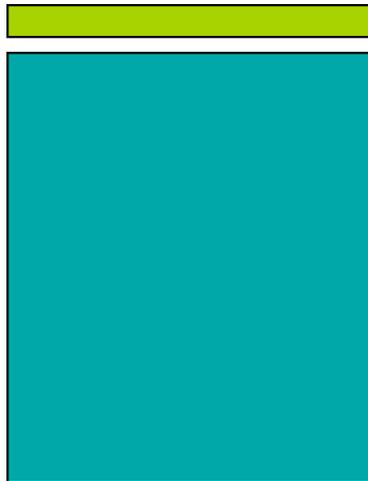


# Chateau Ocean

traffic study



prepared for:  
**Chateau Group**

**Traf Tech**  
ENGINEERING, INC.

**July 2012**

July 27, 2012

Mr. Esteban Koffsmon LEED AP  
**Chateau Group**  
1000 E. Hallandale Beach Boulevard #B  
Hallandale Beach, Florida 33009

**Re: Chateau Ocean - Traffic Study**

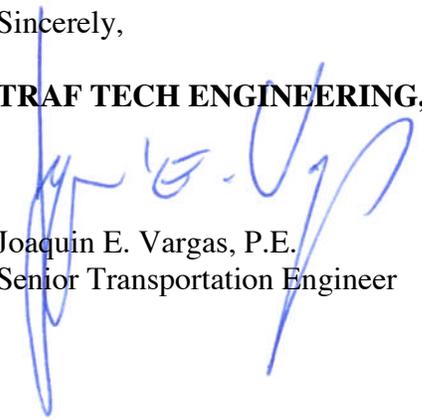
Dear Mr. Koffsmon:

Traf Tech Engineering, Inc. is pleased to provide you with the results of the traffic statement undertaken for the proposed re-development project planned to be located at southeast corner of Collins Avenue and 94<sup>th</sup> Street in the Town of Surfside in Miami-Dade County, Florida.

It has been a pleasure working with Chateau Group on this project.

Sincerely,

**TRAF TECH ENGINEERING, INC.**



Joaquin E. Vargas, P.E.  
Senior Transportation Engineer

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## INTRODUCTION

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Chateau Ocean is a proposed 90-unit high-rise residential complex planned to be located at the south east corner of the intersection of Collins Avenue and 94<sup>th</sup> Street in the Town of Surfside in Miami-Dade County, Florida. The site is currently developed with a 92-room hotel.

Traf Tech Engineering, Inc. was retained by Chateau Group to conduct a traffic study in connection with the proposed redevelopment project. The study addresses the traffic generated by the proposed apartment project and the projected driveway volumes at the three access driveways (one on Collins Avenue and two on 94<sup>th</sup> Street).

This study is divided into four (4) sections, as listed below:

1. Inventory
2. Trip Generation
3. Trip Distribution and Traffic Assignment
4. Conclusions



## INVENTORY

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### **Existing Land Use and Access**

The project site currently consists of a 92-room hotel. Access to existing lodging facility is provided via a right-turn in/right-turn out driveway on Collins Avenue and a wide dropped-curb along 94<sup>th</sup> Street.

### **Proposed Land Use and Access**

The proposed redevelopment project will result in 90 high-rise residential units. The existing access driveway on Collins Avenue will remain but will be restricted to right-turns inbound only (safety improvement). Moreover, the wide dropped-curb on 94<sup>th</sup> Street will be eliminated by converting it into two access driveways, which will also improve traffic operations and safety.

Appendix A contains a copy of the proposed site plan (Ground Floor) for the project.

### **Roadway System**

One major roadway (Collins Avenue) is located adjacent to the project site. Collins Avenue (State Road A1A) is a one-way (northbound) 3-lane arterial roadway with a posted speed limit of 30 miles per hour near 94<sup>th</sup> Street. SR A1A is classified as an Access Class 7 facility by the Florida Department of Transportation.

## TRIP GENERATION

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A trip generation analysis was conducted for the proposed redevelopment project. The analysis was performed using the trip generation rates published in the Institute of Transportation Engineer's *ITE Trip Generation Manual* (8<sup>th</sup> Edition). The trip generation analysis was undertaken for daily, AM peak hour, and PM peak hour conditions. According to ITE's *Trip Generation Manual* (8<sup>th</sup> Edition), the most appropriate "land use" categories for the existing and proposed land uses are:

### HIGH RISE RESIDENTIAL CONDOMINIUM/TOWNHOUSE (ITE Land Use 232)

#### *Daily Trip Generation*

$$T = 4.18 (X)$$

Where T = number of daily trips

X = number of dwelling units

#### *AM Peak Hour*

$$T = 0.34 (X) \text{ (19\% inbound and 81\% outbound)}$$

Where T = number of AM peak hour trips

X = number of dwelling units

#### *PM Peak Hour*

$$T = 0.38 (X) \text{ (62\% inbound and 38\% outbound)}$$

Where T = number of PM peak hour trips

X = number of dwelling units

### HOTEL (ITE Land Use 310)

#### *Daily Trips*

$$T = 8.17 (X)$$

Where T = average daily vehicle trip ends

X = number of hotel rooms

#### *AM Peak Hour*

$$T = 0.56 (X) \text{ (61\% inbound and 39\% outbound)}$$

Where T = average AM peak hour vehicle trip ends

X = number of hotel rooms

#### *PM Peak Hour*

$$T = 0.59 X \text{ (53\% inbound and 47\% outbound)}$$

Where T = average PM peak hour vehicle trip ends

X = number of hotel rooms

Using the above-listed trip generation rates from the ITE document, a trip generation analysis was undertaken for the existing and proposed land uses. The results of this effort are documented in Table 1.

<b>TABLE 1</b>				
<b>Trip Generation Summary</b>				
<b>Chateau Ocean - Surfside, Florida</b>				
		<b>Number of Trips</b>		
<b>Land Use</b>	<b>Size</b>	<b>Daily</b>	<b>AM Peak</b>	<b>PM Peak</b>
EXISTING USE				
Hotel	92 rooms	752	52	54
PROPOSED USE				
Residential	90 units	376	31	34
<b>Difference</b>		<b>-376</b>	<b>-21</b>	<b>-20</b>

Source: ITE Trip Generation Manual (8<sup>th</sup> Edition)

As indicated in Table 1, the proposed Chateau Ocean residential development is anticipated to generate approximately 376 daily trips, approximately 31 AM peak hour trips (6 inbound and 25 outbound) and approximately 34 new trips (21 inbound and 13 outbound) during the typical afternoon peak hour. When compared to the existing use on the site, the proposed 90-unit high-rise residential complex is projected to generate approximately 376 less daily trips, approximately 21 less AM peak hour trips, and approximately 20 less PM peak hour trips when compared to the existing hotel use on the site. Therefore, it is concluded that the proposed Chateau Ocean project will benefit the transportation network located within the Town of Surfside.

## TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

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The trip distribution and traffic assignment for the Chateau Ocean project were based on Miami-Dade County’s Cardinal Distribution information for the study area, examination of the surrounding roadway network characteristics, and existing land use patterns. Table 2 summarizes the county’s cardinal distribution data for the project area (TAZ 602) based on the latest SERPM data published by Miami-Dade County.

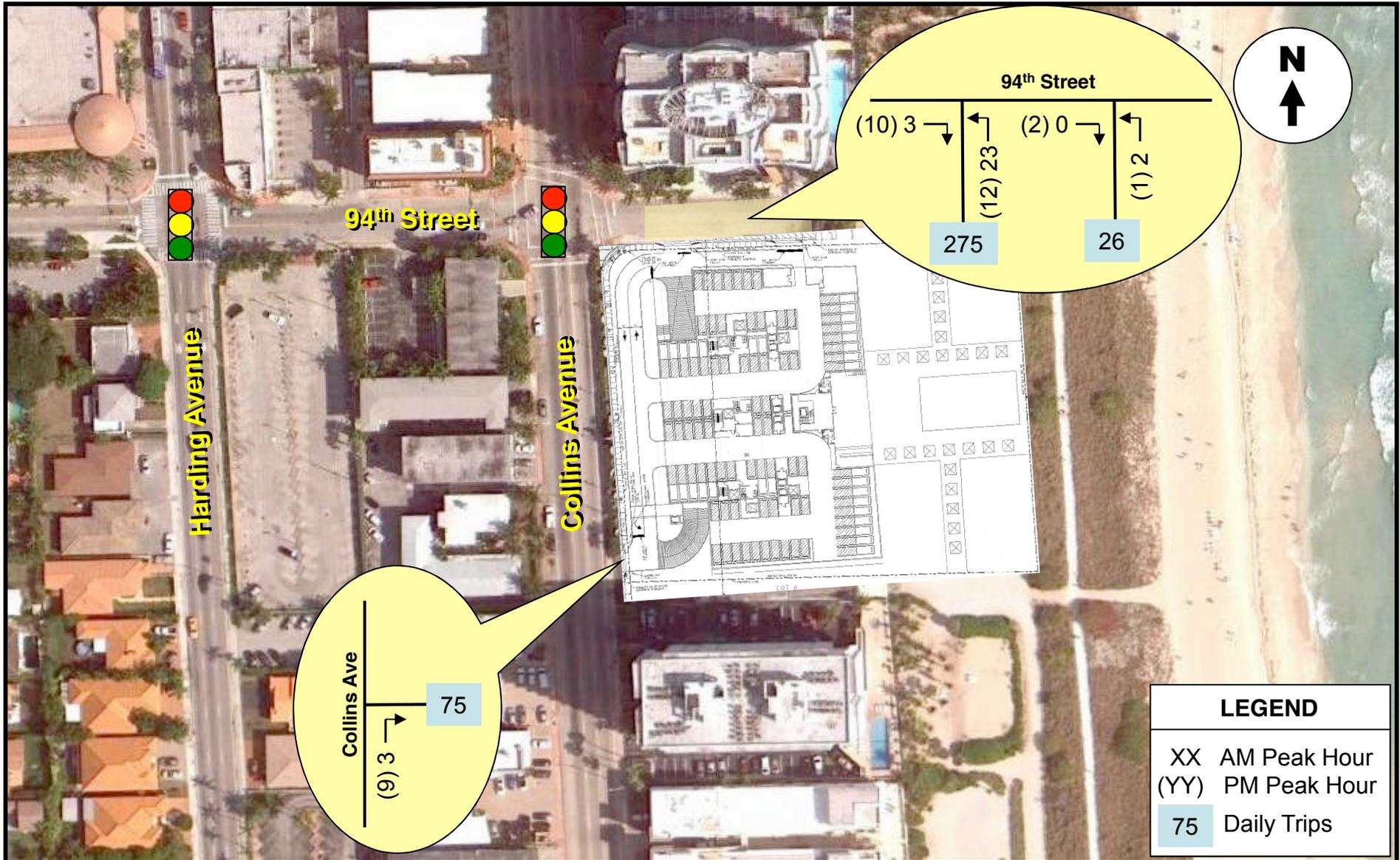
<b>TABLE 2</b>	
<b>Project Trip Distribution</b>	
<b>Chateau Ocean – Surfside, Florida</b>	
<b>Direction</b>	<b>% of Total Trips</b>
North:	Northwest
	Northeast
South:	Southwest
	Southeast
East:	Northeast
	Southeast
West:	Northwest
	Southwest
	<b>Total</b>

*Source: Miami-Dade County (2035 SERPM)*

Using the trip distribution documented in Table 2, the following traffic assignment was assumed for the proposed redevelopment project:

- 55% to and from the north via Collins Avenue/Harding Avenue
- 45% to and from the south via Collins Avenue/Harding Avenue

The AM and PM peak hour traffic generated by the project was assigned to the project driveways using the traffic assignment documented above. The project traffic assignment is summarized in Figure 2. As indicated in Figure 2, the projected northbound right-turning volume at the proposed SR A1A right-turn-in only driveway does not warrant the installation of a separate right-turn lane (maximum hourly volume expected is 9, or approximately one vehicle every six minutes 40 seconds).



## Driveway Traffic Assignment

**FIGURE 2**  
 Chateau Ocean  
 Surfside, Florida

## CONCLUSIONS

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Chateau Ocean is a proposed 90-unit apartment complex planned to be located at the south east corner of the intersection of Collins Avenue and 94<sup>th</sup> Street in the Town of Surfside in Miami-Dade County, Florida. The site is currently developed with a 92-room hotel.

Traf Tech Engineering, Inc. was retained by Chateau Group to conduct a traffic study in connection with the proposed redevelopment project. The study addresses the traffic generated by the proposed apartment project and the projected driveway volumes at the three access driveways (one on Collins Avenue and two on 94<sup>th</sup> Street).

The project site currently consists of a 92-room hotel. Access to existing lodging facility is provided via a right-turn in/right-turn out driveway on Collins Avenue and a wide dropped-curb along 94<sup>th</sup> Street.

The proposed redevelopment project will replace the hotel with a 90 apartment-unit apartment complex. The existing access driveway on Collins Avenue will remain but will be restricted to right-turns inbound only (safety improvement). Moreover, the wide dropped-curb on 94<sup>th</sup> Street will be eliminated by converting it into two access driveways, which will also improve traffic operations and safety.

The proposed Chateau Ocean residential development is anticipated to generate approximately 376 daily trips, approximately 34 AM peak hour trips (6 inbound and 25 outbound) and approximately 34 new trips (21 inbound and 13 outbound) during the typical afternoon peak hour. When compared to the existing use on the site, the proposed 90-unit high-rise residential complex is projected to generate approximately 376 less daily trips, approximately 21 less AM peak hour trips, and approximately 20 less PM peak hour trips when compared to the existing hotel use on the site. Therefore, it is concluded that the proposed Chateau Ocean project will benefit the transportation network located within the Town of Surfside.

The projected northbound right-turning volume at the proposed SR A1A right-turn-in only driveway does not warrant the installation of a separate right-turn lane (maximum hourly volume expected is 9, or approximately one vehicle every six minutes 40 seconds).

**APPENDIX A**  
**Site Plan for Chateau Ocean**

