

MEMORANDUM



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TO: Ted Van Houten, AICP
District Department of Transportation (DDOT)

FROM: Jami Milanovich, P.E.
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RE: Art Place at Fort Totten – Phase II
Updated Trip Generation Analysis

DATE: July 16, 2021

Introduction

On June 10, 2019, the District of Columbia Zoning Commission (DCZC) took final action to approve a modification to the 1st Stage PUD and a 2nd Stage PUD for Phase II of the Art Place project (DCZC Case #06-10D). Phase II is proposed on property located on Square 3765 (Lots 1,2,3,4,5,6,7,8, and 9) and Square 3767 (Lots 1,2,3, and 4). As shown on Figure 1, the site is bordered by South Dakota Avenue NE to the east, Ingraham Street NE to the south, a public alley to the west and Kennedy Street NE to the north. The site is divided by 4th Street NE running north to south through the western portion of the site.

A Comprehensive Transportation Review (CTR), dated February 18, 2019 and amended March 5, 2019, was conducted in conjunction with Case #06-10D and identified a number of improvements required to mitigate the traffic impacts of the site. Based on the CTR and subsequent documents, DDOT agreed that with the proposed mitigation measures, the proposed project would have no adverse effect on the transportation network.

Subsequently, a Modification of Consequence (DCZC Case #06-10E) was approved due to changes resulting from the continued design of the project. The updated development program and changes to the plan resulted in no significant changes to the anticipated trip generation for the project; therefore, the conclusions and recommendations of the approved CTR remained valid. The DCZC took final action on the modification of consequence on June 8, 2020.

Table 1 summarizes the details of the project as originally approved, as analyzed in the CTR, and as approved under the modification of consequence.

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Table 1
Summary of Development Program

Component	Original Approval (06-10D) ¹	Approved CTR	Modification of Consequence (06-10E)
Residential	269 units	264 units	269 units
Children's Museum	26,070 SF	---	20,548 SF
Meow Wolf	80,308 SF	77,204 SF	81,473 SF
Cultural Uses	73,290 SF	113,452 SF+ 250-seat theater	73,290 SF
Grocery Store	24,436 SF	111,502 SF	24,436 SF
Retail	58,574 SF		61,702 SF
Parking	750 spaces	923 spaces	750 spaces

Since the approval of the Modification of Consequence, minor modifications to the building layout and mix of uses are proposed due to changes in the development and potential tenants. The residential unit count would increase to 294 multifamily dwelling units. The new non-residential space is broken down as follows:²

- 24,957 SF Children's Museum,
- 30,583 SF Interactive Experience,
- 50,593 SF Performance Space,
- 36,178 SF Cultural Uses
- 24,945 SF grocery store, and
- 64,398 SF retail.

Under the proposed modification, the number of parking spaces has been reduced from the 750 provided on the approved plans to 494 spaces (a decrease of 34 percent).

This memorandum provides the results of a trip generation analysis completed for the update to Art Place at Fort Totten Phase II development program. The development program analyzed in the CTR and subsequent addendum represented more square feet than what ultimately was approved and assumed a parking supply of 923 spaces (also higher than was ultimately approved). Therefore, for purposes of the assessment contained herein and to determine whether the conclusions and recommendations of the approved CTR are still valid, the current development program was compared to that used in the CTR.

¹ Includes below grade space that is not counted in FAR calculations.

² Includes below grade space that is not counted in FAR calculations.

Trip Generation Analysis

For trip generation purposes, a portion of the cultural uses were previously identified as a 250-seat theater and flexible entertainment space. The updated plans show seating for up to 1,200 persons for a peak event. Based on arrival and departure timing of typical shows at similar venues, it was estimated that ½ of the potentially occupied seats would be occupied during the typical weekday peak hour. Due to the mix of retail and cultural uses in the building, it is anticipated that patrons will arrive earlier and stay longer for events resulting in even fewer peak hour trips. As such, the analysis completed herein should be considered conservative.

To estimate traffic based on the updated building design, the trip generation methodology used previously in the CTR was used for the modification. However, due to the 34 percent decrease in parking supply, an increase in non-auto mode split for the site was assumed compared to the approved CTR. Further, it was assumed that the seating/flexible entertainment space would operate as a 600-seat performance (compared with 250 seats in the previous CTR) with the remainder of the space being used for performance set-up or other cultural exhibits and experience. The updated trip generation based on the updated PUD plans dated July 2021, is shown in Table 2.

As shown in Table 2, the proposed PUD modification is estimated to generate 855 AM peak hour person trips, 1,851 PM peak hour person trips, and 2,075 Saturday peak hour person trips. These estimates result in 199 AM peak hour vehicle trips, 361 PM peak hour vehicle trips, and 328 Saturday peak hour vehicle trips.

As shown in Table 3, compared to the development analyzed in the CTR, the proposed modification is estimated to generate 52 fewer AM peak hour vehicle trips, 128 fewer PM peak hour vehicle trips, and 173 fewer Saturday peak hour vehicle trips. The reduction in trips is attributable to the reduction in non-residential square footage and is consistent with the significant parking reduction since the CTR was completed.

Table 2
Site Trip Generation Summary

Land Use	ITE Code	Setting/Location	Size	Units	AM Peak Hour			PM Peak Hour			SAT Peak Hour			
					IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	
Residential				294 D.U.										
ITE Trips ²			17,375 SF		-	-	-	-	-	-	64	66	130	
Person Trips ¹	AVO	1.96			95	272	367	285	182	467	125	130	255	
Vehicle Person Trips	AM	PM			-	-	-	-	-	-	39	40	79	
Non-auto Person Trips	64%	72%	69%		61	174	235	205	131	336	86	90	176	
Transit	28%	21%	25%		27	76	103	60	38	98	31	33	64	
Bike	4%	4%	4%		4	11	15	12	7	19	5	5	10	
Walk	32%	47%	40%		30	87	117	134	85	219	50	52	102	
Vehicle Trips	36%	28%	31%		35	97	132	80	51	131	20	20	40	
Shopping Center	820	General Urban/Suburban	71,970 SF (GLA)											
ITE Trips ²					116	71	188	204	222	426	294	272	566	
Person Trips ⁵	AVO	2.0			227	140	367	399	432	831	574	530	1104	
Vehicle Person Trips					57	35	92	100	108	208	144	133	276	
Non-auto Person Trips	Ret.				120	74	195	211	229	440	304	281	585	
Metro ³	0.34		34%		78	48	125	136	147	283	180	195	375	
Bus ³	0.09		9%		20	13	33	36	39	75	48	52	99	
Walk/Bike ³	0.32		32%		73	44	117	128	138	266	170	184	353	
Walk			24%		54	33	88	96	104	199	127	138	265	
Bike			8%		18	11	29	32	35	66	42	46	88	
Vehicle Trips					29	18	47	51	55	107	74	68	141	
Live Theater			600 Seats											
Total					7	5	12	210	36	246	210	36	246	
Rate per seat ⁴					-	-	-	0.35	0.06	0.40	0.35	0.06	0.40	
Person Trips ⁵	AVO	2.0			15	10	25	420	72	492	420	72	492	
Vehicle Person Trips					7	5	11	189	32	221	189	32	221	
Non-auto Person Trips		Entert.			8	5	14	231	40	271	231	40	271	
Metro ³		0.12	12%		4	2	6	50	9	59	50	9	59	
Motorcoach	48	0.20	20%		-	-	-	98	-	98	98	-	98	
MetroBus ³		0.08	8%		1	1	2	33	6	39	33	6	39	
Walk/Bike ³		0.15	15%		2	2	4	63	12	74	63	12	74	
Walk			11%		2	1	3	47	9	55	47	9	55	
Bike			4%		-	1	1	16	3	18	16	3	18	
Motorcoach Trips					-	-	-	3	-	3	3	-	3	
Vehicle Trips					4	3	6	95	16	111	95	16	111	
All Vehicle Trips					4	3	6	98	16	114	98	16	114	
Museum	580	General Urban/Suburban	106,133 SF											
ITE Trips ²					26	4	30	3	16	19	50	20	70	
Person Trips ⁵	AVO	3.19			82	14	96	10	51	61	159	65	224	
Vehicle Person Trips					37	6	43	5	23	27	72	29	101	
Non-auto Person Trips		Entert.			31	5	36	4	19	23	60	25	85	
Metro ³		0.12	12%		10	2	12	1	6	7	1	6	7	
Motorcoach	48	0.20	20%		19	-	19	-	12	12	-	12	12	
MetroBus ³		0.08	8%		6	1	7	1	4	5	1	4	5	
Walk/Bike ³		0.15	15%		12	2	14	1	8	9	1	8	9	
Walk			11%		9	1	11	1	6	7	1	6	7	
Bike			4%		3	1	4	-	2	2	-	2	2	
Motorcoach Trips					1	-	1	-	1	1	-	1	1	
Vehicle Trips					12	2	13	2	7	8	23	9	32	
All Vehicle Trips					13	2	14	2	8	9	23	10	33	
Total Proposed Development														
Total Person Trips					419	436	855	1,114	737	1,851	1,278	797	2,075	
Non-auto Person Trips					220	258	480	651	419	1,070	681	436	1,117	
Personal Vehicle Trips					79	119	198	227	130	357	211	113	324	
Motorcoach Trips					1	-	1	3	1	4	3	1	4	
All Vehicle Trips					80	119	199	230	131	361	214	114	328	

Notes:

- Residential AM/PM trip generation (including non-auto mode split) calculated using tripsDC.org. TripsDC includes ground floor retail in estimates.
- Trips generated using Institute of Transportation Engineers (ITE) [Trip Generation](#), 10th Edition.
- Metro, bus, and walk/bike mode splits taken from WMATA 2005 Ridership Survey. The walk mode split was assumed to be 75% of the total walk/bike split.
- Based on counts collected by W + A on Thursday, March 10, 2016 and reflects a show with 90% attendance at an off-site venue during a nighttime peak.
- Average Vehicle Occupancy from National Household Travel Survey

Table 3
Site Trip Generation Summary

Land Use	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Art Place Phase II Development in CTR									
Total Person Trips	440	439	879	983	921	1,904	1,118	936	2,054
<i>Non-auto Person Trips</i>	<u>226</u>	<u>261</u>	<u>487</u>	<u>546</u>	<u>491</u>	<u>1,038</u>	<u>583</u>	<u>508</u>	<u>1,091</u>
Personal Vehicle Trips	113	136	250	262	224	486	276	222	498
Motorcoach Trips	<u>1</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>3</u>
All Vehicle Trips	114	136	251	263	226	488	277	224	501
Proposed Modification to Art Place PUD									
Total Person Trips	419	436	855	1,114	737	1,851	1,278	797	2,075
<i>Non-auto Person Trips</i>	<u>220</u>	<u>258</u>	<u>480</u>	<u>651</u>	<u>419</u>	<u>1,070</u>	<u>681</u>	<u>436</u>	<u>1,117</u>
Personal Vehicle Trips	79	119	198	227	130	357	211	113	324
Motorcoach Trips	<u>1</u>	<u>-</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>4</u>	<u>3</u>	<u>1</u>	<u>4</u>
All Vehicle Trips	80	119	199	230	131	361	214	114	328
Net Trip Comparison	(34)	(17)	(52)	(33)	(96)	(128)	(64)	(109)	(173)

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Parking Requirement

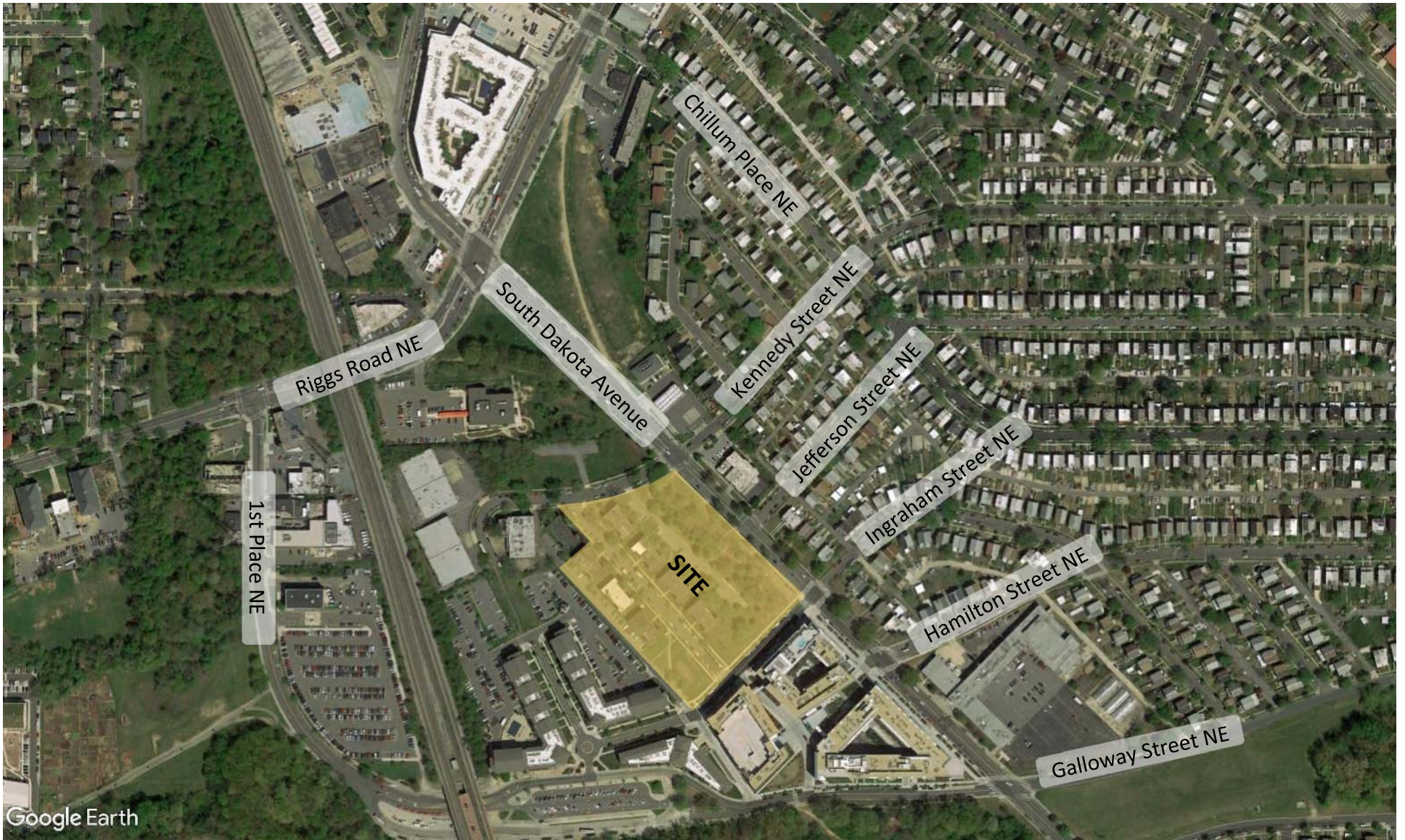
Below is a summary of the ZR16 parking requirement for the proposed mix of uses:

Use	Requirement	Required Spaces
Entertainment, Assembly, Performing Arts	2 spaces per 1,000 GSF	285
Retail	1.33 spaces per 1,000 SF*	119
Residential	1 space per 3 units**	88
TOTAL ***		492
*For retail SF in excess of 3,000 SF ** For residential in excess of 4 units ***Does not include the 50% reduction that could be available due to the proximity to Metro, per Subtitle C, Section 702.1(a)		

Based on the mix of uses, 492 parking spaces would be required. The proposed shared parking supply of 494 parking spaces in the structured garage would exceed the minimum parking requirement and adequately serve the mix of uses.

Conclusions

Based on the reduction in peak hour trips during each studied peak period, with previously proposed mitigation measures, the project will have no adverse effect on the surrounding transportation network. The mitigation measures included in the prior Zoning Order would continue to mitigate the impacts of the proposed development. The significant decrease in parking supply will benefit the vehicle traffic conditions on both the access locations and surrounding roadways.



Google Earth

Figure 1
Project Location



NORTH

Art Place Phase II
Washington, DC