



BELINDER ELEMENTARY

# FACILITY EVALUATION





# OVERALL SUMMARY

ACI Boland Architects along with MFEC and BHC Rhodes Engineers visited each of the elementary schools over a several week process. Each school was evaluated and scored using the A4LE School Facility Appraisal document included in this report. The school's principal and maintenance personnel were present at the building walk-throughs to offer insight into building positives and negatives.

**The overall Assessment scores are indicated as follows:**

- |   |                   |
|---|-------------------|
| • <b>Rushton Elementary School</b>      | <b>523 points</b> |
| • <b>Belinder Elementary School</b>     | <b>557 points</b> |
| • <b>Tomahawk Elementary School</b>     | <b>562 points</b> |
| • <b>Rosehill Elementary School</b>     | <b>656 points</b> |
| • <b>East Antioch Elementary School</b> | <b>669 points</b> |



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## SUMMARY

Belinder Elementary is a two story school with approximately 497 students from ages Kindergarten through 6th grade. School hours are from 7:30 a.m. to 3:10 p.m. The building is 69,319 s.f. with 24 classrooms, cafeteria, kitchen, gymnasium with bleachers, library, art, maker space, resource room, music and administrative areas including nurse's office and staff room. The building is a brick and masonry building with concrete floor structure and steel roof joists. Other exterior building materials include metal panels, blue glazed brick and cast stone. The roof system is a built up roof with roof drains and overflow drains. There is was an elevator added in 2010. There is access to the roof through the Mechanical room. Metal screens are provided around mechanical roof top equipment. An original brick chimney flue is no longer used since the boiler has been replaced. Interior corridor walls are plaster in the older parts of the school. The newer additions have concrete block construction at the corridor walls.



The school is located in a residential neighborhood on Belinder Avenue in close proximity to the Indian Hills Country Club and golf course. The site is surrounded by individual homes. The site has off street parking for staff and visitors with sidewalks connecting these areas. Hard and soft surface play areas are provided with appropriate play equipment. A separate bus drop off and parent drop off is accessed off of Belinder Avenue. The parent drop off on the south side has a loop drive. The bus drop off on the north end is a one lane drive that circles around the asphalt playground. There is traffic backup onto Belinder Avenue during afternoon pickup. There is a traffic light and crosswalk from the east side of Belinder Avenue west to the main entry area.

There are grass play fields on the west end of the site with an approximate 27' grade change across the site. The school building has several large mature trees on the site. The 2 main entries into the building are handicapped accessible, but there are several non-ADA accessible doors provided with concrete steps but no ramps. There are some landscape planters on the south side of the building.





APPRAISAL

**GUIDE FOR**

**SCHOOL FACILITY APPRAISAL**

**BELINDER**  
**ELEMENTARY**

**APPRAISAL**



## Directions for Appraising Facilities

### Elementary School Appraisal

Prior to evaluating a building, the appraiser should become familiar with the educational program provided within the existing school facility. It is essential to determine other pertinent factors about the facility, which will provide background information sufficient to insure a thorough and accurate appraisal. Particularly helpful are the building's architectural plans, specifications and layout, if these are available. If possible, the school plant should be appraised at a time when school is in session, so that the actual use of the building is more apparent.

Although the Appraisal Guide is designed for individual appraiser use, ideally the school facility should be evaluated at the same time by three to five appraisers. The ratings of each of the appraisers should then be used to arrive at a consensus for each item. The final rating is the result of careful review of the individual scores.

The instrument uses an additive scoring method, with each item having a maximum number of allowable points. A total of 1,000 points is distributed among these six major categories:

<u>Section</u>		<u>Maximum Points</u>
1.0	The School Site	100
2.0	Structural and Mechanical Features	200
3.0	Plant Maintainability	100
4.0	School Building Safety and Security	200
5.0	Educational Adequacy	200
6.0	Environment for Education	200

### Prior to Appraisal

#### Step I

Review the educational program; identify the number of faculty members and students; and examine the floor and plot plans carefully.

### Overview of the Building and Grounds

#### Step II

Upon approach to the site, look for traffic patterns, school safety signs, neighborhood environment, etc. Begin the appraisal by taking a preliminary tour of the entire building noting both exterior and interior features. Information obtained prior to arrival at the campus recorded in the Building Data Record should be verified. The appraisal weights should not be determined during this initial walk through. The appraisal is better accomplished as separate individual steps in the process.

### Assignment of Scores

#### Step III

After the completion of the preliminary inspection, go through the entire instrument section by section. The appraisal will be more accurate if each item is carefully considered, while it is appropriately observed. **Do not try to evaluate from memory** - use actual observation when making the appraisal decision.

*Items that are needed/required, but are non-existent, should be given a 0 score. If an item is not needed and is non-existent, full credit should be allowed.*

Note the Table of Weights for assistance in determining the score to be given each item. Each item should first be considered in the following terms: Non-Existent, Very Inadequate, Poor, Borderline, Satisfactory and Excellent. The weight (score) should then be assigned for that item. Place score in space provided in the Points Allotted column, total the score for each Section and insert in the space provided. The Section totals should then be tabulated and indicated in the Points Assigned column of the Appraisal Summary. Use the space provided in the Justification for Allocation of Points to provide notes justifying the scores at the extreme ends of the scale (e.g., very inadequate or excellent).



## Building Data Record

**Name of Appriaser:** ACI Boland Architects      **Date of Appraisal:** 10/30/2017

**Building Name:** Belinder Elementary School

**Street Address:** 7230 Belinder Avenue

**City, State, Zip Code:** Prairie Village, Kansas 66208

**Telephone Number(s):** 913-993-1800

**School District:** Shawnee Mission School District

**Setting:**    ☐ Urban                      ☒ Suburban                      ☐ Small City                      ☐ Rural

Site Acreage: 7.75                      Building Square Footage 69,319

Grades Housed: K-6th                      Student Capacity 487

# of Teaching Stations: 24                      # of Floors 2

Student Enrollment: 487                      As of: 11/14/2017

Dates of Construction: Original Building - 1951, Additions and Renovations 1956, 1964, 1968, 1979, 1992, 1995, 2010 and 2011

**Energy Source:**    ☐ Fuel Oil                      ☒ Gas                      ☐ Electric                      ☐ Solar

**Air Conditioning:**    ☒ Roof Top                      ☐ Window Units                      ☐ Central                      ☒ Room Units

**Heating:**    ☐ Central                      ☒ Roof Top                      ☐ Individual Unit

☒ Forced Air                      ☐ Steam                      ☐ Hot Water

Types of Construction	Exterior Surfacing	Floor Construction
<input checked="" type="checkbox"/> Load Bearing Masonry	<input checked="" type="checkbox"/> Brick	<input type="checkbox"/> Wood Joists
<input type="checkbox"/> Steel Frame	<input type="checkbox"/> Stucco	<input checked="" type="checkbox"/> Steel Frame
<input type="checkbox"/> Concrete Frame	<input checked="" type="checkbox"/> Metal	<input checked="" type="checkbox"/> Slab on Grade
<input type="checkbox"/> Wood	<input type="checkbox"/> Wood	<input checked="" type="checkbox"/> Structural Slab
<input checked="" type="checkbox"/> Other <u>Steel roof joists</u>	Other _____	<input type="checkbox"/> Other _____



## APPRAISAL GUIDE FOR SCHOOL FACILITIES

Table of Weights and Categories	Maximum Points Allotted	Non- Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
	5	0	1	2	3	4	5
	10	0	2	4	6	8	10
	15	0	3	6	9	12	15
	20	0	4	8	12	16	20
	25	0	5	10	15	20	25

Appraisal Summary	Section	Possible Points	Total Earned	Percent	Rating By Category
	1.0 The School Site	100	61	61%	
	2.0 Structural and Mechanical	200	107	54%	
	3.0 Plant Maintainability	100	66	66%	
	4.0 School Building Safety & Security	200	143	72%	
	5.0 Educational Adequacy	200	97	49%	
	6.0 Environment for Education	200	83	42%	
	<b>TOTAL</b>	<b>1,000</b>	<b>557</b>	<b>56%</b>	

## 1.0 The School Site

100 Points

1.1	<b>Site is large enough</b> to meet present and future educational needs as defined by state and local requirements.	25	10
1.2	<b>Site is easily accessible</b> and conveniently located for the present and future population.	20	15
1.3	<b>Location</b> is removed from undesirable business, industry, traffic and natural hazards.	10	10
1.4	Site is <b>well landscaped and developed</b> to meet educational needs.	10	7
1.5	Well equipped <b>athletic areas</b> are adequate with sufficient solid-surface parking.	10	6
1.6	<b>Topography</b> is varied enough to provide desirable appearance and without steep inclines.	5	1
1.7	Site has stable, well drained <b>soil free of erosion</b> .	5	3
1.8	Site is suitable for <b>special instructional needs</b> , e.g. outdoor learning.	5	3
1.9	<b>Pedestrian services</b> including adequate sidewalks with designated crosswalks, curb cuts and correct slopes.	5	4
1.10	Sufficient <b>on-site, solid surface parking</b> is provided for faculty, students, staff and community.	5	2
<b>Total - The School Site</b>		<b>100</b>	<b>61</b>

Table of  
Weights  
and  
Categories

Maximum Points Allotted	Non- Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
5	0	1	2	3	4	5
10	0	2	4	6	8	10
20	0	4	8	12	16	20
25	0	5	10	15	20	25



## 2.0 Structural and Mechanical Features

200 Points

### Structural

2.1	Structure meets all <b>barrier-free</b> requirements both externally and internally.	15	5
2.2	<b>Roofs</b> appear sound, have positive drainage, and are weather-tight.	15	8
2.3	<b>Foundations</b> are strong and stable with no observable cracks.	10	9
2.4	<b>Exterior and interior walls</b> have sufficient expansion joints and are free of deterioration.	10	5
2.5	<b>Entrances and exits</b> are located so as to permit efficient student traffic flow.	10	3
2.6	<b>Building "envelope"</b> generally provides for energy conservation (See criteria).	10	5
2.7	Structure is <b>free of friable asbestos</b> and <b>toxic materials</b> .	10	9
2.8	Interior walls permit sufficient <b>flexibility</b> for a variety of class sizes.	10	2

Table of  
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10	0	2	4	6	8	10
15	0	3	6	9	12	15

### Mechanical/Electrical

2.9	<b>Adequate light sources</b> are well maintained, properly placed and are not subject to overheating.	15	9
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<b>2.10</b>	<b>Internal water supply</b> is adequate with sufficient pressure to meet health and safety requirements.	<b>15</b>	<b>9</b>
<b>2.11</b>	Each teaching/learning area has adequate convenient <b>wall outlets</b> , phone and computer cabling for <b>technology applications</b> .	<b>15</b>	<b>3</b>
<b>2.12</b>	<b>Electrical controls</b> are safely protected with <b>disconnect switches</b> easily accessible.	<b>10</b>	<b>9</b>
<b>2.13</b>	<b>Drinking fountains</b> are adequate in number and placement, and are properly maintained including provisions for the disabled.	<b>10</b>	<b>6</b>
<b>2.14</b>	Number and size of <b>restrooms meet requirements</b> .	<b>10</b>	<b>4</b>
<b>2.15</b>	<b>Drainage systems</b> are properly maintained and meet requirements.	<b>10</b>	<b>2</b>
<b>2.16</b>	<b>Fire alarms, smoke detectors and sprinkler systems</b> are properly maintained and meet requirements.	<b>10</b>	<b>8</b>
<b>2.17</b>	<b>Intercommunication system</b> consists of a central unit that allows dependable <b>two-way communication</b> between the office and instructional areas.	<b>10</b>	<b>8</b>
<b>2.18</b>	<b>Exterior water supply</b> is sufficient and available for normal usage.	<b>5</b>	<b>3</b>
<b>Total - Structural and Mechanical Features</b>		<b>200</b>	<b>107</b>

Table of  
Weights  
and  
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<b>Maximum Points Allotted</b>	<b>Non- Existent</b>	<b>Very Inadequate 1 - 29%</b>	<b>Poor 30 - 49%</b>	<b>Borderline 50 - 69%</b>	<b>Satisfactory 70 - 89%</b>	<b>Excellent 90 - 100%</b>
5	0	1	2	3	4	5
10	0	2	4	6	8	10
15	0	3	6	9	12	15



### 3.0 Plant Maintainability

100 Points

3.1	<b>Exterior windows, doors and walls</b> are of material and finish requiring minimum maintenance.	15	13
3.2	<b>Floor surfaces</b> throughout the building require minimum care.	15	7
3.3	<b>Ceilings and walls</b> throughout the building, including service areas, are easily cleaned and resistant to stain.	10	6
3.4	<b>Built-in equipment</b> is designed and constructed for ease of maintenance.	10	6
3.5	<b>Finishes and hardware</b> , with a compatible keying system, are of durable quality.	10	10
3.6	<b>Restroom fixtures</b> are wall mounted and of quality finish.	10	6
3.7	Adequate <b>custodial storage space</b> with water and drain is accessible throughout the building.	10	4
3.8	Adequate <b>electrical outlets and power</b> , to permit routine cleaning, are available in every area.	10	6
3.9	<b>Outdoor light fixtures, electric outlets</b> , equipment, and other fixtures are accessible for repair and replacement.	10	8
<b>Total - Plant Maintainability</b>		<b>100</b>	<b>66</b>

Table of  
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Maximum Points Allotted	Non- Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
10	0	2	4	6	8	10
15	0	3	6	9	12	15

## 4.0 Building Safety and Security

200 Points

### Site Safety

4.1	<b>Student loading areas</b> are segregated from other vehicular traffic and pedestrian walkways.	15	2
4.2	<b>Walkways</b> , both on and offsite, are available for safety of pedestrians.	10	8
4.3	<b>Access streets</b> have sufficient signals and signs to permit safe entrance to and exit from school area.	5	5
4.4	<b>Vehicular entrances and exits</b> permit safe traffic flow.	5	2
4.5	<b>Athletic field equipment</b> is properly located and is free from hazard.	5	4

### Building Safety

4.6	The <b>heating unit(s)</b> is located away from student occupied areas.	20	12
4.7	Multi-story buildings have at least <b>two stairways</b> for student egress.	15	10
4.8	<b>Exterior doors</b> open outward and are equipped with panic hardware.	10	10
4.9	<b>Emergency lighting</b> is provided throughout the building with exit signs on separate electrical circuits.	10	6
4.10	<b>Classroom doors</b> are recessed and open outward.	10	8
4.11	<b>Building security systems</b> are provided to assure uninterrupted operation of the educational program.	10	8

Table of  
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Maximum Points Allotted	Non- Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
5	0	1	2	3	4	5
10	0	2	4	6	8	10
15	0	3	6	9	12	15
20	0	4	8	12	16	20



**Building Safety** (cont.)

<b>4.12</b>	<b>Flooring</b> (including ramps and stairways) is maintained in a nonslip condition.	<b>5</b>	<b>5</b>
<b>4.13</b>	<b>Stairs</b> (interior and exterior) meet standards (maximum 7" rise to 11" tread) and steps range in number from 3 - 16.	<b>5</b>	<b>5</b>
<b>4.14</b>	<b>Glass</b> is properly located and protected with wire or safety material to prevent accidental student injury.	<b>5</b>	<b>4</b>
<b>4.15</b>	<b>Fixed projections</b> in the traffic areas do not extend more than 8" from the corridor wall.	<b>5</b>	<b>1</b>
<b>4.16</b>	<b>Traffic areas</b> terminate at an exit or a stairway leading to an egress.	<b>5</b>	<b>4</b>

**Emergency Safety**

<b>4.17</b>	Adequate <b>fire safety equipment</b> is properly located.	<b>15</b>	<b>12</b>
<b>4.18</b>	There are at least <b>two independent exits</b> from any point in the building.	<b>15</b>	<b>15</b>
<b>4.19</b>	<b>Fire-resistant materials</b> are used throughout the structure.	<b>15</b>	<b>12</b>
<b>4.20</b>	Automatic and manual <b>emergency alarm system</b> with a distinctive sound and flashing light is provided.	<b>15</b>	<b>10</b>

**Total - Building Safety and Security**

<b>200</b>	<b>143</b>
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Table of  
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and  
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<b>Maximum Points Allotted</b>	<b>Non- Existent</b>	<b>Very Inadequate 1 - 29%</b>	<b>Poor 30 - 49%</b>	<b>Borderline 50 - 69%</b>	<b>Satisfactory 70 - 89%</b>	<b>Excellent 90 - 100%</b>
5	0	1	2	3	4	5
15	0	3	6	9	12	15

## 5.0 Educational Adequacy

200 Points

### Academic Learning Space

5.1	<b>Size of academic learning areas</b> meets desirable standards.	10	2
5.2	<b>Classroom space</b> permits arrangements for small group activity.	10	2
5.3	<b>Location of academic learning areas</b> is near related educational activities and away from disruptive noises.	10	8
5.4	<b>Personal space</b> in the classroom away from group instruction allows privacy time for individual students.	5	0
5.5	<b>Storage for student materials</b> is adequate.	5	1
5.6	<b>Storage for teacher materials</b> is adequate.	5	4

### Specialized Learning Space

5.7	<b>Size of specialized learning area(s)</b> meets standards.	15	6
5.8	<b>Design of specialized learning area(s)</b> is compatible with instructional need.	10	5
5.9	<b>Library/Resource/Media Center</b> provides appropriate and attractive space.	15	13
5.10	<b>Gymnasium and outdoor facilities</b> adequately serve physical education instruction.	15	10
5.11	<b>Pre-kindergarten and kindergarten</b> space is appropriate for age of students and nature of instruction.	10	10
5.12	<b>Music Program</b> is provided adequate sound-treated space.	10	7

Table of  
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5	0	1	2	3	4	5
10	0	2	4	6	8	10
15	0	3	6	9	12	15
25	0	5	10	15	20	25



**Specialized Learning Space** (cont.)

<b>5.13</b>	<b>Space for art</b> is appropriate for instruction, supplies and equipment.	<b>10</b>	<b>6</b>
<b>5.14</b>	<b>Space for technology education</b> permits use of state-of-the-art equipment.	<b>10</b>	<b>2</b>
<b>5.15</b>	Space for <b>small groups and remedial instruction</b> is provided adjacent to classrooms.	<b>5</b>	<b>0</b>
<b>5.16</b>	<b>Storage for student and teacher material</b> is adequate.	<b>5</b>	<b>3</b>

**Support Space**

<b>5.17</b>	<b>Teacher's lounge and work areas</b> support teachers as professionals.	<b>10</b>	<b>6</b>
<b>5.18</b>	<b>Cafeteria/Kitchen</b> is attractive with sufficient space for seating/dining, delivery, storage and food preparation.	<b>10</b>	<b>3</b>
<b>5.19</b>	<b>Administrative offices</b> are consistent in appearance and function with the maturity of the students served.	<b>10</b>	<b>2</b>
<b>5.20</b>	<b>Counselor's office</b> insures privacy and sufficient storage.	<b>5</b>	<b>2</b>
<b>5.21</b>	<b>Clinic</b> is near administrative offices and is equipped to meet requirements.	<b>5</b>	<b>2</b>
<b>5.22</b>	<b>Suitable reception space</b> is available for students, teachers and visitors.	<b>5</b>	<b>2</b>
<b>5.23</b>	<b>Administrative personnel</b> are provided sufficient work space and privacy.	<b>5</b>	<b>1</b>

**Total - Educational Adequacy**

<b>200</b>	<b>97</b>
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Table of  
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<b>Maximum Points Allotted</b>	<b>Non- Existent</b>	<b>Very Inadequate 1 - 29%</b>	<b>Poor 30 - 49%</b>	<b>Borderline 50 - 69%</b>	<b>Satisfactory 70 - 89%</b>	<b>Excellent 90 - 100%</b>
5	0	1	2	3	4	5
10	0	2	4	6	8	10

## 6.0 Environment for Education

200 Points

### Exterior Environment

6.1	Overall <b>design is aesthetically pleasing</b> and appropriate for the age of students.	15	7
6.2	Site and buildings are well landscaped.	10	5
6.3	<b>Exterior noise and surrounding environment</b> do not disrupt learning.	10	7
6.4	<b>Entrances and walkways are sheltered</b> from sun and inclement weather.	10	2
6.5	<b>Building materials</b> provide attractive color and texture.	5	4

### Interior Environment

6.6	<b>Color schemes, building materials and decor</b> provide an impetus to learning.	20	6
6.7	<b>Year around comfortable temperature and humidity</b> are provided throughout the building.	15	7
6.8	<b>Ventilating system</b> provides adequate quiet circulation of clean air and meets 15cfm VBC requirement.	15	9
6.9	<b>Lighting system</b> provides proper intensity, diffusion and distribution of illumination.	15	12
6.10	<b>Sufficient drinking fountains and restroom facilities</b> are conveniently located.	15	9
6.11	<b>Communication among students</b> is enhanced by commons area.	10	0

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5	0	1	2	3	4	5
10	0	2	4	6	8	10
15	0	3	6	9	12	15
20	0	4	8	12	16	20

**Interior Environment** (cont.)

<b>6.12</b>	<b>Traffic flow</b> is aided by appropriate foyers and corridors.	<b>10</b>	<b>2</b>
<b>6.13</b>	<b>Areas for students to interact</b> are suitable to the age group.	<b>10</b>	<b>2</b>
<b>6.14</b>	<b>Large group areas</b> are designed for effective management of students.	<b>10</b>	<b>2</b>
<b>6.15</b>	<b>Acoustical treatment</b> of ceilings, walls and floors provides effective sound control.	<b>10</b>	<b>3</b>
<b>6.16</b>	<b>Window design</b> contributes to a pleasant environment.	<b>10</b>	<b>4</b>
<b>6.17</b>	<b>Furniture and equipment</b> provide a pleasing atmosphere.	<b>10</b>	<b>2</b>
<b>Total - Environment for Education</b>		<b>200</b>	<b>83</b>

Table of  
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10	0	2	4	6	8	10



## Justification for Allocation of Points

BUILDING NAME AND LEVEL:

Name of School Building

Belinder

Indicate the justification for the appraisal decision in the space provided.

BUILDING FEATURES THAT CLEARLY EXCEED CRITERIA:

1. Item 1 Adequate area and natural light in library
2. Item 2 Kindergarten areas adequate size
3. Item 3
4. Item 4
5. Item 5

BUILDING FEATURES THAT ARE NON-EXISTENT OR VERY INADEQUATE:

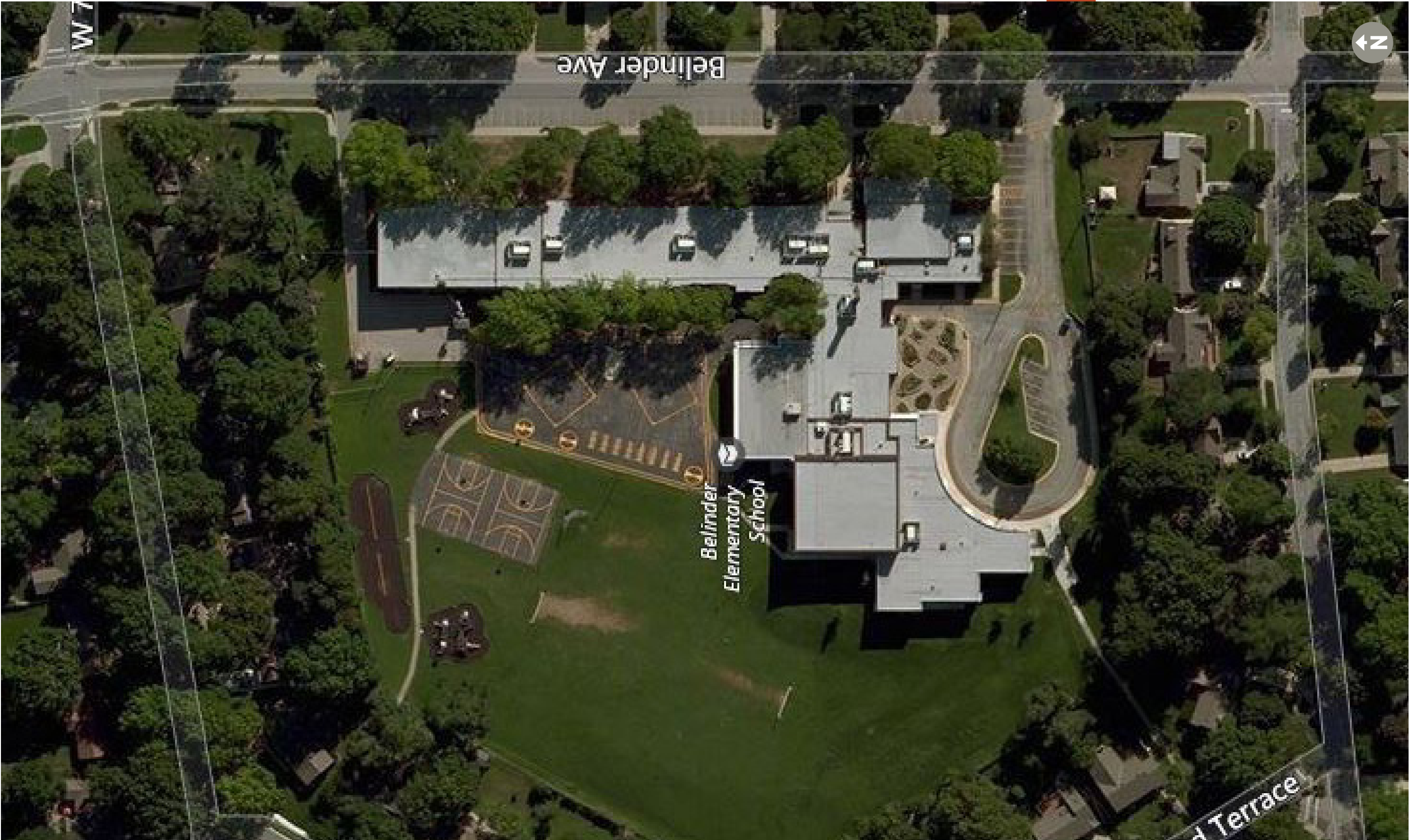
1. Item 1 No Early Childhood or Special education program
2. Item 2 No student collaborative spaces
3. Item 3 Grades levels not adjacent to each other in some areas
4. Item 4 Insufficient toilet facilities for students and staff due to age of school
5. Item 5 No storm shelter
6. Item 6 Huge traffic issues during afternoon parent and bus pick up
7. Item 7 HVAC not balanced through out school
8. Item 8 Student circulation pinch point entering the cafeteria corridor
9. Item 9 Majority of exterior doors not ADA accessible.

**Date of Appraisal:** 11/14/2017

**Name of School:** Belinder Elementary School

**Name of Appraisers:** ACI Boland Architects

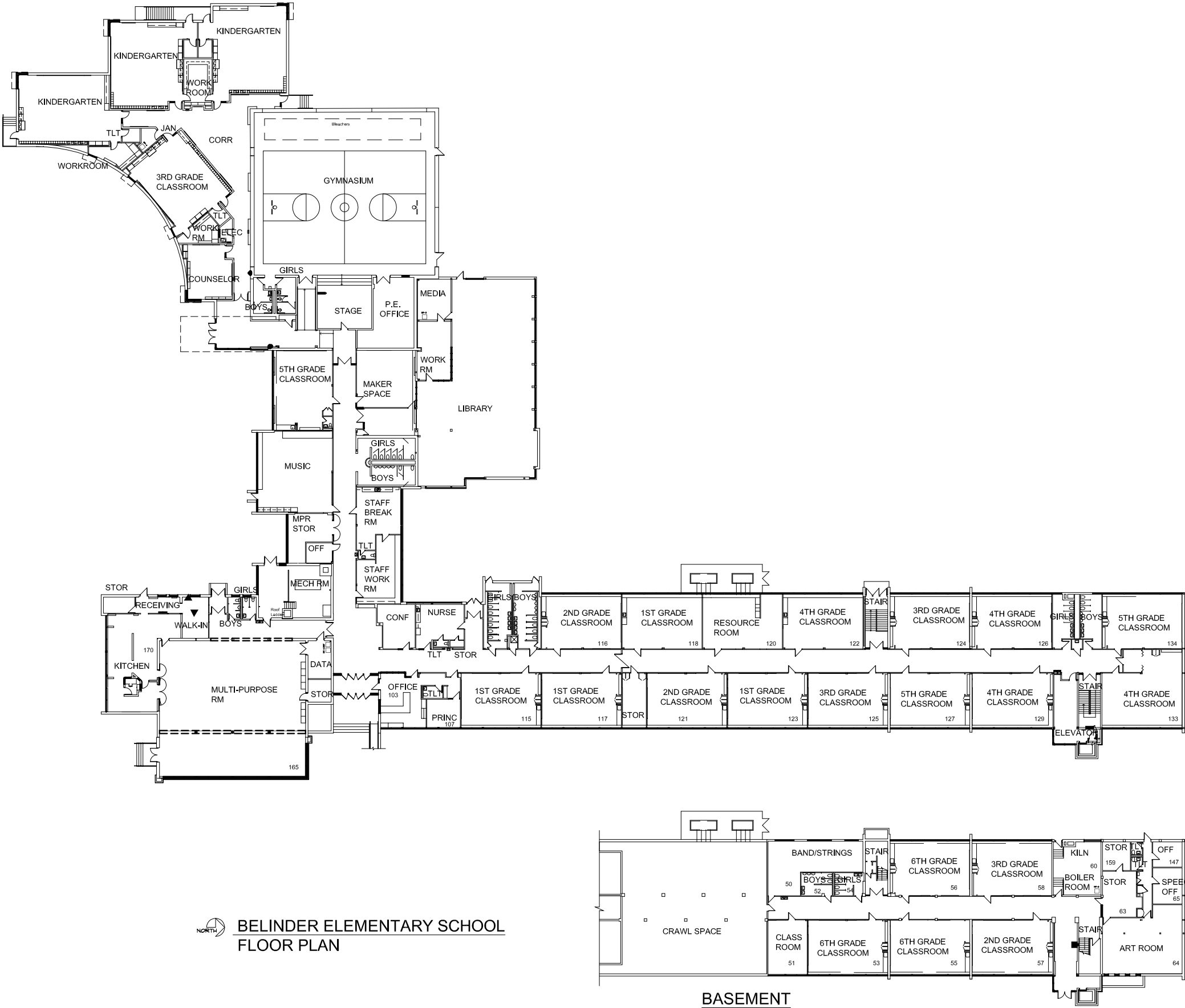
SITE PLAN







FLOOR PLAN



 **BELINDER ELEMENTARY SCHOOL**  
**FLOOR PLAN**

**BASEMENT**



# FACILITY OBSERVATIONS

## Architectural Observations



No cubby storage for students in the 1st Grade thru 6th Grade classrooms, only coat hooks close together.



Corridors have low ceilings (8'-0" a.f.f.). Doors swinging into Corridor. Droopy ceiling tiles due to moisture issues. VCT flooring requires maintenance. No collaboration or common areas for students.





Student toilet rooms need updating.



Staff toilets need updating.  
Not ADA accessible.



Drinking fountains protruding into Corridors more than allowed by ADA.



No shower in Nurse's area for kids.





Classrooms with traditional desks. Need different casework and furniture to allow for various methods of teaching instruction.



Small Kitchen/Serving line- A long Lunch period extends from 10:40 to 12:50.





Kiln is located in Boiler room. Inconvenient for art students to access.



Art Room has unusable sink area, no countertop space.





Band/Strings room located in lower level. Water issues have occurred. Window wells have steel cage on the glass. Room not large enough for this program.



VCT flooring with cracks at expansion joints. There are also uneven surfaces at walls and ceilings. VCT flooring is a maintenance issue.





Both exterior doors at gym have steps outside so they are not ADA accessible.



Exterior doors to playground not ADA accessible. Kindergarten playground location is hidden from view of staff members monitoring larger adjacent playground area. Kindergarten play equipment structure needs updating.





Noisy HVAC exterior unit adjacent to classroom windows.



Off street parking causes traffic problems on Belinder Avenue. Parent pick up drive on south side isn't long enough and as a result cars spill out onto Belinder Avenue causing further traffic problems. Bus entry at north end of site is only one lane wide.

## MEP Observations



Electrical Transformer with Limited access due to ceiling installation



Condensate dangled across middle of the room





Exterior drain at mechanical room that clogs easily causing water inside building



Floor mounted plumbing fixtures



Exterior No parking lot lighting



Janitor Closet without full head clearance



Kiln in Mechanical space in middle of room has inefficient use of space



Network Cabling





Old electrical panel with significant amount of rust



Overhead Electrical Service





Sewer water backup



Portable dehumidifier and fan



Surface electrical power.  
The typical classroom  
needs updating.



Split system serving Art  
Classroom. Exhaust not  
connected to unit.



Transfer air from restroom to corridor.



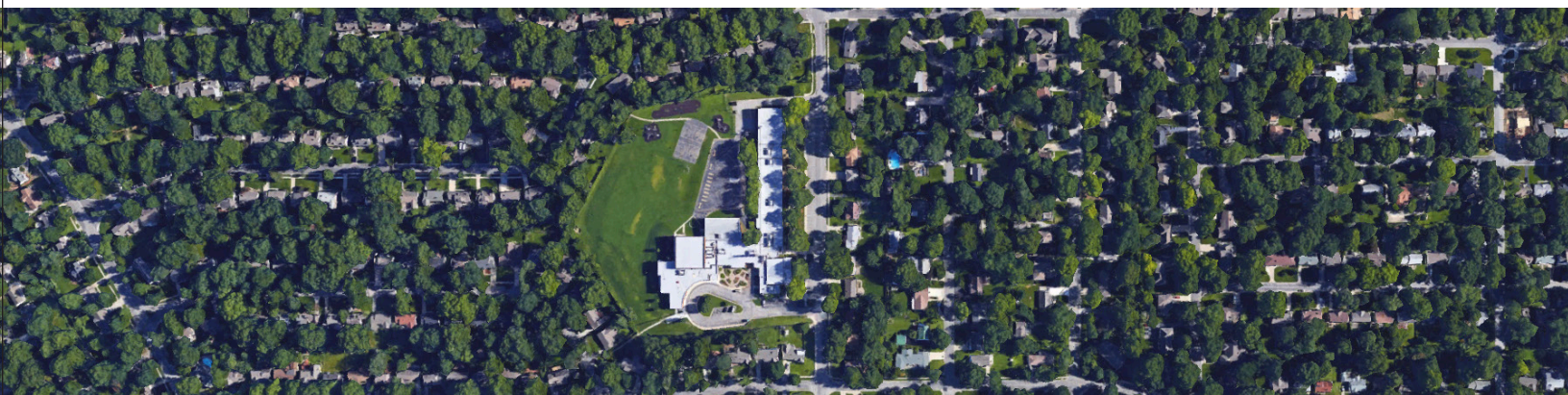
# SITE ANALYSIS

## Existing Conditions

The existing school building and parking is situated on the eastern portion of the site. The existing playgrounds are located on the northwest side of the existing building. There are existing grass ballfields along the western portion of the property. This area slopes moderately (4%) from the school to the west. There is then a steeper slope over the western 50 feet of the property. There are sidewalk connections along Belinder Street and up to the building. There are also sidewalks that lead out to the residential neighborhoods to the west, both in the northwest and southwest directions. There are approximately 70 parking stalls located throughout the site. The south drive is used for pickup of students at the end of the school day. There appears to be enough space for approximately 25 vehicles to queue onsite and not be on Belinder Avenue. The site appears to be reasonably well drained.

## Replacement School Assessment

If a replacement school was to be built on the same site while the existing school would remain open, it would need to be constructed along the west side of the property where the existing grass ballfields are located. While this area is somewhat flatter, there might still be a need for retaining walls along the back side due to the steeper slopes, depending on the proposed footprint of the new building. New parking lot, drives, and playgrounds would not be able to be built until the existing school building, playgrounds, and parking areas are demolished. With potentially increasing the amount of impervious surface with a new school, stormwater detention and water quality facilities would need to be provided with the project. There is existing sanitary main at the very north end of the site, with a possible route to the new building around the north end of the existing school, potentially eliminating the need for a sanitary main extension. All other utilities are readily available around the site to serve the new building. The main concern with a replacement school on the existing site while the existing building remains open would be the phasing and timing of the demolition of the existing school building and the construction of the new parking lot. There are also existing storm pipes that run through the location of where the new school would be built. Either the new building would have to be built over these pipes or they would have to be rerouted temporarily while the new school is built.





# Belinder Elementary Existing Utility Map



December 5, 2017

Johnson - Water Mains

Johnson - Stormwater Inlet

Johnson - Stormwater Pipe

Johnson - Gas Main

Main

Active Manhole or Cleanout

Others

Johnson - OH Electric

Johnson - UG Electric

Johnson - Sewer Mains

Curb Inlet



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

# ARCHITECTURAL NARRATIVE

**Principal: Steve Yeoman | Mascot: Indian Braves | SF 69,319 | 2 story | 1951 original building  
Additions and Renovations in 1956, 1964, 1995, 1968, 1979, 1992, 2010 and 2011.**

1. Attendance according to the Principal: 497 kids (full capacity).
2. Building is open at 7:30 for staff. Class hours are from 8:00 to 3:10. They have before and after school programs YCare.
3. Site: Parent drop off and queuing is on the south side of the building. There is off street parking on Belinder Avenue for staff and visitors. Bus drop off on the northeast area. The bus entry drive is on the north end of Belinder Avenue and only one lane wide. Principal stated that a 2 lane bus drive would help a lot. Bus pick up continues onto the asphalt playground area. Traffic backs up onto Belinder Avenue during afternoon pick up time. There is a traffic light on Belinder Avenue at the front of the school. The Principal stated he would like to switch the parent and bus drop off locations, but the one lane bus drive on north side won't accommodate this change.
4. Site has a lot of big older trees. There is some nice landscape/planters on the south side of the building at Parent drop off entry. Main entries have handicapped ramps provided but not all entries are ADA accessible.
5. Kindergarten playground (adjacent to a non-ADA accessible door) has a very small structure with a swing set. Principal said they don't use it because the location is not easily visible to staff monitoring the rest of the playground.
6. There is an outdoor barn style storage building on north side and separate trash/recycle bins. Outdoor HVAC equipment is fenced separately. There is some black asphalt splatter on the brick in back of building in one area.
7. There is a chain link fence around the entire playground/playfield area. There is a locked gate on the west side (according to the principal). There is a soccer field, basketball goals on asphalt areas along with 2 large mulched playgrounds.
8. Building materials are brick, cast stone panels, metal panels, windows in all classrooms.
9. Secure entry vestibule with buzz in hardware and cabinet unit heater. The buzz in hardware wasn't working during the site visit. Had to knock on the window.
10. Administration offices has a reception desk, security monitors on front wall, waiting area, Principal's office and Conference room. There is no place for a Student to sit at a "Timeout" area.
11. Classrooms are 848 sf. The main classrooms are located in the original older building. The grades 1st thru 6th are not always located next to each other because the school is at capacity. There is a 3rd and 5th grade class over in the west wing on the other side of the school from the rest of the 3rd and 5th graders.
12. Classrooms 1st thru 6th have no cubby storage. There are hooks on wall for back packs etc. Typical desks.
13. Low ceilings throughout school corridors (approx. 8'-0" tall).
14. Roof access is located in the mechanical room adjacent to Cafeteria.
15. Drinking fountains protrude into hallway clearances, against ADA guidelines.

16. Kitchen has adequate equipment. The space seems small. Not enough serving area. Principal said they have a very long lunch hour from 10:40 to 12:50. Seamless flooring and base.
17. Only one pair of corridor doors from Cafeteria to the rest of the school. Principal said it is heavily congested.
18. Gymnasium has wood floors, ceiling hung basketball goals, divider curtain, sound wall panels and a separate stage with curtains. There are bleachers.
19. Nurse's office does not have a shower. They need one to clean up messy kids. VCT flooring.
20. Art Room on lower level had one small sink, but teacher said it is hard to access. Very little countertop space. The Kiln is in the Boiler room across the hall.
21. Band and strings room is small room on lower level. Window/area wells. This room has had some mold issues in the past according to the Principal.
22. Most of the student toilets have older fixtures and finishes.
23. Library is big with natural light built in 2011.
24. Floor materials are mostly VCT and rubber base in corridors and carpet in classrooms.
25. The 3 Kindergarten rooms are large enough. 30 cubbies provided. There is a common space for all 3 Kindergarten classrooms to share. Kindergarten classrooms have separate toilets and separate outside exit door.
26. Counselor's office next to gym. Counselor is there 2 days a week.
27. Playgrounds are adequate. 2 large pieces of play equipment. Hard and soft playground areas.
28. The lower level Crawl space slopes toward the north, and sometimes when it rains the rain/mud comes in the Corridor door.
29. Staff restrooms: Principal stated that there weren't enough.
30. Principal would like to have a storm shelter.
31. Mold issues in older rooms.
32. NO Collaboration spaces in the school.
33. Most student restrooms are old with glazed tile walls and resinous flooring, stainless steel toilet partitions with covered up windows.
34. They have HVAC issues, some areas too hot or too cold.
35. Corridors have VCT flooring and carpet in classrooms. Some corridors have droopy 2x4 ceiling tiles. Plaster corridor walls in the older part of the building. Painted CMU corridor walls in newer areas of the building.
36. There is some broken VCT flooring at the building expansion joints in corridors.
37. New elevator in 2010.
38. Resource room on lower level.
39. MFEC accessed the roof. There were RTU screens, built up asphalt roof, exposed piping, brick boiler flue, roof drains, roof access ladders and lightning protection. Roof looks like it's been repaired/patched in several areas.



# MEP NARRATIVE

## General Project Information

<b>Owner:</b>	Shawnee Mission School District
<b>School Name:</b>	Belinder Elementary School
<b>Project Address 1:</b>	7230 Belinder Rd.
<b>City:</b> Prairie Village	<b>State:</b> KS
	<b>Floor Area:</b> 49,374 sf
<b>Building Stories:</b>	1
<b>Building Use Type:</b>	Elementary School
<b>Code Occupancy Group:</b>	E Occupancy

## Team Contact Information

<b>Contact Name:</b>	Keith Hammerschmidt
<b>Contact Company:</b>	MFEC, Inc.
<b>Contact Phone:</b>	913-322-1400
<b>Contact Fax:</b>	913-825-6697
<b>Contact Email:</b>	khammerschmidt@mfec.com



## General

- **A significant portion of existing building included accessible ceiling space for accessible concealing of electrical, plumbing and data distribution.**
- **Observations regarding code deficiencies are in reference to the current 2012 IBC code series adopted by local jurisdictions. Should local jurisdictions adopt codes newer than the 2012 IBC, additional updates may be required to building systems. Items of note include:**
  - 2015 IBC requires a full FEMA storm shelter which would require backup generator power, ventilation and restrooms.
  - 2015 IBC added requirements for carbon monoxide detection in select classrooms served by fuel fired equipment.
- **It appeared that the lower level Mechanical and Electrical room had flooded in the past due to inadequate exterior drainage.**

## Mechanical

- **System Descriptions**
  - The majority of the building is served from rooftop units.
  - Rooftop units were either 10 years old or 20 years old. Typical life span of a rooftop unit is 15 years. Majority of rooftop unit's condenser coil fins are damaged, which limits performance and efficiency.
  - 2 furnace split systems serve the art room and other classrooms on the lower level. For a classroom application these systems do a poor job handling ventilation air and do a poor job at air filtration.
  - Kitchen was using a portable fan due to the temperature always being hot in the space.
  - Restrooms were transferring air into corridors. Didn't appear exhaust fans were working properly.
  - Some classrooms contain ceiling fans. Some of these fans were operational, but many were not.
  - Ductless split system serves data room with data rack. However the condensate drain piping from unit is loosely hanging across the room.
- **Controls Systems**
  - A full BMS control system is currently installed to serve all HVAC equipment.
  - Not all classrooms were provided with dedicated thermostat controls. Several classrooms were served from one unit and shared thermostats which can cause student and teacher discomfort.
- **One classroom on the lower level had a portable dehumidifier in the space. It appeared it was used mostly when poor drainage caused moisture problems in room.**
- **Additional Updates required to bring systems up to current codes:**
  - Provide minimum ventilation per current codes to each classroom.
  - Energy recovery will be required when minimum ventilation rates are brought up to code.
- **Additional Updates required to bring systems up to current SMSD Standards:**
  - HVAC equipment efficiencies shall be increased.
  - Each classroom shall be provided with its own thermostat.

## Plumbing Systems

- **Hot Water**
  - Domestic hot water system consists of multiple gas-fired water heaters distributed around the building. Majority of water heaters are around 10 years old. A couple water heaters have recently been replaced within the last 3 years.
  - Domestic hot water supply appeared to be sufficient, though piping in the mechanical room was missing insulation on portions of the main.
- **Water Supply**
  - The water service was provided with backflow preventer.
  - Water pressure appeared to be sufficient.
- **Roof Drains**
  - Roof drains appear to be drained to storm sewer. However the majority of the roof appears not to have any means of overflow protection. This may cause standing water on the roof if a roof drain is plugged.
- **The majority of the restrooms had floor mounted urinals and water closets. Portions of the building had updated plumbing fixtures.**
- **The nurse area does not have a shower – accessible or otherwise.**
- **Additional Updates required to bring systems up to current codes:**
  - Several water coolers and plumbing fixtures are not ADA compliant and need to be replaced.
  - All handwashing sinks will need to have thermostat mixing valves installed to limit maximum water hot water temperature to 110°F.
- **Additional Updates required to bring systems up to current SMSD Standards:**
  - Replace all faucets and flush valves with Toto sensor devices.
  - Add accessible roll-in shower for the Nurse Area.
  - Hot water recirculation line shall tie into hot water line with-in 3 feet of every hand washing sink.
  - All classrooms shall be provided with a sink in the classroom.
  - Replace majority of water closets with new wall-mounted water closets.

## Electrical Systems

- **Lighting**
  - Basement Mechanical room illumination was not sufficient to see or maintain equipment.
  - Exterior illumination did not appear sufficient. There was no dedicated parking lot lighting. Wall mounted light fixtures were aged and lenses were significantly yellowed.
  - Each classroom had at least two zones of control for lighting fixtures. Fixtures seemed to be in good shape.
- **Power**
  - Overhead electrical service had not been upgraded to an underground service.
  - Extension cords and power supplies were common in classrooms due to insufficient quantities and locations of electrical receptacles.
  - Power systems did not appear to have available space and spare for future improvements in oldest portions of the building. In newest additions including Library, Gym and Kitchen areas power systems did have available space and spare for future improvements. However, should a different HVAC system be installed, the main electrical service would likely require an upgrade.

- **Special Systems (Fire Alarm, Intercom, Data Systems)**
  - Fire Alarm system was an analog system and would not support a new mass notification system. An entirely new fire alarm system and infrastructure would be required to bring the system up to current codes.
  - Intercom system appeared functional and sufficient.
  - Data systems appeared functional and sufficient. However, locations for data racks were in difficult to access in the storage spaces at times.
- **Additional Updates required to bring systems up to current codes:**
  - Electrical
    - » All receptacles to be replaced with tamper resistant devices.
    - » Additional Exterior lighting to ensure sufficient illumination.
  - Lighting – New lighting controls with occupancy sensors installed in entire building.
  - Fire Alarm – Complete Replacement of all devices and control panels to support a mass notification system. Additional Smoke Detection may be required.
  - Intercom system – None
  - Data systems – None
- **Additional Updates required to bring systems up to current SMSD Standards:**
  - Electrical
    - » Energy Metering added to all electrical equipment. May require replacement of main service panel.
    - » Additional receptacles added throughout classrooms.
  - Lighting
    - » New LED light fixtures installed in all areas, interior and exterior
    - » Dimming Controls added in classrooms.
  - Fire Alarm – Complete Replacement of all devices and control panels to support a mass notification system. Additional Smoke Detection may be required.
  - Intercom system – New Valcom Intercom System
  - Data systems – Dedicated IT closets for Data Racks and data associated equipment.





