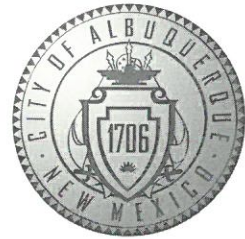


CITY OF ALBUQUERQUE



March 5, 2018

Hugh Floyd
Respec
5971 Jefferson St NE
Albuquerque, NM 87109

RE: **Taos II @ The Trails**
Amended DMP for Release of Financial Guarantee
Stamp Date: none
Hydrology File: C09D001G

Dear Mr. Floyd:

Based upon the information provided in your submittal received 2/26/18, the above referenced submittal cannot be approved until the following are corrected:

PO Box 1293

Amended DMP:

Albuquerque

NM 87103

www.cabq.gov

1. Pond D must demonstrate substantial compliance with the approved Trails Master Plan (last updated 2/10/2017). Demonstrate that the maximum outflow is 14.80 cfs or less. Additional documentation on Pond D should show: maximum water surface elevation, storage, dead storage to accommodate first flush volume, and freeboard of at least 1'. As-built survey needs to be provided to support the above.
2. Pond F-5 must demonstrate substantial compliance with the approved Trails Master Plan (last updated 2/10/2017). Demonstrate that the maximum outflow is 46.43 cfs or less. Additional documentation on Pond F-5 should show: maximum water surface elevation, storage, dead storage to accommodate first flush volume, and freeboard of at least 1'. As-built survey needs to be provided to support the above.
3. It is unlikely that the City will accept the ported risers with excessive welds and unknown structural integrity. Instead of welding the holes back in, it is recommended that new risers be provided in accordance with the original approved construction drawings.
4. The submittal needs to be provided in a bound report or sheet set, stamped by the Engineer.
5. This submittal will need to be made concurrently with the Engineer's Certification of grading and drainage to be considered for ROFG.

Orig: Drainage file



Engineers Certification for ROFG:

6. Pond F-5 needs to be constructed in compliance with the approved grading plan, dated 1/11/2017, unless an amended grading plan is submitted to Hydrology and approved.
7. As-built survey data should be provided on the Engineer's Certification.
8. As no Engineer's Certification (for ROFG) has been submitted, this is only a partial list based on information provided by RESPEC. Additional items of concern were provided at final walkthrough and will need to be resolved as well.

If you have any questions, please contact me at 924-3695 or dpeterson@cabq.gov.

Sincerely,

Dana Peterson, P.E.
Senior Engineer, Planning Dept.
Development Review Services

PO Box 1293

Albuquerque

NM 87103

www.cabq.gov



February 21, 2018

Dana Peterson
Senior Engineer, Planning Dept.
Development Review Services
600 2nd Street NW
Albuquerque, NM 87102

Dear Dana Peterson:

**RE: Hydraulic Analysis Addendum to the Amendment to the DMP Trails Units 1, 2, and 3
Hydrology File: C09D001**

The Taos II Subdivision project (C09D001G) has completed the construction of Pond D and Pond F5 as shown in the Hydraulic Analysis to the Amendment to the DMP Trails Units 1, 2, and 3. Surv-Tek has surveyed the elevations of the finished grades. The spots provided by Surv-Tek are attached for reference. This information was input into PCSWMM to model the constructed ponds. The design volume for Pond D at the emergency spillway elevation of 5431.3' NAD27 (5434' NAD83) was 6.44 ac-ft. The constructed volume at the same elevation is 6.43 ac-ft. The design volume for Pond F5 at the emergency spillway elevation of 5426.3' NAD 27 (5429 NAD83) was 2.78 ac-ft. The constructed volume at the same elvation is 2.73 ac-ft. The rating curves for the constructed ponds are attached. The ported risers that were installed reflect the Old Ported Riser Details attached. Instructions have been given to the contractor to modify the risers to reflect the attached Ported Riser Details (revised based on survey data post-construction). The modified risers comply substantially with the design intent of the original riser design and overall system.

Included with this submittal:

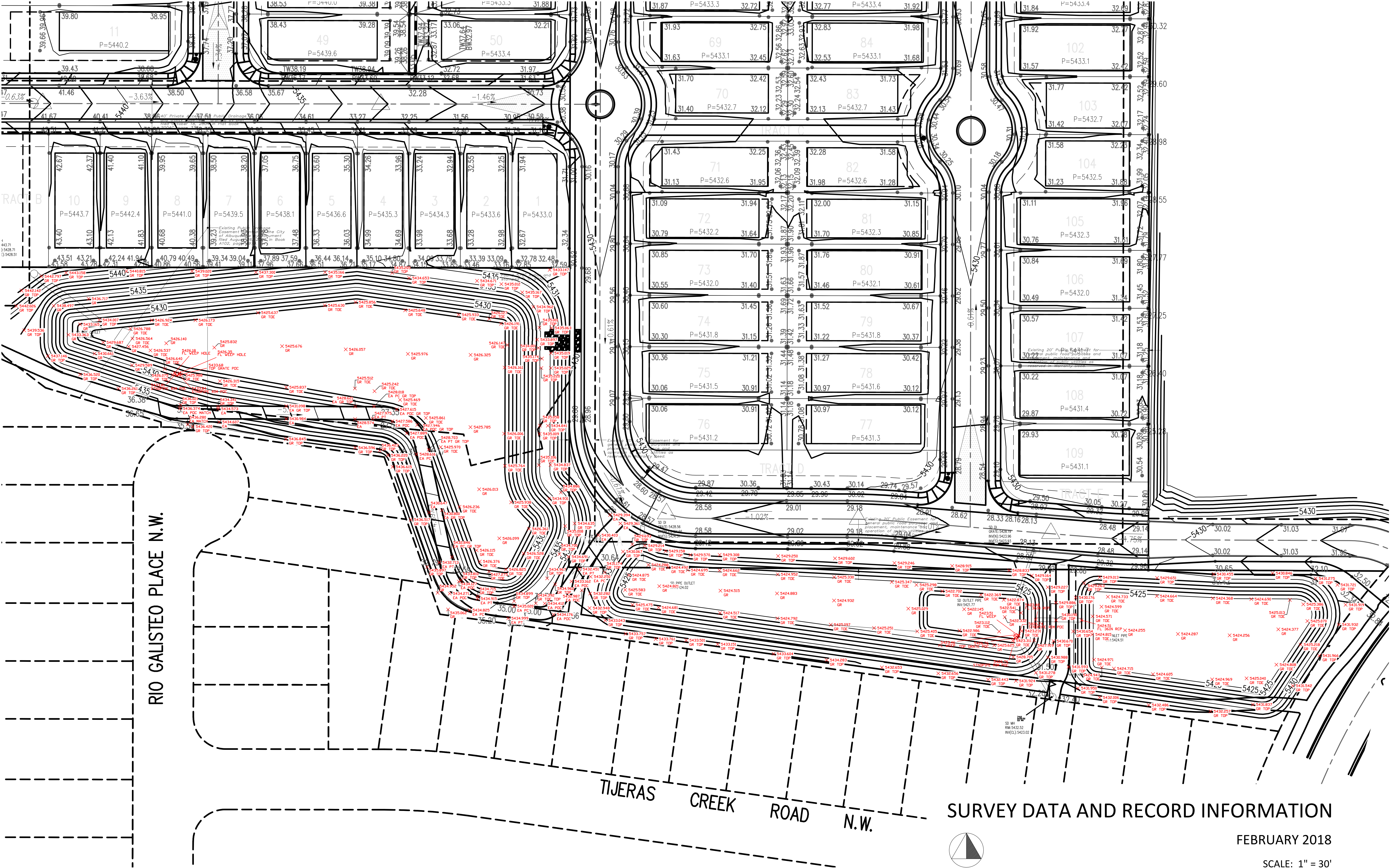
- / Survey Data and Record Information
- / Pond Volume Rating Curves
- / Old Ported Riser Details
- / Ported Riser Details Revised
- / PCSWMM Model (electronic only)

If you have any comments or concerns, please feel free to contact me at (505) 366-4187.

Sincerely,

Hugh Floyd, P.E.
New Mexico Area Manager, Water & Natural Resources

5971 JEFFERSON ST., NE
SUITE 101
ALBUQUERQUE, NM 87109
505.268.2661



Pond Rating Curves (revised based on survey data post-construction)

Pond D

Elev.	Depth	Area (Sq. Ft.)	Cum. (Ac. Ft.)	
5422.8	0.0	320	0.00	Pond Bottom
5423.3	0.5	14399	0.08	
5424.3	1.5	25254	0.54	
5425.3	2.5	28443	1.16	
5426.3	3.5	31719	1.85	
5427.3	4.5	35011	2.61	Emergency Spillway (5431.13)
5428.3	5.5	38316	3.45	
5429.3	6.5	41568	4.37	
5430.3	7.5	44914	5.36	
5431.3	8.5	48319	6.43	
5431.9	9.1	50675	7.12	Top of Pond

*Elevations in NAD27 datum

Pond F5 (West)

Elev.	Depth	Area (Sq. Ft.)	Cum. (Ac. Ft.)	
5419.5	0.0	25	0.00	Pond Bottom
5420.3	0.8	1502	0.01	
5421.3	1.8	2598	0.06	
5422.3	2.8	8369	0.19	
5423.3	3.8	13523	0.44	
5424.3	4.8	15812	0.77	Emergency Spillway
5425.3	5.8	18183	1.17	
5426.133	6.633	20276	1.53	Top of Pond

*Elevations in NAD27 datum

Pond F5 (East)

Elev.	Depth	Area (Sq. Ft.)	Cum. (Ac. Ft.)	
5421.6	0.0	604	0.00	Pond Bottom
5422.3	0.7	9325	0.08	
5423.3	1.7	10809	0.31	
5424.3	2.7	12205	0.58	
5425.3	3.7	13685	0.87	
5426.3	4.7	15248	1.20	Emergency Spillway
				Top of Pond

*Elevations in NAD27 datum

OLD

Ported Riser Details:

Pond F5

- Six 6" holes with invert 5423.5
- Five 6" holes with invert 5424.25
- Six 6" holes with invert 5425
- Five 6" holes with invert 5425.75
- Emergency Spillway elevation = 5426.75

Pond D

- Two 6" holes with invert 5426.15
- Six 6" holes with invert 5427.25
- Emergency spillway elevation = 5434

Pond D Ported Riser Rating Curve

Elevation (ft)	Depth (ft)	Row #1 Head (ft)	Row #1 Flow (cfs)	Row #2 Head (ft)	Row #2 Flow (cfs)	Total Flow (cfs)
5426	0	0.00	0.00	0.00	0.00	0.00
5427	1	0.60	1.46	0.00	0.00	1.46
5428	2	1.60	2.39	0.50	3.34	5.73
5429	3	2.60	3.05	1.50	5.79	8.84
5430	4	3.60	3.59	2.50	7.47	11.06
5431	5	4.60	4.05	3.50	8.84	12.90
5432	6	5.60	4.47	4.50	10.03	14.50
5433	7	6.60	4.86	5.50	11.08	15.94
5434	8	7.60	5.21	6.50	12.05	17.26

Pond F5 Ported Riser Rating Curve

Elevation (ft)	Depth (ft)	Row #1 Head (ft)	Row #1 Flow (cfs)	Row #2 Head (ft)	Row #2 Flow (cfs)	Row #3 Head (ft)	Row #3 Flow (cfs)	Row #4 Head (ft)	Row #4 Flow (cfs)	Total Flow (cfs)
5422	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5423	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5424	2	0.25	2.84	0.00	0.00	0.00	0.00	0.00	0.00	2.84
5425	3	1.25	6.34	0.50	3.34	0.00	0.00	0.00	0.00	9.68
5426	4	2.25	8.51	1.50	5.79	0.75	4.91	0.00	0.00	19.21
5426.75	4.75	3.00	9.82	2.25	7.09	1.50	6.95	0.75	4.09	27.95

Ported Riser Details (revised based on survey data post-construction)*Pond F5*

- Four 6" holes with invert 5423.5
- Three 6" holes with invert 5424.25
- Four 6" holes with invert 5425
- Three 6" holes with invert 5425.75
- Spillway elevation = 5428

Pond D

- Two 6" holes with invert 5426.27
- Five 6" holes with invert 5427.27
- Emergency spillway elevation = 5433.83

Ported Riser Rating Curves					
Pond D			Pond F5		
Elevation (ft)	Depth (ft)	Flow (cfs)	Elevation (ft)	Depth (ft)	Flow (cfs)
5425.5	0	0	5422.2	0	0
5426	0.5	0	5423	0.8	0
5427	1.5	3.37	5424.0	1.8	1.89
5428	2.5	10.12	5425	2.8	6.23
5429	3.5	13.45	5426	3.8	12.42
5430	4.5	16.09	5427	4.8	19.14
5431	5.5	18.34	5428	5.8	23.38
5432	6.5	20.34	5429	6.8	60.95
5433	7.5	22.16			
5434	8.5	37.87			
Orifice Equation: $Q=0.6*A*(2*g*h)^{(1/2)}$					

*Elevations in NAD83