Site Analysis

Franklin Regional School District  Existing Facilities Assessments

VEBH Architects
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October 20, 2016

Cassandra R. Renninger, RA
Senior Associate
VEBH Architects
470 Washington Road
Pittsburgh, PA 15228

Re: Franklin Regional School District
Feasibility Study – Site Assessment
RASN Project No. 3160463

Dear Cassi:

R.A. Smith National, Inc. appreciates the opportunity to establish and build a strong working relationship with VEBH Architects as you evaluate the facilities, real property, and future needs of the Franklin Regional School District (the District). As noted during our initial conversations and meeting at your office we have worked together on many other successful projects and want this to carry over into your work at VEBH. In order to facilitate the start of this relationship we have agreed to provide these initial services as a benefit to both VEBH and the District as the studies are presented. To that end, we met at the District on Monday, October 18, 2016 to assist with your evaluation.

Arriving at the District you first provided an introduction to Mr. Jim Heck, Director of Facilities. Mr. Heck accompanied us during our site assessments. The intent of the assessment was to provide a summary of observed conditions specific to various site improvements throughout the district. We began our site assessment at Mr. Heck’s office that included the High School, the Middle School, and Newlonsburg and Heritage Elementary Schools. We then moved to Sloan Elementary School where we concluded our day’s efforts.

In addition to the site assessment, as presented herein, R.A. Smith National conducted a brief review of applicable zoning criteria for the sites. A preliminary zoning summary is provided and attached to this letter.

EXECUTIVE SUMMARY

Site conditions were generally consistent throughout the two District campuses and reflect a variety of obstacles or challenges for new development and/or renovation of what is in place. Incremental renovations to existing facilities, building and site expansions to respond to a growing student population over time, and overall maintenance deficiencies resulted in deteriorated infrastructure that supports buildings and facilities for the Franklin Regional School District.
To begin, site circulation and movements of both vehicles and pedestrians are hampered by indirect routes, difficult turn movements, misaligned driveway entries, and a number of parking fields that are somewhat disjointed from primary facilities. The various building expansions over the last several decades lead to an inefficient campus network. Sub-standard traffic control signage and the extensive use of speed bumps also relate to the traffic conditions and patterns throughout the District. Pavement conditions varied throughout from minor cracking, to large joint separation, to notable pavement failures. Lack of routine maintenance or preventative maintenance on pavement surfaces has likely resulted in these noted conditions. Observed maintenance of the site drives was limited to tar and chip surfacing. This old practice of maintaining asphalt roadways and surfaces is a low-budget approach to sealing that is often viewed as a nuisance with the loose stone debris that is left behind.

A general lack of maintenance on the overall stormwater management systems resulted in deteriorated inlet top sections, settled pavements, and overgrown detention basins. Additionally, the routine use of pavement tar and chip surfacing has led to a significant amount of debris in the storm inlets and most likely within the storm sewers themselves. Over time and with the continued practices, the carrying capacity of the pipes is lessened. Site lighting is non-uniform with varying pole heights, lamp types and styles, and includes several aged facilities. Overall the site lighting systems are believed to be inefficient and produce higher than usual energy demands. Fire hydrant locations and placement varied resulting in non-uniform coverage. Hydrant locations, flow tests, and fire flow demand should be considered with any planned expansion. Other than the notable issues regarding the fire hydrants, overall site utilities have not been evaluated. Such evaluations must include carrying capacities, loading, and a look at energy efficiencies.

Lastly, observed deficiencies exist throughout the District regarding accessible parking and aisles, applicable accessible signage, accessible cross-walks, accessible routes, and barriers to access. The Americans with Disabilities Act (ADA) outlines specific requirements for these site features. Several deficiencies are noted in the summary that follows. A complete site assessment, specific to ADA criteria, should be undertaken by the District. Any site alteration, including re-striping or re-surfacing must comply with the 2010 standards.
SUMMARY OF FINDINGS

The following summary of observations and opinions are noted in a sequential format as the field assessment moved through the various campus locations. This first aerial image provides a view of the main campus that includes the High School (HS), Middle School (MS), Newlonsburg Elementary School (N-ES), and Heritage Elementary School (H-ES).

Main Campus

- Disjointed ADA parking stalls, located in proximity to the main entrance of the HS, appear to be located on slopes that exceed maximum standards. An applicable cross-walk, or accessible route, is not provided to a constructed ADA curb ramp.
- Flattened asphalt wedge curbs were observed throughout the parking field, typically located on the high-side or up gradient of the parking fields.

- Deteriorated concrete curbs were observed throughout, some with exposed rebar. Concrete curbs were observed on the low-side or down gradient of the parking fields. Sealant was not observed at the interface of asphalt and concrete, increasing the potential of inflow of surface water to the pavement and curb subgrades that typically leads to premature failure and erosion.

- Conditions of the asphalt pavement varied from minor surface cracking to severe joint and crack separation. Damaged pavement and an ongoing intrusion of water will cause further failure of the supporting subgrade.

- Pavement at storm inlets was observed to be settled around the concrete structures. This decreases the effectiveness of collecting stormwater runoff and contributes to by-pass flows and an increase in runoff volumes and rates of runoff to downstream areas.

- Sidewalk surfaces constructed of asphalt were observed to be uneven throughout. These walks, where adjacent to concrete curbs, were found to have varying degrees of vertical exposure and results in tripping hazards.

- Storm inlets were observed to be on the standard C-Top (integral concrete curb at the grate elevation). Some of these inlets were severely deteriorated with exposed rebar.

- Moving to the student parking lot at the HS, many of the same observations are noted. Conditions of asphalt wedge curbs were consistently the same and with the same loss of curb reveal.

- Many pavement failures were observed along the main drive from Old William Penn Highway.

- Stormwater controls along the main drive were minimal.

- Remnants of eroded rills were observed on the steep slope below the HS and near the MS loop road, west end.

- Variations of parking field light poles and lamping was observed. These varying pole heights and lamps result in varying lighting levels throughout. Stocking various lamps and bulbs results in less efficient purchasing and stocking supplies.

- The storm inlet at the MS, near Door “F” is not safe for bicycle or foot traffic. The grate openings do not meet a current DOT standard and is a hazard.
• Rear exits, near Door “F”, at the MS do not appear to be accessible or in compliance with ADA standards.

• A wall at the west end of the MS, near Door “F”, does not have barrier protection and exceeds safe heights to the grade below.

• Fire Hydrant #2 should be rotated so that the nozzles are more accessible to the travel lane where emergency vehicles would stage.

• The ADA parking stall within the faculty lot at the west end of the MS does not have applicable signage.

• Doors “C”, “D”, and “E” do not appear to be accessible.

• Only a single ADA parking stall was observed at the rear lot near Door “E” of the MS.

• The turn lanes and general alignment of the main drive at Old William Penn should be evaluated for improved efficiency. A water vault was observed and is likely to have caused a sub-standard alignment.

• Fire Hydrant #3 is likely too close to the physical structure of the MS.

• Storm inlets at the base of the vegetated slope are obstructed with debris and clogged with vegetation. These should be cleaned and better maintained.

• Speed bumps were observed throughout. Use of speed bumps is not a recommended practice to control speed and causes other issues (snow plowing, vehicular damage, tripping). Other, more effective, speed control practices should be evaluated and implemented.

• The stair rails located on the steep slope from the HS to MS are not in compliance with applicable end treatments at the top and bottom sections.

• A large eroded area of slope was observed north of Door “J” at the MS.

• Two steel bollards were observed at Fire Hydrant #4. These bollards are extremely close to the actual hydrant and could result in an obstruction when connecting hoses.

• Lost curb reveal was observed along the entire run of concrete curb at the rear of the MS.

• A wall near Door “F” at the MS, does not have sufficient barrier protection and exceeds safe heights to the grade below.
• Only two (2) ADA parking stalls were observed near the main entry of the MS. A cross-walk is not located that this location and alignment with the ADA curb ramp is not achieved.

• Conditions of the asphalt pavement at the MS lots varied from minor surface cracking to severe joint and crack separation. Damaged pavement and an ongoing intrusion of water will cause further failure of the supporting subgrade.

• A security chain, believed to allow closure of the main drive, was observed. Only ribbon was noted. The use of chain should also include reflectors for night time visibility.

• The stormwater detention basin located at the south side of the MS is overgrown and not maintained. An evaluation of this basin should be considered and will most likely require re-analysis with any planned site alterations.

• Trash dumpsters are mostly exposed and are not secure between the MS and N-ES.

• Door “E” at N-ES was observed to have ADA accessible signage. ADA parking and accessible pathways are not identified.

• There is an allowance for parking along the entire rear of N-ES without protection of the building face. Parking bumpers or wheel stops or steel bollards should be considered.

• A coolant pipe located near Door “B” of N-ES is exposed and not protected from vehicular movement. This conveyance pipe is exposed to damage.

• The ADA parking stalls do not appear to be incompliance with applicable stall dimensions. Mounting heights should also be evaluated.

• Variations of parking field light poles and lamping was observed in the upper lot, north of N-ES. These varying pole heights and lamps result in varying lighting levels throughout.

• Very poor drainage conditions were observed on the infield of the softball field. A drainage pipe was observed near the back stop but ineffective. The extent of any subsurface drainage system should be evaluated.

• Areas of poor drainage or pools of runoff were observed throughout the open lawn areas outside the tennis courts and south of H-ES. Storm inlets or yard drains were observed to facilitate improved drainage patterns.

• Doors “F” and “G” along the south side of H-ES do not appear to be accessible. Stair railings are not incompliance with required end treatments.
• The stair tread height at Door “G” is excessively high.

• Trash dumpsters are mostly exposed and are not secure at H-ES.

• The sidewalk surface constructed of asphalt was observed to be uneven along the path from H-ES to the MS. These walks, where adjacent to concrete curbs, were found to have varying degrees of vertical exposure and results in tripping hazards.

• A single ADA parking stall was observed at the lower level of H-ES, near the administration entrance. There is no accessible ramp to access the sidewalk.

• The expansive practice field was viewed during the site assessment. No observations or notations at this time.

• A cluster of five (5) ADA parking stalls was observed near the stadium entrance but found to be rather remote from the intended facility they are assumed to serve. No accessible routing provided and an excessive slope exists to the main gate.

• ADA ramping and accessibility appears to be in compliance for the visitor bleachers.

• An excessive amount of deteriorated concrete was observed at a light standard for the large stadium lighting.

• A large seep was observed along the rear slope below the visitor bleachers, north of the 50-yard line.

• The rear door at H-ES, namely Door “E” appears to be accessible but routing to the main parking lot is impacted by curbing and poorly maintained lawn area.

• There were no ADA parking stalls observed in the entire rear lot of H-ES.

• Only a single ADA parking stall was observed at the main entrance to H-ES. This single stall is not aligned with an accessible ramp and crosses an expansive travel way.

• Limited site distance exists at the northern campus entrance looking north along School Road. Site access and main drives should be a major component of master planning.

• A drainage/flooding concern was identified by Mr. Heck that was observed just north of the entrance to School Road. This area should be evaluated to assess flow conditions and options to mitigate the problem. Very wet conditions were observed in the lawn area.
The concrete stairs located to access the upper lot on the north end of H-ES were observed to be undermined due to excessive erosion. Additionally, pavement was collapsing and the top railing mount was severed from the top tread.

Traffic control signage (Stop and speed limit) should be evaluated throughout. Degree of reflectivity, or lack thereof, does not appear to meet current traffic control signage requirements.

Pavement at storm inlets was observed to be settled around the concrete structures. This decreases the effectiveness of collecting stormwater runoff and contributes to by-pass flows and an increase in runoff volumes and rates of runoff to downstream areas. Location near Stall #277.

There are no ADA parking stalls provided near Doors “I”, “H”, and “G” at the HS. There are accessible ramps without direction to accessible pathways.

A cluster of six (6) ADA parking stalls was observed at the HS across from Door “E”. These stalls have applicable signs but the mounting heights all vary with some mounting heights that are not in the tolerable limits. All sign heights should be evaluated and placed in conformance with applicable ADA standards.

There are no ADA parking stalls that are designated van accessible. ADA requires an applicable number of van accessible parking based on an overall number of ADA parking required/provided. A complete assessment of ADA parking should be considered and made an integral part of master planning.

The District maintenance garage is secluded from the main campus.

A fuel tank was observed at the garage. The contents were not confirmed. A spill prevention area or containment area was not found.

Pavement at a storm inlet was observed to be settled around the concrete structures. This decreases the effectiveness of collecting stormwater runoff and contributes to by-pass flows and an increase in runoff volumes and rates of runoff to downstream areas. Specific to location near parking stall #109.
Sloan Elementary Campus

- The entire Sloan campus is located within a High Quality (HQ) watershed as defined by Chapter 93 of the PA Code specific to Haymaker Run. This governs water quality and stormwater management aspects as planned improvements or master planning activities are presented. This HQ designation will have an impact on the planning, design, and implementation of development on this campus. Additionally, stream buffer requirements are substantially increased in HQ watersheds.

- Site access is limited by the existing bridge from Sardis Road. Bus traffic and deliveries access this campus from Crowfoot Road.
• Access to play areas and large open space on Sloan’s campus is limited by a wooden foot bridge to the north and foot traffic in main travel corridors to lower open space along Haymaker Run. Better connectivity to these areas should be considered.

• The rear of S-ES was observed to contain many wet areas due to the topographic conditions and generally poor drainage aspects of the site soils.

• Door “H” of S-ES leads to a planting area and gazebo that has not been well maintained.

• Six (6) ADA parking stalls were observed that do not have access aisled identified but only widened stall widths. There is a considerable travel distance to the main entry at S-ES.

• The stormwater basin is overgrown and not maintained. An evaluation of this basin should be considered and will most likely require re-analysis with any planned site alterations.

• An ADA stall marking was noted in the first bus lane, adjacent to the main entrance of S-ES. It was not clear as to the use or intended use of this space for ADA parking. Additionally, access to the main walk is not provided, as no ramp was found.

• The concrete curb along the entire length of S-ES was separated from the main concrete walk. Joint sealant is ineffective and allows a considerable amount of water to flow in to the subgrade and will likely cause damage and further settlement.

• Only one (1) fire hydrant was observed on the entire Sloan campus. Adequate fire coverage should be evaluated.
The professional service rendered for this project was performed with the care and skill ordinarily exercised by reputable members of the profession practicing under similar conditions at the same time and similar locality. No warranty, expressed or implied, shall be made or intended by rendition of these professional consulting services or by furnishing oral or written reports of the findings made. R.A. Smith National, Inc. reserves the right to revise or amend any opinion in prepared reports in the event new information, documentation, or evidence becomes available.

We hope the stated professional summary noted herein is sufficiently documented to support your work with the Franklin Regional School District. Please contact me directly if you have any questions or require any additional information regarding this project.

Sincerely,

R.A. Smith National

John J. Frydrych, M.S., P.E., CDP
Eastern Regional Manager, Associate
Site Analysis
Zoning Review

Franklin Regional School District  Existing Facilities Assessments

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ZONING REVIEW

R.A. Smith National reviewed applicable zoning criteria for the District campuses. All District facilities are located on land within the Municipality of Murrysville and fall with the Public Land Zoning District (P-L). The portion of the municipal zoning map is shown below.

§ 220-12 Public Land District Land Use Authorization Table.
Any use of land in the P-L Public Land District may be authorized, provided that use is intended to better serve the public and promote the function of the local government. All uses in this District are conditional uses and are subject to procedures and requirements of Article V of this chapter.

§ 220-30 General provisions.
The following basic standards shall apply to all conditional uses in any district.

A. The location and size of the use, the nature and intensity of the operations involved in or conducted in connection with it, its site layout and its relation to streets giving access to it shall be such that both pedestrian and vehicular traffic to and from the use and the assembly of persons in connection with it will not be hazardous or inconvenient to the predominant character of the district or be incongruous therewith or conflict with the normal traffic on the streets thereof, both at the time and as the same may be expected to increase with any prospective increase in the population and
area development, taking into account, among other things, convenient routes of pedestrian traffic, particularly of children; relation to main traffic thoroughfares and to street intersections; turning movements in relation to vehicular flow; and the general character and intensity of development of the district.

**B.**
The location and height of buildings; the location, nature, and height of walls and fences; display of signs in connection with the use; and the nature and extent of landscaping on the site shall be such that the use will not hinder or discourage the appropriate development and use of affected and/or adjacent land and buildings or ground that is an integral part of the operation.

**C.**
The nature, location, size and site layout of the use shall be such that it will be a harmonious part of the district in which it is situated, taking into account, among other things, prevailing shopping habits, convenience of access by prospective patrons, the physical and economic relationships of one type of use to another and characteristic groupings of uses in the district.

**D.**
The location, size, intensity and site layout of the use shall be such that its operations will not be a nuisance or be objectionable to nearby dwellings by reason of vibration, noise, fumes, lights or pollution of any type or be hazardous to a greater degree than is normal with respect to the proximity of other uses.

**E.**
In addition to the regulations of this chapter, all conditional uses shall conform to the requirements of the Land Operations Ordinance.

**F.**
In the event that conditional use requirements conflict with any other municipal land use requirement, the more restrictive shall apply.

§ 220-31 **Standards for specific uses.**
In addition to the general standards and criteria for all conditional uses listed in § 220-30, above, an application for any of the following uses which are listed in any Zoning District as a conditional use or use by special exception shall comply with the applicable standards and criteria specified below for that use.

**F.**
Churches, schools (public and private), subject to:

1. The minimum lot area required for a postsecondary school shall be 10 acres. The minimum lot area required for all other uses shall be one acre.

2. If a residential facility (such as a convent or monastery) is proposed as part of a church, no more than 10 persons shall be housed.

3. A dwelling (such as a manse or parsonage) may be located on the same lot with a church, provided all requirements of this chapter for single-family dwellings in the zoning district can be met in addition to the minimum lot area, lot width and yard requirements applicable to the church.

4. Planting and landscaping shall be installed in compliance with Article VI.
(5) All schools shall be designed to provide convenient access for emergency vehicles and access to all sides of the building by fire-fighting equipment.

(6) All outside storage shall be completely enclosed by a six-foot hedge or solid fence.

(7) The proposed use shall have direct access to a public street with sufficient capacity to accommodate the traffic generated by the proposed use.

(8) All sites, lots, facilities, buildings, structures and appurtenances shall have access by way of an internal street system and shall have adequate emergency vehicle and equipment access.

(9) Off-street parking facilities shall be required in conformance with the provisions of Article VI Where for Schools (public and private); one for each employee plus one for every 20 students.

§ 220-17 Nonresidential Zoning Districts Area and Bulk Regulations Table.
This table shows the area and bulk regulations in the MU and B Zoning Districts, which are subject to the modifications specified in § 220-31AA, Old William Penn Highway setback reduction.

Nonresidential Zoning Districts Area and Bulk Regulations

<table>
<thead>
<tr>
<th></th>
<th>MU</th>
<th>B</th>
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<tbody>
<tr>
<td>Minimum lot area</td>
<td>10,000 square feet</td>
<td>35,000 square feet</td>
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<tr>
<td>Minimum lot width</td>
<td>75 feet</td>
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<tr>
<td>Minimum front yard</td>
<td>25 feet</td>
<td>50 feet</td>
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<tr>
<td>Minimum side yard</td>
<td>10 feet</td>
<td>20 feet</td>
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<tr>
<td>Minimum rear yard</td>
<td>20 feet</td>
<td>40 feet; abutting an R District, 75 feet</td>
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<tr>
<td>Building height</td>
<td>40 feet</td>
<td>65 feet</td>
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<tr>
<td>Maximum lot coverage</td>
<td>60%</td>
<td>75%</td>
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<tr>
<td>Impervious surface coverage</td>
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<td>80%</td>
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<tr>
<td>Maximum building size</td>
<td>10,000 gross square feet–</td>
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§ 220-18 Nonresidential Zoning Districts Area and Bulk Regulations Table for Accessory Uses and Structures.

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<th>Side Yard</th>
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<tr>
<td>MU No accessory use or building authorized in the front yard</td>
<td>MU No accessory use or building authorized in the required side yard</td>
<td></td>
</tr>
<tr>
<td>B No accessory use or building authorized in the front yard</td>
<td>B No accessory use or building authorized in the required side yard</td>
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<tr>
<td></td>
<td>Rear Yard</td>
<td>Building Height</td>
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<td>20 feet</td>
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<td></td>
<td>20 feet</td>
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§ 220-69 Table of Parking Requirements.

Parking Requirements Table

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Parking Requirement</th>
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<tbody>
<tr>
<td>School, public and private</td>
<td>One for each employee plus one for every 20 students</td>
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</table>