CITY OF ALBUQUERQUE

DRB 1010551



January 11, 2016

Richard J. Berry, Mayor

Ronald R. Bohannan Tierra West, LLC 5571 Midway Park Pl, NE Albuquerque, NM, 87109

RE: Westgate Mobile Home Park

Site Plan for Building Permit / Drainage Supplement Engineer's Stamp Date 12-28-2015 (File: L09D44)

Dear Mr. Bohannan:

Based upon the information provided in your submittal received 12-30-2015, the abovereferenced plan is approved for Grading Permit. The Grading and Drainage Plan for this project was approved by the City in 2000, and still appears to be appropriate for this site.

Please ensure to coordinate the need for an approved Erosion and Sediment Control Plan from the Stormwater Engineer prior to any earthwork.

Albuquerque

PO Box 1293

The supplemental drainage submittal and Grading/Drainage plan satisfies Hydrology's requirement from the Development Review Board hearing of 12-9-2015. The condition of final (Site Plan for Building Permit) sign off from Planning was to show the layout of the first flush ponds on the site plan.

New Mexico 87103

If you have any questions, you can contact me at 924-3986.

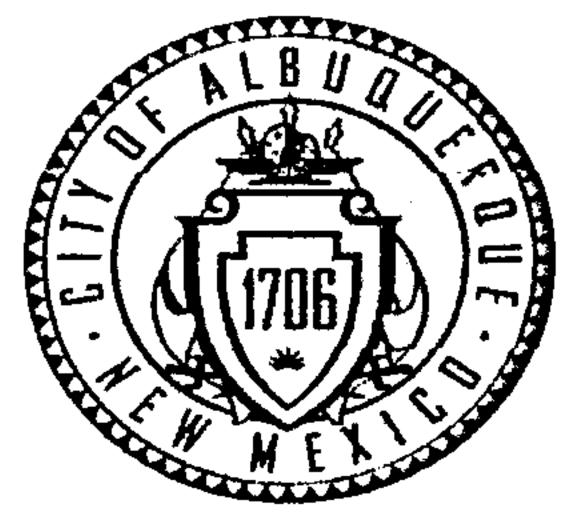
Abiel Carrillo, P.E.

Sincerely

Principal Engineer, Planning Dept.

Development Review Services

Orig: Drainage file



City of Albuquerque

Planning Department

Development & Building Services Division

DRAINAGE AND TRANSPORTATION INFORMATION SHEET (REV 09/2015)

Project Title: West Gate Mobile Home Park	Building Permit #: City Drainage #: LUU						
ORB#: 1010551 15DRB-7034 EPC#:	Work Order#:						
egal Description: TR2-A WestGate Mobile Home Park Add Redivision of TR 2 and							
City Address: Port of TR 1, TR of Land Being Nely Port of TR 1 Unplatted Land	d Snow Vista within Sec 33 T10N R2E						
Engineering Firm: Tierra West, LLC	Contact: Ronald R. Bohannan						
Address: 5571 Midway Park Place NE Albuquerque NM 87109							
Phone#: 505-858-3100 Fax#: 505-858-1118	E-mail: rrb@tierrawestllc.com						
Owner: Deemer Properties NM LLC	Contact:						
Address: 2455 Roop Rd Gilroy CA 95020							
Phone#: Fax#:	E-mail:						
Architect:	Cantasta						
Address:	Contact:						
	77						
Phone#: Fax#:	E-mail:						
Other Contact:	Contact:						
Address:							
Phone#: Fax#:	E-mail:						
TYPE OF SUBMITTAL:ENGINEER/ ARCHITECT CERTIFICATIONCONCEPTUAL G & D PLAN	PRELIMINARY PLAT APPROVAL SITE PLAN FOR SUB'D APPROVAL SITE PLAN FOR BLDG. PERMIT APPROVAL FINAL PLAT APPROVAL						
GRADING PLAN	SIA/ RELEASE OF FINANCIAL GUARANTEE						
DRAINAGE MASTER PLAN	FOUNDATION PERMIT APPROVAL						
X DRAINAGE REPORT	X GRADING PERMIT APPROVALE (P 5 1 W)						
CLOMR/LOMR	SO-19 APPROVAL						
	PAVING PERMIT APPROMATE TO 2015						
TRAFFIC CIRCULATION LAYOUT (TCL)	——PAVING PERMIT APPROMAL GRADING/PAD CERTIFICATION WORK ORDER APPROVAL						
TRAFFIC IMPACT STUDY (TIS)	WORK ORDER AFFROVAL UUOMENT SEC						
FROSION & SEINMENT CONTROL DI ANI ŒGO	CLOMR/LOMR I AND DEVELOPIVILITY						
EROSION & SEDIMENT CONTROL PLAN (ESC)							
EROSION & SEDIMENT CONTROL PLAN (ESC) OTHER (SPECIFY) Modification of Approved Drainage Rpt Lst Flush, Referencing Drainage Plan L9/D25 Stamped 12/26/2000 STHIS A RESUBMITTAL?: Yes No	PRE-DESIGN MEETINGOTHER (SPECIFY)						

ELECTRONIC SUBMITTAL RECEIVED: ____

DRAINAGE MANAGEMENT PLAN

For

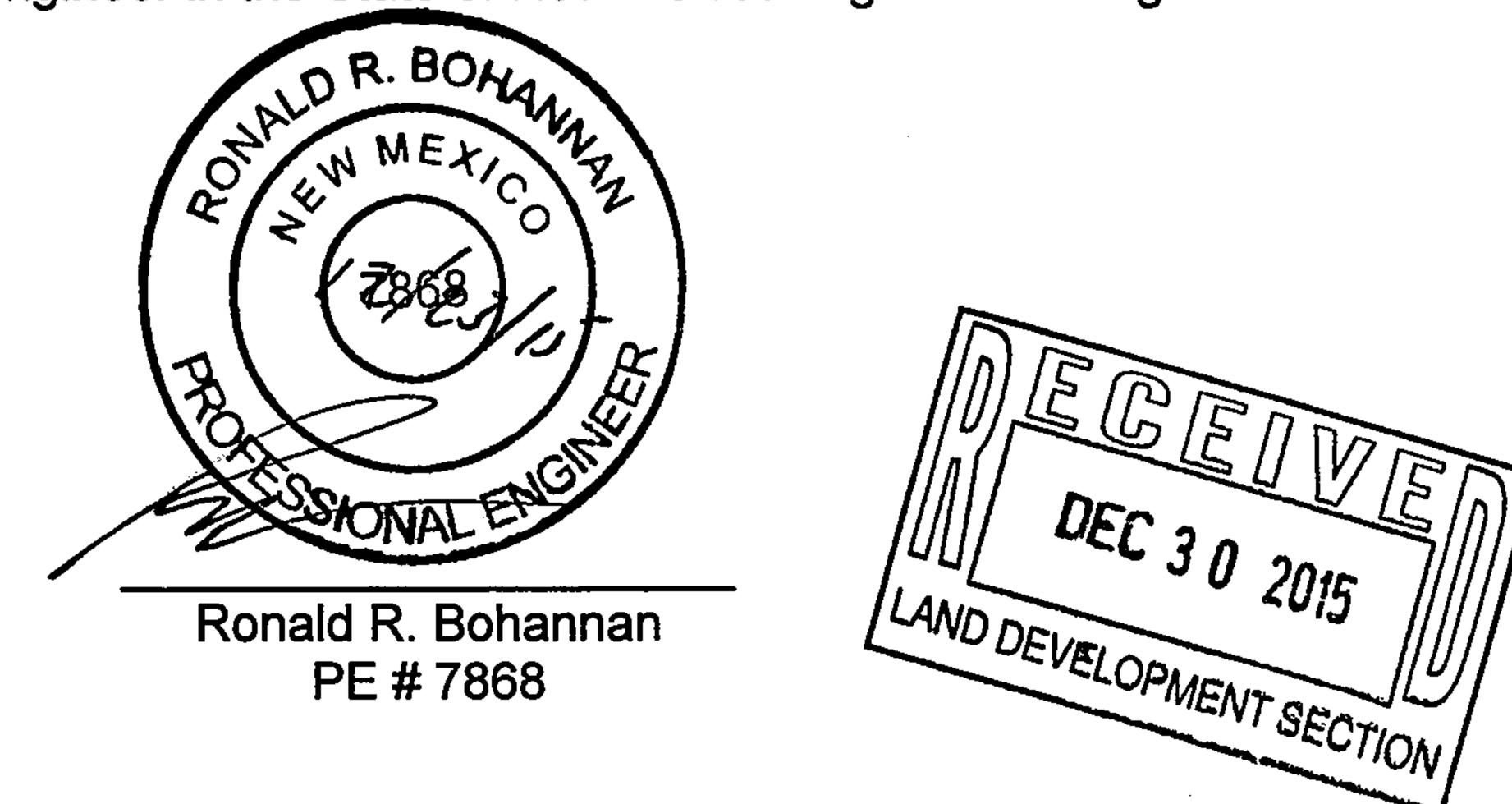
Westgate Mobile Home Park First Flush Retention

Prepared by:

Tierra West, LLC 5571 Midway Park Place NE Albuquerque, New Mexico 87109

December 28, 2015

I certify that this report was prepared under my supervision, and I am a registered professional engineer in the State of New Mexico in good standing.



Job No. 2015099



Westgate Mobile Home Park - First Flush Retention

The purpose of this submittal is to adjust the outfall ponds for the mobile home park located at the northwest corner of 98th Street and Sage Road. The adjustment of the ponds is to retain the first flush elevation onsite before outfalling to the storm drain on 98th Street.

The mobile home park consists of 13 drainage basins that surface flow to a drainage pond within its respective area and outfalls from the pond to the storm drain located on 98th Street. Although there are a series of ponds onsite, two of the ponds act as the outfall for the drainage. Basins 1 thru 6 are directed towards the excess pond located within the public right-of-way, the outfall of the pond connects to the back of a catch basin underneath 98th street. Basins 7 thru 13 are directed towards a series of ponds that eventually makes its way towards Pond F. Like the public right-of-way pond, Pond F connects to the back of a catch basin underneath 98th Street.

The concept of capturing the first flush for water quality retention is the same for both ponds; keep both pond grades as-is and raise the pond outfall inverts high enough to maintain the required volume of retention below the outfall. The grades, invert elevations, and drainage basins were referenced from the approved grading and drainage plan stamped 12/26/2000 (L9/D25).

Pond F:

The pond has an average bottom elevation of 5158.36 and slopes towards the outfall which has an elevation of 5158.0. The volume of raising the outfall invert elevation was calculated and can be found on the following page. The total first flush retention required for the impervious area of Basins 1 thru 6 is 9768 cubic feet. In order to meet this capacity, the invert of the pond outfall needs to be raised 1 foot from the existing elevation.

Excess ROW Pond:

The pond has an average bottom of elevation of 5143.5 and has a Single D drop inlet for the outfall. The volume of raising the outfall invert elevation was calculated and can be found on the following page. The total first flush retention required for the impervious area of Basins 7 thru 13 is 7993.9 cubic feet. In order to meet this capacity, the invert of the pond outfall needs to be raised 0.22 feet above the existing inlet grate elevation.

RETENTION VOLUME CALCULATIONS

ROW POND (Basins 1 thru 6):

Impervious Area = 6.477 ac = 282,138.12 ft²

Retention Volume Required = $(0.44"-0.1") * 282138.12 ft^2 = 7993.9 ft^3$

Raise Inlet Grate 0.22 ft:

Pond Area $_{BOP} = 37884.3 \text{ ft}^2$

Pond Area _{New Inlet Elev.} = 38095.8 ft²

Retention Volume = $(37884.3 + 38095.8) / 2 * 0.22 = 8357.8 ft^3$

Retention Volume > Volume Required

Therefore, OK

POND F (Basins 7 thru 13):

Impervious Area = 7.915 ac = 344,777.4 ft²

Retention Volume Required = $(0.44"-0.1") * 344777.4 ft^2 = 9768.7 ft^3$

Raise Outfall Invert 1 ft:

Pond Area $_{BOP} = 9054.9 \text{ ft}^2$

Retention Volume from BOP to existing invert = $(9054.9 / 2) * 0.36 = 1630 \text{ ft}^3$

Pond Area _{New Invert Elev.} = 16376 ft²

Retention Volume from new invert to BOP = $(16376 + 9054.9 / 2) * 0.64 = 8138 ft^3$

Total Retention Volume = 1630 + 8138 = 9768 ft³

Retention Volume = Volume Required <u>Therefore, OK</u>

WEIGHTED E TABLE FROM DRAINAGE REPORT DATED 10-23-2000

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Basin	Area	Area	Area	Treatment A		Treatment B		Treatment C		Treatment D		Weighted E	V 360	V 1440	V 10 day	· Flow
	(sf)	(acres)	(sq. miles)	%	(acres)	%	(acres)	%	(acres)	%	(acres)	(ac-ft)	(ac-ft)	(ac-ft)	(ac-ft)	cfs
1	37612	0.863	0.001349145	0%	0	7%	0.057	49%	0.427014	44%	0.380	1.400	0.101	0.115	0.147	3.
2	144554	3.319	0.005185161	0%	0	3%	0.092	28%	0.944358	69%	2.282	1.655	0.458	0.545	0.737	12.
3	16901	0.388	0.00060624	0%	0	0%	0.000	0%	0	100%	0.388	1.970	0.064	0.079	0.111	1.
4	172194	3.953	0.00617661	0%	0	3%	0.133	34%	1.347997	63%	2.472	1.592	0.524	0.619	0.827	14.
5	59704	1.371	0.002141586		0	4%	0.055	43%	0.583489	53%	0.732	1.501	0.171	0.199	0.261	4.
6	36765	0.844	0.001318763	0%	0	23%	0.191	51%	0.431263	26%	0.222	1.176	0.083	0.091	0.110	2.
7	263739	6.055	0.009460335	0%	0	8%	0.488	34%	2.063073	58%	3.503	1.531	0.773	0.907	1.202	22.
8	94982	2.180	0.00340701	0%	0	23%	0.492	22%	0.489323	55%	1.199	1.457	0.265	0.311	0.412	7.
9	57944	1.330	0.002078455	0%	0	0%	0.000	52%	0.69171	48%	0,639	1.460	0.162	0.186	0.240	4.
10	59427	1.364	0.00213165	0%	0	24%	0.324	37%	0.503747	39%	0.537	1.300	0.148	0.168	0.214	4.
11	25521	0.586	0.00091544	0%	0	39%	0.228	38%	0.221932	23%	0.136	1.092	0.053	0.059	0.070	1.0
12	49380	1.134	0.001771264	0%	0	0%	0.000		0.426506	62%	0.707	1.601	0.151	0.178	0.238	4.3
13	28439	0.653	0.001020109	 +	0]	0%	0.000		0.228504	65%	0.424	1.627	0.089	0.105	0.141	2.!
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