CITY OF ALBUQUERQUE

Planning Department
David Campbell, Director

Mayor Timothy M. Keller

January 30, 2019

Ron Hensley, P.E.
THE Group
300 Branding Iron Rd. SE
Rio Rancho, NM 87124

RE: Luna Vita Subdivision
Grading and Drainage Plan
Engineer's Stamp Date: 01/21/19
Hydrology File: C19D066

Dear Mr. Hensley:

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov

Based upon the information provided in your submittal received 01/23/2019, the Drainage Report and Grading Plan is approved for action by the DRB for Preliminary Plat or approved for Grading Permit.

As a reminder, prior to obtaining Work Order approval, please pay the Payment in Lieu of $7,890.98. The Owner needs to bring three copies of the provided Treasury Form to the Building Permits and pay the fee. Then provide Hydrology with one copy showing the receipt.

As a reminder, if the project total area of disturbance (including the staging area and any work within the adjacent Right-of-Way) is 1 acre or more, then an Erosion and Sediment Control (ESC) Plan and Owner's certified Notice of Intent (NOI) is required to be submitted to the Stormwater Quality Engineer (Curtis Cherne, PE, ccherne@cabq.gov, 924-3420) 14 days prior to any earth disturbance.

If you have any questions, please contact me at 924-3995 or rbrissette@cabq.gov .

Sincerely,

Renée C. Brissette

Renée C. Brissette, P.E. CFM
Senior Engineer, Hydrology
Planning Department

City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 11/2018)

Project Title: LUNA VITA SUBDIVISION Building Permit #: _____ Hydrology File #: C19d066

DRB#: 2018-001792 EPC#: _____ Work Order#: _____

Legal Description: Lots 31 and 32 Block 3 Unit 3 Tract 2 of North Albuquerque Acres

City Address: 7001 WILSHIRE AVE. NE

Applicant: THE Group Contact: Ron Hensley

Address: 300 Branding Iron Rd. SE, Rio Rancho, NM 87124

Phone#: 505-410-1622 Fax#: _____ E-mail: ron@thegroup.cc

Owner: Nazish LLC Contact: Adil Rizvi

Address: 8504 Waterford Pl. N.E.

Phone#: 505-315-6563 Fax#: _____ E-mail: adil1424@yahoo.com

TYPE OF SUBMITTAL: ✓ PLAT (10 # OF LOTS) ____ RESIDENCE ____ DRB SITE ____ ADMIN SITE

IS THIS A RESUBMITTAL?: ✓ Yes _____ No

DEPARTMENT: _____ TRAFFIC/ TRANSPORTATION ✓ HYDROLOGY/ DRAINAGE

Check all that Apply:

TYPE OF SUBMITTAL:

____ ENGINEER/ARCHITECT CERTIFICATION
____ PAD CERTIFICATION
____ CONCEPTUAL G & D PLAN
✓ GRADING PLAN
____ DRAINAGE MASTER PLAN
____ DRAINAGE REPORT
____ FLOODPLAIN DEVELOPMENT PERMIT APPLIC
____ ELEVATION CERTIFICATE
____ CLOMR/LOMR
____ TRAFFIC CIRCULATION LAYOUT (TCL)
____ TRAFFIC IMPACT STUDY (TIS)
____ OTHER (SPECIFY) _____
____ PRE-DESIGN MEETING?

TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

____ 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: 1/4/19 By: THE Group / Ron Hensley

COA STAFF: ELECTRONIC SUBMITTAL RECEIVED: _____

FEE PAID: _____

The HENSLEY ENGINEERING GROUP

January 21, 2019

Hydrology Development
City of Albuquerque
PO Box 1293
Albuquerque, NM 87103

Re: Luna Vita Subdivision – Grading and Drainage Plan

They previous comments have been addressed, and we are requesting a review of the attached plan and report in support of the Preliminary Plat and Grading Permit of Luna Vita Subdivision and the construction of Wilshire Ave. The subdivision is a replat of "Lots 31 and 32 Block 5 Unit 3 Tract 2 of North Albuquerque Acres" and is located on Wilshire Ave. near the intersection of Louisiana Blvd. and Wilshire Ave. The submittal covers the impact of the development on existing drainage infrastructure. We are requesting a review for compliance with City requirements.

Please contact me at 410-1622 or via email if you have any questions or comments.

Sincerely,

Ron E. Hensley

Ron E. Hensley P.E.
ron@thegroup.cc

DRAINAGE SUPPLEMENT

FOR

GRADING AND DRAINAGE PLAN
LUNA VITA SUBDIVISION

ALBUQUERQUE, NM

January 019

Prepared By

The HENSLEY ENGINEERING GROUP

Ron E. Hensley P.E.

300 Branding Iron Road S.E.

Rio Rancho, NM 87124

Contents

I. PURPOSE

This report is submitted in support for the Grading and Drainage Plan of Luna Vita Subdivision and provides a description and summary of the hydrology and drainage design for the accommodation of runoff from the site.

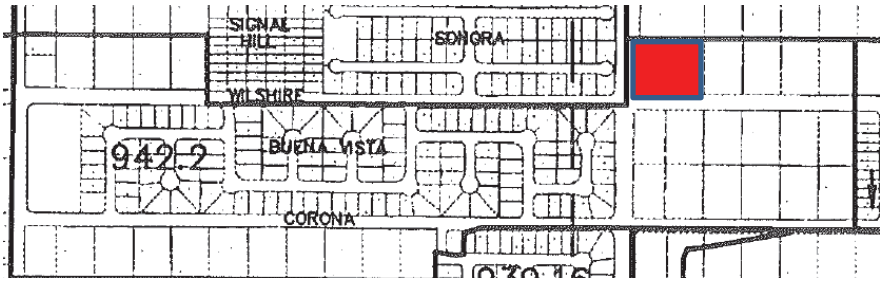
II. INTRODUCTION & PROJECT DESCRIPTION

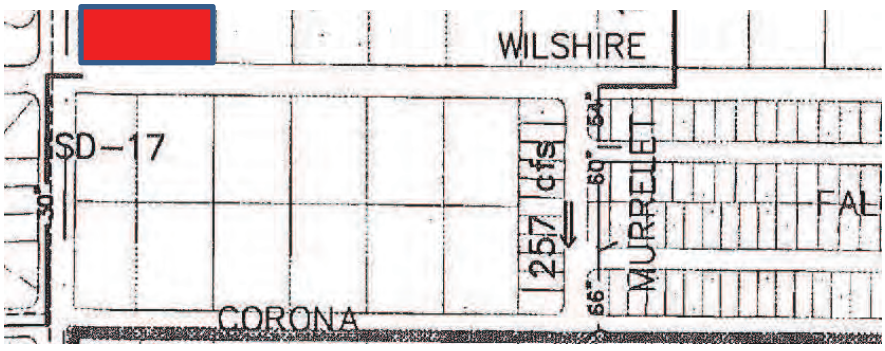
The project, as depicted on the Vicinity Map, ZAP C-19 and the Grading Plan, is a subdivision of two standard North Albuquerque Acres lots, 31 and 32 The project creates a subdivision of 10 lots located at Louisiana Blvd. and Wilshire Ave. The site is bounded by Louisiana Blvd to the West and Wilshire Ave to the South. To the East is a single dwelling on lots 29 and 30. The Eagle Point Subdivision was developed on the south side of Wilshire Ave., and the Eagle Springs was developed to the East of Lot 30.

III. NAADMP AND EXISTING CONDITIONS

NAADMP BACKGROUND

As shown on the Basin Map for NAADMP in VI-EXISTING PLANS, the site falls within the basin designated 942.2. As shown below, the site is within the upper bounds of this basin, and the discharge from this area is to be routed through the storm drain designated SD-17.





The purpose of the NAADMP was to prepare a plan to serve as the design analysis for future storm drainage improvements. Given that the area was primarily undeveloped, assumptions of land use were made to establish the storm drain locations and capacity requirements. The land use assumptions are outlined in the table below.

TABLE 2

FUTURE FULL DEVELOPMENT HYDROLOGIC CONDITION ASSUMPTIONS

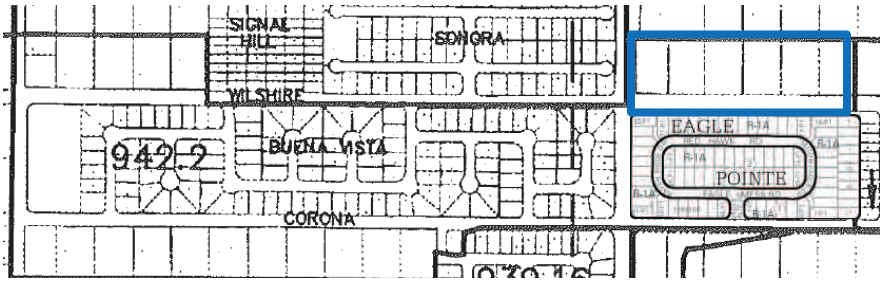
	Land Treatments (%)			
	A	B	C	D
Sandia Heights/Tramway (SH/TB)	20	40	5	35
North Albuquerque Acres (NAA)	22	23	38	17
Low Density Residential (LR)	20	20	34	26
Residential (R)	0	34	16	50
High Density Residential (HR)	0	25	15	60
Commercial/Industrial (C/I)	0	20	10	70
Medium Density Industrial (MI)	0	20	30	50
Sandia Tribal Lands (ST)	20	20	40	20
Primrose Pointe (PP)	0	40	20	40

Based on these assumptions, the anticipated flow at the upper reach of SD-17 from Wilshire Ave. would be 39.96 cfs from the approximately 12 acres fronting to Wilshire Ave. as quantified in the AHYMO summary for "100 YEAR NAADMP CONDITIONS".

BASIN MODIFACTIONS AND CURRENT CONDITIONS

EAGLE POINT

With the development of the Eagle Point Subdivision, the routing of Basin 942.2 to SD-17 was modified to limit the area captured at the upper reach of SD-17 to the area depicted below.



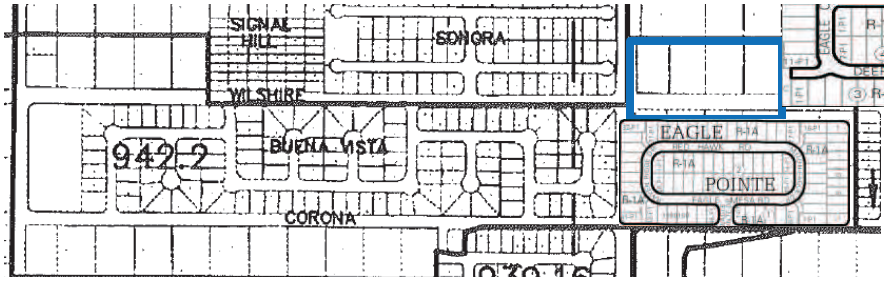
With this modification, the area of discharge to the upper reach of SD-17 was limited to approximately 6 acres, and the area of Basin 942.2 contained within the bounds of

Eagle Point was limited to a discharge of 1.08 cfs to Wilshire Ave. as shown on the Drainage Plan (C19-D21 Eagle Point) in in VI-EXISTING PLANS.

Included in the development of Eagle Point was the design of the upper reach of SD-17. The design included a 30" drain in Louisiana Blvd. to accommodate a flow of 27.89 cfs from inlets adjacent to the intersection of Wilshire Ave. A design flow of 20.3 cfs was included for the flows captured by the proposed inlets in Wilshire Ave. , The anticipated flow at the upper reach of SD-17 from the north side of Wilshire Ave. would be 19.99 cfs from the approximately 6 acres as quantified in the AHYMO summary for "NORTH WILSHIRE AFTER EAGLE POINT". This is combined with the flow from Eagle Point for a calculated total flow at the intersection at 20.07 cfs.

EAGLE SPRINGS

With the development of the Eagle Springs Subdivision, the routing of Basin 942.2 to SD-17 was further modified to limit the area captured at the upper reach of SD-17 to the area depicted below.



With this modification, the area of discharge to the upper reach of SD-17 from the north side of Wilshire Ave. was limited to approximately 4 acres, The anticipated flow at the upper reach of SD-17 from the north side of Wilshire Ave. would be 12.94 cfs from the approximately 6 acres as quantified in the AHYMO summary for "NORTH WILSHIRE AFTER EAGGLE SPRINGS". This is combined with the flow from Eagle Point for a calculated total flow at the intersection at 14.02 cfs. Given this flow and the 20.3 cfs capacity of the NAADMP model and as built storm drain conditions, there is 6.42 cfs of additional capacity in the Wilshire Ave. storm drain that can be allocated to lots 29 – 32.

IV. DEVELOPED CONDITIONS

As shown on the Grading and Drainage Plan for Luna Vita Subdivision, the runoff from the new lots will be directed to the proposed street and flow to Wilshire Avenue. The proposed inlets in Wilshire Ave. will capture the majority of the flow in Wilshire Ave. at this point. The captured flow at the upper reach of SD-17 from the north side of Wilshire Ave. will be 13.79 cfs from the approximately 4 acres, Eagle Point and Wilshire Ave. ROW as quantified in the AHYMO summary for "100 YEAR PROPOSED CONDITIONS NORTH WILSHIRE". The remaining flows are bypassed to a sump inlet in Louisiana Blvd.

V. SUMMARY

The drainage conditions and anticipated flows from the subdivision and improvements can be accommodated by the proposed improvements and existing downstream infrastructure.

VI. APPENDIX

AHYMO

INPUT FILE

```
*
*                    *** TC = 12 MIN ***
*                    *********************************
START                TIME=0.0 HR PUNCH CODE=0 PRINT LINES=-6
RAINFALL             TYPE=2 RAIN QUARTER=0.0
                     RAIN ONE=1.97 IN RAIN SIX=2.37 IN
                     RAIN DAY=2.85 IN DT=0.05 HRS
*                    *********************************
*S                   *100 YEAR NAADMP CONDITIONS
*S                   *TO SD-17
*S                   *APPROX. 12 AC.
*
COMPUTE NM HYD       ID=1 HYD NO=942.2 DA=0.017708 SQ MI
                     PER A=0 PER B=34 PER C=16 PER D=50
                     TP=-0.1333 HR MASS RAIN=-1
*S                   *********************************
PRINT HYD            ID=1 CODE=1
*
*S                   *NORTH WILSHIRE AFTER EAGLE POINT
*S                   *APPROX. 6 AC.
*S                   *********************************
*S                   *ALLOWABLE DISCHARGE TO SD-17
*S                   *FROM NORTH WILSHIRE
COMPUTE NM HYD       ID=1 HYD NO=942.2 DA=0.008854 SQ MI
                     PER A=0 PER B=34 PER C=16 PER D=50
                     TP=-0.1333 HR MASS RAIN=-1
*S                    *********************************
PRINT HYD            ID=1 CODE=1
*
*S                   *100 YEAR CONDITIONS
*S                   *NORTH WILSHIRE AFTER EAGLE SPRINGS
*S                   *APPROX. 4 AC.
*
COMPUTE NM HYD       ID=1 HYD NO=942.2 DA=0.005729 SQ MI
                     PER A=0 PER B=34 PER C=16 PER D=50
                     TP=-0.1333 HR MASS RAIN=-1
*S                    *********************************
PRINT HYD            ID=1 CODE=1
*
*S
*S
*S                   *100 YEAR PROPOSED CONDITIONS
*S                   *NORTH WILSHIRE
RAINFALL             TYPE=2 RAIN QUARTER=0.0
                     RAIN ONE=2.14 IN RAIN SIX=2.60 IN
                     RAIN DAY=3.10 IN DT=0.05 HRS
*S                   *********************************
*S                   *LOTS 39 AND 30
COMPUTE NM HYD       ID=1 HYD NO=EXLOTS DA=0.002770 SQ MI
                     PER A=0 PER B=34 PER C=16 PER D=50
                     TP=-0.1333 HR MASS RAIN=-1
*                    ******************************
PRINT HYD            ID=1 CODE=1
*
*                    *NORTH ROW
COMPUTE NM HYD       ID=2 HYD NO=WILSHIRE DA=0.000657 SQ MI
                     PER A=0 PER B=0 PER C=10 PER D=90
                     TP=-0.1333 HR MASS RAIN=-1
*
PRINT HYD            ID=2 CODE=1
*
```

```
*S                   *ADD LOTS 39 AND 30 TO STREET
ADD HYD              ID=10 HYD NO=STREET  IDS=1 AND 2
*
PRINT HYD            ID=10 CODE=1
*
COMPUTE NM HYD       ID=3 HYD NO=SITE DA=0.002304 SQ MI
                     PER A=0 PER B=18 PER C=10 PER D=72
                     TP=-0.1333 HR MASS RAIN=-1
*                    ******************************
PRINT HYD            ID=3 CODE=1
*
*S                   *FLOW TO INLETS
ADD HYD              ID=11 HYD NO=TOTSL  IDS=10 AND 3
*
PRINT HYD            ID=11 CODE=1
*                   *********************************
FINISH
```

SUMMARY

```
AHYMO PROGRAM SUMMARY TABLE (AHYMO_97) -                        - VERSION:  1997.02c      RUN DATE (MON/DAY/YR) =01/17/2019
INPUT FILE = F:\Adil\LUNAVI~1\DRAINAGE.DAT                                                USER NO.= AHYMO-I-9702c01000Q29-AH

                                FROM  TO                    PEAK         RUNOFF              TIME TO    CFS      PAGE =   1
                    HYDROGRAPH    ID   ID         AREA     DISCHARGE      VOLUME      RUNOFF     PEAK     PER
COMMAND        IDENTIFICATION    NO.  NO.      (SQ MI)      (CFS)       (AC-FT)    (INCHES)  (HOURS)    ACRE     NOTATION

START                                                                                                    TIME=       .00
RAINFALL  TYPE= 2                                                                                        RAIN24=   2.850
*S                   *100 YEAR NAADMP CONDITIONS
*S                   *TO SD-17
*S                   *APPROX. 12 AC.
COMPUTE NM HYD        942.20   -     1        .01771       39.96       1.641      1.73704    1.500    3.526 PER IMP=  50.00
*S                   ***********************************
*S                   *NORTH WILSHIRE AFTER EAGLE POINT
*S                   *APPROX. 6 AC.
*S                   ***********************************
*S                   *ALLOWABLE DISCHARGE TO SD-17
*S                   *FROM NORTH WILSHIRE
COMPUTE NM HYD        942.20   -     1        .00885       19.99        .820      1.73704    1.500    3.528 PER IMP=  50.00
*S                    ***********************************
*S                   *100 YEAR CONDITIONS
*S                   *NORTH WILSHIRE AFTER EAGLE SPRINGS
*S                   *APPROX. 4 AC.
COMPUTE NM HYD        942.20   -     1        .00573       12.94        .531      1.73704    1.500    3.529 PER IMP=  50.00
*S                    ***********************************
*S
*S
*S                   *100 YEAR PROPOSED CONDITIONS
*S                   *NORTH WILSHIRE
RAINFALL  TYPE= 2                                                                                        RAIN24=   3.100
*S                   ***********************************
*S                   *LOTS 39 AND 30
COMPUTE NM HYD         EXLOTS   -     1        .00277        6.91        .287      1.94076    1.500    3.896 PER IMP=  50.00
COMPUTE NM HYD       WILSHIRE   -     2        .00066        2.03        .095      2.70052    1.500    4.828 PER IMP=  90.00
*S                    *ADD LOTS 39 AND 30 TO STREET
ADD HYD               STREET  1& 2  10        .00343        8.94        .381      2.08625    1.500    4.075
COMPUTE NM HYD          SITE   -     3        .00230        6.44        .288      2.34759    1.500    4.368 PER IMP=  72.00
*S                   *FLOW TO INLETS
ADD HYD                 TOTSL 10& 3  11        .00573       15.38        .670      2.19127    1.500    4.193
FINISH
```

HGL CALCULATIONS

ALLOWABLE WHILSHIRE STREET FLOW

Depth	Q	Area	Veloc	Wp	Yc
(ft)	(cfs)	(sqft)	(ft/s)	(ft)	(ft)
0.33	19.99	3.540	5.65	18.98	0.47

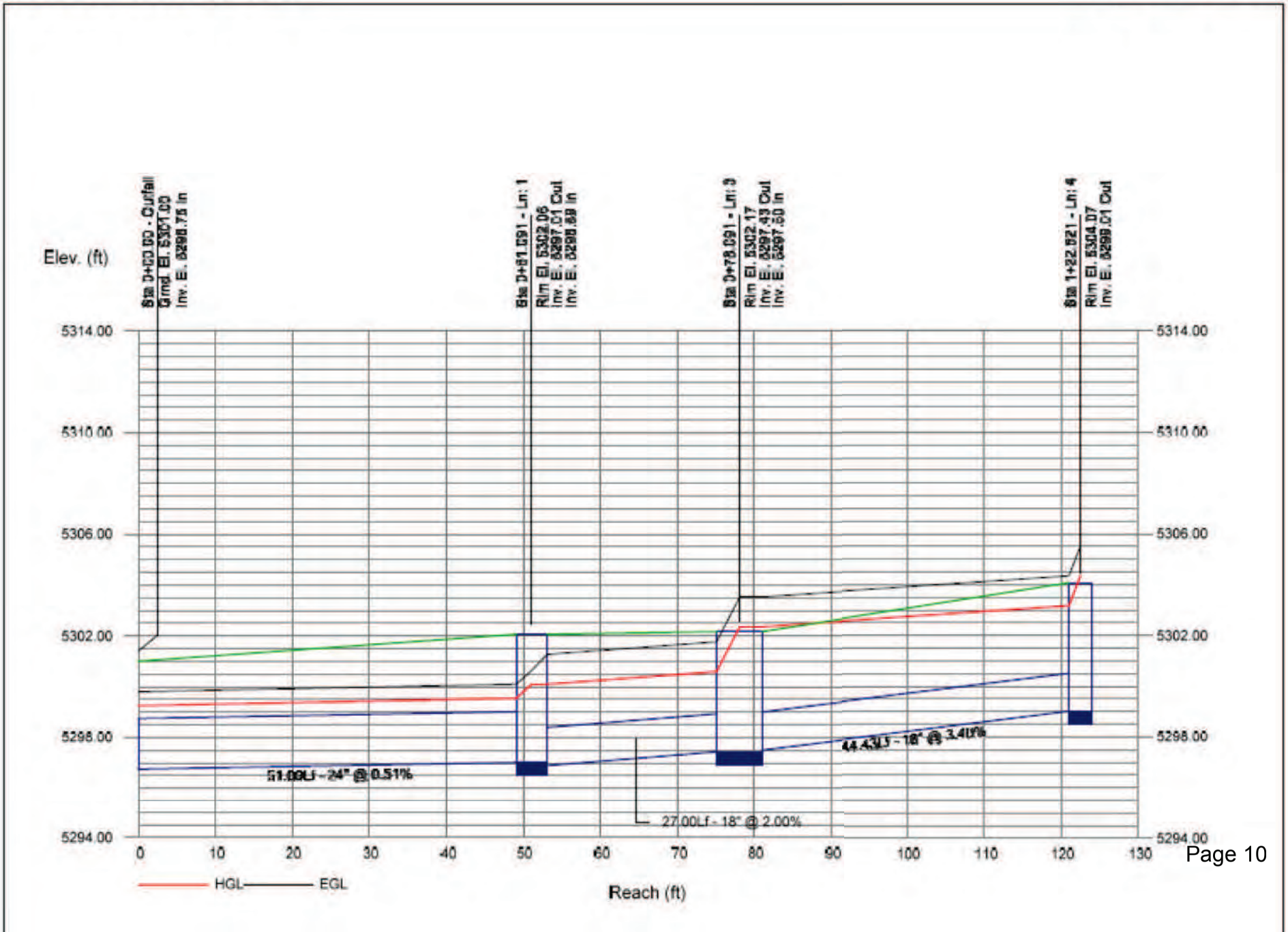
PROPOSED WHILSHIRE STREET FLOW

Depth	Q	Area	Veloc	Wp	Yc
(ft)	(cfs)	(sqft)	(ft/s)	(ft)	(ft)
0.30	15.38	3.004	5.12	17.45	0.42

STORM DRAIN HYDRAULICS

Storm Sewer Profile

Proj. file: LUNA VITA.stm



Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	Pipe - (14)	18.63	24	Cir	51.09	5296.75	5297.01	0.508	5299.25*	5299.55*	0.55	5300.09	End	Manhole
2	Inserted Line	3.25	18	Cir	6.00	5297.20	5297.60	6.665	5300.09*	5300.10*	0.05	5300.15	1	Combination
3	Pipe - (17)	15.38	18	Cir	27.00	5296.89	5297.43	2.000	5300.09*	5300.59*	1.77	5302.35	1	Combination
4	Pipe - (18)	15.38	18	Cir	44.43	5297.50	5299.01	3.398	5302.35*	5303.17*	1.18	5304.34	3	Combination

Inlet Report

Line No	Inlet ID	Q = CIA (cfs)	Q carry (cfs)	Q capt (cfs)	Q Byp (cfs)	Junc Type	Curb Inlet		Grate Inlet			Gutter							Inlet			Byp Line No
							Ht (in)	L (ft)	Area (sqft)	L (ft)	W (ft)	So (ft/ft)	W (ft)	Sw (ft/ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)	
1	MH1	0.00	0.00	0.00	0.00	MH	6.5	6.00	0.00	0.00	0.00	Sag	0.00	0.000	0.000	0.013	0.00	0.00	0.00	0.00	0.0	Off
2	EX INLET	3.25*	0.00	2.20	1.05	Comb	6.5	3.00	12.00	2.64	1.72	0.034	2.00	0.063	0.020	0.017	0.25	8.30	0.28	7.85	1.5	Off
3	INLET 1	0.00	9.10	5.35	3.75	Comb	6.5	6.00	0.00	5.28	1.72	0.034	2.00	0.063	0.020	0.017	0.34	12.90	0.38	12.65	1.5	Off
4	INLET 2	15.38*	0.00	6.28	9.10	Comb	6.5	3.00	0.00	2.64	1.72	0.046	2.00	0.063	0.020	0.017	0.39	15.00	0.42	14.75	1.5	3

Project File: LUNA VITA.stm | Number of lines: 4 | Run Date: 1/16/2019

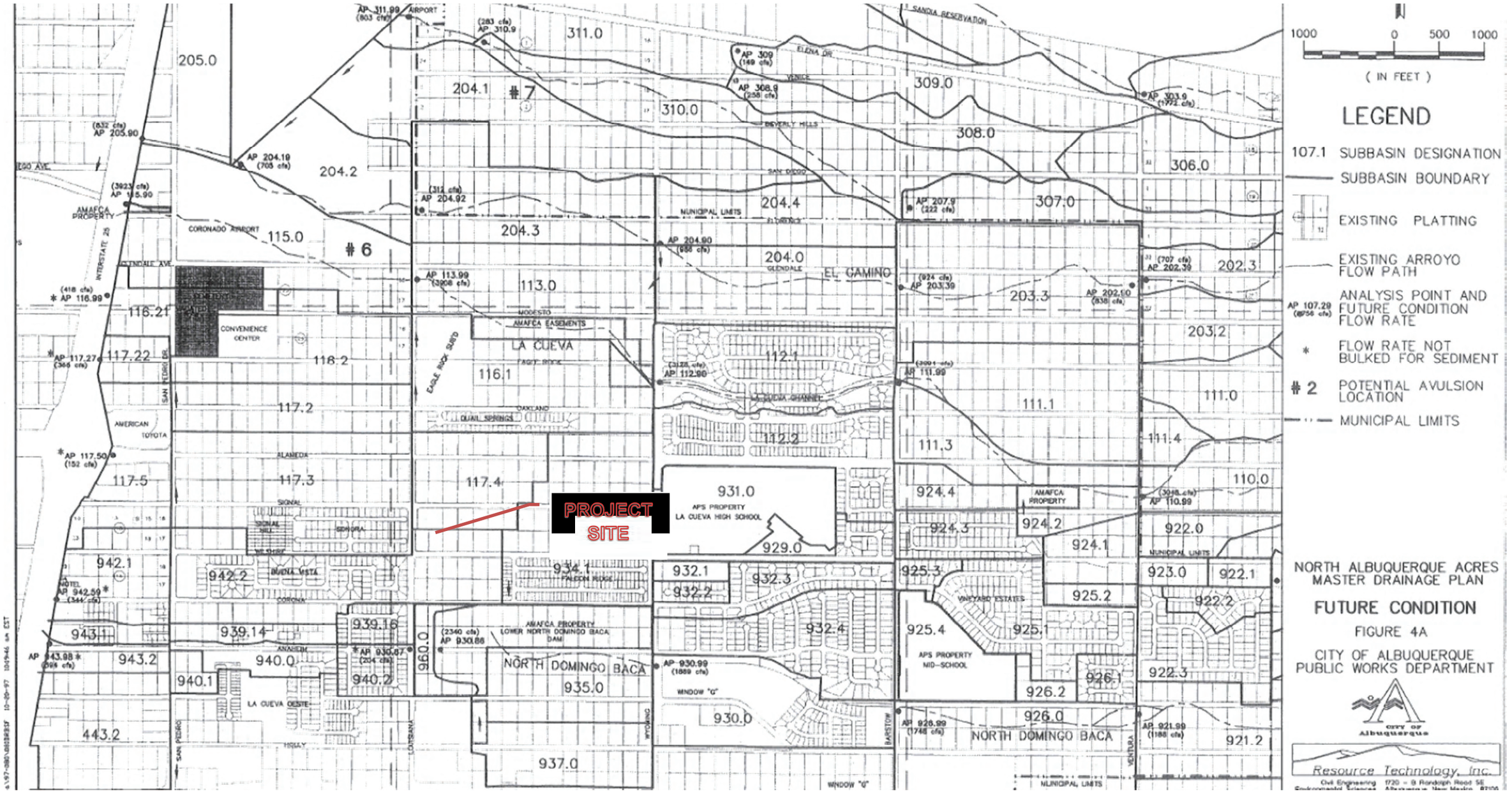
Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
	(in)	(cfs)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	(ft)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	Ave Sf (%)	Enrgy loss (ft)	(K)	(ft)
1	24	18.63	5296.75	5299.25	2.00	3.14	5.93	0.55	5299.80	0.578	51.09	5297.01	5299.55	2.00	3.14	5.93	0.55	5300.09	0.578	0.578	0.295	1.00	0.55
2	18	3.25	5297.20	5300.09	1.50	1.77	1.84	0.05	5300.15	0.082	6.00	5297.60	5300.10	1.50	1.77	1.84	0.05	5300.15	0.082	0.082	0.005	1.00	0.05
3	18	15.38	5296.89	5300.09	1.50	1.77	8.70	1.18	5301.27	1.829	27.00	5297.43	5300.59	1.50	1.77	8.70	1.18	5301.76	1.828	1.828	0.494	1.50	1.77
4	18	15.38	5297.50	5302.35	1.50	1.77	8.70	1.18	5303.53	1.829	44.43	5299.01	5303.17	1.50	1.77	8.70	1.18	5304.34	1.828	1.828	0.812	1.00	1.18

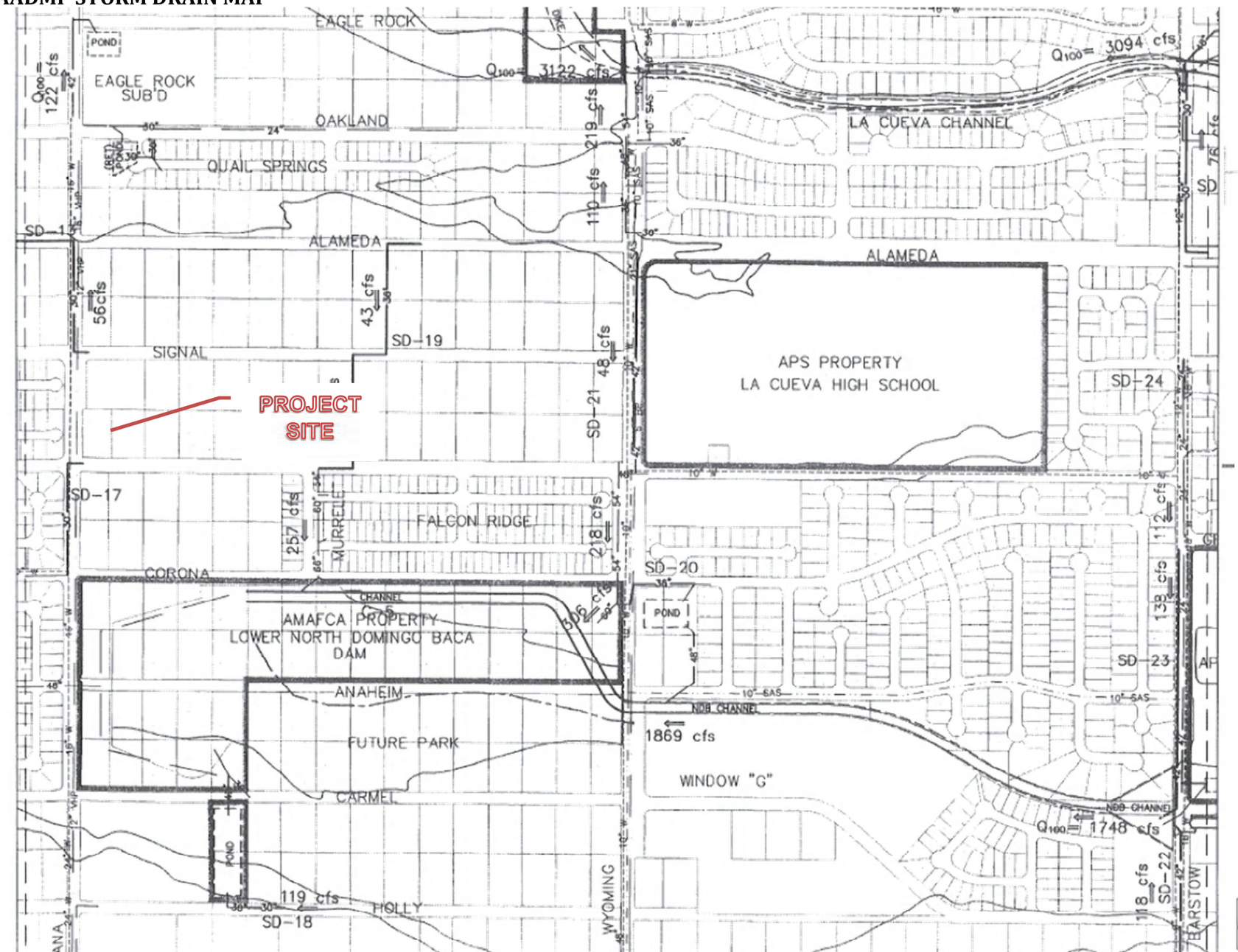
Project File: LUNA VITA.stm | Number of lines: 4 | Run Date: 1/18/2019

EXISTING PLANS

NAADMP BASIN MAP



NAADMP STORM DRAIN MAP



(IN FEET)

LEGEND

- MUNICIPAL LIMITS
- EXISTING PLATTING
- EXISTING ARROYO FLOW PATH
- 10" W — EXISTING WATER LINE
- 10" SAS — EXISTING SANITARY SEWER
- 12" — EXISTING GAS LINE
- 78" — EXISTING STORM DRAIN
- 54" — PROPOSED STORM DRAIN
- CHANNEL — PROPOSED CHANNEL
- PROPOSED STRUCTURE OR ROAD
- PROPOSED DIKE
- #5 AV-5 — POTENTIAL AVULSION

NOTE:
All flow rates shown are future condition 100-year.

NORTH ALBUQUERQUE ACRES
MASTER DRAINAGE PLAN

STORM DRAIN FACILITIES C-19

FIGURE 5E

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT

City of Albuquerque

Resource Technology, Inc.

NAADMP AHYMO

COMMAND	HYDROGRAPH IDENTIFICATION	FROM ID NO.	TO ID NO.	AREA (SQ MI)	PEAK DISCHARGE (CFS)	RUNOFF VOLUME (AC-FT)	RUNOFF (INCHES)	TIME TO PEAK (HOURS)	CFS PER ACRE	PAGE = 6 NOTATION
ADD HYD	943.19	3&14	3	4.32386	288.50	376.928	1.63451	1.550	.104	
COMPUTE NM HYD	940.10	-	1	.00700	18.82	.791	2.11965	1.500	4.202	PER IMP= 70.00
ROUTE MCUNGE	940.80	1	6	.00700	18.75	.791	2.11970	1.600	4.185	CCODE = .2
COMPUTE NM HYD	943.20	-	1	.03750	100.77	4.239	2.11965	1.500	4.199	PER IMP= 70.00
*S OVERLAND FLOW AT I-25 (AP 943.29)										
ADD HYD	943.29	1& 6	5	.04450	112.79	5.031	2.11964	1.500	3.960	
*S TOTAL NDB Q AT I-25 BOX CULVERT (943.89)										
ADD HYD	943.98	5& 3	9	4.36836	394.04	381.959	1.63945	1.550	.141	
*S CORONA SD SYSTEM										
COMPUTE NM HYD	942.20	-	1	.10310	229.08	10.288	1.87097	1.550	3.472	PER IMP= 55.00
*S (ROUTE IN SD DIA=4 FT)										
ROUTE	942.29	1	5	.10310	231.01	10.288	1.87097	1.550	3.501	
COMPUTE NM HYD	942.10	-	2	.04690	128.50	5.391	2.15532	1.500	4.281	PER IMP= 70.00
*S CORONA SD AT I-25										
ADD HYD	942.59	2& 5	3	.15000	344.19	15.679	1.95987	1.550	3.585	
*S TOTAL Q AT CORONADO MH PARK (AP 943.99)										
ADD HYD	943.99	3& 9	3	4.51836	738.23	397.637	1.65009	1.550	.255	
COMPUTE NM HYD	443.20	-	2	.07030	192.62	8.081	2.15532	1.500	4.281	PER IMP= 70.00
FINISH										

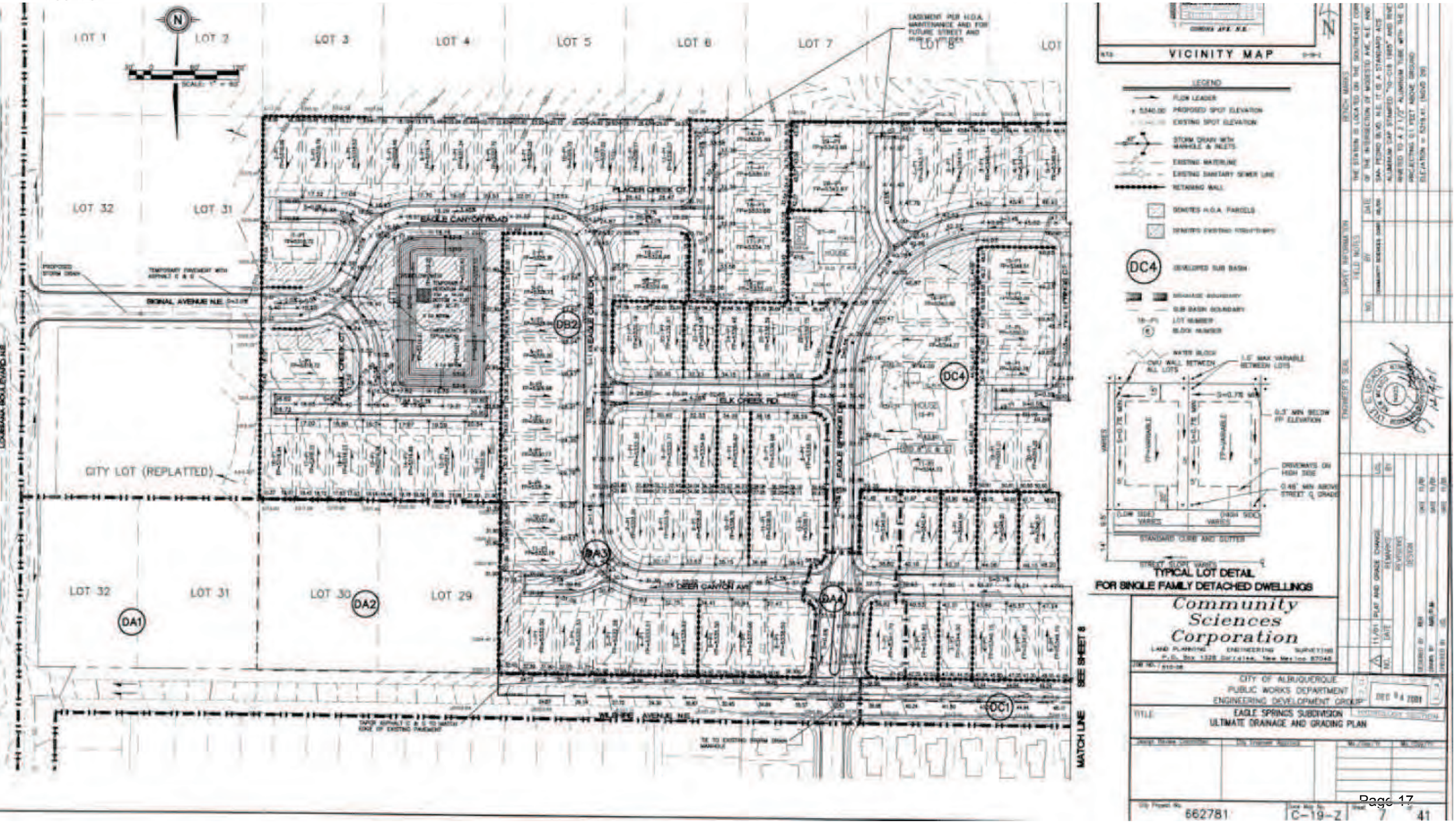
(s0p10h4099T--&16D

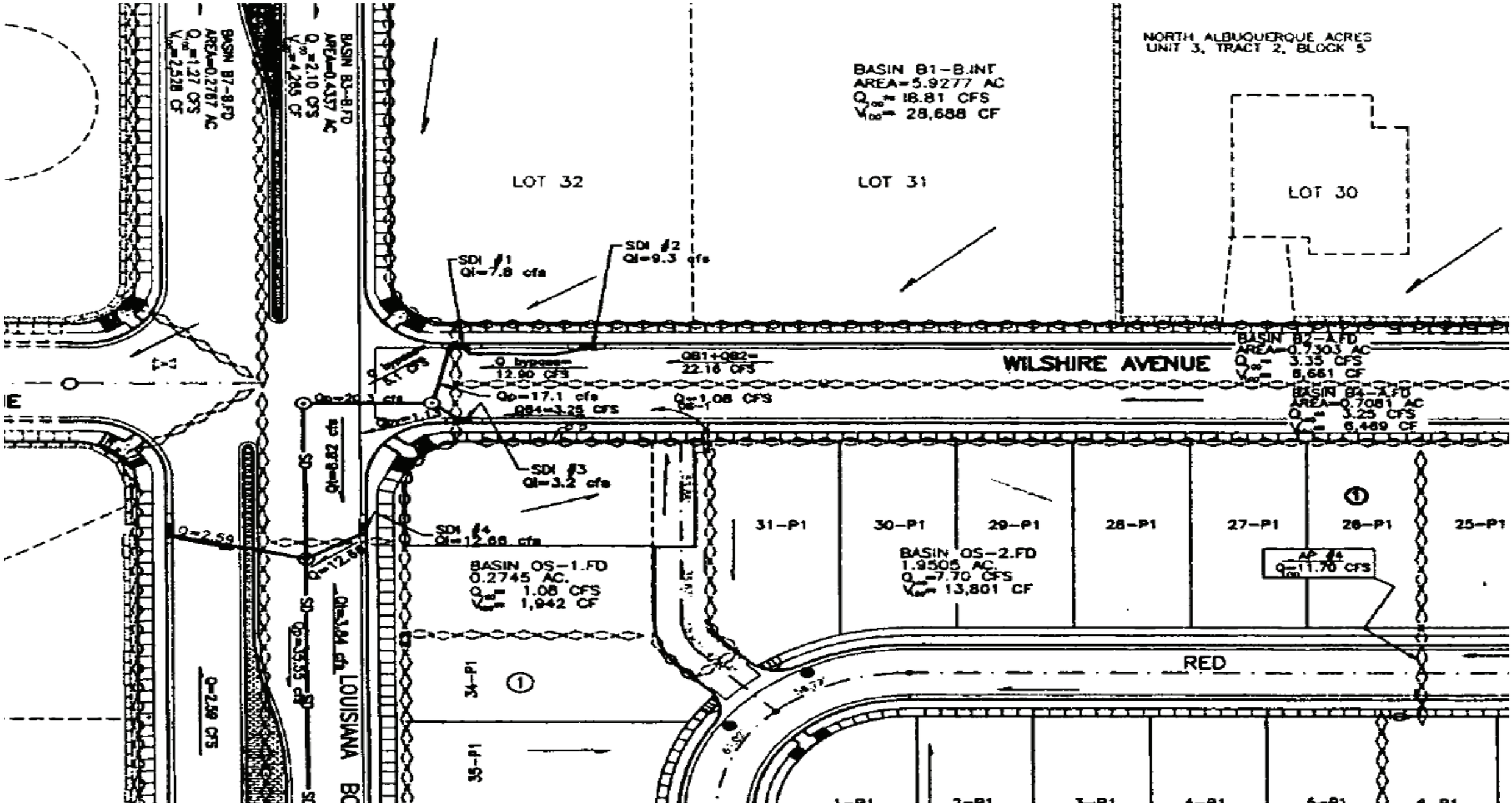
NAADMP SD-17

	10-YR STREET CAP (CFS)	100-YR STREET CAP (CFS)	SD SIZE "	SD S %	SD CAP (CFS)	TOTAL 10-YR CAP	TOTAL 100-YR CAP	Q-10 YR (CFS)	Q-100 YR (CFS)	10-YR OK?	100-YR OK?
SD-13 (ALAMEDA)											ZONE MAP C-18
SIGNAL TO ALAMEDA	10	74	30"	.5	25	35	99	33	56	YES	YES
LOUISIANA TO SAN PEDRO	69	83	30"	3.0	62	131	145	74	125	YES	YES
SD-14 (CORONADO VILLAGE)											ZONE MAP C-18
I-25 TO SOUTH DOMINGO BACA CHANNEL	0	0	84"	1.8	746	746	746	485	738	YES	YES
SD-15 (HOLLY AT I-25)											ZONE MAP C-18
HOLLY TO I-25 CULVERTS	0	0	36"	.9	55	55	55	38	60	YES	YES*
SD-16 (CORONA)											ZONE MAP C-18
SAN PEDRO TO UTE	22	47	48"	2.4	193	215	240	136	229	YES	YES
UTE TO I-25	0	0	54"	1.0	171	171	171	150	271	YES	NO**
SD-17 (LOUISIANA)											ZONE MAP C-18
WILSHIRE TO CORONA	0	0	30"	.5	25	25	25	13	21	YES	YES

YES*: HGL IS ABOVE TOP OF PIPE BUT DOES NOT RISE ABOVE GROUND
NO**: EXCESS FLOW TO I-25 BY EXISTING SURFACE DRAINAGE EASEMENT

C19-D026 EAGLE SPRINGS – PROJ. #662781

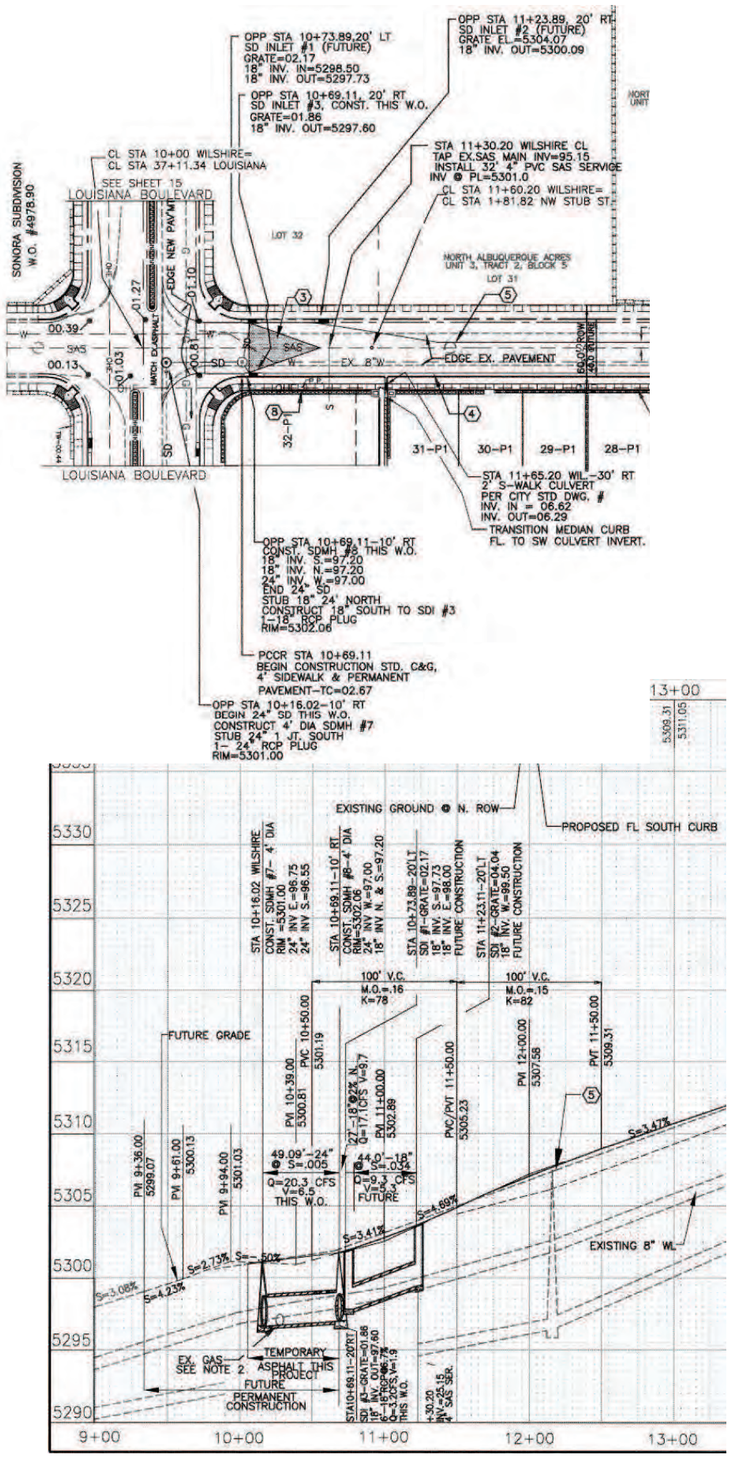



NORTH ALBUQUERQUE ACRES
UNIT 3, TRACT 2, BLOCK 5
BASIN B1-B.INT
AREA=5.9277 AC
Q100= 18.81 CFS
V100= 28,688 CF
LOT 32
LOT 31
LOT 30
SDI #1
Qi=7.8 cfs
SDI #2
Qi=9.3 cfs
Q bypass=
12.90 CFS
Qp=17.1 cfs
Q84=3.25 CFS
Q81+Q82=
22.16 CFS
Q=1.08 CFS
WILSHIRE AVENUE
BASIN B2-A.FD
AREA=0.7303 AC
Q100= 3.35 CFS
V100= 8,661 CF
BASIN B4-A.FD
AREA=0.7081 AC
Q100= 3.25 CFS
V100= 8,469 CF
SDI #3
Qi=3.2 cfs
SDI #4
Qi=12.68 cfs
Q=2.59
Qp=12.68
Qp=8.82 cfs
Qp=3.84 cfs
Qp=3.33 cfs
Q=2.59 CFS
LOUISIANA BOULEVARD
BASIN OS-1.FD
0.2745 AC.
Q100= 1.08 CFS
V100= 1,942 CF
BASIN OS-2.FD
1.9505 AC.
Q100=7.70 CFS
V100= 13,801 CF
AP #4
Q100=11.70 CFS
31-P1
30-P1
29-P1
28-P1
27-P1
26-P1
25-P1
34-P1
35-P1
RED

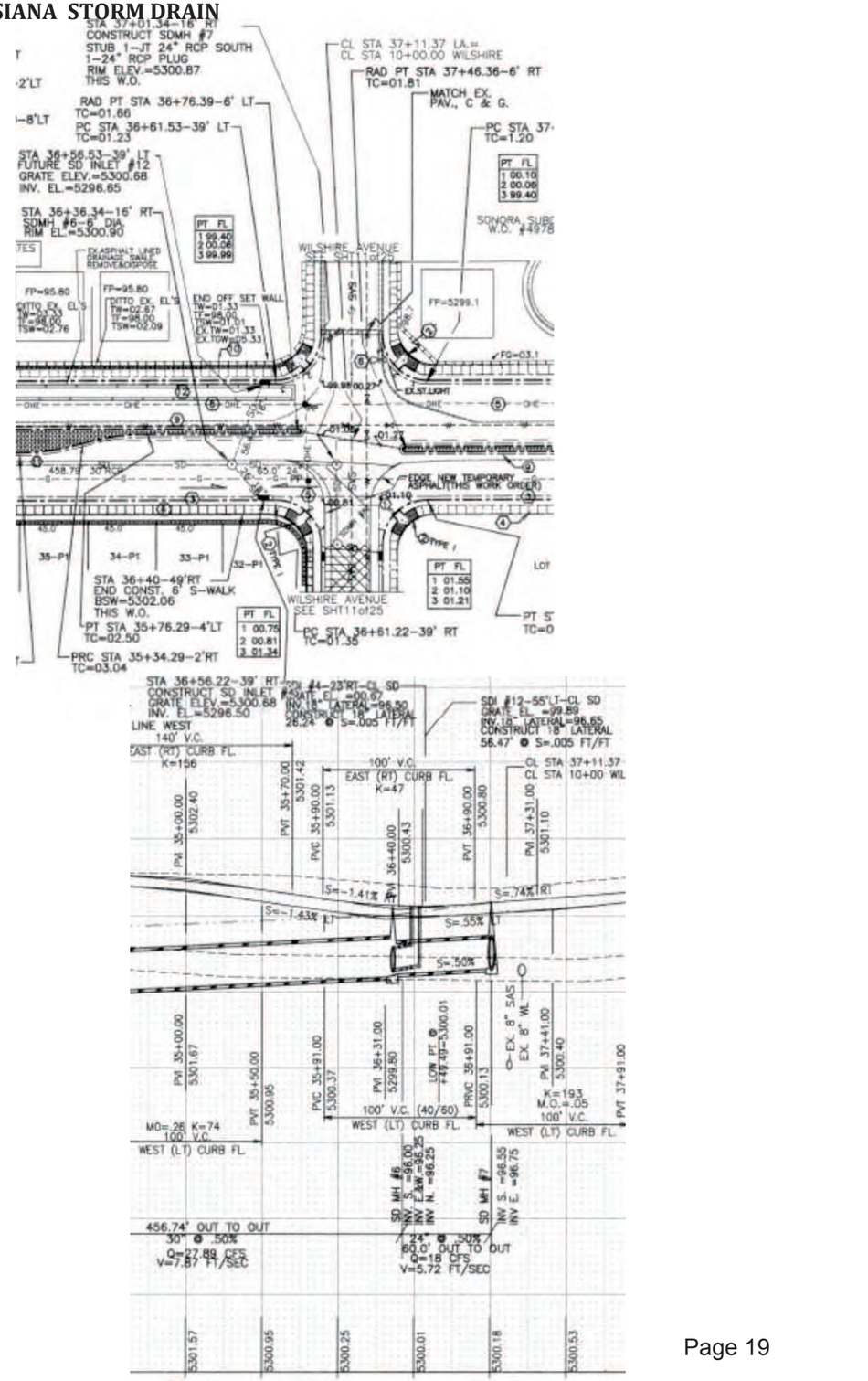
AS BUILT DRAWINGS –

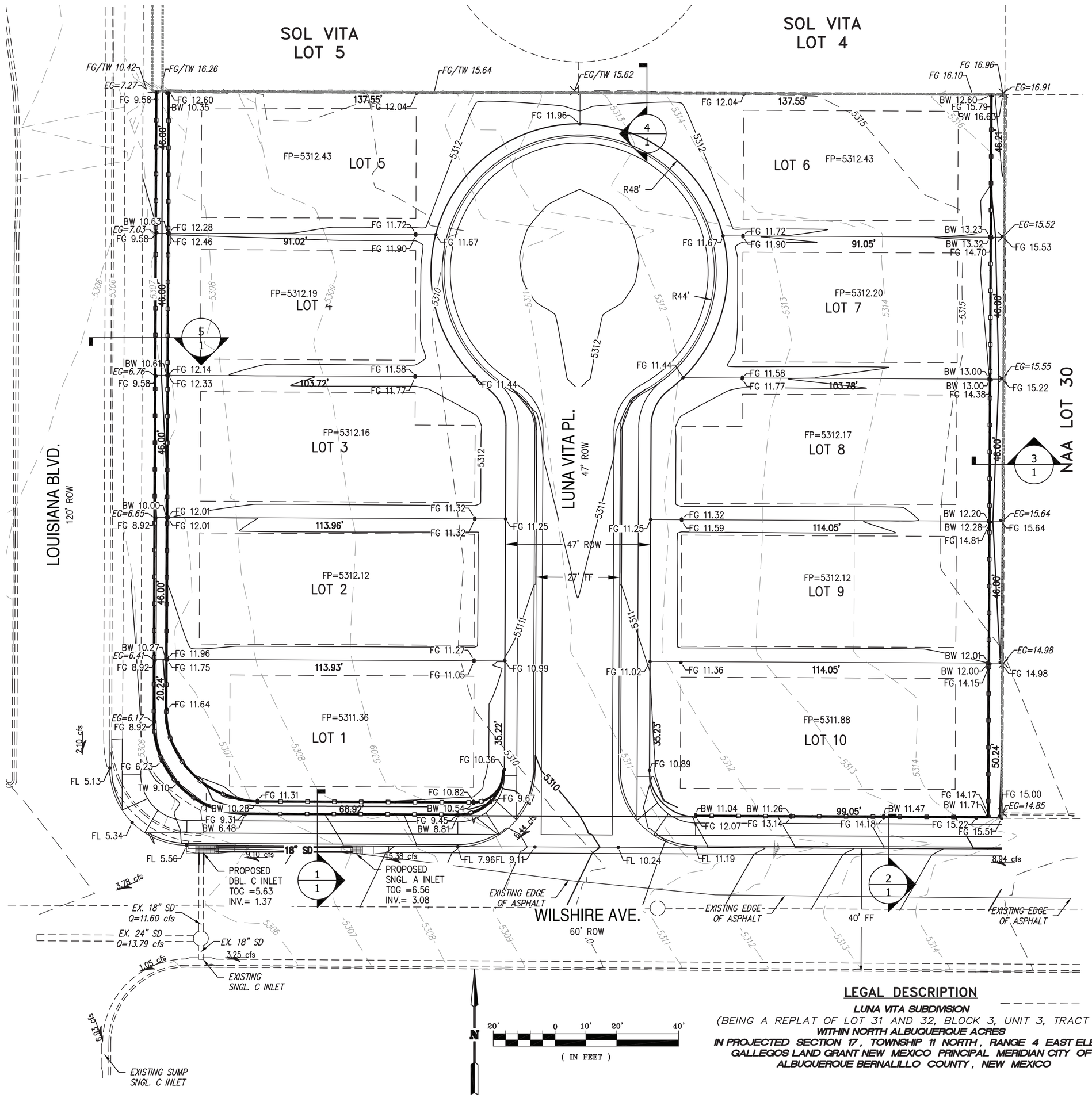
EAGLE POINT – PROJ. #600481

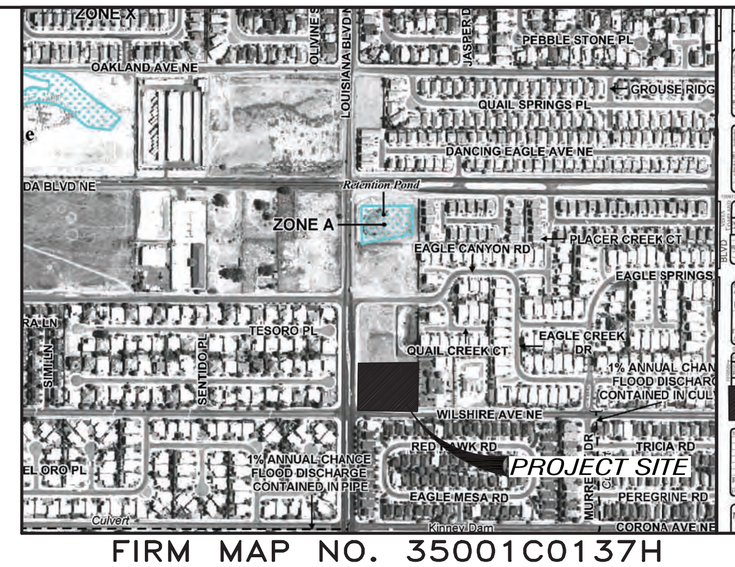
WILSHIRE STORM DRAIN



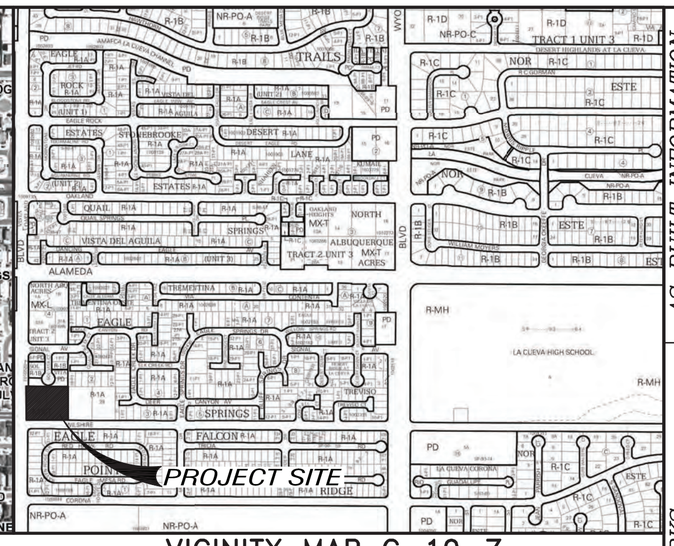
LOUISIANA STORM DRAIN







FIRM MAP NO. 35001C0137H



VICINITY MAP C-19-Z

DRAINAGE INFORMATION

LOCATION & DESCRIPTION

THE PROPOSED SITE IS 1.48 ACRES LOCATED ON THE SOUTH SIDE OF WILSHIRE AVENUE EAST OF LOUISIANA BLVD. AS SEEN ON THE VICINITY MAP. THE SITE IS UNDEVELOPED. THE ADJACENT PROPERTIES TO THE EAST AND WET ARE DEVELOPED HIGHER DENSITY WALLED COMMUNITIES. THE PROPOSED DEVELOPMENT WILL BE TEN (10) SINGLE FAMILY RESIDENTIAL LOTS ON A CUL-DE-SAC.

FLOODPLAIN STATUS

THIS PROJECT, AS SHOWN ON FEMA'S FLOOD INSURANCE RATE MAP 35001C0137H, DATED AUGUST, 2012 IS NOT WITHIN A DESIGNATED 100-YEAR FLOODPLAIN. AN EXHIBIT WITH THE SITE SHOWN ON THE FIRM PANEL IS INCLUDED ON THIS SHEET.

METHODOLOGY

THE HYDROLOGY FOR THIS PROJECT WAS ANALYZED USING AHYMO SOFTWARE.

PRECIPITATION

THE 100-YR 6-HR DURATION STORM WAS USED AS THE DESIGN STORM FOR THIS ANALYSIS. THIS SITE IS WITHIN ZONE 3 AS IDENTIFIED IN THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, SECTION 22.2.

EXISTING DRAINAGE

THE ALLOWABLE FLOWS IN THE STORM DRAIN IS TAKEN FROM THE REFERENCED PROJECT AND EXISTING FLOWS ARE FROM ADJACENT DRAINAGE PLANS C19D021 AND C19D026. THE STORM DRAIN COMPLETED WITH COA PROJECT #600481 COMPLETES THE DOWNSTREAM FACILITIES AND ALLOWS FOR A INLET CAPTURE OF 20.3 CFS FROM WILSHIRE AVE. OF WHICH, 17.1 CFS IS ALLOCATED TO THE NORTH INLETS. THIS SITE DRAINS SURFACE DRAINS TO THE EXISTING CURB AND GUTTER AND INLET IN WILSHIRE AVE.

DEVELOPED CONDITION

THIS SITE WILL BE DEVELOPED WITH A SINGLE STREET INTERCEPTING ALL OF THE SITE RUNOFF. THE RUNOFF WILL FREE DISCHARGE INTO WILSHIRE AVENUE. WILSHIRE AVENUE WILL CONVEY FLOW ALONG THE CURB TO THE PROPOSED INLETS LOCATED IN WILSHIRE AVENUE. WITH A FLOW DEPTH OF 0.30 FT THE CAPACITY OF THE 3 GRATES OF THE PROPOSED INLETS IS 11.6 CFS WITH AN ADDITIONAL 2.2 CFS IN THE EXISTING INLET FOR A TOTAL OF 13.8 CFS. PER C19-D21 EAGLE POINT, THE REMAINING FLOW IS ALLOWED TO BYPASS TO THE INLET IN LOUISIANA BLVD. PER C19-D21 THIS INLET WAS TO CAPTURE 6.22 CFS FROM WILSHIRE AVE. THE PROPOSED FLOW FROM WILSHIRE AVE. IS 4.83 CFS. THE [RP[PSED 6.4 CFS DISHARGE FROM THE SITE, FOR THE 100-YEAR PEAK RUNOFF, DUE TO THIS DEVELOPMENT CAN BE ACCOMMODATED BY THE STORM DRAIN AND DOWNSTREAM FACILITIES.

HYDROLOGIC DATA – NAADMP

BASINS	AREA (acres)	LAND TREATMENT PERCENTAGES BY TYPE				YIELD (cfs/ac)	Q_{100} (cfs)	V_{100-24} (acft)
		A	B	C	D			
SITE	1.48	0	34	16	50	3.17	4.68	0.164
WILSHIRE	0.73	0	0	10	90	4.59	6.70	0.153

HYDROLOGIC DATA – PROPOSED

BASINS	AREA (acres)	LAND TREATMENT PERCENTAGES BY TYPE				YIELD (cfs/ac)	Q_{100} (cfs)	V_{100-24} (acft)
		A	B	C	D			
SITE	1.48	0	18	10	72	4.37	6.44	0.288
WILSHIRE	0.73	0	0	10	90	4.59	6.70	0.153

REQUIRED WATER QUALITY VOLUME

CASH IN LIEU WILL BE UTILIZED FOR FIRST FLUSH RUNOFF REQUIREMENTS. THE VOLUME SHALL BE EQUAL TO: IMPERVIOUS AREA * (0.44-0.10)/12 IN CUBIC FEET.
IMPERVIOUS AREA = 0.72 * 64,469 SQ.FT. = 46,418
REQUIRED VOLUME = 46,418 * (0.44-0.10)/12 = 1,315 CU.FT.

PRIOR TO WORK ORDER, OWNER WILL MAKE PAYMENT IN LIEU FOR THE REQUIRED STORM WATER QUALITY VOLUME IN THE AMOUNT OF $7,890.98.

NOTES

THE ENGINEER HAS UNDERTAKEN LIMITED FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THERETO AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY, AND PRESERVE ANY AND ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES IN PLANNING AND CONDUCTING EXCAVATION, WHETHER BY CALLING OR NOTIFYING THE UTILITIES, COMPLYING WITH "BLUE STAKES" PROCEDURES, OR OTHERWISE.

THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.

THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, ARE INTENDED FOR USE ON THIS PROJECT AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF GND ENGINEERING, LLC IN THE EVENT OF UNAUTHORIZED USE, THE USER ASSUMES ALL RESPONSIBILITY AND LIABILITY WHICH RESULTS.

GENERAL NOTES:

1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED HEREIN, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION, UPDATE NO 8.

2. THE EROSION PROTECTION SPECIFIED ON THIS PLAN IS THE MINIMUM RECOMMENDED. THE OWNER IS ENCOURAGED TO INCORPORATE EROSION RESISTANT LANDSCAPING ON AREAS WHERE EROSION MAY OCCUR SUCH AS SLOPES AND SWALES. THE OWNER IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL FEATURES NECESSARY TO PRESERVE THE DESIGN INTENT OF THE GRADING PLAN.

3. THE DRAINAGE INFRASTRUCTURE SHOWN ON THIS PLAN IS THE RESPONSIBILITY OF THE PROPERTY OWNER.

4. ALL DISTURBED AREAS OUTSIDE THE BUILDING PAD MUST BE RESEEDED OR LANDSCAPED

5. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE, (260-1990) FOR LOCATION OF EXISTING UTILITIES.

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

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.

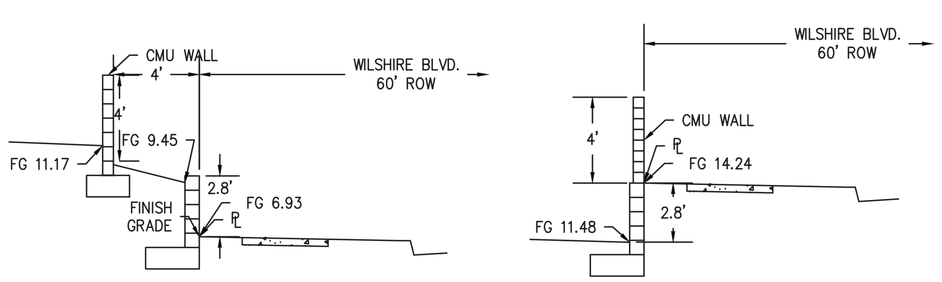
3. CONTRACTOR IS RESPONSIBLE FOR CLEANING ALL SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY.

4. REPAIR OF DAMAGED FACILITIES AND CLEANUP OF SEDIMENT ACCUMULATIONS ON ADJACENT PROPERTIES AND IN PUBLIC FACILITES IS THE RESPONSIBILITY OF THE CONTRACTOR.

5. ALL EXPOSED EARTH SURFACES MUST BE PROTECTED FROM WIND AND WATER EROSION PRIOR TO FINAL (CITY) ACCEPTANCE OF ANY PROJECT.

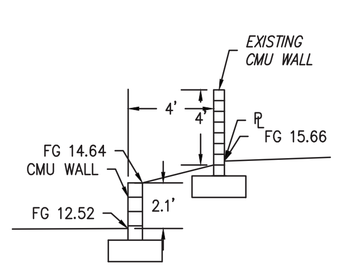
LEGAL DESCRIPTION

LUNA VITA SUBDIVISION
(BEING A REPLAT OF LOT 31 AND 32, BLOCK 3, UNIT 3, TRACT 2)
WITHIN NORTH ALBUQUERQUE ACRES
IN PROJECTED SECTION 17, TOWNSHIP 11 NORTH, RANGE 4 EAST ELENA GALLEGOS LAND GRANT NEW MEXICO PRINCIPAL MERIDIAN CITY OF ALBUQUERQUE BERNALILLO COUNTY, NEW MEXICO

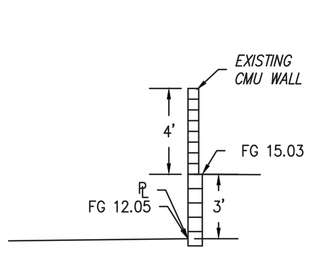


1 SECTION AT PROPERTY LINE
Scale: 1:5

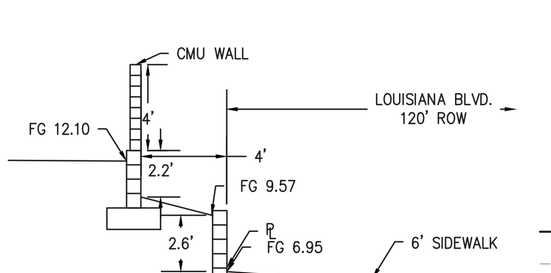
2 SECTION AT PROPERTY LINE
Scale: 1:5



3 SECTION AT PROPERTY LINE
Scale: 1:5



4 SECTION AT PROPERTY LINE
Scale: 1:5



5 SECTION AT PROPERTY LINE
Scale: 1:5

LEGEND

EL=11.28	PROPOSED ELEVATION
66.33	EXISTING ELEVATION
12.11 / 11.61	TOP OF CURB / BOTTOM OF CURB
BW 11.28	BOTTOM OF WALL / FINISH GRADE
	FLOW ARROW
	GRADE BREAK
5000	EXISTING CONTOUR
5000	EXISTING CONTOUR
	EASEMENT
	EXISTING WALL
	RETAINING WALL

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

BENCH MARKS

"ACS BM 20-C18" ON WYOMING BOULEVARD NE, TURN LEFT AND TRAVEL NORTH ON WYOMING BOULEVARD 1.0 MILES TO MODESTO AVENUE NE. THE BENCHMARK IS A 1 3/4" METALLIC DISK EPOXIED TO THE TOP OF THE WEST BACK OF CURB OF WYOMING BOULEVARD, NORTH OF THE APPPROXIMATE CENTERLINE OF MODESTO AVENUE, 19.0 FEET NORTHWEST OF A STORM SEWER MANHOLE LID, STAMPED "ACS BM 20-C18" 1989" X=1547745.03 Y=1547745.68 (NAD 83) ELEV=5393.48 (NAVD 1988)

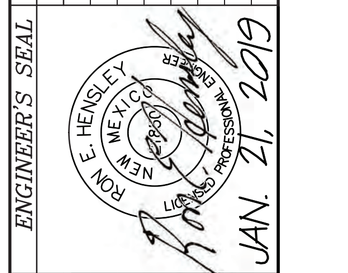
AS BUILT INFORMATION

CONTRACTOR — DATE
WORK STAKED BY — DATE
AS BUILT SURVEY — DATE
ACCEPTANCE BY — DATE
FIELD LOCATION BY — DATE
DRAWINGS CORRECTED BY — DATE

MICRO-FILM INFORMATION

RECORDED BY — DATE
NO.

ENGINEER'S SEAL



NO.	DATE	REMARKS	BY
		REVISIONS	
	DATE DEC. 2018	DESIGN	REH
	DATE DEC. 2018	DESIGNED BY	REH
	DATE JAN. 2019	DRAWN BY	REH
		CHECKED BY	REH

THE Group
300 Branding Iron Rd. SE
Rio Rancho, New Mexico 87124
Phone:(505)514-0995

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

LUNA VITA SUBDIVISION
A REPLAT OF LOTS 31-32, BLOCK 3, UNIT 2, TRACT 2, NAA
GRADING & DRAINAGE PLAN

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST DESIGN UPDATE	Mo./DAY/YR.	Mo./DAY/YR.

DRB No. PR-2018-001792
CITY PROJECT No.
ZONE MAP NO. C-19-Z
SHEET 1 OF 1