STAFF REPORT  2020-05P: Parking Determination
Community Development Department  Council Chambers, 7:30 PM, March 5, 2020

To: Paul Luke, Chairman, Skokie Plan Commission
From: Carrie Haberstich, AICP, Planner
Case: 2020-05P: Parking Determination
Arie Crown Hebrew Day School
7787 Gross Point Road

Related Cases – 2020-03P: Zoning Map Amendment
2020-04P: Subdivision
2020-05P: Parking Determination
2020-06P: Site Plan Approval

<table>
<thead>
<tr>
<th>General Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Petitioner</strong></td>
<td>Arie Crown Hebrew Day School</td>
</tr>
<tr>
<td><strong>Purpose</strong></td>
<td>A parking determination for a gymnasium/auditorium assembly use in an R2 Single-Family zoning district at 7787 Gross Point Road.</td>
</tr>
</tbody>
</table>

PETITIONER’S SUBMITTAL

Arie Crown Hebrew Day School is requesting to renovate an existing office building into an elementary and middle and junior high school and child day care not in a residence uses, which will include a gymnasium addition, surface parking, play fields, and stormwater detention (2020-06P) at 7787 Gross Point Road. The off-street vehicle parking requirement for the assembly use is determined by the Plan Commission.

Gewalt Hamilton Associates, Inc. completed a parking evaluation for the proposed facility and submitted a Parking Study Update, dated November 22, 2019. In that report, the consultant conducted 4 tests (typical school day, after school basketball, weekday evening assembly, and weekend banquet) and stated the following:

Arie Crown Hebrew Day School (ACHDS) proposes to consolidate their two campuses and relocate them to the former Forsythe Building located at 7770 Frontage Road in Skokie, Illinois. Gewalt Hamilton Associates, Inc. (GHA) evaluated the parking characteristics of the school and summarized our findings and recommendations in a report dated September 11, 2019.

[The] Village reviewed our parking study on October 25, 2019 and requested additional information for Test 3 – Weekday Evening Assembly. That test had the highest calculated parking demand. While neither anticipated nor historically required by the school, the Amstadter Architects site plan indicates that at a theoretical maximum capacity, 1092 seats could be provided in the gymnasium.

...
Arie Crown Hebrew Day School indicates that they have never had an event over 500 people, which was associated with a funeral. Traditionally, larger events such as graduation with perhaps 300 people (students plus family and friends) have been held off-campus, such as Niles West High School.

The report concluded that the planned supply of 289 parking spaces will meet the demand throughout the school day, and weekday evening and weekend functions. The weekday evening assemblies should be limited to about 850 people unless a valet service or remote parking is provided.

**STAFF ANALYSIS**

Staff has reviewed the petitioner’s Parking Study Update and supports an assembly use with a maximum of 865 seats.

**Engineering**

A parking study by Gewalt Hamilton Associates dated November 22, 2019, was submitted. As of June 2019, the Village Code parking requirement for assembly use was changed to be determined by the Plan Commission. The parking study includes information from four tests that were conducted, plus information from ITE, APA, and local Chicagoland communities. The key finding concluded a parking ratio of 1 parking space for each 3 seats based on the previously listed information. Staff agrees with concluding recommendation of 1 parking space for each 3 seats. Staff will support recommendation to the Plan Commission for the parking determination case.

Further, Staff recommends the parking requirement for the assembly use portion of the proposed school to be 1 parking space for each 3 seats. In order to meet the parking requirement (based on a parking determination of 1 per 3 seats) the number of seats for the assembly space would need to be reduced to 865 seats maximum.

**Planning**

The parking analysis by the Engineering Division considered different uses and their respective parking needs. The use with the greatest parking need sets the minimum parking requirement. The assembly use for 865 seats resulted in the greater parking need of 288 parking spaces. A total of 289 parking spaces are provided; therefore, the parking requirement is met.

Although consideration was given to providing valet parking services on-site, due to the minimum emergency access needs not being met, this option cannot be accommodated as proposed; therefore, should ACHDS desire to pursue valet parking services in the future, formal applications shall be submitted for a parking determination through the Plan Commission and a modified review of the site plan approval by the Village Board.
STAFF RECOMMENDATION

Staff recommends that the Plan Commission determine the off-street parking requirement for Arie Crown Hebrew Day School at 7787 Gross Point Road be 289 vehicle parking spaces, and that the assembly use at the school not exceed 865 seats. It is further recommended that, should additional parking accommodations be necessary in the future, a formal application shall be submitted for a new parking determination through the Plan Commission and a modified review of the site plan approval by the Village Board.

ATTACHMENTS

1. Parking Study Update, dated November 22, 2019
2. Parking Analysis Worksheet, dated February 24, 2020
3. Zoning and Land Use Map
Parking Study Update

To: Sam Medow
Arie Crown Hebrew Day School

Marc Amstadter
Amstadter Architects

From: Bill Grieve

Date: November 22, 2019

Subject: Arie Crown Hebrew Day School Relocation
7770 Frontage Road – Skokie, Illinois

Arie Crown Hebrew Day School (ACHDS) proposes to consolidate their two campuses and relocate them to the former Forsythe Building located at 7770 Frontage Road in Skokie, Illinois. Gewalt Hamilton Associates, Inc. (GHA) evaluated the parking characteristics of the school and summarized our findings and recommendations in a report dated September 11, 2019. That report is attached for reference.

Four tests were conducted to calculate the school’s parking demands:

- Test 1 – Typical School Day
- Test 2 – After School Basketball
- Test 3 – Weekday Evening Assembly
- Test 4 – Weekend Banquet

Subsequently, the Village reviewed our parking study on October 25, 2019 and requested additional information for Test 3 – Weekday Evening Assembly. That test had the highest calculated parking demand. While neither anticipated nor historically required by the school, the Amstadter Architects site plan indicates that at a theoretical maximum capacity, 1092 seats could be provided in the gymnasium.

Using a demand of 4 seats per parking space which was the Village’s code requirement, resulted in the need for 273 spaces. Their code requirement has now changed to depend on a more detailed analysis of the user profile and ultimately as determined by the Plan Commission. To this end, we offer the following updated information and findings for your consideration regarding Test 3 – Weekday Evening Assembly.

In accordance with our analysis summarized below, the planned supply of parking spaces satisfies the historic and anticipated maximum demand. Even at its theoretical maximum capacity, ACHDS has the designed ability, and are committed to provide, any and all additional necessary parking through valet, off-site parking or a combination thereof.
Part A. Background Information

Events
Arie Crown Hebrew Day School indicates that they have never had an event over 500 people, which was associated with a funeral. Traditionally, larger events such as graduation with perhaps 300 people (students plus family and friends) have been held off-campus, such as at Niles West High School.

Site Plan
The site plan prepared by Amstadter Architects dated November 6, 2019 indicates that 289 permanent parking spaces will be provided. In the case of a very large expected event, valet parking will add 121 more spaces for a total of 410 parking spaces (see attached). Should the valet operation ever be needed, this results in 2.66 seats per parking space.

Part B. Parking Calculations

Institute of Transportation Engineers (ITE)
The ITE publication *Parking Generation, 5th Edition* does not have a specific category for a weekday evening assembly. The closest land uses where there is adequate data available and published are a Church and a Multiplex movie theater during the busy December month. The following calculations from the ITE Manual (see attached) are for the 33rd percentile, average, and 85th percentile.

Church
- 33rd Percentile = 1092 seats X 0.15 = 164 spaces
- Average = 1092 seats X 0.22 = 240 spaces
- 85th Percentile = 1092 seats X 0.34 = 371 spaces
- 85th Percentile (maximum seating) = 289 spaces / 0.34 = 850 seats

Multiplex Movie Theaters - December
- 33rd Percentile = 1092 seats X 0.12 = 131 spaces
- Average = 1092 seats X 0.17 = 186 spaces
- 85th Percentile = 1092 seats X 0.28 = 306 spaces
- 85th Percentile (maximum seating) = 289 spaces / 0.28 = 1032 seats

Key Finding. The ITE calculations indicate that the planned 289 conventional parking spaces will generally accommodate the maximum number of 1092 seats for a weekday evening assembly. A valet parking contingency plan should not be needed, unless an event is anticipated to have at least 850 people attend. This would result in a ratio of 2.94 seats per space.

American Planning Association (APA) – Parking Standards

The APA publication *Parking Standards* provides a summary of municipal / county code parking requirements throughout the United States for a variety of land uses. For an auditorium (see attached), most of the communities sampled required a ratio of 4.00 seats per space.
Key Finding. The APA research indicates that the planned 289 conventional parking spaces will accommodate the maximum number of 1092 seats for a weekday evening assembly. A valet parking contingency plan would not be needed.

Chicagoland Communities – Parking Standards

GHA researched various Chicagoland communities to compare their code parking requirements, including:
- Niles – Decided by Plan Commission
- Glenview – 1 space for each 3 seats (auditorium)
- Northbrook – 1 space per 3 persons of auditorium design capacity
- Deerfield – 1 space per 3 seats (auditorium)
- Lake Forest – 1 space per 3 seats (auditorium)
- Gurnee – 1 space per 4 persons of rated capacity (live venue)
- Waukegan – 1 space per 3 seats of design capacity (auditorium and stadium)
- Lake Bluff – 1 space per 6 seats (churches)
- Buffalo Grove – 1 space per 4 seats (auditorium and amphitheater)
- Arlington Heights (1 space per 4 seats ((indoor theater)
- Wilmette – 1 space per 3 seats (live venue)
- Des Plaines – 1 space per 5 seats (school auditoriums and theaters)
- Morton Grove – 1 space per 3 seats (theaters)
- Lincolnwood – 1 space per 3 seats (entertainment venue)
- Mt. Prospect – 1 space per 4 seats (theater)
- Prospect Heights – 1 space per 5 seats (auditorium and stadium)

Key Finding. A parking ratio of 3.0 seats per space would provide for an event attendance that has 367 more people than the maximum event ever held at Arie Crown Hebrew Day School.

Seating Thresholds

Seating threshold calculations were established for the provided spaces, both conventional and when a valet service is operating.

Conventional = 289 spaces
- 2.0 spaces per seat = 578 seats
- 2.5 seats per space = 723 seats
- 3.0 seats per space = 867 seats
- 3.5 seats per space = 1012 seats
- 4.0 seats per space = exceeds maximum seating

Conventional + Valet = 410 spaces
- 2.0 spaces per seat = 820 seats
- 2.5 seats per space = 1025 seats
- 3.0 seats per space = exceeds maximum seating
- 3.5 seats per space = exceeds maximum seating
- 4.0 seats per space = exceeds maximum seating
Key Finding. A parking ratio of 3.0 seats per space would provide for an event attendance that has 367 more people than the maximum event ever held at Arie Crown Hebrew Day School.

Briefly concluding, the results of the parking analyses indicate that the planned supply of 289 parking spaces will meet the demand throughout the school day, as well as during weekday evening and weekend functions. However, it may be appropriate to limit attendance at weekday evening assemblies to about 850 people, unless a valet service is operated or a remote parking plan is in place, such as at Niles West High School, where overflow attendees can be shuttled by bus across Gross Point Road.

This parking evaluation update was prepared by:

William C. Grieve, P.E., PTOE
Senior Transportation Engineer
bgrieve@gha-engineers.com
Church
(560)

Peak Period Parking Demand vs: Seats
On a: Sunday
Setting/Location: General Urban/Suburban
Peak Period of Parking Demand: 9:00 a.m. - 1:00 p.m.
Number of Studies: 11
Avg. Num. of Seats: 369

Peak Period Parking Demand per Seat

<table>
<thead>
<tr>
<th>Average Rate</th>
<th>Range of Rates</th>
<th>33rd / 85th Percentile</th>
<th>95% Confidence Interval</th>
<th>Standard Deviation (Coeff. of Variation)</th>
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</thead>
<tbody>
<tr>
<td>0.22</td>
<td>0.13 - 0.65</td>
<td>0.15 / 0.34</td>
<td>***</td>
<td>0.15 (68%)</td>
</tr>
</tbody>
</table>

Data Plot and Equation

*Fitted Curve Equation: ***

R² = ***
Multiplex Movie Theater - December
(445)

Peak Period Parking Demand vs: Seats
On a: Friday
Setting/Location: General Urban/Suburban
Peak Period of Parking Demand: 1:00 - 9:00 p.m.
Number of Studies: 4
Avg. Num. of Seats: 3164

Peak Period Parking Demand per Seat

<table>
<thead>
<tr>
<th>Average Rate</th>
<th>Range of Rates</th>
<th>33rd / 85th Percentile</th>
<th>95% Confidence Interval</th>
<th>Standard Deviation (Coeff. of Variation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.17</td>
<td>0.12 - 0.28</td>
<td>0.14 / 0.28</td>
<td>***</td>
<td>0.07 (41%)</td>
</tr>
</tbody>
</table>

Data Plot and Equation

Caution – Small Sample Size

P = Parked Vehicles

Fitted Curve Equation: ***

R² = ***

Parking Generation Manual, 5th Edition • Institute of Transportation Engineers
• 25 per field (Greensboro, N.C., pop. 223,891; Washington, N.C., pop. 9,583)

Noncommercial:
Minimum: 1 per 6 seats or 1 per 30 square feet of gross floor area if no permanent seats
Maximum: 1 per 4 seats or 1 per 50 square feet of gross floor area if no permanent seats

Commercial:
Minimum: 1 per 6 seats or 1 per 30 square feet of gross floor area if no permanent seats
Maximum: 1 per 4 seats or 1 per 50 square feet of gross floor area if no permanent seats

Minimum: 15 per athletic field or diamond
Maximum: 20 per athletic field or diamond (Glenville, N.Y., pop. 28,183)

Bicycle Parking Standard: 1 per 10 vehicle spaces which are 20 spaces per athletic field or ball diamond or 1 per 4 seats, whichever results in more spaces (Grand Junction, Colo., pop. 41,498)

• auction, automobile
  • 2 per 1,000 square feet, plus 1 per 20 vehicle display spaces provided (Clark County, Nev., pop. 1,375,365)
    Minimum: 1 per 500 square feet of gross floor area of sales and service building
    Maximum: 1 per 375 square feet of gross floor area of sales and service building (San Antonio, Tex., pop. 1,144,646)

• auction house
  • 1 space per 4 seats in designed capacity (Jacksonville, N.C., pop. 66,715)
  • 1 space for each 300 square feet of gross floor area (San Buenaventura, Calif., pop. 100,916)
  • 1 space per 2 seats or 2 per 100 square feet of gross leasable area, whichever is greater (Quincy, Ill., pop. 40,366; Spartanburg, S.C., pop. 39,673)
  • 2 spaces per 100 square feet of gross floor area (Provo, Utah, pop. 105,166)
  • 10 per 1,000 square feet of gross floor area (Cedar Rapids, Iowa, pop. 120,758; St. Charles, Ill., pop. 27,896)
  • Minimum: 1 per 4 patron seats
  • Maximum: 1 per 2 patron seats (Glenville, N.Y., pop. 28,183)

• auditorium (see also assembly hall; civic center)
  • Greater of 1 space per 4 seats or 10 spaces per 1,000 square feet with minimum of 20 spaces (Bridgeport, Conn., pop. 139,529)
  • Parking equal to 30 percent of the capacity of persons in the main auditorium and any rooms which can be added to the main auditorium by opening doors or windows to obtain audio or video unity (Minneapolis, Minn., pop. 382,618)
  • 1 off-street parking space for every possible 4 seats in the auditoriums and assembly rooms (Gig Harbor, Wash., pop. 6,465)
  • 1 space for each 4 seats or 1 space for each 40 square feet of floor area available for the accommodation of movable seats in the assembly room (Durham, N.C., pop. 187,035)
  • 1 space per 4 seats (Alexandria, Va., pop. 128,283)
  • 1 parking space for each 5 seats and 1 space of public assembly for each 100 square feet of assembly area not having fixed seats (San Bruno, Calif., pop. 40,165)
  • 1 per 4 fixed seats on the premises, plus 1 per 7 linear feet of fixed benches, or 1 per 30 square feet of floor area used for assembly (San Jose, Calif., pop. 894,943)
  • 1 per every 3 persons for which seating convention facilities, meeting rooms is provided (Prescott, Ariz., pop. 33,938)
  • 1 parking space for every 2.5 seats based on maximum seating capacity (DeKalb County, Ill., pop. 88,969)
  • 1 space per each 6 seats or 9 linear feet of fixed benches, or 1 space for each 45 square feet of floor area without fixed seats (Spartanburg, S.C., pop. 39,673)
  • Minimum: 1 per 6 seats or 1 per 30 square feet if no permanent seating
  • Maximum: 1 per 4 seats or 1 per 50 square feet if no permanent seating (San Antonio, Tex., pop. 1,144,646)
  • Minimum: 0.3 spaces per seat or 6 linear feet bench seating
  • Maximum: 0.4 spaces per seat or 5 linear feet of bench seating (Gresham, Ore., pop. 90,205)
  • Minimum: 1 per 5 seats
  • Maximum: 1 per 3 seats (Glenville, N.Y., pop. 28,183)

Bicycle Parking Standard: 1 space per 40 seats or 60 linear feet of bench seating (Gresham, Ore., pop. 90,205)

Bicycle Parking Standard: 1 per 20 vehicle spaces which are 1 per 4 seats or 1 per 50 square feet if not permanent seats (Grand Junction, Colo., pop. 41,498)

automated teller machine (ATM)
• 0 for drive-thru ATM; 2 per ATM with no drive-thru (Longmont, Colo., pop. 71,093)
• 2 spaces per machine. (San Jose, Calif., pop. 894,943; Spartanburg, S.C., pop. 39,673)
• 2 spaces per each walk-up type; 5 spaces per each drive-up type (Albemarle County, Va., pop. 79,236)
• 2 parking spaces for each teller machine located at any 1 premises; provided, however, that the 2 parking spaces shall not apply to drive-thru automatic
### PARKING ANALYSIS WORKSHEET
7787 Gross Point Road
2/24/2020

**Zone: M1**

<table>
<thead>
<tr>
<th>Tenant / Business</th>
<th>Address / Suite</th>
<th>Use</th>
<th>Gross Area (SF)</th>
<th>Deductions (SF)</th>
<th>*Net Area (SF)</th>
<th>RATIO</th>
<th>Parking Required</th>
<th>Parking Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Arie Crown</td>
<td>All Levels</td>
<td>School: Elementary and Middle School</td>
<td>14,680</td>
<td>0</td>
<td>14,680</td>
<td>1/500</td>
<td>29.4</td>
<td>(parking met)</td>
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<tr>
<td>2 Arie Crown</td>
<td>Main Level</td>
<td>Daycare; Early Childhood</td>
<td>9,075</td>
<td>0</td>
<td>9,075</td>
<td>1/100</td>
<td>90.8</td>
<td>(parking met)</td>
</tr>
<tr>
<td>3 Arie Crown</td>
<td>Main Level Gym</td>
<td>Banquet</td>
<td>0</td>
<td>0</td>
<td>865 seats (max)</td>
<td>1.0 parking space per 3 number of seats</td>
<td>288.3 (Parking met)</td>
<td></td>
</tr>
<tr>
<td>4 Arie Crown</td>
<td>Main Level</td>
<td>Assembly (Parking Determination)</td>
<td>0</td>
<td>0</td>
<td>865 seats (max)</td>
<td>1.0 parking space per 3 number of seats</td>
<td>288.0</td>
<td></td>
</tr>
</tbody>
</table>

* Floor area, net, when prescribed as the basis of measurement for off-street parking and loading spaces for any use, shall be the sum of the gross horizontal area of the basement, and all other floors, excluding hallways, stairways, elevator shafts, boiler and air conditioning equipment rooms, or areas used for off-street parking facilities. All horizontal dimensions shall be taken from the exterior faces of the exterior walls, or from the centerlines of walls separating 2 buildings.

**NOTE:**
- Provide Req. Minimum Nr. of Accessible Spaces = 7
- Provide Required Bicycle Parking Spaces = 80
- Required Loading Spaces =

KSM

Comments: Assembly use parking requirement greater of other listed school uses. Number of seats to be limited to max 865 seats and further information needed regarding valet/offsite parking.
2020-05P - Parking Determination: Arie Crown Hebrew Day School