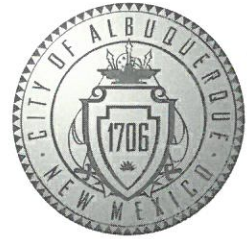


CITY OF ALBUQUERQUE

Planning Department
David S. Campbell, Director



Timothy M. Keller, Mayor

March 12, 2018

David Soule, PE
Rio Grande Engineering
1606 Central SE Suite 201
Albuquerque, NM 87106

**Re: 9000 Alameda Blvd. Grading & Drainage Plan
Engineer's Stamp Dated Missing
(C20D073)**

Dear Mr. Soule,

Based upon the information provided in the submittal received on 3/7/2018 the above-referenced plan cannot be approved for Grading or Floodplain Development Permit until the following are addressed.

PO Box 1293

Albuquerque

NM 87103

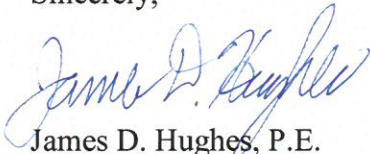
www.cabq.gov

- Correct the DTIS to submit G&D for the purposes of Grading Permit.
- Submit a Floodplain Development Permit application.
- The G&D Plan must be stamped and signed by a registered professional engineer.
- Add a narrative statement to the plan describing the proposed activity as Restoration of Floodplain and Waters of the US. Include a description of the violation (fill, a fence, and a berm disrupt flood flows and the sediment transport is disrupted by replacing the natural sand bottom with foreign material).
- Written approval of the plan is required from the Corps of Engineers.
- Include notes identifying the limits of land disturbance and the area to be stabilized with native seed and mulch.
- Add a note prohibiting Construction in the arroyo during the months of July, August, and September.
- Show the proposed grades necessary to restore the floodplain drainage capacity with proposed contours and spot elevations. Verify that the proposed trapezoidal section will restore the original cross sectional area by plotting the finished grade on the sections.
- Include a profile of the arroyo showing existing and proposed grades. Add a typical section, about 30' flat bottom trapezoidal channel.
- Extend the grading upstream of the property about 20' as necessary to restore the original grade there.

- Provide sufficient horizontal and vertical control for construction staking and as-builts.
- Show a Public Drainage Easement 55' wide at the east PL, 105' wide at the west PL, and 70' wide at a point 50 east of the west PL. Provide the signed and notarized original easement to Madeline Caruthers along with a check for 25\$ payable to Bernalillo County.
- Show the relocated fence outside of the Public Drainage Easement, and identify the existing fence to be removed from within the public drainage easement.
- An ESC plan must be submitted to Stormwater Quality Control. After the ESC plan is approved an ESC Permit must be obtained prior to beginning construction.

If you have any questions, you can contact me at 924-3986 or e-mail Jhughes@cabq.gov .

Sincerely,

A handwritten signature in blue ink, reading "James D. Hughes".

James D. Hughes, P.E.
Principal Engineer, Planning Dept.
Development Review Services



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: _____ **Building Permit #:** _____ **City Drainage #:** _____

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

Legal Description: _____

City Address: _____

Engineering Firm: _____ **Contact:** _____

Address: _____

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

Owner: _____ **Contact:** _____

Address: _____

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

Architect: _____ **Contact:** _____

Address: _____

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

Other Contact: _____ **Contact:** _____

Address: _____

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

Check all that Apply:

DEPARTMENT:

- ☐ HYDROLOGY/ DRAINAGE
☐ TRAFFIC/ TRANSPORTATION
☐ MS4/ EROSION & SEDIMENT CONTROL

TYPE OF SUBMITTAL:

- ☐ ENGINEER/ ARCHITECT CERTIFICATION
- ☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ DRAINAGE MASTER PLAN
☐ DRAINAGE REPORT
☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ TRAFFIC IMPACT STUDY (TIS)
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☐ OTHER (SPECIFY) _____

CHECK 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
- ☐ PRE-DESIGN MEETING
☐ OTHER (SPECIFY) _____

IS THIS A RESUBMITTAL?: ☐ Yes ☐ No

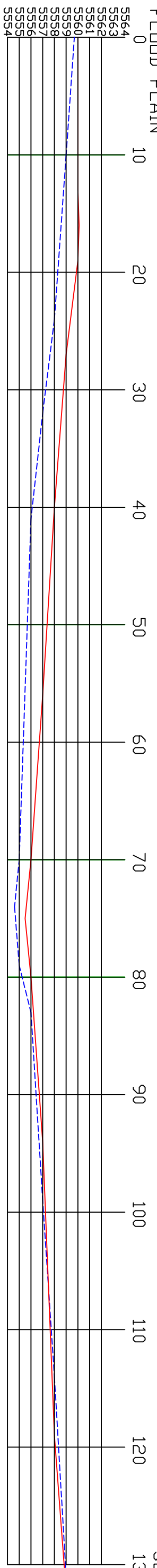
DATE SUBMITTED: _____ **By:** _____

COA STAFF: _____ ELECTRONIC SUBMITTAL RECEIVED: _____

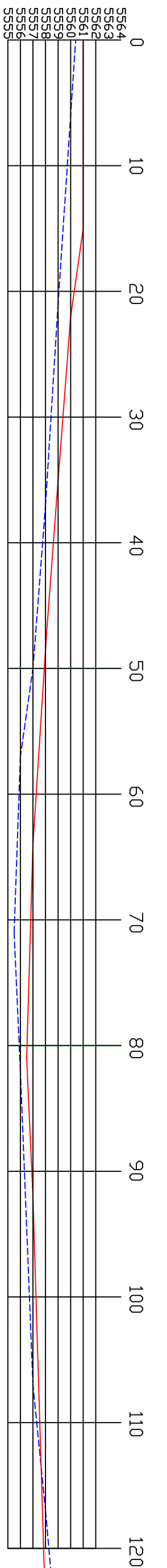
NORTH EDGE OF FLOOD PLAIN

STA 0+00

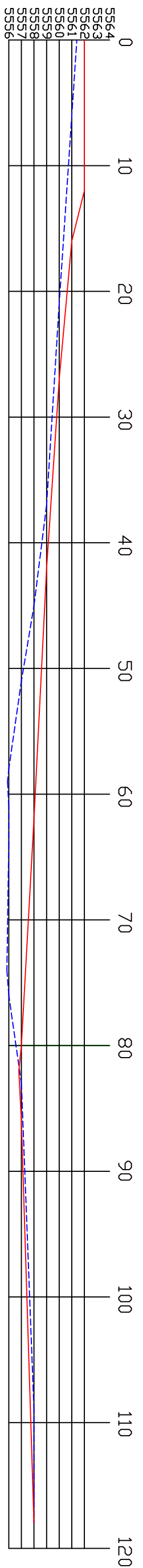
SOUTH PROPERTY LINE



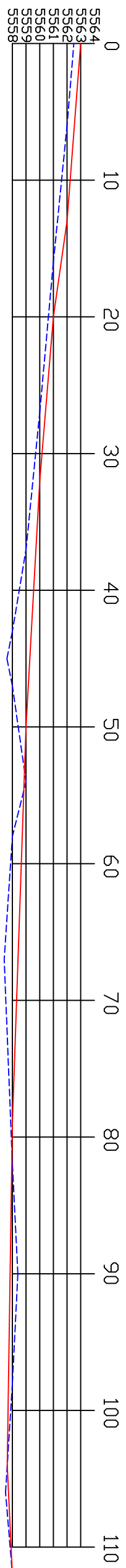
STA 0+20



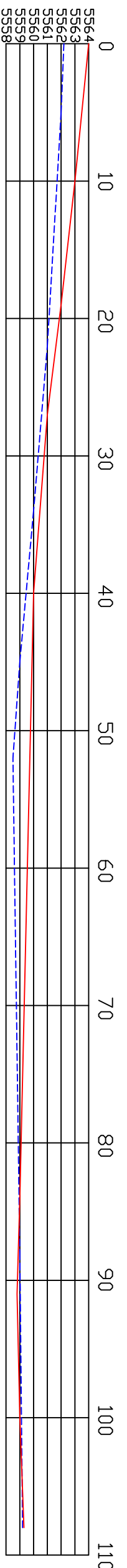
STA 0+40



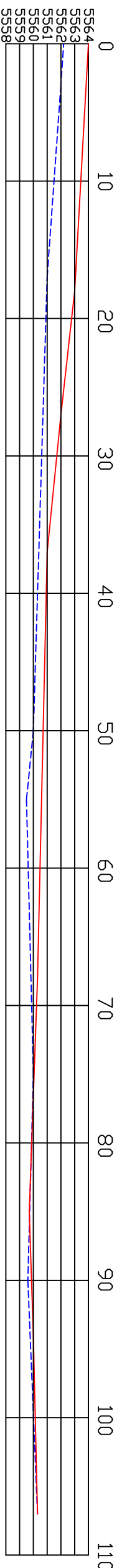
STA 0+60



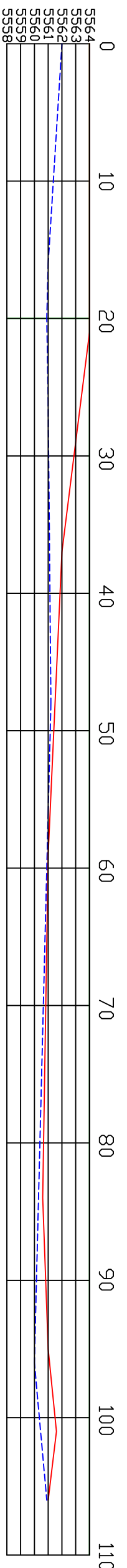
STA 0+80



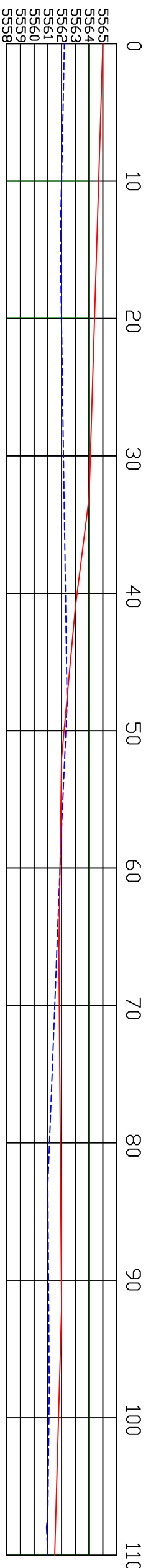
STA 1+00



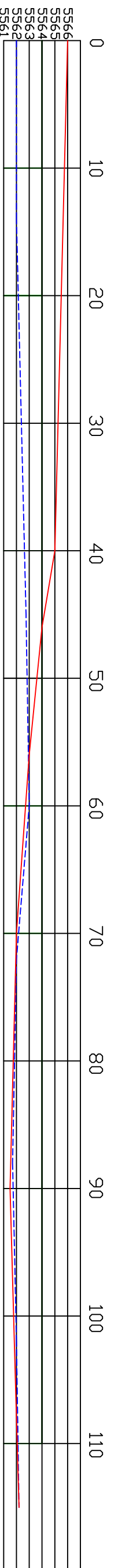
STA 1+20



STA 1+40



STA 1+60



PRE-DEVELOPMENT ELEVATION
POST DEVELOPMENT ELEVATION



FIRM PANEL, REVISION NOVEMBER 2012 Per LOMR Case 11-06-2877P

GRADING & DRAINAGE PLAN

THE RESIDENTIAL HOME PROJECT IS LOCATED IN UNIT 3 OF NORTH ALBUQUERQUE ACRES APPROXIMATELY 11 MILES FROM THE DOWNTOWN CORE OF ALBUQUERQUE, NM. THE GRADING AND DRAINAGE SCHEME HEREON IS IN COMPLIANCE WITH THE BERNALILLO COUNTY FLOOD HAZARD ORDINANCE, NO. 88-46, AND CITY STORM DRAINAGE ORDINANCE. THE PLAN IS REQUIRED IN ORDER TO FACILITATE THE OWNER'S REQUEST FOR BUILDING PERMIT. THE PLAN SHOWS:

1. EXISTING CONTOURS, SPOT ELEVATIONS, AND EXISTING DRAINAGE PATTERNS.
2. PROPOSED IMPROVEMENTS: 1. RESIDENTIAL HOME SITE, GRAVEL-CONCRETE DRIVEWAY, WELL AND SEPTIC SYSTEM, AND NEW GRADE ELEVATIONS.
3. CONTINUITY BETWEEN EXISTING AND PROPOSED ELEVATIONS.
4. QUANTIFICATION AND ACCEPTANCE OF UPSTREAM OFFSITE FLOWS WHICH CONTRIBUTE TO THE DEVELOPED FLOWS GENERATED BY THE IMPROVEMENTS.
5. UPSTREAM ANALYSIS AS TO WATER SURFACE MODEL AND EROSION SETBACK AND EROSION CONTROL.

THE PURPOSE OF THE PLAN IS TO ESTABLISH CRITERIA FOR CONTROLLING STORM RUNOFF AND EROSION, AND ESSENTIALLY ALLOWING HISTORIC FLOWS TO CONTINUE TO DRAIN THROUGH THE PROPERTY. PRESENTLY, THE SITE IS BOUNDED ON THE EAST, WEST AND SOUTH BY UNDEVELOPED PROPERTY. ALAMEDA AVENUE ON THE NORTH IS AN IMPROVED, ASPHALT ROADWAY ALONG THE PROJECT FRONTAGE. THE SITE GENERALLY FALLS FROM EAST TO WEST AT APPROX. 3.5 PERCENT. ALL OFFSITE FLOWS ARE QUANTIFIED ON THE PLAN, AND ADDRESSED IN THE CALCULATIONS.

A PORTION OF THE SITE IS ENCUMBERED BY A DESIGNATED FEMA FLOODPLAIN.

HISTORICAL SITE RUNOFF OUTFALL LOCATIONS WILL REMAIN UNCHANGED IN DEVELOPMENT. SINCE ALAMEDA AVE IS IMPROVED MINIMAL GRADING IS PROPOSED WITHIN THE CITY R.O.W. LIMITED FREE DISCHARGE OF DEVELOPED FLOW IS ACCEPTABLE SINCE DOWNSTREAM CAPACITY (LA CUEVA CHANNEL) EXISTS, AND THE TOTAL DEVELOPED RUN-OFF DOES NOT EXCEED THE ZONE 3 MAXIMUM ESTABLISHED IN THE NAA MASTER DRAINAGE PLAN.

I, PHILIP W. CLARK, A PROFESSIONAL ENGINEER LICENSED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT I HAVE VISITED THE SITE SHOWN HEREON, AND THAT THE CONTOURS SHOWN REPRESENT THE EXISTING GROUND CONDITIONS, AND DO FURTHER CERTIFY THAT NO SIGNIFICANT EARTHWORK OF ANY KIND, NOR DISTURBANCE OF THE EXISTING GROUND HAS OCCURRED ON THIS SITE SINCE THE CONTOURS WERE DETERMINED.

PHILIP W. CLARK NMPE #10265

DESIGN CRITERIA

HYDROLOGIC METHODS PER SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL (DPM) REVISED JANUARY 1993 FOR CITY OF ALBUQUERQUE, ADOPTED BY THE COUNTY OF BERNALILLO DISCHARGE RATE: $Q = Q_{PEAK} \times AREA$, "Peak Discharge Rates For Small Watersheds" VOLUMETRIC DISCHARGE: $VOLUME = E_{Weighted} \times AREA$ $P100 = 2.60$ inches, Zone 3 Time of Concentration, $TC = 10$ Minutes DESIGN STORM: 100-YEAR/6-HOUR, 10-YEAR/6-HOUR [] = 10 YEAR VALUES

HISTORIC CONDITIONS PER EXIST. LOT

100% A PROJECT AREA = 0.89 ACRES, WHERE EXCESS PRECIP. "Weighted" = 0.66 in. [0.19] PEAK DISCHARGE, $Q100 = 1.7$ CFS [0.51], WHERE UNIT PEAK DISCHARGE "A" = 1.9 CFS/AC. [0.60] THEREFORE: $VOLUME 100 = 2123$ CF [611]

DEVELOPED CONDITIONS DETERMINE LAND TREATMENTS, PEAK DISCHARGE AND VOLUMETRIC DISCHARGE FOR STUDY AREA

AREA	LAND TREATMENT	Q_{Peak}	E
UNDEVELOPED	0.43 Ac. (48%) A	1.87[0.58]	0.66[0.19]
LANDSCAPING	0.17 Ac. (20%) B	2.60[1.19]	0.92[0.36]
COMPACTED SOIL & Slopes >	0.14 Ac. (15%) C	3.45[2.00]	1.29[0.62]
ROOF - PAVEMENT	0.15 Ac. (17%) D	5.02[3.39]	2.36[1.50]
	0.89 Ac.		

THEREFORE: $E_{Weighted} = 1.09$ in. [XXX] & $Q100 = 2.5$ CFS $Q10 = 1.24$ CFS VOLUME 100 = 3506 CF VOLUME 10 = XXXX CF

CALC. 1ST FLUSH, $P(4-6MO.) = 0.6"$ Per Table 2 Water Qual. Storm PRO-RATE: $17\%/20\% = 0.85 \times 0.09 = 0.0765$ INCHES $\times 0.88$ (43560/12) = 244 CF ADDITIONAL DE-SILTATION PROVIDED IN RIPRAP EROSION CONTROL PADS

- UPSTREAM ANALYSIS - SEE HEC-RAS WATER SURFACE MODEL OF LA CUEVA, ON FILE WITH CITY HYDROLOGY (Ref: C-20/D35) (REVISED 11.8.12) PER RTI STUDY, $Q100 = 3090$ CFS AT VENTURA ST. (SEE LOMR2012)

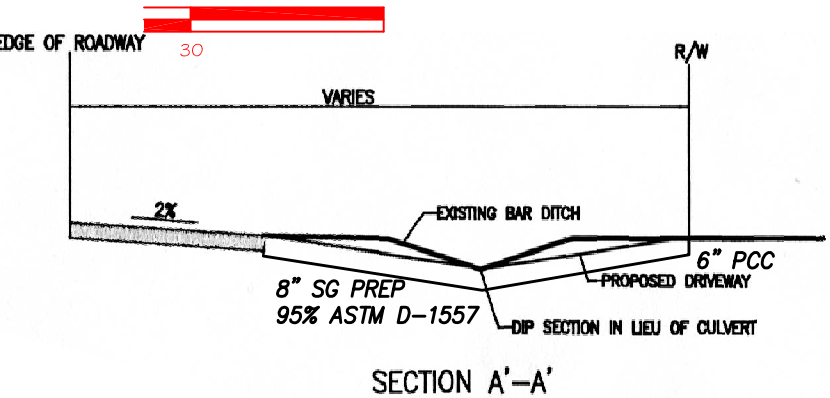
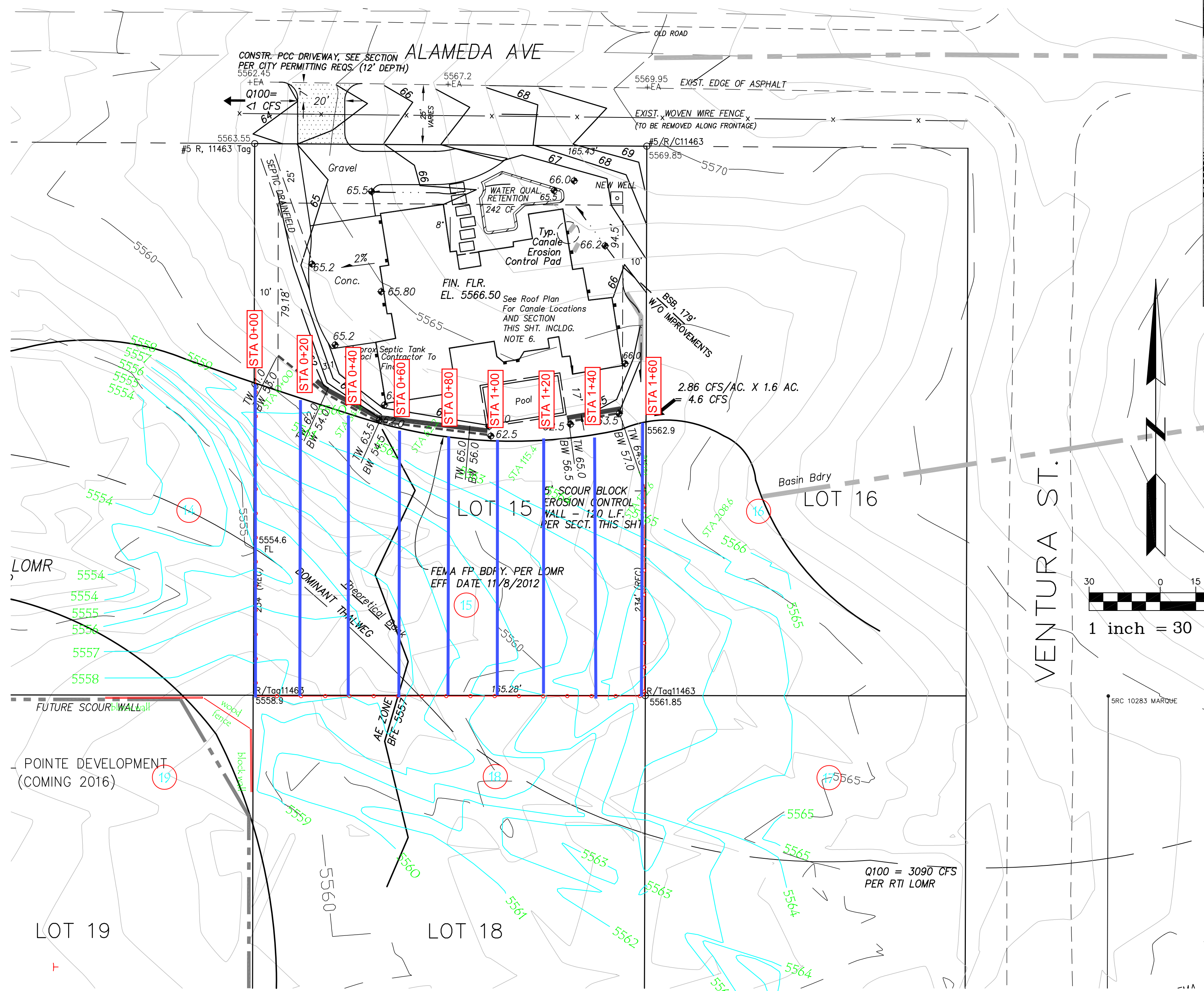
EROSION SET BACK ANALYSIS - PER SEDIMENT EROSION DESIGN GUIDE (SEDG)

$Q_{100} = 3090$ CFS...LA CUEVA ARROYO $Q_{10} = 0.20$ $Q_{100} = 618$ CFS $W_D = 4.6$ $W_D = 60$ FEET

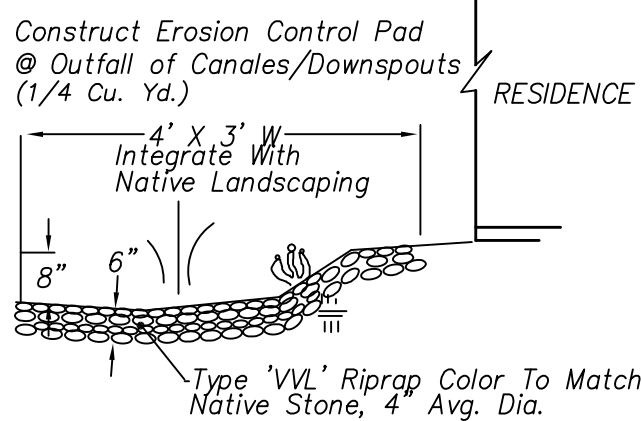
$LAMDA = [0.8 + 4 \log(Q_{10})] W_D = 718$ FEET BANK SETBACK = $LAMDA/4 = 179$ FEET

CENTER LINE SETBACK = $BSB + W_D/2 = 209$ FEET

THEREFORE, EROSION CONTROL IMPROVEMENTS REQUIRED - PER DISCUSSION WITH CITY AND AMAFCA CONSTRUCT SCOUR WALL ON SOUTH SIDE OF FOOTPRINT



SECTION A'-A' DRIVEWAY SECTION



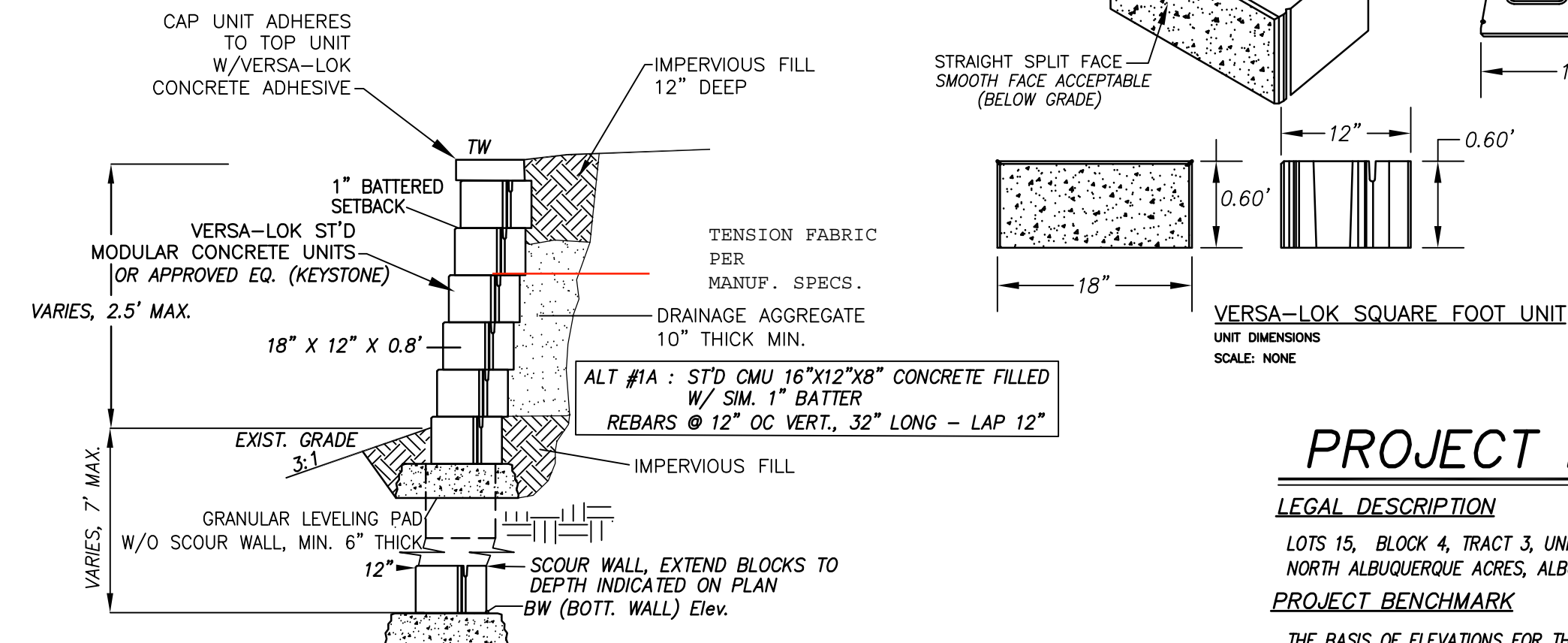
EROSION CONTROL PAD

NO SCALE

RETAINING WALL SECTION

NTS

W/ SCOUR WALL



PROJECT DATA

LEGAL DESCRIPTION

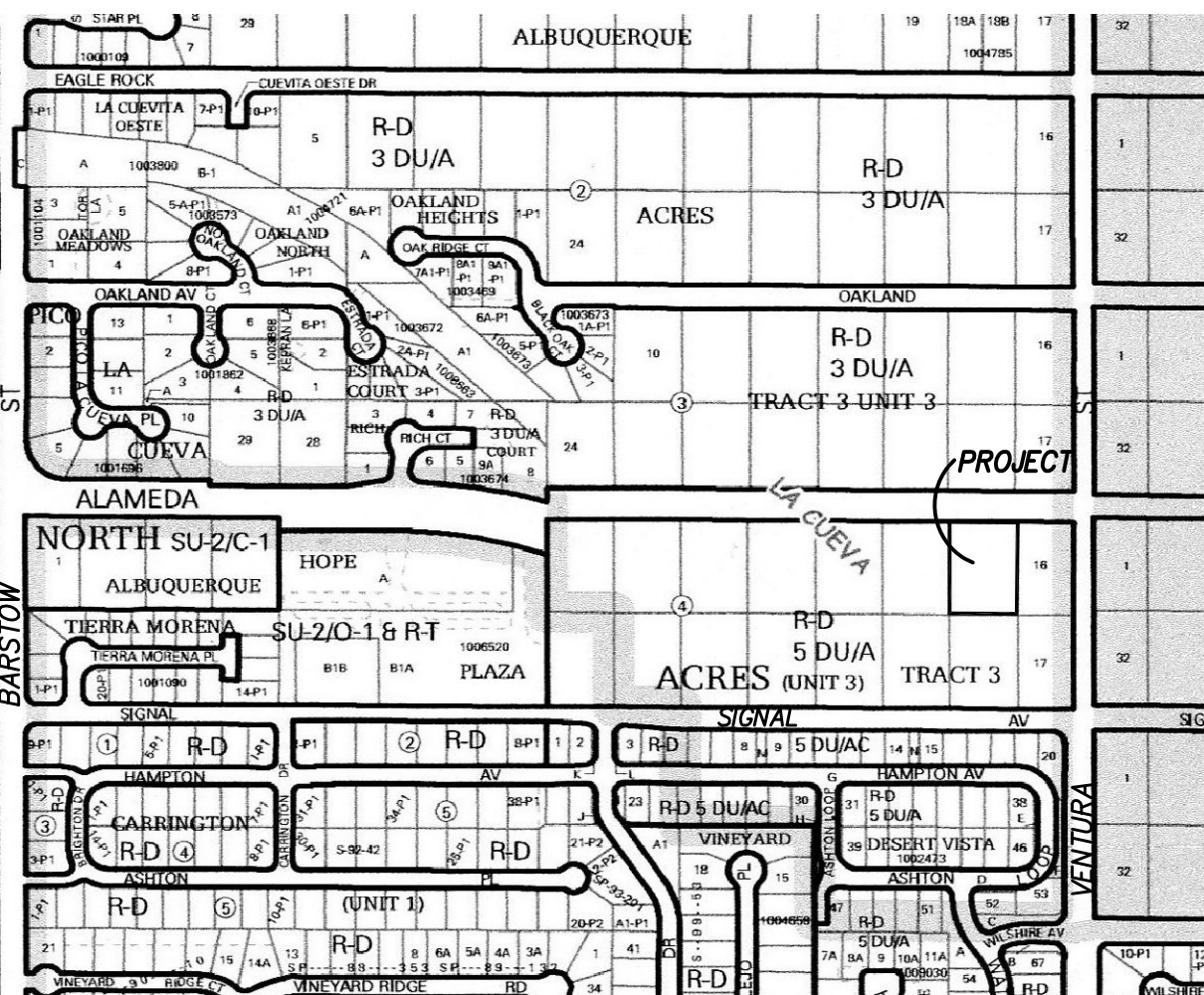
LOTS 15, BLOCK 4, TRACT 3, UNIT 3 NORTH ALBUQUERQUE ACRES, ALBUQUERQUE, NEW MEXICO

PROJECT BENCHMARK

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS ACS BENCHMARK 7-C19, ELEVATION OF WHICH IS 5485.72. BENCHMARK IS LOCATED AT THE INTERSECTION OF BARSTOW ST. AND MODESTO AVE.

TOPOGRAPHIC DESIGN SURVEY

COMPILED BY CLARK CONSULTING ENGINEERS FROM DESIGN SURVEY BY PHILIP W. TURNER P.S., DATED JULY 2014, NAVD83 DATUM.



VICINITY MAP

ZONE C-20

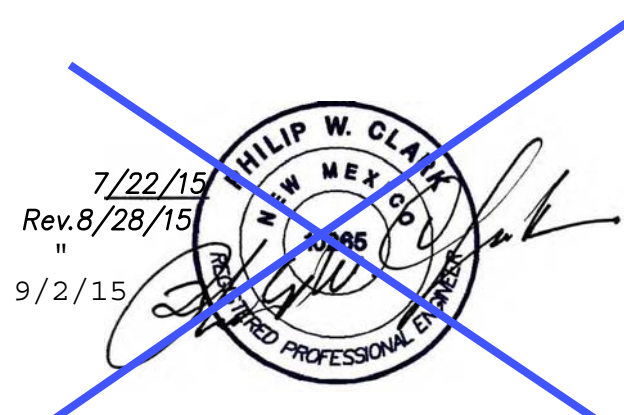
NOTES

ALL WORK WITHIN THE CITY R.O.W. SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, W/ 8 UPDATES.

1. PERIMETER FENCING AROUND THE PROPERTY IS NOT PROPOSED. CONSTRUCTION OF FUTURE FENCING SHALL PERMIT THE PASSING OF DRAINAGE TO AND FROM HISTORIC OUTFALL AND ENTRANCE LOCATIONS. OWNER SHALL MAINTAIN FENCING AND KEEP FREE OF ALL DEBRIS, WEEDS, AND/OR OBSTRUCTIONS.
2. THIS PLAN SHOWS A FIXED PERCENTAGE OF LAND TREATMENT A REMAINING IN AN UNDISTURBED CONDITION. IF A GREATER AREA IS DISTURBED A REVISED PLAN MAY BE REQUIRED PER CITY PLANNING/ENGINEERING DEVELOPMENT UNLESS THE COMPOSITE TREATMENT IS < ALLOWABLE).
3. CONTACT THE CITY OF ALBUQUERQUE PLANNING FOR ACCESS PERMIT @ PLAZA DEL SOL . 924-3991
4. REVEGETATE ALL AREAS DISTURBED DUE TO CONSTRUCTION PER CITY OF ALBUQ. SPEC. 1012, NATIVE SEED MIX.
5. MAXIMUM SITE GRADING WITHOUT EROSION PROTECTION: 3 HORIZONTAL TO 1 VERTICAL, 3:1.
6. RIPRAP STONE SHOWN ON THIS PLAN IS SMOOTH RIVER-RUN COBBLES, TYPE VVL IN COMPLIANCE WITH AMAFCA GUIDELINES, 4" AVERAGE DIA. NATIVE STONE, AND BURIED TO 6" DEPTH (UNO). SEE EROSION CONTROL PAD, THIS SHEET. SEE ROOF PLAN FOR CANALE LOCATIONS.
7. CONTRACTOR SHALL ENSURE THAT NO SITE SOILS/SEDIMENT OR SILT ENTER THE RIGHT-OF-WAYS DURING CONSTRUCTION.

LEGEND

+24.0	EXIST. SPOT ELEVATION
10	EXIST. CONTOUR
24.0	NEW SPOT ELEVATION
12	NEW CONTOUR
	EXIST. CURB & GUTTER
	NEW SWALE
	DRAINAGE DIRECTION
	NEW P.C.C. CONCRETE
	NEW RIPRAP, BURIED
	NEW RETAINING & SCOUR WALL
	TOP OF WALL, RETAINING
BW =	BOTTOM ELEV. OF SCOUR WALL
BFE	BASE FLOOD ELEVATION (SEE FEMA REV'SD MAP NOV. 08, 2012)
FL	FLOWLINE
EG	EXIST. GRADE



THIS PLAN WAS PREPARED UTILIZING SURVEY INFORMATION OBTAINED BY OWNER AND OVERLAID ON APPROVED GRADING PLAN OBTAINED FROM PUBLIC RECORDS. THIS OVERLAY WAS PREPARED BY DAVID SOULE, PE #14522

Clark Consulting Engineers
19 Ryan Road
Edgewood, New Mexico 87015
Tele: (505) 281-2444 Fax: (505) 281-2444

DATE	REVISION	LOT 15, BLK. 4, TR. 3, UNIT 3 NORTH ALBUQ. ACRES, ALBUQ. NEW MEXICO
8/20/15	ADDR. CITY COMM.	THE JONES HOME
8/28/15	*** RND. 2	Grading, Site, and Drainage Plan
9/2/15	ADD T. FABRIC	w/ On-Site Erosion Control Berm Plan / Section
DESIGNED BY: PWC	DRAWN BY: CCE	JOB #: J. Jones
CHECKED BY: PWC	DATE: JUL2015	FILE #: G/D
		SHEET 1 OF 1