The Pamphlet Series: A Primer for the Non Virtual Office

a few thoughts about office planning...

Abby Suckle Architect PC

Notes From the Trenches

The fantasy
Imagine how much fun it would be to telecommute.

Your colleagues wouldn't cast dirty looks your way when you were engrossed in a challenging game of solitaire. You could be sitting in bed eating bonbons and reading magazines instead of trying to keep the well tossed, heavily dressed, plastic container of salad components off of the documents enveloping your not-nearly-large enough workstation. You could be wearing whatever you liked (or nothing) instead of business casual. You wouldn't have to rename a bad hair day a mental health day. And you could play with your iPhone to your heart's content.

Even though most people take pains to inform you at great length that they are most productive when the mood strikes them in the middle of the night, if you so much as hint at downsizing their workspace, they will defend their turf as though you've invaded their territory or merely killed their first born.

It turns out
Everybody works. And not all offices are virtual.

Most people still spend most of their waking hours toiling away at their 'home away from home'. Even though the turn-of-the-last-century bullpen looks suspiciously like the turn-of-this-century trading floor and the rabbit warren of offices that was the setting for the 'Man in the Grey Flannel Suit' or 'Mad Men' seems to have morphed into the rabbit warren of cubicles, a lot has changed in the interim.

Who could have imagined that hotelling which was the hot concept a mere 5 years ago might not be the way of the future? Who would have thought that the design studio has become the model for the forward thinking space of today? Now it's de rigour to fill one's workspace with all the creature comforts of the nest to inspire those lucky workers to new levels of productivity.

Coping is always a difficult thing. But it is not insurmountable. Provided with enough buzzwords, a few insights and outtakes, you can go far. These are just a few notes from the trenches.

INTRODUCTION

Larkin Building
Frank Lloyd Wright, 1905

Swiss Bank
Skidmore Owings & Merrill, 1998

The Document Itself

Facilities Manager

All organizations will have a facilties manager, or somebody who is wearing that hat. This is the person who will help you navigate the organization and will keep you from getting absorbed by their office politics and abused by disgruntled staff. This is the person who will have to defend your choice of yellow as a workstation color to an organization suddenly color literate. Remember that because of its stressful nature, most of these people only undertake this job once. So, they will need to be trained by you. It's just not part of your job description.

The Programming Questionnaire

When you begin programming you are usually in the courtship phase of your relationship and need to impress your client. This requires the production of an elaborate document called the Program Questionnaires that no one will read. You are trying to impress them with how thorough you are. The questionnaire will lead to meetings with the users. That in turn will lead to the an extremely thorough laundry list of program functions sorted room by room with adjacencies and technical constraints and a square footage summary that becomes the program. In life it will tell you what to do, If they want a lot of equipment, you had better plan for a lot of power; if they want a lot of chairs, they need a bigger space.

Tour of the Existing Facilities

It will help you to see the where they live now. This is like the before shots in a makeover. No matter what you will do, there is no question that it will be an improvement on what they have because they wouldn't have hired you if what they have is so wonderful. Keep your eyes out for how cramped they are, who is a pack rat and how much equipment and stuff they have.

How People Should Work

The first thing to do is get the body count and its distribution. You also want to know if they work on projects alone or in teams for their core business and how many people are running their support functions. If there is a single person in charge of copying, supplies, the kitchen, mailroom and faxes, those functions had better be adjacent to preserve that person's sanity.

Critical Things to Talk with Them About

Evenings and Weekends. People who are supposed to be at their desks at 3 in the morning will want copiers, supplies, food, access to delivery men and each other. And sympathy.

PROGRAMMING

Program Questionnaire

Program Space Summary

Program Office Study

Special Features

A Silicon Alley (or Silicon Valley) Company is a State of Mind

Not all silicon alley (or valley) companies have youthful CEO's with hordes of black clad pierced and tattooed employees who are on the other side of 25 following in their wake. How can you tell when your client is really web 2.0?

For one thing, the business model might not be very clear to you. When they tell you what they do, the conversation is peppered with buzzwords: 'twitter', 'b 2 b', 'branding', 'social networking' 'meetups' and 'post ipo'. After a long explanation, you still might not understand it.

Another giveaway is that they took office space in a location a good 1/2 mile to the nearest subway without thinking that messengers may not elect to service them on Friday afternoon when they are called at 4pm.

if you can't see any restaurants in a 6 block radius that might be open at night, you will need to incorporate an elaborate eating facility into the design. Otherwise, the entire staff will disappear daily for 2 hour lunches.

What Makes Them Special

Web 2.0 companies (and companies with pretensions in that direction will want open plan think tank environments. This translates into conference/war rooms with lots of av equipment and computer connections shaped perhaps like an egg. Suggest funky materials (think MDF board with glitter finishes) reminiscent of the 60's and you can't go wrong.

They will also want unusual decorations. Inspiration should come from the Museum of Natural History: a tropical fish tank, an ant farm, a dinosaur skeleton, stuffed moose, or celestial globe are considered ideal to get the creative juices flowing. Naturally the amenities should be designed to complement the decor. You can't go wrong with bocci courts or fireplaces.

Caveats

Even though workstations may look like they have been recently rescued from a flea market, it does not mean that they are less expensive than stations that are made to order.

Speed

Don't even consider any furniture with a normal 12-16 week leadtime. The company could very easily go out of business while they are waiting for their delivery.

DESIGN FOR THE WEB 2.0 COMPANY

TBWA/Chiat/Day
Clive Wilkinson

TBWA/Chiat/Day
Clive Wilkinson

Funny Garbage
Specht Harpman Design

Organizing Principles

Centre Pompidou
Sketch - Competition Entry

Single Loaded Media Wall
Single Monitor Station

- **Sign**
  Cutout
- **Sony Monitor**
- **EMail Monitor**
- **Keyboard**
- **CPU**
- **Light Panels/Openings**
  Mosaic of colored light

Display Kiosk

Eames House
Los Angeles

Double Loaded Smaller Wall

- **Sony Monitor**
  Back to Back
- **CPU**
  Global Digital Sign on Front
- **Email monitor**
- **Keyboard**
  Adjustable shelf

Las Vegas Library
Antoine Predock

Mandell Weiss Forum
Mirrored Wall - Night View

Mandell Weiss Forum
Mirrored Wall - Night View

Wall with cutouts for Equipment
Single Monitor Station

- **Sony Monitor**
  Cutout
- **EMail Station**
  Keyboard on tray
- **CPU**
  Access Panel
- **Light Panels**
  Mosaic of colored light

Wall with equipment on Shelves
Either single loaded or back to back

- **Graphic**
  Signage along side
- **Large Monitor**
  On Shelf
- **Email station**
  Also on Shelf

'Folie'
La Villette Paris - Bernard Tschumi

View from Corridor
Perpendicular to the traffic flow

- **The Globe**
  Logo
- **Sign**
  Faces Direction of traffic
- **Sony Monitor**
  Faces Traffic
- **Email station**
  Behind support
- **CPU**
  Faces Inwards

Facing the Email side
Unit perpendicular to traffic flow

- **The Globe**
  Logo
- **Email station**
  Faces Inwards
- **Keyboard**
  On shelf
- **Possible Seat or Shelf**
  Faces Inwards

Identity
This is the face that the company presents to the world. It's your chance to make a design statement. It should be something you could describe in an elevator and sketch on a napkin. It should be extremely clear who the company thinks they are when you enter the front door.

Before You Lay out the Plan, You need a Concept Diagram
Concept diagrams will illustrate the issues: the relationship of public spaces (what you show the people you want to impress) to private (spaces you show the 'work' family), how the functions 'stack' or what goes next to what, and the circulation spine. Choose your diagrams wisely. Calculating circulation efficiencies is only helpful if your corridor is razor thin.
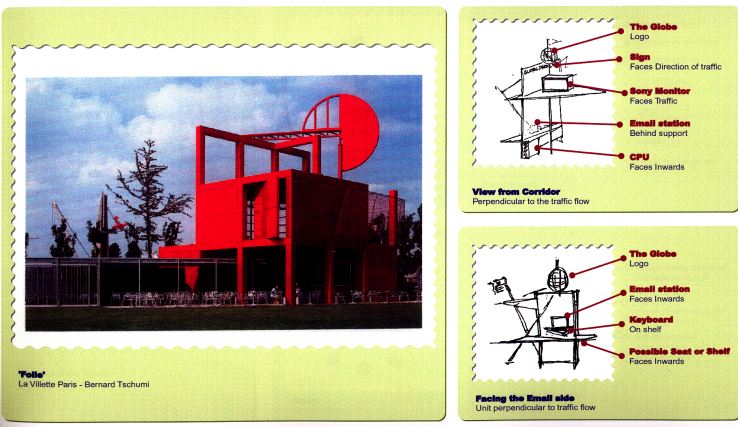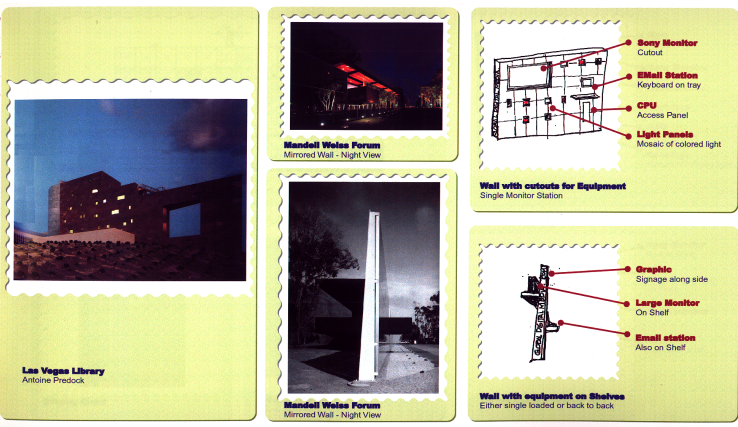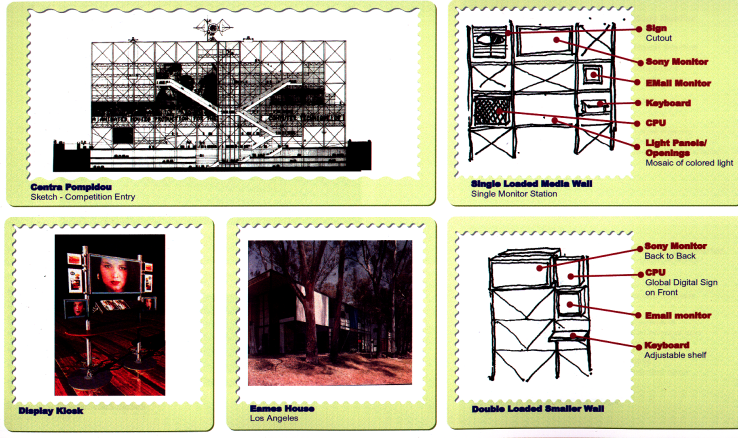
The Concept Diagram Reflects the Caste System
You can count on one hand the number of companies where everybody is equally ranked. Hierarchy in organizations always translates into scale, money and location. Develop a caste system where those higher in the food chain get better location (windows, proximity, view) and amenities (larger offices and furniture more of it and more expensive fittings). If the space has only four windows, office productivity will plummet if you assign the three senior employees windowed offices. Instead concentrate on offering them other sweeteners: offices can be more centrally located, larger, etc.

Don't bother asking; all employees will tell you that they perform sensitive tasks. This is because employees performing significant sensitive tasks will require acoustical privacy. And acoustical privacy entitles them to an enclosed office. Here the facility manager will intervene and decree who gets the cubicles and who the offices. Since no one will be happy, they wait until the last possible moment to assign the spaces. Which is when you have to order the furniture. On a large project it translates into 9 months before move-in; on a small one 8 weeks.

Anticipating The Future
No company hires an architect when they are planning to downsize. The future is always full of grand plans. You could and should have long discussions about this year and next year and in 5 or 10 years. But, definitely design the space for now. Remember, expansion means more people and people means more workspaces. Spaces that are rarely sacrificed to expansion are the reception area, the main conference room, auditorium, and the Senior offices. Plan to spend your money there.

CONCEPT

Uplights - Urban Innovations
Eve Maddox

Task Lights - Publicis & Hal Riney
Esherick Homsey Dodge & Davis

Flourescent is your Friend

How You Light a Space Depends on What You Want to Do In It
Lighting creates the mood. If you are planning an office for the IRS you might look into an endless grid of 2 x 4 flourescent fixtures; for an ad agency, this might not be considered dramatic enough.

The textbooks say that a workspace should have 35-50 footcandles of light and should be designed to have no more than 2-3 watts per sq ft. Since lights use more energy than anything else in the office and energy is expensive, there is a tradeoff between amount of lighting, its quality, costs and the code.

The big Challenge: Computer Screen
With computer screens, the issue is glare.   Lots of low glare fixtures with shielded bulbs are the prescription here; uplights will work better. Some panel systems feature lights as part of the system emanating upwards from powered panels or columns. For even less money you could achieve the same thing with a light cove of uplights. Task lights help.

Rule of thumb: To make the space larger and for drama, light the Walls
An even ceiling grid of light fixtures lights the horizontal surfaces. But, walls will look darker than they really are. Wall washers corrects that. For a normal height ceiling a 1:1 ration of lights per feet away from the wall is appropriate. Or, lights spaced 3' apart and 3' from the wall usually work. Otherwise you get scallops.

The Lamp
A lamp is a technical term for a light bulb.   The warmest bulbs which make people look their most attractive are those that approximate candles, or incandescent. These are about to be eliminated from the market. Halogen lights at the other end of the spectrum actually have a strong white light; thus, jewelry sparkles, people, alas, get bleached out. Ideally, all of the fixtures should approximate daylight and be the same color (temperature).

The Challenge
Bulbs have to be replaced. Since lights are switched on as soon as they are installed by the contractor, they begin burning out shortly after the building opens. It is best to order less varieties and source locally and affordably. Otherwise it is senseless to spend a lot of design effort color correcting the paint and finishes.

LIGHTING

Wiring the Space

Panel System Wireway

Diagram of a Walker Duct System

Raised Floor

In which coping with power and data is briefly described.

Power and Data
However many power and data lines you think you may need, add more. The Rule of Thumb is that you could never have enough outlets. The other rule of thumb is that they both need dedicated conduit in order to not interfere with each other.

Remember power has to come from somewhere. If it comes from the wall, you need extension cords (whether or not they are buried in panels), from the floor (you get computer floors, walker duct, or, pokethrus). It can also come from the ceiling in power raceways. It is a given that none of these will ever be where you want it unless you lay out the space and then plan the building around it.

The Beltway
One way to eliminate the dust bunnie/power cord problem is to get the power off of the floor. All the rage in systems furniture a couple of years ago, the beltway basically brings the power to the desktop, or right beneath it. But, alas, you do pay the extra cost for the additional wireways to get the power up from the floor or wall to the beltway. The compromise solution, wire managers are considerably more cost effective. Nomenclature aside, you are looking at giant hooks or troughs mounted under the worksurface that keep the wires airborne.

UBS
This is what you do if a major earthquake hits, there is a flash flood, and the company must still surge on. It's basically an extra beefed up generator. Everything will be considered critical until the budget comes in; then only the main server and computer room will be protected.

Rule of Thumb
Powered furniture with plugs needs a UL listing; furniture hardwired to the floor or wall does not.

Most overlooked planning issue
You can never have enough grommets

Most overlooked design issue
It is not enough to assume that the contractor will naturally want to coordinate the switches and outlets with your paneling and furniture. What he wants to do is to attach them to the nearest stud. This is because in the interest of economy the electrical foreman on the job is usually only given a set of electrical drawings. Should you be anxious to align these things, it helps to give him the set of the architectural drawings and put a note to that effect in the specification.

POWER & DATA

Sound Transmission
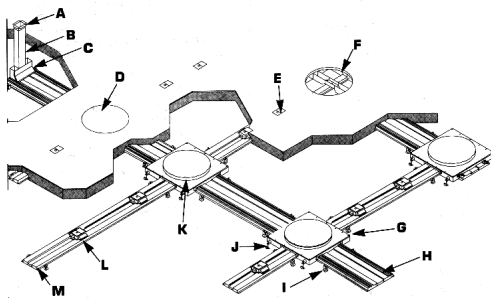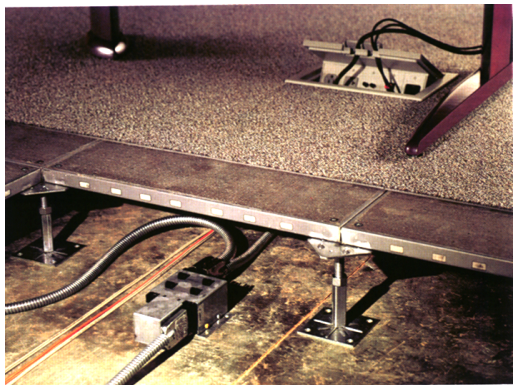
In which some acoustical principles are addressed.

Sound Transmission
Machines and people transmit the most sound. To minimize the sound, muffle it at the source. Fabric panels can do wonders to minimize printer and copier noises. It doesn't get it all.

Even though panel heights are traditionally set so that people are not supposed to hear each other easily, there is no way that everybody else in the vicinity will not know if someone is having an altercation with their loved ones. Not surprisingly, no matter how discrete a person in an open plan workstation is when they are chatting intimately with their doctor, most of their neighbors will surely know. Adding a private telephone room can work wonders on the morale of people confined to workstations.

Lively Spaces
Even though everyone is working very hard, you don't want your office to feel like a morgue. Hard surfaces will reflect the sound. The more hard surfaces you have, the livelier the space will be. There is always a tradeoff between the desirable maintenance qualities of the hard materials with the soft acoustical ones. Another trick is to add white noise. This is a sound system that creates the blowing sounds.

To Muffle a Space
Surround a conference room in a cocoon of stuff. Make the partitions between rooms extend slab to slab, wrap the outlets and switches with acoustical blankets, put a sound seal in the door, thick carpet on the floor, an acoustical ceiling above, fill the gaps at the convectors between spaces, and for good measure, paste thick upholstered panels on the walls and you can hatch terrorist plots inside and no one will be the wiser.

Acoustical Dividers
These are the space dividers that take large conference rooms and allow people to have smaller events inside. No matter how you grid the space and how many fake tracks you put into the ceiling, you can never get the space to look elegant in its small and large incarnations. With its applied finishes, each full height panel grows to be at least 6" thick by about a yard wide by. You also need to create an appropriate closet for panel storage.

Rule of Thumb
All indoor spaces need some sort of acoustical treatment. It is tempting to only hire an acoustician to help with the auditorium and not the entire space. Many acoustical treatments survive value engineering (aka budget cuts). But not all.

Hard Surfaces
Landor Offices

Treated Surfaces
Fila USA

ACOUSTICS

Some Planning Guidelines

ADA - Some Furniture Guidelines

High Forward Reach Limit (a)

High and Low (b) Side Reach Limits

Maximum Side Reach over Obstruction (c)

NY City Building Code

Construction Work that the Owner Can Do Without Involving an Architect

Not a lot. Without an architect the Owner can paint, move furniture, build cabinetry, and strip floors. In New York City an architect is required when the Owner wishes to make any changes to the walls, ceilings, plumbing, doors, etc. Unfortunately it means that if an owner decides to divide a conference room into 4 offices he needs a permit. Should he plow on with the renovation anyway, if he is caught, the penalties begin with court dates and fines.

The Space Needs a Proper Use

Even though the landlord (or managing agent) rented your client a loft space for an office it is possible that the space is still zoned for whatever it was last used as such as a manufacturing space. Most assuredly this will create a problem when you go to file the office plans. It is not enough to just change the name of the space. You may find yourself suddenly upgrading major building systems such as the sprinklers, or fire alarm when you go to file for a permit.

The Permit Process

You've completed a perfect set of construction drawings and hired the contractor. The forms are filled in correctly. The managing agent has signed his forms, the Owner has written his check. The Certificate for Asbestos has been filed. You've orchestrated for the electrical work to be submitted to the Bureau of Electrical Control. And, your contractor has scheduled the freight elevator. It might be wiser to wait. If you are lucky it could take a day to get a permit; it could also take six monthes.

Handicap

In New York City, Local Law 58/87 applies as well as ADA. The former is enforced by the Building Department; the latter by the Courts. In an office, you only need one unisex handicap bathroom per floor. If, for instance, you want to replace a broken toilet, you don't have to bring the bathroom up to code; if you want to add more toilets, you do.

Some Typical Mistakes

Interior Offices without windows need supplemental air. Elevator lobbies need to include the egress stair in the security enclosure.

CODE
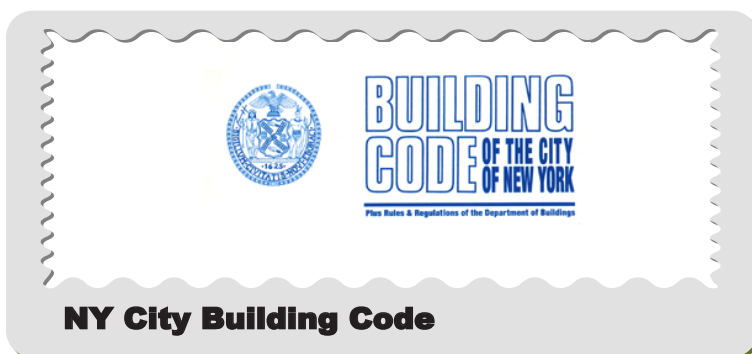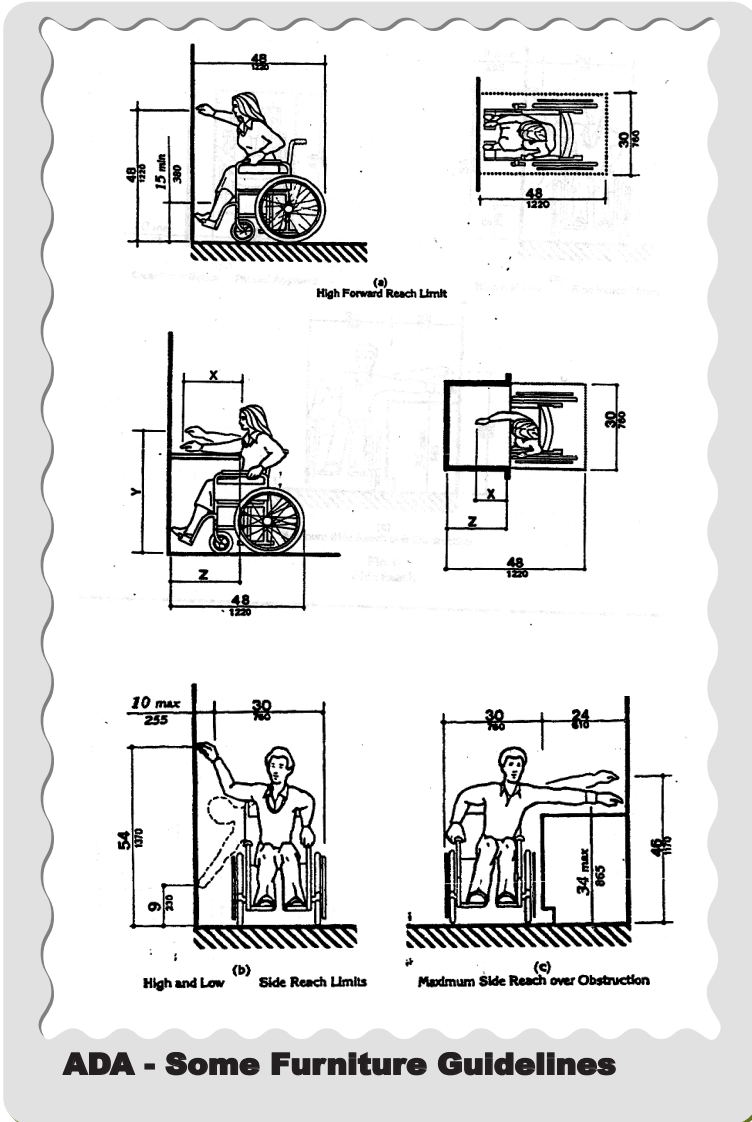
Work Hazards of a Desk Jockey

Prolonged Extension of the Arms & Back

Prolonged Forward Bending of the Head

Prolonged Over Bending

To Get a Bad Back

Many people in this world have bad backs and are excellent candidates for the development of carpel tunnel syndrome. It is not unlikely that more than a few of them will work in this office.

The best way to stress the lower back would be to sit in a hunched and forward position. Another safe bet is to bend the neck over too far. Overextending the arms without supporting them does an admirable job of creating neck and shoulder pain.

The Chair

You should be able to adjust your ergonomic chair so that you sit in it properly. Feet should be firmly planted on the floor, legs bent at a 90 degree angle with the weight on the sit bones and the upper half of the back of the thigh while the body is in a relaxed upright position. The backrest should support the inward curve of the lower back. The rib cage should be elevated. Armrests should hold up the forearms.

Shopping for a suitable chair for a company requires that the chair (or a variation) fit the smallest thinnest person and the biggest fattest one and is adjustable to many variations in between. Finding a chair that everyone agrees is comfortable is one of the biggest hurdles on a project to be overcome and often eclipses the time devoted to designing the rest of the project.

The Desk

Ideally the desk should be adjustable so that the keyboard can be as low as possible. The ideal position has the arms and wrists floating above the keyboard parallel to the floor. Wrists should be straight. The mouse should be the same height as the keyboard and positioned to the side of it.

The Monitor

The monitor should be at eye level and about an arms length away from your face. What you look at all the time should be placed in front of you. Putting it right angles to the window or bright light sources will help relieve glare.

Other Recommendations

Other than improving your posture, it helps if you frequently change your position and even do 'warm up stretches'.

ERGONOMICS

Panel System

Freestanding System

Panel System Plan/ Curved Wall

Systems Furniture

How Do You Choose A System

The selection of the workstation system is the most expensive furniture decision that you and your client will make. This entitles you to lunch (or dinner) courtesy of them, flights on the company plane to the factory, and full scale mockups in the finishes you are considering as the manufacturers fawn over you. In the flurry of courtship, it's easy to overlook that it would be helpful for your client to schedule a trip to a 5+ year old installation to speak to the Facilities Manager there to see how the furniture is holding up.

Panel based systems furniture will always look better in large warehouse spaces with lots of floor area and wide column bays where there can be acres and acres of identical workstations than it will in a more confined space. But, those spaces are often tailor made for the freestanding mobile systems.

Most systems will either be made of wood/particle board or metal. They will have panels dividing the cubicles. If there are a lot of columns that are (unfortunately) going to get clipped by workstations, you will be out of luck if you select a steel worksurface because it will have to get cut in a metal shop to fit the columns.

Coordination

It helps if the panel system module relates to the planning module so that all the lights, ducts, sprinklers, etc. are placed correctly over the stations. It also helps if the power and telephone lines infeed in the right locations.

While it is nice to look through windows and see people working, it is not nearly as nice to see the ends of panels and the undersides of worktops. If the geometry of the system doesn't marry well with the window wall (mullions and convector covers), take the system off of the wall.

Good to Know

Typically a panel dimension is clean and the increment comes with the connectors and supports. If you choose a panel system with a 2-1/2" thick panel, you have gained a foot every 5 workstations. Do not expect the fire marshal to be as sympathetic as you might wish if it impacts an egress corridor.

In order to get systems furniture correctly purchased and installed, the plans need to be frozen about 6-9 monthes before movein. For obvious reasons, there will be a reluctance to assign people to offices on the client side until the last possible moment. What happens? There will be a lot of changes between the order placement and its installation.

Unfortunately

The minute that your installer finishes the first workstation, an electrician will decide that the worktop will make a perfect ladder to reach a light fixture above.
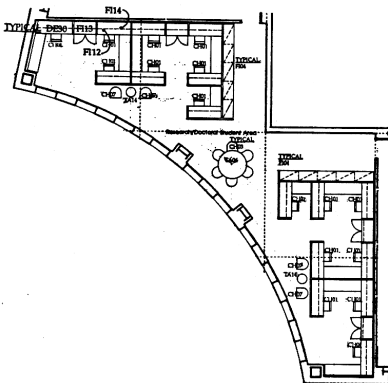
THE WORKSTATION

Page from a SpecSheet
Finish Samples - Presentation Board

Model: Large Conference Room

The Movable Stuff

All Furniture is Custom
Even though a manufacturer labels an item standard, it does not mean that it is sitting in a warehouse awaiting your order. In reality it is made to order. The way that furniture is sold in this country requires that the manufacturer create a telephone book of possibilities encompassing every feature imaginable with a different price quoted for each part. A sales rep on call will guide you through the process because it is virtually impossible for you to specify anything by yourself or to figure out how much it costs.

Furniture prices are quoted as list prices. Nobody pays list price either. Furniture will be sold to your client at something called net price which is list price minus a few discounts the scale of which depends on how anxious the manufacturer is to close the sale. A company that is under the impression that your client is on the verge of purchasing a thousand filing cabinets will price it very competitively.

If your client is important enough, he can buy the furniture directly from the manufacturer. If not, he must shop thru a dealer who exists specifically to write the orders, make sure it gets made, delivered, inspected, and installed. Not all dealers handle all manufacturer's lines. So, if you have your heart set on outfitting your space with Aeron chairs, you might want to seriously consider pairing it with Herman Miller's Ethospace.

When Does the Manufacturer start Making the Furniture?
The day after your client writes the check for the deposit.

When is the furniture Delivered?
The day after your client writes the check for the balance of the payment.

Will this happen before move-in?
Hopefully

How can you speed it up?
Schedule a major party in the space and arrange to have President Obama and the New York Times attend.

What Do You Do About the Future?
Set your client up so he can reorder the product for the same price that he originally paid for it; order attic stock of all customs and keep a record of where you put it. And make more copies than you ever imagined that you would need of your furniture and finishes specification book.

FURNITURE