May 24, 2022

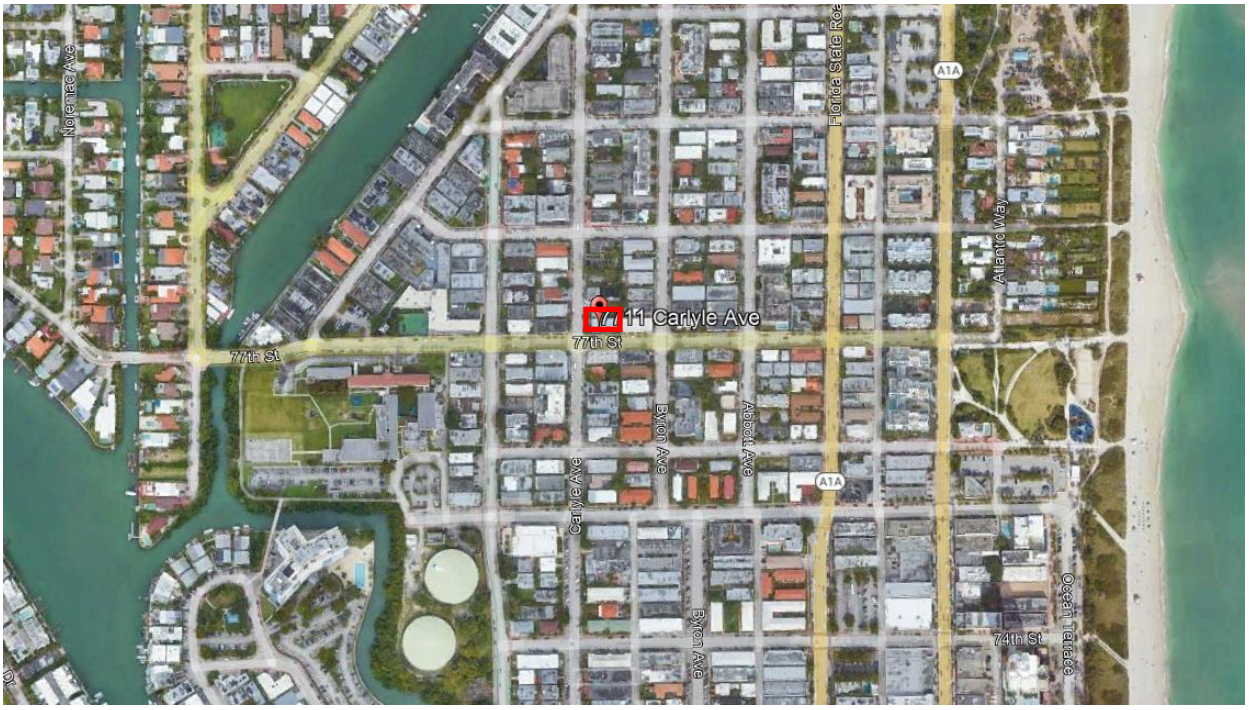
Dani Fawaz, P.E.
Senior Transportation Engineer
City of Miami Beach - Transportation and Mobility Department
1700 Convention Center Drive, 3rd Floor
Miami Beach, FL 33139

RE: 7711 Carlyle Avenue, Miami Beach, Florida
Traffic Impact Study Methodology

Dear Mr. Fawaz:

The purpose of this memorandum is to summarize the traffic impact study for the proposed residential development at 7711 Carlyle Avenue, Miami Beach, Florida. This study is based on the agreed upon methodology, which is included in the **Appendix** for reference. The project plans to include 7 residential units in a 3-story building. The project is going to displace an existing single-family home. The project will be located on a residential local road (Carlyle Avenue) just north of 77th Street. No off-street parking will be provided. The proposed project site is shown in **Figure 1**. The **Appendix** includes the proposed ground floor plan for the development.

Figure 1: Project Site



Source: Google Maps

The proposed development is located on a residential, two-way, local road with parking on both sides of the street. Access to the site would primarily be from A1A or Normandy Drive/NE 79th Street, which provides a bridge across to Miami. Carlyle Avenue has a designated School Zone just north of the site. Carlyle Avenue is stop controlled at the 77th Street intersection and free flow at the 78th Street intersection.

Trip Generation Analysis

A trip generation analysis was completed based on the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition. The land use Multi-Family Housing, Low Rise (ITE land use code 220) was applied for the daily, AM and PM peak hours, based on the net number of dwelling units. As stated previously, the development plans to include 7 residential units and there is currently 1 residential unit on the site, which is a net gain of 6 residential units. The trip generation rates and distribution for the daily, AM and PM peak hours are provided in **Table 1**.

Table 1: Trip Generation Rates

				Weekday					
				AM Peak Hour			PM Peak Hour		
Land Use	ITE Land Use Code	Unit	Daily Trip Gen.	In	Out	Rate	In	Out	Rate
Multifamily Housing (Low-Rise)	220	6 Dwelling Units	6.74	24%	76%	0.4	63%	37%	0.51

Note: Information based on the ITE Trip Generation Rates, 11th Ed.

Table 2 summarizes the estimated trip generation for the proposed project during a typical weekday. As shown in **Table 2**, the project is estimated to generate a total of 40 daily trips, 2 AM peak hour trips, and 3 PM peak hour trips.

Table 2: Trip Generation Summary

Land Use	Units		Daily Total	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Multi-Family Housing (Low-Rise)	6	Dwelling Units	40	1	2	2	2	1	3

Note: Analysis based on the ITE Trip Generation Rates, 11th Ed.

Since the development is projected to generate minimal traffic to the area, no intersection capacity analyses were conducted. Parking on the property is only provided for mopeds (6 spaces) and bicycles (11 spaces). Any larger vehicles will have to use on-street parking in the area. On-street parking is provided on both sides of the street along Carlyle Avenue with minimal restrictions, which is the case for the other local streets in the area.

Transportation Demand Management

To help reduce traffic to the area there are a number of existing and planned amenities in the area and on the property to help support alternative modes of transportation such as bicycles, transit and walking.

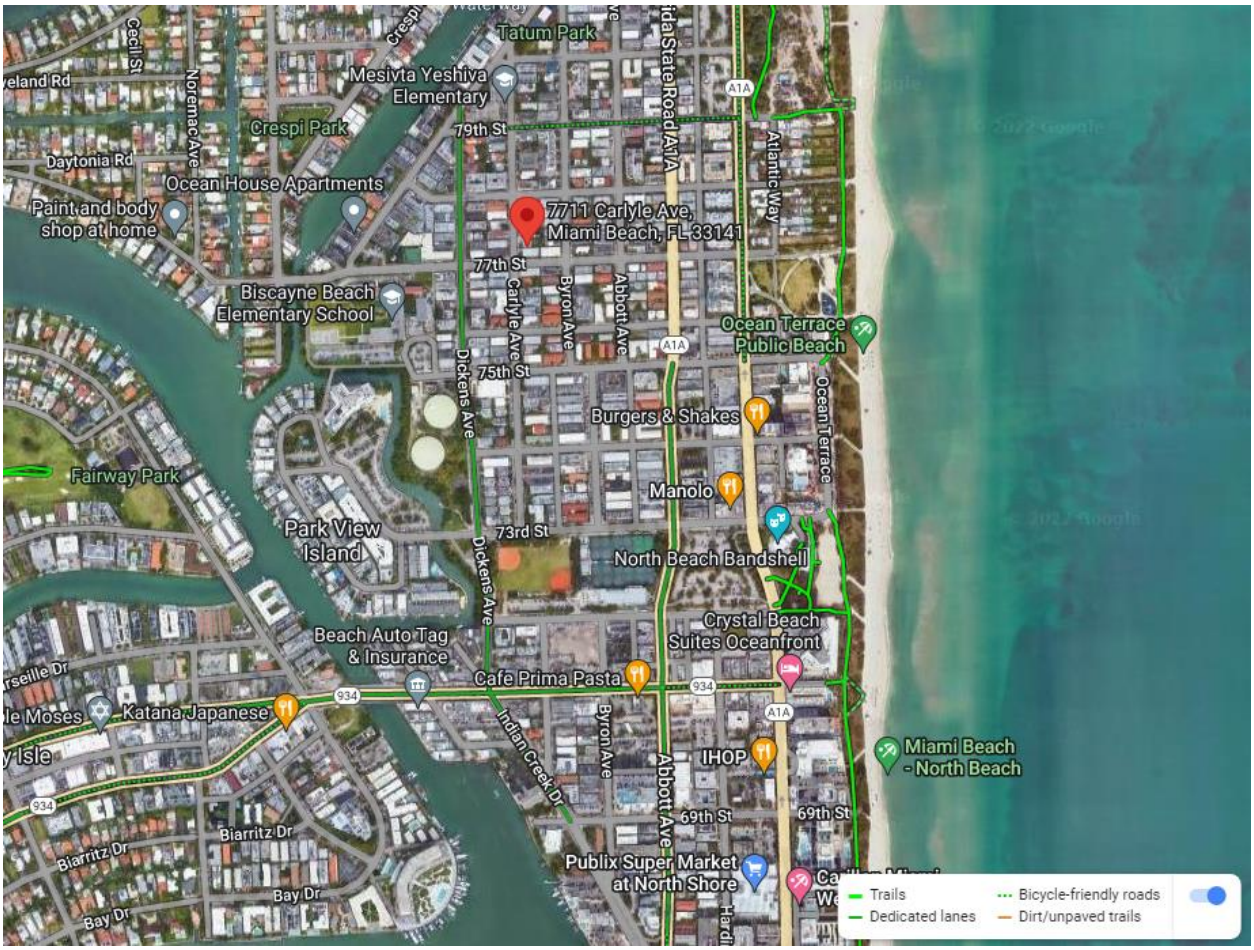
The property plans to provide covered bike parking for 11 bicycles, as shown in the ground floor plan provided in the **Appendix**. This is more than one bike rack per unit. The area is also very bike friendly with bike lanes and sharrows located along the following streets:

- Dickens Avenue between 79th Street and 71st Street (northbound and southbound)
- Indian Creek Drive between 71st Street and 69th Street (southbound)

- 71st Street/Normandy Drive between A1A and into Miami (eastbound and westbound)
- A1A between 75th Street and Alton Road (southbound)
- A1A between 75th Street and the Haulover Inlet Bridge (northbound)

Figure 2 shows a map of the bike lanes, sharrows, and trails in the area of the project site.

Figure 2: Bike Paths Map



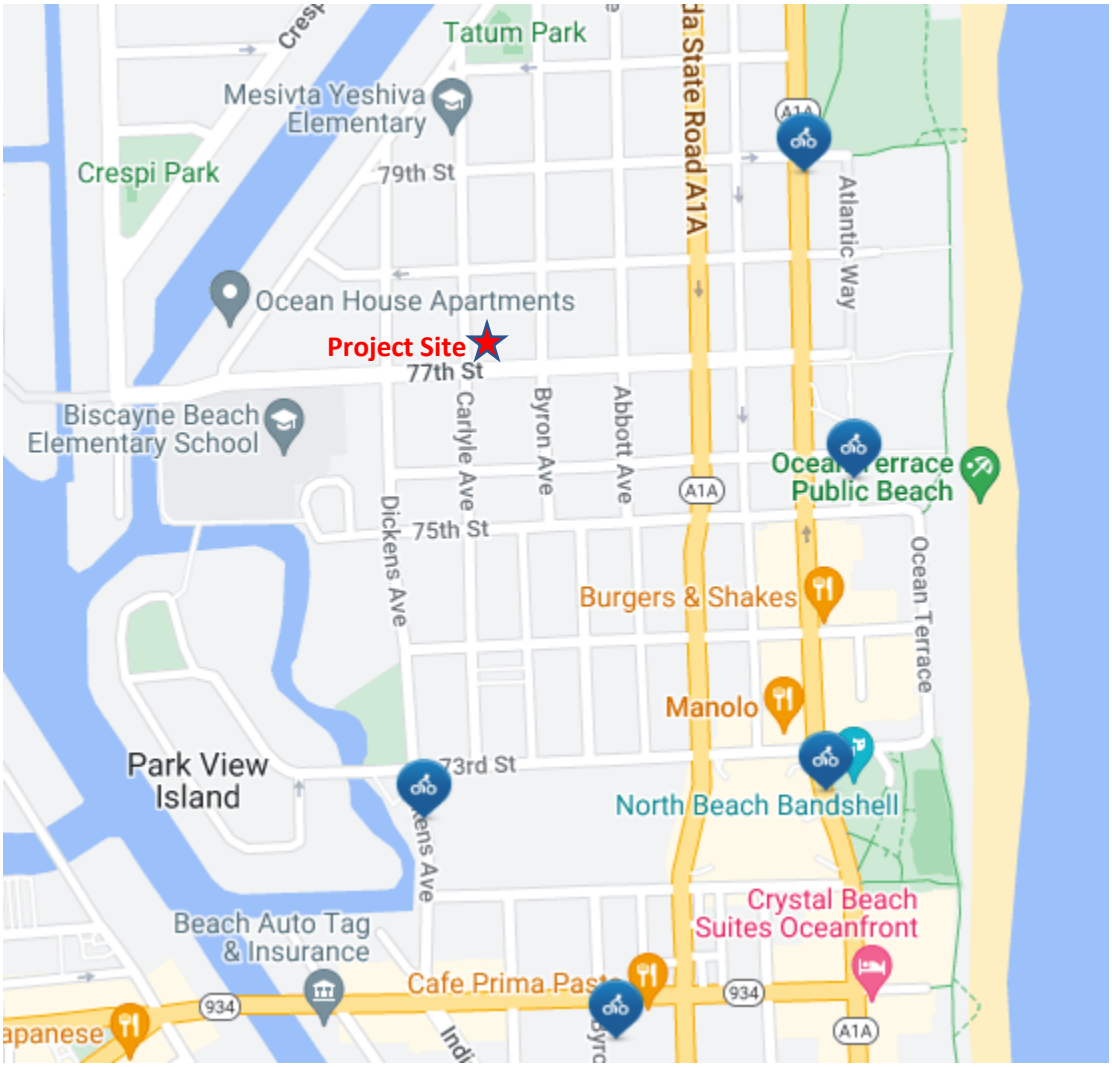
Source: Google Maps

There are also five (5) Citi Bike share stations within walking distance located at the following locations:

- Dickens Avenue just south of 73rd Street
- A1A just south of 73rd Street
- 76th Street just east of A1A
- A1A just south of 79th Street
- Byron Avenue just south of 71st Street (County Rd 934)

Figure 3 shows a map of the Citi Bike share stations within walking distance of the project site.

Figure 3: Citi Bike Share Stations Map



Source: Google Maps

Transit service is provided in the area by Miami-Dade County Metrobus and the City of Miami Beach Trolley Bus (North Beach Loop and Collins Express). **Figure 4** shows maps of the bus stop locations and routes for Metrobus and the Miami Beach Trolley transit service. Below is a summary of the transit service in the area:

- **Route 115**: Runs north/south between 88th Street and Lincoln Road with access to Mt. Sinai Medical Center. Service is provided on weekdays between 7:20 AM to 7:37 PM and on weekends between 7:20 AM and 7:33 PM.
- **Route 79 St Max**: Runs east/west along 71st Street/79th Street between Collins Avenue and NW 32nd Avenue crossing the 79th Street Causeway providing access between Miami Beach and Miami. Service is provided between 5:45 AM and 6:08 PM on weekdays and between 6:05 AM and 6:56 PM on weekends with approximately 30-minute headways.
- **Route 120 Beach Max**: Runs north/south between 199th Street to 5th Street and crosses the MacArthur Causeway providing access to Downtown Miami. Service is provided on weekdays

between 5:00 AM and 11:00 PM with approximately 15-minute headways. Extensive service is also provided on weekends with between 15 minute and 30-minute headways.

- **North Beach Loop**: Runs north/south mostly along Collins Avenue and Abbott Avenue to 88th Street and 65th Street with a loop to the west into North Bay Village (Normandy Drive). It operates 7 days a week, 15 hours a day from 8:00 AM to 11:00 PM with 30-minute service frequency.
- **Collins Express**: Runs north/south mostly along A1A/Collins Avenue between 88th Street and Lincoln Road. It operates 7 days a week, 15 hours a day from 8:00 AM to 11:00 PM at a 30-minute service frequency.

In addition to a robust bicycle and transit network, the area is also very walkable with sidewalks located on both sides of most streets in the area. Pedestrian crosswalks in the area are well striped and/or use colored pavers, which is the case for the pedestrian crossings along Dickens Avenue and A1A. Since it is a School Zone on Carlyle Avenue just north of the project site, there are pedestrian crossing signs at the intersection of Carlyle Avenue and 78th Street. Also, the speed limit decreases to 15 MPH on school days between 7:30 AM to 8:45 AM, 1:45 PM to 4:30 PM, except Fridays (1:45 PM to 3:30 PM).

At signalized intersections in the area (i.e. 77th Street and Dickens Avenue) push-button ped crosswalks with signage is provided. Along 77th Street there are also landscaped islands in the parking lanes that kind of serve as sidewalk bump outs to help protect pedestrians crossing the street. Since there is on-street parking along most streets this helps serve as a buffer between moving traffic and pedestrians to help create a more comfortable and pedestrian-friendly environment. The sidewalks in the area are approximately 5 feet wide.

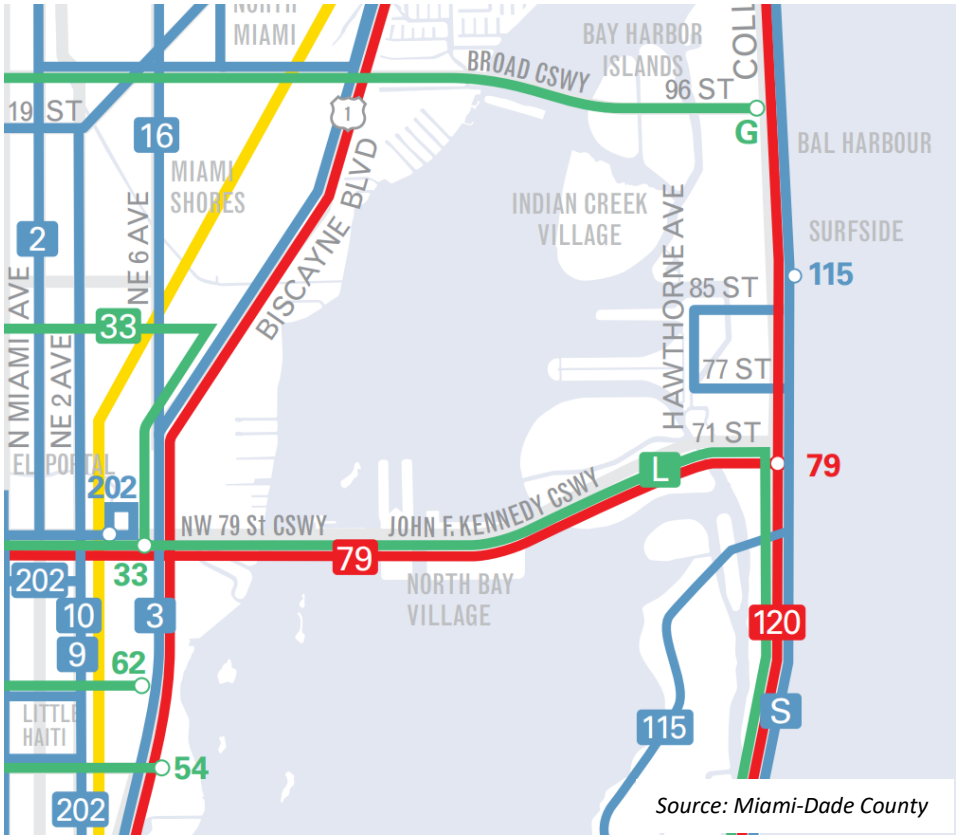
Based on the analysis of transportation demand management in the area of the project site, there is a wealth of transit, bicycle, and pedestrian amenities to support alternative modes of transportation. Also, since the project does not plan on-site parking, except for mopeds and bicycles, residents and visitors will be more inclined to use alternative modes of transportation.

Conclusion

The trip generation analysis for the proposed 7-unit residential development in Miami Beach shows that it is going to generate minimal traffic to the area. The project plans to provide some on-site moped and bicycle parking, but no larger vehicle parking. Residents and visitors driving a car will use on-street parking in the area. The area is supported by a robust transit system (Metrobus and Miami Beach Trolley), bike share service (Citi Bike), extensive bike and pedestrian network that will help encourage alternative modes of transportation. The lack of on-site car parking and strong multimodal system in the area will help reduce vehicle trips. Overall, the proposed 7-unit residential development is going to have a minimal impact on traffic in the area.

Figure 4: Transit Service Maps

Source: Google Maps



Source: Miami-Dade County

Should you have any questions regarding this traffic study methodology please contact me via email at David.Taxman@WGInc.com or via phone at 954-565-7894.

Sincerely,

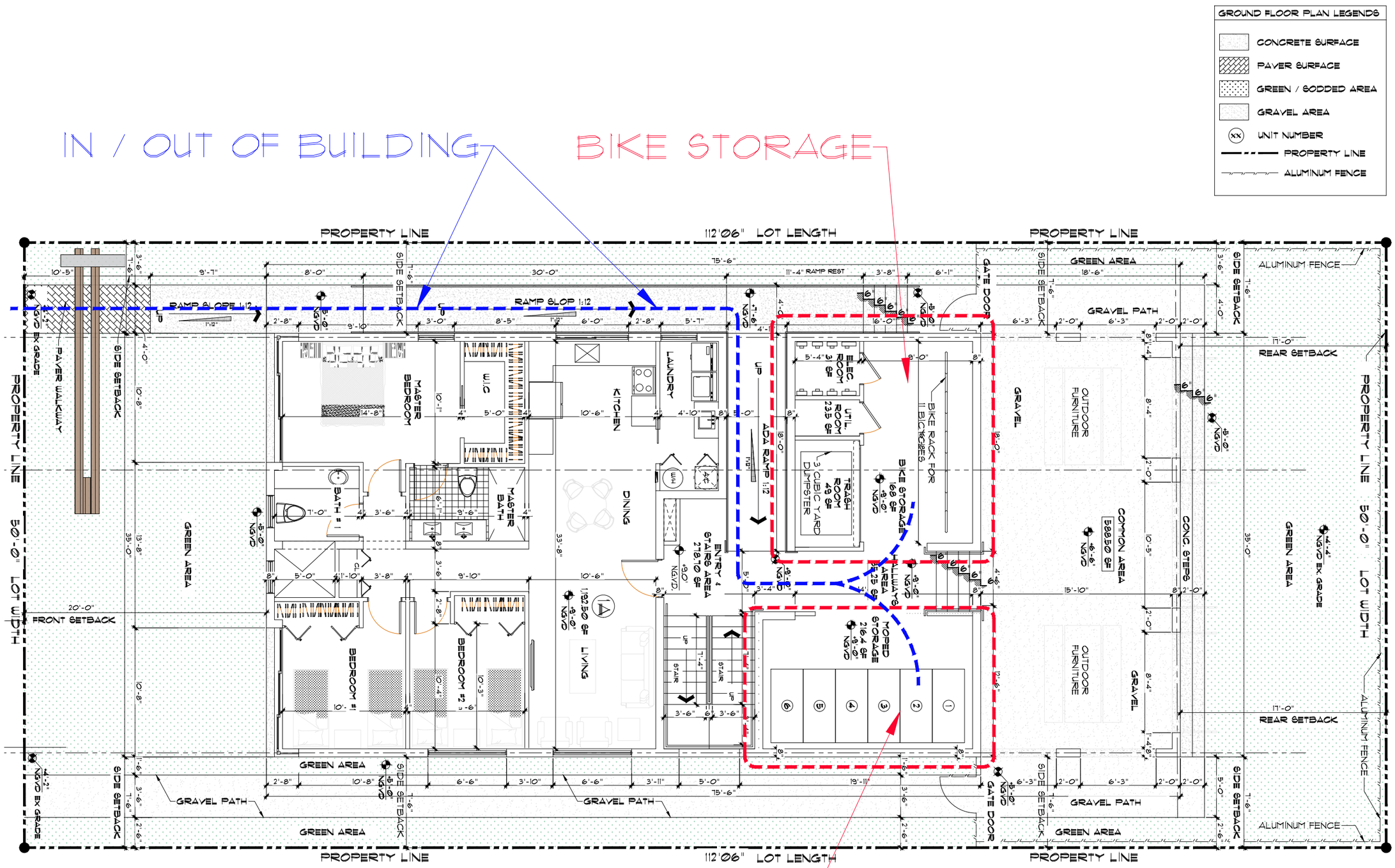
WGI, Inc.

David Taxman, P.E.

Mobility Market Leader

APPENDIX:

Ground Floor Plan



PROPOSED GROUND FLOOR PLAN

SCALE: 1/8" = 1'-0"

PLP CONSTRUCTION GROUP, INC

CGC 1530035

18710 SW 107 AVE MIAMI FL 33157
PH: (786) 351-0576
E-MAIL: plp@plpconstruction.com

ALEJANDRO SALAS P.E.

P.E LIC No.74789
STRUCTURAL ENGINEERING

SEAL:

ALEJANDRO SALAS LICENSE No 74789 STATE OF FLORIDA PROFESSIONAL ENGINEER

DIGITAL SIGNATURE:

PROJECT NAME:
NEW CONSTRUCTION MULTIFAMILY RESIDENCE

OWNER:
77 CARLYLE PARTNERS LLC

PROJECT ADDRESS:
7711 CARLYLE AVE MIAMI BEACH FL

PROJECT NO.
2021-15

DATE:
03/23/2022

REVISIONS:

Issue	Issue date / For
Rev 1	
Rev 2	
Rev 3	
Rev 4	
Rev 5	

SHEET TITLE:
PROPOSED FLOOR PLAN & LEGENDS

SHEET:
A-1