



COLORADO

Colorado Department of Human Services Multiphase EPC Project

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COLORADO
Department of Human Services

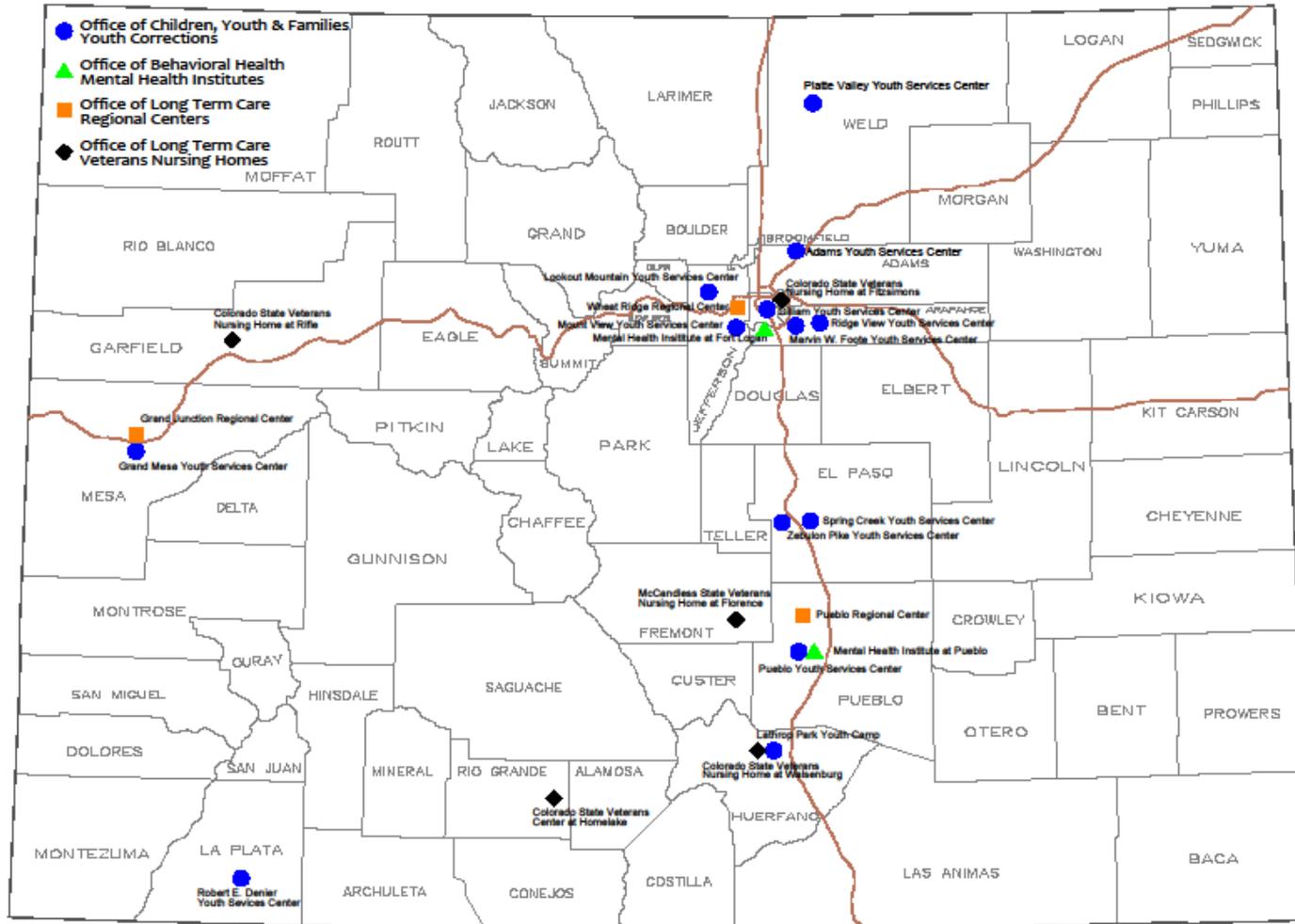
CDHS Overview

DHS facilities consist of two mental health institutes, three regional centers for developmental disabilities, twelve youth services facilities, forty group homes, two learning centers and five veteran's nursing homes

Division	Building Name	City	Bldg Count	Gross Floor Sq. Ft.
CMHIP	Co. Mental Health Institute at Pueblo	Pueblo	49	1,362,424
CMHIFL	Co. Mental Health Institute at Ft Logan	Denver	74	642,446
GJRC	Grand Junction Regional Center	Grand Junction	28	233,381
WRRC	Wheat Ridge Regional Center	Wheat Ridge	9	130,411
PRC	Pueblo Regional Center	Pueblo West	2	24,164
DYC	Dept. of Youth Services	various	77	946,864
VETS	State & Veterans Nursing Homes	various	62	404,650
N,S,W, DISTRICTS	Group Homes & Learning Centers	various	42	185,365
	DHS TOTAL		343	3,929,705



CDHS Facility Map



Colorado Department of Human Services Sites



Multiphase Summary

8 Contracts from 2005-2011 (4 Nursing Homes)

Total Guaranteed Savings: \$25,849,926

Total Operational Savings: \$4,637,984

Total Savings: \$30,487,910

Total Project Costs: \$25,000,978



Phase I: Fort Logan (March 2005)

FIM 1) Lighting Retrofits

FIM 2) Water Conservation

FIM 3) H Building Motor Replacement

FIM 4) Pipe Insulation

FIM 5) KA Building RTU 1 Optimization

FIM 6) Building H Zone Isolation Dampers

FIM 7) Building 64 Heating System Replacement

FIM 8) Building A Flex Connector Repair



Phase II: Multiple Locations (September 2006)

Year 1 Energy Savings: \$103,032

Year 1 Ops Savings: \$6,348

Total Year 1 Savings: \$109,380

Project Costs: \$1,087,182

12 Year Term



Phase II: Multiple Locations (September 2006)

- FIM 1) Lighting Retrofits Wheatridge
- FIM 2) Water Conservation Wheatridge
- FIM 3) Zier Pool Cover
- FIM 4) Sunada Boiler Replacement
- FIM 5) Zier Pool VFD for RTU
- FIM 6) Zier Pool Block Diffusers
- FIM 7) Sunada Domestic Water Improvements
- FIM 8) Zier/Sunada Vending Misers
- FIM 9) Zier Pool Seal Door Jam
- FIM 10) Removed from Projects
- FIM 11) Zier - 3-way Valve Replacements
- FIM 12) Zier Demo Heat Exchanger
- FIM 13) Lighting Retrofits Grand Junction
- FIM 14) Water Conservation Grand Junction
- FIM 15) Bowers Cafeteria Replace Water Cooled Condensing Units
- FIM 16) Meyers/Laundry/W. District Admin Vending Misers
- FIM 17) Admin Building Install DDC for Optimization of 3 RTUs
- FIM 18) Hinds Recreation Center Program Occupancy Schedules on AHUs and FCUs
- FIM 19) Bowers Cafeteria Add to DDC Runtime Optimization
- FIM 20) Bowers Cafeteria Disable Dishwasher Hood Fan/Add Timer to Kitchen Hood Timer
- FIM 21) Bowers Cafeteria Install Control Valves for Steam Radiation Units and Add to DDC
- FIM 22) Butler Building Runtime Optimization on AHU
- FIM 23) Laundry Building Programmable Thermostats
- FIM 24) W District Admin Programmable Thermostats
- FIM 25) Meters Building Program Occupancy Schedule on RTUs
- FIM 26) Developmental Center Install DDC Controls on AHU
- FIM 27) Group Homes Convert Irrigation System to Ditch Water
- FIM 28) Fort Logan Solar Window Screens



Phase III: Multiple Locations (July 2008)

Year 1 Energy Savings: \$576,432

Year 1 Ops Savings: \$303,374

Total Year 1 Savings: \$879,806

Project Costs: \$9,922,214

14 Year Term



Phase III FIMs

North Central Division:

- FIM 1) Lighting Retrofits
- FIM 2) Water Retrofits
- FIM 3) Automation Upgrades
- FIM 4) Install AHU Supply Fan VFD
- FIM 5) Vending Misers
- FIM 7) Repair Economizer Control
- FIM 14) Chiller Replacement
- FIM 15) Install AHU Return Fan VFD
- FIM 16) Install Gas Booster Heater
- FIM 17) Pipe and Equipment Insulation
- FIM 18) Ditch Water Irrigation
- FIM 19) Boiler Replacement
- FIM 20) Install Programmable Thermostats
- FIM 21) Zone Isolation Dampers
- FIM 22) Modify Chilled Water Piping
- FIM 23) Motor Replacement
- FIM 26) Boiler Plant Decentralization

South Division:

- FIM 1) Lighting Retrofits
- FIM 2) Water Retrofits
- FIM 3) Automation Upgrades
- FIM 4) Install AHU Supply Fan VFD
- FIM 5) Vending Misers
- FIM 8) RTU Replacement
- FIM 9) Exhaust Fan Controls
- FIM 10) Lighting Controls
- FIM 11) Heat Trace Chiller
- FIM 12) Replace Make-Up Air Unit
- Fix 13) CMHIP Irrigation
- FIM 15) Install AHU Return Fan VFD
- FIM 24) Sub-metering
- FIM 27) Water Main

West Division:

- FIM 1) Lighting Retrofits
- FIM 2) Water Retrofits
- FIM 3) Automation Upgrades
- FIM 5) Vending Misers
- FIM 16) Install Gas Booster Heater
- FIM 25) Sudan HVAC



Phase IV: CMHIP (July 2011)

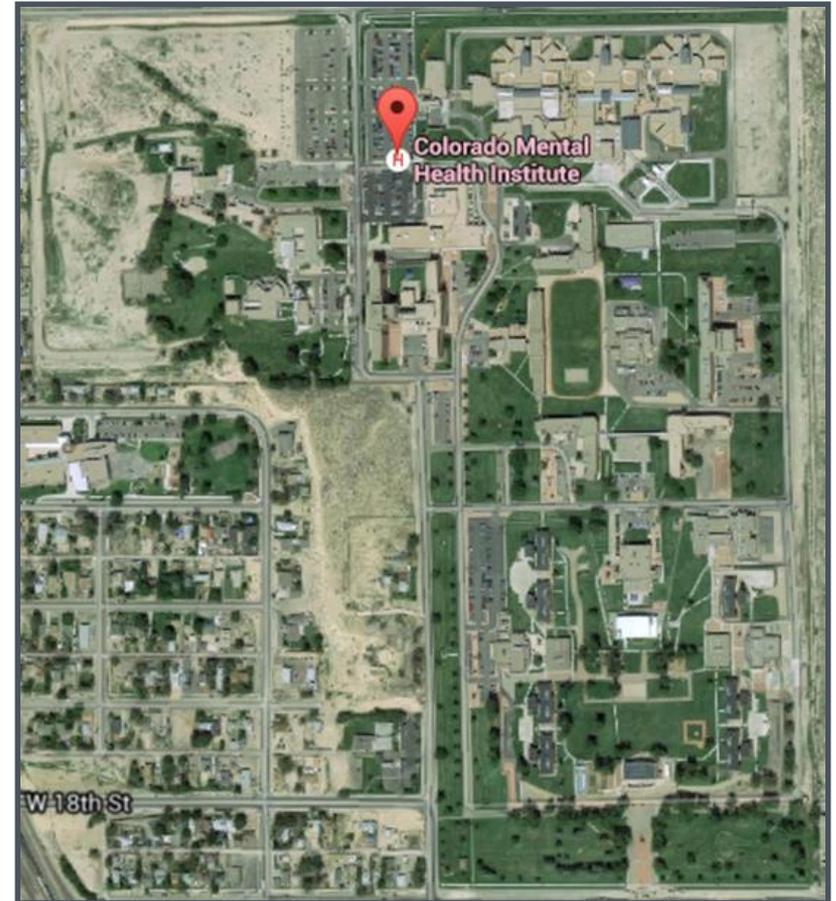
Year 1 Energy Savings: \$916,337

Year 1 Ops Savings: \$ 64,363

Total Year 1 Savings: \$980,700

Project Costs: \$8,976,765

10 Year Project Term



Phase IV FIMs

FIM 1) Lighting Retrofit

FIM 2) Plumbing Fixtures

FIM 2.03) Water to Waste

FIM 2.04) Ice Machine Retrofits

FIM 4) Coal Stokers

FIM 5) Chilled Water Plant Modifications

FIM 6) Distribution Systems Modification

FIM 8) Pool Repair and Sand Filter

FIM 10) SMH 125 Zone Isolation Dampers

FIM 11) SMH 125 Starter Replacement

FIM 12) Building Automation

FIM 13) Convert Multizone Unit to VAV

FIM 13.03) Convert Multizone to VAV

FIM 14) Insulation FIMs

FIM 23) Building Envelope Improvements/HVAC and
Electrical Upgrades

FIM 25) Building Retro-commissioning



Veteran Community Living Centers



Trinidad Nursing Home

(July 2005)

Year 1 Energy Savings: \$66,065

Year 1 Ops Savings: \$ 6,395

Total Year 1 Savings: \$72,451

Project Costs: \$707,562

FIM 1) Lighting Retrofits

FIM 2a) Boiler Replacement

FIM 2b) Boiler Temperature Reset

FIM 3) Install Gas Booster Heater

FIM 4) Vending/Snack Misers



Florence Nursing Home

(July 2005)

Year 1 Energy Savings: \$26,056

Year 1 Ops Savings: \$2,865

Total Year 1 Savings: \$28,921

FIM 1) Vestibule Entrance

FIM 2) Ceiling Replacement

FIM 3) Soffit for FCUs

FIM 4) Window Replacements

Project Cost: \$2,688,602

12 Year Project Term

Used VA grant funds to buy down
cost of project; \$1,747,592



Rifle Nursing Home

(November 2005)

Year 1 Energy Savings: \$56,602

Year 1 Ops Savings: \$4,268

Total Year 1 Savings: \$60,870

FIM 1) Lighting Retrofit

FIM 2) Water Conservation

Project Cost: \$ 790,930

12 Year Project Term



Homelake Nursing Home

(May 2006)

Year 1 Energy Savings: \$73,043

Year 1 Ops Savings: \$4,268

Total Year 1 Savings: \$77,311

Project Cost: \$810,702

15 Year Project Term

FIM 1: Lighting Retrofits

FIM 2) Water Conservation

FIM 3) Well Water Irrigation

FIM 4) Boiler Reset Controls

FIM 5) Replace Cottage Zone Valves

FIM 6) Insulate Steam Pipes

