

PROPOSED WORLD TRADE CENTER

Preliminary Outline Specifications Scheme III

for Stage I Estimate

November 30, 1960

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I. LIST OF DRAWINGS

The following drawings dated November 30, 1960 comprise Scheme III of the World Trade Center Study.

<u>Drawing Title</u>	<u>Drawing No.</u>
Basement Plan	W.T.C. -1231
1st Level Plan	" -1232
2nd Level Plan	" -1233
3rd Level Plan	" -1234
4th Level Plan	" -1235
5th Level Plan	" -1236
6th Level Plan	" -1237
Tower Plans	" -1238
Longitudinal Section A-A	" -1239
Cross Sections B-B, C-C	" -1240

II.

Legend

1. Number and Numbers with sub letter in square shown in areas on drawings relate to Areas Schedules No. 1 & 2 of the Outline Specifications.
2. Letters indicating Exterior Wall Finishes are shown on plans see Legend below.
3. Number in Hexagon indicates floor elevation.

Exterior Wall Finishes (Floor to Floor Basis)

- B. - Glazed Brick Facing
- W. - 60% Glass Wall - Aluminum Mullions
- G. - 100% Glass Wall - Aluminum Mullions
- S. - Perforated - Prefabricated Concrete Panels

Doors

- H. M. - Hollow metal
- O. H. - Overhead rolling
- P. G. - Plate Glass

Lighting

- F. - Fluorescent
- I. - Incandescent
- M. - Mercury

Others

- K. - Kitchen
- D. - Dining
- C. T. - Ceramic Tile

III. INTRODUCTION

The World Trade Center complex will probably be constructed in Lower Manhattan, N. Y. C. on an area bounded approximately by the following city streets:

North - Fulton Street

East - Franklin D. Roosevelt Drive and South Street

South - Old Slip

West - Pearl Street and Water Street (partially covered by proposed project.)

The complex shall consist, in main, of a 6 tier horizontal element approximately covering the entire site. Rising as separate units from various tier levels shall be four main vertical structures:

These are:

1. World Trade Mart
2. World Commerce Exchange
3. World Trade Services
4. Structure housing the Securities Exchange Trading Floor.

N. Y. C. Code

All above mentioned structures are to be Class I as defined by the New York City Building Code. In the absence of specific requirements for certain areas the general intent of the code and prudent designs will govern.

IV. HORIZONTAL ELEMENT OF 6 TIERS

1. BASEMENT: (elevation of finish floor from grade varies: -12, -15 see drawings)

Contains:

- 1) U.S. Appraisers Examination Area (including offices, OPIUM RM. and security storage)
- 2) U.S. toilets, lockers, Maintenance Area, Pistol Range, etc. (Appraisers)

- 3) U.S. Sales and Storage (Customs)
 - 4) Commercial Shop Storage
 - 5) Mechanical Equipment Room
 - 6) Hotel Storage
 - 7) World Trade Building Storage
 - 8) Utility Tunnel
 - 9) Interior vehicle circulation parking and truck loading dock areas
2. FIRST LEVEL - "street level" (elevation of finish floor from grade varies +1,+4 - see drawings)
- Contains:
- 1) New York Stock Exchange Clearing House & Ticker & Quotation
 - 2) Customs Information Exchange
 - 3) Mail Examination Area
 - 4) Appraiser's Offices
 - 5) Telephone Co. Equipment room
 - 6) Covered city streets: Gouverneur Lane, Maiden Lane, Water Street (partial)
 - 7) Misc. storage, service and unassigned areas
 - 8) Interior vehicle circulation ramps
 - 9) U.S. Mail & other Truck Loading
 - 10) Fire Department - N.Y.C. (Elev. +1)
 - 11) Police Department - N.Y.C. (Elev. +1)
 - 12) Maintenance Areas
 - 13) Lobby of World Trade Service
3. SECOND LEVEL (Elevation Finish Floor +16)

Contains:

- 1) Passenger vehicle parking
- 2) Ramps
4. THIRD LEVEL - "World Trade Center Plaza" (Elevation of finished floor +25)

Contains:

 - 1) First Floor Elements of Securities Exchange (Public Entrance & Exhibits - Members Entrance)
 - 2) First Floor Elements of World Commerce Exchange (Lobby - Elevator Banks)
 - 3) First Floor Elements of World Trade Mart (Lobby - Elevator Banks)
 - 4) Commercial Shops
 - 5) Enclosed & Open Pedestrian Circulation Areas
 - 6) Termination of main architectural Escalators & Bridge from street level to 3rd level
 - 7) Ground floor of Meeting Room
5. FOURTH LEVEL - "Plaza Mezzanine" (Elevation finished floor +40)

Contains:

 - 1) Upper Lobbies of World Commerce Exchange
 - 2) Upper Lobby of World Trade Mart
 - 3) Consumer Services with corridors and cross over (Trade Center Plaza) pedestrian bridges
 - 4) Tie Bridge - Commerce Exchange to Securities Exchange Communications
 - 5) Commodity Exchanges
6. FIFTH LEVEL - (Elevation finish floor +55)
 - 1) Securities Exchange Trading Fl. Empl. Lockers & Lounges, Members Lockers & Lounges, Members Lunch Club & Storage
 - 2) Cafeterias
 - 3) Commodity Exchanges

7.

A. E
A:

B. U
T
A
U
1

2

C. F
1

4) Customs Office Areas

5) Misc. Office Areas

6) Landscaped Courts

7. SIXTH LEVEL - (Elevation finish floor +67)

1) Restaurants

2) Outdoor dining area

3) Securities Exchange Gallery

A. EXCAVATION

As required.

B. UTILITIES

Temporary Utilities

As required.

Utilities to Serve Project

1) All required connections to existing water mains, storm drains and sewers, gas mains, steam mains, electrical and communication ducts shall be made and (the lines) carried to around and through the construction site to serve the new building complex.

2) Utility runs shall use the Utility Tunnel provided along the east perimeter of the site development. (See drawings)

C. FOUNDATIONS

1) Foundations shall be carried to firm bearing.

World Trade Mart

a. Rises as separate unit from 6th level - Elev. 67' -0"± to Elev. 915' -0"±. (Restaurant level plus approximately 71' floors at 11' -6" F1 to F1).

b. Lobby - Elev. +25' -0"± to +55' -0"±(Integral part of platform levels).

c. Restaurant Level - Elev. +67' -0"± to +87' -0"±.

Length: 315' -0"±. Width: 145' -0"±

d. Main Structure - Elev. +87' -0"± to +915' -0"±.

Length: 342' -0"± Width: 171' -0"±.

e. Bay spacing - 28' -6" x 28' -6".

World Commerce Exchange

- a. Rises in part as separate unit from 6th level - Elev. - +67' -0''± to Elev. 432' -0''±. (Restaurant level) + approximately 30 stories - height 432' -0''±.
- b. Lobbies - Elev. +25' -0''± to +55' -0''±.
Length: 140' -0''± Width: 150' -0''±.
- c. Main Structure - Elev. to +87' -0''± to 432' -0''±.
Length: 665' -6''± Width: 142' -6''±.
- d. Bay spacing 28' -6" x 28' -6"

World Trade Services

- a. Rises as a separate unit from 1st level Elev. ±0' -0''± to Elev. 285' -0''±.
- b. Lobbies Elev. ±0' -0''± to Elev. 55' -0''±
Length: 60' - 0" Width: 45' -0"
- c. Main Structure Elev. 55' -0''± to Elev. 285' -0''±
Length: 456' -0" Width: 85' -5"
Bay spacing 28' -6" x 28' -6"

Securities Exchange

- a. Rises as separate unit from 6th level - Elev. +67' -0''± to Elev. +125' -0''±.
- b. Exhibits & Public Entry - Elev. +25' -0''± to +40' -0''±.
Diameter: 71' -0"
- c. Communications - Elev. +40' -0''± to Elev. 55' -0''±.
Diameter: 210' -0"
- d. Trading Floor - Elev. 55' -0''± to Elev. +125' -0''±
Diameter: 250' -0"

2) Special considerations influencing foundation loads are:

Telephone Co. Equipment Rm; Parking Areas, interior vehicle circulation; reflecting pool; landscaping. (See plans for location and approximate size.)

3. Foundations shall be designed with proper consideration to membrane waterproofing, flashing and reinforcement required for hydrostatic pressures and uplift.

4. Live loads are given on "Area Schedule" No. 1.

oxi-

D. STRUCTURE

Shall be poured in place, reinforced concrete. For live loads see "Area Schedule" No. 1.

E. FACADE

The facade of the six tiers shall be Architectural glazed brick perforated prefabricated concrete panels and glass with aluminum mullions according to letter indication on plans - (See Legend page (1).

Elev. F. ROOFING

The roofing as in areas indicated on the drawings shall be:

a. (Built-up) 20 year bond roofing.

b. Terrace paving - Precast concrete panels with marble chipped surface.

G. INTERIOR PARTITIONING

See Drawings for location: (2-1/4" solid gypsum partition in office areas)

H. PLUMBING

1) The plumbing system shall generally consist of water supply, sanitary waste, drainage - fire standpipe and sprinkler systems as required.

2) Special requirements due to peculiarities of space utilization shall be provided (See "Area Schedule" No. 1 & 2.)

I. H. V. A. C.

1) Provisions shall be made for heating, ventilating and air conditioning of the various levels in accordance with the requirements shown on Area Schedule No. 1.

2) Ventilation systems shall be installed as required by code.

J. ELECTRICAL

- 1) Provisions shall be made for lighting levels as shown on the Area Schedule No. 1.
- 2) The electrical installation shall consist generally of the following electrical systems:

Electrical light and power distribution systems, wire conduit, and circuits for automatic temperature controls, alarm, signal and communication systems, and all motor and controllers for heating, ventilation, air conditioning, plumbing, elevators, fire protection, fire alarm and smoke detection systems.

K. OTHER ITEMS

Necessary foundations, structural, architectural, plumbing, H.V.A.C. and electrical considerations shall be made as pertaining to exterior vehicle roadways, ramps, sidewalks, interior and exterior informational and directional signing, (illuminated and non-illuminated) street lighting, reflecting pools, fountains, pedestrian architectural stairs, ramps and bridges; landscaping, special lighting effects, storm drainage - and glass domes (See drawings.)

V. WORLD TRADE MART - (For general description of building size see IV-C page 5)

A. STRUCTURE (For Live Loads see "Area Schedule" No. 1.)

- 1) The structural framing of columns, girders and beams shall be structural steel, all field connections to be high strength steel tension bolts.
- 2) The floor structural system shall be designed as dictated by sound economic and engineering criteria. A blanket of mineral fiber fireproofing shall be sprayed directly to the structural steel beams and girders, providing the fireproofing for the remaining elements. Column fireproofing shall be obtained by sprayed-on mineral fiber.
- 3) Column spacing shall be 28' -6" x 28' -6"
- 4) Office and Display Areas floor levels shall be designed to accomplish flexibility by creating an option for:
 - 1) two story clear area.
 - 2) one story office area with two story clear display area.
 - 3) one story office area.

See drawing sections for details and Area Schedule No. 1 for live loads.

B. FACADE

The facade shall be curtain wall construction and shall consist of the following:

- 1) Lobby Area: Glass with aluminum mullions
- 2) Main Structure: Aluminum curtain wall panels (65%); glass (30%); and stone veneered exterior columns (05%).

C. ROOFING

The roofing shall be 20 year bond.

D. INTERIOR PARTITIONING

See drawings. (2- $\frac{1}{4}$ " solid gypsum plank).

E. PLUMBING

- 1) The plumbing system shall generally consist of water supply, sanitary waste, drainage, fire stand pipe and sprinkler systems.
- 2) Special requirements due to peculiarities of space utilization shall be provided (See "Area Schedule" No. 1 & 2)

F. H. V. A. C.

Provisions shall be made for heating, ventilating and air conditioning of the various floors in accordance with the requirements shown on Area Schedule No. 1.

G. ELECTRICAL

- 1) Provisions shall be made for lighting levels as shown on "Area Schedule" No. 1.
- 2) The electrical installation shall consist generally of the following electrical systems:

Electrical lighting and power distribution systems, wire, conduit, and circuits for automatic temperature controls, alarm, signal and communications systems, and all motors and controllers for heating, ventilation, air conditioning, plumbing, elevators, fire protection, fire alarm and smoke detection systems.

FINISH TYPES

A. UNFINISHED

1. ARCHITECTURAL

- (a) Floors = Concrete
- (b) Wall = Masonry or Aluminum & Glass or reinforced concrete - fenestration & aluminum frames (perimeter walls of area only).
- (c) Ceiling = Fireproofed
- (d) Columns = Fireproofed
- (e) Doors = Exterior and perimeter walls of tenant area provided with doors - H. M. + Plate glass, Overhead rolling.

2. PLUMBING

All plumbing lines run to perimeter of area as required and capped.

3. HVAC

- (a) All duct work, steam lines, and chilled water lines as required run to perimeter of tenant area and capped.
- (b) If fin tube radiation is required on exterior walls, it will be installed. No convector covers provided.

4. ELECTRICAL

Power and lighting electrical requirements will be made available to the tenant from a designated point. He will complete his own installation from this location.

FINISH TYPES

B. SEMI-FINISHED

1. ARCHITECTURAL

Same as unfinished area.

2. PLUMBING

Same as unfinished area.

3. HVAC

(a) All required duct work and chilled water lines as required run through the tenant area. These lines to be capped at point which will enable the tenant to tap off.

(b) If fin tube radiation is required on exterior walls, it will be installed. No convector covers provided.

4. ELECTRICAL

Bus ducts for power and lighting requirements to run through tenant area for his use.

H. OTHER ITEMS

Necessary structural, architectural, plumbing, H.V.A.C. and electrical considerations shall be made pertaining to interior directional and informational signing (illuminated and non-illuminated), special lighting effects - breech smoke stack for Assay Building (See drawings).

VI. WORLD COMMERCE EXCHANGE - (For general descriptions of building size See IV-C page 6)

Similar to outline specifications for World Trade Mart and as per Area Schedule No. 1 & 2 - except:

- 1) Structure: Poured in place, reinforced concrete.
- 2) Facade: Poured in place, reinforced concrete fenestration in aluminum frames.
- 3) Bay spacing shall be 28' -6" x 28' -6"

VII. WORLD TRADE SERVICES - (For general descriptions of building size See IV-C page 6)

Similar to outline spec. for World Commerce Exchange.

VIII. SECURITIES EXCHANGE - (For general description of building size See IV page 6)

As per plan and Area Schedules No. 1 & 2.

IX. ATTACHMENTS

Area Schedule No. 1

Area Schedule No. 2

Finish Classifications

BAY	ACING	LIVE LOAD	FOOT CANDLES	LIGHTING	HEAT	VENT	COND.	SPRINKLER	REMARKS
		250	7	F	Yes	Large	No	No	