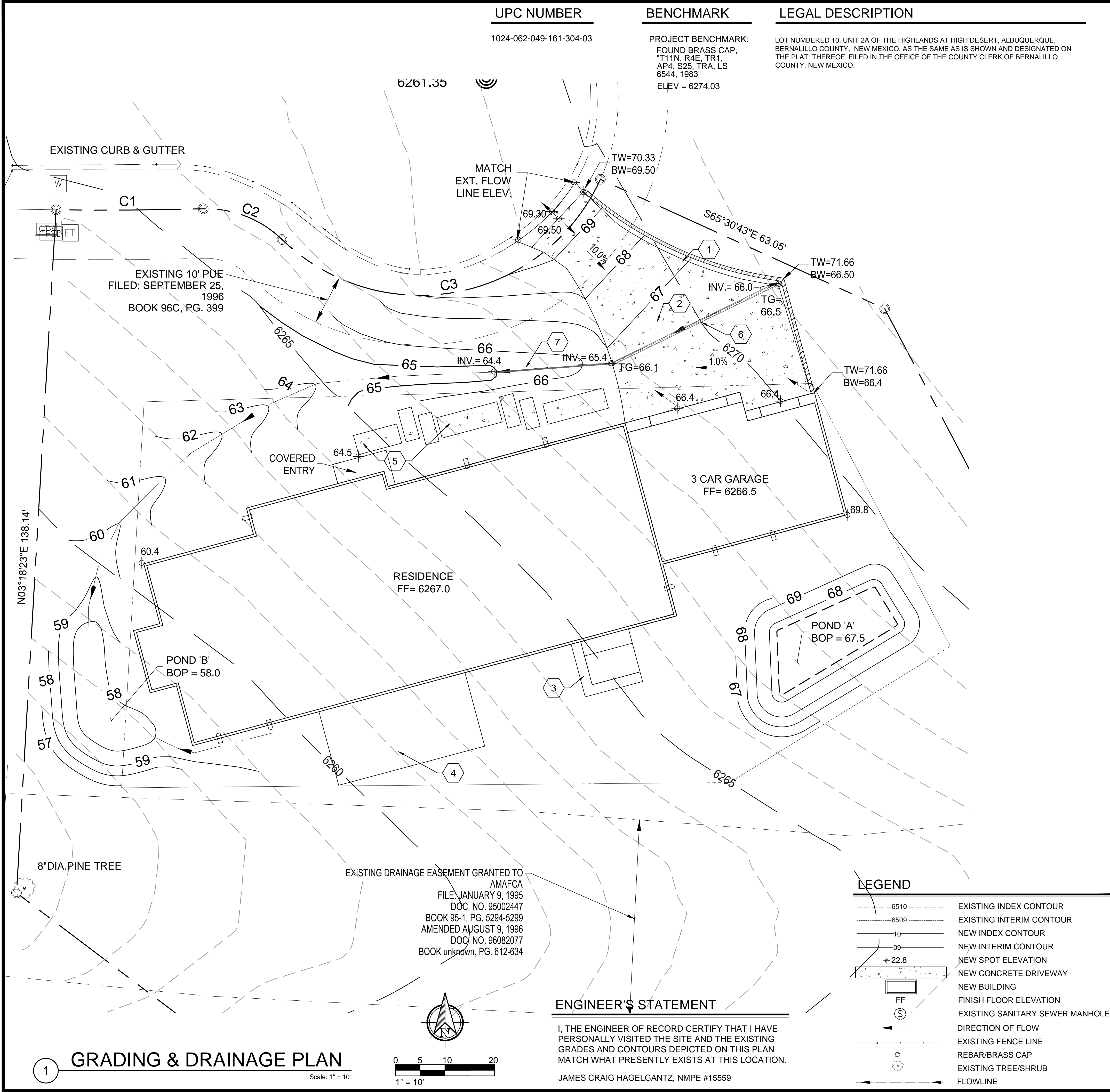


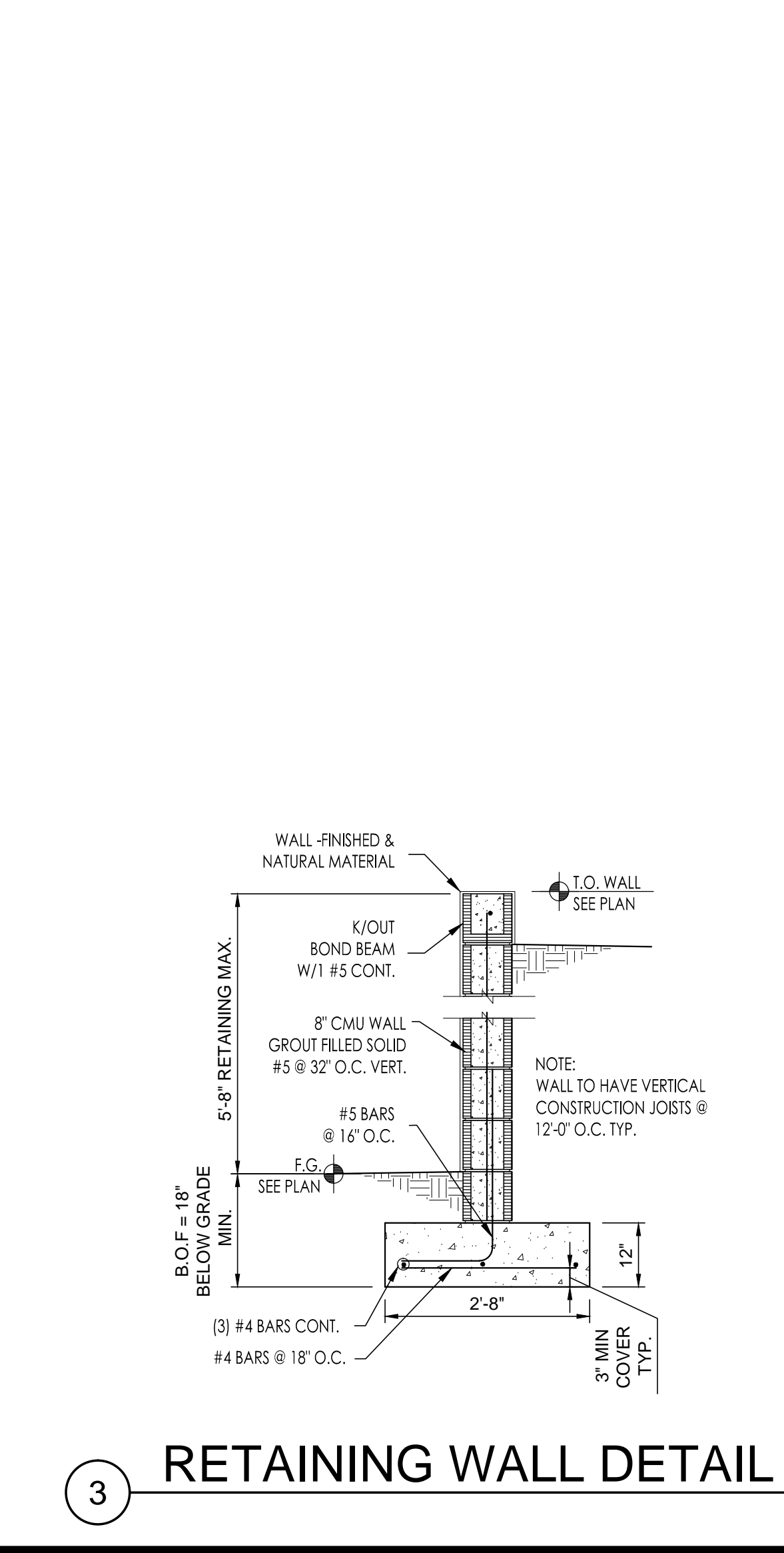
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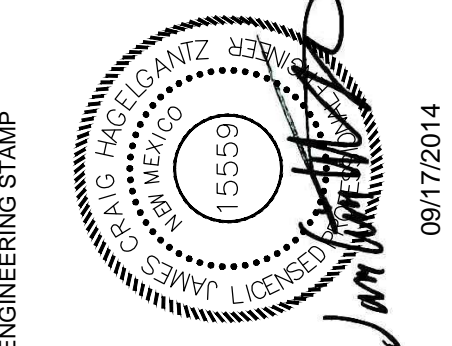
- KEYED NOTES
1. CONSTRUCT 86 LF RETAINING WALL. SEE DETAIL 3, THIS SHEET.
 2. INSTALL COLORED CONCRETE DRIVEWAY (BY OTHERS).
 3. CONSTRUCT NEW PATIO. SEE ARCHITECTURAL PLANS FOR DETAILS.
 4. CONSTRUCT NEW DECK. SEE ARCHITECTURAL PLANS FOR DETAILS.
 5. INSTALL COLORED CONCRETE WALKWAY. SEE ARCHITECTURAL PLANS FOR DETAILS.
 6. INSTALL NEW 6" TUF-TITE TR1 TRENCH DRAIN.
 7. 4" SCH. 40 PVC DRAIN PIPE SEE PLAN FOR INVERT ELEVATIONS

DRAINAGE CALCULATIONS

Hydrology Calculations				
DPM - Volume 2, October 2008				
Section 22.2.Hydrology				
Precipitation Zone	4			
100 Year Storm Depth, P (360)	2.9			
Treatment Area	A	B	C	D
Excess Precipitation Factors	0.8	1.08	1.46	2.64
Peak Discharge Factors	2.20	2.92	3.73	5.25
Land Treatment Area	Acres	Existing	Allowable	Proposed
Type "D" (Impervious, Roof, Driveway, Ect.)		0	0.19	0.169
Type "C" (Unpaved Roadway)		0	0.23	0.00
Type "B" (Irrigated Lawns)		0	0.23	0.00
Type "A" (Undeveloped)		1.1362	0.49	0.97
Total (Acres)		1.136	1.136	1.136
Excess Precipitation(in)		0.80	1.28	1.07
Volume (100), cf		3300	5297	4430
Volume (10), cf		2211	3549	2968
Q (100), cfs		2.50	3.47	3.02
Q (10), cfs		1.67	2.32	2.02
Ponding Volume Required ,cf = V(10)proposed-V(10)existing				758
POND VOLUME PROVIDED:				
POND 'A'= 670 CF				
POND 'B'= 130 CF				
TOTAL PONDING PROVIDED = 800 CF > 758 CF				



ABQ Engineering
Engineers • Planners • Construction Services
8102 Merit Blvd. NE, Suite D, Albuquerque, NM 87110
tele: 505.255.7802
www.abqeng.com



DO NOT SCALE DRAWINGS
CONTRACTOR TO VERIFY ALL
EXISTING CONDITIONS AND
DIMENSIONS- NOTIFY
ENGINEER/ARCHITECT OF ANY
DISCREPANCIES PRIOR TO
BEGINNING CONSTRUCTION

CHAO \ LIMARY HOME
6001 BUFFALO GRASS COURT
ALBUQUERQUE, NEW MEXICO 87111

DESIGNED BY: PROJECT NO.: 14-034
DATE: CAB
DRAWN BY: AUGUST 2014

GRADING AND DRAINAGE PLAN

SHEET NUMBER

C-101

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

KEYED NOTES

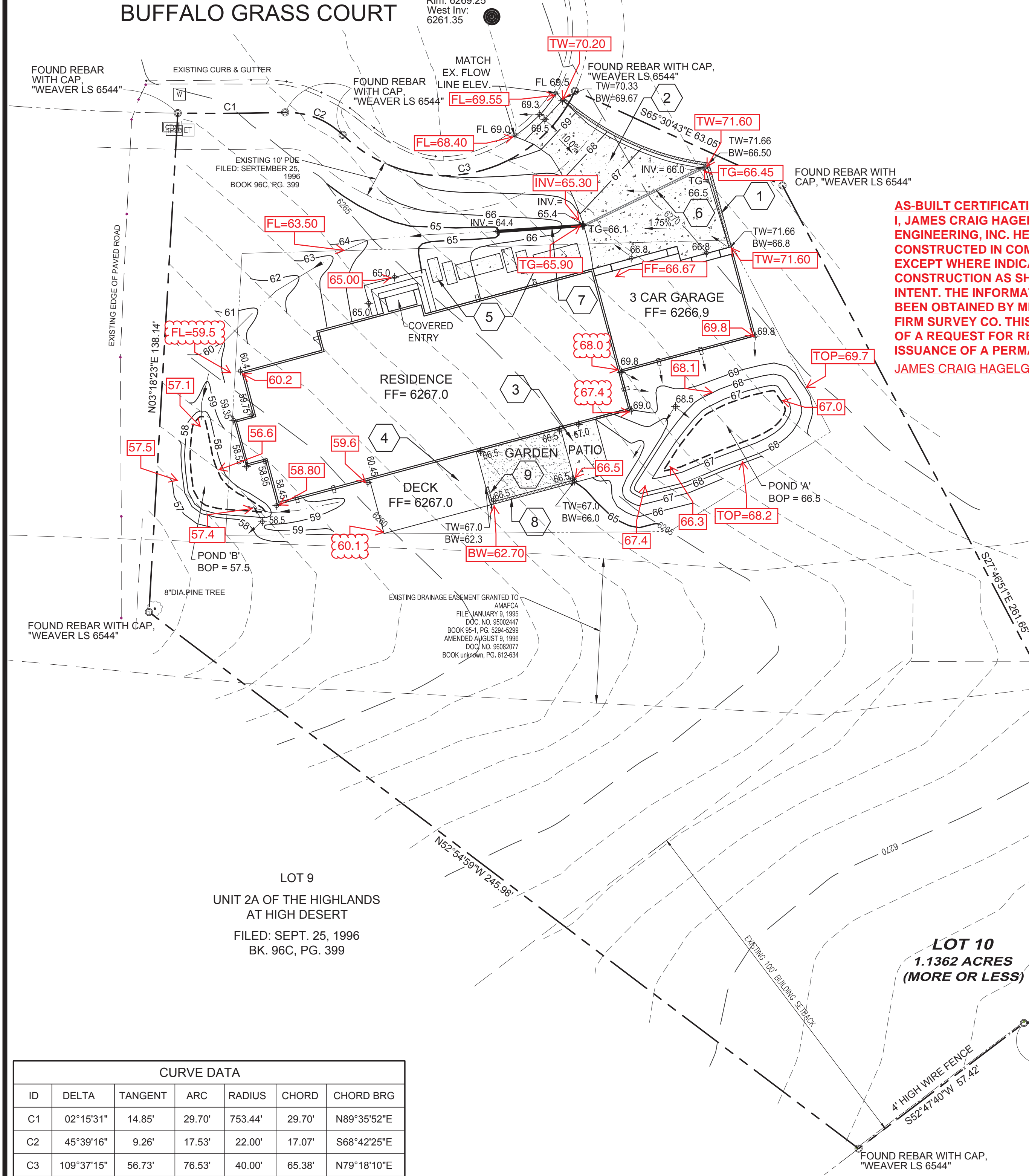
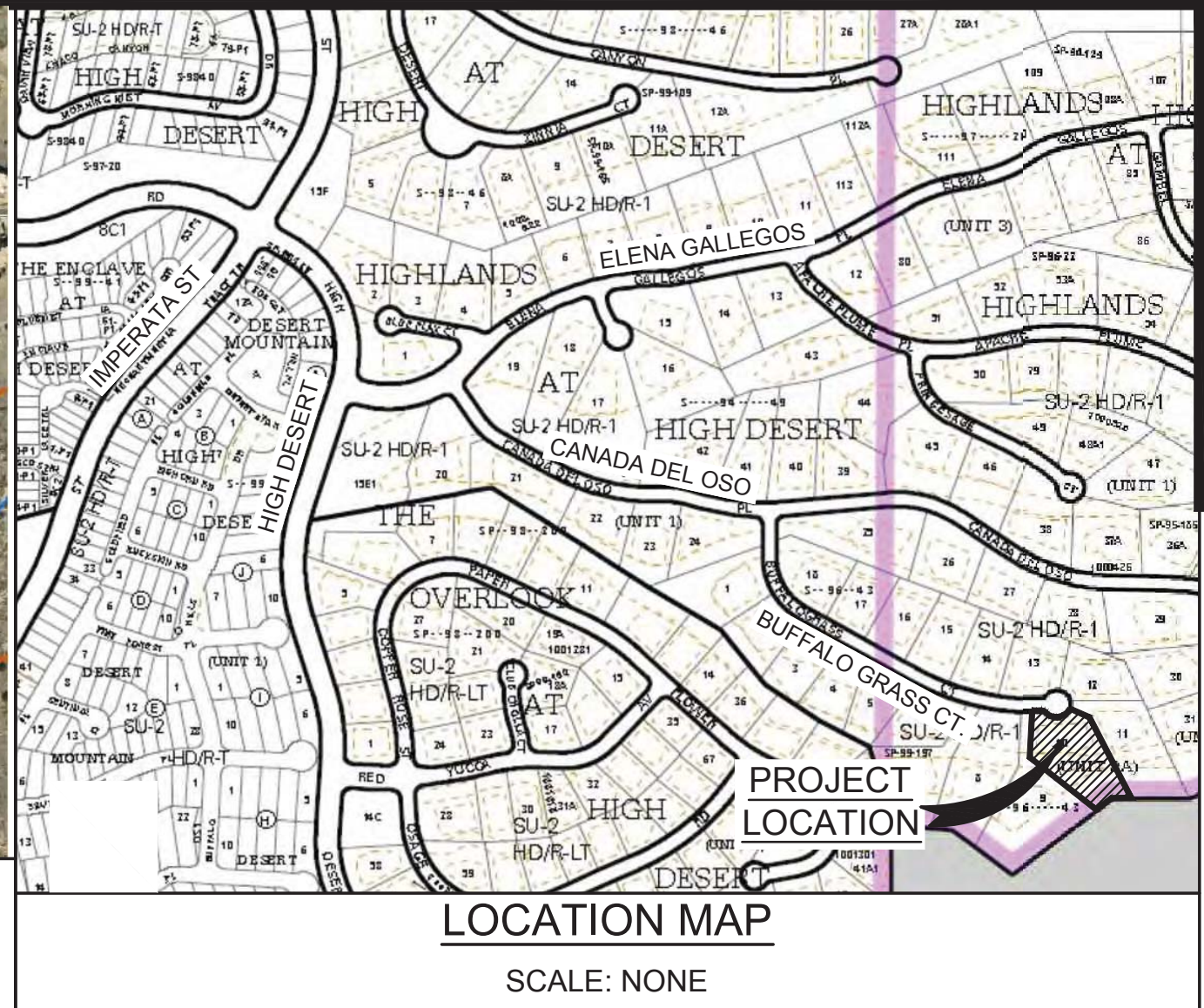
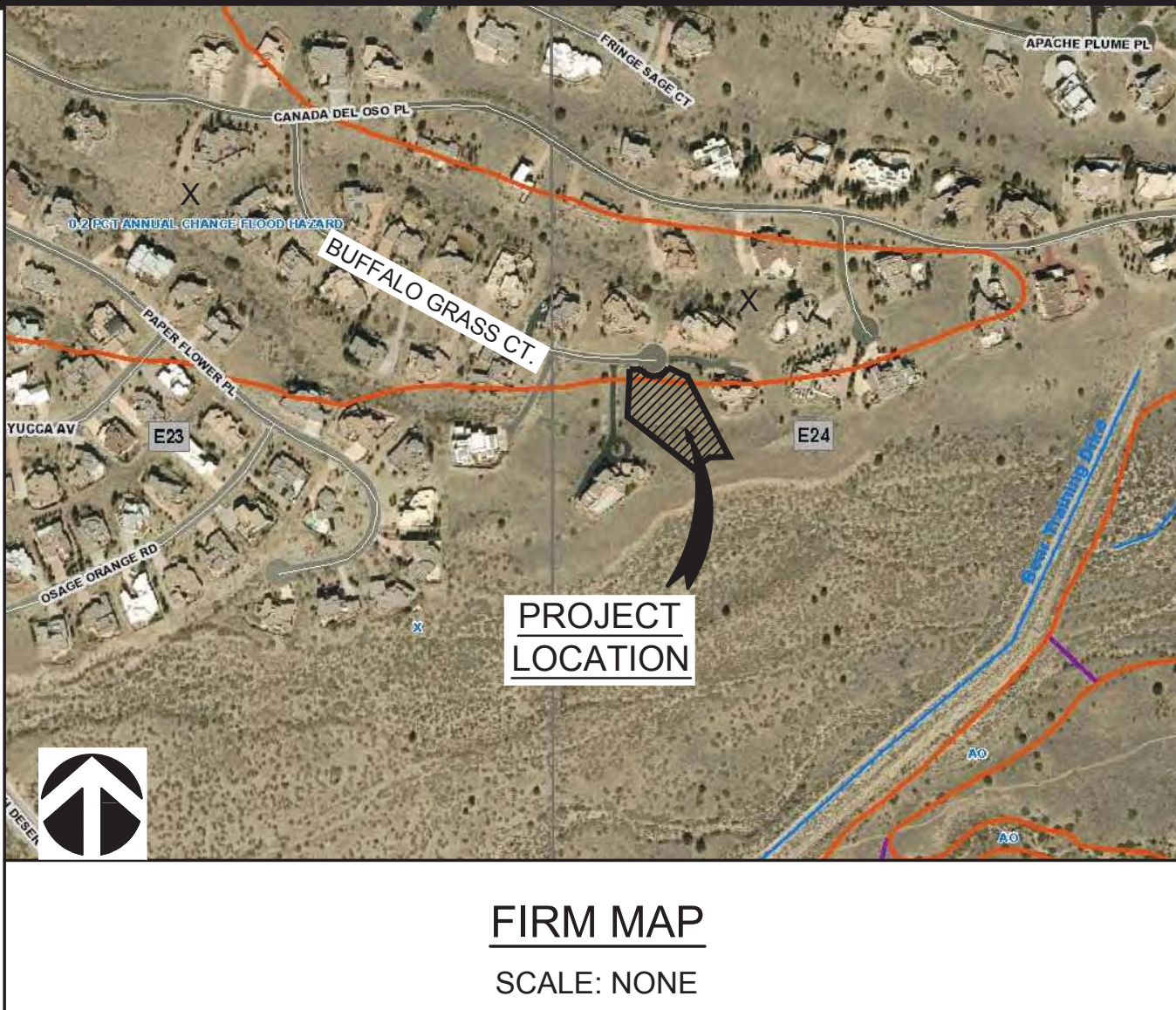
1. CONSTRUCT 86 LF RETAINING WALL. SEE DETAIL 3, THIS SHEET.
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6. INSTALL NEW 6" TUF-TITE TR1 TRENCH DRAIN.
7. 24 LF 4" SCH. 40 PVC DRAIN PIPE SEE PLAN FOR INVERT ELEVATIONS.
8. CONSTRUCT 38.5 LF RETAINING WALL PER DETAIL 2, THIS SHEET.
9. OFFSET FOOTING ADJACENT TO DECK SEE NOTE ON DETAIL 2, THIS SHEET.

LEGAL DESCRIPTION

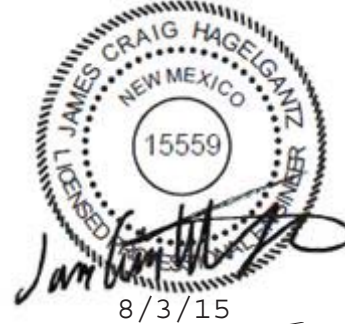
LOT NUMBERED 10, UNIT 2A OF THE HIGHLANDS AT HIGH DESERT, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, AS THE SAME AS IS SHOWN AND DESIGNATED ON THE PLAT THEREOF, FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO.

UPC NUMBER

1024-062-049-161-304-03



AS-BUILT CERTIFICATION
I, JAMES CRAIG HAGELGANTZ, NMPE #15559, OF THE FIRM ABQ ENGINEERING, INC. HEREBY CERTIFY THIS PROJECT HAS BEEN CONSTRUCTED IN COMPLIANCE WITH THE DESIGN DRAWINGS EXCEPT WHERE INDICATED WITH (X). I ALSO CERTIFY THAT THE CONSTRUCTION AS SHOWN MEETS OR EXCEEDS THE DESIGN INTENT. THE INFORMATION EDITED ONTO THIS DOCUMENT HAS BEEN OBTAINED BY MR. GARY E. GRITSKO NMPS #8686 OF THE FIRM SURVEY CO. THIS CERTIFICATION IS SUBMITTED IN SUPPORT OF A REQUEST FOR RELEASE OF FINANCIAL GUARANTEE AND ISSUANCE OF A PERMANENT CERTIFICATE OF OCCUPANCY.
JAMES CRAIG HAGELGANTZ NMPE# 15559



DRAINAGE NARRATIVE

THE SITE FOR THIS GRADING PLAN IS LOT 10 TRACT 14 B (E23DD003K) OF HIGH DESERT ESTATES IN ALBUQUERQUE, NEW MEXICO. THE SITE IS CONTAINED WITHIN THE HIGH DESERT MASTER DRAINAGE PLAN. THE SITE IS LOCATED ON SOUTH SIDE OF A CUL-DE-SAC AT THE END OF BUFFALO GRASS COURT. THE SITE CONTAINS APPROXIMATELY 1.136 ACRES AND IS CURRENTLY UNDEVELOPED WITH NO STRUCTURES OR DRIVEWAY. THE SITE CURRENTLY DRAINS FROM EAST TO WEST ALONG NATURAL SLOPES AND IS BISECTED WITH AN AMAFCA DRAINAGE EASEMENT. THE PORTION OF THE NORTH SIDE OF THE LOT IS WITHIN A TYPE X FLOOD PLAIN. (SEE MAP THIS SHEET) NO PORTION OF THE LOT IS LOCATED WITHIN A 100 YEAR FLOOD PLAIN.

WITH THIS DEVELOPMENT, THE PROPOSED RESIDENCE WILL BE CONSTRUCTED ON THE NORTHERN PORTION OF THE SITE WITH A DRIVEWAY BETWEEN THE ADJACENT STREET AND PROPOSED GARAGE. THE MAJORITY OF THE SITE HISTORICALLY DRAINED WEST TOWARD THE ARROYO IN THE MIDDLE OF THE SITE. THE PORTION OF THE SITE SOUTH OF THE ARROYO WILL REMAIN UNDEVELOPED. WHILE THE NEW GRADING MAINTAINS THE HISTORICAL DRAINAGE PATTERN, THE ADDITION OF THE ONSITE PONDING AREAS WILL CAPTURE AND MANAGE THE 90TH PERCENTILE STORM EVENT AND THE "FIRST FLUSH" RUNOFF PER COA DRAINAGE ORDINANCE (SEE CALCULATIONS)

ONSITE DRAINAGE RETENTION

FIRST FLUSH STORAGE REQUIRED BY COA HYDROLOGY:

PROVIDE STORAGE FOR FIRST FLUSH RUNOFF PER SECTION 22 OF DPM
TABLE A-6 USE 0.1 - 0.44 = 0.34 IN

FIRST FLUSH (IN) APPLIED OVER IMPERVIOUS AREAS (ACRES)
THEREFORE 0.34/12 X 0.169 X 43560 = 209CF

FIRST FLUSH PONDING AREA REQD. = 209 CF < 815 CF PROVIDED

LEGEND

- 6510 --- EXISTING INDEX CONTOUR
- 6509 EXISTING INTERIM CONTOUR
- 10 —— NEW INDEX CONTOUR
- 09 —— NEW INTERIM CONTOUR
- ± 22.8 NEW SPOT ELEVATION
- [Symbol] NEW CONCRETE DRIVEWAY
- [Symbol] NEW BUILDING
- [Symbol] FINISH FLOOR ELEVATION
- [Symbol] EXISTING SANITARY SEWER MANHOLE
- [Symbol] DIRECTION OF FLOW
- [Symbol] EXISTING FENCE LINE
- [Symbol] EXISTING TREE/SHRUB
- [Symbol] FLOWLINE

AS-BUILT ELEVATIONS PER SURVEYOR

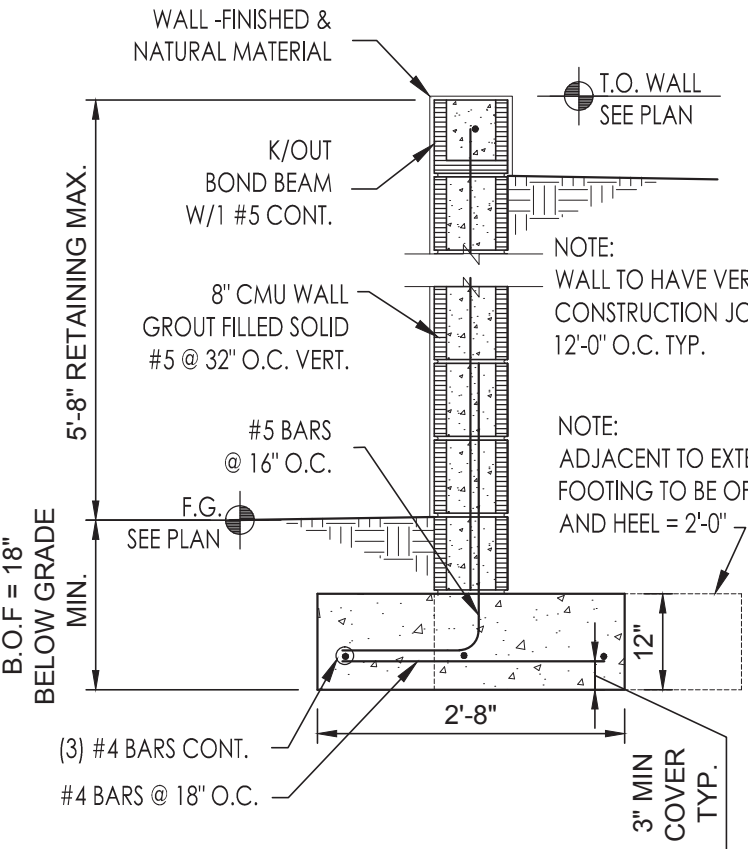
DRAINAGE CALCULATIONS

Hydrology Calculations DPM - Volume 2, October 2008 Section 22.2.Hydrology				
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100 Year Storm Depth, P (360)	2.9			
Treatment Area	A	B	C	D
Excess Precipitation Factors	0.8	1.08	1.46	2.64
Peak Discharge Factors	2.20	2.92	3.73	5.25
Land Treatment Area	Acres	Existing	Allowable	Proposed
Type "D" (Impervious, Roof, Driveway, Ect.)		0	0.19	0.176
Type "C" (Compacted Soil > 10%)		0	0.23	0.04
Type "B" (Compacted Native Soil)		0	0.23	0.10
Type "A" (Undeveloped)		1.1362	0.49	0.82
Total (Acres)		1.136	1.136	1.136
Excess Precipitation(in)		0.80	1.30	1.13
Volume (100), cf		3300	5364	4673
Volume (10), cf		221	3594	3131
Q (100), cfs		2.50	3.61	3.17
Q (10), cfs		1.67	2.42	2.12
Ponding Volume Required_cf = V(10)proposed-V(10)existing	= 920			

POND VOLUME PROVIDED:

POND 'A' = 816 CF
POND 'B' = 130 CF

TOTAL PONDING PROVIDED = 946 CF > 920 CF

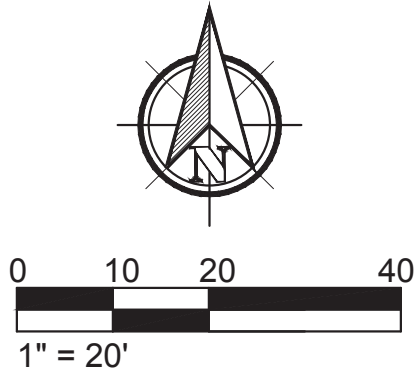


RETAINING WALL DETAIL

Scale: NTS

GRADING & DRAINAGE PLAN

Scale: 1" = 20'



ENGINEER'S STATEMENT

I, THE ENGINEER OF RECORD CERTIFY THAT I HAVE PERSONALLY VISITED THE SITE AND THE EXISTING GRADES AND CONTOURS DEPICTED ON THIS PLAN MATCH WHAT PRESENTLY EXISTS AT THIS LOCATION.

JAMES CRAIG HAGELGANTZ, NMPE #15559

BENCHMARK

PROJECT BENCHMARK:
FOUND BRASS CAP,
T11N, R4E, TR1, AP4,
S25, TRA, LS 6544, 1983"
ELEV = 6274.03



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CONTRACTOR TO VERIFY ALL
EXISTING CONDITIONS AND
DIMENSIONS- NOTIFY
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CHAO \ LIMARY HOME
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SHEET TITLE

GRADING
AND
DRAINAGE
PLAN

SHEET NUMBER

C-101