

Memorandum

To: Nichole Satera
Director of Facilities
Barrington School District 220

From: Milan Patel, P.E., PTOE, RSP 1
Dan Brinkman, P.E., PTOE

Copy: David Guerrero
Don Matthews

Date: September 29, 2025

Subject: Parking Analysis
Barrington High School
616 W Main Street
Barrington, Illinois 60010

Part I. Introduction and Project Context

Gewalt Hamilton Associates, Inc. (GHA) has conducted a Parking Analysis for the existing Barrington High School. The high school is located at 616 W Main Street at the northeast corner of Main Street and Hart Road, in Barrington, IL. Barrington High School serves approximately 2,759 students, 113 classrooms, 10,914 sq. ft. of office space, and there will be 850 seats in the proposed auditorium addition.

The property is served by a total of 1,071 parking spaces in multiple separate lots including 28 accessible spaces and 27 parking spaces specifically for buses. There are two full access entrances and a RIRO access at Hart Road, and one one-way entrance on Main Street. One of the full access entrances is at the signalized intersection of Hart Road and Barrington High School.

The following provides a summary of existing conditions, site traffic characteristics and the Parking Analysis conducted. *Exhibits* and *Appendices* referenced are located at the end of this document.

Part II. Background Information

Site Location Map and Roadway Inventory

Barrington High School is located at 616 W Main Street (Lake Cook Road), the northeast corner of the Main Street and Hart Road intersection. **Exhibit 1** provides a site location map.

Roadway Network

Main Street/County Line Road is an east-west, minor arterial roadway providing a two-lane cross-section (1 travel lane in each direction) with a posted speed limit of 30 miles per hour (mph) in the site vicinity. There is a signalized intersection southwest of the property at Main St and Hart Rd. At its signalized intersection, Main St widens to provide a westbound right turn lane and an eastbound left turn lane. The intersection is a 3-legged intersection. Main St is under the jurisdiction of the Illinois Department of Transportation.

Hart Road is a north-south, major collector roadway providing a 2-lane cross-section (one travel lane in each direction) and a posted speed limit of 30 mph. Hart Rd starts at the intersection with Main St and continues north past US 14 (Northwest Highway). Also along Hart Rd is the signalized intersection of Hart Rd and Barrington High School, a direct entrance to the high school. Hart Rd is under the jurisdiction of the Lake County Department of Transportation.

Pedestrian Facilities

A shared-use path is provided along both the west and south side of the site. A crosswalk is maintained across all existing entrances to the high school as well as Hart Rd. A RRFB (Rectangular Rapid Flashing Beacon) crossing is provided, crossing Main St, at the two-way stop-controlled intersection of Main St and Hager Ave, directly east of the high school.

Part III. Parking Observations

Parking Supply and Occupancy Survey

A parking supply and occupancy survey of the parking serving Barrington High School was conducted. The parking counts were performed on Tuesday, May 20th, 2025, between the hours of 6:30 AM – 5:00 PM. For clarity the campus was divided into various parking Zones A-M (See **Exhibit 2**). The results of the parking survey are summarized in **Exhibit 3**. The peaks of parking were between the hours of 9:00 AM - 12:00 PM with Zone E, the primary parking for students, being over capacity causing vehicles to park in undesignated parking spaces. Zone K (north Field of Dreams lot) did not have marked parking spaces at the time of this study. Parking Zone A is designated for buses and both Zones A & I can only be accessed by staff through a gated entrance.

The findings of the survey are summarized below:

- A total of 1,003 parking spaces were surveyed Zones A, B, E, H, I, and M.
- Approximately 89% percent (896 of 1003) of the total parking spaces surveyed were occupied at the building's peak occupancy, which occurred at 11:00 AM.
- Parking Zone E is the most utilized parking zone during the study period. Parking Zone E is primarily used as student parking and was overcapacity between the hours of 9:00 AM – 1:00 PM with the peak being at 11:00 AM at 104% Capacity (489 of 470 spaces) resulting in vehicles parking in undesignated parking areas.
- Parking Zone B is the second most utilized parking zone during the study period. Between the hours of 11:00 AM – 2:00 PM Parking Zone B had a capacity of over 85% with the peak being at 2:00 PM at 89% capacity (245 of 276 spaces). Parking Zone B is primarily used as staff parking.
- As a guideline, parking demand should not exceed 90% of the supply. Based on our observations and calculations, the parking supply at Barrington High School is sufficient overall to accommodate existing demand with a peak overall capacity of 89% (896 of 1,003 spaces), but specific parking zones, primarily zones E and C, should be reevaluated based on parking designation rules (students vs staff vs visitors) and location.

Part IV. Parking Evaluation

Parking Requirements

Based on the parking requirements outlined in the Village of Barrington's Zoning Ordinance (**Appendix A**) (Section 4.10-10 OFF STREET PARKING REQUIREMENTS), the BHS campus (secondary school, Public) should provide parking as follows:

- 1 space for each classroom, plus 2.5 spaces per 1,000 sq.ft., of area devoted to offices, plus 1 space for every 6 students based on maximum enrollment.

Per District 220, there are approximately 2,759 students, 113 classrooms, and 10,914 sq. ft. of office space. Per Village ordinance, the high school should provide 601 spaces.

- The total number of existing parking spaces for Barrington High School is 1,071 including 28 accessible spaces and 27 parking spaces specifically for buses. Therefore, the number of existing parking spaces is sufficient per village ordinance.

New Auditorium

District 220 is proposing to construct a new auditorium with 850 seats along the south frontage of the building adjacent to Zone B. It is not anticipated that the auditorium would be utilized by another program / event while school was in session. Based on the parking requirements outlined in the Village of Barrington's Zoning Ordinance (**Appendix A**) (Section 4.10-10 OFF STREET PARKING REQUIREMENTS), the proposed auditorium should provide parking as follows:

- 1 space for every 4 seats in the main auditorium, sanctuary, nave or similar place of assembly, and other rooms (gymnasium, classrooms, offices) which are to be occupied simultaneously.

As noted above, the new auditorium will have 850 seats, requiring 212.5 (213) spaces. Zone B, the lots adjacent to Main Street and in close proximity to the primary auditorium entrance are proposed to be modified and expanded east along Main Street to include 358 standard and 15 accessible spaces. Zone B alone satisfies the code requirements for the auditorium as a "stand alone" use.

Expanded Parking Supply

As part of the auditorium project, District 220 is proposing modifications and an expansion of parking in Zone B and also proposing to "double mark" Zone A (creating 54 standard spaces where the 27 bus spaces are) for overflow event parking. The expanded Zone B will provide 358 standard parking spaces and 15 accessible parking spaces. See **Exhibit 4** for the proposed modifications and expansion plans.

Part IV. Recommendations and Conclusions

A Parking Analysis was completed for the existing Barrington High School and the proposed auditorium addition. Based on the parking analysis it can be concluded that overall, the existing supply with the minor proposed modifications is sufficient to accommodate the parking demands of the school and the proposed auditorium based on the Village ordinance. However, specific parking zones, primarily zones E and C, should be reevaluated based on parking designation rules (students vs staff vs visitors) and location.

Part V. Technical Addendum

The following *Exhibits* and *Appendices* were previously referenced. They provide technical support for our observations, findings and recommendations discussed in the text.

Exhibits

1. Location Map
2. Existing Parking Overview
3. Parking Occupancy
4. Proposed Parking Overview

Appendices

- A. Village of Barrington Zoning Ordinance Excerpt

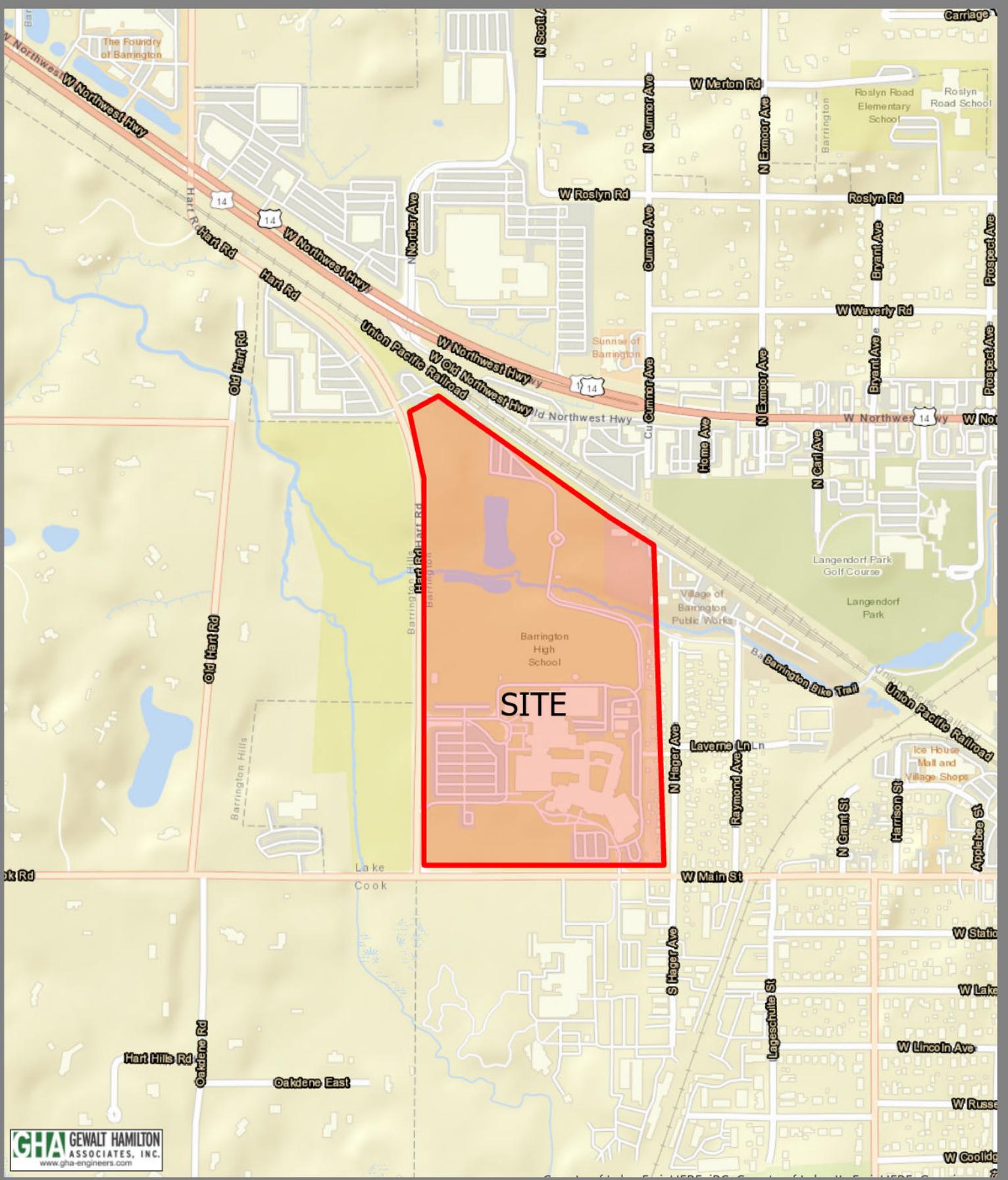
5715.115_Barrington High School Parking Study 092925.docx

*Barrington High School
616 W Main Street
Barrington, Illinois*

TECHNICAL ADDENDUM

*Barrington High School
616 W Main Street
Barrington, Illinois*

Exhibits



GHA GEWALT HAMILTON
ASSOCIATES, INC.
www.gha-engineers.com

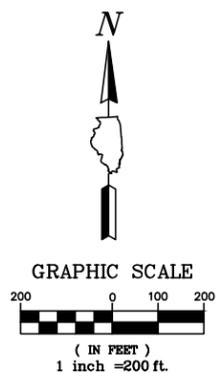


1 inch = 1,000
Feet

Exhibit 1 - Location Map

Barrington High School Parking Study
Barrington, Illinois

- ZONE A: MAINTENANCE BUILDING EAST PARKING LOT & MAIN DRIVE
- ZONE B: W MAIN STREET PARKING LOTS
- ZONE E: HART ROAD PARKING LOT
- ZONE H: STADIUM PARKING LOT
- ZONE I: LOADING DOCK REAR PARKING LOT
- ZONE K: REMOTE JV BASEBALL PARKING LOT
- ZONE M: REMOTE FOD PARKING LOT



PARKING SPACE DATA:

ZONE	EXISTING SPACES		
	STANDARD	A.D.A.	BUSES
ZONE A	2	0	27
ZONE B	269	7	0
ZONE E	470	0	0
ZONE H	33	14	0
ZONE I	58	2	0
ZONE K	66	2	0
ZONE M	118	3	0
TOTAL	1016	28	27

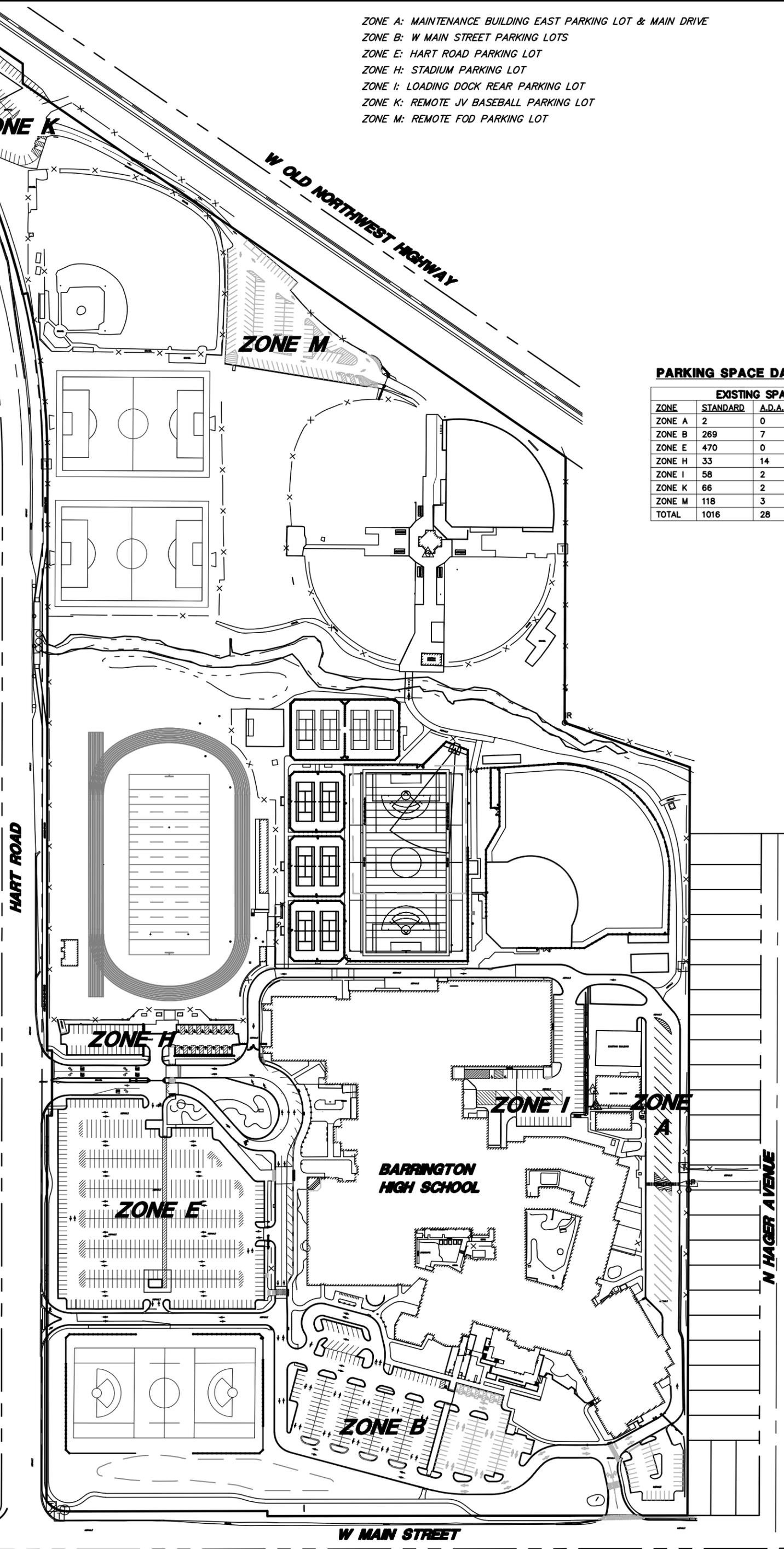


Exhibit 2

GHA GEWALT HAMILTON ASSOCIATES, INC.

625 Forest Edge Drive ■ Vernon Hills, IL. 60061
Tel.: 847.478.9700 ■ Fax.: 847.478.9701

EXISTING PARKING OVERVIEW

**BARRINGTON HIGH SCHOOL FINE ARTS SITE IMPROVEMENTS
BARRINGTON SCHOOL DISTRICT 220**

FILE: 5715.107-Parking Exhibits.dwg

DRAWN BY: LTC

GHA PROJECT #

DATE: 09-23-25

5715.107

CHECKED BY: DG

SCALE: 1"=200'

Exhibit 3
Existing Parking Observations
Barrington High School - Barrington, Illinois

Tuesday, May 20, 2025

Zone	Spaces Available	Spaces Occupied												
		6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	
Zone A	Buses	27	0	0	7	11	11	11	14	10	9	14	5	10
	Regular	2	0	0	2	2	2	2	2	2	2	2	2	2
	Total =	29	0	0	9	13	13	13	16	12	11	16	7	12
	% Occupied		0%	0%	31%	45%	45%	45%	55%	41%	38%	55%	24%	41%
Zone B	Regular	269	30	111	225	227	230	235	235	235	240	215	106	60
	ADA	7	1	2	6	7	7	7	7	6	5	3	0	0
	Total =	276	31	113	231	234	237	242	242	241	245	218	106	60
	% Occupied		11%	41%	84%	85%	86%	88%	88%	87%	89%	79%	38%	22%
Zone E	Regular	470	24	46	436	473	487	489	474	429	330	272	127	103
	Total =	470	24	46	436	473	487	489	474	429	330	272	127	103
	% Occupied		5%	10%	93%	101%	104%	104%	101%	91%	70%	58%	27%	22%
Zone H	Regular	33	9	15	26	30	30	30	31	31	34	35	29	29
	ADA	14	1	1	1	1	1	1	1	1	1	7	0	0
	Total =	47	10	16	27	31	31	31	32	32	35	42	29	29
	% Occupied		21%	34%	57%	66%	66%	66%	68%	68%	74%	89%	62%	62%
Zone I	Regular	58	28	34	34	37	36	39	34	38	29	23	21	22
	ADA	2	0	0	0	0	0	0	0	0	0	0	0	0
	Total =	60	28	34	34	37	36	39	34	38	29	23	21	22
	% Occupied		47%	57%	57%	62%	60%	65%	57%	63%	48%	38%	35%	37%
Zone M	Regular	118	2	2	4	79	80	82	82	79	73	57	6	4
	ADA	3	0	0	0	0	0	0	0	0	0	0	0	0
	Total =	121	2	2	4	79	80	82	82	79	73	57	6	4
	% Occupied		2%	2%	3%	65%	66%	68%	68%	65%	60%	47%	5%	3%
Total Barrington High School			95	211	741	867	884	896	880	831	723	628	296	230
Total Spaces	1003													
Overall % Occupied	-	9%	21%	74%	86%	88%	89%	88%	83%	72%	63%	30%	23%	
Surplus Spaces Available	-	908	792	262	136	119	107	123	172	280	375	707	773	

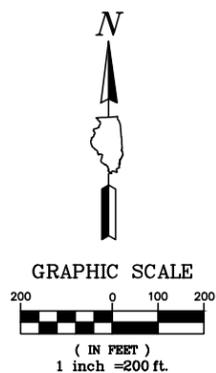
Parking Occupancy Key

> 85% occupied

≤ 61% to 85% occupied

≤ 60% occupied

- ZONE A: MAINTENANCE BUILDING EAST PARKING LOT & MAIN DRIVE
- ZONE B: W MAIN STREET PARKING LOTS
- ZONE E: HART ROAD PARKING LOT
- ZONE H: STADIUM PARKING LOT
- ZONE I: LOADING DOCK REAR PARKING LOT
- ZONE K: REMOTE JV BASEBALL PARKING LOT
- ZONE M: REMOTE FOD PARKING LOT



PARKING SPACE DATA:

ZONE	PROPOSED SPACES		
	STANDARD	A.D.A.	BUSES
ZONE A	54*	0	27
ZONE B	358	15	0
ZONE E	470	0	0
ZONE H	33	14	0
ZONE I	58	2	0
ZONE K	66	2	0
ZONE M	116	3	0
TOTAL	1155	36	27

*OVERFLOW/EVENT PARKING ONLY

TOTAL SPACES GAINED (EXCL. BUSES)	139
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HART ROAD

W OLD NORTHWEST HIGHWAY

BARRINGTON HIGH SCHOOL

N HAGER AVENUE

W MAIN STREET

Exhibit 4

GHA GEWALT HAMILTON ASSOCIATES, INC.

625 Forest Edge Drive ■ Vernon Hills, IL. 60061
Tel.: 847.478.9700 ■ Fax.: 847.478.9701

PROPOSED PARKING OVERVIEW
BARRINGTON HIGH SCHOOL FINE ARTS SITE IMPROVEMENTS
BARRINGTON SCHOOL DISTRICT 220

FILE: 5715.107-Parking Exhibits.dwg

DRAWN BY:	LTC	GHA PROJECT #
DATE:	09-23-25	5715.107
CHECKED BY:	DG	SCALE: 1"=200'

*Barrington High School
616 W Main Street
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APPENDICES

*Barrington High School
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Appendix A
Village of Barrington Zoning Ordinance Excerpt

CHAPTER 4

REGULATIONS OF GENERAL APPLICABILITY

PART II: OFF-STREET PARKING AND LOADING

4.10 Off-Street Parking and Loading

4.10-1 Purpose

4.10-2 Application

4.10-3 General Requirements for Off-Street Parking Areas

4.10-4 Parking Restrictions for Residential Dwellings

4.10-5 Specifications for Off-Street Parking Areas

4.10-6 Off-Site Parking

4.10-7 Collective/Shared Parking

4.10-8 Stacking Requirements for Drive-Through Facilities and Car Washes

4.10-9 Computation of Required Spaces

4.10-10 Off-Street Parking Requirements

4.10-11 Mobility-Impaired Accessible Parking

4.10-12 Loading Requirements

4.10-13 Specific Loading Requirements

4.10 Off-Street Parking and Loading

4.10-1 PURPOSE

The purpose of this Chapter is to prevent, or alleviate, the congestion of public streets and to promote public safety and welfare by establishing minimum requirements for the off-street parking and loading of motor vehicles in accordance with the use to which property is subject.

4.10-2 APPLICATION

All uses, buildings and structures established after the effective date of this Ordinance shall provide accessory parking and loading facilities in the amount and manner as specified herein except where an alternative regulatory requirement supersedes or preempts the application of the Zoning Ordinance, such as, for example, but not by way of limitation, a planned development ordinance, another special use ordinance, or a plat of subdivision.

4.10-3 GENERAL REQUIREMENTS FOR OFF-STREET PARKING AREAS

A. Previously Issued Building Permits

Where a Building Permit has been issued prior to the effective date of this Ordinance, and construction has begun within one (1) year of such issuance and diligently pursued thereafter, parking and loading facilities may be provided in the amounts required for the issuance of the building permit regardless of any different amounts required by this Ordinance.

B. Change of Use

Whenever the existing use of a building or structure shall hereafter be changed to a new use, parking or loading facilities shall be provided as required for such new use. However, if the building or structure was erected prior to the effective date of this Ordinance, additional parking or loading facilities are mandatory only in the amount by which the requirements for the new use would exceed those for the existing use under the parking and loading provisions of this Ordinance.

4.10-9 COMPUTATION OF REQUIRED SPACES

A. Basis for Computation

The total number of required parking spaces shall be based upon the parking requirement stated for the principal use of the zoning lot in question, except that where residential uses and non-residential uses occupy the same zoning lot, the number of parking spaces for the residential uses shall be calculated separately from, and in addition to, the parking requirements for the non-residential uses.

B. Fractional Spaces

When determination of the number of required parking spaces results in the requirement of a fractional space, any fraction shall require one (1) additional parking space.

C. Bench Seating

In Places of Public Assembly in which patrons or spectators occupy benches, pews, or other similar seating facilities, each twenty-two (22) inches of such seating facility shall be counted as one (1) seat for the purpose of determining the requirement for off-street parking facilities under this Ordinance, except that when the structure has no design capacity the maximum number present at any one time shall govern.

D. Employee Designation

For purposes of parking requirements, full and part-time employees are treated alike for the computation of required off-street parking spaces.

4.10-10 OFF-STREET PARKING REQUIREMENTS

The parking and loading requirements are set forth as follows:

Residential Uses	
Convents and Monasteries	1 space for every guest room or dwelling unit
Day Care Home	1 in addition to residence requirement
Dwellings, Multiple Family Studio/1 Bedroom Units 2 Bedroom Units 3 or 4 Bedroom Units 5 or more Bedrooms Units	1 space per dwelling unit 1.5 spaces per dwelling unit 2 spaces per dwelling unit 2 spaces per dwelling unit
Dwellings, Single Family	2 spaces per dwelling unit
Dwellings, Two-Family	2 spaces per dwelling unit
Nursing Homes	1 space per 6 beds, plus 2 spaces per 3 employees
Senior Housing, Assisted Living	1 space for each 5 beds, plus 2 spaces for every 3 employees
Senior Housing, Independent	1.25 spaces per dwelling unit

Institutional Uses	
Cemeteries or Mausoleums	1 for every 2 employees, plus 1 space for every 5 seats for any place of assembly
Convent or Monastery	1 space for every guest room or dwelling unit
Hospital	1 space for every 5 beds, plus 1 spaces for every 3 employees

Places of Public Assembly	1 space for every 4 seats in the main auditorium, sanctuary, nave or similar place of assembly and other rooms (gymnasiums, classrooms, offices) which are to be occupied simultaneously
Offices, Government	4 per 1000 sq. ft. of gross floor area, plus 4 per vehicle bay
Public/Private Utility Buildings and Structures	1.67 spaces per 1000 sq. ft. of gross floor area
Primary School, Private Primary School, Public	1 space for each classroom, plus 2.5 spaces per 1000 sq. ft. of area devoted to offices
Secondary School, Private Secondary School, Public	1 space for each classroom, plus 2.5 spaces per 1000 sq. ft. of area devoted to offices, plus 1 space for every 6 students based on maximum enrollment

Cultural/Entertainment Uses	
Commercial Amusement Center	3.3 spaces per 1000 sq. ft. of gross activity area
Community Centers	5 spaces per 1000 sq. ft. of gross activity area
Cultural Facilities	3.3 spaces per 1000 sq. ft. of gross floor area
Libraries	1.33 spaces per 1000 sq. ft. of gross floor area
Nature Preserves/Conservation Areas	2 spaces plus 1 per every ½ acre
Places of Public Assembly	1 space for every 4 seats in the main auditorium, sanctuary, nave or similar place of assembly and other rooms (gymnasiums, classrooms, offices) which are to be occupied simultaneously
Recreation, Active Outdoor	1 space per 3 seats or 1.5 per play station
Recreation, Active Outdoor, Driving Range	1.25 spaces per golf station
Recreation, Active Outdoor, Golf Course	5 spaces per 1000 sq. ft. of gross floor area in any building, plus 1 space for every 2 practice tees in the driving range, plus 4 for each green in the playing area
Recreation, Active Outdoor, Miniature Golf	3 spaces per golf hole
Recreation, Active Outdoor, Outdoor Athletic Fields and Recreation Facilities	3 space per court, 1 per 4 feet of bleacher area or 30 per field, whichever is greater, 2.5 per 1000 sq. ft. of pool surface; 0.1 per 1000 sq. ft. all other recreational areas
Recreation, Indoor	3.3 spaces per 1000 sq. ft. of gross activity area
Recreation, Indoor, Bowling Alley	4 spaces per lane, plus 3.3 spaces per 1000 sq. ft. of restaurant/lounge area
Recreation, Indoor, Child Indoor Amusement Facility	3.3 spaces per 1000 sq. ft. of gross activity area
Recreation, Indoor, Health and Fitness Facilities	3.3 spaces per 1000 sq. ft. of gross floor area
Recreation, Passive Outdoor	2 spaces, plus 1 space for every 1/2 acre.
Taverns	6.67 spaces per 1000 sq. ft. of gross floor area
Theaters	1 space for every 3 seats

Commercial Uses	
Academies	1 space per student and 1 space per instructor of peak classes. If instruction is offered solely to students under the age of sixteen, 5 spaces per 1,000 square feet of net floor area, plus drop-off facilities as determined by the Zoning Official.
Adult Uses	6.67 spaces per 1000 sq. ft. of gross floor area
Ambulance Services	1 space per employee, plus 1 space for every 2 ambulance vehicles
Artisan Use	1.67 spaces per 1000 sq. ft. of gross floor area