

Requirement Detail

by Asset Name and Category

MORGAN PARK

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park - Parking
Asset Number: 225a

Requirement Name	Vehicular Paving: Asphalt Parking Lots		
Linked System	Parking Lots	Inspection Date	08/01/2006
Prime System	Paving and Surfacing	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2009	Total Estimated Cost:	59,000
Funding Year	-	Funding Type	-
Requirement Location	Asphalt Parking Lots	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Pavement is very weathered and will need overlay in 3-5 years.

PHOTOS

ACTION DESCRIPTION

Overlay all asphalt parking lots at site in 3-5 years.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park - Parking
Asset Number: 225a

Requirement Name	Vehicular Paving: Asphalt Parking Lots		
Linked System	Parking Lots	Inspection Date	08/01/2006
Prime System	Paving and Surfacing	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2007	Total Estimated Cost:	29,500
Funding Year	-	Funding Type	-
Requirement Location	Asphalt Lots	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Several damaged areas of asphalt pavement present.

PHOTOS

ACTION DESCRIPTION

Repair damaged pavement areas present in asphalt parking lots.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Life Safety

Asset Name: Morgan Park - Sidewalks
Asset Number: 225b

Requirement Name	Pedestrian Paving: Concrete Sidewalks		
Linked System	Pedestrian Paving	Inspection Date	08/01/2006
Prime System	Paving and Surfacing	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2007	Total Estimated Cost:	23,600
Funding Year	-	Funding Type	-
Requirement	Concrete Sidewalks	Annual Energy/Ops	-
Location		Savings \$	
Savings Description	-		

REQUIREMENT DESCRIPTION

Several areas of concrete sidewalk throughout site have settled, heaved, or cracked. New ADA ramp needed at NE door.

PHOTOS

ACTION DESCRIPTION

Replace several areas of damaged concrete sidewalk at site. Install new disability ramp at northeast entrance.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Beyond Rated Life

Asset Name: Morgan Park - Site
Asset Number: 225e

Requirement Name	Site: Perimeter Fencing	Inspection Date	08/01/2006
Linked System	Site Improvements	Finish Date	-
Prime System	Site Improvements	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	70,800
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Perimeter Fencing West and South of Athletic Track		
Savings Description	-		

REQUIREMENT DESCRIPTION

Ten-foot high perimeter fencing west and south of athletic track is leaning in portions and is very old and rusted.

PHOTOS

ACTION DESCRIPTION

Replace the 10' high chain link perimeter fencing around athletic track.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park - Site
Asset Number: 225e

Requirement Name	Site: Athletic Track	Inspection Date	08/01/2006
Linked System	Site Improvements	Finish Date	-
Prime System	Site Improvements	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	70,800
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Athletic Track		
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing surfacing is showing signs of wear and thinning.

PHOTOS

ACTION DESCRIPTION

Repair damaged or delaminated areas on track surface and apply structural spray over entire track and field events.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park - Site
Asset Number: 225e

Requirement Name	Site: Goal Post on Football Field	Inspection Date	08/01/2006
Linked System	Site Improvements	Finish Date	-
Prime System	Site Improvements	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	5,900
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Football Field		
Savings Description	-		

REQUIREMENT DESCRIPTION

Goal post is leaning and bent.

PHOTOS

ACTION DESCRIPTION

Repair/reinstall leaning goal post.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park - Site
Asset Number: 225e

Requirement Name	Site: Outdoor Basketball Court		
Linked System	Site Improvements	Inspection Date	08/01/2006
Prime System	Site Improvements	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Inspecc	Actual Cost	0
Action Date	08/01/2009	Total Estimated Cost:	7,080
Funding Year	-	Funding Type	-
Requirement Location	Outdoor Basketball Court	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Court is in good condition currently, but due to its small size it should be overlaid at the same time as parking lots.

PHOTOS

ACTION DESCRIPTION

Overlay outdoor basketball court at same time as parking lots at site.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Accessibility

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Aquatic Facilities: Code Items	Inspection Date	10/08/2006
Linked System	Aquatic Facilities	Finish Date	-
Prime System	Aquatic Facilities	Status	Open
Priority	1- Currently Critical (Immediately)	Actual Cost	0
Inspector Name	USAquatics	Total Estimated Cost:	24,792
Action Date	10/08/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Pool walls		
Savings Description	-		

REQUIREMENT DESCRIPTION

The accent at the transition must be extended up the side walls.

The cast iron strainer has reached the end of its life and is in need of replacement. There is no strainer on the transfer pump. The required flow rate is 484 gpm. The pool was not operating at the time of the inspection to verify the actual flow rate. Per the operator it generally fluctuates around 400 gpm. The type of flow meter installed has a tendency to clog and has poor accuracy. The mercury manometer should be removed from the facility for safety reasons. (NO DIVING) tiles or wording are required.

PHOTOS



Aquatic Facilities: Code Items

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ACTION DESCRIPTION

Add the required accent stripe up side walls. Replace pump and strainer. Install thermometer. Install new flow meter. The mercury manometer should be removed from the facility for safety reasons. Install required NO DIVING tile.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Accessibility

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Equipment and Furnishings: Accessibility		
Linked System	Equipment and Furnishings	Inspection Date	11/12/2006
Prime System	Equipment and Furnishings	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	JQP Inc.	Actual Cost	0
Action Date	11/12/2009	Total Estimated Cost:	73,181
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

This requirement includes accessibility issues related to high public use areas of the school, including auditoriums, stadiums, gymnasiums, ticket counters, and the main office. Items include: providing wheelchair viewing positions, providing access to the stage, providing an assistive listening system and lowering counters.

It also includes accessibility issues found in Specialty Areas (science labs, cooking labs, industrial arts areas, as well as the media center/library). Items include: providing accessible work stations in kitchens, providing accessible labs and lowering eyewashes.

PHOTOS



Equipment and Furnishings: Accessibility

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ACTION DESCRIPTION

Correct accessibility issues as required.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Accessibility

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Interior Construction: Accessibility		
Linked System	Interior Construction	Inspection Date	11/12/2006
Prime System	Interior Construction	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	JQP Inc.	Actual Cost	0
Action Date	11/12/2009	Total Estimated Cost:	44,781
Funding Year	-	Funding Type	-
Requirement Location	Interior	Annual Energy/Ops Savings \$	-
Savings Description	-		

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: Morgan Park Middle School
Category: Accessibility

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Interior Doors: Replace Knob Hardware with Lever Hardware		
Linked System	Interior Doors	Inspection Date	08/21/2006
Prime System	Interior Doors	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	08/21/2009	Total Estimated Cost:	62,216
Funding Year	-	Funding Type	-
Requirement Location	All floors	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Approximately 85% of the interior door hardware is not lever type.

PHOTOS

ACTION DESCRIPTION

Replace existing cylindrical style locksets with lever type locksets on most interior doors. Approximately 85% of all doors interior. 190 doors.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Accessibility

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Plumbing: Accessibility	Inspection Date	11/12/2006
Linked System	Plumbing	Finish Date	-
Prime System	Plumbing	Status	Open
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Actual Cost	0
Inspector Name	JQP Inc.	Total Estimated Cost:	39,329
Action Date	11/12/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Plumbing throughout		
Savings Description	-		

REQUIREMENT DESCRIPTION

This requirement includes accessibility issues in toilet rooms, locker/shower rooms and drinking fountains. All requirements for upgrading a toilet or locker/shower room are included in this category, even if they are not plumbing (i.e. relocating stall partitions to provide 60 in. wide stall, relocating toilet paper dispenser or grab bars, etc.). Items include: replacing drinking fountains, raising/lowering toilets, installing grab bars, relocating toilet paper or towel dispensers, adding handheld shower wands, and providing 60 in. wide fully compliant toilet stalls.

Note: the actual cost to complete work in toilet rooms may be increased by a decision to do work beyond what is required for accessibility, such as re-tiling, replacing all fixtures, replacing all stall partitions, etc.

PHOTOS



Plumbing: Accessibility

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ACTION DESCRIPTION

Upgrades as needed to meet plumbing accessibility requirements.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Accessibility

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Site Improvements: Accessibility		
Linked System	Site Improvements	Inspection Date	11/12/2006
Prime System	Site Improvements	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	JQP Inc.	Actual Cost	0
Action Date	11/12/2009	Total Estimated Cost:	9,886
Funding Year	-	Funding Type	-
Requirement Location	Exterior	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

This requirement includes accessibility issues from the moment you are on school grounds until you get to the front door. Items include: adding and identifying accessible parking and adding or modifying accessible routes (sidewalks).

PHOTOS



Site Improvements: Accessibility

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ACTION DESCRIPTION

Correct exterior accessibility issues as required.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Air and Water Quality

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	HVAC - Add Ventilation and Replace Wood Shop Dust Collector and Upgrade Shop Hood Exhaust		
Linked System	Air Distribution Systems	Inspection Date	07/25/2006
Prime System	Air Distribution Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/25/2009	Total Estimated Cost:	227,150
Funding Year	-	Funding Type	-
Requirement Location	Wood Working and Sheet Metal - 1916 Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The dust collector for the wood shop is 30 years old and is beyond it's recommended useful life.

The exhaust duct is located above grade and is need of repair and many of the pieces of shop equipment do not have dust collection ductwork.

In addition, make up air is not being supplied to the wood shop as required by the 2000 International Mechanical Code.

The soldering area in the metal shop need the addition of exhaust hoods. Make up air is not being supplied as required by the International Mechanical Code.

PHOTOS



HVAC - Add Ventilation and Replace Wood Shop Dust Collector and Upgrade Weld Hood Exhaust

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ACTION DESCRIPTION

Replace the wood shop dust exhaust system with a new re-circulating dust collector and pipe the exhaust duct overhead.

All Costs in USD.

Install new capture type solder exhaust stations and install new exhaust fans.

Install a new air handling unit for the wood shop and an new air handling unit for the sheet metal area.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Air and Water Quality

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	HVAC - Dehumidification Chiller and Piping Mains		
Linked System	Chilled Water Distribution	Inspection Date	06/28/2006
Prime System	Chilled Water Distribution	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	491,116
Funding Year	-	Funding Type	-
Requirement Location	All Floors - Entire Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Morgan Park Middle School has no means of dehumidification, other than the office and boys club area. Without de-humidification capabilities, these spaces cannot meet ASHRAE 55-1992 space design conditions.

PHOTOS



HVAC - Dehumidification Chiller and Piping Mains

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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: Morgan Park Middle School
Category: Air and Water Quality

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	HVAC: Pool Unit Replacement along with an Automatic Pool Cover		
Linked System	Aquatic Facilities	Inspection Date	07/18/2006
Prime System	Aquatic Facilities	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/18/2007	Total Estimated Cost:	354,000
Funding Year	-	Funding Type	-
Requirement Location	1976 Building	Annual Energy/Ops Savings \$	5,818
Savings Description	Pool cover saving heat and evaporation losses from pool. The pool area also required less ventilation when the pool is covered which results in additional savings. A sensible heat exchanger recovers heat from exhaust to preheat air during the winter. Additional energy will be consumed during the cooling season when mechanical dehumidification is required.		

REQUIREMENT DESCRIPTION

Install an automatic pool cover to save energy when the pool is not occupied during the nights or parts of weekends. Replace pool unit with a new dehumidification unit that recovers exhaust heat and has VFD controls to reduce ventilation rates based on space humidity and temperature levels when the pool is covered.

PHOTOS



HVAC: Pool Unit Replacement along with an Automatic Pool Cover

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ACTION DESCRIPTION

Replace the pool air handling unit with a pool dehumidification unit. This will help maintain acceptable temperature and humidity.

All Costs in USD.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Air and Water Quality

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	HVAC: Replace Classroom Unit Ventilators and Home Economics Unit		
Linked System	Air Distribution Systems	Inspection Date	07/12/2006
Prime System	Air Distribution Systems	Finish Date	-
Priority	6- Does Not Meet Current Codes/Standards	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	725,700
Funding Year	-	Funding Type	-
Requirement Location	1939 and 1966 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The nine (9) classroom unit ventilators are not capable of meeting current ASHRAE indoor air quality standards.

In addition classrooms and offices have had walls added and some of the spaces have no means of ventilation. This does not meet 2000 International Mechanical Code.

PHOTOS



HVAC: Replace Classroom Unit Ventilators and Home Economics Unit

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ACTION DESCRIPTION

Remove existing classroom unit ventilators, patch wall to match existing. Replace with modern ventilation system with energy recovery with dehumidification, duct distribution system, and variable air volume boxes with hot water reheat coils and hot water finned tube radiation on exterior walls. Upgrade the controls systems to DDC and commission the new system.

Replace Home Economics Unit with new double wall AHU with dehumidification capabilities.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Air and Water Quality

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	HVAC: Replace Ventilation in the Gym/Auditorium/Locker Room/Cafeteria Areas.		
Linked System	Air Distribution Systems	Inspection Date	07/11/2006
Prime System	Air Distribution Systems	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/11/2007	Total Estimated Cost:	531,000
Funding Year	-	Funding Type	-
Requirement Location	Gymnasium/Auditorium/Cafeteria in 1916 and 1939 Building	Annual Energy/Ops Savings \$	4,265
Savings Description	Energy savings will be generated by reducing the fan cfm and OA ventilation during part load operation utilizing variable speed drives and CO2 controls as well as recovering heat from the locker room exhaust. Additional energy will be consumed during the cooling season to provide dehumidification.		

REQUIREMENT DESCRIPTION

The two (2) air handling systems serving the gym/auditorium/cafeteria are 67 and 90 years old and has exceed it's recommended service life. As part of the upgrade the air handling units will come with variable speed drive and CO2 controls to reduce ventilation rates during part load operation as well as a heat recovery unit for the locker room unit.

PHOTOS



HVAC: Replace Ventilation in the Gym/Auditorium/Cafeteria Areas

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ACTION DESCRIPTION

Addition of three air handling units. One AHU to serve the Gym, one to serve the Auditorium, and one to serve the Cafeteria. Upgrade Controls System. Test and Balance and Commissioning of air handling units.

All Costs in USD.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Air and Water Quality

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	HVAC: Upgrade Ventilation and Add Dehumidification 1983 Music Addition		
Linked System	Air Distribution Systems	Inspection Date	06/28/2006
Prime System	Air Distribution Systems	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	215,114
Funding Year	-	Funding Type	-
Requirement Location	Music Wing Addition - 1983 Addition	Annual Energy/Ops Savings \$	349
Savings Description	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 three air handling systems serving the 1983 addition have no means of dehumidification. Without de-humidification capabilities, these spaces cannot meet ASHRAE 55-1992 space design conditions. As part of this upgrade, the new mechanical system will incorporate heat recovery and classroom occupancy / CO2 controls to save energy.

These units also have duct board supply ductwork. This ductwork is not rigid and exposes fiberglass to the air stream, which does not lend itself to optimal indoor air quality.

The supply fans are axial inline and are noisy and have had multiple bearing failures.

PHOTOS



HVAC: Upgrade Ventilation and Add Dehumidification 1983 Music Addition

All Costs in USD.

ACTION DESCRIPTION

Replacement of the air handling units with air handling units with dehumidification coils. Replacement of ductboard supply duct with rigid supply duct. Installation of external duct insulation where not exposed, new acoustical ceiling tile, lighting removal and reinstallation or new lights where required. Upgrade Controls System to DDC. Test and Balance and Commissioning of entire system.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Air and Water Quality

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Plumbing: Replace Galvanized Domestic Water Piping		
Linked System	Domestic Water Distribution	Inspection Date	06/28/2006
Prime System	Domestic Water Distribution	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	06/28/2007	Total Estimated Cost:	384,208
Funding Year	-	Funding Type	-
Requirement Location	Building Wide - Except for 1983 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The 30-90 year old domestic water distribution piping consists of galvanized piping which is connected together via lead based solder. Current flushing procedures have maintained lead levels at an acceptable level. As the piping continues to age, this may not be possible.

PHOTOS



Plumbing: Replace Galvanized Domestic Water Piping

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ACTION DESCRIPTION

Remove all the remaining galvanized domestic water distribution piping as well as faucets and fixtures containing lead solder. Install insulated copper piping and fixtures/faucets where required. Wall cutting and patching would be required.

This includes the bradley shower stations in the locker rooms.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Appearance

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Ceiling Finishes: Paint	Inspection Date	08/21/2006
Linked System	Ceiling Finishes	Finish Date	-
Prime System	Ceiling Finishes	Status	Open
Priority	4- Mid Term Needs (6-10 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	28,947
Action Date	08/21/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Upper Auditorium		
Savings Description	-		

REQUIREMENT DESCRIPTION

Ceiling will eventually require routine, periodic paint recoating for appearance reasons.

PHOTOS

ACTION DESCRIPTION

Paint auditorium ceiling. Approximately 3500 S. F.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Appearance

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Equipment and Furnishings: Refinish Balcony Seats		
Linked System	Equipment and Furnishings	Inspection Date	08/21/2006
Prime System	Equipment and Furnishings	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	-	Total Estimated Cost:	3,929
Funding Year	-	Funding Type	-
Requirement Location	Gymnasium Balcony	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Balcony and wood seating are worn and unsightly.

PHOTOS



Equipment and Furnishings: Refinish Balcony Seats

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ACTION DESCRIPTION

Strip and repaint existing 2x strip wood seating. Approximately 600 L.F.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Appearance

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Site Improvements: General Landscaping		
Linked System	Site Improvements	Inspection Date	10/03/2006
Prime System	Site Improvements	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Northern Lights Landscaping	Actual Cost	0
Action Date	10/03/2007	Total Estimated Cost:	12,528
Funding Year	-	Funding Type	-
Requirement Location	Property around facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

There are areas around the facility (lawn, trees, shrubs and perennials) that require care to improve appearance. There are negative slope areas around the facility bringing drainage towards the facility instead of away from the facility. There are lawn areas around the immediate building requiring restoration.

PHOTOS

ACTION DESCRIPTION

Pruning, cultivating and mulching of existing trees, shrubs and perennials. Correct negative slope around foundations by installing soil and sod. Restore lawn at stressed and/or non existing lawn areas around immediate building by installing soil and sod.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Appearance

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Wall Finishes: Paint Interior	Inspection Date	08/21/2006
Linked System	Wall Finishes	Finish Date	-
Prime System	Wall Finishes	Status	Open
Priority	4- Mid Term Needs (6-10 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	251,020
Action Date	08/21/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Entire Building		
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing wall and ceiling surfaces will require painting.

PHOTOS



Wall Finishes: Paint Interior

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ACTION DESCRIPTION

Paint existing wall and ceiling surfaces.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Asbestos

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Hazardous Components: Abatement	Inspection Date	07/01/2006
Linked System	Hazardous Components Abatement	Finish Date	-
Prime System	Hazardous Components Abatement	Status	Open
Priority	1- Currently Critical (Immediately)	Actual Cost	0
Inspector Name	Wormuth, Kevin	Total Estimated Cost:	35,825
Action Date	07/01/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Entire Facility		
Savings Description	-		

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: Morgan Park Middle School
Category: Beyond Rated Life

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Aquatic Facilities: Filtration System	Inspection Date	10/08/2006
Linked System	Aquatic Facilities	Finish Date	-
Prime System	Aquatic Facilities	Status	Open
Priority	5- Recommendations/ Improvements	Actual Cost	0
Inspector Name	USAquatics	Total Estimated Cost:	54,516
Action Date	-	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Pool		
Savings Description	-		

REQUIREMENT DESCRIPTION

The existing filtration system is a diatomaceous earth (DE) filter. The DE filter is a waste media filter since you must continuously buy DE. Depending on the bather load, the filters are backwashed weekly. DE has been found to be a carcinogen by several testing agencies. Its handling characteristics are similar to asbestos. When wetted it can be handled safely, when it is a dry dust it can be inhaled into the lungs. There has been a trend nationally away from DE filters because of operational costs and health concerns. The filter is being backwashed down the sewer. In many jurisdictions, DE is considered a hazardous waste and must be separated from the water during the backwash process with the DE material being sent to the proper disposal sites. The DE system used requires dual pumps and a governor valve. Flooding is always a possibility and two pumps require twice the power of a single pump system.

PHOTOS



Aquatic Facilities: Filtration System

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ACTION DESCRIPTION

Install a high rate pressure sand filter system with backwash retention capability. Pressure sand filters are a permanent media filter, which are more efficient to operate than other types of filters. Backwashing the filters take approximately 10 minutes per filter as compared to several hours for the DE filter. When proper sizing methods are used and the correct type of filter is specified, filtration effectiveness comparable to DE can be achieved without the associated dangers. The filters are also non-metallic, so rusting will not be an issue. Since backwashing is a process of reversing flow in the filter, the only

All Costs in USD.

elements going to waste are pool water and organics.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Beyond Rated Life

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	HVAC: Heating System Conversion - Steam to Hot Water		
Linked System	Steam Distribution Systems	Inspection Date	06/28/2006
Prime System	Steam Distribution Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	06/28/2009	Total Estimated Cost:	550,116
Funding Year	-	Funding Type	-
Requirement Location	All Floors - Entire Building Except for 1966 and 1983 Additions	Annual Energy/Ops Savings \$	12,544
Savings Description	Energy savings generated from converting from a steam system with old boilers to a how water system that includes condensing style boiler(s).		

REQUIREMENT DESCRIPTION

The steam system (30 - 90 years old) has exceeded the recommended useful life. Most of the steam system is a one pipe system which is difficult to control/maintain/service. A steam system requires substantially more maintenance than a modern hot water heating system due to steam traps, condensate pumps, and chemical treatment.

PHOTOS



HVAC: Heating System Conversion - Steam to Hot Water

-

ACTION DESCRIPTION

Install new high efficiency hot water condensing boilers and hot water piping system. Retrofit the small steam boiler to hot water and utilize for interruptible fuel rates. Replace all steam terminal heating devices and coils with hot water devices and coils.

Interconnect both boiler plants.

Budgeted costs of \$150,000 are avoided by converting the steam system to hot water.

All Costs in USD.

This is due to the terminal steam devices requiring custom covers to be installed to eliminate the burn hazard.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Beyond Rated Life

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	HVAC: Replace Ventilation All Floors 1916 Building Classrooms		
Linked System	Air Distribution Systems	Inspection Date	06/28/2006
Prime System	Air Distribution Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	06/28/2009	Total Estimated Cost:	2,382,538
Funding Year	-	Funding Type	-
Requirement Location	All Floors - 1916 Building Classrooms	Annual Energy/Ops Savings \$	1,048
Savings Description	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 90 year old ventilation system has exceeded the recommended useful life expectancy and currently poorly distributes ventilation air. As part of this upgrade, the new mechanical system will incorporated heat recovery and classroom occupancy / CO2 controls to save energy.

PHOTOS



HVAC: Replace Ventilation All Floors 1916 Building Classrooms

-

ACTION DESCRIPTION

Replacement of the Existing Ventilation System with a Modern Ventilation System consisting of Air Handling Units with Energy Recovery, Duct Distribution System, and Variable Air Volume Boxes with Hot Water Reheat Coils and Hot Water
All Costs in USD.

Finned Tube Radiation.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Beyond Rated Life

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Lighting Equipment: Occupancy Sensors		
Linked System	Lighting Equipment	Inspection Date	09/19/2006
Prime System	Lighting Equipment	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Ruud, Mark	Actual Cost	0
Action Date	09/19/2012	Total Estimated Cost:	11,796
Funding Year	-	Funding Type	-
Requirement	Classrooms	Annual Energy/Ops	-
Location		Savings \$	
Savings Description	-		

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: Morgan Park Middle School
Category: Beyond Rated Life

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Plumbing - Sump Pump Replacement		
Linked System	Plumbing	Inspection Date	07/18/2006
Prime System	Plumbing	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/18/2012	Total Estimated Cost:	23,600
Funding Year	-	Funding Type	-
Requirement Location	Mechanical Rooms - 1976 and 1939 Buildings	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The sump pumps in the mechanical rooms are 30 - 67 years old and beyond it's recommended service life.

PHOTOS



Plumbing - Sump Pump Replacement

-

ACTION DESCRIPTION

Replace the existing vertical sump pumps with a new vertical duplex set of sump pumps with new duplex control panel.

Two sets of duplex pumps.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Beyond Rated Life

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Plumbing: Replace Domestic Water Heat Exchanger		
Linked System	Plumbing	Inspection Date	07/12/2006
Prime System	Plumbing	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/12/2012	Total Estimated Cost:	35,046
Funding Year	-	Funding Type	-
Requirement Location	Boiler Room - 1916 Building	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Replace existing steam/electric to domestic heat exchanger. This will allow for continued interruptible natural gas rate.

PHOTOS



Plumbing: Replace Domestic Water Heat Exchanger

-

ACTION DESCRIPTION

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

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Beyond Rated Life

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Plumbing: Replace Underground Sanitary Sewer Lines		
Linked System	Plumbing	Inspection Date	11/29/2006
Prime System	Plumbing	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	206,500
Funding Year	-	Funding Type	-
Requirement Location	All Building Areas 35 Years or Older	Annual Energy/Ops Savings \$	-
Savings Description	-		

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: Morgan Park Middle School
Category: Beyond Rated Life

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Roof System: Replace Roof	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	2- Potentially Critical (1-2 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	106,058
Action Date	08/01/2007	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	163
Requirement Location	1939 Gym		
Savings Description	Energy savings generated from improved roof insulation.		

REQUIREMENT DESCRIPTION

Roof system beyond rated life. Includes roof Area 7.

PHOTOS



Roof System: Replace Roof

-

ACTION DESCRIPTION

Replace EPDM roof system. Sequence work with roof-level wall restoration.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Beyond Rated Life

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Roof System: Replace Roof	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Actual Cost	0
Inspector Name	Inspe	Total Estimated Cost:	31,176
Action Date	08/01/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Relocatable		
Savings Description	-		

REQUIREMENT DESCRIPTION

Roof system beyond rated service life.

PHOTOS



Roof System: Replace Roof

-

ACTION DESCRIPTION

Replace shingle and EPDM roof systems.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Beyond Rated Life

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Roof System: Replace Roof	Inspection Date	08/01/2006
Linked System	Roofing	Finish Date	-
Prime System	Roofing	Status	Open
Priority	4- Mid Term Needs (6-10 Yrs)	Actual Cost	0
Inspector Name	Inspec	Total Estimated Cost:	409,394
Action Date	08/01/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	628
Requirement Location	Multiple Locations		
Savings Description	Energy savings generated from improved roof insulation.		

REQUIREMENT DESCRIPTION

Roofing system beyond rated service life. Includes roof Areas 1-5 and 8-11.

PHOTOS



Roof System: Replace Roof

ACTION DESCRIPTION

Replace the BUR and EPDM roof systems. Sequence work with roof-level wall restoration.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Building Code

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Ceiling Finishes: Replace Ceiling with Sanitary, Washable Tile		
Linked System	Ceiling Finishes	Inspection Date	08/21/2006
Prime System	Ceiling Finishes	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	08/21/2009	Total Estimated Cost:	3,536
Funding Year	-	Funding Type	-
Requirement Location	Kitchen	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing 12x12 adhesive applied ceiling tile is acoustic, old and not sanitary and easily scrubbable. Replace ceiling.

PHOTOS



Ceiling Finishes: Replace Ceiling with Sanitary, Washable Tile

ACTION DESCRIPTION

Replace 12x12 adhesive applied acoustic tile with suspended 2x2 washable tile. Approximately 450 S.F.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Building Code

Asset Name: Morgan Park Middle School
Asset Number: 225

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

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: Morgan Park Middle School
Category: Building Code

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	HVAC: Replace Kitchen Grease Exhaust Hood / Add Kitchen Make Up Air		
Linked System	Exhaust Ventilation Systems	Inspection Date	07/12/2006
Prime System	Exhaust Ventilation Systems	Finish Date	-
Priority	6- Does Not Meet Current Codes/Standards	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	120,950
Funding Year	-	Funding Type	-
Requirement Location	Kitchen - 1939 Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The existing grease exhaust hood has been written up as a non compliant hood by the State Fire Marshall. 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: Morgan Park Middle School
Category: Capacity

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Electrical Distribution: Insufficient Capacity		
Linked System	Electrical Service and Distribution	Inspection Date	09/13/2006
Prime System	Electrical Service and Distribution	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/13/2009	Total Estimated Cost:	16,520
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

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

PHOTOS



Electrical Distribution: Insufficient Capacity

-

ACTION DESCRIPTION

Provide two new 100 amp feeders and panels to help carry the extra load of additional receptacles throughout the building.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Capacity

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	HVAC: Add Cooling Capability to Computer Lab and IT Data Rooms		
Linked System	Cooling Generating Systems	Inspection Date	07/11/2006
Prime System	Cooling Generating Systems	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/11/2007	Total Estimated Cost:	169,566
Funding Year	-	Funding Type	-
Requirement Location	IT Data Rooms Located in Storage Room 224 - 1916 Building and Room 1983 Mechanical Room	Annual Energy/Ops Savings \$	-
Savings Description	-		

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 Rooms

-

ACTION DESCRIPTION

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

This would be done for both IT rooms.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Capacity

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Wiring Devices: Insufficient Receptacles		
Linked System	Branch Wiring Devices	Inspection Date	09/13/2006
Prime System	Branch Wiring Devices	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/13/2009	Total Estimated Cost:	76,700
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

In general, classrooms have an insufficient number of receptacles. Computers and other electronics are plugged into power strips due to the lack of receptacles. This limits future addition of electronic devices and presents a fire hazard.

PHOTOS



Wiring Devices: Insufficient Receptacles

-

ACTION DESCRIPTION

Provide six additional 20 amp receptacle per classroom and associated branch wiring. Upgrade will first require additional branch panel boards.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Aquatic Facilities: Deferred Maintenance Items		
Linked System	Aquatic Facilities	Inspection Date	10/08/2006
Prime System	Aquatic Facilities	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	USAquatics	Actual Cost	0
Action Date	10/08/2007	Total Estimated Cost:	101,456
Funding Year	-	Funding Type	-
Requirement	Pool	Annual Energy/Ops	-
Location		Savings \$	
Savings Description	-		

REQUIREMENT DESCRIPTION

The main drains are cast iron and over time the piping either corrodes or scales shut. Long term maintenance should include replacement of the main drains. Similar to the cast iron main drains, the cast iron gutter drop-outs either corrode or scale shut. Long term maintenance should include replacement of the drop outs. Like the main drains and gutter drop outs, the inlets are cast iron / galvanized pipe and either corrode or scale shut. Long term maintenance should include replacement of the inlets. The inlets require to be cleaned out in order to efficiently and evenly distribute filtered and disinfected water. The inlet grates (by Josam) are no longer made and the grates cannot be replaced. The inlet fittings should be replaced with a different model to facilitate easier repair and replacement in the future. The inlet piping surrounding the pool that feeds the inlets should be a complete loop in order to equalize the pressure in the pipe and evenly distribute filtered and disinfected water to the pool. Inlets are required to be adjustable. The pool tile must be re-grouted in order to preclude the delaminating of the tile from the pool shell. Some of the piping and valves are still the original cast iron which has a lot of scale build-up and corrosion present. Repiping would include the necessary valves, flowmeter and thermometer. Years of diatomaceous earth (DE) going down the drain clog the drain. Hard DE deposits build-up in the waste lines. The piping should be inspected.

PHOTOS



Morgan Pool2

-

ACTION DESCRIPTION

All Costs in USD.

Replace main drains and associated piping. Replace gutter drop-outs and connect to existing piping. Complete inlet pipe loop. Replace inlet fittings with adjustable eyeball fittings. Repipe inlets through pool wall. Re-grout pool. Replace equipment room piping and valves.

Ream out sanitary waste piping.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Ceiling Finishes: Replace Suspended Acoustical Tile		
Linked System	Ceiling Finishes	Inspection Date	08/21/2006
Prime System	Ceiling Finishes	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	08/21/2009	Total Estimated Cost:	2,292
Funding Year	-	Funding Type	-
Requirement Location	1976 Pool Addition Entry/ Ramp Area adjacent ante room and office	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Tile is missing and water damaged. Replace ceiling.

PHOTOS



Ceiling Finishes: Replace Suspended Acoustical Tile

ACTION DESCRIPTION

Replace missing and water damaged 2x2 suspended acoustical tile with new. Approximately 500 S.F.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Equipment and Furnishings: Replace Auditorium Seating		
Linked System	Equipment and Furnishings	Inspection Date	08/21/2006
Prime System	Equipment and Furnishings	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	-	Total Estimated Cost:	300,376
Funding Year	-	Funding Type	-
Requirement Location	Auditorium Main Floor/ Balcony	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Auditorium seating is noticeably dated. Replace all seats.

PHOTOS



Equipment and Furnishings: Replace Auditorium Seating

-



Equipment and Furnishings: Replace Auditorium Seating

-

ACTION DESCRIPTION

Replace balcony folding wood seating and main floor wood/cushion folding seating with new. Approximately 264 balcony seats and 382 main floor seats.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Exterior Walls: Roof-Level Wall Restoration		
Linked System	Exterior Walls	Inspection Date	08/01/2006
Prime System	Exterior Walls	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2007	Total Estimated Cost:	47,200
Funding Year	-	Funding Type	-
Requirement Location	1939 Gym Addition	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated roof-level walls at roof Area 7.

PHOTOS



Exterior Walls: Roof-Level Wall Restoration

-

ACTION DESCRIPTION

Tuck pointing, spot brick replacement, joint sealant replacement, and painting. Sequence work with reroofing Area 7.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Exterior Walls: Wall Restoration		
Linked System	Exterior Walls	Inspection Date	08/01/2006
Prime System	Exterior Walls	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Inspec	Actual Cost	0
Action Date	08/01/2009	Total Estimated Cost:	826,000
Funding Year	-	Funding Type	-
Requirement Location	Multiple Locations	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Deteriorated roof-level and grade-level walls and chimney.

PHOTOS



Exterior Walls: Wall Restoration

-

ACTION DESCRIPTION

Tuck point, spot brick replacement, rebuild sills and cover with sheet metal, through-wall flashing replacement, joint sealant replacement, new chimney cap, and misc. items. Sequence work with reroofing Areas 2 and 11.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

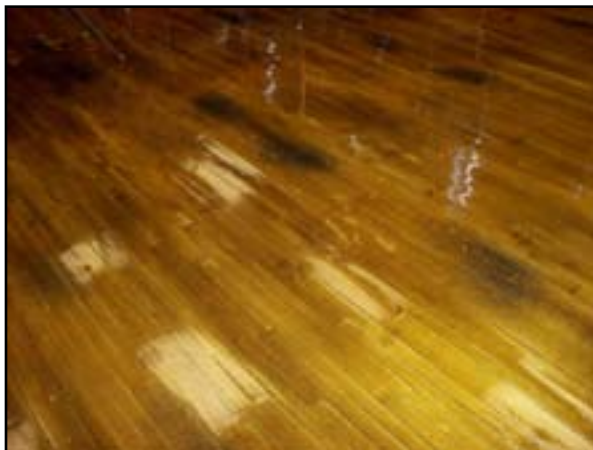
Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Floor Finishes: Refinish Hardwood Floors		
Linked System	Floor Finishes	Inspection Date	08/21/2006
Prime System	Floor Finishes	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	08/21/2012	Total Estimated Cost:	133,600
Funding Year	-	Funding Type	-
Requirement Location	1st Floor Rooms: 105, 110, 112, 126, 134, 136, 2nd Floor Rooms 205, 207, 209, 211, 212, Stage, Auditorium, 231, 229, 232, Gymnasium, 3rd Floor Rooms: 330, 331, 332, 334, 205, 312, 326, Upper Auditorium 307	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing hardwood floors require resurfacing and leveling.

PHOTOS



Floor Finishes: Refinish Hardwood Floors
-

ACTION DESCRIPTION

Sand and refinish hardwood floors. Approximately 25,500 S.F.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Floor Finishes: Replace Carpet	Inspection Date	08/21/2006
Linked System	Floor Finishes	Finish Date	-
Prime System	Floor Finishes	Status	Open
Priority	4- Mid Term Needs (6-10 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	143,030
Action Date	08/21/2012	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	1st Floor Rooms: 100, 102, 101, 103, 101 offices and practice rooms, 104, 106, 108, Administrative Offices, 128, 130 , 131, 132, 2nd Floor Rooms: 208, 210, 226, 230, Computer Lab, Library, 3rd Floor Rooms: 308, 310, 311, 327, 328, 329		
Savings Description	-		

REQUIREMENT DESCRIPTION

Carpeted areas are exhibiting deterioration and wear.

PHOTOS



Floor Finishes: Replace Carpet

-

ACTION DESCRIPTION

Replace carpet with new. Approximately 19500 S.F.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Floor Finishes: Replace Vinyl Tile	Inspection Date	08/21/2006
Linked System	Floor Finishes	Finish Date	-
Prime System	Floor Finishes	Status	Open
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	47,153
Action Date	08/21/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	1st Floor: Main Entry Vestibule Lobby and Corridor, Cafeteria, Dish Wash, Kitchen		
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing Vinyl Tile and linoleum areas are in deteriorated condition.

PHOTOS



Floor Finishes: Replace Vinyl Tile

-

ACTION DESCRIPTION

Replace existing vinyl tile/ poured or linoleum floor finishes with VCT. Approximately 4800 S.F.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park Middle School
Asset Number: 225

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

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: Morgan Park Middle School
Category: Deferred Maintenance

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Plumbing: Replace Lavatory Wash Fountains		
Linked System	Plumbing Fixtures	Inspection Date	07/11/2006
Prime System	Plumbing Fixtures	Finish Date	-
Priority	4- Mid Term Needs (6-10 Yrs)	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	07/11/2012	Total Estimated Cost:	17,700
Funding Year	-	Funding Type	-
Requirement Location	1976 Locker Rooms	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The two lavatory wash fountains are not vandal proof and will need to be replaced in the upcoming years.

PHOTOS



Plumbing: Replace Lavatory Wash Fountains

-

ACTION DESCRIPTION

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

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Energy and Operational Efficiency

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Aquatic Facilities: Operational Upgrades		
Linked System	Aquatic Facilities	Inspection Date	11/05/2006
Prime System	Aquatic Facilities	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	USAquatics	Actual Cost	0
Action Date	11/05/2007	Total Estimated Cost:	29,335
Funding Year	-	Funding Type	-
Requirement Location	Pool	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

REPLACE PUMP

The pump characteristics for a pressure system are different than those for a vacuum DE system.

STRAINER

The pump strainers were just replaced with dual 4" strainers on a parallel pipe installation. If and when they are replaced, we recommend the installation of a single larger strainer to reduce pressure loss and cleaning requirements.

SURGE TANK

The surge tank is an open vessel in the equipment room. This leads to corrosion of metals in the room (potable water line in particular) and the potential for flooding.

UPDATED AUTOMATED CHEMICAL CONTROLLER

A micro-processor based chemical controller with high resolution oxidation reduction potential (ORP) capabilities should be installed which can improve water chemistry, reduce maintenance requirements and save on chemical costs. These controllers are very reliable and control pool water chemistry eliminating the peaks and valleys associated with many other controllers. The chemical controller should include a memory with down load and modem capabilities. These features give the ability to store the history of the pool chemistry to protect the owner in case of liability issues, allows easier trouble shooting and is controllable from remote locations via the modem for easier management of the facility or assistance from outside parties who can download the pools data.

pH ADJUSTMENT

The Duluth school pools are unique in their chemical feed needs. Limited adjustment is required for pH control. This is unusual in that the use of gas chlorine (pH = 1) drives the pool water pH lower, generally requiring the use of caustic soda or soda ash to maintain the required pH. Due to this limited adjustment, the pool pH is maintained manually. Despite the limited adjustment necessary, it is still necessary. The installation of automatic pH adjustment chemicals will reduce the potential for peak and valley pH changes which can reduce the chlorine effectiveness.

PHOTOS



Aquatic Facilities: Operational Upgrades

-

ACTION DESCRIPTION

Replace pump and strainer.

Seal the top of the surge tank and vent accordingly.

Add pH feed equipment.

Install an updated automatic chemical controller.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Energy and Operational Efficiency

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Aquatic Facilities: Pool Pump VFD		
Linked System	Aquatic Facilities	Inspection Date	09/11/2006
Prime System	Aquatic Facilities	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Ruud, Mark	Actual Cost	0
Action Date	09/11/2006	Total Estimated Cost:	3,540
Funding Year	-	Funding Type	-
Requirement Location	Pool Mechanical	Annual Energy/Ops Savings \$	230
Savings Description	Pool pump saving from VFD controls to reduce flow during low filter head conditions or elimination of balancing valves.		

REQUIREMENT DESCRIPTION

Install VFD on pool pump and control to maintain constant flow.

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Energy and Operational Efficiency

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Controls: VendingMiser Vending Machine Controls		
Linked System	Controls and Instrumentation	Inspection Date	10/03/2006
Prime System	Controls and Instrumentation	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Ruud, Mark	Actual Cost	0
Action Date	10/03/2006	Total Estimated Cost:	3,304
Funding Year	-	Funding Type	-
Requirement Location	Vedning Machines	Annual Energy/Ops Savings \$	362
Savings Description	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: Morgan Park Middle School
Category: Energy and Operational Efficiency

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	HVAC: Steam System Steam Trap Upgrades		
Linked System	Steam Distribution Systems	Inspection Date	09/07/2006
Prime System	Steam Distribution Systems	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Ruud, Mark	Actual Cost	0
Action Date	09/07/2006	Total Estimated Cost:	21,765
Funding Year	-	Funding Type	-
Requirement Location	Facility Wide	Annual Energy/Ops Savings \$	3,354
Savings Description	Heating savings attributed to leaking steam traps that result in the overheating of tunnel areas or steam venting in condensate receiver tanks.		

REQUIREMENT DESCRIPTION

- 1) Complete survey all steam traps system wide to locate failed traps.
- 2) Replace or repair of failed traps depending on trap age, condition, and availability of replacement part kits.

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Energy and Operational Efficiency

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Lighting: Lighting Retrofit	Inspection Date	09/20/2006
Linked System	Lighting Equipment	Finish Date	-
Prime System	Lighting Equipment	Status	Open
Priority	1- Currently Critical (Immediately)	Actual Cost	0
Inspector Name	Ruud, Mark	Total Estimated Cost:	49,446
Action Date	09/20/2006	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	3,513
Requirement Location	Entire Facility		
Savings Description	Energy savings generated through more efficient lighting technology.		

REQUIREMENT DESCRIPTION

Lighting project consists of the following:

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

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Energy and Operational Efficiency

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Plumbing - Addition of Natural Gas Water Heater		
Linked System	Plumbing	Inspection Date	07/17/2006
Prime System	Plumbing	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Schumacher, Russ	Actual Cost	0
Action Date	-	Total Estimated Cost:	29,500
Funding Year	-	Funding Type	-
Requirement Location	Boiler Room	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

The domestic hot water is currently generated by a steam to hot water heat exchanger, with electric coil for summer operation. A natural gas water heater is desired for summer operation.

PHOTOS



Plumbing - Addition of Natural Gas Water Heater

-

ACTION DESCRIPTION

Add Natural Gas Water Heater for summer operation.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Energy and Operational Efficiency

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Plumbing: Water Conservation Upgrades		
Linked System	Plumbing Fixtures	Inspection Date	09/21/2006
Prime System	Plumbing Fixtures	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Ruud, Mark	Actual Cost	0
Action Date	09/21/2006	Total Estimated Cost:	25,267
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	2,933
Savings Description	Reduce water and sewer usage using new low flow devices.		

REQUIREMENT DESCRIPTION

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

PHOTOS

ACTION DESCRIPTION

-

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Life Safety

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Elevators and Lifts: Elevator Repair	Inspection Date	08/28/2006
Linked System	Elevators and Lifts	Finish Date	-
Prime System	Elevators and Lifts	Status	Open
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Actual Cost	0
Inspector Name	Schindler Elevator Corp.	Total Estimated Cost:	7,788
Action Date	08/28/2009	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	2000 Elevator Addition		
Savings Description	-		

REQUIREMENT DESCRIPTION

Work required falls into two categories: Life Safety Issues and Product Upgrades.

PHOTOS

ACTION DESCRIPTION

Upgrade elevator for life safety issues and product upgrades.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Life Safety

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Lighting Equipment: Exterior Lighting		
Linked System	Lighting Equipment	Inspection Date	09/19/2006
Prime System	Lighting Equipment	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	Ruud, Mark	Actual Cost	0
Action Date	09/19/2006	Total Estimated Cost:	16,591
Funding Year	-	Funding Type	-
Requirement Location	Exterior	Annual Energy/Ops Savings \$	-
Savings Description	-		

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.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Occupant Security

Asset Name: Morgan Park Middle School
Asset Number: 225

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

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: Morgan Park Middle School
Category: Occupant Security

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Communications and Security: CCTV		
Linked System	Communications and Security	Inspection Date	11/30/2006
Prime System	Communications and Security	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	11/30/2007	Total Estimated Cost:	161,229
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

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: Morgan Park Middle School
Category: Occupant Security

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Fire Alarm Systems: Outdated System		
Linked System	Fire Alarm Systems	Inspection Date	09/20/2006
Prime System	Fire Alarm Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/20/2009	Total Estimated Cost:	134,520
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

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: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Communication and Security: Cabling Upgrade		
Linked System	Communications and Security	Inspection Date	08/16/2006
Prime System	Local Area Networks	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	The Westlund Group	Actual Cost	0
Action Date	-	Total Estimated Cost:	175,230
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing building cabling has been installed in several stages over the years and contains different 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. Add high bandwidth Fiber Optic Cabling between wiring closets. Standardize quantity of phone and data in classroom and offices.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Communication and Security: Clock System		
Linked System	Communications and Security	Inspection Date	09/20/2006
Prime System	Clock and Program Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/20/2009	Total Estimated Cost:	31,388
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

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: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Communication and Security: Public Address and Sound System		
Linked System	Communications and Security	Inspection Date	09/20/2006
Prime System	Intercommunication and Paging System	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/20/2009	Total Estimated Cost:	25,960
Funding Year	-	Funding Type	-
Requirement Location	Building Wide	Annual Energy/Ops Savings \$	-
Savings Description	-		

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: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Communication and Security: Telephone System Upgrade		
Linked System	Communications and Security	Inspection Date	08/16/2006
Prime System	Telephone Systems	Finish Date	-
Priority	1- Currently Critical (Immediately)	Status	Open
Inspector Name	The Westlund Group	Actual Cost	0
Action Date	08/16/2006	Total Estimated Cost:	5,192
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

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

PHOTOS

ACTION DESCRIPTION

Install a new CISCO phone system. Add paging interface. Remove old system after installation of new.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Communication and Security: Video/TV Distribution Upgrade		
Linked System	Communications and Security	Inspection Date	08/16/2006
Prime System	Television Systems	Finish Date	-
Priority	3- Necessary - Not Yet Critical (3-5 Yrs)	Status	Open
Inspector Name	The Westlund Group	Actual Cost	0
Action Date	08/16/2009	Total Estimated Cost:	39,589
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

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: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Communications and Security: Sound Systems, Auditorium Control Booth Upgrades		
Linked System	Communications and Security	Inspection Date	08/15/2006
Prime System	Classroom Sound Systems	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	The Westlund Group	Actual Cost	0
Action Date	08/15/2007	Total Estimated Cost:	332,288
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

There are little or no Audio Enhancement systems int the Classrooms.

Gymnasium Sound System is not adeaquate. Auditorium Sound System has recently been updated. Auditorium Control booth components need upgrade (video/projection). Pool Sound System has eight speakers.

PHOTOS

ACTION DESCRIPTION

- Add audio enhancement systems to Classrooms.
- Replace Pool sound system.
- Replace Gymnasium sound system.
- Upgrade Auditorium sound, video/projection systems.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Controls and Instrumentation: BAS and Controls Upgrade		
Linked System	Controls and Instrumentation	Inspection Date	08/08/2006
Prime System	Building Automation Systems	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Schmidt, Brian	Actual Cost	0
Action Date	08/08/2007	Total Estimated Cost:	206,500
Funding Year	-	Funding Type	-
Requirement Location	Entire building	Annual Energy/Ops Savings \$	3,913
Savings Description	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.

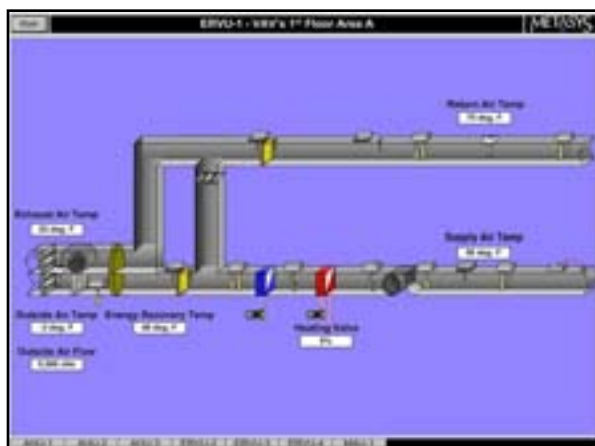
Upgrade existing pneumatic controls (old technology) to new Direct Digital controls.

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

Upgrade existing BAS to new web based to tie to District-wide BAS network. Add additional monitoring and control points to optimize BAS system.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Emergency Power Distribution: Generator Backup		
Linked System	Emergency Light and Power Systems	Inspection Date	09/19/2006
Prime System	Emergency Light and Power Systems	Finish Date	-
Priority	2- Potentially Critical (1-2 Yrs)	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	09/19/2007	Total Estimated Cost:	105,020
Funding Year	-	Funding Type	-
Requirement Location	Exterior near Electrical Room	Annual Energy/Ops Savings \$	-
Savings Description	-		

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: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Equipment and Furnishings: Construct Computer Stations		
Linked System	Equipment and Furnishings	Inspection Date	08/21/2006
Prime System	Equipment and Furnishings	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	-	Total Estimated Cost:	78,588
Funding Year	-	Funding Type	-
Requirement Location	Room 212 Computer Lab, Computer Lab adjacent to room 214 library	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

District standards are to standardize computer work stations.

PHOTOS



Equipment and Furnishings: Construct Computer Stations

-

ACTION DESCRIPTION

Replace existing computer stations with new standardized work stations. Approximately 60 stations.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Equipment and Furnishings: Replace Shades		
Linked System	Equipment and Furnishings	Inspection Date	08/21/2006
Prime System	Equipment and Furnishings	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Siddens, Lance	Actual Cost	0
Action Date	-	Total Estimated Cost:	120,952
Funding Year	-	Funding Type	-
Requirement Location	Classrooms	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Existing roll shades are in good condition but do not meet district future standardization.

PHOTOS



Equipment and Furnishings: Replace Shades

-

ACTION DESCRIPTION

Replace existing roll type shades.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Equipment and Furnishings: Visual Systems (Smart Boards)		
Linked System	Equipment and Furnishings	Inspection Date	08/15/2006
Prime System	Audio-visual Equipment	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	The Westlund Group	Actual Cost	0
Action Date	-	Total Estimated Cost:	376,420
Funding Year	-	Funding Type	-
Requirement Location	Entire Facility	Annual Energy/Ops Savings \$	-
Savings Description	-		

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: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Fittings: Replace Chalkboards	Inspection Date	08/21/2006
Linked System	Fittings	Finish Date	-
Prime System	Fittings	Status	Open
Priority	5- Recommendations/ Improvements	Actual Cost	0
Inspector Name	Siddens, Lance	Total Estimated Cost:	36,674
Action Date	-	Funding Type	-
Funding Year	-	Annual Energy/Ops Savings \$	-
Requirement Location	Classrooms		
Savings Description	-		

REQUIREMENT DESCRIPTION

Replace existing chalkboards with markerboard per district standardization goal.

PHOTOS



Fittings: Replace Chalkboards

-

ACTION DESCRIPTION

Replace existing chalkboards with markerboards. Approximately 2000 S. F.

District: Duluth Public Schools
Facility: Morgan Park Middle School
Category: Upgrades

Asset Name: Morgan Park Middle School
Asset Number: 225

Requirement Name	Lighting Equipment: Dimming System		
Linked System	Lighting Equipment	Inspection Date	11/30/2006
Prime System	Lighting Equipment	Finish Date	-
Priority	5- Recommendations/ Improvements	Status	Open
Inspector Name	Crotteau, Paul	Actual Cost	0
Action Date	-	Total Estimated Cost:	70,800
Funding Year	-	Funding Type	-
Requirement Location	Stage Area	Annual Energy/Ops Savings \$	-
Savings Description	-		

REQUIREMENT DESCRIPTION

Dimming system could be improved with newer system and better technology.

PHOTOS

ACTION DESCRIPTION

Replace dimming system with newer system for better stage lighting and control.