

SOFT COST ANALYSIS

This analysis is based on an approximate +/- 50,000 Rentable Square Foot project in the New York area in which union labor would be required. The building would be run with union labor (32BJ). The project would need to be filed with the NYC Buildings Department and FDNY as well as reviewed and approved by the Landlord. The makeup of the space would be 40% open space work areas and 60% enclosed areas, meaning offices, conference rooms, reception, break room, storage, Server room, copy areas etc. The space is fully demolished when handed over to the Client so there are no costs involved with demolition. Obtaining space this way is always more advantageous both from a cost standpoint and the ability of the consultants to get into the space to measure and investigate base building tie-ins etc. immediately. The services performed by the Architect, Engineer and other consultants are what we have called Soup to Nuts. This means the Architect is there when the client is looking for space, providing test fits, reviewing the lease along with the Brokers, in house personnel and the legal counsel, working with the client on programming the amount of space required for the facility, measuring the space both horizontally and vertically, coordinating with the Clients in house IT personnel, providing bid analysis for both the construction and the furniture, procure moving services and subsequent analysis and being on site the day the Client moves in and provide close out services as well as all the basic services such as schematic design, design development, working drawings and specifications, coordination of consultants and construction administration that we commonly associate with an Architect. The numbers below and the description for each item are based on the tracking of projects of various sizes that we have designed over the years. Some numbers work better as lump sum rather than cost/SF due to the nature of the item. The numbers presented here are for a project that wishes to maximize population with a few high end areas and the rest open space and offices/or other rooms.

The Soft Costs of a project entails the following items:

1. Code Consultant (formerly known as Building Dept Expeditors)
2. Building Department Filing Fees
3. Special Inspection Agency
4. Asbestos Investigation Agency (ACP-5)
5. Engineering Fees (MEP)
6. Engineering Fees (Data Center)
7. Architectural Interior Fees
8. Structural Engineering Fees
9. A/V Consultant Fees
10. Lighting Design Fees
11. Reimbursable Expenses
12. Voice and Data Cabling
13. Telephones
14. A/V Equipment
15. Furniture
16. Security Systems
17. Server Room/Data Center Equipment
18. Landlord Charges
19. OT freight Elevator Charges
20. Moving Expenses
21. Cleaning

Some of these items, such as Voice and Data Cabling, may seem to be hard costs but have been typically included in the soft costs due to the in house nature of the item or being under separate contract with the client as opposed to being part of the General Contractor's scope of work. Also, you may wish to remove some of these items as they may be budgeted and funded through different departments and vehicles.

1. Code Consultant

As new applications and procedures are continually added by the NYC Department of Buildings, the cost for the Code Consultant has gone up as well. Some 20 years ago these fees were in the \$3,000 to \$3,500 range but now can be some \$15,000 on projects of 50,000 RSF. One should be careful when contracting for these services. It is important that they

include a code review. There are continual changes by the Building Department that require notes, details or other drawing information that never gets down to the consultants, but always works its way to the Code Consultants. The services under this consultant not only include filing with the building department but also Fire Alarm and Sprinkler filings with the FDNY. There are items such as equipment use permits for HVAC equipment which need to be procured and they should also pull the permits for the GC as part of the services the Client pays thus negating any excuses from the GC that he is unable to pull a permit to get started. Control over the “time is of the essence” nature of project management and construction is the key to moving the mobilization of the project along quickly. As you want soup to nuts with the Architect, the Code Consultant should be retained under the same conditions.

In addition, please understand that the NYC Department of Buildings has a Self Certification program. By the Architect, Engineer and Building Owner signing affidavits, the consultants are stating that they are responsible for the code compliance of the drawings. Some Architects and Engineers have started to shy away from this due to an increase in the auditing procedures of the Building Department. In this case the project goes through a normal review process in the Building Department, which can take 2 to 4 weeks, thus increasing the length of the project. The Self Certification program minimizes this down to approximately 3 days. Any consultant, who is confident in his honesty in performing the work and his integrity to maintain the code, should have no issue with this. A recent filing for a project of some 6,000 RSF included 75 pages of applications in the initial filing for the permits.

2. Building Department Filing Fees

In a nutshell you should budget 1.5% of the construction cost of the project for filing Fees for both the NYC Buildings Department and FDNY. These numbers are fairly consisted across the board. The Building Department, at one time, accepted whatever the Architect stated as the construction cost. In addition, the Architects had a tendency to low ball costs. Back then the costs of the project did not include carpeting, painting, millwork and a few other minor items. Today, the costs include all hard costs for fixed items except furniture and electrical. The Building Department requires cost Affidavits to be signed and sealed by the

Architect, Engineer and signed by the Landlord. These affidavits have to be submitted both at the start of the project and the end of the project. Should there be any increase in work you are required to pay additional fees at the end of the project. If the Building Department audits the project, they can request documentation for backup. Fines can be imposed and the professionals can be sanctioned. No one's license is worth this. This came about due to the under valuing of work. Also keep in mind, if you are phasing or fast tracking a project, you may have multiple filings or amended filings. All of that has costs to the Code Consultant and additional permit fees to the Building Department and FDNY. For the purpose of this exercise we have used a \$50/RSF number for hard costs not including electrical work.

3. Special Inspection Agency

As a result of crane collapses and other construction failures within the last 5 years, the City decided that Architects and Engineers should no longer inspect their own projects for the controlled inspections required under the code. Now known as Special Inspections, these inspections typically revolve around sprinklers, fire alarms, fire stopping, fire rated construction, HVAC systems and ventilation among others. The Architect and Engineer only sign off the Final Inspection. On projects of 10,000 RSF this number can be \$11,000. On projects of that size, the Inspection Agency normally has to go to the job site once or twice. However, when you are dealing with projects of 50,000 RSF, it is necessary to go to the project site on multiple occasions for these inspections raising this number as high as \$20,000. The key to minimizing these visits is close coordination between the General Contractor and the Special Inspection Agency so that adequate notice and time is made for the inspections. The more they have to go back because the work is not ready to inspect, the more it will cost. This is a new issue that the Architect needs to stay on top of during Construction Administration as well.

4. Asbestos Investigation

Unless you are fortunate enough to be relocating to a building built after asbestos was outlawed(1985) you will need to provide an ACP-5 indicating no asbestos or asbestos to be untouched. I normally budget \$2,000 for this for a project of 50,000 RSF. Smaller projects usually are only

\$950 with the cost increasing as the project gets larger. The investigation fee includes the initial air samples. However, on some occasions you may need additional samples taken which run from \$14 to \$75 apiece. Keep in mind that if you are going into a building that was previously cleaned of all asbestos, you still need to provide this form. Some landlords are willing to supply this form as part of the lease deal so you can save this cost under that condition.

5. Engineering Fees (MEP)

This item is quite simple. Most engineers that can handle a project of 50,000 RSF or more are looking for \$1.50. You may be able to negotiate down to \$1.25 if they are hungry enough but the fair number is the best to use for budgeting. This will buy you the MEP services for an office with some supplemental units for large conference rooms and minor server rooms. Emergency generators also require additional engineering although we don't run into this often when taking space in an existing building because of the cost to install such generator.

6. Engineering Fees (DataCenter)

Additional engineering fees would be incurred if there was a major datacenter component of the project. This means a data room of 1500 SF or more where you need additional engineering for AC and electrical due to UPS equipment etc. The budget for this space can be as high as \$30,000

7. Architectural Interior Design Fees

Architectural Interior Design, as the AIA now refers to this service in their documents, includes the programming, schematic design, design development and construction administration of the project. While I agree with most of what is in the standard AIA agreement, I believe that other services of the Architect should be utilized and be included in the services that they perform. These services can be critical and advantageous to the continuity of a project. Thus, we have the "soup to nuts" scenario we tend to describe. Some clients will try to run parts of the project with their facility management personnel. While I believe that these persons are invaluable in moving a project along, the Architects

role should never be diminished. The Architect should always be an extension of a Client's Facilities group working hand in hand as opposed to just working for them. Architects need to coordinate to maintain control over a project and should be retained for that. Site evaluations, test fits, lease reviews are the least of these services. Also, as a word of caution, most Landlords are now adamant about as-builts at the end of the project, especially in these days of CADD. It is important that these are included as part of the services from the beginning, otherwise you will wind up with a subsequent bill that can be fairly large depending on hourly charges. Soup to Nuts.

Based on a soup to nuts scenario a client should budget a minimum of \$4.00 per RSF. The larger firms may be up at \$6.00 to \$7.00 per RSF but if you go that route the Client should definitely be receiving A-1 service and no extras unless the Client makes a major change halfway through the project. \$5.00 per RSF was the reasonable number but the economic times have driven that down. If you go below \$3.50 per RSF you will, in my opinion, begin to sacrifice quality of service. Consultants are businessmen also, albeit not that great at it sometimes, so they will always be looking for ways to complete a project in less time to maximize profit when the fees are low. The number one way to do this is deflecting responsibility onto the Client, other consultants and vendors and the contractor. Specialty spaces may incur additional fees. A specialized video conference room is one example, when the design and layout has to be performed by the Architect, as opposed to adapting existing specifications. The services received by the Client for his \$4.00 /RSF includes all those services discussed above in addition to furniture selection and specification, décor, client equipment coordination, bidding packages for FF&E and construction and close out so the Landlord is happy and the Client can receive any final work letter monies it is owed.

8. Structural Engineering Fees

Typically structural engineering fees are not involved in projects of 50,000 RSF. They are normally incurred in larger projects where a Client may wish to connect 2 or more floors with an interconnecting stair. The charges for this can vary and it is difficult to budget unless there is an actual scope. You may need some structural engineering should you have a Data

Center within the facility. Additional condensers on the roof will more than likely require dunnage and you may need to reinforce the floor due to the loading of lines of racks and UPS equipment. For a Data Center issue I would budget \$10,000 in fees.

9. A/V Consultant Fees

The fee below should be used when you have a facility with Audio/ Video equipment in the Boardroom consisting of a ceiling projector, screen, monitor, speaker system, microphones in the table, a Crestron system both table remote and on the wall which also incorporates the lighting, motorized shades and potentially a supplemental unit feeding the room for additional cooling. A boardroom such as this is setup for video conferencing. This setup typically requires a closet for a 48" high A/V rack for equipment. In addition to the boardroom you may have 3 other conference rooms with smart boards as well as monitors and perhaps monitors in the reception area and throughout the facility being strategically placed. This type of facility carries A/V Consultant fees of \$25,000 to \$30,000. You may do better if the conference rooms are all the same, more should you have multiple rooms with different equipment or wish to perform options which require additional programming.

10. Lighting Design

With the onslaught of LED's and more sophisticated control systems, Lighting Designer's are becoming more a part of the design team than ever before. Some Architects and Engineers have in house capability but you pay extra for it as you would with an outside consultant. If your project requires a Lighting Designer, or if you want one, you should budget \$0.75 - \$1.00 per SF depending on the sophistication of the lighting and typically \$1.50 for the reception area. It is important to tell the Lighting Designer what you are expecting. They should not be allowed to determine the scope of the work on their own.

11. Reimbursable Expenses

Reimbursable Expenses are those costs typically reimbursed to the Architect, Engineer and other consultants for messenger services, courier services and reproductions. Travel is usually reimbursed only when it is

outside the project area. On a 50,000 RSF facility these reimbursables can run upwards of \$15,000. Remember, there is still a lot of printing done, even though we are computerized and the construction phase requires a lot of messenger and FedEx services to get everything going where it should. E-mails are starting to bring this number down. Also keep in mind that this number should include Client side couriers and messengers. Reimbursable expenses should be billed at cost with no mark ups.

12. Voice and Data Cabling

This item will include the pulling of all cabling used for the voice network and data distribution. We are over \$200 per pull these days so a 50,000 RSF facility will cost roughly \$200,000 or \$4.00/RSF. This number would also include a paging system throughout the facility. Terminations of the cable both in the server room and at the outlet may or may not be done by the in house IT personnel or a vendor that works on all of the Client's facilities. Keep in mind that this number is more efficiently determined by pulls. In house IT should have a good handle on this.

13. Telephone Equipment

The cost of telephone equipment can vary greatly depending on the manufacturer and the services being provided. I would budget \$170,000 for the system, which would include all of the head-in equipment located at the server room, handsets for offices, conference rooms and other specialty handsets and programming. This cost assumes a new system for the facility and not one relocated from another facility.

14. A/V Equipment

Equipment for this item can be as varied as the telephones and even more so. However, I have predicated the number based on descriptions of the operations under various items above. I would define this as being the mid to high end of a normal installation. Budgeting should be at \$3.50/RSF.

15. Furniture

Furniture is the second largest cost on the project after the hard costs or construction. Furniture budgets do not include any built in cabinetry but does include any custom built freestanding items such as reception desks and conference tables. It is important to understand that this number should include desk accessories, waste baskets both at desks and in the pantry and copier/printer areas and any other items such as dishes, glasses and flatware that may be required for high end meetings.

Furniture costs have come down dramatically as manufacturers are offering discounts upwards of 80% so they can retain market share. I recent pricing exercise had Knoll workstations for slightly under \$1400 each. This represents a cost reduction of +/- 60% from 4 years ago. I would carry a budget figure of \$25/RSF for this item until selections have been made and numbers can be more refined.

16. Security Systems

The installation of these systems for a 50,000 square foot space may have at least 4 doors to be tied in to the system as well as the server room door, secure storage areas, fire stairs and possibly the restroom doors. In addition, the pricing includes the supply of the wiring to the electrician, the head-in equipment including distribution panels, power modules, PC and software to run the system. The electrical contractor's installation costs are not included in this number. Budget number should be \$30,000. These costs do not necessarily fluctuate with the market as the security vendor is set by the building which removes competition.

17. Server Room/Data Center Equipment

Typically, when we budget a number for this item it involves the racks only and is based on initial estimates from the Client's IT department as to how many closed and open racks they might need, and the UPS. All other items such as disconnect switches and panels are in the electrical numbers. Servers, blade servers and other equipment similar to that is never budgeted by us and is usually handled under a separate budget. Budgeting for a 50,000 RSF project with a server room, not a Data Center, is approximately \$40,000. A UPS for a server room will cost approximately

\$30,000. If the facility has a full blown Data Center these costs can be as high as \$1,000,000 and more depending on AC, structural work, redundancy in power, back-up power generation etc.

18.Landlord Charges

Landlord Charges include such items as Drawing review fees, overtime elevator charges, Project Management(CM) and the costs to tie-in additional power and chilled water for supplemental units. The only cost not in the soft costs would be the tie-ins. Some landlords charge a Project Management (CM) fee as a way of recouping work letter money under the pretext that we need them to help us get our project built. These charges could range from \$25,000 up to \$125,000 depending on how the Landlord sets these up (SF or %of cost). Drawing reviews range from \$2500 to \$5,000. The drawing review costs can usually be negotiated away for the initial buildout and most Landlords have stepped away from the Project Management (CM) fee due to liability issues unless the are performing the construction as well. See OT freight Elevator charges below.

19.Overtime Freight Elevator Charges

All buildings have these and they can vary building by building depending on whether or not the building has operating engineers on staff and security as well as the elevator operator. Most of these charges run in the \$125 to \$150 range but we have seen them as high as \$350. These charges are not part of the General Contractor's number and must be evaluated early on to estimate properly. Some buildings will allow daytime deliveries but any regular deliveries such as FedEx, UPS, office supplies vendors and mail take precedence. Some allow small deliveries on daytime hours but large deliveries must be on OT and some require all construction related deliveries as well as furniture, equipment and the move to be on OT. A project of 50,000 RSF where all deliveries must be on OT can add up to some 240 Hours. This can equate to \$36,000 at the normal range of rates. We have seen these charges waived for initial construction but that is a rarity.

20. Moving Expenses

Assuming you will have a content move only because all furniture is new we would suggest you budget a minimum of \$35,000. If you are bringing over existing furniture for some or all of the facility, then this number rises accordingly but is offset by the reduced furniture number.

21. Cleaning

The project needs to be cleaned prior to the move or immediately after the move, but before the personnel come in. This cleaning involves, vacuuming, dusting, cleaning out new cabinets, polishing floors where required. All the normal stuff you need to do after construction. We sometimes call this fine cleaning to differentiate it from the end of project cleaning that the contractor performs. This cleaning should be budgeted at \$6,000



Based on the information described above a typical soft cost analysis would be similar to the following:

<u>ITEM</u>	<u>COST</u>
1. Code Consultant	\$ 15,000
2. Building Department Filing Fees	34,000
3. Special Inspection Agency	20,000
4. Asbestos Investigation Agency	2,000
5. Engineering Fees (MEP)	75,000
6. Engineering Fees (Data Center)	N/A
7. Architectural Interior Fees	200,000
8. Structural Engineering Fees	N/A
9. A/V Consultant Fees	25,000
10. Lighting Design Fees	38,000
11. Reimbursable Expenses	15,000
12. Voice and Data Cabling	200,000
13. Telephones	170,000
14. A/V Equipment	175,000
15. Furniture	1,125,000
16. Security Systems	30,000
17. Server Room	40,000
18. Landlord Charges	N/A
19. OT Freight Elevator Charges	36,000
20. Moving Expenses	35,000
21. Cleaning	6,000
<u>TOTAL</u>	\$ 2,366,000

Please keep in mind that these numbers are a guide only and are based on our experiences as well as our assumption for others. It is important to use this as a tool and not a tell all and these numbers should be adjusted continually through the project process as the blanks are filled in. There are other consultants which may need to be included in the project soft costs such as acoustical, LEED, building commissioning, artwork etc. should they be required on the project. We have only included those that we typically see.