

Biazar, Shahab

From: Biazar, Shahab
Sent: Thursday, May 19, 2016 12:12 PM
To: 'CCEAlbq@aol.com'; acacarrillo@cabq.gov
Cc: rtmf91@gmail.com; Cherne, Curtis
Subject: RE: 9000 Alameda (John Jones) Certification

Hi,

The disturbance is definitely more than one acre. You are saying that only 0.89 acres was disturbed. But no disturbance should have happened beyond the flood wall (which is encroaching into the flood plain). There is clearly disturbance of dirt on both properties to the east and to the west. I did approve the plans. So the improvements should reflect the approved grading plan. Unfortunately, a Certification of Occupancy was issued by mistake without certification of the floodwall and grades on this project. The Certification of Occupancy will be retracted if Hydrology's concerns are not addressed. Furthermore, existing improvements will have to be removed and reconstructed to reflect the approved grading and drainage plan.

Thanks

Shahab Biazar, P.E.

City Engineer

Planning Department
Development Review Services Division
600 2nd St. NW, Suite 201
Albuquerque, NM 87102
t 505-924-3999
f 505-924-3864

From: CCEAlbq@aol.com [mailto:CCEAlbq@aol.com]
Sent: Tuesday, May 17, 2016 11:21 AM
To: Biazar, Shahab; acacarrillo@cabq.gov
Cc: rtmf91@gmail.com; Cherne, Curtis; llavehomes@hotmail.com; lmazur@amafca.org
Subject: Re: 9000 Alameda (John Jones) Certification

Shahab - and Abiel (finally getting you in the loop on such matters)

Of course, the three items questioned in the conclusion of your e-mail were not submitted! For two reasons, 1). Only 0.89 acres were disturbed. Secondly 2)., **you personally**, approved the plan as submitted for Building Permit.

Additionally, let alone you ignore my comment that Mr. Jones has actually cleaned-up the arroyo from debris, vegetation and silt, thereby increasing the capacity. The owner has testified that no significant fill was brought into floodplain - with the exception of the small, 2.5' tall wall located 14' south of the sport-pool. This wall, if you would review against the LOMR (rev. Nov. 2012) reveals that it is built **above** the BFE's as published (and measured 4-5' encroachment into FP). I have pointed out to you and Cherne several times the problems associated with the RTI LOMR as submitted. (Please see my blue hi-lite below) I personally recommend to you, the City of Albuquerque and AMAFCA form a joint effort to submit a revised/corrected LOMR of the portion of Block 4 (including CLOMR of proposed Sedimentation Pond), caused by datum errors and FEMA errors of transference of consultant analyses.

As to 1). you must be confusing "Curtis' comment" to my client that LLave Homes disturbed about 20' of lands north and adjoining to Signal Pointe. I think you must be confusing two separate projects.

Mr. Biazar - I categorically find your comments somewhat disingenuous and questions facetious, or either that,absolutely misinformed.

Respectfully,

Philip W. Clark, PE
Clark Consulting Engineers
Designing to Shape the Future
o/f: 505.281.2444 c/t: 505.264.6042

In a message dated 5/17/2016 8:42:41 A.M. Mountain Daylight Time, sbiazar@cabq.gov writes:

Sorry for getting back to you so late. Curtis had not told Mr. Jones that what he had done is OK. I believe Mr. Rael had talked with the owner when he was asked to visit the site. The improvement did not follow the approved grading and drainage plan. A new analysis has been submitted for the improvements encroaching the floodplain. If the improvement have any impact on the floodplain or on the adjacent properties or existing floodplain, all the improvement encroaching into the floodplain will have to be removed. We will also need approval letter from adjacent property owners allowing Mr. Jones disturb their site and store material. The total disturbance was more than one acre. Was there an Erosion Sediment Control Plan prepared or SWPPP? Was there a Notice of Intent (NOI) to FEMA?

Thanks

Shahab Biazar, P.E.

City Engineer
Planning Department
Development Review Services Division
600 2nd St. NW, Suite 201
Albuquerque, NM 87102
t 505-924-3999
f 505-924-3864

From: CCEAlbq@aol.com [<mailto:CCEAlbq@aol.com>]
Sent: Monday, April 25, 2016 11:55 AM
To: Biazar, Shahab
Cc: rtmf91@gmail.com; Cherne, Curtis
Subject: 9000 Alameda (John Jones) Certification

Shahab - went by the site last week as you requested and spoke with owner Jones. He told me that Rael and Cherne were not too concerned with his site improvements south of the scour wall location.

You are correct that a second wall about 2.5' tall was built south of the scour wall. I measured about 14' south - therefore about 10' encroachment into the floodplain. As you know, I have re-run the HEC-ras model on this block with the submittal of Signal Pointe, which concluded that the BFE's established by the late 2012 LOMR were in error. The magnitude of the error was about 2.5' due to datum differentials of 29Datum to NAVD88, and as you know should have been in the current datum back in 2012. Additionally, my analysis rendered that the published north bdry of the revised FP at Jones was greater (further north) than my results. Upon review of the topography I am confident if a new LOMR was submitted, with correct datum etc. it would pull this same bdry. back (South) a minimum of 10 feet. Bottom line, this second wall should not impact the 100-yr. event, nor most importantly the public safety. **This is know as "The Best Available Data".**

As to the landscaping placed within the southerly portion of the lot - it appears that no substantial fill has been placed, and if anything the clearing of the natural vegetation will **in essence increase the capacity of the arroyo.** The main thalweg of the arroyo has not been compromised nor blocked. The wrought-iron fencing will continue to pass the flows so long as it is kept free of debris, weeds, and aggrading (low-flow) silt deposition. Note # 1 on the plan addresses the owner's responsibility as to maintenance of these flows. Since the bottom of the fence extends to about 8-inches from grade, I do not recommend any removal of the bottom of this fence as suggested by inspectors.

As always give me a call anytime should you have any questions.

Regards,

Phil

Philip W. Clark, PE
Clark Consulting **E**ngineers
Designing to Shape the Future
o/f: 505.281.2444 c/t: 505.264.6042

CITY OF ALBUQUERQUE



September 2, 2015

Philip W. Clark, PE
Clark Consulting Engineers
19 Ryan Rd
Edgewood, NM 87015

**Re: The Jones's Home
9000 Alameda Ave NE
Grading and Drainage
Engineers Stamp Date 9/2/2015 (C20D073)**

Dear Mr. Clark,

Based upon the information provided in your submittal received 9/2/2015, the above referenced Grading and Drainage Plan is approved for Grading Permit and Building Permit.

Please attach a copy of this approved plan dated 9/2/15 to the construction sets in the permitting process prior to sign-off by Hydrology.

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required along with an elevation Certificate provided by a registered surveyor.

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

If you have any questions, you can contact me at 924-3999 or Rudy Rael at 924-3977.

Sincerely,

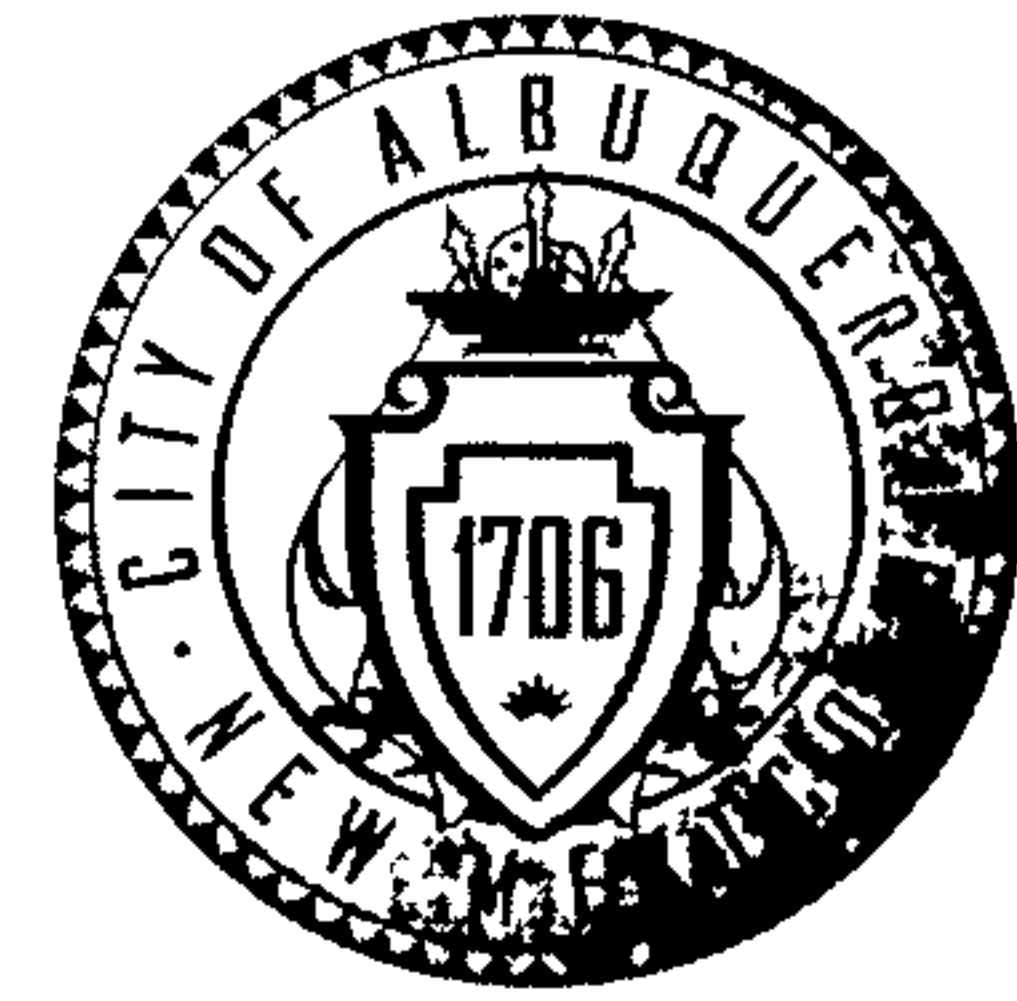
Shahab Biazar, P.E.
City Engineer, Albuquerque
Planning Department

C: RR/SB
email

CITY OF ALBUQUERQUE

August 25, 2015

Philip W. Clark, PE
Clark Consulting Engineers
19 Ryan Rd
Edgewood, NM 87015



**Re: The Jones's Home
9000 Alameda Ave NE
Grading and Drainage
Engineers Stamp Date 8/20/2015 (C20D073)**

Dear Mr. Clark,

Based upon the information provided in your submittal received 8/21/2015, the above referenced Grading and Drainage Plan cannot be approved for Grading Permit or Building Permit until the following comments are addressed.

- Provide the location of the septic tank.
- Provide the specifications for the interlock retaining wall and scour wall system showing the tension fabric and other specifications.
- I calculated a Center Line Setback of 210', compared to your 190', please verify.
- Provide a concrete driveway up to the property line. Only one driveway is allowed off of Alameda.
- Provide reason for no scour wall to the south of the pool.

PO Box 1293

Albuquerque

If you have any questions, you can contact me at 924-3999 or Rudy Rael at 924-3977.

New Mexico 87103

www.cabq.gov

Sincerely,

Shahab Biazar, P.E.
City Engineer, Albuquerque
Planning Department

C: RR/SB
email

Attn: Rudy

DRAINAGE AND TRANSPORTATION INFORMATION SHEET
(REV 01/06 - KDM)

PROJECT TITLE: The Jones Home ZONE MAP: C-20/0073
DRB#: _____ EPC#: _____ WORK ORDER#: _____

LEGAL DESCRIPTION: LOT 15, B1K. 4, T 3, U3, N. A16. Acres
CITY ADDRESS: 9000 Alameda Ave NE 87122

ENGINEERING FIRM: Clark Consulting Engineers CONTACT: Phil
ADDRESS: 19 Ryan Road PHONE: 281-2444 & FAX
CITY, STATE: Edgewood, NM ZIP CODE: 87015

OWNER: Jones CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

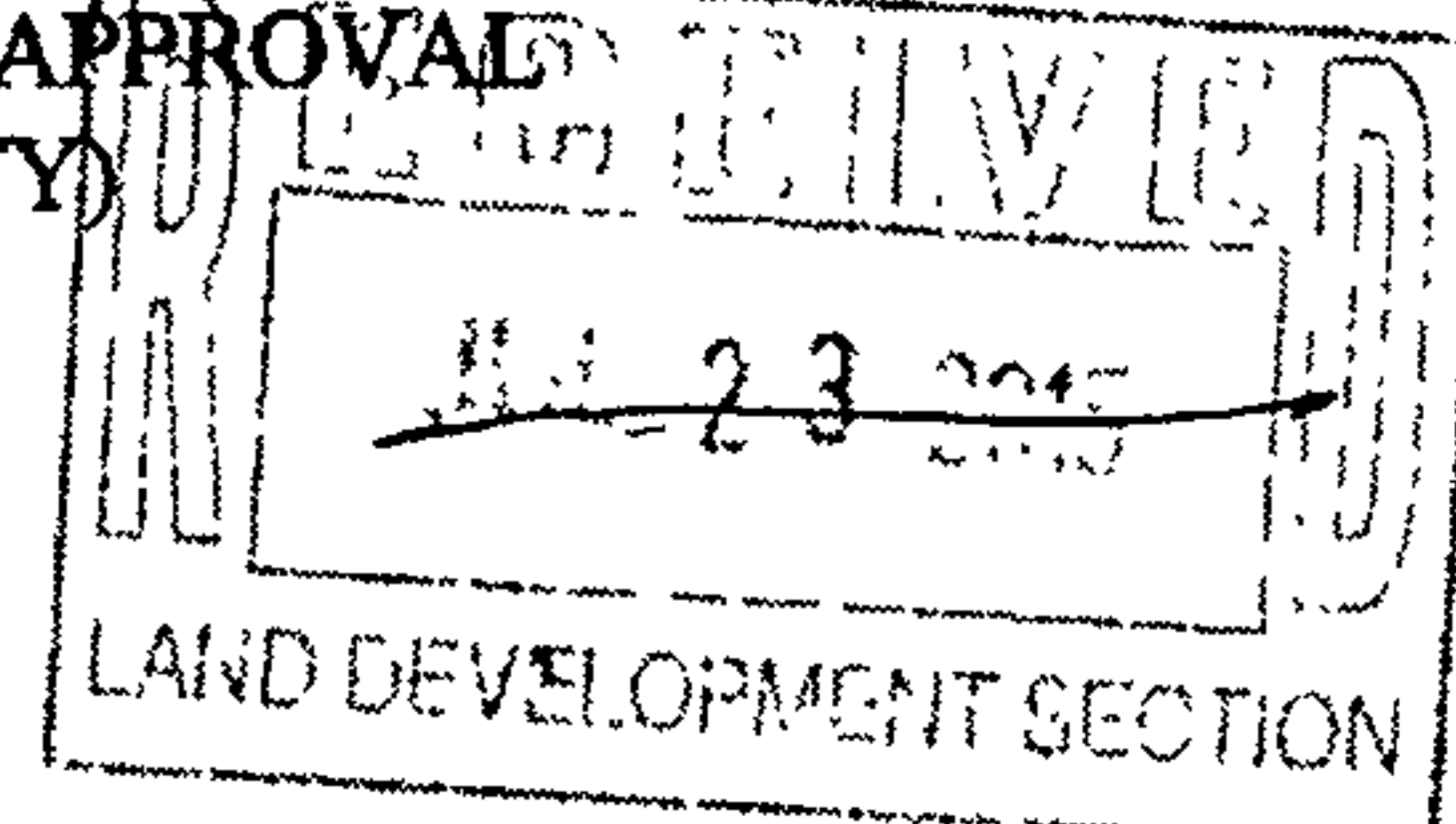
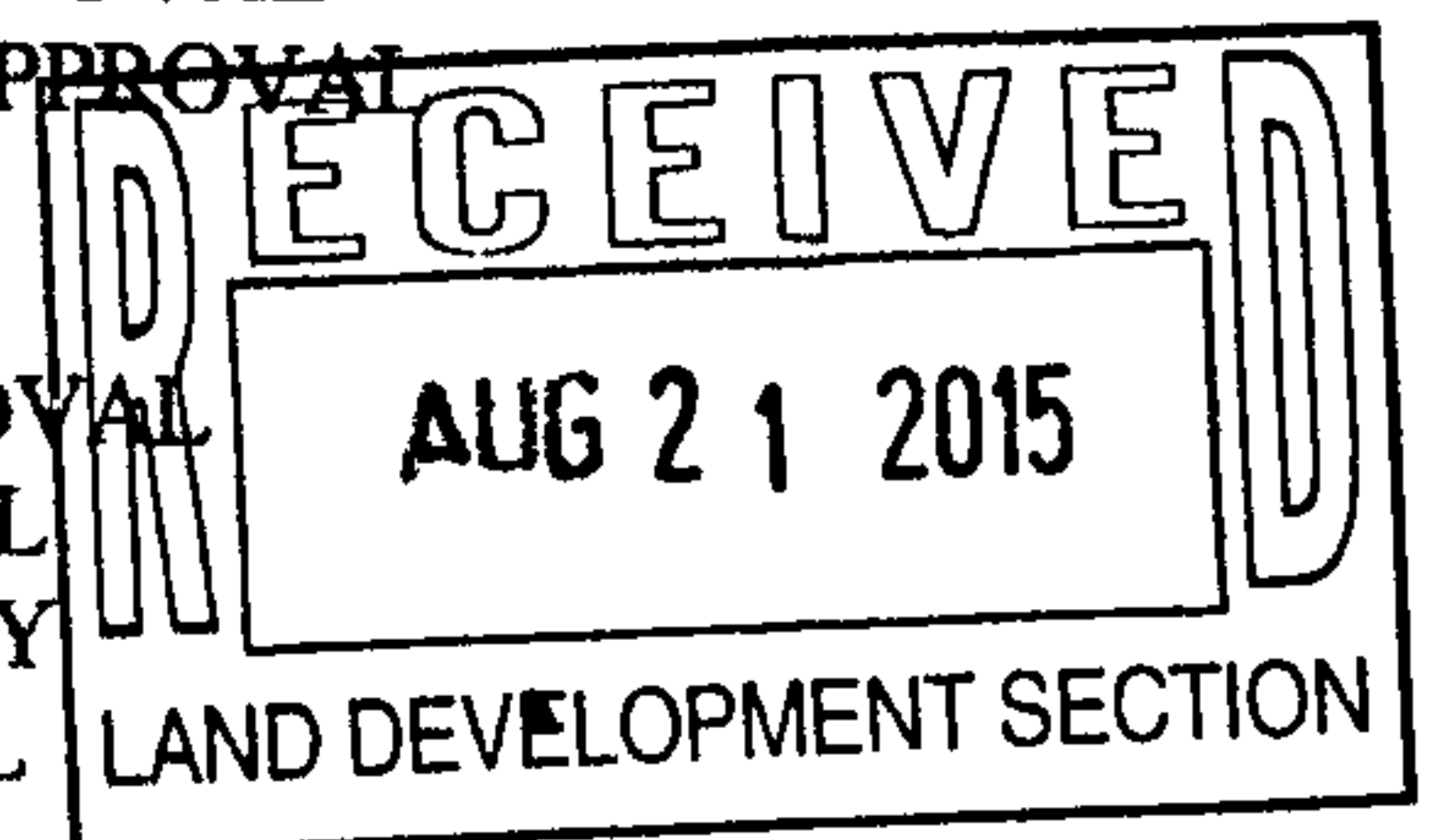
ARCHITECT: N/A CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

SURVEYING FIRM: Terrametrics of New Mexico LICENSED SURVEYOR: Phil Turner
ADDRESS: PO Box 30192 PHONE: 379-4301
CITY, STATE: Albuquerque NM ZIP CODE: 87190

CONTRACTOR: _____ CONTACT: _____
ADDRESS: _____ PHONE: _____
CITY, STATE: _____ ZIP CODE: _____

TYPE OF SUBMITTAL:
☐ DRAINAGE REPORT
☒ DRAINAGE PLAN 1st SUBMITTAL
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☒ GRADING PLAN
☐ EROSION CONTROL PLAN
☐ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT
☐ ENGINEER'S CERT (TCL)
☐ ENGINEER'S CERT (DRB SITE PLAN)
☐ OTHER (SPECIFY) _____

CHECK TYPE OF APPROVAL SOUGHT:
☐ SIA/FINANCIAL GUARANTEE RELEASE
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
☐ S. DEV. FOR BLDG. PERMIT APPROVAL
☐ SECTOR PLAN APPROVAL
☐ FINAL PLAT APPROVAL
☐ FOUNDATION PERMIT APPROVAL
☒ BUILDING PERMIT APPROVAL
☐ CERTIFICATE OF OCCUPANCY
☐ GRADING PERMIT APPROVAL
☐ PAVING PERMIT APPROVAL
☐ WORK ORDER APPROVAL
☐ OTHER (SPECIFY) _____



WAS A PRE-DESIGN CONFERENCE ATTENDED:
☒ YES
☐ NO
☐ COPY PROVIDED

DATE SUBMITTED: 8/21/15 7/23/15 BY: DR

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

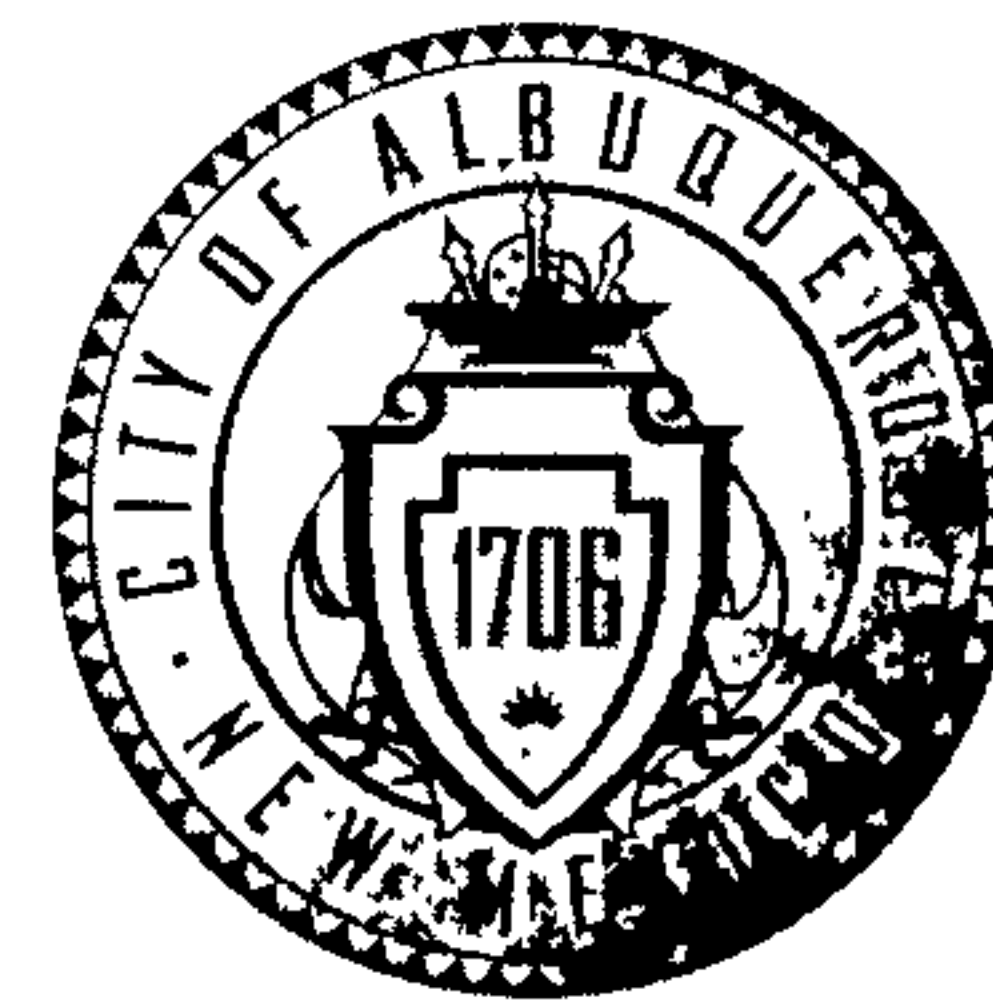
1. **Conceptual Grading and Drainage Plan:** Required for approval of Site Development Plans greater than five (5) acres and Sector Plans.
2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.

*Cj pdf + Hec. ras + scour + X. sections + LOMR image
Electronically @ 11:32, TODAY*

CITY OF ALBUQUERQUE

August 4, 2015

Philip W. Clark, PE
Clark Consulting Engineers
19 Ryan Rd
Edgewood, NM 87015



**Re: The Jones Home
9000 Alameda NE
Grading and Drainage
Engineers Stamp Date 7/22/2015 (C20D073)**

Dear Mr. Clark,

Based upon the information provided in your submittal received 7/23/2015, the above referenced Grading and Drainage Plan cannot be approved for Grading Permit or Building Permit until the following comments are addressed.

- Provide the "First Flush" calculations and Ponding for the new impervious area's.
- Provide a basin for the 2cfs.
- A Floodplain Permit will be required before any construction begins.
- Provide roof flows.
- The scour wall to the west of the home needs to protect the septic tank and septic drain field.
- Provide the flow amount coming from Alameda Blvd. and Ventura St., headed in a southwesterly direction into the AE flood zone, if any.
- The two flood control structures provided are not acceptable. In option B the block should extend below the scour depth.
- The driveway must be concrete, provide a detail as to how the driveway will not block the 2cfs flow.

PO Box 1293

Albuquerque

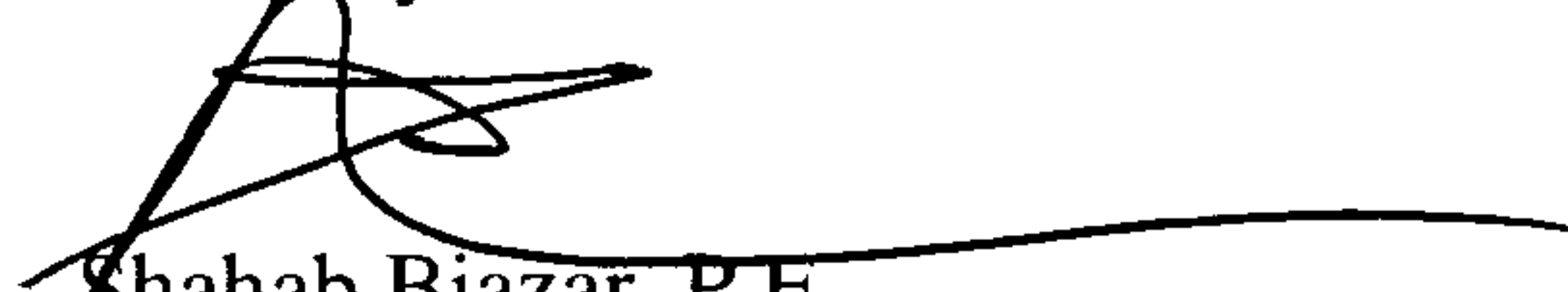
New Mexico 87103

www.cabq.gov

Note; The COA Transportation department will allow a single entry in Alameda Blvd., once this street is completely built out and becomes a Principal Arterial Road. Coordinate with DMD for the future road alignment in Alameda, the home may possibly be in the future right of way.

If you have any questions, you can contact me at 924-3999 or Rudy Rael at 924-3977.

Sincerely,


Shahab Biazar, P.E.
City Engineer, Albuquerque
Planning Department

C: RR/CC
email

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 01/06 - KDM)

PROJECT TITLE: 'The Jones Home' ZONE MAP: C-20-0073
 DRB#: _____ EPC#: _____ WORK ORDER#: _____

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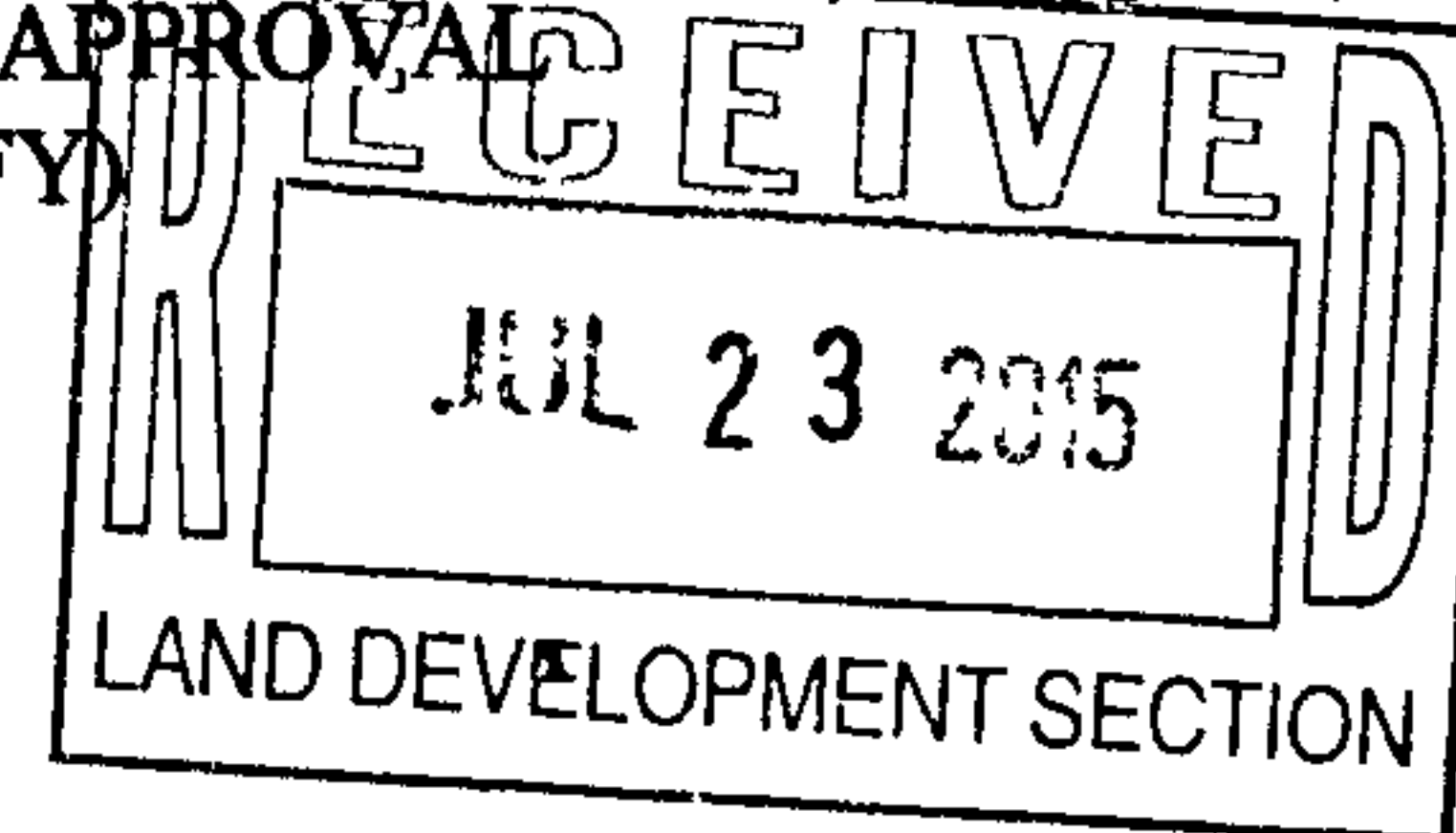
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CONTRACTOR: _____ CONTACT: _____
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 CITY, STATE: _____ ZIP CODE: _____

<p>TYPE OF SUBMITTAL:</p> <p>_____ DRAINAGE REPORT</p> <p><input checked="" type="checkbox"/> DRAINAGE PLAN 1st SUBMITTAL</p> <p>_____ DRAINAGE PLAN RESUBMITTAL</p> <p>_____ CONCEPTUAL G & D PLAN</p> <p><input checked="" type="checkbox"/> GRADING PLAN</p> <p>_____ EROSION CONTROL PLAN</p> <p>_____ ENGINEER'S CERT (HYDROLOGY)</p> <p>_____ CLOMR/LOMR</p> <p>_____ TRAFFIC CIRCULATION LAYOUT</p> <p>_____ ENGINEER'S CERT (TCL)</p> <p>_____ ENGINEER'S CERT (DRB SITE PLAN)</p> <p>_____ OTHER (SPECIFY) _____</p>	<p>CHECK TYPE OF APPROVAL SOUGHT:</p> <p>_____ SIA/FINANCIAL GUARANTEE RELEASE</p> <p>_____ PRELIMINARY PLAT APPROVAL</p> <p>_____ S. DEV. PLAN FOR SUB'D APPROVAL</p> <p>_____ S. DEV. FOR BLDG. PERMIT APPROVAL</p> <p>_____ SECTOR PLAN APPROVAL</p> <p>_____ FINAL PLAT APPROVAL</p> <p>_____ FOUNDATION PERMIT APPROVAL</p> <p><input checked="" type="checkbox"/> BUILDING PERMIT APPROVAL <i>paid \$50.00</i></p> <p>_____ CERTIFICATE OF OCCUPANCY</p> <p>_____ GRADING PERMIT APPROVAL</p> <p>_____ PAVING PERMIT APPROVAL <i>As Varified</i></p> <p>_____ WORK ORDER APPROVAL</p> <p>_____ OTHER (SPECIFY) _____</p>
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WAS A PRE-DESIGN CONFERENCE ATTENDED:
 _____ YES
☒ NO
 _____ COPY PROVIDED



DATE SUBMITTED: 7/23/15 BY: [Signature]

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

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2. **Drainage Plans:** Required for building permits, grading permits, paving permits and site plans less than five (5) acres.
3. **Drainage Report:** Required for subdivision containing more than ten (10) lots or constituting five (5) acres or more.

*C: pdf + Hec.ras + scour + X-sections + LOMR image
 Electronically @ 11:32, TODAY*
[Signature]

HYDROLOGY/TCL SUBMITTAL STATUS REPORT

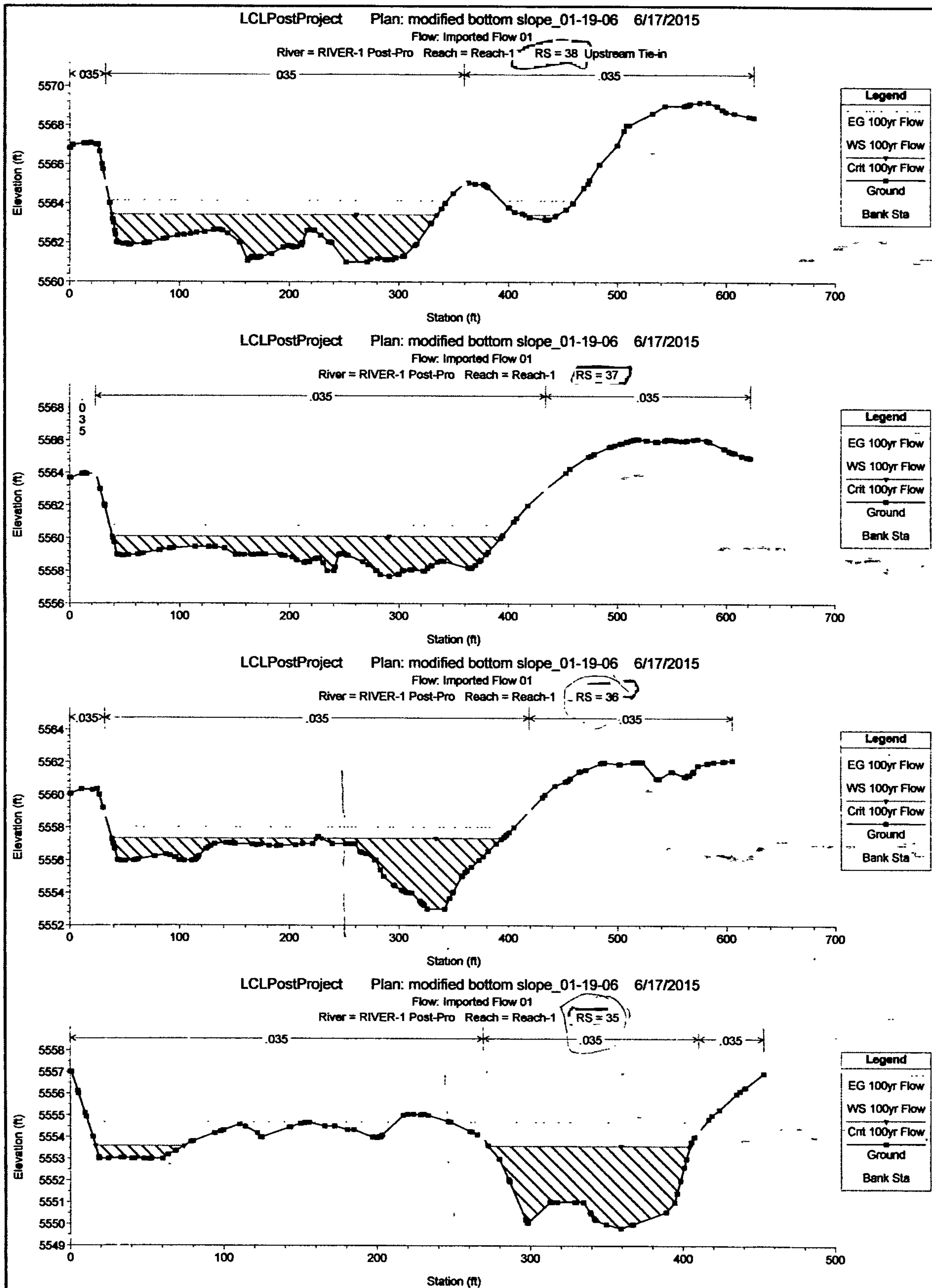
12-Oct-15

File #	Project Name	Reviewer	Sub Date	Approval Sought	Review Date	Approved	Firm	Discharge	Acres Imp
C20D070	SIGNAL POINTE	SB	8/21/2015	BP-R, GP-R			CLARK CONSU	FREE	
G18D048	MONTGOMERY ELEMENTARY S		9/4/2015	DMP			WILSON AND C		
H13D057	SAWMILL CROSSING SUBDIVISI	RH	9/10/2015	ROFG			MARK GOODW	RETENTIO N	3
C09D011	VALLE PRADO UNIT 2	RH	9/11/2015	BP			BOHANNAN H		
F16D003E1	ABRAHAM-BEACH PROPERTY	RH/RE	9/15/2015	BP			TIERRA WEST		
M15D026B	MULTI-SPECIALTY CLINIC	RH	9/17/2015	BP, SPBP, GP			TIERRA WEST		
F23D012	WILDERNESS CANON @ HIGH DE		9/21/2015	PP, GP			BOHANNAN H		
J14D140	MARBLE BREWERY - 111 MARBL		9/22/2015	GP-R, PAVE			WOOTEN ENGI	DETENTIO N LISTO	.02
K12D015A	WEST CENTRAL/ATRISCO		9/22/2015	BP, GP, PAVE			WOOTEN ENGI		
C20D070	SIGNAL POINTE	SB	9/23/2015	BP-R, GP-R			CLARK CONSU	FREE	
K21D009H3	COPPER POINTE SUBDIVISION		9/25/2015	PAVE			MARK GOODW		
E19D021	HOLY CROSS TOWNHOMES	RH	9/25/2015	PP			MARK GOODW	FREE	
L12D012	CATHOLIC CHARITIES		9/29/2015	PP			MILLER ENGIN		

File #	Project Name	Reviewer	Sub Date	Approval Sought	Review Date	Approved	Firm	Discharge	Acres Imp
J08D002A	WESTSIDE REGIONAL SPORTS C		10/1/2015	SPBP, BP, GP, WO			BOHANNON H		
D10D003L10	6531 PAPAGAYO	RER	10/2/2015	BP, GP			RIO GRANDE E		
C19D042A	LA VISTA SUBDIVISION LOTS 17		10/5/2015	BP, GP			THOMPSON EN	FREE	.23
D18D054E	SANTA MONICA ESTATES	RH/SB	10/5/2015	GP, PP, WO			ISAACSON & A		
J10D005	WEST MESA HIGH SCHOOL INTE	RM	10/5/2015	TIS			BOHANNON H		
F15D052B	ACCLASS STORAGE - 5134 2ND ST	GS	10/5/2015	TCL-CO-PERM			RIO GRANDE E		
G15D201	DISCOUNT TOWING	RER/R	10/8/2015	BP-R			RHD ENGINEE	FREE	1.92 AC
H13D057	SAWMILL CROSSING SUBDIVISI	RH	10/8/2015	ROFG, CO, BP, FO			MARK GOODW	RETENTIO NI	3
J14D175	MUSKET DEVELOPMENT	RER	10/8/2015	BP-REVISION			TIERRA WEST	FREE 1.02	.271 AC
D09D004	MONTECITO WEST UNIT 2	RER	10/8/2015	ROFG			BHI	FREE	Y
J14D175	MUSKET DEVELOPMENT	GS	10/8/2015	TCL-BP-R			TIERRA WEST	FREE 1.02	.271 AC
C17D103	JAGUAR LAND ROVER SHOWRO		10/8/2015	BP			HIGH MESA CO	DETENTIO NI	
H15D016	SUNSET MEMORIAL PARK - 924	RH/RR	10/8/2015	BP			HIGH MESA CO		
G14D080	BACA DUPLEXES - 4421 12TH ST	TE	10/8/2015	CO-PERM			CLARK CONSU	FREE 1 CF S	
C12D003B7	PRESBYTERIAN PARADISE CLINI	RH/RE	10/8/2015	BP-R			BOHANNON H	FREE	3.6 AC

File #	Project Name	Reviewer	Sub Date	Approval Sought	Review Date	Approved	Firm	Discharge	Acres Imp
D18D054D	TRACTS 3-A 3-B 4-A 4-B SANTA M	TE	10/8/2015	CO-PERM			ISAACSON AN	FREE	20.14 AC
M15D012B	CHILIS GIBSON AND UNIVERIST	GS	10/9/2015	TCL-CO-PERM			TIERRA WEST		
M15D012B	CHILIS GIBSON AND UNIVERIST	TE	10/9/2015	CO-PERM			TIERRA WEST	FREE	1.6 AC
K18d106	FAÇADE REMODEL-111 CARDEN	GS	10/8/2015	TCL-BP			FREDDIE MON		
K15D094	LEAD AVENUE TOWNHOMES - 21	GS	10/9/2015	TCL-CO-PERM			MULLEN HELL		
G14D066	COMMERCIAL & APARTMENT B		10/9/2015	BP, GP, SO-19, PA			WOOTEN ENGI		

RT1. Past Project



$\Delta = 1$
 γ_{normal}

HEC-RAS Plant Supercrit River RIVER-1 Post-Pro Reach: Reach-1 Profile: PF 1

Reach	River Sta	Profile	Q Total (cfs)	Mn Ch El (ft)	W.S. Elev (ft)	Ch W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/m)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Ch
Reach-1	38	PF 1	3090.00	5561.00	5563.06	5563.39	5564.29	0.035031	8.92	346.37	290.73	1.44
Reach-1	37	PF 1	3090.00	5557.67	5559.06	5560.10	5560.87	0.032179	8.06	383.23	351.37	1.36
Reach-1	36	PF 1	3090.00	5553.00	5557.17	5557.33	5558.04	0.024424	7.50	411.73	341.70	1.20
Reach-1	35	PF 1	3090.00	5549.61	5552.76	5553.59	5555.12	0.031821	12.35	250.19	119.88	1.51
Reach-1	34	PF 1	3090.00	5546.18	5549.88	5550.67	5552.30	0.024846	12.50	247.26	96.54	1.36
Reach-1	33	PF 1	3090.00	5543.99	5546.08	5547.65	5549.37	0.034856	12.65	244.20	120.39	1.57
Reach-1	32.5	PF 1	3090.00	5539.80	5543.61	5544.53	5546.49	0.028243	13.62	226.81	80.63	1.43
Reach-1	32	PF 1	3090.00	5537.80	5541.62	5542.76	5544.70	0.033696	14.06	219.43	90.21	1.56
Reach-1	31	PF 1	3090.00	5536.00	5540.08	5540.37	5541.57	0.022825	9.11	339.22	199.40	1.23
Reach-1	30	PF 1	3090.00	5533.99	5537.89	5538.24	5539.20	0.024469	9.20	335.73	205.92	1.27
Reach-1	29	PF 1	3090.00	5532.32	5536.29	5536.70	5537.65	0.032440	9.37	329.63	242.92	1.42
Reach-1	28	PF 1	3090.00	5531.20	5535.32	5535.62	5536.45	0.024931	8.52	392.56	252.39	1.25
Reach-1	27	PF 1	3090.00	5529.00	5534.05	5534.28	5535.07	0.024394	8.12	390.61	279.68	1.23
Reach-1	26	PF 1	3090.00	5527.98	5532.21	5532.61	5533.58	0.035016	9.38	329.34	255.62	1.46
Reach-1	25	PF 1	3090.00	5526.22	5530.64	5530.86	5531.40	0.016908	7.00	441.54	307.22	1.03
Reach-1	24	PF 1	3090.00	5525.00	5529.25	5529.46	5530.27	0.023062	8.11	381.13	269.43	1.20
Reach-1	23	PF 1	3090.00	5523.90	5527.41	5527.78	5528.76	0.028076	9.36	329.27	216.72	1.34
Reach-1	22.5	PF 1	3090.00	5522.98	5526.72	5527.06	5528.08	0.027334	9.37	329.76	212.99	1.33
Reach-1	22	PF 1	3090.00	5522.16	5525.88	5526.29	5527.36	0.029733	9.77	316.37	204.92	1.36
Reach-1	21	PF 1	3090.00	5520.96	5524.84	5525.15	5526.34	0.015494	9.91	315.05	155.99	1.22
Reach-1	20	PF 1	3090.00	5519.88	5523.80	5524.19	5525.51	0.016450	10.52	293.84	136.99	1.27
Reach-1	19	PF 1	3090.00	5517.20	5521.21	5522.25	5524.67	0.017088	14.92	207.16	73.78	1.57
Reach-1	18.7	PF 1	3090.00	5516.26	5521.65	5522.16	5524.35	0.007897	13.18	234.47	80.86	1.18
Reach-1	18.35	PF 1	3090.00	5515.25	5522.81	5522.81	5525.30	0.001796	12.65	244.21	48.13	0.99
Reach-1	18	PF 1	3090.00	5514.13	5522.15	5522.61	5525.15	0.002224	13.91	222.12	44.27	1.09
Reach-1	17	PF 1	3090.00	5511.15	5517.73	5519.94	5524.43	0.006417	20.77	148.80	35.92	1.80
Reach-1	16	PF 1	3090.00	5508.15	5514.08	5517.02	5523.37	0.008982	24.46	126.31	33.32	2.21
Reach-1	15	PF 1	3090.00	5505.15	5510.72	5514.02	5522.04	0.013051	27.00	114.46	31.67	2.51
Reach-1	14	PF 1	3090.00	5502.15	5507.48	5511.02	5520.44	0.015680	28.69	106.95	30.91	2.74
Reach-1	13	PF 1	3090.00	5499.15	5504.31	5508.02	5516.64	0.017876	30.38	101.72	30.23	2.92
Reach-1	12	PF 1	3090.00	5496.15	5501.18	5505.02	5516.63	0.018916	31.54	97.96	29.72	3.06
Reach-1	11	PF 1	3090.00	5493.15	5498.09	5502.02	5514.46	0.021556	32.48	95.15	29.34	3.18
Reach-1	10	PF 1	3090.00	5490.15	5495.11	5502.02	5512.20	0.022775	33.18	93.14	28.30	3.22
Reach-1	9	PF 1	3090.00	5487.15	5491.95	5499.19	5512.20	0.024255	33.91	91.12	26.79	3.36
Reach-1	8	PF 1	3090.00	5484.15	5488.90	5492.92	5507.28	0.025216	34.40	89.83	26.61	3.42
Reach-1	7	PF 1	3090.00	5480.86	5485.56	5489.64	5504.63	0.026527	35.04	88.17	26.38	3.50
Reach-1	6	PF 1	3090.00	5474.14	5478.57	5482.82	5501.28	0.033674	36.24	80.80	27.32	3.92
Reach-1	5	PF 1	3090.00	5467.45	5471.92	5476.59	5487.46	0.037086	40.56	76.19	24.88	4.06
Reach-1	4	PF 1	3090.00	5462.75	5467.06	5471.66	5483.51	0.040230	41.28	74.86	25.60	4.25
Reach-1	3	PF 1	3090.00	5459.87	5464.18	5468.73	5484.13	0.039061	40.06	77.09	26.61	4.15
Reach-1	2	PF 1	3090.00	5457.33	5461.67	5466.01	5484.89	0.033340	38.67	79.90	27.69	4.01
Reach-1	1	PF 1	3090.00	5454.00	5458.60	5462.85	5481.24	0.033630	38.19	80.91	27.38	3.92

$F_v = 1.30$

$$\gamma_{(avg.)} = 3.2'$$

$$\gamma_{(Super Crit.)} = 3.2$$

Sed G. Eg. 3.89...

$$\frac{\gamma_s}{\gamma_n} = 0.73 + 0.14 \pi F_r^2$$

$$\therefore \gamma_s = 4.94' / USE 5'$$

@ Signal Pnte.
 La Cueva
 Super Crit.

**POST PROJECT CHANNEL HEC-RAS OUTPUT
100-YEAR STORM**

Cross Section	Station #	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
38	40+17	3090	5561.00	5562.69	5563.39	5565.22	0.112373	12.76	242.13	284.75	2.44
37	39+17	3090	5557.35	5559.73	5559.84	5560.53	0.021598	7.17	430.95	349.24	1.14
36	38+17	3090	5553.00	5556.66	5557.02	5557.87	0.032369	8.83	350.13	281.05	1.39
35	37+17	3090	5549.50	5552.43	5553.01	5554.25	0.039436	10.81	285.72	196.02	1.58
34	36+17	3090	5546.10	5549.51	5549.90	5551.13	0.024393	10.20	302.85	157.71	1.30
33	35+40	3090	5542.90	5546.20	5546.82	5548.22	0.034498	11.39	271.19	155.24	1.52
32.5	34.68	3090	5539.80	5544.58	5544.80	5546.04	0.014566	9.69	318.97	121.86	1.06
32	34+13	3090	5537.80	5541.66	5542.79	5544.63	0.032428	13.83	223.42	91.28	1.56
31	33+12	3090	5534.90	5539.84	5540.20	5541.33	0.024846	9.80	315.33	176.77	1.29
30	32+27	3090	5533.50	5537.48	5537.88	5539.13	0.023245	10.30	300.12	149.26	1.28
29	31+90	3090	5532.30	5536.62	5536.86	5537.73	0.021950	8.44	366.04	235.09	1.19
28	31+50	3090	5531.25	5535.32	5535.74	5536.65	0.032706	9.25	334.16	252.38	1.42
27	30+95	3090	5528.80	5533.80	5534.11	5534.98	0.026627	8.73	354.10	249.56	1.29
26	30+50	3090	5528.00	5532.26	5532.60	5533.52	0.031274	9.00	343.32	260.57	1.38
25	29+90	3090	5526.22	5530.61	5530.66	5531.40	0.017900	7.15	432.12	305.16	1.06
24	29+40	3090	5525.00	5529.27	5529.46	5530.26	0.022218	7.99	386.94	272.11	1.18
23	28+90	3090	5523.90	5527.78	5528.01	5528.95	0.023138	8.66	356.78	228.97	1.22
22	28+40	3090	5522.16	5526.16	5526.45	5527.35	0.028698	8.75	353.11	262.34	1.33
21	27+90	3090	5521.00	5525.77	5525.12	5526.44	0.006197	6.53	473.35	172.24	0.69
20	27+40	3090	5519.70	5525.88	5523.63	5526.19	0.001581	4.44	696.54	160.51	0.38
19.3	27+30	3090	5518.75	5525.91	5522.79	5526.16	0.001192	4.05	763.65	143.32	0.31
19.2	27+20	3090	5518.45	5525.84	5522.84	5526.14	0.001406	4.42	698.80	128.67	0.33
19.1	27+10	3090	5517.90	5525.80	5522.68	5526.12	0.001485	4.59	673.02	118.54	0.34
19	27+01	3090	5517.20	5525.72	5522.36	5526.11	0.000532	5.01	616.68	101.07	0.36
18.9	26+90	3090	5516.86	5525.54	5522.42	5526.08	0.001909	5.92	521.82	97.77	0.45
18.8	26+80	3090	5516.56	5525.45	5522.44	5526.06	0.002245	6.25	494.75	96.64	0.49
18.7	26+70	3090	5516.26	5525.26	5522.69	5526.02	0.002924	6.98	442.90	91.26	0.56

TABLE 1 A

USE FOR BFE

Sub Crit.
La Cueva
@ Signal Pote

@ Signal Pote.

HEC-RAS Plan: subcrit River: RIVER-1 Post-Pro Reach: Reach-1 Profile: PF 1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach-1	38	PF 1	3090.00	5561.00	5563.42	5563.42	5564.14	0.014715	6.82	457.06	326.39	0.97
Reach-1	37	PF 1	3090.00	5557.67	5560.10	* 5560.10	5560.78	0.017015	6.63	466.05	355.30	1.02
Reach-1	36	PF 1	3090.00	5553.00	5557.33	* 5557.33	5558.01	0.016843	6.64	465.54	351.50	1.02
Reach-1	35	PF 1	3090.00	5549.81	5553.59	* 5553.59	5554.68	0.010772	8.49	383.13	189.48	0.91
Reach-1	34	PF 1	3090.00	5546.18	5550.68	* 5550.68	5551.99	0.013131	9.22	335.28	127.87	1.00
Reach-1	33	PF 1	3090.00	5543.89	5547.65	5547.65	5548.91	0.013197	9.01	342.88	135.68	1.00
Reach-1	32.5	PF 1	3090.00	5539.80	5544.53	5544.53	5546.10	0.010966	10.09	312.71	117.94	0.96
Reach-1	32	PF 1	3090.00	5537.80	5542.77	5542.77	5543.96	0.013710	8.74	353.50	150.99	1.01
Reach-1	31	PF 1	3090.00	5536.00	5540.37	5540.37	5541.30	0.014771	7.75	399.17	221.26	1.00
Reach-1	30	PF 1	3090.00	5533.99	5538.24	5538.24	5539.11	0.014555	7.50	412.17	232.47	0.99
Reach-1	29	PF 1	3090.00	5532.32	5536.70	5536.70	5537.48	0.014850	7.06	437.93	274.63	0.98
Reach-1	28	PF 1	3090.00	5531.20	5535.62	5535.62	5536.38	0.015069	6.99	442.11	284.15	0.99
Reach-1	27	PF 1	3090.00	5529.00	5534.27	5534.27	5535.00	0.017055	6.87	449.73	324.94	1.03
Reach-1	26	PF 1	3090.00	5527.98	5532.61	5532.61	5533.38	0.016097	7.07	436.88	289.34	1.01
Reach-1	25	PF 1	3090.00	5526.22	5530.66	5530.66	5531.40	0.016048	6.89	448.61	308.76	1.01
Reach-1	24	PF 1	3090.00	5525.00	5529.47	5529.47	5530.23	0.015841	6.98	442.59	295.50	1.01
Reach-1	23	PF 1	3090.00	5523.90	5527.78	5527.78	5528.66	0.014352	7.51	411.49	228.75	0.99
Reach-1	22.5	PF 1	3090.00	5522.96	5527.08	5527.08	5527.97	0.014201	7.59	407.34	224.30	0.98
Reach-1	22	PF 1	3090.00	5522.16	5526.29	5526.29	5527.20	0.013387	7.66	406.99	226.71	0.96
Reach-1	21	PF 1	3090.00	5520.96	5525.15	5525.15	5526.27	0.009892	8.50	363.63	159.37	0.99
Reach-1	20	PF 1	3090.00	5519.88	5525.01	5524.19	5525.68	0.003899	6.54	472.18	151.60	0.65
Reach-1	19	PF 1	3090.00	5517.20	5525.01	5522.25	5525.57	0.001018	6.03	512.12	86.87	0.44
Reach-1	18.7	PF 1	3090.00	5516.26	5524.75	5522.18	5525.52	0.001214	7.02	439.99	71.81	0.50
Reach-1	18.35	PF 1	3090.00	5515.25	5522.81	5522.81	5525.30	0.001798	12.65	244.21	48.13	0.99
Reach-1	18	PF 1	3090.00	5514.13	5522.61	5522.61	5522.95	0.000445	6.42	1153.14	331.82	0.49
Reach-1	17	PF 1	3090.00	5511.15	5519.94	5519.94	5522.56	0.001772	12.99	239.41	59.84	0.98
Reach-1	16	PF 1	3090.00	5508.15	5517.02	5517.02	5519.56	0.001690	12.80	246.56	76.00	0.96
Reach-1	15	PF 1	3090.00	5505.15	5514.02	5514.02	5516.56	0.001690	12.80	246.56	76.00	0.96
Reach-1	14	PF 1	3090.00	5502.15	5511.02	5511.02	5513.56	0.001690	12.80	246.56	76.00	0.96
Reach-1	13	PF 1	3090.00	5499.15	5508.02	5508.02	5510.56	0.001690	12.80	246.56	76.00	0.96
Reach-1	12	PF 1	3090.00	5496.15	5505.02	5505.02	5507.56	0.001690	12.80	246.56	76.00	0.96
Reach-1	11	PF 1	3090.00	5493.15	5502.02	5502.02	5504.56	0.001690	12.80	246.56	76.00	0.96
Reach-1	10	PF 1	3090.00	5490.15	5499.19	5499.19	5501.76	0.001643	12.88	248.31	76.00	0.95
Reach-1	9	PF 1	3090.00	5487.15	5496.05	5496.05	5498.56	0.001657	12.72	250.27	90.40	0.95
Reach-1	8	PF 1	3090.00	5484.15	5492.92	5492.92	5495.56	0.001795	13.04	238.36	59.67	0.99
Reach-1	7	PF 1	3090.00	5480.86	5489.64	5489.64	5492.27	0.001783	13.01	239.14	62.17	0.99
Reach-1	6	PF 1	3090.00	5474.14	5482.92	5482.92	5485.55	0.001782	13.01	239.18	62.22	0.99
Reach-1	5	PF 1	3090.00	5467.45	5476.58	5476.58	5479.40	0.001878	13.48	229.18	40.76	1.00
Reach-1	4	PF 1	3090.00	5462.75	5471.66	5471.66	5474.41	0.001882	13.32	231.93	42.68	1.01

88 Datum - 1' Contours
(Used for Nov. 2012 LOMR)

SIGNAL AVE

RTI 34
CCE 50.7

RTI 35
CCE 53.6

RTI 36
CRWS 57.4

RTI 37
CRWS 60.1

RTI 38
UPSTREAM TIE IN

LOT 38

LOT 18

LOT 18

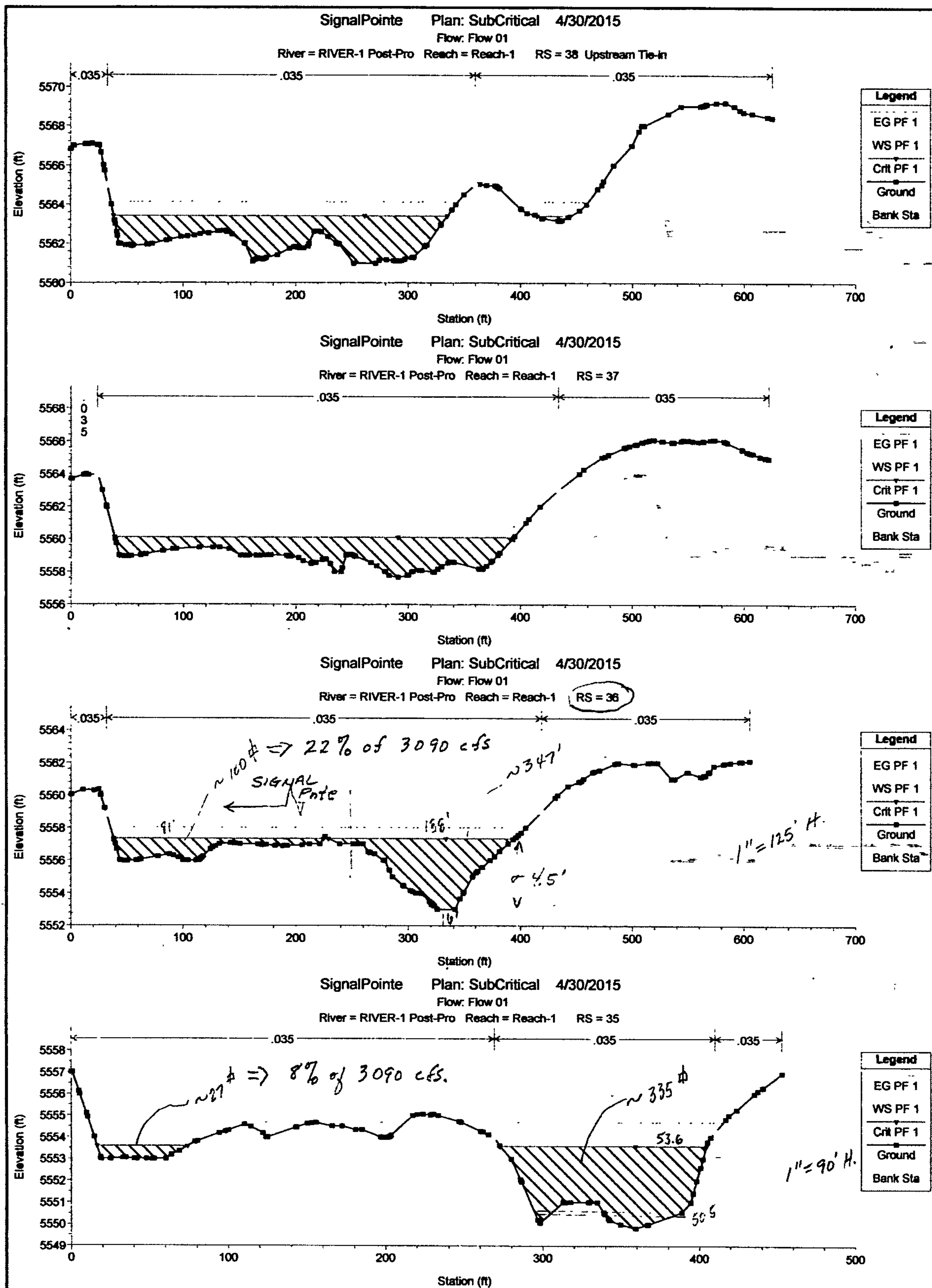
LOT 7

Ventura

88
= 11'

(Thalweg
Dom.)

CCE- Re-run Model



Post-project
Gross Section=38

- 32
- 33
- 34
- 35
- 36
- 37
- 38

NO. KEY
DESK
DRAW
REVIE
DATE

Note: Contours
Indexed in SW
2.9 Datum

1" = 112'

ZONE M
HERRAS
CRWS

PROJ
SHEET

Existing Berm Constructed Prior to 1980

