

- KEYED NOTES**
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 - CONSTRUCT 6" HIGH CONCRETE PINNED CURB PER C.O.A. STD. DWG. 2415-B (TYPE 1 PINNED CURB). SEE SITE PLAN FOR ADDITIONAL INFORMATION.
 - PROVIDE SHALLOW DEPRESSION (4" TO 6" DEEP) WITHIN LANDSCAPING TO CAPTURE STORM WATER FOR WATER HARVESTING.
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 - B=LOW SIDE GRADE
 - XXXXXX TEMPORARY PHASE TRANSITION PAVEMENT

VICINITY MAP

PROJECT DATA

PROPERTY: THE SITE IS A FULLY DEVELOPED PUBLIC PARK PROPERTY LOCATED WITHIN C.O.A. VICINITY MAP J-15. THE PARK IS BOUND TO THE EAST BY WALTER STREET NE, TO THE WEST BY EDITH BLVD. AND TO THE NORTH AND SOUTH BY DEVELOPED RESIDENTIAL PROPERTIES.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE ADA ACCESSIBLE RAMPS AND VARIOUS IMPROVEMENTS TO PLAY AREAS, GRASS FIELDS, RETAINING WALL TRANSITIONS, PLAYGROUND AND PICNIC AREAS.

LEGAL: SANTA BARBARA PARK, ALBUQUERQUE, N.M.

BENCHMARK: "17-J14" A 3 1/4" ALUMINUM DISC SET FLUSH WITH THE TOP OF CONCRETE. PUBLISHED GRID COORDINATES (NAD 83 CENTRAL ZONE) N=,488,866.762, E=1,519,149.317, ELEV.=4957.484 (NAVD 1988), LATITUDE 35°5'29.65906"N, LONGITUDE 106°39'19.40075"W (WGS 84)

OFF-SITE: NO OFF-SITE DRAINAGE AFFECTS THIS PROPERTY.

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP #35001C0332G, DATED SEPTEMBER 2008, THE SITE IS LOCATED WITHIN FLOODZONE 'X' (UNSHADED) DESIGNATED AS FLOOD INSURANCE RATE ZONES FOR AREAS OUTSIDE THE 0.2-PERCENT-ANNUAL-CHANCE FLOODPLAIN.

DRAINAGE PLAN CONCEPT:

THE SITE DEMOLITION AND NEW CONSTRUCTION WILL NOT SIGNIFICANTLY ALTER EXISTING DRAINAGE PATTERNS OR RATES. SITE DISCHARGE WILL CONTINUE TO PASS WEST TO EDITH BLVD.

PER A PRE-DESIGN MEETING WITH COA HYDROLOGY ENGINEER: CURTIS CHERNE P.E., A TEMPORARY ASPHALT CURB WILL BE INSTALLED ALONG THE NORTH EDGE OF THE EXISTING ASPHALT BASKETBALL PAVEMENT TO DEFLECT MINOR DISCHARGE TO EDITH BLVD. WHEN THIS PORTION OF THE PARK IS REDEVELOPED (PHASE II), A PERMANENT CURB WILL BE CONSTRUCTED. STORM WATER WILL CONTINUE TO DISCHARGE FORM THE SITE AS PER THE EXISTING RELEASE CHARACTERISTICS.

ENGINEER: ISAACSON & ARFMAN, P.A.
128 MONROE ST NE, ABO. NM 87108
PHONE: (505) 268-8828

SURVEYOR: BOHANNAN HUSTON
ROBERT LOCKMAN NMPS NO. 18331
COURTYARD 1
7500 JEFFERSON ST NE, ABO. NM 87109

WATER QUALITY REQUIREMENTS

PER THE CITY OF ALBUQUERQUE DRAINAGE ORDINANCE, ALL NEW DEVELOPMENT PROJECTS SHALL MANAGE THE RUNOFF FROM PRECIPITATION WHICH OCCURS DURING THE 90TH PERCENTILE STORM EVENT - THE PRECIPITATION EVENT THAT IS LESS THAN OR EQUAL TO NINETY PERCENT OF ALL RAINFALL EVENTS IN A CALENDAR YEAR. THE ORDINANCE DEFINES THE 90TH PERCENTILE STORM EVENTS AS 0.44 INCHES AND THE REQUIRED STORAGE AS 0.34" [0.44" LESS 0.1" FOR INITIAL ABSTRACTION].

IN THE FULLY DEVELOPED CONDITION (FOLLOWING THE REMOVAL / REPLACEMENT OF THE EXISTING ASPHALT BASKETBALL COURTS - SEE SHEET CG-102), THE IMPERVIOUS AREA WILL BE 0.27 ACRES(±). THE REQUIRED STORMWATER RETENTION FOR THIS IMPERVIOUS AREA = 333 CF (BASED ON THE 0.34" REQUIREMENT).

ISAACSON & ARFMAN, P.A.
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Ph. 505-268-8828 www.isaacson.com

2081 CG-101.dwg Jul 16, 2015

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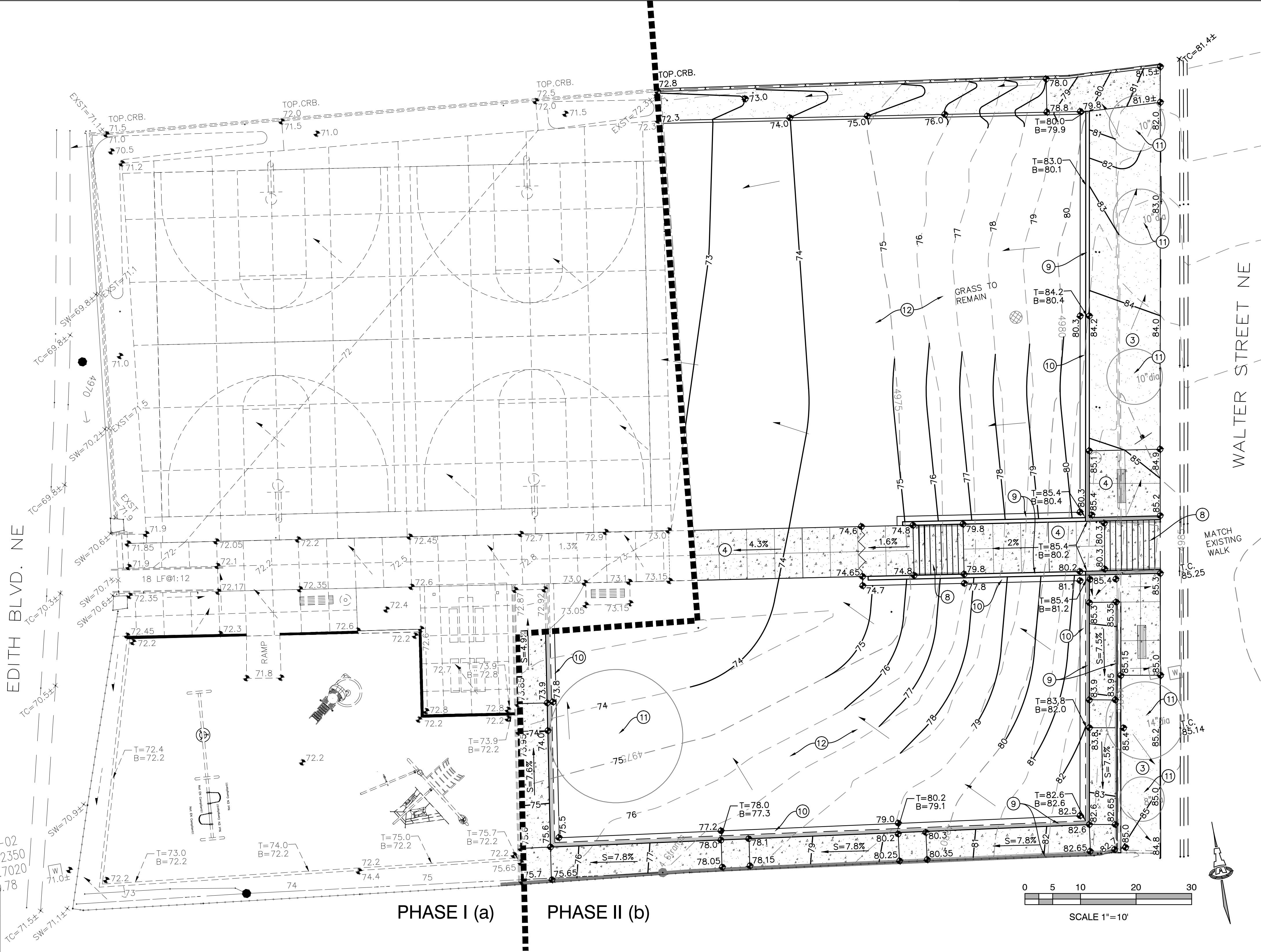
SANTA BARBARA PARK
MRWM

GRADING & DRAINAGE - PHASE I

No.	Revision:	Date:	Job No.
07/16/15			2081
Drawn By:			CG-101
BJB			
FCA			SH. 4 OF 19

GENERAL NOTES

- A. ALL WORK DETAILED ON THESE PLANS AND PERFORMED UNDER THIS CONTRACT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT. WHERE APPLICABLE, CITY OF ALBUQUERQUE STANDARDS APPLY.
- B. THE CONTRACTOR SHALL ABIDE BY ALL STATE, LOCAL, AND FEDERAL LAWS, CODES, RULES AND REGULATIONS WHICH APPLY TO THE CONSTRUCTION OF THESE IMPROVEMENTS, INCLUDING EPA AND ADA REQUIREMENTS.
- C. ALL SUBGRADE, OVEREXCAVATION, BACKFILL, AND FILL SHALL BE PLACED AND / OR COMPACTED PER THE GEOTECHNICAL REPORT AND CITY OF ALBUQUERQUE SPECIFICATIONS.
- D. COORDINATE WORK WITH SITE, DEMOLITION AND LANDSCAPE PLANS.
- E. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING OBSTRUCTIONS, AND CONDITION OF ALL EXISTING INFRASTRUCTURE PRIOR TO CONSTRUCTION. REPORT ALL DISCREPANCIES TO THE ARCHITECT AND VERIFY THE ARCHITECT 'S INTENT BEFORE PROCEEDING.
- F. CONTRACTOR SHALL OBTAIN ALL REQUIRED INSPECTIONS OF THE WORK.
- G. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE PROPERTY AND/OR PROJECT LIMITS. ANY DAMAGE TO ADJACENT STRUCTURES RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
- H. CONSTRUCTION EQUIPMENT SHALL NOT OBSTRUCT DRIVEWAYS. EQUIPMENT SHALL ONLY OBSTRUCT DESIGNATED TRAFFIC LANES IF APPROPRIATE BARRICADING PERMITS HAVE BEEN OBTAINED.
- I. THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION TRAFFIC CONTROL AND SIGNING PLAN THAT CONFORMS TO THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL OBTAIN BARRICADING PERMITS FROM THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION WORK ON OR ADJACENT TO EXISTING STREETS.
- J. THE CONTRACTOR SHALL MAINTAIN ALL BARRICADING AND CONSTRUCTION SIGNING AT ALL TIMES. THE CONTRACTOR SHALL VERIFY THE PROPER LOCATION OF ALL BARRICADING AT THE END AND BEGINNING OF EACH DAY.
- K. ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.
- L. PROPOSED SPOT AND CONTOUR ELEVATIONS SHOWN REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF CONCRETE, TOP OF CONCRETE BUILDING PAD, TOP OF PAVEMENT MATERIAL, TOP OF LANDSCAPING MATERIAL, ETC.). CONTRACTOR SHALL GRADE, COMPACT SUBGRADE AND DETERMINE EARTHWORK ESTIMATES BASED ON ELEVATIONS SHOWN MINUS FINISH MATERIAL THICKNESSES.
- M. IF FIELD GRADE ADJUSTMENTS ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT.
- N. EXISTING UTILITY LINES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AND MAY BE INCOMPLETE OR OBSOLETE. SUCH LINES MAY OR MAY NOT EXIST WHERE SHOWN OR NOT SHOWN. CONTRACTOR SHALL CONTACT NM-811 FOR UTILITY LINE SPOTS TWO WORKING DAYS PRIOR TO CONDUCTING SITE FIELD WORK. CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF NECESSARY DRY UTILITY ADJUSTMENTS.
- O. SOIL TESTING AND INSPECTION SERVICES DURING EARTHWORK OPERATIONS ARE REQUIRED. CONTRACTOR SHALL ALLOW TESTING LABS TO INSPECT AND APPROVE COMPACTED SUBGRADES, BACKFILL, AND FILL LAYERS BEFORE FURTHER CONSTRUCTION WORK IS DONE. SHOULD COMPACTION TESTS INDICATE INADEQUATE DENSITY, CONTRACTOR SHALL PROVIDE ADDITIONAL COMPACTION AND TESTING AT THE CONTRACTOR'S SOLE EXPENSE.
- P. CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION STAKING. CONTRACTOR SHALL LOCATE AND PRESERVE ALL BOUNDARY CORNERS AND REPLACE ANY LOST OR DISTURBED CORNERS AT CONTRACTOR'S SOLE EXPENSE. PROPERTY CORNERS SHALL ONLY BE RESET BY A REGISTERED LAND SURVEYOR.
- Q. A CURRENT STORMWATER CONTROL PERMIT, INCLUDING AN EROSION SEDIMENT CONTROL PLAN (E.S.C.) FOR EROSION AND SEDIMENT CONTROL IS REQUIRED FOR ALL CONSTRUCTION, DEMOLITION, CLEARING, AND GRADING OPERATIONS THAT DISTURB THE SOIL ON ONE ACRE OR MORE OF LAND. OWNER WILL COORDINATE.
- R. POST-CONSTRUCTION MAINTENANCE FOR PRIVATE STORMWATER FACILITIES WILL BE THE RESPONSIBILITY OF THE FACILITIES OWNER. PERIODIC INSPECTION AND CERTIFICATIONS OF THE FACILITIES MAY BE REQUIRED BY THE CITY ENGINEER.
- Y. IF THE SITE IS SMALL ENOUGH NOT TO REQUIRE A SWPPP/NPDES PERMIT (LESS THAN ONE ACRE), THE CONTRACTOR SHALL STILL BE RESPONSIBLE FOR USING EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S) TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PUBLIC RIGHT-OF-WAY.
- Z. ADJUST ANY RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES. UTILITIES IN PAVED AREAS SHALL BE HS-25 TRAFFIC RATED.
- AA. WHERE GRADES BETWEEN NEW AND EXISTING ARE SHOWN AS 'MATCH' OR '±', TRANSITIONS SHALL BE SMOOTH.
- AB. ENGINEER RECOMMENDS THAT OWNER INSPECT SITE YEARLY AND AFTER EACH RAINFALL TO IDENTIFY AREAS OF EROSION AND INSTALL EROSION PROTECTION AS NEEDED BASED ON ACTUAL OCCURRENCES.
- AC. MEASURES REQUIRED FOR EROSION AND SEDIMENT CONTROL SHALL BE INCIDENTAL TO THE PROJECT COST.



CALCULATIONS

CALCULATIONS: SANTA BARBARA PARK : 12/22/14

Based on Drainage Design Criteria for City of Albuquerque
Section 22.2, DPM, Vol2, dated Jan., 1993

ON-SITE CALCULATIONS: 100-YEAR, 6-HOUR STORM

AREA OF SITE = 26770 SF = 0.6

HISTORIC FLOWS:

Treatment SI	%
Area A = 0	0%
Area B = 16329.7	61%
Area C = 0	0%
Area D = 10440.3	39%
Total Area = 26770	100%

DEVELOPED FLOWS:

Treatment SI	%	PRECIP. ZONE	2
Area A = 0	0%	EA = 0.53	
Area B = 14456	54%	EB = 0.78	
Area C = 0	0%	EC = 1.13	
Area D = 12314	46%	ED = 2.12	
Total Area = 26770	100%		

On-Site Weighted Excess Precipitation (100-Year, 6-Hour Storm)

Weighted E = $\frac{EA \cdot AA + EB \cdot AB + EC \cdot AC + ED \cdot AD}{AA + AB + AC + AD}$

Historic = 1.30 in. Developed E = 1.40 in.

On-Site Volume of Runoff: V360 = $E^3 \cdot A / 12$

Historic V = 2906 CF Developed V360 = 3115 CF

On-Site Peak Discharge Rate: Qp = $Q_{pA} \cdot AA + Q_{pB} \cdot AB + Q_{pC} \cdot AC + Q_{pD} \cdot AD / 43,560$

For Precipitation Zo2

QpA = 1.56 QpC = 3.14

QpB = 2.28 QpD = 4.70

Historic C = 2.0 CFS Developed Qp = 2.1 CFS

WATER QUALITY PONDING

WATER QUALITY RETENTION PONDING WILL BE PROVIDED WITHIN THE SITE LANDSCAPING TO INCLUDE THE GRASS AREAS, SELF-PONDING PLAYGROUNDS AND A SERIES OF DEPRESSED LANDSCAPING (6" DEPTH) ON THE NORTH AND WEST SIDES OF THE NEW BASKETBALL COURT PAVEMENT.

BASED ON AN OVERALL PERVIOUS AREA CONSISTING OF 61% OF THE FULLY DEVELOPED SITE (16,330 SF), THE REQUIRED VOLUME OF 333 CF REPRESENTS AN AVERAGE DEPTH OF 0.02' OR 1/4".

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SANTA BARBARA
PARK
MRWM

GRADING & DRAINAGE - PHASE II

No.	Revision:	Date:	Job No.
07/16/15			2081
Drawn By:			CG-102
BJB			
FCA			SH. 5 OF 19

CITY OF ALBUQUERQUE



August 5, 2015

Fred C. Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe St NE
Albuquerque, New Mexico 87108

**RE: Santa Barbara Park Improvements
Grading and Drainage Plan
Engineers Stamp Date 7/16/15 (J15-D097)**

Dear Mr. Arfman,

Based upon the information provided in your submittal received 7/16/15, this plan is approved for Grading Permit and Paving Permit.

Please attach a copy of this approved plan to the construction sets in the permitting process prior to sign-off by Hydrology.

Once the project is complete, send the hydrology department a PDF copy of the As-built plan for our records.

PO Box 1293

If you have any questions, please contact me at 924-3695 or Rudy Rael at 924-3977.

Albuquerque

New Mexico 87103

www.cabq.gov

Sincerely,

Rita Harmon, P.E.
Senior Engineer, Hydrology
Planning Department

RR/RH
C: File