CITY OF ALBUQUERQUE

Richard J. Berry, Mayor

April 11, 2017

Fred C. Arfman, P.E.
Isaacson & Arfman, P.A.
128 Monroe St. N.E
Albuquerque, NM, 87108

RE: 616 Lomas Blvd NW Shell Building
Grading Plan
Stamp Date: 4/3/17
Hydrology File: J14D183

Dear Mr. Arfman:

Based upon the information provided in your submittal received 4/11/2017, the Grading Plan is approved for Building and SO-19 Permit.

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

Sincerely,

Renee C. Brissette

Reneé C. Brissette, P.E.
Senior Engineer, Hydrology
Planning Department

Orig: Drainage File

PO Box 1293
Albuquerque
New Mexico 87103
www.cabq.gov

GENERAL NOTES

A. PROPOSED SPOT AND CONTOUR ELEVATIONS SHOWN REPRESENT TOP OF FINISH MATERIAL (I.E. TOP OF CONCRETE, TOP OF CONCRETE BUILDING PAD, TOP OF PAVEMENT MATERIAL, TOP OF LANDSCAPING MATERIAL, ETC.). CONTRACTOR SHALL GRADE, COMPACT SUBGRADE AND DETERMINE EARTHWORK ESTIMATES BASED ON ELEVATIONS SHOWN MINUS FINISH MATERIAL THICKNESSES.

B. IF FIELD GRADE ADJUSTMENTS ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT FOR INSTRUCTIONS.

C. THE ENVIRONMENTAL PROTECTION AGENCY (EPA) AND THE CITY OF ALBUQUERQUE REQUIRE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), AN NDPES 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 CURRENT CITY-APPROVED ESC PERMIT MUST BE INCLUDED WITH THE CONTRACTOR'S SUBMITTAL FOR A ROUGH GRADING, GRADING, PAVING, BUILDING, OR WORK ORDER PERMIT. CONTRACTOR SHALL COORDINATE WITH OWNER TO DETERMINE WHO WILL PREPARE SWPPP AND INSPECT REQUIRED ELEMENTS.

D. IF THE SITE IS SMALL ENOUGH NOT TO REQUIRE A SWPPP/NPDES PERMIT (LESS THAN ONE ACRE), THE CONTRACTOR SHALL STILL BE RESPONSIBLE FOR USING EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S) TO ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO ADJACENT PUBLIC RIGHT-OF-WAY.

E. MEASURES REQUIRED FOR EROSION AND SEDIMENT CONTROL SHALL BE INCIDENTAL TO THE PROJECT COST.

F. WHERE GRADES BETWEEN NEW AND EXISTING ARE SHOWN AS 'MATCH' OR '±', TRANSITIONS SHALL BE SMOOTH.

G. PAVEMENT GRADES IN MARKED HANDICAPPED PARKING AREAS SHALL NOT EXCEED 2.0% IN ANY DIRECTION. FOR ALL ACCESSIBLE ROUTES, MAXIMUM ALLOWABLE CROSS SLOPE IS 2.0% AND MAXIMUM LONGITUDINAL SLOPE WITHOUT RAMP IS 5.0% FOLLOW ALL ADA ACCESSIBILITY GUIDELINES OR CITY CODES, WHICHEVER IS MORE STRINGENT.

H. ALL EROSION PROTECTION TO BE INSTALLED AS 6" AVG. DIA. ANGULAR FACED ROCK (F.F. ROCK) PLACED OVER GEOTEX 501 NON-WOVEN GEOTEXTILE (O.E.).

I. FIRST FLUSH BASIN DESIGN PARAMETERS AND STORMWATER CONTROL MEASURES SHOWN ON THIS PLAN TO BE STRICTLY ADHERED TO FOR CERTIFICATION PURPOSES.

J. POST-CONSTRUCTION MAINTENANCE FOR PRIVATE STORMWATER FACILITIES WILL BE THE RESPONSIBILITY OF THE FACILITIES OWNER. PERIODIC INSPECTION AND CERTIFICATIONS OF THE FACILITIES MAY BE REQUIRED BY THE CITY ENGINEER. 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.

K. FOR ENGINEER'S CERTIFICATION OF SUBSTANTIAL COMPLIANCE (FOR CERTIFICATE OF OCCUPANCY) CONTRACTOR SHALL PROVIDE AN AUTOCAD FORMAT AS-BUILT SURVEY PREPARED BY A LICENSED SURVEYOR WHICH INCLUDES:
- AS-BUILT SPOT ELEVATIONS AT EACH DESIGN SPOT ELEVATION SHOWN ON THE APPROVED PLAN;
- TOP AND BOTTOM ELEVATIONS AS REQUIRED TO DEFINE THE PERIMETER OF PONDS (TO BE USED BY ENGINEER TO CALCULATE AS-BUILT VOLUME PROVIDED);

L. GRADING OF FIRST FLUSH BASINS WILL BE INSPECTED AS PART OF ENGINEER'S CERTIFICATION FOR CERTIFICATE OF OCCUPANCY. DURING LANDSCAPING, FIRST FLUSH BASINS WILL BE SMOOTHLY INTEGRATED INTO LANDSCAPING WHILE MAINTAINING REQUIRED TOP AND BOTTOM ELEVATION, VOLUME AND INLET / OVERFLOW ELEVATIONS.

CALCULATIONS

CALCULATIONS: 6th & Lomas : March 20, 2017

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

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

AREA OF SITE: 19423 SF = 0.45

HISTORIC FLOWS:

		Treatment Sl	%
Area A	=	0	0%
Area B	=	0	0%
Area C	=	11654	60%
Area D	=	7769.3616	40%
otal Area	=	19423.404	100%

DEVELOPED FLOWS:

		Treatment Sl	%	**EXCESS PRECIP:**
Area A	=	0	0%	Precip. Zone 2
Area B	=	971	5%	E_A = 0.53
Area C	=	1942	10%	E_B = 0.78
Area D	=	16510	85%	E_C = 1.13
otal Area	=	19423.404	100%	E_D = 2.12

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 = 1.53 in.	Developed E = 1.95 in.
On-Site Volume of Runoff: V360 =	E*A / 12
Historic V = 2470 CF	Developed V_{36} = 3163 CF

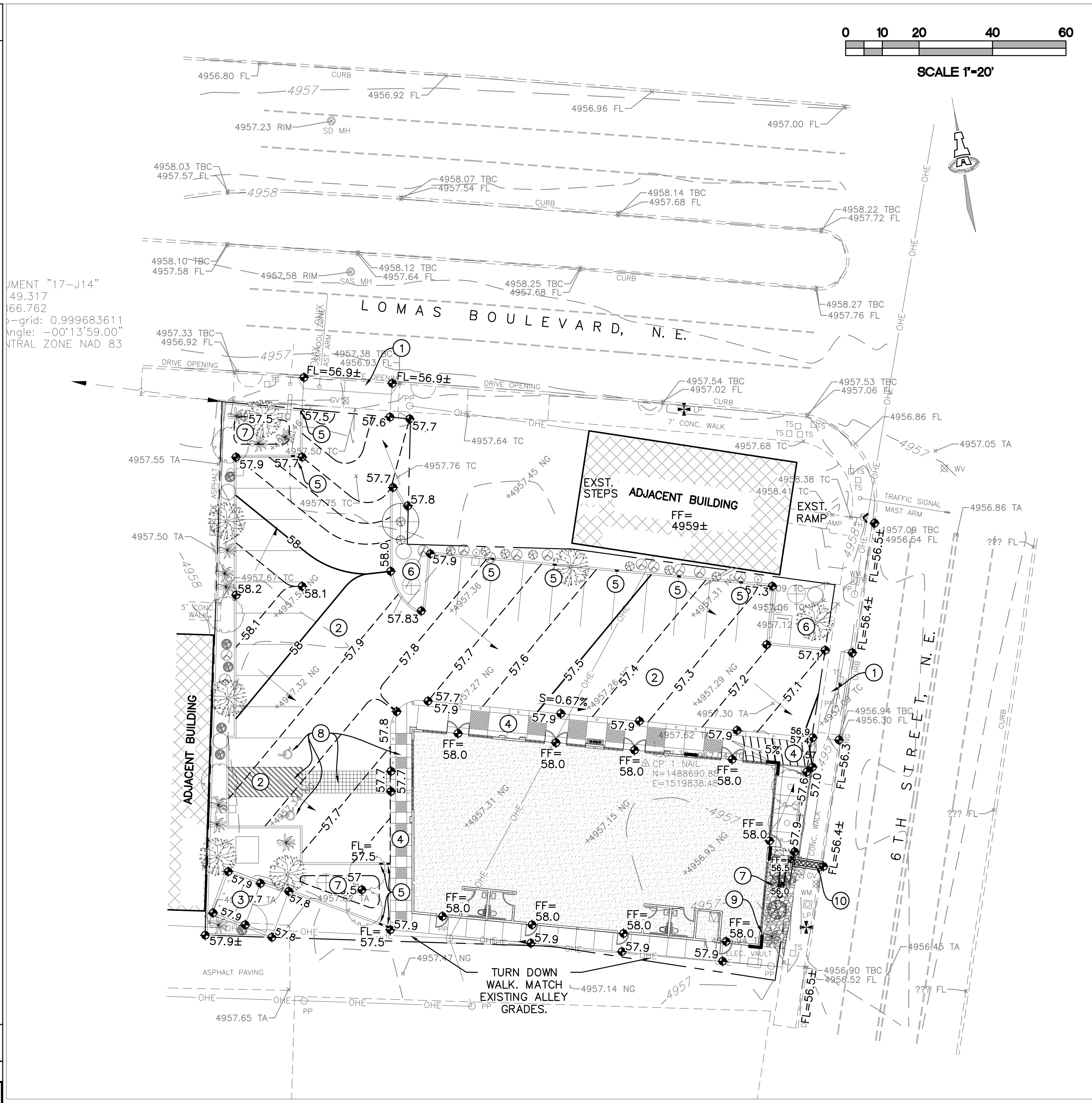
On-Site Peak Discharge Rate: $Qp = Q_{pA}A_A+Q_{pB}A_B+Q_{pC}A_C+Q_{pD}A_D$ / 43,56(

For Precipitation Zo 2

Q_{pA} = 1.56 Q_{pC} = 3.14

Q_{pB} = 2.28 Q_{pD} = 4.70

Historic (= 1.7 CFS	Developed Q_p = 2.0 CFS



KEYED NOTES

1. CONSTRUCT CONCRETE DRIVEPAD PER CITY OF ALBUQUERQUE STANDARD DETAIL 2425.
2. CONSTRUCT ASPHALT PARKING AREA AT ELEVATIONS SHOWN. SEE ARCHITECTURAL FOR DETAILS.
3. CONSTRUCT CONCRETE DUMPSTER PAD AND ENCLOSURE AT ELEVATIONS SHOWN. SEE UTILITY PLAN FOR FLOOR DRAIN INLET TO SAS SYSTEM. SEE ARCHITECTURAL FOR ENCLOSURE DETAILS.
4. CONSTRUCT NEW CONCRETE WALK TO ELEVATIONS SHOWN. NOTE RELATIONSHIP TO ADJACENT ASPHALT PAVEMENT VARIES.
5. 12" WIDE (BOTTOM WIDTH) CURB OPENING PER DETAIL THIS SHEET.
6. DEPRESS LANDSCAPING THIS AREA 6"± TO HARVEST STORMWATER.
7. CONSTRUCT FIRST FLUSH RETENTION BASIN AT ELEVATIONS SHOWN.
8. ALL ACCESSIBLE RAMPS, WALKS AND HC PARKING AREAS TO BE ADA COMPLIANT.
9. ALL ROOF DISCHARGE TO BE RELEASED VIA DOWNSPOUTS TO LANDSCAPED FIRST FLUSH BASIN.
10. CONSTRUCT 18" WIDE (BOTTOM WIDTH) COVERED SIDEWALK CULVERT WITH STEEL PLATE TOP AT ELEVATIONS SHOWN PER C.O.A. STD. DWG. 2236. ANCHOR STEEL PLATE TOP PER DETAILS THIS SHEET. SEE S.O.19 PERMIT REQUIREMENTS THIS SHEET.

S.O.19 : NOTICE TO CONTRACTORS

1	AN EXCAVATION / CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY.
2	ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE #8.
3	TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (CALL '811') 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.
8	THE WORK IN THE CITY ROW MUST BE INSPECTED AND ACCEPTED. THE CONTRACTOR MUST CONTACT JASON RODRIGUEZ AT 235-8016 AND CONSTRUCTION COORDINATION AT 924-3416 TO SCHEDULE INSPECTIONS.

APPROVAL	NAME	DATE
INSPECTOR		

VICINITY MAP

PROJECT INFORMATION

PROPERTY: THE SITE IS A PREVIOUSLY DEVELOPED PROPERTY LOCATED WITHIN CITY OF ALBUQUERQUE VICINITY MAP J-14. THE SITE IS BOUND TO THE EAST BY 6TH STREET NW, TO THE WEST BY DEVELOPED COMMERCIAL, TO THE NORTH BY LOMAS BLVD. NW AND TO THE SOUTH BY A PUBLIC ALLEY.

PROPOSED IMPROVEMENTS: THE PROPOSED IMPROVEMENTS INCLUDE A COMMERCIAL RETAIL CENTER WITH ASSOCIATED ACCESS, PARKING AND LANDSCAPING.

LEGAL: PARCEL 1, PARCEL 2 AND PARCEL 3, BLOCK EIGHTEEN (18) OF THE PERFECTO ARMIJO AND BROTHERS ADDITION, CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

AREA: 0.4459 ACRES

BENCHMARK: VERTICAL DATUM IS BASED UPON THE ALBUQUERQUE CONTROL SURVEY MONUMENT "17-J14", ELEVATION = 4957.48 FEET (NAVD 1988).

OFF-SITE: OFF-SITE DRAINAGE FROM THE COMMERCIAL PROPERTY TO THE NORTH WILL CONTINUE TO BE ROUTED THROUGH THIS PROPERTY AS HISTORIC FLOW. CURB OPENINGS WILL BE PROVIDED ACCEPT THIS FLOW.

FLOOD HAZARD: PER BERNALILLO COUNTY FIRM MAP PANEL #35000203346; EFFECTIVE DATE: SEPTEMBER 26, 2008, THE SITE IS LOCATED WITHIN FLOODZONE 'X' DESIGNATED AS AREAS OUTSIDE THE 0.2 PERCENT ANNUAL CHANCE FLOOD.

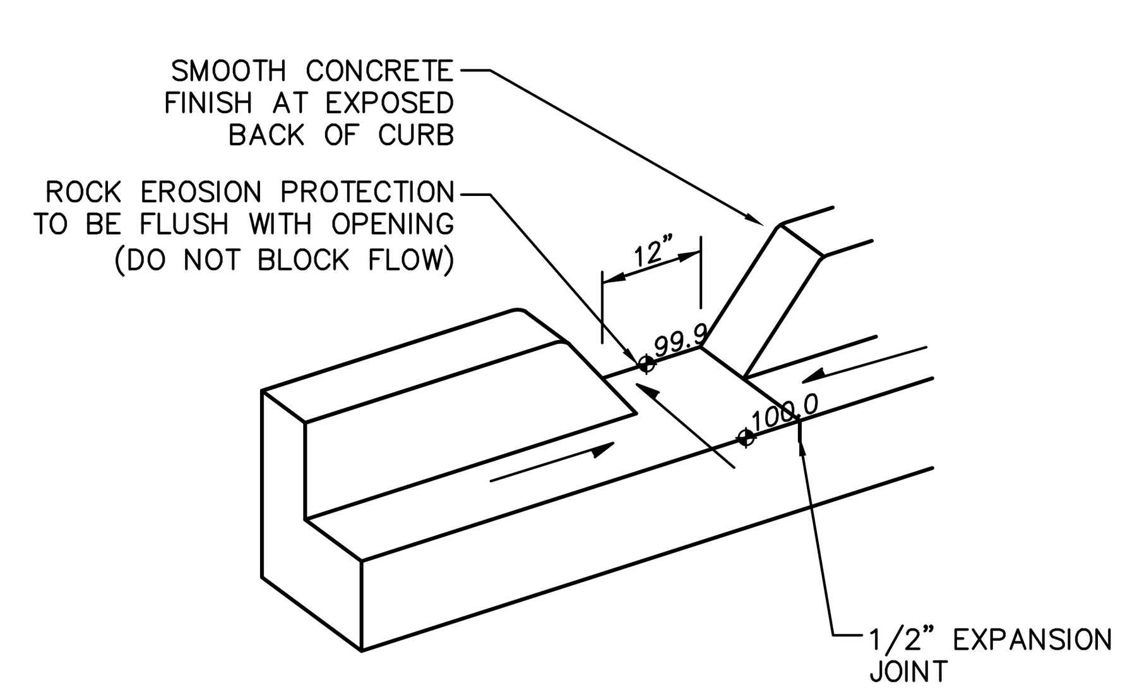
ENGINEER: FRED C. ARFMAN: NMPE 7322
ISAACSON & ARFMAN, PA
505-268-8828

SURVEYOR: THOMAS D. JOHNSTON, NMPS 14269
WAYJOHN SURVEYING, INC. (505) 255-2052

DRAINAGE PLAN CONCEPT: THE PROPERTY IS AN INFILL PROPERTY IN A FULLY DEVELOPED AREA. FIRST FLUSH BASINS ARE PROVIDED FOR A PORTION OF THE PARKING AND ROOF AREAS. ALL OTHER LANDSCAPING WILL BE DEPRESSED FOR WATER HARVESTING. THE ANTICIPATED INCREASE IN FLOW RATE TO THE SURROUNDING STREETS IS NEGLIGIBLE @ 0.3 CFS.

LEGEND

×4958.63	EXISTING SPOT ELEVATION
---4958---	EXISTING CONTOUR
——57——	PROPOSED CONTOUR (0.5' INCREMENT)
---57.3---	PROPOSED CONTOUR (0.1' INCREMENT)
82.5	PROPOSED SPOT ELEVATION
→	FLOW ARROW
FF = 4958.00	FINISH FLOOR ELEVATION
	LIMITS OF EROSION CONTROL



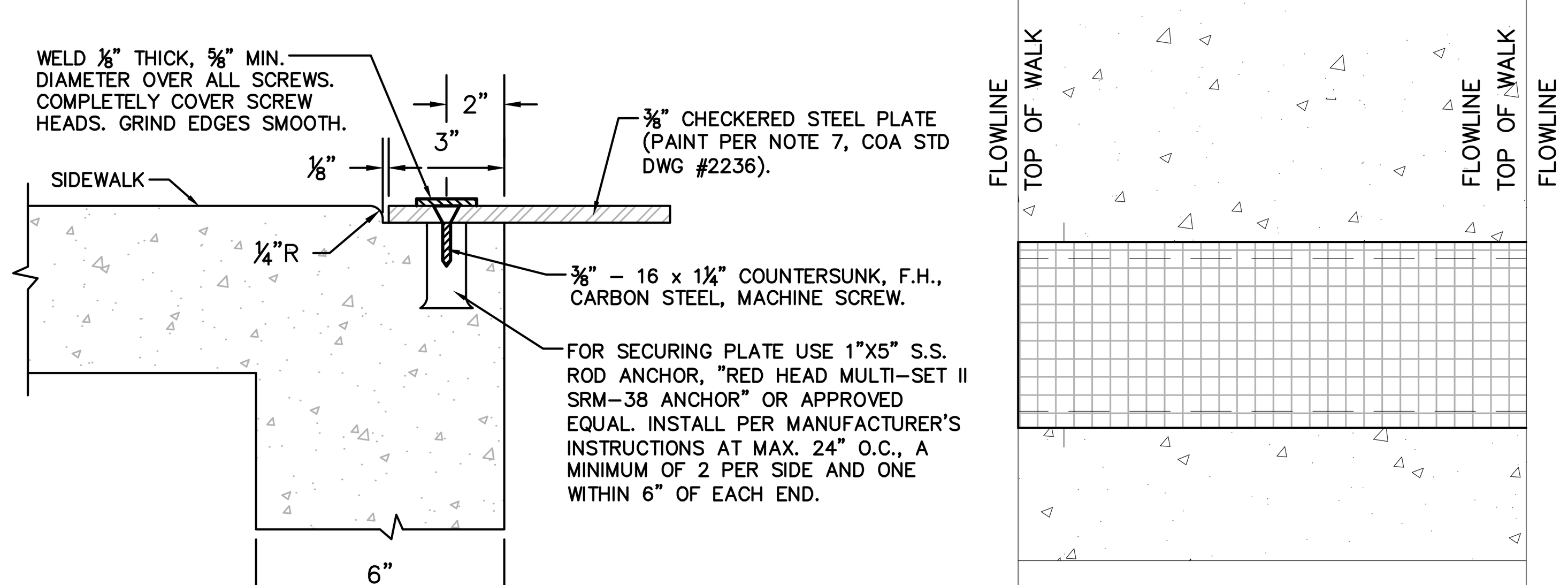
GENERAL NOTES

1. EDGES NOT SPECIFICALLY DIMENSIONED SHALL BE SHAPED WITH A 3/8" EDGING TOOL.

CURB OPENING
N.T.S.

CONSTRUCT PER C.O.A. STD. DWG. 2236 MODIFIED AS FOLLOWS:

- MODIFIED SECTION B-B FOR SECURING PLATE (SEE ABOVE).



COVERED SIDEWALK CULVERT
N.T.S.

S.O.19 PERMIT REQUIRED

MARTIN FM GRUMMER ARCHITECT
331 WELLESLEY PLACE NE
ALBUQUERQUE, NEW MEXICO 87106
(505) 265-2507

ALL DIMENSIONS ARE TO BE FIELD VERIFIED. IF THERE ARE DISCREPANCIES, PLEASE NOTIFY THE ARCHITECT. DRAWING ARE NOT TO BE SCALED. USE DIMENSIONS FOR ACCURACY.

FRED C. ARFMAN
NEW MEXICO
7322
LICENSED PROFESSIONAL ENGINEER
04.03.17

616 LOMAS BLVD NW
SHELL BUILDING
ALBUQUERQUE, NM 87102
GRADING & DRAINAGE PLAN

DATE:	JAN 2017
DRAWN BY:	BJB
CHECKED BY:	FCA
VERIFIED BY:	

REVISIONS

SHEET NO:
CG1