

## **ROLLING HILLS ELEMENTARY SCHOOL**

Rolling Hills Elementary was built in 1999 and is the newest addition to the Mukwonago Area School District. The building contains approximately 64,900 gross square feet on the first floor, with a partial mechanical mezzanine above of nearly 4,400 gross square feet. The exterior wall is load bearing masonry cavity walls type construction. The roof structure over the flat roof consists of steel columns, beams, joists, and a built up roofing system. The pitched roof over the mechanical mezzanine consists of wood trusses, and standing seam metal roof.

### **1. SITE**

#### **Condition of Asphalt Parking**

- 1.1 *The asphalt parking lot near the front entrance is in good condition and should be resealed and restriped in the near future.*

#### **Condition of Asphalt Playgrounds**

- 1.2 *Several large cracks have appeared in the asphalt playground, on the east side of the building, and will need to be repaired.*

#### **Adequate Parking / Observed Traffic Flow**

- 1.3 *Parking is adequate.*

#### **Athletic Field Conditions**

- 1.4 *The baseball diamond / grass playground is in good condition. The soccer grass is in very poor condition.*

#### **Condition of Landscaping**

- 1.5 *Landscaping around the perimeter of the building is in good condition.*  
1.6 *Landscaping at the edge of the playground and parking lot is in poor condition, where most of the grass has eroded away. Reseed Lawn.*

#### **ADA Access**

- 1.7 From parking lot to front door: *An ADA accessible route and accessible parking stalls are provided at the front entrance.*  
1.8 From building to playground: *ADA access is provided through several doors throughout the building.*

### **2. BUILDING – ROOF**

#### **Roof Type**

- 2.1 *Built-up roof system/standing seam metal roof*

#### **Lifespan / Age / Condition**

- 2.2 *Roof was new in 1999 and is in good condition.*  
2.3 *Leaks have appeared at the connection between the flat roof and the west and east wall of the gym. A repair was made, but water continues to leak down the wall in these areas. Also, the flexible flashing used in the walls of this area is failing and should be repaired.*

**3. BUILDING - EXTERIOR**

**Condition of Brick / Tuck Pointing**

3.1 *Brick work is in good condition.*

**Condition of Windows / Insulated Glass / Operation**

3.2 *Windows are in good condition.*

**Condition of Trim Work (Metal Coping, Trim Accent Pieces, Etc.)**

3.3 *Trim work is in good condition.*

**Condition of Exterior Doors (Store Front, Steel Doors, Etc.)**

3.4 *Exterior doors are in good condition.*

**Condition of Exposed Foundations, Cracks**

3.5 *No work required.*

**Condition of Drainage System (Gutters, Downspouts, Scuppers)**

3.6 *Drainage system is in good condition.*

**Caulking**

3.7 *Caulking is in good condition.*

**4. BUILDING – INTERIOR**

**ADA Access / Entrance**

4.1 *ADA access is adequate.*

**ADA Bathrooms**

4.2 *All public bathrooms are ADA accessible and in good condition.*

**Asbestos Abatement**

4.3 *Report available at School and District offices.*

**Interior Windows / Doors**

4.4 *Interior windows/doors are in good condition.*

**Elevator**

4.5 *N/A*

**Stairs**

4.6 *N/A*

**Flooring / Carpet**

4.7 *The tile/carpets around the building are in good condition. A few areas of tile flooring are cracked and need to be replaced. The gym epoxy floor shows signs of bubbling and should be repaired. The hallway and classroom floors have huge cracks.*

**Ceilings**

4.8 *Ceiling tiles are in good condition.*

**General paint condition on walls**

4.9 *Painted walls around the building are in good condition. Cracks in the library walls have appeared and should be repaired and repainted.*

**Condition of woodwork / casework**

4.10 *Woodwork/casework is in good condition.*

**Miscellaneous**

*4.11 N/A*

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## **ROLLING HILLS ELEMENTARY SCHOOL**

### **Sanitary Drainage System:**

Sanitary waste is extended from the building below ground to an on site private wastewater treatment system.

### **Storm Drainage System:**

Storm water from roof areas is collected at interior roof drains, routed down to below grade and extended to an on site storm water retention basin.

### **Domestic Water System:**

Domestic water is supplied to the building from an on site well. Water supply piping is routed below ground from the well to the building and in the building to a water meter and well pressure tanks in the South Mechanical Mezzanine.

Domestic water is routed throughout the building above the ceiling.

A water softener and brine tank is provided to soften the domestic hot water.

Domestic hot water is provided by two (2) gas-fired, sealed combustion, tank –type water heaters.

A tempering valve is installed to limit the hot water supply temperature to the building plumbing fixtures with the exception of the kitchen.

A gas-fired, wall-hung booster heater is installed in the kitchen to serve the dishwasher.

### **Plumbing Fixtures:**

Water Closets: Floor outlet, manual flush valve, water closets, vitreous china units.

Urinals: Stall floor outlet, vitreous china urinals, sensor operated flush valve.

Lavatories: Wall-hung, vitreous china units with mixing valve faucet and push button operator.

Sinks: Countertop, self-rimming, single and double compartment stainless steel sinks, deck-mounted gooseneck spout, mixing faucet with wrist handles.

Mop Basins: Floor set, floor outlet, 36” x 24” x 10” fiberglass mop basin with wall-mounted faucet with vacuum breaker.

Water Coolers: Wall-hung, combination standard/handicapped height water coolers.

**General Comments:**

- 1.1 The building's domestic hot water distribution system is the only piping that is softened. The entire building's water distribution system should be softened except for the exterior hose bibbs. New larger water softening equipment should be provided and additional hard water piping extended through the building to all exterior hose bibb locations.  
**Estimated Cost** \$ **12,000.**
  
- 1.2 The staff stated that at times they run out of hot water. The existing gas-fired water heaters appear to be in good condition, and to improve upon this problem, a storage tank should be provided.  
**Estimated Cost** \$ **8,000.**
  
- 1.3 Replace water heater copper condensate drain pipes with CPVC pipe.  
**Estimated Cost** \$ **500.**

## **ROLLING HILLS ELEMENTARY SCHOOL**

### **Heating:**

The building is heated by three (3) gas-fired, forced draft, flexible tube, hot water boilers located in the North Mechanical Mezzanine. Each boiler is provided with a primary circulating pump.

Secondary hot water circulating pumps with a hot water piping loop routed around the building, above the ceiling, are connected to radiation, air handling unit heating coils, variable volume air handling units and reheat coils throughout the building.

### **Ventilating:**

The building is ventilated by three (3) air handling units serving the following areas:

<b><u>Area Served</u></b>	<b><u>Unit Location</u></b>	<b><u>Type</u></b>
Gymnasium	Gym Mechanical Mezzanine	Constant Vol. w/Reheat Coils
Classroom North	North Mechanical Mezzanine	Var. Vol. w/VAV Reht. Units
Classroom South	South Mechanical Mezzanine	Var. Vol. w/VAV Reht. Units

Supply ductwork is extended from each air handling unit above the ceiling with variable volume units to sidewall or ceiling outlets. The variable volume units are controlled by room thermostats for individual room temperature control.

Economizer relief is provided by a roof-mounted relief hood located above the corridor ceiling and ducted to grilles in the corridor ceiling.

Exhaust for toilet rooms, locker/shower rooms, kitchen hood, etc. is provided by roof-mounted exhaust fans.

### **Air Conditioning:**

The building is air conditioned by a grade-mounted air cooled chiller, a chilled water piping loop with circulating pump is routed above the ceiling and connected to each air handling unit cooling coil. The chilled water system contains a glycol solution to eliminate the need to drain the chiller or cooling coils during the heating system.

### **Temperature Controls:**

Automatic temperature controls for the HVAC systems in the building are Trane Company Tracer Summit Direct Digital Controls (DDC).

**HVAC Comments:**

- |     |  |                   |
|-----|--|-------------------|
| 1.1 | Replace boiler system with new high efficiency boilers.<br><b>Estimated Cost</b>               | <b>\$150,000.</b> |
| 1.2 | Provide additional exhaust ventilation for Kiln Room to control heat.<br><b>Estimated Cost</b> | <b>\$ 800.</b>    |

## **ROLLING HILLS ELEMENTARY SCHOOL**

### **ELECTRICAL SERVICE AND DISTRIBUTION**

*The main electric service is 2500A, 120/208V 3-phase, 4-wire. The Square D service entrance switchboard is original to the 1999 construction of the building. There is additional space in the distribution section for additional feeders.*

*A majority of the branch-circuit panelboards located throughout the school have space for additional branch circuits that may be required if lighting replacements, boiler replacements, septic/mound system upgrades, and/or water heating upgrades are completed.*

*1.1 Minor power distribution modifications will be required for water heater replacement.*

*1.2 Minor power distribution modifications will be required for boiler replacement.*

*1.3 Minor power distribution modifications will be required for septic/mound upgrades.*

### **SURGE SUPPRESSION**

*The main service does have a TVSS unit to provide surge suppression.*

### **EMERGENCY GENERATOR AND TRANSFER SWITCH**

*The emergency systems are served by a 100 kW Spectrum Detroit Diesel natural gas generator that is original to the 1999 construction of the building. It is located outside next to the transformer. There are two separate transfer switches; one 80A transfer switch to serve life-safety loads and one 225A transfer switch to serve non-life safety loads.*

### **LIGHTING**

*The majority of the interior lighting at this building is T8 fluorescent with parabolic fixtures. Two-lamp fixtures are spaced 12' on center in the corridors and three-lamp fixtures are spaced 10' on center in classrooms. Both areas appear dark and District Buildings and Grounds staff indicated lighting upgrades as a possible project at this school to correct this. However, this relighting is not strongly recommended unless students and staff are complaining of eye strain.*





*1.4 Option A: Remove and relocate existing fixtures in classrooms and corridors to 8' on center and add additional fixtures to match existing.*

\$88,500

*Option B: Remove existing fixtures in classrooms and corridors and replace one for one with new troffers in lieu of parabolics.*

\$177,000

*The exterior lighting is HPS.*

*The exit lights are LED.*

### **FIRE ALARM**

*The existing fire alarm system in this building is a Radionics fire alarm control panel with Gentex devices. There is smoke detection in the corridors, storage rooms, and classrooms. Mechanical rooms have heat detection. The horn/strobe coverage appears to be adequate for current Code.*

### **CLOCK SYSTEM**

*The existing clock system in this building is a Rauland system installed during the 1999 construction of this building. Buildings and Grounds staff as scheduled the removal of this system and installation of a Primex wireless GPS clock system for 2007.*

### **INTERCOM SYSTEM**

*The existing intercom system in this building is a Rauland system installed during the 1999 construction of this building.*

### **DATA DISTRIBUTION**

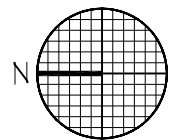
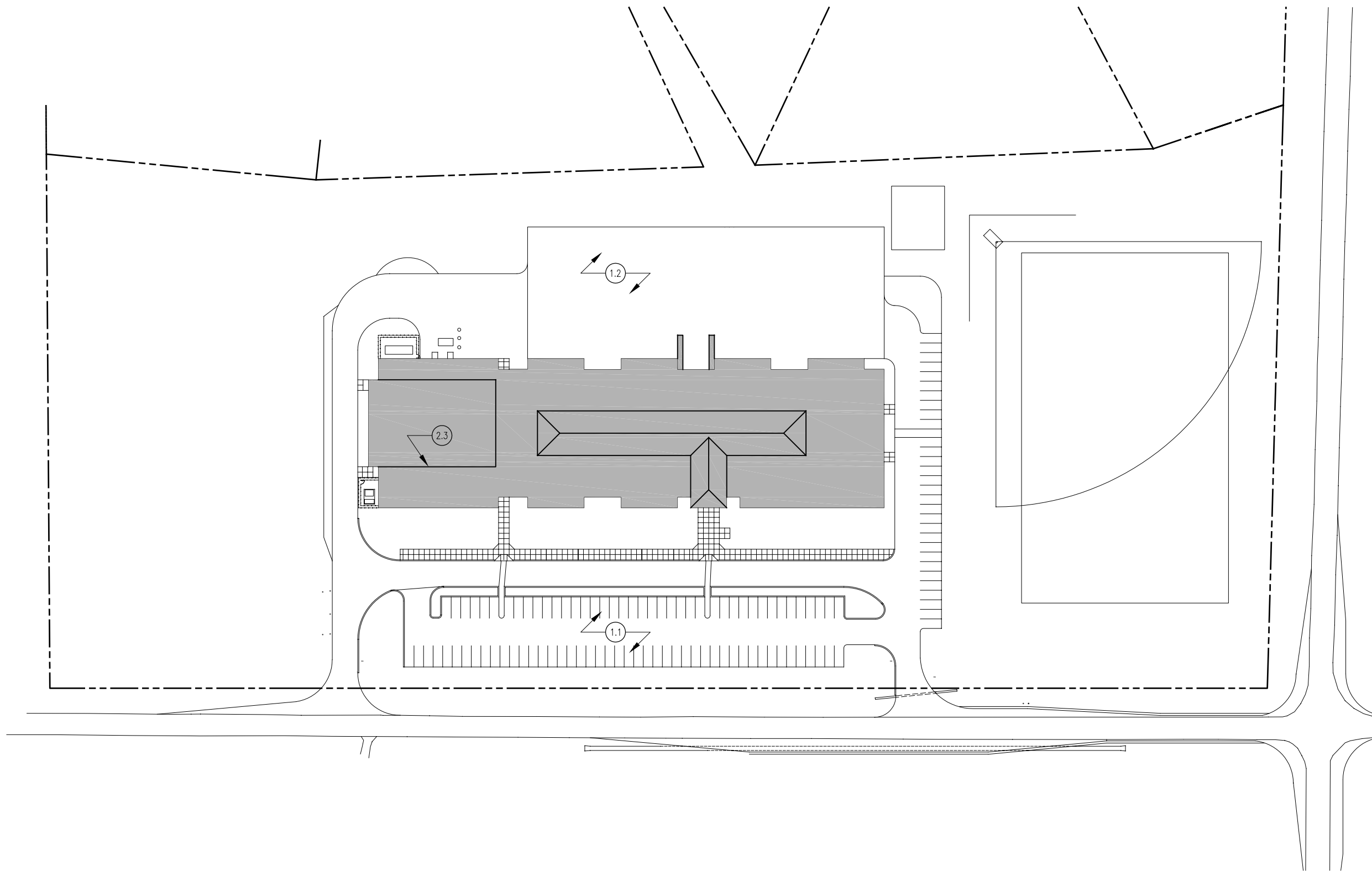
*The data distribution was completed in the late 1990's as part of the TEACH telecommunication systems program. Cat 5 outlets are provided in each classroom.*

### **TELEPHONE DISTRIBUTION**

*The telephone distribution was completed in the late 1990's as part of the TEACH telecommunication systems program. Cat 5 phone outlets are provided in each classroom.*

### **TELEVISION DISTRIBUTION**

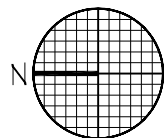
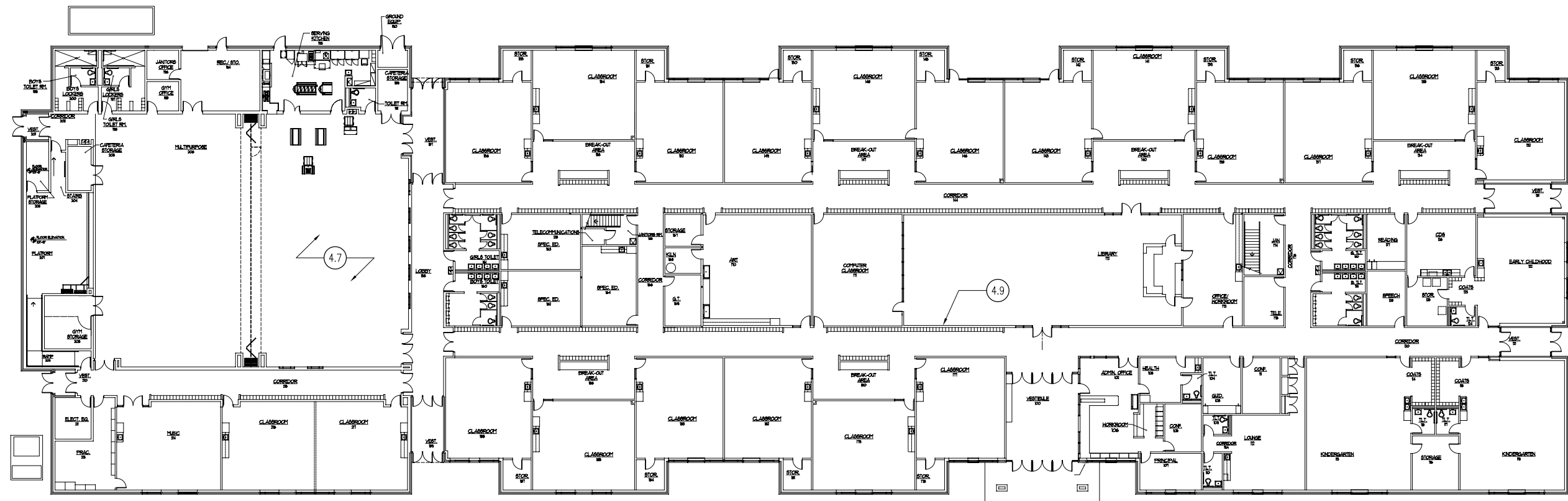
*The television distribution was completed in the late 1990's as part of the TEACH telecommunication systems program. Television distribution outlets are provided in each classroom.*



SITE PLAN

# ROLLING HILLS ELEMENTARY SCHOOL

MUKWONAGO, WISCONSIN



FLOOR PLAN

**ROLLING HILLS ELEMENTARY SCHOOL**



1.2 Asphalt paving at playground



1.5 Landscaping at perimeter of building



2.2 Roof



2.3 Brick repair at gym wall



2.3 Brick repair at gym wall



2.3 Flexible membrane flashing failure at gym wall



2.3 Interior leaks from roof above



2.3 Interior leaks from roof above



2.3 Interior leaks from roof above



4.7 Floor tile



4.7 Floor tile



4.7 Gym floor



4.9 Cracks in library walls