

## Section VI North Smyrna Elementary School

### Overview – NES

|                             |   |
|-----------------------------|---|
| Address:                    | 365 North Main Street, Smyrna, Delaware 19977 |
| Floor Area:                 | 48,300 sf                                     |
| Built / Expanded:           | 1964 / 1993 / 2005                            |
| Last Major Work             | 2016  |
| General Exterior Condition: | Fair  |
| General Interior Condition: | Good  |

North Smyrna Elementary School is a single-story 1960s building with classroom additions attached to the rear via a long breezeway. The original central building houses common areas and administration, with the original classroom wing extending to the east. The exterior envelope is predominantly brick with large aluminum storefront windows. In general, masonry is in good condition, but metal wall panels and soffits are aging. Windows and exterior doors are mostly serviceable throughout.



Structural systems vary by location, but all are flat / low-slope areas with varying roof systems. Some low slope roof areas have been installed as or replaced with EPDM membrane systems, which are in very good condition and have plenty of remaining service life. However, the majority of the building has a modified bitumen roof system. The older roofs are in poor to very poor condition, and have long exceeded their service lives. All MBR areas will require replacement with new membrane in the immediate to near future. Given the age of the building, it would be highly cost-effective to increase the insulation thickness as part of this process.

Interior finishes and fixtures are dated and worn in areas, though still serviceable. District personnel have been refreshing interior finishes. This program should be extended through the balance of the building. Casework is operational, but aging and worn. Recent toilet room modifications and other renovations have improved accessibility, but additional compliance issues remain to be corrected.

## Interior

### Accessibility

*NES.01, NES.02, NES.03, NES.04, NES.18, NES.20, NES.21, NES.22, NES.23, NES.24, NES.25, NES.26*

Vertical and horizontal circulation are not significant problems in this 1-story school. Recent modifications have addressed the most critical issues concerning access to restrooms and the stage area. Several remaining toilet rooms require modification or replacement of existing stall configurations. Casework in classrooms, including sinks, are worn and not accessible. These areas should be replaced with new, compliant items. Various other minor accessibility issues require correction in order to be fully inclusive. This includes items like replacing non-compliant drinking fountains, and installing undersink insulation or grab bars.



### Doors and Hardware

*NES.29*

Most interior doors (solid core wood veneer, stained) and frames (hollow metal, painted) show typical wear and tear. All doors and frames in high-traffic areas should be refinished as part of an overall interior painting project.

### Floors

*NES.30, NES.31*

The majority of resilient floor finishes throughout the building are in acceptable condition. Occasional areas of damage or cracking should be corrected. Base trims, however, are worn, damaged, and dated in color (see Walls below for more information). Areas of carpet in Wings A and C-D are worn, stained, and damaged. They are past their expected service life, and should be replaced with new carpet and resilient base trim.



## **Walls**

*NES.06, NES.07, NES.14, NES.16, NES.17, NES.32, NES.33, NES.34*

Walls between classrooms are predominantly painted gypsum wallboard. Most other interior walls, including corridors, toilet rooms, core areas, and inside face of exterior walls are painted masonry. Interior walls are in good to fair condition. Corridor walls and select other areas should be repainted, including incidental patching as required. This work is outside the scope of typical incidental touch-up by district personnel. Resilient base trim throughout Wing A should be replaced.

## **Casework**

*NES.12, NES.15*

Casework (cabinets, countertops, and shelving) is worn and damaged. Most rooms are still serviceable. Selected areas of damaged casework in Wing A and throughout Wing B should be repaired or replaced in kind. See also Accessibility segment above for non-compliant casework modifications.



## **Ceilings**

Ceilings are predominantly lay-in acoustical panel suspended grid systems, with areas of painted gypsum wallboard or exposed structure. Localized areas throughout the building show evidence of minor water infiltration or leaks. In particular, skylights / light wells require prompt attention. These must be investigated by District personnel, the water sources corrected as required, and damaged materials replaced.

# Exterior

## **Doors and Hardware**

Exterior doors, frames, and hardware are in good condition and require only routine maintenance. Hollow metal doors and frames should receive regular painting to protect against rust.

### **Exterior Walls**

*NES.35, NES.36, NES.37*

The existing brick / CMU walls are in good condition. Cracking and settlement are mostly confined to Wings A / B. At a minimum, the cracks require repair and repointing.

Exterior metal siding and soffit panels on Wings A, C, and D are aged, deteriorating, and have been previously painted. Paint is peeling and mildewed. These should be replaced with new prefinished metal wall panels and soffits to match 2005 addition and provide a coherent exterior appearance.



### **Exterior Ramps / Walks**

Existing concrete walk areas are in generally good to fair condition. Regular maintenance with replacement of individual sections as necessary will keep them in service.

## Roof

### **Membrane Roofs (Low Slope / Flat)**

*NES.38, NES.39, NES.41, NES.42, NES.44*

Original built-up roofs were replaced by a modified bitumen roof (MBR) system in approximately 2002. These in turn have reached the end of their expected service life and should be replaced within the next year if possible.

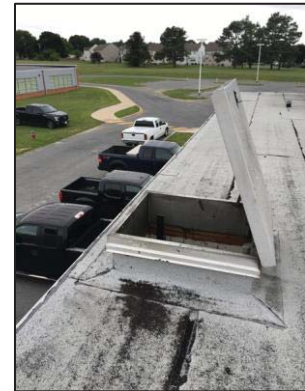
Deteriorated insulation and flashings were observed throughout. Ponding is a major problem in most places, and evidence of water infiltration is visible in various interior locations. Timely roof replacement is critical to avoid the expense of additional interior water damage. As part of this program, existing cast stone copings should be covered with new prefinished aluminum copings to improve water integrity of the roof / exterior wall connection. During roof



replacement, the District should strongly consider installing additional insulation depth where feasible rather than simply replacing in kind.

The existing areas of EPDM membrane roofing vary in condition. The kitchen and 6 classroom wing addition are in very good to good condition at the kitchen and 6 classroom wing addition, and require only routine maintenance. They should have a remaining service life in excess of the timeframe of this assessment. The older addition adjacent the c6 classroom wing has reached its lifespan and is requiring patching. We recommend this be replaced when replacing the Modified -Bit roofing noted above.

The roof access hatch is located immediately adjacent to the exterior wall and opens directly onto a significant sheer drop. This is a critical safety hazard and is not code compliant. A wall-mounted guard rail must be installed to provide fall protection for personnel using the hatch.



## Other

### **M/P/E Renovations**

*NES.47, NES.48*

Detailed information concerning mechanical systems is included in a separate report. However, due to age, the school requires a significant amount of replacement and remedial work to plumbing and HVAC systems throughout all portions of the building.

### **Security**

*NES.49*

The building is relatively secure thanks to operational policy and existing systems. There are no immediate needs for additional measures. In the moderate future term, the District should consider additional protective measures such as ballistic window film or other hardpoint retrofits.

### **Child Nutrition Program**

#### *NES.50*

Food service facilities are aged but serviceable condition and sized appropriately for the current population. The kitchen received an expansion as part of the 2005 additions project. A significant fraction of the existing kitchen equipment has reached or exceeded expected service life. These fixtures should be replaced in the near future to improve efficiency and reliability, and reduce maintenance costs.

