Pré-concept 1000 St-Denis

Hôpitaux en hauteur et utilisation des transports verticaux

Rapport final

Conseil en immobilisation & management inc.

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AVANT-PROPOS

Dans le cadre des études préparatoires du pré-concept sommaire pour le futur CHUM sur le site du 1000 Saint-Denis, ce document fait le point sur l'utilisation des transports verticaux et leur soutien logistique dans la fonctionnalité des hôpitaux en hauteur.

1. FONCTIONNALITÉ ET PROXIMITÉ

1.1. Relations fonctionnelles

L'hôpital est un lieu d'interactions : interactions entre différents services aux activités distinctes mais complémentaires, interactions entre intervenants, particulièrement ceux concernés par l'offre de soins et enfin interactions entre l'organisation et sa clientèle, raison d'être de sa mission.

L'un des éléments clés retenus dans l'évaluation de la fonctionnalité d'un hôpital tient dans la relation efficace de proximité des services les uns par rapport aux autres. La démarche d'élaboration du programme fonctionnel et technique du nouveau CHUM entreprise en 2002 a clairement fait valoir cet aspect en identifiant les interrelations fonctionnelles pour chacun des services de l'hôpital. Ces liens ont été mis en évidence à l'aide de diagramme relationnel schématisé.

La nomenclature fait écho à ce principe. À titre d'exemple, lors d'une allocution présentée le 20 septembre 2000 au congrès organisé par le Centre universitaire de santé McGill (CUSM) « Healing by Design : Building for Health Care in the 21st Century », Wanda J. Jones, MPH, présidente, New Century Healthcare Institute, San Francisco, California, déclarait :

> "Synergy – the ability of the parts to function together for the better good of the whole – will not be found in a series of independent units bound only by their letterhead and mailing address. The synergy that leads to a well-oiled healthcare delivery system comes from an articulated series of related services connected both organizationally and physically."

Dans une autre conférence lors de ce même congrès, les auteurs Tannis Chefurka, partner, Faith Nesdoly, partner, The RPG Partnership, Toronto, Ontario, Canada, John Christie, Director, Parkin Architects, Toronto, Ontario, Canada, affirment :

> "The long-term development of the site should be envisioned during Master Planning so that options for vertical and horizontal expansion on-site are identified at the outset. […] The size of the site will, over the long term, determine the direction for this decision. […] Ultimately, a solution that allows for both vertical and horizontal expansion is desirable, but relative to future flexibility, both provide opportunities."

La solution optimale réside dans une connaissance des enjeux et des contraintes spécifiques à chaque projet.

1.2. Liens de proximité

Compte tenu des volumes importants d'activités projetés au futur CHUM, l'envergure de l'hôpital et, par conséquent celle de chacun de ses services constituants, est énorme. Pour maintenir un niveau de fonctionnalité adéquat, les concepteurs font donc face à un double défi, accru par les proportions significatives du projet :

- Parvenir à rapprocher les services dont la dépendance et la complémentarité fonctionnelle sont essentielles.
- Garantir, à l'intérieur d'un même service, des liens de fonctionnalité étroits malgré la dimension importante du secteur.

La planification du futur bloc opératoire qui comptera 32 salles de chirurgie permet de bien illustrer ce propos. La conception d'un service de cette envergure soulève en soi un défi d'ordre logistique significatif :

- Arrivée du matériel et des chariots;
- Ségrégation des corridors propres vs souillés;
- Circulation du personnel;
- Respect des zones stériles;
- Etc.

À ce défi, s'ajoute celui de faciliter les déplacements avec les autres services :

- Arrivée des malades en provenance des unités de soins ;
- Déplacement vers la salle de réveil ;
- Retour aux unités de soins ;
- Liens avec urgence ;
- Etc.

Le respect des relations de proximité ne doit donc pas être évalué uniquement en fonction des distances séparant les services entre eux. La réelle mesure de la relation de proximité tient plutôt au temps de déplacement requis pour franchir les distances et circuler d'un lieu à un autre, que ce soit sur des distances horizontales ou verticales. Et plus la fréquence des déplacements (personnel, clientèle et objets) entre deux services est grande, plus il sera important de les rapprocher dans le but de minimiser et d'optimiser les temps de déplacement. C'est l'unique moyen de gagner en efficacité et fonctionnalité.

Par conséquent, le rapprochement des secteurs d'activités d'un hôpital en terme de durée des déplacements convient tout aussi bien, et même mieux dans certains cas, dans des établissements en hauteur en autant que les systèmes de transports verticaux soient conçus et présents en quantité suffisante.

2. RAPPROCHEMENT ET TEMPS DE DÉPLACEMENT

2.1. Efficacité des transports verticaux

Investi des principes énoncés précédemment, plusieurs projets ont privilégié la construction de bâtiments en hauteur. L'utilisation soigneusement planifiée des transports verticaux contribue au rapprochement des fonctions tout en minimisant les temps de déplacement.

La nomenclature fait valoir plusieurs études spécifiques en regard de l'optimisation des temps de déplacement liés à l'utilisation des transports verticaux dans les immeubles en hauteur. Plusieurs firmes de consultant oeuvrent dans ce domaine et de nombreuses associations ou regroupements réunissent à la fois consultants et fabricants dont, entre autres :

- Elevator World Research Center;
- Council on Tall Buildings and Urban Habitat;
- International Association of Elevator Engineers.

Qui plus est, ces intervenants se côtoient sur une base périodique lors d'évènements internationaux. Le « Elevcon World Congress on Vertical Transportation Technologies » en constitue un exemple probant.

Là comme ailleurs, l'évolution des technologies a favorisé de nouvelles percées dont l'arrivée d'ascenseurs à haute vitesse (« high speed elevator ») de même que des ascenseurs à deux niveaux (« double deck shuttle elevators »).

Mais c'est surtout au chapitre de la simulation et des algorithmes de calcul que les percées sont les plus significatives. De plus, les logiciels qui coordonnent les montées et descentes des ascenseurs entre eux sont beaucoup plus performants. Ceux-ci voient à la synchronisation des mouvements d'ascenseurs et, de façon prédictive et probabiliste, garantissent maintenant des temps d'attente beaucoup plus courts.

La mesure de la capacité de transport et des temps de déplacement s'appuie en premier lieu sur les variables liées au trafic et débit :

- Estimation de l'achalandage :
  - Entrée et sortie;
  - Déplacements internes entre les étages;
- Répartition de l'achalandage par tranche horaire et estimation des pointes;
- Élaboration de circuits de distribution distincts : personnel, visiteurs, approvisionnements, retour du matériel souillé, etc.

Les algorithmes de calcul permettent d'estimer et dimensionner les systèmes d'ascenseurs selon les critères suivants:

- Nombre de cages d'ascenseurs
- Capacité d'occupation maximale de chacune des cages
- Durée des intervalles (arrêt-départ à chaque étage)

  (ces deux dernières variables sont inversement reliées)
- Vitesses d'ascension et de descente

La simulation de ces paramètres permet d'estimer avec précision les capacités de transport des ascenseurs et les temps effectifs de déplacement afin de mesurer si celles-ci répondent adéquatement au besoin de rapprochement des services les uns avec les autres.

2.2. Normes et codes

Au Québec, la Corporation d'hébergement du Québec a préparé un guide spécifique dans son répertoire des normes et procédures (vol. 06-05-01, date 97-09-08 « Guide pour ascenseurs, monte-charge et monte-plats »)[1]. Ce guide établit certains critères de conception pour l'évaluation du nombre d'ascenseur requis et fournit à titre indicatif un exemple d'étude de trafic théorique pour un hôpital.

La planification des transports verticaux devra être beaucoup plus sévère et rigoureuse dans le traitement des volumes de trafic estimés pour le futur CHUM. Pour garantir des durées de déplacement optimales et efficaces, l'évaluation des besoins en transports verticaux devra s'appuyer sur plusieurs autres critères. À titre d'exemple :

- Attribution d'ascenseurs dédiés : personnel, clientèles, matériel, recherche;
- Ségrégation des circulations entre le propre et le souillé;
- Analyse exhaustive des flux et leur distribution dans le temps;
- Sécurité;
- Prévention des infections;
- Etc.

Aux Etats-Unis, Elevator World Magazine publie et tient à jour un manuel intitulé « The Guide to Elevatoring » qui contient une section spécifiquement dédiée au milieu hospitalier. Cette section fait valoir entre autre la pertinence de ces critères.

[1] Voir annexe 1

2.3. Mesure des temps de déplacement et rapprochement

Dans un essai produit en septembre 2000 lors de la même conférence portant sur « Healing by Design : Building for Health Care in the 21st Century », l'équipe de conception du CUSM a proposé une méthode de mesure pour élaborer le rapprochement réel entre différents secteurs d'activités de l'hôpital en fonction de la durée et de la fréquence des déplacements. Pour fin d'évaluation, cette méthode fixe certaines variables :

- Durée des déplacements horizontaux : 5 pi/sec ;
- Durée des déplacements verticaux : 2.5 pi/sec (selon norme CHQ) ;
- Durée des intervalles ;
- Temps d'attente (n'excédant pas 60 secondes) ;
- Fréquence des déplacements ;
- Achalandage ;
- Etc.

L'objet de la méthode consiste à mesurer l'estimation de la durée des temps de déplacement entre tous les secteurs d'activités et, dans la mesure du possible, ordonner la position des services les uns aux autres en fonction du besoin de proximité (les flux) et des temps optimaux de déplacement. Cette méthode s'inspire des techniques propres au génie industriel appelées « SLP ; Systematic Layout Planning » et utilisées couramment en conception d'usine.

Cette méthode a le mérite de conjuguer plusieurs variables de débit et de durée afin d'établir une matrice relationnelle de fonctionnalité. Elle jette les bases d'un exercice de simulation exhaustif pour optimiser le positionnement des services les uns par rapport aux autres selon leurs réels besoins de rapprochement.

3. EXEMPLES D'ÉTABLISSEMENTS DE SANTÉ EN HAUTEUR

3.1. Quelques exemples

Le tableau de la page suivante présente des hôpitaux qui, pour diverses raisons liées pour la plupart aux contraintes de densité urbaine, ont adopté la solution de bâtiments en hauteur (11 étages et plus).

Plusieurs caractéristiques y apparaissent, dont le nombre d'étage, la superficie brute, l'année de construction ou de rénovation selon le cas. Le tableau fournit aussi un résumé des principales activités cliniques. À titre d'exemple, les statistiques de clientèle admise, le nombre de lits disponibles et le nombre d'effectif, sont disponibles pour la plupart des hôpitaux énumérés. Par ailleurs, le nom des architectes des différents projets, ainsi que les fournisseurs d'ascenseurs sont aussi colligés.

Plusieurs annexes sont disponibles à la fin du présent document pour consultation d'informations pertinentes et plus spécifiques concernant chacun des hôpitaux répertoriés. Ces annexes présentent également quelques photos d'établissement, la distribution des services par étages pour certains hôpitaux, quelques plans de site et autres statistiques diverses.

Enfin, l'annexe 14 présente la liste des 50 plus hauts hôpitaux construits dans le monde ainsi que la fiche du Queen Mary Hospital à Hong Kong correspondant au deuxième hôpital le plus élevé.

3.2. Un exemple pertinent

La qualité des travaux préparatoires à la planification des besoins en matière de transport vertical est essentielle pour réduire les temps de déplacement. Et c'est par une estimation appropriée du trafic des usagers et des flux de matériel que les solutions de conception retenues sauront concilier et optimiser les paramètres d'efficacité, de proximité, de temps et d'argent.

L'exemple du pavillon Guggenheim au « Mount Sinaï Medical Center » à New York témoigne bien de ces préoccupations. La firme d'architectes « PEI Cobb Freed & Partners » a été dans un dilemme d'importance en cours de planification et de conception du nouveau pavillon érigé à la fin des années 80. Le texte qui suit résume bien l'essentiel des enjeux mis en évidence lors de ce vaste projet urbain à New York :

> "Of all the challenges confronted, the greatest was circulation – a challenge in any large and complex institution but especially so at Mount Sinai where decades of additions and modifications had left the hospital a knot of interconnecting basement corridors filled to capacity with an undifferentiated flow of patients, hospital staff, students, equipment, materials transport and the general public alike. The new building separates incompatible traffic both horizontally and vertically. Public corridors in the patient towers allow staff and visitors to move freely without encountering carts and stretchers, as service traffic is supported by an independent network of dedicated elevators and passages."

Les architectes ont relevé le défi de la fonctionnalité en s'appuyant sur un réseau d'ascenseurs efficaces et performants.

Tableau récapitulatif des principaux hôpitaux en hauteur

No.	Nom	Réseau	Ville	Étages / hauteur	Superficie brute	Année de construction	Architectes du projet	Fournisseur d'ascenseur	Faits Cliniques	Faits Divers	Documents pertinents
1.	The Mount Sinai Hospital (Guggenheim Pavilion)	Mont Sinai Medical Center	New-York	11	900 707 pi.ca	1992	PEI Cobb Freed & Partners et Ellerbe Becket	Dover Elevator company	1 171 lits, 2 150 médecins, 829 résidents, 1 920 infirmières, 300 484 patients interne, 5 499 naissances, 478 027 visites externes, 73 507 visites à l'urgence.	9 ascenseurs pour les passagers, 1 pour l'administration, 5 pour les patients, 3 pour les services, 1 pour les cuisines, 3 pour les livraisons et 2 pour les "casecart".	Voir plan de site et statistiques diverses; Voir les articles provenant des architectes I.M PEI.
2.	Northwestern Memorial Hospital: Feinberg pavilion Galter Pavilion	Northwestern Memorial Hospital	Chicago	Feinberg: 17 étages Galter: 22 étages	2 millions pi.ca	1997	Ellerbe Becket	Levee & Associates	40 942 admissions, 194 061 jour patients, moy. Durée de séjour 4,74 jours, 9 032 naissances, 66 169 visites à l'urgence, 79 000 visite à domicile, 210 544 visites de patients.	Voir liste des nominations reçues.	Voir documents d'implantation et photos du site.
3.	Princess Margaret Hospital	University Health Network	Toronto	19	800 000 pi.ca	1995	Zeidler	Thyessen	2 800 patients admis, 130 lits, 161 000 visites ambulatoires, 8 000 visites en transfusion, 24 600 visites en chimiothérapie, 1 600 jours de chirurgie cancer, etc.	-	Voir distribution des services sur les étages; Voir photo de l'hôpital;
4.	Toronto Western Hospital	University Health Network	Toronto	14		2004	Dunlop / Murphy Hilgers	OTIS	8 974 patients admis, 272 lits, 290 973 visites cliniques, 42 900 visite en urgence, 13 156 chirurgies.	-	Voir photo de l'hôpital;
5.	Hospital of the University of Pennsylvania	University of Pennsylvania Health Systèm	Pennsylvanie	15		2003		Amtech Elevator Services - OTIS	Voir document descriptif	-	Voir carte du site, plan d'étage et distribution des services sur chaque étage.
6.	Bellevue Hospital Center	NYU School of Medecine	New-York	25	65 000 pi.ca par étage	1968			26 000 patients admis, 400 000 visites externes, 65 000 jours de soins à domicile, 100 000 visites à l'urgence; comprend 6 unités de soins intensifs. 1 200 médecins et 500 internes	-	Voir description de l'hôpital et photo.
7.	Gonda Building	Mayo Clinic	Rochester	21 (93 m)	1,5 million pi.ca	2001	Ellerbe Becket	OTIS	2 000 médecins et 35 000 professionnels de la santé(liés). 500 000 patients annuellement.	Voir Article sur le projet de construction	Voir texte sur les "high rise building" et sur les "modern building". Voir document de statistiques sur la clinique Mayo en générale. Voir photo
8.	Mayo Building	Mayo Clinic	Rochester	20 (90 m)	1,0 million pi.ca	1968	Ellerbe Becket	OTIS - Schindler et Schumacher	Voir document descriptif	-	Voir photo de l'immeuble;
9.	Guggenheim Building	Mayo Clinic	Rochester	20 (78 m)	500 000 pi.ca	1974	Ellerbe Becket	OTIS - Schindler et Schumacher	Voir document descriptif	-	Voir photo de l'immeuble;
10.	Charter House	Mayo Clinic	Rochester	22 (67 m)	250 000 pi.ca	1988	Ellerbe Becket	OTIS - Schindler et Schumacher	Voir document descriptif	-	Voir photo de l'immeuble; Voir document avec
11.	UW Medical Center	Université de Washington Medical Center	Seattle						45 000 patiens admis par année, 1 million de visite par année dont 500 000 en soins de première ligne.	Rank's 10th among America's best hospital US.News & World report's	Voir document descriptif.
12.	Henry Ford Hospital	Henry Ford Health System	Détroit						16 000 employés temps plein dont 3 000 infirmières et 4 000 médecins, 2,5 millions de contact patients, plus de 30 000 chirurgies et environ 65 000 patients admis chaque année.	-	Voir photo et document descriptif.

ANNEXE 1

GUIDE TECHNIQUE

GUIDE POUR ASCENSEURS, MONTE-CHARGE ET MONTE-PLATS

Préparé par :

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TABLE DES MATIÈRES

1- GENRE, LOCALISATION ET ACCESSIBILITÉ

1.1 L'ascenseur pour les établissements où des gens sont alités seront du genre "passagers-service", "type hôpital" (cabine en profondeur), localisés à un endroit central accessible aux visiteurs, occupants et principaux services.

Pour les établissements de type "à bureaux" (genre CLSC), ces derniers seront plutôt du genre "passagers" (cabine en largeur).

1.2 La distance maximum de marche entre les ascenseurs et la chambre, local ou service le plus éloigné, ne devrait pas excéder 60m.

1.3 L'espace de dégagement en face des ascenseurs, ne devra en aucun cas être inférieur à 2 400 mm.

2- CABINE INTÉRIEURE, CAPACITÉ

2.1 Les cabines seront de dimensions intérieures nettes respectives de:

1625 L X 2390 P X 2285 H (cabine en profondeur, type "hôpital")
2030 L X 1295 P X 2285 H (cabine en largeur, type "passagers")

Celles-ci seront munies d'un ventilateur électrique de capacité adéquate (encastré dans le toit), de crochets pour suspension de coussin protecteur, de mains courantes et de plinthes en acier inoxydable sur les parois.

Les colonnades à l'entrée devront être d'acier inoxydable de calibre 14.

Le plancher sera recouvert de tuiles antidérapantes.

Pour les édifices de type "à bureaux", endroits où l'utilisation des ascenseurs n'est pas intensive ou dont l'ascenseur ne sert qu'au transport de passagers; les murs seront fabriqués de contre-plaqué ignifuge recouvert de plastique stratifié. Ailleurs, sous justification, l'acier inoxydable pourra être utilisé.

Un coussin protecteur devra être fourni à la fin des travaux; un seul coussin sera fourni, même dans le cas où l'on aurait plusieurs ascenseurs dans l'établissement.

2.2 La capacité requise, de par les dimensions de cabine intérieure ci-avant indiquées, est 1815 kg pour un ascenseur en profondeur et 1135 kg pour un ascenseur en largeur.

3- TYPES D'ASCENSEURS, GROUPES DISTINCTS, VITESSE

3.1 Types d'ascenseurs

3.1.1 *Hydraulique*

a) Pour un bâtiment ayant jusqu'à 4 planchers, il peut être avantageux d'installer des ascenseurs de type hydraulique si le trajet n'excède pas 11 m environ et que la vitesse n'est pas supérieure à 0,65 m/s en montée.

Dans ce cas, la machinerie doit être à la partie inférieure du bâtiment, dans un rayon n'excédant normalement pas 7,50 m du puits.

b) Le forage du trou pour le logement du vérin hydraulique devra être effectué par un spécialiste dans ce domaine; il sera aux frais et sous la responsabilité de l'entrepreneur général.

Toutefois, ce travail sera sujet à l'approbation du constructeur d'ascenseurs quant au diamètre, à la rectitude, à la profondeur et à l'emplacement dans le puits.

c) Le vérin hydraulique (cylindre) devra extérieurement être pourvu des protections appropriées contre les mauvais effets chimiques ou électrolytiques possibles du sol (protection cathodique, gaine PVC et/ou autres).

d) Tout moteur d'ascenseur hydraulique devra être conçu et/ou équipé de correctifs appropriés, afin de réduire le plus possible son courant de démarrage tout en assurant un facteur de puissance le plus élevé possible en tout temps.

3.1.2 *Traction* (à câbles)

a) L'ascenseur du type traction (à câbles) peut être installé dans un établissement, sans limite quant à la hauteur (trajet) et à des vitesses plus élevées que le type hydraulique.

La machinerie devra dans ce cas être à la partie supérieure du puits.

On devra à moins de raisons valables, éviter l'installation d'ascenseurs avec machinerie à la partie inférieure du puits.

b) Les ascenseurs du type traction (à câbles) de 0,75 m/s et moins, auront un moteur à opération CA (2 vitesses); ceux de 1,00 m/s et plus, auront un moteur à opération CC (avec unité MG). La vitesse de nivelage ne devra pas excéder 0,13 m/s.

Note:

Lorsqu'économiquement justifié (calcul de rentabilité fourni au concept) et préalablement approuvé, le remplacement du groupe MG par des SCR pourra être considéré.

SCR: Rectificateurs au silicium contrôlable (transistors de puissance).

MG: Ensemble moteur et générateur.

3.2 Groupes distincts (utilisations principales)

3.2.1 On aura dans le cas des établissements où des gens sont alitées, 2 groupes distincts:

a) **PUBLIC** (visiteurs, personnel)

b) **SERVICE** (lits, civières, nourriture, lingerie)

La cabine sera dans les 2 cas du "type d'hôpital" (en profondeur), de dimensions et de capacité ci-avant indiquées.

3.3 Vitesse

3.3.1 Pour la vitesse recommandée (selon le nombre de planchers desservis, le trajet et type d'ascenseurs). Voir le tableau des Normes et critères de rendement, p. 13.

4- RENDEMENT ET NOMBRE D'ASCENSEURS

4.1 Sommaire

Le rendement des éléments de transport vertical (ascenseurs) devra répondre aux besoins généralement rencontrés dans le genre d'établissements ici concerné.

4.2 Genre, capacité, type, vitesse

Le genre, la capacité normalisée, de même que certaines recommandations relatives aux types d'ascenseur et vitesse, sont déjà signalés plus avant dans ce guide.

4.3 Nombre d'ascenseurs (Étude de trafic)

4.3.1 Le nombre d'ascenseurs sera déterminé après considération du genre d'établissement, de la population à desservir et du rendement désiré, selon une étude de trafic appropriée.

4.3.2 Pour diverses recommandations et critères de rendement à respecter relativement à ce sujet, voir le tableau des Normes et critères de rendement, p. 13.

4.3.3 *Dans les centres de 64 et 96 lits* (possibilité de 3, 4 ou 5 planchers à être desservis), la provision de deux (2) ascenseurs "passager-service" est requise.

Ces 2 éléments de transport vertical devront de préférence être adjacents.

La manœuvre devra en être sous un contrôle automatique collectif-sélectif duplex jumelé, incluant possibilité du "service indépendant".

5- OPÉRATION ET CONTRÔLES

5.1 L'opération sera automatique et à isonivelage; elle devra aussi inclure la possibilité du "service indépendant".

5.2 *Le type de contrôle* sera selon ce qui suit:

Application	Type de contrôle
Pour un ascenseur desservant deux planchers:	"collectif simple"
Pour un ascenseur desservant plus de deux planchers:	"collectif-sélectif"
Pour un groupement de deux ascenseurs ou plus:	"collectif-sélectif" (jumelé ou de groupe)
Pour un monte-charge:	"collectif simple"
Pour un monte-plats:	"entièrement automatique" (appel et renvoi)

6- OUVERTURES ET PORTES

6.1 Les ouvertures seront de 1220 L X 2135 H (avec portes motorisées à deux vitesses, coulissant horizontalement vers le même côté) pour les cabines en profondeur et de 1070 L X 2135 H (avec portes motorisées ouvrant par le centre) pour les cabines en largeur.

6.2 La vitesse de fermeture des portes sera modérée par rapport à sa vitesse maximum.

6.3 Le bourrelet de sécurité de la porte de cabine sera du type escamotable.

Pour les ascenseurs utilisés par des bénéficiaires, un détecteur de type "à multiples rangées de rayons infra-rouges parallèles" est aussi à prévoir afin d'éviter le bousculement lors de la fermeture des portes.

Ailleurs deux rangées de rayons lumineux (à hauteurs respectives appropriées) seront installées.

P.S.: L'installation en alternative d'un détecteur à multiples rangées de rayons infra-rouges parallèles pourrait éventuellement être considérée; en autant qu'elle soit accepté conjointement par le propriétaire et le MSSS.

6.4 Pour les ascenseurs prévus dans les édifices de type "à bureaux", les encadrements et les portes palières seront en acier émaillé de solidité et de jauge appropriés. Le fini de la porte de cabine sera de plastique stratifié avec bordure d'acier inoxydable. Ailleurs, l'utilisation intensive peut justifier les cadres, portes palières et de cabines entièrement en acier inoxydable.

7- ÉCLAIRAGE DES CABINES

7.1 *L'éclairage régulier* y sera maintenu au moyen de lampes fluorescentes standards, donnant un éclairement minimum de 200 lux au niveau du plancher et du seuil de porte. (Raccordement au réseau d'électricité d'urgence de l'établissement).

7.2 De plus, un strict minimum d'éclairage incandescent "à batteries" y sera prévu, pour fonctionnement instantané lors de pannes d'électricité.

L'unité comprendra aussi un petit relais de transfert automatique, batteries de type rechargeable et un chargeur automatique; ces derniers éléments seront installés sur le toit de la cabine.

8- DÉPANNAGE ET OPÉRATION LORS DE PANNES D'ÉLECTRICITÉ

8.1 Dépannage au début de la coupure de l'Hydro (Voir note "a"):

Pour types "à câbles": Dépannage automatique (un à la fois), jusqu'au plancher principal d'évacuation.

Pour types "hydraulique": Dépannage automatique (un à la fois) en descente seulement, jusqu'au plancher principal d'évacuation et/ou au plus bas plancher desservi (voir note "c").

Notes:

a) Pour les établissements possédant un groupe électrogène (normalement ceux où des gens sont alitées), dans le but d'assurer avec flexibilité la possibilité du dépannage automatique dont il est ici question, la ligne d'alimentation régulière (contrôle et force motrice) de chacun des ascenseurs devra provenir d'une seule source, soit du réseau d'urgence de l'établissement.

Deux fils de surveillance devront aussi être installés à cet effet, à partir d'un relais auxiliaire sur l'inverseur automatique du réseau de l'établissement, jusqu'au panneau de contrôle du ou des ascenseur(s).

(Un dispositif de séquence devra être installé au besoin, par le constructeur d'ascenseur.)

b) Pour les édifices à bureaux (ex: CLSC) où aucun groupe électrogène n'est présent, le dépannage automatique (incluant descente, nivellement et ouverture de porte) devra être effectué au moyen d'un dispositif approprié fonctionnant à l'aide de batteries rechargeables, comprenant aussi un chargeur automatique, relais de transfert etc, si l'ascenseur, est de type hydraulique. En autre cas, s'en tenir aux prescriptions particulières au projet concerné.

c) On devra s'assurer et/ou faire en sorte, qu'une issue existe au niveau du plus bas plancher desservi.

8.2 Opération continue durant une panne

Ce n'est qu'après justification et sur approbation préalable, qu'on pourra faire les prévisions nécessaires aux plans et devis, pour assurer l'opération continue du ou des ascenseur(s) durant une panne d'électricité. Cette opération n'est cependant pas requise pour les établissements n'hébergeant pas de personnes alitées.

8.3 Indications aux plans et devis concernés

Le choix entre un "dépannage automatique seulement" ou "dépannage automatique avec opération continue par la suite", devra être clairement indiqué aux plans et devis d'électricité et d'architecture.

9- AUTRES RECOMMANDATIONS

9.1 Les boutons poussoirs (en cabines et aux paliers) seront du type lumineux.

9.2 Il y aura pour chaque ascenseur, un indicateur de position en cabine et au palier principal.

9.3 Les boutons de manoeuvre et dispositifs d'alarme du tableau de commande en cabine, de même que les boutons d'appel aux paliers, devront être accessibles aux personnes en fauteuil roulant. (1,4 m max. du plancher)

9.4 Prévoir un concept d'organisation des circulations, évitant la nécessité de cabines à deux ouvertures (arrière ou de côté).

9.5 *Groupement d'ascenseurs*:

9.5.1 Advenant un regroupement, chacun des ascenseurs devra être de forme et de dimensions identiques; il est de plus recommandé que tous desservent les mêmes planchers et fonctionnent à la même vitesse, à moins de raisons jugées valables.

9.5.2 Il y aura pour chacun de ces ascenseurs, une lanterne de direction et gong à tous les paliers. Au palier principal, ces lanternes seront incorporées aux indicateurs de position respectifs.

9.6 *Télécommunication*

- Pour chaque ascenseur et monte-charge, un système devra être installé en vue d'une communication audio-bidirectionnelle pouvant fonctionner comme suit:

  a) entre la cabine et sa chambre de machines;

  b) entre la cabine et un endroit où il y aura présence continue (au principal poste de surveillance ou à la réception selon le cas).

Notes:

- Pour les établissements de type "à bureaux", à l'intérieur de la cabine, on devra installer un cabinet en prévision d'un appareil téléphonique encastré. De plus, tout le filage nécessaire au raccordement possible de cet appareil devra y être installé et ce, jusqu'à la chambre de machines. Si aucune surveillance continuelle n'est actuellement prévue dans l'édifice ici concerné, l'appareil téléphonique ci-avant mentionné devra y être fourni et installé, pour raccordement immédiat au réseau de la compagnie de téléphone locale ou selon la situation, une cloche extérieure reliée au bouton d'alarme en cabine sera prévue (solution davantage économique).

- Le constructeur d'ascenseurs devra, entre autres, fournir et installer le filage requis, à partir de la cabine jusqu'à sa chambre de machines (ce filage sera du type blindé, afin d'éviter tout phénomène d'induction).

- Les autres composantes de ce système (bouton d'appel et haut-parleur/microphone en cabine, amplificateur, postes-maîtres, etc...) seront fournies et installées par le sous-traitant en communications.

9.7 Puits et fosse

Dans le(s) puits d'ascenseur(s), on devra fournir et installer les supports nécessaires aux accessoires, échelle d'accès à la fosse, ainsi que l'éclairage minimum requis pour l'entretien.

10- MONTE-CHARGE ET MONTE-PLATS (seulement pour les établissements où des gens sont alités)

Comme l'utilisation des monte-charges et des monte-plats est exclusive au transport de charges et ne permet évidemment pas le transport de passagers, l'organisation architecturale des lieux devrait être conçu de façon à éviter l'installation de ces derniers. Sinon fournir justification pour approbation.

10.1 Monte-charge

10.1.1 *Caractéristiques générales*

On choisira un "monte-charge" hydraulique de catégorie "A", desservant deux (2) planchers. L'espace de dégagement en face de ce dernier ne devra en aucun cas être inférieur à 2 400 mm.

10.1.2 *Cabine intérieure*

10.1.2.1 *La cabine* sera de *dimensions intérieures nettes* de 1220 L X 1980 P X 2285 H minimum.

L'éclairage sera du type fluorescent indirect installé dans une moulure métallique posée de chaque côté de la cabine donnant un éclairement d'environ 200 lux au niveau du plancher et du seuil de porte (raccordement au réseau d'électricité d'urgence de l'établissement).

10.1.2.2 *La finition* de la cabine sera selon ce qui suit:

a) Les murs et le plafond seront d'acier émaillé jauge No. 16 minimum;

b) Le plancher sera en acier antidérapant;

c) Des bandes pare-chocs devront être installées sur les murs à une hauteur appropriée.

10.1.3 *Ouvertures, barrière et portes* (à opération manuelle)

Les ouvertures libres seront 1220 L X 2135 H.

La cabine sera munie d'une barrière verticale (à deux sections), balancée, coulissante vers le haut.

Les portes palières seront du type "à guillotine", chacune composée de deux vantaux balancés, dont l'un coulissant vers le haut et l'autre vers le bas.

Les encadrements et les portes palières seront en acier émaillé de solidité et de jauge appropriés.

10.1.4 *Capacité*

La capacité devra être de 900 kg.

10.1.5 *Vitesse*

La vitesse sera 0,38 m/s en montée et 0,50 m/s en descente.

10.1.6 *Genre d'opération*

L'opération sera automatique et à isonivelage. Le type de contrôle sera "collectif-simple".

10.1.7 *Signalisation*

Les boutons poussoirs (en cabine et aux paliers) seront du type lumineux.

Si la barrière de cabine et/ou une des portes palières est laissée ouverte, une sonnerie particulière devra s'y faire entendre lorsqu'on appuira sur un bouton d'appel.

10.1.8 *Télécommunication*

Se référer à la section 9.6.

10.1.9 *Dépannage et opération*

Au début d'une panne d'électricité, on devra obtenir un *dépannage automatique (en descente seulement)* jusqu'au plus bas plancher desservi, à l'aide du réseau d'électricité d'urgence de l'établissement; deux (2) fils de surveillance devront aussi être installés à cet effet, à partir d'un relais auxiliaire sur l'inverseur automatique du réseau de l'établissement, jusqu'au panneau de contrôle de ce monte-charge.

Note:

L'opération continue de ce monte-charge durant la panne d'électricité n'est cependant pas requise.

10.1.10 *Chambre de machines*

La machinerie doit être à la partie inférieure du bâtiment dans un local prévu à cette fin.

10.1.11 *Puits et fosse*

Dans le puits du monte-charge, on devra fournir et installer les supports nécessaires aux accessoires, échelle d'accès à la fosse, ainsi que l'éclairage nécessaire à l'entretien.

10.2 Monte-plats

Étude cas par cas. Fournir caractéristiques techniques dès le concept.

11- CODE DE SÉCURITÉ

L'installation des éléments de transport vertical devra en tout être conforme aux exigences du "Code de sécurité des ascenseurs et monte-charge".

Note:

Le fabricant doit fournir au propriétaire une attestation que les essais de réception ont été effectués selon le code ci-haut mentionné.

(Cette exigence devra être clairement mentionnée au devis des ascenseurs).

12- CODE DU BÂTIMENT

Dans le cas où certaines exigences additionnelles particulières de ce code s'appliqueraient aux installations, elles devront être respectées.

13- GARANTIE, ENTRETIEN ET DOCUMENTS

13.1 *Un (1) an de garantie*, après l'acceptation finale des travaux de construction du bâtiment.

13.2 *Douze (12) mois d'entretien complet*, s'appliquant au début de la période de garantie; incluant réponses aux appels d'urgence ainsi que les frais de séjour et de déplacement.

(Voir tableau section 14 pour fréquence minimum d'inspections).

13.3 *Deux séries complètes des plans* d'installation, d'électricité et/ou de contrôle des ascenseurs, devront être transmises au propriétaire à la fin des travaux; une (1) de ces séries devra être maintenue en tout temps, à un endroit approprié dans la(les) chambre(s) de machines.

14- ENTRETIEN PÉRIODIQUE COMPLET

14.1 Durant la période de garantie

Genre d'équipement	**Vitesse**	**Fréquence minimum d'inspection recommandée**		
		Québec, Montréal et (70 km à la ronde)	**Gaspésie et Côte-Nord**	**Autres endroits**
Ascenseurs (passager et passager-service)	jusqu'à 1,75 m/s	2 fois/mois	1 fois/3 mois	1 fois/mois
	plus de 1,75 m/s	4 fois/mois	---	---
Monte-charge	jusqu'à 1,25 m/s	2 fois/mois	1 fois/3 mois	1 fois/mois
Monte-plats (petits monte-charge électriques)	jusqu'à 0,50 m/s	1 fois/mois	1 fois/3 mois	1 fois/2 mois
	plus de 0,50 m/s	2 fois/mois	---	---

Notes: a) Dans les régions de Québec et de Montréal (incluant 70 km à la ronde), réponse gratuite aux appels d'urgence devra être fournie 24 hres/jour, 7 jrs/sem.

b) Ailleurs dans la province, réponse gratuite aux appels d'urgence devra aussi être fournie (sous une base équitable tenant compte des distances et disponibilités locales).

14.2 Après la période de garantie

14.2.1 *Il est fortement recommandé ici*, que suite à la période de garantie, un programme d'*entretien périodique complet* continue d'être appliqué pour chacun des éléments de transport vertical nouvellement installés et/ou rénovés.

14.2.2 Ce programme devra entre autre comprendre *un contrat d'entretien complet* en "bonne et due forme" signé avec une compagnie d'ascenseurs responsable.

14.2.3 On pourra incidemment référer au tableau précédent, à titre de guide pour les fréquences minimum d'inspections périodiques ainsi que pour les appels d'urgence.

NORMES ET CRITERES DE RENDEMENT

TRANSPORT VERTICAL

OBJET:

Illustrer sous forme d'un seul et unique tableau, certaines des principales caractéristiques et critères de rendement à respecter, relativement aux éléments et/ou systèmes de transport vertical (ascenseur).

CHAMP D'APPLICATION:

Dans les établissements suivants:

- CH (soins de courte durée)
- CHSLD (soins de longue durée)
- CAH (personnes âgées)
- CLSC (services communautaires)

(Tableau à la page suivante)

ÉTABLISSEMENTS DU M.S.S.S

TRANSPORT VERTICAL — NORMES

ÉTABLISSEMENTS	ASCENSEUR Utilisations principales	GENRE PASSAGER	GENRE PASSAGER SERVICE	CAPACITÉ ET VITESSE RECOMMANDÉES CAPACITÉ Kg.	NOMBRE DE PLANCHERS desservis	TRAJET APPROX. MAX. m	VITESSE ASC. A TRACTION m/s	VITESSE ASC. HYDRAULIQUE (M) m/s	VITESSE ASC. HYDRAULIQUE (D) m/s	ÉTUDE DE TRAFFIC (THÉORIQUE) POPULATION A DÉSSERVIR (théorique)	CRITÈRES DE RENDEMENT CAPACITÉ DE TRANSPORT PAR 5 MIN.	% de POPULATION PAR 5 MIN.	INTERVALLE EN SEC.	NOTES
CH SOINS DE COURTE DURÉE	(2 groupes distincts) PUBLIC visiteurs, personnel	—	X	1815	2	3,7	0,50	0,38	0,50	2.5-3.0 pers./lit	—	10-12 % Two-way traffic 10 pers. à la fois /asc	30-50	Cabine "type-hôpital" (1220 ouv.) 1625 L x 2390 P
					3	7,3	0,75	0,50	0,65					
					4	11,0	1,00	0,65	0,75					
	SERVICE lits, civières, nourriture, lingerie.	—	X	1815	5	14,6	1,25	—	—	—	3-4 vén. / 100 lits	—	30-50	Cabine "type-hôpital" (1220 ouv.) 1625 L x 2390 P
					6	18,3	1,50	—	—					
					7-12	40,2	2,00-2,50 gearless	—	—					
CHSLD SOINS DE LONGUE DURÉE	(2 groupes distincts) PUBLIC visiteurs, personnel	—	X	1815	2	3,7	0,50	0,38	0,50	2.0-2.5 pers./lit	—	8-10 % Two-way traffic 6 pers. à la fois /asc	50-60	Cabine "type-hôpital" (1220 ouv.) 1625 L x 2390 P
					3	7,3	0,75	0,50	0,65					
					4	11,0	1,00	0,65	0,75					
CAH PERSONNES AGÉES	SERVICE lits, civières, nourriture, lingerie	—	X	1815	5	14,6	1,25	—	—	—	3-4 vén. / 100 lits	—	50-60	Cabine "type-hôpital" (1220 ouv.) 1625 L x 2390 P
					6	18,3	1,50	—	—					
					7-12	40,2	2,00-2,50 gearless	—	—					
CLSC SERVICES COMMUNAUTAIRES	PUBLIC visiteurs, personnel	X	—	1135	2	3,7	0,50	0,38	0,50	11,6 m² net/pers	—	15-20 %	75 max. A.R. (si un seul asc.)	Cabine en largeur (1070 ouv.) 2030 L x 1295 P
					3	7,3	0,75	0,50	0,65					
					4	11,0	1,00	0,65	0,75				30-35 (si plus d'un asc.)	
					5	14,6	1,25	—	—					
					6	18,3	1,50	—	—					

Direction de la construction
Service d'expertise et normalisation

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avril 94

Exemple d'étude de trafic théorique réalisé par le S.E.N.
Centre Hospitalier Pierre Boucher, Longueuil.
Pour 9 planchers, 354 lits.

© *Service d'expertise et de normalisation*
Direction de la construction
M.S.S.S., Gouvernement du Québec.

1 *Données et/ou prémices.*

a) Type de centre (ou équiv.): **CH**
(CH, CAH (équivalent CHSLD), CLSC)

b) Nombre de planchers désservis: **9** *planchers* **(SS, RC, 2 @ 8)**
(présumant cabine à une seule ouverture)

c) Nombre de lits: **354** *lits*

d) Trajet max. du(es) ascenseur(s): **96** *pieds, (29.3 m), dist.entrepl.* **12.00 pi. max**

e) Plancher principal d'évacuation (RC): **2** *er(ème) plancher*

f) Long. du trajet entre RC et dernier étage: **84** *pieds, (25.6 m)*

g) Nombre de plancher dés. pour véhicules: **9** *planchers* **(SS, RC, 2 @ 8)**

h) Nb plancher dés. pour véh au dessus du RC: **7** *planchers*

i) Trajet max. de l'asc. pour véhicules: **96** *pieds, (29.3 m)*

2 *Normes du MSSS.*

a) Ascenseur avec cabine en profondeur, type hôpital, 1625L x 2390P (1220 ouv.).

b) Genre Passager-Service, 4000 lbs (1815 kg).

c) Type "gearless", chambre de machine au toit (ici considéré).

d) Vitesse recommandée: **500** *pi min en monté, (2.5 m s)*
500 *pi min en descente (2.5 m s)*

e) Population théorique: **2.5** *à* **3** *pers. lit*

f) % Pop. par 5 min: **10** *à* **12** *% (calculs fait avec* **10** *%)*

g) Nb de pers. à la fois: **10** *pers. à la fois asc.*
(**6** *pers. à la fois asc. pour méth. 3c)Combinée)*

h) Cap. de transport: **3** *à* **4** *véh. 100lits 5min.*
3 *véh. 100lits x 354 lits 10.6 véh. 5min*

i) Intervalle: **30** *à* **50** *sec. si plus d'un ascenseur.*
(Calculs fait avec **50** *sec)*
125 *à* **150** *sec. si un seul ascenseur.*
(Calculs fait avec **125** *sec)*

3 Etude théorique de trafic. ° réf: G. R. Strakosch, Vert. Transp., Orig. edition

a) Pour trafic de passagers seulement (du RC au dernier étage):

1. **Nb d'arrêts probables:** 1.75 x (5) - 1 — **7.75 arrêts**
2. **Temps total probable (Aller-Retour):**
   - -Entrée & sortie RC: 12 sec + 2 x 10 sec groupe) — 32 sec
   - -Temps d'arrêt(étage): 7.75 arrêts x 12 sec arrêt — 93 sec
   - -Temps pour trajet A-R:
   - (84 pi x 60 sec/min) / 500 pi/min — 10.1 sec
   - (84 pi x 60 sec/min) / 500 pi/min — 10.1 sec

   Total = 145 sec
3. **Cap. de transport/5 min./asc.:**
   (2 x 10 pers.) x 300 sec / 145 sec — **41.3 pers.**
4. **% population / 5 min. /ascenseur:**
   ---- population théorique max. possible ----
   41.3 pers. (3 pers. lit x 354 lits) — **3.89 %**
5. **Intervalle (N.A. si on a un seul ascenseur):**
   145 sec (pour trajet A-R) / 5 asc. — **29 sec**

b) Pour transport de véh.(chariots) seulement: **(SS, RC, 2 (a, 8)**

1. **Vitesse moy.:(** 500 pi/min + 500 pi/min) 2 — **500 pi/min**
2. **Temps total probable par véhicules pour un voyage moyen:**
   - -Temps trajet 1 2 hauteur:
   - 1 2(60sec/min x 96 pi / 500 pi/min, — 5.76 sec
   - -Calcul final:
   - 104sec-3(8sec- 5.76 sec) — **97.3 sec**
3. **Cap. de transport de charriots / 5min /asc.:**
   2 véh. asc. x 300 sec / 97.28 sec — **6.17 sec**
4. **Intervalle (N.A. si on a un seul ascenseur):**
   97.3 sec / 5 asc. — **19.5 sec**

c) Pour transport de passagers, combiné avec véhicules: **(SS, RC, 2 (a, 8)**

1. **Nb d'arrêts probables:** 1.75 x (3) - 1 — **4.25 arrêts**
2. **Temps total probable (Aller-Retour):**
   - -Temps d'arrêt (étages):
   - -Passagers: 4.25 arrêts x 12 sec arrêt — 51 sec
   - -Véhicules: 2 arrêts x 15 sec arrêt — 30 sec
   - -Entrée & sortie RC: 12 sec + 2 x (6 sec groupe) — 24 sec
   - -Temps trajet A-R: 4 x 5.76 sec(1 2haut) — 23 sec

   Total: 128 sec
3. **Cap. de transport/5 min./asc.:**
   (2 x 6 pers.) x 300 sec / 128 sec — **28.1 pers.**
4. **% population / 5 min. /ascenseur:**
   ----- population théorique max. possible ----
   28.1 (3 pers. lit x 354 lits) — **2.65 %**
5. **Cap. de transport de charriots / 5min /asc.:**
   1 véh. asc. x 300 sec / 128.04 sec — **2.34 véh.**
6. **Intervalle (N.A. si on a un seul ascenseur):**
   128 sec / 5 asc. — **25.6 sec**

4 *Synthèse des résultats.*

Exemple d'étude de trafic théorique réalisé par le S.E.N.
Centre Hospitalier Pierre Boucher, Longueuil.
Tableau comparatif: **354** ***lits,*** **9** ***planchers.***

Items à considérer	*Normes du MSSS*	*Résultats théoriques avec un (1) ascenseur* (a) *Passagers seulement 2 sens, 10 pers.*	(b) *Véhicules seulement*	(c) *Passager + Véhicules combinés 2 sens, 6 pers. 1 sens, 1 véh.*
%Pop/5min	» *10* @ *12 %*	*3.89 %*	-	*2.65 %*
Temps total A-R (1 seul asc.)	» *125* @ *150 sec*	*145.16 %*	*97.28 %*	*128.04 %*
Intervale (si plus d'un ascenseur)	*30* @ » *50 sec*	*29.03 sec avec 5 asc.*	*19.46 sec avec 5 asc.*	*25.61 sec avec 5 asc.*
Véhicule/5min	*10.62 véh. Pour le centre ici concerné.*	-	*6.17 véh.*	*2.34 véh.*
Nombre d'ascenseurs requis en considérant les critères ci-bas:				
%Pop/5min		*2.57 asc.*	-	*3.77 asc.*
Temps total (A.R.) et/ou intervalle si plusieurs asc. requis		*2.90 asc.*	*1.95 asc.*	*2.56 asc.*
Véhicule / 5 min		-	*1.72 asc.*	*4.54 asc.*
Demande maximale selon l'étude		***2.9 asc.***	***1.95 asc.***	***4.54 asc.*** *Méthode généralement non recommendable.*

2.9 asc. + 1.95 asc. = 4.85 asc. requis.

CONCLUSION : **5 ASCENSEUR(S) REPONDRA(ONT) AUX BESOINS DU CENTRE.**

RECOMMENDATIONS:

Les besoins du centre sont de (3) trois ascenseurs à contrôle de groupe pour le publique et le personnel (service) et de (2) deux ascenseurs exclusivement pour le service, le tout selon les caractéristiques ici-haut mentionnées. Un estimé actualisé de la valeur de ces éléments de transport vertical vous est présenté en annexe. À cela, (2) deux petits monte-documents disposés à des endroits stratégiques devraient normalement répondre aux autres besoins exprimés.

Alain Tremblay, ing. 14/03/96

5 *Évaluation des coûts de construction en Transp. Vertical.* ° *droits exclusifs, SEN, MSSS.*

Première évaluation

Construction de (5) cinq asc. neufs (#1 à #5). Coûts de la construction d'un puit non-inclus. Travaux à la fosse, honoraires & contingences prévus.

1) Prix de base incluant:

a) Ascenseur avec cabine en profondeur, type hôpital, 1625L x 2390P (1220 ouv.).
b) Genre Passager-Service, 4000 lbs (1815 kg).
c) Type "gearless", chambre de machine au toit (ici considéré).
d) Vitesse (base): 200 *pi min.*
e) Trajet (base): 40 *pieds (distance verticale),*
4 *étages déservis.*
f) Ventillateur électrique encastré au toit.
g) Crochets pour suspension de toile protectrice matelassée. (une seule toile sera fournie, même s'il y a plusieurs asc.)
h) Mains courantes sur trois (3) côtés à 850mm du plancher en acier inoxydable.
i) Plinthes et collonades à l'entrée en acier inoxydable.
j) Eclairage fluorescent standard de 200lux min. (mesuré au niveau du plancher) relié sur l'alimentation d'urgence.
k) Eclairage d'urgence incandescent "à batterie rechargeable" avec relais de transfert automatique et chargeur, le tout reliés au toit de la cabine.
l) Bourrelet de sécurité de porte de type escamotable avec 2 rangées de rayons lumineux ou bien avec détecteur de proximité.
m) Boutons poussoirs (en cabine et aux paliers) de type lumineux.
n) Indicateur de position en cabine et au palier principal.
o) Bouton d'alarme d'urgence. Lanterne de direction en cabine visible du hall.
p) Tous boutons aux paliers et en cabine accessibles aux pers. handicapés.
q) Boîte téléphonique avec filage.

Voir normes MSSS pour détails supplémentaires... = ***85 026 $***

2) Ajust. sur trajet: 36.00 *pi. en suppl. x* *204.51 $* *pi.* = ***11 453 $***

3) Ajust. arrêts additionnels: *5 748.33 $* *arrêt x* 5 *arrêt(s)* = ***28 742 $***

4) Ajust. sur vitesse (300 ***pi/min en supplément):*** = ***7 407 $***
Supplément pour type Gearless: = ***22 109 $***

5) Options:

a) Contrôles:

X *Automatique,* 5 *asc. regroupés:* = ***10 170 $***
X *service d'intercom:* = ***553 $***
Collectif sélectif (standard): = ***0 $***
X *Collectif sélectif jumelé (ou de groupe):* = ***3 316 $***

b) Portes 1220 larges x 2135 hautes à fermeture modérée (caractéristiques en sus):

Ouvertures centrâles, 1 vitesse: = ***0 $***
Ouvertures centrâles, 2 vitesse: = ***0 $***
Ouverture arrière: = ***0 $***
Ouverture de côté, 2 vitesses: = ***0 $***

c) Transfert de l'alimentation sur l'urgence:

X *Automatique:* = ***2 460 $***
Manuel: = ***0 $***

d) Finis de cabine:

Plafond:

En paneaux acrylique: = ***0 $***
X *En paneaux métalliques:* = ***387 $***

Plancher:		=	*0 $*
	En tapis, classe A:	=	*0 $*
	En Epoxy:	=	*254 $*
X	*En tuiles antidérapantes:*	=	*0 $*
	En ardoise:	=	*0 $*
	En plaques d'acier:	=	*0 $*
	En caoutchout texturé:		
Murs:			
X	*En c-plaqué ignifuge, recouv. plast. stratif. (std):*	=	*0 $*
	En acier inoxydable:	=	*0 $*
	Retourné à la porte:	=	*0 $*
	Portes de cabine en acier inoxydable *0 porte(s))*	=	*0 $*

Portes palières.

	1	*portes étage*
x	*5*	*étage(s) en supplément*
=	*5*	*porte(s) avant(s)*
+	*0*	*porte(s) côté(s) et ou arrière(s)*
	5	*porte(s) palière(s) en suppl. au total*

		=	*0 $*
X	*En émail cuit (Std.):*	=	*0 $*
	En acier inoxydable:		
Câdrages aux paliers:		=	*0 $*
X	*En émail cuit (Std.):*	=	*0 $*
	En acier inoxydable:		

	X *Travaux à la fosse*	=	*10 502 $*
	Sous total	=	**182 377 $**
x	*5 ascenseur(s) au total*	=	*911 885 $*
+	*1 ctrl service pompier*	=	*0 $*
	Total des coûts (mat. et main d'oeuvre)	=	**911 885 $**
+	**Entretien complet 12 mois** 5.5 % coûts mat. et main d'oeuvre	=	*50 154 $*
+	**Conditions spéciales (éloignement)** 0 % coûts mat. et main d'oeuvre	=	*0 $*
+	**Honoraires des professionnels** évalués à 12 % coûts mat. et main d'oeuvre	=	*109 426 $*
+	**Contingences** évalués à 10 % coûts mat. et main d'oeuvre	=	*91 189 $*
	GRAND TOTAL	=	**1 162 654 $**
	Construction d'un puit d'asc. incluant hon. & conting.		
	GRAND TOTAL	=	

Révisions ou additions:

96-03-15 - ajouts pp. 17 à 21

97-09-08 corrections p. 1-6

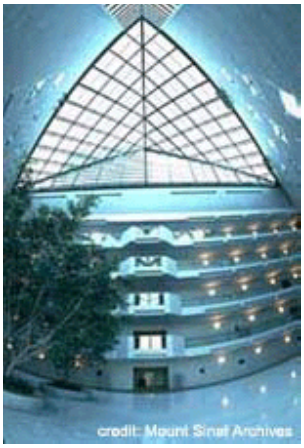
Préparé par : Direction de l'expertise technique
Corporation d'hébergement du Québec
☎ : (418) 644-3600

ANNEXE 2

The Mount Sinai Medical Center
One Gustave L. Levy Place, 1190 Fifth Avenue, New York, NY 10029 Tel: (212) 241-6500

About Us

The Mount Sinai Hospital



Founded in 1852, The Mount Sinai Hospital is one of the country's oldest and largest voluntary teaching hospitals. Mount Sinai is internationally acclaimed for excellence in clinical care, education, and scientific research in nearly every aspect of medicine. Mount Sinai's 1,171-bed tertiary-care teaching hospital with a medical staff of nearly 1,800 provides physicians who deliver the most advanced and compassionate inpatient and outpatient care. Located at 98th Street and Madison Avenue, The Mount Sinai Hospital serves Manhattan's Upper East Side and Harlem.

Mount Sinai's state-of-the-art facilities include the unique Guggenheim Pavilion, the first hospital designed by internationally renowned architect I.M. Pei. Here, the most advanced scientific tools for diagnosis and treatment join an uplifting ambiance that uses natural light and space to keep patients' spirits bright and promote healing.

Mount Sinai School of Medicine

MOUNT SINAI SCHOOL OF MEDICINE

Located in Manhattan, Mount Sinai School of Medicine is internationally recognized for ground-breaking clinical and basic-science research, and innovative approaches to medical education. Mount Sinai ranks 9th in the percentage of graduates who go on to faculty positions in medical schools across the country. Through the Mount Sinai Graduate School of Biological Sciences, Mount Sinai trains biomedical researchers with an emphasis on the rapid translation of discoveries of basic research into new techniques for fighting disease. One indication of Mount Sinai's leadership in scientific investigation is its receipt during FY04 of over $153.2 million in NIH grants, placing it 25th among the nation's 123 medical schools. Mount Sinai School of Medicine also is known for unique educational programs such as the Humanities in Medicine program, which creates opportunities for liberal arts students to pursue medical school, and instructional innovations like The Morchand Center, the nation's largest program teaching students and physicians with "standardized patients" to become not only highly skilled, but compassionate caregivers. Long dedicated to improving its community, the School extends its boundaries to work with the East Harlem community to pair physician/scientists and medical students with at risk high school students interested in careers in math and science.

Mount Sinai Medical Center Mission Statement

The following Mission Statement states Mount Sinai's commitment to excellent patient care, the education of physicians and scientists, the support of innovative research, the dissemination of knowledge, the good health of the community, and the creation of a working environment conducive to individual creativity, career and personal advancement.

THE MISSION STATEMENT

Preamble

In the context of the Jewish traditions of scholarship and charity, the Board of Trustees commits Mount Sinai to the advancement of the art and science of medicine through clinical excellence. This central mission consists of high-quality patient care and teaching conducted in an atmosphere of social concern and scholarly inquiry into the nature, causation, prevention and therapy of human disease.

The Mount Sinai Hospital has been designated a Magnet Hospital for Nursing Excellence

Article I: Patient Care

In this academic medical center, the responsibility to teach and do research in the laboratory, at the bedside and in the community enhances the fundamental goal of entirely personal, compassionate patient care. Mount Sinai will strive to provide superlative patient care, considered to be the requisite model for learning.

Article II: Education

The educational process will aim to graduate individuals who will be committed to a lifetime of continuing education while they are contributing in many and varied ways to the health needs of people. Mount Sinai will be responsible for the certification of physicians at the undergraduate, graduate and postgraduate level, as well as the certification of biomedical scientists at the graduate level; and, as appropriate, will undertake the education of other health and allied professionals.

Article III: Research

Since medicine is a derivative science and must draw upon at least the biological, social and physical sciences, no discipline will intentionally be excluded as irrelevant. Fundamental and applied research will be primarily centered in geographic proximity to clinical facilities. Mount Sinai will encourage, support and evaluate innovative ideas and programs in health services delivery.

Article IV: Dissemination of Knowledge

Mount Sinai will participate as a national and international resource in the gathering, analysis and dissemination of information pertaining to the prevention, diagnosis and treatment of disease.

Article V: Concern for the Community

Mount Sinai will be ever sensitive to the social and health care needs of the many different communities it serves. The Center will be a participant in efforts to define and solve health problems in population groups and communities through its capability in developing scientific knowledge, education and service.

Article VI: Organization

In a framework of free participation, Mount Sinai will strive to create a stable evolving working environment conducive to individual creativity.

PEI COBB FREED & PARTNERS *Architects LLP*

THE MOUNT SINAI MEDICAL CENTER
Guggenheim Pavilion
New York, New York

Client
The Mount Sinai Medical Center

The main atrium rises 11 stories to signal arrival at one of the country's preeminent medical centers. With its infusion of natural light and outdoor views, this 5,000-square foot space has been designed to convey a feeling of wellness rather than illness.

Brief
This teaching hospital facility was undertaken as the first step in a massive reconstruction and renovation program to meet Mount Sinai's goal of becoming one of the nation's top academic medical centers. The 625-bed building has been designed to improve access, security, circulation, amenities and ambience while consolidating functions previously dispersed throughout the medical complex. The design rests firmly on the conviction that a good environment aids the healing process.

From a rectangular base the I I -story pavilion rises as three inpatient towers. Each is angled to provide patient rooms with a view to the outdoors, or alternately to one of the two landscaped atria carved from the building's core. A third atrium connects nearly two-thirds of the Medical Center for the first time at the ground floor. Circulation is further enhanced by bridges, stairs, elevators and corridors that separate medical and materials traffic from the general public.

In a unique advance in hospital design, beds in the ICUs are located on an angle, enabling hospital personnel to reach patients from all sides and affording unobstructed patient surveillance from centralized nursing stations. Other major program elements include 22 new operating rooms, a new emergency room, rehabilitation and nuclear medicine, admitting, a cafeteria, conference center and auditorium, hospital kitchen, administrative offices, a chapel and a synagogue.

Site
A full city block at the northern edge of the Mount Sinai Medical Center campus; bordered by 101st Street between Fifth and Madison Avenues.

Building Program
The new Guggenheim Pavilion was undertaken as the first step in a massive reconstruction and renovation program to meet Mount Sinai's goal of becoming one of the top academic medical centers in the country. Since opening as the Jews' Hospital with 45 beds in 1855, it had relocated uptown, established a medical school (in 1963) and become one of the largest voluntary hospitals in the country. It had also reached a critical point in its development. By the late 1970's Mount Sinai's aging campus, scattered over four city blocks, was inadequate to meet the challenges imposed by rapidly evolving medical technologies.

Rather than follow the ad hoc growth pattern typical of most large medical centers, Pei Cobb Freed & Partners recommended that Mount Sinai undertake a long range Master Plan. From it came the decision to erect a major new building at the northern edge of the campus in which related departments could be grouped together and the hospital as a whole be made more flexible to accommodate current and future needs. By concentrating inpatient diagnostic procedures, surgery and support services within this single 900,000- square foot facility, it would become possible to renovate and expand other specialized areas, including the medical school and research facilities essential to sustain Mount Sinai's extraordinary record of biomedical discoveries.

Guggenheim Pavilion gathers together 625 medical/surgical and ICU beds--more than half of all patient beds at Mount Sinai--and incorporates the emergency room (twice the size of the previous ER), nuclear and rehabilitation medicine, admitting, administrative offices, and the hospital kitchen and cafeteria, all transferred from remote and outmoded facilities. In addition, the Pavilion houses such new program elements as state-of-the-art operating rooms, a conference center, a chapel, a synagogue and, for the first time, a main hospital lobby. In conjunction with two major entrances on Fifth and Madison Avenues, this lobby renders Guggenheim Pavilion a gateway to the entire medical complex, facilitating access and circulation and helping to achieve corollary goals for the improvement of security, ambience and amenities. The building was executed in phases in order to replace eleven functionally obsolete but actively working hospital facilities; the first phase was completed on two-thirds of the site in 1989 and the second along Fifth Avenue in 1992.

Urban Context
The exterior envelope of Guggenheim Pavilion takes its cue from the traditional materials of buildings along Fifth Avenue, using brick and limestone to articulate the mass with a reduction but not an elimination of ornament. Some 1.1 million bricks were custom-fired with a matte coating of colored clay and iron additives to achieve a low maintenance finish which, in its random pattern of lavender, buff and gray hand-laid bricks, creates a tapestry that tonally interweaves the pavilion with its setting. The bricks were manufactured at the same height as standard bricks, but 50% longer to reduce apparent bulk. Their rhythm and iron-spotted texture, like the limestone trim threaded around patient room windows, help to humanize this immense building stretched over an entire city block by

introducing a level of detail that maintains interest at close proximity.

Internal Organization
The I I-story Pavilion rises from a rectangular base that locates public spaces and services for easy access from the street, while accommodating major medical areas on large (two acre) floor plates for maximum flexibility. Patient areas, by contrast, are housed in three linked towers raised atop the base away from city bustle, and angled to maximize perimeter surface; every patient room enjoys a view to the outdoors or alternately, to one of the two landscaped atria that have been carved from the building's core. A slender service block runs along the south to house offices, stairs, 16 elevators and a perimeter corridor system that separates the general public from medical and materials traffic. The scheme has been designed to allow connections to existing and future buildings without disruption of services.

Circulation
Of all the challenges confronted, the greatest was circulation--a challenge in any large and complex institution but especially so at Mount Sinai where decades of additions and modifications had left the hospital a knot of interconnecting basement corridors filled to capacity with an undifferentiated flow of patients, hospital staff, students, equipment, materials transport and the general public alike. The new building separates incompatible traffic both horizontally and vertically. Public corridors in the patient towers allow staff and visitors to move freely without encountering carts and stretchers, as service traffic is supported by an independent network of dedicated elevators and passages. The hospital kitchen and all horizontal materials traffic have been confined to the newly expanded second basement, while radiology and other diagnostic areas have been concentrated on the first basement for easy access by patient guerneys from all parts of the hospital complex. Above, on floors 4-8, glazed bridges connect Guggenheim Pavilion to adjacent buildings, further reducing basement congestion and eliminating the multiple elevator trips required for travel between patient care areas.

Atria
Such functional reorganization and traffic regulation freed the main floor of Guggenheim Pavilion for use by the general public and critically, allowed nearly two-thirds of the medical center to be connected at ground level for the first time. With the relocation of hospital amenities to the plaza level -- dining, gift shop and patient services -- the building is reinforced in its vital role as both gateway and hub. Outdoor views and a series of skylit enclosures aid orientation and introduce a calming sense of well-being.

The building's main ceremonial entrance fronts on Fifth Avenue with an open arcade that gestures at heroic scale to Central Park across the street. Set back from a low rise flight of stairs and framed by huge panes of transparent glass that bring the outdoors inside with great immediacy, a revolving door specially designed to accommodate wheelchairs opens onto a coffered lobby. (A marquee on Fifth Avenue signals access to a protected handicap ramp). The double height lobby leads, in turn, to the main atrium: a great triangular space that penetrates the building's full I I-story height to convey a sense of arrival at one of the nation's preeminent medical centers.

Open corridors along one side give the atrium a sectional quality that permits the visitor to determine in a glance where he is inside the building, and also outside by looking across the space to the long glazed angle opposite. Patient room windows punched through the other two bounding walls offer further orientational guides but more importantly, they allow patients to enjoy the atrium: the approach of visitors, the patterns of constantly changing light against the walls, the liberation of great open space. The atrium has as its message a sense of tranquility and reassurance, a sense, in its infusion of natural light and outdoor views, of wellness rather than illness. So too, its smaller counterpart on levels 7-11 of the east tower. But since this atrium was designed not as an entrance but as a gathering place for ambulatory patients, its space is more private than public, more intimate than grand. Trees, planters and movable seats that invite easy conversation make for a sun bathed stage of social exchange, a point of reflection and recuperation. It is in these uplifting spaces that the Guggenheim Pavilion is best understood as an active participant in the therapeutic process.

From the main entrance, the building's geometry leads the visitor to a third atrium: a 12,000-square foot skylit plaza that stretches 157 feet all the way to Madison Avenue. Supported, like the other atria, on a web of girders punched with 16-inch diameter circles for maximum strength but minimum obstruction of light, this airy enclosure defines what at one time was 100th Street. Its traditional role as a traffic artery survives. The plaza leads to admitting, patient services, and a fenestrated cafeteria that wraps around the building's comer to provide the entire hospital community with a pleasant atmosphere for dining. A kosher kitchen for observant patrons has also been provided. The plaza has 12 elevators (including one designated for use on Sabbath) and two grand stairs: a sculptural freestanding stair that doubles back to the 194-seat auditorium on the mezzanine, and another stair that leads down to Madison Avenue, the hospital's functional main entrance, through which a staggering 14,000 people pass each day. From the Madison

PEI COBB FREED & PARTNERS *Architects LLP*

THE MOUNT SINAI MEDICAL CENTER
Guggenheim Pavilion
New York, New York

Major Building Components

I I Stories above grade; 2 basement levels
Exterior height: 160'-3" feet above plaza level
Fifth Avenue Atrium (floors I- 11): 5,138 square feet
Madison Avenue Atrium (floors 7-11): 5,138 square feet
Plaza Atrium (floors 1-3): 8,413 square feet
Typical 2-bed Rooms (192 on floors 6-11): 61,440 sf (320 sf each)
Typical I -bed Rooms (175 on floors 6-11): 38,500 sf (220 sf each)
Intensive Care Bedrooms (66 on floors 5-6): 14,520 sf (220 sf each)
Operating Rooms/Support (22 on 3rd floor): 47,000 sf
Emergency Room (level MC): 15,020 sf
Cafeteria (plaza level): 15,636 square feet
Coffee Shop (mezzanine): 4,220 square feet
Auditorium (mezzanine): 194 seats/ 2,000 square feet

Site Area
95,989 square feet

Gross Area
900,707 square feet

Foundation
Cast-in-place piers to rock; caissons at east end

Structure
Structural steel

Facade
Iron spot 3-color blended brick with limestone trim; double pane insulating clear glass in painted aluminum frames; tinted glass for patient rooms

Exterior Paving
Cast-in-place concrete sidewalks

Interior Finishes
ATRIA (3): terrazzo flooring; iron spot white brick & limestone walls; clear glass skylight in painted aluminum frames
TYPICAL: vinyl or carpeted flooring; painted gypsum wallboard walls; Jay-in acoustical tile ceilings

Mechanical
Variable and constant air control systems with hot water perimeter radiation; 1,250-ton chillers added to existing plant; using existing boilers; 100% sprinklered

Vertical Circulation
ELEVATORS: 9 passenger, I administration, 5 patient, 3 service; 2 casecart, I kitchen, 3 freight
STAIRS: 6 fire; 3 grand

Module
26-0"

Consultants
Programming: Ellerbe Associates, Inc., Bloomington, Minnesota
Master Planning: Mason DaSilva, New York, NY
Soils: Museser Rutledge, New York, NY
Structural: Weiskopf & Pickworth, New York, NY
Mechanical /Electrical: Syska and Hennessy, New York, NY
Lighting: Howard Brandston Lighting Design, Inc., New York , NY
Acoustical: Cerami and Associates, New York, NY
Life Safety: Rolf Jensen & Associates, Inc., Springfield, VA
Food Service: Marriott Corporation, Washington, D.C.*
Materials Handling: Kowalski/Dickow Associates, Milwaukee,WI*
Communications: Charles A. Broutman, Rancho Palos Verdes, CA*
Environmental: Allee King Rosen Fleming, Inc., New York, NY*
Traffic: Travers Associates, Clifton, New Jersey
Codes/Building Department: Cole-Gillman Associates. P.C. NYC
Estimators: Turner Construction Company, New York, NY
Construction Consultants: Morse/Diesel, Inc., New York, NY*
Specifications: Robert Schwartz Associates, New York, NY
Graphics: Christopher Klumb Associates, New York, NY*
Equipment: Mitchell International, New York, NY*
*Owner's Consultants

Client
The Mount Sinai Medical Center
New York, New York

Pei Cobb Freed & Partners' Services
Master Planning; Architectural Services

Time Frame
Planning Commenced: April 1983 (Master Plan 1981)
Construction Began: June 1986 (Site Preparation January 1985)
Completion, Phase 1: January 1989; Phase 11: April 1992

Project Team
I.M. Pei, *PartnerlDesign*
Eason H. Leonard, *Partner/Administration (Planning Phase)*
Leonard Jacobson, *Partner/Administration (Planning Phase)*
Werner Wandelmaier, *PartnerlAdministration (Design & Construction*

Avenue lobby one can also proceed directly into the hospital's basement corridor system.

Surgical Suites
Twenty-two operating rooms occupy the building's second level. In addition to facilities for general surgery, there are specialty suites for orthopedic and neurosurgery, as well as for transplantations (which require dual facilities for donor and recipient). Each of the operating rooms is equipped with the most advanced medical technology available and is supplemented by closed circuit television, computer linkages and a pneumatic tube system that can transport laboratory specimens and pharmaceuticals anywhere in the building. Operating tables are movable for optimal approach by the surgeon, with complete access ensured by the location of all support systems overhead rather than on the floor, from a densely housed complex of mechanical equipment in the 11 -foot clearance above the ceiling.

Intensive Care
Intensive care units on levels 5 and 6 have direct elevator connections to the operating rooms, including an emergency elevator in the middle of the building that is large enough to accommodate both the patient and an entire surgical team. In a unique advance in hospital design, all beds in the ICUs are angled to provide medical staff with immediate access to all sides of the patient and to also allow unobstructed patient surveillance from centralized nursing stations. The disposition of the beds has the additional benefit of helping patients to orient themselves with light and outdoor views from strategically placed windows.

Patient Rooms
Above, on tower levels 7-11, patient rooms are grouped into 16 nursing units, each with 34 to 36 beds. On the interior, the rooms are organized around triangular nursing stations for maximum nursing supervision. On the exterior, the configuration allows views through large windows which help to dissipate the patient's sense of confinement by engaging his imagination beyond the room's edge.

C.C. Pei, *Design Architect*
Allen *Terry, Design Architect*
Richard Cutter, *Project Architect*
Michael Vissichelli, *Production Manager*
Fritz Sulzer, *Curtain Wall/Skylight*
Ian Bader, Richard Diamond, Richard Dunham, Ellen Friedman, Michaela Haberland, Dorothy Hill, Tatiana Kasnar, Louis Kaufman Stephanie Mallis, Andrzej Morawski, Jean-Pierre Mutin, Steve Nakada, Gianni Neri, Michael Ngu, Armando Rose, Stephen Rustow, Jeff Sturnacher, Simon Thackdurian, Jose Valdes, Jorg Weinbrenner, King Wong, W. Stephen Wood, Steve Yabon, Michael Zakian

Associate Architects
Ellerbe Architects & Engineers, New York, New York

General Contractor
Turner Construction Company, New York, New York

Major Subcontractors
Architectural Metals: Berson & Berleth Associates, Brooklyn, NY
Architectural Millwork: Somerset Wood Products, Somerville, NJ
Automation: Johnson Controls, Inc., Long Island City, NY
Casework: Hamilton Industries, Two Rivers, WI
Central Sterile Supply: AMSCO Sales Co., Horsham, PA
Electrical: Lowy & Donnath, Inc., Long Island City, NY
Communications: MCS-Medical Communications Systems, Bridgeview, 1L
Security: MSI-Security Systems, Inc., Kearny, NJ
Elevators: Dover Elevator Co., Secaucus, NJ
Elevator Cabs: Elevator Cabs Inc.,
Eucavation, Foundations & Back-filling: Maytich Construction, Bronx, NY
Exterior Windows, Curtainwall, Bridges, Entrances: Flour City Architectural Metals, Glen Cove, NY
Fire Protection-Sprinkler: Able Sprinkler, Queens, NY
HVAC: Kerby Saunders-Warkol, Inc., Long Island City, NY
ICU Entrance Doors & Sidewalls: Stanley Magic Door, Edison, NJ
Limestone: Harding & Cogswell Corp., Bedford, IN
Masonry: Kelly Masonry Corp., Mineola, NY & Glen-Gery Brick, NYC
Plumbing: Wachtel, Duklauer & Fein., Inc., Mt. Vernon, NY
Pneumatic Tube: Translogic Corporation, Huntington Valley, PA
Resilient Flooring & Carpeting: W.B.E. Flooring Systems, Inc., NYC
Skylight: Super Sky Products, Inc., Mequon, WI
Stone Setter & Erector: Moliterno Stone Sales, Inc., New York, NY
Structural Steel: Mosher-Steel Co., Birmingham, AL and Atlas/Gem Erectors, New York, NY
Surgical Lights: Siemens Medical Systems, Cranford, NJ
Terrazzo: D. Magnan & Co., Inc., Mount Vernon, NY

Bibliography
Muschamp, Herbert, "Architecture as an Antidote: New Mount Sinai Pavilion Offers Esthetic Approach to Care," *The New York Times* (September 24, 1992) p. B 1.

GUGGENHEIM PAVILION, THE MOUNT SINAI MEDICAL CENTER MODERNIZATION
New York, New York

Location
A 96,000 square foot site between Fifth and Madison Avenue at 101st Street

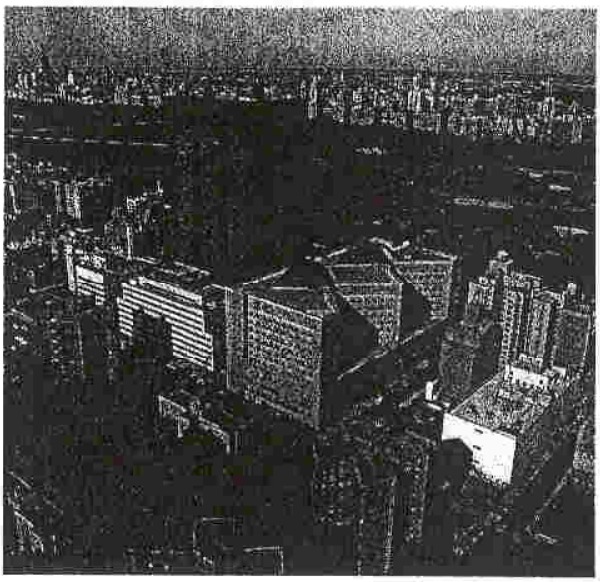
Gross Building Area
900,000 square feet; 160'-0" high
(11 floors above grade/2 below)

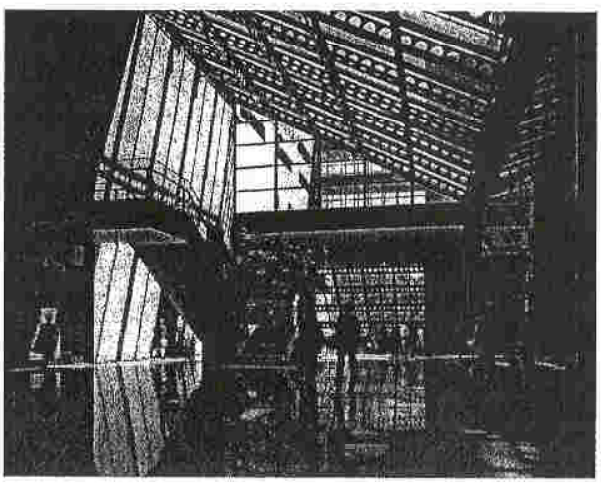
Use
A 625-bed teaching hospital facility replacing 11 buildings in 2 phases as part of a major reconstruction and renovation program

Client
The Mount Sinai Medical Center
New York, New York

Time Frame
Planning Commenced: April 1983
Construction Commenced: June 1986
Completed: January, 1989
(Phase I), April 1992 (Phase II)

Awards
1990 Associated Landscape Contractors of America, Environmental Improvement Grand Award

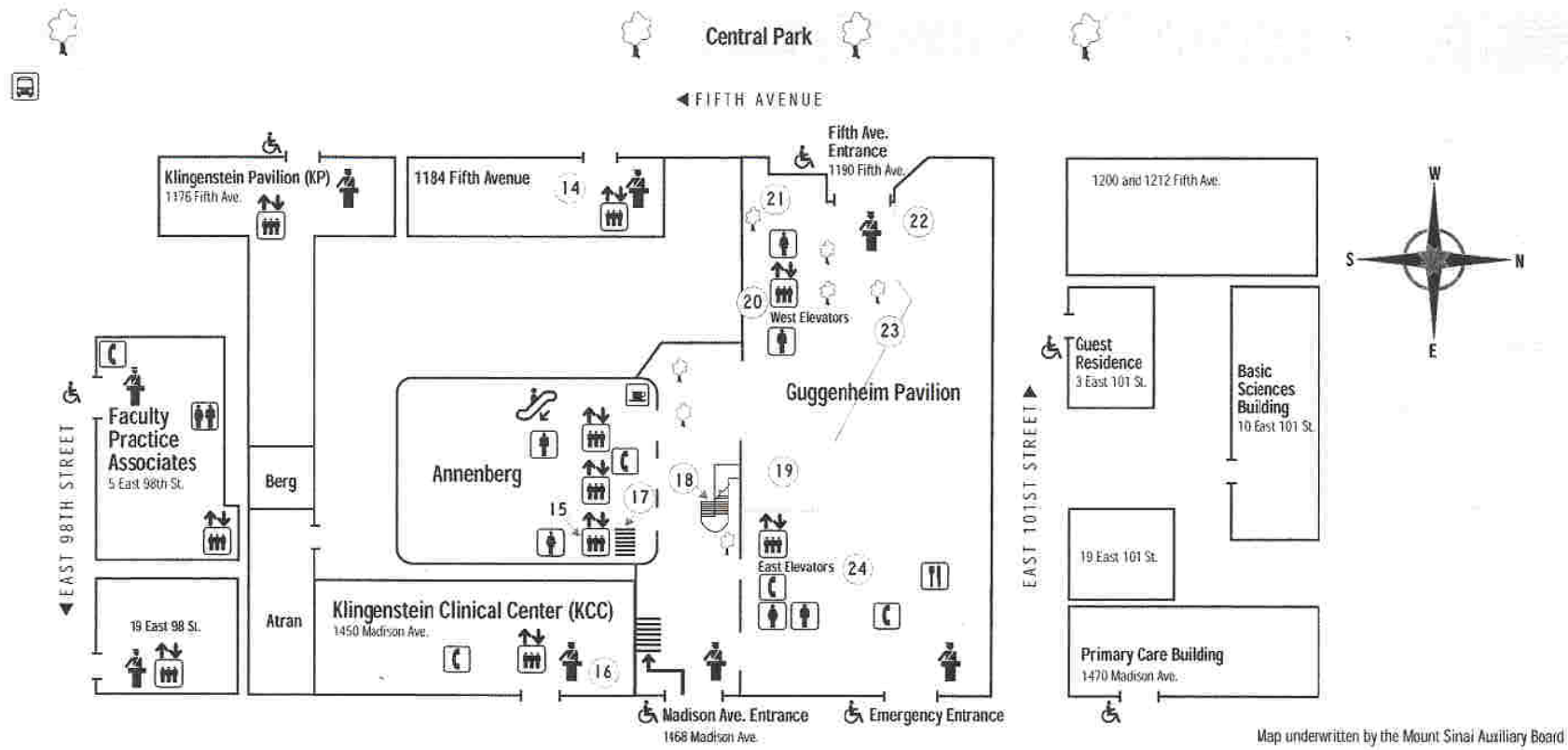




This teaching hospital facility was undertaken as the first step in a massive reconstruction and renovation program to meet Mount Sinai's goal of becoming one of the top academic medical centers in the country. The structure, replacing 11 buildings in two phases, has been designed to improve access, security, ambience, amenities and circulation within Mount Sinai while consolidating functions previously dispersed in the sprawling hospital compound. The challenge lay not so much in the achievement of multiple interrelated goals but resolution in a way that responds equally to all sides of the hospital equation—functional, institutional, urban and above all, human. The building rests firmly on the conviction that a good environment aids the healing process.

From a rectangular base the 11-story building rises as three inpatient towers, each set at an angle to increase exterior surface. By virtue of this manipulation every patient room enjoys a view to the outdoors, or alternately to one of the two landscaped atria that have been carved from the building's core. Two hundred feet of frontage on Fifth Avenue permit spectacular views from patient rooms over Central Park and beyond. At street level a new entrance to the Medical Center extends through the west atrium to a 12,000 square foot skylit plaza that leads all the way to Madison Avenue, connecting for the first time nearly two-thirds of the Medical Center at the ground floor. Elevated bridges, stairs and separate elevator banks for patients, visitors and service personnel further enhance circulation into and through the full hospital complex. In a unique advance in hospital design, all beds in the ICUs have been located on an angle enabling hospital personnel to reach all sides of the beds while simultaneously affording unobstructed patient surveillance from centralized nursing stations.

In the lower floors of the building, major program elements include 22 new operating rooms, an Emergency Room, Rehabilitation Medicine, Admitting, and Nuclear Medicine as well as a Cafeteria, Conference Center and Auditorium, Hospital Kitchen, Administrative and Nursing Offices, a chapel and synagogue.



Security/Information Lost? Call 212-241-6068, or 46068 from a hospital phone.

Bus—M1, 2, 3, 4, 106

Cafeteria

Coffee Stand

Elevator

Escalator

Rest Room

Stairs

Subway—at 96th St. and Lexington Ave.

Telephone

Wheelchair Access

The Mount Sinai Medical Center Ground Level

Ambulatory Care Practices (15)
Take elevator to the appropriate practice on the MC, 2nd, 3rd, or 4th floor.

ATM—Guggenheim Pavilion (24)

ATM—Klingenstein Clinical Center (16)

Auditorium—Hatch (18)
Take stairs to 2nd floor.

Auditorium—Stern (17)
Take stairs to 2nd floor.

Cancer Treatment Center (23)

Cardiovascular Center (22)

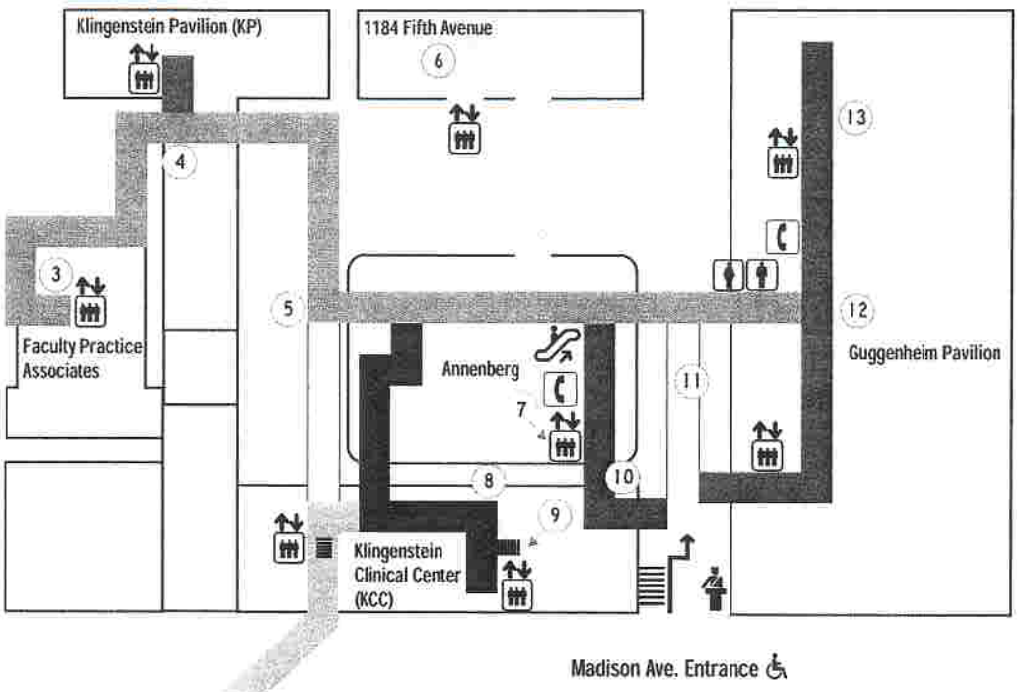
Children's Center (14)

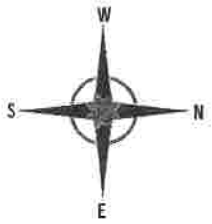
Chapels (21)
Hatch Interdenominational Chapel
For Peck Jewish Chapel, take stairs to 2nd floor.

Gift Shop (19)

Patient Service Center (20)

Surgical Family Waiting Room (18)
Take stairs to 2nd floor.
East—Ambulatory, West—Inpatient





To find your way on the MC level, colors on the map correspond to the double painted strips on the walls of the corridors.

Map underwritten by the Mount Sinai Auxiliary Board

The Mount Sinai Medical Center MC Level

(below ground)

- **Security/Information** Lost? Call 212-241-6068, or 46068 from a hospital phone.
- **Elevator**
- **Escalator**
- **Rest Room**
- **Stairs**
- **Telephone**
- **Wheelchair Access**

Ambulatory Care Practices (7)
Take elevator to the appropriate practice on the 2nd, 3rd, or 4th floor.

Blood Bank Donor Center (9)
Take stairs down one level.

Bookstore (2)
Take elevator to East Building's MC Level.

Cardiac Rehabilitation Program (3)

Cashier (10)

MRI Suite (5)

Nuclear Medicine (13)

Radiation Oncology (6)

Radiology Associates (4)

Renal Treatment Center (8)

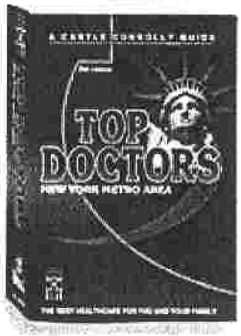
Rehabilitation Services (12)

Security Office (11)

Volunteer Office (1)
Take elevator to East Building's MC Level.

Welcome
Top Stories
Press Releases
Who's New
News Magazine
Facts & Figures
Mount Sinai Firsts
Press Contacts

read more



read more

Facts and Figures

The Mount Sinai Hospital (2003 Data)

Founded		1852
Beds		1,171
Attending Physicians		2,400
Residents and Fellows		864
Nurses (RNs)		1,920
Inpatient Days		292,674
Excluding Newborns	282,109	
Discharges		47,078
Excluding Newborns	42,847	
Newborn Deliveries (*Live Births*)		4,500
Outpatient Visits		469,112
Emergency Room Visits		72,238

Mount Sinai School of Medicine (2003 Statistics)

Faculty

Total Members of the Faculty	3,625
Full-Time	1,752
Voluntary/Part-Time	1,873
Total Number of Non-Faculty	2,914

Students

Total Number of Medical Students	445
Percent Women	51.5%
Percent Under-represented Minorities	14.1%
Number of Humanities and Medicine Students	49
Number of Engineering and Medicine Students	8
Average MCATs	10.5
Average GPAs	3.63
Total Number of Graduate Students	144
Percent Women	50.6%

Percent Under-represented Minorities	7%
Total Number of M.D./Ph.D. Students	61
Percent Women	34%
Percent Under-represented Minorities	12%
Total Number of Ph.D. Students	154

Space

Total Number of Square Feet	746,550 sq.ft.
Square Feet Devoted to Research	429,427 sq.ft.
Square Feet Devoted to Clinical Programs	118,619 sq.ft.
Total Number of Departments and Centers	38

Grants

Total $ Value of Grant Funding	$214.3 million
Total Number/ $ Value of Federal Grants Awarded	559/$154.7 million
Total Number/ $ Value of Non-Federal Grants Awarded	972/$59.6 million
National NIH Rank	24th

Profile

▶ **Projects**

Contacts

Contents

Site
96,000 s/f, between Fifth and Madison avenues at 101st Street, overlooking Central Park

New York, New York

Gross Floor Area
900,000 s/f

Client
The Mount Sinai Medical Center,
New York, New York

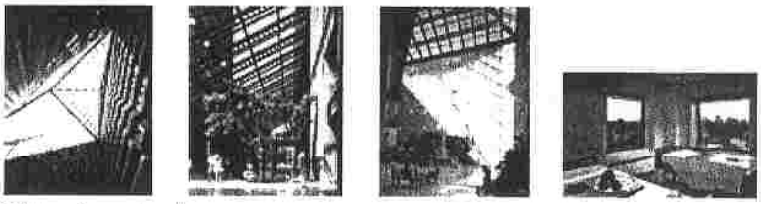
Time Frame
Planning: 4/83–
Construction: 6/86–
Completion:
Phase I: 1/89
Phase II: 4/92

Guggenheim Pavilion, The Mount Sinai Medical Center Expansion & Modernization

New York, New York
Completed 1992

Lead Designers: I. M. Pei
C.C. Pei
Ian Bader

625-bed teaching hospital facility, providing a new main lobby and gateway into the full medical complex



Click on image to enlarge

This 625-bed medical facility inaugurated a massive reconstruction and renovation campaign aimed at positioning Mount Sinai among the top teaching hospitals in the United States. The goal of this project was to improve access, security, ambience and circulation while consolidating facilities dispersed throughout the full medical complex. The challenge was to satisfy these goals in functional, institutional, urban and above all, human terms. Guided by the conviction that a good environment aids healing, the building was designed to participate actively in the therapeutic process.

Decades of ad hoc expansion had left Mount Sinai a knot of corridors filled with undifferentiated traffic. In solution, access was improved and circulation rationalized by a new network of bridges, stairs and dedicated elevators that horizontally and vertically separate patients from materials transport and the comings and goings of the general public. A new main entrance was created to convey a sense of arrival and also to achieve functional integration, leading to a skylit plaza and thereby connecting nearly 70% of the entire hospital complex at ground floor for the first time.

Guggenheim Pavilion occupies a full city block. It rises from a rectangular base designed for easy access to a greatly enlarged emergency room, health clinics and other public services. State-of-the-art operating suites and major medical areas are located above on large (2-acre) floors that provide maximum flexibility.

Patients are housed in three linked towers on the five uppermost

floors, raised above city noise and bustle. The towers are angled to provide each room with an atrium or outdoor view in order to engage the patient's imagination beyond the room's edge and thereby promote a sense of wellness rather than illness.

Major Components

12,000 s/f atrium lobby; 8,400 s/f atrium plaza; 5,100 s/f patient atrium (on floors 7–11); 192 two-bed rooms; 175 single-bed rooms; 66 ICU beds; 22 operating rooms/support (47,000 s/f); 15,000 s/f Emergency Room; 16,000 s/f cafeteria; coffee shop; 194-seat auditorium; chapel, synagogue, support

Awards

1993 New York Association of Consulting Engineers:
Engineering Excellence Competition:
First Prize, Structural — Buildings Category

1990 Associated Landscape Contractors of America:
Environmental Improvement Grand Award

I. M. Pei & Partners services

Master Planning; Architectural Design; Interior Design of public spaces; coordination with associate architect on construction documents and construction administration

Associate Architects

Ellerbe Architects & Engineers, New York, NY

Structural

Weiskopf & Pickworth, New York, NY

Mechanical / Electrical

Syska and Hennessy, New York, NY

Programming

Ellerbe Associates, Inc., Bloomington, MN

ANNEXE 3

About Us
- Our Mission
- Our Core Values
- Leadership
- History

Awards & Rankings

Reports
- Annual Reports
- Fiscal Statistics

Home

Fiscal Statistics

The following table summarizes certain statistics for the fiscal years ending August 31, 2004 and 2005.

Utilization Statistics	2004	2005
Inpatient Admissions	40,840	42,202
Patient Days	200,109	204,636
Average daily census	562	579
Average length of stay	4.90 days	4.85 days
Deliveries	9,801	9,841
Outpatient Registrations	378,870	403,299
Surgical Cases - Inpatient	11,065	11,424
Surgical Cases - Outpatient	17,612	18,432
Emergency Room Visits	67,299	70,058
Northwestern Memorial Physicians Group		
Physicians and Allied Healthcare Providers	81	79
Community Medical Offices	11	11
Patient Visits	271,434	274,340
Northwestern HealthCare Corporation		
Managed Care Contracts	20	18
Northwestern Memorial Foundation (dollars in millions)		
Gifts received to support hospital programs, research, education and community services	$26.0	$25.1
Grants for hospital programs, research, education and community services	$31.7	$24.0

*** This subsidiary has been sold.**

Quick Links: Baby Photos, Charitable Giving, Greeting Cards, Healthcare Professionals, Volunteer

About Us
- Our Mission
- Our Core Values
- Leadership
- History

Awards & Rankings

Reports
- Annual Reports
- Fiscal Statistics

Awards & Rankings

Northwestern Memorial Hospital ranked high in the 2005 *US News & World Report's* "America's Best Hospitals"

Eight of Northwestern Memorial Hospital's clinical specialties rank among the very best in the country in the 2005 U.S. News & World Report's annual "America's Best Hospitals" list. Three Northwestern Memorial specialties rose in the rankings from a year ago and are among the top 20 nationally: Urology (No. 15, up from 17); Rheumatology (No. 18, up from 21); and Digestive Disorders (No. 20, up from 27). Five additional Northwestern Memorial specialties are rated among the country's elite – Orthopedics (No. 26), Hormonal Disorders (No. 29), Gynecology (No. 32), Neurology and Neurosurgery (No. 40), and Ear, Nose & Throat (No. 44). Northwestern Memorial is the highest-ranked Chicago area hospital for Urology and Rheumatology.

Alan L. Buchman, MD, Receives Fiterman Distinguished Achievement Award

The American Gastroenterological Association (AGA) has named Alan L. Buchman, MD, the recipient of its 2005 AGA/Miles and Shirley Fiterman Foundation Hugh R. Butt Award for Distinguished Achievement in Clinical Research in Hepatology or Nutrition. (more)

Awards For Clinical Excellence
National Research Corporation Consumer's Choice Award

Northwestern Memorial was chosen as the No. 1 consumer-preferred hospital in Chicago and the nine-county area. Northwestern Memorial has been recognized since 1992 by Chicago healthcare consumers as Chicago's first choice for:

- Best Quality
- Best Physicians
- Best Nurses
- Most Personalized Care
- Best Image and Reputation

Northwestern Memorial Hospital Honored With One of the Nation's Top Awards for Quality Among Hospitals

One of the nation's preeminent symbols of quality in health care – the 2005 National Quality Health Care Award – was bestowed upon Northwestern Memorial Hospital. The award is presented annually by the National Committee for Quality Health Care (NCQHC) with corporate sponsorship from the Cardinal Health Foundation and with legacy partner *Modern Healthcare* magazine.

U.S. News & World Report

Eleven of Northwestern Memorial's clinical specialties were highlighted as the nation's best in U.S. News & World Report.

Sodexho Health Care Services and Modern Healthcare Magazine

The Best Patient Experience Pilot Project won the Patient

Appointments

Looking for a doctor? Request an appointment online.

Classes / Programs

View Northwestern Memorial Hospital's classes, programs and support groups.

Patient Feedback

We welcome your comments about your Northwestern Memorial experience.

Service Excellence award. The award recognizes the project that best demonstrates responsiveness to patient needs, preferences and expectations. Northwestern Memorial has "raised the bar on customer satisfaction to a new level that should set the standard for the healthcare industry."

How to Find the Best Metropolitan Chicago Doctors
182 Northwestern Memorial physicians - more physicians than any other hospital in the area - were listed in the recently published book "How to Find the Best Metropolitan Chicago Doctors." The book's listings are based on nominations by other physicians.

Consumer's Checkbook
Northwestern Memorial ranked fifth on a national survey of "America's Top Hospitals" by Consumer's Checkbook, a Washington D.C.-based nonprofit consumer education organization. The national survey ranked the nation's 50 leading metropolitan hospitals.

Hospitals & Health Networks
Northwestern Memorial has maintained the title of "Most Wired Hospital" by "Hospitals & Health Networks," Compaq and PeopleSoft for five consecutive years.

Human Resources Awards
Working Mother's Magazine
Since 2000, Northwestern Memorial Hospital has been named among the "100 Best Companies for Working Mothers" in its annual ranking compiled by Working Mother Magazine.

Illinois Governor's Commission On The Status Of Women
Northwestern Memorial received the 2002 Governor's Family Investment Award in the category of Innovations, Insights and First Steps.

CARA
In 2002, Northwestern Memorial was honored with CARA's Good Neighbor award. The award recognizes Northwestern's hiring of 30 CARA program participants. CARA is an organization dedicated to helping the homeless and at-risk populations in their efforts to return to a life of economic self-sufficiency through job training and placement.

Community Service Awards
Illinois State Historical Society
Northwestern Memorial received the distinguished Service Award at the 15th Annual Centennial Awards.

United Way
Northwestern Memorial was named a leading Contributor in the Crusade of Mercy Campaign.

March Of Dimes
Northwestern Memorial received the Diamond Award for being one of the top ten fundraisers for the March of Dimes annual campaign.

Marketing and Public Relations Awards
The New York American Marketing Association EFFIE Award
Northwestern Memorial's advertising campaign to launch the new hospital was the winner of the EFFIE, the preeminent award in the advertising industry. This is the only national award that honors creative achievement in meeting and exceeding marketing objectives.

The Chicago American Marketing Association

The Golden Champs Award
The Chicago American Marketing Association bestowed this honor upon the hospital's integrated marketing efforts to promote awareness of the new hospital.

The Healthcare Marketing Report Awards

Gold award for Publication/In-House for Connections

Gold award for Other with Physician Information Folder-"Stem Cell"

Silver award for Newspaper Advertising/Single-"Erma Clark ad"

Bronze award for Patient Handbook-"Stem Cell Transplant"

Merit award for the annual report

Publicity Club of Chicago, Gold & Silver Trumpet Award
Northwestern Memorial was honored in the category of public service for publicity efforts to remind Chicago residents about potential dangers on lakefront bike paths and how to enjoy recreational sports safely. Most recently, The Publicity Club recognized Lifetime of Health, a health information newsletter produced by Northwestern Memorial as a service to the community.

Search:

Go

Patient Guide

- Becoming a Patient
- Advance Directives
- Patient Rights
- Room Accommodations
- Visiting Hours

Managing Your Health

- Accepted Insurance
- Financial Assistance & Billing
- Medical Records

Getting Here

- Driving Directions
- Parking Options
- Campus Map
- Public Transportation
- Health Express Minivan Service

Shopping & Services

- Retail & Flower Shop
- Dining & Café
- Pharmacy
- Banking
- Special Assistance
- Conference Centers

Home

Campus Map

Northwestern Memorial Hospital is conveniently located in the heart of Chicago, just north of Chicago's "Loop" between North Michigan Avenue and Lake Michigan.

1. Main entrance and drive-through for Feinberg and Galter Pavilions
2. Emergency Department
   250 E. Erie St.
3. Feinberg Inpatient Pavilion
   251 E. Huron St.
4. Galter Pavilion:

   Physician Offices
   201 E. Huron St.

   Robert H. Lurie Comprehensive Cancer Center
   675 N. St. Clair St.

   Northwestern Memorial Faculty Foundation
   675 N. St. Clair St.
5. Prentice Women's Hospital
   333 E. Superior St.
6. Norman & Ida Stone Institute of Psychiatry - Inpatient
   320 E. Huron St.
7. Human Resources
   Olson Pavilion
   233 E. Superior St.
8. Onterie Center
   446 E. Ontario St.
9. The Wellness Institute
   150 E. Huron St., Suite 1100
10. Physician Offices
    150 E. Huron St.
11. Physician Offices
    645 N. Michigan Ave.
12. Physician Offices
    676 N. St. Clair St.
13. Physician Offices
    233 E. Erie St.
14. Physician Offices and Northwestern Memorial Home Health Care
    211 E. Chicago Ave.
15. Physician Offices
    680 N. Lakeshore Dr.
16. MRI Facility
    441 E. Ontario St.
17. Worcester House
    244 E. Pearson St.
18. Galter Carriage House
    215 E. Chicago
19. Patient/Visitor Parking

ANNEXE 4

MAPS & DIRECTIONS

Princess Margaret Hospital Floor Description

Floor	Unit/Description
18	In-Patient Units (18-A), Eye Clinic (Ocular Oncology), Pencer Brain T
17	In-Patient Units (17-A, 17-B)
16	Administration, Palliative Care Inpatient Unit, Psychosocial Oncology Care Office, Public Affairs, Roof Top Garden
15	In-Patient Units (15-A, 15-B), Nursing Education, Rehabilitation Servi Community Care Access Centre, Respiratory Therapy
14	In-Patient Units (14-A, 14-B, 14-C)
13	Building Services (accessible from 12th Floor)
12	Medical Engineering, Machine Shop
10	Research Labs
9	Research Labs
8	Research Labs
7	Research Labs, Research Atrium
6	Lecture Theatre, SIMS Training Room
5	Cafeteria, Vending Machines, Patient Education, Radiation Oncology Library
4	Blood Bank, Bridge to Mt. Sinai Hospital, G.I. Clinic, G.U. Clinic, Lung Prostate Centre, Skin-Sarcoma Clinic, Laboratory Hematology Office
3	Breast Centre, Breast Imaging (Mammography), Brachytherapy Lab, Feel Better Program, Wig Salon and Accessories Boutique, Pharmac Department, Referral and Registration, CT Suite, MRI units, Surgical Ultrasound
2	Breast Centre, Chemo Daycare, Dentistry, Head and Neck Centre, H Clinics, Transfusion
M	Main Lobby, Information Desk, Gift Shop, Chapel, Volunteer Resourc Deli, Tim Horton's Coffee, Boardroom, Security, Cashier, Bank Machi Castle Day Care, Out-Patient Pharmacy, Familian Ovarian Cancer Cl Gynecology Clinic, Colposcopy Clinic, Blood Collection Lab
1B	Radiation Services (Treatment and Planning), Clinical Physics
2B	Radiation Therapy Treatment Units
3B	Human Resources, Environmental Services, Occupational Health, Gr Audio Visual, Mailroom, Purchasing, Transcription Services

Princess Margaret Hospital

PMH at a Glance

Princess Margaret Hospital, a teaching hospital of the University of Toronto, has achieved an international reputation as a global leader in the fight against cancer and is considered one of the top comprehensive cancer treatment and research centres in the world. Located in Toronto, Canada, Princess Margaret Hospital, together with its research institute the Ontario Cancer Institute, is a member of the University Health Network, which also includes the Toronto General Hospital and the Toronto Western Hospital. PMH is the only facility in Canada devoted exclusively to cancer research, treatment and education.

Established in 1952 by an Act of the Ontario Legislature, the Ontario Cancer Institute was officially opened by Her Royal Highness, Princess Margaret, on May 1, 1958. To mark the occasion, the Ontario government named the 87-bed facility at 500 Sherbourne Street in her honour.

Photograph celebrating the arrival of an Electron Microscope at Princess Margaret Hospital, 1967.

On Nov. 13, 1995, Princess Margaret Hospital moved to its current location at 610 University Avenue, directly across the street from the Toronto General Division and into the heart of Canada's greatest concentration of teaching and research hospitals. Again, Princess Margaret was on hand to officially reopen the hospital on July 12, 1996.

The original hospital at 500 Sherbourne Street.

As part of provincial hospital restructuring, the Health Services Restructuring Commission recommended the Toronto Hospital and Princess Margaret Hospital merge all oncology services. This became official when the Toronto Hospital Act was passed in the provincial legislature on Jan. 1, 1998.

The move was on. In the months that followed, staff from both hospitals prepared to relocate oncology services and programs from the Toronto General Hospital to their new home. The first step was renovating the Princess Margaret Hospital site to house these service and to ensure they were properly established to allow for a seamless flow of patient care. With the help of the Princess Margaret Hospital Foundation, a $15-million renovation program was completed in the fall of 1998, creating several newcomprehensive treatment centres for specific cancers including breast, prostate, head and neck and brain tumours.

During the 1960s, Dr. Harold Johns was a pioneer of cobalt therapy.

During the year, a surgical oncology program was also established at Princess Margaret Hospital, further solidifying this institution as a world leader in cancer care. While some major surgical procedures are still performed at the General, Princess Margaret Hospital now houses all facilities for our Oncology Priority Program. With a proven record in research, education, and patient care, it has truly become a world-class institution.

The 800,000-square-foot building accommodates 220 patient beds, 160,000 square feet of research space, and 17 radiation treatment machines in special concrete bunkers below grade, making PMH the largest radiation treatment centre in Canada and one of the largest treatment facilities in the world. The building's architectural characteristics and the manner in which the hospital delivers care mean that PMH can serve 10,000 new patients a year -- over 500 patients a day. PMH sees about 190,000 outpatients annually for diagnosis, treatment and follow-up.

PMH ranks among the top centers in the world for bone marrow transplantation, and has achieved a solid international reputation as having some of the longest surviving bone marrow transplant recipients in the world. The hospital's bone marrow transplant unit, established in 1971, was the first in Canada to perform allogeneic transplants -- transplants between unrelated donors. In 2002-2003, we completed 251 bone marrow transplants, of which 170 were autologous transplants and 81 were allogeneic transplants.

[**back to top**]

ANNEXE 5

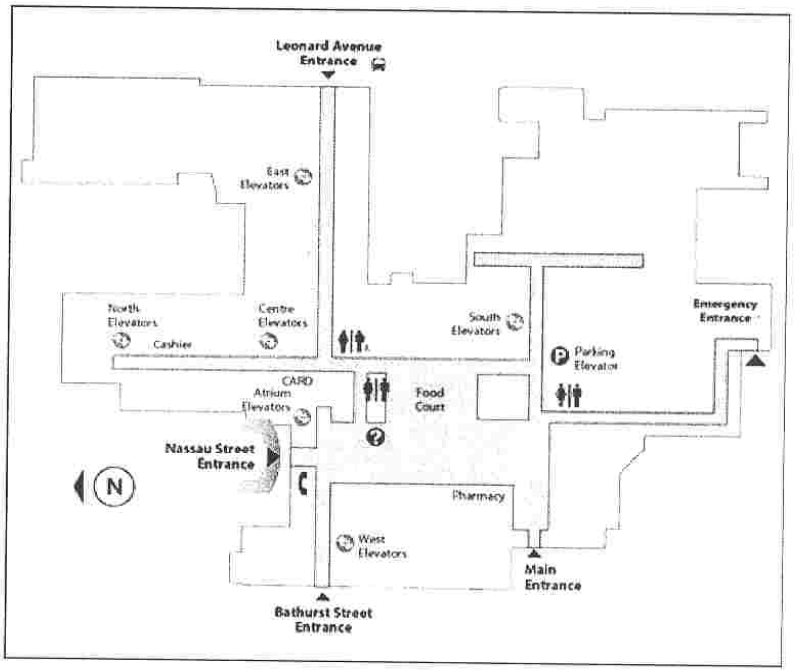
Maps & Directions

Physician Directory

Internet Resources

MAPS & DIRECTIONS

Map of Toronto Western Hospital



Please Note: This map is not to scale

Print Versic

Toronto Western Hospital

TWH Fast Facts

Patients Served 2004/2005

- Beds = 239
- Patient Days = 82,496
- Admissions = 9,908
- Clinic Visits = 325,355
- Emergency Visits = 41,765
- O.R. Surgeries = 12,894
- Diagnostic/Therapeutic Procedures = 688,250
- Hip and Knee Replacements = 701


Toronto Western Hospital
Krembil
Neuroscience
Centre

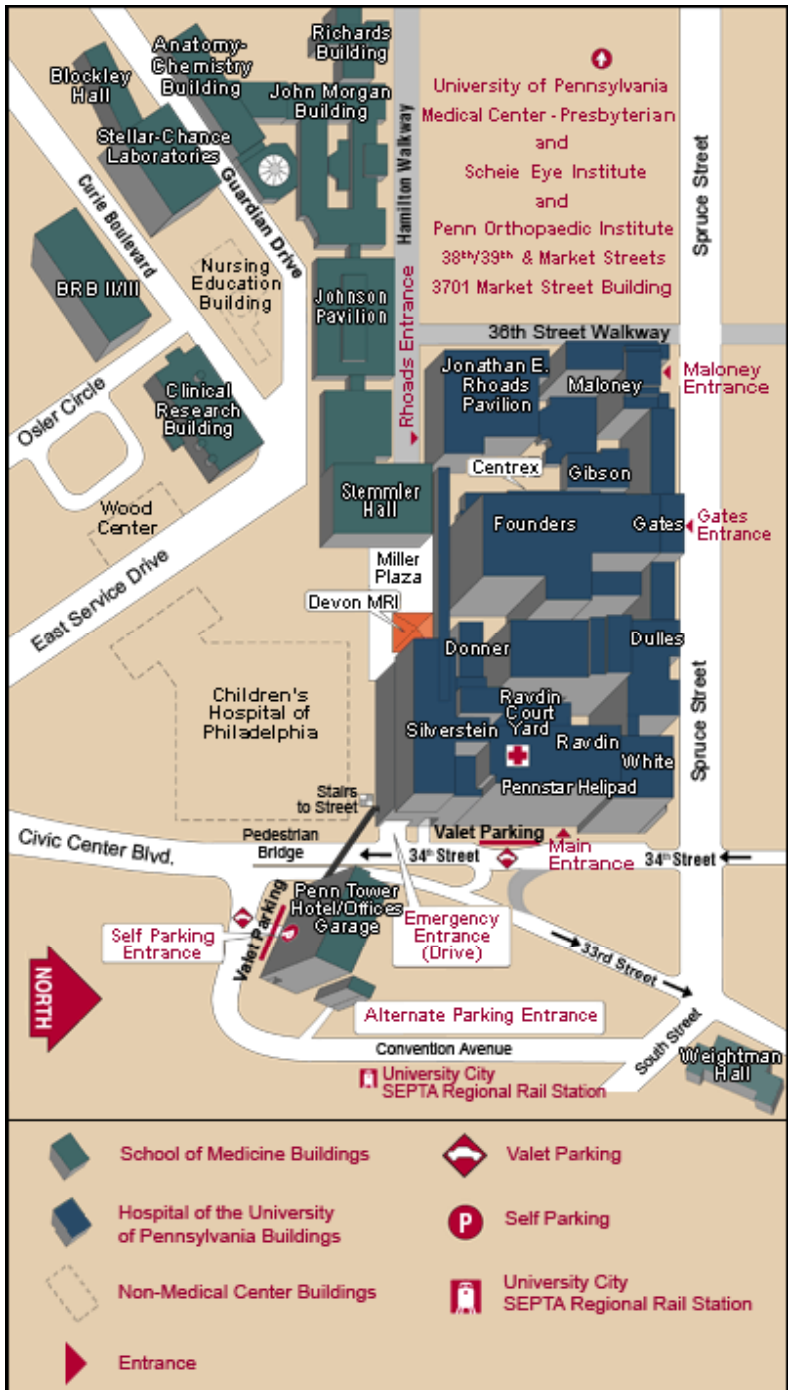
ANNEXE 6

Hospital of the University of Pennsylvania Campus Map

Back to maps

- **HUP Ground Floor**
- **HUP First Floor**

Due to current construction, we are always making changes in the hospital. Please be sure to stop and read the signs.



Related Links

Find a Doctor

Request an Appointment Online or call **1-800-789-PENN (7366)**

Medical Services at HUP

Encyclopedia Articles

HUP Floor Plan: Ground Floor

Back to maps

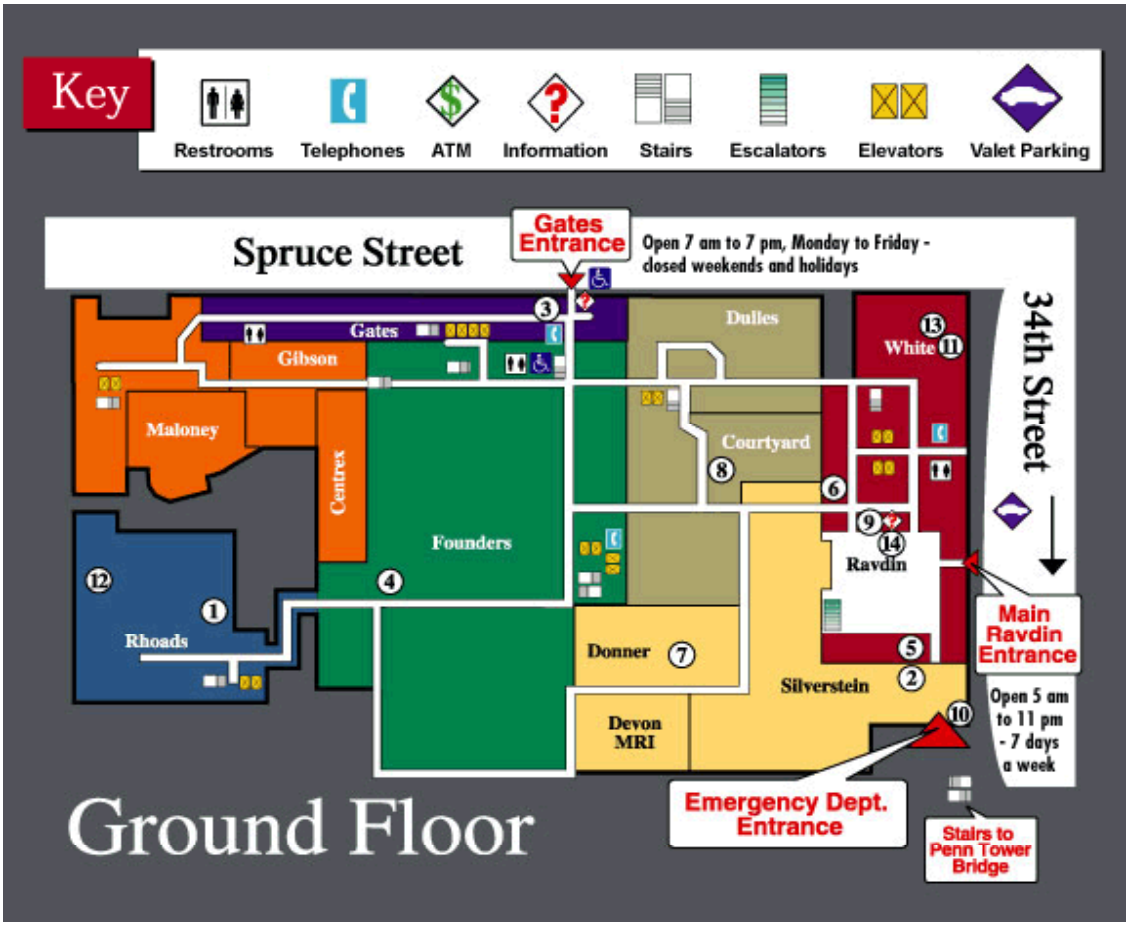
Related Links

Find a Doctor

Request an Appointment Online or call **1-800-789-PENN (7366)**

Medical Services at HUP

Encyclopedia Articles



	Destination	Floor / Building
1	Cardiology	Ground / Rhoads**/***
2	Emergency Department	Ground / Silverstein
3	Gates Lobby	Ground / Gates
4	MRI Registration	Ground / Founders
5	Occupational Medicine & Travel Medicine	Ground / Ravdin

6	Psychiatric Emergency Evaluation Center	Ground / Ravdin
7	Radiation Therapy	Ground / Donner
8	Radiology Registration	Ground / Dulles
9	Ravdin Lobby	Ground / Ravdin
10	Security Office	Ground / Silverstein
11	Surgical Theater	Ground / White
12	Transplant	Ground / Rhoads**/***
13	William J. Erdman, II Spine Center	Ground / White
14	Volunteer Services	Ground / Ravdin

* Internal Medicine and Penn Fertility Care are now located at 3701 Market Street.

** From the Bridge Level, Cardiology, Dermatology and Transplant are three city blocks.

*** From the Ravdin entrance, Cardiology, Dermatology and Transplant are two city blocks. Please ask for assistance if necessary.

Due to construction, we are often making changes in the hospital. Please be sure to stop at an Information Desk for current information.

Hospital of the University of Pennsylvania

HUP First Floor

Due to current construction, we are always making changes in the hospital.
Please be sure to stop and read the signs.

HUP Floor Plan: First Floor

Back to maps

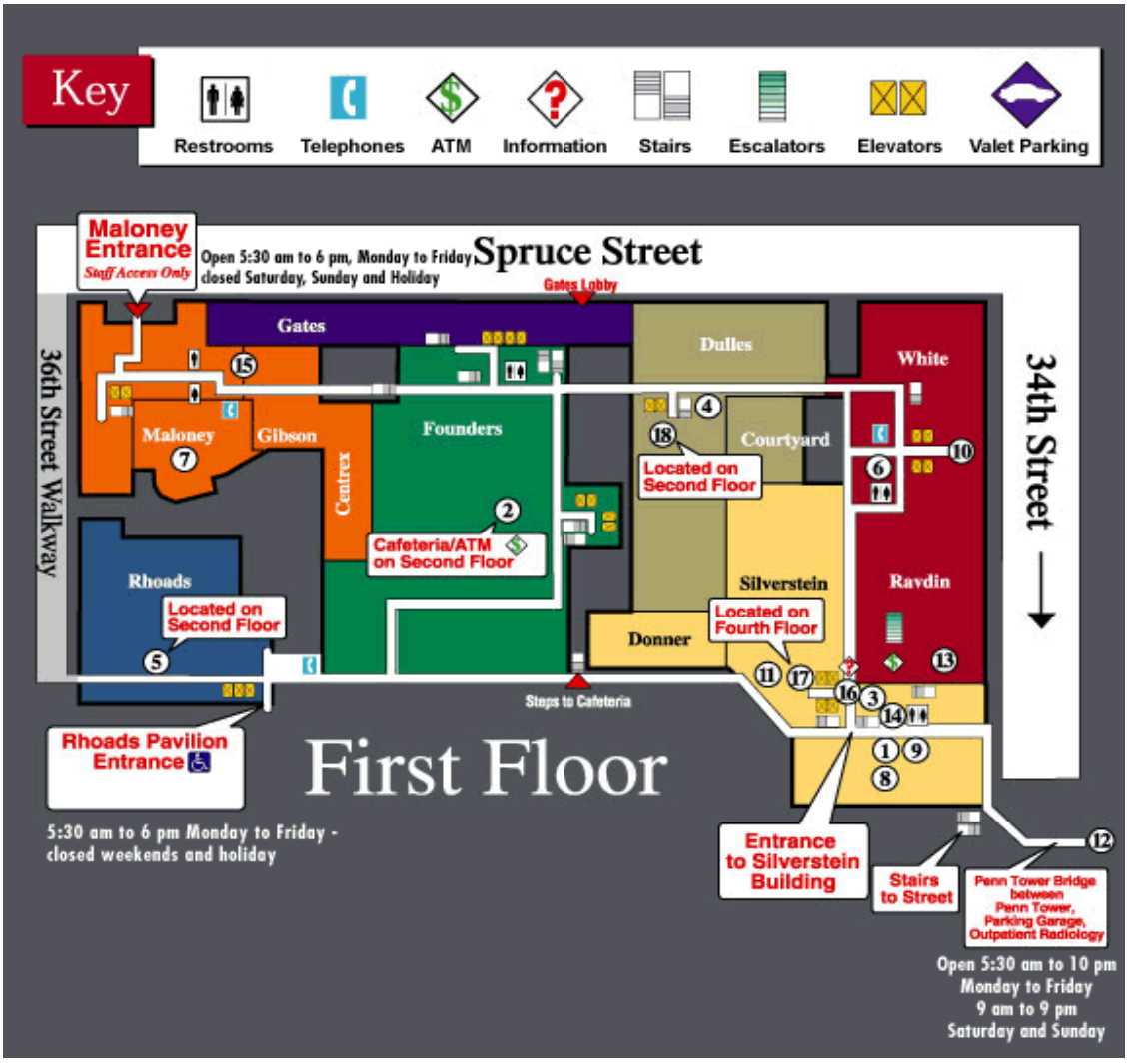
Related Links

Find a Doctor

Request an Appointment Online or call **1-800-789-PENN (7366)**

Medical Services at HUP

Encyclopedia Articles



	Destination	Floor / Building
1	Admissions / Admissions Evaluation Center	One / Silverstein
2	Cafeteria / ATM	Two / Founders
3	Cashier	One / Silverstein

4	Chapel	One / Dulles
5	Dermatology	Two / Rhoads**/***
6	Gift Shop	One / Ravdin
7	Medical Alumni Hall	One / Maloney
8	Occupational Medicine	One / Silverstein
9	Outpatient Laboratory (in Admissions)	One / Silverstein
10	Outpatient Pharmacy	One / Ravdin
11	Outpatient Radiology	One / Silverstein
12	Outpatient Radiology	Penn Tower / Bridge Level
13	Patient / Family Education Center	One / Silverstein
14	Patient / Guest Services Administration	One / Silverstein
15	Hair House Too	One / Maloney
16	Silverstein Information Desk	One / Silverstein
17	Surgery	Four / Silverstein
18	Surgical Family Lounge	Two / Dulles

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** From the Bridge Level, Cardiology, Dermatology and Transplant are three city blocks.

*** From the Ravdin entrance, Cardiology, Dermatology and Transplant are two city blocks. Please ask for assistance if necessary.

Due to construction, we are often making changes in the hospital. Please be sure to stop at an Information Desk for current information.

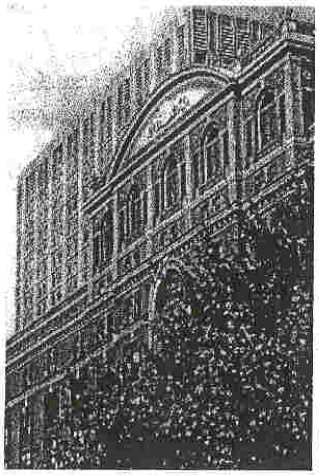
Penn Tower Directory **University of Pennsylvania Health System**	
Bridge Level Phlebotomy Laboratory Outpatient Radiology **4th Floor** Penn Rodebaugh Diabetes Center **5th Floor** Penn Ob/Gyn Care Division of Urogynecology **6th Floor** Penn Cardiac Care **8th Floor** Penn Cardiac Care Infectious Diseases Division-ACTU Rheumatology Division	**9th Floor** Penn Urology **10th Floor** Center for Human Appearance Internal Medicine Oculoplastic Surgery Plastic Surgery **14th Floor** Rena Rowan Breast Center at the Abramson Cancer Center of the University of Pennsylvania **15th Floor** Hematology/Oncology Abramson Cancer Center of the University of Pennsylvania

Hospital of the University of Pennsylvania

HUP Ground Floor

Due to current construction, we are always making changes in the hospital.
Please be sure to stop and read the signs.

ANNEXE 7



Bellevue Hospital Center

Bellevue Hospital occupies a 25-story, multi-million dollar patient care facility at First Avenue and 27th Street. Annually, Bellevue treats 26,000 inpatients and handles nearly 400,000 outpatient clinic visits, while providing another 65,000 days of home care to 200 patients. Bellevue's world-famous Emergency Service provides help for another 100,000 people each year, approximately 50,000 in the Adult Emergency Services, 35,000 in Pediatric Emergency Services, and the remaining 15,000 in Psychiatric Emergency Services.

In 1968, the NYU School of Medicine assumed full responsibility for clinical services in Bellevue Hospital. The hospital has an attending physician staff of 1,200 and a house staff of more than 500 residents and interns.

History

Bellevue's history can be traced through the changing health needs and concepts of the community. The hospital is a lineal descendant of the infirmary for soldiers and slaves established in New Amsterdam by Jacob Varrenvanger in 1658. When the colony came under English rule, the Montgomerie Charter of 1731 provided for the building of a "Public Workhouse and House of Correction" to cost eighty pounds and fifty gallons of rum. In this building, at the site of the present City Hall, a single twenty-five by twenty-three-foot room was set aside solely for the care of the indigent sick. in 1794, yellow fever swept the coast of the newly independent nation, and the old almshouse was given a new site on Chambers Street. The facilities were inadequate to deal with the epidemic, so the city fathers acquired an estate about three miles from town, far enough away to isolate the victims. The mansion, "Belle Vue," was used as a pesthouse and gave its name to the hospital later built on this site. In 1811, the city bought additional land adjoining the fever hospital from the Kip Estate, and the Honorable De Witt Clinton, Mayor of New York, laid the cornerstone for a new set of almshouse buildings. The War of 1812 intervened and the hospital was not completed until 1826. In 1847, in response to clamor of the citizens, the almshouse and the penitentiary were removed from the hospital grounds, and the facilities were opened for clinical instruction to the medical students of the city.

The annals of Bellevue tell the history of the development of American medicine. Dr. Valentine Seaman established at the almshouse the first lying-in ward in New York, and delivered a series of lectures on obstetrics to the midwives of the town. Dr. Seaman also introduced Jenner's new cowpox vaccine to New York. Dr. David Hosack performed the first tying of the femoral artery in America at Bellevue. Dr. Wright Post made the first successful ligature of the subclavian artery for brachial tumor. Dr. Stephen Smith inaugurated the series of public health reform movements that swept the country after the Civil War. The first hospital-based ambulance service in the world was established at Bellevue in 1869 by Dr. Edward L. Dalton, who sent his horse and buggy teams racing to every disaster within range of the hospital. The first school of nursing in the nation was opened at Bellevue in 1873. Bellevue was also responsible for the nation's first outpatient department, the Bureau of Medical and Surgical Relief for the Outdoor Poor. In the first year, this service treated 437 patients; in the second, more than 15,000; in recent years nearly 400,000.

Bellevue Today

Each floor of the New Bellevue encompasses 1 1/2 acres of space for a total of 65,000 gross square feet of space per floor. The building is centrally air-conditioned and includes 21 numbered floors, plus a basement, ground floor, and mezzanine. Overall, a total of 4,400 rooms, are provided in the structure. The logistics of providing care for Bellevue's patients have been eased considerably by centralizing services primarily in one high-rise building as opposed to treating patients in some ten buildings scattered over a widearea.

The old, open-ward arrangements traditional in municipal hospitals, have been eliminated and Inpatients are housed in one-bed, two-bed, and four-bed rooms, all on the periphery of the building. A total of 1,232 bedpatients can be accommodated. The building includes six Intensive Care Units: a Cardiac Intensive Care Unit; a Medical Intensive Care Unit; a Surgical Intensive Care Unit; a Neuro-Surgical Intensive Care Unit; and a Pediatric Intensive Care Unit, and the Emergency Ward.

The Operating Suites floor includes 16 operating rooms, Surgical Pathology, the Blood Bank and a Cardiac Catheterization area. There are twin operating rooms for organ transplant operations. Television monitoring links satellite radiology stations in specialty areas to central radiology headquarters on the third floor to provide immediate consultations as needed.

The heritage of the NYU School of Medicine, its remarkable opportunities for service, teaching, and investigation through its association with Bellevue Hospital and the building of a new Medical Center all contribute to the strength of the institution. The real vigor of the School, however, is the vigor of the community of individuals who are part of it: the students, the faculty, the administrative and technical staffs-all working together to relate the practice of medicine effectively to community and national needs.

ANNEXE 8

Mayo Clinic

Location

City: Rochester

Project in General

Type of construction: hospital

Status: completed

Buildings of Mayo Clinic

Building	Height	Floors	Year
Gonda Building	93 m	21	2001
Plummer Building	91 m	19	1929
Mayo Building	90 m	20	1955
Guggenheim Building	78 m	20	1974
Charter House	67 m	22	1988
Siebens Building	67 m	14	1994
Eisenberg Building	46 m	12	1966
Stabile Building		10	2000

Facts

- The Mayo Clinic is the largest private medical center in the United States and consistently ranks as one of the two best hospitals in the country.

Companies

(no entries)

Mayo Clinic

also known as Mayo Medical Center

[Enlarge]

(c) Thomas Young

Location

City	Rochester

Project in General

Type of construction	hospital
Status	completed

Buildings of Mayo Clinic

Building	Floors	Year
Gonda Building	21	2001
Plummer Building	19	1929
Mayo Building	20	1955
Guggenheim Building	20	1974
Charter House	22	1988
Siebens Building	14	1994
Eisenberg Building	12	1966
Damon Parking Ramp	11	
Charlton Building	10	
St. Mary's Hospital	10	1940
Ozmun East Building	6	
Colonial Building	6	1914
Stabile Building	13	2006

Facts

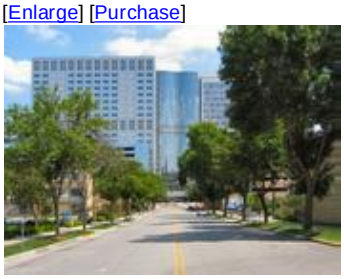
- The Mayo Medical Center is the largest private medical center in the United States and consistently ranks as one of the two best hospitals in the country.
- The main downtown campus includes Mayo Clinic and Rochester Methodist Hospital facilities, and the westside campus includes St. Mary's Hospital.

Companies involved in this Building*

Mayo Foundation for Medical Education and Research.

Gonda Building

[Enlarge] [Purchase]



(c) James Peacock

[Enlarge] [Purchase]

(c) James Peacock

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(c) James Peacock

Photo Compilation

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Identification

Official name	Gonda Building
Alternative names	*
Emporis Building Number	101051

Location

Address	*
Bordering street #1	2nd Avenue SW
Bordering street #2	3rd Avenue SW
Bordering street #3	West Center Street
Postcode	*
Location Map	*
Complex	Mayo Clinic
City	Rochester
State	Minnesota
Country	U.S.A.

Technical Data

Height (tip)	*	
Height (struct.)	93 m	305 ft
Height (roof)	*	
Height (top floor)	*	
Floors (OG)	21	
Construction start	*	
Construction end	2001	
Height Floor-to-floor	*	
Elevators	*	

Building in General

Type of construction	high-rise building
Facade systems	*
Facade materials	*
	*
Main usages	*
Architectural style	*
Status	completed

Facts

- The Gonda Building was constructed in two phases, floors 1-11 (topped out March 17, 2000) and then floors 12-21 (topped out January 12, 2001).
- The Gonda Building was designed to accommodate up to 30 floors in future expansions. If implemented, these vertical expansions would make this one of the tallest hospital buildings in the world.
- Every floor connects to the Mayo Building, just to the south, and a 7-level skyway crosses Center Street to connect to the Charlton Building and Rochester Methodist Hospital to the north.
- The first occupants began moving in during October 2001, and phased move-ins continued through 2003.
- The Gonda Building was awarded First Place in the healthcare category from the International Interior Design Association Northland Chapter.
- The building also received an 'Honorable Mention' Vista Team Award from the American Society of Healthcare Engineering and was cited for 'Excellence in Masonry Design and Construction' by the Minnesota Concrete and Masonry Contractors Association.
- This was the tallest building in Rochester from 2001 until late 2003 when it was surpassed by Oakwood Broadway Plaza.
- It replaced the Damon Parkade, demolished in 1998.

Companies involved in this Building*

design architect: Cesar Pelli & Associates Architects, Ellerbe Becket, Inc.

Other firms: Mayo Foundation for Medical Education and Research, Centex Rodgers, Inc., Mulcahy, Inc., Ellerbe Becket, Inc., Ellerbe Becket, Inc., Ellerbe Becket, Inc., Hunt Electric Corporation, Twin City Tile & Marble Company, Quality Mechanical [HiMec Mechanical, Inc.], Enclos Corp., Braun Intertec, Wenzel Engineering, Inc., La Crosse Technical Consultants, Inc., Israel Berger & Associates, Superl Inc., Viracon, LeJeune Steel Company.

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Leslie and Susan Gonda Building, Mayo Clinic

As the new main entrance to the Mayo Clinic in Rochester, the 1.5 million-square-foot Leslie and Susan Gonda Building was designed to treat and comfort patients for the next 100 years. The granite and marble-laced building not only incorporates durable, timeless materials, it also is warm and inviting from its basement level to the 10th floor. The building is meant to reinforce Mayo's quality reputation from the moment patients enter.

"Some fashions will always change," said Jim Lewison, senior interior project designer at Ellerbe Becket, Minneapolis. "The carpets, upholstery, those things will change. The interior architecture is classic modern -- there are no details that will date it."

Mayo's Facilities Project Services and Ellerbe Becket overcame several construction and design challenges with the project, including balancing clinical needs with patient amenities and blending the design and traffic flow with that of the existing Mayo Building to which the Gonda building is attached. The building's three-story atrium and patient waiting areas are flooded with daylight through a massive wave wall of windows. This central design element connects patients and employees to the outside, helping them stay oriented during long days at the clinic.

"Mayo was concerned about patient amenities and making new spaces that have a lot of light," Lewison said. "We tried to take advantage of daylight whenever we could because Mayo feels it is very important for the healing process."

Public areas convey quality and richness through an abundance of neutral and warm tones in the custom wood paneling and trim, stone tile and marble. Blown-glass art pieces, which Mayo commissioned from Dale Chihuly, are displayed throughout the building. The health-care organization also commissioned sculptures and paintings to augment its substantial art collection.

"There are wonderful pieces of art throughout the building that add to the architecture and the healing environment," said Bruce Rohde, project manager with Mayo's Facilities Project Services. The exam rooms on floors two though 10 have neutral vinyl tile flooring; warm wood for the doors, cupboards and desks; and neutral vinyl wallpaper. A small upholstered bench provides accent color and additional comfort for patients.

"Overall, it was very important for the design to meet the clinical and patient needs," Rohde said. "It is functioning very well. The ambiance and layout of the clinical functions have fulfilled our needs."

Electrical Engineering:

As technology advances, so too do medical procedures. Throughout Gonda's construction, Mayo was likely to see exponential leaps forward in health care. Therefore, designers planned the systems infrastructure to support virtually any use, planned or not-yet-imagined. All system designs and installations carry excess capacity, from HVAC, plumbing and electrical, to fiber-optics for communications. And, because they are located in zones outside the functional areas, support systems accommodate floor-by-floor program diversity that is unusual for a health care facility.

Architecture:

In 1928 Ellerbe Becket designed the Plummer Building for the Mayo Clinic. Revolutionary then, it still functions efficiently today. You can see it from inside the new Gonda Building, which catapults Mayo's practice into the next century. Gonda's exterior takes its cue from the Mayo and Charlton buildings, but it's all new design, from the base of white marble to the linen-textured stainless steel framing white Brazilian granite. While Gonda links to the other buildings by multistory skyways to improve department adjacencies, a gently curved glass wall softens the stylistic transition.

Planning:

Mayo's philosophy is patient convenience and collaboration between health care professionals. Yet with the practice continually expanding, departments gradually became dispersed on several floors in buildings and even scattered across campus. The Gonda Building begins to bring organization back, efficiently clustering specialties and reducing the time patients and staff spend traveling to various service points.

Project overview:

The largest building project in the Mayo Clinic's history, the Leslie & Susan Gonda Building was constructed in three phases to a height of 30 stories. Located at the heart of the campus, Gonda is the centerpiece of Mayo's integrated practice. The goal of this initiative is to offer efficient, high-tech, comprehensive care. Gonda's design is innovative in its approach to functional flexibility and its incorporation of sophisticated technology.

Plus de photos a l'adresse suivante:
http://www.ellerbebecket.com/portfolio_template_74.html

Spécifications :

Client Mayo Clinic
For more than a century, Mayo has been a leader in integrated comprehensive healthcare. Today more than 2,000 physicians and 35,000 allied health professionals work in the Mayo health system, treating nearly a half a million patients annually.
Client site

Client Type Health Care Organization

Location Rochester, Minnesota USA

Date 2003

Area Dimensions
1,614,600 sq. feet
150,000 sq. meters

Integrated Team
Architecture - Ellerbe Becket and Cesar Pelli & Assoc.
Engineering - Ellerbe Becket
Construction Management - Centex Rodgers

Awards
- 2004 American Society of Healthcare Engineering (ASHE) Team Award, Honorable Mention; Vista Awards Program
- 2003 American Society of Interior Designers (ASID) Minnesota Chapter, Honorable Mention; Health Care category
- 2003 Marble Institute of America Pinnacle Award of Merit; Commercial Interior category
- 2003 IESNA/IIDA Twin Cities Chapter Section Award for Interior Lighting Design
- 2003 IESNA/IIDA Twin Cities Chapter Section Award for Outdoor Lighting

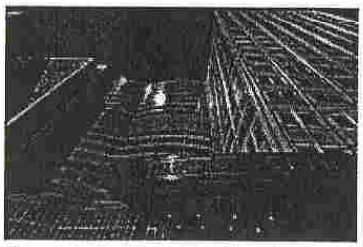
Notes
Other projects by Ellerbe Becket at the Mayo Clinic
Jacksonville Clinic
Scottsdale Satellite Clinic
Samuel C. Johnson Biomedical Research Facility

Building Type
Acute Care
Ambulatory Care

Integrated Services Provided
Architecture
Construction Administration
Electrical Engineering
Facility Assessments
Interiors
Landscape Architecture
Mechanical Engineering
Medical Equipment Planning
Medical Planning

Divers Articles:

NO.1



ROCHESTER, Minn. – The design and construction team responsible for the Mayo Clinic's new Leslie & Susan Gonda Building has been honored by the nation's healthcare engineers.

The 20-story Gonda Building, designed to accommodate the next century of medical advances, will receive an 'Honorable Mention' Vista Team Award from the American Society for Healthcare Engineering (ASHE) in March. The awards recognize teamwork in the design and construction of the built healthcare environment.

The design and construction team consisted of Ellerbe Becket, Cesar Pelli & Associates, Centex Rodgers Construction Company and the Mayo Facilities staff. Ellerbe Becket served as master planner, architect/engineer-of-record and

designer for all clinical and support areas. Cesar Pelli served as design consultant for the building exterior and public spaces and Centex Rodgers was the Construction Manager.

"This is one of the most successful and rewarding project experiences we have had," said Ellerbe Becket Principal John Waugh. "The genuine project team partnership which maintained communications and resolved issues in a non confrontational manner has been outstanding."

Located in the heart of the downtown campus, the Gonda Building is linked with the Mayo Building and Rochester Methodist Hospital, forming one of the largest interconnected medical facilities of its kind in the world, with more than 3.5 million sf. Waugh said this presented many design challenges such as linking to the 50 year old Mayo Building on 18 floors and to Rochester Methodist on eight floors while matching floor heights and allowing for independent building movement.

The Gonda team developed a highly flexible facility that allows for expansion, redesign and accommodation of the ever-changing healthcare delivery system. The building's flexible infrastructure, including structural, heating, ventilation and air-conditioning, electrical and communications services, materials handling and vertical circulation, provides a shell that allows for diverse clinical uses throughout each floor.

The support zones are located outside the functional areas to increase flexibility and allow changes in medical practice. The building's infrastructure has been designed with excess capacity to accommodate the building well into the future.

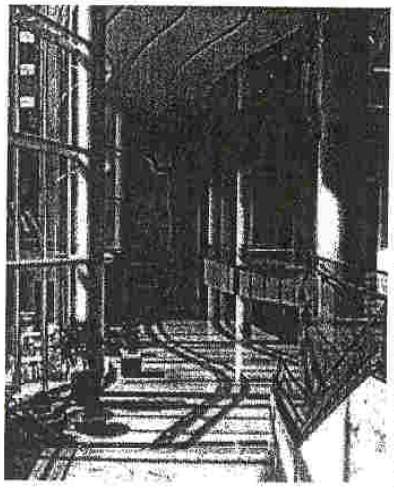
The Gonda project is the centerpiece of the most extensive building program in Mayo Clinic history. The subway and lobby levels of the new 1.5 million-sf Gonda Building opened in 2001 and nine additional floors of disease-specific patient care areas were completed and occupied sequentially during 2002 and 2003.

Vista Team winners will be listed in an upcoming issue of *Today's Healthcare Engineer* magazine and honored at ASHE's 2004 International Conference and Exhibition on Health Facility Planning, Design and Construction next month in Tampa, Fla.

For nearly 10 years, ASHE, in conjunction with the American Institute of Architects Academy of Architecture for Health (AIA/AAH), has presented the Vista Team Awards to more than 30 design and construction teams. The Vista Team Awards encourage, recognize and promote the value of the team approach to the successful execution of building projects.

An innovator since its founding in 1909, Ellerbe Becket is a leader in architecture, engineering and the construction industry with office locations worldwide. This is the fourth time in the last five years that Ellerbe Becket has received a national award for outstanding teamwork.

No.2



ROCHESTER, Minn. – The Mayo Clinic's new Leslie & Susan Gonda Building has added two more design awards to a growing list of industry citations.

The International Interior Design Association (IIDA) Northland Chapter has honored the building with first place in the healthcare category of its FAB Awards Program.

Additionally, the building has been cited for its "Excellence in Masonry Design and Construction" by the Minnesota Concrete and Masonry Contractors Association.

The 20-story Gonda Building is designed to accommodate the next century of medical advances. The design and construction team consisted of Ellerbe Becket, Cesar Pelli & Associates, Centex Rodgers Construction Company and the Mayo Facilities staff. Ellerbe Becket served as master planner, architect/engineer-of-record and designer for all clinical and support areas.

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No.3

At long last, hospitals are going high-tech

Innovations are changing how health care is delivered—and how hospitals are designed

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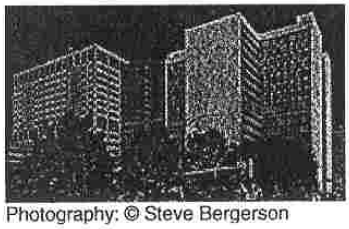
By Alan Joch

The health care industry has always had a love/hate relationship with technology. Hospitals have been quick to embrace sophisticated diagnostic equipment such as MRIs, CAT scanners, and digital X-rays, yet

stagnant capital budgets have made them laggards in installing technology and communications gear that are ubiquitous in other types of facilities. A telling example of the effects of this foot-dragging occurred last March, when the Food and Drug Administration ordered the health care industry to install bar-code systems within three years—a mature technology that has been commonplace in retail environments for years. The FDA estimates that bar codes could eliminate almost half a million medication errors in hospitals over the next 20 years.

Sweeping changes in medical technologies are the driving force behind projects at two well-known medical facilities, the Memorial Sloan-Kettering Cancer Center in New York City (above)and the Mayo Clinicin Rochester, Minnesota (below).
Photography: © John Bartelstone

Fortunately, examples of this go-slow approach may be getting rare. Renovations and construction of new hospitals are layering new computers and communications gear on top of existing IT infrastructures. "The overarching issue in health care today is change, and technology is playing a big part in that," says John Pangrazio, FAIA, a partner at the Seattle architectural firm NBBJ and the leader of the company's health care practice.



Photography: © Steve Bergerson

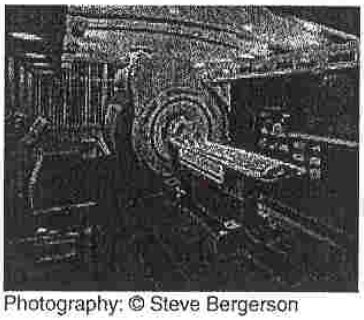
The following case studies illustrate ways that architects are integrating new technologies into three markedly different health care projects. In each case, technology was a core design element that shaped each project's goals and program.

Mayo Clinic, Rochester, Minnesota

At 1.6 million square feet, the Gonda Building is the largest construction project in the long history of the Mayo Clinic. But size isn't its biggest claim to fame: At its core, the building represents a new initiative to integrate various medical practices to improve collaboration among caregivers and provide more convenience for patients, who won't have to be shuttled throughout the hospital for tests and treatments. This approach of taking testing equipment to patients, rather than the reverse, is gaining a foothold in other health care facilities, as well. "Construction costs for large facilities pale when compared to the operational efficiencies of not having to move patients throughout the hospital for certain tests," says NBBJ's Pangrazio.

In the Gonda Building, architects planned flexible spaces to accommodate future high-tech medical equipment.

The Gonda Building includes specialty clusters for the diagnosis and treatment of various types of cancers, as well as cardiovascular, vascular, urological, and other diseases. "The fit-out is still going on today, so there are five or six floors that are still unoccupied," says Paul Zugates, director of health care for architecture firm Ellerbe Becket in Minneapolis. "If we have the flexibility we think we have, they can occupy parts of this building and move into the remaining space as they need it."

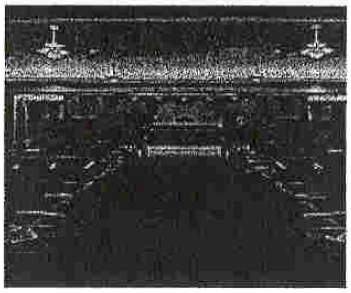


Photography: © Steve Bergerson

In addition to collaborative clusters, the clinic also wanted the building to be flexible and adaptable for expansions over the next 50 years or more. To accomplish this, Ellerbe Becket provided excess capacity for HVAC, plumbing, electricity, fiber-optic communications, floor loads, and vibration control, not knowing where new equipment might be located in the building in the coming decades. "All the things that are hidden within buildings—the things behind the walls—are the expensive items within a health care facility," Zugates says.

One example of how new technologies make overengineering necessary is the trend toward using digital diagnostic images. By law, existing hospitals must store X-ray film for more than a dozen years, but as filmless digital X-ray machines become commonplace, storage needs will gradually decline. The Mayo Clinic decided to upgrade the areas that would be emptied of X-ray archives to meet power, loading, and vibration tolerances required by MRI and CAT scan machines—or other, unknown medical

technologies—which would allow the facility to use high-tech medical equipment anywhere in the future.



Flexibility also affected the design of the interior spaces, says Mark Shoemaker, AIA, associate principle for Cesar Pelli & Associates of New Haven, who participated in the project. "MRI [machines] are getting smaller. We design smaller inserts within the facade to allow units we placed in the building today to be traded [for smaller ones] later. The curtain wall was designed to allow panels to be removed easily," he says.

Designers also had to accommodate the growing need for rooms dedicated to computers and communications equipment. The Gonda Building has rooms of approximately 200 square feet on every floor to house data and telephone network equipment. The rooms are stacked above each other on each floor to provide for direct communications connection throughout the facility.

As the Gonda Building approaches full occupancy, the Mayo Clinic hopes it will have a facility that will serve patients through the next century. "Not too many institutions look for that kind of sustainability," Zugates says. "But the philosophy was that if we build in flexibility today, it will be less expensive to make the changes we know we'll have to make over the life of the building.

Plummer Building

[Enlarge] [Purchase]

(c) James Peacock

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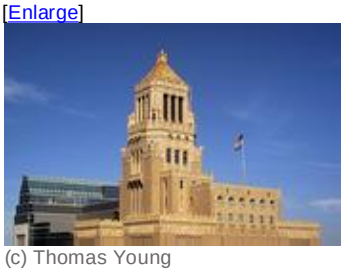

(c) Thomas Young

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Identification

Official name	Plummer Building
Emporis Building Number	127949

Location

Address	*
Bordering street #1	2nd Avenue SW
Bordering street #2	2nd Street SW
Postcode	*
Location Map	*
Complex	Mayo Clinic
City	Rochester
State	Minnesota
Country	U.S.A.

Technical Data

Height (tip)	*	
Height (struct.)	91 m	298 ft
Height (roof)	*	
Height (top floor)	*	
Floors (OG)	19	
Construction start	*	
Construction end	1929	

Building in General

Type of construction	high-rise building
Facade materials	*
	*
	*
Facade colors	*
Main usages	*
	*
Architectural style	*
Status	completed

Facts

- The first two stories are of limestone, with the upper ones of brick

with terra cotta trim. The tower holds a 23-bell carillon with bells cast in England, which is played at the end of each day. When opened in 1929, this building was considered one of the most modern and efficient hospitals in the world.

- The building is named for Dr. Henry Plummer, widely-regarded as the Architect of the Mayo Group Practice. He joined the Mayo in 1901 and designed many of the systems that gave rise to the group practice concept that has become so successful.
- The main library reading room on the 12th floor is called Mayo Hall. Dr. Plummer selected sixty prominent physicians and scientists to be memorialized with their names engraved in the room's ceiling beams.
- The Plummer Building was the tallest building in Rochester from 1929 until completion of the Gonda Building in 2001.
- It was added to the National Register of Historic Places in 1969.

Companies involved in this Building*

architect: undefined, Ellerbe & Company

Other firms: Mayo Foundation for Medical Education and Research, G. Schwartz & Company , Maass & McAndrew Co. , Maass & McAndrew Co. , Otis Elevator Co., American Terra Cotta & Ceramic Co. , Corning-Donohue, Inc..

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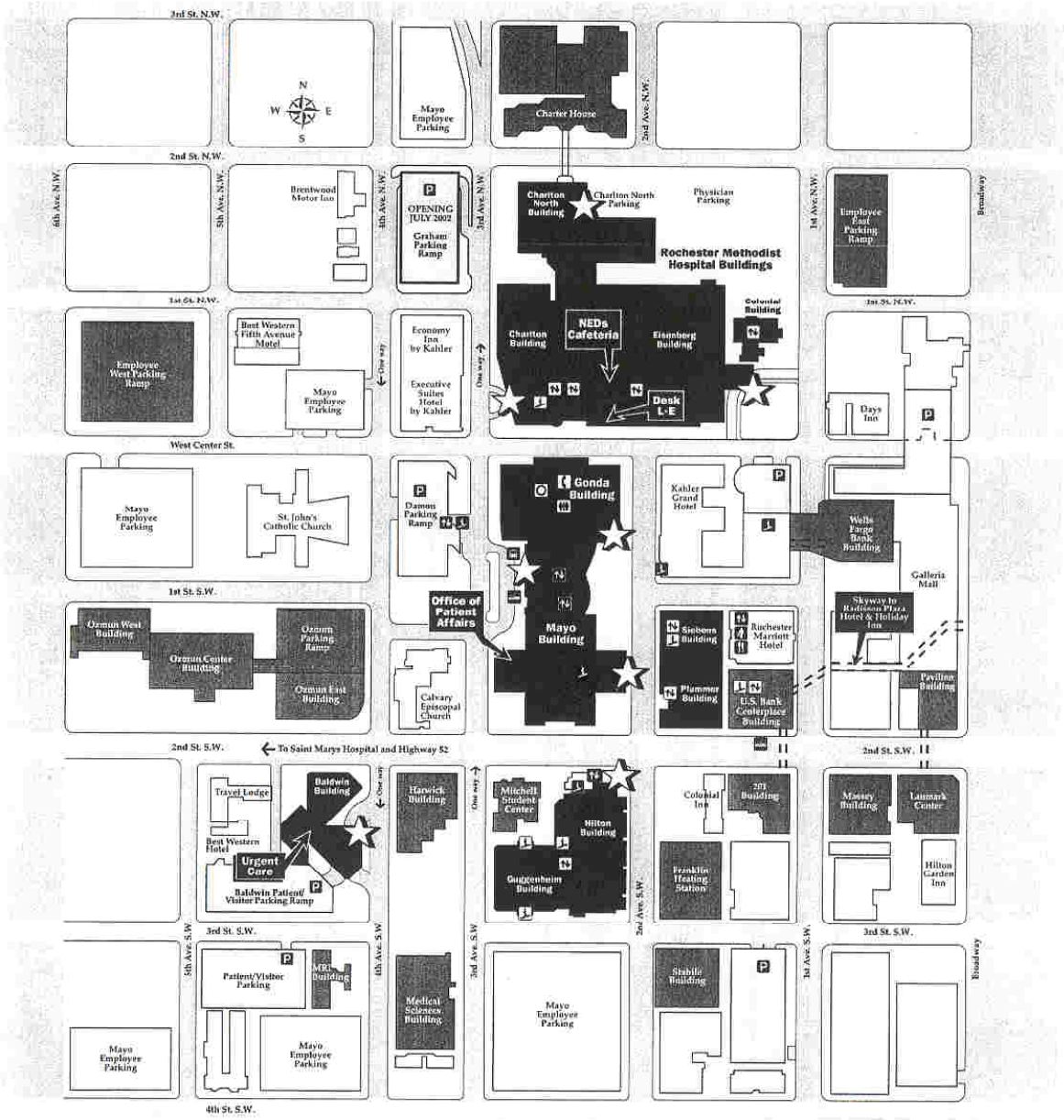
Downtown Campus - Street Level



- Mayo Clinic Patient Care Buildings
- Mayo Clinic Non-Patient Care Buildings
- Mayo Patient/Visitor Parking & Public Parking
- Rochester Methodist Hospital Buildings
- Building Entrance
- Access to ATM
- Access to Food
- Elevators
- Information
- Newsstand
- Patient/Visitor Parking
- Pharmacy
- Restrooms
- Retail Area
- Shuttle to Saint Marys Hospital
- Skyway Access
- Stairs to Street
- Transportation

Clinique Mayo

2003 Statistics

Personnel

Patient Care

Medical Research

Medical Education

Financial

Personnel *

Staff physicians and medical scientists	2,722
Clinical and research associates and fellows	520
Residents and students	1,875
Administrative and Allied health staff	37,503
Total	**42,620 ****

* Average full-time equivalents
** Mayo Foundation employed a total of 46,836 individuals in full-time and part-time positions during 2003.

Patient Care

Unique patients*	511,000
Total outpatient visits	2,253,513
Hospital admissions	127,300
Hospital days of patient care	595,300

* Rochester, Jacksonville and Scottsdale
Individuals are counted once annually, not by visits.

Medical Research

Biomedical research at Mayo Clinic includes strong programs in basic and clinical research. Most Mayo medical staff participate in some research activity.

Research Personnel

Mayo physicians and medical scientists	290

Temporary professionals	487
Allied health personnel	1,739
Total personnel	**2,516**
Protocols reviewed by Institutional Review Board	2,463
Active protocols	6,129
Grants and contracts	3,206
Research Funding Sources (in millions)	
Mayo funds	$133
Extramural funds	$218
National Institutes of Health	$141
Other federal sources	$25
Commercial sources	$29
Other	$23
Total	**$351**

Medical Education

Mayo School of Graduate Medical Education

The oldest of Mayo's five schools, the Mayo School of Graduate Medical Education has trained more than 16,000 alumni in virtually all medical specialties since 1915.

Clinical residents and fellows	1,409

Mayo Graduate School

Mayo Graduate School has granted about 425 graduate degrees in seven specialties since 1917.

Predoctoral students	142

Mayo Medical School

Mayo Medical School has trained and graduated more than 1,000 students since 1972.

Medical students	170
Medical student clerks from other schools	391

Mayo School of Health Sciences

Established in 1973, Mayo School of Health Sciences enrolls approximately 816 students each year in 32 allied health science programs.

Mayo School of Continuing Medical Education

Mayo School of Continuing Medical Education formally became a school in 1996. It offers approximately 275 courses and 6,500 hours of continuing medical education each year.

Funding Sources (in millions)

Extramural funding	$38
Mayo Funds	$116
Total funding	**$154**

Financial Information

Patient care revenue (in millions)	$4,046.1
Net from patient care	$185.6
Total assets	$6,109.8
Contributions, private grants and endowments from nearly 132,000 donors	$136

Rochester

Mayo Clinic, Saint Marys Hospital and Rochester Methodist Hospital together form an integrated medical center dedicated to providing comprehensive diagnosis and treatment in virtually every medical and surgical specialty. See Mayo Clinic in Rochester.

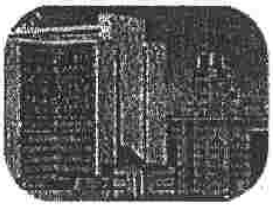
2003 Statistics *

Mayo Clinic

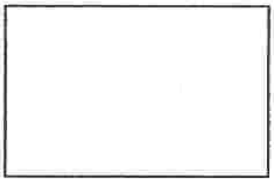
Unique patients	319,687
Outpatients visits	1.44 million

Personnel

Staff physicians and scientists	1,626
Residents, fellows and temporary professionals	1,636
Allied health staff (clinic and hospital)	23,524
Total Staff	**26,786**



Mayo Clinic



Saint Marys Hospital

Saint Marys Hospital

Licensed beds available	1,157
Admissions	42,344
Average length of stay (days)	5.6
Operating rooms	60
Surgical cases	29,737

Rochester Methodist Hospital

Rochester Methodist Hospital

Licensed beds available	794
Admissions	18,223
Average length of stay (days)	4.7
Operating rooms	41
Surgical cases	21,809

Approximately 80 percent of the patients who come to Mayo Clinic are treated as outpatients; 20 percent are hospitalized.

About 80 percent of Mayo Clinic patients come to Mayo Clinic from Minnesota, Iowa and Wisconsin.

Approximately one-third of Mayo's patients are on Medicare.

The five leading sources of funding for research at Mayo Clinic in 2003 were the National Cancer Institute; commercial enterprises; the National Institute of Diabetes and Digestive and Kidney Diseases; the National Heart, Lung and Blood Institute; and the Department of Defense.

Mayo Clinic occupies approximately 15 million square feet -- about 2.9 times the size of the Mall of America.

A typical day at Mayo Clinic

Patients being treated	3,632
Admissions to the hospital	238
Surgical procedures	202
Lab tests	45,386
Radiology procedures	3,906
CT scans	544
Chest X-rays	742
MRIs	222
Electrocardiograms	600
Units of blood and blood components used	326

* figures from the end of 2003

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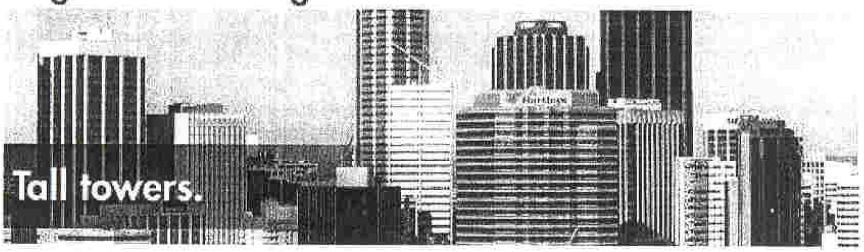
Emporis Quickjump [?]

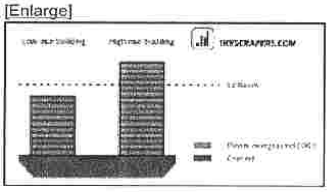
High-rise Buildings



Basic Definition

For the purposes of the EDC, a high-rise building is defined as a building 35 meters or greater in height, which is divided at regular intervals into occupiable levels. To be considered a high-rise building an edifice must be based on solid ground, and fabricated along its full height through deliberate processes (as opposed to naturally-occurring formations).

[Enlarge]



General Definition

A high-rise building is distinguished from other tall man-made structures by the following guidelines:

1. It must be divided into multiple levels of at least 2 meters height;
2. If it has fewer than 12 such internal levels, then the highest undivided portion must not exceed 50% of the total height;
3. Indistinct divisions of levels such as stairways shall not be considered floors for purposes of eligibility in this definition.

How you can advertise your firm on Emporis.

Any method of structural support which is consistent with this definition is allowable, whether masonry, concrete, or metal frame. In the few cases where such a building is not structurally self-supporting (e.g. resting on a slope or braced against a cliff), it may still be considered a high-rise building but is not eligible for any height records unless the record stipulates inclusions of this type.

Minimum Height

The cutoff between high-rise and low-rise buildings is 35 meters. This height was chosen based on an original 12-floor cutoff, used for the following reasons: 1) Twelve floors is normally the minimum height needed to achieve the physical presence which earns the name "high-rise"; 2) The twelve-floor limit represents a compromise between ambition and manageability for a worldwide database.

Since height information on smaller buildings is usually not readily available, the twelve-floor limit is still used in most areas covered by the websites belonging to the Emporis Network. A building of fewer floors may only be included as a high-rise when its exact height is known. In most cases, a city is considered to have a satisfactory listing of high-rise buildings when all twelve-floor buildings are counted.

Single vs. Multiple Building

In most cases there is no trouble deciding what constitutes a separate building. Only when they are linked in unusual ways is there a logical difficulty. The following rules have been adopted by the EDC to set a uniform standard:

1. Any two towers which are separated for at least 2/3 of each tower's height are considered separate buildings UNLESS the connection(s) form an unmistakable architectural unity, such as an arch-shaped building (examples: Genex Tower, Dusit Dubai, Umeda Sky Building). Skybridges are generally not sufficient to unify two separate towers.

2. Any structures which adjoin each other for more than 1/3 of any of their heights should be considered 1 building UNLESS:
   - they were built as separate structures and neither one can be considered an addition to the other; this means that the interiors are not integrated at any level, including the ground floor or basement; or
   - the structures are separated at ground level and connected for most of their heights but are normally considered separate buildings; or
   - an addition to a building forms a significant architectural disjunction.

3. An addition on top of an existing building is never counted as a separate building from the one underneath unless it overhangs the lower building from another base.

About Skyscrapers

The word "skyscraper" was coined in the late 19th Century, reflecting public amazement at the tall buildings being built in New York City. The structural definition of the word "skyscraper" was created later by architectural historians, based on engineering developments of the 1880's which had enabled construction of tall multistory buildings. This definition was based on the steel skeleton, as opposed to constructions of load-bearing masonry which passed their practical limit in 1891 with the Monadnock Building. The steel frame developed in stages of increasing self-sufficiency, with several buildings in New York and Chicago advancing the technology which allowed the steel frame to carry a building on its own.

ANNEXE 9

Mayo Building

[Enlarge] [Purchase]

(c) James Peacock

[Enlarge] [Purchase]

(c) James Peacock

Photo Compilation

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Do you have an update for the content on this page?
[Write to Emporis] [Become a photographer]

Identification

Official name	Mayo Building
Alternative names	*
Emporis Building Number	127948

Location

Address	*
Bordering street #1	1st Street SW
Bordering street #2	2nd Avenue SW
Bordering street #3	2nd Street SW
Bordering street #4	3rd Avenue SW
Postcode	*
Location Map	*
Complex	Mayo Clinic
City	Rochester
State	Minnesota
Country	U.S.A.

Technical Data

Height (struct.)	90 m	295 ft
Height (main roof)	*	
Height (top floor)	*	
Floors (OG)	20	
Construction start	*	
Construction end	1955	
Last reconstruction	*	
Height Floor-to-floor	*	

Building in General

Type of construction	high-rise building
Facade materials	*
Facade colors	*
	*
	*
Main usages	*
Architectural style	*
Status	completed

Facts

- Originally twelve floors in height, eight additional floors plus a mechanical penthouse were added in 1968 to the designs of Ellerbe & Company.

- Every floor connects to the Gonda Building, located just to the north.
- The building has an address on 1st Street SW, but this street was vacated for the Gonda Building.

Companies involved in this Building*

architect: Ellerbe & Company

Other firms: Mayo Foundation for Medical Education and Research, Ellerbe & Company [Ellerbe Becket, Inc.].

You are using Emporis Buildings. All data marked with * and additional tools are accessible through Emporis Research.

ANNEXE 10

Guggenheim Building

[Enlarge] [Purchase]

(c) James Peacock

[Enlarge] [Purchase]

(c) James Peacock

Photo Compilation

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Identification

Official name	Guggenheim Building
Emporis Building Number	127953

Location

Address	*
Bordering street #1	3rd Avenue SW
Bordering street #2	3rd Street SW
Postcode	*
Location Map	*
Complex	Mayo Clinic
City	Rochester
State	Minnesota
Country	U.S.A.

Technical Data

Height (tip)	*	
Height (struct.)	78 m	258 ft
Height (main roof)	*	
Height (top floor)	*	
Floors (OG)	20	
Construction start	*	
Construction end	1974	
Last reconstruction	*	
Height Floor-to-floor	*	

Building in General

Type of construction	high-rise building
Facade materials	*
	*
Main usages	*
Architectural style	*
Status	completed

Facts

- Eleven floors were added by Hansen Lind Meyer in 1990.
- The Guggenheim Building primarily contains research laboratories.
- The low-rise portion on the east side is known as the Conrad Hilton Building, named for the founder of Hilton Hotels after a large gift in the early 1970s.

Companies involved in this Building*

architect: Ellerbe & Company

Other firms: Mayo Foundation for Medical Education and Research, BOR-SON Construction, Inc., Superl Inc., Hansen Lind Meyer, Inc [HLM Design].

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ANNEXE 11

Charter House

[Enlarge] [Purchase]

(c) James Peacock

[Enlarge] [Purchase]

(c) James Peacock

Photo Compilation

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Identification

Official name	Charter House
Emporis Building Number	127950

Location

Address	*
Bordering street #1	2nd Avenue NW
Bordering street #2	2nd Street NW
Bordering street #3	3rd Avenue NW
Postcode	*
Location Map	*
Complex	Mayo Clinic
City	Rochester
State	Minnesota
Country	U.S.A.

Technical Data

Height (tip)	*	
Height (struct.)	67 m	220 ft
Height (roof)	*	
Floors (OG)	22	
Construction end	1988	

Building in General

Type of construction	high-rise building
Facade materials	*
Main usages	*
Architectural style	*
Status	completed

Facts

- Charter House is a Mayo Clinic-affiliated retirement facility.
- The building overlooks the full-block Central Park, which is located directly to the east across 2nd Avenue NW.
- The highest residences in Minnesota, outside of Minneapolis and St. Paul, are located on the top floors of this building.

Companies involved in this Building*

architect: Ellerbe Becket, Inc.

Other firms: Mayo Foundation for Medical Education and Research, Hunt Electric Corporation.

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Emporis Research

- NO DATA RESTRICTION
- INDIVIDUAL QUERIES
- EXPORT DATA TO EXCEL

Enter a city

CHARTER HOUSE
211 NW SECOND ST
ROCHESTER, MN 55901

SHORT TERM SKILLED NURSING FACILITIES

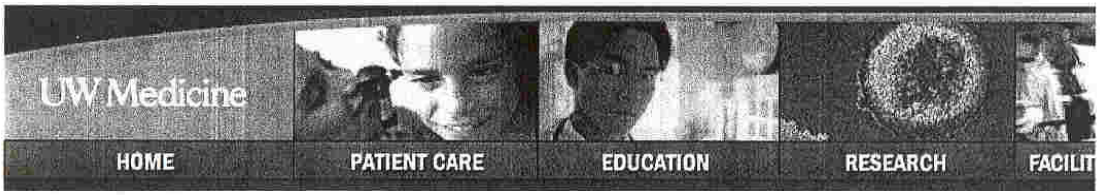
Services provided by CHARTER HOUSE:

- Clinical laboratory services are provided onsite to non residents
- Clinical laboratory services are provided onsite to residents
- Dietary services are provided onsite to residents
- Housekeeping services are provided onsite to residents
- Nursing services are provided onsite to residents
- Occupational therapy services are provided onsite to residents
- Field 1 - Indicates other activity services provided by staff onsite to residents
- Pharmacy services are provided onsite to residents
- Physician extender services are provided onsite to residents
- Physical therapy services are provided onsite to residents
- Physician services are provided onsite to residents
- Social work services are provided onsite to residents
- Speech/language pathology services are provided onsite to residents
- Therapeutic recreation specialist services are provided onsite to residents

Beds - Total *(Total number of beds in a facility, including those in non-Participating or non-licensed areas)*: **32**
Beds - Total certified *(Number of beds in Medicare and/or Medicaid certified areas within a facility)*: **32**
Lpn/lvn - Full time *(The number of full-time equivalent licensed practical/ vocational nurses employed by a facility on a full time basis)*: **3.20**
Registered nurse - Full time *(The number of full-time equivalent registered nurses employed by a facility on a full time basis)*: **1.14**
Program participation *(Indicates if the provider participates in Medicare, Medicaid, or both programs)*: **MEDICARE ONLY**
Administrator - Full time *(The number of full-time equivalent administrative staff employed on a full time basis by a facility)*: **0.91**
Beds - Medicare snf *(Number of Medicare certified snf beds in a facility)*: **32**
Cert nurse aides - Full time *(The number of full-time equivalent certified nurse aides employed by a facility on a full time basis)*: **5.60**
Cert nurse aides - Part time *(The number of full-time equivalent certified nurse aides employed by a facility on a part time basis)*: **10.29**
Dietitians - Contract *(The number of full-time equivalent under contract to a facility)*: **0.21**
Food service - Contract *(The number of full-time equivalent food service personnel under contract to a facility)*: **3.14**
Housekeeping - Full time *(The number of full-time equivalent housekeeping personnel employed by a facility on a full time basis)*: **1.60**

Housekeeping - Part time *(The number of full-time equivalent housekeeping personnel employed by a facility on a part time basis)*: **1.63**
Lpn/lvn - Part time *(The number of full-time equivalent licensed practical/ vocational nurses employed by a facility on a part time basis)*: **3.77**
Medication aides/techs-Full time *(The number of full-time equivalent medication aides/ technicians employed by a facility on a full time basis)*: **2.29**
Medication aides/techs-Part time *(The number of full-time equivalent medication aides/ technicians employed bya facility on a part time basis)*: **2.74**
Nurses with admin duties-Full time *(The number of full-time equivalent nurses with administrative duties employed by a facility on a full time basis)*: **1.03**
Occup therapy aide - Contract *(The number of full-time equivalent occupational therapy aides under contract to a facility)*: **0.47**
Occupational therapist - Contract *(The number of full-time equivalent occupational therapists under contract to a facility)*: **1.20**
Organized resident group *(Indicates if the facility has an organized residents group)*: **Yes**
Other - Full time *(The number of full-time equivalent persons not included in any other categories employed by the facility on a full-time basis)*: **5.41**
Pharmacists - Contract *(The number of full-time equivalent pharmacists under contract to a facility)*: **0.11**
Phys ther asst - Contract *(Number of contract staff hours for physical therapy ass istants)*: **0.60**
Physical therapists - Contract *(The number of full-time equivalent physical therapists under contract to a facility)*: **2.64**
Physical therapy aide - Contract *(The number of full-time equivalent physical therapy aide under contract to a facility)*: **0.70**
Registered nurse - Part time *(The number of full-time equivalent registered nurses employed by a facility on a part time basis)*: **5.86**
Rn director of nursing - Full time *(The number of full-time equivalent rn director of nursing employed by a facility on a full time basis)*: **0.69**
Social worker - Full time *(The number of full-time equivalent social workers employed by a facility on a full time basis)*: **1.07**
Social worker - Part time *(The number of full-time equivalent social workers employed by a facility on a part time basis)*: **0.17**
Ther rec spec - Full time *(Number of full-time staff hours provided by therapeutic recreation specialist)*: **0.70**
Ther rec spec - Part time *(Number of part-time staff hours provided by therapeutic recreation specialist)*: **0.83**
Compliance: status *(Indicates if a provider or supplier is in compliance with program requirements)*: **IN COMPLIANCE**
Current survey date *(The date of the health or life safety code survey, whichever is later. the "official" survey date for the provider)*: **Mar 2002**
Eligibility code *(Indicates if a facility is eligible to participate in the Medicare and/or Medicaid programs)*: **ELIGIBLE TO PARTICIPATE**
Participation date *(The date a facility is first approved to provide Medicare and/or Medicaid services)*: **Jul 1985**

ANNEXE 12



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INFO FOR HEALTHCARE PROFESSIONALS

About UW Medicine

Mission

Part of the University of Washington, UW Medicine works to improve the hea by advancing medical knowledge, providing outstanding primary and specia to people of the region, and preparing tomorrow's physicians, scientists and professionals.

Components

UW Medicine owns or operates

- Harborview Medical Center
- University of Washington Medical Center
- University of Washington School of Medicine
- UW Medicine Neighborhood Clinics
- UW Physicians

UW Medicine shares in the governance of

- Children's University Medical Group
- Seattle Cancer Care Alliance

Leader in Biomedical Research

Ranks first among public medical schools and second among all medical sch research funding.

In fiscal year 2003, received $488.5 million in National Institutes of Health r and $165 million from private foundations, industry and other non-federal s

The faculty includes:

- 5 Nobel Prize winners
- 26 Institute of Medicine members
- 26 National Academy of Science members

Innovator in Education

Ranked as top medical school for eleven consecutive years in training prima

physicians, and has top-ranked academic programs in family medicine and r

WWAMI, an acronym for Washington, Wyoming, Alaska, Montana and Idaho community-based training of medical students and residents and of intersta in medical education.

UW Medicine enrolls:

- 790 medical students
- 560 graduate students in the basic sciences
- 1,114 residents
- 1,040 clinical and research fellows
- 155 physician assistant students
- 190 allied-health students

The UW medical school has a full-time faculty of 1,760 and volunteer clinica numbering about 4,500 throughout the WWAMI region.

Nationally Recognized for Patient Care

University of Washington Medical Center ranks 9th among America's best hc *News & World Report's* honor roll and is a Magnet Hospital for nursing. It is programs in solid organ transplantation, cancer treatment, heart care, high- and neonatal intensive care, rehabilitation, and specialized orthopaedic surg

Harborview Medical Center has the only Level I adult and pediatric trauma c state, serves as disaster control center for King County, and is the area's de House receiving hospital.

UW Medicine handles about 20 percent of hospitalizations in King County. O admit 37,000 patients a year to our principal teaching hospitals. Our clinics 1 million patient visits per year. Our physicians and medical centers provide percent of the hospital charity care and care to Medicaid beneficiaries in Kin more than one-third of the total statewide.

ANNEXE 13

Locations

Henry Ford Health System is one of the nation's leading health care providers, offering a seamless array of acute, primary, tertiary, quaternary and preventive care backed by excellence in research and education.

Henry Ford, a Michigan non-profit health care enterprise governed by community leaders, records $1.9 billion in revenues annually while providing $60 million in uncompensated care. The system is governed by a 46-member board. Advisory and affiliate boards comprised of 240 trustees provide vital links to the communities served by the system. Henry Ford is managed by President and Chief Executive Officer Nancy Schlichting.

Henry Ford is Michigan's sixth largest employer. More than 16,000 full-time equivalent employees, including 3,000 nurses and more than 4,000 allied health professionals provide care during more than 2.5 million patient contacts. Henry Ford health care providers perform more than 30,000 ambulatory surgery procedures each year.

Nearly 65,000 patients are admitted to Henry Ford hospitals each year.

Founded in 1915 by auto pioneer Henry Ford, the health system is committed to improving the health and well-being of a diverse Michigan community. Our essential priority is to provide exceptional quality and cost-effective care. We work together to improve the health and quality of life in the community.

Top

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- FIND A DOCTOR
- SIGN UP FOR HEALTH NEWSLETTER
- REFER A PATIENT

- HENRY FORD SERVICES
- HEALTH ENCYCLOPEDIA
- INFORMATION ON YOUR PRESCRIPTIONS
- INTERACTIVE BODY GUIDE
- HENRY FORD LOCATIONS
- MEDICAL EDUCATION
- RESEARCH & CLINICAL TRIALS

HENRY FORD SPECIALTY CENTERS
- HEART DISEASE
- NEUROSCIENCE
- ORTHOPAEDICS
- CANCER
- ORGAN TRANSPLANTS
- PROSTATE CANCER

Henry Ford Hospital

Address:

Henry Ford Hospital
2799 W. Grand Blvd.
Detroit, MI 48202
(313) 916-2600 voice

Hosted at this Facility:

Allergy & Clinical Immunology, Division of
Anesthesiology, Department of
Behavioral Health
Biomedical Communications
Bone & Joint Center
Breast Care Center
Cardiac & Thoracic Surgery, Division of
Clinical & Molecular Genetics, Department of
Colon & Rectal Surgery, Division of
Dentistry, Department of
Dermatology, Department of
Diagnostic Radiology, Department of
Endocrinology & Metabolism, Division of
Eye Care Services
Gastroenterology, Department of
General Surgery, Division of
Heart & Vascular Institute
Hematology & Oncology, Division of
Infectious Diseases, Department of
Josephine Ford Cancer Center
Medical Records
Medicine, Department of
Nephrology & Hypertension, Division of
Neurological Surgery, Department of
Neurology, Department of
Obstetrics and Gynecology, Department of
Oral and Maxillofacial Surgery, Division of
Orthopaedic Surgery, Department of
Otolaryngology, Department of
Pathology, Department of
Patient Financial Service
Patient Food, Nutrition and Education Service
Pediatric Surgery, Division of
Pediatrics, Department of
Pharmacy, Department of
Plastic and Reconstructive Surgery, Division of
Pulmonary & Critical Care Medicine, Division of
Radiation Oncology Department of
Rehabilitation Services, Department of
Research Administration Office
Respiratory Therapy
Retail Pharmacy (in the Main Lobby and K-15)
Rheumatology, Division of
Sladen Library & Center for Health Information Resources
Speech Pathology/Speech Therapy

Surgery, Department of
Transplant Surgery, Division of
Trauma & Critical Care Surgery, Division of
Urology, Department of
Vascular Surgery, Division of
Volunteer Services

Hours: 7 Days a Week/24 Hours a Day

Directions: Located on West Grand Boulevard off the John C. Lodge expres
(M-10), 4 blocks west of Woodward Avenue and the Fisher Build

Major Cross Streets
West Grand Boulevard and the John C Lodge (M-10)

Click here for a map to Henry Ford Hospital

Top

We're Henry Ford
We Can

ANNEXE 14

Official World's 50 Tallest High-rise Buildings (Hospital Use)

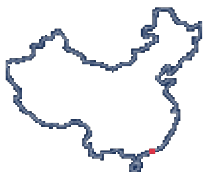
This overview is the most accurate compilation of its kind and uses in-depth research results and reliable building information. It is based on data standards as outlined by the Emporis Data Committee (EDC). This listing is verified and updated continuously and includes high-rise buildings which have been topped out, including those still under construction or on hold and whose occupiable height is devoted at least 90% to hospital uses. The ranking is based entirely on the buildings' structural height. TV towers, masts, and other building types are not included.

#	Building	City	Height	Height	Floors	Year
1.	Guy's Tower	London	143 m	469 ft	34	1974
2.	Queen Mary Hospital	Hong Kong	137 m	449 ft	27	1991
3.	Galter Pavilion	Chicago	123 m	402 ft	22	1997
4.	Amtssygehuset i Herlev	Herlev	120 m	394 ft	25	1976
5.	New York Hospital	New York City	115 m	376 ft	27	1932
6.	Nix Professional Building	San Antonio	114 m	375 ft	23	1931
7.	National Cancer Center Ch..	Tokyo	110 m	361 ft	19	1999
8.	Cityplex West Tower	Tulsa	106 m	348 ft	30	1981
9.	Charité	Berlin	100 m	328 ft	21	1982
10.	Princess Margaret Hospita..	Toronto	98 m	322 ft	18	1995
11.	Queeny Tower	St. Louis	98 m	321 ft	19	1965
12.	Jikei University School o..	Tokyo	98 m	321 ft	23	1999
13.	B. S. Pollack Hospital	Jersey City	98 m	320 ft	22	1936
14.	Hospital das Clinicas	Curitiba	97 m	318 ft	27	1973
15.	St. Luke's Medical Tower	Houston	96 m	316 ft	25	1991
16.	Prentice Women's Hospital *	Chicago	96 m	316 ft	18	2007
17.	TCH Clinical Care Center	Houston	95 m	313 ft	16	2002
18.	Center for the Mentally a..	Tokyo	95 m	310 ft	23	1998
19.	Gonda Building	Rochester	93 m	305 ft	21	2001
20.	Nassau University Medical..	East Meadow	91 m	299 ft	19	1974
21.	Plummer Building	Rochester	91 m	298 ft	19	1929
22.	Feinberg Pavilion	Chicago	91 m	297 ft	17	1997
23.	Jim Pattison Pavilion	Vancouver	90 m	296 ft	17	1995
24.	Mayo Building	Rochester	90 m	295 ft	20	1955
25.	Surgical Building	Jersey City	90 m	295 ft	20	1931
26.	The Capitol	Jersey City	90 m	295 ft	20	1941

27.	The Rialto	Jersey City	90 m	295 ft	21	1938
28.	Klinikum	Cologne	89 m	292 ft	23	1971
29.	Samsung Medical Center, G..	Seoul	86 m	282 ft	20	1996
30.	Medical Center of Louisia..	New Orleans	85 m	279 ft	20	1939
31.	AKH	Vienna	85 m	279 ft	25	1994
32.	The Nagoya City Universit..	Nagoya	85 m	279 ft	17	2003
33.	Osaka University Hospital	Suita	85 m	278 ft	19	1991
34.	Grady Memorial Hospital	Atlanta	84 m	277 ft	21	1958
35.	Tokyo Medical University ..	Tokyo	84 m	277 ft	19	1986
36.	Mercy Medical Center Inpa..	Baltimore	84 m	276 ft	20	1963
37.	Fakultna nemocnica s poli..	Košice	83 m	272 ft	19	1979
38.	University of Tokyo Hospi..	Tokyo	82 m	270 ft	15	2000
39.	Barnes-Jewish Hospital So..	St. Louis	82 m	270 ft	18	1971
40.	Hua Chiew Hospital	Bangkok	82 m	269 ft	22	
41.	Yokohama City University ..	Yokohama	82 m	269 ft	15	1999
42.	Rehabilitation Institute ..	Chicago	80 m	264 ft	19	1973
43.	William Black Medical Res..	New York City	80 m	264 ft	20	1966
44.	Tohoku University Hospita..	Sendai	80 m	262 ft	18	2000
45.	Guggenheim Building	Rochester	78 m	258 ft	20	1974
46.	University College London..	London	78 m	255 ft	18	2005
47.	Dr. Stanley S. Bergen Bui..	Newark	78 m	255 ft	16	1954
48.	Showa University Hospital	Tokyo	77 m	253 ft	17	1980
49.	Juntendo Hospital Buildin..	Tokyo	77 m	252 ft	17	1996
50.	Belfast City Hospital Tow..	Belfast	76 m	250 ft	15	

Last update: 10/2006. Legend: * = this building topped out already

Map of China:



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Queen Mary Hospital

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Identification

Official name	Queen Mary Hospital
Emporis Building Number	120497

Location

Address	*
Bordering street	Pok Fu Lam Road
District	Pokfulam
Region	Hong Kong Island
City	Hong Kong
State	Hong Kong
Country	China

Technical Data

Height (tip)	*	
Height (struct.)	137 m	449 ft
Height (roof)	*	
Floors (OG)	27	
Construction end	1991	

Building in General

Type of construction	high-rise building
Structural materials	*
Main usages	*
Architectural style	*
Status	completed

Facts

- Queen Mary Hospital is the tallest hospital in China.

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Conseil en immobilisation & management inc.

CERTIFIÉ ISO 9001

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