

## Department of Education & Early Development

SCHOOL FINANCE & FACILITIES

801 West 10th Street, Suite 200 P.O. Box 110500 Juneau, Alaska 99811-0500 Main: 907.465.6928 Fax: 907.463.5279

Email: Wayne.Marquis@Alaska.Gov

22 December, 2016

Lauren Burch, Superintendent Hydaburg City School District P.O. Box 109 Hydaburg, AK 99922

Re: Preventive Maintenance Site Visit

Dear Mr. Burch:

The State of Alaska requires that districts comply with the Preventive Maintenance Statute in order to receive funding under AS 14.11. Regulation also requires that the department perform an onsite inspection at least once every five years.<sup>2</sup>

On November 16, 2016 - pursuant to 4 AAC 31.013(f), an on-site inspection of the district's preventive maintenance and facility management program was conducted. The results of this inspection indicate the district's preventive maintenance and facility management program does not meet the minimum requirements of a compliant program as set out in 4 AAC 31.013(a).

Certification of the district's preventive maintenance and facility management program cannot be renewed at this time. The district is not eligible to submit Capital Improvement Project (CIP) requests until identified deficiencies have been corrected and the program recertified.

Enclosed with this letter is a copy of the final site visit report.

Please know that I am available to work with the district as you develop a compliant Preventive Maintenance program. If I can be of any assistance at all, contact me at 907-465-6928. It is a high priority for me to help the Hydaburg City School District attain re-certification status.

Sincerely,

Wayne Marquis

**Building Management Specialist** 

Enclosure

<sup>2</sup> 4 AAC 31.013(f)

<sup>&</sup>lt;sup>1</sup> AS 14.11.011(b)(4); AS 14.11.100(j)(5)(A)



## Department of Education & Early Development Finance/Facilities Trip Report

Prepared by:	TA #:
Wayne Marquis	05-17-22594
Date of Trip:	Date Report Finalized:
11/16/2016	12/15/2016
School District/Site:	Persons Involved in Trip:
Hydaburg City School District	Wayne Marquis
Name of Facility Visited:	Type of Facility / Student Enrollment FY16:
Hydaburg Elementary School Hydaburg Jr./Sr. High School Hydaburg Gymnasium	PK-6 / 59 7-12 / 29 PK-12

Persons Contacted: Lauren Burch, Superintendent, laurenburch@sisd.org, (907)-285-3491; Bart Mwarey, Assistant Superintendent / Principal, bmwarey@hydaburg.k12.ak.us, (907)-285-3491, (907)-401-3359 (mobile); Shophina Edenshaw, Administrative Assistant, sedenshaw@hydaburg.k12.ak.us, (907)-285-3491; Lucienne Smith, Business Manager for Hydaburg City Schools and Southeast Island School District, lucienne.smith@akebs.com, (907)-677-9263; Teri Willard, Maintenance Manager / Travel / Purchasing for Hydaburg City Schools and Southeast Island School District, teriwillard@sisd.org, (907)-828-8254; Makario Olape, Part-Time Custodian; Radson Daddius, Part-Time Custodian.

PO Box 109 Hydaburg, AK, 99922 Fax: (907)-285-3391

Purpose of Visit: Preventive Maintenance re-certification site visit of the School District's maintenance program as required by 4 AAC 31.013. (Preventive Maintenance And Facility Management), and technical assistance.

Active Projects/Status:

Project # / CIP Priority	Project	Amount	Year	Status
	No Active Project at this time.			

Certification Summary:	District Certified?	NO
	**	

The Hydaburg City Schools does not meet the department's requirements as required in regulations 4 AAC 31.013 Preventive Maintenance and Facility Management.

In order to continue receiving state aid under AS 14.11.011, the Hydaburg City Schools will need to address the following:

- 1. Provide evidence of effectively using a preventive maintenance management program capable of meeting the requirements as set forth in 4 AAC 31.013 (a) (1)
- 2. Develop a maintenance training program that specifies training for custodial and maintenance staff and records training received by each person as set forth in 4 AAC 31.013 (a) (4)

The district has been given credit for the information produced during the site visit.

The department remains available to answer any questions and provide technical assistance while the district implements a qualifying preventive maintenance program.

Maintenance Management:	
<ul> <li>Provide copies of work orders in varying state of completion.</li> </ul>	YES
<ul> <li>Report: Total maintenance labor hours collected on work orders by type of work [e.g., scheduled, corrective, operations support, etc.] vs. labor hours available by month for the previous 12 months.</li> </ul>	NO
<ul> <li>Report: Scheduled and completed work orders by month for previous 12 months.</li> </ul>	NO
<ul> <li>Report: Number of incomplete work orders sorted by age [30 days, 60 days, 90 days, etc.] and status [deferred, awaiting materials, scheduled, etc.]</li> </ul>	NO
<ul> <li>Report: Comparison of scheduled maintenance work order hours to unscheduled maintenance work order hours by month for the previous 12 months.</li> </ul>	NO
<ul> <li>Report: Monthly trend data for unscheduled work orders showing both hours and numbers of work orders by month for the previous 12 months.</li> </ul>	NO
<ul> <li>Report: Planned maintenance activity report by facility for next 3 months.</li> </ul>	YES

• Report: Completed maintenance activity (work orders) including labor and material costs by facility for previous 3 months.

YES

Since our last site visit, on 1 March, 2012, the district has experienced several noteworthy challenges, many of which have had a direct impact on Preventive Maintenance (PM) as well as the custodial care of campus facilities.

Our site visit informed the department of the non-adherence to the PM program going back two years, at the very least. Prior to this period, assumption was made that a custodian was assigned and performed the most basic of PM tasks. The reviewing of 12-month PM reports that were submitted in preparation for our site visit show monthly PM tasks getting accomplished in February and March of 2016; unfortunately, the maintenance employee that was on-site during this timeframe resigned and moved on.

On paper, and in theory, the district has in place the proper ingredients to have a successful PM program. By shared use of the Southeast Island School District PM program, schedules and tasks are uploaded and the program is ready for use; but in order to have this program succeed, qualified personnel need to perform the work. At the time of the site visit, the district did not have the necessary resources to meet this objective nor was there prospect of an immediate solution to resolve the dilemma.

This is not to say that school facilities do not receive any attention. On occasion, the Hydaburg City Schools does hire maintenance personnel from the Southeast Island School District, but this occurs randomly, and most often, when absolutely necessary, such as in during emergencies or when corrective maintenance repairs need to be addressed. A district the size of the Hydaburg City Schools has maintenance needs that go beyond reactionary maintenance.

Candid and informative discussions with district officials depicted awareness of the consequences of not having maintenance personnel on board. Tough decisions are made on a regular basis where the interest of providing education to students takes precedence over facilities maintenance. For the time being, the lack of regular maintenance of facilities systems appears to be inflicting decline of certain systems, with some signs of acute progression in other areas (e.g. floor buckling in gymnasium, exterior gymnasium wall buckling, Heating, Ventilation, and Air Conditioning (HVAC) systems not operating efficiently, etc.) Caution is warranted when neglecting preventive maintenance long term on some of these systems (e.g. HVAC) where repairs far outweigh the cost of having maintenance personnel on staff. Furthermore, the presence of knowledgeable maintenance personnel is often worth its gold when recognizing signs of compromised safety. Good maintenance employees who become familiar with their facilities can often detect anomalies well before they become emergencies, again saving money on the long run. As the old saying goes, "an ounce of prevention is worth a pound of cure."

Provide a written energy management plan.	YES
• Report: Consumption data for each building, each utility [e.g., fuel oil, electricity, natural gas, LPG, water] by month for the previous 12 months.	YES

The district presented the <u>Fiscal Year 2017 Hydaburg City School District Energy Management Plan</u> which holds the principal and or lead teacher accountable for energy management of his / her school. These individuals are to promote use of educational programs that correlate to energy use and conservation.

The plan lists a series of measures aimed at conserving natural resources while saving money to support other district needs:

- Domestic hot water not to exceed 120 degree Fahrenheit
- Replace end-of-service life appliances with energy efficient models
- Use energy audits when available and implement low-cost / high priority energy measures
- Arctic Entryway doors to remain closed during school hours
- Lower temperatures during non-occupancy
- Etc.

Review of the district's energy logs show:

- FY16 is the highest oil consumption year between FY14-FY16 timeframe\*
- FY16 is the highest electrical consumption year between FY14-FY16 timeframe \* with exception to "Main School and Gymnasium"

Noted is the fact that FY16 was the warmest of the three years, with FY14 being the coldest. These results bring into question some of the effectiveness of the energy management plan where more oil is consumed as time goes by, regardless of warmer years, as cited in above analysis. It appears that FY15 was the most successful of the three years where efforts to mitigate energy consumption truly paid off overall.

The district has automatic fuel readers for most of its fuel tanks. These greatly simplify the collection of monthly fuel consumption. As we conducted our walk-through of the facilities, it was evident that minimal lighting was on where necessary and that the overall environmental temperature was cool, but comfortable.

The district is anticipating the upcoming installation of 3 biomass boilers next summer. A site located uphill from the gymnasium has already been selected. The project is sanctioned through a grant from the Alaska Energy Authority (AEA). The objective will be to have another facility built to enclose the boilers along with sufficient storage for biomass fuel and to run underground heating piping distribution to each of the heating mechanical plants for the 3 main campus facilities. Since the district is now struggling to find and afford maintenance personnel, a word of caution was aired

<sup>&</sup>lt;sup>1</sup> For facilities constructed before 12/15/2004, a district may record energy consumption for utilities on a monthly basis when multiple buildings are served by one utility plant; [4 AAC 31.013]

during one of our conversations in light of biomass boilers requiring much more attention than oil boilers. Although the intent to save money on fuel is worthy, going through with such an important capital project should definitely take into consideration the long-term Maintenance and Operation (M&O) costs that follow project completion and the need for human resources.

istodial Program:	
<ul> <li>Custodial plan that is building specific and describes both the frequency and level of custodial care for each facility.</li> </ul>	YES

The district is still utilizing the generic Custodial Care Program that was produced for the 2012 site visit. The document is basic and meets with above regulation. Two part-time custodians are on staff for the district. Each custodian is allocated four hours of work per day.

It was noted that domestic water was disconnected from water fountains. The quality of the water is such that this measure must be taken to benefit student health.

As revealed in the photos below, and given the size of the facilities and the limited time to perform custodial care, there seems to be adequate custodial care taking place in all of the facilities we visited. The site visit escort was achieved with one of the custodians spending time to do the walk-through while candidly answering questions to the best of his ability. There were signs of responsible ownership where many of the doors were secured when we showed up, and then carefully re-secured behind us following our visit. This showed evidence that district officials are making efforts to control traffic on campus while looking out for the best interest and safety of all stakeholders as well as the facilities themselves.

Maint	enance Training:	
•	Provide a schedule of planned training for both custodial and maintenance personnel for the current or upcoming school year.	NO
•	Provide a record of training describing type and duration of training by individual for current school year.	NO

As cited previously, the district does not have any full-time maintenance technician on staff at this time.

The annual training report that was presented consists of a two-hour Preventive Maintenance (PM) training session that was hosted in February 2016 by the sub-contracted Southeast Island School District Maintenance Manager / Travel / Purchasing agent. This is the only training reported for the custodial workforce for the entire year.

The role and importance of both maintenance and custodial employees are often underestimated. In many different ways, these individuals connect with everyone involved in our schools. As such, it is critical that they receive adequate training.

In order to meet regulatory requirements, a training schedule needs to be implemented and adequate record keeping with pertinent information need to be kept. A responsible party needs to be assigned

and establish a basic training plan and keep training accountability. The record keeping needs to include data such as trainee name, training description / topic, date, and duration.

As examples, subject matters many districts utilize to train custodians include:

- Workplace Safety
- Working with Blood Borne Pathogen (e.g. use of Personal Protective Equipment (PPE))
- Job Hazard Analysis
- Material Safety Data Sheet (MSDS)
- Asbestos Exposure
- Machinery Use
- School User Interaction
- Child Abuse Prevention
- Occupational Safety and Health Administration (OSHA) Record Keeping
- Safety Leadership
- Energy Management
- Etc.

## The following suggestions are made:

- Establish a yearly training plan for the custodial workforce at the beginning of each school year (include maintenance personnel if they are member of district workforce)
- Record "shadow-training" such as when accompanying / escorting other facility professionals and anytime knowledge is acquired
- Continue using the "Training" purpose code in the MPulse Computerized Maintenance Management System (CMMS) and log the hours of training as they occur throughout the year
- Take advantage of the Alaska Public Entity Insurance (APEI) which offers free online training, free webinar, free on-site training, etc. http://www.akpei.com/Education/On-siteTraining.aspx
- Monitor training accomplishments throughout the year

District officials also mentioned that custodians will be assisting in the replacement of wood shop equipment, starting January 2017. The opportunity for training will then take place during a three-week timeframe, where district personnel will learn new work methodology as well as the functioning of equipment being installed. The district is reminded to log all training activities.

Capit	al Planning (Renewal and Replacement):	
•	Provide a Renewal / Replacement (R&R) Schedule (detailed to at least	YES
	EED's 26 systems) for each permanent building over 1000sf.	
•	Provide information that supports that the data in the R&R schedules was	YES
	developed based on system condition assessments.	

Renewal and Replacement (R&R) schedules are in place for all of the district's school facilities:

- A summary cover sheet gives rendition for each of the district's facilities with figures matching the fiscal year in which work is estimated to be required;
- Many R&R schedules have attached sheets where comments explain "Year Installed" changes that correlate to the R&R in question.

The history of the district's grant projects that have been documented in the department's archives began in 1976 (e.g. GR-76-101 Hydaburg School Construction \$436,900).

The district is capturing some of the important details listed above, thereby delivering a better rendition of what has transpired over time in affected facilities. The information becomes a good tool of historical value that can be used for reference.

The last capital project where both the district and the department worked collaboratively was GR-03-022, <u>Hydaburg School Renovation</u>. The original approved amount was \$5,822,106. This project was closed in August of 2010.

During this year's FY18 Capital Improvement Project (CIP) cycle, the district presented its <u>Six-Year Capital Improvement Plan</u>, of which the top three projects were presented and rated during this year's CIP cycle:

District	Project Location and Description	Estimated Cost
Priority		
1	Hydaburg Elementary Roof Replacement*	\$455,432
2	Hydaburg Elementary Playground Upgrades	\$105,009
3	Hydaburg School Covered Play Area	\$684,201
4	Hydaburg High School and Gym Roof Replacement	\$950,000

<sup>\*</sup> reuse of score from FY17 CIP cycle

Fixed Asset Inventory System:	
Report recording asset, date acquired, location and estimated period of service	YES

The district turned in a fixed asset schedule, dated 30 June 2016, for items holding a minimum threshold value beginning at \$5,000. Assets are depreciated on an annual basis and they are catalogued in various functions, including acquisition date, life expectancy, depreciation per year, etc. Depreciation for Fiscal Year 2016 was \$50,109.77.

The insurance carrier for the district is the Alaska Public Entity Insurance (APEI).

## General Observations and Comments:

District officials were very helpful assisting the department conduct the site visit. Candid conversations took place discussing various facets of district operations and the influences / impacts on both the maintenance and custodial care of the facilities.

As was the case during our last site visit, the district did not have a compliant PM program at the time of this site visit. With the last school major renovation project dating back to 2003, there are signs that the upgrades that were implemented back then are still adequately supporting educational needs. However, with the random maintenance support exhibited in recent times, some of the systems are currently finding themselves in disorder (e.g. HVAC system not operating properly, lighting systems not fully functional, etc.). The effect of not sustaining an efficient PM program can prove detrimental to all systems. Most worrisome is the fact that progressive neglect in facilities maintenance tends to have a domino effect, where independent systems still influence each other; the speed at which these systems come to total failure usually ramps up exponentially over time. It is imperative that energies be invested and solutions be found so that the district can continue to keep its facilities in top shape with proper resource allocation and execute adequate PM.

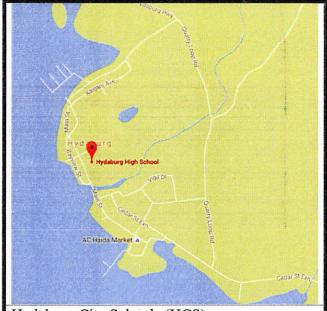
The district has produced documentation to authenticate use of an energy management program. A few questions came into light when drawing comparisons between yearly oil consumption as to the reasons contributing to more fuel being consumed during warmer winters. The fact that energy data collection is taking place enables the district to make these comparisons and verify program efficiency.

A custodial plan along with human resources to do the work are in place. The two part-time custodians are working hard to keep the facilities looking good. District officials reported having custodians often volunteer to do much more work than what can be accomplished in the daily four-hour time allotment. Commendations are in place for such dedication. As indicated above, one of the custodians conducting the walk-through exhibited responsible ownership which is a most valued trait in any employee. As seen in the photos below, custodial care is taking place, with light variations in custodial effectiveness. Overall impression is good. A note must be shared to indicate heavy use of the gymnasium either during special events (e.g. funeral, potluck, etc.) or after hours (e.g. open gym for basketball). These activities increase district operational costs (e.g. need to maintain comfort heat during activity, cleaning afterward, staff to monitor, etc.).

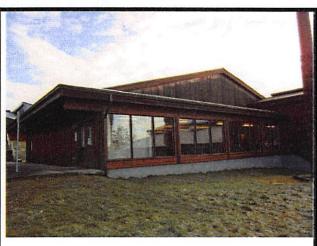
Training is not taking place as required by regulation. The district needs to better plan and organize training for both maintenance (if and when hired) and custodial staff. School facilities are complex, and the need for training is ever present. With the advent of online training, DVD, etc., there are ample low-cost and often free opportunities to meet this important aspect of PM programming. Unless planning takes place, it is nearly impossible to get things done in an orderly fashion, including training.

The district has adequate capital planning. R&R schedules are in place and receiving their due share of updates when needed. The district also has a vetted process to prioritize its list of projects. As seen in the photos below, the exterior staining of the elementary building was accomplished in FY15. The district is also actively engaged in submitting Capital Improvement Project (CIP) requests to the department. There is good work happening in this aspect of PM programming.

A fixed asset inventory system is in place.



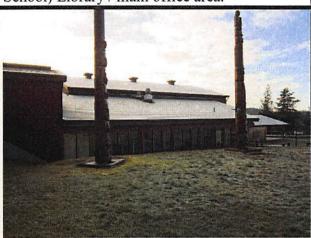
Hydaburg City Schools (HCS) map



HCSES (Hydaburg City Schools Elementary School) Library / main office area.



HCSES View toward waterway.



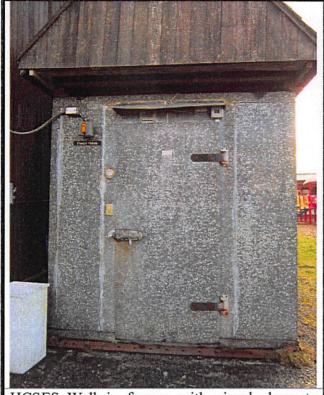
HCSES View toward kitchen / dining room / gymnasium (background).

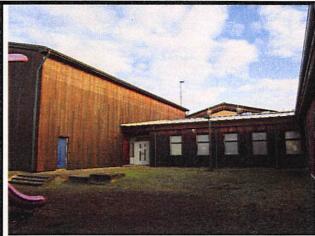


HCSES



HCSES Effective use of security camera system aiming directly at walk-in freezer.

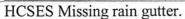


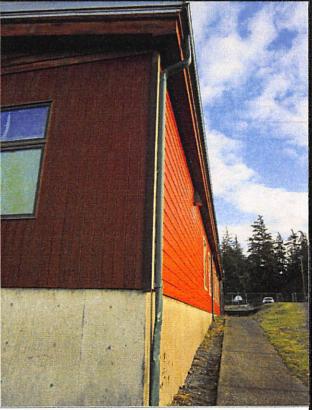


HCSES Walk-in freezer with visual alarm to signal failure. Cold zinc spray application may slow corrosion of rusting surfaces.

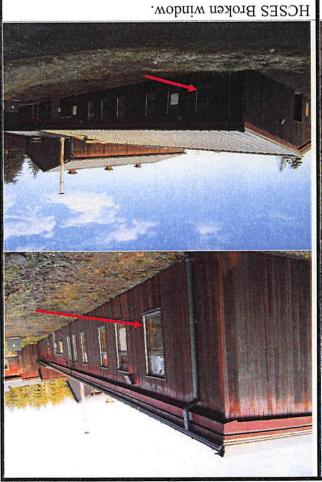
HCSES Gymnasium to the left of photo. Wooden surfaces change in color according to exposure weather and sun.







HCSES Partly crushed rain gutter.



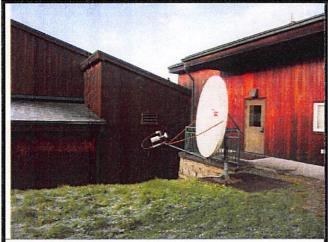


HCSES Vegetation does not contact wood HCSES Broken window. forefront of photo has been stained.



HCSES Vehicle fleet. Elementary gymnasium in background.





HCSES Internet reception dish.



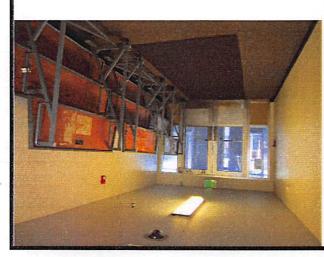
HCSES District office / library.

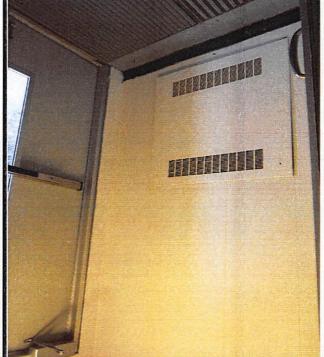


HCSES Rain gutter routes water to underground drain.



HCSES Partly crushed rain gutter. Underground drain appears to be out of order.





HCZEZ

HCSES Entryway. Electrical heat control in this



.,

condition.

HCSES Library / commons. Great artwork.

HCSES Library / district office area.

13

Good



condition.



the left. HCSES Hallways. Clean. Kitchen entryway to



HCSES Classroom.





HCSES Gymnasium. Uneven lighting.



Seals have most likely failed. HCSES Cracked window. View is opaque.



HCSES Kitchen.



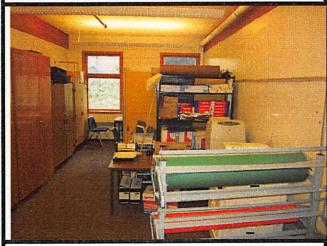
HCSES Dishwasher was out of commission at the time of the site visit.



HCSES Dry food storage.



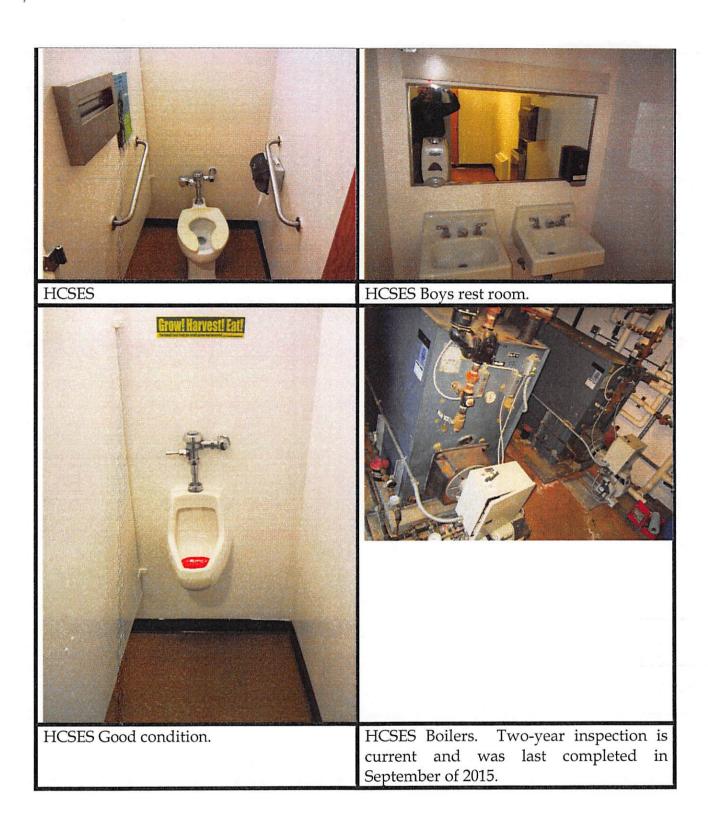
HCSES Cafeteria. Floor cleanliness is marginal.



HCSES Teachers storage / production room. Good organization.



production HCSES Girls rest room. Clean.

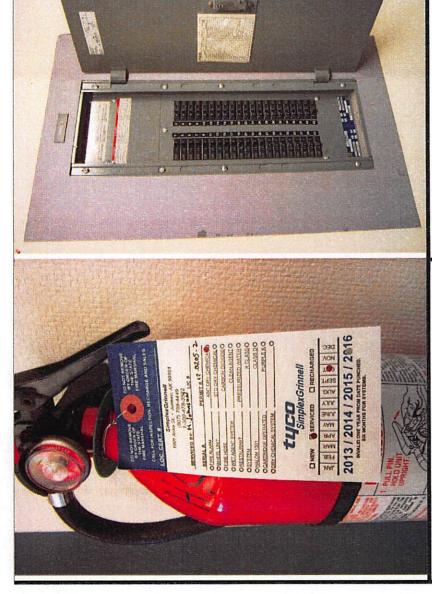






a "trouble" condition at the time of the site HCSES Simplex Fire Alarm panel reported

in October of 2015. Juneau is now due, and was last completed Southeast Fire Protection based out of great condition. Annual inspection by HCSES Fire sprinkler tree -wet system- in

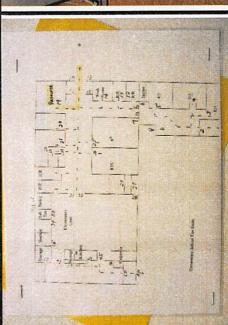


COOKE

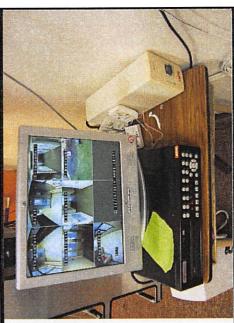
臺灣

HCSES Fire panel. Good condition, including circuit identification.

HCSES Annual fire extinguisher inspection by Simplex Grinnel based out of Juneau is current and was last completed in October of 2016.



HCSES Fire exit plan.



HCSES Security system is functional and being used.

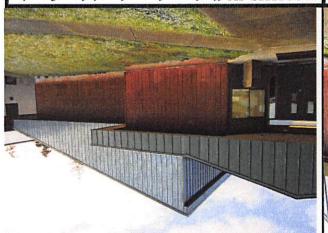




covered play area. to the department for the construction of a Capital Improvement Project grant request HCSES Playground equipment. Appears to MCSES The district has applied for a



be in great condition.



HCSISHS Walk-through to the right of main

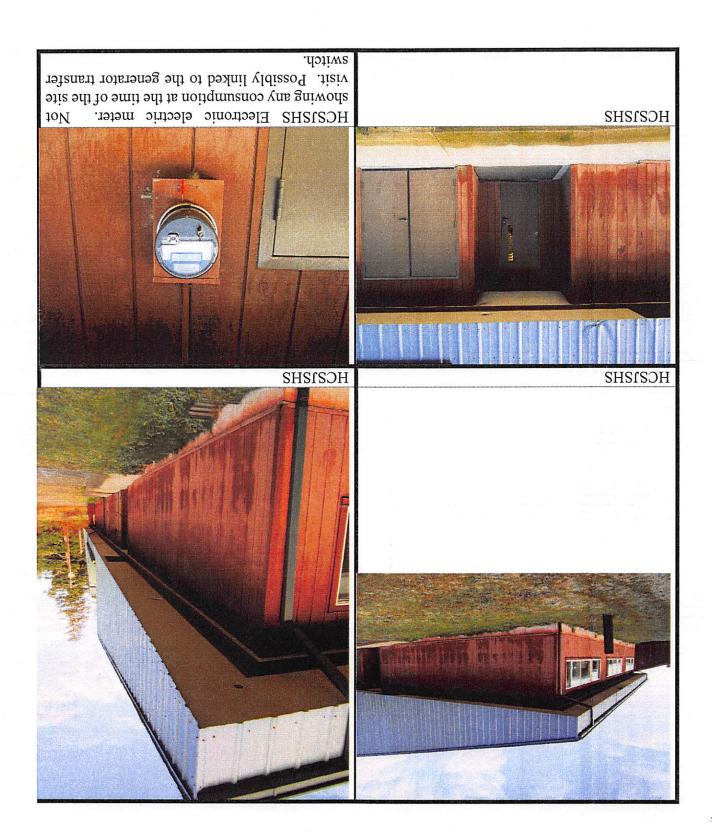


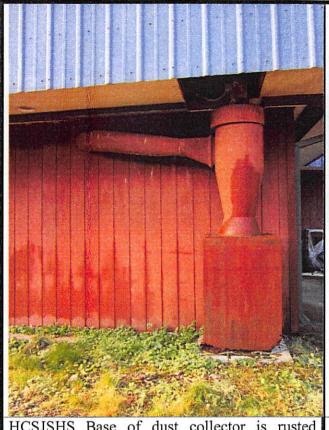
CSJSHS Main entrance.

HCSJSHS (Hydaburg City Schools Junior / HCSJSHS Senior High School) Temporary repair on left entrance.



Hydaburg City School District Site Visit 16 NOVEMBER 2016







HCSJSHS Base of dust collector is rusted through and it is becoming a hazard.

HCSJSHS



HCSJSHS Surface damage to facility.

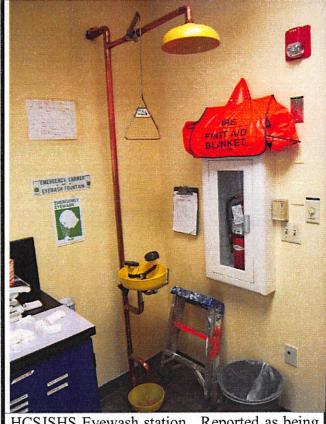


HCSJSHS Single wall fuel tank sitting on wooden crib, with partial contact with vegetation. Locked.



HCSJSHS

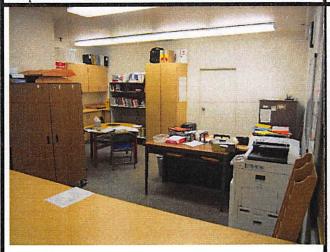
HCSJSHS Science classroom.





HCSJSHS Eyewash station. Reported as being tested annually. Annual fire extinguisher inspection is current.

HCSJSHS Classroom.





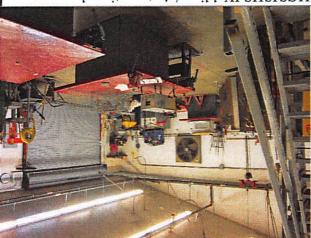
HCSJSHS Teacher office.



HCSJSHS Great condition.







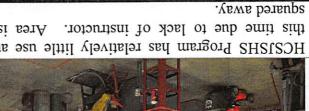


HCSJSHS Welding / Automotive shop area.



this time due to lack of instructor. Area is HCSJSHS Program has relatively little use at

HCSJSHS Native canoe project underway.





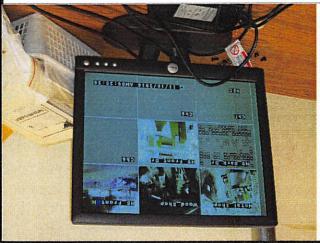
HCSJSHS Simplex Fire Alarm panel reported a "trouble" condition at the time of the site visit.



HCSJSHS One of two electric power generator transfer switches. The other switch is located in the gymnasium mechanical room, along with the generator itself.



HCSJSHS New replacement / upgrade tools to be installed in January 2017. This will be a joint effort with the Ilisagvik College, out of Barrow.



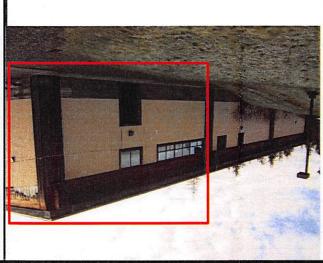
HCSISHS Security system. A few cameras appear not to be working properly.

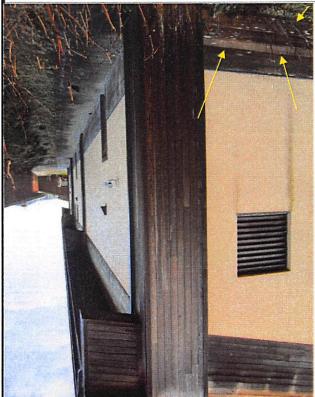


HCSHMG Façade wood delamination.

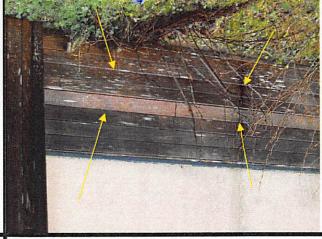


HCSHMG Hydaburg City Schools Haida Memorial Gymnasium





investigating reason(s) why. wooden base is buckling. Recommend HCSHMG Rear view. Portion of horizontal



classroom / social functions. Elevator is in place.

HCSHMG Front portion of gym is used for

Exterior fan / storage access room above it. HCSHMG Rear view. Boiler room access.

HCSHMG Close-up view.



HCSHMG Egress. Wood scraps from recent gym flooring expansion. Generator room exhaust.



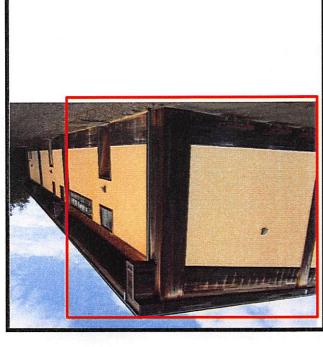
HCSHMG Damaged flashing at base of door. Needs to be replaced.

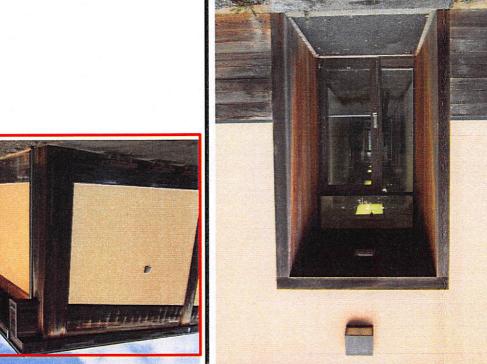


HCSHMG Underground fuel tank access. Equipped with Veeder-Root monitoring system. System appeared to be functioning properly.



HCSHMG Act of vandalism. Immediate access to gym area. Needs repaired.





classroom / social functions. HCSHMG Front portion of gym used for

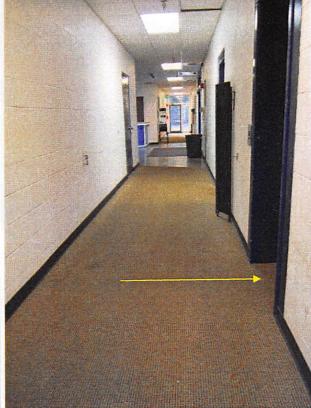


HCSHMG Glass area needs cleaning.

community use.







HCSHMG Hallway.

HCSHMG Hallway. Elevator access on the right. Main entryway in center. In good overall condition.



HCSHMG Signs of water intrusion on wood glulam beam. Need to determine source. Is this a recent event?



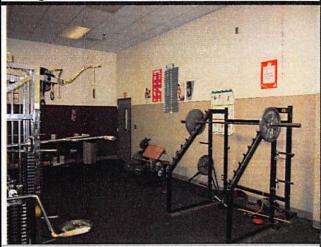
HCSHMG One of the upstairs classroom. Currently being used for storage due to low student numbers.



HCSHMG Classroom currently being used for storage.



HCSHMG Weight room. Poor lighting.



HCSHMG Weight room.

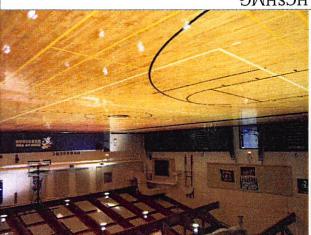


The pride of the HCSHMG Gymnasium. community.

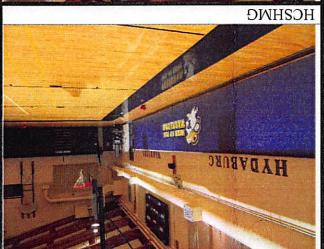








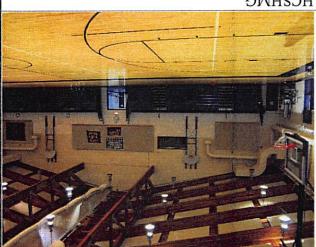
**HC2HMG** 





side of the gymnasium. (1-1  $\frac{1}{2}$ ). HCSHMG Floor is buckling upward on one

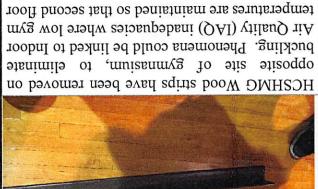
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**HCSHWG** 

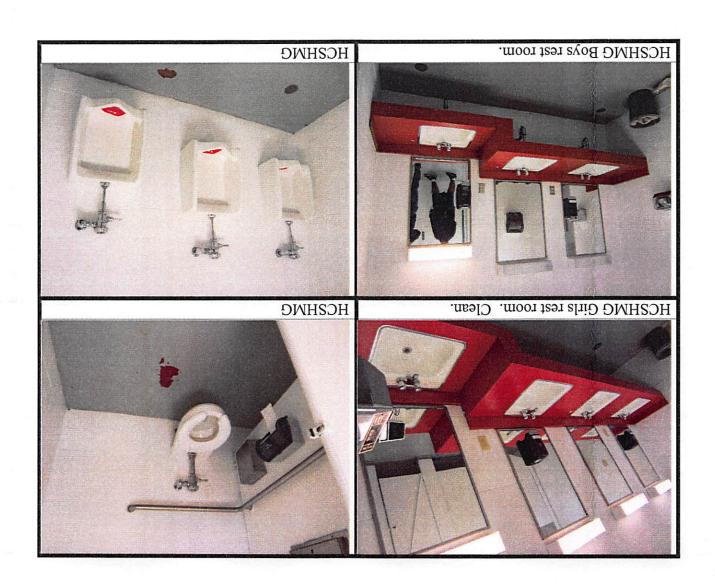


HCSHWG



do fortinos independent control of pneumatic control repair part was underway to could be causing gym wood floor to expand. A student education. High humidity air content

classrooms temperatures are adequate for



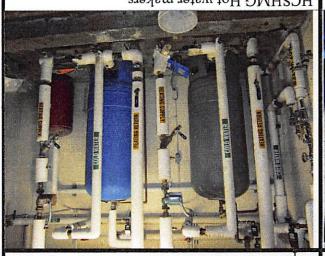




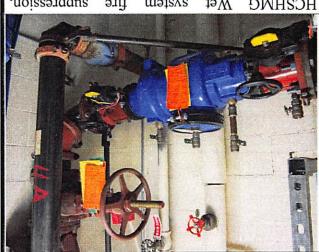




September of 2015. current and was last completed in HCSHMG Boilers. Two-year inspection is

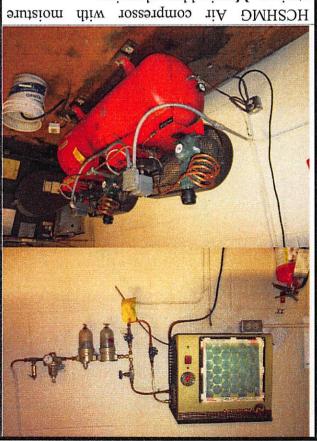


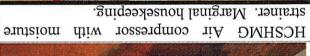
HCSHMG Hot water makers.

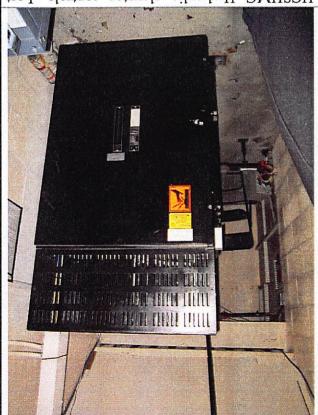


**HC2HMG** 

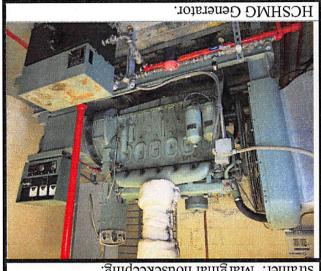
Inspection is current. HCSHMG Wet system fire suppression.







inspection completed in September 2015. HCSHMG Hydraulic elevator controls. Last



KOHLER

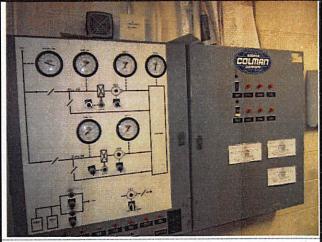
HCSHMG Transfer switch.



HCSHMG Air handler (ASU-5)



HCSHMG Air handler (ASU-6)



HCSHMG Barber Colman solid state pneumatic controls. Robust system, but difficult to find replacement parts these days.



HCSHMG Maintenance office area.

This area intentionally left blank.

This area intentionally left blank.

HCSHMG

HCSHMG