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Board of Zoning Adjustment
District of Columbia
CASE NO. 17232
EXHIBIT NO. 23A2

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MEMORANDUM

TO: Kenneth G. Laden — DDOT
Abdoulaye Bah — DDOT

CC: Drew Greenwald — Grid Properties, Inc.
Jim Tuman — Grid Properties, Inc.
Chip Glasgow — Holland & Knight, LLP
Kyrus Freeman — Holland & Knight, LLP

FROM: Daniel VanPelt, P.E.
Robert Schiesel, P.E.
Frederick Gorove, P.E.

DATE: October 28, 2004

SUBJECT: Revised DC USA Parking Reduction Analysis

INTRODUCTION

This memorandum is a revision of the *DC USA Parking Reduction Analysis* prepared by Gorove/Slade Associates, Inc. (G/SA), dated April 2, 2002. This memorandum demonstrates that the number of proposed DC USA parking spaces will be sufficient to meet the project's expected demand.

This revision is necessary due to a change in the proposed development program, outlined below. The total amount of planned development is being reduced, as are the planned amount of parking spaces.

- *2002 Development Program*
  - 378,500 Square Feet (SF) retail (GLA)
  - 25,000 SF health club
  - 40-lane bowling alley
  - Either a movie theater with 3,500 seats, or a 80,000 SF retail discount store
  - 1,364 parking spaces

- *2004 Development Program*
  - 405,000 SF retail (GLA)
  - 40,000 SF Health Club (GLA)
  - 1,000 parking spaces

ANALYSIS

Practical Need Calculation

The 'practical need' calculation is based on retail industry standard parking ratios observed in practice at shopping centers and documented by the Urban Land Institute (ULI) in *Parking Requirements for Shopping Centers, 2nd Edition.* The ULI methodology starts with an estimation of 4 spaces for each 1,000 square feet of commercial space. This is based on data collected throughout the year for suburban shopping centers located across the country. The rate of 4 spaces per 1,000 square feet corresponds to the 20th highest hour occurring over the course of the year for all the hours the shopping center is open. Use of this design hour to calculate need results in sufficient parking for all patrons and employees for more than 3,000 hours per year. For approximately 40% of the operational hours of the year, over half of the parking spaces will remain empty. By using the 20th highest hour, only 19 hours out of the year should it be expected that the parking supply will be exceeded and these 19 hours will occur typically during the 10 busiest shopping days of the year.

Given that the ULI rate applies to suburban shopping center models, the rate was adjusted based on two assumptions: (1) that employees, which generally constitute 15-20% of the parking demand, will use alternate modes of transportation to reach the site, and (2) DC USA patrons will use alternate modes 35% of the time given the urban site location. The employee parking need is commonly observed to be as much as 20% during peak periods. For the purposes of this analysis, 15% employee parking was assumed. The 35% alternative mode reduction is based on District-wide transit use as recently documented in the *Columbia Heights/Mount Pleasant Transportation Study* prepared by Cambridge Systematics. Table 3 contains the result of the ULI based parking demand calculations.

Table 1 – Peak Parking Demand Calculations

Amount (GLA)	ULI Ratio	Employee Reduction	Transit Reduction	Adjusted Ratio	Adjusted Demand
445,000 SF	4 spaces per 1,000 SF	(15%)	(35%)	2.2 spaces per 1,000 SF	983

The peak parking demand is 98% of the programmed supply; the proposed 1,000 parking spaces will provide sufficient capacity.

It should be amplified that the ULI methodology results in a peak demand calculation that will be exceeded only several hours a year. Thus, even though the peak parking demand is 98% of the supply; this number will only be met or exceeded at peak times of the year, such as when the development first opens or during holiday shopping periods.

Comparable Sites

Several shopping center sites located within sections of Washington, DC were identified for consideration as comparables. The most similar project, in that it contains "big box" retailers, is located at 4500 Wisconsin Avenue above the Tenleytown Metro station. This project, along with The Shops at Georgetown Park, has a parking ratio less than the proposed ratio of 2.2 for DC USA. The new project located at Gallery Place has a very similar parking supply available for the retail component of the project. The comparable ratios are attributable to several factors most notably high non-auto mode split due to transit access and urban location.

Table 2 – Comparable DC Retail Parking Ratios

Site	Size	Number of Parking Spaces	Parking Ratio per 1,000 SF
4500 Wisconsin – Best Buy & Container Store	88,000 SF	150*	1.7
The Shops at Georgetown Park	449,000 SF	650	1.5
Gallery Place	260,000	608*	2.3

* Does not include parking for the residential component of the project.

CONCLUSIONS

- The development program has been reduced along with the planned parking when compared to the previously reported 2002 program.
- The practical parking need as calculated using the adjusted ULI rate results in 983 spaces.
- The proposed 1,000 parking spaces will have sufficient capacity for the practical parking need.
- The practical need parking demand will only be exceeded for several hours of the year during busy shopping days such as the holiday shopping season.
- According to ULI, it could be expected that half of the parking supply will remain empty for as much as 40% of the operational hours throughout the year.

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FROM: Daniel VanPelt, P.E.
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Frederick Gorove, P.E.

DATE: October 28, 2004

SUBJECT: DC USA Pedestrian Analysis

INTRODUCTION

The purpose of this memorandum is to assess the adequacy of the sidewalk widths being proposed adjacent to the north, east and south sides of the DC USA retail project in Columbia Heights. The assessment considers the sufficiency of the sidewalks in light of projected increased pedestrian volumes associated with the retail development and future development in the vicinity of the project. The basis of this analysis includes an assessment of sidewalk capacity undertaken by HCM Methodology and an analysis of sidewalks serving comparable land uses in the DC area.

PROPOSED SIDEWALK

The proposed DC USA plan drafted by Bower Lewis Thrower Architects shows a total sidewalk width of 19' 9" from the face of the building façade glass to the curb on the 14th Street frontage. Accounting for structural piers that project from the building façade a distance of 1' 9" on a spacing of approximately 12' apart except where there are entry doors, the sidewalk width narrows to 18' at these pier locations. The 18' dimension is held constant for most of the block, but increases to as much as 37' 3" at the northern end of the block due to a northeasterly bend in 14th Street away from the building. As part of the streetscape, 5' wide tree boxes are being proposed set back from the curb a distance of 10". The planters will not be located in areas where there will be high concentrations of pedestrians such as in front of critical building entry points or at the intersections of 14th Street/Irving Street and 14th Street/Park Road. A parking or "lay by" lane will be provided in the northern portion of the block, north of the main entrance to the project, to avoid street congestion.

The Irving Street sidewalk adjacent to the project will have a width of 12' 2" (10' 5" at pier locations) at

the narrowest point from the building façade glass to the curb. The sidewalk widens to 20' - 22' in some locations along Irving Street. The Park Road sidewalk will measure 10' 6" (9' 9" at pier locations) consistently along the building frontage. The Irving Street and Park Road sidewalks will not have planter boxes.

COMPARABLE SIDEWALKS

Multiple sites throughout the DC area were identified for the purpose of comparing the proposed DC USA sidewalks to known sidewalks functioning today. Each of the comparable locations support considerable retail activity and high volumes of pedestrian traffic. The sidewalks were measured at the narrowest point from the face of the building to the curb. Any features that reduce the width of the sidewalk, such as landscaping, planter boxes or sidewalk seating/dining, were subtracted to achieve the available sidewalk width. The information obtained for each of the comparables is contained in Table 1.

Table 1 – Comparison of DC USA Sidewalk Frontages to Comparable Locations

		On-Street Parking	Sidewalk Width at Narrowest Point	Reduction for Planter Boxes and Patio Seating	Available Clear Sidewalk Width
Proposed DC USA	*14th Street Sidewalk*	*No*	*18.00 feet*	*(5.83) feet*	*12.17 feet*
	Irving Street Sidewalk	*No*	*10.42 feet*	--	*10.42 feet*
	Park Road Sidewalk	*Yes*	*9.75 feet*	--	*9.75 feet*
Gallery Place	*H St NW adjacent to Benneton*	*No*	*15.5 feet*	*(4) feet*	*11.5 feet*
	7th St NW adjacent to Urban Outfitters	*Off peak*	*16 feet*	*(4) feet*	*12 feet*
L St NW	*west of 18th St NW north side*	*Evening & weekend*	*22 feet*	*(14) feet*	*8 feet*
	east of 19th St NW south side	*Off peak*	*21 feet*	*(14) feet*	*7 feet*
Downtown Silver Spring	*Fenton St adjacent to Borders*	*No*	*17 feet*	*(10) feet*	*7 feet*
	Fenton St adjacent to Men's Warehouse	*No*	*16.4 feet*	*(6) feet*	*10.4 feet*
4500 Wisconsin adjacent to Best Buy		*No*	*23 feet*	*(8) feet*	*15 feet*
Mazza Gallerie on Wisconsin Ave at main entrance		*Off peak*	*22 feet*	*(10) feet*	*12 feet*
Bethesda Row on Bethesda Ave at Barnes & Noble		*Yes*	*16 feet*	*(7.5) feet*	*8.5 feet*
Pentagon Row on Joyce St east side		*Yes*	*12 feet*	*(5) feet*	*7 feet*
Clarendon Market Common on Clarendon adjacent to The Container Store		*Yes*	*19.5 feet*	*(5.5) feet*	*14 feet*
Georgetown M St NW between 31st St and Wisconsin Ave		*Off peak*	*10 feet*	*(4) feet*	*6 feet*

A review of the table shows that there is much variation from location to location, but the DC USA proposed dimensions are similar to or exceed many of the comparable location dimensions.

PROPOSED SIDEWALK FLOW RATES

According to the *Highway Capacity Manual* 2000 (HCM) published by the Transportation Research Board, the maximum capacity of a sidewalk that experiences platooning (grouping of pedestrians often caused by interruptions of flow such as at a signalized intersection) is 18 persons per minute per foot. This value is based on a compilation of research data and years of industry practice. The HCM also presents a methodology to relate the operation of a sidewalk based on a 15-minute peak pedestrian flow rate. The HCM methodology provides level of service (LOS) grades ranging from "A" to "F" with LOS E being defined as the sidewalk capacity. The common practice is to design for LOS D (11 persons per minute per foot) during peak conditions on the basis that the majority of off-peak times will be much less congested and operate at much higher LOS.

Considering the HCM methodology, the following assumptions in Table 2 were applied to the minimum dimensions of the proposed sidewalks. The planter boxes physically reduce the sidewalk width because they occupy portions of the sidewalk that would otherwise be available to pedestrians. The planter box reduction applies to 14th Street only. Additionally, a reduction is taken for the space immediately adjacent to the building, which is occupied by architectural piers at some locations and is often not utilized by pedestrians so as to avoid opening doors or individuals standing next to the building to window shop. A third reduction was taken to account for the fact that pedestrians typically do not walk on the portion of the sidewalk located immediately adjacent to the curb. This third reduction is not applicable to 14th Street because the planter boxes are located adjacent to the curb. The total sidewalk width with reductions applied results in the effective sidewalk width for analysis purposes.

Table 2 – Analysis Assumptions for the Proposed DC USA Sidewalk Frontages

	Minimum Width from Glass Façade to Curb	Reduction for Planter Boxes	Reduction for Friction Space Adjacent to Building	Reduction for Shying Away from Curb	Effective Sidewalk Width
14th Street Sidewalk	*19.75 feet*	*(5.00 + 0.83)*	*(3.00)*	--	*10.92 feet*
Irving Street Sidewalk	*12.17 feet*	--	*(3.00)*	*(1.50)*	*7.67 feet*
Park Road Sidewalk	*10.50 feet*	--	*(3.00)*	*(1.50)*	*6.00 feet*

Applying the analysis assumptions in Table 2 using the HCM methodology produces the peak 15-minute flow rates in Table 3. It is recommended that the maximum flow rate corresponding to LOS D be considered for design purposes. If this flow rate is not exceeded during peak pedestrian activity periods then non-peak periods will function with considerably less congestion. However, if the LOS D maximum design flow were to be exceeded there will still be pedestrian capacity as illustrated in Table 3.

Table 3 – Peak 15-Minute Flow Rates for the Proposed DC USA Sidewalk Frontages

	Max Design Flow Rate (LOS D)	Max Capacity Flow Rate (LOS E)
14th Street Sidewalk	*1,801 p/15 min*	*2,948 p/15 min*
Irving Street Sidewalk	*1,265 p/15min*	*2,070 p/15 min*
Park Road Sidewalk	*990 p/15min*	*1,620 p/15 min*

PEDESTRIAN VOLUME DEMANDS

Existing pedestrian volumes during the weekday AM and PM peak hours were collected on October 19 and 20, 2004 for the 14th Street sidewalk adjacent to the DC USA site. In addition, an estimate was made of the order of magnitude of pedestrian trips that will be generated by DC USA along 14th Street to determine the impacts the foot traffic generated by this large-scale retail project will have on the planned sidewalks. This projection does not include other development in the corridor that will add to pedestrian traffic.

New pedestrian traffic generated by the DC USA project was formulated using assumptions regarding modal split and vehicular trip generation contained in the DC USA Traffic Impact Analysis (TIA). According to the ITE *Trip Generation* methodology contained in the TIA, the project would generate 383 AM peak hour and 1,677 PM peak hour trips before taking a transit reduction of 50% based on WMATA *Transit Ridership Surveys*. Assuming the 50% mode split reducing vehicular trips and converting the vehicle trips into people trips assuming a vehicle occupancy of 1.2 consistent with retail uses, this translates to 230 AM peak hour (58 AM peak 15 minutes) and 1,007 PM peak hour (252 PM peak 15 minutes) pedestrian trips.

Table 4 contains a summary of the existing peak 15-minute pedestrian flows, the addition of new pedestrian trips generated by DC USA (all pedestrians assumed to use 14th Street), the total number of pedestrians in the future (not including other development) and the pedestrian flows as a percentage of the maximum design flow. The table shows that existing pedestrian traffic and new DC USA pedestrian traffic occurring during peak hours of the day will utilize only 7.3% and 19.0% of the design flow for the AM and PM peak hours respectively. Therefore more than 81% of the sidewalk capacity will remain for additional pedestrian traffic to be generated by other future development. This analysis indicates that the proposed sidewalk will provide sufficient capacity to accommodate new pedestrian trips associated with DC USA and other future development.

Table 4 – 14th Street Peak 15 Minute Flows

	AM Peak		PM Peak	
	Peak 15 Min Flow	*% of Max Design Flow*	*Peak 15 Min Flow*	*% of Max Design Flow*
Existing	*73*	*4.1%*	*90*	*5.0%*
DC USA Projection	*58*	*3.2%*	*252*	*14.0%*
*Total**	*131*	*7.3%*	*342*	*19.0%*

* Does not include pedestrian traffic generated by other future developments.

INDUSTRY STANDARDS

FHWA (Federal Highway Administration) Pedestrian Facilities Users Guide

The *Pedestrian Facilities Users Guide* states that the width of a sidewalk depends primarily on the number of pedestrians who are expected to use the sidewalk at a given time – high-use sidewalks should be wider than low-use sidewalks. "Street furniture" and sidewalk cafes require extra width.

The minimum clear or unobstructed sidewalk widths are:

- Local or collector streets - 5 feet
- Arterial or major streets - 6 - 8 feet
- Central Business District (CBD) areas - 8 feet minimum without planter strip to 12 feet minimum with planter strip
- Along parks, schools, and other major pedestrian generator - 8 - 10 feet

Similarly, when sidewalks abut storefronts, the sidewalk should be built 2 feet wider to accommodate window shoppers and to avoid conflicts with doors opening and pedestrians entering or leaving the buildings.

The sidewalks along the DC USA façade exceed the minimum clear or unobstructed sidewalk widths recommended in the *Pedestrian Facilities Users Guide* for arterials or major streets, and also exceed the minimum widths recommended in CBD areas and along major pedestrian generators.

AASHTO (American Association of State Highway and Transportation Officials) Guide for the Planning, Design, and Operation of Pedestrian Facilities

Along arterials not in the CBD, sidewalk widths of 6-to-8 feet are desirable where a planting strip is provided between the sidewalk and the curb, and sidewalk widths of 8-to-10 feet are desirable where the sidewalk is flush against the curb. In CBD areas, the desirable sidewalk width is 10 feet or sufficiently wide to provide the desired level of service. These widths represent a clear or unobstructed pedestrian travel way. When the sidewalk abuts storefronts, it is desirable to provide a sidewalk about 2 feet wider to

accommodate shy distance from walls, shoppers stopping to look into windows, and to avoid conflicts with doors opening and pedestrians entering and leaving the adjacent buildings

The minimum unobstructed pedestrian travel ways along DC USA façade exceed the AASHTO recommendations.

LAY BY LANE LOCATION

A lay by parking lane is being proposed for a location along the 14th Street frontage north of the main entrance to DC USA. The design team chose this location because practical experience has shown that lay by lanes immediately adjacent to the building entrance can be problematic. Such features located near an entrance can promote undesirable activities associated with loitering and can increase sidewalk congestion as a result of pick up/drop off activity. Provisions for pick up/drop off activity have been provided in the parking garage. Additionally, locating the lay by lane closer to the intersection with Irving Street in the vicinity of the entrance will result in on-street congestion by increasing the amount of vehicular movements that will conflict with one another at this critical location.

CONCLUSIONS

This memorandum looked at comparables, sidewalk capacities according to HCM 2000 and industry standards, all of which indicate that the proposed DC USA sidewalks will be sufficient to serve the project. The additional pedestrian generation of other development planned for the corridor is not expected to materially change these conclusions since DC USA and existing pedestrian activity will utilize less than 20% of the sidewalk capacity during peak conditions. The facts supporting this conclusion include: a) many of the pedestrians forecasted in the analyses contained in this document will also be visiting the other developments in the corridor; b) the Metro Station and the bus stop are across the street from the DC USA site so these people will not cross the street and; c) there is sufficient sidewalk capacity to accommodate a greater increase in volume than would be expected from the other development.

The analysis reviewed each sidewalk at its narrowest point with many portions of the sidewalks being much wider. To avoid congestion on the sidewalks, planter boxes and sidewalk furniture features will not be located where there will be a concentration of pedestrians. The lay by lane will be located to the north of the main entrance, also to avoid both pedestrian and on-street congestion.

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Enclosure
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JIM GRAHAM
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Chairperson
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Voting Member
Board of Directors, Washington Metropolitan Area Transit Authority

October 20, 2004

Board of Zoning Adjustment
441-4th Street, N.W.
Suite 210S
Washington, D.C. 20001

Re: BZA Application No. 17232
Application of RLA Revitalization Corporation
14th & Irving Streets, N.W.

Dear Members of the Board:

As the Councilmember with whom this project rests, I am writing to urge your approval of the above-referenced BZA application. This long-awaited project which is so vital to the provision of retail services to the residents of Ward one and the District is, after years of hard work, ready to proceed forward. The original project previously approved by the Board was decreased in scope in order to address the unique problems and difficulties in constructing the third parking garage level on the site.

In addition, due to the large size of the roof and several large tenants, there will be multiple roof structures. Special exception relief is needed to address that issue.

The revised plan has been carefully reviewed by many departments within the District of Columbia including the Deputy Mayor's office, my office, DDOT, and other agencies. All have concluded that this is the appropriate project and development for the site. Collectively, we are now moving forward to implement this vision with the agreement between Target and the developer finally signed and in place. The City Council previously took emergency action this past summer to provide a financing mechanism for the project.

In closing, I urge your prompt approval of this application for special exception and variance relief, which is necessary to permit this development to proceed.

Sincerely,

Jim Graham

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Outline of Testimony of Developer

I. Introduction

II. Development History in District of Columbia

III. Description of Subject Property

IV. Description of Proposed Project

V. Conclusion

L

Outline of Testimony of Architect

I. Introduction and Professional Qualifications

II. Site and Location Description

III. Project Description

  A. Design Goals and Constraints

  B. Description of Project Design

IV. Conclusion

M

Outline of Testimony of Traffic Consultant

I. Introduction

II. Experience and Expertise

III. Project Scope

IV. Existing Conditions

V. Future Background Conditions

VI. Total Future Traffic and Pedestrian Conditions

VII. Conclusions

N

Outline of Testimony of Land Planner

I. Site Location and Description

II. Description of Surrounding Area

III. Existing Zoning

IV. Proposed Development

V. Analysis of relief Required

VI. Conclusion

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