



Turner Construction Company
11413 Isaac Newton Square
Reston, VA 20190

November 8, 2016

Mr. Sheldon Stein
Ranger Properties
80 8th Avenue #1010
New York, NY 10011
212-675-6900
ss@rangerproperties.com

Reference: **400 Florida Avenue, NE**

Subject: **Parking Garage Cost Analysis**

Dear Sheldon,

Pursuant to your request, we have reviewed the drawings prepared by SK&I dated November 2, 2016, and prepared a preliminary construction cost estimate. The cost are significantly higher on a per parking space basis than any other project we maintain history on. We have attached the conceptual estimate for the 400 Florida Avenue parking garage along with a table of Turner's historical costs for a number underground parking garages in the area. As you will note on the table, the average per parking space of the 12 projects listed is \$48,888 compared to the cost of \$145,485 per parking space for the proposed 400 Florida Avenue parking garage.

The site configuration has a significant impact on the per space cost. A few examples are listed below:

- The long and narrow shape of the site is inefficient for the sheeting and shoring work. A premium is associated with a narrow site Support of Excavation (SOE) system. The cost for the 400 Florida Avenue site is \$23.46 per sf of parking garage compared to \$12.92 per SF for a more regularly shaped site. This represents an 82% premium in cost for this element.
- The size of the garage also carries a premium for the structure. We would typically expect the structure in the \$40 range per SF, the same project referenced above had a structure cost of \$40.91 per SF compared to this site which has an estimated structure cost of \$62.29 per SF, or 66% premium.
- The long and narrow site shape requires the garage ramp run along the long side of the site, making the layout very inefficient and eliminating the possibility for more parking spaces compared to the overall size of the garage. The attached chart indicates how inefficient the proposed garage would be. The average underground garage provides 1 parking space for every 444 SF of garage. The proposed garage only provides 1 parking space for 931 SF.

Other factors affecting the cost for this site include:

- The history of the site as a former gas station will necessitate exporting of material to a hazardous waste facility at elevated disposal costs. This cost would be incurred had it

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been a larger site but would not be incurred for the alternate slab-on-grade design with no garage.

- Data on the site suggests required dewatering will be required. Costs for dewatering do not scale as it requires a full engineering and sophisticated installation regardless how small the site. Often on larger sites engineered dewatering is avoided where local water pockets can be managed by pumping from one side of the site to another. On a small site such as this most of the site will be active simultaneously and local pumping precluded.

Lastly, the fixed costs of various features of a garage in a basement include:

1. Elevator stops to service the garage from both elevator lobbies.
2. Driveway ramp.
3. Exiting stairs.
4. CO2 monitoring, exhaust system and associated mechanical and areaways.
5. Lighting.
6. Garage door.
7. Parking controls.
8. Sub-grade drainage system below parking level.
9. Dry type valve system for ventilated garage for the fire sprinkler system.

These costs are pro-rata extremely high when only yielding 22 spaces as compared to a larger garage where the lobbies, elevator pits et al would be amortized across a hundred or more parking spaces more typical of larger sites.

Please contact me if you have any questions, I can be reached anytime at 202-438-3061.

Sincerely,



Derek Brown
Deputy Operations Manager



Cost Index Data		
Baseline	821	1Q 2012
Current	995	3Q 2016

Below Grade Garages

Project	1101 K Street	77 K Street	Square 673	Ballegger Building	3 White Flint North	The Monty Residential	1200 17th Street	Art Place (Below Grade component)	5333 Connecticut Avenue	Marymount Ballston	Homewood Suites - 50 M St	Hilton 22nd & M	Average	Proposed 400 Florida Avenue
Location	Washington DC	Washington DC	Washington DC	Alexandria, VA	Bethesda, MD	Bethesda, MD	Washington DC	Washington DC	Washington DC	Arlington, VA	Washington DC	Washington DC		Washington DC
Year	2004	2006	2007	2007	2010	2011	2012	2013	2013	2014	2014	2012		2016
GSF	73,000	100,800	126,000	133,993	302,438	98,273	53,025	170,816	83,923	121,464	17,263	20,000		20,481
Cars	169	241	289	277	650	213	95	332	213	311	43	53		22
GSF / Car	432	418	436	484	465	461	558	515	394	391	401	377	444	931
Construction Cost Baseline*	\$5,367,690	\$6,773,760	\$9,025,380	\$12,099,568	\$20,562,760	\$8,454,426	\$5,893,429	\$12,681,152	\$6,611,853	\$11,829,686	\$2,300,239	\$2,923,072		\$3,200,675
Adjusted Construction Cost**	\$6,505,300	\$8,209,368	\$10,938,189	\$14,663,910	\$24,920,762	\$10,246,229	\$7,142,462	\$15,368,753	\$8,013,147	\$14,336,830	\$2,787,744	\$3,542,578		\$3,200,675
\$/GSF	\$89.11	\$81.44	\$86.81	\$109.44	\$82.40	\$104.26	\$134.70	\$89.97	\$95.48	\$118.03	\$161.49	\$177.13	\$110.86	\$156.28
\$/Car	\$38,493	\$34,064	\$37,848	\$52,938	\$38,340	\$48,104	\$75,184	\$46,291	\$37,620	\$46,099	\$64,831	\$66,841	\$48,888	\$145,485

* all baseline costs adjusted to 2012 dollars (1Q 2012) = 821

** Adjusted Construction Cost is adjusted to 2016 dollars (3Q 2016) = 995



400 Florida Avenue, NE
Washington, DC

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Item	Description	Takeoff Qty	Unit Cost	Amount
010	Garage			
01100	General Requirements			
0105	General Requirements	20,481.00 gsf	1.75 /gsf	35,842
	01100 General Requirements			35,842
01100	General Conditions			
0105	General Conditions	2.00 mo	125,000.00 /mo	250,000
	01100 General Conditions			250,000
02315	Excavation & Fill			
0040	Dewatering - Not Included	1.00 ls		
0100	Excavate Level B1 - Hotel, Avg 14' deep	4,407.00 lcy	28.00 /lcy	123,396
0200	Excavate Level B1 - Apartment, Avg 14' deep	6,077.00 lcy	28.00 /lcy	170,156
	02315 Excavation & Fill			293,552
02455	Sheeting & Shoring			
n	4200 Sheet & Shore Level B1 - Hotel. (Assumes 15' of Lagging)	4,380.00 sf	48.00 /sf	210,240
n	4300 Sheet & Shore Level B1 - Apartment, (Assumes 15' of Lagging)	5,385.00 sf	48.00 /sf	258,480
	4565 Safty Railing - Hotel Side	292.00 lf	18.00 /lf	5,256
	4570 Safty Railing - Apt Side	359.00 lf	18.00 /lf	6,462
	02455 Sheeting & Shoring			480,438
03300	Building Concrete			
00100	Foundations / Spread Footings / Strip Footing / Elev Pits	20,481.00 sf	12.00 /sf	245,772
00150	Level B2 Slab on Grade	20,481.00 sf	9.00 /sf	184,329
00200	Level 1 Elevated Slab	20,481.00 sf	31.00 /sf	634,911
01600	Foundation Wall B1	9,114.00 sf	23.00 /sf	209,622
01700	Elevator Pits	4.00 ea	2,500.00 /ea	10,000
	03300 Building Concrete			1,284,634
04200	Masonry			
n	0020 CMU partitions at level P1 Under Hotel	2,160.00 lf	14.00 /lf	30,240
n	0060 CMU partitions at level P1 Under Apartment	2,160.00 lf	14.00 /lf	30,240
	04200 Masonry			60,480
05500	Metal Fabrications			
2400	Interior Misc Metals	20,481.00 gsf	1.00 /gsf	20,481
n	---- Steel Angle Corner Guards			
n	---- Pipe Guards			
n	---- Pipe Bollards			
n	---- CMU Clip Angles to Support CMU Walls			
n	---- Trench Drain Covers at Garage or Dock Entrances			
n	---- Elevator Sump Pit Grates			
n	---- Elevator Sump Pit Ladders			
n	---- Elevator Divider Beams			
n	---- Egress Stair Rails and Overrun Gates			
	05500 Metal Fabrications			20,481
06100	Rough Carpentry			
00050	Rough Carpentry	20,481.00 gsf	0.10 /gsf	2,048
	06100 Rough Carpentry			2,048
07100	Waterproofing			
0050	Elevator Pits - Hotel	2.00 ea	1,500.01 /ea	3,000
0060	Elevator Pits - Apartment	2.00 ea	1,499.99 /ea	3,000
0020	Horizontal Fluid Applied Above Level P1 Out Front - Apartment	824.00 sf	12.00 /sf	9,888
0030	Horizontal Fluid Applied Above Level P1 Out Back - Apartment	318.00 sf	12.00 /sf	3,816
0040	Horizontal Fluid Applied Above Level P1 Out Front - Hotel	792.00 sf	12.00 /sf	9,504
0050	Horizontal Fluid Applied Above Level P1 Out Back - Hotel	901.00 sf	12.00 /sf	10,812
0020	Foundation Wall Waterproofing Level P1, 15' High	9,765.00 sf	10.00 /sf	97,650
0200	Exhaust & Intake Shaft Coatings - Hotel	1.00 ls	1,000.00 /ls	1,000



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	0300 Exhaust & Intake Shaft Coatings - Apartment	1.00 ls	999.98 /ls	1,000
	1200 Expansion Joint in WP Slab Level 1	41.00 lf	125.00 /lf	5,125
	0010 Foundation Drainage - Apartment Footprint	11,721.00 sf	1.25 /sf	14,651
	0020 Foundation Drainage - Hotel Footprint	8,500.00 sf	1.25 /sf	10,625
	07100 Waterproofing			170,071
07900	Joint Sealers			
	0200 Joint Sealants - Garage	20,481.00 gsf	0.20 /gsf	4,096
	07900 Joint Sealers			4,096
08110	Doors, Frames, & Hardware			
	4500 Opening at Level P1	10.00 ea	900.00 /ea	9,000
	08110 Doors, Frames, & Hardware			9,000
08330	Coiling Overhead Doors			
n	2020 Interior Overhead Coiling Doors or Grilles			
	0050 OH Door at Garage Entry	1.00 ea	8,500.00 /ea	8,500
	08330 Coiling Overhead Doors			8,500
08400	Glass & Glazing			
	9000 Doors at Garage Elevator Lobbies - Level P1 - Apartment	1.00 lvs	2,999.98 /lvs	3,000
	0600 Interior Glass and Aluminum Storefront at Garage Elevator Lobby	420.00 sf	40.00 /sf	16,800
	08400 Glass & Glazing			19,800
09250	Drywall & ACT			
n	0040 Semi Rigid Insulation Board at Underside of Level P1	15,208.00 sf	1.50 /sf	22,812
	0900 Gypsum Board Ceilings a Shuttle Elevator Lobbies Level P1	304.00 sf	4.52 /sf	1,374
	09250 Drywall & ACT			24,186
09300	Tile			
	0400 Tile Base at Shuttle Lobby - P1	200.00 lf	14.00 /lf	2,800
	6900 Tile at Floor in P1 Shuttle Lobby - Apartment	152.00 sf	13.99 /sf	2,126
	7200 Tile at Floor in P1 Shuttle Lobby - Hotel	152.00 sf	13.99 /sf	2,126
	09300 Tile			7,053
09650	Resilient Flooring & Carpet			
n	1100 Resilient Base,	350.00 lf	1.70 /lf	595
	8150 Resilient Flooring,			
	09650 Resilient Flooring & Carpet			595
09900	Painting & Wall Coverings			
n	2400 Sealer Hardener at concrete floors in rooms of garage	2,166.00 sf	0.50 /sf	1,083
	0200 Painted CIP Structure in Garage			
	0800 Painted CMU / CIP Walls in Parking Areas, Level P1	9,984.00 sf	1.00 /sf	9,984
	0100 Sealed Concrete at Parking Areas Level P1	18,381.00 sf	1.00 /sf	18,381
	---- Misc Metals	1.00 allo	5,000.00 /allo	5,000
	6520 Paint Walls in Misc Areas (i.e.Stairs, Mech) , Level P1	1,320.00 sf	1.00 /sf	1,320
	09900 Painting & Wall Coverings			35,768
10400	Signage Allowance			
n	0600 Handicap Parking Signage within Garage	5.00 ea	75.00 /ea	375
	01000 Luminescent Stair Markings			
	01100 Misc Code Related Signage - Level P1 - Apartment	6.00 ea	75.00 /ea	450
	01100 Misc Code Related Signage - Level P1 Hotel	6.00 ea	75.00 /ea	450
	01100 Wayfinding - Directional Signage - Level P1	1.00 lvl	750.00 /lvl	750
	10400 Signage Allowance			2,025
10520	Fire Protection Specialties			
	2080 Fire extinguishers	4.00 ea	60.00 /ea	240
	10520 Fire Protection Specialties			240
11150	Parking Control Equipment Allowance			
	5000 Parking control equipment allowance	1.00 allo	39,999.72 /allo	40,000



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Item	Description	Takeoff Qty	Unit Cost	Amount
	11150 Parking Control Equipment Allowance			40,000
13900	Fire Suppression Systems			
6001	Dry Pipe Sprinkler System - Level P1	20,481.00 sf	2.75 /sf	56,323
	13900 Fire Suppression Systems			56,323
14200	Vertical Transportation			
0425	Hotel Elevator at Level P1 (additional opening cost only)	3.00 stop	5,000.00 /stop	15,000
0525	Apartment Elevator at Level P1 (additional opening cost only)	2.00 stop	5,000.00 /stop	10,000
	14200 Vertical Transportation			25,000
15700	HVAC			
1000	Plumbing / HVAC - Level P1	20,481.00 sf	5.00 /sf	102,405
	15700 HVAC			102,405
16000	Electrical			
8000	Electrical Package- Level P1	20,481.00 sf	5.00 /sf	102,405
	16000 Electrical			102,405
32121	Asphalt Paving			
n 1100	Precast concrete parking bumpers, wheel stops	18.00 ea	90.00 /ea	1,620
0500	Painted pavement markings w/in garage	88.00 spc	25.00 /spc	2,200
0600	Painted pavement markings at grade	1.00 allo	3,999.99 /allo	4,000
	32121 Asphalt Paving			7,820
32330	Site Furnishings			
1000	Floor Mounted Bike Racks	10.00 ea	350.00 /ea	3,500
----	Vertical Space Saver Bike Racks	10.00 ea	200.00 /ea	2,000
	32330 Site Furnishings			5,500
	Contractors Fee and Insurance	1	est 5%	152,413
	Contractors Fee and Insurance			152,413
	010 Garage	20,481.00 gsf	156.28 /gsf	3,200,675