



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF THE SUPERINTENDENT

July 19, 2016

TO: The Honorable Grant Chun
Chairperson, Finance and Infrastructure Committee

FROM: 
Kathryn S. Matayoshi
Superintendent

SUBJECT: **Update on Department of Education's "Jacob's Study"
(A Facility Inventory, Assessment, and Capacity Study)**

1. DESCRIPTION

Office of School Facilities and Support Services (OSFSS) provides a status update on the study and facilities master plan being done by Jacobs Project Management Co.

2. UPDATE

OSFSS provides a brief on the development of the study and facilities master plan being done by Jacobs Project Management Co.

KSM:jmb
Attachment

c: Office of School Facilities and Support Services



Finance and Infrastructure Committee

July 19, 2016

Update on Department of Education's "Jacob's Study" (A Facility Inventory, Assessment, and Capacity Study)

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Agenda

- Purpose
- Process Overview
- Development of Facility Drawings
- Facility Inventory Summary
- Facility Requirements / Gap Analysis
- Data-Driven Project Prioritization



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Purpose

The WHAT

- Compile comprehensive space inventory
- Deliver database for inventory management
- Benchmark facilities to Hawaii Department of Education (HIDOE) Education Specifications
- Identify program needs
- Measure school capacities and utilization
- Develop composite siteplans/floorplans
- The WHY
- Inform Operational and Capital Decisions
- Foster Equity



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Process Overview

- **Phase 1- Assessment Preparation:**
 - As-built siteplan/floorplan search (50,000+ drawings, 4400+ bldgs)
 - Compile electronic assessment packets
- **Phase 2- Field-Assessments:**
 - Update drawing layouts and measurements
 - Validate spaces and room use
 - Assess building age and envelope profile
- **Phase 3- Data Analysis:**
 - Prepare AutoCAD (CAD) drawings for Geographic Information System (GIS) database
 - Compile facility inventory database
 - Compare facilities to HIDOE 2006/2008 Education Specifications to determine deficiencies
 - Compute school capacities and conduct utilization analysis
 - Prioritize facility deficiencies to inform data-driven decisions

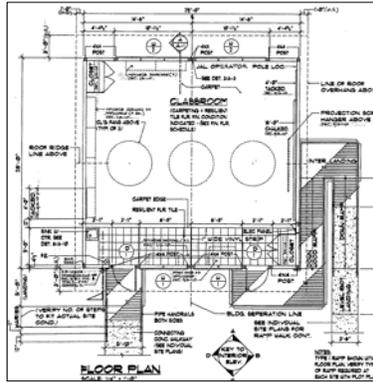
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Development of Facility Drawings

- 1. Paper As-Built Documents
 - 50,000+ drawings scanned and distilled into composite electronic packages



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Development of Facility Drawings

- 2. Electronic Field Markups
 - Floorplans updated for 4410 buildings, 344 drawn by hand.
 - All spaces measured and cataloged by use.
 - Recapturable classrooms identified



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Development of Facility Drawings

- 3. AutoCAD files
 - Standardized drawing files for every campus.
 - Aerial image, siteplan, and floorplans.
 - Room number and use.



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Development of Facility Drawings

- 4. Geo-Coded GIS Database
 - HIDOE Dashboard project by ESRI



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Overview of Facilities Statewide

- 20.7 Million Net Square Feet**
- 261 Schools** (including Conversion Charters)
- 4,410 Buildings**
- 7.4 Percent of square footage in portables** (1,819 statewide)
- 11 Percent of schools with >20% of space in portables**
- 61 Average School Age**
- 44 Average Building Age** (weighted by SF)
- 53 Buildings over 100 years of age**

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Building Inventory by School Type, Statewide

School type	Number of Schools	Number of Bldgs	SF	Ave SF per school	Average Year Weighted by SF	% in 'Old' or 'Beyond Expected Life' Age Profile	Portable SF % of Total	Number of Schools with 20%+ Portables
Elementary (K-5, K-6)	171	2283	9,040,074	52,866	1972	45%	9%	26
Middle (6-8, 7-8)	39	630	3,779,445	96,909	1974	40%	5%	1
HS (9-12)	33	1109	6,330,954	191,847	1972	37%	6%	0
Combination (eg. K-1, K-12, 7-12)	18	388	1,545,978	85,888	1971	37%	9%	3
TOTAL	261	4,410	20,696,451	79,297	1972	41%	7%	30

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Building Inventory by District

District	Number of Schools	Number of Bldgs	SF	Ave SF per school	Average Year by SF	% in 'Old' or 'Beyond Expected Life' Age Profile	Portable SF % of Total	SF per student
Honolulu District	54	589	3,996,626	74,012	1960	69%	2%	130
Central District	42	759	3,454,574	82,252	1972	42%	8%	107
Windward District	31	435	2,110,954	68,095	1967	52%	6%	143
Leeward District	44	870	4,420,246	100,460	1981	24%	8%	108
Hawaii District	43	774	3,102,619	72,154	1973	34%	9%	134
Maui District	32	679	2,423,246	75,726	1980	29%	12%	114
Kauai District	15	303	1,175,224	78,348	1977	29%	8%	126
TOTAL	261	4,409	20,683,489	79,247	1973	41%	7%	120

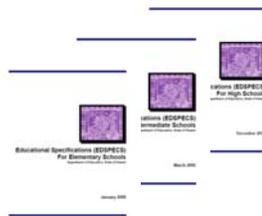
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Facility Requirements Driven by HIDEOE Standards and Enrollment

- Requirements are based on current prevailing HIDEOE standards
 - 2008 Elementary School Education Specifications
 - 2006 Middle and Intermediate School Education Specifications
 - 2006 High School Education Specifications
- Required room quantities and sizes driven by Current 2015-16 and Projected 2019-2020 Enrollment.



Space Description	400-500			500-600		
	#of	Size	Total	#of	Size	Total
Classroom/Instructional Area						
General Classrooms (6-8)	11	980	10780	14	980	13720
Supplemental Classrooms	2	980	1960	3	980	2940
Special Education Classrooms						
Self-Contained A	2	1880	3760	2	1880	3760
Self-Contained Y	1	1200	1200	1	1200	1200
Resource	1	980	980	2	980	1960
Arts & BPA Classrooms						
Art Classroom	1	2050	2050	1	2050	2050
Choral Room		1940	0			0
Band Room	1	3795	3795	1	3795	3795
Music Common Area (not a classrm)		600	600		600	600
Family & Consumer Science	1	2500	2500	1	2500	2500
Business Education		1380	0		1380	0
Industrial Arts	1	3800	3800	1	3800	3800
Industrial Technology		2960	0		2960	0
Science Classroom/Lab	3	2360	6780	4	2360	9440
Total Classroom Area	24		38205	30		45365
Support Area						
Administrative Center	1	8550	8550	1	9110	9110
Library/Media Center	1	8060	8060	1	8060	8060
Dining/Multi-Purpose	1	8600	8600	1	9900	9900
Food Service-Kitchen Cntr	1	3485	3485	1	3485	3485
Custodial Service Center	1	500	500	1	520	520
Faculty Center	1	980	980	2	980	1960
Computer Resource Center	1	1200	1200	2	1200	2400
Restroom Room	1	330	330	1	330	330
PE Locker Shower	1	7740	7740	1	8340	8340
Total Support Area			39445			44105

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Focus of Gap Analysis (Existing Space vs HIDEOE Ed Spec Standard)

- **Academic Building Spaces**
 - General Classrooms
 - Special Education Classrooms
 - Science Classrooms
 - Arts & BPA Classrooms
 - Portable Classrooms
- **Support Building Spaces**
 - Administration
 - Library Media Center
 - Cafeteria
 - Gymnasium
 - Locker/Shower



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Gap Analysis: Admin Building based on 2015-2016 Current Enrollment

- 15 schools with significant administration space deficiencies
- Eg. Pahoia Elementary admin is a wood building beyond its expected life sized for 12% of required space. Administration is operating in six other buildings, including 3 classrooms.*
- Eg. Kaewai Elementary admin is a 1956 CMU building that is 24% of standard for its enrollment. Administration is making due by using 6 classrooms for other uses.*

School	2015-16 Current Enrollment	Administrative Center Building						Admin in Other Buildings			Admin in All Bldgs				
		Bldg Type	Bldg Envelope	Year Built	Age Category	Req SF by 2015-16 Enrol	Exist SF	Delta Exist to Req SF	Exist to Req SF %	Addl Admin SF on Camp	Count of Other Bldgs Used	Count of Classrooms Used	Delta Exist to Req SF by 2015-16 Enrol	Exist to Req Admin SF % incl all admin SF %	Pct SF in Admin Center
Anuenue El	421	Permanent	CMU	1964	Old	10,150	826	(9,324)	8%	994	2	0	(8,330)	18%	45%
Lokelani Int	594	Portable	Wood Siding	1989	Average	9,110	785	(8,325)	9%	4,850	10	0	(3,475)	62%	14%
Ke Kula o Ehunikaia	225	Permanent	Wood Siding	1925	Beyond Exp Life	9,930	1,067	(8,863)	11%	1,850	3	0	(7,013)	29%	37%
Ka'a'awa El	128	Portable	Wood Siding	1940	Beyond Exp Life	7,450	849	(6,601)	11%	179	1	0	(6,422)	14%	83%
Pahoia El	423	Permanent	Wood Siding	1960	Beyond Exp Life	7,820	947	(6,873)	12%	5,491	6	3	(1,382)	82%	15%
de Silva El	454	Permanent	Wood Siding	1959	Beyond Exp Life	7,820	950	(6,870)	12%	1,217	4	1	(5,653)	28%	44%
O'romana Int & High - O	74	Portable	Wood Siding	2005	New	9,930	1,359	(8,571)	14%	3,021	3	1	(5,550)	44%	31%
Isokooka El	117	Permanent	Wood Siding	1947	Beyond Exp Life	7,450	1,029	(6,421)	14%	2,501	3	0	(3,920)	47%	29%
Kahalu'u El	271	Permanent	CMU	1963	Old	7,450	1,058	(6,392)	14%	2,038	2	2	(4,354)	42%	34%
Momilani El	418	Permanent	Hybrid	1972	Average	7,820	1,120	(6,700)	14%	-	0	0	(6,700)	14%	100%
Haaheo El	182	Permanent	Wood Siding	1931	Beyond Exp Life	7,450	1,107	(6,343)	15%	101	1	0	(6,242)	16%	92%
Holualoa El	489	Permanent	Wood Siding	1916	Beyond Exp Life	7,820	1,199	(6,621)	15%	1,284	3	0	(5,337)	32%	48%
Maunaloa El	60	Permanent	CMU	1980	Average	7,450	1,146	(6,304)	15%	1,812	4	1	(4,492)	40%	39%
Kaewai El	330	Permanent	CMU	1956	Old	7,610	1,855	(5,755)	24%	2,872	3	2	(2,883)	62%	39%
Kailani El	377	Permanent	CMU	1970	Average	7,610	2,972	(4,638)	39%	3,826	3	4	(812)	89%	44%

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Gap Analysis: Administration Building

- Kaewai Elementary



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Target Completion - Sept 2016

- Currently in 'pre-final' phase:
 - Data verification,
 - Capacity methodologies
 - Needs Prioritization
 - Coordination with DOE GIS database
- Database and final deliverables
- Results will help DOE with 2017 Legislature CIP Budget Request

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