

Systems- Value Engineering:

The systems have been designed from the beginning in conjunction with the District's Facilities Manager. Although he would prefer the system in the March DD baseline estimate set, he is satisfied with the systems as designed in the June DD estimate set.

MSBA SCHEMATIC DESIGN SUBMISSION

MARCH DD BASELINE ESTIMATE

JUNE DD ESTIMATE

Mechanical: (SD-VE listed target savings)

- Roof top penthouses for mechanical units
- VAV with reheat coils in classroom
- Aircurity detection systems
- Indoor air handling units
- All classrooms with displacement air
- Arts , SPED, Fitness Media & Cafe supplied by displacement air
- Central Chiller System
- Operable windows interlocked with VAV controls
- Energy metering
- Ductless cooling units

Electrical/ Security/Technology: (SD-VE listed target savings)

- Full lighting protection system (SD-VE listed target savings)
- 18 card readers
- Communication conduit installed in EMT (SD-VE listed target savings)
- 55 security cameras
- Submetering for energy management
- 3"concrete duct banks
- Dimming ballasts for daylight harvesting
- Automated lighting control system panelboard
- LED downlights and exterior fixtures (SD-VE listed target savings)
- 2 transformer switches (life safety and standby)
- Electrical room on east end of building (most cost effective at SD)
- 2 teacher data drops in each classroom

Plumbing/FP

- Bathrooms located without refinement
- 2 Domestic hot water heaters
- Concealed sprinkler heads

Superstructure: (SD-VE listed target savings)

- 2000 tons (high estimation)
- Emergency shelter with unknown cost implications

Mechanical:

- Roof top penthouse for boiler and chiller plan only
- VAV with reheat oils in classrooms
- Aircurity detection systems
- Ground mounted air handling units
- All classrooms with displacement air
- Arts , SPED, Fitness Media & Cafe supplied by displacement air
- Central Chiller System
- Operable windows interlocked with VAV controls
- Energy metering
- Ductless cooling units

Electrical / Technology:

- Full lighting protection system
- 82 card readers
- Communication conduit installed in EMT
- 89 security cameras
- Submetering for energy management
- 3"concrete duct banks
- Dimming ballasts for daylight harvesting, task tuning & loads
- Addressable lighting control system
- LED downlights, track lights and exterior fixtures
- 3 transformer switches (life safety , standby)
- Electrical room on east end of building (revised utility route)
- 2 teacher data drops in each classroom

Plumbing/FP

- Bathrooms located without refinement
- Domestic hot water heaters with instantaneous units
- Concealed sprinkler heads

Superstructure

- 1900 tons
- Code Compliant Emergency Shelter with seismic category 4

Mechanical: Achieved VE Savings from SD Targeted List

- Roof top penthouse for boiler plant only
- Reheat deleted from classrooms
- DDC/ATC detection system
- Roof top mounted air handling units
- All classrooms with displacement air
- Arts , SPED, Fitness Media & Cafe supplied by overhead distribution
- DX system
- Delete VAV controls for operable windows
- No energy metering
- Reduced ductless cooling units

Electrical / Technology : Achieved VE Savings from SD Targeted List

- Full lighting preventer system
- 9 card readers
- Communication boxes only with ring and strings
- 50 security cameras
- Delete submetering
- 3"concrete duct banks
- Reduce 50% of dimming ballasts
- Delete addressable lighting control system
- LED exterior lights only
- Reduce to 2 transformer switches for "shelter in place" option
- Electrical room moved to west side to be more cost effective
- 1 teacher data drop in each classroom
- Stacked electrical rooms
- Delete security motion detectors

Plumbing/FP:

- Back to Back and stacked plumbing walls
- 2 domestic hot water heaters
- Semi recessed sprinkler heads

Superstructure: Achieved VE Savings from SD Targeted List but unit pricing increased

- 1810 tons
- Emergency Shelter changed to "Shelter in Place" w/ seismic category 3

Systems- MA CHPS: MA CHPS points remain constant & our building energy model reflects efficiency gains since SD.

MSBA SCHEMATIC DESIGN SUBMISSION

MARCH DD BASELINE ESTIMATE

JUNE DD ESTIMATE

- 6 Targeted Points in Integration & Innovation
- 13 Targeted Points in Indoor Environmental Quality
- 13 Targeted Points in Energy
- 7 Targeted Points in Water
- 10 Targeted Points in Site
- 5 Targeted Points in Materials & Waste Management
- 7 Targeted Points in Operations and Maintenance

- 8 Targeted Points in Integration & Innovation
- 13 Targeted Points in Indoor Environmental Quality
- 15 Targeted Points in Energy
- 7 Targeted Points in Water
- 10 Targeted Points in Site
- 6 Targeted Points in Materials & Waste Management
- 7 Targeted Points in Operations and Maintenance

- 6-8 Targeted Points in Integration & Innovation
- 9 Targeted Points in Indoor Environmental Quality
- 17 Targeted Points in Energy
- 7 Targeted Points in Water
- 9 Targeted Points in Site
- 5 Targeted Points in Materials & Waste Management
- 7 Targeted Points in Operations and Maintenance

Total Points Targeted: 61

Total Points Targeted: 66

Total Points Targeted: 60-62