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January 9, 2017

Mr. Sam Hubbard
Development Planner
Planning and Community Development Department
Village of Arlington Heights
33 S. Arlington Heights Road
Arlington Heights, IL 60005

Re: **Round 1 Comments: Responses**
Plan Commission Application

Plan Commission 16-026

Windsor Elementary School Addition
1315 E. Miner Street
Arlington Heights, IL 60004

Arlington Heights School District 25

STR Project #16060.A0

Dear Mr. Hubbard:

Responses to comments received to date for the Plan Commission application for the proposed addition to Windsor Elementary School in Arlington Heights School District 25 are included in this letter.

Additionally, enclosed with this letter are the following:

1. Four full sized revised plan sets and four half sized revised plan sets.
    a. Subject Property Map
    b. Architectural Site Plan
    c. Site Plan – Electrical
    d. Photometric Plan
    e. Engineering Drawings – 17 sheets (C0.0 Cover Sheet, C0.1 Plat of Topographic Survey, C0.2 Site Work Notes, C1.1 Site Demolition Plan, C2.1 Site Geometry Plan, C3.1 Site Utility Plan, C4.1 Grading and Paving Plan, C4.2 Enlarged Grading and Paving Plan, C5.1 Soil Erosion & Sediment Control Plan, C6.1 Operation and Maintenance Plan, C7.1 Site Work Details, C7.2 Site Work Details, C7.3 Site Work Details, CX1.1 Autotum Exhibit Fire Truck, CX2.1 Project Disturbance, CX3.1 Drainage Exhibit – Existing Conditions, and CX3.2 Drainage Exhibit – Proposed Conditions)
    f. First Floor Plan
    g. Second Floor Plan
    h. Building Elevations
    i. Color Rendering

j. Landscape Plan

k. Tree Preservation Plan

2. Eight copies of exterior light fixture cut sheets.
3. Eight copies of the revised traffic study.
4. Written justification to variation/special use permit letter.
5. CD of above items

Responses to comments are as follows:

Building Services:

1. Provide construction type of existing building and the proposed additions.

   The construction type is Type 2 Unprotected (2B per 2015 International Building Code). This information has been added to the revised proposed first floor plan sheet.

2. Indicate if the building has fire suppression and fire alarm systems.

   The existing building and the proposed additions have fire suppression and fire alarm systems. This information has been added to the revised proposed first floor plan sheet.

3. Provide a height and area calculation based on Table 503 of the 2009 International Building Code.

   Building height and areas are less than the maximum allowed by 2015 International Building Code and would also be less than the maximum allowed by 2019 International Building Code. This calculation has been added to the revised proposed first floor plan sheet.

4. Provide details on travel distance in the new additions to the nearest exit, along with the occupant load calculation for each exit.

   Travel distances and occupant load calculations have been added to the revised proposed first floor plan and proposed second floor plan sheets.

Fire Safety Division:

1. Village amendment to the Fire Code requires that all new buildings have fire suppression systems installed.

   The existing building and the proposed additions have fire suppression systems. This information has been added to the revised proposed first floor plan sheet.

2. Section 503.1.1 of the 2009 International Fire Code states that approved fire apparatus access roads shall be provided for every facility, building or portion of a building and

shall extend to within 150 feet of all portions of the facility an all portions of the exterior walls of the first story as measured by an approved route around the exterior of the building or facility. Please provide information supporting compliance with this requirement to include widths of any access roads and maximum loads.

Please refer to the response of comment #1 received from the Arlington Heights Fire Department below.

3. The addition is required to have a complete fire alarm system.

   The existing building and the proposed additions have a complete fire alarm system. This information has been added to the revised proposed first floor plan sheet.

4. A zoning indicator panel and the associated controls, or fire alarm control panel shall be located within the closest proximity to the front main entrance of the building as approved.

   The fire alarm annunciator panel/control panel is being relocated to the main entry vestibule. It has been added to the proposed first floor plan sheet.

5. Provide a factual auto turn diagram with ladder truck specifications obtained from Engineering for any new pavement.

   An AutoTurn Exhibit demonstrating the turning movements of the Village of Arlington Heights Ladder Truck has been provided.

Public Works:

1. Ensure that all sidewalks are returned to satisfactory condition at the completion of construction.

   Please refer to General Note #4 provided on Sheet C2.0.

2. The wire mesh screening system on Restrictor Structure A will most likely clog unless maintained/cleaned frequently. The best way to provide screening would be a bar, grate, or vortex type screening structure, not mesh.

   A wire mesh has been called for in order to allow water to flow to the restrictor structure if the bottom of the wire mesh becomes clogged. We feel that the use of a grate would inhibit flow in its entirety if it became clogged. We believe that the use of the wire mesh reduces the potential of the restrictor becoming clogged and failing. This type of trash rack was also called out on the approved design plans for the improvements at Ivy Hill Elementary School, Olive-Mary Stitt School, and Thomas Middle School of School District 25. The detail initially submitted has not been revised.

3. Explain maintenance of Storm Trap System.
   a. Where is debris removed and how often should it be performed.

   The following maintenance notes have been added to the revised plan set.

   Underground Detention Systems, Including Pipes and Vaults

   Activity Schedule:

Underground vaults must be designed so that the vault can have easy access for inspection and maintenance. Vault maintenance procedures must meet OSHA confined space entry requirements, which include clearly marking entrances to confined space areas. This may be accomplished by hanging a removable sign in the access riser(s),just under the access lid.

As needed

- **Removal of sediment and debris from subsurface vault sedimentation chamber when the sediment zone is full as well as from inlet and outlet pipes. Sediments should be tested for toxicants in compliance with applicable disposal requirements if land uses in the catchment include commercial or industrial zones, or if indications of pollution are noticed.**

Quarterly

- **Floating debris should be removed.**

Once per year

- **Inspection of subsurface vault and control structures**

The Storm Trap system can be cleaned with a Vacuum Truck by means of access risers.

4. Will additional lighting be provided at ingress/egress to new parking lot?

   Light Fixtures will be added to illuminate the parking lot as shown on Sheet ES1.0, Site Plan – Electrical. See PH1.0, Site Plan – Photometric Calculation, for lighting levels at ingress/egress.

5. Show limits of sidewalk replacement along Miner Street. All sidewalks must comply with ADA Standards.

   The approximate limits of sidewalk replacement are indicated by the hatch patterns shown on Sheets C1.1 and C 4.1. Additional notes have also been added to help clarify the approximate limits of removal and replacement. All new sidewalks shall comply with ADA Standards.

6. Need to provide Limits and Cross Section of utility trench on Miner Street.

   The limits of the utility trench are shown on Sheets C1.1 and C4.1. A note specifying the trench width has been provided on Sheet C1.1. Please refer to the "Standard Sewer And Water Trench Section" Detail provided on Sheet C6.2 for additional information.

7. Provide size of storm manhole on Miner Street that the new system is being connected to.

   The new sewer has been proposed to connect to an existing structure by coring a new opening in the existing structure for the proposed 24" RCP sewer. No structure sizing information was provided when the survey information was obtained. We will initiate correspondence with the Village Engineering Department to determine whether or not the size of the existing structure is large enough to accommodate the new sewer connection.

Engineering Department:

11. The petitioner is notified that these comments are being provided to ensure that the project meets the requirements for submittal to the Plan Commission. Approval by the Plan Commission is not an endorsement or approval of these documents to obtain the required building permits, engineering approval, or permits required by other government or permitting agencies for construction. Detailed plan review with associated comments will be provided upon submittal of plans for a building permit. The petitioner shall acknowledge that they accept this understanding.

    I accept this understanding.

12. Final engineering plans shall be georeferenced by using State Plane Coordinate System – Illinois East.

    The engineering plans have been georeferenced using State Plane Coordinate System – Illinois East.

13. The proposed detention facility will be a private system and as such will not be the Village's responsibility to maintain. The basin requires a 1-foot freeboard with an overflow weir at the 6" line. Provide calculations for sizing the weir. An Onsite Utility Maintenance Agreement must be executed prior to final engineering approval. Please use the previous agreements for Ivy Hill School and Olive School as templates.

    The use of an underground detention facility has been proposed for this project.

14. The stormwater calculations were not available at the time of review. Final approval will require final engineering plans including detention calculations showing HWL, storage required, storage provided, and restrictor sizing calculations. Any detention storage system located under pavement must be designed to AASHTO HS-25 loading standard. The Village's allowable release rate is 0.18 CFS/acre. Use C=0.50 for pervious areas, C=0.95 for impervious areas. Use Bulletin 70 rainfall data. Clearly show the overflow route for the site. Minimum restrictor size allowed, for maintenance reasons, is 2". Restrictors between 2" and 4" must be in a trap in a catch basin. Provide details showing the restrictor catch basin.

    Stormwater calculations and a stormwater narrative have been submitted with the revised submittal for review.

15. The overall site release rate cannot be increased. Determine the release rate under existing conditions including unrestricted flow, and compare that to the overall release rate under the proposed conditions. Similar to what was done for Ivy Hill School, calculate the overall site release rate and detention volume per Village requirements and show what percentage of this is being provided by the proposed design.

    The overall site release rate will not be increased. The overall site release rate and required detention volume per Village requirements have been determined and provided within the stormwater narrative. The percentage provided with the proposed design has also been noted in the stormwater narrative.

16. It appears from the existing survey that the existing storm sewer connection goes north to Miner Street. Is this being disconnected or remaining in place? Please clarify.

    The structure has been called to be removed in its entirety. A note calling to abandon the existing sewer in place has been added to the plans. The sewer shall be

abandoned in conformance with the requirements of the MWRD and the Village of Arlington Heights.

17. Provide an exhibit to engineering scale showing the turning path of the Fire Department's responding vehicle, in this case the tower truck. Exhibit mush show front and rear wheel paths and the extent of the front and rear overhangs, as provided in an "Autoturn" exhibit. The vehicle shall be shown maneuvering through the site in all possible directions of travel. Attached are the specifications for the tower apparatus.

    An AutoTurn exhibit demonstrating the turning path of the Fire Department's responding vehicle has been provided.

18. Better define the overflow elevations along the east side of the school. Provide a weir calculation to ensure the proposed swale is adequately sized to convey the overflow volume before reaching the finished floor elevations of 673.65.

    The overflow elevations along the east side of the school have been more clearly defined. A weir calculation has been provided within the stormwater narrative. This overflow is not intended to function as the primary overflow. This overland flow path has been designed to minimize any chance of flooding at the existing door entries during high frequency rainfall events. The primary overflow will be the concrete weir wall within the outlet control structure. If the internal overflow becomes inundated, the catch basin structure located in the curb line near the eastern most exit drive will begin to bubble up. From there it will be able to spill from the property to the public ROW.

19. Consider including bicycle racks in development plan to encourage alternate modes of transportation for employees and patrons.

    The School currently has bicycle racks provided along the eastern building facing along Windsor Drive. These existing bicycle racks are to be maintained.

20. The lighting information provided did not include catalog cuts of the proposed fixtures. Also no site lighting photometric plan has been provided showing the footcandle reading for the property.

    PH1.0 – Photometric Plan and catalog cuts are enclosed.

21. The proposal for the two new driveway cuts along Miner Street has not been adequately explained. The orientation of the westerly most driveway looks to be designed for right turn in only, but is substandard, and is not explained in sufficient fashion, since the easterly driveway is shown to be an exit only driveway. This presumes only traffic from the west will be entering this lot.

    The western driveway will allow right- and left-turns to enter the site and the eastern drive will permit right- and left-turns to exit the site. The geometric plans have been corrected.

22. The orientation of the parking lot angled parking stall configuration only permits easterly flow, with no capability to circulate within the parking lot. Motorists getting to the east drive aisle are forced back to Miner Street to circulate, if they turn left, cannot turn back into the lot into the westerly right turn in only driveway. The engineering plans conflict with other architectural and landscaping plans showing a different parking lot orientation and flow.

    As indicated in the response for Comment 21, left-turns will be permitted back into the lot from Minor Street.

23. The presumption is that all drives and aisles are intended to be one-way operation, is this correct?

    Yes, identical to the parking lot serving Ivy Hill School.

24. How does the flow from the Miner School lot and bus operations at that school affect the use of this lot?

    Miner School does not impact this lot. It has a one-way loading area with separate in and out driveways north of their building and west of Windsor School.

25. The significant difference between observed and projected trip generation values must be discussed. There is no explanation of the current or proposed use of the west parking lot for student drop off and loading, or any recommendations to manage on-street operation along the west side of Windsor Drive east of the school. What is the expected queue for parents using the west lot for drop off and pick up, and will this have any potential to back up to Miner Street?

    The observed volumes, based on actual traffic counts at Windsor School, were used to estimate the additional traffic from the increase of 9 students and used in the capacity analyses.

    The ITE trip generation projections were provided as a comparison per previous staff requests of the other SD 25 traffic studies. The ITE traffic projections were lower and assumed some level of bussing provided. Windsor School does not bus students to this school. They were not used to analyze traffic.

    The current west parking lot is used primarily for staff and accessible parking and the loading of special education students before and after school. The existing and proposed lots provide the same travel distance from the entrance to the exit of the lots (approximately 690 feet). The new lot provides two lanes in the same direction which could be used for additional stacking if needed. Observations note a maximum of 10 queued vehicles.

Arlington Heights Fire Department:

1. Please follow the October 27, 2016 email between Lt. Andrew Larson and Josh Cap regarding Fire Department access. No other comments at this time.

   The fire access has been designed per the aforementioned correspondence.

Community Services Bureau:

1. Character of use: The character of use should not be problematic.

   Noted. The Special Use is consistent with the Village's designation "Schools" on the Village's Comprehensive Plan.

2. Are lighting levels adequate? Lighting should be up to the Village of Arlington Heights code. There are concerns regarding the South and East sides of the buildings, with lighting begin adequate enough to deter criminal activity, especially the areas where there is new construction.

Enclosed is PH1.0 – Photometric Plan showing illumination levels.

3. Present traffic problems? Currently there are several reported traffic issues with student drop-off and pick-up on Windsor Dr. It may be beneficial to create a new area in the Northwest parking lot which appears to be bigger than the previous lot.

   The traffic study noted several problems starting with the morning northbound restriction on Windsor being ignored. After the Thanksgiving school break, the school, in coordination with the village, has been placing traffic cones to divert northbound traffic and removing them when the morning arrival is over. The cones have been successful at discouraging northbound traffic.

4. Traffic problems that may be created by the development. Please provided a detailed map regarding bus drop-off and pick-up procedures/times to highlight whether it will create additional traffic problems.

   Windsor School does not provide busing for its students.

5. Traffic problems that may be created by the development. Please provided a detailed map regarding bus drop-off and pick-up procedures/times to highlight whether it will create additional traffic problems.

   Windsor School does not provide busing for its students.

6. General Comments:
   - The new gym and classroom area need to be well it and measure need to be taken to ensure that the area is not an area that is susceptible to criminal activity. Although the courtyard is enclosed, there have been issues at other buildings and schools in AH with juveniles accessing these areas via rooftops and ladders.

   Enclosed is PH1.0 – Photometric Plan showing illumination levels for all outdoor spaces including the courtyard.

   - Agent contact information must be provide to the Arlington Heights Police Department during all construction phases. Emergency contact cards can be filled out at the Village of Arlington Heights website (vah.com). This allows police department personnel to contact an agent during emergency situations or for suspicious activity/criminal activity on the property during all hours.

   An Arlington Heights Police Department Emergency Information Card has been completed and is enclosed.

Health Services:

1. No comments at this time.

   Noted.

Planning & Community Development:

General:

7. The Plat & Subdivision report requested that the School District work with the Park District to coordinate the removal of the recreational field, which field shall be removed to accommodate the reoriented parking lot. Please provide an update on where thing stand relative to coordination with the Park District.

   School District 25 will be meeting with the Park District on January 23 to review the Windsor project.

8. A courtesy meeting with the neighbors is required prior to appearing before the Plan Commission. Has this meeting been scheduled yet?

   A community meeting has been scheduled. It will occur on January 18.

9. Please provide a detailed explanation as to why the building expansion is needed given that growth of the student population is expected to be minimal. As part of this explanation, it may be helpful to outline what the current capacity of the school vs. the current enrollment (i.e. the school was built to accommodate xxx number of students and currently we have xxx number of students enrolled.) An explanation of the Special Education program and their associated needs may also be a way to illustrate the need for the building addition. Finally, as the expansion will create additional storage and office areas, it may be useful to outline if a lack of existing storage and/or offices is part of the impetus for the expansion.

   The building expansion will add six permanent classrooms. The additional classrooms will replace two classrooms in a mobile unit to be removed, accommodate the needs of two District-wide special education programs, Communications and Foundations as well as an expected population increase of 9 students, from 509 to 518. The increase will allow one Foundations classroom housed at another District facility to be consolidated with the program. Additionally the increase in classrooms will allow adequate space for the lower staff to student ratio of the special education programs.

   Storage spaces are needed in the addition to replace existing storage spaces that will be removed to enlarge the Commons. The Commons, built in 1990, is being enlarged to accommodate increased building capacity. Building capacity had increased in 1999 with an addition of five classrooms and two meeting rooms/offices and will increase with the proposed addition.

   Office spaces will increase by two as three new office spaces will be added and one will be removed in the existing building for a corridor link to the new classroom wing. Additional office spaces are needed for to meet the increased support needs of the Communications and Foundations programs.

10. Please provide a Photometric Plan showing proposed illumination levels.

    PH1.0 – Photometric Plan is enclosed.

11. The following variations have been identified:

    a. Section 5.1-3.6 to allow an exterior side yard setback of approx. 12.92' where code requires a 40' setback. This setback applies to the existing building.

    b. Section 5.1-3.8 Maximum Impervious Surface Coverage to allow 50.11% impervious surface coverage where code allows a maximum of 50% impervious surface coverage.

c. Section 11.4-4 to allow 90 parking spaces where code requires 218 spaces.

Variations are requested from the exterior side yard setback along Windsor Drive, Maximum Surface Coverage and parking requirement. Written justification, revised January 9, 2017, is enclosed.

Site Plan:

12. The "Existing Site Area" as shown on the Architectural Site Plan is listed at 274,568 sq. ft. However, the Plat of Survey indicates that the property is 536.93' x 610.99', which would result in an area of 328,059 sq. ft., the corresponding FAR, Building Coverage, and Impervious Surface calculations must be revised. Additionally, the written justification letter outlining the Variation requests should also be revised to reflect the actual impervious surface Variation requested.

    The FAR, Building Coverage, and Impervious Surface calculations are revised per the area of 328,059 sq. ft. corresponding with the Plat of Survey and the revised calculations are shown on the updated Architectural Site Plan. The written justification letter is also revised to reflect the actual impervious surface being requested.

13. The required front yard setback (north side of property) is based on the average of the existing front yard setbacks on the frontage due to the frontage being 100% developed. Since the average setback of both Miner School and Windsor School is greater than 40', a maximum 40' front yard setback is required. Please revise the architectural site plan to show a 40' required front yard setback along Miner Street.

    The architectural site plan is revised to show a 40' front yard setback.

14. Please revise sheet C2.1 of the engineering plans to show the proposed setbacks of the building addition to the property lines.

    The proposed building setbacks have been added to Sheet C2.1.

15. Was the rubber surface play area considered as an impervious surface and included within the impervious surface calculation.

    Yes, the rubber surface play area was included within the impervious surface calculation.

16. Section 11.2-12.6 requires curbing along the perimeter of all parking areas. Please add curbing around the edge of both of the two proposed landscape islands at the northwestern corner of the site (where the existing parking lot connects to the proposed parking lot) so that these landscape islands have curbing around their entire perimeter.

    Perimeter curbing has been added around both edges of the proposed landscaped islands being created adjacent to the existing parking lot.

17. The size of the "chiller enclosure" on the architectural site plan does not match the size as shown on the landscape and engineering plans. Additionally, this area on the landscape plan and engineering plans is labeled "dumpster enclosure". Please revise the plans so that they are consistent.

    The size of the proposed "chiller enclosure" has been revised to match that which is shown on the architectural site plan.

18. Please confirm the height of the walls on the chiller enclosure. Please confirm the height of the chiller. Will the walls completely screen the chiller?

    The chiller will be completely screened. The top of the chiller screen wall is 9'-4". The top of the chiller on steel supports is also 9'-4".

19. Per Section 6.13-2(f), slatted chain link fencing is prohibited. Staff recommends substituting the proposed slatted chain-link gate on the chiller enclosure with a wood or metal gate.

    The Building Elevations are revised to change the gate to a metal gate.

20. The engineering and landscape plans show a door on the northern elevation of the gymnasium addition where no door is shown on the architectural plans. Will a door be constructed in this location?

    Per the updated architectural site plan, there will be a door in the location shown along the northern elevation of the gymnasium addition.

21. Staff recommends the addition of evergreen landscape plantings around the proposed transformer west of the gym addition.
    The transformer has been relocated since the prior issuance. We no longer feel that this comment is applicable to the current site layout. No revisions have been made to the plan set at this time.

23. The parking lot on the electrical plan does not match the parking lot as shown on the architectural, engineering, and landscape plans. Therefore, staff could not evaluate if the proposed light poles will interfere with the proposed landscaping. Please revise the electrical plan to show the correct orientation of the parking lot and proposed lighting. It may be helpful to show the proposed lights on the landscape plan to ensure that they will not interfere with the landscaping.

    The proposed lighting has been revised to match the electrical plans. The proposed lights have been shown on the landscaping plan.

    <u>Parking and Traffic</u>

24. In counting the total number of parking spaces as shown on sheet C2.1 of the engineering plans, it appears that only 90 parking spaces have been proposed, however, all documents submitted indicated that 92 parking spaces are proposed. Please clarify the total number of parking spaces proposed. One of the labels which total the number of parking spaces in a parking row indicates 12 parking spaces and 1 handicap will be provided, however, the row actually contains 10 parking spaces and 2 handicap spaces. Please revise this sheet to reflect the correct number of parking spaces. Additionally, the Traffic and Parking Study states that 92 spaces will be provided on the site; please revise this study to reflect that only 90 spaces will be added. Finally, please revise the Written Justification for Variation approval to reflect the correct number of parking spaces that will be included on the site.
    90 spaces are proposed and the referenced documents have been corrected.

25. Please revise sheet C2.1 to include "Do Not Enter" signage facing Miner Street at the "exit only" drive aisle where the drive aisle connects to Miner Street.

    A "Do Not Enter" sign has been included at the location of the proposed "exit only" drive aisle.

26. Page 5 of the Traffic and Parking Study needs revisions to the Windsor Drive at Miner Street paragraph. It is unclear what the first sentence of this section is trying to say.

    Report updated to correct typo.

27. Further analysis of the adequacy of the parking is need. The study states that "parking counts were conducted in May after the morning arrival period which found only a few open spots on-site for staff and visitors". How many spots were available? It appears that the study is indicating the existing 89 space parking lot is at capacity. If the number of staff is expected to increase by five and the parking lot will only increase by one space, it appears that a parking shortage may exist.

    Study updated with additional information requested.

28. The northern parking row is shown at 18.5' in parking space depth, and per Section 11.2-8, parking spaces with 60 degree angled parking must be a minimum of 20' in depth. Please revise the depth of the parking spaces to conform to the code requirement.

    Per Section 3.2-160, a car overhang area of the parking space of no more than one foot six inches in length is not required to be hard surface. When include 1.5' of overhang to the proposed 18.5' length stall a total of 20' is provided. No revisions have been made at this time.

29. The parking requirements for the site are shown below:

SPACE	PARKING CODE USE	NUMBER OF EMPLOYEES	NUMBER OF CLASSROOMS	PARKING RATIO	PARKING REQUIRED
Windsor Elementary School	Elementary School	93	32	1 space per classroom plus two spaces per employee	218
Total Parking Required					218
Total Parking Provided					90
Parking **Surplus**/(Deficit)					128 (59% reduction in required parking)
As outlined above, a parking variation is required.					

A parking variation is requested. The request is included in Written Justification, revised January 9, 2017, that is enclosed.

Planning and Community Development – Landscape & Tree Preservation:

1. No comments at this time.

Noted.

Please contact me at 312-242-4168 or don@strpartners.com with any questions.

Sincerely,

Don Hansen, AIA, LEED AP
Senior Project Manager

cc: Ryan Schulz, Arlington Heights School District 25