

CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



January 14, 2016

Craig Hagelgantz, P.E.
ABQ Engineering Inc.
8201 Menaul Blvd., Suite D
Albuquerque, New Mexico 87110

Richard J. Berry, Mayor

**RE: RGNC State Park Parking Lot
Grading & Drainage Plan
Engineer's Stamp Date 11-18-2015 (File: F12D001)**

Dear Mr. Hagelgantz:

Based upon the information provided in your submittal received 11-19-15, the above referenced plan is approved for Grading Permit with the following conditions/comment:

1. The existing parking site is 1.81 with the proposed expansion being 2 acres, for a total of 3.81 Acres. The existing site is gravel and flat, so it appears runoff either infiltrated, or flowed to a low area on the proposed expansion. This historic drainage pattern must be maintained. The submitted plan shows that the low area is not being reduced in volume. If fact a shallow pond shows that additional volume (5194CF-2178CF = 3016 CF) is being provided which is an improvement of current conditions.
2. However, there is not in our records a grading plan for the existing lot, and volume for the 100-yr storm should have been retained within the property boundaries. In order to protect the lots to the south, provide a berm along the south property line that would contain the volume for the entire site based on the 100-yr storm. Show the berm on the as-built plan with the Engineer Certification which is to be submitted at the completion of the project.
3. Beginning February 1st, 2016, an Erosion and Sediment Control (ESC) **Permit** will be required for all construction, demolition clearing and grading operations that disturb one acre or more of land. **See attached Permit.** The Erosion and Sediment Control (ESC) Plan must be approved by the City's Storm water Engineer.

If you have any questions, you can contact me at 924-3695.

Sincerely,

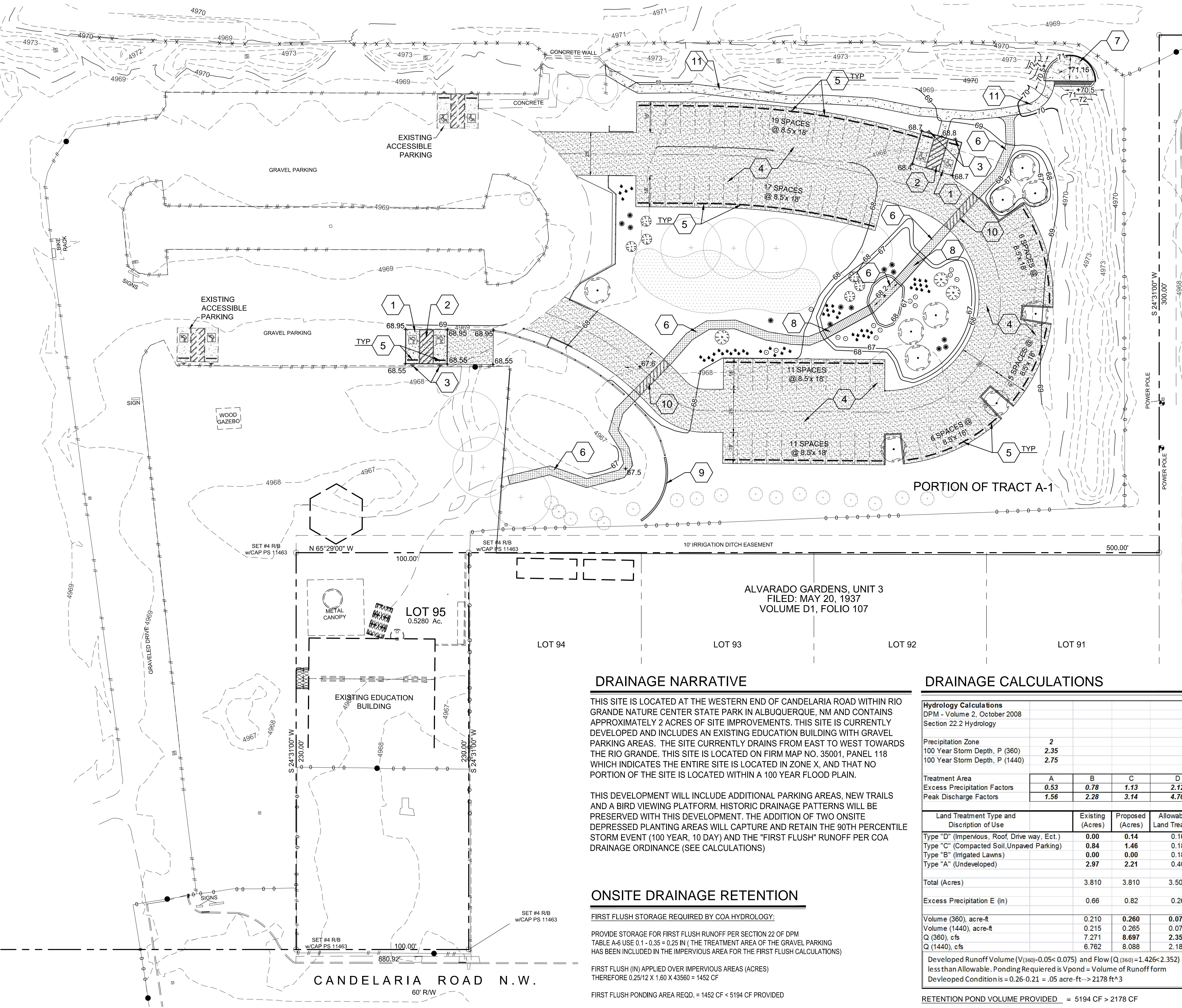
Rita Harmon, P.E.
Senior Engineer, Planning Dept.
Development Review Service

Orig: Drainage file
c.pdf: via Email: Recipient

F12D001_GP_Appr_Cond.doc

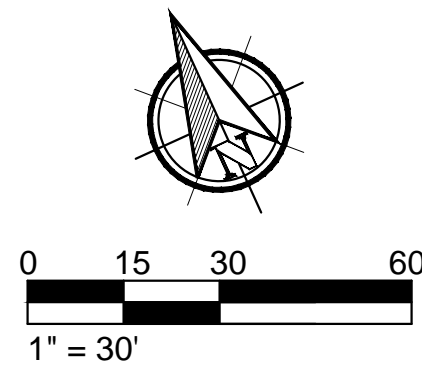
1 of 1

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1 GRADING & DRAINAGE PLAN

Scale: 1" = 30'



DRAINAGE NARRATIVE

THIS SITE IS LOCATED AT THE WESTERN END OF CANDELARIA ROAD WITHIN RIO GRANDE NATURE CENTER STATE PARK IN ALBUQUERQUE, NM AND CONTAINS APPROXIMATELY 2 ACRES OF SITE IMPROVEMENTS. THIS SITE IS CURRENTLY DEVELOPED AND INCLUDES AN EXISTING EDUCATION BUILDING WITH GRAVEL PARKING AREAS. THE SITE CURRENTLY DRAINS FROM EAST TO WEST TOWARDS THE RIO GRANDE. THIS SITE IS LOCATED ON FIRM MAP NO. 35001, PANEL 118 WHICH INDICATES THE ENTIRE SITE IS LOCATED IN ZONE X, AND THAT NO PORTION OF THE SITE IS LOCATED WITHIN A 100 YEAR FLOOD PLAIN.

THIS DEVELOPMENT WILL INCLUDE ADDITIONAL PARKING AREAS, NEW TRAILS AND A BIRD VIEWING PLATFORM. HISTORIC DRAINAGE PATTERNS WILL BE PRESERVED WITH THIS DEVELOPMENT. THE ADDITION OF TWO ONSITE DEPRESSED PLANTING AREAS WILL CAPTURE AND RETAIN THE 90TH PERCENTILE STORM EVENT (100 YEAR, 10 DAY) AND THE "FIRST FLUSH" RUNOFF PER COA DRAINAGE ORDINANCE (SEE CALCULATIONS)

ONSITE DRAINAGE RETENTION

FIRST FLUSH STORAGE REQUIRED BY COA HYDROLOGY:

PROVIDE STORAGE FOR FIRST FLUSH RUNOFF PER SECTION 22 OF DPM TABLE A-6 USE 0.1 - 0.35 = 0.25 IN (THE TREATMENT AREA OF THE GRAVEL PARKING HAS BEEN INCLUDED IN THE IMPERVIOUS AREA FOR THE FIRST FLUSH CALCULATIONS)

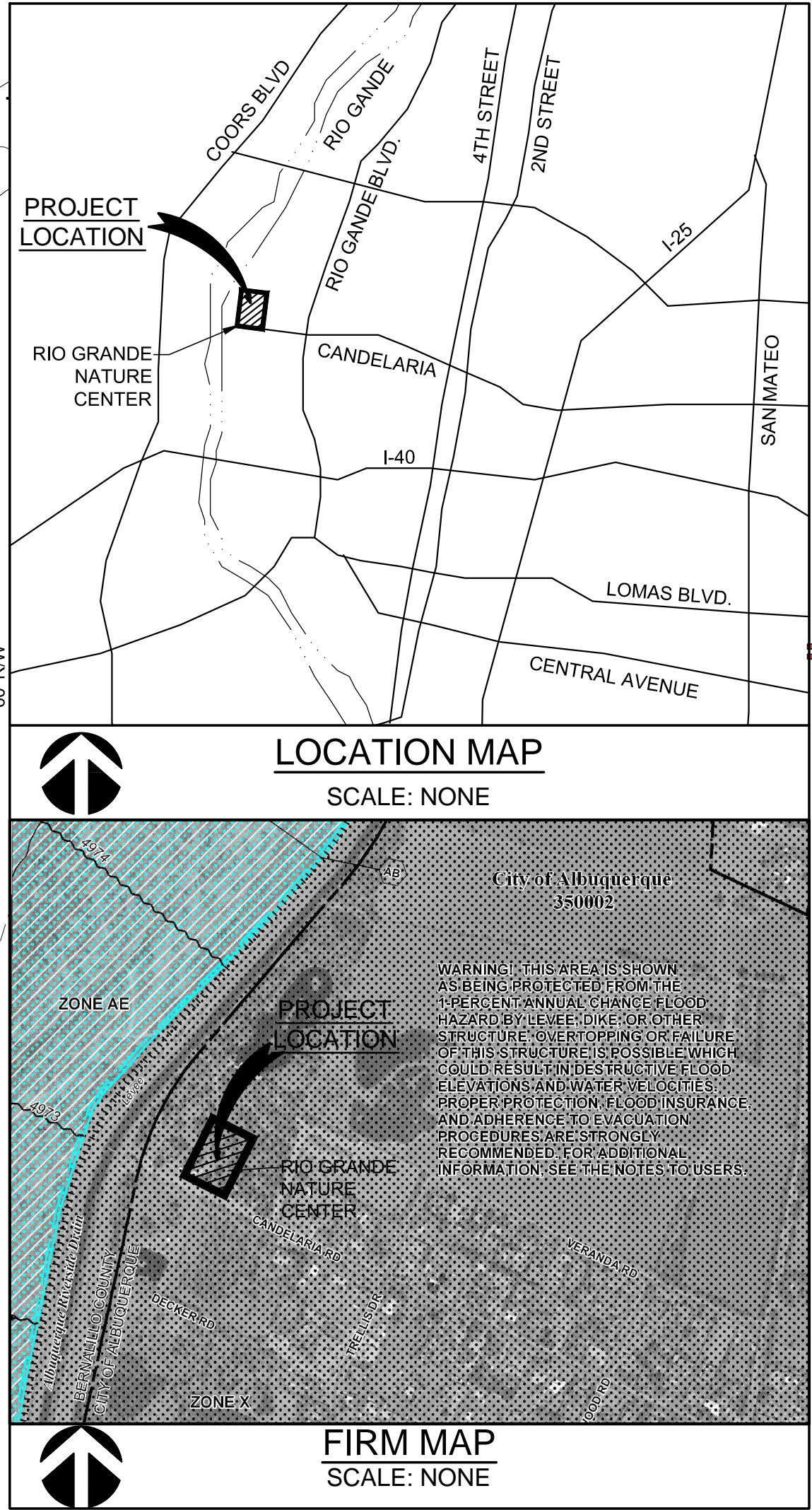
FIRST FLUSH (IN) APPLIED OVER IMPERVIOUS AREAS (ACRES)
THEREFORE 0.25/12 X 1.60 X 43560 = 1452 CF

FIRST FLUSH PONDING AREA REQD. = 1452 CF < 5194 CF PROVIDED

DRAINAGE CALCULATIONS

Hydrology Calculations				
DPM - Volume 2, October 2008				
Section 22.2 Hydrology				
Precipitation Zone	2			
100 Year Storm Depth, P (360)	2.35			
100 Year Storm Depth, P (1440)	2.75			
Treatment Area	A	B	C	D
Excess Precipitation Factors	0.53	0.78	1.13	2.12
Peak Discharge Factors	1.56	2.28	3.14	4.70
Land Treatment Type and Description of Use	Existing (Acres)	Proposed (Acres)	Allowable % Land Treatment	
Type "D" (Impervious, Roof, Drive way, Ect.)	0.00	0.14	0.16	
Type "C" (Compacted Soil, Unpaved Parking)	0.84	1.46	0.18	
Type "B" (Irrigated Lawns)	0.00	0.00	0.18	
Type "A" (Undeveloped)	2.97	2.21	0.40	
Total (Acres)	3.810	3.810	3.505	
Excess Precipitation E (in)	0.66	0.82	0.26	
Volume (360), acre-ft	0.210	0.260	0.075	
Volume (1440), acre-ft	0.215	0.265	0.079	
Q (360), cfs	7.271	8.697	2.352	
Q (1440), cfs	6.762	8.088	2.187	
Developed Runoff Volume ($V_{(360)}=0.05<0.075$) and Flow ($Q_{(360)}=1.426<2.352$) is less than Allowable. Ponding Required is V_{pond} = Volume of Runoff form Developed Condition is = $0.26-0.21 = .05$ acre-ft \rightarrow 2178 ft ³				

RETENTION POND VOLUME PROVIDED = 5194 CF > 2178 CF

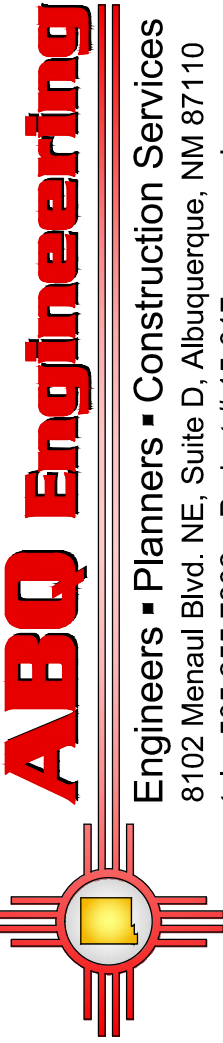


KEYED NOTES

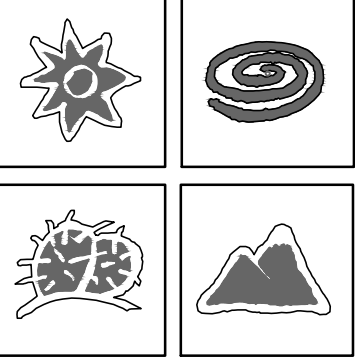
1. CONSTRUCT NEW CONCRETE PAD FOR ACCESSIBLE PARKING. SEE DETAIL 4/C-501.
2. INSTALL ACCESSIBLE PARKING PER DETAIL 1/C-501.
3. INSTALL ACCESSIBLE PARKING SIGNS. SEE DETAIL 2/C-501.
4. CONSTRUCT NEW GRAVEL PARKING PER DETAIL 5/C-501.
5. INSTALL WHEEL STOPS. SEE DETAIL 3/C-501.
6. CONSTRUCT NEW STABILIZED SOIL WALKS.
7. CONSTRUCT NEW CONCRETE BIRD VIEWING PLATFORM. SEE ARCHITECTURAL PLANS FOR DETAILS.
8. CONSTRUCT NEW BOARDWALK. SEE ARCHITECTURAL PLANS FOR DETAILS.
9. CONSTRUCT NEW MASONRY WALL. SEE ARCHITECTURAL PLANS FOR DETAILS.
10. CONSTRUCT 5' x 25' CONCRETE ACCESSIBLE CROSSWALK.
11. CONSTRUCT NEW CONCRETE WALK.

LEGEND

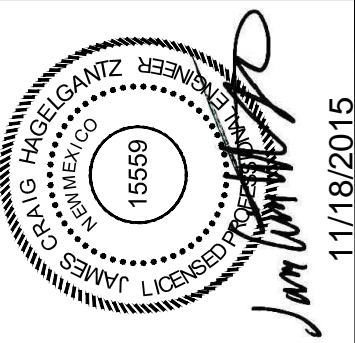
---	6510	EXISTING INDEX CONTOUR
---	6509	EXISTING INTERIM CONTOUR
---	10	NEW INDEX CONTOUR
---	09	NEW INTERIM CONTOUR
+	22.8	NEW SPOT ELEVATION
▬		NEW CONCRETE
▬		NEW GRAVEL
▬		NEW STABILIZED SOIL WALK
▬		EXISTING BUILDING
▬		DIRECTION OF FLOW
•		EXISTING GATE
•		EXISTING WOOD FENCE
•		EXISTING WOOD RAIL FENCE
•		EXISTING WIRE FENCE
•		EXISTING CHAINLINK FENCE
S		EXISTING SIGN
+		NEW SIGN
•		EXISTING POWER POLE



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tele: 505.255.7802 Project # 15-017 www.abqeng.com



Robert M. Love AIA
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505 476 3382
NEW MEXICO STATE PARKS
DESIGN & DEVELOPMENT BUREAU



FIELD VIEWING PLATFORM
RGNC STATE PARK
BERNALILLO COUNTY, NEW MEXICO

C# BWCCSIT

TITLE

SITE GRADING &
DRAINAGE PLAN

SCALE

DATE

NOVEMBER 2015

DRAWN BY

CAB

PROJECT ENGINEER

JOL

SHEET

C-101

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