## SPACE TYPE: AUTOMATED DATA PROCESSING CENTER (ADP) (MAINFRAME)

## **Construction Criteria**

The unit costs for ADP Mainframe space types are based on the construction quality and design features in the following table. This information has been generally organized under Uniformat headings. Items marked with a  $\square$  have a space-related cost impact on the building shell and core.

Category	
Shell Exterior Enclosure	
Windows	☑ All exterior windows to computer spaces, including tape room, teleprocessor room, mainframe room, DASD farms, server farms and test rooms to be glass block
Interior Construction	
Partitions	
General	■ ½" GWB on metal studs at 16" OC
	<ul> <li>Raised floor-to-ceiling grid</li> </ul>
Suite Perimeter and	<ul> <li>Structural slab-to-slab</li> </ul>
Public Corridor	■ Two layers ½" GWB both sides on metal studs at 16" OC
	Acoustical insulation
	■ 45 STC
Printer Room	■ Floor-to- slab
	<ul> <li>One layer ½" GWB both sides on metal studs at 16" OC with underfloor plenum divider</li> </ul>
	Acoustical insulation
	• 40 STC
Mechanical Room	Structural slab-to-slab
	• $\frac{5}{8}$ GWB on metal studs at 24" OC
Doors	
General	■ Solid core 1¾" hardwood veneer doors 3'- 0" (w) by 7'- 0" (h)
	Doorframes will be a minimum 14 gauge metal frame construction
	Hardware to be latch sets with levers

## From GSA Unit Cost Study

Category	
Suite Entrance	■ Solid core 1¾" hardwood veneer double doors in 6'- 0" (w) by 7'- 0" (h)
	Doorframes will be a minimum 14 gauge metal frame construction
	Frame and threshold sound gasketing
	<ul> <li>Hardware to be locksets with levers</li> </ul>
	Key locks
	Automatic closers
Printer Room	■ Solid core 1 <sup>3</sup> / <sub>4</sub> " hardwood veneer doors 3'- 0" (w) by 7'- 0" (h)
	Doorframes will be a minimum 14 gauge metal frame construction
	Frame sound gasketing
	Hardware to be locksets with levers
	Key locks
	<ul> <li>Brushed stainless steel kick plate room side</li> </ul>
Mechanical Room	Solid core 1¾" hardwood veneer doors 3'- 0" (w) by 7'- 0" (h)
	Doorframes will be a minimum 14 gauge metal frame construction
	Hardware to be latch sets with levers
	<ul> <li>Brushed stainless steel kick plate room side</li> </ul>
Signage	
Suite Entrance	<ul> <li>Room identification signage to be raised plastic letters mounted beside the door with Braille stainless steel ADAAG compliant module</li> </ul>
Room Signage System	Signage for life safety and public convenience (toilets) within the functional areas of the tenant will be included in the unit costs and will be modular vinyl lettering on plastic laminate signage frame system with ADAAG compliant tactile Braille vinyl signage modules
	<ul> <li>Signage requirements within the tenant demised space related to their function will be provided by tenant</li> </ul>
Window Treatment	Glass block areas do not require window treatment
	<ul> <li>Horizontal 1" louver blinds at offices</li> </ul>
	Anti-static painted aluminum louvers
	Concealed valance free head
Floor	☑ 18" raised floor throughout suite
	All non-core areas and core electrical, telephone and computer LAN closets
	<ul> <li>Exclude core areas of public lobby, public toilets, mechanical fan rooms, janitor closets and storage rooms</li> </ul>
	Low pressure high induction diffuser
	Concrete filled metal pans at 24" modules
	<ul> <li>Pedestal and stringer support, with intermediate support</li> </ul>
	■ UL rated conduit

Category	
Interior Finishes	
Walls	
General	Low VOC semi-gloss paint with vinyl base
Floors	
General	<ul> <li>Anti-static plastic laminate (on raised floor as part of building shell and core provisions)</li> </ul>
Offices, Break Rooms	<ul><li>Carpet tile (on raised floor)</li><li>32 oz per square yard level loop</li></ul>
	<ul> <li>Yarn dyed color with pattern</li> </ul>
	Fourth generation nylon yarn
	<ul> <li>Bonded construction with cushioned back</li> </ul>
Ceiling	
General	<ul> <li>Suspended 24" by 24" acoustical tile ceiling part of the building shell and core provisions</li> </ul>

## From GSA Unit Cost Study

VAC	
Dedicated HVAC Units	Suite to have redundant mechanical systems with service provided 24 hours per day; the system will provide humidity control
	Computer areas will use the "cold aisle" concept (W. Pitt Turner IV, Edward C Koplin, "Changing Cooling Requirements Leave Many Data Centers At Risk, Computer Site Engineering Inc, www.upsite.com, CSE 540.1)
	☑ Dedicated HVAC equipment has been sized on the basis of approximately 1 to of refrigeration per 125 gross SF of usable floor area; a total of six (6) 25 ton units are assumed to allow for 50% redundancy in units
	☑ Dedicated cooling towers shall be two-cell type with each cell having 100% required heat rejection capacity
	☑ Provide two condenser water pumps (one stand-by)
	<ul> <li>Separate zones for each space</li> </ul>
	HOT COLD AISLE HOT COLD AISLE AISLE AISLE AISLE OUT AISLE AISLE
Air Supply	☑ Sound baffles at all acoustically rated partitions
Exhaust Air	☑ Copier rooms, printer rooms and service units provide direct 100% exhaust
Thermostat Controls	<ul> <li>Provide separate controls for each room</li> </ul>
	Provide setback thermostat even in areas of 24 hr operation with override by building shell and core BAS
ire Protection	
Fire Suppression	<ul> <li>Sprinkler system is part of the building shell and core provisions; assume that the Tenant Improvement for this space type requires relocation of 10% sprinkler heads</li> </ul>
	Fire and smoke dampers to be provided in rated walls
Fire and Smoke Detection	<ul> <li>One smoke and heat detection device in each occupiable space</li> <li>One final device in each occupiable space</li> </ul>
	One fire alarm pull station by each egress point for each suite

tegory	
ectrical	
General Criteria	• 50 Watts per SF provided as part of building shell and core provisions
UPS and Emergency Power	Emergency power and uninterruptible power be provided to meet all electrical requirements of the entire ADP facility for 30 minutes
Electrical Outlets	
Raised Floor Areas	<ul> <li>Raised floor wireway distribution with modular cable, distribution boxes and conduit every 12'- 0"</li> </ul>
	Raised floor in equipment rooms to have 50 Watts/SF general power supply
	<ul> <li>See Equipment section below for information on the requirements of individual pieces of equipment</li> </ul>
	<ul> <li>Flush floor receptacles with four duplex receptacles for every 100 SF for office areas</li> </ul>
	■ Wall mounted duplex outlets every 50'- 0" OC
Lighting	
General	General lighting provided as part of the building standard shell and core provisions with a minimum of one 24" (w) by 48" (1) recessed parabolic fluorescent fixture with two T-8 lamps and electronic ballasts per room and additional fixtures per every 80 SF (or T-5 equivalent)
	Independent switch control for each suite with 3 way switches at each entrance and for each enclosed space, including offices, work rooms, file rooms, closets
Telephone and Communication Outlets	
General	<ul> <li>Conduit and pathways for services from the core to the tenant demised space provided as part of the building shell and core provisions; conduit and boxes within the tenant suite are part of the Tenant Improvement unit costs</li> </ul>
	<ul> <li>Conduit and outlet boxes provided as part of the Tenant Improvement unit costs telephone systems and Data LAN systems provided by tenant</li> </ul>
	<ul> <li>Conduit and telephone outlet boxes for flush floor receptacles with one telephor line for every 400 SF provided as part of the Tenant Improvement unit costs; equipment and wiring provided by tenant</li> </ul>
	<ul> <li>Conduit and outlet boxes for flush floor receptacles with one LAN connection for every 400 SF provided as part of the Tenant Improvement unit costs; equipment and wiring provided by tenant</li> </ul>
	<ul> <li>Conduit and outlet boxes for one ceiling mounted PA speaker per room plus one for every additional 1,000 SF provided as part of the Tenant Improvement unit costs; equipment and wiring provided by tenant</li> </ul>
Computer Equipment	<ul> <li>Conduit and outlet boxes for fiber optic main horizontal and vertical backbone system (optics by tenant) provided as part of the Tenant Improvement unit costs equipment and wiring provided by tenant</li> </ul>
	<ul> <li>Conduit and outlet boxes for T-1 communication lines for web servers provided part of Tenant Improvement unit costs; equipment and wiring provided by tenant</li> </ul>