

# Requirement Detail

by Asset Name and Category

**ROCKRIDGE**

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Beyond Rated Life

**Asset Name:** Rockridge - Parking  
**Asset Number:** 560a

<b>Requirement Name</b>	Vehicular Paving: East Drive/Parking Area		
<b>Linked System</b>	Parking Lots	<b>Inspection Date</b>	08/01/2006
<b>Prime System</b>	Paving and Surfacing	<b>Finish Date</b>	-
<b>Priority</b>	2- Potentially Critical (1-2 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Inspec	<b>Actual Cost</b>	0
<b>Action Date</b>	08/01/2007	<b>Total Estimated Cost:</b>	177,000
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	East Drive/Parking Area	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Existing asphalt drive/parking area east of building is in very poor condition.

**PHOTOS**

**ACTION DESCRIPTION**

Reconstruct asphalt drive and parking area east of building.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Upgrades

**Asset Name:** Rockridge - Parking  
**Asset Number:** 560a

<b>Requirement Name</b>	Vehicular Paving: Gravel Drive/Parking Area		
<b>Linked System</b>	Parking Lots	<b>Inspection Date</b>	08/01/2006
<b>Prime System</b>	Paving and Surfacing	<b>Finish Date</b>	-
<b>Priority</b>	5- Recommendations/ Improvements	<b>Status</b>	Open
<b>Inspector Name</b>	Inspec	<b>Actual Cost</b>	0
<b>Action Date</b>	-	<b>Total Estimated Cost:</b>	118,000
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	South of Building	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Gravel drive and parking area south of building should be paved and new curbing installed in the future. Drainage problems southwest of building.

**PHOTOS**

**ACTION DESCRIPTION**

Install new curbing and pave gravel drive and parking area south of building. Improve drainage southwest of building.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Life Safety

**Asset Name:** Rockridge - Sidewalks  
**Asset Number:** 560b

<b>Requirement Name</b>	Pedestrian Paving: Concrete Sidewalks		
<b>Linked System</b>	Pedestrian Paving	<b>Inspection Date</b>	08/01/2006
<b>Prime System</b>	Paving and Surfacing	<b>Finish Date</b>	-
<b>Priority</b>	2- Potentially Critical (1-2 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Inspec	<b>Actual Cost</b>	0
<b>Action Date</b>	08/01/2007	<b>Total Estimated Cost:</b>	7,080
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement</b>	Sidewalks	<b>Annual Energy/Ops</b>	-
<b>Location</b>		<b>Savings \$</b>	
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Portions of concrete sidewalk at site are damaged.

**PHOTOS**

**ACTION DESCRIPTION**

Repair/replace damaged portions of concrete sidewalks at site.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Beyond Rated Life

**Asset Name:** Rockridge - Site  
**Asset Number:** 560c

<b>Requirement Name</b>	Site: Ballfield Bakstop Fencing	<b>Inspection Date</b>	08/01/2006
<b>Linked System</b>	Site Improvements	<b>Finish Date</b>	-
<b>Prime System</b>	Site Improvements	<b>Status</b>	Open
<b>Priority</b>	2- Potentially Critical (1-2 Yrs)	<b>Actual Cost</b>	0
<b>Inspector Name</b>	Inspec	<b>Total Estimated Cost:</b>	5,900
<b>Action Date</b>	08/01/2007	<b>Funding Type</b>	-
<b>Funding Year</b>	-	<b>Annual Energy/Ops Savings \$</b>	-
<b>Requirement Location</b>	Fence at Ballfield south of building		
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Chain link fence at ballfield south of building is leaning and needs to be replaced.

**PHOTOS**

**ACTION DESCRIPTION**

Replace chain link backstop at ballfield south of building.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Deferred Maintenance

**Asset Name:** Rockridge - Site  
**Asset Number:** 560c

<b>Requirement Name</b>	Site: Asphalt Basketball Court		
<b>Linked System</b>	Site Improvements	<b>Inspection Date</b>	08/01/2006
<b>Prime System</b>	Site Improvements	<b>Finish Date</b>	-
<b>Priority</b>	3- Necessary - Not Yet Critical (3-5 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Inspec	<b>Actual Cost</b>	0
<b>Action Date</b>	08/01/2009	<b>Total Estimated Cost:</b>	5,900
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Asphalt Basketball Court	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Asphalt basketball court south of building is very weathered and rough, but structurally sound.

**PHOTOS**

**ACTION DESCRIPTION**

Overlay basketball court south of building.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Accessibility

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Interior Construction: Accessibility		
<b>Linked System</b>	Interior Construction	<b>Inspection Date</b>	11/12/2006
<b>Prime System</b>	Interior Construction	<b>Finish Date</b>	-
<b>Priority</b>	3- Necessary - Not Yet Critical (3-5 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	JQP Inc.	<b>Actual Cost</b>	0
<b>Action Date</b>	11/12/2009	<b>Total Estimated Cost:</b>	13,603
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Interior	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

This requirement includes accessibility issues encountered while you move through the school. Items include: providing elevator or ramp, adding/modifying handrails (only if the level is not served by an elevator or other accessible route), widening doors, replacing door hardware, eliminating protruding hazards and all permanent room identification signage as well as directional signage (adding signs, replacing signs and relocating signs).

**PHOTOS**



Interior Construction: Accessibility

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**ACTION DESCRIPTION**

Make necessary modifications to correct accessibility issues as needed.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Accessibility

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Superstructure: Reconstruct Toilet Rooms for Accessibility		
<b>Linked System</b>	Partitions	<b>Inspection Date</b>	08/09/2006
<b>Prime System</b>	Partitions	<b>Finish Date</b>	-
<b>Priority</b>	3- Necessary - Not Yet Critical (3-5 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Siddens, Lance	<b>Actual Cost</b>	0
<b>Action Date</b>	08/09/2009	<b>Total Estimated Cost:</b>	39,294
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Faculty men and women toilets	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Toilet stalls, urinals and lavatories need to be reconfigured to meet current accessibility (ADA) standards.

**PHOTOS**



Superstructure: Reconstruct Toilet Rooms for Accessibility

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**ACTION DESCRIPTION**

Modify toilet stalls and plumbing fixtures for accessibility.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Air and Water Quality

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	HVAC - Dehumidification Chiller and Piping Mains		
<b>Linked System</b>	Chilled Water Distribution	<b>Inspection Date</b>	07/12/2006
<b>Prime System</b>	Chilled Water Distribution	<b>Finish Date</b>	-
<b>Priority</b>	5- Recommendations/ Improvements	<b>Status</b>	Open
<b>Inspector Name</b>	Schumacher, Russ	<b>Actual Cost</b>	0
<b>Action Date</b>	-	<b>Total Estimated Cost:</b>	194,936
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Entire Building	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Rockridge Elementary School has no means of dehumidification. Without dehumidification capabilities, these spaces cannot meet ASHRAE 55-1992 space design conditions.

**PHOTOS**



HVAC - Dehumidification Chiller and Piping Mains

**ACTION DESCRIPTION**

Addition of an air cooled chiller, pumps, and insulated chilled water pipe distribution system. Chiller to be screened for appearance purposes.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Air and Water Quality

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	HVAC: Add Dehumidification to the 1965 Building and 1992 Addition Classrooms		
<b>Linked System</b>	Air Distribution Systems	<b>Inspection Date</b>	07/12/2006
<b>Prime System</b>	Air Distribution Systems	<b>Finish Date</b>	-
<b>Priority</b>	5- Recommendations/ Improvements	<b>Status</b>	Open
<b>Inspector Name</b>	Schumacher, Russ	<b>Actual Cost</b>	0
<b>Action Date</b>	-	<b>Total Estimated Cost:</b>	502,326
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	1965 Building Classrooms and 1992 Addition	<b>Annual Energy/Ops Savings \$</b>	941
<b>Savings Description</b>	Energy savings will be generated by using heat exchangers to recover exhaust air energy in order to pre-condition make-up air. In addition, each classroom occupancy controls will reduce ventilation rates and control the lighting to save energy when rooms are not in use. Additional energy will be consumed to provide dehumidification during the cooling months.		

**REQUIREMENT DESCRIPTION**

The air handling unit serving the all of the 1992 Addition and all of the 1965 Building (except for the gym, kitchen, and latchkey room) has no means of dehumidification. Without dehumidification capabilities, these spaces cannot meet ASHRAE 55-1992 space design conditions. As part of this upgrade, the new mechanical system will incorporated heat recovery and classroom occupancy / CO2 controls to save energy.

**PHOTOS**



HVAC: Add Dehumidification to the 1965 Building and 1992 Addition Classrooms

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**ACTION DESCRIPTION**

*All Costs in USD.*

Addition of a dehumidification coil to the air handling unit serving the classrooms for this area via modification and internal closed cell AHU liner. The supply duct would be externally insulated in mechanical rooms and above ceilings. Upgrade the controls system. Test and Balance and Commissioning of the air handling systems.

VAV boxes with hot water reheat coils would be added to the ductwork in the classrooms. New acoustical tile ceilings would be installed. New lighting as well.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Air and Water Quality

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	HVAC: Provide Negative Pressure in Crawlspace/Tunnels		
<b>Linked System</b>	Air Distribution Systems	<b>Inspection Date</b>	07/15/2006
<b>Prime System</b>	Air Distribution Systems	<b>Finish Date</b>	-
<b>Priority</b>	2- Potentially Critical (1-2 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Schumacher, Russ	<b>Actual Cost</b>	0
<b>Action Date</b>	07/15/2007	<b>Total Estimated Cost:</b>	70,800
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	1965 and 1992 Crawlspace/Tunnel	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

The tunnels have concrete floors and are wet. If not under negative pressure can transfer odors to the floors above due to the pipe and duct penetrations. The tunnels are also present opportunity for mold growth.

In addition, there is a ground water issue on site and additional sump pumps are required in the tunnels.

**PHOTOS**



HVAC: Provide Negative Pressure in Crawlspace/Tunnels

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**ACTION DESCRIPTION**

Install exhaust fans and outdoor air intakes as required to ventilate tunnels, as well as maintain negative pressure. Plan on 4 areas.

In addition, 5 more sump pumps are budgeted to be added.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Appearance

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Exterior Doors: Paint Doors		
<b>Linked System</b>	Exterior Doors	<b>Inspection Date</b>	08/09/2006
<b>Prime System</b>	Exterior Doors	<b>Finish Date</b>	-
<b>Priority</b>	3- Necessary - Not Yet Critical (3-5 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Siddens, Lance	<b>Actual Cost</b>	0
<b>Action Date</b>	08/09/2009	<b>Total Estimated Cost:</b>	43,601
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Old Addition	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Metal exterior and interior vestibule doors and frames exhibit damaged finish and rust.

**PHOTOS**



Exterior Doors: Paint Doors

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**ACTION DESCRIPTION**

Paint Exterior metal doors and interior vestibule doors in old addition approximately 19 doors.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Appearance

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Site Improvements: General Landscaping		
<b>Linked System</b>	Site Improvements	<b>Inspection Date</b>	10/03/2006
<b>Prime System</b>	Site Improvements	<b>Finish Date</b>	-
<b>Priority</b>	2- Potentially Critical (1-2 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Northern Lights Landscaping	<b>Actual Cost</b>	0
<b>Action Date</b>	10/03/2007	<b>Total Estimated Cost:</b>	2,190
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Property around facility	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

There are negative slope areas around the facility bringing drainage towards the facility instead of away from the facility.

**PHOTOS**

**ACTION DESCRIPTION**

Correct negative slope around foundations by installing soil and sod.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Asbestos

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Hazardous Components: Abatement	<b>Inspection Date</b>	07/01/2006
<b>Linked System</b>	Hazardous Components Abatement	<b>Finish Date</b>	-
<b>Prime System</b>	Hazardous Components Abatement	<b>Status</b>	Open
<b>Priority</b>	1- Currently Critical (Immediately)	<b>Actual Cost</b>	0
<b>Inspector Name</b>	Wormuth, Kevin	<b>Total Estimated Cost:</b>	12,850
<b>Action Date</b>	07/01/2006	<b>Funding Type</b>	-
<b>Funding Year</b>	-	<b>Annual Energy/Ops Savings \$</b>	-
<b>Requirement Location</b>	Entire Facility		
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

This facility was built when asbestos was a common component of many building materials. The majority of asbestos in this facility was part of the insulating materials. Some has been abated, but in some areas it is still present.

**PHOTOS**

**ACTION DESCRIPTION**

Abatement of asbestos containing materials throughout facility.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Beyond Rated Life

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Ceiling Finishes: Replace Acoustical Tile		
<b>Linked System</b>	Ceiling Finishes	<b>Inspection Date</b>	08/09/2006
<b>Prime System</b>	Ceiling Finishes	<b>Finish Date</b>	-
<b>Priority</b>	4- Mid Term Needs (6-10 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Siddens, Lance	<b>Actual Cost</b>	0
<b>Action Date</b>	08/09/2012	<b>Total Estimated Cost:</b>	10,030
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Old buildings kitchen and adjacent storage dishwahr and corridor spaces. Faculty toilet/locker room boys and girls toilets and storage rooms off gymnasium.	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Existing 2 X 4 suspended acoustical tile is beyond rated life and does not meet district standardization/modernization plan to convert to 2 X 2 suspended acoustical tile.

**PHOTOS**



Ceiling Finishes: Replace Acoustical Tile

**ACTION DESCRIPTION**

Replace 2 X 4 suspended acoustical tile with 2 X 2 suspended acoustical tile approximately 1700 S.F.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Beyond Rated Life

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Floor Finishes: Replace Carpet	<b>Inspection Date</b>	08/09/2006
<b>Linked System</b>	Floor Finishes	<b>Finish Date</b>	-
<b>Prime System</b>	Floor Finishes	<b>Status</b>	Open
<b>Priority</b>	3- Necessary - Not Yet Critical (3-5 Yrs)	<b>Actual Cost</b>	0
<b>Inspector Name</b>	Siddens, Lance	<b>Total Estimated Cost:</b>	80,712
<b>Action Date</b>	08/09/2009	<b>Funding Type</b>	-
<b>Funding Year</b>	-	<b>Annual Energy/Ops Savings \$</b>	-
<b>Requirement Location</b>	Classrooms		
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Carpet in classrooms is worn and beyond rated life.

**PHOTOS**



Floor Finishes: Carpet

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**ACTION DESCRIPTION**

Replace classroom carpet with new carpet, approximately 11,000 S.F.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Beyond Rated Life

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Floor Finishes: Replace Carpet	<b>Inspection Date</b>	08/09/2006
<b>Linked System</b>	Floor Finishes	<b>Finish Date</b>	-
<b>Prime System</b>	Floor Finishes	<b>Status</b>	Open
<b>Priority</b>	3- Necessary - Not Yet Critical (3-5 Yrs)	<b>Actual Cost</b>	0
<b>Inspector Name</b>	Siddens, Lance	<b>Total Estimated Cost:</b>	16,697
<b>Action Date</b>	08/09/2009	<b>Funding Type</b>	-
<b>Funding Year</b>	-	<b>Annual Energy/Ops Savings \$</b>	-
<b>Requirement Location</b>	Corridors		
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Carpet in corridors is beyond useful life and does not meet districts standardization to VCT in corridors.

**PHOTOS**



Floor Finishes: Replace Carpet

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**ACTION DESCRIPTION**

Replace carpet in corridors with VCT approximately 2500 S.F.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Beyond Rated Life

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Lighting Equipment: Occupancy Sensors		
<b>Linked System</b>	Lighting Equipment	<b>Inspection Date</b>	09/19/2006
<b>Prime System</b>	Lighting Equipment	<b>Finish Date</b>	-
<b>Priority</b>	4- Mid Term Needs (6-10 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Ruud, Mark	<b>Actual Cost</b>	0
<b>Action Date</b>	09/19/2012	<b>Total Estimated Cost:</b>	4,424
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement</b>	Classrooms	<b>Annual Energy/Ops</b>	-
<b>Location</b>		<b>Savings \$</b>	
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

The existing classroom occupancy sensors are single technology sensors and will need replacement in the mid term future. Dual technology sensors offer improved performance.

**PHOTOS**

**ACTION DESCRIPTION**

Remove and replace existing classroom occupancy sensors with dual technology occupancy sensors.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Beyond Rated Life

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Plumbing: Replace Underground Sanitary Sewer Lines		
<b>Linked System</b>	Plumbing	<b>Inspection Date</b>	11/29/2006
<b>Prime System</b>	Plumbing	<b>Finish Date</b>	-
<b>Priority</b>	5- Recommendations/ Improvements	<b>Status</b>	Open
<b>Inspector Name</b>	Schumacher, Russ	<b>Actual Cost</b>	0
<b>Action Date</b>	-	<b>Total Estimated Cost:</b>	35,400
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	All Building Areas 35 Years or Older	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Underground sanitary sewer lines require replacement due to tree roots, pipe degradation, and pipe damage due to ground shifting over time.

**PHOTOS**

**ACTION DESCRIPTION**

Replace the underground sanitary sewer lines with new.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Beyond Rated Life

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Roof System: Replace Roof	<b>Inspection Date</b>	08/01/2006
<b>Linked System</b>	Roofing	<b>Finish Date</b>	-
<b>Prime System</b>	Roofing	<b>Status</b>	Open
<b>Priority</b>	4- Mid Term Needs (6-10 Yrs)	<b>Actual Cost</b>	0
<b>Inspector Name</b>	Inspec	<b>Total Estimated Cost:</b>	185,553
<b>Action Date</b>	08/01/2012	<b>Funding Type</b>	-
<b>Funding Year</b>	-	<b>Annual Energy/Ops Savings \$</b>	321
<b>Requirement Location</b>	1992 Addition		
<b>Savings Description</b>	Energy savings generated from improved roof insulation.		

**REQUIREMENT DESCRIPTION**

Roof is performing as intended. Replace in 10 years. Includes roof Area 4.

**PHOTOS**

**ACTION DESCRIPTION**

Replace the adhered EPDM roof on this building.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Beyond Rated Life

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Roof System: Replace Roof	<b>Inspection Date</b>	08/01/2006
<b>Linked System</b>	Roofing	<b>Finish Date</b>	-
<b>Prime System</b>	Roofing	<b>Status</b>	Open
<b>Priority</b>	4- Mid Term Needs (6-10 Yrs)	<b>Actual Cost</b>	0
<b>Inspector Name</b>	Inspec	<b>Total Estimated Cost:</b>	314,437
<b>Action Date</b>	08/01/2012	<b>Funding Type</b>	-
<b>Funding Year</b>	-	<b>Annual Energy/Ops Savings \$</b>	543
<b>Requirement Location</b>	1965 Building		
<b>Savings Description</b>	Energy savings generated from improved roof insulation.		

**REQUIREMENT DESCRIPTION**

Roof system is performing as expected. Replace in 10 years. Includes roof Areas 1-3.

**PHOTOS**



Roof System: Replace Roof

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**ACTION DESCRIPTION**

Replace the adhered EPDM roof in this area.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Beyond Rated Life

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Site Furnishings: Playground Upgrade / Replacement		
<b>Linked System</b>	Site Furnishings	<b>Inspection Date</b>	10/03/2006
<b>Prime System</b>	Site Furnishings	<b>Finish Date</b>	-
<b>Priority</b>	3- Necessary - Not Yet Critical (3-5 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Earl F. Anderson	<b>Actual Cost</b>	0
<b>Action Date</b>	10/03/2009	<b>Total Estimated Cost:</b>	82,305
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Facility Grounds	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Playground equipment was built in 1991 and 1998. Swings are non-conforming to safety standards (not enough room). Has "pea rock" which does not meet ADA. The playground equipment does not meet current safety and ADA requirements. Site is close to adequate for population size.

**PHOTOS**



Site Furnishings: Playground Upgrade / Replacement

**ACTION DESCRIPTION**

Replace existing playground with new equipment to meet needs of enrollment. Replace surface material with district standard and replace edging as needed.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Building Code

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	HVAC: Replace Dishwasher Exhaust Hood		
<b>Linked System</b>	Exhaust Ventilation Systems	<b>Inspection Date</b>	06/28/2006
<b>Prime System</b>	Exhaust Ventilation Systems	<b>Finish Date</b>	-
<b>Priority</b>	6- Does Not Meet Current Codes/Standards	<b>Status</b>	Open
<b>Inspector Name</b>	Schumacher, Russ	<b>Actual Cost</b>	0
<b>Action Date</b>	-	<b>Total Estimated Cost:</b>	17,700
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Kitchen 1965 Building Addition	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

The existing dishwasher has an existing exhaust hood but is not tagged as a type II Hood. It does not have an exhaust hood as required by the 2000 International Mechanical Code. Exhausting the dishwasher steam is critical in maintaining proper indoor air quality in the kitchen.

**PHOTOS**



HVAC: Replace Dishwasher Exhaust Hood

-

**ACTION DESCRIPTION**

Demolish the existing dishwasher hood and fan system.

Add a Type II hood and dishwasher exhaust fan with the required externally insulated aluminum ductwork. Installation to comply with the 2000 International Mechanical Code.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Building Code

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	HVAC: Replace Kitchen Grease Exhaust Hood / Add Kitchen Make Up Air		
<b>Linked System</b>	Exhaust Ventilation Systems	<b>Inspection Date</b>	07/12/2006
<b>Prime System</b>	Exhaust Ventilation Systems	<b>Finish Date</b>	-
<b>Priority</b>	6- Does Not Meet Current Codes/Standards	<b>Status</b>	Open
<b>Inspector Name</b>	Schumacher, Russ	<b>Actual Cost</b>	0
<b>Action Date</b>	-	<b>Total Estimated Cost:</b>	120,950
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Kitchen - 1965 Building	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

The existing grease exhaust hood does not appear to be drawing the exhaust airflow as required by the 2000 Uniform Mechanical Code. This hood needs to be replaced with a code compliant grease exhaust hood and fan.

In addition, the kitchen does not have a dedicated make up air unit. Make up air for the kitchen hood is required by the 2000 International Mechanical Code.

**PHOTOS**



HVAC: Replace Kitchen Grease Exhaust Hood / Add Kitchen Make Up Air

-

**ACTION DESCRIPTION**

Replace the existing grease exhaust hood and fan and grease duct with 2000 International Mechanical Code compliant kitchen grease hood exhaust system.

Add a dedicated make up air unit with dehumidification.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Capacity

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Electrical Distribution: Insufficient Capacity		
<b>Linked System</b>	Electrical Service and Distribution	<b>Inspection Date</b>	08/14/2006
<b>Prime System</b>	Electrical Service and Distribution	<b>Finish Date</b>	-
<b>Priority</b>	4- Mid Term Needs (6-10 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Crotteau, Paul	<b>Actual Cost</b>	0
<b>Action Date</b>	08/14/2012	<b>Total Estimated Cost:</b>	15,222
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Building Wide	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Existing Branch Panels are lacking capacity for additional circuits. A panel must be added to accommodate circuits needed for additional receptacles.

**PHOTOS**



Electrical Distribution: Insufficient Capacity

**ACTION DESCRIPTION**

Provide a new 200 amp feeder and panel to help carry the extra load of additional receptacles throughout the building.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Capacity

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	HVAC: Add Cooling Capability to Computer Lab and IT Data Room		
<b>Linked System</b>	Cooling Generating Systems	<b>Inspection Date</b>	07/12/2006
<b>Prime System</b>	Cooling Generating Systems	<b>Finish Date</b>	-
<b>Priority</b>	2- Potentially Critical (1-2 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Schumacher, Russ	<b>Actual Cost</b>	0
<b>Action Date</b>	07/12/2007	<b>Total Estimated Cost:</b>	133,930
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	IT Data Room Located in Faculty Lounge - 1965 Building	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

The Computer Lab and IT Data rooms get hot, which could cause technology equipment failure.

**PHOTOS**



HVAC: Add Cooling Capability to IT Data Room

-

**ACTION DESCRIPTION**

Provide a fan coil with a DX cooling coil with full economizer capability to utilize free cooling when outdoor conditions allow.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Capacity

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Wiring Devices: Insufficient Receptacles		
<b>Linked System</b>	Branch Wiring Devices	<b>Inspection Date</b>	07/17/2006
<b>Prime System</b>	Branch Wiring Devices	<b>Finish Date</b>	-
<b>Priority</b>	4- Mid Term Needs (6-10 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Crotteau, Paul	<b>Actual Cost</b>	0
<b>Action Date</b>	07/17/2012	<b>Total Estimated Cost:</b>	5,900
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Building Wide	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

With rapid advances in technology, additional receptacles may be required in 6 to 10 years. The Addition of receptacles will require additional branch panels.

**PHOTOS**



Wiring Devices: Insufficient Receptacles

-

**ACTION DESCRIPTION**

Provide additional 20 amp receptacle throughout building and associated branch wiring. Upgrade will first require additional branch panel boards.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Deferred Maintenance

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Exterior Walls: Wall Restoration		
<b>Linked System</b>	Exterior Walls	<b>Inspection Date</b>	08/01/2006
<b>Prime System</b>	Exterior Walls	<b>Finish Date</b>	-
<b>Priority</b>	4- Mid Term Needs (6-10 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Inspec	<b>Actual Cost</b>	0
<b>Action Date</b>	08/01/2012	<b>Total Estimated Cost:</b>	35,400
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Entire Building	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Deteriorated walls around the entire perimeter of building.

**PHOTOS**



Exterior Walls: Wall Restoration

-

**ACTION DESCRIPTION**

Tuck pointing, spot brick replacement, joint sealant replacement, painting, and other misc. items.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Deferred Maintenance

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	HVAC: Ductwork Cleaning	<b>Inspection Date</b>	11/29/2006
<b>Linked System</b>	Air Distribution Systems	<b>Finish Date</b>	-
<b>Prime System</b>	Air Distribution Systems	<b>Status</b>	Open
<b>Priority</b>	4- Mid Term Needs (6-10 Yrs)	<b>Actual Cost</b>	0
<b>Inspector Name</b>	Schumacher, Russ	<b>Total Estimated Cost:</b>	41,300
<b>Action Date</b>	11/29/2012	<b>Funding Type</b>	-
<b>Funding Year</b>	-	<b>Annual Energy/Ops Savings \$</b>	-
<b>Requirement Location</b>	Building Wide		
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Clean the duct systems that are not replaced by the indoor air quality upgrade.

**PHOTOS**

**ACTION DESCRIPTION**

Clean ductwork that is not replaced due to indoor air quality upgrades.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Deferred Maintenance

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Plumbing: Replace Lavatory Wash Fountains		
<b>Linked System</b>	Plumbing Fixtures	<b>Inspection Date</b>	07/11/2006
<b>Prime System</b>	Plumbing Fixtures	<b>Finish Date</b>	-
<b>Priority</b>	6- Does Not Meet Current Codes/Standards	<b>Status</b>	Open
<b>Inspector Name</b>	Schumacher, Russ	<b>Actual Cost</b>	0
<b>Action Date</b>	-	<b>Total Estimated Cost:</b>	21,240
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	1965 Building Toilet Rooms	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

There are two(2) old style lavatory wash fountains are in need of constant maintenance and most leak water. They are also located inside the toilet rooms. These wash fountains have exceeded the recommended useful life.

**PHOTOS**



Plumbing: Replace Lavatory Wash Fountains

-

**ACTION DESCRIPTION**

Replace two wash fountains with new wash fountains with infrared mixing stations.

Locate these outside the toilet rooms.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Energy and Operational Efficiency

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Controls: VendingMiser Vending Machine Controls		
<b>Linked System</b>	Controls and Instrumentation	<b>Inspection Date</b>	10/02/2006
<b>Prime System</b>	Controls and Instrumentation	<b>Finish Date</b>	-
<b>Priority</b>	1- Currently Critical (Immediately)	<b>Status</b>	Open
<b>Inspector Name</b>	Ruud, Mark	<b>Actual Cost</b>	0
<b>Action Date</b>	10/02/2006	<b>Total Estimated Cost:</b>	826
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Vending Machines	<b>Annual Energy/Ops Savings \$</b>	92
<b>Savings Description</b>	VendingMiser controls cycle power to the vending machine during unoccupied times to save energy.		

**REQUIREMENT DESCRIPTION**

Install VendingMiser controls on vending machines.

**PHOTOS**

**ACTION DESCRIPTION**

-

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Energy and Operational Efficiency

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	HVAC: Boiler Room Upgrades	<b>Inspection Date</b>	07/12/2006
<b>Linked System</b>	Heat Generating Systems	<b>Finish Date</b>	-
<b>Prime System</b>	Heat Generating Systems	<b>Status</b>	Open
<b>Priority</b>	2- Potentially Critical (1-2 Yrs)	<b>Actual Cost</b>	0
<b>Inspector Name</b>	Schumacher, Russ	<b>Total Estimated Cost:</b>	159,064
<b>Action Date</b>	07/12/2007	<b>Funding Type</b>	-
<b>Funding Year</b>	-	<b>Annual Energy/Ops Savings \$</b>	1,167
<b>Requirement Location</b>	Boiler Room - 1965 Building		
<b>Savings Description</b>	Energy savings generated from installing condensing style hot water boiler(s).		

**REQUIREMENT DESCRIPTION**

The existing boiler has exceeded the recommended useful life expectancy. The boiler shell is in poor condition and rust has formed. The building has only one boiler, thus backup heating capacity is not present. This could lead to building freeze up if the boiler fails. The existing boiler should be replaced with two high efficiency hot water boilers to increase the efficiency of the boiler plant.

This would also provide heating backup for the building.

**PHOTOS**



HVAC: Boiler Room Upgrades

-

**ACTION DESCRIPTION**

Install one high efficiency condensing boiler for increased boiler efficiency. Install one gas/fuel oil boiler to provide backup and allow interruptible gas rates for the heating plant system.

Install primary circulating pump for the dual fuel boiler.

Combine the pump system to a parallel pumping system and eliminate the multiple zone pumps.

*All Costs in USD.*



**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Energy and Operational Efficiency

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Lighting: Lighting Retrofit	<b>Inspection Date</b>	09/20/2006
<b>Linked System</b>	Lighting Equipment	<b>Finish Date</b>	-
<b>Prime System</b>	Lighting Equipment	<b>Status</b>	Open
<b>Priority</b>	1- Currently Critical (Immediately)	<b>Actual Cost</b>	0
<b>Inspector Name</b>	Ruud, Mark	<b>Total Estimated Cost:</b>	39,197
<b>Action Date</b>	09/20/2006	<b>Funding Type</b>	-
<b>Funding Year</b>	-	<b>Annual Energy/Ops Savings \$</b>	2,786
<b>Requirement Location</b>	Entire Facility		
<b>Savings Description</b>	Energy savings generated through more efficient lighting technology.		

**REQUIREMENT DESCRIPTION**

Lighting project consists of the following:

- 1) Retrofit/Replace 34w T12 fixtures with 25w T8 lighting
- 2) Relamp 32w T8 lamps with 25w T8 lamps
- 3) Replace HID lighting with T8 lighting fixtures
- 4) Replace Incand. lighting with Fluorescent
- 5) Upgrade exit signs with LED technology
- 6) Gym Occupancy Sensors

**PHOTOS**

**ACTION DESCRIPTION**

-

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Energy and Operational Efficiency

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Plumbing: Add Domestic Water Heat Exchanger	<b>Inspection Date</b>	07/12/2006
<b>Linked System</b>	Plumbing	<b>Finish Date</b>	-
<b>Prime System</b>	Plumbing	<b>Status</b>	Open
<b>Priority</b>	5- Recommendations/ Improvements	<b>Actual Cost</b>	0
<b>Inspector Name</b>	Schumacher, Russ	<b>Total Estimated Cost:</b>	35,046
<b>Action Date</b>	-	<b>Funding Type</b>	-
<b>Funding Year</b>	-	<b>Annual Energy/Ops Savings \$</b>	-
<b>Requirement Location</b>	Boiler Room - 1965 Building		
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Provide a domestic hot water heat exchanger. This will allow for an interruptible natural gas rate.

**PHOTOS**



Plumbing: Add Water to Water Heat Exchanger for Domestic Hot Water

-

**ACTION DESCRIPTION**

Provide a new domestic hot water heat exchanger and all required piping and controls.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Energy and Operational Efficiency

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Plumbing: Water Conservation Upgrades		
<b>Linked System</b>	Plumbing Fixtures	<b>Inspection Date</b>	09/21/2006
<b>Prime System</b>	Plumbing Fixtures	<b>Finish Date</b>	-
<b>Priority</b>	1- Currently Critical (Immediately)	<b>Status</b>	Open
<b>Inspector Name</b>	Ruud, Mark	<b>Actual Cost</b>	0
<b>Action Date</b>	09/21/2006	<b>Total Estimated Cost:</b>	13,412
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Entire Facility	<b>Annual Energy/Ops Savings \$</b>	1,231
<b>Savings Description</b>	Reduce water and sewer usage using new low flow devices. Project contains replacement of constant flow urinals - Savings for urinals \$757, savings for remaining items \$474.		

**REQUIREMENT DESCRIPTION**

Replace / Retrofit standard flow flush valves and faucets with low flow devices.

**PHOTOS**

**ACTION DESCRIPTION**

-

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Life Safety

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Lighting Equipment: Exterior Lighting	<b>Inspection Date</b>	09/19/2006
<b>Linked System</b>	Lighting Equipment	<b>Finish Date</b>	-
<b>Prime System</b>	Lighting Equipment	<b>Status</b>	Open
<b>Priority</b>	1- Currently Critical (Immediately)	<b>Actual Cost</b>	0
<b>Inspector Name</b>	Ruud, Mark	<b>Total Estimated Cost:</b>	21,323
<b>Action Date</b>	09/19/2006	<b>Funding Type</b>	-
<b>Funding Year</b>	-	<b>Annual Energy/Ops Savings \$</b>	-
<b>Requirement Location</b>	Building Perimeter Parking		
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

The existing exterior lighting for this facility is getting old and the light levels and coverage for adequate safety is a concern.

**PHOTOS**

**ACTION DESCRIPTION**

Replace and add exterior fixtures as needed to improve light levels and coverage. To discourage vandalism and increase occupant safety.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Occupant Security

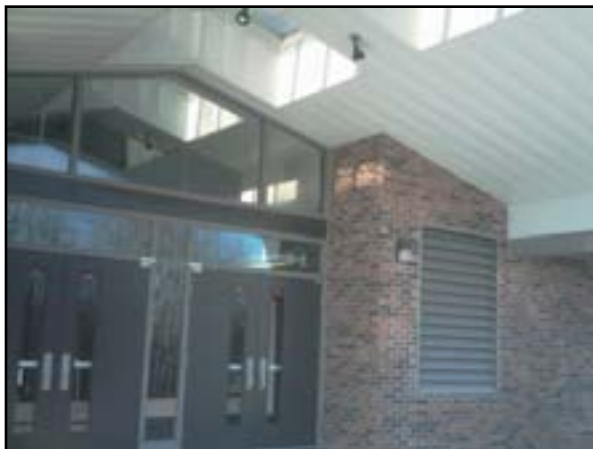
**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Communication and Security: Access Control		
<b>Linked System</b>	Communications and Security	<b>Inspection Date</b>	09/20/2006
<b>Prime System</b>	Security and Detection Systems	<b>Finish Date</b>	-
<b>Priority</b>	3- Necessary - Not Yet Critical (3-5 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Crotteau, Paul	<b>Actual Cost</b>	0
<b>Action Date</b>	09/20/2009	<b>Total Estimated Cost:</b>	23,600
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Building Wide	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Doors need ability to be locked down with access allowed only to authorized people. Also doors without card readers should be monitored for unauthorized access.

**PHOTOS**



Communication and Security: Access Control

-

**ACTION DESCRIPTION**

Install 6 proximity card readers at main entry doors for both public and personal  
 And add magnetic door contacts to all other exterior doors on a alarm system.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Occupant Security

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Communications and Security: CCTV		
<b>Linked System</b>	Communications and Security	<b>Inspection Date</b>	11/30/2006
<b>Prime System</b>	Communications and Security	<b>Finish Date</b>	-
<b>Priority</b>	2- Potentially Critical (1-2 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Crotteau, Paul	<b>Actual Cost</b>	0
<b>Action Date</b>	11/30/2007	<b>Total Estimated Cost:</b>	0
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Building Wide	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

There are currently no cameras located in the school. Cameras would add an increased security throughout the school which is becoming more critical.

**PHOTOS**

**ACTION DESCRIPTION**

Provide cameras throughout school. Camera locations provided by ISD 709.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Occupant Security

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Fire Alarm Systems: Outdated System		
<b>Linked System</b>	Fire Alarm Systems	<b>Inspection Date</b>	09/20/2006
<b>Prime System</b>	Fire Alarm Systems	<b>Finish Date</b>	-
<b>Priority</b>	3- Necessary - Not Yet Critical (3-5 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Crotteau, Paul	<b>Actual Cost</b>	0
<b>Action Date</b>	09/20/2009	<b>Total Estimated Cost:</b>	47,200
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Building Wide	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Fire alarm systems are old analog system. System is prone to malfunctions and is very hard to identify exact area of alarm. It is also difficult to troubleshoot and find malfunctions.

**PHOTOS**



Fire Alarm Systems: Outdated System

-

**ACTION DESCRIPTION**

Replace fire system with a fully addressable fire system.  
 This will allow for quick response to exact alarm device  
 And allow for better maintenance and safety

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Upgrades

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Communication and Security: Cabling Upgrade		
<b>Linked System</b>	Communications and Security	<b>Inspection Date</b>	08/16/2006
<b>Prime System</b>	Local Area Networks	<b>Finish Date</b>	-
<b>Priority</b>	5- Recommendations/ Improvements	<b>Status</b>	Open
<b>Inspector Name</b>	The Westlund Group	<b>Actual Cost</b>	0
<b>Action Date</b>	-	<b>Total Estimated Cost:</b>	46,728
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Entire Facility	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Existing building has older categories of cabling.

**PHOTOS**

**ACTION DESCRIPTION**

Replace old and mixed telephone/data cabling with up to date category 6 of 6A. Add basic wireless coverage. Standardize quantity of phone and data in classroom and offices.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Upgrades

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Communication and Security: Clock System		
<b>Linked System</b>	Communications and Security	<b>Inspection Date</b>	09/20/2006
<b>Prime System</b>	Clock and Program Systems	<b>Finish Date</b>	-
<b>Priority</b>	3- Necessary - Not Yet Critical (3-5 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Crotteau, Paul	<b>Actual Cost</b>	0
<b>Action Date</b>	09/20/2009	<b>Total Estimated Cost:</b>	10,620
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Building Wide	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Master clock systems no longer keep clocks in time. Most are only used for running the bells. Atomic clocks may not receive a signal through the brick buildings. Many clocks do not work at all.

**PHOTOS**



Communication and Security: Clock System

-

**ACTION DESCRIPTION**

Install new wireless master clock system. The main clock receives the GPS signal for exact time and then sends signal to other clocks in facility. This will allow for accurate time and less tardiness between classes.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Upgrades

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Communication and Security: Public Address and Sound System		
<b>Linked System</b>	Communications and Security	<b>Inspection Date</b>	09/20/2006
<b>Prime System</b>	Intercommunication and Paging System	<b>Finish Date</b>	-
<b>Priority</b>	3- Necessary - Not Yet Critical (3-5 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Crotteau, Paul	<b>Actual Cost</b>	0
<b>Action Date</b>	09/20/2009	<b>Total Estimated Cost:</b>	19,588
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Building Wide	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

PA system is 25+ years old but is still functional.  
 There are no speakers located in hallways or commons areas.

**PHOTOS**



Communication and Security: Public Address and Sound System  
 -

**ACTION DESCRIPTION**

Update paging head end with new system and amplifier  
 And install speakers where needed.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Upgrades

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Communication and Security: Telephone System Upgrade		
<b>Linked System</b>	Communications and Security	<b>Inspection Date</b>	08/16/2006
<b>Prime System</b>	Telephone Systems	<b>Finish Date</b>	-
<b>Priority</b>	1- Currently Critical (Immediately)	<b>Status</b>	Open
<b>Inspector Name</b>	The Westlund Group	<b>Actual Cost</b>	0
<b>Action Date</b>	08/16/2006	<b>Total Estimated Cost:</b>	3,894
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Entire Facility	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

The telephone system should be updated to the new District standard of CISCO VOIP. The telephone system should include port for paging/intercom system. The Paging/Intercom system should be modified to allow access from the new telephone system.

**PHOTOS**

**ACTION DESCRIPTION**

Install new CISCO telephone system. Add paging interface. Remove old telephone system.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Upgrades

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Communication and Security: Video/TV Distribution Upgrade		
<b>Linked System</b>	Communications and Security	<b>Inspection Date</b>	08/16/2006
<b>Prime System</b>	Television Systems	<b>Finish Date</b>	-
<b>Priority</b>	3- Necessary - Not Yet Critical (3-5 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	The Westlund Group	<b>Actual Cost</b>	0
<b>Action Date</b>	08/16/2009	<b>Total Estimated Cost:</b>	19,795
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Entire Facility	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Analog Broadcast TV Signals are required by the FCC to be turned off in the Spring of 2009.

**PHOTOS**

**ACTION DESCRIPTION**

Install new TV Distribution System capable of digital signals in all classrooms and administrative areas as required.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Upgrades

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Communications and Security: Sound System Upgrades		
<b>Linked System</b>	Communications and Security	<b>Inspection Date</b>	08/15/2006
<b>Prime System</b>	Classroom Sound Systems	<b>Finish Date</b>	-
<b>Priority</b>	2- Potentially Critical (1-2 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	The Westlund Group	<b>Actual Cost</b>	0
<b>Action Date</b>	08/15/2007	<b>Total Estimated Cost:</b>	183,018
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Entire Facility	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Currently there is audio enhancement systems in the K, 1st and 2nd grade classrooms. The Gymnasium/Cafeteria sound system is minimal and inadequate.

**PHOTOS**

**ACTION DESCRIPTION**

Add audio enhancement systems to remaining classrooms.  
 Replace Gymnasium/Cafeteria sound system.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Upgrades

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Controls and Instrumentation: BAS and Controls Upgrade		
<b>Linked System</b>	Controls and Instrumentation	<b>Inspection Date</b>	08/09/2006
<b>Prime System</b>	Building Automation Systems	<b>Finish Date</b>	-
<b>Priority</b>	2- Potentially Critical (1-2 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Schmidt, Brian	<b>Actual Cost</b>	0
<b>Action Date</b>	08/09/2007	<b>Total Estimated Cost:</b>	118,000
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Entire building	<b>Annual Energy/Ops Savings \$</b>	981
<b>Savings Description</b>	Energy saving through optimization and repairs of existing control system.		

**REQUIREMENT DESCRIPTION**

Upgrade existing, outdated BAS to new Web-based BAS and tie to new District-wide BAS network. This will allow for central monitoring and control of all buildings from the Facilities Management building.

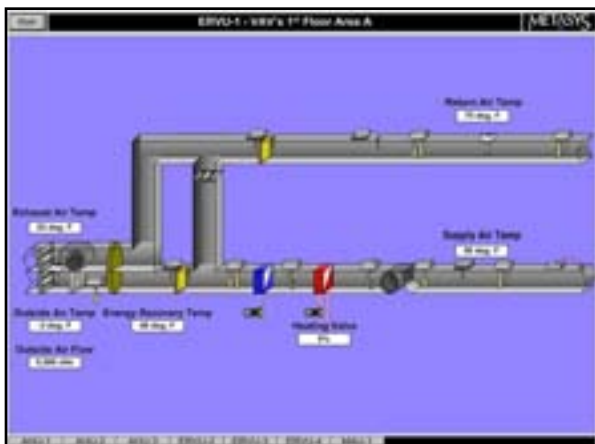
Upgrade existing pneumatic controls (old technology) to new Direct Digital controls.

Upgrade/replace existing temperature control valves, dampers, and actuators. The majority are beyond rated life and many are disconnected and not functioning, thus not operating as energy efficiently as possible.

Replace existing temperature control air compressor and air dryer with new and repair control air line leaks. This will improve the energy efficiency of the existing control system.

The existing controls shall be recommissioned to verify proper sequence of operation and optimize energy efficiency. Additional control and monitoring points shall also be added to the BAS system to optimize HVAC system performance.

**PHOTOS**



BAS Graphic

-

**ACTION DESCRIPTION**

Replace existing BAS headend to Web-based headend to tie District wide BAS. Replace existing DDC and pneumatic controls with new JCI DDC controls to allow integration to District wide BAS.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Upgrades

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Emergency Power Distribution: Generator Backup		
<b>Linked System</b>	Emergency Light and Power Systems	<b>Inspection Date</b>	09/19/2006
<b>Prime System</b>	Emergency Light and Power Systems	<b>Finish Date</b>	-
<b>Priority</b>	2- Potentially Critical (1-2 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Crotteau, Paul	<b>Actual Cost</b>	0
<b>Action Date</b>	09/19/2007	<b>Total Estimated Cost:</b>	54,457
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Exterior near Electrical Room	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

School currently has no backup power system to be used during a power failure. To keep students in school during power outage sufficient lighting must be maintained along with necessary life safety systems.

**PHOTOS**



Emergency Power Distribution: Generator Backup

**ACTION DESCRIPTION**

Install transfer switch and generator to feed distribution system during a power outage. Generator will be sized to handle the full building demand.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Upgrades

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Equipment and Furnishings: Visual Systems (Smart Boards)		
<b>Linked System</b>	Equipment and Furnishings	<b>Inspection Date</b>	08/15/2006
<b>Prime System</b>	Audio-visual Equipment	<b>Finish Date</b>	-
<b>Priority</b>	5- Recommendations/ Improvements	<b>Status</b>	Open
<b>Inspector Name</b>	The Westlund Group	<b>Actual Cost</b>	0
<b>Action Date</b>	-	<b>Total Estimated Cost:</b>	142,780
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Entire Facility	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Site has no Smart Boards installed. Three Smart Boards are on order.

**PHOTOS**

**ACTION DESCRIPTION**

Install additional Smart Boards.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Upgrades

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	Fittings: Chalkboard	<b>Inspection Date</b>	08/09/2006
<b>Linked System</b>	Fittings	<b>Finish Date</b>	-
<b>Prime System</b>	Fittings	<b>Status</b>	Open
<b>Priority</b>	5- Recommendations/ Improvements	<b>Actual Cost</b>	0
<b>Inspector Name</b>	Siddens, Lance	<b>Total Estimated Cost:</b>	2,054
<b>Action Date</b>	-	<b>Funding Type</b>	-
<b>Funding Year</b>	-	<b>Annual Energy/Ops Savings \$</b>	-
<b>Requirement Location</b>	Rooms 110, 121, 127		
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

Existing Chalkboard does not meet district standardization/ modernization plan to replace with markerboard.

**PHOTOS**



Fittings: Chalkboard

-

**ACTION DESCRIPTION**

Replace existing chalkboard with markerboard approximately 112 S. F.

**District:** Duluth Public Schools  
**Facility:** Rockridge Elementary School  
**Category:** Upgrades

**Asset Name:** Rockridge Elementary School  
**Asset Number:** 560

<b>Requirement Name</b>	HVAC: Add Propylene Glycol to Heating System		
<b>Linked System</b>	Hot Water Distribution	<b>Inspection Date</b>	07/12/2006
<b>Prime System</b>	Hot Water Distribution	<b>Finish Date</b>	-
<b>Priority</b>	2- Potentially Critical (1-2 Yrs)	<b>Status</b>	Open
<b>Inspector Name</b>	Schumacher, Russ	<b>Actual Cost</b>	0
<b>Action Date</b>	07/12/2007	<b>Total Estimated Cost:</b>	23,600
<b>Funding Year</b>	-	<b>Funding Type</b>	-
<b>Requirement Location</b>	Building Wide	<b>Annual Energy/Ops Savings \$</b>	-
<b>Savings Description</b>	-		

**REQUIREMENT DESCRIPTION**

The heating system currently serving the air handling units does not contain glycol, which creates the opportunity for heating coil freeze up.

A separate pump has been added to the 1992 air handling unit to reduce the chance of freeze up, but this adds an un-necessary piece of equipment to the system if glycol is present.

**PHOTOS**

**ACTION DESCRIPTION**

Add Propylene Glycol into the entire heating system to prevent coil freeze up.

Remove pump on 1992 air handling unit.