

E23D003Q

HIGH DESERT

NEW CONSTRUCTION COMMITTEE

June 16, 2015

Ms. Chao and Mr. Limary
11405 Canyonlands Road SE
Albuquerque, NM 87123

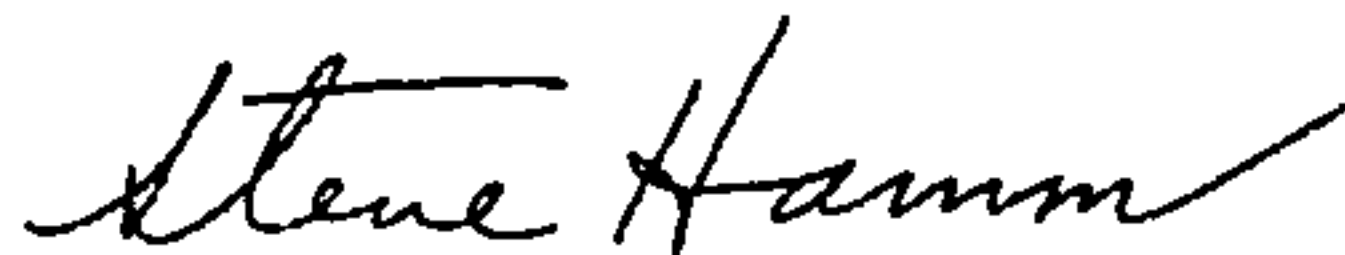
RE: Revised Grading & Drainage Plan NCC Approval for Highlands Lot 10, Unit 2a

Dear Ms. Chao and Mr. Limary:

On June 9, 2015 the NCC approved the as-submitted revision to the Grading & Drainage Plan (resulting from the raising of the garden area between the deck and patio) dated and stamped June 8, 2015.

Good luck with your continuing construction.

Sincerely,



Steve Hamm
NCC Chair

Copy: Amber Kennington
File
HOAMCO

6/19/15

Garden was added if
Pond was Modified.

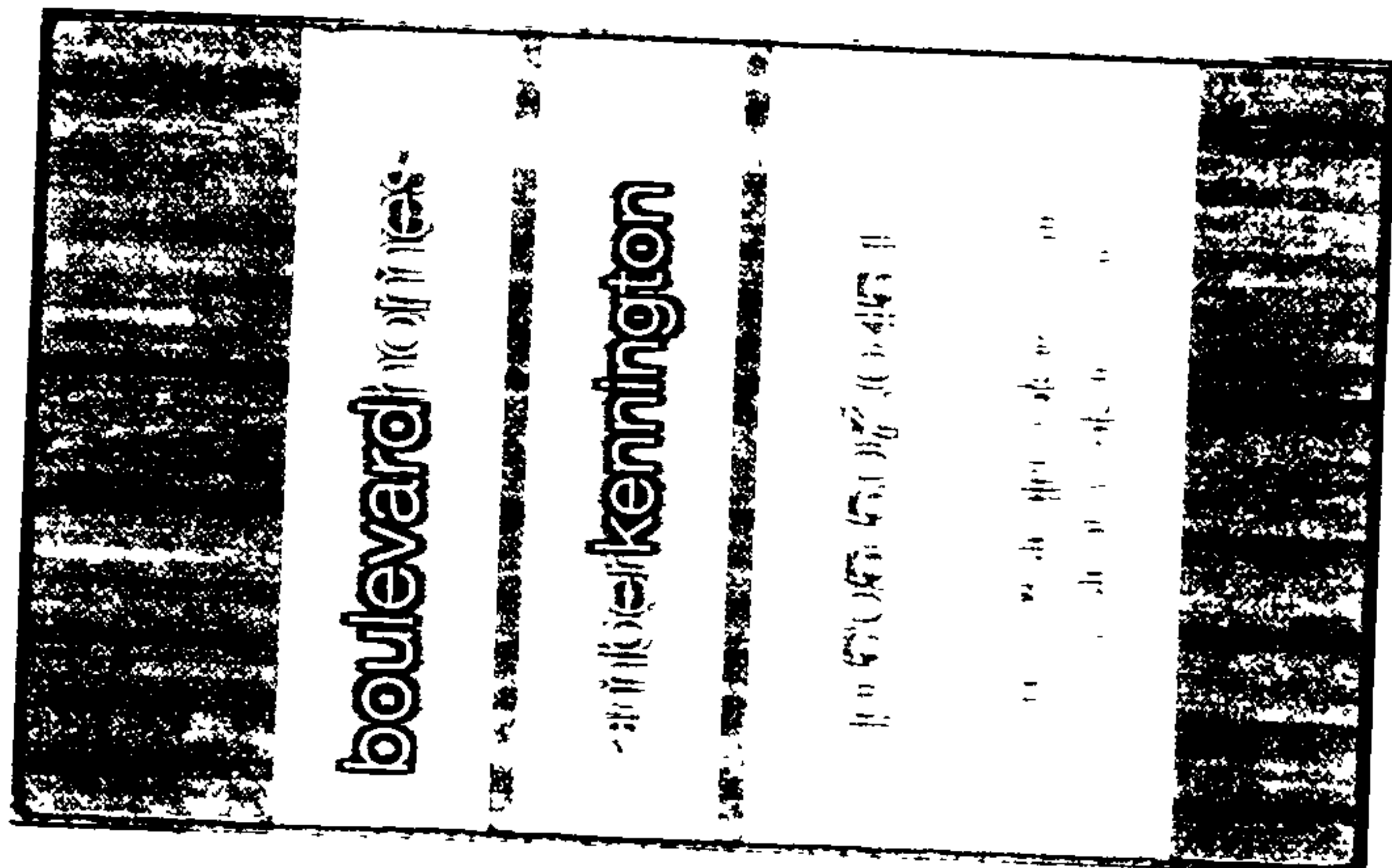
I told them to submit
The changes ~~at~~ in The
as-built Cert.

Attached plan ~~has~~ the
includes the changes.

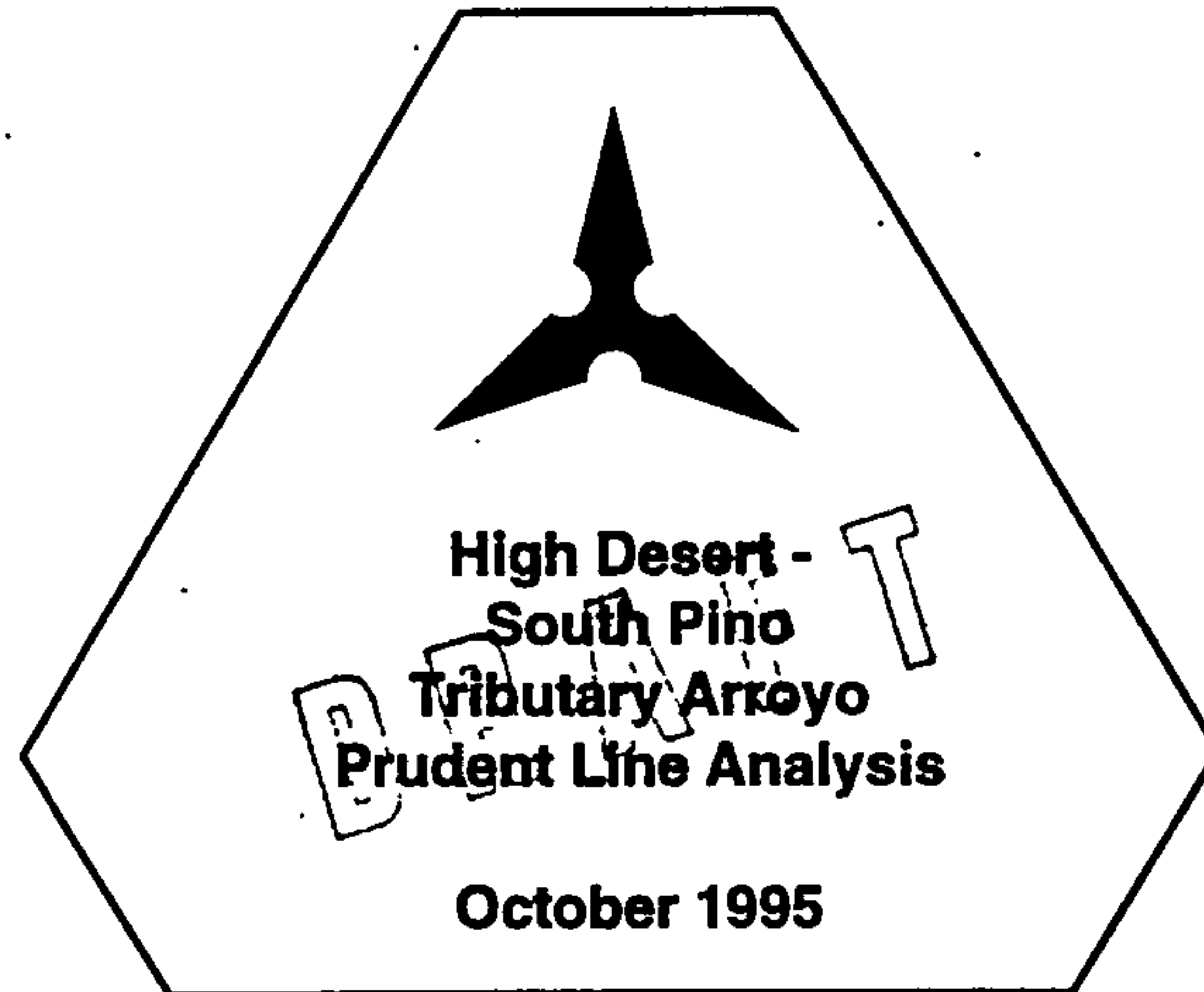
~~##~~

Shahab

E23D003Q



Revised G&D Plan Approval Letter



HIGH DESERT - SOUTH PINO TRIBUTARY ARROYO PRUDENT LINE ANALYSIS

Prepared for:

Doug Collister
High Desert Investment Corporation
13000 Academy Boulevard NE
Albuquerque, NM 87113

Prepared by:



BOHANNAN-HUSTON INC.

ENGINEERS ARCHITECTS PHOTOGRAMMETRISTS SURVEYORS

COURTYARD I, 7500 JEFFERSON NE ALBUQUERQUE, NM 87109 TEL (505) 823-1000 FAX (505) 821-0892

South Pino Trib. Desiltation Pond

1. Design Particle based on Pond Surface Area (SA)

$$SA = (1.2)(Q_2)/V_s$$

where

Q_2 = 2-yr. Bulk Peak Flowrate (cfs)

V_s = Settling Velocity

- Remove 100% Very fine Sand (0.06mm)

North Inlet

$$Q_2 = 24.72 \text{ cfs}$$

$$SA = (1.186 \text{ acres}) \left(\frac{43,560 \text{ ft}^2}{\text{acre}} \right) = 51,662.16 \text{ ft}^2 \quad (\text{from Lower Level Pond Volume Calcs.})$$

$$V_s = \frac{1.2(Q_2)}{SA} = \frac{(1.2)(24.72)}{51,662.16} = V_s = 0.0006 \text{ ft/s}$$

From Table B.1

$$0.02 \text{ mm} \rightarrow V_s = 0.00096 \text{ ft/s}$$

$$X \rightarrow V_s = 0.00060 \text{ ft/s}$$

$$0.01 \text{ mm} \rightarrow V_s = 0.00024 \text{ ft/s}$$

$$\frac{0.00096 - 0.00024}{0.02 - 0.01} = \frac{0.0006 - 0.00024}{X - 0.01}$$

$$0.072 = \frac{0.0003}{X - 0.01}$$

$$0.06 \text{ mm} > 0.0147 \text{ mm}$$

$$0.072 \times -0.0007 = -0.0003$$

$$X = 0.0147 \text{ mm}$$

100% Removal of Very Fine Sand (0.06mm) (100% of sample)

South Inlet

$$Q_2 = 155.19 \text{ cfs}$$

$$SA = 0.656 \text{ acres} \left(\frac{43,560 \text{ ft}^2}{\text{acre}} \right) = 28,575.36 \text{ ft}^2 \quad (\text{from Upper Level Pond Volume Calcs.})$$

$$V_s = \frac{1.2(155.19)}{28,575.36} = V_s = 0.0065 \text{ ft/s}$$

From Table B.1

$$0.1 \text{ mm} \rightarrow 0.023 \text{ ft/s}$$

$$X \rightarrow 0.0065 \text{ ft/s}$$

$$0.05 \text{ mm} \rightarrow 0.0062 \text{ ft/s}$$

$$\frac{0.023 - 0.0062}{0.1 - 0.05} = \frac{0.0065 - 0.0062}{X - 0.05}$$

$$0.336 = \frac{0.0003}{X - 0.05}$$

$$0.336X - 0.0168 = 0.0003$$

$$0.06 \text{ mm} > 0.050 \text{ mm}$$

$$X = 0.050 \text{ mm}$$

(99% of sample)

100% Removal of Very Fine Sand (0.06mm)



BOHANNAN-HUSTON INC.

ENGINEERS • PLANNERS • PHOTOGRAMMETRISTS • SURVEYORS • LANDSCAPE ARCHITECTS

ALBUQUERQUE LAS CRUCES SANTA FE

PROJECT NAME _____ SHEET _____ OF _____

PROJECT NO. _____ BY _____ DATE _____

SUBJECT _____ CH'D _____ DATE _____

2. Check Pond for 10-yr Storm

- Design Particle based on Pond Surface Area (SA)

- Remove 100% Fine Sand (0.1mm)

North Inlet

$$Q_{10} = 125.01 \text{ cfs}$$

$$SA = 51,662.16 \text{ ft}^2 \quad (\text{from Lower Level Pond Calcs.})$$

$$V_s = \frac{(1.2)(125.01)}{51,662.16} = V_s = 0.0029 \text{ fps}$$

$$\text{From Table 8.1} \quad 0.05 \text{ mm} \rightarrow 0.0062 \text{ fps} \quad \frac{0.0062 - 0.00096}{0.05 - 0.02} = \frac{0.0029 - 0.00096}{x - 0.02}$$

$$x \rightarrow 0.0029 \text{ fps}$$

$$0.02 \text{ mm} \rightarrow 0.00096 \text{ fps}$$

$$0.1747 = \frac{0.0019}{x - 0.02}$$

$$0.1 \text{ mm} > 0.03 \text{ mm}$$

$$0.1747x - 0.0035 = 0.0019$$

$$x = 0.0311 \text{ mm}$$

100% Removal of Fine Sand (0.1mm) (100% of Sample)

South Inlet

$$Q_{10} = 595.94 \text{ cfs}$$

$$SA = 28,575.36 \text{ ft}^2$$

$$V_s = \frac{(1.2)(595.94)}{28,575.36} = V_s = 0.025 \text{ fps}$$

From Table 8.1

$$0.2 \text{ mm} \rightarrow 0.067 \text{ fps}$$

$$x \text{ mm} \rightarrow 0.0250 \text{ fps}$$

$$0.1 \text{ mm} \rightarrow 0.023 \text{ fps}$$

$$\frac{0.067 - 0.023}{0.2 - 0.1} = \frac{0.025 - 0.023}{x - 0.1}$$

$$0.44 = \frac{0.002}{x - 0.1}$$

$$0.1 \text{ mm} \geq 0.10 \text{ mm}$$

$$0.44x - 0.044 = 0.0020$$

$$x = 0.10 \text{ mm}$$

100% Removal of Fine Sand (0.1mm) (96% of Sample)

Total Flowrate

$$Q_{10} = 715.92$$

$$SA = 51,662.32 \text{ ft}^2$$

$$V_s = \frac{(1.2)(715.92)}{51,662.16} = 0.0166 \text{ fps}$$

$$0.1 \rightarrow 0.023$$

$$x \rightarrow 0.0166$$

$$0.05 \rightarrow 0.0062$$

$$\frac{0.023 - 0.0062}{0.1 - 0.05} = \frac{0.0166 - 0.0062}{x - 0.05}$$

$$0.336 = \frac{0.0104}{x - 0.05}$$

$$0.336x - 0.0168 = 0.0104 \Rightarrow x = 0.081 \text{ mm}$$

(97% of Sample)

$$0.1 \text{ mm} > 0.08 \text{ mm}$$

100% Removal of Fine Sand (0.1mm)



PROJECT NAME _____ SHEET _____ OF _____

PROJECT NO. _____ BY _____ DATE _____

SUBJECT _____ CH'D _____ DATE _____

3. Size of Pond Based on Settling Velocity
- Design Particle of 0.075mm; $V_s = 0.0146 \text{ ft/s}$

North Inlet

From Pond Layout Plate B - length to outlet = 170.0'

$$Q_{10} = 125.01 \text{ cfs}$$

$$SA = (1.2)(125.01)/(0.0146) = 10,274.79 \text{ ft}^2$$

Assume Pond Length = 3 x Width

$$3 \cdot W \cdot W = 10,274.79 \text{ ft}^2$$

$$W = 58.52$$

$$L = 176' - \text{Baffle Required}$$

South Inlet

From Pond Layout Plate B - length to outlet = 125.0'

$$Q_{10} = 595.94 \text{ cfs}$$

$$SA = (1.2)(595.94)/(0.0146) = 48,981.37 \text{ ft}^2$$

Assume Pond Length = 3 x Width

$$3 \cdot W \cdot W = 48,981.37$$

$$W = 127.7'$$

$$L = 383' - \text{Baffle Required}$$



PROJECT NAME _____ SHEET _____ OF _____

PROJECT NO. _____ BY _____ DATE _____

SUBJECT _____ CH'D _____ DATE _____

HIGH DESERT SUBDIVISION
SOUTH PINO TRIBUTARY ARROYO DESIGN ANALYSIS REPORT
BHI JOB NO. 97140A
DESILTATION POND VOLUME CALCULATIONS

SOUTH PINO TRIBUTARY POND LOWER LEVEL

ELEVATION	AREA (ac)	VOLUME (ac-ft)	CUMMULATIVE VOLUME (ac-ft)	REQUIRED SEDIMENT STORAGE VOLUME (ac-ft)	NET STORAGE VOLUME (ac-ft)
6143	0.495				
6144	0.585	0.540	0.540	0.292	0.248
6145	0.679	0.632	1.172	0.292	0.880
6146	0.763	0.721	1.893	0.292	1.601
6147	0.848	0.806	2.699	0.292	2.407
6148	0.978	0.913	3.612	0.292	3.320
6149	1.080	1.029	4.641	0.292	4.349
6150	1.186	1.133	5.774	0.292	5.482
6151	1.332	1.259	7.033	0.292	6.741
6152	1.484	1.408	8.441	0.292	8.149
6153	1.618	1.551	9.992	0.292	9.700

NOTE: REQUIRED SEDIMENT STORAGE VOLUME IS EQUAL TO 5 TIMES THE AVERAGE ANNUAL SEDIMENT VOLUME. THE 100 YEAR SEDIMENT VOLUME IS INCLUDED IN THE BULKED INFLOW HYDROGRAPH

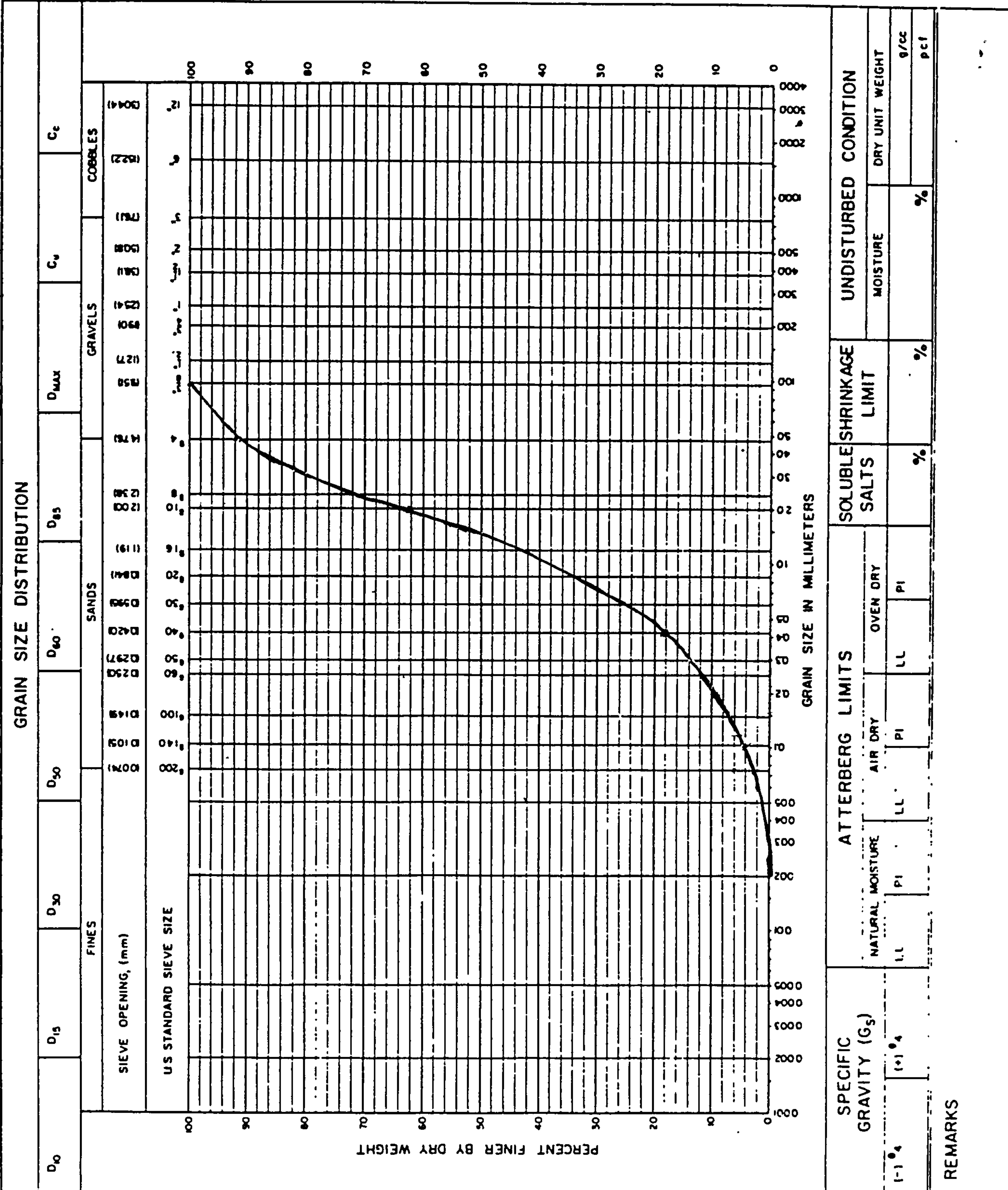
HIGH DESERT SUBDIVISION
SOUTH PINO TRIBUTARY ARROYO DESIGN ANALYSIS REPORT
BHI JOB NO. 97140A
DESILTATION POND VOLUME CALCULATIONS

SOUTH PINO TRIBUTARY POND UPPER LEVEL

ELEVATION	AREA (ac)	VOLUME (ac-ft)	CUMMULATIVE VOLUME (ac-ft)	REQUIRED SEDIMENT STORAGE VOLUME (ac-ft)	NET STORAGE VOLUME (ac-ft)
6150	0.372				.
6151	0.438	0.405	0.405	0.842	-0.437
6152	0.506	0.472	0.877	0.842	0.035
6153	0.582	0.544	1.421	0.842	0.579
6154	0.656	0.619	2.040	0.842	1.198
6155	0.735	0.696	2.736	0.842	1.894
6156	0.808	0.772	3.507	0.842	2.665
6157	0.873	0.841	4.348	0.842	3.506
6158	0.947	0.910	5.258	0.842	4.416
6159	1.010	0.979	6.236	0.842	5.394

NOTE: REQUIRED SEDIMENT STORAGE VOLUME IS EQUAL TO 5 TIMES THE AVERAGE ANNUAL SEDIMENT VOLUME. THE 100 YEAR SEDIMENT VOLUME IS INCLUDED IN THE BULKED INFLOW HYDROGRAPH

MATERIALS TESTING REPORT		U. S. DEPARTMENT of AGRICULTURE SOIL CONSERVATION SERVICE		SOIL CLASSIFICATION	
PROJECT and STATE <i>HIGH DESERT - SOUTH ARIZO TRIB. RD</i>			SAMPLE LOCATION <i>Upstream of Pond</i>		
FIELD SAMPLE NO	DEPTH	GEOLOGIC ORIGIN			
TYPE OF SAMPLE	TESTED AT	APPROVED BY		DATE	
SYMBOL		DESCRIPTION			



#

LL PI 200 80 40 10 4 3/8" 3/4"

[illegible]

RCP Option
Manning's n = 0.013
for pipe

1F-1D

HIGH DESERT SUBDIVISION SOUTH PINO TRIB - DESIGN ANALYSIS REPORT

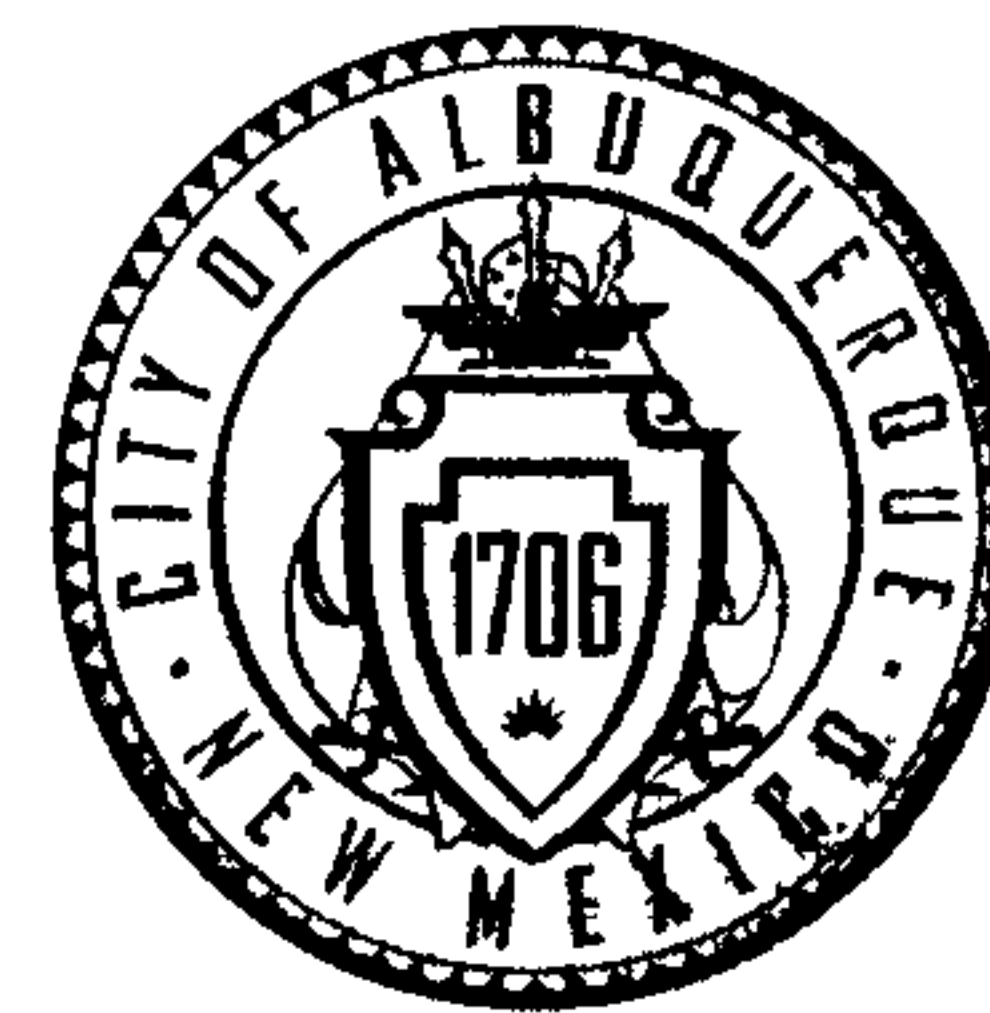
OPTION #2 - Use of 5 of 6 existing 60" RCP's at Tramway

***** HYDRAULIC GRADE LINE CALCULATIONS *****

CIPCP Option
Manning's n = 0.013
for pipe

Station	Structure	Diam. (in.)	Q (cfs)	Area	Vel.	K	Sf	Length (ft.)	MH Dia. (ft.)	JNCT Angle	Hf	Hb	Hj	Hmh	Ht	Total Losses	HGL(dn)	HGL(up)	Low Point	HV	EGL(dn)	EGL(up)
12+05	END BOX	120	1680	78.54	21.39	16537	0.0103	28	0.0	0.0	0.289	0	0	0	0	0.00		6025.03	6026.56	7.10	6032.14	6032.14
12+33	END PIPE	120	1680	78.54	21.389	16537	0.0103	4	0.0	0.0	0.0413	0	0	0	0	0.00	6025.32	6025.32	6026.84	7.10	6032.43	6032.43
12+37	MH#1	120	1680	78.54	21.389	16537	0.0103	8	4	0	0.0826	0	0	0.3552	0	0.04	6025.36	6025.72	6026.88	7.10	6032.47	6032.82
12+45	BEND #1	120	1680	78.54	21.39	16537	0.0103	404	0	45	4.1695	1.0047	0	0	0	1.00	6025.80	6026.81	6026.97	7.10	6032.91	6033.91
16+49	MH#2	120	1680	78.54	21.39	16537	0.0103	8	4	0	0.0826	0	0	0.3552	0	0.08	6030.98	6031.33	6031.07	7.10	6038.08	6038.44
16+57	WYE #1	120	1659	78.54	21.123	16537	0.0101	9.36	0	0	0.0942	0	0.1591	0	0	0.16	6031.41	6031.75	6031.15	6.93	6038.52	6038.68
16+66.36	VPI	108	1659	63.617	26.078	12486	0.0177	283.09	4	0	4.9974	0	0	0	0.0762	0.08	6031.84	6028.29	6030.75	10.56	6038.77	6038.85
19+49.45	VPI	108	1659	63.617	26.078	12486	0.0177	69.55	0	0	1.2278	0	0	0.528	0	0.53	6033.28	6033.81	6039.30	10.56	6043.84	6044.37
20+19	MH#3	108	1659	63.617	26.078	12486	0.0177	8	4	0	0.1412	0	0	0.528	0	0.53	6035.04	6035.57	6041.40	10.56	6045.60	6046.13
20+27	WYE #2	108	1652	63.617	25.968	12486	0.0175	54.78	0	0	0.9589	0	0.0865	0	0	0.09	6035.71	6035.89	6041.64	10.47	6046.27	6046.36
20+81.78	MH#4	108	1652	63.617	25.968	12486	0.0175	8	4	0	0.14	0	0	0.5235	0	0.52	6036.84	6037.37	6043.30	10.47	6047.32	6047.84
20+89.78	BEND #2	108	1652	63.617	25.968	12486	0.0175	461.22	0	45	8.0733	1.4808	0	0.5235	0	2.00	6037.51	6039.51	6043.54	10.47	6047.98	6049.98
25+51	MH#5	108	1652	63.617	25.968	12486	0.0175	419	4	0	7.3343	0	0	0.5235	0	0.52	6047.59	6048.11	6060.61	10.47	6058.06	6058.58
29+70	MH#6	108	1652	63.617	25.968	12486	0.0175	8	4	0	0.14	0	0	0.5235	0	0.52	6055.44	6055.97	6076.11	10.47	6065.91	6066.44
29+78	WYE #3	108	1593	63.617	25.04	12486	0.0163	440	0	0	7.1615	0	0.5646	0	0	0.56	6056.11	6057.41	6076.40	9.74	6066.58	6067.14
34+18	MH#7	108	1593	63.617	25.04	12486	0.0163	8	4	0	0.1302	0	0	0.4868	0	0.49	6064.57	6065.05	6092.68	9.74	6074.30	6074.79
34+26	WYE #4	108	1548	63.617	24.333	12486	0.0154	432	0	0	6.6397	0	0.4434	0	0	0.44	6065.18	6066.17	6092.98	9.19	6074.92	6075.36
38+58	MH#8	108	1548	63.617	24.333	12486	0.0154	10	4	0	0.1537	0	0	0.4597	0	0.46	6072.81	6073.27	6108.96	9.19	6082.00	6082.46

CITY OF ALBUQUERQUE



August 4, 2015

Craig Hagelgantz, PE
ABQ Engineering
8102 Menaul Blvd NE Suite D
Albuquerque, NM 87121

**Re: Chao/Limary Residence
6001 Buffalograss Ct NE
Request Permanent C.O. - Accepted
Engineer's Stamp dated: 6-8-15 (E23D003Q)
Certification dated: 8-3-15**

Dear Mr. Hagelgantz,

Based on the Certification received 8/3/2015, the above named residence is acceptable for release of Certificate of Occupancy by Hydrology.

PO Box 1293 If you have any questions, you can contact me at 924-3999 or Rudy Rael at 924-3977.

Albuquerque

Sincerely,

New Mexico 87103

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

www.cabq.gov

C: RR/SB
email



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

6001 Buffalograss Ct (REV 02/2013)

Project Title: Chao/Limery Residence Building Permit #: _____ City Drainage #: E23D003Q

DRB#: N/A EPC#: N/A Work Order#: _____

Legal Description: Lot 10, Highlands at High Desert

City Address: 6001 Buffalograss Ct NE, Albuquerque, 87111

Engineering Firm: ABQ Engineering Contact: Craig Hagelgantz

Address: 8102 Menaul Blvd NE, Suite D

Phone#: (505) 255-7802 Fax#: _____ E-mail: chagelgantz@abqeng.com

Owner: Jocelyn Chao & Victor Limery Contact: Jocelyn

Address: 11405 Canyonlands Rd SE

Phone#: (505) 780-8643 Fax#: _____ E-mail: jocelyn_chao@yahoo.com

Surveyor/Architect: Alpha Pro Surveying Contact: Gary Gritska

Address: P.O. Box 483116, Rio Rancho, NM

Phone#: (505) 259-2003 Fax#: _____ E-mail: gary@alphaprosurveying.com

Architect/Surveyor: N/A Boulevard Homes Design & Build Contact: Amber Kennington

Address: 1914 Rio Grande NW, 87104

Phone#: (505) 507-0451 Fax#: _____ E-mail: amberk@gmail.com

Contractor: Boulevard Homes LLC Contact: Amber Kennington

Address: 1914 Rio Grande NW, 87104

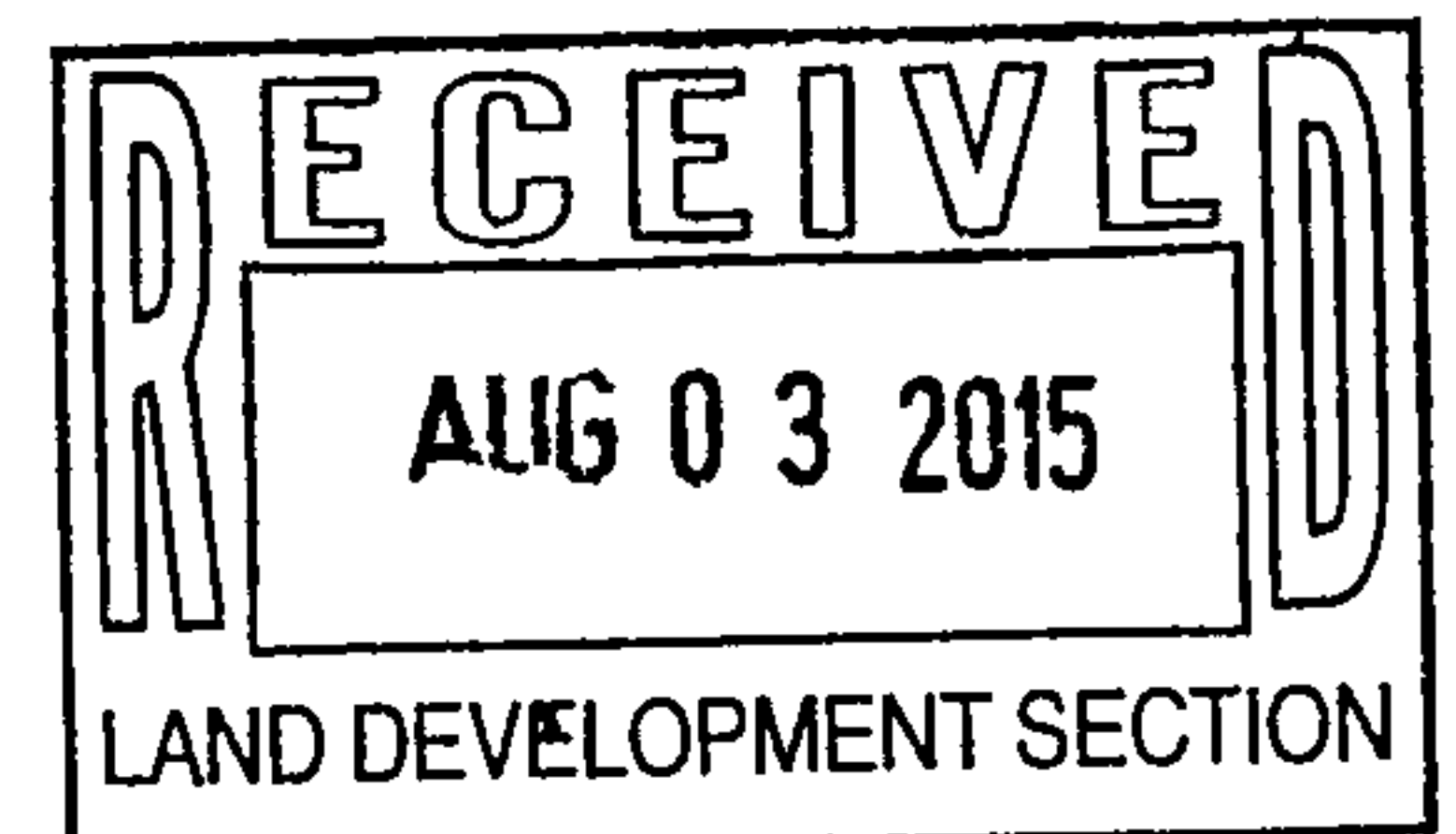
Phone#: (505) 507-0451 Fax#: _____ E-mail: amberk@gmail.com

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
- ☐ DRAINAGE PLAN 1st SUBMITTAL
- ☐ DRAINAGE PLAN RESUBMITTAL
- ☐ CONCEPTUAL G & D PLAN
- ☐ GRADING PLAN
- ☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
- ☒ ENGINEER'S CERT (HYDROLOGY)
- ☐ CLOMR/LOMR
- ☐ TRAFFIC CIRCULATION LAYOUT (TCL)
- ☐ ENGINEER'S CERT (TCL)
- ☐ ENGINEER'S CERT (DRB SITE PLAN)
- ☐ ENGINEER'S CERT (ESC)
- ☐ SO-19
- ☐ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE 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
- ☒ CERTIFICATE OF OCCUPANCY (PERM)
- ☐ CERTIFICATE OF OCCUPANCY (TCL TEMP)
- ☐ FOUNDATION PERMIT APPROVAL
- ☐ BUILDING PERMIT APPROVAL
- ☐ GRADING PERMIT APPROVAL
- ☐ PAVING PERMIT APPROVAL
- ☐ WORK ORDER APPROVAL
- ☒ GRADING CERTIFICATION
- ☐ SO-19 APPROVAL
- ☐ ESC PERMIT APPROVAL
- ☐ ESC CERT. ACCEPTANCE
- ☐ OTHER (SPECIFY)



WAS A PRE-DESIGN CONFERENCE ATTENDED:

Yes No Copy Provided

DATE SUBMITTED: 8/3/15 By: Amber Kennington

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
4. **Erosion and Sediment Control Plan:** Required for any new development and redevelopment site with 1-acre or more of land disturbing area, including project less than 1-acre than are part of a larger common plan of development

CITY OF ALBUQUERQUE



October 7, 2014

Mr. Craig Hagelgantz
ABQ Engineering
Suite D
8102 Menaul Boulevard NE
Albuquerque, NM 87110

**Re: Chao/Limary Residence
Grading and Drainage Plan
Engineer's Stamp Date 9-17-14 (E23D003Q)**

Dear Mr. Hagelgantz,

Based upon the information provided in your submittal received October 6, 2014, the above referenced plan is approved for Building Permit. Please attach a copy of this approved plan to the Building Permit construction sets prior to sign-off by Hydrology

PO Box 1293

Prior to Certificate of Occupancy release, Engineer Certification per the DPM checklist will be required.

Albuquerque

If you have any questions, you can contact me at 924-3994.

New Mexico 87103

Sincerely,

Amy L. D. Niese, P.E.
Senior Engineer, Hydrology
Planning Department

www.cabq.gov

C: e-mail



City of Albuquerque

Planning Department

Development & Building Services Division DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 02/2013)

Project Title: Chao / Limary Residence Building Permit #: T20149233 City Drainage #: E230003Q
DRB#: _____ EPC#: _____ Work Order#: _____
Legal Description: Lot 10, Unit 2A Highlands at High Desert
City Address: 6001 Ruffalo Grass Ct NE, Alb, NM 87111
Engineering Firm: Abg Engineering Contact: Craig Hagelgantz
Address: 8102 Mahaul Blvd NE, Suite P
Phone#: 505 255-7802 Fax: 505 255-7902 E-mail: chagelgantz@abgeny.com
Owner: Jocelyn Chao & Victor Limary Contact: Jocelyn Chao
Address: 11405 Canyonlands Rd SE, 87123
Phone#: 505 480-8643 Fax: _____ E-mail: jocelyn-chao@yahoo.com
Architect: _____ Contact: _____
Address: _____
Phone#: _____ Fax: _____ E-mail: _____
Surveyor: Alpha Pro Surveying Contact: Gary Britsko
Address: 1436 32nd Circle SE, Rio Rancho
Phone#: 892-1070 Fax: 891-0471 E-mail: info@alphapro-surveying.com
Contractor: Boulevard Homes LLC Contact: Amber Kemmighan
Address: 1914 Rio Grande NW, 87104
Phone#: 505 507-0451 Fax: _____ E-mail: amber@abgmodern.com

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☒ DRAINAGE PLAN 1st SUBMITTAL
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ ENGINEER'S CERT (TCL)
☐ ENGINEER'S CERT (DRB SITE PLAN)
☐ ENGINEER'S CERT (ESC)
☐ SO-19
☐ OTHER (SPECIFY)

CHECK TYPE OF APPROVAL/ACCEPTANCE SOUGHT:

- ☐ SLA/FINANCIAL GUARANTEE RELEASE
☐ PRELIMINARY PLAT APPROVAL
☐ S. DEV. PLAN FOR SUB'D APPROVAL
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☐ GRADING CERTIFICATION
☐ SO-19 APPROVAL
☐ ESC PERMIT APPROVAL
☐ ESC CERT. ACCEPTANCE
☐ OTHER (SPECIFY)

Received
10/6/14

WAS A PRE-DESIGN CONFERENCE ATTENDED: _____

DATE SUBMITTED: 10/2/14

Yes No Copy Provided
By: [Signature] [Signature]

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Ad = .17

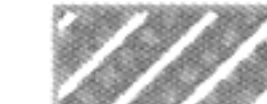
RETEN



35001C0163H

MAP REVISED
AUGUST 16, 2012

- also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

 **FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

 **OTHER FLOOD AREAS**

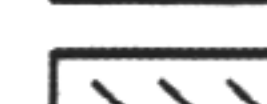
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

 **OTHER AREAS**

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

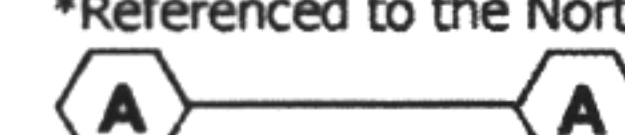
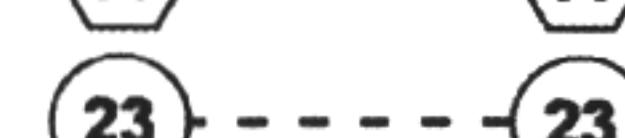
ZONE D Areas in which flood hazards are undetermined, but possible.

 **COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

 **OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

-  1% annual chance floodplain boundary
-  0.2% annual chance floodplain boundary
-  Floodway boundary
-  Zone D Boundary
-  CBRS and OPA Boundary
-  Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
-  Base Flood Elevation line and value; elevation in feet*
-  Base Flood Elevation value where uniform within zone; elevation in feet*

- *Referenced to the North American Vertical Datum of 1988
-  Cross section line
-  Transect line
- 97° 07' 30", 32° 22' 30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 76°E 1000-meter Universal Transverse Mercator grid values, zone 13
- 600000 FT 5000-foot grid ticks: New Mexico State Plane coordinate system, Central zone (FIPSZONE 3002), Transverse Mercator
- NY5510

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Chua Limang

10/7/14

17 + 2 water block only

Trapping water at 69 cent by wall

w site plan 10/7

the dang rolled down curb per site plan

$$\begin{array}{l} \text{rough } A_D = \begin{array}{cccc} \text{HALLS} & \text{DRIVE} & \text{DRIVE} & \text{PARKING PATIO} \\ 101 \times 44 & + 50 \times 38 & + 20 \times 30 & + 15 \times 28 + 10 \times 10 \\ = 7764 \text{ SF} = .178 \text{ AC} \approx .169 \checkmark \end{array} \end{array}$$

Per MDP E2303K

3.17 CFS/AC ALLOWABLE DISCHARGE

LOT 10 1.136 AC $\rightarrow$ 3.60 CFS ALLOW

DOING 3.07

DISTURBED SOIL

$$\begin{array}{l} \begin{array}{cccc} \text{ROAD A} & \text{ROAD B} & \text{CURB} & \text{FRONT YARD} \\ 140 \times 50 & + 75 \times 30 & + 20 \times 140 & + 100 \times 30 = \\ = 15050 \text{ SF} = .35 \text{ AC} \end{array} \end{array}$$

$$Q_D = .89$$

$$Q_G = .04$$

$$Q_B = .35 \times 2.92 = 1.02$$

$$Q_A = 1.98 \text{ } (.90 - .35) \times 2.2 = 1.21$$

$$3.16 \text{ CFS} < 3.60 \text{ CFS}$$

HE IS SAYING 3.07 CFS
0.09 IN SIG DIFF

DRIVE SLIPS - OK WITH TURN

Chao L. Mayhew

E24
E23 D0030

- No FIRM discussion
- No Final Fish discussion
- TBM
- Show entire prop.

Grades on south side of road

59 contour of FF 67, grades adjacent ditches + ponds
How water getting to Pond A?

✓
 $FF = .34 \text{ IN}/12 \text{ IN}/\text{FT} \cdot 169 \text{ AC} \cdot 43560 \text{ SF}/\text{AC} = 209 \text{ CF}$

C

Lot of Type A which seems moderate
WILL DISTURB MOUTH

~~What is size of each pond. Ponding in bed of road~~

From E23 D3K High Desert Tract 14B

Lot 10 1.14 AC, 58% A, 9% B, 6% C, 27% D, $Q_{100} = 3.64$
149,492 SF 1.47 AC 2.00 2.92 3.73 5.25
BLDG ENV = .2701 AC = 11,764 SF

EXIST 2.56 CFS/AC

PROP 12,000 SF BLDG ENV.

CROSS-LOT DRAINAGE

3.17 CFS/AC

LOT 10 $3.07 \times 1.136 = 3.60 \text{ CFS} > 3.10 \text{ CF}$
ALLOWED
FOR LOT 10

HIGHLANDS AT HIGH DESERT

What are ponds for - don't seem to
be for FF. No discussion in MDP

$$\sim A_0 \quad 140 \times 40 = 5600$$

$$70 \times 25 = 1750$$

$$\underline{7350 \text{ SF}} = .17 \text{ AC}$$

HDA WANTING POND

ROOF DRAWS

CITY OF ALBUQUERQUE



September 24, 2014

Mr. Craig Hagelgantz
ABQ Engineering
Suite D
8102 Menaul Boulevard NE
Albuquerque, NM 87110

**Re: Chao/Limary Residence
Grading and Drainage Plan
Engineer's Stamp Date 9-17-14 (E23D003Q)**

Dear Mr. Hagelgantz,

Based upon the information provided in your submittal received August 28, 2014, the above referenced plan cannot be approved for Building Permit until the following comments are addressed:

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

1. Provide a vicinity map with the site outlined on it.
2. Include a FIRM map and discussion of the Flood Zone the site is in.
3. A benchmark was provided. Is that a TBM? Identify it on the site or provide a tie to one if it is not on the site.
4. Provide a narrative. Indicate how the design of the property is in accordance with the Master Drainage Plan, High Desert – Tract 14B (E23D003K). Include a discussion of existing and proposed conditions off-site and on-site. Are flows coming from off-site? How are those being managed? Indicate all your existing and proposed design assumptions. Land Treatments B and C should be included for the proposed condition. The soil will be disturbed for the front yard, swale and ponds. There are slopes greater than 10% being proposed. See Table A-4 in Chapter 22 for the description of land treatments.
5. What is happening with the grades on the south and west sides of the property? There is a drop of 9 feet from the house to the pond on the west, but no wall of any kind indicated. On the south side, what are the grades against the house? How are the proposed grades being tied into the existing grades on the south and east sides? What are the grades for the patio and deck? Show any stem walls and grades adjacent to the stem walls.
6. What are the flow line elevations in the cul-de-sac that are being matched? Is the higher side of the proposed driveway going to be above that for the full length of the water block? Is there enough of a water block to prevent flows from entering and going down the driveway?

CITY OF ALBUQUERQUE



- ✓7. Show the entire property. Provide a second sheet if necessary.
- ✓8. Discuss how the First Flush is being retained. Per the City Drainage ordinance, the 90th Percentile Storm Event, which is 44 inches, is to be managed. Reduce 0.44 inch by the 0.1 inch for the initial impervious abstraction in Table A-6 of Section 22 of the DPM. Multiply the remaining 0.34 inch by your impervious area. This is the portion to retain.

If you have any questions, you can contact me at 924-3994.

Sincerely,

Amy L. D. Niese, P.E.
Senior Engineer, Hydrology
Planning Department

C: e-mail

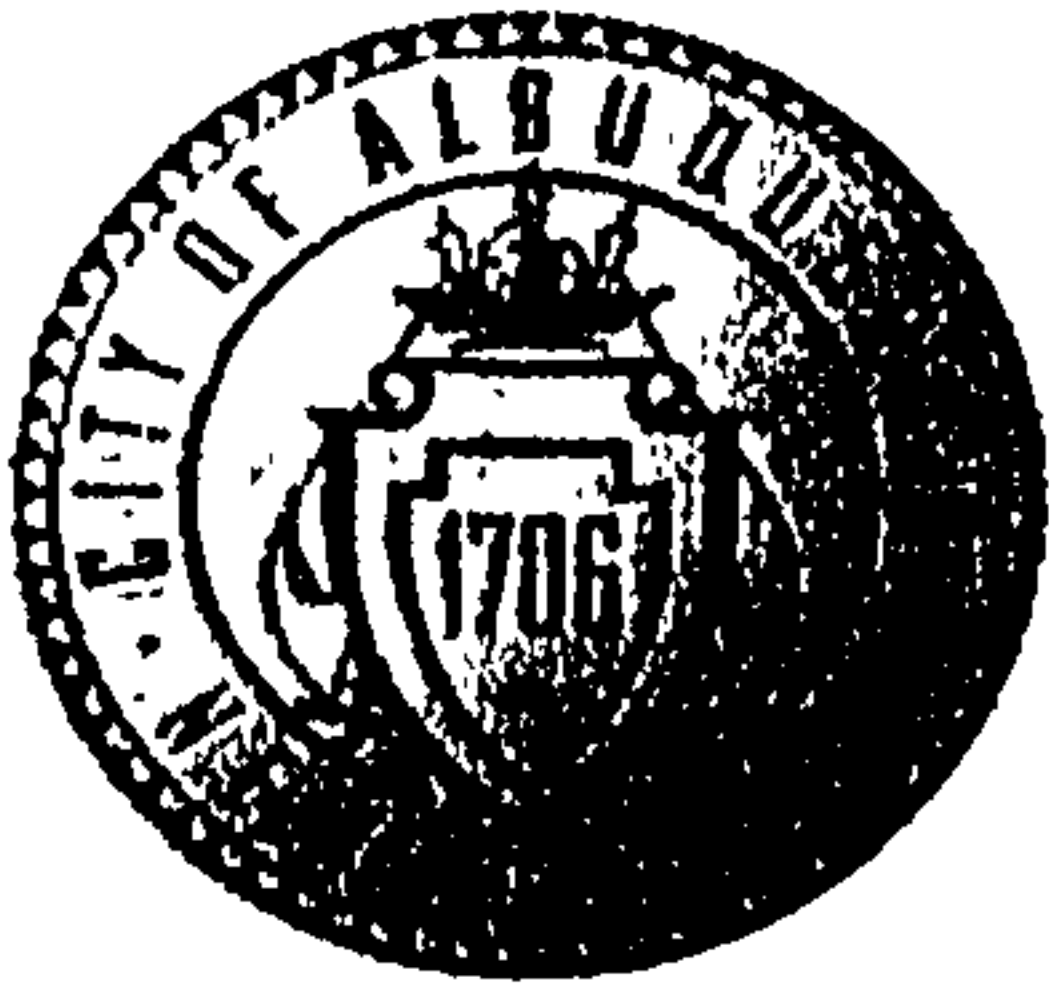
PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov

amberk@gmail.com



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET

(REV 02/2013)

624

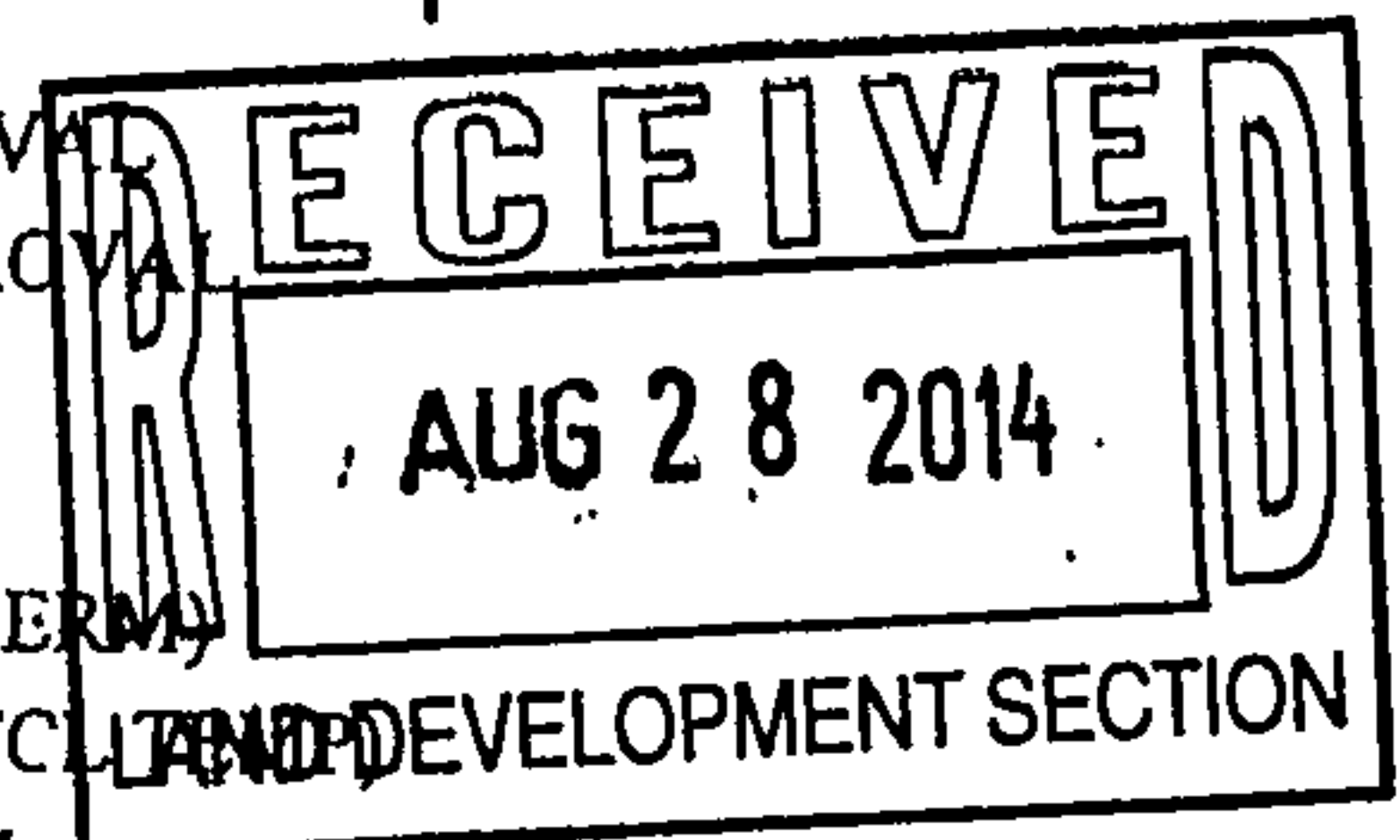
Project Title: Chao/Limary Residence Building Permit #: _____ City Drainage #: E23D003Q
DRB#: _____ EPC#: _____ Work Order#: _____
Legal Description: Lot 10 Unit 2A Highlands at High Desert
City Address: 6001 Buffalograss Ct, 87111
Engineering Firm: Abg Engineering Contact: Craig Hagelgantz
Address: 8102 Menaul Blvd NE, Suite D, 87110
Phone#: 255-7802 Fax#: _____ E-mail: chagelgantz@abgeng.com
Owner: Jocelyn Chao & Victor Limary Contact: Jocelyn Chao
Address: 11405 Canyonlands Rd SE, 87123
Phone#: 480-8643 Fax#: _____ E-mail: jocelyn-chao@yahoo.com
Architect: Boulevard Homes LLC Contact: Amber Kennington
Address: 1914 Rio Grande NW, 87104
Phone#: 507-0451 Fax#: _____ E-mail: amerc@abgmodern.com
Surveyor: Alpha Pro Surveying Contact: Gary Gritsko
Address: Po Box 46316, Rio Rancho, 87174
Phone#: 892-1076 Fax#: _____ E-mail: info@alphaprosurveying.com
Contractor: Boulevard Homes LLC Contact: Amber Kennington
Address: 1914 Rio Grande NW, 87104
Phone#: 507-0451 Fax#: _____ E-mail: amerc@abgmodern.com

TYPE OF SUBMITTAL:

- ☐ DRAINAGE REPORT
☒ DRAINAGE PLAN 1st SUBMITTAL
☐ DRAINAGE PLAN RESUBMITTAL
☐ CONCEPTUAL G & D PLAN
☐ GRADING PLAN
☐ EROSION & SEDIMENT CONTROL PLAN (ESC)
☐ ENGINEER'S CERT (HYDROLOGY)
☐ CLOMR/LOMR
☐ TRAFFIC CIRCULATION LAYOUT (TCL)
☐ ENGINEER'S CERT (TCL)
☐ ENGINEER'S CERT (DRB SITE PLAN)
☐ ENGINEER'S CERT (ESC)
☐ SO-19
☐ OTHER (SPECIFY)

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☐ ESC CERT. ACCEPTANCE
☐ OTHER (SPECIFY)



WAS A PRE-DESIGN CONFERENCE ATTENDED: _____

Yes

No

Copy Provided

DATE SUBMITTED: 8/28/14

By: Ce T

Amber Kennington

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AD = .689

FREE / VOL RETURN