

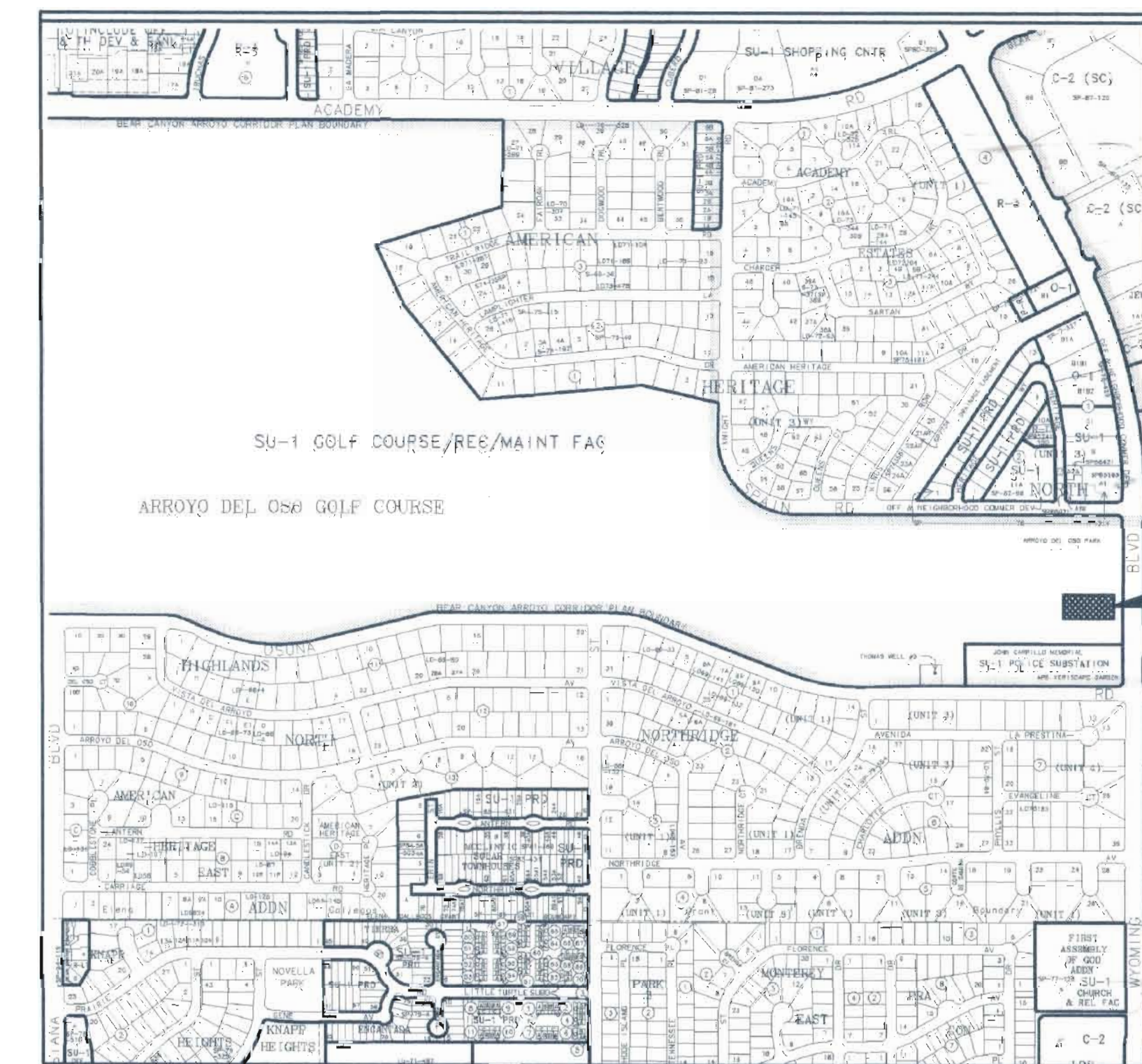
ARROYO DEL OSO TENNIS COURT ADDITION: PHASE I

ARROYO DEL OSO PARK

CONSTRUCTION PLANS



CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
NOVEMBER 2004



SITE

VICINITY MAP

ZONE ATLAS PAGE F-19
N.T.S.

INDEX OF SHEETS

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REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE	
ENGINEERS STAMP & SIGNATURE		APPROVALS	ENGINEER	DATE	APPROVED FOR CONSTRUCTION			
		BRC CHAIRMAN	11/16/04	11/16/04				
		TRANSPORTATION	11/16/04	11/16/04				
		WATER/WASTEWATER	11/16/04	11/16/04				
		HYDROLOGY	11/16/04	11/16/04				
		GIP	11/16/04	11/16/04				
CITY PROJECT NO.		718502		SHEET		1	OF	10

GENERAL NOTES

GOVERNING SPECIFICATIONS

1) ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE (COA) STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION, INCLUDING UPDATE #7.

MONUMENTATION INFORMATION

2) INFORMATION PERTAINING TO THE MONUMENTATION FOR THIS PROJECT MAY BE OBTAINED FROM THE CITY OF ALBQ. PUBLIC WORKS DEPT, SURVEY SECTION.

3) THE CONTRACTOR SHALL NOTIFY THE 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 NOTIFY THE ENGINEER 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 OF ANY COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO SECTION 4.4 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS.

EARTHWORK

4) EARTHWORK QUANTITIES ARE BASED ON FINAL VOLUMES COMPACTED IN PLACE. ON-SITE EXCAVATION AND BACKFILL QUANTITY (BID ITEM 0204.01) IS BASED ON A SHRINKAGE FACTOR OF 20%.

5) ALL SIDESLOPES TO BE 3H:1V MAXIMUM, KEEPING SLOPES FLATTER WHEREVER POSSIBLE. SLOPES SHALL TRANSITION SMOOTHLY TO EXISTING GRADES AND ADJACENT STRUCTURES IN ALL CASES.

6) SEE ADDITIONAL EARTHWORK NOTES AND SPECIFICATIONS ON SHEET 3 OF 10. NO MATERIAL PITS HAVE BEEN IDENTIFIED FOR THIS PROJECT. THE CONTRACTOR MAY OBTAIN SUITABLE MATERIAL FROM ANY ACCEPTABLE SOURCE, PROVIDED THAT IT MEETS PROJECT SPECIFICATIONS. ALL MATERIAL PIT ACTIONS SHALL BE IN COMPLIANCE WITH SECTION 205 OF THE C.O.A. SPECIFICATIONS. NO ADDITIONAL PAYMENT SHALL BE MADE FOR HAULING OF SUCH MATERIAL.

7) THE DESIGN "R" VALUE FOR THIS PROJECT IS 50. MATERIAL WITH AN "R" VALUE OF LESS THAN 50 SHALL NOT BE PLACED IN, NOR ALLOWED TO REMAIN WITHIN, THE TOP TWO FEET OF FINISHED SUBGRADE.

8) THE CONTRACTOR SHALL WARP SLOPES WHERE NECESSARY TO STAY WITHIN THE RIGHT-OF-WAY OR CONSTRUCTION LIMITS, OR TO MEET EXISTING STRUCTURES.

9) ALL EXCAVATION SHALL BE GOVERNED BY FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.

10) THE CONTRACTOR SHALL BE RESTRICTED TO THE USE OF A 35 TON NON-VIBRATING ROLLER MAXIMUM TO OBTAIN THE REQUIRED COMPACTION IN EMBANKMENT AND SUB GRADE IN URBAN OR OTHER AREAS WHERE THE USE OF HEAVIER EQUIPMENT COULD DAMAGE UNDERGROUND UTILITIES OR OTHER PERMANENT STRUCTURES.

WASTE DISPOSAL REQUIREMENTS

11) THE CONTRACTOR SHALL PROPERLY HANDLE AND DISPOSE OF ALL ASPHALT PAVEMENT MATERIAL REMOVED ON THE PROJECT BY: BREAKING DOWN TO MAXIMUM 4" SIZE AND PLACING WITHIN NEW ROADWAY PRISM AT LEAST 2 FEET BELOW FINISHED GRADE; RECYCLING; STOCK PILING; AND/OR, HAULING TO AN APPROVED LANDFILL; IN ACCORDANCE WITH THE REGULATIONS OF THE NEW MEXICO SOLID WASTE ACT.

12) ITEMS DESIGNATED FOR REMOVAL WITHOUT SALVAGE, UNSUITABLE CONSTRUCTION MATERIALS AND DEBRIS FROM CLEARING AND GRUBBING, ARE TO BE PLACED IN AN ENVIRONMENTALLY SUITABLE DISPOSAL SITE DECIDED UPON AND COORDINATED BY THE CONTRACTOR, WITH THE APPROPRIATE REGULATORY AGENCIES. THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER IN WRITING OF THE DETAILS OF DISPOSAL OPERATIONS. BORROW MATERIAL, ROCK WASTE, VEGETATIVE DEBRIS, ETC., SHALL NOT BE PLACED IN WETLAND AREAS OR AREAS WHICH MAY IMPACT ENDANGERED SPECIES OR ARCHAEOLOGICAL RESOURCES. AN ARCHAEOLOGICAL SURVEY AND ENVIRONMENTAL CLEARANCE SHALL BE GAINED BY THE CONTRACTOR BEFORE DISPOSAL SITES ARE ACCEPTED.

HAZARDOUS SPILLS REQUIREMENTS

13) THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING AND CLEANUP OF SPILLS ASSOCIATED WITH PROJECT CONSTRUCTION AND SHALL REPORT AND RESPOND TO SPILLS OF HAZARDOUS MATERIALS SUCH AS GASOLINE, DIESEL, MOTOR OILS, SOLVENTS, CHEMICALS, TOXIC AND CORROSIVE SUBSTANCES, ETC., WHICH MAY BE A THREAT TO PUBLIC HEALTH OR THE ENVIRONMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING DISCOVERIES OF PAST SPILLS AND OF CURRENT SPILLS NOT ASSOCIATED WITH CONSTRUCTION. REPORTS SHALL BE MADE IMMEDIATELY TO THE NEW MEXICO ENVIRONMENT DEPARTMENT EMERGENCY RESPONSE AT 827-9329. NON-EMERGENCIES MAY BE REPORTED TO 428-2500.

ENVIRONMENTAL COMPLIANCE

14) THE CONTRACTOR SHALL COMPLY WITH ALL REGULATIONS OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY, INCLUDING THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEMS (NPDES) PROGRAM. FOR INFORMATION, CONTACT THE NPDES CONTACT FOR THE STATE OF NEW MEXICO AT (505) 827-2855. THE CONTRACTOR IS RESPONSIBLE FOR SECURING ALL PERMITS REQUIRED BY FEDERAL, STATE, AND CITY REGULATIONS FOR NPDES COMPLIANCE, AS WELL AS MONITORING OF THE NPDES PLAN.

15) THE AIR POLLUTION CONTROL REGULATION OF THE ALBUQUERQUE - BERNALILLO COUNTY AIR QUALITY CONTROL BOARD LIMIT EMISSIONS OF PARTICULATE MATTER AND THE USE OF CUT BACK ASPHALT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CLARIFY THESE RESTRICTIONS WITH THE ENVIRONMENTAL HEALTH DEPARTMENT PRIOR TO SUBMITTAL OF BIDS TO AVOID CONFLICT WITH THE REGULATIONS. CALL THE ENVIRONMENTAL HEALTH DEPARTMENT AT 768-2600.

UTILITIES

16) CAUTION - ALL EXISTING UTILITIES SHOWN REFLECT THE BEST INFORMATION AVAILABLE AND ARE APPROXIMATE ONLY. EXACT DEPTH OF UTILITIES IS UNKNOWN. ADDITIONAL UTILITIES MAY ALSO EXIST WHICH ARE NOT SHOWN.

17) THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES WHEN WORKING NEAR THEIR SYSTEMS. UTILITY COMPANIES SHALL BE GIVEN 48 HOURS (WEEKENDS EXCLUDED) ADVANCE NOTICE FOR LINE LOCATION. CALL NEW MEXICO ONE CALL SYSTEM INC. AT 260-1990 REGARDING LOCATION OF UTILITY LINES.

18) IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES. ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

19) ALL UTILITY VALVE BOXES, MANHOLES, AND/OR UTILITY POLES WHICH FALL WITHIN THE CONSTRUCTION ZONE SHALL BE ADJUSTED TO GRADE OR RELOCATED BY THE RESPECTIVE UTILITIES, UNLESS OTHERWISE NOTED ON PLANS. THE CONTRACTOR SHALL COORDINATE SUCH ACTIVITIES IN ORDER TO FACILITATE ADJUSTMENT OR RELOCATION IN A TIMELY MANNER.

GENERAL CONSTRUCTION

20) THE CONTRACTOR IS TO COORDINATE ALL WORK WITH THE PROJECT MANAGER.

21) IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO SECURE AND SUPPLY WATER FOR THE PROJECT. THE COST WILL BE INCIDENTAL TO COMPLETION OF THE PROJECT AND NO SEPARATE PAYMENT WILL BE MADE THEREFORE.

22) ALL EXISTING TREES, SHRUBS OR TURF ON AN EXISTING IRRIGATION SYSTEM SHALL BE PROTECTED AND WATERED DURING CONSTRUCTION; ANY VARIANCE SHALL BE CLEARED THROUGH THE PROJECT MANAGER. REMOVAL OF ANY OTHER EXISTING NON-IRRIGATED TREES OR SHRUBS NECESSARY TO COMPLETE THE PROJECT SHALL BE COORDINATED WITH AND APPROVED BY THE PROJECT MANAGER PRIOR TO ANY REMOVALS.

23) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REMOVALS REQUIRED TO COMPLETE THE PROJECT. ADDITIONAL REMOVALS NOT SHOWN ON THE PLANS MAY BE DESIGNATED BY THE PROJECT MANAGER. ALL REMOVALS, UNLESS OTHERWISE INDICATED WILL BE INCIDENTAL TO BID ITEM 0201.01-SITE CLEARING AND GRUBBING.

24) ANY SALVAGEABLE MATERIALS REMOVED FROM THIS PROJECT SHALL BE HAULED AND STOCKPILED AT A LOCAL LOCATION DETERMINED BY PROJECT MANAGER. HAUL OF SUCH MATERIALS SHALL BE INCIDENTAL TO BID ITEM 0201.01- SITE CLEARING AND GRUBBING.

25) THE CONTRACTOR SHALL BE REQUIRED TO CONFINE HIS WORK WITHIN THE CONSTRUCTION LIMITS AND/OR RIGHT-OF-WAY LIMITS.

26) THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED BY HIM TO EXISTING WALLS, FENCES, SIDEWALKS, TRAIL SURFACES, IRRIGATION LINES, VALVE BOXES, MANHOLES, CURB AND GUTTER ETC. DURING CONSTRUCTION AND SHALL REPAIR OR REPLACE SAME AT HIS OWN EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR DOCUMENTATION OF ANY EXISTING DAMAGE PRIOR TO START OF CONSTRUCTION.

27) PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY EXISTING HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR IMMEDIATELY SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.

28) IF BARRICADING IS NECESSARY FOR ELECTRICAL WORK: FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A DETAILED CONSTRUCTION SCHEDULE TO CONSTRUCTION COORDINATION DIVISION. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (924-3400) PRIOR TO OCCUPYING AN INTERSECTION. REFER TO SECTION 19 OF THE GENERAL CONDITIONS OF THE COA STANDARD SPECIFICATIONS.

29) THE CONTRACTOR SHALL BE THE RESPONSIBLE PARTY FOR THE IMPLEMENTATION AND MAINTENANCE OF ALL TRAFFIC CONTROL PROCEDURES AND MATERIALS. THE CONTRACTOR SHALL HAVE PERSONNEL AVAILABLE 24 HOURS PER DAY, SEVEN (7) DAYS PER WEEK TO INSPECT AND MAINTAIN TRAFFIC CONTROL DEVICES AS DIRECTED BY THE PROJECT ENGINEER.

30) IF TRAFFIC CONTROL IS NECESSARY FOR ELECTRICAL WORK: THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN A TRAFFIC CONTROL DIARY, WHICH SHALL BE AVAILABLE FOR REVIEW BY THE CITY AND /OR HIGHWAY DEPARTMENT PROJECT MANAGERS. COST OF THIS WORK IS TO BE INCLUDED IN THE UNIT BID PRICE FOR BID ITEM 0019.01 CONSTRUCTION TRAFFIC CONTROL.

31) ALL SIGNS AND CODING WILL BE IN ACCORDANCE WITH THE LATEST EDITION OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION. COORDINATE LOCATION FOR NEW SIGNS, PAVEMENT MARKINGS AND/OR POSTS WITH ENGINEER.

33) UPON COMPLETION OF CONSTRUCTION ALL AREAS WITHIN PROJECT LIMITS WHICH ARE DISTURBED, OR ARE TO BE REVEGETATED, SHALL BE SEEDED IN ACCORDANCE WITH SECTION 1012 - "NATIVE PLANT SEEDING" OF THE STANDARD SPECIFICATIONS, EXCEPT AS MODIFIED HEREIN.

34) THE CONTRACTOR SHALL MAINTAIN AN UP-TO-DATE SET OF AS-BUILT PLANS FOR THE PROJECT. THESE SHALL BE KEPT CURRENT WITHIN TWO WEEKS AT ALL TIMES AND SHALL BE SUBJECT TO REVIEW BY THE PROJECT ENGINEER THROUGHOUT THE PROJECT. THE FINAL AS-BUILT PLANS SHALL BE SUBMITTED TO THE PROJECT ENGINEER PRIOR TO FINAL PAYMENT.

35) QUANTITIES SHOWN HEREIN, FOR THE VARIOUS BID ITEMS, ARE FOR THE CONTRACTOR'S INFORMATION ONLY. PAYMENT SHALL BE BASED ON ACTUAL QUANTITIES AS CONSTRUCTED.

CONSTRUCTION STAKING

36) BID ITEM 004.01 CONSTRUCTION STAKING SHALL INCLUDE ALL SURVEYING AND CONTROL STAKING NECESSARY TO ESTABLISH PROJECT CENTERLINE, TOE OF SLOPE CATCH POINTS AND OTHER FEATURES AS REQUIRED FOR CONSTRUCTION OF THE PROJECT.

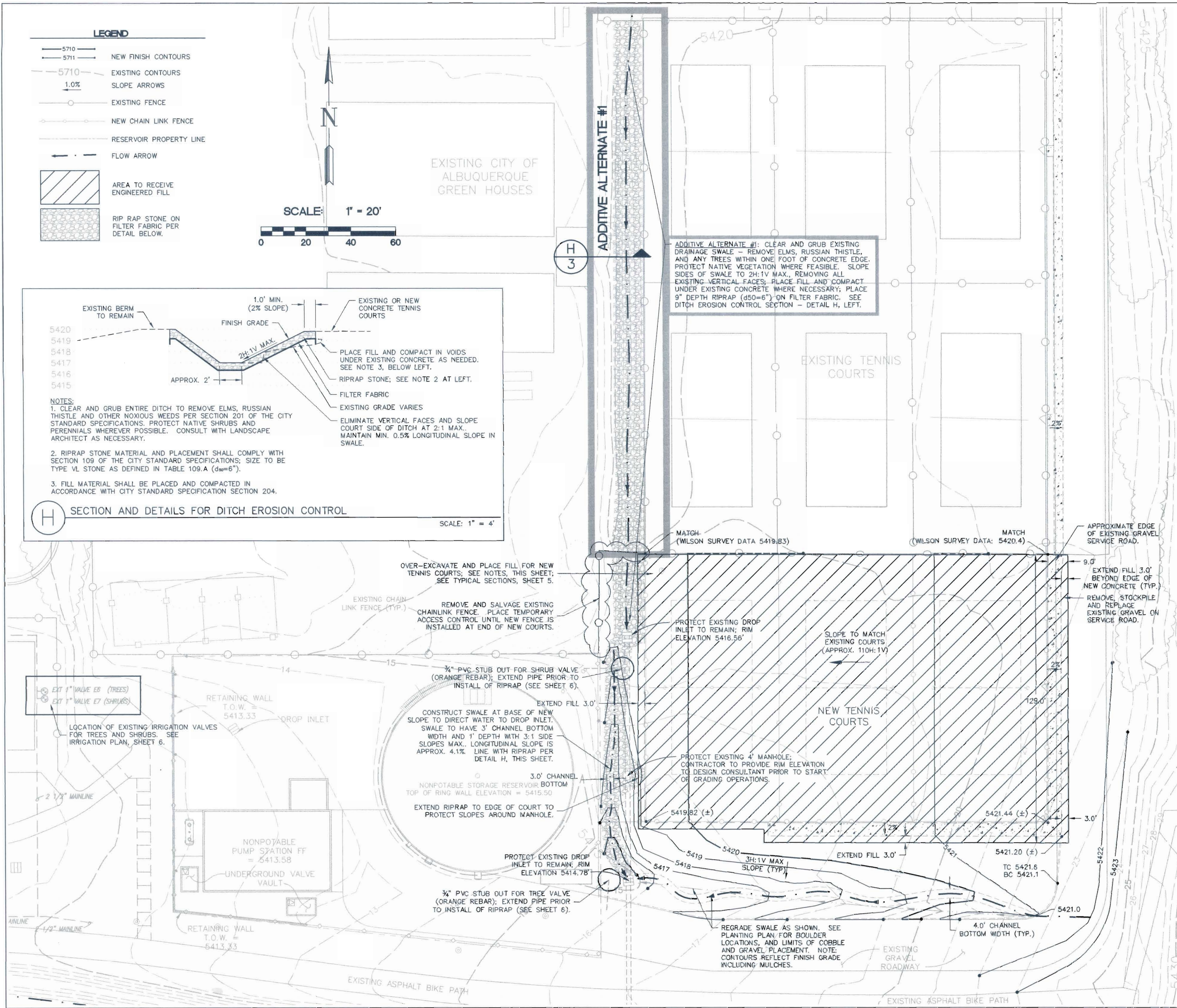
CONSTRUCTION SURVEYING

37) THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND RECORDING ALL EXISTING AND FINAL GRADES BY CROSS-SECTIONING OR OTHER MEANS, FOR THE PURPOSE OF DETERMINING EARTHWORK QUANTITIES. THESE RECORDS WILL BE SUBJECT TO REVIEW BY THE CITY AND/OR ENGINEER FOR VERIFICATION OF PAY QUANTITIES.

UTILITY CONTACTS

BUSINESS	CONTACT	PHONE NO.
AT&T	DAVID CROWEL	842-2911
CITY OF ALBUQUERQUE	GREG OLSON	768-2719
COMCAST	RITA ERICKSON	761-6235
LEVEL 3 COMMUNICATIONS	ROGER WEATHERS	720-888-5688
NCI WORLDCOM	ANDY DARNELL	346-4470
McLEOD USA	RICK MUELLER	244-3161
NEW MEXICO UTILITIES	BOB GAY	898-2661
PNM-ELECTRIC	MARK BOUCHARD	241-3402
PNM-GAS	JEFF ROMANOWSKI	241-7703
QWEST	DAVID MULLER	245-8706
QWEST LONG DISTANCE	LARRY KELLY	244-4062
TIME WARNER TELECOM	ROYAL HARRISON	938-7339
UNIVERSAL ACCESS, INC	JAIME MARTINEZ	328-2675
XSPEDIUS MANAGEMENT CO.	STEVE BENJAMIN	998-2220

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CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT PARK DIVISION	
TITLE: ARROYO DEL OSO TENNIS COURT ADDITION, PHASE I Spain and Wyoming NE, Albuquerque, NM	
GENERAL NOTES	
Design Review Committee APPROVED JAN 14 2005 DESIGN REVIEW COMMITTEE	City Engineer Approval APPROVED JAN 14 2005 CITY ENGINEER
PROJECT NO. 718502	MAP NO. 2-F-19
SHEET 2 OF 10	



GENERAL NOTES

1. STATED GRADES (SLOPES) SHOWN ON THE PLANS WILL GOVERN ELEVATIONS. ELEVATIONS PROVIDED ARE FOR INFORMATION ONLY, AND ARE BASED ON SURVEY INFORMATION AVAILABLE AT TIME OF DESIGN.

2. GRADE OF NEW COURTS IS TO MATCH EXISTING COURTS, PROVIDED THE SLOPE IS UNIFORM FROM ONE SIDE TO THE OTHER. SLOPE IS APPROXIMATELY 110H:1V.

3. ELEVATIONS SHOWN ARE TO FINISHED GRADE INCLUDING CONCRETE AND DEPTH OF MULCH.

EARTHWORK NOTES

1. **EARTH EXCAVATION**

A. GENERAL:
EARTH EXCAVATION SHALL CONSIST OF THE EXCAVATION OF SOIL TO A DEPTH TWO FEET BELOW BOTTOM OF NEW CONCRETE, AS WELL AS THE EXCAVATION AND REMOVAL OF UNSUITABLE SOILS, AND THE SATISFACTORY DISPOSAL OF ALL VEGETATION, DEBRIS, AND DELETERIOUS MATERIAL ENCOUNTERED WITHIN THE AREA TO BE GRADED AND/OR IN A BORROW AREA.

B. SURFACE MAINTENANCE:
EXCAVATED AREAS SHALL BE CONTINUOUSLY MAINTAINED SO THAT THE SURFACE SHALL BE SMOOTH AND HAVE SUFFICIENT SLOPE TO ALLOW WATER TO DRAIN FROM THE SURFACE.

2. **FILL MATERIAL**

A. GENERAL:
SUBGRADE PREPARATION FOR COURTS SHALL CONSIST OF A CONTROLLED FILL PLACED TO A DEPTH OF TWO FEET IN THE AREAS INDICATED ON THE GRADING PLANS.

B. FILL MATERIALS:
FILL MATERIAL SHALL CONSIST OF GRANULAR SOILS THAT CONFORM TO THE FOLLOWING PHYSICAL CHARACTERISTICS:

SIEVE SIZE (SQUARE OPENINGS)	% PASSING BY WEIGHT
3 INCH	100
2 INCH	70-100
NO. 4	50-100
NO. 200	35 (MAX)

THE PLASTICITY INDEX OF THE MATERIALS, AS DETERMINED IN ACCORDANCE WITH ASTM D-423 AND D-424, SHALL NOT BE MORE THAN 12. ENGINEERED FILL MATERIAL SHALL CONTAIN LESS THAN 0.10% SOLUBLE SULFATES.

THE FILL MATERIAL SHALL BE FREE FROM ROOTS, GRASS, OTHER VEGETABLE MATTER, CLAY LUMPS, OR OTHER DELETERIOUS MATERIALS.

SITE SOILS MAY BE USED FOR FILL, PROVIDED THEY MEET THE REQUIREMENTS OF SECTION B, ABOVE.

C. CONSTRUCTION:
PRIOR TO PLACEMENT OF FILL MATERIAL THE AREA TO BE FILLED SHALL BE SCARIFIED TO A DEPTH OF EIGHT INCHES AND MOISTURE CONDITIONED TO WITHIN ± THREE PERCENT OF OPTIMUM AND THE AREA SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557. IF VIBRATORY COMPACTION TECHNIQUES POSE A THREAT TO ADJACENT STRUCTURES, A STATIC COMPACTOR SHALL BE USED.

EXTEND FILL THREE FEET BEYOND THE EDGE OF NEW CONCRETE. SLOPE OF FILL SHALL NOT EXCEED 5H:1V EXCEPT WHERE INDICATED. WHERE FILL SLOPE EXCEEDS 5H:1V, THE NATURAL GROUND SHALL BE BENCHED WITH THREE FOOT WIDE BENCH AND A TWO FOOT VERTICAL INTERVAL.

COMPACTION: THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 8 INCHES (UNCOMPACTED). MOISTURE SHALL BE ADDED AS NECESSARY, AND THE FILL COMPACTED. THE MOISTURE CONTENT AT THE TIME OF COMPACTION SHALL BE WITHIN TWO PERCENT OF OPTIMUM.

COMPACTION SHALL BE WITH A VIBRATORY ROLLER TO OBTAIN A DENSITY OF NOT LESS THAN 95 PERCENT OF MAXIMUM DENSITY. IF VIBRATORY COMPACTION TECHNIQUES POSE A THREAT TO ADJACENT STRUCTURES, A STATIC COMPACTOR SHALL BE USED.

OPTIMUM MOISTURE AND MAXIMUM DENSITY FOR EACH SOIL USED SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D-1557.

AS BUILT INFORMATION				BENCH MARKS				SURVEY INFORMATION				ENGINEERS SEAL			
CONTRACTOR	DATE	DATE	DATE	STATION NAME	DATE	BY	NO.	NO.	BY	NO.	BY	NO.	BY	NO.	BY
LOCATED BY	DATE	DATE	DATE	LOCATED ON THE SOUTHEAST CORNER OF ARROYO DEL OSO GOLF COURSE IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF OSUNA RD. AND WYOMING BLVD.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
RECORDED BY	DATE	DATE	DATE	MARK IS A STANDARD BRASS TABLET (KGOOLE & POOLS ENG.) STAMPED "3-F19AB 1974" SET ON TOP OF CONCRETE POST FLUSH WITH AND SURROUNDED BY CONCRETE CURB. ELEV: 5440.56 (NOV 29)	DATE	BY	NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
NO.	NO.	NO.	NO.	N: 1,505,422.06 E: 470,112.53 (NAD 27)	DATE	BY	NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY
<div>APPROVED JAN 14 2005 DESIGN COMMITTEE</div> <div>APPROVED JAN 14 2005 CITY ENGINEER</div>															
PROJECT NO.	718502	MAP NO.	Z-F-19	SHEET	3	OF	10								

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CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
PARK DIVISION

TITLE: **ARROYO DEL OSO TENNIS COURT ADDITION, PHASE I**
Spain and Wyoming NE, Albuquerque, NM
GRADING AND DRAINAGE PLAN

Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.
APPROVED JAN 14 2005 DESIGN COMMITTEE	APPROVED JAN 14 2005 CITY ENGINEER		
DESIGNED BY	CVO	DATE	08/04
DRAWN BY	CVO	DATE	08/04
CHECKED BY	CSM	DATE	11/04

01220085.dwg 11/14/04 cvo

HEADER CURB LINE TABLE		
LINE	LENGTH	BEARING
L1	22.78	S05°18'06"W
L2	134.77	S89°58'09"W
L3	41.87	N77°21'05"W

HEADER CURB CURVE TABLE					
CURVE	LENGTH	RADIUS	TANGENT	CHORD	CHORD DIRECTION
C1	23.64	16.00	14.58	21.55	N47°38'08"E
C2	13.28	60.07	6.67	13.25	S83°41'28"E

EXISTING CITY OF
ALBUQUERQUE
GREEN HOUSES

ADDITIVE ALTERNATE #1:
DRAINAGE SWALE WITH
RIPRAP - SEE SHEET 3.

POST-TENSIONED CONCRETE TENNIS COURTS, MEDIUM
BROOM FINISH, 4000 PSI CONCRETE; WIDTH TO
MATCH EXISTING COURTS (APPROX. 180'), LENGTH
120.5'. SEE DETAIL A AND B, SHEET 5. SEE ALSO
TYPICAL SECTION F, SHEET 5. APPLY SPORTMASTER
ACRYLIC EMULSION RESURFACER WITH ACRYLIC
EMULSION COLOR COATING AND LINE PAINT (AS
AVAILABLE FROM DML, INC. 505-286-5414). COLOR
TO MATCH EXISTING COURTS.

CHAINLINK PERIMETER FENCING; SEE DETAILS A,
B1, AND C, SHEET 5. INSTALL ECONOMY GRADE
WOVEN POLYPROPYLENE WINDSCREEN MATERIAL, 6'
WIDTH, ON ALL PERIMETER FENCING (PROD.
#TENBAST AS AVAILABLE FROM GARDENSCHWARTZ
TEAM SALES - MATT LEVY, 505-884-1234);
SEE NOTE 5, THIS SHEET.

NET POST FOOTING AND SLEEVE
(TYP. OF 6); SEE DETAIL D, SHEET 5. POSTS TO BE 42' O.C., SET
PLUMB AND STRAIGHT SO NET IS
HELD 42" ABOVE COURT SURFACE.

EXISTING CHAIN
LINK FENCE (TYP.)

3/4" PVC STUB OUT FOR SHRUB VALVE
(ORANGE REBAR); EXTEND PIPE PRIOR TO
INSTALL OF RIPRAP (SEE SHEET 6).

CONSTRUCTED SWALE AT BASE
OF NEW SLOPE TO DIRECT
WATER TO DROP INLET. SEE
SHEET 3 FOR MORE DETAIL.

NONPOTABLE STORAGE RESERVOIR
TOP OF RING WALL ELEVATION = 5415.50

INSTALL NEW CHAINLINK FENCE
BETWEEN COURT FENCING AND
RESERVOIR FENCE TO MATCH TENNIS
COURT PERIMETER FENCE.

3/4" PVC STUB OUT FOR TREE VALVE
(ORANGE REBAR); EXTEND PIPE PRIOR
TO INSTALL OF RIPRAP (SEE SHEET 6).

12" DRAIN-CUT IN CURB, TAPER LAST
12" OF CURB ON EACH SIDE
OF OPENING AT 2H:1V.

12" DRAIN-CUT IN CURB, TAPER
LAST 12" OF CURB ON EACH SIDE
OF OPENING AT 2H:1V.

ADDITIVE ALTERNATE #1

INSTALL 4' WIDE BY 7' HIGH CHAINLINK GATES IN
EXISTING FENCE (TYP. OF 2) WITH 3' HEIGHT
FIXED PANEL (TRANSOM) ABOVE. ADJUST
LOCATIONS AS NEEDED PER EXISTING FENCE POST
AND BRACE SPACING. COORDINATE AND ADJUST
GATE LOCATIONS WITH LANDSCAPE ARCHITECT
PRIOR TO FORMING CONCRETE FOR LANDINGS.
SEE GENERAL NOTES, THIS SHEET FOR GATE
SPECIFICATIONS.

4" THICK PCC SIDEWALK (WIDTH 4' ALONG
EXISTING COURTS, 6' ALONG NEW
COURTS- SEE PLAN) PER COA STD
DRAWING 2720. THICKEN OUTSIDE 12" OF
SIDEWALK TO 6" ALONG ROADWAY.

EXISTING TENNIS
COURTS

INSTALL GRAY CRUSHER FINES, 4" THICK,
COMPACTED TO 90% MP BETWEEN COURT
AND NEW SIDEWALK. PROTECT FENCE
BACKBRACING TO REMAIN.

180' BASED ON FIELD MEASUREMENT
VERIFY ACTUAL WIDTH PRIOR TO CONSTRUCTION

10' HEIGHT SIDE-
STOP FENCE (TYP.)
SEE DETAIL S, SHEET 5

28.0' 3' HEIGHT SIDE-
STOP FENCE (TYP.)

CENTER STRAP
ANCHOR (TYP. OF
3); SEE DETAIL E,
SHEET 5.

INTERIOR CHAINLINK
FENCING; SEE DETAILS
B2 AND C, SHEET 5.

PROTECT EXISTING
DROP INLET

DRAINAGE SWALE - SEE
PLANTING PLAN FOR
MULCH; GRADES SHOWN
ARE TO TOP OF MULCH.

TAPER CURB FROM 0" TO 6"
HEIGHT ABOVE GRAVEL ROAD
OVER 10' LENGTH

TO 5422.4
BC 5421.6
12" DRAIN-CUT IN CURB, TAPER
LAST 12" OF CURB ON EACH SIDE
OF OPENING AT 2H:1V.

5"W CONCRETE HEADER CURB PER
COA STAND AND DWS. 24" HIGHER CURB
TO EXTEND 6" ABOVE FINISH GRADE
OF GRAVEL ROAD.

LEGEND

- 5710 NEW FINISH CONTOURS
- 5711 EXISTING CONTOURS
- 1.0% SLOPE ARROWS
- EXISTING FENCE
- NEW CHAIN LINK FENCE
- RESERVOIR PROPERTY LINE
- FLOW ARROW

GENERAL NOTES

- DETERMINE LOCATION OF, AND INSTALL,
NEW GATES IN EXISTING COURT FENCING
PRIOR TO PLACING CONCRETE FOR
LANDINGS. COORDINATE WITH LANDSCAPE
ARCHITECT IF IT IS NECESSARY TO ADJUST
LANDING LOCATIONS.
- CHAINLINK GATE POSTS TO BE 3" O.D.
SCHEDULE 40 PIPE; GATE FRAME TO BE
1-3/8" O.D. STEEL PIPE, METERED AND
WELDED TO FORM RIGID FRAME; COAT ALL
WELDS WITH COLD GALVANIZED COATING.
FASTEN FABRIC (SAME GAUGE AND MESH
SIZE AS FENCE FABRIC) IN FRAME WITH
TENSION BARS AND TENSION BANDS AT 1'
O.C. USE 3/8" O.D. ADJUSTABLE TRUSS
RODS FOR DIAGONAL BRACING OF GATE
FRAME.
- PROVIDE TWO PRESSED STEEL,
NON-LIFT-OFF TYPE HINGES PER GATE,
SIZED APPROPRIATELY FOR GATE SIZE.
OFFSET HINGES TO ALLOW FOR 180°
OPENING. SECURE HINGE TO GATE FRAME
AND POST TO PREVENT ROTATION.
- PROVIDE HEAVY DUTY GATE FORK LATCH
OF MALLEABLE IRON ON EACH CHAINLINK
GATE, SIZED TO PERMIT OPERATION FROM
EITHER SIDE OF GATE, WITH INTEGRAL
PADLOCK EYE.
- INSTALL WINDSCREEN FABRIC ON
PERIMETER FENCE PER MANUFACTURER'S
RECOMMENDATIONS; BOTTOM OF FABRIC
TO BE 24" ABOVE COURT GRADE.



SCALE: 1" = 20'



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Albuquerque, New Mexico 87109
Water Resources E-mail: rtech@rti.net
Landscape Architecture Telephone: (505) 243-7300
Fax: (505) 243-7490

CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
PARK DIVISION

TITLE: ARROYO DEL OSO TENNIS COURT ADDITION, PHASE I
Spain and Wyoming NES, Albuquerque, NM
SITE LAYOUT

Design Review Committee City Engineer Approval
APPROVE JAN 14 2005 APPROVE JAN 14 2005
DESIGN REVIEW CITY ENGINEER

PROJECT NO. 718502 MAP NO. Z-F-10 SHEET 4 OF 10

AS-BUILT INFORMATION			
CONTRACTOR	DATE	DATE	DATE
WORK BY	DATE	DATE	DATE
INSPECTOR'S	DATE	DATE	DATE
FIELD	DATE	DATE	DATE
VERIFICATION BY	DATE	DATE	DATE
CORRECTED BY	DATE	DATE	DATE
MICRO-FILM INFORMATION			
RECORDED BY	DATE	DATE	DATE
NO.	DATE	DATE	DATE

BENCH MARKS			
STATION NAME	DATE	DATE	DATE
3-F19AB	DATE	DATE	DATE
LOCATED ON THE SOUTHEAST CORNER OF ARROYO DEL OSO	DATE	DATE	DATE
GOLF COURSE IN THE NORTHWEST QUADRANT OF THE	DATE	DATE	DATE
INTERSECTION OF OSUNA RD. AND WYOMING BLVD., STATION	DATE	DATE	DATE
MARK IS A STANDARD BRASS TABLET (KODGE & POOLS	DATE	DATE	DATE
ENG.) STAMPED "5-F19AB 1974" SET ON TOP OF	DATE	DATE	DATE
CONCRETE POST FLUSH WITH AND SURROUNDED BY	DATE	DATE	DATE
CONCRETE CURB. ELEV: 5440.56 (NGVD 29)	DATE	DATE	DATE
N: 1,505,422.06 E: 410,112.53 (NAD 27)	DATE	DATE	DATE

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



REVISIONS			
NO.	DATE	BY	REMARKS
1	08/04	CVO	DESIGN
2	08/04	CVO	DESIGN
3	11/04	RMO	DESIGN

SECTION KEY JOINT AT NET LINE

DETAIL OF CABLE ATTACHMENT

SECTION THICKENED
COURT EDGE

NOTE: ENGINEERED DRAWINGS FOR POST TENSIONED CONCRETE SLAB ARE TO BE PROVIDED BY CONTRACTOR PRIOR TO CONSTRUCTION DETAILS RELATED TO POST TENSIONED SLAB SHOWN HEREON ARE FOR GENERAL GUIDANCE ONLY. POST TENSIONED SLAB TO CONFORM TO "SECTION II.H. - POST TENSIONED CONCRETE SLAB TENNIS COURTS" OF THE USTC&TBA Guidelines for Tennis Court Construction AVAILABLE FROM CONSULTANT (505-243-7300) OR ON-LINE AT <<http://www.ustcoba.com/guidelines-tennis/contents.html>> (EXCEPT AS MODIFIED HEREIN), AND TO BE DESIGNED BASED ON ALLOWABLE SOIL BEARING CAPACITY OF 1500 PSF. COMPRESSIVE STRENGTH OF CONCRETE TO BE 4000 PSI.

A
7

POST-TENSIONED CONCRETE COURT PAVEMENT

NOT TO SCALE

SCALE 1" = 5'

C
3

INTERIOR FENCE AND CHAINLINK DETAIL

B1 PERIMETER FENCE POST FOOTING DETAIL
3 NOT TO SCALE

B2 INTERIOR FENCE POST FOOTING DETAIL
3 NOT TO SCALE

Diagram showing the front view of a 2'-6" square plate with a 18" diameter hole. The hole is centered horizontally and vertically. The dimensions are indicated by arrows and text: 18" for the hole diameter and 2'-6" SQUAR for the plate size.

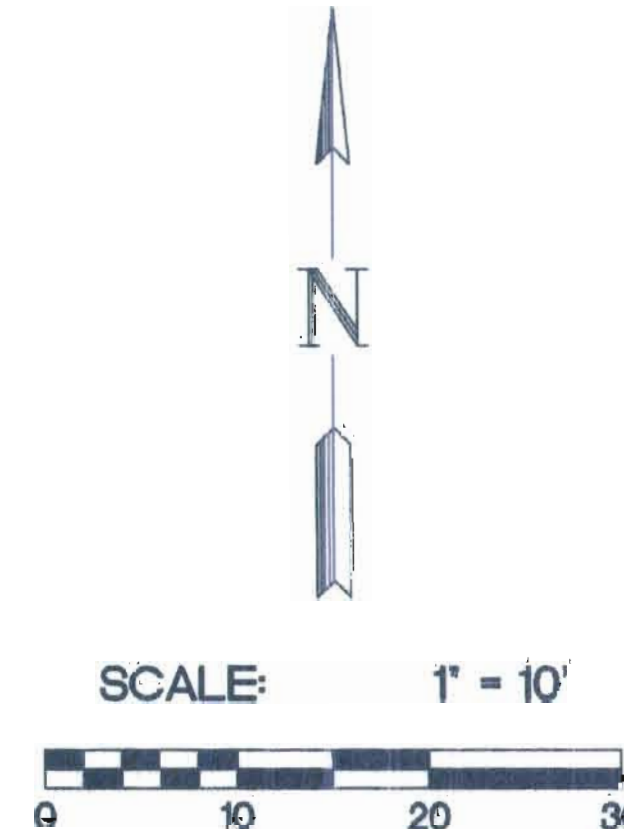
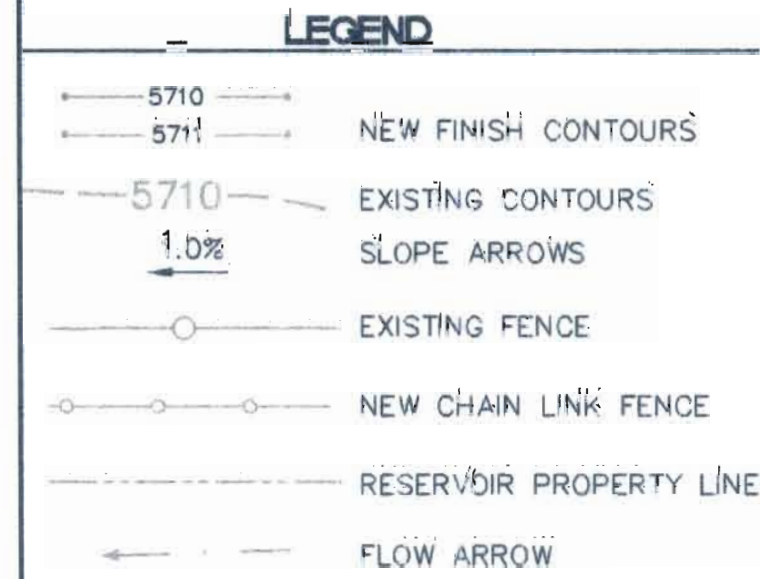
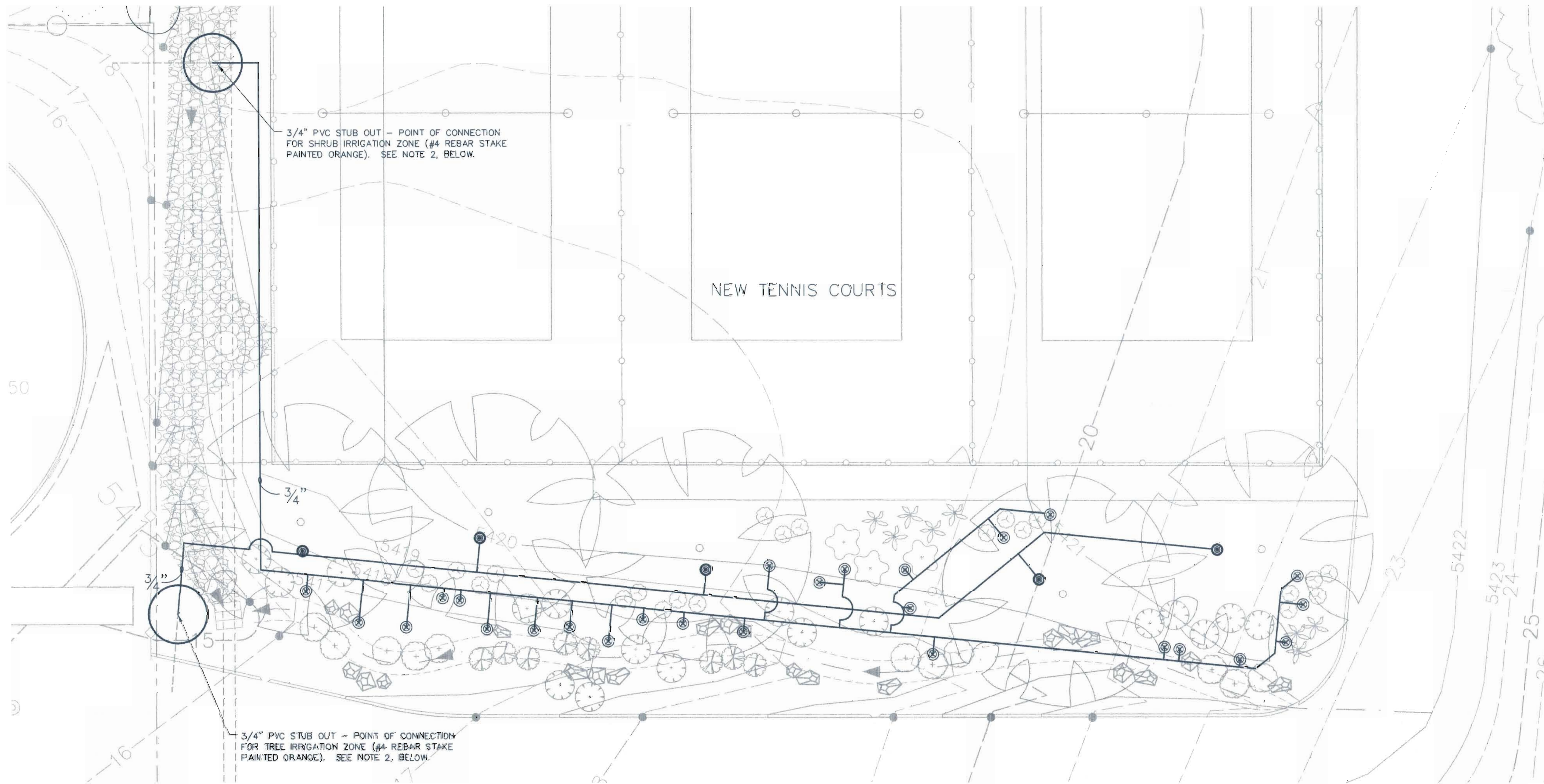
NET POST FOOTING DETAIL

E TENNIS NET CENTER STRAP ANCHOR
3 NOT TO SCALE

TYPICAL SECTION - NEW COURTS
ABUTTING EXISTING CONCRETE


 TYPICAL SECTION - NEW COURTS
 ABUTTING EXISTING CONCRETE

DATE		NO.		BY		DATE		STATION NAME: 3-F19AB LOCATED ON THE SOUTHEAST CORNER OF ARROYO DEL OSO GOLF COURSE IN THE NORTHWEST QUADRANT OF THE INTERSECTION OF OUSINA RD. AND WYOMING BLVD.. STATION MARK IS A STANDARD BRASS TABLET (KOOGL & POULS ENG.) STAMPED "3-F19AB 1974" SET ON TOP OF CONCRETE POST FLUSH WITH AND SURROUNDED BY CONCRETE CURB. ELEV: 5440.56 (NGVD 29)		CONTRACTOR STARTED BY DATE INSPECTOR'S RECEIPT/TANCE BY DATE VERIFICATION BY DATE DRAWINGS FORWARDED BY DATE <i>MICRO-FILM INFORMATION</i> RECORDED BY DATE NO.	
NO.		DATE		REMARKS		BY					
				REVISIONS							
				DESIGN							
DESIGNED BY		CVO		DATE		08/04					
DRAWN BY		CVO		DATE		08/04					



AS BUILT INFORMATION			
CONTRACTOR:	DATE:	DATE:	DATE:
INSPECTOR:	DATE:	DATE:	DATE:
VERIFICATION BY:	DATE:	DATE:	DATE:
DRAWING BY:	DATE:	DATE:	DATE:
CHECKED BY:	DATE:	DATE:	DATE:
RECORDED BY:	DATE:	DATE:	DATE:
NO:	DATE:	DATE:	DATE:



NO.	DATE	REVISIONS	BY
1	08/04	DESIGN	CJO
2	08/04	DESIGN	CJO
3	08/04	DESIGN	CJO
4	08/04	DESIGN	CJO
5	08/04	DESIGN	CJO
6	08/04	DESIGN	CJO
7	08/04	DESIGN	CJO
8	08/04	DESIGN	CJO
9	08/04	DESIGN	CJO
10	08/04	DESIGN	CJO

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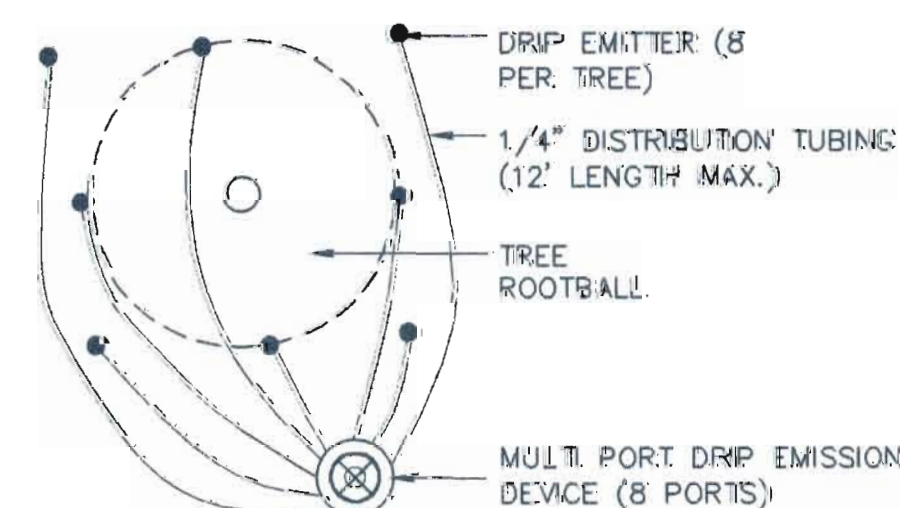
CITY OF ALBUQUERQUE
 DEPARTMENT OF MUNICIPAL DEVELOPMENT
 PARK DIVISION

TITLE: **ARROYO DEL OSO TENNIS COURT ADDITION, PHASE I**
 Spain and Wyoming NE, Albuquerque, NM

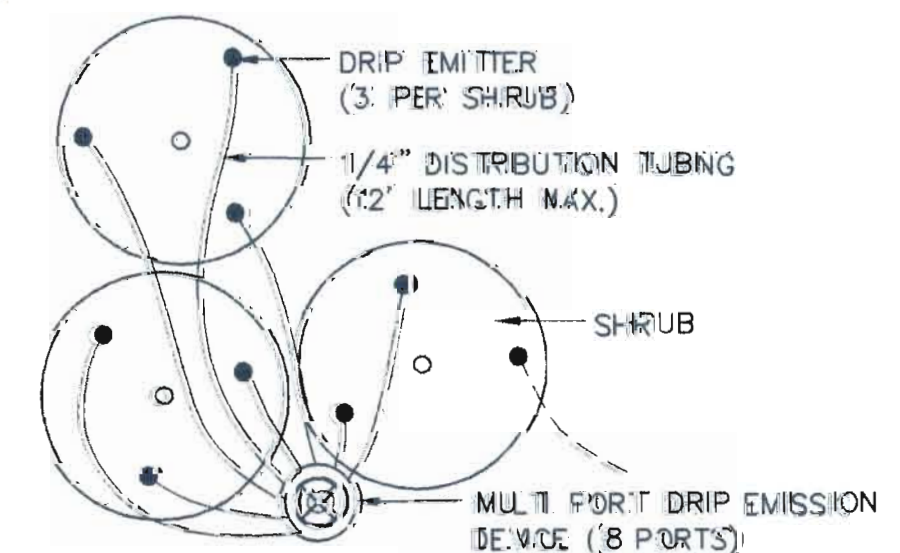
DESIGN REVIEW COMMITTEE
 APPROVED
 JAN 14 2005

CITY ENGINEER
 APPROVED
 JAN 14 2005

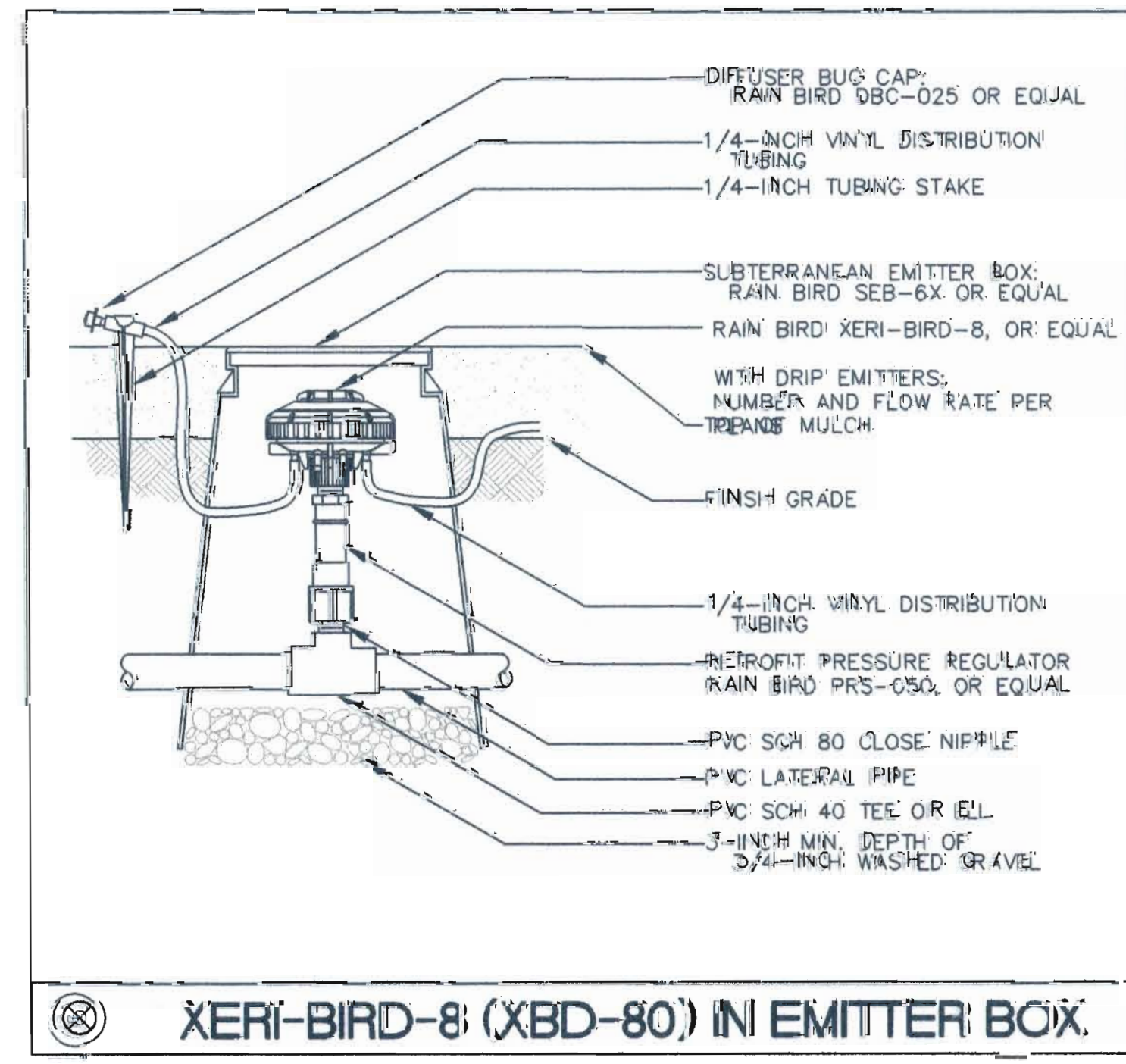
PROJECT NO. **718502** MAP NO. **2-F-19** SHEET **6** OF **10**



A TYPICAL EMITTER PLACEMENT AT TREES
 NO SCALE



B TYPICAL EMITTER PLACEMENT AT SHRUBS
 NO SCALE



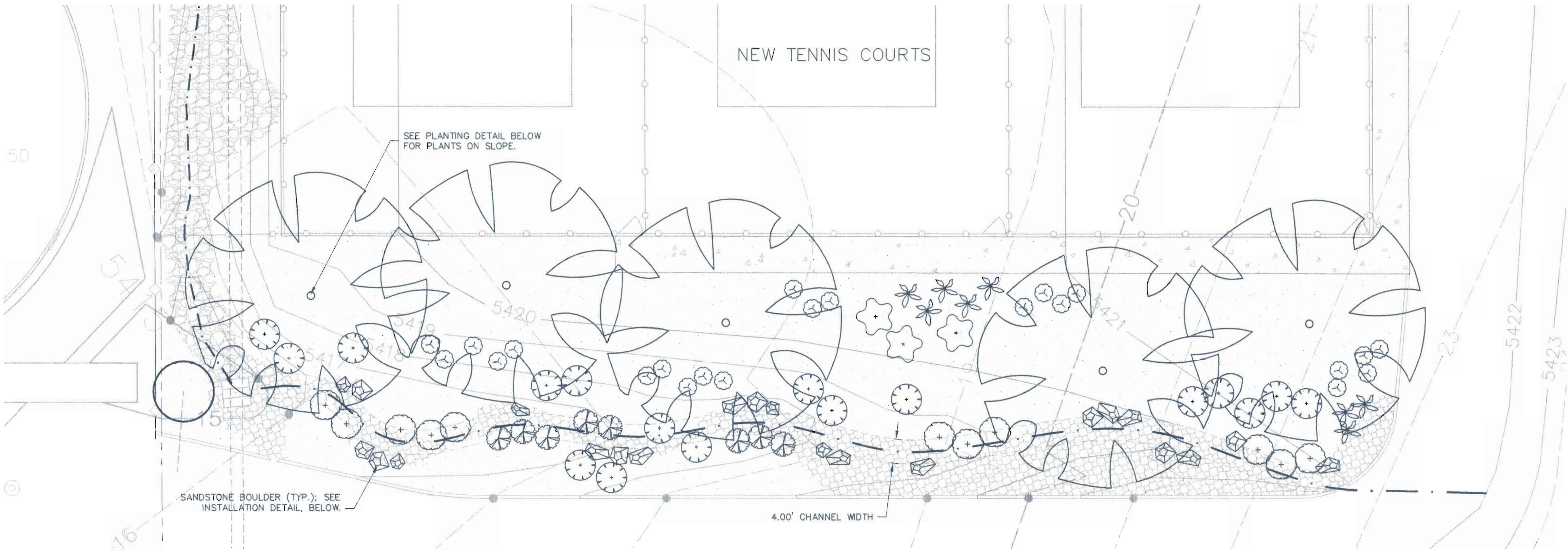
C XERI-BIRD-8 (XBD-80) IN EMITTER BOX

IRRIGATION NOTES - CONSTRUCTION

1. ALL IRRIGATION INSTALLATION SHALL BE IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION INCLUDING UPDATE 7.
2. COORDINATE WITH BRADBURY STAMM AS NECESSARY FOR TIE IN TO 3/4" PVC IRRIGATION LATERAL (BILL MCCARTY, 765-1200). VALVES ARE LOCATED BETWEEN THE WEST RESERVOIR FENCE AND THE BASKETBALL COURT; SEE SHEET 4 FOR VALVE LOCATIONS.
3. CONTRACTOR TO FIELD VERIFY EXISTING PRESSURE AT STUB OUT AND NOTIFY LANDSCAPE ARCHITECT PRIOR TO START OF WORK.

IRRIGATION LEGEND

- LATERAL PIPING: 3/4" SCHEDULE 40 PVC; USE PURPLE PIPE FOR NON-POTABLE WATER, OR MARK WITH NON-POTABLE WARNING TAPE; SOLVENT WELD!
- ⊗ RAINBIRD XBD-80 MULTI-OUTLET EMITTER DEVICE IN EMITTER BOX (SEE DETAIL, LEFT), OR APPROVED EQUAL. INSTALL X8-29 (2 GPH) EMITTERS AS PER DETAIL A, THIS SHEET (LEFT). 1/4" DISTRIBUTION TUBING NOT TO EXCEED 12' IN LENGTH, TYP.
- ⊗ RAINBIRD XBD-80 MULTI-OUTLET EMITTER DEVICE IN EMITTER BOX (SEE DETAIL, LEFT), OR APPROVED EQUAL. INSTALL X8-10 (1 GPH) EMITTERS AS PER DETAIL B, THIS SHEET (LEFT). 1/4" DISTRIBUTION TUBING NOT TO EXCEED 12' IN LENGTH, TYP.



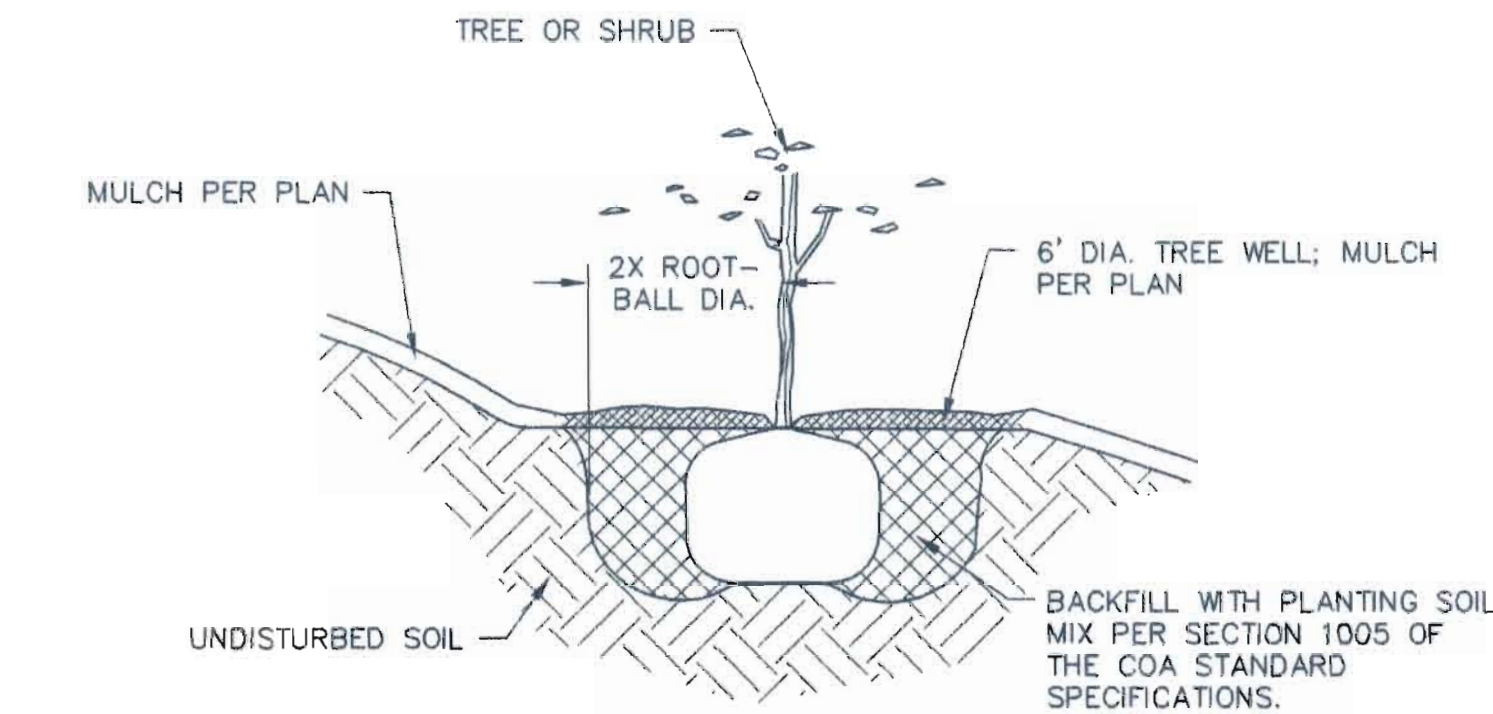
PLANTING NOTES

1. PLANTING OPERATIONS ARE TO COMPLY WITH SECTION 1005 OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES FROM DAMAGE.
2. PLANT SUBSTITUTIONS SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION PER SECTION 1005.3.2.1.
3. ALL PLANT MATERIAL SHALL BE INSPECTED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION, IN ACCORDANCE WITH SECTION 1005.3.2.2.7. SEE SECTION 3.2.2 FOR MORE INFORMATION ON SELECTION CRITERIA FOR PLANTS.
4. PLANTING SOIL MIXTURE FOR BACKFILL SHALL BE TESTED AND THE RESULTS PROVIDED TO LANDSCAPE ARCHITECT, PER SECTION 1005.3.3.3.
5. LOCATIONS OF ALL PLANTS SHALL BE STAKED AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO ANY EXCAVATION FOR PLANTING.
6. TREES SHALL BE LOCATED A MINIMUM OF 8' AWAY FROM IRRIGATION LINES, CONCRETE WALKWAYS, EDGE OF TENNIS COURTS, AND CURBS.
7. A 6' DIAMETER WELL SHALL BE PROVIDED AROUND THE BASE OF ALL TREES.
8. GRAVEL OR CRUSHER FINES MULCH SHALL BE A MINIMUM OF 4" THROUGHOUT, OR DEEPER IF SO SPECIFIED IN PLANS.

PLANT LEGEND

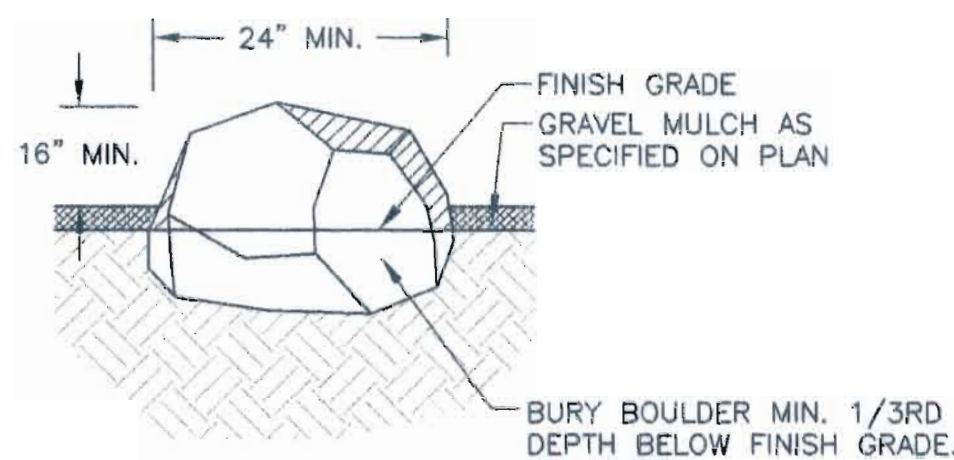
Quantity	Symbol	Common Name	Scientific Name	Planting Size	Height	Width	Comments
5		Broadleaf Deciduous Trees					
		Honey Locust "Shademaster"	<i>Gleditsia triacanthos inermis</i>	2"-Cal	80.00	40.00	Medium Water Use
		Shrubs					
11		Apache Plume	<i>Fallugia paradoxa</i>	1-Gal	5.00	5.00	Drought Tolerant
22		Blue Mist Spirea	<i>Caryopteris x clandonensis</i>	5-Gal	3.00	3.00	Low to Medium Water Use
3		Curl Leaf Mountain Mahogany	<i>Cercocarpus ledifolius</i>	5-Gal	10.00	6.00	Drought Tolerant
8		Red Yucca	<i>Hesperaloe parviflora</i>	5-Gal	3.00	4.00	Drought Tolerant
17		Rubber Rabbitbrush (Chamisa)	<i>Chrysothamnus nauseosus</i>	1-Gal	5.00	5.00	Drought Tolerant
8		Western Sand Cherry	<i>Prunus besseyi</i>	1-Gal	4.00	4.00	Drought Tolerant

PLANTING DETAILS



PLANTING ON SLOPE

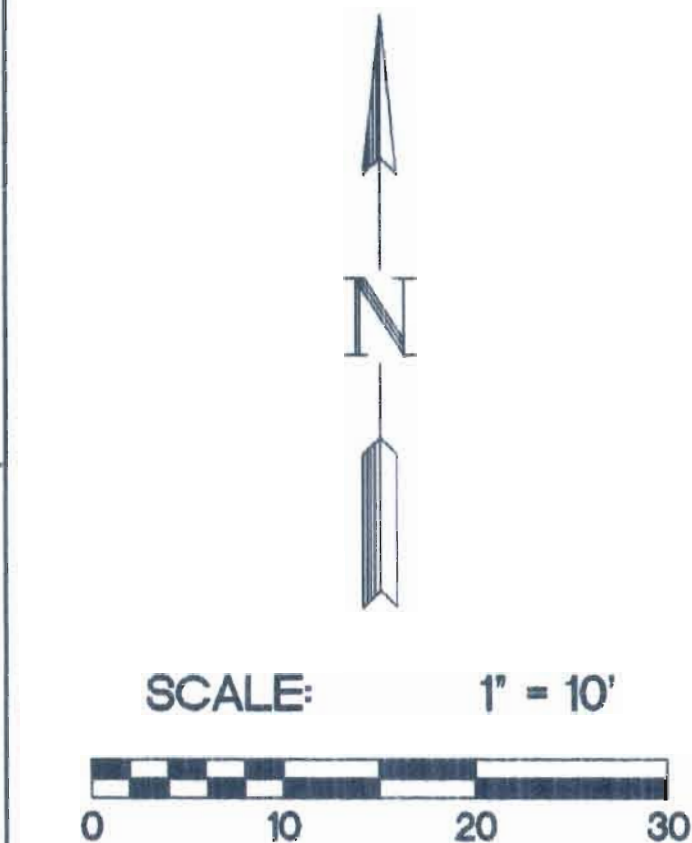
N.T.S.



BOULDER INSTALLATION DETAIL

N.T.S.

LEGEND	
	NEW FINISH CONTOURS
	EXISTING CONTOURS
	SLOPE ARROWS
	EXISTING FENCE
	NEW CHAIN LINK FENCE
	RESERVOIR PROPERTY LINE
	FLOW ARROW
	3/4" SANTA ANA TAN GRAVEL MULCH, 4" DEPTH.
	2"-4" SANTA ANA TAN COBBLE, 6" DEPTH, ON WEED BARRIER FABRIC.
	RIP RAP STONE ON FILTER FABRIC PER DETAIL, SHEET 5.
	SANDSTONE MOSS ROCK BOULDERS; SEE BOULDER INSTALLATION DETAIL, BELOW LEFT.



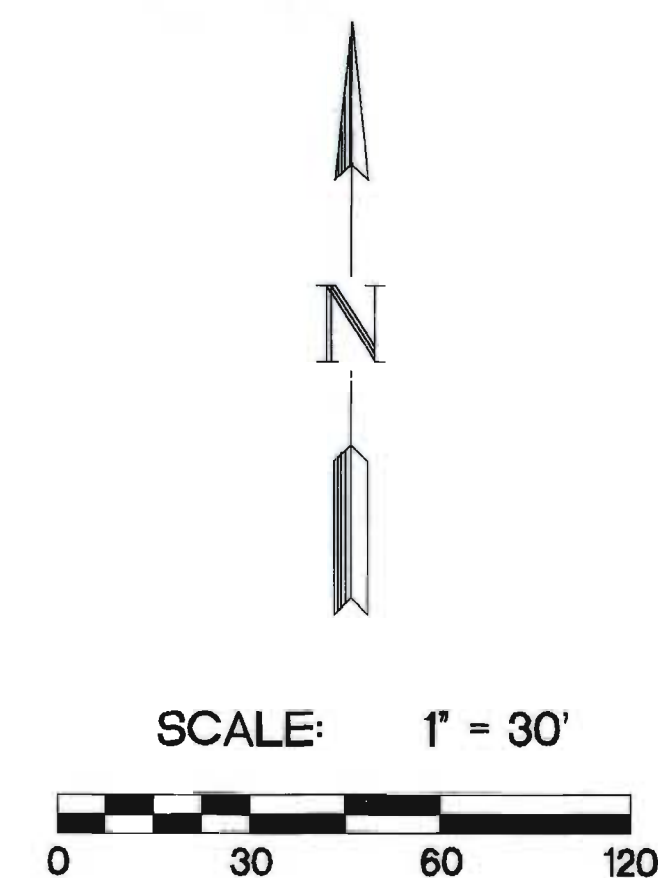
Resource Technology, Inc.
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Planning Facsimile: (505) 243-7400

CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT PARK DIVISION	
TITLE: ARROYO DEL OSO TENNIS COURT ADDITION, PHASE I Spain and Wyoming NE, Albuquerque, NM	
PLANTING PLAN	
Design Review Committee	City Engineer Approval
APPROVED JAN 14 2005 DESIGN REVIEW COMMITTEE	APPROVED JAN 14 2005 CITY ENGINEER
PROJECT NO. 718502	MAP NO. Z-F-19
SHEET 7 OF 10	



1. ON-OFF DOUBLE POLE DOUBLE THROW HUBBELL #HBL1382 STATION WITH HUBBELL #HBL7420 COVERPLATE. PROVIDE WITH SIGN. REFER TO CONTROL DIAGRAM ON SHEET E09. LOCATE SWITCH ON LATCH SIDE OF GATE.
2. INSTALL FREE STANDING UNISTRUT FRAMEWORK FOR SUPPORT OF PANEL AND CONTROL CABINET. ANCHOR VERTICAL LEGS IN CONCRETE. DEGREASE, PRIME AND PAINT FRAME. (PHASE 2)
3. SHOWN FOR GENERAL INFORMATION ONLY.
4. REFER TO PANEL SCHEDULE ON E10.
5. CONTROL CABINET SHALL BE NEMA 4X (GASKETED/RAINSHIELD). CABINET SHALL BE SIZED TO ACCOMMODATE SWITCHES, RELAYS, TIMERS, ETC. SHOWN IN DIAGRAMS ON SHEET E09.
6. TRANSFORMER AND CONDUCTORS BY PNM. CONDUIT BY ELECTRICAL CONTRACTOR. COORDINATE WITH PNM.
7. PROVIDE AND INSTALL NEW LIGHTING FIXTURE AS SCHEDULED ON LIGHTING FIXTURE SCHEDULE.
8. PROVIDE METER, CABINETS AND FRAMEWORK AT PHASE 2 CONSTRUCTION. STUB-UP CONDUIT FOR CONNECTION TO PANEL AND CONTROL CABINET. CABINETS AND FRAMEWORK SHALL BE PAINTED A TAN/BEIGE COLOR. PRIME AND USE ENAMEL PAINT WITH UV INHIBITOR. INSTALL BI-LINGUAL "DANGER-HIGH VOLTAGE" SIGNS. PROVIDE WITH LOCKS.
9. REFER TO POWER RISER DIAGRAM AND GENERAL NOTES ON SHEET E10.
10. THREE 1" CONDUITS WITH LIGHTING CIRCUITS AND CONTROL CONDUCTORS. IF CONTRACTOR ELECTS TO COMBINE CIRCUITS IN RACEWAY TO REDUCE NUMBER OF CONDUIT RUNS, CONDUIT SIZES SHALL BE INCREASED AND CONDUCTORS DERATED PER NEC TABLE FOR CURRENT CARRYING CONDUCTORS. CONDUIT SIZES ARE PRESENTLY SIZED FOR VOLTAGE DROP AND DERATION FOR SPECIFIED INSTALLATION.
11. 3/4" PVC, SCHEDULE 40 CONDUIT 24" BELOW GRADE WITH 2 #10 CU. THHN AND 1 #10 CU. THHN GROUND.
12. 3/4" PVC, SCHEDULE 40 CONDUIT 24" BELOW GRADE WITH 4 #10 CU. THHN AND 1 #10 CU. THHN GROUND.
13. UTILIZE #10 CONDUCTORS FOR RUNS OVER ONE HUNDRED AND FIFTY FEET AND UTILIZE #8 CONDUCTORS FOR RUNS OVER TWO HUNDRED FEET.
14. COORDINATE ROUTING OF CONDUIT WITH EXISTING CONDITIONS VIA PULLBOX.
15. NOT USED.
16. 3 #12 CU. THHN AND 1 #10 CU. THHN GROUND SWITCH CONTROL CONDUCTORS IN 3/4" PVC CONDUIT.
17. NOT USED.
18. NO WORK REQUIRED IN THESE AREAS.
19. NOT USED.
20. LIGHTING FIXTURES, POLES, PANELS, CONTROL CABINET, FRAMEWORK AND WIRE TO BE INSTALLED AT LATER DATE. (PHASE TWO CONSTRUCTION). PROVIDE POLE BASE, ANCHOR BOLTS, CONDUIT STUB-UPS (MARKED/CAPPED) AND ALL CONDUIT WITH TWO PULLCORDS. CAP AND INSTALL WARNING TAPE 6" BELOW GRADE.
21. PROVIDE COMPLETE LIGHTING SYSTEM AS INDICATED FOR PHASE ONE AND PHASE TWO CONSTRUCTION.

A. PROVIDE ALL CUTTING, TRENCHING AND BACKFILL FOR ALL UNDERGROUND CONDUIT INSTALLATION. COORDINATE WITH ALL EXISTING CONDITIONS AND THE CITY OF ALBUQUERQUE-PARK DIVISION.



Resource Technology, Inc.

Civil Engineering
Environmental Sciences
Water Resources
Landscape Architecture
Planning

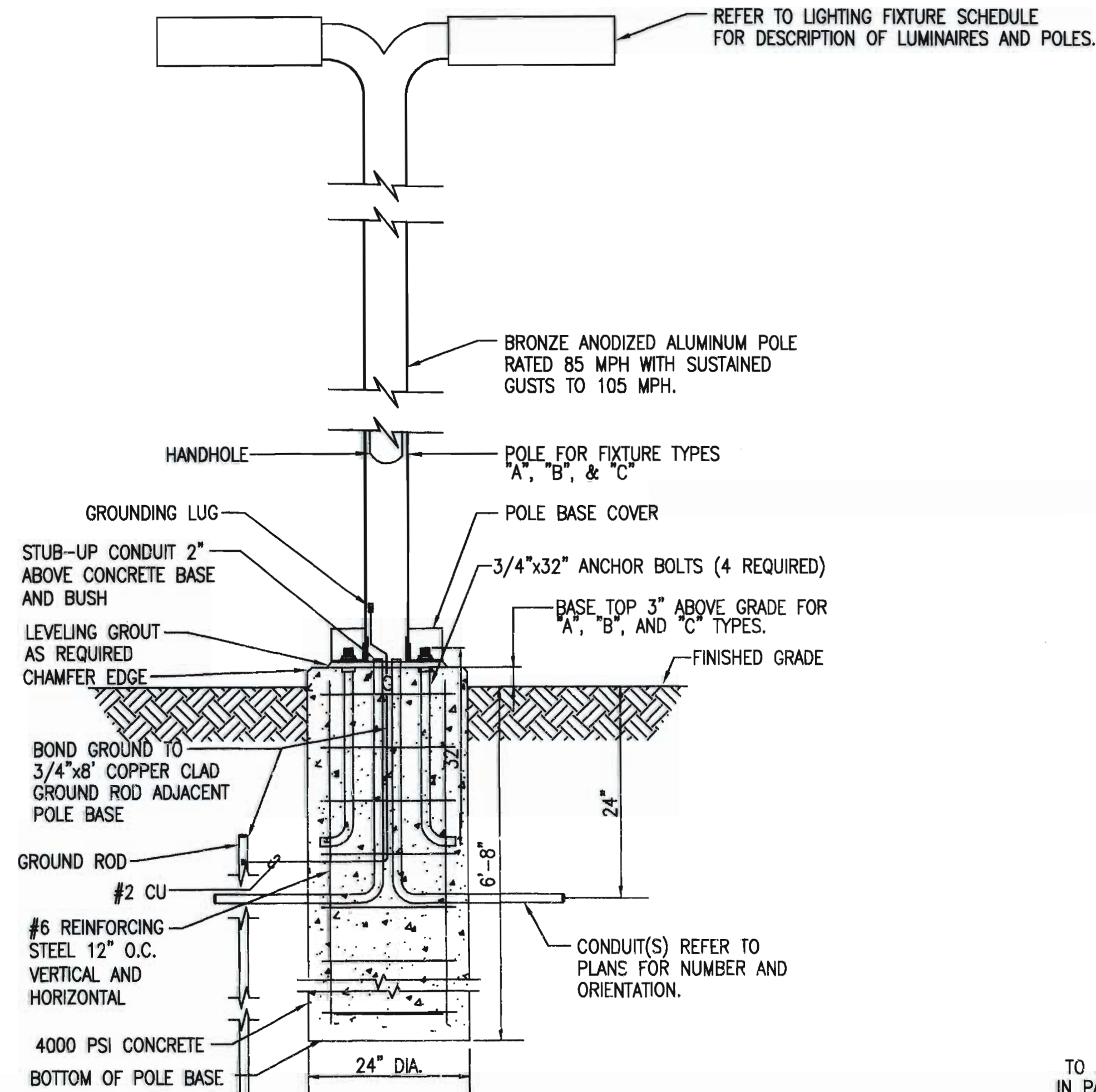
5501 Jefferson Blvd. NE, Suite 200
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CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
PARK DIVISION

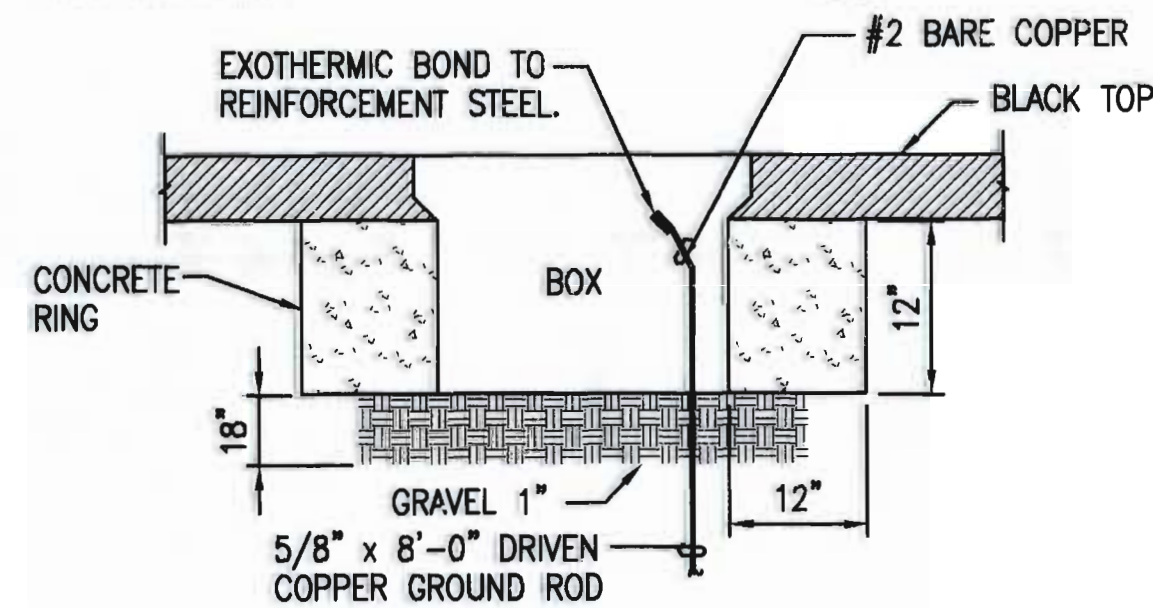
TITLE: **ARROYO DEL OSO TENNIS COURT ADDITION**
Spain and Wyoming NE, Albuquerque, NM
LIGHTING SITE PLAN

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

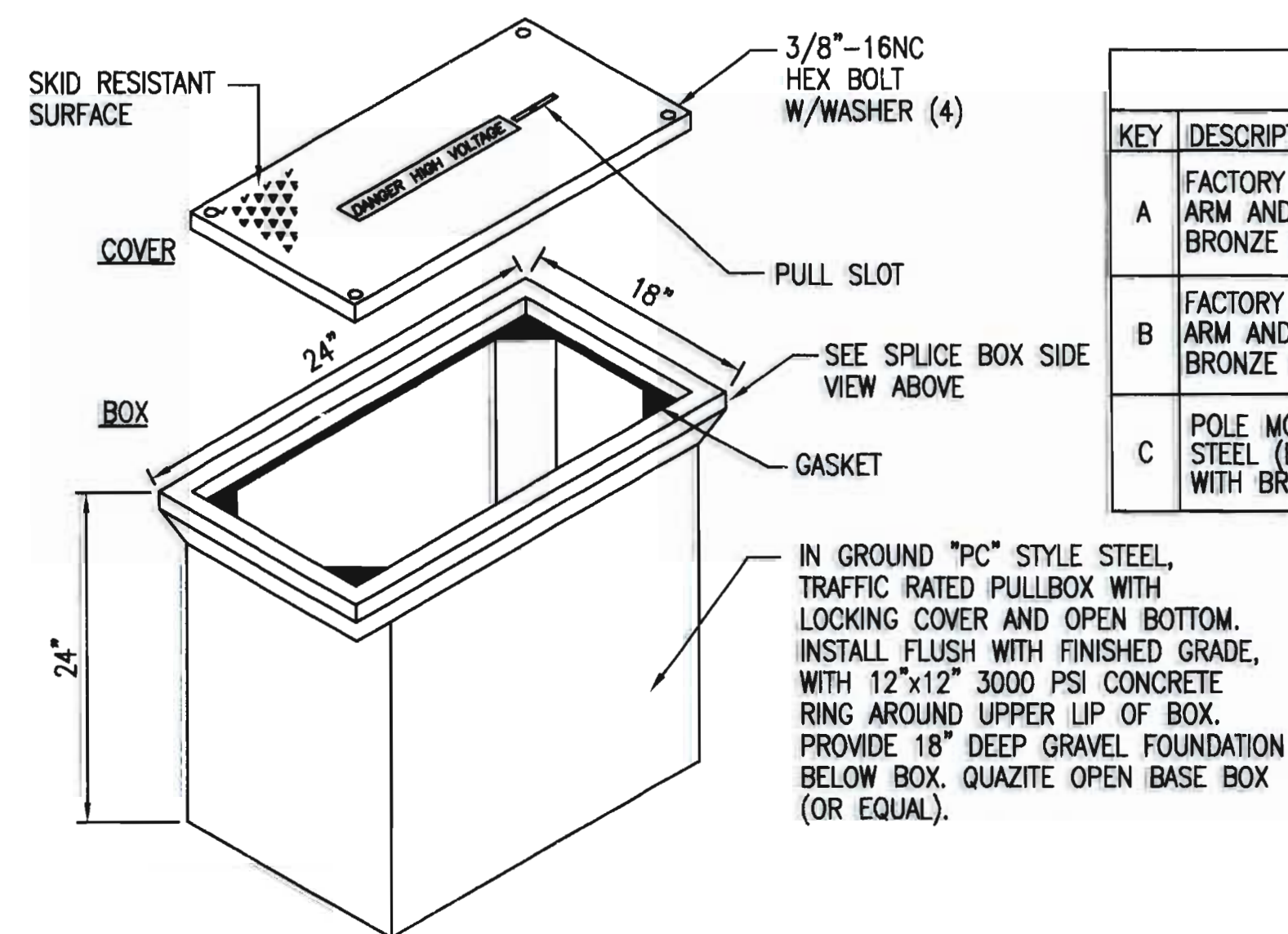
PROJECT NO.	718502	MAP NO.	Z-F-19	SHEET	E-8	OF	10
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POLE BASE DETAIL
NOT TO SCALE

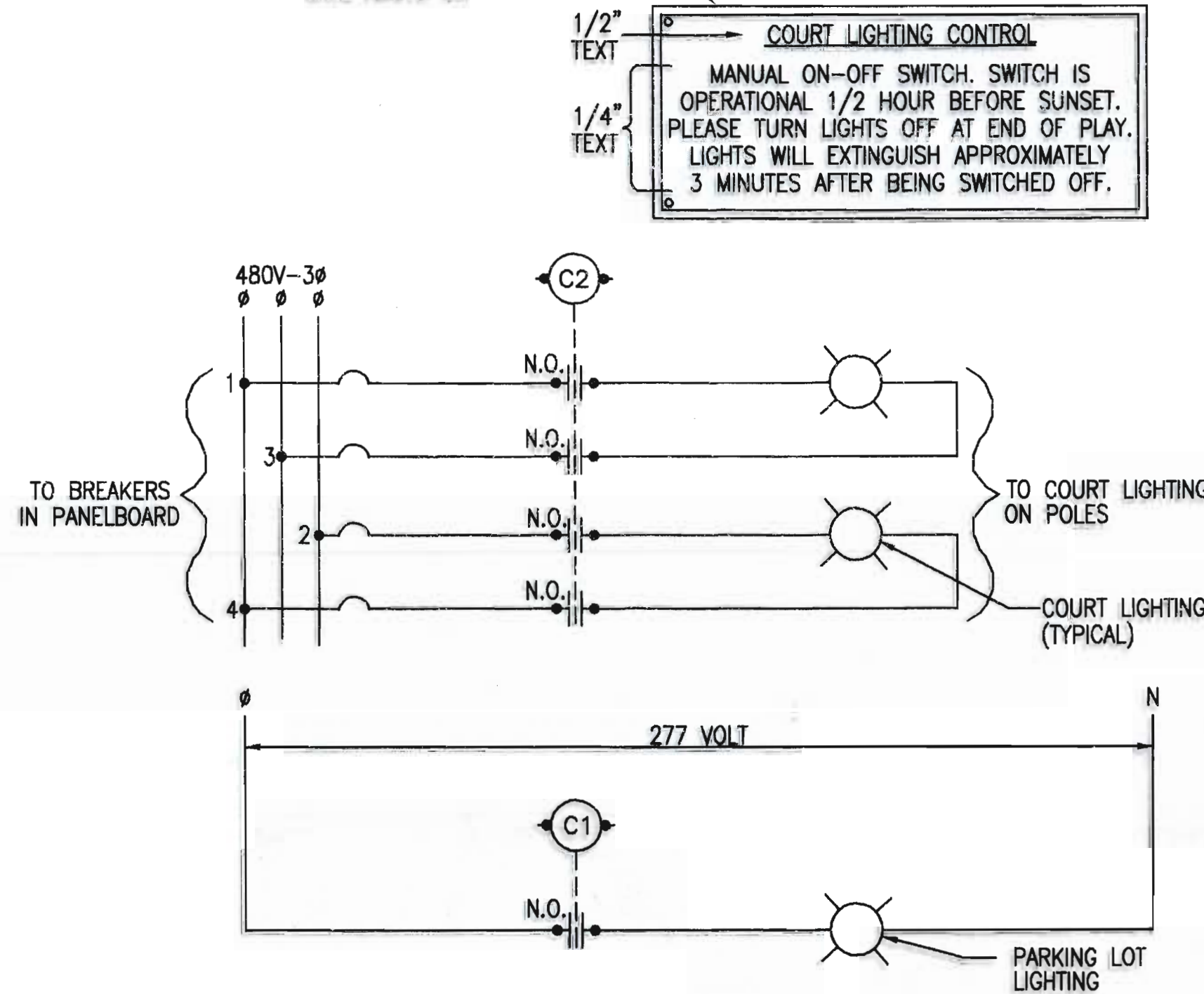
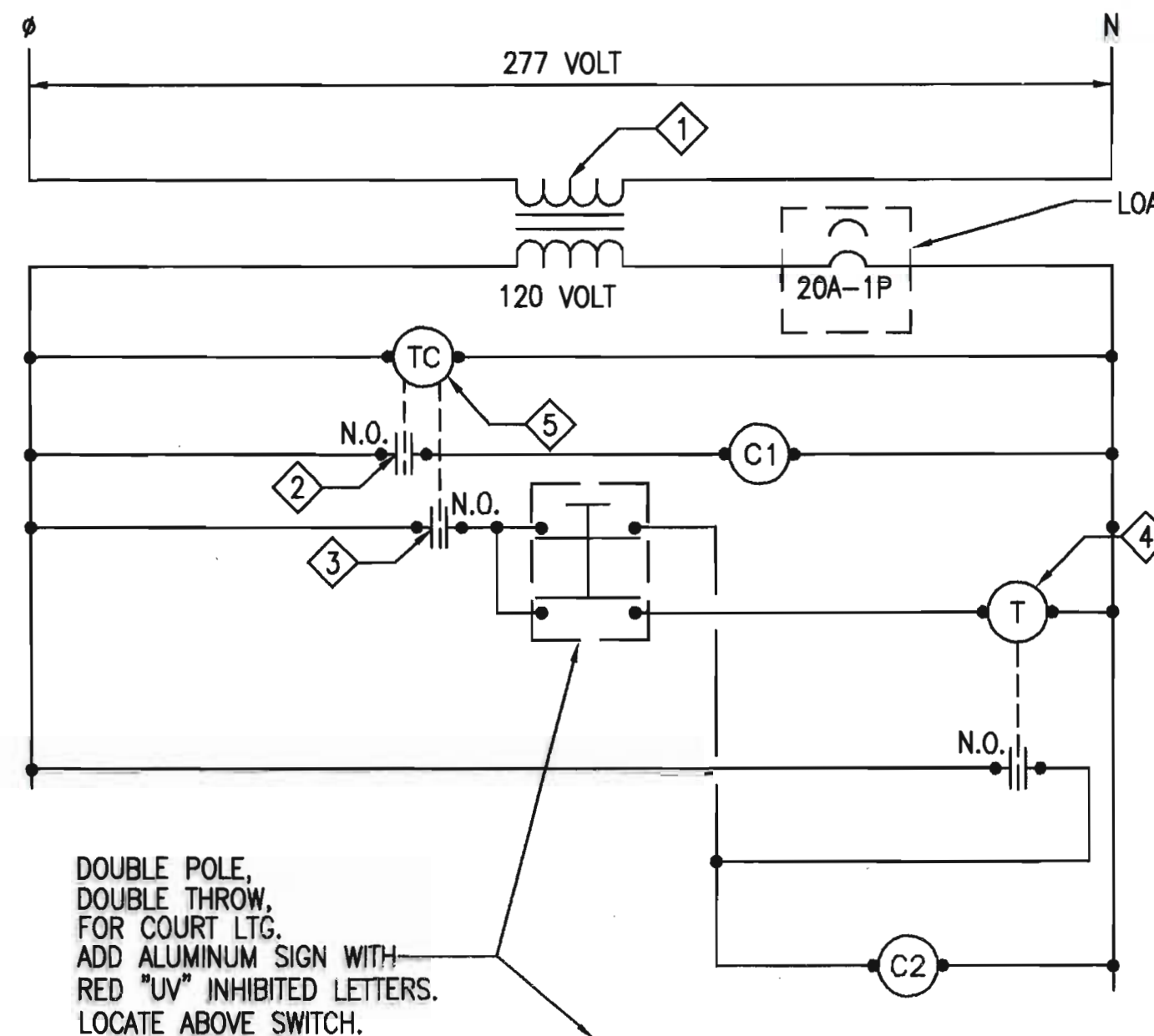


SPlice BOX SIDE VIEW DETAIL



SPlice BOX DETAIL

NOT TO SCALE



COURT LIGHTING CONTROLS (TYP. OF 7)

NOT TO SCALE

LIGHT FIXTURE SCHEDULE

KEY	DESCRIPTION	MANUFACTURER	CATALOG #	#LAMPS/TYPE	VOLT.	WATTS/FIXTURE	MOUNTING	COMMENTS
A	FACTORY PAINTED (BRONZE) POLE WITH EXTENSION ARM AND HANDHOLE. SINGLE HEAD FIXTURE WITH BRONZE FINISH.	LSI-COURTSIDER	CXLS-A-4TBC-480V-BRZ-HSS-PLS-NO	(1)-1000W/MH	480V-1 ph.	1000W	POLE MOUNTED	20' X 4" O.D. STEEL ROUND POLE. SEE POLE BASE DETAIL.
B	FACTORY PAINTED (BRONZE) POLE WITH EXTENSION ARM AND HANDHOLE. DOUBLE HEAD FIXTURE WITH BRONZE FINISH.	LSI-COURTSIDER	CXLS-B-4TBC-480V-BRZ-HSS-PLS-NO	(2)-1000W/MH	480V-1 ph.	2000W	POLE MOUNTED	20' X 4" O.D. STEEL ROUND POLE. SEE POLE BASE DETAIL.
C	POLE MOUNTED, 25' FACTORY PAINTED ROUND STEEL (BRONZED) POLE. ONE HEAD FIXTURE WITH BRONZE FINISH. SEE POLE BASE DETAIL.	LSI	CT2H-3-250MH-F-MT-BRZ-CT2H-HSS-CT2H-PLS (POLE)-SRPBO-S07G-25 S-BRZ-SSRBC	(1)-250W/MH	277V-1 ph.	250W	POLE MOUNTED	

KEYED NOTES: ◇

- 120 VOLT CONTROL CIRCUIT SHALL BE OBTAINED FROM A CONTROL POWER TRANSFORMER MOUNTED IN CABINET SIZED FOR THE LOAD WITH 25% SPARE CAPACITY.
- CIRCUIT #1 FROM TIMECLOCK TO CONTROL PARKING LOT LIGHTING VIA CONTACTOR COIL "C1".
- CIRCUIT #2 FROM THE TIME CLOCK TO CONTROL COURT LIGHTING VIA CONTACTOR COIL "C2".
- DELAY ON BREAK RELAY TIMER. CUTLER HAMMER #TRNP240AC. SET AT 3 MINUTES. PROVIDE WITH 8 PIN SOCKET CUTLER HAMMER #D3PA2. CONNECT POWER TO PIN 2 & 7. CONNECT SWITCH LEG TO PIN 1 & 3.
- PROVIDE TORK TIME CLOCK #DIN200.

GENERAL NOTES:

- LIGHTING FIXTURE SPECIFIED IS SPECIFICALLY DESIGNED FOR PERIMETER LIGHTING OF TENNIS COURTS. FIXTURE EMPLOYS A FORWARD THROW REFLECTOR WITH SHARP BACKSIDE CUT-OFF TO MINIMIZE/ELIMINATE STRAY LIGHT AND GLARE. PROJECT DESIGN, BASED ON THE TENNIS COURT FIXTURE SPECIFIED, UTILIZES EIGHT 20 FOOT POLES WITH 24" FIXTURE EXTENSION ARMS AND EIGHT 1000 WATT, 107,800 LUMEN, MH FIXTURES PER COURT. SIDE-BY-SIDE COURTS SHARE FOUR POLES (BUT HAVE SEPARATE FIXTURES) AS SHOWN ON PLAN AND SPECIFIED. IF CONTRACTOR ELECTS TO SUBSTITUTE SPECIFIED FIXTURE WITH ANOTHER TYPE THAT REQUIRES MORE FIXTURES WITH INCREASED WATTAGE USE, THE CONTRACTOR WILL BE REQUIRED TO INCLUDE IN HIS BID, THE ADDITIONAL COST TO INCREASE THE ELECTRICAL SERVICE, PANEL AMPACITIES, INCREASE IN CONDUIT AND WIRE SIZES, ADDITIONAL BREAKERS, ETC. AND THE REVISED DESIGN AND DRAWINGS PROPOSED BY HIM MUST BE STAMPED BY A REGISTERED NEW MEXICO PROFESSIONAL ELECTRICAL ENGINEER PRIOR TO SUBMISSION OF SHOP DRAWINGS AND THE START OF WORK. INCLUDED IN THE SUBMISSION SHALL BE THE OVERALL PER MONTH INCREASE IN UTILITY CO. SUPPLIED POWER REQUIRED TO SERVE THE SUBSTITUTED LIGHTS, ASSUMING THE LIGHTS WILL OPERATE 4 HOURS PER DAY, 7 DAYS A WEEK. THE ELECTRICAL SYSTEM IS SIZED/DESIGNED TO ACCOMMODATE THE SPECIFIED WATTAGES AND NUMBER OF FIXTURES SHOWN ON THE DRAWINGS.



CITY OF ALBUQUERQUE DEPARTMENT OF MUNICIPAL DEVELOPMENT PARK DIVISION	
TITLE: ARROYO DEL OSO TENNIS COURT ADDITION Spain and Wyoming NE, Albuquerque, NM DETAILS, SCHEDULE AND DIAGRAMS	
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL
APPROVED JAN 14 2005	APPROVED JAN 14 2005
PROJECT NO. 718502	MAP NO. Z-F-19
SHEET E-9 OF 10	

AS BUILT INFORMATION	
CONTRACTOR	DATE
WORK BY	DATE
FIELD ACCEPTANCE BY	DATE
DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE
MICRO-FILM INFORMATION	
NO.	DATE
BENCH MARKS	
STATION NAME: 3-F19AB	DATE
SURVEY INFORMATION	
FIELD NOTES	DATE
BY	DATE
NO.	DATE
ENGINEERS SEAL	
NEW MEXICO PROFESSIONAL ENGINEER 6530 H. J. Baumgardner 10-25-05	
REVISIONS	
NO.	DATE
DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE

KEYED NOTES:

1. PROVIDE AND INSTALL 4" SERVICE CONDUIT PER PNM STANDARD DRAWING DS-10-8.0, UNDERGROUND UP EXISTING UTILITY POLE TO PNM POLE MOUNTED TRANSFORMER AS REQUIRED BY PNM/PNM STANDARD DRAWINGS DS-4-9.5.
2. CONDUIT AND BRANCH CIRCUIT WIRING AS REQUIRED BY LIGHTING CONTROL DIAGRAMS ON SHEET E09 AND CIRCUITING ON SHEETS E08 AND E10.
3. PROVIDE NEMA 4X OUTDOOR GASKETED CABINET WITH HINGED COVER AND BACKBOARD. MOUNT RELAYS ON BACKBOARD. REFER TO LIGHTING CONTROL DIAGRAMS ON SHEET E09.
4. INSTALL THREE DRIVEN 3/4" X 10'-0" COPPER CLAD GROUND RODS ON 10'-0" ON CENTERS INTERCONNECTED WITH 1 #2 BARE COPPER CONDUCTOR. USE CADWELD CONNECTIONS.
5. ALL EXTERIOR ELECTRICAL ENCLOSURES TO BE NEMA 4X WITH PROVISIONS FOR LOCKS. FITTINGS TO BE COMPRESSION TYPE WITH BUSHINGS, LIQUIDTIGHT. REFER TO SITE PLAN FOR LOCATION.
6. INSTALL THREE PHASE METER ENCLOSURE PER PNM STANDARD DRAWING MS-3-8.0(A) & (A1) AND MS-7-1.0.
7. PROVIDE AND INSTALL 400A-3 PHASE. 480V HEAVY DUTY DISCONNECT SWITCH IN NEMA 4X ENCLOSURE PER NEC 110.26, WORKING CLEARANCE. FUSE AT MANUFACTURER'S RECOMMENDATIONS.
8. PROVIDE AND INSTALL 4" SCHEDULE 80 PVC 48" BELOW GRADE. ELBOWS ARE TO BE RIGID GALVANIZED STEEL. CONDUCTORS BY PNM.
9. REFER TO PANEL SCHEDULE ON THIS SHEET.

10. TO PNM PROVIDED TRANSFORMERS. CONTRACTOR TO COORDINATE WORK WITH PNM.
11. 4 #600 COPPER AND 1 #1/0 COPPER GROUND IN 3-1/2" CONDUIT.
12. INSTALL TWO 2-1/2" CONDUIT STUB-OUTS BEYOND PANEL "LP" APPROXIMATELY 200' TO THE WEST FOR FUTURE EXTENSION TO PANELS "LP1" AND "LP2" AND CAP. INSTALL AT 24" BELOW GRADE TO TOP. INSTALL ELECTRICAL WARNING TAPE 6" FROM TOP OF GRADE.

GENERAL NOTES:

APPLICABLE TO ALL ELECTRICAL DRAWINGS

- A. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL WORK IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS, PLANS AND ASSOCIATED NOTES. NFPA, NATIONAL ELECTRICAL CODE, STATE & LOCAL CODES, AND IN A WORKMANLIKE MANNER.
- B. CONTRACTOR SHALL BECOME FAMILIAR WITH EXISTING CONDITIONS AT JOB SITE.
- C. THE CONTRACTOR SHALL INSTALL ALL CONTROLS AND MAKE REQUIRED CONNECTIONS TO EQUIPMENT.
- D. THE CONTRACTOR SHALL INCLUDE IN HIS BID THE COSTS OF ALL PERMITS, TESTS & INSPECTIONS, AND VISIT THE SITE OF WORK BEFORE SUBMITTING BID. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS.
- E. THE CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE.
- F. THE CONTRACTOR SHALL PREPARE AND MAINTAIN ON THE JOB SITE A SET OF MARKED UP PRINTS SHOWING ALL CHANGES MADE DURING CONSTRUCTION AND TURN IT OVER TO THE CITY AT THE END OF THE JOB. ALL CHANGES MUST HAVE THE CITY AND ENGINEERS APPROVAL.
- G. ANY DISCREPANCY BETWEEN MATERIAL DESCRIPTION & CATALOG NO. SHALL BE BROUGHT TO THE CITY'S ATTENTION IMMEDIATELY.

- H. INTERRUPTION OF ANY ELECTRICAL SERVICES SHALL BE COORDINATED WITH THE OWNER AT LEAST 14 DAYS PRIOR TO THE INTENDED OUTAGE AND SHALL BE REQUESTED IN WRITING WITH A COPY TO THE CITY.
- I. PROVIDE COLOR CODING FOR 277/480V-3Ø-4W AND 120/240V-1Ø-3W, CIRCUITS. MAINTAIN SAME COLOR CODING THROUGHOUT. GENERALLY, CONDUCTORS SHALL BE THHN/THWN. SPLICES OUTDOORS SHALL BE WATERTIGHT.
- J. CONDUIT SHALL BE ROUTED IN A NEAT WORKMANLIKE MANNER.
- K. CONDUIT BEING RUN EXPOSED SHALL BE DONE IN A NEAT WORKMANLIKE MANNER, MAKING ALL RUNS AS STRAIGHT AS POSSIBLE.
- L. ALL METALLIC CONDUIT WHICH COMES IN CONTACT WITH EARTH SHALL BE WRAPPED IN SCOTCH WRAP #51 (HALF-LAPED) OR PLASTIC COATED. SCHEDULE 40 PVC, GRS, AND IMC CONDUIT IS APPROVED FOR UNDERGROUND USE. GRS OR IMC ABOVE GRADE.
- M. ALL PULLBOXES SHALL BE CODE GA. AND MEET THE MINIMUM SIZES AS RECOMMENDED BY N.E.C.
- N. FURNISH AND INSTALL ALL FRAMEWORK/CHANNELS REQUIRED FOR THE SUPPORT OF EQUIPMENT. PRIME AND PAINT IF NOT GALVANIZED.
- O. CONTRACTOR SHALL REPLACE ALL EXISTING SURFACES (SIDEWALKS, PAVEMENT, ASPHALT, CURBS/GUTTERS, ETC.) REMOVED/DISTURBED BY NEW WORK REMOVALS, ETC., WITH NEW MATCHING MATERIALS OF THE SAME TYPE, THICKNESS, ETC. IN AREAS OF THE TENNIS COURTS AND WALKWAYS. AREAS IMMEDIATELY AROUND COURTS SHALL BE SAW CUT AND AUGERS USED TO INSTALL POLE BASES. TENNIS COURT PLAYING SURFACES DISRUPTED BY THIS WORK SHALL BE CAREFULLY PATCHED WITH LIKE MATERIALS.
- P. INSTALL MICARTA NAMEPLATES ON ALL CABINETS, PANELBOARDS, PULLBOXES, ETC. INDICATING POINTS OF FEEDER ORIGIN AND TERMINATION.
- Q. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR CATALOG CUTS ON ALL LIGHTING FIXTURES. INCLUDED SHALL BE POINT BY POINT LIGHTING CALCULATIONS, MOUNTING HEIGHTS, POLE PLACEMENT AND AIMING CHARTS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR PANELBOARDS, ENCLOSED BREAKERS, RELAYS, PULLBOXES, RACEWAY, WIRING, TRANSFORMERS, LIGHTING CONTROL CABINET AND METERING ENCLOSURE.
- R. GROUNDING SHALL BE AS REQUIRED BY NFPA 70/NEC.
- S. ALL CONDUCTORS TO BE #12 AWG THWN/THHN EXCEPT WHERE OTHERWISE SHOWN OR NOTED.
- T. SERVICE ENTRANCE CONDUCTORS SHALL BE LISTED FOR THE APPLICATIONS.
- U. CONTRACTOR SHALL PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES.
- V. TENNIS COURT LIGHTING SYSTEM SHALL MEET OR EXCEED THE FOLLOWING CRITERIA. SYSTEM SHALL MEET IES, RP6-1988 SPORTS LIGHTING CLASS II ILLUMINANCE REQUIREMENTS TO SUPPORT SPORT CLUB TOURNAMENT PLAY. MAINTAINED ILLUMINANCE SHALL MEET OR EXCEED MAINTAINED HORIZONTAL FOOTCANDLES AT 3-FOOT ABOVE COURT WITHIN THE PRINCIPAL PLAYING AREA OF 60 FC AVERAGE, 40FC MINIMUM WITH A MAX. TO MIN. UNIFORMITY OF 1.5 WITHIN THE LINES AND 1.7 WITHIN THE PRINCIPAL PLAYING AREA ON A PER COURT ILLUMINATION BASIS WITHOUT INCLUDING CONTRIBUTING LIGHT FROM ADJACENT COURTS. PLACEMENT, AIMING AND HEIGHT OF FIXTURES SHALL BE AS REQUIRED BY FIXTURE MANUFACTURERS POINT-BY-POINT LIGHTING CALCULATIONS. CALCULATIONS MUST BE PROVIDED AS PART OF SHOP SUBMITTAL. CALCULATIONS SHALL USE AN LLD OF 80%.
- W. CONTRACTOR SHALL COMPLY/FOLLOW NFPA CONDUCTOR DERATION TABLES. CONDUCTOR SIZES SHOWN ARE BASED ON VOLTAGE DROP OF 2.5% OR LESS.
- X. BRANCH CIRCUIT DERATION FACTORS. CONTRACTOR MUST COMPLY WITH NFPA 70 (NEC) TABLE 310-15(b)(2)(g) REGARDING CONDUCTOR CURRENT RATING WHERE THE NUMBER OF CURRENT CARRYING CONDUCTORS EXCEED THREE IN A RACEWAY.

Load Description	Cat #	Brkr Size	poles	CCT #	Phase A Load	Phase B Load	Phase C Load	CCT #	poles	Brkr Size	Cat #	Load Description
COURT #4 LTG	1	20	2	1	2182			2	2	20	1	COURT #7 LTG
COURT #4 LTG	1	20		3	2182	2182		4		20	1	COURT #7 LTG
COURT #4 LTG	1	20	2	5			2182	6	2	20	1	COURT #7 LTG
COURT #4 LTG	1	20		7	2182			8		20	1	COURT #7 LTG
COURT #4 LTG	1	20		9	2182			10	2	20	1	COURT #8 LTG
COURT #5 LTG	1	20		11		2182		12		20	1	COURT #8 LTG
COURT #5 LTG	1	20	2	13	2182			14	2	20	1	COURT #8 LTG
COURT #5 LTG	1	20		15	2182			16		20	1	COURT #8 LTG
COURT #6 LTG	1	20	2	17		2182		18	2	20	1	COURT #5 LTG
COURT #6 LTG	1	20		19	2182			20		20	1	COURT #5 LTG
COURT #6 LTG	1	20	2	21	2182			22	2	20	1	COURT #5 LTG
COURT #6 LTG	1	20		23		2182		24		20	1	COURT #5 LTG
AREA LIGHTING	1	20	1	25	800			26	3	100	4	FUTURE SEMI PRO
COURT #9 LTG	1	20	2	27	13000	13000		28		100	4	COURT #13 AND BLDG. PANEL "LP2"
COURT #9 LTG	1	20		29			2182	30		100	4	
COURT #9 LTG	1	20	2	31	2182			32	3	70	4	FUTURE COURTS
COURT #9 LTG	1	20		33	8648	8648		34		70	4	TEN THRU TWELVE
SPARE		20	1	35				36		70	4	PANEL "LP1"
SPARE		20	1	37				38	1	20	1	VA CONTROL XFMR
SPARE		20	1	39	300			40	1	20		SPARE
SPARE		20	1	41								SPARE
Total Watts					42006	43268	41106	42	1	20		

Load Category	Connected	Dmd %	Demand	Feeder Size	Load
1.) Lighting	81436	1.25	76795	Connected KW	126.36
2.) Receptacles	0	1	0	Demand KW	141.74
3.) Motor	0	0.5	0	Connected Amps	152
4.) Sub - Panels	84944	1.25	0	Demand Amps	171
Total	126380	1	84944		
			141739		

NEW PANEL "LP": 277/480V, 3 PHASE, 4 WIRE
400AMP, 400A MCB, 42 CIRCUIT, SURFACE MOUNT,
NEMA 4X ENCLOSURE, BOTTOM FEED
SQUARE "D", NOOD OR EQUAL
14 KAC
BOLT-IN BREAKERS

LIGHTING CONTROL CABINET

CONTROL POWER TRANSFORMER (120V) WITH SECONDARY FUSES.

LOAD CENTER

CONTACTORS
C1=ELECTRICALLY HELD(20A-1P)
C2=ELECTRICALLY HELD(14/20A-1P)

UNISTRUT FRAMEWORK SUPPORT SYSTEM

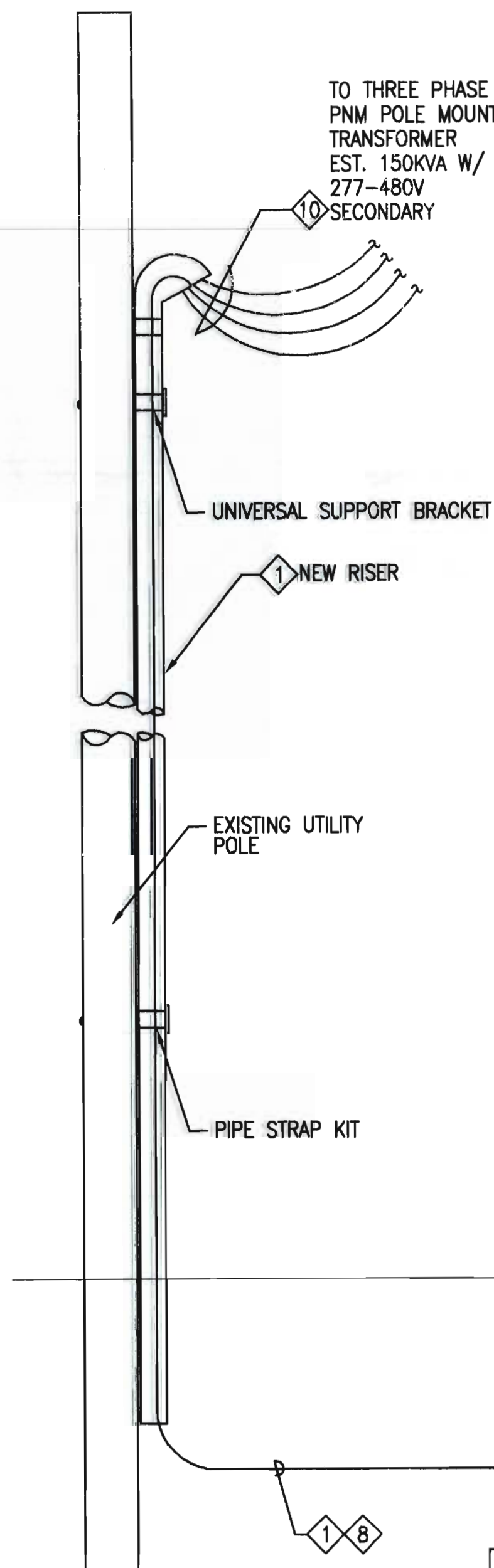
TYPICAL BRANCH CCT. TO POLE MOUNTED LIGHTS

CONDUIT STUBOUT FOR FUTURE COURTS 10-12 TO SOUTHWEST
CONDUIT STUBOUT FOR FUTURE COURT 13 TO WEST.

POWER RISER DIAGRAM

NOT TO SCALE

NOTE: REFER TO PANEL "LP" FOR LOAD CALCULATIONS.
PNM 150KVA XFMR @ 1.5% IMPED. @ UNLIMITED = 12,019 FAULT CURRENT.



AS BUILT INFORMATION

BENCH MARKS

SURVEY INFORMATION

ENGINEERS SEAL

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CITY OF ALBUQUERQUE
DEPARTMENT OF MUNICIPAL DEVELOPMENT
PARK DIVISIONTITLE: ARROYO DEL OSO TENNIS COURT ADDITION
Spain and Wyoming NE, Albuquerque, NM
PANEL SCHEDULE AND POWER RISER DIAGRAM

Design Review Committee City Engineer Approval Mo./Day/Yr. Mo./Day/Yr.
APPROVED JAN 14 2005
DESIGN REVIEW COMMITTEE CITY ENGINEER

PROJECT NO. 718502 MAP NO. Z-F-19 SHEET E-10 OF 10