CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director

Mayor Timothy M. Keller

August 6, 2018

David Soule, P.E.
Rio Grande Engineering
PO Box 93924
Albuquerque, NM 87199

RE: **Jefferson Hotel**
Restaurant Ln NE
Grading Plan Stamp Date: 7/30/18
Drainage Report Stamp Date: 7/30/18
Drainage File: F17D044C

Dear Mr. Soule:

PO Box 1293

Albuquerque

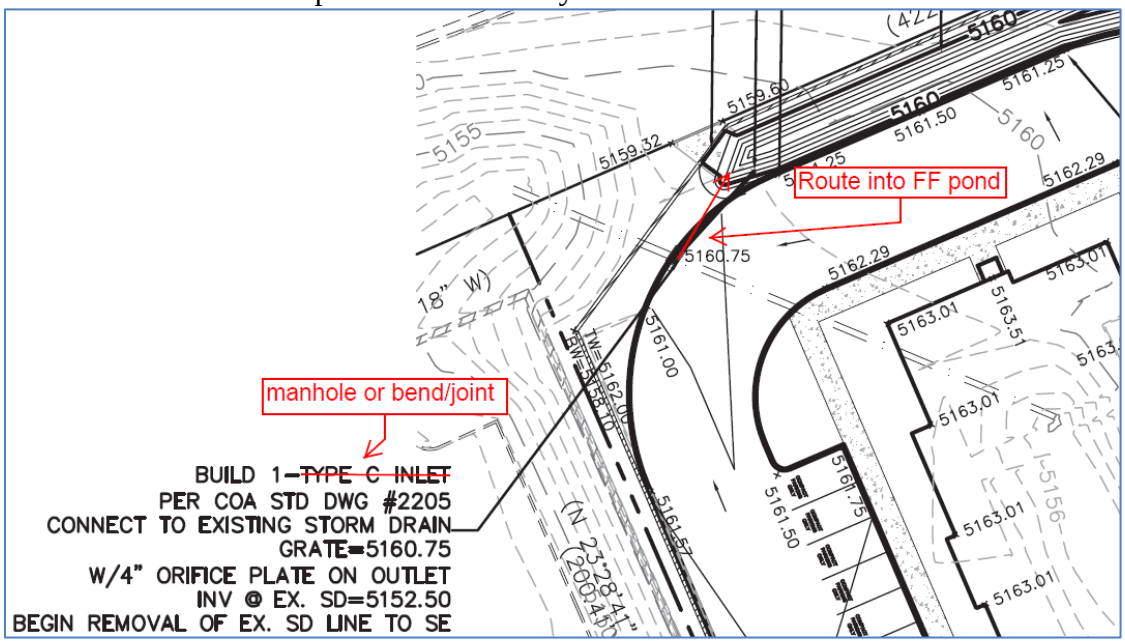
NM 87103

www.cabq.gov

Based on the submittal received on 7/31/18, the grading plan and drainage report cannot be approved for building permit until the following are corrected:

Prior to Building Permit:

1. The Type C inlet at the NW corner should be removed as it allows surface flows to bypass the first flush pond. Stormwater draining to this low spot will need to be routed to the pond first. Also the 4" orifice plate isn't necessary on this outlet:



2. Correct the calculation error for the Fee-in Lieu amount in the narrative and in Appendix A; should be 244cf x $8/cf = $1952.

3. Payment of the Fee in Lieu (Amount = $1,952, per Appendix A of the drainage report) for the required first flush volume must be made.

4. This project requires an ESC Plan, submitted to the Stormwater Quality Engineer (Curtis Cherne PE, ccherne@cabq.gov or 924-3420).

Prior to Certificate of Occupancy (For Information):

1. Engineer's Certification, per the DPM Chapter 22.7: *Engineer's Certification Checklist For Non-Subdivision* is required.

2. Provide photographs of the installed orifice plate, including one showing its dimensions and include with the drainage certification.

3. A Bernalillo County Recorded Drainage Covenant (No Public Easement) is required for the stormwater control pond. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee ($25, payable to Bernalillo County) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) or Madeline Carruthers (mtafoya@cabq.gov, 924-3997) regarding the routing and recording process for covenants. The routing and recording process for covenants can take a month or longer; Hydrology recommends beginning this process as soon as possible as to not delay approval for certificate of occupancy.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 6/2018)

Project Title: JEFFERSON HOTEL Building Permit #:_____ Hydrology File #: F17D044C

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

Legal Description: TRACT 2A3C1 AND 2A3C2 MCLEOD BUSINESS PARK

City Address: UNADDRESSED ON NW CORNER OF JEFFERSON AND HOTEL LANE

Applicant: SAMIR PATEL Contact: _____

Address: _____

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

Other Contact: RIO GRANDE ENGINEERING Contact: DAVID SOULE

Address: PO BOX 93924 ALB NM 87199

Phone#: 505.321.9099 Fax#: 505.872.0999 E-mail: david@riograndeengineering.com

TYPE OF DEVELOPMENT: ___ PLAT ___ RESIDENCE ___ DRB SITE _X_ ADMIN SITE

Check all that Apply:

DEPARTMENT:

_X_ HYDROLOGY/ DRAINAGE

___ TRAFFIC/ TRANSPORTATION

TYPE OF SUBMITTAL:

___ ENGINEER/ARCHITECT CERTIFICATION

___ PAD CERTIFICATION

___ CONCEPTUAL G & D PLAN

_X_ GRADING PLAN

_X_ DRAINAGE REPORT

___ DRAINAGE MASTER PLAN

___ FLOODPLAIN DEVELOPMENT PERMIT APPLIC

___ ELEVATION CERTIFICATE

___ CLOMR/LOMR

___ TRAFFIC CIRCULATION LAYOUT (TCL)

___ TRAFFIC IMPACT STUDY (TIS)

___ STREET LIGHT LAYOUT

___ OTHER (SPECIFY) _____

___ PRE-DESIGN MEETING?

IS THIS A RESUBMITTAL?: _X_ Yes ___ No

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

_X_ BUILDING PERMIT APPROVAL

___ CERTIFICATE OF OCCUPANCY

___ PRELIMINARY PLAT APPROVAL

___ SITE PLAN FOR SUB'D APPROVAL

___ SITE PLAN FOR BLDG. PERMIT APPROVAL

___ FINAL PLAT APPROVAL

___ SIA/ RELEASE OF FINANCIAL GUARANTEE

___ FOUNDATION PERMIT APPROVAL

___ GRADING PERMIT APPROVAL

___ SO-19 APPROVAL

___ PAVING PERMIT APPROVAL

___ GRADING/ PAD CERTIFICATION

___ WORK ORDER APPROVAL

___ CLOMR/LOMR

___ FLOODPLAIN DEVELOPMENT PERMIT

___ OTHER (SPECIFY) _____

DATE SUBMITTED: _____ By: _____

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED:_____

FEE PAID:_____

CITY OF ALBUQUERQUE

May 1, 2018

David Soule, P.E.
Rio Grande Engineering
PO Box 93924
Albuquerque, NM 87199

RE: **Jefferson Hotel**
Restaurant Ln NE
Conceptual Grading Plan Stamp Date: 4/13/18
Drainage Report Stamp Date: 4/17/18
Drainage File: F17D044C

Dear Mr. Soule:

Based on the information provided in your submittal received 4/17/18, the conceptual grading plan and drainage report are approved for final plat. Prior to grading or building permit the following are required:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

1. A Private Drainage Covenant (No Public Easement) is required for the stormwater detention ponds. The original notarized form, exhibit A (legible on 8.5x11 paper), and recording fee ($25, payable to City of Albuquerque) must be turned into DRC (4th, Plaza del Sol) for routing. Please contact Charlotte LaBadie (clabadie@cabq.gov, 924-3996) or Madeline Carruthers (mtafoya@cabq.gov, 924-3997) regarding the routing and recording process for covenants.

2. This project requires an ESC Plan, submitted to the Stormwater Quality Engineer (Curtis Cherne PE, ccherne@cabq.gov or 924-3420).

3. Discharge to the SW corner of this site (Restaurant Ln) needs to be limited to 7.85 cfs (4.33cfs/ac x 1.8ac) per the approved management plan by JMA (2005). Increasing the area draining to Restaurant Ln is acceptable, but the flow does need to be restricted to 7.85cfs. We have updated the plan such that the discharge is limited to 7.88 cfs we feel the .03cfs is deminimus

4. Delineate and determine the runoff from the Restaurant Ln half street and frontage; this area is within the subject property, free discharges to the west, and counts against the subject property's allowable discharge. We have included this basin and adjusted the onsite accordingly

5. The proposed contours and spot elevations do not support the waterblock between the center rows of parking in the SE corner. Please adjust, or update the subbasins accordingly. We have updated the spots and contours

CITY OF ALBUQUERQUE

6. Payment of the Fee in Lieu (Estimate Amount = $5707, per Appendix A of the drainage report) for the required first flush volume must be made. This amount will need to be reconfirmed at the time of grading/building permit approval, to ensure the volume didn't change as a result of the above comments revised volume is 234 cf corresponding to $2070.00
7. "Conceptual" markings will need to be removed from the grading plan.
   We have removed the word conceptual
8. Additional comments may be provided at Building Permit, based on the outcome of the above remarks and level of detail shown on plans.
   Acknowledged

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

REVISED
DRAINAGE REPORT

For

TRU BY HILTON
TRACT 2-A-3-C-1 MCLEOD BUSINESS PARK
Albuquerque, New Mexico

Prepared by

Rio Grande Engineering
PO Box 93924
Albuquerque, New Mexico 87199

JULY 2018

David Soule P.E. No. 14522

TABLE OF CONTENTS

Appendix

Map

Site Grading and Drainage Plan

PURPOSE

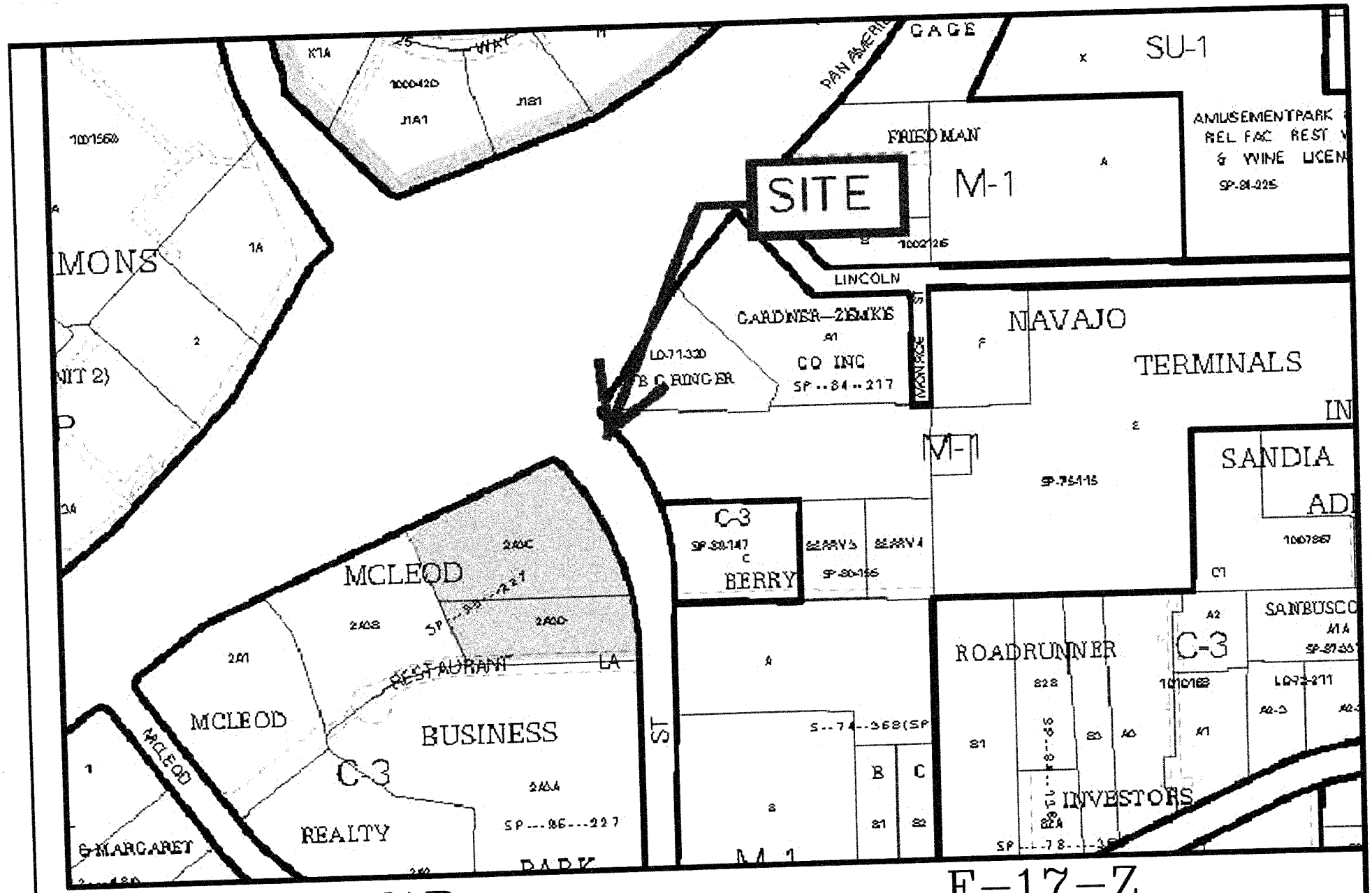
The purpose of this report is to provide the Drainage Management Plan for the development of a 4.95 acre tract of land that is being redeveloped as a 4 story hotel. This plan was prepared in accordance with the City of Albuquerque design regulations, utilizing the City of Albuquerque's Development Process Manual drainage guidelines. This report will demonstrate that the grading does not adversely affect the surrounding properties, nor the upstream or downstream facilities.

INTRODUCTION

The subject of this report, as shown on the Exhibit A, is a 4.95 -acre parcel of land located on the west side of Jefferson Boulevard directly south of Interstate 25. The proposed legal description of this site is tract 2A3C1 and 2A3C2 of McLeod Business Park. The existing two lots are in the process of being lot line adjusted. As shown on FIRM map35001C0138H, the entire site is located within Flood Zone X. The site is bound on all sides by roadways, and is not impacted by upland flows. The site is an existing developed site, with a restaurant building and large parking field. The site currently discharges 7.74 cfs to the adjacent NMDOT right of way utilizing a detention pond. The site was developed utilizing (F17-D44C). The southern portion of the site is undeveloped and governed by F17-D69 and allowed to discharge 7.85 cfs or (4.33 cfs/acre). The proposed improvements include the redevelopment of the existing building and the construction of a new hotel with associated paved parking area. The site must conform to the master plan peak flow requirements and must retain the first flush volume onsite.

EXISTING CONDITIONS

The site is currently developed. The site currently discharges developed flow of 7.85 cfs to a swale along the NMDOT right of way, utilizing a detention pond. The remaining undeveloped southern portion sheet flows to Hotel Lane. The flows in this basin are all conveyed to 3-42" culverts located at McLeod and Interstate 25 where they are conveyed to the Vineyard channel and the Main North Diversion Channel The site is not impacted buy upland flows.



VICINITY MAP:

F–17–Z

PROPOSED CONDITIONS

The proposed improvements consist of interior improvements to the existing building and the construction of a new hotel. The area between the buildings will be paved. The site contains 6 drainage basins. Basin A contains the northern portion of the new building and discharges 3.32 cfs to the existing outfall. The basin retains the first flush volume of 556 cubic feet. Basin B contains the existing building and the southern half of the new hotel as well as most of the parking area. This basin generates 12.49 cfs. This basin drains to a central pond that has an outlet control. Basin C contains the southeastern portion of the paved area. This basin discharges 1.58 cfs to an inlet that drains to the central pond. As shown in appendix B, this pond will discharge 5.78 cfs and have a maximum water surface elevation of 5158.45. The first flush volume of 3393 CF is retained in the pond below the inlet grate. Basin D contains the south western portion of the lot and discharges 1.05 cfs to an inlet connected to the outfall of the detention pond. This basin does not capture the 243 cubic feet of first flush volume therefore generates a fee in lieu of $2,070.00. Basin E contains the northern half of Hotel lane; this basin discharges 1.05 cfs to the west. The combined flow from the detention pond (basin B and C and D is 7.88 cfs, which is .03 cfs greater than allowed. The northeast corner of the site contains a large landscaped pond and does not discharge.

SUMMARY AND RECOMMENDATIONS

This project is a redevelopment of an existing site that allows 7.74 cfs to discharge to the NMDOT right of way via an existing outfall, and 7.85 cfs to discharge to Hotel Lane. The site discharges 3.32 cfs to the NMDOT right of way, a reduction of 4.42 cfs. The Southern portion of the site generates a flow greater than allowed, so the flow is metered by onsite detention ponding and an orifice controlled outlet. The resultant flow discharging to hotel lane is 7.88 cfs. The majority of the flow passes thru a first flush pond that retains the required volume. The portions of the site that can not be captured results in a fee in lieu to be paid. The onsite storm drain and outfalls were designed to convey the flow. The ponds will overflow in an emergency or clogging

situation via the emergency spill way for basin A and thru the driveway for basin B/C. The development of this site will not negatively impact the upstream nor down stream facilities. Since the work area does exceed 1 acre, erosion and sediment Control Plan shall be required.

APPENDIX A

SITE HYDROLOGY

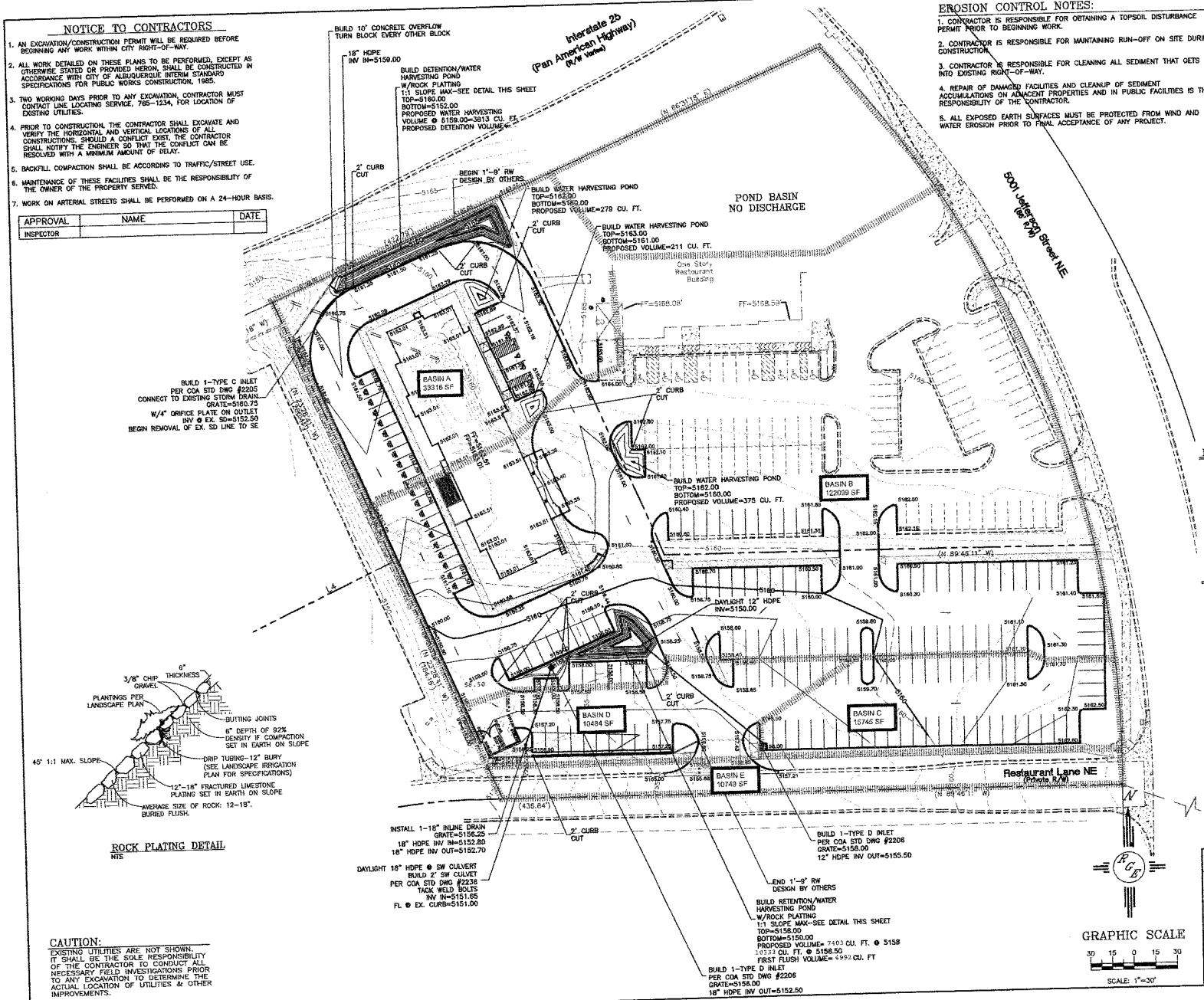
NOTICE TO CONTRACTORS

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

APPROVAL	NAME	DATE
INSPECTOR		

EROSION CONTROL NOTES:

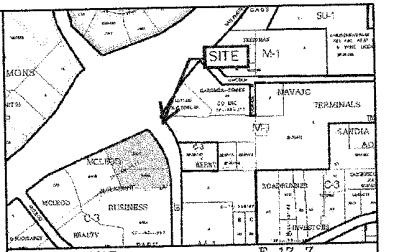
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



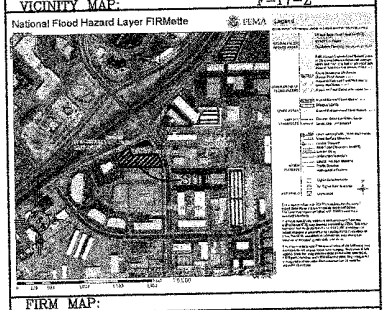
ROCK PLATING DETAIL
NTS

CAUTION:

EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.



VICINITY MAP: F-17-Z



FIRM MAP:

LEGAL DESCRIPTION:
Tracts 2-A-3-C-1 & 2-A-3-C-2 McLeod Business Park

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. ALL CURB AND GUTTER TO 6" HEADER UNLESS OTHERWISE NOTED.
3. ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.
4. ANY CURBS OR PAVEMENT NEGATIVELY IMPACTED BY CONSTRUCTION ACTIVITY SHALL BE REPLACED TO MATCH EXISTING CONDITIONS.
5. ALL SITE WORK SHALL CONFORM TO CITY OF ALBUQUERQUE STANDARDS FOR PUBLIC WORKS CONSTRUCTION EDITION 9

LEGEND

- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- PROPOSED CONTOUR
- PROPOSED INDEX CONTOUR
- SLOPE TIE
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- BOUNDARY
- CENTERLINE
- RIGHT-OF-WAY
- PROPOSED CURB
- EXISTING CURB AND GUTTER
- EXISTING SIDEWALK
- PROPOSED RETAINING WALL (SEE STRUCTURAL DRAWINGS)
- PROPOSED CONCRETE SW
- ADA PATH 2% MAX. CROSS SLOPE
- ROCK PLATTING-SEE DETAIL THIS SHEET

GRAPHIC SCALE
30 15 0 15 30
SCALE: 1"=30'

ENGINEER'S SEAL DAVID SOULE NEW MEXICO 14522 REGISTERED PROFESSIONAL ENGINEER 7/30/18 DAVID SOULE P.E. #14522	JEFFERSON HOTEL GRADING AND DRAINAGE PLAN Rio Grande Engineering 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999	DRAWN BY WCWJ DATE 7-30-18 SHEET # C1 JOB # 21882

Weighted E Method

JEFFERSON HOTEL

Existing Developed Basins- not accounting for detetion basin

Basin	Area (sf)	Area (acres)	Treatment A %	Treatment A (acres)	Treatment B %	Treatment B (acres)	Treatment C %	Treatment C (acres)	Treatment D %	Treatment D (acres)	100-Year, 6-hr. Weighted E (ac-ft)	100-Year, 6-hr. Volume (ac-ft)	100-Year, 6-hr. Flow cfs	10-day Volume (ac-ft)
BASIN A	33316	0.765	0%	0	0.0%	0.000	23.0%	0.17591	77%	0.589	1.892	0.121	3.32	0.199
BASIN B	122099	2.803	0%	0	5.0%	0.140	8.0%	0.22424	87%	2.439	1.974	0.461	12.49	0.786
BASIN C	15745	0.361	0%	0	5.0%	0.018	7.0%	0.0253	86%	0.311	1.941	0.058	1.58	0.100
BASIN D	10484	0.241	0%	0	8.0%	0.019	10.0%	0.02407	82%	0.197	1.914	0.038	1.05	0.065
BASIN E	10749	0.247	0%	0	0.0%	0.000	28.0%	0.06909	72%	0.178	1.843	0.038	1.05	0.062
COMBINED C+B	137844	3.164	0%	0	5.0%	0.158223	7.9%	0.24954	87%	2.749468	1.970	0.520	14.07	0.886

Equations:

Weighted E = Ea*Aa + Eb*Ab + Ec*Ac + Ed*Ad / (Total Area)

Volume = Weighted D * Total Area

Flow = Qa * Aa + Qb * Ab + Qc * Ac + Qd * Ad

Where for 100-year, 6-hour storm (zone 3)

Ea= 0.53
Eb= 0.78
Ec= 1.13
Ed= 2.12

Qa= 1.57
Qb= 2.28
Qc= 3.14
Qd= 4.7

	EXISTING	PROPOSED	AFTER ROUTING
DRAINS TO NMDOT	7.74	3.32	3.32
DRAINS TO HOTEL		16.17	7.88

First flush requirement (Redevelopment=impx.26/12-- New development=impx.34/12)
Area of site affected=7753 was/is impervious

	BASIN A	BASIN B+C	BASIN D	
first flush=	556	3393	243.5782667	CF
volume retained=	2303	4992	0	CF
fee in lieu			$2,070	DOLLARS

APPENDIX B

HYDRAULIC MODELING AND CALCULATIONS

Pipe Capacity

Pipe	D	Slope	Area	R	Q Provided	Q Required	Velocity
	(in)	(%)	(ft^2)		(cfs)	(cfs)	(ft/s)
18HDPE	18	0.8	1.77	0.375	8.16	5.78	3.27
12HDPE	12	5	0.79	0.25	6.92	1.58	2.01

Manning's Equation:

$Q = 1.49/n * A * R^{(2/3)} * S^{(1/2)}$

A = Area
R = D/4
S = Slope
n = 0.015

DROP INLET CALCULATIONS

POND	TYPE OF INLET	AREA (SF)	Q (CFS)	H (FT)	H ALLOW (FT)
	SINGLE D	3.84	1.58	0.0073	0.5

ORIFICE EQUATION

Q = CA sqrt(2gH)

C = 0.6

g = 32.2

INLETS IN SUMP CONDITION. ONE INLET CAN HANDLE THE FLOW ,

VOLUME CALCULATIONS

COMMONS POND

POND OUTLET

ACTUAL ELEV.	DEPTH (FT)			VOLUME CUMULATIVE	VOLUME AC-FT	Q (CFS)
50.00	0.00			800	0.018	0.00
52.50	0.00			5120	0.118	4.43
56.00	3.50			6135	0.141	5.03
57.00	4.50			7403	0.170	5.56
58.00	5.50			10333	0.237	5.81
58.50	6.00					

Orifice Equation

Q = CA SQRT(2gH)

C =	0.6
Diameter (in)	9.5
Area (ft^2)=	0.492237391
g =	32.2
H (Ft) =	Depth of water above center of orifice
Q (CFS)=	Flow

```
*S      AHYMO -  DETENTION-JEFFERSON HOTEL
*S             POND ROUTING

START                TIME=0.0  PUNCH CODE=0

RAINFALL             TYPE=2
                     QUARTER=0.0     ONE= 2.01 IN
                     SIX=2.35 IN    DAY= 2.75 IN    DT = 0.05 HR



COMPUTE NM HYD       ID=1  HYD NO=101  DA= .00494 SQ MI
                     PER A=0  PER B=5 PER C=8  PER D=87
                     TP=-.142  MASSRAIN=-1

PRINT HYD            ID=1  CODE=3

* ROUTE THE TOTAL FLOW THROUGH THE PROPOSED RESERVOIR
ROUTE RESERVOIR      ID=2   HYD NO=102   INFLOW=1   CODE=3
                     OUTFLOW(CFS)     STORAGE(AC-FT)     ELEV(FT)
                        0.00              0.018           52.50
                        4.43              0.118           56.00
                        5.03              0.141           57.00
                        5.56              0.170           58.00
                        5.81              0.237           58.50



 FINISH
```

```
AHYMO PROGRAM (AHYMO-S4)                    - Version: S4.01a - Rel: 01a
     RUN DATE (MON/DAY/YR) = 07/30/2018
     START TIME (HR:MIN:SEC) = 16:53:40     USER NO.=

RioGrandeSingleA41963517
     INPUT FILE = ettings\Owner\Desktop\2018 JOBS\1813-jefferson
hotel\DRAINAGE\pondrout031318.txt

  *S     AHYMO -  DETENTION-JEFFERSON HOTEL

  *S              POND ROUTING


  START                TIME=0.0   PUNCH CODE=0


  RAINFALL             TYPE=2

                       QUARTER=0.0    ONE= 2.01 IN

                       SIX=2.35 IN    DAY= 2.75 IN    DT = 0.05 HR


                  24-HOUR RAINFALL DIST. - BASED ON NOAA ATLAS 14 FOR
CONVECTIVE AREAS (NM & AZ) - D1
                  DT =   0.050000 HOURS        END TIME =    24.000002 HOURS
                    0.0000  0.0023  0.0046  0.0071  0.0099  0.0127  0.0159
                    0.0203  0.0272  0.0347  0.0424  0.0509  0.0595  0.0684
                    0.0776  0.0870  0.0974  0.1084  0.1204  0.1437  0.1728
                    0.2117  0.2559  0.3104  0.3831  0.4649  0.6062  0.8258
                    1.2021  1.4666  1.6752  1.7800  1.8719  1.9379  1.9905
                    2.0362  2.0697  2.1005  2.1259  2.1418  2.1530  2.1629
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2.2542	2.2565	2.2588	2.2611	2.2633	2.2654	2.2676
2.2697	2.2717	2.2738	2.2758	2.2778	2.2798	2.2817
2.2837	2.2856	2.2874	2.2893	2.2911	2.2930	2.2948
2.2965	2.2983	2.3000	2.3017	2.3034	2.3051	2.3068
2.3084	2.3100	2.3117	2.3133	2.3148	2.3164	2.3180
2.3195	2.3210	2.3225	2.3240	2.3255	2.3269	2.3284
2.3298	2.3313	2.3327	2.3341	2.3355	2.3368	2.3382
2.3396	2.3409	2.3422	2.3436	2.3449	2.3462	2.3474
2.3487	2.3500	2.3513	2.3525	2.3538	2.3551	2.3563
2.3576	2.3589	2.3601	2.3614	2.3627	2.3639	2.3652
2.3665	2.3677	2.3690	2.3702	2.3715	2.3728	2.3740
2.3753	2.3765	2.3778	2.3790	2.3803	2.3815	2.3828
2.3840	2.3853	2.3865	2.3878	2.3890	2.3903	2.3915
2.3927	2.3940	2.3952	2.3965	2.3977	2.3989	2.4002
2.4014	2.4027	2.4039	2.4051	2.4064	2.4076	2.4088
2.4101	2.4113	2.4125	2.4137	2.4150	2.4162	2.4174
2.4186	2.4199	2.4211	2.4223	2.4235	2.4247	2.4260
2.4272	2.4284	2.4296	2.4308	2.4320	2.4333	2.4345
2.4357	2.4369	2.4381	2.4393	2.4405	2.4417	2.4429
2.4441	2.4453	2.4465	2.4478	2.4490	2.4502	2.4514
2.4526	2.4538	2.4550	2.4561	2.4573	2.4585	2.4597
2.4609	2.4621	2.4633	2.4645	2.4657	2.4669	2.4681
2.4692	2.4704	2.4716	2.4728	2.4740	2.4752	2.4764
2.4775	2.4787	2.4799	2.4811	2.4822	2.4834	2.4846
2.4858	2.4869	2.4881	2.4893	2.4905	2.4916	2.4928
2.4940	2.4951	2.4963	2.4975	2.4986	2.4998	2.5010
2.5021	2.5033	2.5044	2.5056	2.5068	2.5079	2.5091
2.5102	2.5114	2.5125	2.5137	2.5148	2.5160	2.5171
2.5183	2.5194	2.5206	2.5217	2.5229	2.5240	2.5252
2.5263	2.5274	2.5286	2.5297	2.5309	2.5320	2.5331
2.5343	2.5354	2.5365	2.5377	2.5388	2.5399	2.5411
2.5422	2.5433	2.5445	2.5456	2.5467	2.5478	2.5490
2.5501	2.5512	2.5523	2.5535	2.5546	2.5557	2.5568
2.5579	2.5590	2.5602	2.5613	2.5624	2.5635	2.5646
2.5657	2.5668	2.5679	2.5691	2.5702	2.5713	2.5724
2.5735	2.5746	2.5757	2.5768	2.5779	2.5790	2.5801
2.5812	2.5823	2.5834	2.5845	2.5856	2.5867	2.5878
2.5889	2.5899	2.5910	2.5921	2.5932	2.5943	2.5954
2.5965	2.5976	2.5986	2.5997	2.6008	2.6019	2.6030
2.6040	2.6051	2.6062	2.6073	2.6084	2.6094	2.6105
2.6116	2.6126	2.6137	2.6148	2.6159	2.6169	2.6180
2.6191	2.6201	2.6212	2.6223	2.6233	2.6244	2.6254
2.6265	2.6276	2.6286	2.6297	2.6307	2.6318	2.6328
2.6339	2.6350	2.6360	2.6371	2.6381	2.6392	2.6402
2.6413	2.6423	2.6433	2.6444	2.6454	2.6465	2.6475
2.6486	2.6496	2.6506	2.6517	2.6527	2.6538	2.6548
2.6558	2.6569	2.6579	2.6589	2.6600	2.6610	2.6620
2.6630	2.6641	2.6651	2.6661	2.6672	2.6682	2.6692
2.6702	2.6712	2.6723	2.6733	2.6743	2.6753	2.6763
2.6774	2.6784	2.6794	2.6804	2.6814	2.6824	2.6834
2.6844	2.6854	2.6865	2.6875	2.6885	2.6895	2.6905
2.6915	2.6925	2.6935	2.6945	2.6955	2.6965	2.6975
2.6985	2.6995	2.7005	2.7015	2.7025	2.7034	2.7044
2.7054	2.7064	2.7074	2.7084	2.7094	2.7104	2.7114
2.7123	2.7133	2.7143	2.7153	2.7163	2.7172	2.7182
2.7192	2.7202	2.7211	2.7221	2.7231	2.7241	2.7250
2.7260	2.7270	2.7280	2.7289	2.7299	2.7309	2.7318
2.7328	2.7338	2.7347	2.7357	2.7366	2.7376	2.7386
2.7395	2.7405	2.7414	2.7424	2.7433	2.7443	2.7452
2.7462	2.7472	2.7481	2.7491	2.7500		

COMPUTE NM HYD ID=1 HYD NO=101 DA= .00494 SQ MI

PER A=0 PER B=5 PER C=8 PER D=87

TP=-.142 MASSRAIN=-1

K = 0.077390HR TP = 0.142000HR K/TP RATIO = 0.545000 SHAPE CONSTANT, N = 7.106428
UNIT PEAK = 15.928 CFS UNIT VOLUME = 0.9985 B = 526.28

P60 = 2.0100
AREA = 0.004298 SQ MI IA = 0.10000 INCHES INF = 0.04000 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

K = 0.124555HR TP = 0.142000HR K/TP RATIO = 0.877146 SHAPE CONSTANT, N = 4.047639
UNIT PEAK = 1.6206 CFS UNIT VOLUME = 0.9931 B = 358.33

P60 = 2.0100
AREA = 0.000642 SQ MI IA = 0.40769 INCHES INF = 0.99154 INCHES PER HOUR
RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = 0.050000

PRINT HYD ID=1 CODE=3

PARTIAL HYDROGRAPH 101.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
0.000	0.0	5.100	0.0	10.200	0.1
0.150	0.0	5.250	0.0	10.350	0.1
0.300	0.0	5.400	0.1	10.500	0.1

15.600	0.450	0.1	0.0	20.700	5.550	0.1	0.1	10.650	0.1
15.750	0.600	0.1	0.0	20.850	5.700	0.1	0.1	10.800	0.1
15.900	0.750	0.1	0.0	21.000	5.850	0.1	0.1	10.950	0.1
16.050	0.900	0.1	0.1	21.150	6.000	0.1	0.1	11.100	0.1
16.200	1.050	0.1	0.8	21.300	6.150	0.1	0.1	11.250	0.1
16.350	1.200	0.1	2.0	21.450	6.300	0.1	0.1	11.400	0.1
16.500	1.350	0.1	4.7	21.600	6.450	0.1	0.1	11.550	0.1
16.650	1.500	0.1	14.0	21.750	6.600	0.1	0.1	11.700	0.1
16.800	1.650	0.1	9.1	21.900	6.750	0.1	0.1	11.850	0.1
16.950	1.800	0.1	4.5	22.050	6.900	0.1	0.1	12.000	0.1
17.100	1.950	0.1	2.6	22.200	7.050	0.1	0.1	12.150	0.1
17.250	2.100	0.1	1.4	22.350	7.200	0.1	0.1	12.300	0.1
17.400	2.250	0.1	0.8	22.500	7.350	0.1	0.1	12.450	0.1
17.550	2.400	0.1	0.5	22.650	7.500	0.1	0.1	12.600	0.1
17.700	2.550	0.1	0.3	22.800	7.650	0.1	0.1	12.750	0.1
17.850	2.700	0.1	0.2	22.950	7.800	0.1	0.1	12.900	0.1
18.000	2.850	0.1	0.1	23.100	7.950	0.1	0.1	13.050	0.1
18.150	3.000	0.1	0.1	23.250	8.100	0.1	0.1	13.200	0.1
18.300	3.150	0.1	0.0	23.400	8.250	0.1	0.1	13.350	0.1
18.450	3.300	0.1	0.0	23.550	8.400	0.1	0.1	13.500	0.1
18.600	3.450	0.1	0.0	23.700	8.550	0.1	0.1	13.650	0.1

18.750	3.600	0.1	0.0	23.850	8.700	0.1	0.1	13.800	0.1
18.900	3.750	0.1	0.0	24.000	8.850	0.1	0.1	13.950	0.1
19.050	3.900	0.1	0.0	24.150	9.000	0.0	0.1	14.100	0.1
19.200	4.050	0.1	0.0	24.300	9.150	0.0	0.1	14.250	0.1
19.350	4.200	0.1	0.0	24.450	9.300	0.0	0.1	14.400	0.1
19.500	4.350	0.1	0.0	24.600	9.450	0.0	0.1	14.550	0.1
19.650	4.500	0.1	0.0	24.750	9.600	0.0	0.1	14.700	0.1
19.800	4.650	0.1	0.0		9.750		0.1	14.850	0.1
19.950	4.800	0.1	0.0		9.900		0.1	15.000	0.1
20.100	4.950	0.1	0.0		10.050		0.1	15.150	0.1
20.250		0.1							

RUNOFF VOLUME = 2.32270 INCHES = 0.6120 ACRE-FEET
PEAK DISCHARGE RATE = 14.04 CFS AT 1.500 HOURS BASIN AREA =

0.0049 SQ. MI.

* ROUTE THE TOTAL FLOW THROUGH THE PROPOSED RESERVOIR

ROUTE RESERVOIR ID=2 HYD NO=102 INFLOW=1 CODE=3

OUTFLOW(CFS)	STORAGE(AC-FT)	ELEV(FT)
0.00	0.018	52.50
4.43	0.118	56.00
5.03	0.141	57.00

5.56 0.170 58.00

5.81 0.237 58.50

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TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
0.00	0.00	52.50	0.018	0.00
0.15	0.00	52.50	0.018	0.00
0.30	0.00	52.50	0.018	0.00
0.45	0.00	52.50	0.018	0.00
0.60	0.00	52.50	0.018	0.00
0.75	0.00	52.50	0.018	0.00
0.90	0.09	52.51	0.018	0.01
1.05	0.84	52.65	0.022	0.19
1.20	2.00	53.07	0.034	0.73
1.35	4.70	53.89	0.058	1.76
1.50	14.04	56.74	0.135	4.87
1.65	9.09	58.37	0.220	5.75
1.80	4.51	58.44	0.228	5.78
1.95	2.62	58.23	0.200	5.67
2.10	1.37	57.51	0.156	5.30
2.25	0.81	55.71	0.110	4.07
2.40	0.53	54.57	0.077	2.62
2.55	0.27	53.82	0.056	1.67
2.70	0.16	53.33	0.042	1.05
2.85	0.10	53.02	0.033	0.66
3.00	0.06	52.83	0.027	0.41
3.15	0.04	52.70	0.024	0.26
3.30	0.03	52.63	0.022	0.16
3.45	0.03	52.59	0.020	0.11
3.60	0.03	52.56	0.020	0.07
3.75	0.03	52.54	0.019	0.05
3.90	0.03	52.53	0.019	0.04
4.05	0.03	52.53	0.019	0.04
4.20	0.03	52.53	0.019	0.03

4.35	0.03	52.53	0.019	0.03
4.50	0.04	52.53	0.019	0.03
4.65	0.04	52.53	0.019	0.04
4.80	0.04	52.53	0.019	0.04
4.95	0.04	52.53	0.019	0.04
5.10	0.05	52.53	0.019	0.04
5.25	0.05	52.54	0.019	0.04
5.40	0.05	52.54	0.019	0.05
5.55	0.06	52.54	0.019	0.05
5.70	0.06	52.54	0.019	0.05
5.85	0.06	52.55	0.019	0.06
6.00	0.07	52.55	0.019	0.06
6.15	0.07	52.55	0.019	0.06
6.30	0.07	52.55	0.020	0.07
6.45	0.07	52.55	0.020	0.07
6.60	0.07	52.55	0.020	0.07
6.75	0.07	52.55	0.020	0.07
6.90	0.07	52.55	0.020	0.07
7.05	0.07	52.56	0.020	0.07
7.20	0.07	52.56	0.020	0.07
7.35	0.07	52.55	0.020	0.07
7.50	0.07	52.55	0.020	0.07
7.65	0.07	52.55	0.020	0.07
7.80	0.07	52.55	0.020	0.07
7.95	0.07	52.55	0.020	0.07
8.10	0.07	52.55	0.020	0.07
8.25	0.07	52.55	0.020	0.07

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
8.40	0.07	52.55	0.020	0.07
8.55	0.07	52.55	0.020	0.07
8.70	0.07	52.55	0.020	0.07
8.85	0.07	52.55	0.020	0.07
9.00	0.07	52.55	0.020	0.07
9.15	0.07	52.55	0.020	0.07
9.30	0.07	52.55	0.020	0.07
9.45	0.07	52.55	0.020	0.07
9.60	0.07	52.55	0.020	0.07
9.75	0.07	52.55	0.020	0.07
9.90	0.07	52.55	0.020	0.07
10.05	0.07	52.55	0.020	0.07
10.20	0.07	52.55	0.020	0.07
10.35	0.07	52.55	0.019	0.07
10.50	0.07	52.55	0.019	0.07
10.65	0.07	52.55	0.019	0.07
10.80	0.07	52.55	0.019	0.07
10.95	0.06	52.55	0.019	0.07
11.10	0.07	52.55	0.019	0.07
11.25	0.07	52.55	0.019	0.07
11.40	0.07	52.55	0.019	0.07
11.55	0.07	52.55	0.019	0.07
11.70	0.06	52.55	0.019	0.07
11.85	0.06	52.55	0.019	0.07
12.00	0.06	52.55	0.019	0.06
12.15	0.06	52.55	0.019	0.06
12.30	0.06	52.55	0.019	0.06
12.45	0.06	52.55	0.019	0.06
12.60	0.06	52.55	0.019	0.06
12.75	0.06	52.55	0.019	0.06
12.90	0.06	52.55	0.019	0.06
13.05	0.06			

13.20	0.06	52.55	0.019	0.06
13.35	0.06	52.55	0.019	0.06
13.50	0.06	52.55	0.019	0.06
13.65	0.06	52.55	0.019	0.06
13.80	0.06	52.55	0.019	0.06
13.95	0.06	52.55	0.019	0.06
14.10	0.06	52.55	0.019	0.06
14.25	0.06	52.55	0.019	0.06
14.40	0.06	52.55	0.019	0.06
14.55	0.06	52.55	0.019	0.06
14.70	0.06	52.55	0.019	0.06
14.85	0.06	52.55	0.019	0.06
15.00	0.06	52.55	0.019	0.06
15.15	0.06	52.55	0.019	0.06
15.30	0.06	52.55	0.019	0.06
15.45	0.06	52.55	0.019	0.06
15.60	0.06	52.55	0.019	0.06
15.75	0.06	52.55	0.019	0.06
15.90	0.06	52.55	0.019	0.06
16.05	0.06	52.55	0.019	0.06
16.20	0.06	52.55	0.019	0.06
16.35	0.06	52.55	0.019	0.06
16.50	0.06	52.55	0.019	0.06
16.65	0.06	52.55	0.019	0.06

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
16.80	0.06	52.55	0.019	0.06
16.95	0.06	52.55	0.019	0.06
17.10	0.06	52.55	0.019	0.06
17.25	0.06	52.55	0.019	0.06
17.40	0.06	52.55	0.019	0.06
17.55	0.06	52.55	0.019	0.06
17.70	0.06	52.55	0.019	0.06
17.85	0.06	52.55	0.019	0.06
18.00	0.06	52.55	0.019	0.06
18.15	0.06	52.55	0.019	0.06
18.30	0.06	52.55	0.019	0.06
18.45	0.06	52.55	0.019	0.06
18.60	0.06	52.55	0.019	0.06
18.75	0.06	52.55	0.019	0.06
18.90	0.06	52.55	0.019	0.06
19.05	0.06	52.55	0.019	0.06
19.20	0.06	52.55	0.019	0.06
19.35	0.06	52.55	0.019	0.06
19.50	0.06	52.55	0.019	0.06
19.65	0.06	52.55	0.019	0.06
19.80	0.06	52.55	0.019	0.06
19.95	0.06	52.55	0.019	0.06
20.10	0.06	52.54	0.019	0.06
20.25	0.06	52.54	0.019	0.06
20.40	0.06	52.54	0.019	0.06
20.55	0.06	52.54	0.019	0.06
20.70	0.06	52.54	0.019	0.06
20.85	0.06	52.54	0.019	0.06
21.00	0.06	52.54	0.019	0.06
21.15	0.06	52.54	0.019	0.06
21.30	0.06	52.54	0.019	0.06
21.45	0.06	52.54	0.019	0.06
21.60	0.06	52.54	0.019	0.06
21.75	0.05	52.54	0.019	0.05
21.90	0.06			

22.05	0.06	52.54	0.019	0.06
22.20	0.05	52.54	0.019	0.05
22.35	0.05	52.54	0.019	0.05
22.50	0.05	52.54	0.019	0.05
22.65	0.05	52.54	0.019	0.05
22.80	0.05	52.54	0.019	0.05
22.95	0.05	52.54	0.019	0.05
23.10	0.05	52.54	0.019	0.05
23.25	0.05	52.54	0.019	0.05
23.40	0.05	52.54	0.019	0.05
23.55	0.05	52.54	0.019	0.05
23.70	0.05	52.54	0.019	0.05
23.85	0.05	52.54	0.019	0.05
24.00	0.05	52.54	0.019	0.05
24.15	0.03	52.54	0.019	0.05
24.30	0.01	52.53	0.019	0.03
24.45	0.00	52.52	0.018	0.02
24.60	0.00	52.51	0.018	0.01
24.75	0.00	52.51	0.018	0.01
24.90	0.00	52.50	0.018	0.00

PEAK DISCHARGE = 5.789 CFS - PEAK OCCURS AT HOUR 1.75
MAXIMUM WATER SURFACE ELEVATION = 58.459
MAXIMUM STORAGE = 0.2315 AC-FT INCREMENTAL TIME= 0.050000HRS

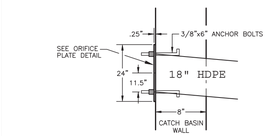
FINISH

NORMAL PROGRAM FINISH END TIME (HR:MIN:SEC) = 16:53:40

NOTICE TO CONTRACTORS

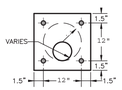
1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY.
2. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, 765-1234, FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.

APPROVAL	NAME	DATE
INSPECTOR		

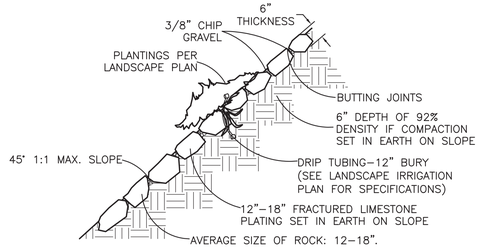


DETAIL A

TO BE INSTALLED @ THE OUTFLOW OF THE CATCH BASINS (SEE THIS PLAN FOR ORIFICE PLATE SIZES)



ORIFICE PLATE DETAIL

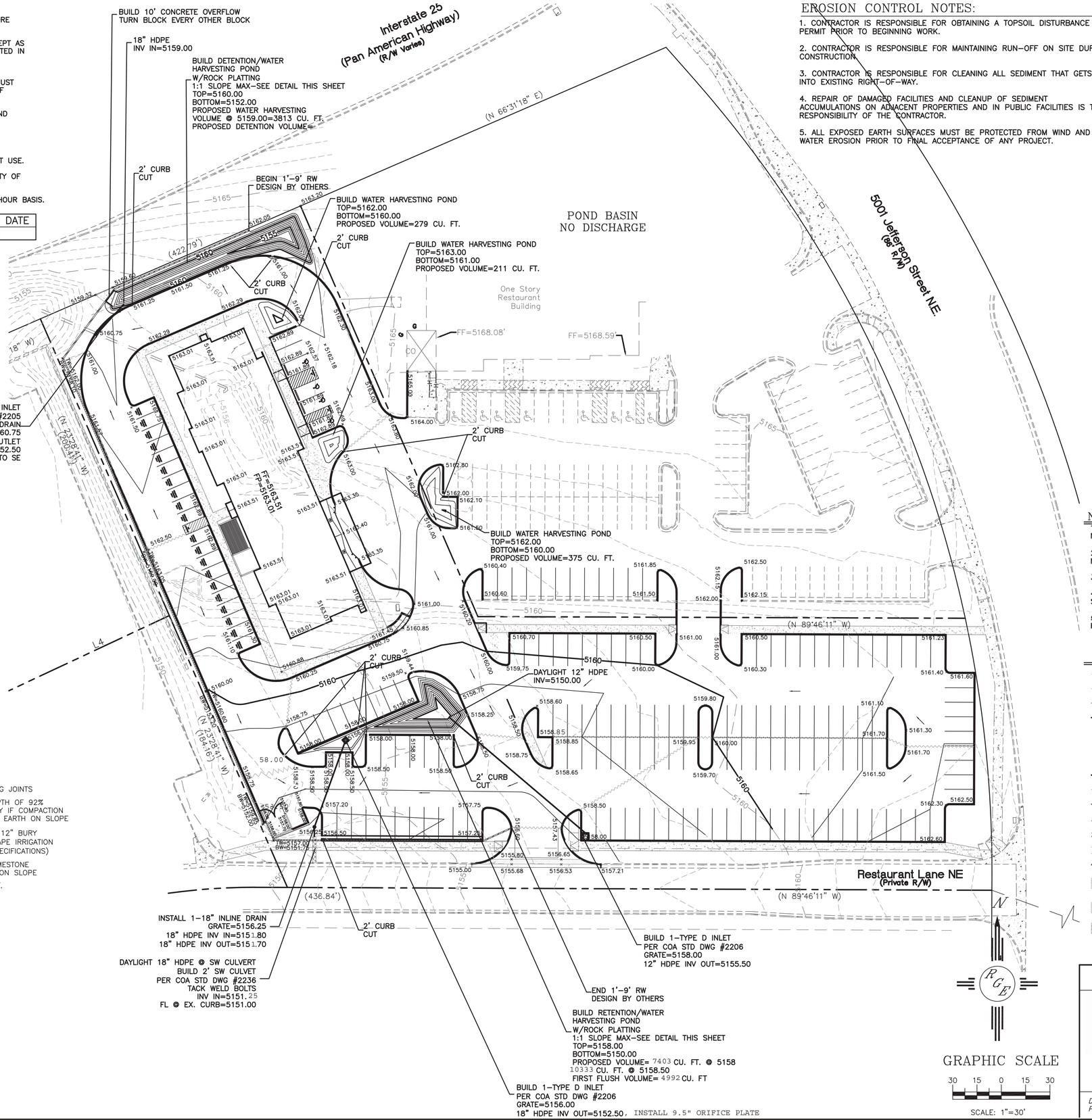


ROCK PLATING DETAIL

NTS

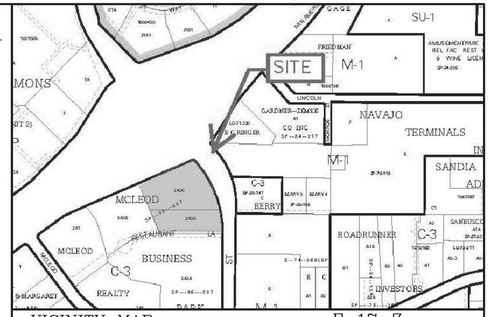
CAUTION:

EXISTING UTILITIES ARE NOT SHOWN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATION TO DETERMINE THE ACTUAL LOCATION OF UTILITIES & OTHER IMPROVEMENTS.



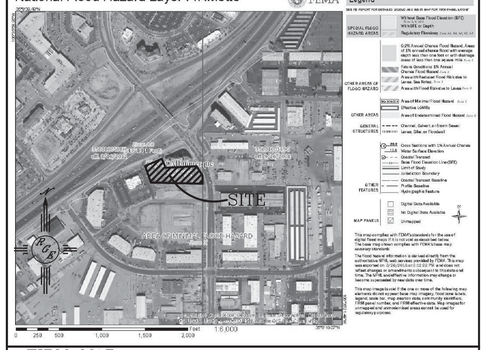
EROSION CONTROL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RUN-OFF ON SITE DURING CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.
4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL ACCEPTANCE OF ANY PROJECT.



VICINITY MAP: F-17-Z

National Flood Hazard Layer FIRMette



FIRM MAP:

LEGAL DESCRIPTION:

Tracts 2-A-3-C-1 & 2-A-3-C-2 McLeod Business Park

NOTES:

1. ALL SPOT ELEVATIONS REPRESENT FLOWLINE ELEVATION UNLESS OTHERWISE NOTED.
2. ALL CURB AND GUTTER TO 6" HEADER UNLESS OTHERWISE NOTED.
3. ALL RETAINING WALL DESIGN SHALL BE BY OTHERS.
4. ANY CURBS OR PAVEMENT NEGATIVELY IMPACTED BY CONSTRUCTION ACTIVITY SHALL BE REPLACED TO MATCH EXISTING CONDITIONS.
5. ALL SITE WORK SHALL CONFORM TO CITY OF ALBUQUERQUE STANDARDS FOR PUBLIC WORKS CONSTRUCTION EDITION 9

LEGEND

- EXISTING CONTOUR (5414)
- EXISTING INDEX CONTOUR (5415)
- PROPOSED CONTOUR (5414)
- PROPOSED INDEX CONTOUR (5415)
- SLOPE TIE
- EXISTING SPOT ELEVATION (× 4048.25)
- PROPOSED SPOT ELEVATION (× 4048.25)
- BOUNDARY
- CENTERLINE
- RIGHT-OF-WAY
- PROPOSED CURB
- EXISTING CURB AND GUTTER
- EXISTING SIDEWALK
- PROPOSED RETAINING WALL (SEE STRUCTURAL DRAWINGS)
- PROPOSED CONCRETE SW
- ADA PATH 2% MAX. CROSS SLOPE
- ROCK PLATTING-SEE DETAIL THIS SHEET

GRAPHIC SCALE

30 15 0 15 30

SCALE: 1"=30'

ENGINEER'S SEAL: DAVID SOULE NEW MEXICO 14522 REGISTERED PROFESSIONAL ENGINEER 7/30/18	JEFFERSON HOTEL	DRAWN BY WCWJ
	GRADING AND DRAINAGE PLAN	DATE 7-30-18
		21882-LAYOUT-3-30-18
		SHEET # C1
DAVID SOULE P.E. #14522	Rio Grande Engineering 1606 CENTRAL AVENUE SE SUITE 201 ALBUQUERQUE, NM 87106 (505) 872-0999	JOB # 21882