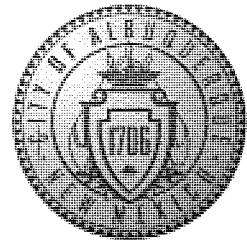


CITY OF ALBUQUERQUE

PLANNING DEPARTMENT – Development Review Services



February 11, 2014

Richard J. Berry, Mayor

Ms. Genny Donart, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. NE
Albuquerque, New Mexico 87108

RE: **McDonalds – McMahon Market Place, Lot 7** **A11-D011B**
SW Corner of McMahon & Fineland NW PE Stamp: - N/A (12/2/13 plot)
Conceptual Grading & Drainage Plan - Site Plan for Building Permit

Dear Ms. Donart:

Based upon the information provided in your submittal received 12-04-2013, the above referenced **Conceptual Plan is approved for Site Development Plan for Building Permit.**

The final Grading and Drainage Plan for Building Permit on this site will need to address the following comments:

PO Box 1293

Albuquerque

New Mexico 87103

- The proposed curb opening on the east side of the parking lot may need erosion protection on the discharge.
- The Grade Break line on the SW corner of the site is not accurate.
- SO-19 notes will be required on the Private drain line connection to the City inlet.

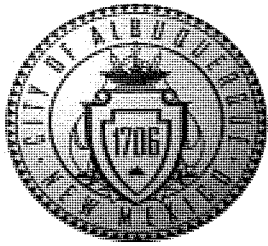
If you have questions, please email me at grolson@cabq.gov or phone 505-924-3994.

www.cabq.gov

Sincerely,

Gregory R. Olson, P.E.
Senior Engineer

Orig: Drainage file **A11/D011B**
c.pdf Addressee via Email GennyD@IAcivil.com



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

Project Title: McDonald's at McMahon Marketplace Building Permit #: _____ City Drainage #: A11/0011B

DRB#: _____ EPC#: _____ Work Order#: _____

Legal Description: Lot 7, McMahon Marketplace

City Address: _____

Engineering Firm: Isaacson & Arfman, P.A. Contact: Genny Donart

Address: 128 Monroe Street, NE - Albuquerque, NM 87108

Phone#: (505) 268-8828 Fax#: N/A E-mail: gennyd@iacivil.com

Owner: JMD McMahon, LLC Contact: Doug Peterson

Address: _____

Phone#: (505) 884-3578 Fax#: _____ E-mail: Doug@petersonproperties.net

Architect: Martin Grummer Architect Contact: Martin Grummer

Address: _____

Phone#: (505) 265-2507 Fax#: _____ E-mail: mgrummer@qwestoffice.net

Surveyor: _____ Contact: _____

Address: _____

Phone#: _____ Fax#: _____ E-mail: _____

Contractor: _____ Contact: _____

Address: _____

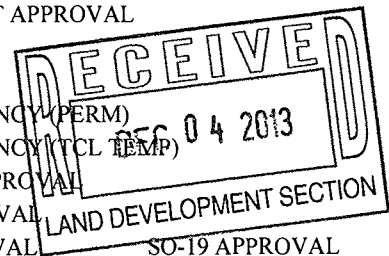
Phone#: _____ Fax#: _____ E-mail: _____

TYPE OF SUBMITTAL:

- DRAINAGE REPORT
- DRAINAGE PLAN 1st SUBMITTAL
- DRAINAGE PLAN RESUBMITTAL
- CONCEPTUAL G & D PLAN
- GRADING PLAN
- EROSION & SEDIMENT CONTROL PLAN (ESC)
- ENGINEER'S CERT (HYDROLOGY)
- CLOMR/LOMR
- TRAFFIC CIRCULATION LAYOUT (TCL)
- ENGINEER'S CERT (TCL)
- ENGINEER'S CERT (DRB SITE PLAN)
- ENGINEER'S CERT (ESC)
- SO-19
- OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- SIA/FINANCIAL GUARANTEE RELEASE
- PRELIMINARY PLAT APPROVAL
- S. DEV. PLAN FOR SUB'D APPROVAL
- S. DEV. FOR BLDG. PERMIT APPROVAL
- SECTOR PLAN APPROVAL
- FINAL PLAT APPROVAL
- CERTIFICATE OF OCCUPANCY (PERM)
- CERTIFICATE OF OCCUPANCY (TCL TEMP)
- FOUNDATION PERMIT APPROVAL
- BUILDING PERMIT APPROVAL
- GRADING PERMIT APPROVAL
- PAVING PERMIT APPROVAL
- WORK ORDER APPROVAL
- GRADING CERTIFICATION
- SO-19 APPROVAL
- ESC PERMIT APPROVAL
- ESC CERT. ACCEPTANCE
- OTHER (SPECIFY)



WAS A PRE-DESIGN CONFERENCE ATTENDED: _____ Yes _____ No _____ Copy Provided

DATE SUBMITTED: 12/03/2013 By: Genevieve Donart

for Isaacson & Arfman, P.A.

Requests for approvals of Site Development Plans and/or Subdivision Plats shall be accompanied by a drainage submittal. The particular nature, location, and scope to the proposed development defines the degree of drainage detail. One or more of the following levels of submittal may be required based on the following

1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

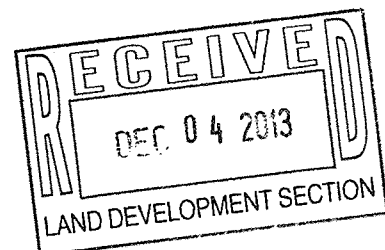
DECEMBER 3, 2013

SUPPLEMENTAL INFORMATION

FOR

McDonald's at McMahon Marketplace

BY



Job Name:	McDonald's at McMahon Marketplace
Client:	Peterson Properties
Date Prepared:	10/9/2013
Date Modified:	
Precipitation Zone:	1

CALCULATIONS: McDonald's at McMahon Marketplace :

Based on Drainage Design Criteria for City of Albuquerque Section 22.2, DPM, Vol 2, dated Jan., 1993

ON-SITE

AREA OF SITE: 53635.671 SF = 1.2 Ac.

100-year, 6-hour

HISTORIC FLOWS:

DEVELOPED FLOWS:

EXCESS PRECIP:

	Treatment SF	%		Treatment SF	%	Precip. Zone	
Area A =	0	0%	Area A =	0	0%	E _A	0.44
Area B =	0	0%	Area B =	2682	5%	E _B	0.67
Area C =	53635.671	100%	Area C =	5364	10%	E _C	0.99
Area D =	0	0%	Area D =	45590	85%	E _D	1.97
Total Area =	53635.671	100%	Total Area =	53635.671	100%		

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

$$\text{Weighted E} = \frac{E_A A_A + E_B A_B + E_C A_C + E_D A_D}{A_A + A_B + A_C + A_D}$$

Historic E =	0.99 in.	Developed E =	1.81 in.
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On-Site Volume of Runoff: V₃₆₀ = E * A / 12

Historic V ₃₆₀ =	4425 CF	Developed V ₃₆₀ =	8077 CF
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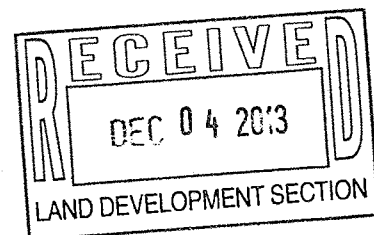
On-Site Peak Discharge Rate: Q_p = Q_{pA}A_A + Q_{pB}A_B + Q_{pC}A_C + Q_{pD}A_D / 43,560

For Precipitation Zone 1

Q _{pA} =	1.29	Q _{pC} =	2.87
Q _{pB} =	2.03	Q _{pD} =	4.37

Historic Q _p =	3.5 CFS	Developed Q _p =	5.1 CFS	3.5 cfs
---------------------------	---------	----------------------------	---------	---------

The overall site consists of 1.2313055785124 acre(s) located in Zone 1 which is designated as properties D. The 100-year, 6-hour historic discharge is 3.5 cfs. The proposed developed discharge is 5.1 cfs.



Hydrograph

CALCULATIONS: McDonald's at McMahon Marketplace : 0
HYDROGRAPH FOR SMALL WATERSHED
DPM SECTION 22-2 * PAGE A-13/14

Base time, t_B , for a small watershed hydrograph is,

$$t_B = (2.107 * E * A / Q_P) - (0.25 * A_D / A)$$

Where

E	=	1.81 inches
A	=	1.23 acres
A_D	=	1.05 acres
Q_P	=	5.1 cfs

$t_B = 0.72$ hours

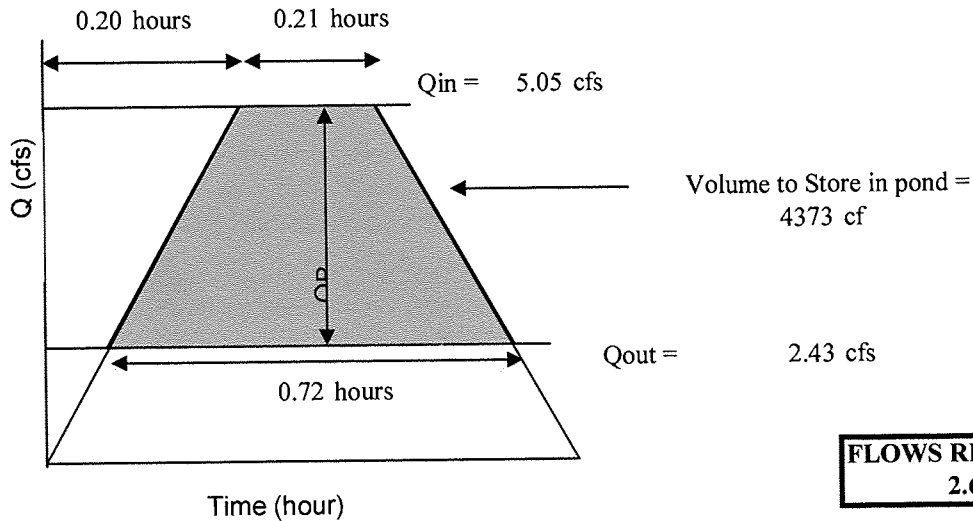
E is the excess precipitation in inches (from DPM TABLE A-8), Q_P is the peak flow, A_D is the area (acres) of treatment D, and A_T is the total area in acres. Using the time of concentration, t_C (hours), the time to peak in hours is:

$$t_p = (0.7 * t_C) + ((1.6 - (A_D / A)) / 12)$$

Where $t_C = 0.20$ hours

$t_p = 0.20$ hours

Continue the peak for $0.25 * A_D / A_T$ hours. When A_D is zero, the hydrograph will be triangular. When A_D is not zero, the hydrograph will be trapezoidal. see the graph below:

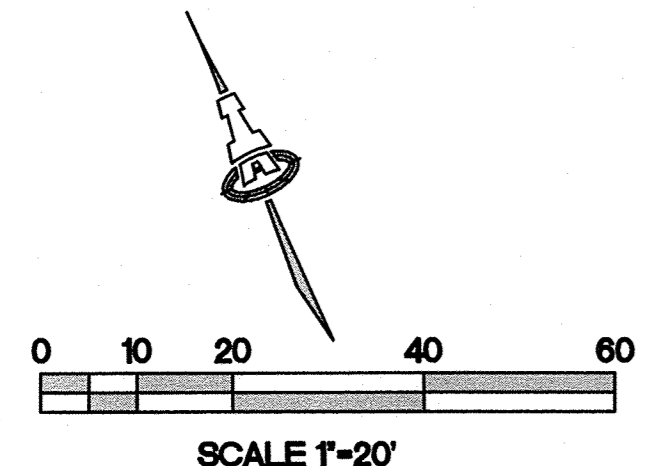
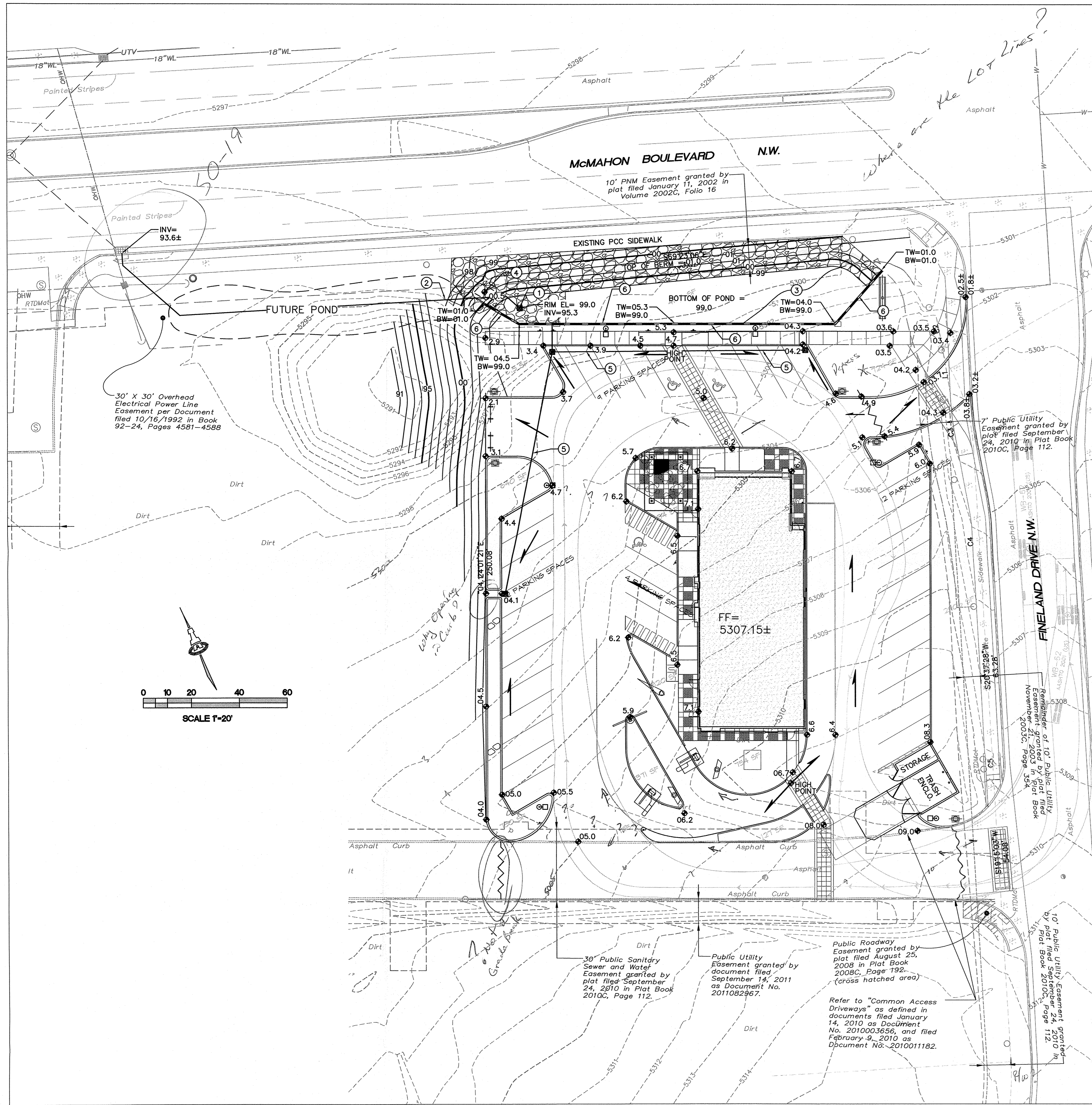


FLOWES REDUCED BY:
2.62 CFS

INFLOW / OUTFLOW HYDROGRAPH

POND #1		
Contour	Area	Volume
5300.50	3287.5	
5300.00	3036.5	1581 CF
5299.00	2546.6	2792 CF
TOTAL VOL.		4373 CF

RECEIVED
 DEC 04 2013
 LAND DEVELOPMENT SECTION



GENERAL NOTES

- A. COORDINATE WORK WITH SITE PLAN, UTILITY PLAN, AND LANDSCAPE PLAN.
- B. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION. REPORT ALL DISCREPANCIES TO THE ARCHITECT / ENGINEER AND VERIFY THE ARCHITECT / ENGINEER'S INTENT BEFORE PROCEEDING.
- C. ALL TRASH, DEBRIS, & SURFACE VEGETATION SHALL BE CLEARED AND LEGALLY DISPOSED OF OFFSITE.
- D. ALL SUBGRADE, OVEREXCAVATION, AND FILL SHALL BE PLACED AND / OR COMPACTED PER THE GEOTECHNICAL REPORT AND CITY OF ALBUQUERQUE SPECIFICATIONS.
- E. FINAL GRADES 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.
- F. 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.
- G. THE ENVIRONMENTAL PROTECTION AGENCY (EPA) AND THE CITY OF ALBUQUERQUE REQUIRE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), AN NPDES PERMIT, AND AN EROSION AND SEDIMENT CONTROL (ESC) PERMIT FOR PROJECTS WHERE CONSTRUCTION ACTIVITIES MEET THE EPA THRESHOLD. (SWPPP, NPDES PERMIT, AND ESC PLAN BY OTHERS.) A CITY-APPROVED ESC PERMIT MUST BE INCLUDED WITH THE CONTRACTOR'S SUBMITTAL FOR A ROUGH GRADING, GRADING, PAVING, BUILDING, OR WORK ORDER PERMIT.
- H. ADJUST RIMS OF EXISTING UTILITY FEATURES AS NECESSARY TO MATCH NEW GRADES, TYPICAL.
- I. ALL FRACTURED FACE ROCK (F.F. ROCK) TO BE 6" AVG. DIA. ANGULAR FACED ROCK PLACED OVER GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.). NOTE: PERMANENT TURF REINFORCEMENT MATERIAL (LANDLOK TRM 450 O.E.) MAY BE SUBSTITUTED AT ALL AREAS REFERENCING F.F. ROCK EROSION PROTECTION.
- J. POND DESIGN PARAMETERS (TOP OF POND, BOTTOM OF POND, SIZE OF ORIFICE, AREA OF POND, ETC.) TO BE STRICTLY ADHERED TO FOR CERTIFICATION PURPOSES. SEE DETAIL SHEET FOR ADDITIONAL INFORMATION.
- K. ENGINEER RECOMMENDS THAT OWNER MAINTAIN EROSION PROTECTION ELEMENTS. ENGINEER RECOMMENDS THAT OWNER INSPECT SITE YEARLY AND AFTER EACH RAINFALL TO IDENTIFY NEW AREAS OF EROSION AND INSTALL ADDITIONAL EROSION PROTECTION AS NEEDED BASED ON ACTUAL OCCURRENCES.

DRAINAGE CONCEPT

EXISTING CONDITIONS:
 THE EXISTING SITE IS AN 1.23 AC. UNDEVELOPED PROPERTY WITHIN THE MCMAHON MARKETPLACE MASTERPLANNED COMMERCIAL PROJECT. LOT 7 IS AT THE SOUTHWEST CORNER OF MCMAHON BLVD AND FINELAND DR. THE PROPERTY HAS NATIVE SHRUBS AND GRASSES, AND SLOPES TO THE NORTHWEST AT APPROXIMATELY 7%. THE SITE GENERATES 3.5 CFS OF STORM WATER IN THE 100-YEAR STORM. (SEE CALCULATIONS SEPARATE.)

PROPOSED CONDITIONS:
 A 4,500± SF DRIVE-THRU RESTAURANT IS PROPOSED FOR THIS SITE. THE SITE GENERATES 5.1 CFS OF STORM WATER IN THE DEVELOPED CONDITION.

PER THE MCMAHON MARKETPLACE DRAINAGE MANAGEMENT PLAN, MARCH 2010 (STAMPED 05-07-10) PREPARED BY BOHANNAN - HUSTON, INC., THE EXISTING 36" STORM DRAIN IN MCMAHON WILL ACCEPT 41.55 CFS OF DEVELOPED FLOW. THE OVERALL SITE GENERATES 49.9 CFS IF DEVELOPED AT 5% TYPE B, 10% TYPE C AND 85% TYPE D LAND TREATMENTS. THE OVERALL SITE IS REQUIRED TO REDUCE FLOWS BY 8.35 CFS. (49.9 CFS-41.55 CFS=8.35 CFS)

THE 4,370 CF POND ON THE NORTH SIDE OF THE MCDONALD'S SITE WILL REDUCE THE FLOWS BY 2.6 CFS TO DISCHARGE 2.5 CFS. THIS IS 31% OF THE TOTAL REDUCTION NEEDED PER BHI'S DRAINAGE MANAGEMENT PLAN (2.62/8.35=31%). THIS SITE IS 1.23 AC, WHICH IS 10% OF THE MASTERPLANNED AREA (1.23/12.19=10%). THEREFORE THE PROPOSED DEVELOPMENT ON LOT 7 MEETS THE MINIMUM AMOUNT OF DETENTION REQUIRED.

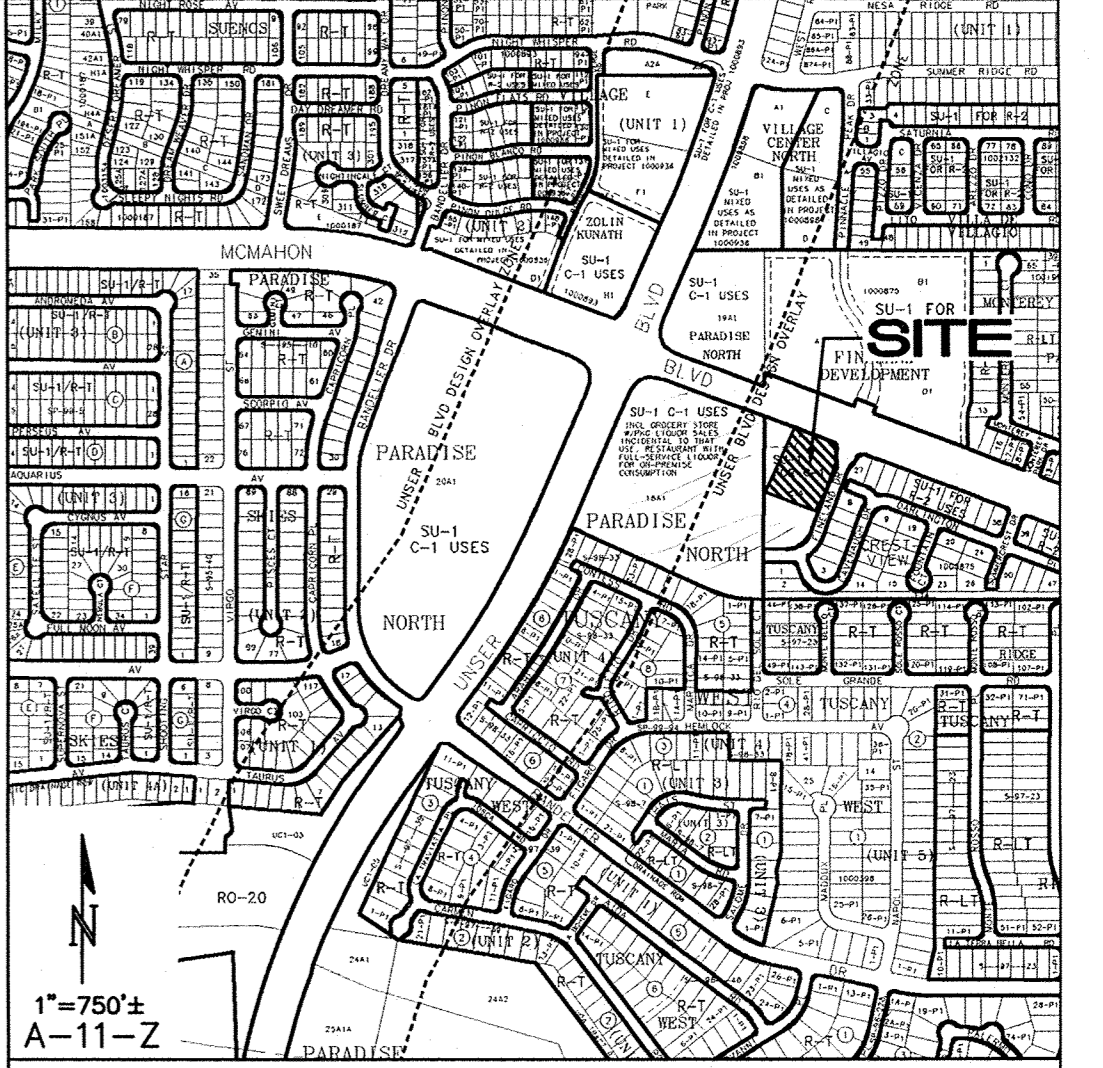
THE REMAINING 7.80 ACRES OF UNDEVELOPED PROPERTIES ON THE MCMAHON MARKETPLACE SITE WILL NEED TO REDUCE THE DISCHARGE BY AT LEAST 0.74 CFS/ACRE.

A 12" STORM DRAIN RUNS FROM THE PROPOSED POND TO AN EXISTING STORM INLET IN MCMAHON BLVD. THE 2 LOTS TO THE WEST (1.2 ACRES TOTAL) ALLOWED ACCESS TO THE STORM DRAIN WOULD, COMBINED, GENERATE 5.0 CFS OF STORM WATER IN A 100-YEAR STORM. POND TO REDUCE THE FLOWS AS NEEDED WOULD REDUCE THIS FLOW TO 4.1 CFS. ADDED TO THE 2.5 CFS DISCHARGE FROM THE SITE, THE STORM DRAIN CARRIES 6.6 CFS MAXIMUM.

THE MCMAHON MARKETPLACE PRELIMINARY GRADING & DRAINAGE PLAN (02-22-07) AND THE OVERALL DRAINAGE PLAN, STAMPED DATE: 04-18-07 BOTH PREPARED BY OLSSON ASSOCIATES. THESE PLANS ESTABLISH THE CROSS LOT DRAINAGE CONVEYANCE AND A SERIES OF PONDS ALONG MCMAHON TO CAPTURE THE ONSITE DEVELOPED STORM WATERS AND CONVEY THEM TO THE SUBJECT PUBLIC CATCH BASIN VIA OVERLAND FLOW OR DRAIN PIPES.

AN EXISTING CROSS LOT DRAINAGE EASEMENT ENSURES THE RIGHTS OF THE PRESENT AND FUTURE LAND OWNERS TO DISCHARGE THE DEVELOPED STORM WATER FLOWS ACROSS THE PLATTED BOUNDARIES TO THE ULTIMATE DISCHARGE POINT (PUBLIC CATCH BASIN ALONG MCMAHON BLVD.).

VICINITY MAP



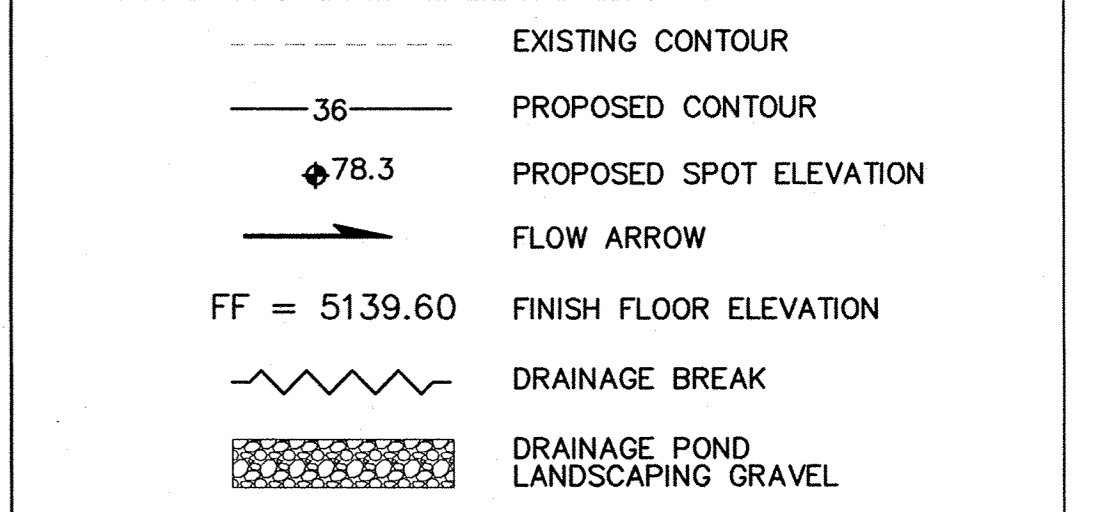
PROJECT DATA

LEGAL DESCRIPTION: LOT 7, MCMAHON MARKETPLACE
SITE AREA: 1.232 AC.
MASTERPLANNED AREA:
FLOOD ZONE: N/A
ENGINEER: FRED ARFMAN
 ISAACSON & ARFMAN, P.A.
 128 MONROE ST NE, ABQ. NM 87108
 PHONE: (505) 268-8828
SURVEYOR: SURVTEK, INC.
 9384 VALLEY VIEW DRIVE, N.W. ABQ. NM 87114
 PHONE: (505) 897-3366
BENCHMARK: VERTICAL DATUM IS BASED UPON THE ALBUQUERQUE CONTROL SURVEY MONUMENT "9-A11", ELEVATION = 5301.647 (NAVD 1988).

KEYED NOTES

1. INLET STRUCTURE IN POND SIZED TO ALLOW 2.5 CFS DISCHARGE FROM POND.
2. 12" PRIVATE STORM DRAIN AT 1% MIN SLOPE TO TIE TO EXISTING INLET PER COA STD DWG #2237.
3. DETENTION POND WITH 3:1 SIDE SLOPES PROTECTED WITH FRACTURED FACE ROCK. POND TO BE MAINTAINED BY THE BENEFITTING UNDERLYING LAND OWNERS DISCHARGING STORM WATERS TO THE FACILITY. POND CAPACITY = 4373 CF.
4. 5' WIDE, 6" DEEP EMERGENCY OVERFLOW.
5. STORM DRAINS TO CAPTURE ONSITE FLOWS AND DIRECT THEM TO THE POND.
6. RETAINING WALL.

LEGEND



ISAACSON & ARFMAN, P.A.
 Consulting Engineering Associates
 128 Monroe Street N.E.
 Albuquerque, New Mexico 87108
 Ph. 505-268-8828 www.isaacson.com
 1998 CG-101.dwg Dec 02, 2013

**McMAHON MARKET PLACE
 McDONALD'S RESTAURANT**
 SHELL BUILDING, ALBUQUERQUE, NM 87114

CONCEPTUAL GRADING AND DRAINAGE PLAN

Date:	No.:	Revision:	Date:	Job No.:
06-2013				1998
Drawn By:				CG-101
FCB				
Clk By:				SH4 OF 6
FCB				

All-0011B Conceptual

