IDS
Engineering Group

August 10, 2017

Mr. Richard W. Stolleis, P.E.
County Engineer
Fort Bend County, Texas
301 Jackson St., Suite 401
Richmond, Texas 77469

RE: Walnut Creek - Variance Request to Major Thoroughfare Centerline Radius

Dear Mr. Stolleis,

Walnut Creek is an approximately 445-acre Master Planned Development located south of US Highway 59 and east of FM 2977. It is predominantly a single family residential development. The development is located within Fort Bend County. The development is also located within the Lamar Consolidated I.S.D. A majority of the development is located within the City of Rosenberg E.T.J. with a small portion located within the City of Rosenberg. The development is traversed by two southeast-northwest major thoroughfares, A Myers Road and Ricefield Road and a proposed northeast-southwest major thoroughfare, Benton Road (see enclosed overall schematic plan for Walnut Creek, with the subject portion of Benton Road shown in red).

On behalf of Friendswood Development Company, we IDS Engineering Group respectfully submit a request for a variance to the minimum major thoroughfare centerline radius required by the *Fort Bend County Regulations of Subdivisions* (as revised January 24, 2017) Section 5.2(c)(l) from 2,000 feet to 1,955 feet for proposed Benton Road within the Walnut Creek development.

A portion of the proposed centerline alignment of Benton Road is collinear with the west property line of the Walnut Creek development south of Dry Creek, which is the common line to a 93.7 acre tract owned by the City of Rosenberg. Thus, in order for the centerline to match the established property line a reduced centerline radius is required.

This request does not require any deviations from the infrastructure design standards regarding public water or sewer service, storm drainage or required ADA sidewalks therefore this request is not detrimental to the public safety or welfare, or injurious to other property in the area.

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This request is in conformance with the Development Agreement between the developer and the City of Rosenberg, the Walnut Creek General Plan as approved by the City of Rosenberg and existing development regulations and practices within the greater Houston area. The reduced 1,955 foot centerline radius is also well above the minimum allowed centerline radius of 1,125 feet for non-super elevated streets required in Table 3-13b of the 2011 Edition of the American Association of State Highway and Transportation Officials (AASHTO) *Policy on Geometric Design of Highways and Streets* (see attached table).

Again, we respectfully request approval of a reduced major thoroughfare centerline radius of 1,955 feet for proposed Benton Road in the Walnut Creek development.

Please contact me if you have any comments or questions.

Sincerely,

Brian D. Gerould, P.E.
Senior Project Manager

encl.

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Table 3-13b. Minimum Radii and Superelevation for Low-Speed Urban Streets

U.S. Customary							
	V_d = 15 mph	V_d = 20 mph	V_d = 25 mph	V_d = 30 mph	V_d = 35 mph	V_d = 40 mph	V_d = 45 mph
e (%)	R (ft)	R (ft)	R (ft)	R (ft)	R (ft)	R (ft)	R (ft)
–6.0	58	127	245	429	681	1067	1500
–5.0	56	121	231	400	628	970	1350
–4.0	54	116	219	375	583	889	1227
–3.0	52	111	208	353	544	821	1125
–2.8	51	110	206	349	537	808	1107
–2.6	51	109	204	345	530	796	1089
–2.4	51	108	202	341	524	784	1071
–2.2	50	108	200	337	517	773	1055
–2.0	50	107	198	333	510	762	1039
–1.5	49	105	194	324	495	736	1000
0	47	99	181	300	454	667	900
1.5	45	94	170	279	419	610	818
2.0	44	92	167	273	408	593	794
2.2	44	91	165	270	404	586	785
2.4	44	91	164	268	400	580	776
2.6	43	90	163	265	396	573	767
2.8	43	89	161	263	393	567	758
3.0	43	89	160	261	389	561	750
3.2	43	88	159	259	385	556	742
3.4	42	88	158	256	382	550	734
3.6	42	87	157	254	378	544	726
3.8	42	87	155	252	375	539	718
4.0	42	86	154	250	371	533	711
4.2	41	85	153	248	368	528	703
4.4	41	85	152	246	365	523	696
4.6	41	84	151	244	361	518	689
4.8	41	84	150	242	358	513	682
5.0	41	83	149	240	355	508	675
5.2	40	83	148	238	352	503	668
5.4	40	82	147	236	349	498	662
5.6	40	82	146	234	346	494	655
5.8	40	81	145	233	343	489	649
6.0	39	81	144	231	340	485	643
6.2	39	80	143	229	337	480	637
6.4	39	80	142	227	335	476	631
6.6	39	79	141	226	332	472	625
6.8	39	79	140	224	329	468	619
7.0	38	78	139	222	327	464	614
7.2	38	78	138	221	324	460	608
7.4	38	78	137	219	322	456	603
7.6	38	77	136	217	319	452	597
7.8	38	77	135	216	317	448	592
8.0	38	76	134	214	314	444	587
8.2	37	76	134	213	312	441	582
8.4	37	75	133	211	309	437	577
8.6	37	75	132	210	307	434	572
8.8	37	74	131	208	305	430	567
9.0	37	74	130	207	302	427	563
9.2	36	74	129	205	300	423	558
9.4	36	73	129	204	298	420	553
9.6	36	73	128	203	296	417	549
9.8	36	72	127	201	294	413	544
10.0	36	72	126	200	292	410	540
10.2	36	72	126	199	290	407	536
10.4	35	71	125	197	288	404	531
10.6	35	71	124	196	286	401	527
10.8	35	71	123	195	284	398	523
11.0	35	70	123	194	282	395	519
11.2	35	70	122	192	280	392	515
11.4	35	69	121	191	278	389	511
11.6	34	69	120	190	276	386	508
11.8	34	69	120	189	274	384	504
12.0	34	68	119	188	272	381	500

Notes:

1. Computed using Superelevation Distribution Method 2.
2. Superelevation may be optional on low-speed urban streets.
3. Negative superelevation values beyond –2.0 percent should be used for unpaved surfaces such as gravel, crushed stone, and earth. However, a normal cross slope of –2.5 percent may be used on paved surfaces in areas with intense rainfall.