

DOCUMENT DATA FORM

Your Name: Nick Carino

Document Title or Description (max. 254 characters): Circle: Same as cover (or fill in below)

Column Schedule and details - below grade

Include work order no. and floor no. if applicable

Roll # DB02

Doc. ID (report #, dwg. #):

Document Date: *1969*

Document Author Name:

Author Organization:

KEYWORDS - HIGHLIGHT ALL THAT APPLY

Level 1

Bankers Trust	Project 4	WTC 1 - North Tower	Add
Below Grade	Project 5	WTC 2 - South Tower	
Concourse	Project 6	WTC 3 - Marriot Hotel	
Electrical Substation	Project 7	WTC 4 - South Plaza Bldg.	
Liberty Plaza	Project 8	WTC 5 - North Plaza Bldg	
PATH Station	WFC 1 - Oppenheimer Dow	WTC 6 - Customs House	
PATH Terminal	WFC 2 - Tower B	WTC 7	
Project 1	WFC 3 - American Express	WTC Complex	
Project 2	WFC 4 - Tower D	WTC Plaza	
Project 3			

Level 2

Accident analysis & risk	Fire protection	Misc. Performance Problems	Structural
Architectural	Fire service	News coverage	Tenant alterations
Data request	Landscaping	Police	Tenant Space
Emergency management	Management	Security	Add
Evacuation	Mech./elec.		

Level 3

1993 explosion	Cranes	Frame	Roof	Weight
A/E fitout	Criteria	Frame analysis	Safety	Weld detail
A-242	Dampers	Frequency	Schedule	Weld size
A-36	Debris	Fuel	Sculpture	Welding
A-497	Deck	Furniture layout	Security system	Wind
Aircraft impact	Deflection	Generators	Shear knuckle	Windows
Air cooled condensers	Demolition	Guidelines	Shear test	Yield strength
Analysis	Design	Gypsum board	Shear Stud	Add
Angles	Detailing	Hat truss	Shop drawings	
Antenna	Doors	Human comfort	Shortening	
Artifacts	Drawings	HVAC	Slab	
Asbestos	Eastern States Steel	Index	Slurry wall	
Base plate	Egress	Inspection	Smoke control	
Beams	Elevator	Insulation	Smoke test	
Bid documents	Elevator Shaft	Job number	Spandrel beam	
Bid Invitation	Emergency	Joist	Specifications	
Bow tie	communications	L-50	Splices	
Bracing	Equipment	Lighting	Sprinkler	
Bridging truss	Erection marks	Loads	Stability	
Building code	Errors & Omissions	Maintenance	Stairways	
Calculations	Escalator	Marking	Standards	
Carpet	Expansion joint	Mesh reinforcement	Steel	
Ceilings	Exterior columns	Mill inspection	Steel composition	
Certification	Fabrication	Model	Stiffness	
Chillers	Family member	Mullion	Structural review	
Cladding	Field survey	Operations	Surveillance	
Collapse	Fire alarms	Paint	Survey	
Columns	Fireproofing	Partition layout	Survivor	
Communication systems	Fire spread	Partitions	Tenant list	
Composite truss	Fire testing	Photos	Tenant occupancy	
Computer output	Firetower	Pipes	Testing	
Computer program	Flag Pole	Plumbing	Tie	
Concrete	Flammability	Prestressing	Tolerances	
Connections	Floor	Probability, uncertainty	Transfer Girders	
Construction	Floor load	Quality control	Triad	
Contract	Floor slab	Ramp	Truss	
Core beams	Floor system	Reinforcing	Vestibule	
Core columns	Floor trusses	(strengthening)	Vibration	
Corrosion	Formwork	Renovation	Walls	
Cracking	Foundations	Repair	Water supply	
	Fracture	Research & Development	Weather	

drawing books

BOOK 10
COLUMN
SCHEDULE

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON		Structural & Civil Engineers	
PROJECT	TITLE	DRAWING INDEX	DATE
THE WORLD TRADE CENTER			5/15/67

<u>DRAWING NO.</u>	<u>TITLE</u>
<u>BOOK 10</u>	
10-JK1-0	Drawing Index
10-J1-1	Notes on Column, Base Plates & Shear Heads
10-J1-1 thru 29, 31, 32, 33, 35 thru 81, 83 thru 95, 97, 99	Column Schedule and Base Plates (Zone J)
10-K1-201 thru 223, 225 thru 262, 264 thru 272, 274 thru 276A, 278, 279	Column Schedule and Base Plates (Zone K)
10-JK2-2 thru 5	Typical Column Details
10-JK2-7 thru 10	Typical Column Details
10-JK2-12 thru 17	Typical Column Details
10-JK2-30 & 31A	Typical Detail of Temporary Column Cap for Construction Crane Support
10-JK2-31	Typical Detail of Column Sitting on Top of Girder
10-JK2-32	Detail of Column Cap over Columns K31-4, K35-3 & K17-3
10-JK2-33	Hanger Detail
10-JK2-34	Detail of Column J8-6
10-JK2-35	Column Details
10-JK2-35A, 35B, 35C, 36 thru 42	Column Splice Details
10-JK3-2	Typical Detail of Column Base Plate
10-JK3-2A	Detail of Column Base Plate J3-14
10-JK3-2B	Column Base Plate Detail at Truck Ramps
10-JK3-2C	Typical Column Base Plate Detail under Box Section Column
10-JK3-2D	Typical Detail of Column Base Plates (with ** as shown on plans)
10-JK3-2E	Detail of Column Base Plate M42-3
10-JK3-2F	Detail of Column Base M48-5
10-JK3-3, 3A, 3B & 3C	Column Base Plate Schedule at Fl. 310'
10-JK3-4 thru 10	Column Base Plate Detail at Fl. 310'
10-JK4-3	Typical Column Shear - Head Details at Fl. 264'
10-JK4-4	Typical Column Shear - Head Details at Fl. 264'
10-JK4-4B	Column Splice Detail
10-JK4-5	Column Shear - Head Detail - Type V, W, X
10-JK4-6	Column Shear - Head Detail - Type Y
10-JK4-7, 8 & 9	Shear Head Details
10-JK4-10	Detail of Column Rosom Plates - Types A, B, C, D, E, F, G
10-JK4-10A, 10B, 10C, 10D, 10E, 10F, 10G, 10H	Detail of Column Rosom Plates - Type H
10-JK4-11A, 12, 15, 16, 29 and 30	Detail of Column Rosom Plates - Type J

10-JK1-0



3-21-69
4- 1-69
5-1-69

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT *THE WORLD TRADE CENTER*

TITLE *NOTES ON COLUMN, BASE PLATES & SHEAR HEADS*

DATE *5-15-67*

REVISIONS

5-26-67

10-20-67

11-8-67

NOTES:

A. Columns

1. Material for all columns shall be A-36 steel except as noted.
2. See 10-JK2 for location and detail of column splices.

B. Column Base-plates

1. Material for all base plates shall be A-36 steel except as noted.

2. All thickness shown are finished thickness.

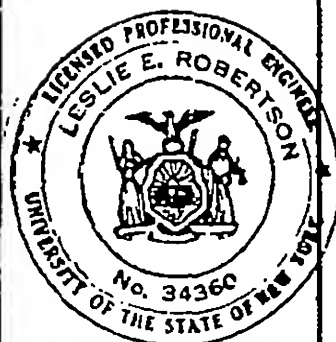
3. Provide $(2-1" \phi) \frac{1}{4}"$ anchor bolts and proper nuts & washers per base $\#$. See detail on 10-JK3-2.

C. Column Shear-Heads

1. Provide shear-head at each level where column supports flat-slab construction (see 10-JK4 for typical detail). Where steel or concrete beams frame to a column, no shear-head is required.
2. Material for shear-heads shall be $F_y=50\text{KSI}$

D. Column Cap and Bearing Plates

1. All column cap and bearing plates to be $1-1/2"$ thick, overhang a min. of $1/2"$ to each side of the column to which they are connected to, except otherwise noted on JK2-30 and 31.



10-J1-1

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

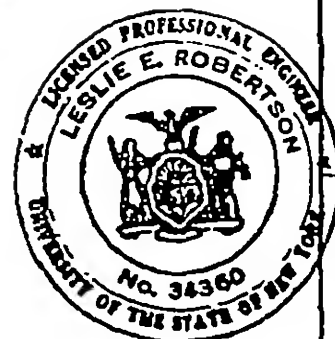
REVISIONS

2-9-68

4-5-68

	J1-1	J1-2	J1-3	J1-4	J1-5	J1-6	J1-7
El. 332'							
El. 310'							
level							
El. 294'							
El. 284'	14 WF 61 (Fy = 42)	14 WF 87 (Fy = 50)	14 WF 87 (Fy = 50)	14 WF 87 (Fy = 50)	14 WF 87 (Fy = 42)		
El. 274'							
El. 264'	14 WF 111 (Fy = 50)	14 WF 150 (Fy = 50)	14 WF 184 (Fy = 50)	14 WF 184 (Fy = 50)	14 WF 150 (Fy = 50)		
El. 253	14 WF 111 (Fy = 50)	14 WF 150 (Fy = 50)	14 WF 184 (Fy = 50)	14 WF 184 (Fy = 50)	14 WF 150 (Fy = 50)	14 WF 314 (Fy = 50)	14 WF 95 (Fy = 50)
Top of base R	El. 249'	El. 249'	El. 249'	El. 249'	El. 249'	El. 249'	El. 243'-6"
Base Plate	25 x 2 x 2'-2"	30 x 2 ⁵ / ₈ x 2'-8"	33 x 3 x 2'-11"	33 x 3 x 2'-11"	30 x 2 ⁵ / ₈ x 2'-8"	45 x 4 ⁵ / ₈ x 4'-0"	26 x 2'8" x 2'-3"

TRUSS JT 2 ABOVE
See dwg. 11-J1-3



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-2

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

5-1-68

El. 332'

J1-8

J1-11

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of base plate

Base Plate

El. 243'-6"

42 x 15 1/2 x 3'-8"

14WF240
(FY=50)

El. 241'

27 x 2 1/2 x 2'-3"

14WF95
(FY=50)

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-3



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

	J1-13	J1-13A	J1-14	J1-15	J1-16		
El. 332'							
El. 290'							
El. 274'							
El. 264'							
Top of base R							
Base Plate	49 x 5 5/8 x 4'-3"	17 x 1/2 x 1'-7"	56 x 6 1/2 x 5'-0"	16 x 17/8 x 1'-8"	16 x 17/8 x 1'-8"		

El. 332'

El. 290'

El. 274'

El. 264'

Top of base R

Base Plate

J1-13

J1-13A

J1-14

J1-15

J1-16

Port of Truss JT-4

14 WF 264
(Fy=50)

8 WF 40
(Fy=42)

R Girder
See dwg.

14 WF 426
(Fy=50)

14 WF 426
(Fy=50)

10 WF 49
(Fy=42)

Top of Base R
El. 289'-10"

See det.
on 10-JK3-2B

10 WF 49
(Fy=42)

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4..
- Splice: 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-4



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

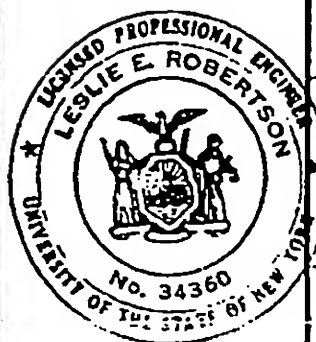
2-9-68

4-5-68

	J2-1	J2-2	J2-3	J2-4	J2-5	J2-6	J2-7
El. 332'							
El. 310'							
Street level				El. 301'-11" 7			
El. 294'							
El. 284'	14WF61 (Fy=42)	14WF87 (Fy=42)	14WF127 (Fy=50)		14WF136 (Fy=50)	14WF150 (Fy=50)	14WF136 (Fy=50)
El. 274'							
El. 264'	14WF103 (Fy=50)	14WF142 (Fy=50)	14WF246 (Fy=50)		14WF264 (Fy=50)	14WF287 (Fy=50)	
El. 253	14WF103 (Fy=50)	14WF142 (Fy=50)	14WF246 (Fy=50)		14WF264 (Fy=50)	14WF287 (Fy=50)	14WF142 (Fy=50)
Top of base R	El. 249'	El. 249'	El. 249'	El. 249'	El. 249'	El. 249'	El. 243'-6"
Base Plate	22 x 15/8 x 2'-0"	28 x 23/8 x 2'-6"	41 x 4 1/8 x 3'-8"	41 x 4 x 3'-8"	43 x 4 3/4 x 3'-9"	33 x 23/8 x 3'-0"	

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-5



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

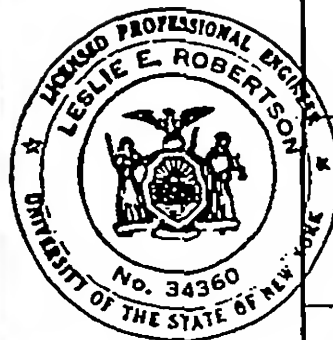
TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

	J2-8	J2-9	J2-10	J2-11	J2-12	J2-13	J2-14
El. 332'							
El. 310'	*	*	*	*	*	*	*
El. 294'							
El. 284'	14WF176 (Fy=50)	14WF176 (Fy=42)	14WF176 (Fy=50)	14WF167 (Fy=50)	14WF167 (Fy=50)	14WF167 (Fy=50)	14WF167 (Fy=50)
El. 274'							
El. 264'	14WF193 (Fy=50)	14WF342 (Fy=50)	14WF342 (Fy=50)	14WF342 (Fy=50)	14WF342 (Fy=50)	14WF342 (Fy=50)	14WF193 (Fy=50)
El. 253		14WF342 (Fy=50)	14WF342 (Fy=50)	14WF342 (Fy=50)	14WF342 (Fy=50)	14WF342 (Fy=50)	
Top of base R		El. 243'-6"	El. 243'-6"	El. 243'-6"	El. 243'-6"	El. 243'-6"	
Base Plate		45 x 5 x 4'-1"	45 x 5 x 4'-1"	45 x 5 x 4'-1"	45 x 5 x 4'-1"	45 x 5 x 4'-1"	



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-6

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

5-1-68

6-7-68

	J2-15	J2-15A	J2-16	J2-17			
El. 332'							
El. 310'							
El. 294'							
El. 284'							
El. 274'							
El. 264'							
El. 253							
Top of base R at El. 241							
Base Plate							

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of base R at El. 241

Base Plate

* T

14WF184
(Fy=50)

14WF211
(Fy=50)

14WF78
(Fy=42)

17 x 1/2 x 1'-9"

14WF53
(Fy=42)

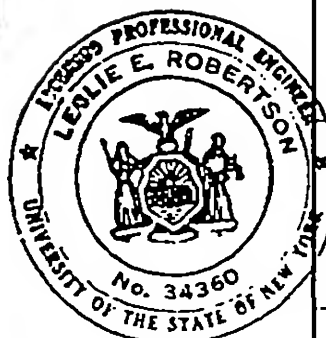
R Girder
14WF228
(Fy=50)

14WF228
(Fy=50)

14WF237
(Fy=50)

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-7



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

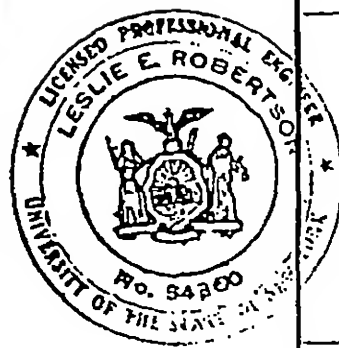
DATE 5-15-67

REVISIONS

5-1-68

9-4-68

	J2-18	J2-20	J2-22	J2-23	J2-23A	J2-24	J2-25
El. 332'							
El. 310'	Top of Girder			Top of Girder			
El. 290'	14WF127 (Fy=50)	14WF228 (Fy=50)		14WF264 (Fy=50)	Top of Girder 14WF150 (Fy=50)		14WF150 (Fy=50)
El. 274'	Part of Truss JF-4			14WF264 (Fy=50)		14WF127 (Fy=50)	
El. 264'			14WF87 (Fy=42)	14WF455 (Fy=50)		14WF314 (Fy=50)	14WF314 (Fy=50)
Top of base R			14WF87 (Fy=42)	14WF455 (Fy=50)		14WF314 (Fy=50)	14WF314 (Fy=50)
Base Plate			24x2'8x2'0"	55x6'2x5'0"		45x4'8x4'0"	45x4'8x4'0"



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4..
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-8

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

11-5-68

	J2-23B							
El. 332'								
El. 310'								
El. 290'								
El. 274'								
El. 264'								
Top of base R at El. 241'								
Base Plate								

14 WF 78
(FY=50)

Top of girder



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-9

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

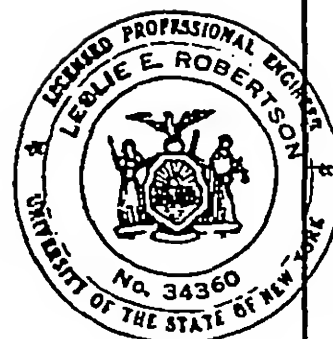
2-9-68

6-7-68

9-20-68

	J2-51	J2-52	J2-53	J2-54	J2-55	J2-56	J2-57
El. 332'							
El. 310'							
STREET level							
El. 294'							
El. 284'	14WF74 (Fy=42)		14WF43 (Fy=42)				
El. 274'							
El. 264'	14WF142 (Fy=50)		14WF84 (Fy=50)				
El. 253	14WF142 (Fy=50)		14WF84 (Fy=50)	14WF211 (Fy=50)	14WF342 (Fy=50)	14WF78 (Fy=42)	14WF119 (Fy=50)
Top of base plate	El. 249'	El. 249'		El. 243'-6"	El. 243'-6"	El. 243'-6"	El. 243'-6"
Base Plate	28 x 2 ³ / ₈ x 2'-6"	18 x 1 ¹ / ₄ x 1'-10"		39 x 4 x 3'-6"	49 x 5 ⁵ / ₈ x 4'-5"	17 x 1 ¹ / ₂ x 1'-9"	28 x 2 ³ / ₈ x 2'-6"

14WF78
(Fy=42)
*
Top of Girder



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-10

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

9-4-68

9-20-68

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253'

Top of
Base R

Base
Plate

J2-59

J2-60

(*)
14WF78
H=50)
Top of
Girder
J2E

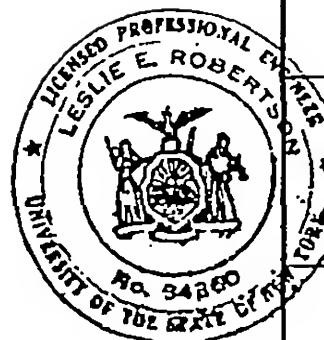
14WF287
(Fy=50)

El. 203'-6"

47x58x4'-2"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-11-11



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

4-5-68

5-1-68

6-17-68

	J3-1	J3-2	J3-3	J3-4	J3-5	J3-6	J3-7
El. 332'							
El. 310'	*	*	Det. 104 10-JK2-7	See Detail-1 on 10-JK2-36	10-JK2-17	10-JK2-17	10-JK2-17
El. 294'				THUSS JT-2 See dwg. 11-VI-3			
El. 284'	14WF158 (Fy=50)	14WF127 (Fy=50)	14WF342 (Fy=50)		14WF314 (Fy=50)	14WF314 (Fy=50)	14WF314 (Fy=50)
El. 274'							
El. 264'	14WF314 (Fy=50)	14WF246 (Fy=50)	14WF730 (Fy=46)		14WF426 (Fy=50)	14WF398 (Fy=50)	14WF398 (Fy=50)
El. 253	14WF314 (Fy=50)	14WF246 (Fy=50)	14WF730 (Fy=46)		14WF426 (Fy=50)	14WF398 (Fy=50)	14WF398 (Fy=50)
Top of base	El. 249'	El. 249'	El. 244'		El. 241'	El. 241'	El. 241'
Base Plate	45 x 48 x 4'-0"	41 x 48 x 3'-8"	60 x 74 x 5'-7"		63 x 73 x 5'-7"	62 x 72 x 5'-6"	62 x 72 x 5'-6"

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-VI-12



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

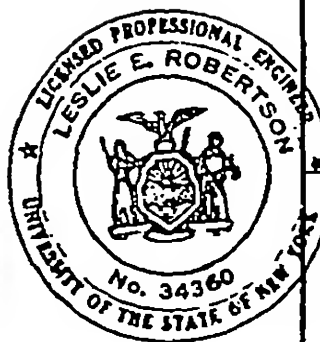
REVISIONS

2-9-68
2-29-68
4-5-68
5-1-68
6-7-68
6-17-68

	J3-8	J3-9	J3-10	J3-11	J3-12	J3-13	J3-14
El. 332'	<i>10-JK2-17</i>	<i>10-JK2-17</i>	<i>Det. 104 10-JK2-7</i>				
El. 310'				*	*	<i>12-JK2-118A</i>	
El. 294'			<i>Splice, see Det. on 10-JK2-36</i>				
El. 284'	14WF320 (Fy=50)	14WF342 (Fy=50)	<i>Part of Truss JT-3 See dwg. 11-J1-4</i>	14WF136 (Fy=50)	14WF136 (Fy=50)	14WF103 (Fy=50)	
El. 274'							
El. 264'	14WF426 (Fy=50)	14WF426 (Fy=50)	<i>See detail on 12-JK2-52</i>		14WF158 (Fy=50)	<i>See Det. 10-JK2-35</i>	
El. 253	14WF426 (Fy=50)	14WF426 (Fy=50)	<i>See detail on 10-JK2-35</i>	14WF287 (Fy=50)			
Top of base R							
El. 241'				El. 243'-6"		El. 243'-6"	
Base Plate	63 x 7 ³ / ₄ x 5'-7"	63 x 7 ³ / ₄ x 5'-7"		43 x 4 ³ / ₄ x 3'-9"		<i>See dwg. 10-JK3-2A</i>	

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-13



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

9-4-68

9-20-68

11-5-68

	J3-15A	J3-15	J3-16	J3-18	J3-19	J3-20	J3-21
El. 332'							
El. 310'							
El. 290'		See Det. 10-JK2-17 14WF78 (Fy = 50)					
El. 274'							
El. 264'							
Top of base R							
Base Plate							

See Det. 10-JK2-17
14WF78
(Fy = 50)

El. 307'-10" 2
Top of Girder
J2 A

14WF193
(Fy=50)

14WF167
(Fy=50)

14WF87
(Fy=42)

14WF87
(Fy=42)

14WF342
(Fy=50)

14WF342
(Fy=50)

14WF87
(Fy=42)

14WF87
(Fy=42)

14WF342
(Fy=50)

14WF342
(Fy=50)

El. 240'-3"

El. 243'-4"

El. 243'-4"

El. 249'

21 x 1 1/2 x 2'-0"

23 x 13 x 2'-1"

19 x 5 5/8 x 4'-5"

19 x 5 5/8 x 4'-5"



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4..
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-31-68

10-11-14

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

4-5-68

5-1-68

	J3-51	J3-52	J3-53	J3-54	J3-55	J3-56	J3-57
El. 332'							
El. 310'							
STREET level							
El. 294'							
El. 284'	14WF87 (Fy=50)	14WF48 (Fy=42)					14WF176 (Fy=50)
El. 274'							
El. 264'	14WF176 (Fy=50)	14WF87 (Fy=50)	TRUSS JT-1 See dwg. 11-J1-2	TRUSS JT-2 See dwg. 11-J1-3	TRUSS JT-3 See dwg. 11-J1-4		14WF342 (Fy=50)
El. 253	14WF176 (Fy=50)	14WF87 (Fy=50)	14WF500 (Fy=50)	14WF730 (Fy=46)	14WF730 (Fy=46)	14WF158 (Fy=50)	14WF342 (Fy=50)
Top of base R	El. 249'	El. 249'	El. 241.1'	El. 241'	El. 241'	El. 241'	El. 243'-6"
Base Plate	31 x 23 1/2 x 2'-9"	21 x 1 1/2 x 1'-11"	64 x 8 x 5'-9"	80 x 10 x 7'-3"	80 x 10 x 7'-3"	34 x 30 x 2'-11"	45 x 5 x 4'-1"



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-15

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

	J3-58	J3-59						
El. 332'								
El. 310'								
El. 290'								
El. 274'								
El. 264'								
Top of base R								
Base Plate								

El. 332'

El. 310'

El. 290'

El. 274'

El. 264'

Top of base R

Base Plate

J3-58

J3-59

El. 243'-4"

El. 240'-3"

33 x 3 1/8 x 3'-0"

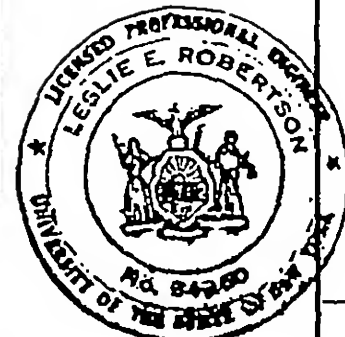
39 x 3 3/4 x 3'-5"

14 WF 142
(Fy=50)

14 WF 193
(Fy=50)

14 WF 193
(Fy=50)

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4..
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.



10-11-16

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

4-5-68

6-17-68

4-18-69

	J4-1	J4-2	J4-3	J4-4	J4-5	J4-6	J4-7
El. 332'							
El. 310'			10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17
El. 294'			14WF264 (Fy=50)	14WF225 (Fy=50)			
El. 284'	14WF142 (Fy=50)	14WF127 (Fy=50)	14WF264 (Fy=50)	14WF287 (Fy=50)	14WF264 (Fy=50)	14WF264 (Fy=50)	14WF264 (Fy=50)
El. 274'			14WF287 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)
El. 264'	14WF287 (Fy=50)	14WF264 (Fy=50)		14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)
El. 253	14WF287 (Fy=50)	14WF264 (Fy=50)		14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)
Top of base plate	El. 249'	El. 249'		El. 241'	El. 241'	El. 241'	El. 241'
Base Plate	43 x 43 x 3'-9"	41 x 4 x 3'-8"		60 x 7 1/4 x 5'-3"	60 x 7 1/4 x 5'-3"	60 x 7 1/4 x 5'-3"	60 x 7 1/4 x 5'-3"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-J1-17



DRAWN S.C.

REVIEWED E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

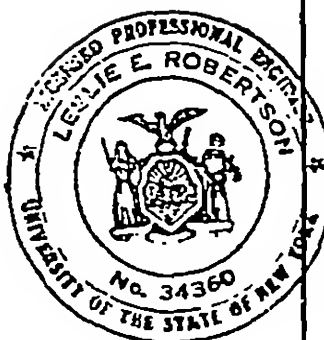
REVISIONS

2-9-68
4-5-68
5-1-68
6-17-68

	J4-8	J4-9	J4-10	J4-11	J4-12	J4-12A	J4-13
El. 332'	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17		10-JK2-17
El. 310'							
El. 294'							
El. 284'	14WF264 (Fy=50)	14WF264 (Fy=50)	14WF264 (Fy=50)	14WF314 (Fy=50)	14WF314 (Fy=50)		14WF320 (Fy=50)
El. 274'			Truss JT-3 See dwg. 11-J-4 Splice see Det. 310-JK2-36				
El. 264'	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF426 (Fy=50)	14WF342 (Fy=50)		14WF342 (Fy=50)
El. 253	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF426 (Fy=50)		14WF426 (Fy=50)	
Top of base plate	El. 241'	El. 241'	El. 241'	El. 241'	El. 243'-6"		
Base Plate	60 x 7'4" x 5'-3"	60 x 7'4" x 5'-3"	60 x 7'4" x 5'-3"	63 x 7'3" x 5'-7"	56 x 6'2" x 5'-0"		

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-JI-18



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-28-68

4-4-69

	J4-14	J4-16	J4-17	J4-19	J4-20
El. 332'					
El. 310'					
El. 290'					
El. 274'					
El. 264'					
Top of base R					
Base Plate					

El. 332'

El. 310'

El. 290'

El. 274'

El. 264'

Top of base R

Base Plate

J4-14

Part of Truss JT-5

Part of Truss JT-4

Splice, see Det. 5

10-JK2-36

18x17 I

2R517x4

1R10x2 1/2

(Fy=50)

67x8x6'-1"

J4-16

Part of Truss JT-5

Part of Truss JT-4

10-JK2-36

14 WF 297

(Fy=50)

14 WF 605

+ 1R 14x3 (B.S.)

(Fy=46)

14 WF 211

(Fy=50)

69x8 3/4x6'-9"

J4-17

Part of Truss JT-5

10-JK2-36

14 WF 264

(Fy=50)

14 WF 605

+ 1R 14x3 (B.S.)

(Fy=46)

14 WF 211

(Fy=50)

40x4x3'-7"

J4-19

Part of Truss JT-5

10-JK2-36

14 WF 264

(Fy=50)

14 WF 605

+ 1R 14x3 (B.S.)

(Fy=46)

14 WF 211

(Fy=50)

40x4x3'-7"

J4-20

Part of Truss JT-5

10-JK2-36

14 WF 264

(Fy=50)

14 WF 605

+ 1R 14x3 (B.S.)

(Fy=46)

14 WF 211

(Fy=50)

40x4x3'-7"

J4-20

Part of Truss JT-5

10-JK2-36

14 WF 264

(Fy=50)

14 WF 605

+ 1R 14x3 (B.S.)

(Fy=46)

14 WF 211

(Fy=50)

40x4x3'-7"

J4-20

Part of Truss JT-5

10-JK2-36

14 WF 264

(Fy=50)

14 WF 605

+ 1R 14x3 (B.S.)

(Fy=46)

14 WF 211

(Fy=50)

40x4x3'-7"

Part of 12 Girder

14 WF 550

14 WF 550

14 WF 550

14 WF 550

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-11-19



DRAWN S.C.

REVIEWED E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

El. 332'

El. 313'

El. 290'

El. 274'

El. 264'

Top of
base R

Base
Plate

J4-21

J4-22

14 WF 550
(Fy=50)
El. 243'-4"

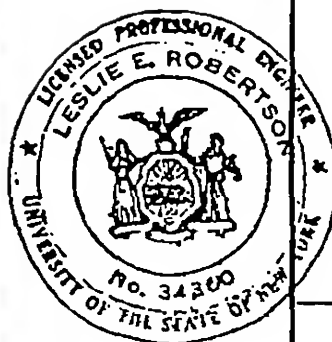
14 WF 398
(Fy=50)
El. 243'-4"

67 x 8 x 6'-1"

55 x 6 1/2 x 4'-11"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4...
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-20



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

2-29-68

5-1-68

El. 332'

El. 310'

Street
level

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base plate

Base
Plate

J4-51

J4-52

J4-52A

J4-53

J4-54

14WF103
(Fy=42)

14WF43
(Fy=42)

14WF202
(Fy=50)

14WF87
(Fy=42)

14WF202
(Fy=50)

14WF87
(Fy=42)

14WF87
(Fy=50)

14WF87
(Fy=50)

14WF342
(Fy=50)

El. 249'

El. 249'

El. 241'

El. 243'-6"

El. 243'-4"

31 x 2 1/4 x 2'-9"

21 x 1 1/2 x 1'-11"

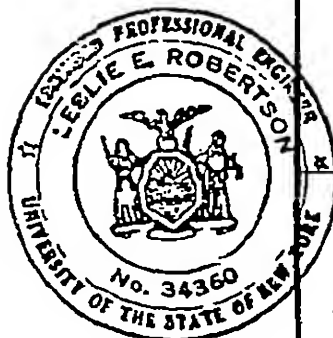
23 x 1 3/4 x 2'-1"

23 x 1 3/4 x 2'-1"

51 x 5 7/8 x 4'-7"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-21



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

4-5-68

6-17-68

	J5-1	J5-3	J5-4	J5-5	J5-6	J5-7
El. 332'			10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17
El. 310'	*					
El. 294'						
El. 284'	14WF158 (Fy=50)	14WF87 (Fy=50)	14WF314 (Fy=50)	14WF264 (Fy=50)	14WF287 (Fy=50)	14WF314 (Fy=50)
El. 274'			Truss JT-1 See dwg. 10-JI-2			
El. 264'	14WF314 (Fy=50)	14WF167 (Fy=50)		14WF370 (Fy=50)	14WF370 (Fy=50)	14WF426 (Fy=50)
El. 253	14WF314 (Fy=50)	14WF167 (Fy=50)	14WF237 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF426 (Fy=50)
Top of base R	El. 244'-6"	El. 244'-6"	El. 241'	El. 241'	El. 241'	El. 241'
Base Plate	45 x 4 ⁵ / ₈ x 4'-0"	31 x 2 ³ / ₄ x 2'-9"	49 x 5 ⁵ / ₈ x 4'-3"	60 x 7 ¹ / ₄ x 5'-3"	60 x 7 ¹ / ₄ x 5'-3"	63 x 7 ³ / ₄ x 5'-7"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and -4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-JI-22



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

5-1-68

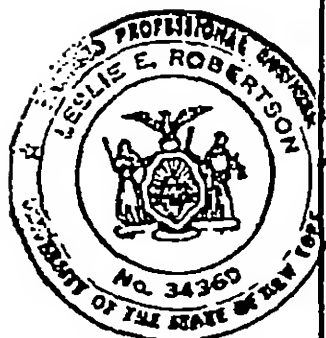
6-7-68

6-17-68

	J5-8	J5-9	J5-10	J5-11	J5-12	J5-13	J5-14
El. 332'	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17
El. 310'							
El. 294'							
El. 284'	14WF314 (Fy=50)	14WF314 (Fy=50)	14WF314 (Fy=50)	14WF314 (Fy=50)	14WF314 (Fy=50)	14WF320 (Fy=50)	14WF370 (Fy=50)
El. 274'							
El. 264'	14WF398 (Fy=50)	14WF398 (Fy=50)	14WF42G (Fy=50)	14WF42G (Fy=50)	14WF42G (Fy=50)	14WF342 (Fy=50)	14WF550 (Fy=50)
El. 253	14WF398 (Fy=50)	14WF398 (Fy=50)	14WF42G (Fy=50)	14WF42G (Fy=50)	14WF42G (Fy=50)		14WF550 (Fy=50)
Top of base R	El. 241'	El. 241'	El. 241'	El. 241'	El. 241'		El. 243'-4"
Base Plate	62 x 7 1/2 x 5'-6"	62 x 7 1/2 x 5'-6"	63 x 7 3/4 x 5'-7"	63 x 7 3/4 x 5'-7"	63 x 7 3/4 x 5'-7"		60 x 7 x 5'-6"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-J1-23



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-13-67

REVISIONS

5-1-68

6-7-68

6-17-68

	J5-15	J5-17	J5-18	J5-19	J5-20	J5-21
El. 332'						
El. 310'						
El. 290'						
El. 274'						
El. 264'						
Top of base R	See detail 10-JK2-4B 14WF158 (Fy=50) El. 243'-4"	14WF142 (Fy=50) El. 243'-4"	14WF142 (Fy=50) El. 241'-9"	See detail on 10-JK2-35 14WF370 (Fy=50) El. 241'-9"	14WF550 (Fy=50) El. 241'	14WF455 (Fy=50) El. 241'
Base Plate	35 x 3 1/4 x 3'-1"	33 x 3 1/8 x 3'-0"	53 x 6 1/4 x 4'-9"		59 x 7 x 5'-5"	55 x 6 1/2 x 5'-0"

10-JK2-77

14WF500
(Fy=50)

R Girder

14WFG1
(Fy=42)

R Girder

14WF550
(Fy=50)

14WF237
(Fy=50)

14WF455
(Fy=50)

14WF455
(Fy=50)



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-24

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

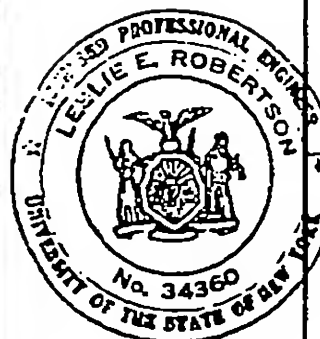
DATE 5-15-67

REVISIONS

2-9-68

5-1-68

	J5-51	J5-52	J5-53	J5-54			
El. 332'							
El. 310'							
Street level							
El. 294'							
El. 284'	14WF87 (Fy=50)						
El. 274'		14WF43 (Fy=42)					
El. 264'	14WF176 (Fy=50)	14WF87 (Fy=50)					
El. 253	14WF176 (Fy=50)	14WF87 (Fy=50)	14WF426 (Fy=50)	14WF665 (Fy=46)			
Top of base plate	El. 249'	El. 249'	El. 241'	El. 243'-4"			
Base Plate	31 x 2 3/4 x 2'-9"	21 x 1 1/2 x 1'-11"	56 x 6 1/2 x 5'-0"	69 x 8 1/2 x 6'-4"			



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-25

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

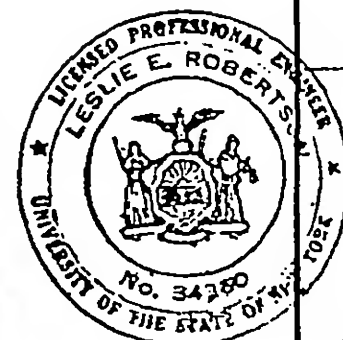
	J5-55	J5-56						
El. 332'								
El. 310'								
El. 290'								
El. 274'								
El. 264'								
Top of base R								
Base Plate								

Part of Truss J5-6
See dwg.

Part of Truss J5-6
See dwg.

Temp. bracing

See detail
10-JK4-dB



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-26

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

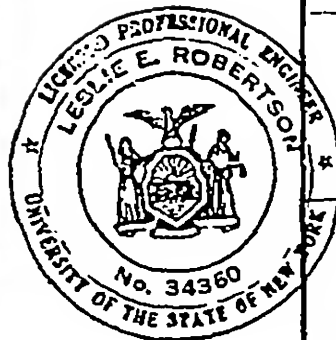
REVISIONS

2-9-68

4-5-68

6-17-68

	JG-1	JG-2	JG-3	JG-4	JG-5	JG-6	JG-7
El. 332'		10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17
El. 310'	*						
El. 294'							
El. 284'	14WF158 (Fy=50)	14WF320 (Fy=50)	14WF287 (Fy=50)	14WF287 (Fy=50)	14WF320 (Fy=50)	14WF314 (Fy=50)	14WF314 (Fy=50)
El. 274'		Port of Truss VT-1 See dwg. 11-JI-2					
El. 264'	14WF237 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF426 (Fy=50)	14WF398 (Fy=50)	14WF398 (Fy=50)
El. 253	14WF237 (Fy=50)	14WF730 (Fy=46)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF426 (Fy=50)	14WF398 (Fy=50)	14WF398 (Fy=50)
Top of base R at El. 241'							
Base Plate	46x4 ³ / ₄ x4'-1"	80x10x7'-3"	60x7 ¹ / ₂ x5'-3"	60x7 ¹ / ₂ x5'-3"	63x7 ³ / ₄ x5'-7"	62x7 ¹ / ₂ x5'-6"	62x7 ¹ / ₂ x5'-6"



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-JI-27

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

5-1-68

6-7-68

6-17-68

	JG-8	JG-9	JG-10	JG-11	JG-12		
El. 332'	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17		
El. 310'							
El. 294'							
El. 284'	14WF342 (Fy=50)	14WF342 (Fy=50)	14WF342 (Fy=50)	14WF342 (Fy=50)	14WF342 (Fy=50)		
El. 274'							
El. 264'	14WF426 (Fy=50)	14WF426 (Fy=50)	14WF426 (Fy=50)	14WF426 (Fy=50)	14WF426 (Fy=50)		
El. 253	14WF426 (Fy=50)	14WF426 (Fy=50)	14WF426 (Fy=50)	14WF426 (Fy=50)	14WF426 (Fy=50)		
Top of base R at El. 241'							
Base Plate	63x7 $\frac{3}{4}$ x5'-7"	63x7 $\frac{3}{4}$ x5'-7"	63x7 $\frac{3}{4}$ x5'-7"	63x7 $\frac{3}{4}$ x5'-7"			

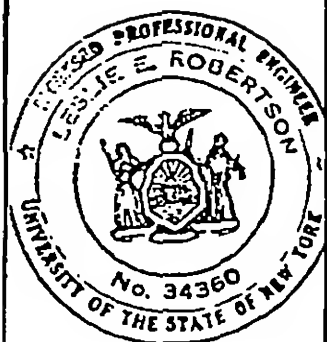
* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-J1-28



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-17-68

El. 332'

El. 310'

El. 290'

El. 274'

El. 264'

Top of
base R

Base
Plate

JG-13

JG-15

JG-16

JG-17

10-JK2-17

Top of R Girder

14 WF 455
(Fy=50)

14 WF 246
(Fy=50)

14 WF 111
(Fy=50)

See detail
10-JK4-4B

14 WF 136
(Fy=50)

14 WF 455
(Fy=50)

14 WF 111
(Fy=50)

14 WF 136
(Fy=50)

14 WF 455
(Fy=50)

El. 213'-4"

El. 243'-9"

El. 213'-9"

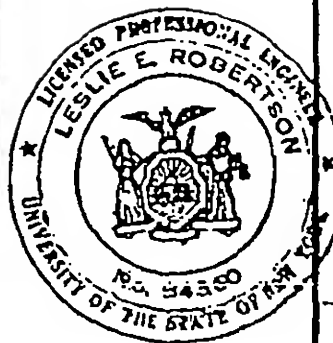
29 x 2 1/2 x 2'-7"

32 x 3 x 2'-11"

55 x 6 1/2 x 5'-0"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4..
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-29



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

	JG-51						
El. 332'							
El. 310'							
Street Level							
El. 294'							
El. 284'	14WF87 (FY=50)						
El. 274'							
El. 264'	14WF167 (FY=50)						
El. 253	14WF167 (FY=50)						
Top of base R							
El. 245'							
Base Plate	32 x 27/8 x 2'-9"						

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-11-31



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

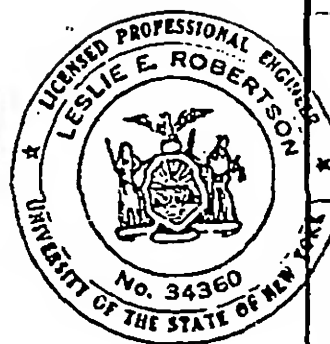
DATE 5-15-67

REVISIONS

2-9-68

6-17-68

	J7-1	J7-2	J7-3	J7-4	J7-5	J7-6	J7-7
El. 332'							
El. 310'		Det. 104 10-JK2-7	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17
El. 294'							
El. 284'	14WF150 (Fy=50)	14WF370 (Fy=50)	14WF342 (Fy=50)	14WF314 (Fy=50)	14WF287 (Fy=50)	14WF287 (Fy=50)	14WF287 (Fy=50)
El. 274'							
El. 264'	14WF246 (Fy=50)	14WF455 (Fy=50)	14WF455 (Fy=50)	14WF426 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)
El. 253	14WF246 (Fy=50)	14WF455 (Fy=50)	14WF455 (Fy=50)	14WF426 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)
Top of base plate at El. 241'							
Base Plate	45x5'8x3'-11"	64x8x5'-9"	64x8x5'-9"	63x7'3/4x5'-7"	60x7'1/4x5'-3"	60x7'1/4x5'-3"	60x7'1/4x5'-3"



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-JI-32

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

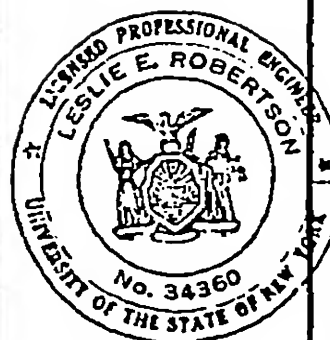
REVISIONS

2-9-68

5-1-68

6-17-68

	J7-8	J7-9	J7-10	J7-11	J7-12	J7-13	
El. 332'							
El. 310'	10-JK2-17	10-JK2-17	10-JK2-17	10-JK2-17		10-JK2-17	
El. 294'							
El. 284'	14WF287 (Fy=50)	14WF287 (Fy=50)	14WF287 (Fy=50)	14WF287 (Fy=50)		14WF264 (Fy=50)	
El. 274'							
El. 264'	14WF370 (Fy=50)	14WF398 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)			
El. 253	14WF370 (Fy=50)	14WF398 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF246 (Fy=50)		
Top of base R	El. 241'	El. 241'	El. 241'	El. 241'	El. 241'		
Base Plate	60 x 7 1/2 x 5'-3"	62 x 7 1/2 x 5'-6"	60 x 7 1/2 x 5'-3"	60 x 7 1/2 x 5'-3"	49 x 5 5/8 x 4'-8"		



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- ◆ See detail on 10-JK2-30.

10-J1-33

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

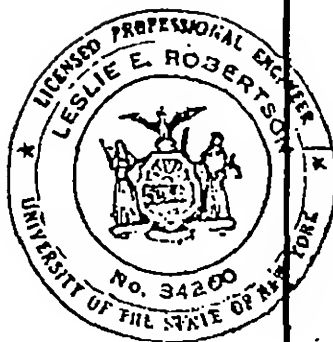
DATE 5-15-67

REVISIONS

5-1-68

	J7-15								
El. 332'									
El. 310'									
El. 290'									
El. 279'3"									
El. 274'									
El. 264'									
El. 253									
Top of Base R.									
Base Plate									

Both of 12" Girder
14 WF 500
(Fy = 50)
12" Girder



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-35

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

9-4-68

El. 332'

El. 310'

El. 290'

El. 274'

El. 264'

Top of
base R

Base
Plate

J7-16

J7-17

Top of R
Girder

14 WF 211
(Fy=50)

R Girder

14 WF 342
(Fy=50)

14 WF 342
(Fy=50)

El. 241'

19 x 5 1/2 x 1/2"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-36



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

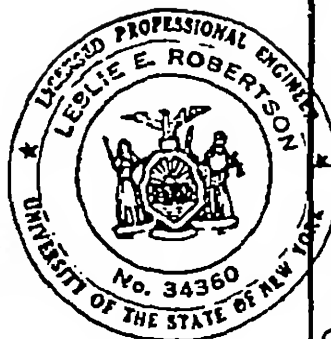
REVISIONS

2-9-68

	J7-51	J7-52	J7-53				
El. 332'							
El. 310'							
Street level							
El. 294'							
El. 284'	14WF87 (Fy=50)	14WF84 (Fy=42)					
El. 274'							
El. 264'	14WF127 (Fy=50)		14WF119 (Fy=50)				
El. 253	14WF127 (Fy=50)		14WF119 (Fy=50)				
Top of base plate at El. 241'							
Base Plate	33 x 3 1/4 x 3'-0"		32 x 3 x 2'-9"				

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-37



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

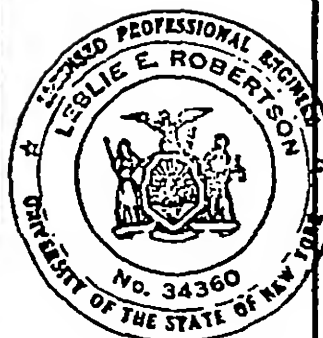
4-5-68

6-17-68

11-5-68

	JB-1	JB-2	JB-3	JB-4	JB-5	JB-6	JB-7
El. 332'							
El. 310'	*	*	10-JK2-17	10-JK2-17	10-JK2-17	See detail 10-JK2-17 3'-0" 14WF211 (Fy=50)	10-JK2-17
El. 294'						See detail 10-JK2-34 2258x158 I 2 RS 1528x2 1/2 1 RS 1758x1 1/2 (Fy=50)	
El. 284'	14WF158 (Fy=50)	14WF142 (Fy=50)	14WF320 (Fy=50)	14WF287 (Fy=50)	14WF264 (Fy=50)		14WF287 (Fy=50)
El. 274'							
El. 264'	14WF264 (Fy=50)	14WF228 (Fy=50)	14WF426 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF398 (Fy=50)
El. 253	14WF264 (Fy=50)	14WF228 (Fy=50)	14WF426 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF398 (Fy=50)
Top of base R at El. 241'							
Base Plate	49x5 1/2x4'-3"	47x5x4'-2"	63x7 3/4x5'-7"	60x7 1/4x5'-3"	60x7 1/2x5'-3"	60x7 1/4x5'-3"	62x7 1/2x5'-6"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.



10-31-68

10-J1-38

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

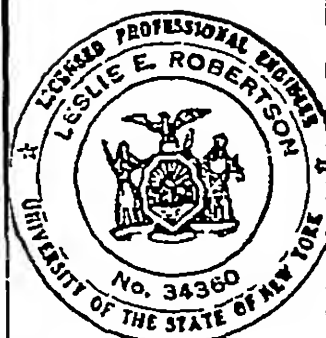
5-1-68

6-17-68

	J8-8	J8-9	J8-10				
El. 332'							
El. 310'	10-JK2-17	10-JK2-17	10-JK2-17				
El. 294'							
El. 284'	14WF287 (Fy=50)	14WF342 (Fy=50)	14WF370 (Fy=50)				
El. 274'							
El. 264'	14WF370 (Fy=50)	14WF42G (Fy=50)	14WF455 (Fy=50)				
El. 253	14WF370 (Fy=50)	14WF42G (Fy=50)	14WF455 (Fy=50)				
Top of base R	El. 241'	El. 241'	El. 241'				
Base Plate	60 x 7 1/4 x 5'-3"	63 x 7 3/4 x 5'-7"	66 x 8 x 5'-11"				

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-39



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-17-68

	J8-12	J8-13							
El. 332'									
El. 310'									
El. 290'									
El. 274'									
El. 264'									
Top of base R									
Base Plate									

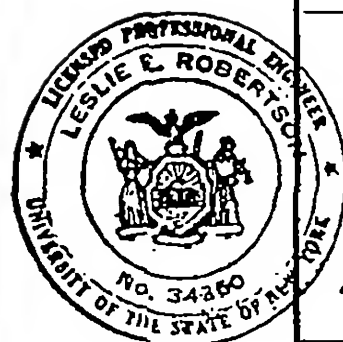
10-JK2-17

14 WF 342
(Fy=50)

14 WF 287
(Fy=50)

Part of Truss JT-10

Part of Truss JT-10



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4..
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-40

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-9-68

	J8-51	J8-53	J8-54			
El. 332'						
El. 310'						
St. level						
El. 294'						
El. 284'	14 WF 95 (Fy=50)	14 WF 150 (Fy=50)	14 WF 87 (Fy=42)			
El. 274'						
El. 264'	14 WF 176 (Fy=50)	14 WF 211 (Fy=50)	14 WF 103 (Fy=50)			
El. 253	14 WF 176 (Fy=50)	14 WF 211 (Fy=50)	14 WF 103 (Fy=50)			
Top of base plate at El. 241'						
Base Plate	39 x 3 7/8 x 3'-5"	44 x 4 5/8 x 3'-11"	31 x 2 7/8 x 2'-9"			

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-J1-41



Civil & Structural Engineers

TITLE	COLUMN SCHEDULE
-------	-----------------

DATE 5-15-67

5-1-68

6-7-68

78-55

El. 332'

El. 310'

El. 290'

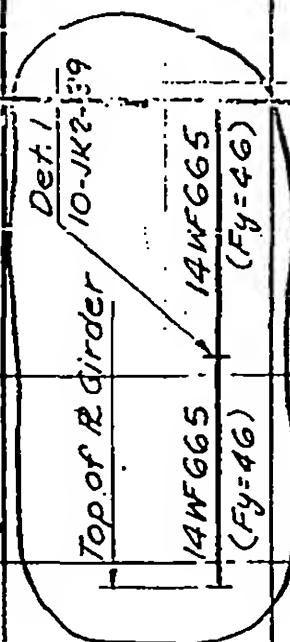
El. 279'3

E1.264'

El. 253

Top of
Base R.

Base
Plate



* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
▲ See detail on 10-JK4-3 and 4.
■ Splice 3" above slab. See note on 10-JK2-2.
● See detail on 10-JK2-30.

10-J1-42

10-11-42



Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE	COLUMN	SCHEDULE
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102
103	104	105
106	107	108
109	110	111
112	113	114
115	116	117
118	119	120
121	122	123
124	125	126
127	128	129
130	131	132
133	134	135
136	137	138
139	140	141
142	143	144
145	146	147
148	149	150
151	152	153
154	155	156
157	158	159
160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177
178	179	180
181	182	183
184	185	186
187	188	189
190	191	192
193	194	195
196	197	198
199	200	201
202	203	204
205	206	207
208	209	210
211	212	213
214	215	216
217	218	219
220	221	222
223	224	225
226	227	228
229	230	231
232	233	234
235	236	237
238	239	240
241	242	243
244	245	246
247	248	249
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300
301	302	303
304	305	306
307	308	309
310	311	312
313	314	315
316	317	318
319	320	321
322	323	324
325	326	327
328	329	330
331	332	333
334	335	336
337	338	339
340	341	342
343	344	345
346	347	348
349	350	351
352	353	354
355	356	357
358	359	360
361	362	363
364	365	366
367		

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

6-17-68

1-8-69

	J9-1	J9-2	J9-3	J9-4	J9-5	J9-6	J9-7
El. 332'							
El. 310'	12-JK2-17	12-JK2-17	12-JK2-17	10-JK2-17	10-JK2-17	12-JK2-38A	*
El. 294'	14 WF 398 (Fy=50)	14 WF 370 (Fy=50)	14 WF 370 (Fy=50)	14 WF 370 (Fy=50)	14 WF 370 (Fy=50)	14 WF 398 (Fy=50)	14 WF 136 (Fy=50)
El. 284'							
El. 274'							
El. 264'	14 WF 426 (Fy=50)	14 WF 426 (Fy=50)	14 WF 426 (Fy=50)	14 WF 426 (Fy=50)	14 WF 426 (Fy=50)	14 WF 426 (Fy=50)	14 WF 167 (Fy=50)
El. 253	14 WF 500 (Fy=50)	14 WF 455 (Fy=50)	14 WF 455 (Fy=50)	14 WF 455 (Fy=50)	14 WF 455 (Fy=50)	14 WF 500 (Fy=50)	14 WF 228 (Fy=50)
Top of base R at El. 241'							
Base Plate	60 x 7 1/2 x 5'-5"	60 x 7 1/2 x 5'-5"	60 x 7 1/2 x 5'-5"	60 x 7 1/2 x 5'-5"	60 x 7 1/2 x 5'-5"	62 x 7 1/2 x 5'-6"	44 x 4 7/8 x 3'-10"



DRAWN
S.C.

REVIEWED
E.L.

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-J1-

10-J1-43

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base R
at El. 241'

Base
Plate

48 x 48 x 4'-1"

14 WF 167
(FY = 50)

14 WF 211
(FY = 50)

14 WF 246
(FY = 50)

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-44



Civil & Structural Engineers

TITLE	COLUMN	SCHEDULE
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102
103	104	105
106	107	108
109	110	111
112	113	114
115	116	117
118	119	120
121	122	123
124	125	126
127	128	129
130	131	132
133	134	135
136	137	138
139	140	141
142	143	144
145	146	147
148	149	150
151	152	153
154	155	156
157	158	159
160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177
178	179	180
181	182	183
184	185	186
187	188	189
190	191	192
193	194	195
196	197	198
199	200	201
202	203	204
205	206	207
208	209	210
211	212	213
214	215	216
217	218	219
220	221	222
223	224	225
226	227	228
229	230	231
232	233	234
235	236	237
238	239	240
241	242	243
244	245	246
247	248	249
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300
301	302	303
304	305	306
307	308	309
310	311	312
313	314	315
316	317	318
319	320	321
322	323	324
325	326	327
328	329	330
331	332	333
334	335	336
337	338	339
340	341	342
343	344	345
346	347	348
349	350	351
352	353	354
355	356	357
358	359	360
361	362	363
364	365	366
367		

DATE 5-15-67

5-1-68

19-9

E1.332'

51.31U

EL 290'

E1. 274'

EI. 264'

Top of
base P
at E_i .

*Base
Plate*

$$\frac{14WF150}{(F_y=50)}$$

* Provide proper splice pls., bolt-holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4..
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-JI-45

10-11-45



Civil & Structural Engineers

TITLE *COLUMN SCHEDULE*

DATE 5-15-67

11-8-67

El. 310'

EI. 294

EI. 284'

El. 274

El. 264'

E1, 253

Top of
base @
at El. 241'

Base
Dite

J10-1.

J10-2

U/O-3

J10-4

14 WF 74
(FY=50)

$$\frac{1445}{(F_y = 50)}$$
$$\frac{144 \times 136}{(F_y - 50)}$$
$$\frac{14 \text{ W} \cdot 142}{(F_y = 50)}$$

(55 = 44):
144 = 87

05.87
9/14/71

$$\frac{1445158}{(F_y = 50)}$$

14WE162
(Fy=50)

144F95 (FY=50)

(Fy = 50)
414 246

$$\begin{array}{r} 141 \times 228 \\ \hline 32148 \end{array}$$

AW=237	(FY=50)
--------	---------

$30 \times 2\frac{1}{2} \times 2'-1"$ $48 \times 4\frac{3}{4} \times 3'-9"$ $44 \times 4\frac{5}{8} \times 3'-11"$ $46 \times 4\frac{7}{8} \times 3'-10"$

* Provide proper splice pls. bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

Splice 3" above slab. See note on 10-JK2-2.

See detail on 10-JK2-30.

10-11-46



Civil & Structural Engineers

TITLE	COLUMN SCHEDULE
-------	-----------------

DATE 5-15-67

11-8-67

El. 310'

Street
level

EI. 294

El. 284'

El. 274

El. 264'

E1.253

Top of
base R
at El. 241'

Base
Pjäre

U.10-51

(05 = A.F.)	14 W-87
-------------	---------

14WF95 (1)
(Fy=50)

$$\begin{array}{r} 1445127 \\ \hline (05 = 95) \end{array}$$

32 x 3 x 2'-9"

* Provide proper splice pls., bolt-holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
See detail on 10-JK4-3 and 4.
Splice 3" above slab. See note on 10-JK2-2.
See detail on 10-JK2-30.

10-11-47



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

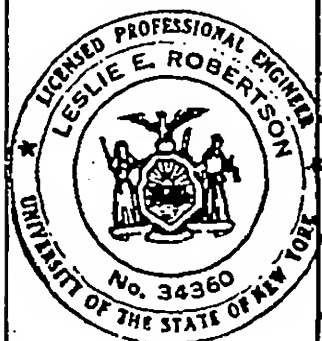
10-20-67

11-8-67

	JII-1	JII-2	JII-3	JII-4	JII-5	JII-6	JII-7
El. 332'							
El. 310'	14 WF 426 (Fy=50)	14 WF 398 (Fy=50)	14 WF 398 (Fy=50)	14 WF 398 (Fy=50)	14 WF 398 (Fy=50)	14 WF 398 (Fy=50)	14 WF 150 (Fy=50)
El. 294'							
El. 284'							
El. 274'	14 WF 455 (Fy=50)	14 WF 455 (Fy=50)	14 WF 455 (Fy=50)	14 WF 455 (Fy=50)	14 WF 455 (Fy=50)	14 WF 455 (Fy=50)	14 WF 167 (Fy=50)
El. 264'	14 WF 500 (Fy=50)	14 WF 500 (Fy=50)	14 WF 500 (Fy=50)	14 WF 500 (Fy=50)	14 WF 500 (Fy=50)	14 WF 500 (Fy=50)	14 WF 237 (Fy=50)
El. 253							
Top of base plate at El. 241'							
Base Plate	72 x 8 3/4 x 6'-10"	72 x 8 3/4 x 6'-10"	72 x 8 3/4 x 6'-10"	72 x 8 3/4 x 6'-10"	72 x 8 3/4 x 6'-10"	72 x 8 3/4 x 6'-10"	44 x 4 1/2 x 3'-10"

* Provide proper splice plates, bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3' above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-3.

10-JI-48



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

J11-8

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base @
at El. 241'

Base
Plate

48 x 5 1/4 x 4'-4"

14 WF 211
(FY=50)

14 WF 219
(FY=50)

14 WF 264
(FY=50)



* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-J1-49

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

El. 332'

El. 310'

El. 290'

El. 279'3"

El. 264'

El. 253

Top of
Base R.
at El. 241'

Base
Plate

J11-9

14WF150
(Fy = 50)

14WF158
(Fy = 50)

14WF184
(Fy = 50)

42" x 4'4" x 3'-8"



* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 See detail on 10-JK4-3 and 4.
 Splice 3" above slab. See note on 10-JK2-2.
 See detail on 10-JK2-10.

10-11-50

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE	DATE	BY	REMARKS
COLUMN SCHEDULE			

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

	J12-1	J12-2	J12-3
El. 332'			
El. 310'	(*)	(*)	(*)
El. 294'	14WF127 (Fy=50)	14WF142 (Fy=50)	14WF150 (Fy=50)
El. 284'			
El. 274'	+	+	+
El. 264'	14WF150 (Fy=50)	14WF150 (Fy=50)	14WF167 (Fy=50)
El. 253	14WF219 (Fy=50)	14WF228 (Fy=50)	14WF246 (Fy=50)
Top of base plate at El. 241'			
Base Plate	42 x 4 1/4 x 3'-8"	44 x 4 1/2 x 3'-10"	50 x 5 x 3'-9"

*
▲
■
○
2-detail proper splice pks. 3" bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
See detail on 10-JK4-3 and 4.
Splice 3" above slab. See note on 10-JK2-2.
See detail on 10-JK2-30.

10-11-51



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

	J12-8								
El. 332'									
El. 310'									
El. 290'									
El. 279'-3"									
El. 264'									
El. 253									
Top of Base R.									
Base Plate									



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-52

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

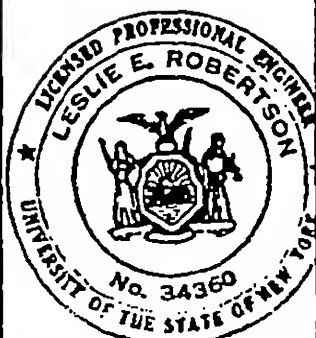
REVISIONS

10-20-67

11-8-67

1-5-68

	J12-51	J12-52	J12-53	C12-54	C12-55	C12-56	C12-57
El. 332'							
El. 310'		13'0" * Splice 12WF58 By others	13'0" * Splice 12WF58 By others	12WF58 By others	By others	By others	By others
Street level		El. 306'-9"	El. 307'-4"	El. 309'-10 1/2"	El. 309'-10 1/2"	El. 309'-6"	El. 309'-6"
El. 294'		See detail on dwg. 10-JK2-31					
El. 284'							
El. 274'							
El. 264'		14WF103 (FY=50)					
El. 253		14WF127 (FY=50)					
Top of base plate at El. 241'							
Base plate	38 x 3 1/2 x 2'-11"						



* Provide proper splice plate, bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 See detail on 10-JK2-30.

10-J1-53

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

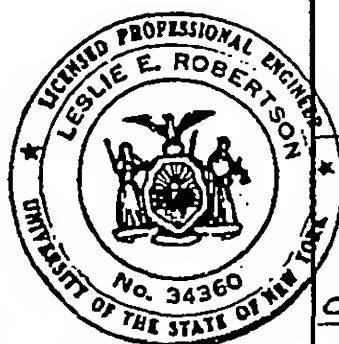
10-20-67

11-8-67

	J13-1	J13-2	J13-3	J13-4	J13-5	J13-6	
El. 332'							
El. 310'							
El. 294'	14 WF 167 (Fy=50)	14 WF 95 (Fy=50)	14 WF 95 (Fy=50)	14 WF 87 (Fy=50)	14 WF 87 (Fy=50)	14 WF 95 (Fy=50)	
El. 284'							
El. 274'	14 WF 176 (Fy=50)	14 WF 111 (Fy=50)	14 WF 111 (Fy=50)	14 WF 111 (Fy=50)	14 WF 103 (Fy=50)	14 WF 103 (Fy=50)	
El. 264'							
El. 253	14 WF 219 (Fy=50)	14 WF 158 (Fy=50)	14 WF 158 (Fy=50)	14 WF 142 (Fy=50)	14 WF 142 (Fy=50)	14 WF 127 (Fy=50)	
Top of base plate at El. 241'							
Base Plate	46 x 4 3/4 x 4'-0"	40 x 3 3/4 x 3'-2"	40 x 3 3/4 x 3'-2"	38 x 3 1/2 x 2'-11"	38 x 3 1/2 x 2'-11"	34 x 3 3/8 x 3'-1"	

* Provide proper splice plate, bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ See detail on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-J1-54-



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

	J13-7								
El. 332'									
El. 310'									
El. 290'									
El. 279'3"									
El. 264'									
El. 253									
Top of Base R.									
El. 241'									
Base Plate	33 x 33 x 2-1/4"								

14 WF 103
(F_y = 50)

Temp. bracing

14 WF 103
(F_y = 50)



* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ○ See detail on 10-JK2-30.

10-J1-55

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

	J14-1	J14-2	J14-3	J14-4	J14-5	J14-6	
El. 332'							
El. 310'							
Street Level							
El. 294'							
El. 284'							
El. 274'							
El. 264'							
El. 253							
Top of base plate at El. 241'							
Base Plate	32x3x2'-9"	32x3x2'-9"	48x5 1/2x4'-4"	48x5 1/2x4'-2"	50x5x4'-0"	32x3x2'-9"	

El. 332'

El. 310'

Street Level

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of base plate at El. 241'

Base Plate

14WF103
(Fy=50)

14WF103
(Fy=50)

14WF119
(Fy=50)

14WF74
(Fy=50)

14WF111
(Fy=50)

14WF150
(Fy=50)

14WF176
(Fy=50)

14WF264
(Fy=50)

14WF142
(Fy=50)

14WF167
(Fy=50)

14WF246
(Fy=50)

14WF211
(Fy=50)

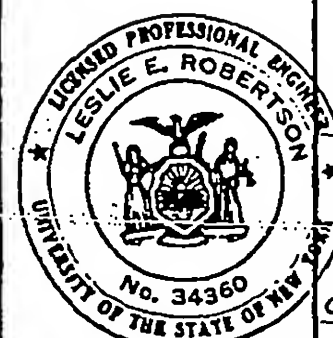
14WF228
(Fy=50)

14WF320
(Fy=50)

14WF61
(Fy=50)

14WF74
(Fy=50)

14WF111
(Fy=50)



* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-J1-56

Civil & Structural Engineers

PROJECT *THE WORLD TRADE CENTER*

TITLE	COLUMN	SCHEDULE
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102
103	104	105
106	107	108
109	110	111
112	113	114
115	116	117
118	119	120
121	122	123
124	125	126
127	128	129
130	131	132
133	134	135
136	137	138
139	140	141
142	143	144
145	146	147
148	149	150
151	152	153
154	155	156
157	158	159
160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177
178	179	180
181	182	183
184	185	186
187	188	189
190	191	192
193	194	195
196	197	198
199	200	201
202	203	204
205	206	207
208	209	210
211	212	213
214	215	216
217	218	219
220	221	222
223	224	225
226	227	228
229	230	231
232	233	234
235	236	237
238	239	240
241	242	243
244	245	246
247	248	249
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300
301	302	303
304	305	306
307	308	309
310	311	312
313	314	315
316	317	318
319	320	321
322	323	324
325	326	327
328	329	330
331	332	333
334	335	336
337	338	339
340	341	342
343	344	345
346	347	348
349	350	351
352	353	354
355	356	357
358	359	360
361	362	363
364	365	366
367		

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

1-13-69

J14-7

El. 332'

El. 310'

El. 290'

El. 279'-3"

E1.264'

E1. 253

Top of
Base R.

Base
Plate

 $1.2 \times 4^5 \times 3 \cdot 8''$

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col: one size smaller except as shown.
▲ See detail on 10-JK4-3 and 4.
■ Splice 3" above slab. See note on 10-JK2-2.
● See detail on 10-JK2-30.
- 10-JI-57

10-11-57:



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

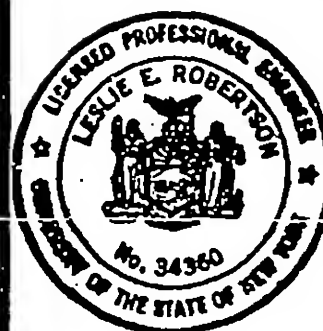
TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-13-69

	J14-8	J14-9	J14-10	J14-11	J14-12		
El. 332'							
El. 310'	14WF193 (Fy=50)	14WF264 (Fy=50)	14WF202 (Fy=50)	14WF202 (Fy=50)	14WF264 (Fy=50)		
El. 290'							
El. 279'3"							
El. 264'							
El. 253							
Top of Base R.							
Base Plate							



DRAWN
S.C.

REVIEWED
R.T. & E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-11-58

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE. *COLUMN SCHEDULE*

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

V14-51

E1. 332'

El. 310'

El. 294

El. 284

El. 274

El. 264'

E1.253

Top of
base fl.
at El. 241'

Base
Plate.

 $30 \times 2\frac{1}{2} \times 2'-1''$

1445-45

14W-43

82-714-78

$$\underline{f(y=50)}$$
$$\underline{(F_y = 50)}$$


* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-J1-59

10-11-59

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

El. 332'

El. 310'

Street
level

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base R
at El. 241'

Base
Plate

J15-1	J15-2	J15-3	J15-4	J15-5		
14WF68 (Fy=50)	14WF111 (Fy=50)	14WF136 (Fy=50)	14WF167 (Fy=50)	14WF87 (Fy=50)		
14WF84 (Fy=50)	14WF142 (Fy=50)	14WF167 (Fy=50)	14WF202 (Fy=50)	14WF111 (Fy=50)		
14WF127 (Fy=50)	14WF219 (Fy=50)	14WF237 (Fy=50)	14WF314 (Fy=50)	14WF158 (Fy=50)		
34 x 3 3/8 x 3'-1"	46 x 4 3/4 x 4'-2"	16 x 4 7/8 x 4'-1"	54 x 5 1/2 x 4'-3"	38 x 3 3/4 x 3'-4"		

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ○ See detail on 10-JK2-30.

10-J1-60



Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE	COLUMN SCHEDULE
-------	-----------------

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

J 15-51

El. 332'

£1.310!

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base @
at El. 241'

Base
Plate

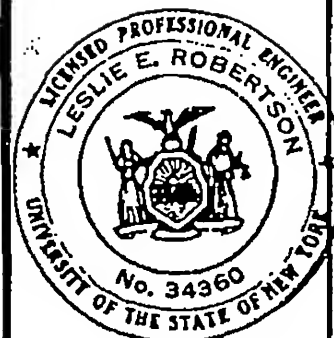
30 = 2 1/2 = 2 1/2"

14 WF 43

14 W-43

 $(F_4 = 50)$

14 W 78

$$\underline{(Fy = 50)}$$


* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3' above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-J1-C1

10-11-01

1040-L

Civil & Structural Engineers

TITLE	COLUMN	SCHEDULE
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102
103	104	105
106	107	108
109	110	111
112	113	114
115	116	117
118	119	120
121	122	123
124	125	126
127	128	129
130	131	132
133	134	135
136	137	138
139	140	141
142	143	144
145	146	147
148	149	150
151	152	153
154	155	156
157	158	159
160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177
178	179	180
181	182	183
184	185	186
187	188	189
190	191	192
193	194	195
196	197	198
199	200	201
202	203	204
205	206	207
208	209	210
211	212	213
214	215	216
217	218	219
220	221	222
223	224	225
226	227	228
229	230	231
232	233	234
235	236	237
238	239	240
241	242	243
244	245	246
247	248	249
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300
301	302	303
304	305	306
307	308	309
310	311	312
313	314	315
316	317	318
319	320	321
322	323	324
325	326	327
328	329	330
331	332	333
334	335	336
337	338	339
340	341	342
343	344	345
346	347	348
349	350	351
352	353	354
355	356	357
358	359	360
361	362	363
364	365	366
367		

DATE 5-15-67

1-13-69

	J16-1	J16-2	J16-3	J16-4			
El. 332'							
El. 310'	14WF264 (Fy=50)	14WF202 (Fy=50)	14WF202 (Fy=50)	14WF264 (Fy=50)			
El. 290'							
El. 279'3"							
El. 264'							
El. 253							
Top of Base R.							
Base Plate							



REVIEWED
RT. & E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
▲ See detail on 10-JK4-3 and 4.
■ Splice 3" above slab. See note on 10-JK2-2.
● See detail on 10-JK2-30.
- 10-J1-62

10-11-62

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

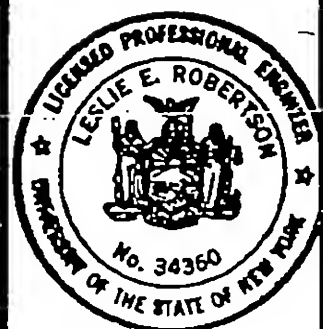
TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-13-69

	J16-51								
El. 332'									
El. 310'	14WF87 (Fy=50)								
El. 290'									
El. 279'3"									
El. 264'									
El. 253									
Top of Base R.									
Base Plate									



DRAWN
S.C.

REVIEWED
R.T. & E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-11-63

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

El. 332'

El. 310'

Street
Level

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

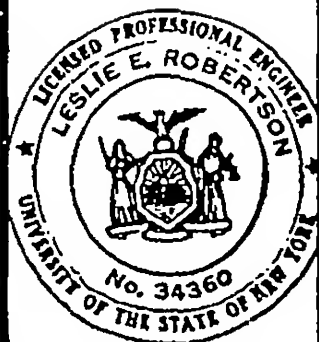
Top of
base R
at El. 241'

Base
Plate

J17-1	J17-2	J17-3	J17-4	J17-5		
14WF68 (Fy=50)	14WF111 (Fy=50)	14WF111 (Fy=50)	14WF167 (Fy=50)	14WF87 (Fy=50)		
14WF78 (Fy=50)	14WF136 (Fy=50)	14WF142 (Fy=50)	14WF202 (Fy=50)	14WF111 (Fy=50)		
14WF119 (Fy=50)	14WF202 (Fy=50)	14WF211 (Fy=50)	14WF314 (Fy=50)	14WF158 (Fy=50)		
28x28x2'-4"	42x44x3'-8"	42x44x3'-10"	54x52x4'-3"	38x34x3'-4"		

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-11-64



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253'

Top of
base plate
at El. 241'

Base
Plate

J17-51

14W43

14W43

(Fy=50)

14W78

(Fy=50)

20 x 2'8" x 2'-4"

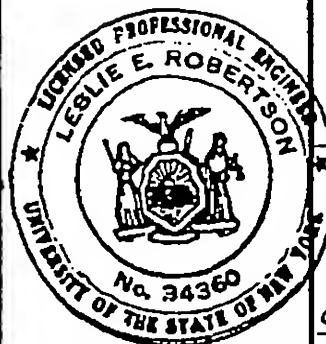
* Provide proper splice plate, bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-11-65



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

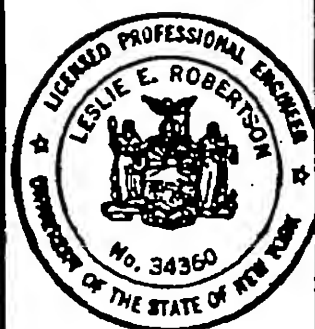
TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-13-69

	J18-1	J18-2	J18-3	J18-4			
El. 332'							
El. 310'	14 WF 228 (Fy=50)	14 WF 84 (Fy=50)	14 WF 84 (Fy=50)	14 WF 228 (Fy=50)			
El. 290'							
El. 279'3"							
El. 264'							
El. 253							
Top of Base R.							
Base Plate							



DRAWN

S.C.

REVIEWED

R.T. & E.L.

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-11-66

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

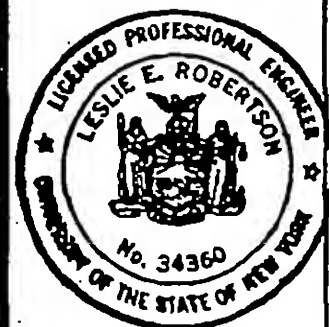
TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-13-69

	J18-51							
El. 332'								
El. 310'	14WF87 (FY=50)							
El. 290'								
El. 279'3"								
El. 264'								
El. 253								
Top of Base R.								
Base Plate								



DRAWN
S.C.

REVIEWED
R.T. & E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-67

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

El. 332'

El. 310'

Street level

El. 294'

El. 284'

El. 274'

El. 264'

El. 253'

Top of base plate at El. 241'

Base Plate

J19-1

J19-2

J19-3

J19-4

J19-5

14 WF 61
(Fy = 50)

14 WF 87
(Fy = 50)

14 WF 119
(Fy = 50)

14 WF 167
(Fy = 50)

14 WF 87
(Fy = 50)

14 WF 68
(Fy = 50)

14 WF 111
(Fy = 50)

14 WF 142
(Fy = 50)

14 WF 202
(Fy = 50)

14 WF 103
(Fy = 50)

14 WF 95
(Fy = 50)

14 WF 158
(Fy = 50)

14 WF 219
(Fy = 50)

14 WF 314
(Fy = 50)

14 WF 150
(Fy = 50)

32 x 23 3/4 x 2'-5"

38 x 33 3/4 x 3'-4"

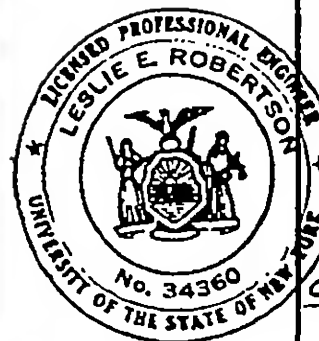
16 x 43 3/4 x 4'-2"

48 x 51 1/4 x 4'-4"

38 x 32 x 3'-5"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-68



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base R
at El. 241'

Base
Plate

30 x 2 1/2 x 2'-1"

J19-51

14 WF 43

14 WF 43

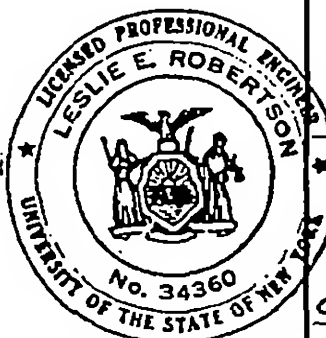
(Fy = 50)

14 WF 78

(Fy = 50)

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-11-69



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT *THE WORLD TRADE CENTER*

TITLE *COLUMN SCHEDULE*

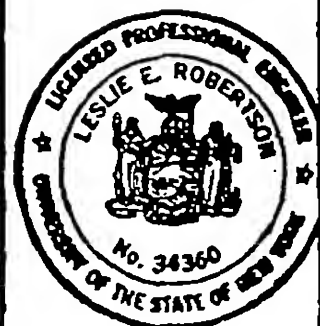
DATE *5-15-67*

REVISIONS

1-13-69

	<i>J20-1</i>	<i>J20-2</i>	<i>J20-3</i>	<i>J20-4</i>				
<i>El. 332'</i>								
<i>El. 310'</i>	<i>14 WF 228 (Fy=50)</i>	<i>14 WF 87 (Fy=50)</i>	<i>14 WF 87 (Fy=50)</i>	<i>14 WF 228 (Fy=50)</i>				
<i>El. 290'</i>								
<i>El. 279'3"</i>								
<i>El. 264'</i>								
<i>El. 253</i>								
<i>Top of Base R.</i>								
<i>Base Plate</i>								

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.



DRAWN
S.C.

REVIEWED
R.T. & E.L.

10-J1-70

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

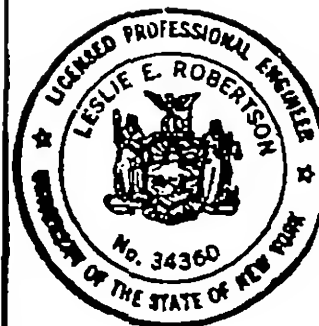
TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-13-69

	J20-51								
El. 332'									
El. 310'	14WF87 (Fy=50)								
El. 290'									
El. 279'3"									
El. 264'									
El. 253									
Top of Base R.									
Base Plate									



DRAWN
S.C.

REVIEWED
R.T. & E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-11-71

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE *COLUMN SCHEDULE*

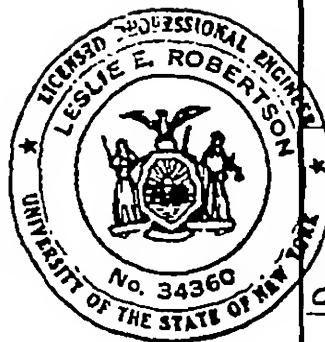
DATE 5-15-67

REVISIONS

10-20-67

11-8-67...

	J21-1	J21-2	J21-3	J21-4
El. 332'				
El. 310'				
Street level				
El. 294'	14 WF 74 (Fy = 50)	14 WF 127 (Fy = 50)	14 WF 158 (Fy = 50)	14 WF 84 (Fy = 50)
El. 284'				
El. 274'	14 WF 87 (Fy = 50)	14 WF 167 (Fy = 50)	14 WF 184 (Fy = 50)	14 WF 95 (Fy = 50)
El. 264'				
El. 253'	14 WF 127 (Fy = 50)	14 WF 237 (Fy = 50)	14 WF 287 (Fy = 50)	14 WF 142 (Fy = 50)
Top of base Rb at El. 241'				
Base plate	34 x 33 1/2 x 3'-1"	46 x 47 1/2 x 4'-1"	48 x 51 1/2 x 4'-1"	38 x 33 1/2 x 3'-4"



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-3Q.
- 10-J1-72

10-J1-72

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE *COLUMN SCHEDULE*

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

E1. 264'

E1.253

Top of
base R
at El. 241'

Base
Plate

30 x 2' 2 x 2'-1"

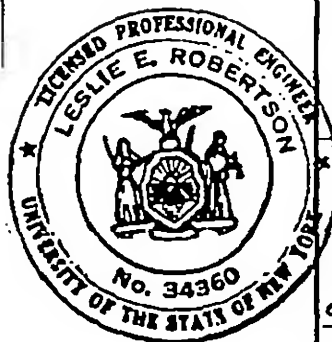
J21-51

144-43

14 WF 431

(Fy-50)

14 WF 78

$$\underline{(F_y = 50)}$$


* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-JI-73

10-11-73

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-13-69

	J22-1	J22-2						
El. 332'								
El. 310'	14 WF 37 (Fy=50)	14 WF 228 (Fy=50)						
El. 290'								
El. 279'3"								
El. 264'								
El. 253								
Top of Base R.								
Base Plate								



DRAWN
S.C.

REVIEWED
R.T. & E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-74

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

1-13-69

El. 332'

El. 310'

Street level

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of base R at El. 241'

Base Plate

J23-1

J23-2

J23-3

J23-4

J23-5

J23-6

J23-7

14WF68
(Fy=50)

14WF119
(Fy=50)

14WF167
(Fy=50)

14WF87
(Fy=50)

14WF74
(Fy=50)

14WF142
(Fy=50)

14WF202
(Fy=50)

14WF111
(Fy=50)

14WF103
(Fy=50)

14WF219
(Fy=50)

14WF314
(Fy=50)

14WF158
(Fy=50)

14WF87
(Fy=50)

14WF228
(Fy=50)

14WF111
(Fy=50)

32 x 3 = 2'-9"

40 x 4 3/4 = 4'-2"

50 x 5 1/2 = 4'-3"

38 x 3 3/4 = 2'-4"

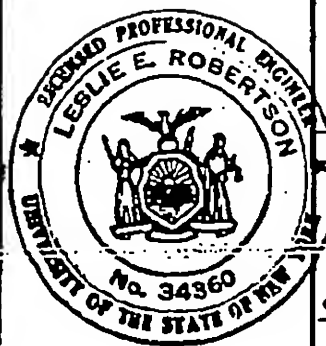
* Provide proper splice pls. bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-10.

10-J1-75



DRAWN S.C.

REVIEWED R.T. & E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base @
at El. 241'

Base
plate

J23-51

14WF43

14WF43

14WF78

(Fy=50)

(Fy=50)

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

See detail on 10-JK4-3 and 4.

Splice 3" above slab. See note on 10-JK2-2.

See detail on 10-JK2-30.

10-J1-76



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

El. 332'

El. 310'

Street level

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of base plate at El. 241'

Base Plate

J25-1

J25-2

J25-3

J25-4

14 WF 68
(Fy=50)

14 WF 95
(Fy=50)

14 WF 167
(Fy=50)

14 WF 87
(Fy=50)

14 WF 78
(Fy=50)

14 WF 119
(Fy=50)

14 WF 202
(Fy=50)

14 WF 111
(Fy=50)

14 WF 119
(Fy=50)

14 WF 193
(Fy=50)

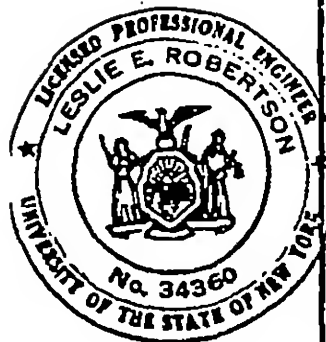
14 WF 314
(Fy=50)

14 WF 158
(Fy=50)

28 x 25/8 x 2'-7" 42 x 14 x 3'-10" 54 x 5 1/2 x 4'-3" 38 x 3 3/4 x 3'-4"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-77



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base R
at El. 241'

Base
Plate

J25-51

14 WF 53
(Fy=50)

14 WF 68
(Fy=50)

14 WF 95
(Fy=50)

26x28x2'7"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-51-78



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

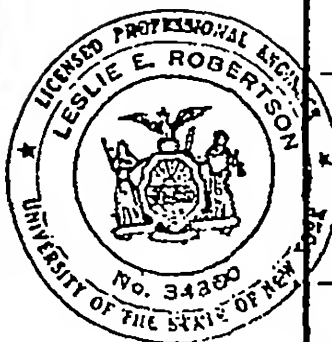
REVISIONS

5-1-68

	J 70-1	J 70-2						
El. 332'								
El. 310'								
El. 290'	14WF142 (Fy=50)	14WF136 (Fy=50)						
El. 279'3"								
El. 264'	14WF370 (Fy=50)	14WF314 (Fy=50)						
El. 253	14WF370 (Fy=50)	14WF314 (Fy=50)						
Top of Base R.								
El. 241'								
Base Plate	47 x 5 1/4 x 4'-2"	42 x 4 5/8 x 3'-9"						

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-11-79



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

	J 70-51	J 70-52	J 70-53				
El. 332'							
El. 310'							
El. 290'	14WF87 (Fy=50)	14WF119 (Fy=50)	14WF95 (Fy=50)				
El. 279'3"							
El. 264'	14WF228 (Fy=50)	14WF314 (Fy=50)	14WF237 (Fy=50)				
El. 253	14WF228 (Fy=50)	14WF314 (Fy=50)	14WF237 (Fy=50)				
Top of Base R.	El. 241'	El. 241'	El. 241'				
Base Plate	36 x 3 ³ / ₈ x 3'-2"	41 x 4 ¹ / ₂ x 3'-6"	36 x 3 ³ / ₈ x 3'-2"				



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-80

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

	J71-1	J71-2	J71-3	J71-4	J71-5	J71-6	J71-7
El. 332'							
El. 310'							
El. 290'		14WF111 (Fy=50)	14WF127 (Fy=50)	14WF127 (Fy=50)	14WF136 (Fy=50)	14WF176 (Fy=50)	14WF167 (Fy=50)
El. 279'3"							
El. 264'		14WF314 (Fy=50)	14WF342 (Fy=50)	14WF314 (Fy=50)	14WF342 (Fy=50)	14WF426 (Fy=50)	14WF398 (Fy=50)
El. 253	14WFG1 (Fy=42)	14WF314 (Fy=50)	14WF342 (Fy=50)	14WF314 (Fy=50)	14WF342 (Fy=50)	14WF426 (Fy=50)	14WF398 (Fy=50)
Top of Base R.	El. 241'	El. 241'	El. 241'	El. 241'	El. 241'	El. 241'	El. 241'
Base Plate	20x13x2'-0"	10x4x3'-7"	44x42x3'-10"	42x45x3'-9"	44x5x3'-11"	50x55x4'-5"	48x55x4'-4"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-81



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-28-68

El. 332'

El. 310'

El. 290'

El. 274'

El. 264'

Top of
base R.

Base
Plate

J 72-1

J 72-2

Part of Truss JT-9

Part of Truss JT-10

Part of Truss JT-8
See dwg.

14 WF 342

(Fy = 50)

14 WF 665

(Fy = 46)

14 WF 665

(Fy = 46)

10-JK4-4B

14 WF 665

(Fy = 46)

El. 243'-4"

El. 243'-4"

69 x 8 1/2 x 6'-4"

64 x 7 3/4 x 5'-10"

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4..

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-J1-83



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

10-15-68

El. 332

El. 310

El. 290

El. 279'-3"

El. 264

El. 253

Top of Base R.

Base Plate

J72-4

J72-5

J72-6

J72-7

R-Girder

14WF264

(Fy=50)

14WF228

(Fy=50)

14WF237

(Fy=50)

14WF211

(Fy=50)

14WF550

(Fy=50)

Temp. bracing

Temp. bracing

Temp. bracing

Det. 1

10-JK2-41

20x12 I

2R 12x24

1R 14x1/2

(Fy=50)

14WF550

(Fy=50)

20x12 II

2R 12x5

2R 10x4

(Fy=50)

20x12 II

2R 12x5

2R 10x4

(Fy=50)

See detail on 10-JK2-35B

14WF342

(Fy=50)

El. 243'-4"

El. 243'-4"

El. 243'-4"

El. 243'-4"

57x7x5'-2"

53x7x5'-0"

57x7x5'-1"

53x6x4'-9"

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

⊗ Splice detail, see 10-JK2-35A.

10-11-84



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

	J 72-8	J 72-9	J 72-10	J 72-11	J 72-12		
El. 332'							
El. 310'							
El. 290'							
El. 279'-3"							
El. 264'	Temp. bracing 20x12 I 2 R 12x2 3/4 1 R 14 1/2x1 1/2 (Fy=50)	Temp. bracing 20x12 I 2 R 12x2 3/4 1 R 14 1/2x1 1/2 (Fy=50)	Temp. bracing 20x12 I 2 R 12x2 3/4 1 R 15x1 (Fy=50)	Temp. bracing 20x12 I 2 R 12x2 3/4 1 R 14 1/2x1 1/2 (Fy=50)	Temp. bracing 20x12 I 2 R 12x2 3/4 1 R 14 1/2x1 1/2 (Fy=50)		
El. 253	See 10-JK2-355 14 WF 342 (Fy=50)	See 10-JK2-356 14 WF 370 (Fy=50)	See 10-JK2-355 14 WF 287 (Fy=50)	See 10-JK2-355 14 WF 370 (Fy=50)	See 10-JK2-355 14 WF 264 (Fy=50)		
Top of Base R.	El. 243'-4"	El. 243'-4"	El. 243'-4"	El. 243'-4"	El. 243'-4"		
Base Plate	53x6 1/4x4'-9"	54x6 1/4x4'-9"	49x5 5/8x4'-3"	54x6 1/4x4'-9"	45x5 5/8x4'-0"		

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-JI-85



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

6-28-68

El. 332'

J73-1

J73-2

El. 310'

El. 290'

El. 274'

El. 264'

Top of
base R

Base
Plate

Part of Truss JT-9

Part of Truss JT-10

14 WF 455
(Fy=50)

14 WF 43
(Fy=42)
14 WF 426
(Fy=50)

See detail
10-JK4-4B
14 WF 455
(Fy=50)

See detail
10-JK4-4B
14 WF 426
(Fy=50)

El. 243'-4"

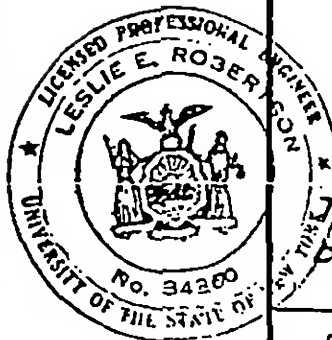
El. 243'-4"

55 x 6 1/2 = 5'-0"

53 x 6 = 4'-9"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-86



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

10-15-68

El. 332'

El. 310'

El. 290'

El. 279'3"

El. 264'

Top of
Base R.

Base
Plate

J73-4

J73-5

J73-6

J73-7

14WF193
(Fy=50)

Temp. bracing

20x12I-2R5/12x5-1R10x3
(Fy=50)

Temp. bracing

20x12I-2R5/12x5-1R10x3
(Fy=50)

Temp. bracing

20x12I-2R5/12x5-1R10x3
(Fy=50)

14WF176
(Fy=50)

14WF78
(Fy=42)

El. 243'4"

El. 243'4"

El. 243'4"

El. 243'4"

35x3¹/₂x3'2"

32x3¹/₂x2'11"

40x5x3'7"

39x3³/₄x3'5"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-87



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

10-15-68

El. 332'

El. 310'

El. 290'

El. 279'3"

El. 264'

El. 253'

Top of
Base R.

Base
Plate

J73-8

J73-9

J73-10

J73-11

J73-12

Temp. bracing
20 x 12
2 x 12 12 x 12
12 17 x 34
14 W F 87
(Fy=50)

Temp. bracing
20 x 12
2 x 12 12 x 12
12 17 x 34
14 W F 111
(Fy=50)

Temp. bracing
20 x 12
2 x 12 12 x 12
12 17 x 34
14 W F 111
(Fy=50)

Temp. bracing
20 x 12
2 x 12 12 x 12
12 17 x 34
14 W F 87
(Fy=50)

Sec. 10 JK2-35B
14 W F 176
(Fy=50)

Sec. 10 JK2-35B
14 W F 193
(Fy=50)

14 W F 87
(Fy=50)

Sec. 10 JK2-35B
14 W F 193
(Fy=50)

Sec. 10 JK2-35B
14 W F 176
(Fy=50)

El. 243'-4"

El. 243'-4"

El. 243'-4"

El. 243'-4"

El. 243'-4"

37 x 3 3/4 x 3'-4"

38 x 3 7/8 x 3'-5"

20 x 2 1/8 x 2'-4"

38 x 3 7/8 x 3'-5"

37 x 3 3/4 x 3'-4"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-51-88



5,4931-0101-1524

TU-1040-LEPA, I

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

El. 332'

El. 310'

El. 290'

El. 274'

El. 264'

Top of
base R

Base
Plate

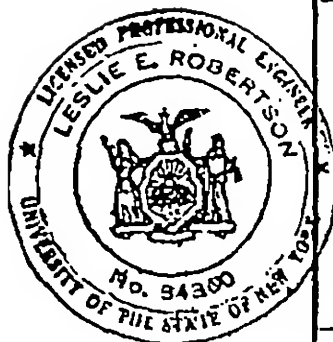
J 74-1

R Girder
14WFG8
(Fy=42)
14WF314
(Fy=50)
14WF314
(Fy=50)
El. 243'-4"

47x5'4x4'-2"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4..
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-89



1040-L, 2

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

10-15-68

El. 332'

El. 310'

El. 290'

El. 279'3"

El. 274'

El. 264'

El. 253

Top of
Base R.

Base
Plate

J74-2

J74-3

J74-4

J74-5

J74-6

Bott. of R Girder
14WF550
(Fy=50)
14WF550
(Fy=50)

Bott. of R Girder
14WFGG5
+ R 15x3 (B.S.)
(Fy=46)
Temp. bracing

20x12 II
2R 12x5
2R 10x4
(Fy=50)

20x12 II
2R 12x5
2R 10x4
(Fy=50)

See detail on
10-JK2-35B
14WF398
(Fy=50)

Temp. bracing

Temp. bracing

Temp. bracing

Def. 5
10-JK2-41
14WF264
(Fy=50)

14WF314
(Fy=50)

14WF264
(Fy=50)

El. 243'4"

El. 243'4"

El. 243'4"

El. 243'4"

El. 243'4"

59x7x5'-5"

74x9x7'-4"

64x8x15'-9"

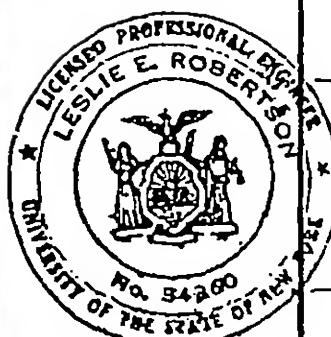
57x7x5'-1"

57x7x5'-1"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

Splice detail, see 10-JK2-35A.

10-J1-90



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

El. 332'

El. 310'

El. 290'

El. 279'3"

El. 264'

El. 253

Top of
Base R.

Base
Plate

J74-7

J74-8

J74-9

J74-10

J74-11

Det. 5
10-JK2-41
14WF264
(Fy=50)

Temp. bracing
20x12 I
2R 12x3
1R 14x2
(Fy=50)

See 10-JK2-35B
14WF398
(Fy=50)

El. 243'4"

56x6 1/2 x 5'-0"

Det. 1
10-JK2-41
14WF211
(Fy=50)

Temp. bracing
20x12 I
2R 12x2 3/4
1R 14 1/2 x 1 1/2
(Fy=50)

See 10-JK2-35B
14WF342
(Fy=50)

El. 243'4"

53x6 1/4 x 4'-9"

Det. 3
10-JK2-41
14WF167
(Fy=50)

Temp. bracing
20x12 I
2R 12x2 1/2
1R 15x1
(Fy=50)

See 10-JK2-35B
14WF287
(Fy=50)

El. 243'4"

49x5 5/8 x 4'-3"

Det. 3
10-JK2-41
14WF167
(Fy=50)

Temp. bracing
20x12 I
2R 12x2 1/2
1R 15x1
(Fy=50)

See 10-JK2-35B
14WF314
(Fy=50)

El. 243'4"

48x5 5/8 x 4'-4"

Det. 1
10-JK2-41
14WF211
(Fy=50)

Temp. bracing
20x12 I
2R 12x2 3/4
1R 14 1/2 x 1 1/2
(Fy=50)

See 10-JK2-35B
14WF342
(Fy=50)

El. 243'4"

53x6 1/4 x 4'-9"

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
▲ See detail on 10-JK4-3 and 4.
■ Splice 3" above slab. See note on 10-JK2-2.
● See detail on 10-JK2-30.

10-11-91



Civil & Structural Engineers

PROJECT *THE WORLD TRADE CENTER*

TITLE	COLUMN	SCHEDULE
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102
103	104	105
106	107	108
109	110	111
112	113	114
115	116	117
118	119	120
121	122	123
124	125	126
127	128	129
130	131	132
133	134	135
136	137	138
139	140	141
142	143	144
145	146	147
148	149	150
151	152	153
154	155	156
157	158	159
160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177
178	179	180
181	182	183
184	185	186
187	188	189
190	191	192
193	194	195
196	197	198
199	200	201
202	203	204
205	206	207
208	209	210
211	212	213
214	215	216
217	218	219
220	221	222
223	224	225
226	227	228
229	230	231
232	233	234
235	236	237
238	239	240
241	242	243
244	245	246
247	248	249
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300
301	302	303
304	305	306
307	308	309
310	311	312
313	314	315
316	317	318
319	320	321
322	323	324
325	326	327
328	329	330
331	332	333
334	335	336
337	338	339
340	341	342
343	344	345
346	347	348
349	350	351
352	353	354
355	356	357
358	359	360
361	362	363
364	365	366
367		

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

6-28-68

El. 332'

El. 310

EI. 290

El. 279-3

El. 274'

E1.264

El. 253

Top of
Base R.

Base
Plate

J75-1

J 75-2

J75-3

J-75-4

J 75-5

J 75-G

Temp. bracing

17 x 17 I
2 R's 17 x 4
1 R 9 x 2 1/2
Bott. of R Girder
14 W 398
(Fy = 50)

Temp. bracing

17, 17, 17

$$(F_y = 50)$$

Temp bracing

14WF428	14WF342	14WF228
(Fy=50)	(Fy=50)	(Fy=50)

Temp. bracing

$20 \times 12 I$ $2 R 5 T 2 \times 5$ $1 R 10 \times 3$ $(F_y = 50)$	$10-JK241$ $14 WF 228$ $(F_y = 50)$
---	---

Temp bracing

20 x 12 I	Det 7	10-JK2-41
20 x 12 x 5		14WF211
12 x 10 x 3		(Fy=50)
(Fy=50)		

Temp. breaking

14 WF 287	detail 10-JK2-358	20 x 12 I 2 P's 12 x 2 1 P 16 x 1	Det. 8 10-JK2-41
(F4=50)			14 WF 150 (F4=50)

See detail
on 10-JK2-358

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
▲ See detail on 10-JK4-3 and 4.
■ Splice 3" above slab. See note on 10-JK2-2.
● See detail on 10-JK2-30.

10-JI-92

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

	J75-13	J75-14	J75-15				
El. 332							
El. 310							
El. 290							
El. 279'3"							
El. 264							
El. 253							
Top of Base R.							
Base Plate							

14 WF 246
(Fy=50)

14 WF 142
(Fy=50)

20x12 I
2 RS 12x3
1 R 14x2
(Fy=50)

Temp. bracing
20x12 I
2 RS 12x2
1 R 16x1
(Fy=50)

14 WF 78
(Fy=50)

Splice detail
similar to
12-JK2-35B
(No shear head)
Temp bracing
14 WF 426
(Fy=50)

50C 10 JK2-35B
14 WF 287
(Fy=50)

El. 243'-4"

El. 243'-4"

El. 243'-4"

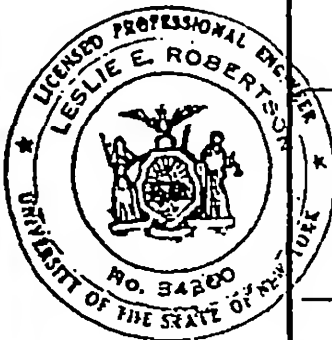
12x1/2x1'-10"

57x7x5'-2"

47x5 1/2x4'-2"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-94



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

6-7-68

6-28-68

	J75-51	J75-52	J75-53				
El. 332'							
El. 310'							
El. 290'							
El. 279'-3"							
El. 264'	14WF74 (Fy=42)	Temp. bracing 1Ø 16x1	Temp. bracing 1Ø 16x1				
Top of Base R.	14WF78 (Fy=42)	20x12I-2Ø 5/8x2'-4" (Fy=50)	20x12I-2Ø 5/8x2'-4" (Fy=50)				
Base Plate	21x2x1'-9"	24x2'2x2'-4"	32x3'2x2'-11"				

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-95



Civil & Structural Engineers

PROJECT *THE WORLD TRADE CENTER*

TITLE	COLUMN	SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

El. 332

El. 310'

EI. 290

El. 279'-3

E1.264

E/ 253

Top of
Base A

Base
Plate

J76-2

✓ 76-3

J 76-4

J 76-5

✓ 176 - 6

$$\frac{14WF111}{(F_y = 50)}$$

14 WF 111
(FY-50)

$$\frac{14WF.95}{(Fy=50)}$$
$$\frac{144595}{(14 = 50)}$$

14 WF 111
(FY=50)

$$\frac{WF246}{Fy=50}$$
Sirder

4KF136
(Fy: 50)

144F237
(F4-50)

4W 287	(50.50)
--------	---------

4WF 24G
5450

$$F_y = 50$$

ΔWF 237
FY 50)

WF 287
(FY-50)

E1.243-4^m

El. 243-4

F1243-4

FL 243-4

 $33 \times 3 \times 3$ $39 \times 3\frac{3}{4} \times 3'-5"$

35 x 3 1/2 x 3 1/2"

40 x 7 x 3'-6"

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
▲ See detail on 10-JK4-3 and 4.
■ Splice 3" above slab. See note on 10-JK2-2.
● See detail on 10-JK2-30.

10-J1-97

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

5-1-68

9-13-68

El. 332'

El. 310'

El. 290'

El. 279'3"

El. 264'

El. 253

Top of
Base R.

Base
Plate

J76-51

J76-52

J76-53

14WF87
(Fy=50)

14WF68
(Fy=50)

14WF68
(Fy=50)

El. 243'-4"

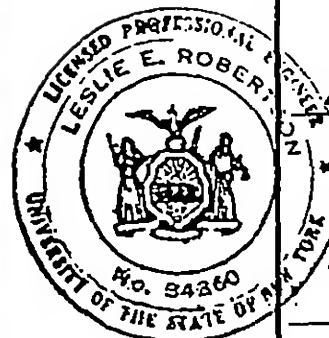
El. 243'-4"

El. 243'-4"

28 x 2³/₈ x 7'-6"

18 x 13¹/₂ x 1'-10"

18 x 13¹/₂ x 1'-10"



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-J1-99

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-13-69

	K 26-1	K 26-2	K 26-3	K 26-4	K 26-5	K 26-6	K 26-7
El. 332'							
El. 310'	14 WF 202 (Fy=50)	14 WF 264 (Fy=50)	14 WF 202 (Fy=50)	14 WF 202 (Fy=50)	14 WF 264 (Fy=50)	14 WF 202 (Fy=50)	14 WF 314 (Fy=50)
El. 290'							
El. 279'3"							
El. 264'							
El. 253							
Top of Base R.							
Base Plate							



DRAWN
S.C.

REVIEWED
R.T. & E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-201

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

El. 332'

El. 310'

Street level

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of base @
at El. 241'

Base
Plate

K27-1

K27-2

K27-3

14WF95
(Fy=50)

14WF167
(Fy=50)

14WF87
(Fy=50)

14WF127
(Fy=50)

14WF202
(Fy=50)

14WF111
(Fy=50)

14WF176
(Fy=50)

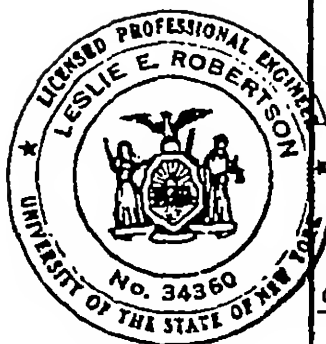
14WF314
(Fy=50)

14WF158
(Fy=50)

38 x 3 3/4 x 3'-1" 54 x 5 1/2 x 4'-3" 38 x 3 3/4 x 3'-4"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-202



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

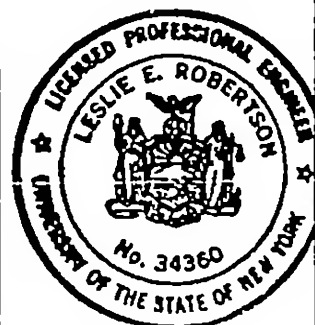
TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-13-69

	K 28-1	K 28-2	K 28-3	K 28-4	K 28-5	K 28-6	K 28-7
El. 332							
El. 310	14 WF 202 (Fy=50)	14 WF 264 (Fy=50)	14 WF 202 (Fy=50)	14 WF 202 (Fy=50)	14 WF 264 (Fy=50)	14 WF 202 (Fy=50)	14 WF 264 (Fy=50)
El. 290							
El. 279'3"							
El. 264							
El. 253							
Top of Base R.							
Base Plate							



DRAWN
S.C.

REVIEWED
R.T. & E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-203

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

12-13-67

6-7-68

	K29-1	K29-2	K29-3	K29-4			
El. 332'							
El. 310'							
Street level							
El. 294'	14 WF 119 (FY=50)	14 WF 158 (FY=50)	14 WF 142 (FY=50)	14 WF 127 (FY=50)			
El. 284'							
El. 274'							
El. 264'	14 WF 136 (FY=50)	14 WF 193 (FY=50)	14 WF 184 (FY=50)	14 WF 398 (FY=50)			
El. 253'	14 WF 211 (FY=50)	14 WF 314 (FY=50)	14 WF 264 (FY=50)				
Top of base plate at El. 241'							
Base Plate	42 x 4 1/2 x 3'-5"	46 x 4 1/2 x 4'-1"	44 x 4 1/2 x 3'-10"	42 x 4 x 3'-3"			



- * Provide proper splice pla., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-204

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

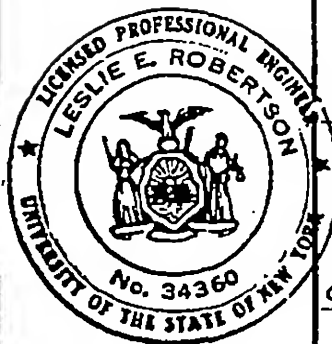
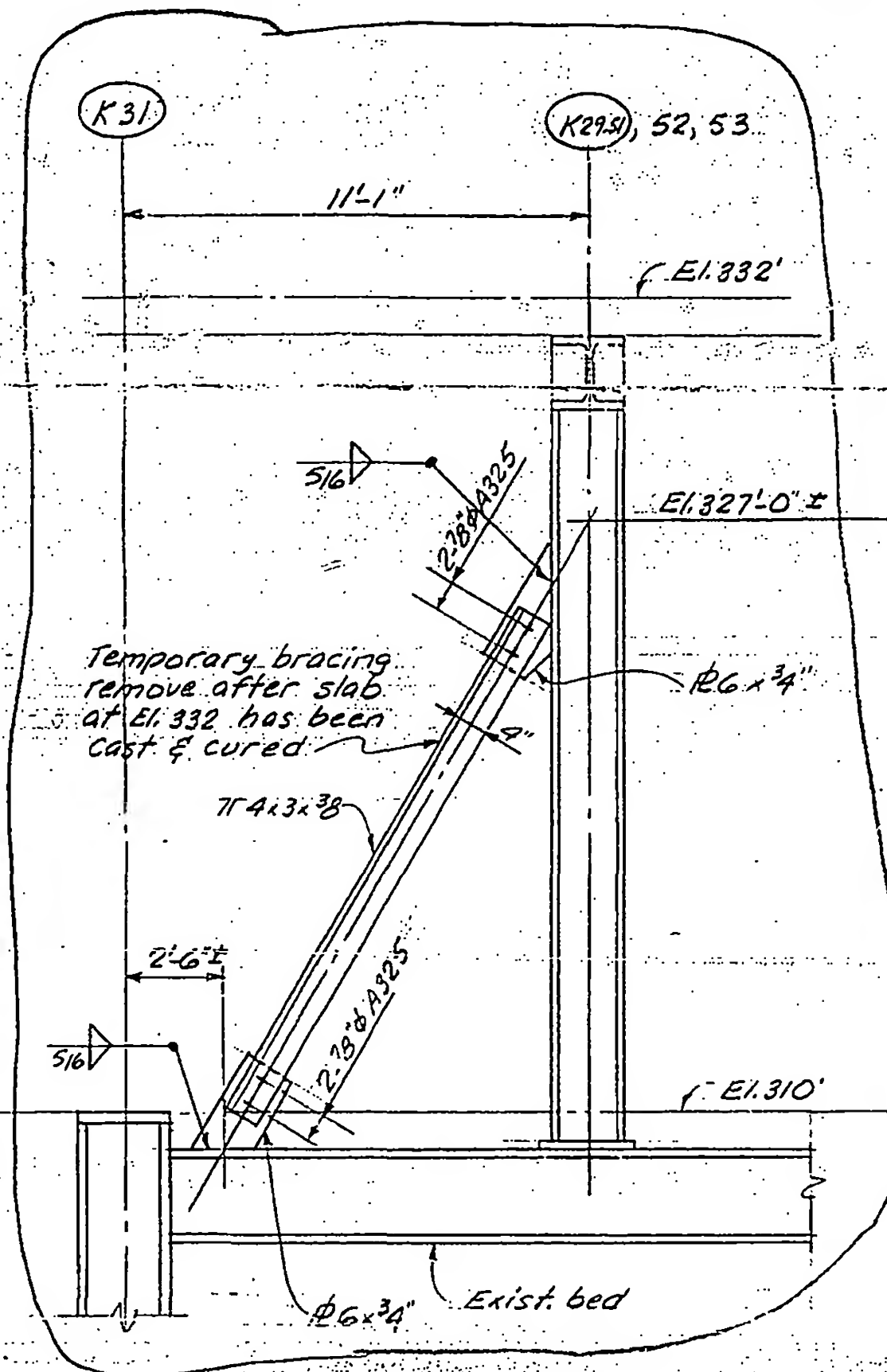
REVISIONS

10-20-67

11-8-67

4-7-72

	K29-51	K29-52	K29-53
El. 332'			
El. 310'	14 WF 74	14 WF 74	14 WF 74
El. 294'	(See detail on dwg. 10-JK2-31)		
El. 284'			
El. 274'			
El. 264'			
El. 253			
Top of base @ El. 241'			
Base Plate			



Drawn S.C.

Reviewed

10-K1-205

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

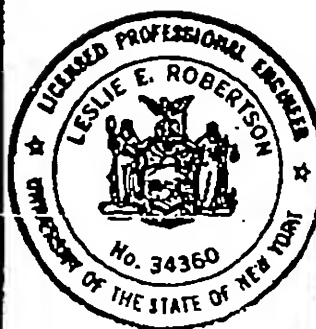
TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-13-69

	K 30-1	K 30-2	K 30-3	K 30-4	K 30-5	K 30-6	K 30-7
El. 332'							
El. 310'	14 WF 84 (Fy=50)	14 WF 228 (Fy=50)	14 WF 84 (Fy=50)	14 WF 84 (Fy=50)	14 WF 228 (Fy=50)	14 WF 84 (Fy=50)	14 WF 228 (Fy=50)
El. 290'							
El. 279'3"							
El. 264'							
El. 253							
Top of Base R.							
Base Plate							



DRAWN
S.C.

REVIEWED
R.T. & E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-KI-206

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

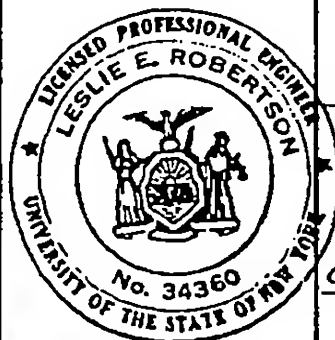
11-8-67

12-23-71

1-15-72

11-27-72

	K31-1	K31-2	K31-3	K31-4	K31-5	K31-6	K31-7
El. 332'							12-JK2-181
El. 310'			See Dwg. Book 13		See D.B. 13	See D.B. 13	14 WF 370 (Fy=50)
Street level						See 19-1053 for new cover	
El. 294'	14 WF 111 (Fy=50)	14 WF 184 (Fy=50)	14 WF 264 (Fy=50)		14 WF 426 (Fy=50)	14 WF 398 (Fy=50)	14 WF 398 (Fy=50)
El. 284'							
El. 274'							
El. 264'	14 WF 127 (Fy=50)	14 WF 246 (Fy=50)	14 WF 320 (Fy=50)		14 WF 320 + 2 23 x 3 (B.S.) (Fy=42)	14 WF 320 + 2 23 x 28 (B.S.) (Fy=42)	14 WF 320 + 2 23 x 28 (B.S.) (Fy=42)
El. 253	14 WF 202 (Fy=50)	14 WF 370 (Fy=50)	14 WF 455 (Fy=50)	14 WF 84 (Fy=50)			
Top of base plate at El. 241'							
Base Plate	40 x 34 x 5'-1"	54 x 58 x 4'-3"	62 x 7 x 4'-7"	20 x 2'8 x 2'-4"	60 x 7 x 5'-6"	60 x 7 x 5'-5"	60 x 7 x 5'-6"



DRAWN

S.C.

REVIEWED

E.L.

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-K1-207

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

6-7-68

11-5-68

12-3-68

10-14-69

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base plate
at El. 241'

Base
Plate

K31-8

K31-9

K31-10

K31-11

K31-12

K31-5A

14 WF 136
(Fy=50)

14 WF 150
(Fy=50)

14 WF 95
(Fy=50)

14 WF 176
(Fy=50)

14 WF 176
(Fy=50)

14 WF 184
(Fy=50)

14 WF 150
(Fy=50)

14 WF 61
(Fy=42)

14 WF 550
(Fy=50)

14 WF 550
(Fy=50)

14 WF 550
(Fy=50)

14 WF 500
(Fy=50)

14 WF 111
(Fy=50)

14 WF 68
(Fy=50)

54 x 5 1/2 x 4-3" 54 x 5 1/2 x 4-3" 46 x 4 3/4 x 4-2" 38 x 3 3/4 x 3-4" 30 x 3 x 2-0" 25 x 2 1/2 x 2-6"



DRAWN
S.C.

REVIEWED
E.L.

- * Provide proper splice plate, bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-10.

10-KI-208

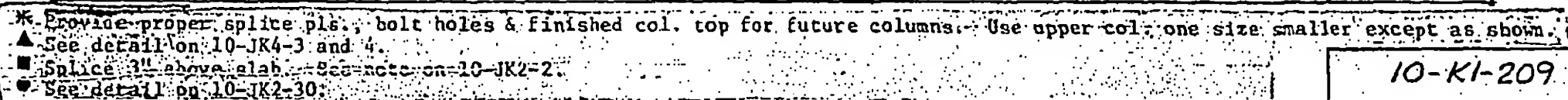
Civil & Structural Engineers

TITLE	COLUMN SCHEDULE
-------	-----------------

DATE 5-15-67

11-8-67

Base
Plate.

$$\begin{array}{l} 611 = 415 \\ (F_y = 50) \end{array}$$
 $32 \times 2\frac{3}{4} \times 2'-5"$ 

10-KI-209

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

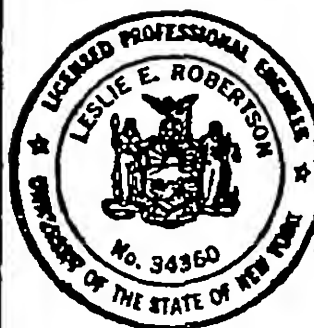
REVISIONS

1-13-69

	K 33-1	K 33-2	K 33-3	K 33-4	K 33-5	K 33-6	K 33-7
El. 332'							
El. 310'	14 WF 87 (Fy=50)	14 WF 228 (Fy=50)	14 WF 87 (Fy=50)	14 WF 87 (Fy=50)	14 WF 228 (Fy=50)	14 WF 87 (Fy=50)	14 WF 228 (Fy=50)
El. 290'							
El. 279'3"							
El. 264'							
El. 253							
Top of Base R.							
Base Plate							

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-210



DRAWN
S.C.

REVIEWED
R.T. & E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

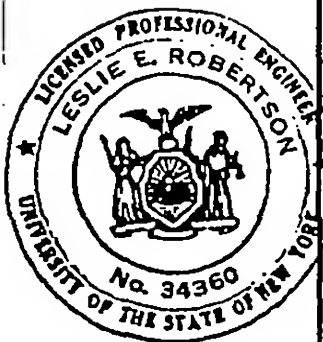
11-8-67

12-23-71

1-15-72

11-27-72

	K35-1	K35-2	K35-3	K35-4	K35-5	K35-6	K35-7
El. 332'							12-JK2-B1
El. 310'		* See Dwg Book 13		* See D.B. 13	* See D.B. 13	* See D.B. 13	* 14 WF 264 (Fy=50)
Level							
El. 294'	14 WF 142 (Fy=50)	14 WF 158 (Fy=50)		See 19-1053 for new cover. R. 14 WF 264 (Fy=50)	See 19-1053 for new cover. R. 14 WF 426 (Fy=50)	See 19-1053 for new cover. R. 14 WF 398 (Fy=50)	14 WF 264 (Fy=50)
El. 284'							
El. 274'							
El. 264'	14 WF 176 (Fy=50)	14 WF 176 (Fy=50)		14 WF 730 (Fy=46)	14 WF 320 + R 23 x 28 (B.S.) (Fy=42)	14 WF 320 + R 23 x 28 (B.S.) (Fy=42)	14 WF 730 (Fy=46)
El. 253	14 WF 314 (Fy=50)	14 WF 264 (Fy=50)	14 WF 78 (Fy=50)				
Top of base R at El. 241'							
Base Plate	46 x 4 3/4 x 4'-0"	46 x 4 1/2 x 3'-10"	20 x 2 1/8 x 2'-4"	54 x 5 3/8 x 4'-9"	60 x 7 x 5'-5"	60 x 7 x 5'-5"	54 x 5 3/8 x 4'-9"



DRAWN S.C.

REVIEWED E.L.

- * Provide proper splice plg., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-211

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

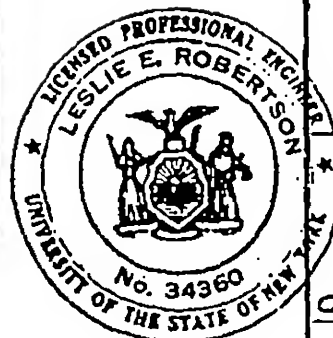
11-8-67

6-7-68

12-3-68

10-14-69

	K35-8	K35-9	K35-10	K35-11	K35-12		
El. 332'							
	14WF150 (FY=50)	14WF167 (FY=50)	14WF195 (FY=50)				
El. 310'			*				
Remove existing splice & attached to lower column and install new butt & similar to detail on 10-JK2-7 (reversed pos.)	14WF127 (FY=50)	14WF127 (FY=50)	14WF127 (FY=50)	14WF61 (FY=50)	14WF150 (FY=50)		
El. 294'							
El. 284'							
El. 274'					El. 279'-3"		
El. 264'	14WF398 (FY=50)	14WF398 (FY=50)	14WF398 (FY=50)	14WF237 (FY=50)	14WF237 (FY=50)		
El. 253					El. 257'-0"		
Top of base @ El. 241'							
Base Plate	42x4 1/4x3'-8"	42x4 1/4x3'-8"	40x3 3/4x3'-1"	32x2 3/4x2'-7"	40x5 1/4x4'-1"		



DRAWN
S.C.

REVIEWED
E.L.

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-K1-212

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

2-4-69

El. 332'

El. 310'

Street level

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of base plate at El. 241'

Base Plate

K35-51

K35-52

K35-52A

K35-53

K35-54

K35-55

14WF84
(Fy=50)

14WF74
(Fy=50)

14WF95
(Fy=50)

14WF111
(Fy=50)

14WF176
(Fy=50)

14WF176
(Fy=50)

14WF150
(Fy=50)

El. 305'-0"

14WF342
(Fy=50)

El. 302'-0"

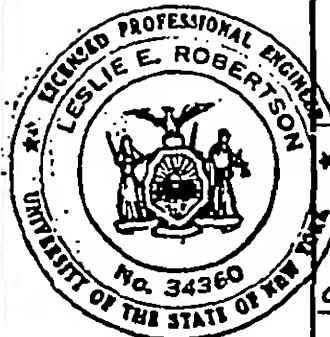
14WF84
(Fy=50)

El. 298'-0"

14WF370
(Fy=50)

El. 262'-6"

- * Provide proper splice pl., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.



DRAWN S.C.

Reviewed E.L.

10-K1-213

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-13-69

	K 36-1	K 36-2	K 36-3	K 36-4	K 36-5	K 36-6	K 36-7
El. 332							
El. 310	14 WF 87 (Fy=50)	14 WF 228 (Fy=50)	14 WF 87 (Fy=50)	14 WF 87 (Fy=50)	14 WF 228 (Fy=50)	14 WF 87 (Fy=50)	14 WF 228 (Fy=50)
El. 290							
El. 279'3"							
El. 264'							
El. 253							
Top of Base R.							
Base Plate							

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-K1-214



DRAWN S.C.

REVIEWED R.T. & E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-4-69

2-11-69

4-4-69

5-29-69

1-15-72

11-27-72

K 37-1

K 37-2

K 37-3

K 37-4

K 37-5

K 37-6

K 37-7

El. 332'

12-JK2-181

El. 310'

* See Day Book 13

See D.B. 13

See D.B. 13

* See D.B. 13

* 14W 398

(Fy=50)

Street level

El. 294'

14W 150

(Fy=50)

14W 246

(Fy=50)

El. 284'

14W 237

(Fy=50)

14W 455

(Fy=50)

El. 274'

14W 500

(Fy=50)

14W 605

(Fy=46)

El. 261'-6"

14W 264

(Fy=50)

El. 264'

El. 257'

14W 730

(Fy=46)

El. 257

14W 730

(Fy=46)

Top of base plate at El. 241'

Base Plate

47 x 5 1/8 x 3'-11"

47 x 5 1/8 x 3'-11"

28 x 2 3/8 x 2'-4"

61 x 7 1/4 x 5'-1"

74 x 9 x 6'-2"

74 x 9 x 6'-2"

67 x 8 x 5'-7"

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

○ See detail on 10-JK2-30.

10-K1-215



DRAWN
S.C.

REVIEWED
E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

9-20-68

12-3-68

2-4-69

2-11-69

10-14-69

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253'

Top of
base plate
at El. 241'

Base
Plate

K37-8

K37-9

K37-10

14WF150
(Fy=50)

14WF167
(Fy=50)

14WF95
(Fy=50)

14WF237
(Fy=50)

14WF287
(Fy=50)

14WF184
(Fy=50)

14WF314
(Fy=50)

14WF605
(Fy=42)

14WF455
(Fy=50)

47x5'8x3'-11"

47x5'8x3'-11"

47x5'8x3'-11"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-216



DRAWN

S.C.

REVIEWED

E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

9-20-68

2-4-69

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base R

Base
Plate

K 37-51

K 37-52

Street
level

14WF127
(Fy=50)

10WF112
(Fy=50)

14WF167
(Fy=50)

14WF111
(Fy=50)

14WF342
(Fy=50)

El. 241'-0"

El. 235'-9 3/8"

38x3 1/2 x 3'-2"

28x2 3/8 x 2'-4"



DRAWN

S.C.

REVIEWED

E.L.

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-K1-217

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

9-20-68

	K 38-1	K 38-2					
El. 332'							
El. 310'							
El. 294'	14 WF 119 (Fy = 50)	14 WF 342 (Fy = 50)					
El. 284'							
El. 279'-3"							
El. 274'							
El. 264'	14 WF 127 (Fy = 50)	14 WF 264 (Fy = 50)					
El. 253							
Top of base R at El. 241'							
Base Plate	35 x 3 ³ / ₈ x 2'-11"	41 x 4 ¹ / ₂ x 3'-5"					



* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-K1-218

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-13-69

	K39-1	K39-2	K39-3	K39-4	K39-5	K39-6	K39-7
El. 332							
El. 310	14 WF 202 (Fy=50)	14 WF 264 (Fy=50)	14 WF 202 (Fy=50)	14 WF 202 (Fy=50)	14 WF 264 (Fy=50)	14 WF 202 (Fy=50)	14 WF 264 (Fy=50)
El. 290							
El. 279'3"							
El. 264							
El. 253							
Top of Base R.							
Base Plate							



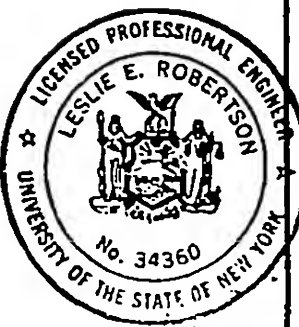
DRAWN S.C.

REVIEWED R.T. & E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-219

REVISIONS										
6-7-68										
9-20-68										
11-5-68										
	El. 332'	K 40-1	K 40-2							
	El. 310'									
	El. 290'	14 WF 158 (Fy = 50)	14 WF 103 (Fy = 50)							
	El. 279'-3"									
	El. 264'	14 WF 158 (Fy = 50)	14 WF 103 (Fy = 50)							
	El. 253									
	Top of Base Pl. at El. 241'									
	Base Plate	42 x 48 x 3/8	42 x 58 x 3/8							



*

Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲

See detail on 10-JK4-3 and 4.

■

Splice 3" above slab. See note on 10-JK2-2.

●

See detail on 10-JK2-30.

10-K1-2-20

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-4-69

2-11-69

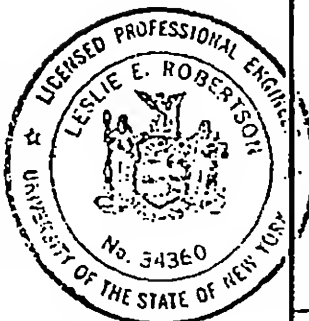
1-15-72

11-27-72

	K 41-1	K 41-2	K 41-3	K 41-4	K 41-5	K 41-6	K 41-7
El. 332'							12-JK2-1B1
El. 310'			* See Dwg Book 13	* See D.B. 13	* See D.B. 13	* See D.B. 13	* 14WF398 (Fy=50)
STREET level							
El. 294'	14WF95 (Fy=50)	14WF158 (Fy=50)	14WF246 (Fy=50)	14WF500 (Fy=50)	14WF665 (Fy=46)	14WF320 + R 22x2 1/2 (B.S.) (Fy=42)	14WF605 (Fy=46)
El. 284'							
El. 274'	14WF142 (Fy=50)	14WF237 (Fy=50)	14WF455 (Fy=50)	14WF550 (Fy=50)	14WF320 + R 24x3 (B.S.) (Fy=42)	14WF320 + R 22x2 1/2 (B.S.) (Fy=42)	14WF320 + R 22x2 1/2 (B.S.) (Fy=42)
El. 264'							
El. 253'	14WF287 (Fy=50)	14WF500 (Fy=50)	14WF605 (Fy=46)				
Top of base R at El. 241'							
Base Plate	33 x 3 1/8 x 2'-9"	47 x 5 1/8 x 3'-11"	48 x 5 1/4 x 4'-0"	61 x 7 1/4 x 5'-1"	74 x 9 x 6'-2"	74 x 9 x 6'-2"	67 x 8 x 5'-7"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-K1-221



DRAWN S.C.

REVIEWED E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

9-20-68

12-3-68

2-4-69

2-11-69

10-14-69

12-23-71

11-27-72

	K41-8	K41-9	K41-10	K41-11			
El. 332'							
El. 310'	* 14WF150 (Fy=50)	* 14WF167 (Fy=50)	See Dwg Book 3				
El. 294'	14WF246 (Fy=50)	14WF287 (Fy=50)	Add COVER RS See 19-K-1053 14WF136 (Fy=50)	14WF78 (Fy=50)			
El. 284'							
El. 274'	14WF314 (Fy=50)		14WF237 (Fy=50)				
El. 264'		14WF605 (Fy=42)		14WF87 (Fy=50)			
El. 253'							
Top of base R							
Base Plate	El. 241'-0" 47x5'8x3'-11"	El. 241'-0" 47x5'8x3'-11"	El. 241'-0" 47x5'8x3'-11"	El. 235'-5'8" 33x3'6x2'-9"			



DRAWN

S.C.

REVIEWED

E.L.

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-K1-222

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-4-69

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base plate
at El. 241'

Base
Plate

K41-51

5th
level

14 WF 103
(Fy = 50)

14 WF 127
(Fy = 50)

14 WF 228
(Fy = 50)

33 x 3'8" x 2'9"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.



DRAWN
S.C.

REVIEWED
E.L.

10-K1-223

A

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

12-17-68

4-17-69

	M42-1	K42-2	M42-3				
El. 332'							
El. 310'	14WF202 (Fy=50) (By others)		14WF287 (Fy=50) (By others)				
El. 294'		14WF426 (Fy=50)	see 10-JK3-2E 14WF287 (Fy=50)				
El. 284'							
El. 274'		14WF426 (Fy=50)					
El. 264'							
El. 253		14WF500 (Fy=50)					
Top of base plate							
Base Plate		53 x 6 x 4'5"					



DRAWN S.C.

REVIEWED E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-225

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

2-4-69

2-11-69

3-1-69

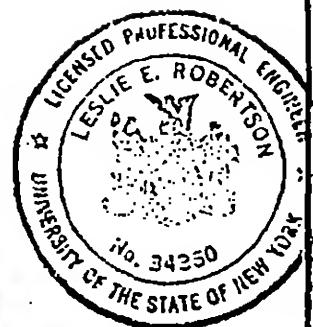
3-12-69

3-21-69

10-23-69

11-27-72

	K43-1	K43-2	K43-3	K43-4	K43-5	K43-6	K43-7
El. 332'			See Dwg. Book 13	See D.B. 13	See D.B. 13	See D.B. 13	See Dwg. Book 13
El. 310'							
El. 294'		Street level					
El. 284'	14WF87 (Fy=50)	14WF176 (Fy=50)	14WFG05 (Fy=46)	14WF320 + R 23 x 3 (B.S.) (Fy=42)	14WF320 + R 24 x 3 (B.S.) (Fy=42)	14WF550 (Fy=50)	14WF264 (Fy=50)
El. 274'	14WF111 (Fy=50)	14WF211 (Fy=50)	14WFG05 (Fy=46)	14WF320 + R 23 x 3 (B.S.) (Fy=42)	14WF320 + R 24 x 3 (B.S.) (Fy=42)	14WF550 (Fy=50)	14WF287 (Fy=50)
El. 264'		R-Grider					
El. 253	14WF193 (Fy=50)	14WF455 (Fy=50)	14WF320 + R 23 x 3 (B.S.) (Fy=42)	14WF320 + R 24 x 3 1/2 (B.S.) (Fy=42)	14WF320 + R 24 x 3 1/2 (B.S.) (Fy=42)	14WF320 + R 23 x 3 (B.S.) (Fy=42)	14WF500 (Fy=50)
Top of base plate at El. 241'							
Base Plate	33 x 3 1/2 x 2'-9"	47 x 5 1/2 x 2'-11"	74 x 9 x 6'-2"	86 x 10 3/4 x 7'-2"	86 x 10 3/4 x 7'-2"	72 x 8 3/4 x 6'-0"	55 x 6 1/4 x 4'-7"



DRAWN

S.C.

REVIEWED

E.L.

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-K1-226

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

12-3-68

10-23-69

11-27-72

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base plate
at El. 241'

Base
Plate

K 43-3

K 43-9

See Drawing Book 13

14WF264

(Fy=50)

14WF370

(Fy=50)

14WF287

(Fy=50)

14WF370

(Fy=50)

14WF287

(Fy=50)

14WF370

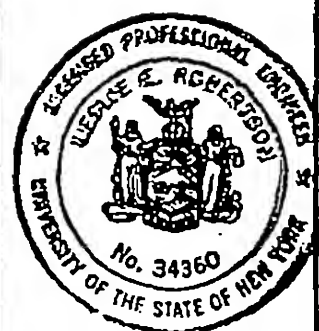
(Fy=50)

55'6 1/4" x 4'7"

46'5 1/2" x 10"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-227



DRAWN
S.C.

Reviewed
E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

3-1-69

3-12-69

3-21-69

El. 332'

El. 310'

Street
Level

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base R
at El. 241'

Base
Plate

K 43-51

K 43-52

K 43-53

14 WF 87
(Fy=50)

14 WF 87
(Fy=50)

Top of col.
El. 294'-0"

14 WF 136
(Fy=50)

14 WF 136
(Fy=50)

14 WF 111
(Fy=50)

14 WF 202
(Fy=50)

14 WF 219
(Fy=50)

R Girder

33 x 3 1/8 x 2'-9"

35 x 3 3/8 x 2'-11"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-228



DRAWN
S.C.

REVIEWED
E.L.

A

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

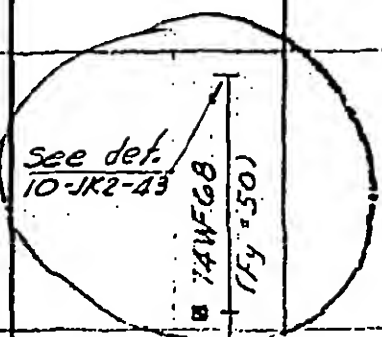
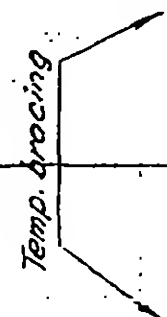
TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

12-17-68

8-10-70

	K44-1	K44-2	K44-3	K44-4			
El. 332'							
El. 310'							
El. 294'	14WF287 (Fy=50)						
El. 284'							
El. 274'							
El. 264'							
El. 253	14WF370 (Fy=50)	14WF158 (Fy=50)					
Top of base R	El. 244'-0"	El. 243'-4"		El. 243'-4"			
Base Plate	45 x 48 x 3'-9"	28 x 28 x 2'-4"		53 x 6 x 4'-5"			

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-229



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

12-3-68

3-1-69

3-12-69

3-21-69

10-23-69

11-27-72

	K 45-1	K 45-2	K 45-3	K 45-4	K 45-5	K 45-6	K 45-7
El. 332'							
El. 310'							
level							
El. 294'	Top of girder @ El. 297'-0" R Girder 14WF68 (Fy=50)						
El. 284'	Bottom of girder @ El. 294'-0" Hanger 14WF43 (Fy=36)	14WF320 + R 18x14 (B.S.) (Fy=42)	14WF320 + R 22x25 (B.S.) (Fy=42)	14WF320 + R 22x25 (B.S.) (Fy=42)	14WF455 (Fy=50)	14WF320 (Fy=50)	14WF287 (Fy=50)
El. 274'	Bottom of hanger @ El. 282'-5"	14WF320 + R 20x13 (B.S.) (Fy=42)	14WF320 + R 22x24 (B.S.) (Fy=42)	14WF320 + R 22x24 (B.S.) (Fy=42)	El. 282'-0" 14WF500 (Fy=50)	El. 284'-9" 14WF342 (Fy=50)	14WF342 (Fy=50)
El. 264'	R Girder 14WF43 (Fy=36)	14WF320 + R 20x13 (B.S.) (Fy=42)	14WF320 + R 22x24 (B.S.) (Fy=42)	14WF320 + R 22x24 (B.S.) (Fy=42)	14WF550 (Fy=50)	14WF370 (Fy=50)	14WF342 (Fy=50)
El. 253	14WF287 (Fy=50)	14WF320 + R 22x13 (B.S.) (Fy=42)	14WF320 + R 24x3 (B.S.) (Fy=42)	14WF320 + R 24x3 (B.S.) (Fy=42)	14WF550 (Fy=50)	14WF370 (Fy=50)	14WF342 (Fy=50)
Top of base R at El. 241'							
Base Plate	42x43x3'-6"	70x81/2x5'-10"	84x101/2x7'-0"	84x101/2x7'-0"	69x81/4x5'-9"	55x61/4x4'-7"	57x61/4x4'-9"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-K1-230



DRAWN
S.C.

REVIEWED
E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

12-3-68

10-23-69

11-27-72

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base fl.

Base
Plate

K45-B

See Dwg. Book 13

14WF237
(Fy=50)

14WF287
(Fy=50)

14WF287
(Fy=50)

El. 241'-0"

46 x 5 x 3'-10"



DRAWN
S.C.

REVIEWED
E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-231

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

3-1-69

3-12-69

3-21-69

El. 332'

El. 310'

Street level

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of base @
at El. 241'

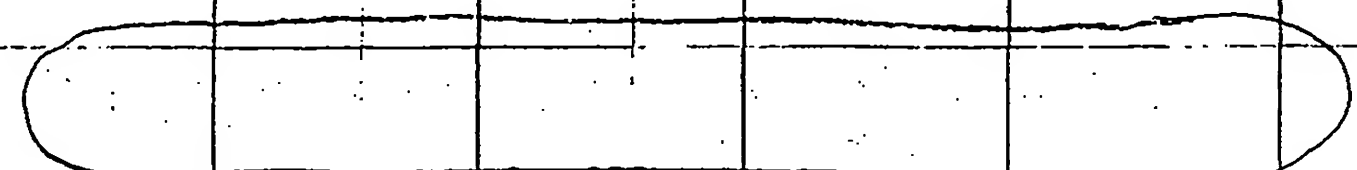
Base Plate

K45-51

14WF136
(Fy=50)

14WF211
(Fy=36)

37x3⁵/₈ = 3'-1"



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-232



DRAWN
S.C.

REVIEWED
E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

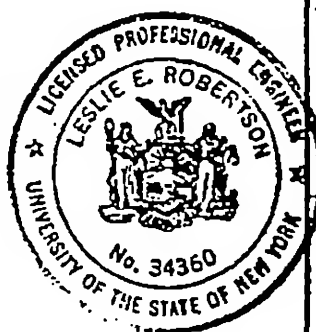
12-17-68

4-30-69

	K46-51	K46-52	K46-53				
El. 332'							
El. 310'	See 12-JK2-107	See 12-JK2-108					
El. 294'	14WF370 (Fy=50)	14WF605 (Fy=50)					
El. 284'		Temp. bracing					
El. 274'	Temp. bracing P-Girder	14WF605 (Fy=50)	P-Girder				
El. 264'							
El. 253	14WF455 (Fy=50)	P-Girder	14WF605 (Fy=50)				
Top of base P							
Base Plate	63x7 1/2 x 5'-3"		70x8 1/2 x 5'-10"				

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-233



DRAWN
S.C.

REVIEWED
E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

3-1-69

3-12-69

3-21-69

10-23-69

11-27-72

	K47-1	K47-2	K47-3	K47-4	K47-5	K47-6	K47-7
El. 332'							
El. 310'		* See Dwg. Book 13	* See D.B. 13	* See D.B. 13	* See D.B. 13	* See D.B. 13	* See D.B. 13
Street level							
El. 294'	14 WF 136 (Fy=50)	14 WF 455 (Fy=50)	14 WF 320 + 2 23 x 3 (B.S.) (Fy=42)	14 WF 320 + 2 23 x 2 7/8 (B.S.) (Fy=42)	14 WF 398 (Fy=50)	14 WF 228 (Fy=50)	14 WF 211 (Fy=50)
El. 284'							
El. 274'	14 WF 193 (Fy=50)	14 WF 500 (Fy=50)	14 WF 320 + 2 24 x 3 (B.S.) (Fy=42)	14 WF 320 + 2 23 x 3 (B.S.) (Fy=42)	14 WF 426 (Fy=50)	14 WF 264 (Fy=50)	14 WF 264 (Fy=50)
El. 264'							
El. 253	14 WF 211 (Fy=50)	14 WF 550 (Fy=50)	14 WF 320 + 2 24 x 3 5/8 (B.S.) (Fy=42)	14 WF 320 + 2 24 x 3 1/2 (B.S.) (Fy=42)	14 WF 500 (Fy=50)	14 WF 370 (Fy=50)	14 WF 370 (Fy=50)
Top of base plate at El. 241'							
Base Plate	47 x 5'8" x 3'11"	73 x 9 x 6'1"	88 x 11 x 7'4"	88 x 11 x 7'4"	68 x 8'2" x 5'8"	51 x 5'5" x 4'3"	57 x 6'4" x 4'9"



DRAWN S.C.

REVIEWED E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-234

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

3-1-69

3-12-69

3-21-69

10-23-69

11-27-72

	K 47-8						
El. 332'	Sec. Dwg. Book 13						
El. 310'							
El. 294'	14 WF 176 (FY=50)						
El. 284'							
El. 274'	14 WF 202 (FY=50)						
El. 264'							
El. 253	14 WF 314 (FY=50)						
Top of base plate at El. 241'							
Base Plate	46x5x3'-10"						



DRAWN
S.C.

REVIEWED
E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-235

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-17-69
3-1-69
3-12-69
3-21-69
10-23-69
11-27-72

	K 47-51	K 47-52	K 47-53	K 47-54			
El. 332'							
El. 310'		14 WF 127 (Fy=50)	14 WF 127 (Fy=50)				
El. 294'	14 WF 119 (Fy=50)	14 WF 176 (Fy=50)	14 WF 320 + 2 # 22 x 2 (B.S.) (Fy=42)	14 WF 320 + 2 # 22 x 2 (B.S.) (Fy=42)			
El. 284'							
El. 274'		14 WF 246 (Fy=50)	14 WF 320 + 2 # 22 x 2 1/4 (B.S.) (Fy=42)	14 WF 320 + 2 # 22 x 2 1/4 (B.S.) (Fy=42)			
El. 264'	14 WF 202 (Fy=50)						
El. 253		14 WF 314 (Fy=50)	14 WF 320 + 2 # 22 x 2 1/4 (B.S.) (Fy=42)	14 WF 320 + 2 # 22 x 2 1/4 (B.S.) (Fy=42)			
Top of base R							
Base Plate	El. 248'-0"	El. 235'-7 3/8"	El. 241'-0"	El. 241'-0"			
	34 x 3 1/4 x 2'-10"	49 x 5 3/8 x 4'-1"	79 x 10 x 7'-2"	79 x 10 x 7'-2"			



DRAWN
S.C.
REVIEWED
E.C.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-236

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

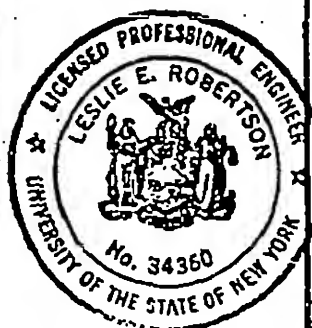
DATE 5-15-67

REVISIONS

12-17-68

4-17-69

	K4B-1	K4B-2	K4B-3	K4B-4	M4B-5		
El. 332'							
El. 310'			10-JK2-17		10-JK2-17		
El. 294'	14WF342 (Fy=50)		14WF500 (Fy=50)		See detail on 10-JK3-2F 14WF287 (Fy=50)		
El. 284'							
El. 274'	Temp. bracing 14WF455 (Fy=50)		Temp. bracing 14WF605 (Fy=50)				
El. 264'							
El. 253	14WF455 (Fy=50)	14WF228 (Fy=50)		14WF665 (Fy=50)			
Top of base R	El. 242'-0"	El. 242'-0"		El. 241'-0"			
Base Plate	15 x 64 x 4'-7"	33 x 36 x 2'-9"		6-9 x 84 x 5'-9"			



DRAWN
S.C.

REVIEWED
E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-237

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

3-1-69

3-12-69

3-21-69

10-23-69

11-27-72

	K49-1			K49-4	K49-5	K49-6	
El. 332'							
El. 310'							
Level							
El. 294'							
El. 284'							
El. 274'							
El. 264'							
El. 253							
Top of base plate at El. 241'							
Base Plate	41 x 4 1/4 x 3'-5"			88 x 11 x 7'-4"	69 x 8 1/4 x 5'-9"	57 x 6 1/4 x 4'-9"	

14WF119
(FY=50)

14WF193
(FY=50)

* See Dwg. Book 13

14WF320
+ R 23 x 28 (B.S.)
(FY=42)

14WF320
+ R 23 x 3 (B.S.)
(FY=42)

14WF320
+ R 24 x 3 1/4 (B.S.)
(FY=42)

See D.B. 13

14WF455
(FY=50)

14WF550
(FY=50)

* See D.B. 13

14WF264
(FY=50)

14WF314
(FY=50)

14WF398
(FY=50)



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-238

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-17-69
3-1-69
3-12-69
3-21-69
6-13-69
11-27-72

	K49-51	K49-52	K49-53	K49-54	K49-55	K49-56	
El. 332'							
El. 310'							
Street level							
El. 294'	14WF84 (Fy=50)						
El. 284'		14WF53 (Fy=50)					
El. 274'							
El. 264'	14WF184 (Fy=36)	(see 12-JK1-47) 14WF111 (Fy=36)	Reinforced	14WF320 + R 22x24 (B.S.) (Fy=42)	14WF320 + R 22x24 (B.S.) (Fy=42)		
El. 253			14WF142 (Fy=36)	14WF320 + R 22x24 (B.S.) (Fy=42)	14WF320 + R 22x24 (B.S.) (Fy=42)	(see 12-JK1-47) 14WF500 (Fy=36)	
Top of base R							
Base Plate	El. 248'-0"	El. 248'-0"	El. 241'-0"	El. 241'-0"	El. 241'-0"		
	31x23 1/2 x 7'-7"	28x23 1/2 x 7'-4"	30x28 x 7'-4"	79x10 x 7'-2"	79x10 x 7'-2"		

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-K1-239



DRAWN
S.C.

REVIEWED
E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

12-17-68

	K50-1	K50-2	K50-3				
El. 332'							
El. 310'		10-JK2-17	10-JK2-17				
El. 294'	14WF342 (Fy=50)	14WF500 (Fy=50)	14WF500 (Fy=50)				
El. 284'							
El. 274'	Temp. bracing 14WF455 (Fy=50)	Temp. bracing 14WF605 (Fy=50)	Temp. bracing 14WF550 (Fy=50)				
El. 264'							
El. 253	14WF550 (Fy=50)	14WF730 (Fy=50)	14WF550 (Fy=50)				
Top of base R							
Base Plate	El. 242'-0" 55x6 1/4 x 4'-7"	El. 243'-4" 74x9 x 6'-2"	El. 249'-0" 72 x 8 3/4 x 6'-0"				



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- ◆ See detail on 10-JK2-30.

10-K1-240

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

3-1-69

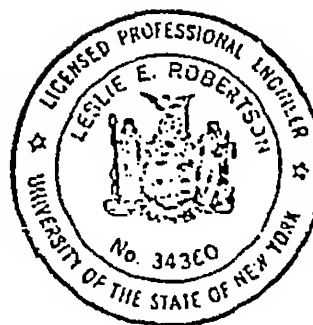
3-12-69

3-21-69

10-23-69

11-27-72

	K51-1	K51-2	K51-3	K51-4	K51-5	K51-6	K51-7
El. 332'							
El. 310'		See Dwg. 800K73	See D.B. 13	See D.B. 13	See D.B. 13	14 WF 142 (Fy = 50)	14 WF 87 (Fy = 50)
El. 294'	14 WF 87 (Fy = 50)	14 WF 55 (Fy = 50)	14 WF 320 + R 23 x 23 1/2 (B.S.) (Fy = 42)	14 WF 320 + R 23 x 23 1/2 (B.S.) (Fy = 42)	14 WF 99B (Fy = 50)	14 WF 219 (Fy = 50)	14 WF 246 (Fy = 50)
El. 284'							
El. 274'	14 WF 119 (Fy = 50)	14 WF 500 (Fy = 50)		14 WF 320 + R 24 x 13 (B.S.) (Fy = 42)	14 WF 55 (Fy = 50)	14 WF 264 (Fy = 50)	14 WF 287 (Fy = 50)
El. 264'	El. 270'-4"						
El. 253	R girder	14 WF 550 (Fy = 50)	14 WF 320 + R 23 x 3 (B.S.) (Fy = 42)	14 WF 320 + R 24 x 3 1/2 (B.S.) (Fy = 42)	14 WF 500 (Fy = 50)	14 WF 320 (Fy = 50)	14 WF 342 (Fy = 50)
Top of base R		El. 241'-0"	El. 241'-0"	El. 241'-0"	El. 241'-0"	El. 241'-0"	El. 235'-8 1/2"
Base Plate		73 x 9 x 6 1/4"	8.5 x 10 3/4 x 7 1/4"	RR x 11 x 7 1/4"	6.9 x 8 1/2 x 5 1/2"	57 x 6 1/2 x 4 1/2"	56 x 12 1/2 x 1 1/2"



DRAWN J.A.

REVIEWED E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-241

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-6-69

1-17-69

3-1-69

3-12-69

3-21-69

6-13-69

11-27-72

	K51-51	K51-52	K51-53	K51-54	K51-55	K51-56
El. 332'						
El. 310'						
El. 294'						
El. 284'						
El. 274'						
El. 264'						
El. 253						
Top of base R						
Base Plate						

See Dry Book 13

14WF95
(Fy=50)

14WF95
(Fy=50)

14WF370
(Fy=50)

(see 12-JK1-47)
14WF500
(Fy=42)

(see 12-JK1-47)
14WF500
(Fy=42)

R girder

R girder

265'6"

14WF398
(Fy=50)

(see 12-JK1-47)
14WF550
(Fy=36)

14WF442
(Fy=36)

14WF78
(Fy=50)

14WF426
(Fy=50)

El. 248'-0"

El. 248'-0"

El. 248'-0"

El. 241'-0"

El. 241'-0"

32x3x2'-8"

23x1³/₄x2'-1"

30x2⁵/₈x2'-6"

28x2³/₈x2'-4"

61x7¹/₂x5'-7"



DRAWN S.C.

REVIEWED E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-242

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

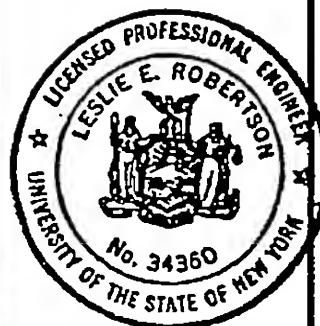
TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

12-17-68

	K52-1	K52-2	K52-3				
El. 332'							
El. 310'		10-JK2-17	10-JK2-17				
El. 294'	14WF370 (Fy=50)	14WF550 (Fy=50)	14WF398 (Fy=50)				
El. 284'							
El. 274'	Temp. brocing 14WF500 (Fy=50)	Temp. brocing 14WF605 (Fy=50)	Temp. brocing 14WF455 (Fy=50)				
El. 264'							
El. 253	14WF550 (Fy=50)	14WF730 (Fy=50)	14WF500 (Fy=50)				
Top of base R							
Base Plate	56x6'2x4'-8"	75x9'4x6'-3"	65x7'4x5'-5"				



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-243

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT

THE WORLD TRADE CENTER

TITLE

COLUMN SCHEDULE

DATE

5-15-67

REVISIONS

1-6-69

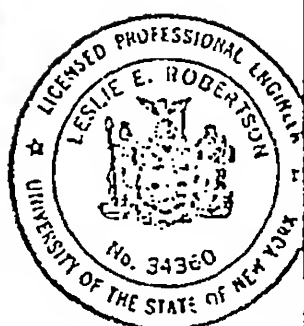
3-1-69

3-12-69

3-21-69

11-27-72

	K53-1	K53-2	K53-3		K53-5	K53-6	K53-7
El. 332'							
El. 310'		See Dwg. Book 13	See D.B. 13		See D.B. 13	See D.B. 13	See D.B. 13
El. 294'	14WF87 (FY=50)	14WF55 (FY=50)	14WF320 + R 23x28 (B.S.) (FY=42)		14WF342 (FY=50)	14WF320 (FY=50)	14WF500 (FY=50)
El. 284'							
El. 274'	14WF119 (FY=50)	14WF500 (FY=50)	14WF320 + R 23x43 (B.S.) (FY=42)		14WF370 (FY=50)	14WF370 (FY=50)	14WF550 (FY=50)
El. 264'	El. 268'-6"						
El. 253	14WF550 (FY=50)		14WF320 + R 24x34 (B.S.) (FY=42)		14WF426 (FY=50)	14WF445 (FY=50)	14WF605 (FY=46)
Top of base R		El. 241'-0"	El. 241'-0"		El. 241'-0"	El. 241'-0"	El. 241'-0"
Base Plate		73x9x6'-1"	53x11x7'-1"		64x7 1/2x5'-4"	64x7 1/2x5'-4"	73x9x6'-1"

DRAWN
S.C.REVIEWED
E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-K1-244

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

3-21-69

11-27-72

K53-B

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base plate
at El. 241'

Base
Plate



DRAWN
S.C.

REVIEWED
E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-245

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-6-69
1-17-69
3-1-69
3-12-69
3-21-69
6-13-69
11-27-72

	K53-51	K53-52	K53-53	K53-54	K53-55	K53-56	K53-57
El. 332'							
El. 310'				See Dwg. Book 13	See D.B. 13	See D.B. 13	See D.B. 13
Street level							
El. 294'	14WF95 (Fy=50)			14WF370 (Fy=50)			
El. 284'		14WF95 (Fy=50)			14WF342 (Fy=50)		14WF342 (Fy=50)
El. 274'						14WF342 (Fy=50)	
El. 264'	(see 12-JK1-47) 14WF550 (Fy=42)	(see 12-JK1-47) 14WF550 (Fy=42)	14WF219 (Fy=36)	14WF398 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)	14WF370 (Fy=50)
El. 253				14WF426 (Fy=50)	14WF426 (Fy=50)	14WF426 (Fy=50)	14WF426 (Fy=50)
Top of base R	El. 248'-0"	El. 248'-0"	El. 248'-0"	El. 241'-0"	El. 241'-0"	El. 241'-0"	El. 241'-0"
Base Plate	32 x 3 x 2'-8"	23 x 13/2 x 2'-1"	38 x 33/4 x 3'-2"	61 x 7 1/2 x 5'-7"	61 x 7 1/2 x 5'-7"	61 x 7 1/2 x 5'-7"	61 x 7 1/2 x 5'-7"



DRAWN
S.C.

REVIEWED
E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-246

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 6-13-69

REVISIONS

	K 53-58	K 53-59					
El. 332'							
El. 310'							
El. 294'							
El. 284'							
El. 274'	(See 12-JK1-47) 14WF605 (FY-36)	(See 12-JK1-47) 14WF605 (FY-36)					
El. 264'							
El. 253							
Top of base R							
Base Plate							

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-246.A



DRAWN
S.C.
REVIEWED
E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

12-17-68

	K54-51						
El. 332'							
El. 310'							
El. 294'							
El. 284'							
El. 274'							
El. 264'							
El. 253							
Top of base R							
El. 243'-4"							
Base Plate	41 x 4 1/2 x 3'-5"						

Temp. bracing
14 WF 158 (Fy=50)
14 WF 228 (Fy=50)
14 WF 287 (Fy=50)



* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
▲ See detail on 10-JK4-3 and 4.
■ Splice 3" above slab. See note on 10-JK2-2.
● See detail on 10-JK2-30.

10-K1-248

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-6-69

1-17-69

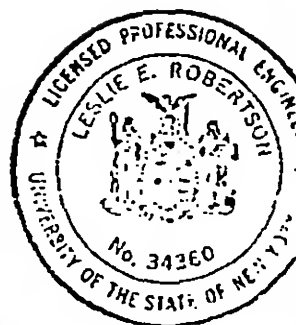
3-1-69

3-12-69

3-21-69

11-27-72

	K55-1	K55-2	K55-3	K55-4	K55-5	K55-6	K55-7
El. 332'							
El. 310'							
El. 294'	14WF167 (Fy=50)	14WF455 (Fy=50)	14WF320 +R 22x3 (B.S.) (Fy=42)	14WF320 +R 22x238 (Fy=42)	14WF320 +R 22x238 (Fy=42)	14WF320 +R 22x2 (B.S.) (Fy=42)	
El. 284'							
El. 274'	14WF202 (Fy=50)	14WF500 (Fy=50)	14WF320 +R 24x32 (B.S.) (Fy=42)	14WF320 +R 22x258 (Fy=42)	14WF320 +R 22x258 (Fy=42)	14WF320 +R 22x24 (B.S.) (Fy=42)	
El. 264'							
El. 253	14WF237 (Fy=50)	14WF550 (Fy=50)	14WF320 +R 24x3 1/2 (B.S.) (Fy=42)	14WF320 +R 23x3 (B.S.) (Fy=42)	14WF320 +R 23x3 (B.S.) (Fy=42)	14WF320 +R 22x2 3/4 (B.S.) (Fy=42)	
Top of base R	El. 248'-0"	El. 241'-0"	El. 241'-0"	El. 241'-0"	El. 241'-0"	El. 241'-0"	
Base Plate	47x5 1/8 x 3'-11"	73x9 x 6'-1"	88x11 x 7'-4"	83x10 1/4 x 6'-11"	83x10 1/4 x 6'-11"	79x9 3/4 x 6'-7"	

DRAWN
S.C.REVIEWED
E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-K1-249

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

1-6-69

3-1-69

3-12-69

3-21-69

6-13-69

	K55-51	K55-52	K55-53				
El. 332'							
El. 310'							
Street level							
El. 294'							
El. 284'							
El. 274'							
El. 264'							
El. 253							
Top of base R							
Base Plate							



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-250

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

12-17-68

	K56-1	K56-2					
El. 332'							
El. 310'	10-JK2-17	10-JK2-17					
El. 294'	14WF500 (Fy=50)	14WF455 (Fy=50)					
El. 284'							
El. 274'	Temp. bracing 14WF500 (Fy=50)	Temp. bracing 14WF550 (Fy=50)					
El. 264'							
El. 253	14WF550 (Fy=50)	14WF550 (Fy=50)					
Top of base R							
Base Plate	67x8x5'-7"	67x8x5'-7"					



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-251

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-11-68

6-28-68

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base R

Base
Plate

K 56-51

K 56-52

K 56-53

El. 241'-0"

El. 243'-4"

El. 243'-4"

50x50x4-5

20x20x2-5

31x31x3-5

14 WF 184
(FY=50)
14 WF 314
(FY=50)
14 WF 314
(FY=50)

14 WF 111
(FY=50)
12 Girder

14 WF 176
12 Girder



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-252

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

10-15-68
1-6-69
3-1-69
3-12-69
3-21-69
11-27-72

	K57-1	K57-2	K57-3	K57-4	K57-5	K57-6	K57-7
El. 332'							
El. 310'		14WF500 (Fy=50) See Dwg. BOOK 13		See D.B. 13	See D.B. 13	See D.B. 13	
El. 294'	10" R Girder 8'-8" 14WF342 (Fy=50)	El. 303'-8" 10" R Girder 8'-8" 14WF342 (Fy=50)	10" R Girder 8'-8" 14WF370 (Fy=50)	Part of TRUSS KT-3 14WF320 (Fy=50)	14WF320 +R22x158 (B.S.) (Fy=42)	14WF455 (Fy=50) 14WF320 +R22x158 (B.S.) (Fy=42)	
El. 284'							
El. 274'	14WF370 (Fy=50)	14WF95 (Fy=50)	14WF398 (Fy=50)	14WF342 14WF550 (Fy=50)	14WF320 +R22x2 (B.S.) (Fy=42)	14WF320 +R22x134 (B.S.) (Fy=42)	
El. 264'		See Detail 10-JK2-35					
El. 253	14WF500 (Fy=50)		14WF455 (Fy=50)	14WF320 +R22x28 (B.S.) (Fy=42)	14WF320 +R22x258 (B.S.) (Fy=42)	14WF320 +R22x258 (B.S.) (Fy=42)	
Top of base R	El. 248'-0"		El. 241'-0"	El. 241'-0"	El. 241'-0"	El. 241'-0"	
Base Plate	62 x 7 1/4 x 5'-2"		66 x 8 x 5'-6"	75 x 9 1/4 x 2'-3"	78 x 9 3/4 x 6'-6"	76 x 9 1/4 x 6'-4"	

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-K1-253



DRAWN

S.C.

REVIEWED

E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-11-68

10-15-68

1-6-69

3-1-69

3-12-69

3-21-69

El. 332'

El. 310'

Street level

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of base plate

Base Plate

K57-51

K57-52

K57-53

14WF95
(Fy=50)

14WF103
(Fy=50)

14WF107
(Fy=50)

El. 248'-0"

32 x 3 x 2'-8"

14WF43
(Fy=42)

14WF87
(Fy=50)

14WF87
(Fy=50)

El. 248'-0"

23 x 1 3/4 x 2'-1"

Part of Truss K1-3

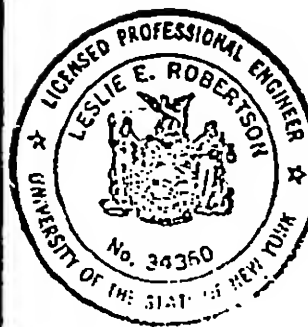
14WF370
(Fy=50)

El. 241'-0"

59 x 7 x 4'-11"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-254



DRAWN S.C.

REVIEWED E.L.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-11-68

	K58-1	K58-2	K58-3	K58-4	K58-5	K58-6	K58-7
El. 332'							
El. 310'							
Street							
El. 294'							
El. 284'	14 WF 170 (Fy = 50)	14 WF 170 (Fy = 50)	14 WF 170 (Fy = 50)	14 WF 170 (Fy = 50)	14 WF 170 (Fy = 50)	14 WF 170 (Fy = 50)	14 WF 170 (Fy = 50)
El. 274'							
El. 264'	14 WF 246 (Fy = 50)	14 WF 246 (Fy = 50)	14 WF 246 (Fy = 50)	14 WF 342 (Fy = 50)	14 WF 342 (Fy = 50)	R. Girder 14 WF 228 (Fy = 50)	14 WF 342 (Fy = 50)
El. 253	14 WF 287 (Fy = 50)	14 WF 287 (Fy = 50)	14 WF 287 (Fy = 50)	14 WF 342 (Fy = 50)	14 WF 342 (Fy = 50)		14 WF 342 (Fy = 50)
Top of base R	El. 241'-0"	El. 241'-0"	El. 241'-0"	El. 241'-0"	El. 241'-0"		El. 244'-0"
Base Plate	51 x 6 1/4 x 4'-7"	51 x 6 1/4 x 4'-7"	51 x 6 1/4 x 4'-7"	47 x 5 1/8 x 4'-5"	47 x 5 x 4'-3"		47 x 5 x 4'-3"



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-255

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-11-68

6-28-68

9-4-68

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of
base R

Base
Plate

K58-8

K58-9

K58-10

14 W 184
(FY = 50)

14 W 142
(FY = 50)

14 W 103
(FY = 50)

14 W 237
(FY = 50)

14 W 314
(FY = 50)

14 W 223
(FY = 50)

14 W 314
(FY = 50)

14 W 228
(FY = 50)

El. 247'0"

El. 247'0"

44 x 40 x 3-11

37 x 38 x 3-4

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-256



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

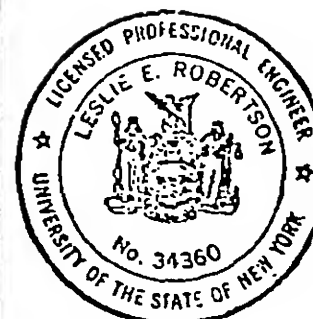
TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-11-68

	K 58 - 51	K 58 - 52	K 58 - 53	K 58 - 54	K 58 - 55		
El. 332'							
El. 310'							
El. 294'							
El. 284'							
El. 274'							
El. 264'							
El. 253							
Top of base R							
Base Plate							



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-257

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-11-68

9-4-68

	K59-1	K59-2	K59-3	K59-4	K59-5		
El. 332'							
El. 310'							
Street							
El. 294'							
El. 284'	14WF119 (Fy=50)	14WF119 (Fy=50)	14WF103 (Fy=50)	14WF87 (Fy=50)			
El. 274'							
El. 264'	14WF246 (Fy=50)	14WF246 (Fy=50)	14WF158 (Fy=50)	14WF127 (Fy=50)			
El. 253	14WF246 (Fy=50)	14WF246 (Fy=50)	14WF228 (Fy=50)	14WF184 (Fy=50)			
Top of base R	El. 248'-0"	El. 245'-0"	El. 241'-0"	El. 241'-0"			
Base Plate	41x46x3'-8"	40x4x3'-7"	48x55x4'-3"	46x53x4'-1"			

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-K1-258



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

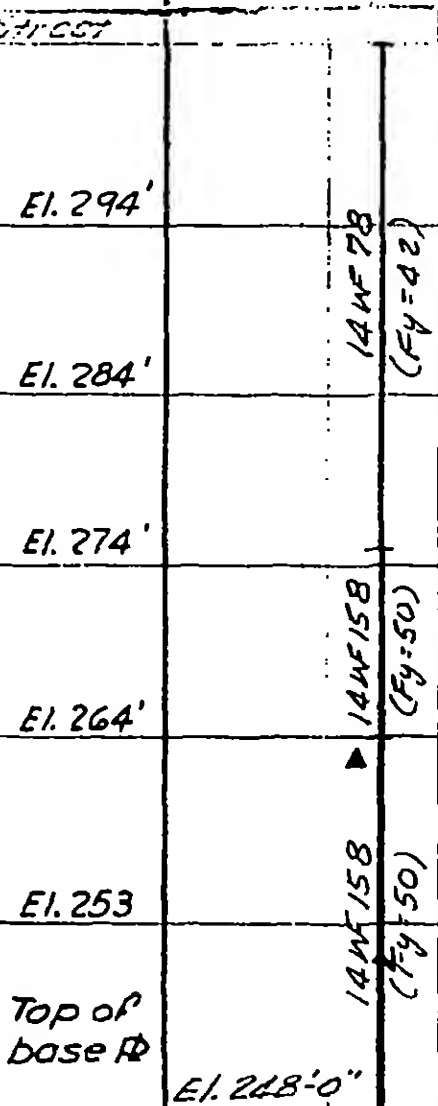
TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-11-68

	K-59-51						
El. 332'							
El. 310'							
El. 294'							
El. 284'							
El. 274'							
El. 264'							
El. 253							
Top of base R							
Base Plate							



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-259

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-11-68

	K60-1	K60-2	K60-3	K60-4	K60-5	K60-6	K60-7
El. 332'							
El. 310'							
Street							
El. 294'							
El. 284'	14WF111 (Fy=50)	14WF111 (Fy=50)	14WF111 (Fy=50)	14WF111 (Fy=50)	14WF111 (Fy=50)	14WF119 (Fy=50)	14WF119 (Fy=50)
El. 274'							
El. 264'	14WF167 (Fy=50)	14WF167 (Fy=50)	14WF142 (Fy=50)	14WF237 (Fy=50)	14WF237 (Fy=50)	14WF176 (Fy=50)	14WF264 (Fy=50)
El. 253	14WF211 (Fy=50)	14WF211 (Fy=50)	14WF237 (Fy=50)	14WF237 (Fy=50)	14WF237 (Fy=50)	14WF264 (Fy=50)	14WF264 (Fy=50)
Top of base R	El. 241'-0"	El. 241'-0"		El. 241'-0"	El. 241'-0"		El. 244'-0"
Base Plate	44 x 45 x 3'-11"	44 x 45 x 3'-10"		40 x 4 x 3'-7"	40 x 4 x 3'-7"		41 x 45 x 3'-8"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-K1-260



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-11-68

9-4-68

	K60-8	K60-9	K60-10	K60-11			
El. 332'							
El. 310' Street							
El. 294'							
El. 284'	14WF119 (Fy=50)	14WF127 (Fy=50)	14WF127 (Fy=50)	14WF136 (Fy=50)			
El. 274'							
El. 264'	14WF167 (Fy=50)	14WF287 (Fy=50)	14WF287 (Fy=50)	14WF287 (Fy=50)			
El. 253	12 Girder	14WF287 (Fy=50)	14WF287 (Fy=50)	14WF287 (Fy=50)			
Top of base R		El. 243'-4"	El. 247'-0"	El. 247'-0"			
Base Plate		43 x 4 ³ / ₈ x 3'-10"	43 x 4 ³ / ₈ x 3'-10"	44 x 4 ⁷ / ₈ x 3'-11"			

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3" above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

10-K1-261



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

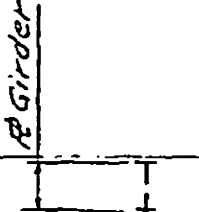
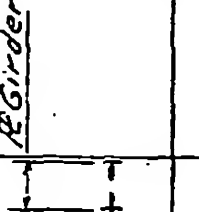
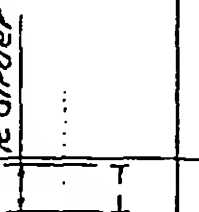
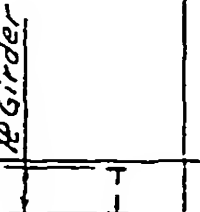
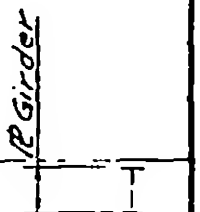
PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

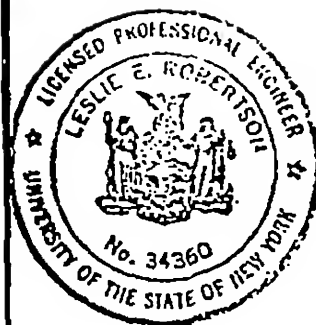
REVISIONS

6-11-68

	K60-52	K60-53	K60-54	K60-55	K60-56	K60-57
El. 332'						
El. 310'						
El. 294'						
El. 284'						
El. 274'						
El. 264'						
El. 253						
Top of base R	El. 244'-0"	El. 243'-6"	El. 243'-10"	El. 243'-4"	El. 243'-4"	El. 243'-4"
Base Plate	37x3 ⁵ / ₈ x3'-3"	26x2 ⁵ / ₈ x2'-7"	33x3x2'-11"	29x2 ¹ / ₂ x2'-7"	19x1 ¹ / ₂ x1'-10"	19x1 ¹ / ₂ x1'-10"

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-262



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

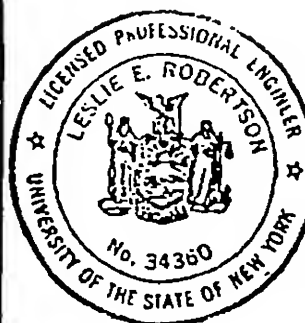
DATE 5-15-67

REVISIONS

6-11-68

9-4-68

	K61-1	K61-2	K61-3	K61-4	K61-5	K61-6	K61-7
El. 332'							
El. 310'					14WF87 (Fy=50)		
El. 294'							
El. 284'	14WF87 (Fy=50)	14WF103 (Fy=50)	14WF87 (Fy=50)	14WF87 (Fy=50)		14WF103 (Fy=50)	14WF103 (Fy=50)
El. 274'					14WF95 (Fy=50)		
El. 264'	14WF158 (Fy=50)	14WF228 (Fy=50)	14WF193 (Fy=50)	14WF211 (Fy=50)		14WF228 (Fy=50)	14WF228 (Fy=50)
El. 253	14WF158 (Fy=50)	14WF228 (Fy=50)	14WF193 (Fy=50)	14WF211 (Fy=50)		14WF228 (Fy=50)	14WF228 (Fy=50)
Top of base R	El. 248'-0"	El. 248'-0"	El. 248'-0"	El. 246'-0"		El. 245'-0"	El. 244'-4"
Base Plate	31 x 27 1/2 x 2'-10"	37 x 35 1/2 x 3'-4"	35 x 33 1/2 x 3'-1"	12 x 4 x 3'-6"		39 x 37 1/2 x 3'-6"	37 x 35 1/2 x 3'-4"



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-264

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-11-68

	K 61-8	K 61-9	K 61-10				
El. 332'							
El. 310'							
Street							
El. 294'							
El. 284'	14WF103 (Fy=50)	14WF103 (Fy=50)	14WF111 (Fy=50)				
El. 274'							
El. 264'	14WF150 (Fy=50)	14WF150 (Fy=50)	14WF237 (Fy=50)				
El. 253	2 Girder	2 Girder	14WF237 (Fy=50)				
Top of base R			El. 243'-4"				
Base Plate			39" x 4" x 3'-6"				



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-265

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

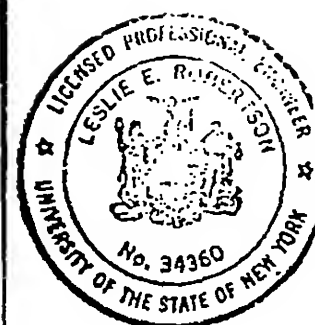
DATE 5-15-67

REVISIONS

6-11-68

9-4-68

	K61-51	K61-52	K61-53	K61-54			
El. 332'							
El. 310'							
El. 294'							
El. 284'							
El. 274'							
El. 264'							
El. 253							
Top of base R							
Base Plate							



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-266

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-11-68

9-4-68

	K 62 - 1	K 62 - 2	K 62 - 3	K 62 - 4	K 62 - 5	K 62 - 6	
El. 332'							
El. 310'							
El. 294'							
El. 284'							
El. 274'							
El. 264'							
El. 253							
Top of base R							
Base Plate							

14 W F 111
(F_y = 50)

14 W F 111
(F_y = 50)

14 W F 111
(F_y = 50)

14 W F 111
(F_y = 50)

14 W F 119
(F_y = 50)

14 W F 78
(F_y = 50)

14 W F 150
(F_y = 50)

14 W F 237
(F_y = 50)

14 W F 246
(F_y = 50)

14 W F 246
(F_y = 50)

14 W F 264
(F_y = 50)

14 W F 167
(F_y = 50)

El. 247'-0"

El. 247'-0"

El. 247'-0"

El. 247'-0"

El. 247'-0"

40 x 4 x 3'-7"

40 x 4 x 3'-7"

40 x 4 x 3'-7"

41 x 4 x 3'-8"

32 x 3 x 2'-10"



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-267

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-11-68

	K62-51						
El. 332'							
El. 310'							
El. 294'							
El. 284'							
El. 274'							
El. 264'							
El. 253							
Top of base R							
El. 243'-4"							
Base Plate							



- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-JK1-268

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE ZONE K 2

DATE 5-15-61
REVISIONS

REVISIONS

6-7-68

El. 332'

El. 310'

El. 290'

El. 279'3"

El. 264'

El. 253

Top of
Base R.
at El. 241'

K 70-3

K 70-4

K 70-5

K 70-6

K 70-7 7 8

6-28-68

14WF211
(FY=50)

14WF237
(FY=50)

14WF228
(FY=50)

14WF237
(FY=50)

14WF142
(FY=50)

14WF342
(FY=50)

14WF342
(FY=50)

14WF370
(FY=50)

14WF370
(FY=50)

14WF264
(FY=50)

14WF228
(FY=50)

14WF550
(FY=50)

WORTHINGTON, SKILLING, HELLE & JACKSON

PROJECT THE WORLD TRADE CENTER

K 71-B

K 71-

El. 332'

El. 310'

El. 290'

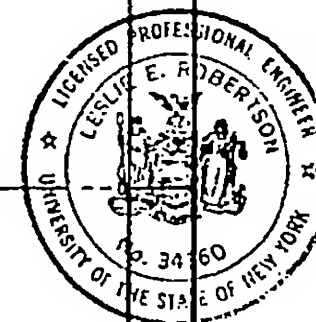
El. 279'3"

El. 264'

El. 253

Top of
Base R.
at El. 241'

Base



MICROFILM CORRECTION GUIDE (M-9)

CORRECTION

The preceding document has been re-
photographed to assure legibility and its
image appears immediately hereafter.

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE ZONE K 2

DATE 5-15-67

REVISIONS

6-7-68

El. 332

El. 310

El. 290

El. 279'3"

El. 264

El. 253

Top of
Base R.
at El. 241'

Base
Plate

K 70-3

K 70-4

K 70-5

K 70-6

K 70-7

14W211
(Fy=50)

14W231
(Fy=50)

14W226
(Fy=50)

14W237
(Fy=50)

14W242
(Fy=50)

14W342
(Fy=50)

14W342
(Fy=50)

14W370
(Fy=50)

14W370
(Fy=50)

14W264
(Fy=50)

51x57³/₈ x 4'-7"

53x62¹/₂ x 4'-9"

53x62¹/₂ x 4'-9"

57x63³/₄ x 5'-1"

50x6 x 4'-5"

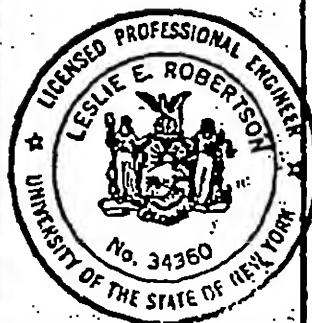
* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-K1-269



Civil & Structural Engineers

TITLE	COLUMN	SCHEDULE
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102
103	104	105
106	107	108
109	110	111
112	113	114
115	116	117
118	119	120
121	122	123
124	125	126
127	128	129
130	131	132
133	134	135
136	137	138
139	140	141
142	143	144
145	146	147
148	149	150
151	152	153
154	155	156
157	158	159
160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177
178	179	180
181	182	183
184	185	186
187	188	189
190	191	192
193	194	195
196	197	198
199	200	201
202	203	204
205	206	207
208	209	210
211	212	213
214	215	216
217	218	219
220	221	222
223	224	225
226	227	228
229	230	231
232	233	234
235	236	237
238	239	240
241	242	243
244	245	246
247	248	249
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300
301	302	303
304	305	306
307	308	309
310	311	312
313	314	315
316	317	318
319	320	321
322	323	324
325	326	327
328	329	330
331	332	333
334	335	336
337	338	339
340	341	342
343	344	345
346	347	348
349	350	351
352	353	354
355	356	357
358	359	360
361	362	363
364	365	366
367		

DATE 5-15-67

6-28-68

El. 310'

E1. 264

Top of
Base R.
at El. 241'

Base:
Plate

K 71-13

14NF95

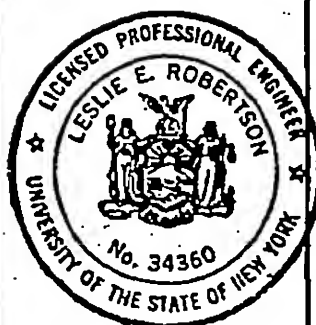
14AF 264

 $38 \times 3\frac{3}{4} \times 3\frac{3}{4}$

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
 ▲ See detail on 10-JK4-3 and 4.
 ■ Splice 3' above slab. See note on 10-JK2-2.
 ● See detail on 10-JK2-30.

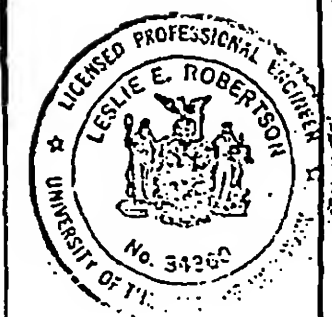
10-K1-270

10-K1-270



REVISIONS
6-7-68
6-28-68

	K 72-13	K 72-14	K 72-15	K 72-16	K 72-17	K 72-18	
EI. 332'							
EI. 310'							
EI. 290'							
EI. 279'-3"							
EI. 264'							
EI. 253							
Top of Base R.							
Base Plate							



* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

Civil & Structural Engineers

PROJECT *THE WORLD TRADE CENTER*

TITLE	COLUMN	SCHEDULE
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102
103	104	105
106	107	108
109	110	111
112	113	114
115	116	117
118	119	120
121	122	123
124	125	126
127	128	129
130	131	132
133	134	135
136	137	138
139	140	141
142	143	144
145	146	147
148	149	150
151	152	153
154	155	156
157	158	159
160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177
178	179	180
181	182	183
184	185	186
187	188	189
190	191	192
193	194	195
196	197	198
199	200	201
202	203	204
205	206	207
208	209	210
211	212	213
214	215	216
217	218	219
220	221	222
223	224	225
226	227	228
229	230	231
232	233	234
235	236	237
238	239	240
241	242	243
244	245	246
247	248	249
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300
301	302	303
304	305	306
307	308	309
310	311	312
313	314	315
316	317	318
319	320	321
322	323	324
325	326	327
328	329	330
331	332	333
334	335	336
337	338	339
340	341	342
343	344	345
346	347	348
349	350	351
352	353	354
355	356	357
358	359	360
361	362	363
364	365	366
367		

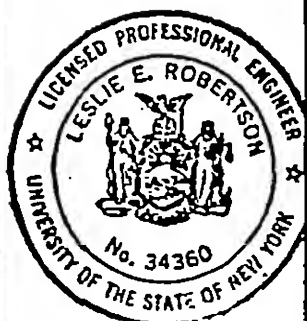
DATE 5-15-67

REVISIONS

6-7-68

6-28-68

	K 73 - 13	K 73 - 14	K 73 - 15	K 73 - 16	K 73 - 17	K 73 - 18	K 73 - 19
El. 332'							
El. 310'							
El. 290'	14 WF 264 (Fy = 50)	14 WF 264 (Fy = 50)	14 WF 237 (Fy = 50)		14 WF 264 (Fy = 50)		14 WF 193 (Fy = 50)
El. 279'3"							
El. 264'	Temp. Bracing	Temp. Bracing	Temp. Bracing	14 WF 167 (Fy = 50)	14 WF 550 (Fy = 50)	14 WF 87 (Fy = 50)	14 WF 455 (Fy = 50)
El. 253	20 x 12 II 2 PL 12 x 5 2 PL 10 x 4 (Fy = 50)	20 x 12 II 2 PL 12 x 5 2 PL 10 x 4 (Fy = 50)	14 WF 426 (Fy = 50)	14 WF 167 (Fy = 50)	14 WF 550 (Fy = 50)	14 WF 87 (Fy = 50)	14 WF 455 (Fy = 50)
Top of Base R.	El. 243'-4"	El. 243'-4"	El. 243'-4"	El. 243'-4"	El. 243'-4"	El. 243'-4"	El. 243'-4"
Base Plate	57 x 7 1/2 x 5'-1"	57 x 7 1/2 x 5'-0"	59 x 7 x 5'-5"	53 x 5 1/8 x 2'-11"	53 x 6 x 4'-10"	22 x 2 3/4 x 2'-0"	51 x 5 3/8 x 4'-6"



* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
▲ See detail on 10-JK4-3 and 4.
■ Splice 3" above slab. See note on 10-JK2-2. *Splice detail see 10-JK2-35A*
● See detail on 10-JK2-30.

10-K1-272

10-K1-272

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

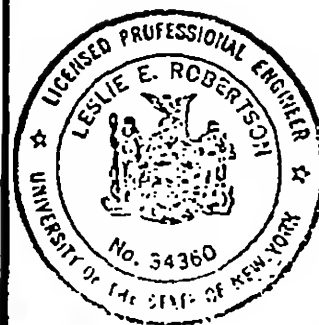
REVISIONS

6-7-68

6-28-68

	K 74 - 12	K 74 - 13	K 74 - 14	K 74 - 15	K 74 - 16	K 74 - 17	K 74 - 18
El. 332'							
El. 310'							

El. 290'							
El. 279'3"	detail 10 10-JK2-41	detail 10 10-JK2-41					
El. 264'	Temp. Bracing	Temp. Bracing					
El. 253							
Top of Base R.							
Base Plate							



* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

■ Splice 3" above slab. See note on 10-JK2-2.

● See detail on 10-JK2-30.

10-JK1-274

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 5-15-67

REVISIONS

6-7-68

6-28-68

El. 332'

El. 310'

K 74-19

El. 290'

El. 279'-3"

El. 264'

El. 253

Top of
Base R.

El. 243'-4"

Base
Plate

35 x 3 1/4 x 3/4"

14 WF 95
(Fy = 50)

14 WF 264
(Fy = 50)

14 WF 264
(Fy = 50)

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-275



Civil & Structural Engineers

PROJECT *THE WORLD TRADE CENTER*

TITLE	COLUMN	SCHEDULE
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102
103	104	105
106	107	108
109	110	111
112	113	114
115	116	117
118	119	120
121	122	123
124	125	126
127	128	129
130	131	132
133	134	135
136	137	138
139	140	141
142	143	144
145	146	147
148	149	150
151	152	153
154	155	156
157	158	159
160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177
178	179	180
181	182	183
184	185	186
187	188	189
190	191	192
193	194	195
196	197	198
199	200	201
202	203	204
205	206	207
208	209	210
211	212	213
214	215	216
217	218	219
220	221	222
223	224	225
226	227	228
229	230	231
232	233	234
235	236	237
238	239	240
241	242	243
244	245	246
247	248	249
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300
301	302	303
304	305	306
307	308	309
310	311	312
313	314	315
316	317	318
319	320	321
322	323	324
325	326	327
328	329	330
331	332	333
334	335	336
337	338	339
340	341	342
343	344	345
346	347	348
349	350	351
352	353	354
355	356	357
358	359	360
361	362	363
364	365	366
367		

DATE 5-15-67

REVISIONS

6-7-68

6-28-68

El. 332

El. 310'

K-75-16

K 75-17

K. 75 - 18

K.75-19

K 75 - 20

K 75 - 21

...K75-22

EL-290

El. 279'-3

E1.264

E1. 253

Top of
Base R

Base
Plate

detail 10
10-K2-41

14-WF-119	(Fv=50)
detail 11	
10-JK2-41	

Temp. tracing

Temp. Bracing.

20×121
 $2 R 5 12 \times 5$
 $1 R 10 \times 3$
 $(F_y = 50)$

20 x 12	5
2 x 5	10 x 5
1 x 5	5
Fy = 50	

(E1.243'-4")

El. 243-4

El. 243'-4"

E1.243'-4"

El. 243'-4

El. 243'-4"

(E1.243'-4")

10 - 1 - 19

1. 1.1

۱۱ ۱۳ ۱۴

میرا و بی بی

۱۰۰

۱۱۵۰

२२ २३ २४ २५

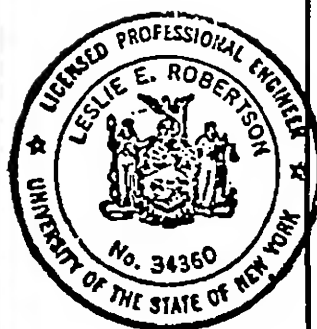
* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

Splice 3" above slab. See note on 10-JK2-2.

See detail on 10-JK2-30

10-K1-276



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE

DATE 12-17-68

REVISIONS

	K75-23				K75-54		
El. 332'							
El. 310'							
El. 294'							
El. 284'							
El. 274'							
El. 264'							
El. 253							
Top of base R							
Base Plate							

K75-23

K75-54

El. 332'

El. 310'

El. 294'

El. 284'

El. 274'

El. 264'

El. 253

Top of base R

Base Plate

14 WF 119
(F_y = 50)

14 WF 167
(F_y = 50)

14 WF 193
(F_y = 50)

El. 243'-4"

12 x 12 x 3'-6"

14 WF 78
(F_y = 50)

Temp. bracing

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
- Splice 3" above slab. See note on 10-JK2-2.
- See detail on 10-JK2-30.

10-K1-276A



Civil & Structural Engineers

PROJECT *THE WORLD TRADE CENTER*

TITLE	COLUMN	SCHEDULE
1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24
25	26	27
28	29	30
31	32	33
34	35	36
37	38	39
40	41	42
43	44	45
46	47	48
49	50	51
52	53	54
55	56	57
58	59	60
61	62	63
64	65	66
67	68	69
70	71	72
73	74	75
76	77	78
79	80	81
82	83	84
85	86	87
88	89	90
91	92	93
94	95	96
97	98	99
100	101	102
103	104	105
106	107	108
109	110	111
112	113	114
115	116	117
118	119	120
121	122	123
124	125	126
127	128	129
130	131	132
133	134	135
136	137	138
139	140	141
142	143	144
145	146	147
148	149	150
151	152	153
154	155	156
157	158	159
160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177
178	179	180
181	182	183
184	185	186
187	188	189
190	191	192
193	194	195
196	197	198
199	200	201
202	203	204
205	206	207
208	209	210
211	212	213
214	215	216
217	218	219
220	221	222
223	224	225
226	227	228
229	230	231
232	233	234
235	236	237
238	239	240
241	242	243
244	245	246
247	248	249
250	251	252
253	254	255
256	257	258
259	260	261
262	263	264
265	266	267
268	269	270
271	272	273
274	275	276
277	278	279
280	281	282
283	284	285
286	287	288
289	290	291
292	293	294
295	296	297
298	299	300
301	302	303
304	305	306
307	308	309
310	311	312
313	314	315
316	317	318
319	320	321
322	323	324
325	326	327
328	329	330
331	332	333
334	335	336
337	338	339
340	341	342
343	344	345
346	347	348
349	350	351
352	353	354
355	356	357
358	359	360
361	362	363
364	365	366
367		

DATE 6-7-68

REVISIONS

6-28-68

9-13-68

10-15-68

El. 332

K 76 - 54

K.76-55

K76-56

K76-57

El. 310'

El. 290'

El. 279'-3"

El. 264'

E1. 253

Top of
Base R.

Base
Plate

El. 243'-4"

E1. 243'-4"

El. 243'-4"

E1.243'-4"

20 x 1 3/4 x 2'-0"

 $20 \times 1\frac{3}{4} \times 2'-0"$
$$20 \times 1\frac{3}{4} \times 2'-0''$$
 $20 \times 1\frac{3}{4} \times 2'-0''$ 

* Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.

▲ See detail on 10-JK4-3 and 4.

Splice 3" above slab. See note on 10-JK2-2.

See detail on 10-JK2-30.

10-K1-278

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

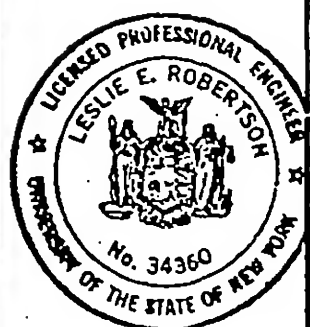
TITLE COLUMN SCHEDULE

DATE 1-17-69

REVISIONS

4-18-69

	K 92-3	K 92-4	K 92-5				
El. 332'							
El. 310'							
El. 300'							
El. 284'	Det. 1 12-JK2-99 14WF95 (FY=50)	Det. 3 12-JK2-99 14WFG1 (hanger) (FY=42)	Det. 2 12-JK2-99 14WF87 (FY=50)				
El. 270'							
El. 264'		Det. 10 12-JK1-75A					
El. 253	14WF127 (FY=50)		14WF127 (FY=50)				
Top of base R							
Base Plate	34 x 3 1/4 x 2'-10"		34 x 3 1/4 x 2'-10"				



DRAWN S.C.

REVIEWED E.L.

- * Provide proper splice pls., bolt holes & finished col. top for future columns. Use upper col. one size smaller except as shown.
- ▲ See detail on 10-JK4-3 and 4.
 - Splice 3' above slab. See note on 10-JK2-2.
 - See detail on 10-JK2-30.

10-K1-279

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SCHEDULE--NEW COLUMNS HOTEL AREA

DATE 12-23-71

REVISIONS

11-27-72

	H-P1	H-P2	H-P3	H-P4	H-P5	H-P6	H-P7
3'-0"							
El. 332'							
	See Dwg. Book 13	See D.B. 13	See D.B. 13	See D.B. 13	See D.B. 13	See D.B. 13	
El. 310'							
3'-0"	*		*	*	*	*	
El. 294'							10-JK5-2
	14WF426 Fy36	14WF426 Fy36	14WF193 Fy36	14WF193 Fy36	14WF455 Fy36	14WF455 Fy36	10-JK5-2
El. 284'							10-JK5-2
3'-0"	③	③	③	③	③	③	10-JK5-2
El. 274'							10-JK5-2
							10-JK5-2
El. 264'							10-JK5-2
	14WF500 Fy36	14WF500 Fy36	14WF219 Fy36	14WF219 Fy36	14WF500 Fy36	14WF500 Fy36	14WF264 Fy36
El. 253							
Top of base R at El. 241'							
Base Plate	60x6 ³ / ₄ x5'-6" ① Fy36	60x6 ³ / ₄ x5'-6" ① Fy36	41x4'8"x3'-8" ① Fy36	41x4'8"x3'-8" ① Fy36	60x9 ¹ / ₂ x5'-6" ①② Fy36	60x6 ³ / ₄ x5'-6" ① Fy36	45x4'8"x4'-0" ① Fy36

Shear studs see 10-JK5-2



DESIGNED K. CHIANG

DRAWN A. FRANQUI

REVIEWED W. B. BROWN

- * Provide proper splice pls., bolt holes & finished col. top for future columns. See 10-JK2-4.
- ① See 10-JK3-2
- ② See Det. 8-8-JK5-9.5
- ③ See 10-JK2-4

10-K1-299

WORTHINGTON SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE TYPICAL COLUMN DETAILS

DATE 5-15-67

REVISIONS

10-20-67

11-8-67

12-13-67

1-5-68

2-16-68

12-3-68

3-1-69

Except as noted in
column schedule and
adjacent detail

Struct. floor line

3'-0"

Top of butt R

3"

Use Splice
Detail 104 & 2" butt
R at El. 310' only
Top of struct. slab

FOR COLUMNS :- J11-1 thru 9

J12-52 & 53

K29-4 (hold)

K31-3

K31-5 thru 10

K35-10

K37-10

K41-10

K43-9

K44-1

K45-8

K46-1

K47-8 & 52

K48-1

K50-1

K51-7

K52-1

K53-7

K54-1

K55-6

TYPICAL SPLICE LOCATION



DRAWN
S.C.

REVIEWED
E.L.

K57-2, 4, 5, 6

10-JK2-2

WORTHINGTON, SKILLING HELLE & JACKSON

Civil & Structural Engineers

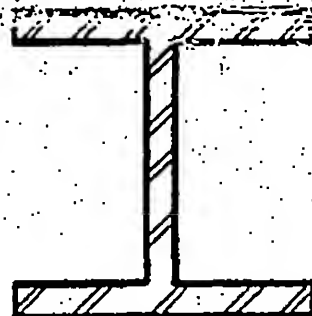
PROJECT *THE WORLD TRADE CENTER*

TITLE *TYPICAL COLUMN DETAILS*

DATE *5-15-67*

REVISIONS

10-20-67



TYPE 100

*All splice material to
be A36.*

*Welding electrodes to be
E70 series electrodes.*

*Bolts to be A325 Friction
type connections.*



10-JK2-3

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE TYPICAL COLUMN DETAILS

DATE 5-15-67

REVISIONS

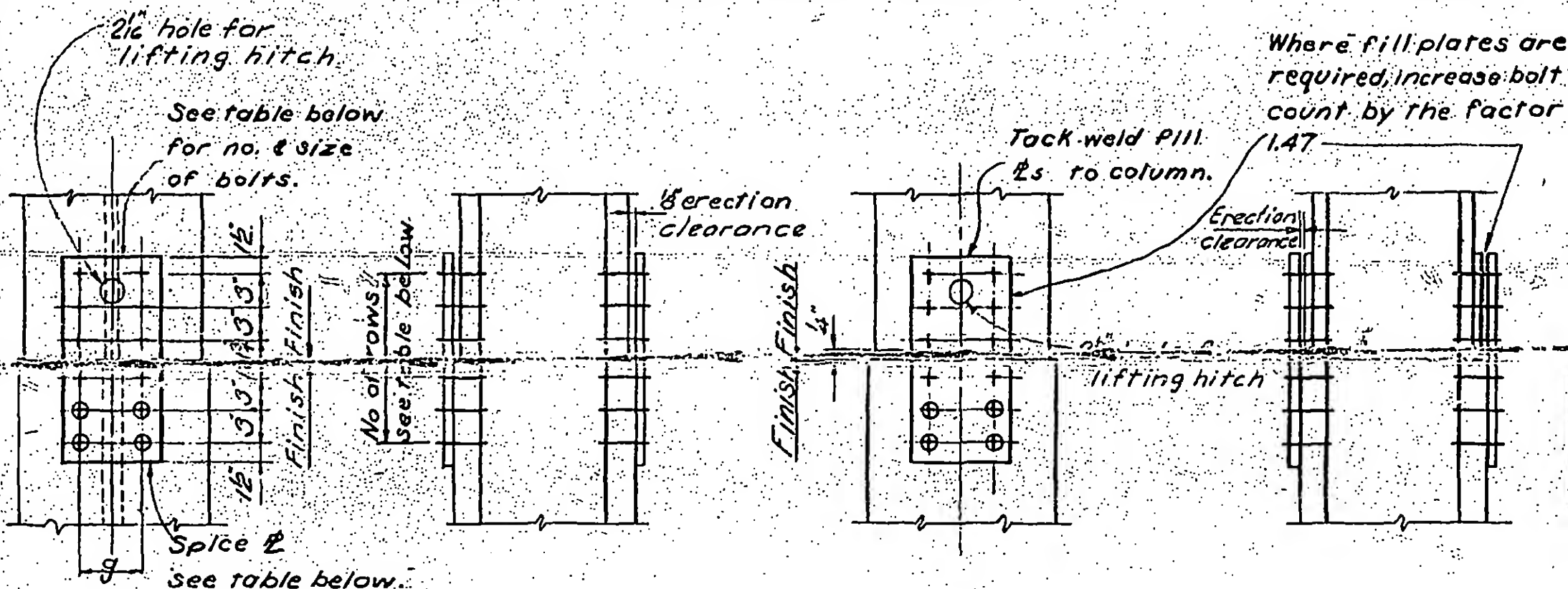
5-26-67

10-20-67

11-8-67

3-17-69

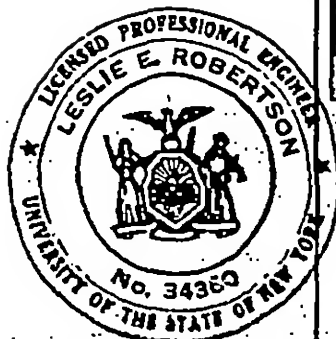
12-23-71



UPPER COLUMN SIZE	No. & Size of BOLTS	No. of ROWS	SPLICE PLATE SIZE	g
10 W 112 thru 33	8 - 3/4"	4	8 x 3/8	5 1/2
12 W 190 thru 161 incl.	12 - 3/4"	6	9 x 1/2	5 1/2
133 53	8 - 3/4"	4	9 x 3/8	5 1/2
50 40	8 - 3/4"	4	8 x 3/8	5 1/2
14 W 455 thru 370 incl.	20 - 7/8"	10	15 x 5/8	11 1/2
342 287	16 - 7/8"	8	15 x 5/8	11 1/2
264 202	12 - 7/8"	6	15 x 1/2	11 1/2
193 142	12 - 3/4"	6	15 x 1/2	11 1/2
136 87	12 - 3/4"	6	11 x 3/8	5 1/2
84 61	8 - 3/4"	4	9 x 3/8	5 1/2
53 43	8 - 3/4"	4	8 x 3/8	5 1/2

SPLICE DETAIL 101

Splice Detail-102 may be used at contractor's option.



DRAWN S.C.

REVIEWED E.L.

10-JK2-4

PROJECT THE WORLD TRADE CENTER

TITLE TYPICAL COLUMN DETAILS

DATE 10-20-67

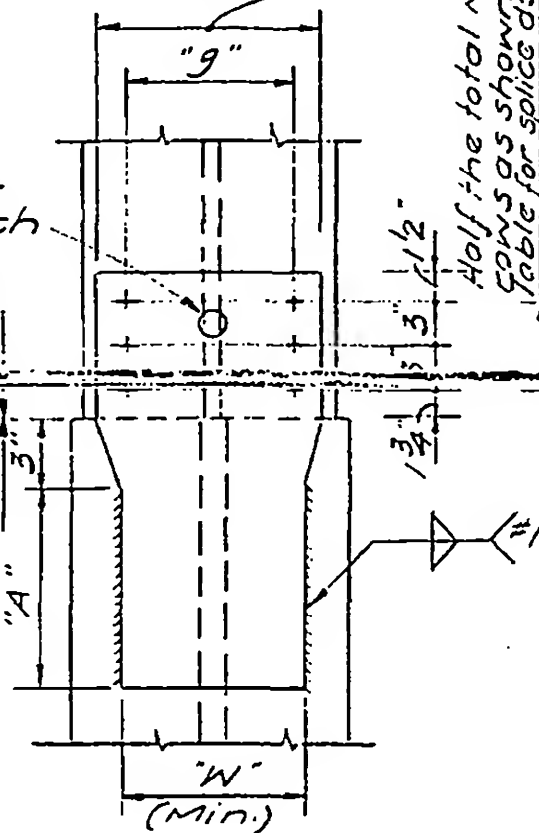
REVISIONS

11-8-67

Width & thickness of splice
R same as shown in Table
for splice detail 101

2 1/2" Hole for
lifting hitch

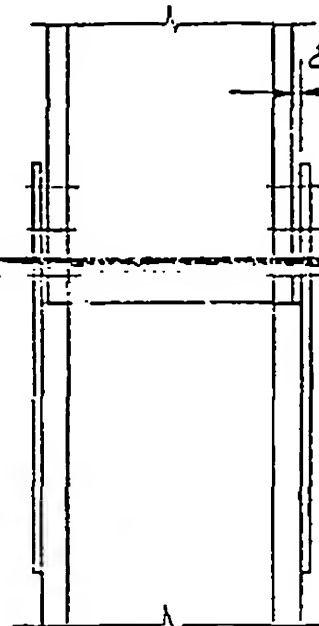
Finish
"A"



Half the total No. of
bolts as shown in
Table for splice detail 101

8" Erection
clearance

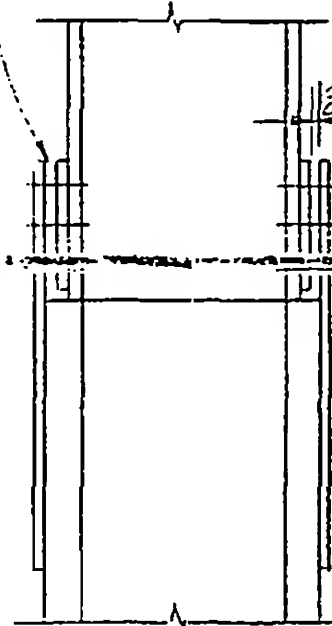
Finish



Tack weld fill
R's to column

Where fill R's are
req'd increase bolt
count by the factor
1.47.

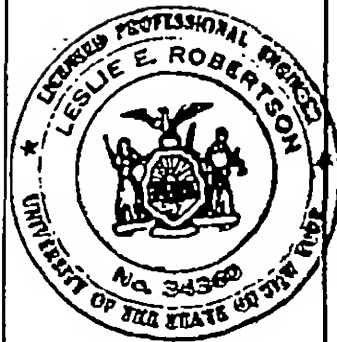
8" Erection
clearance



UPPER COLUMN SIZE	Weld #1	"A"	"W"
10W33 THRU 66	1/4	6"	6"
" 72 " 112	5/16	8	6
12W40 THRU 58	1/4	10	6
" 65 " 133	5/16	12	8
" 161 " 190	3/8	12	9
14W43 THRU 53	1/4	8	8
" 61 " 84	1/4	12	8
" 87 " 95	1/4	15	11
" 111 " 136	3/8	15	11
" 142 " 202	3/8	15	12
" 211 " 264	1/2	15	12
" 287 " 342	1/2	15	12
" 370 " 426	3/4	15	12

SPLICE DETAIL 102

10-JK2-5



WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE TYPICAL COLUMN DETAILS

DATE 5-15-67

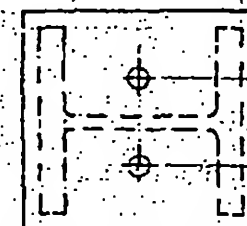
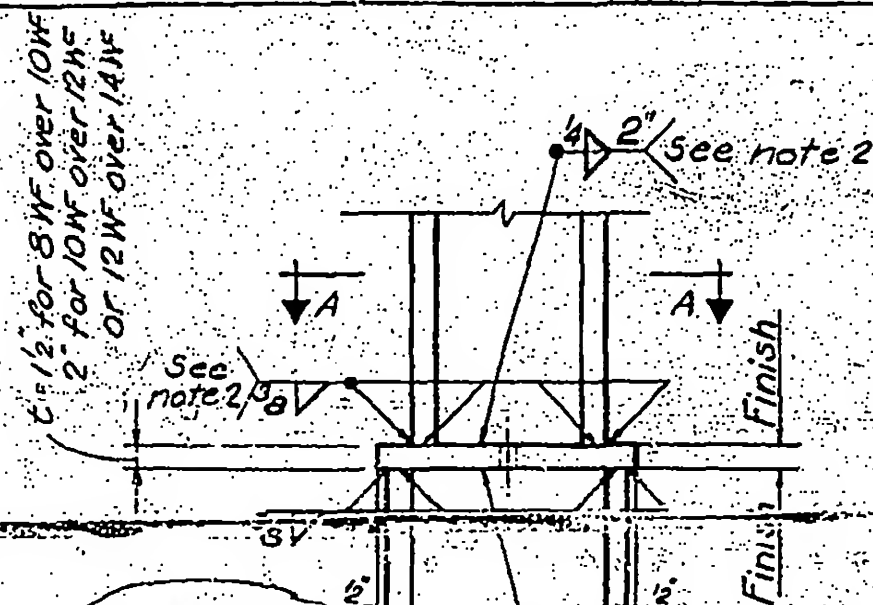
REVISIONS

5-26-67

11-8-67

3-13-68

6-17-68



Provide 2-1/16" ϕ holes for lifting hitch. (Not req'd. when upper column is shop welded as stated in note 2.)

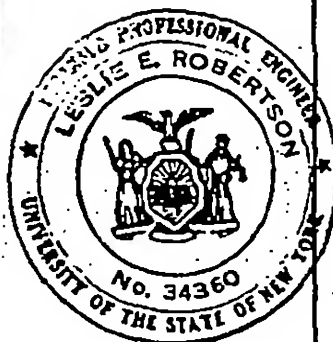
Section A-A

NOTES:

1. Use where upper column is nominally 2" or more smaller than lower column.
2. Shop weld shall be used for column splices at El. 264' as shown on 10-JK4-3 and 4.
3. Full length weld each side of web for columns J3-3, J3-10, J7-2 and J11-1 Thru J11-6 (above El. 310').
4. Butt Pls to be 22 1/2" x 2" x 1'-10 1/2" for cols. J3-3, J3-10, J7-2, J11-1 and J11-6 (above El. 310').

SPLICE DETAIL 104

10-JK2-7



WORTHINGTON SKILLING HELLE & JACKSON

Civil & Structural Engineers

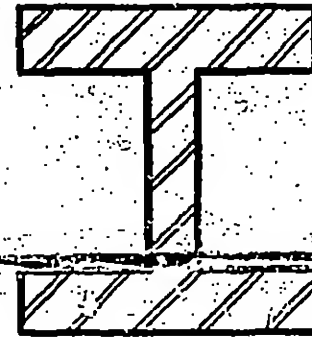
PROJECT THE WORLD TRADE CENTER

TITLE TYPICAL COLUMN DETAILS

DATE 5-15-67

REVISIONS

10-20-67



TYPE 110

All splice & material
to be A36.

Welding electrodes to be
E70 series electrodes.

Bolts to be A325 Friction
type connections.



10-JK2-8

8-10-67

...

...

1040-4,2

WORTHINGTON, SKILLING, HELL & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE TYPICAL COLUMN DETAILS

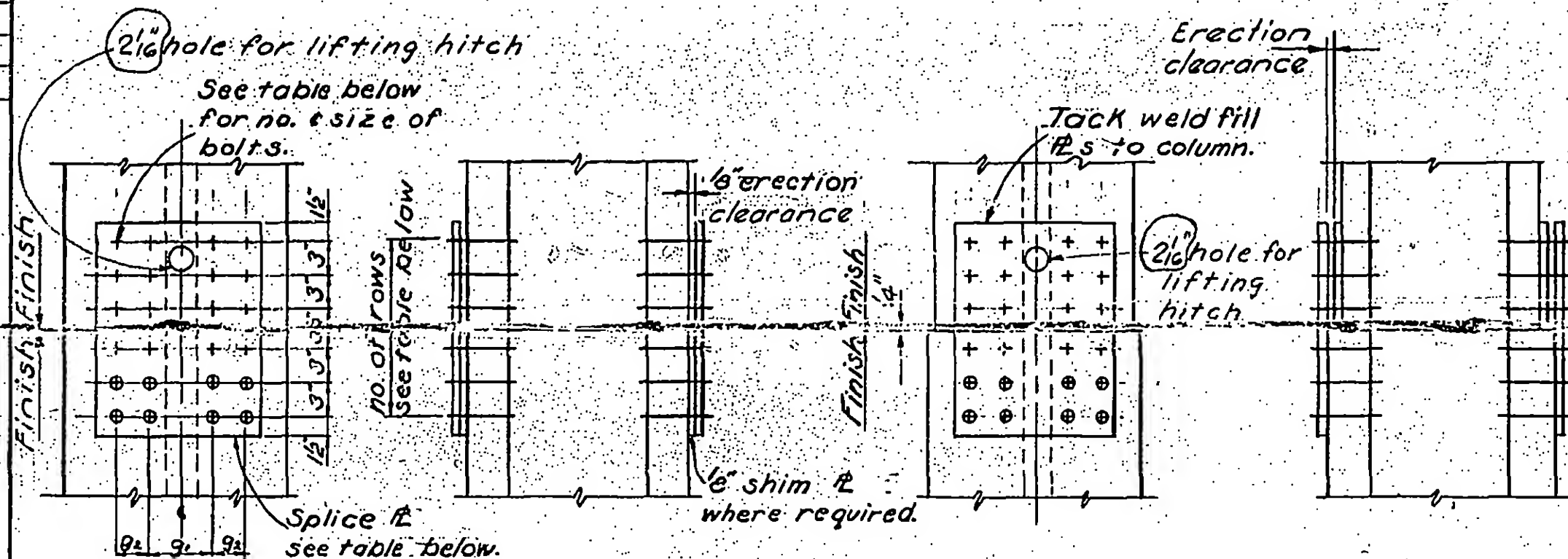
DATE 5-15-67

REVISIONS

5-26-67

10-20-67

11-8-67



UPPER COL. SIZE	No. & SIZE OF BOLTS	No. OF ROWS	SPLICE PLATE SIZE	g	g ₂
14W 455, 14W 500	20-1"Ø	6	17 x 7/8	5 1/2	3
14W 550, 14W 605	24-1"Ø	6	17 x 7/8	5 1/2	3
14W 665, 14W 730	28-1"Ø	8	17 x 1	7	3

SPLICE DETAIL III

Splice Detail - 112 may be used at contractor's option.

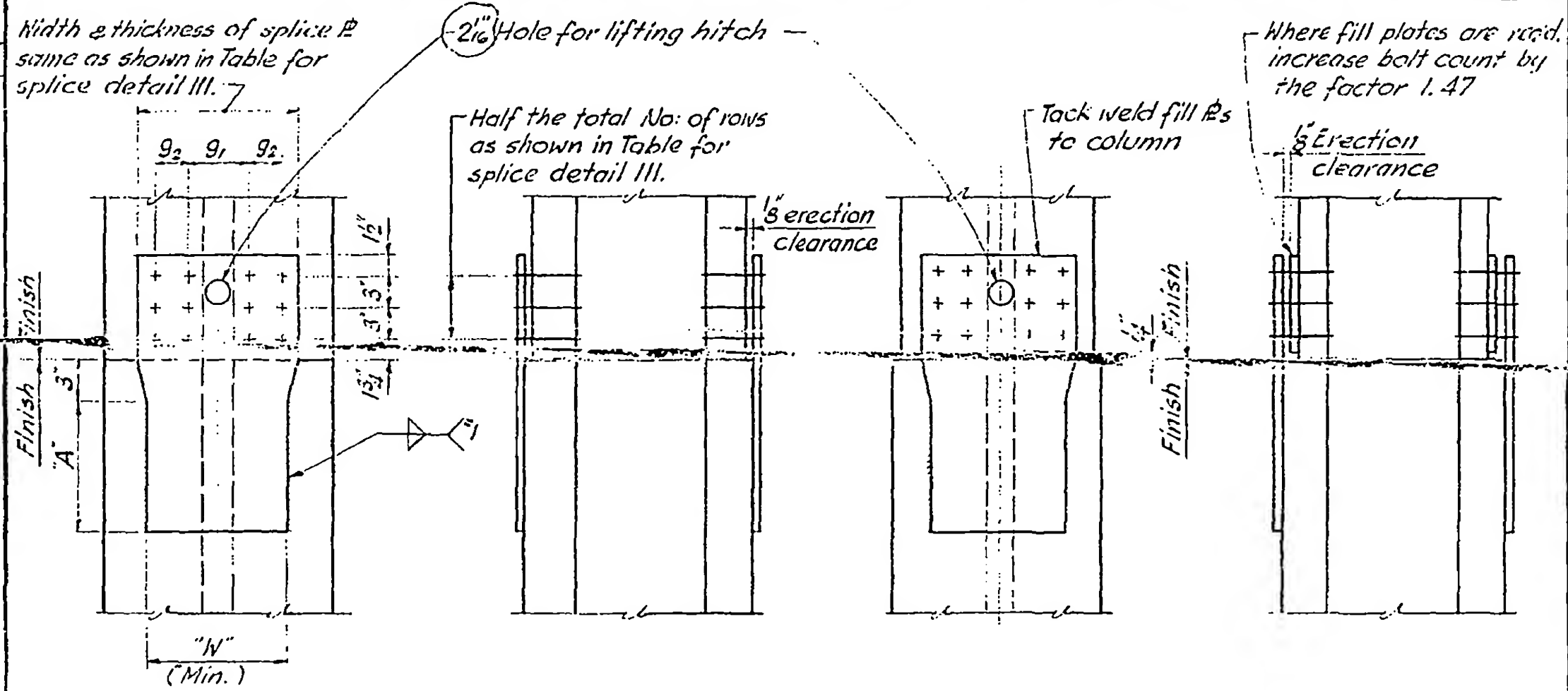


10-JK2-9

1040-L,3

REVISIONS

11-3-67



UPPER COL. SIZE	WELD #2	"A"	"W"
14 W 455 thru 14 W 500	9/16	18	14
14 W 550 thru 14 W 605	5/8	18	14
14 W 665 thru 14 W 730	5/8	18	15



SPLICE DETAIL II 2

WORTHINGTON, SKILLING, HELLE & JACKSON

Civil & Structural Engineers

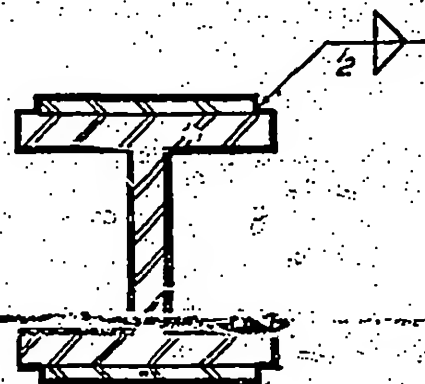
PROJECT THE WORLD TRADE CENTER

TITLE TYPICAL COLUMN DETAILS

DATE 5-15-67

REVISIONS

10-20-67



TYPE 200

All splice & material to
be A36.

Welding electrodes to be
E70 series electrodes

Bolts to be A325, Friction
type connections.



10-JK2-12

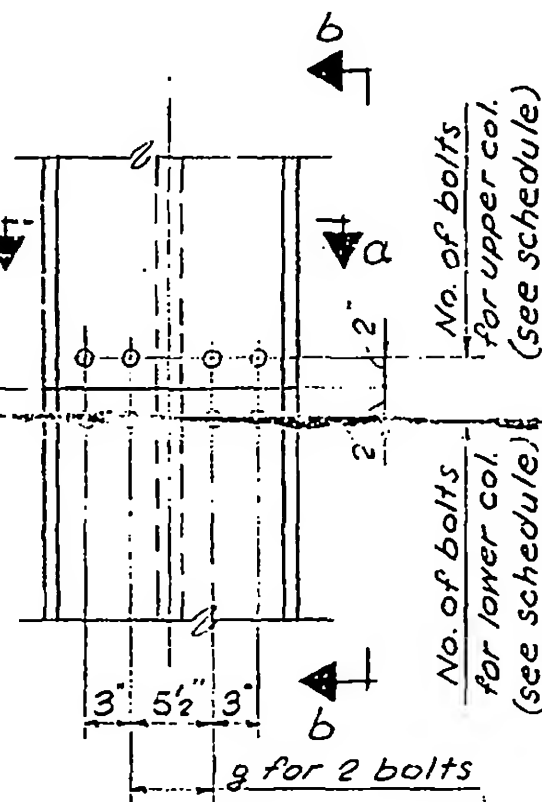
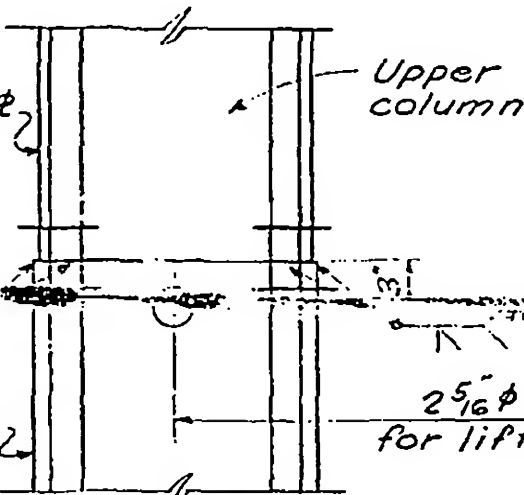
REVISIONS

3-13-68

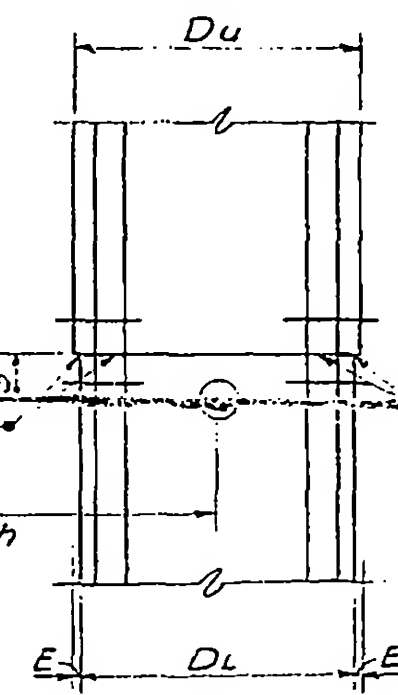
Col. splice point
See dwg 10-JK2-2

Finish

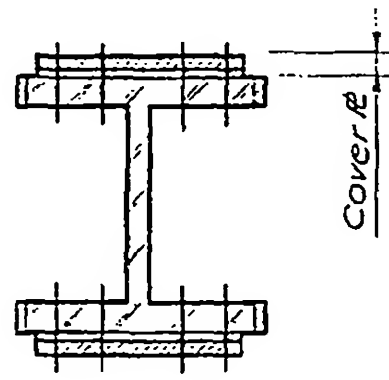
Finish

No. of bolts
for upper col.
(see schedule)No. of bolts
for lower col.
(see schedule)Cover R_2 Cover R_2 

Elevation b-b



Elevation b-b

where $D_u > D_c$ 

Section a-a

COLUMN SECTION (14W320)

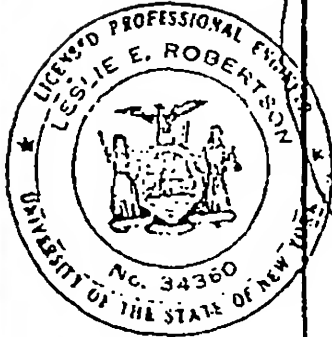
COVER R THICK.	*WELD #7	No. & SIZE OF BOLTS
1" thru 1 1/4"	1" P.P.	2 - 3/4" ϕ
1 3/8" thru 1 3/4"	1 1/16"	2 - 3/4" ϕ
1 7/8" thru 2 1/2"	1 1/8"	4 - 3/4" ϕ
2 5/8" thru 3 1/8"	1 3/16"	4 - 3/4" ϕ
3 1/4" thru 3 5/8"	1 1/4"	4 - 3/4" ϕ

NOTES:

1. All bolts shown to be A325 H.S. friction type (shop bolted).
2. * size of weld #7 is governed by cover R thickness of upper col. Where $D_u > D_c$, add E to depth of weld #7.

SPlice DETAIL 201

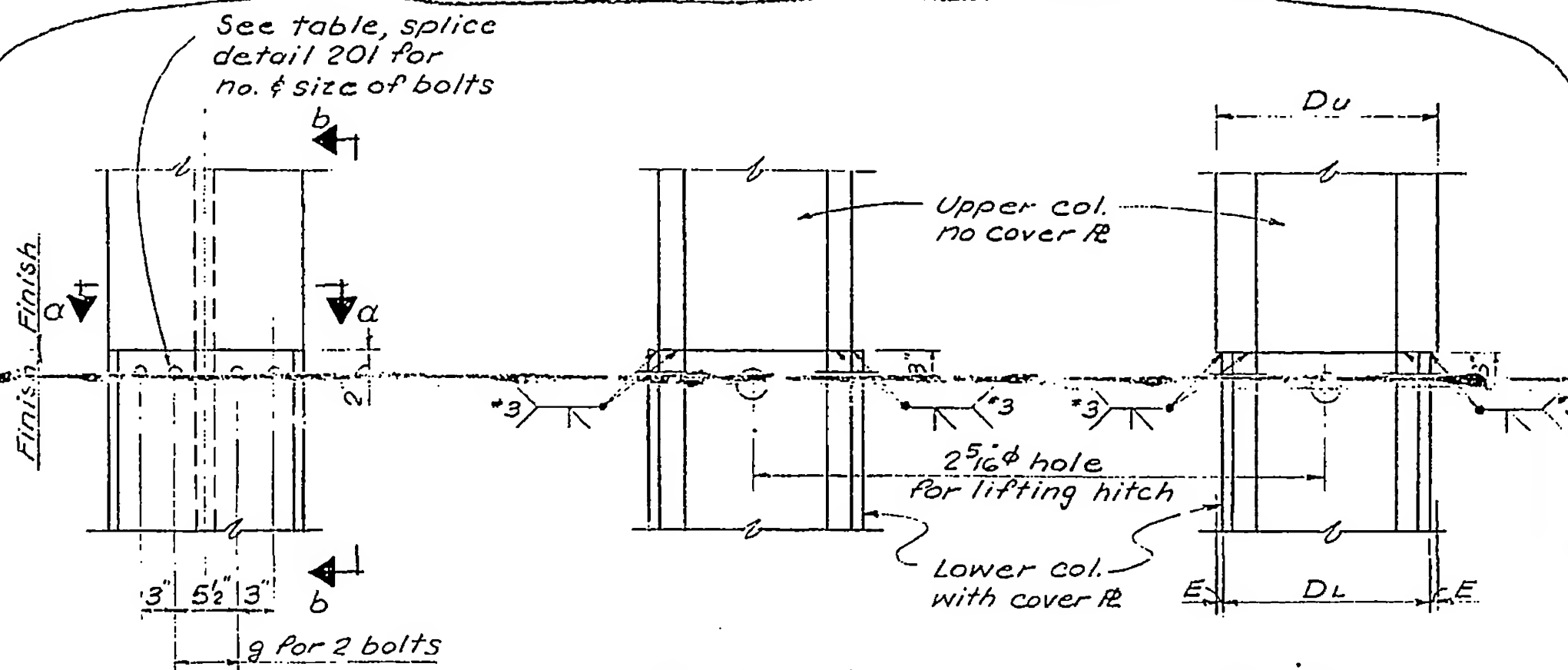
10-JK2-13



REVISIONS

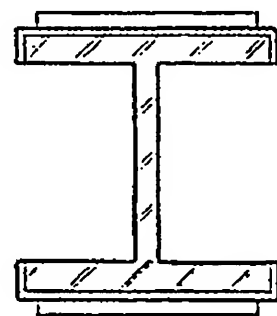
10-20-67

3-13-68



Elevation b-b

Elevation b-b

where $D_u > D_L$ 

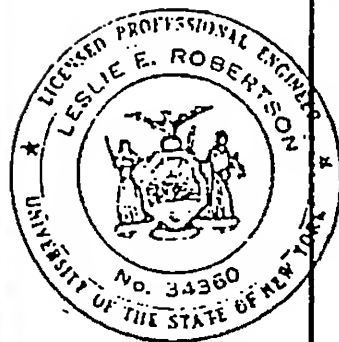
Section a-a

FLANGE THICKNESS OF UPPER COL.	* WELD * 3
1 1/16" & less	C.P.
3/4" - 1 5/16"	5/8" R.P.
1" - 1 1/4"	1 1/16"
1 5/16" - 1 9/16"	3/4"
1 5/8" - 2 1/16"	1 3/16"
2 1/8" - 2 9/16"	7/8"
2 5/8" - 3 1/16"	1 5/16"
3 1/8" - 3 7/16"	1"
3 1/2" - 4"	1 1/16"
4 1/16" - 4 5/8"	1 1/8"

NOTE:

1. * Where $D_u > D_L$, add E to depth of weld * 3

SPLICE DETAIL 202



SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

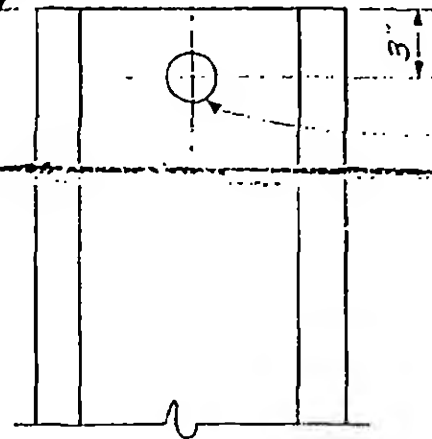
PROJECT THE WORLD TRADE CENTER

TITLE TYPICAL COLUMN DETAIL

DATE 3-13-68

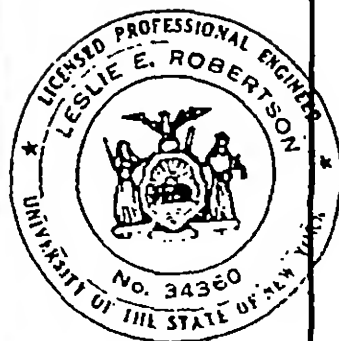
REVISIONS

Top of column or
column assembly
where no splice is
used.



Provide 2 5/16" hole thru web
for lifting hitch.

Typical of top of all columns
or column assemblies, unless
shown otherwise in Detail
Drawings.



10-JK2-15

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT

THE WORLD TRADE CENTER

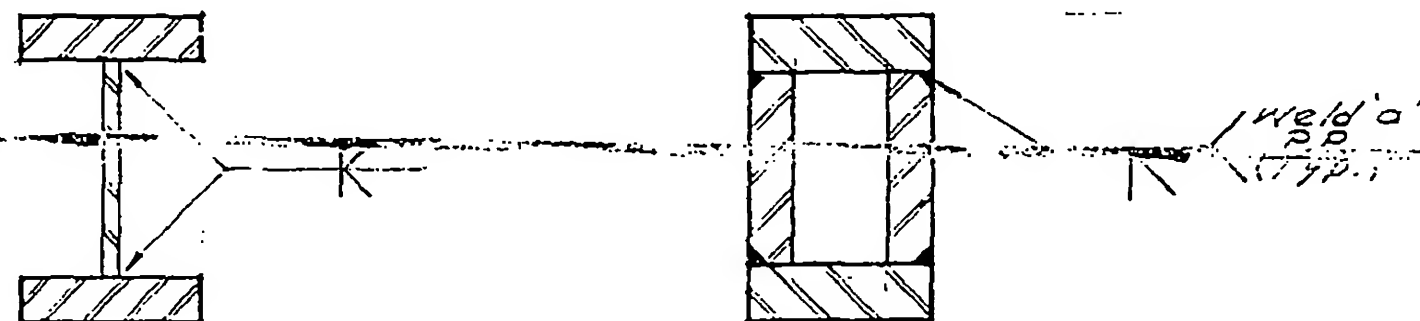
TITLE

TYPICAL DETAIL OF BUILT-UP COLUMNS

DATE

6-7-68

REVISIONS

NOTE:

Size of weld 'a' not less
than $D = \sqrt{\frac{T}{6}} + \frac{1}{4}$ (min. 1")

Where T = thickness of thinner P
at the joint.

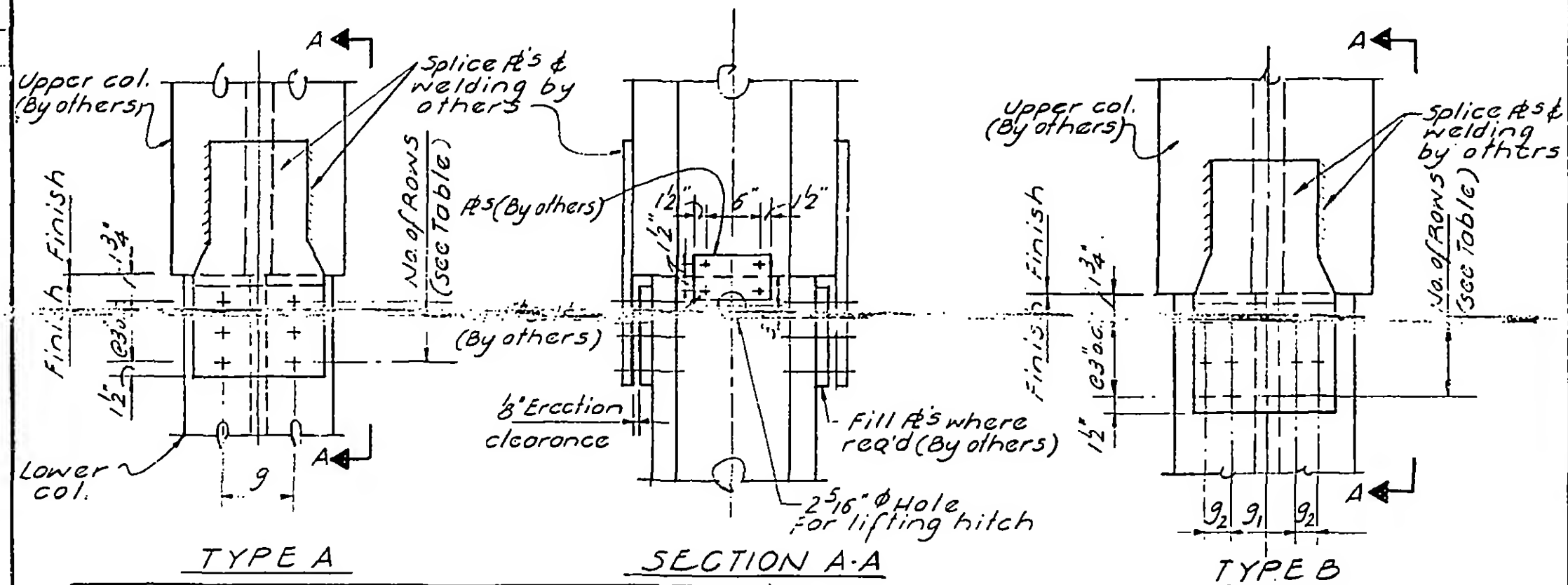


10-JK2-16

REVISIONS

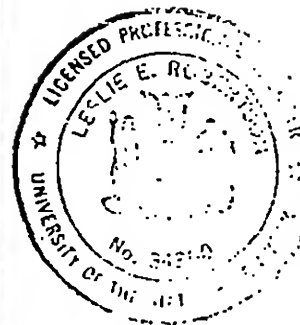
11-5-68

3-17-69



LOWER COLUMN SIZE	TYPE	NO. & SIZE OF BOLTS	NO. OF ROWS	9	9 ₁	9 ₂
14W 61 THRU 84 INCL.	A	6- $\frac{3}{4}$ " ϕ	3	5 $\frac{1}{2}$ "		
" 87 " 136 "	A	10- $\frac{3}{4}$ " ϕ	5	5 $\frac{1}{2}$ "		
" 142 " 193 "	A	10- $\frac{3}{4}$ " ϕ	5	11 $\frac{1}{2}$ "		
" 202 " 264 "	A	10- $\frac{7}{8}$ " ϕ	5	11 $\frac{1}{2}$ "		
" 287 " 342 "	A	12- $\frac{7}{8}$ " ϕ	6	11 $\frac{1}{2}$ "		
" 370 " 426 "	A	16- $\frac{7}{8}$ " ϕ	8	11 $\frac{1}{2}$ "		
" 455 & 500	B	16-1" ϕ	4		5 $\frac{1}{2}$ "	3"
" 550 & 605	B	18-1" ϕ	5		5 $\frac{1}{2}$ "	3"

Notes:
1. All bolts shown not in this contract.



DRAWN
 S.C.
 REVIEWED
 E.L.

10-JK2-17

REVISIONS

11-8-67

1-5-68

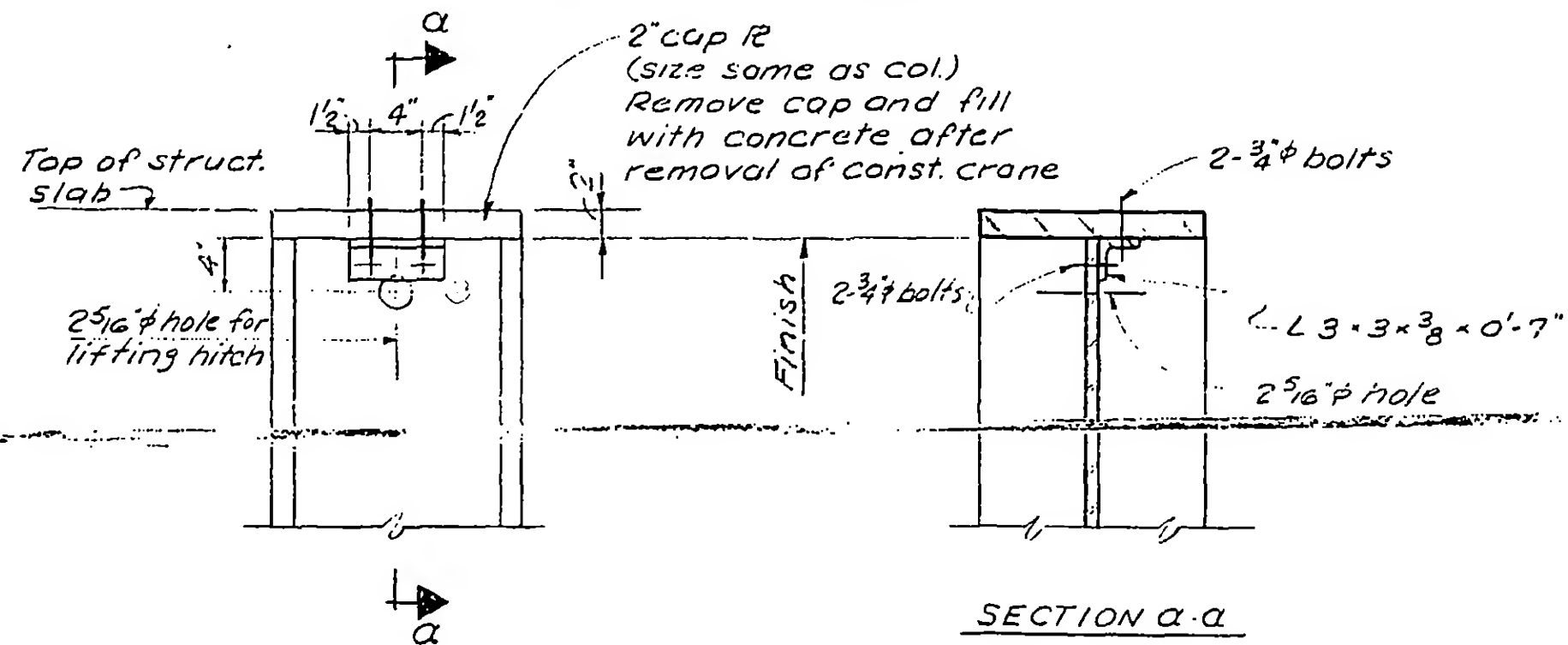
3-13-68

6-11-68

6-28-68

7-19-68

10-15-68



COLUMN No.	TOP ELEVATION OF CAP R
J13-1	EL. 308'-10"
J14-5	308'-6½"
J15-4	308'-6½"
J17-4	308'-2"
J19-4	308'-2"
J21-3	308'-0"
J23-3	307'-10"
J25-3	307'-0"
K27-2	305'-9"
K29-1	305'-6"
K29-2	306'-3"
K29-3	308'-0"
K31-1	305'-6"
K31-2	306'-0"

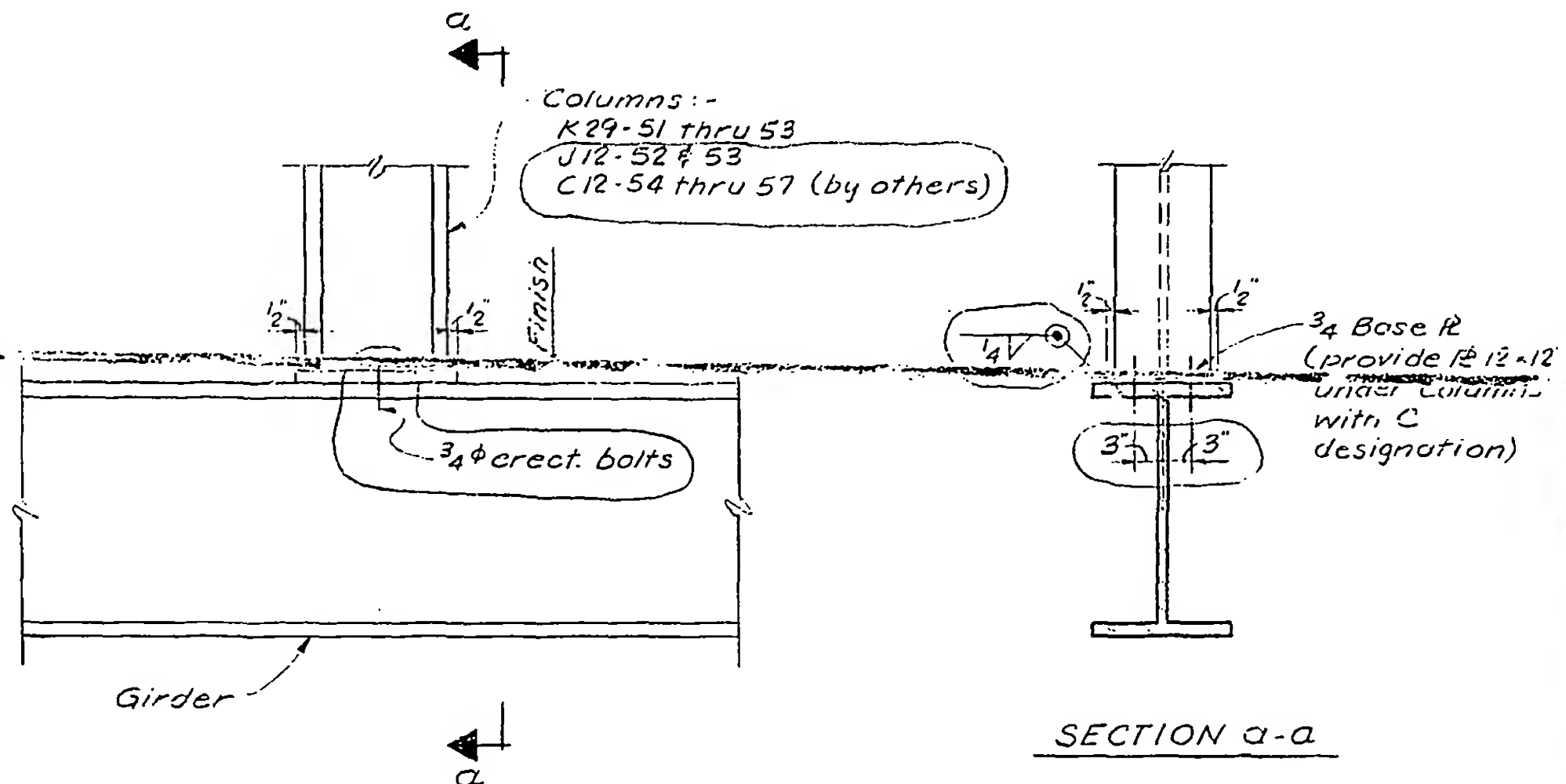
COLUMN No.	TOP ELEVATION OF CAP R
K-31-11	EI. 309'-9"
J11-9	EI. 310'-0"



REVISIONS

11-8-67

1-5-68



10-JK2-31

SKILLING, HELLE. CHRISTIANSEN, ROBERTSON

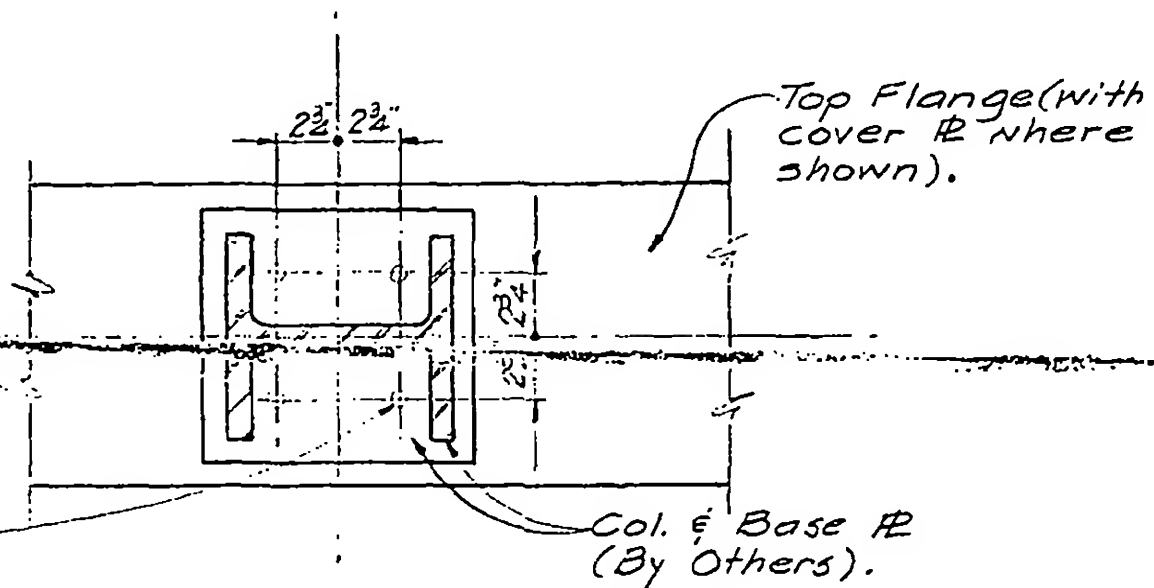
Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

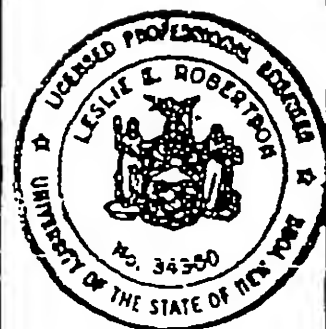
TITLE DETAIL OF COLUMN SITTING ON TOP OF GIRDER

DATE 11-5-68

REVISIONS



Provide 4 holes thru top flange (located as shown) to receive future $\frac{3}{4}$ " ϕ H. S. Bolts (Frict. Type).



DRAWN

REVIEWED

10-JK2-31A

SKILLING, HELLE. CHRISTIANSEN, ROBERTSON

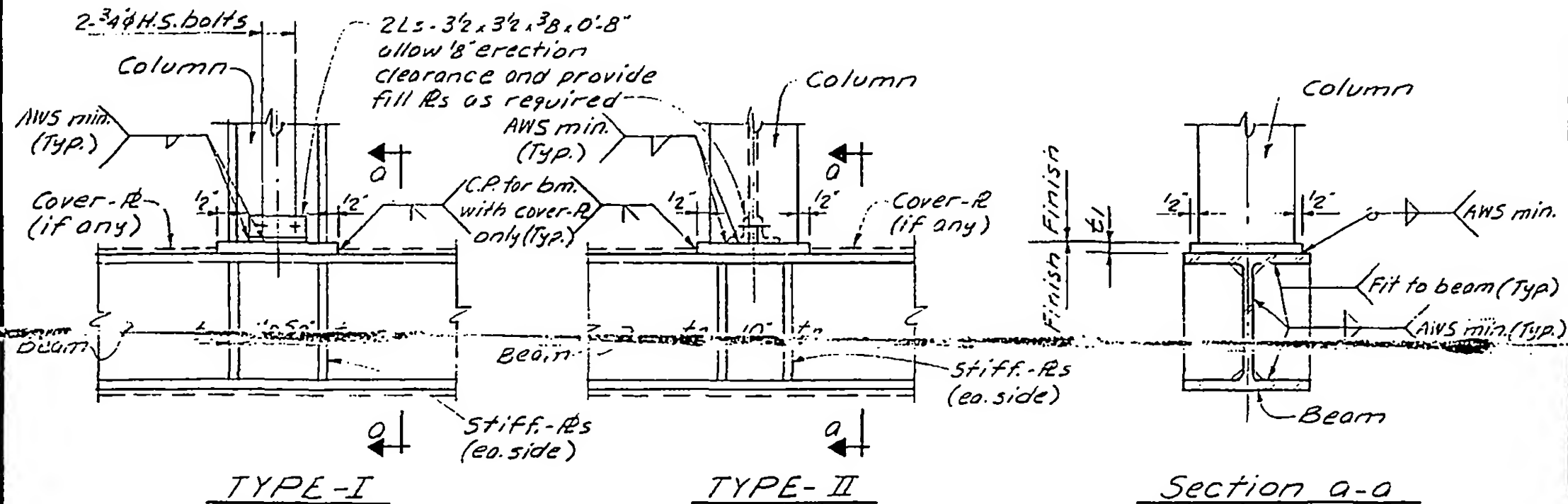
Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE DETAIL OF COLUMN SITTING ON TOP OF GIRDER

DATE 2-4-69

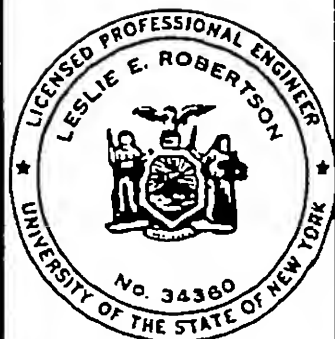
REVISIONS



Notes:

1. All bolts to be A-325 friction type.
2. All welds to be E70xx.

DETAIL NO.	TYPE	BEARING R		STIFF. Rs		DETAIL NO.	TYPE	BEARING R		STIFF. Rs	
		t1	Fy	t2	Fy			t1	Fy	t2	Fy
1	I	1"	36	3/4"	42						



DESIGNED

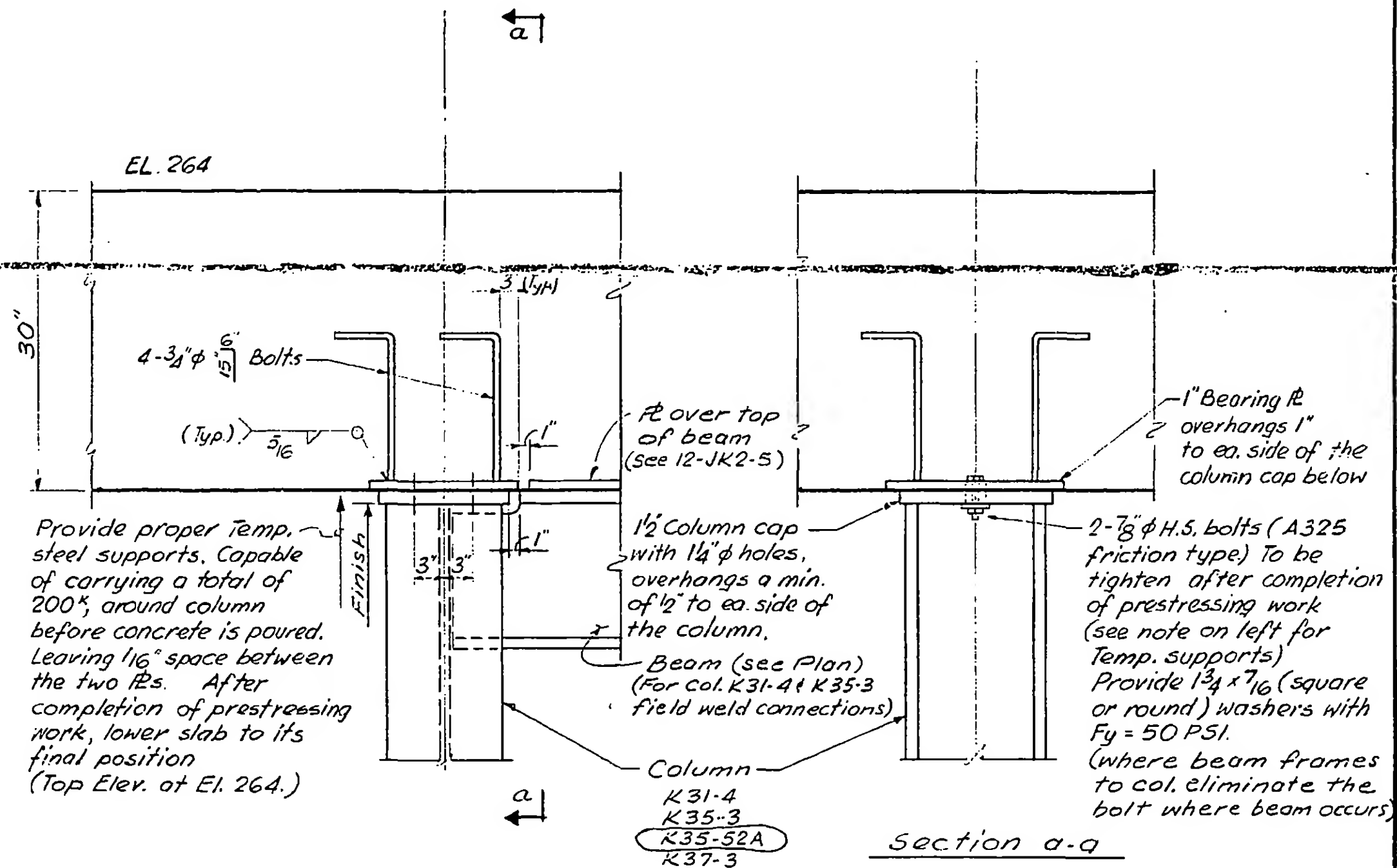
DRAWN
A.L.F.REVIEWED
E.L.

10-JK2-31B

REVISIONS

11-5-68

4-4-69



DRAWN

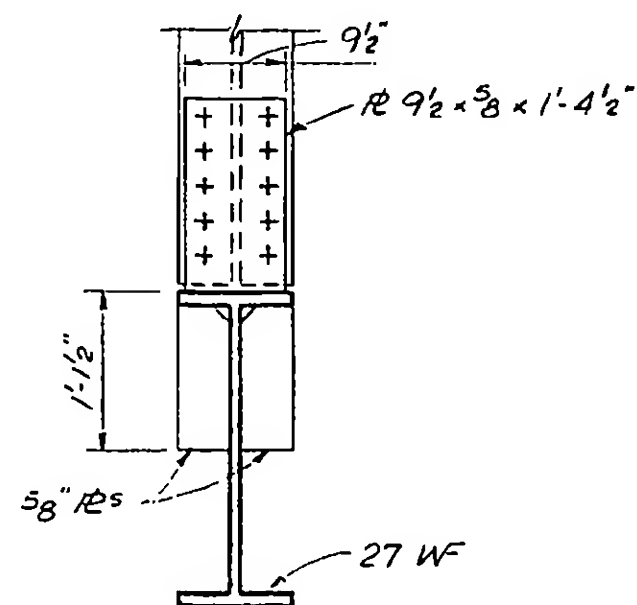
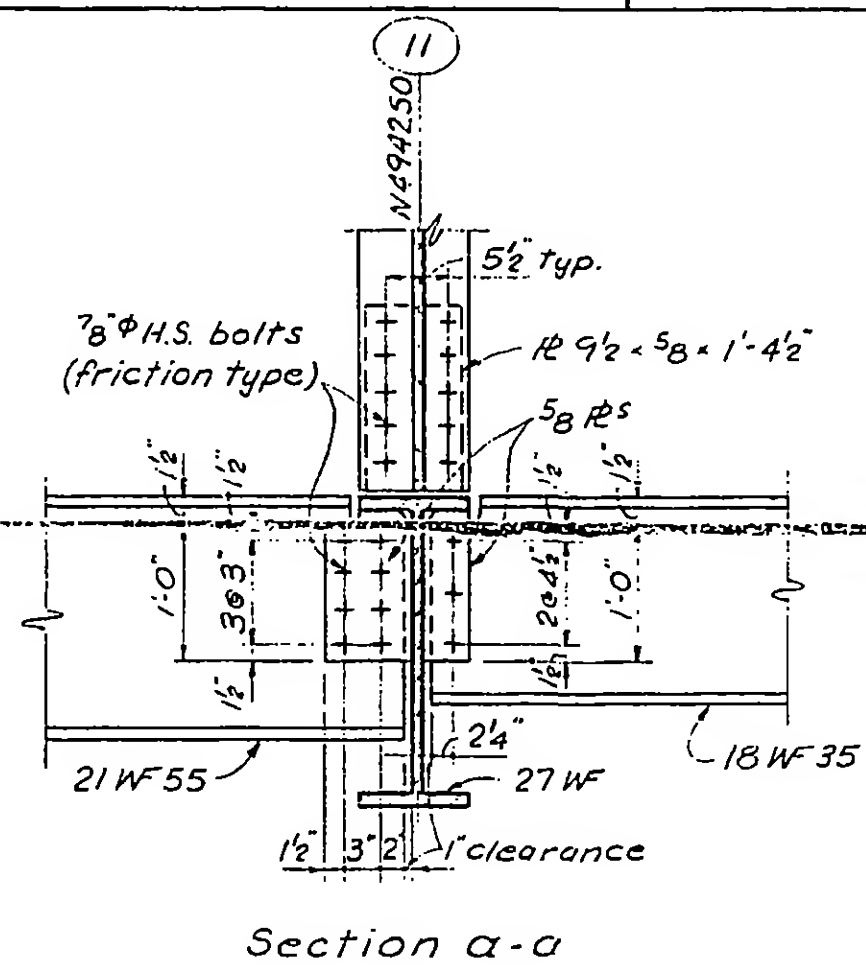
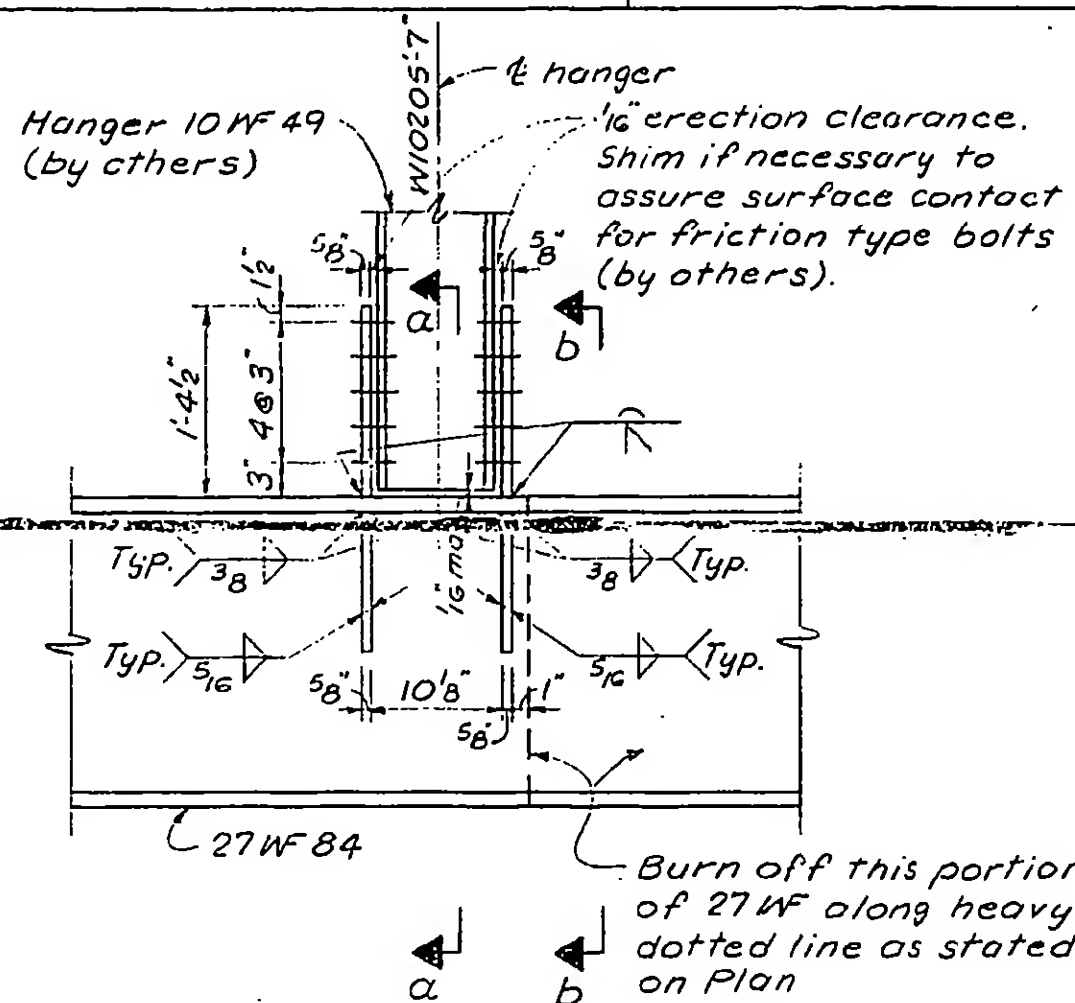
S.C.

REVIEWED

E.L.

10-JK2-32

REVISIONS

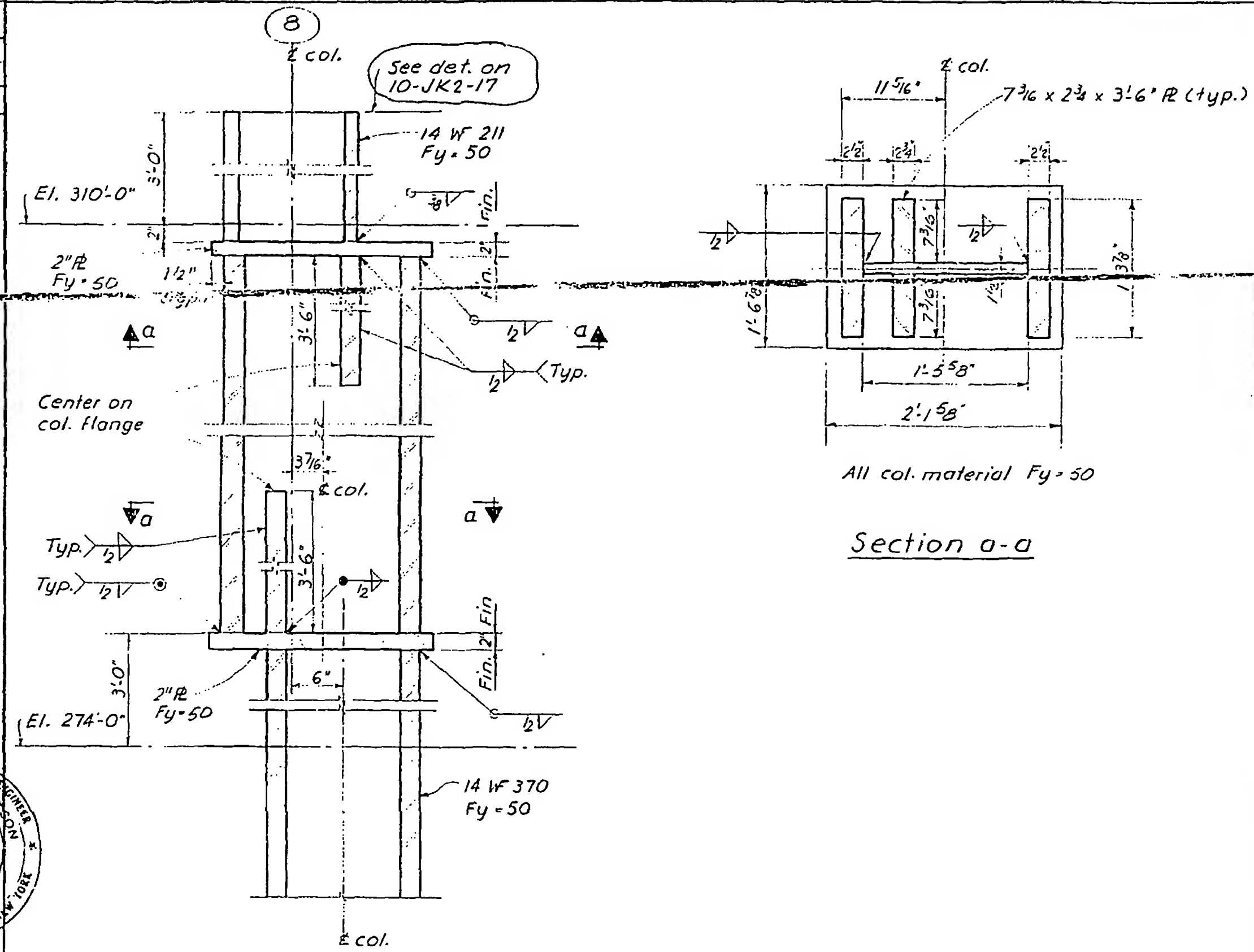


Section b-b



10-JK2-33

REVISIONS
7-19-68
9-4-68
11-5-68



SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE

COLUMN DETAILS

DATE 4-5-68

REVISIONS

5-1-68

6-7-68

Shear head,
for detail
see 10-JK4-3/4

C.P.

Column - see
schedule

El. 264'-0"

3/8"

C.P.

Finish

Slab

2 1/2"
min.

A

Shear head,
for detail
see 10-JK4-3/4

El. 264'-0"

Slab

2 1/2"
min.

Section A-A

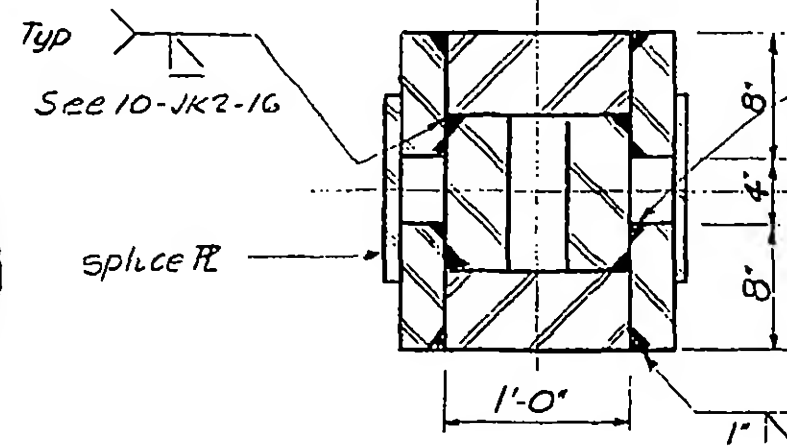
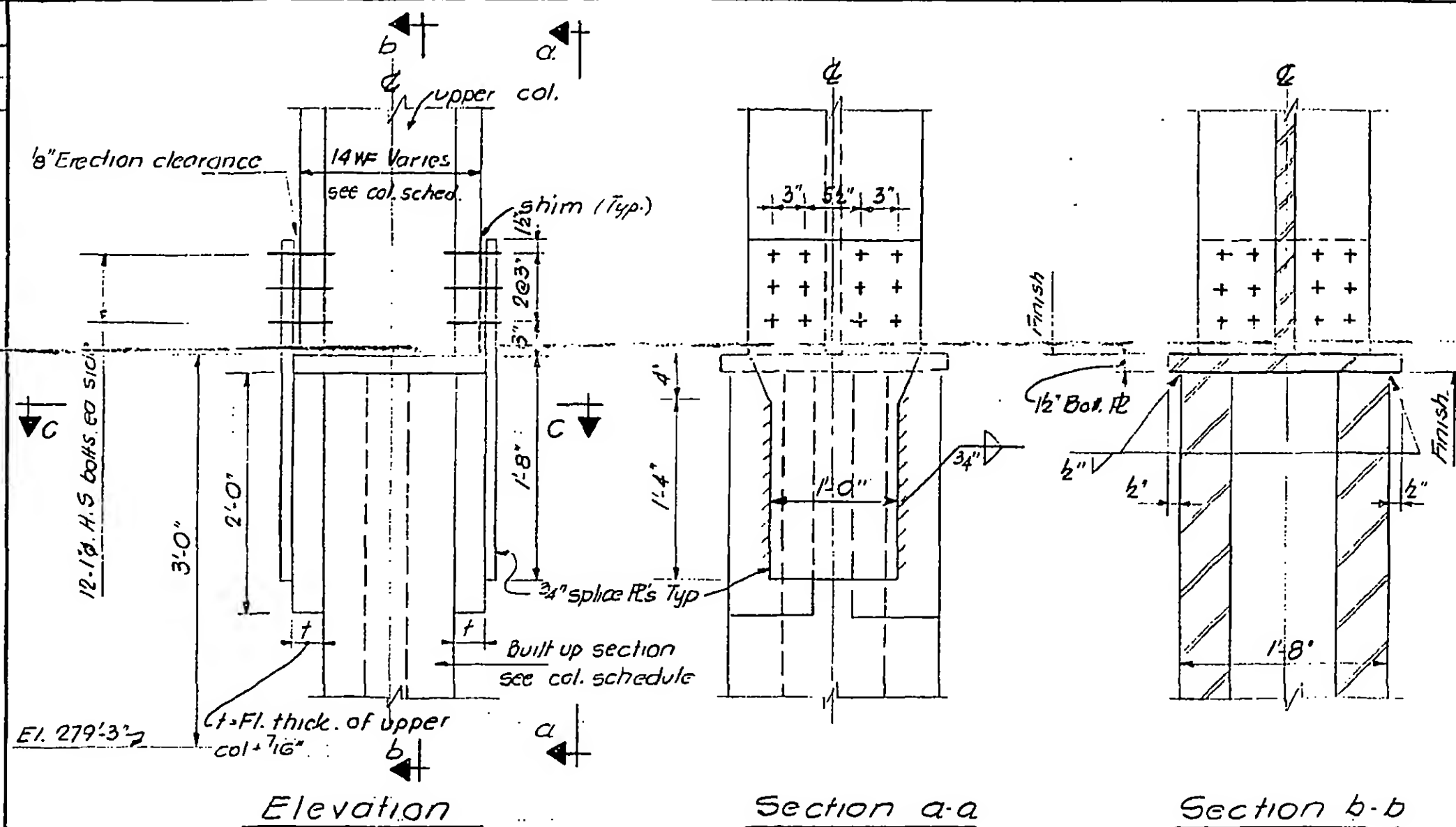


10-JK2-35

REVISIONS

11-5-68

12-3-68

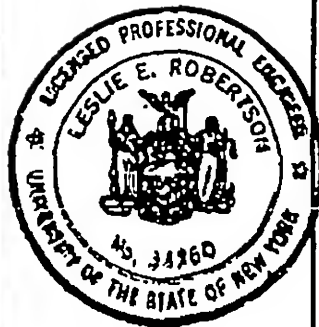


- Contractor's option to replace this R.P. weld with fillet weld. Size of fillet weld to be not less than $\frac{D-0.25}{0.707}$ (in.)

Note:

1. See notes on 10-JK2-36
2. Field's shall not be less than $D = \sqrt{\frac{T}{6}} + 4$
Where T = Thickness of thinner R at the joint.

10-JK2-35A



SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SPLICE DETAIL

DATE 6-7-68

REVISIONS

11-5-68

5-29-69

Built up section
see col. schedule

* 2 1/2" Typ.

El. 264'-0"

2" Butt R
Fy same as lower col.

R "A"

14 WF varies
see col. schedDetail of shear head
(if any)
See 10-JK4-3 & 4

Finish

1/2" min. Typ.

1/2" R Typ

AWS. min

2.58" stiff
one each side

Elevation

Welding similar to detail 104 (10-JK2-7)
except avoid welding at end of col.
flanges.

El. 264'-0"

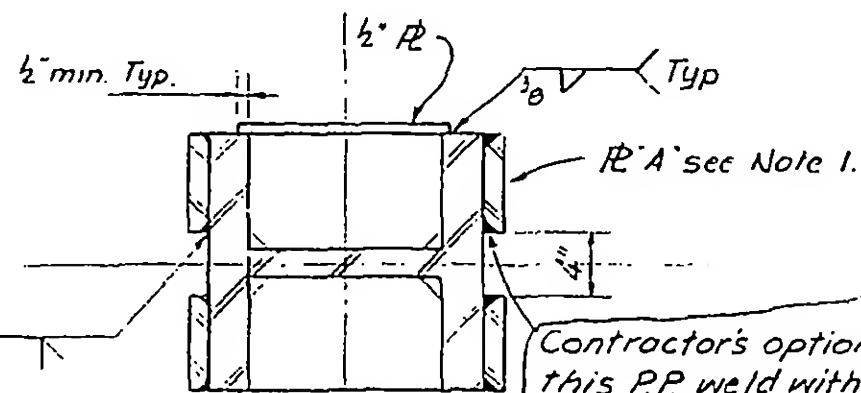
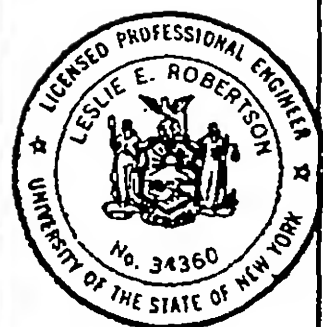
5'06"

8"

7"

R's "A"

Section A-A



Section C-C

Notes:

1. For col. No. & detail of R "A" see schedule on 10-JK2-35C
2. All welds to be E70xx
3. See Notes on 10-JK4-3 for temp. steel support under slab.
4. * If no shear head occurs, Butt-R to project only 1/2" from face of either upper or lower column.

Contractor's option to replace
this P.P. weld with fillet weld.
Size of fillet weld to be not less
than $\frac{D-0.25}{0.707}$ (in.)

Weld "a" shall not be less than $D \cdot \sqrt{F_y + 1/4}$
Where t = thickness of thinner R at the joint.

10-JK2-35B

S.C.

REVIEWED
E.L.

REVISIONS

9-4-68

COLUMN NO.	P "A"		
	t	L	Weld "o" (P.P.)
J72 - 7	1 1/4"	1'-8"	3/4"
J72 - 8	1 1/4"	1'-8"	3/4"
J72 - 9	1"	2'-0"	3/4"
J72 - 10	1 5/8"	1'-8"	3/4"
J72 - 11	1"	2'-0"	3/4"
J72 - 12	1 3/4"	1'-10"	3/4"
J73 - 7	2 3/8"	1'-10"	7/8"
J73 - 8	2 3/8"	1'-10"	7/8"
J73 - 9	2 1/4"	1'-10"	7/8"
J73 - 11	2 1/4"	1'-10"	7/8"
J73 - 12	2 3/8"	1'-10"	7/8"
J74 - 6	NOT	REQ'D	

COLUMN NO.	P "A"		
	t	L	Weld "o" (P.P.)
J74 - 7	NOT	REQ'D	
J74 - 8	1 1/4"	1'-8"	3/4"
J74 - 9	1 5/8"	1'-8"	3/4"
J74 - 10	1 3/8"	1'-8"	3/4"
J74 - 11	1 1/4"	1'-8"	3/4"
J75 - 6	1 5/8"	1'-8"	3/4"
J75 - 7	1 3/4"	1'-10"	7/8"
J75 - 8	NOT	REQ'D	
J75 - 14	NOT	REQ'D	
J75 - 15	1 5/8"	1'-8"	3/4"



Notes:

1. See detail on 10-JK2-35B

2. P "A" to have Fy - 42 ksi

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

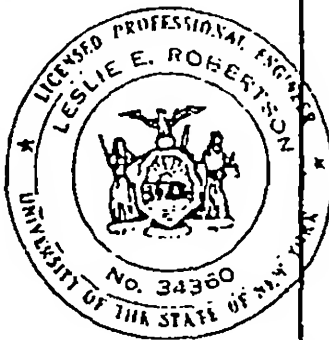
TITLE	SCHEDULE OF COLUMN SPLICES
-------	----------------------------

DATE 4-26-68

REVISIONS

9-4-68

4-4-69

[illegible]

DRAWN
S.C.

REVIEWED
E.L.

Notes:

1. See Dwg. 10-JK2-37 for Type I column splice detail.
2. Material:
 - a. Splice Rs — A-36
 - b. Other Rs — To have F_y same as lower column.
3. All welds to be E70xx.
4. All bolts to be A-325 H.S. Friction Type.

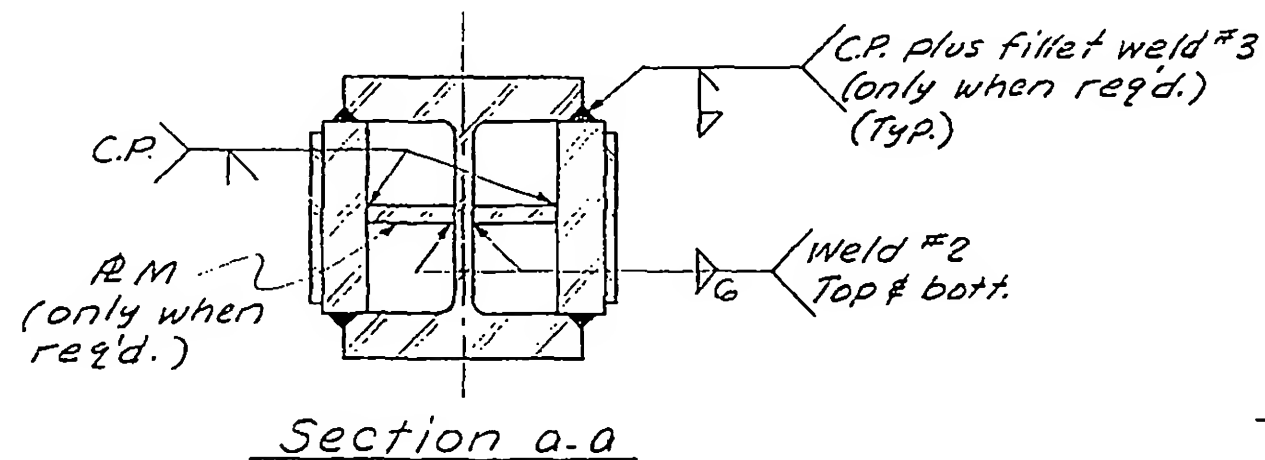
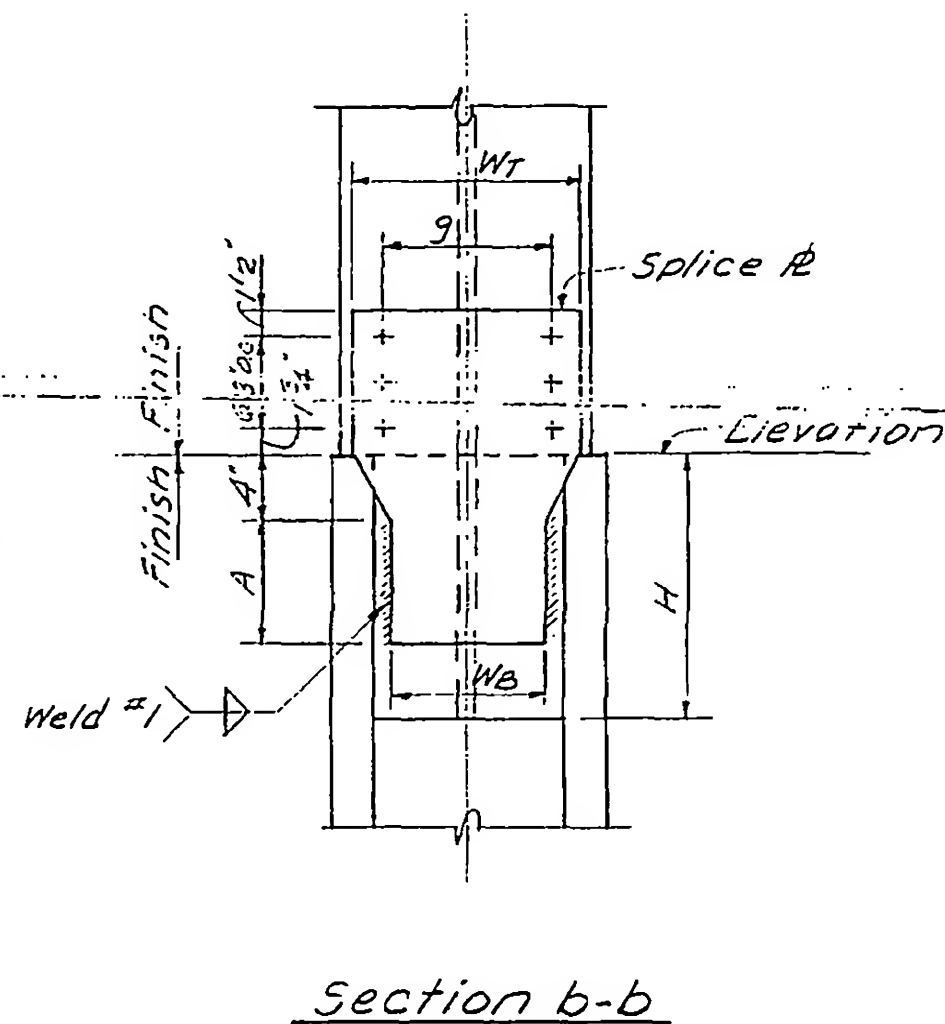
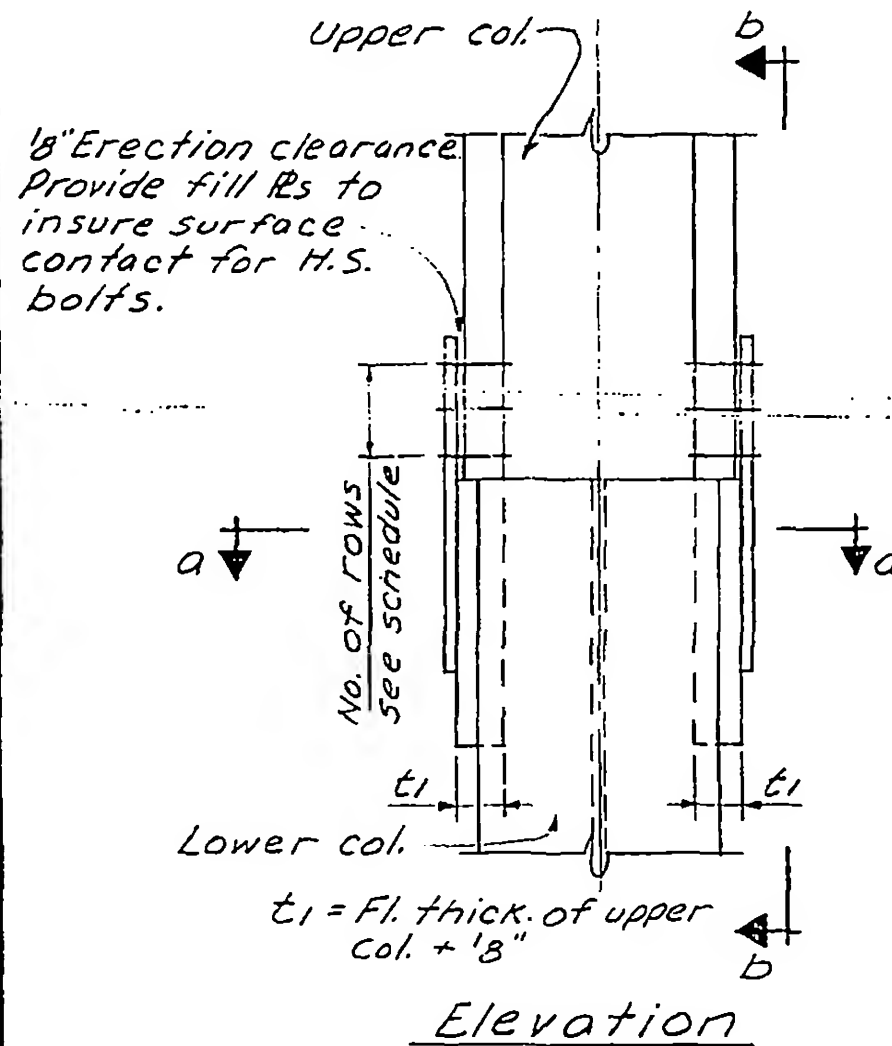
10-JK2-36

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SPLICE DETAILS

DATE 4-26-68

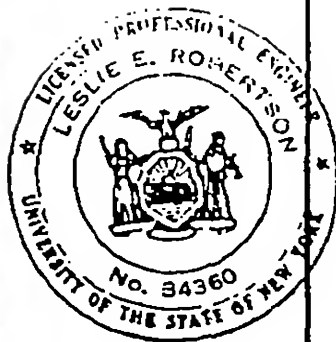
REVISIONS



Note:
1. See schedule on 10-JK2-36.

TYPE I

10-JK2-37



SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SPLICE DETAILS

DATE 4-26-68

REVISIONS

6-17-68

11-5-68

1-8-69

1/8" Erection clearance.
Fill R's by others2 Ls 4x3x2x0'-8 1/2"
(4" leg vert.)12-1" H.S. bolts ea. side
(A325 Friction type)
By others2 3/8" R's
(One ea. side)14W550
(By others)7/8" splice R's
(Typ.)

14W287

Section A-A

1/8" Erection clearance
Fill R's by others3-3/4" H.S. Bolts
(A325 Frict. type)
By others

1/2" Butt R's

Section B-B

Elevation

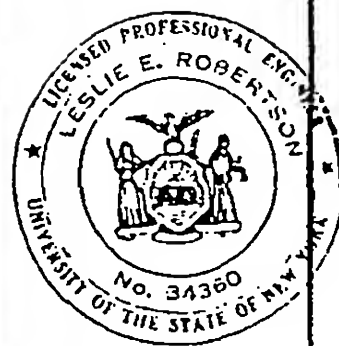
Splice R.

15/8" Typ.

Section C-C

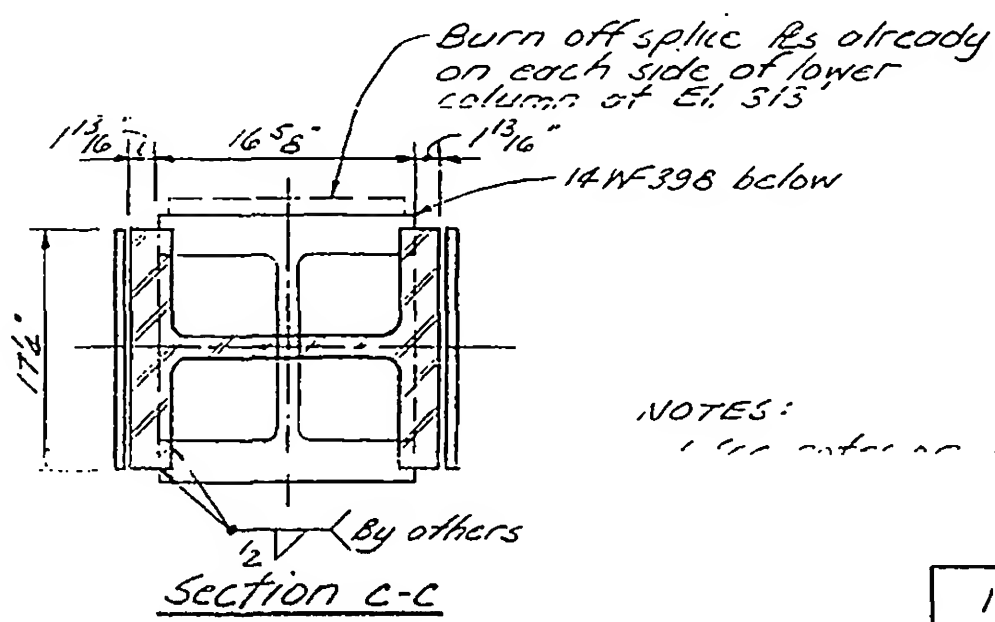
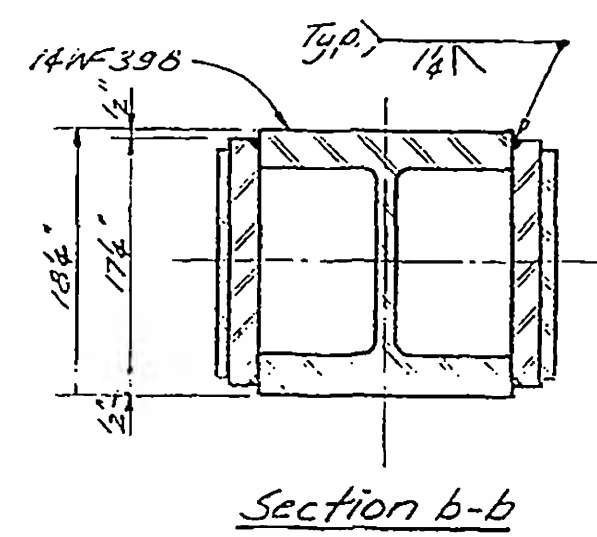
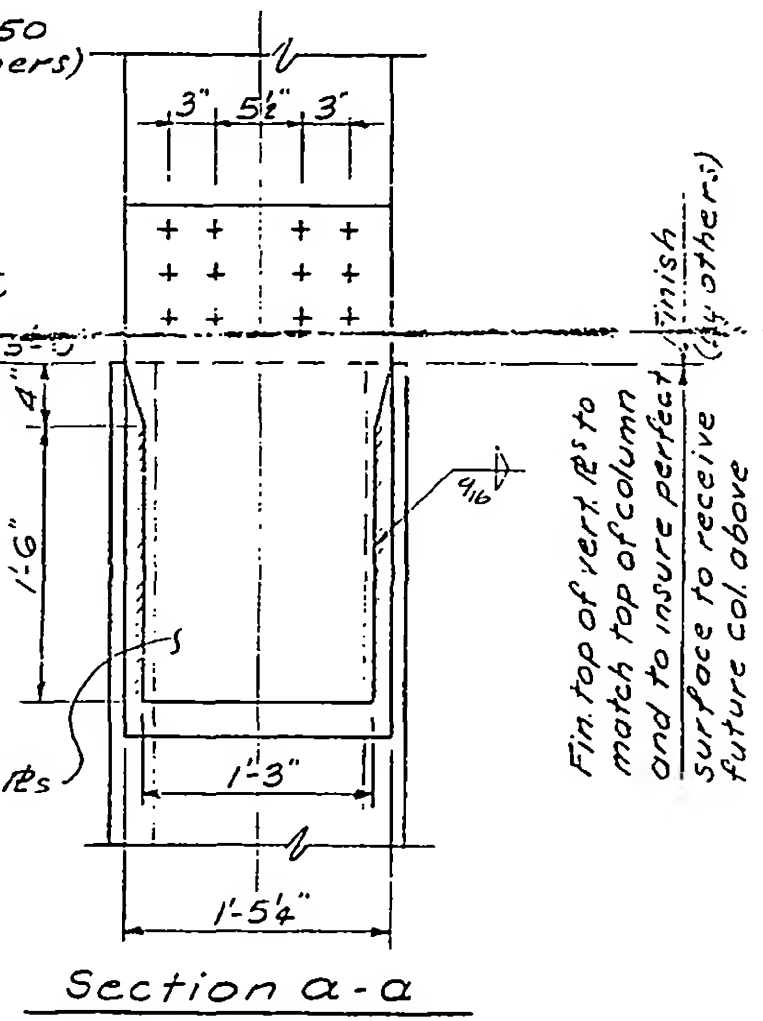
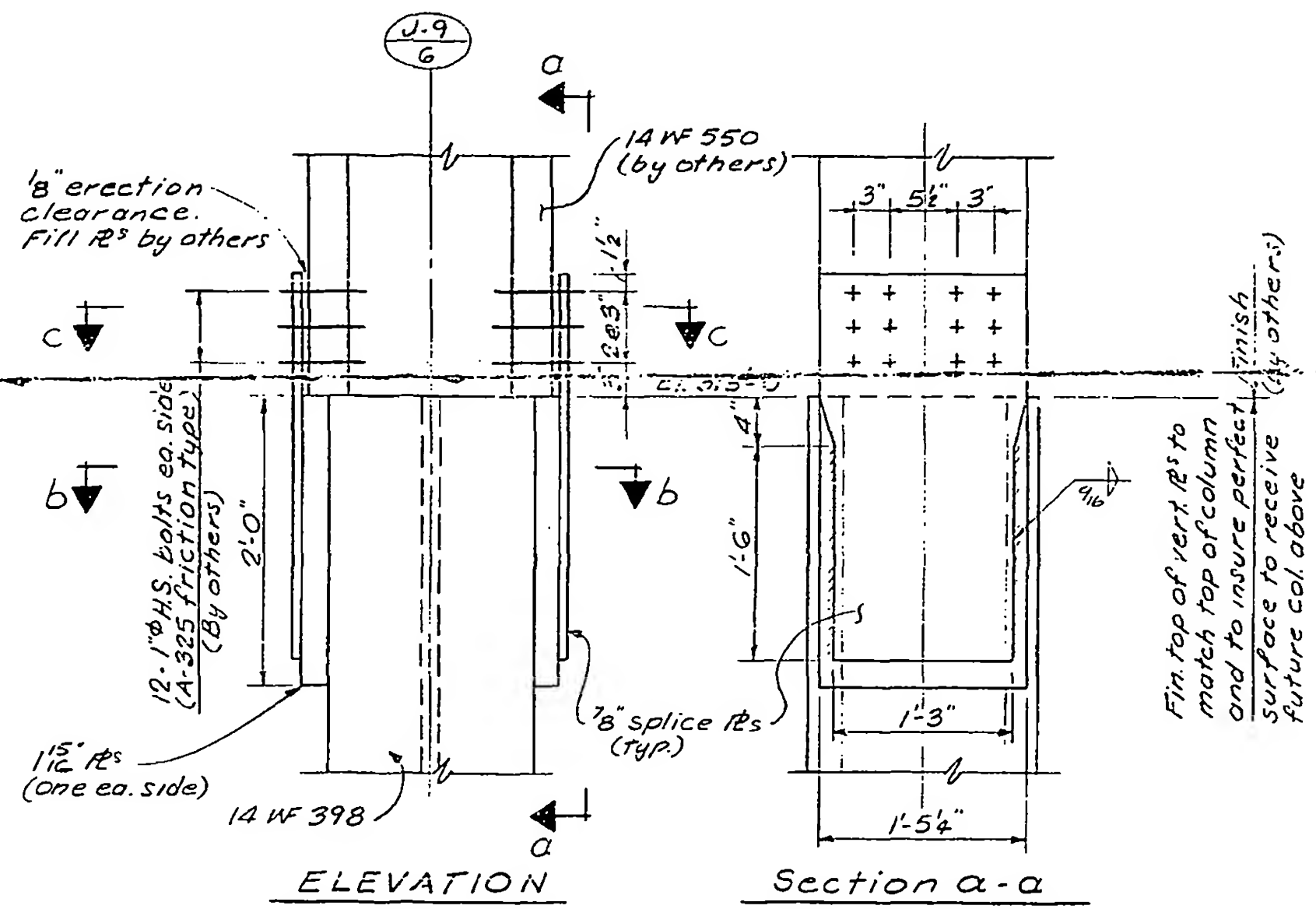
Note:

1. See notes on 10-JK2-36.

DRAWN
S.C.
REVIEWED
E.L.

10-JK2-38

REVISIONS



NOTES:
 1. See notes on 10-147-26



DESIGNED
 DRAWN S.C.
 REVIEWED E.L.

10-JK2-38A

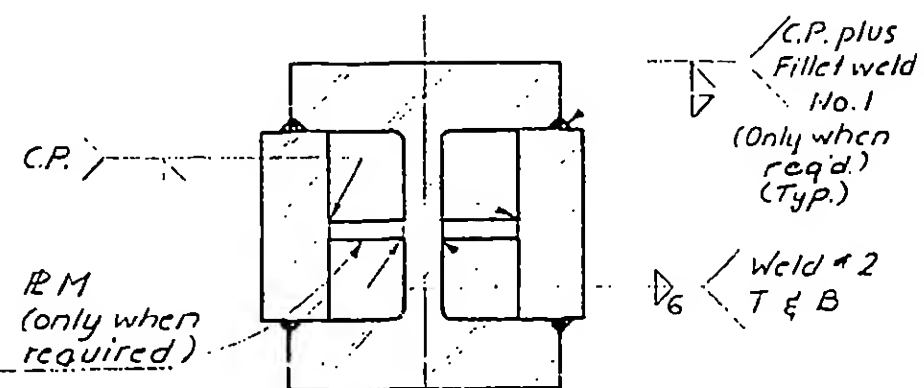
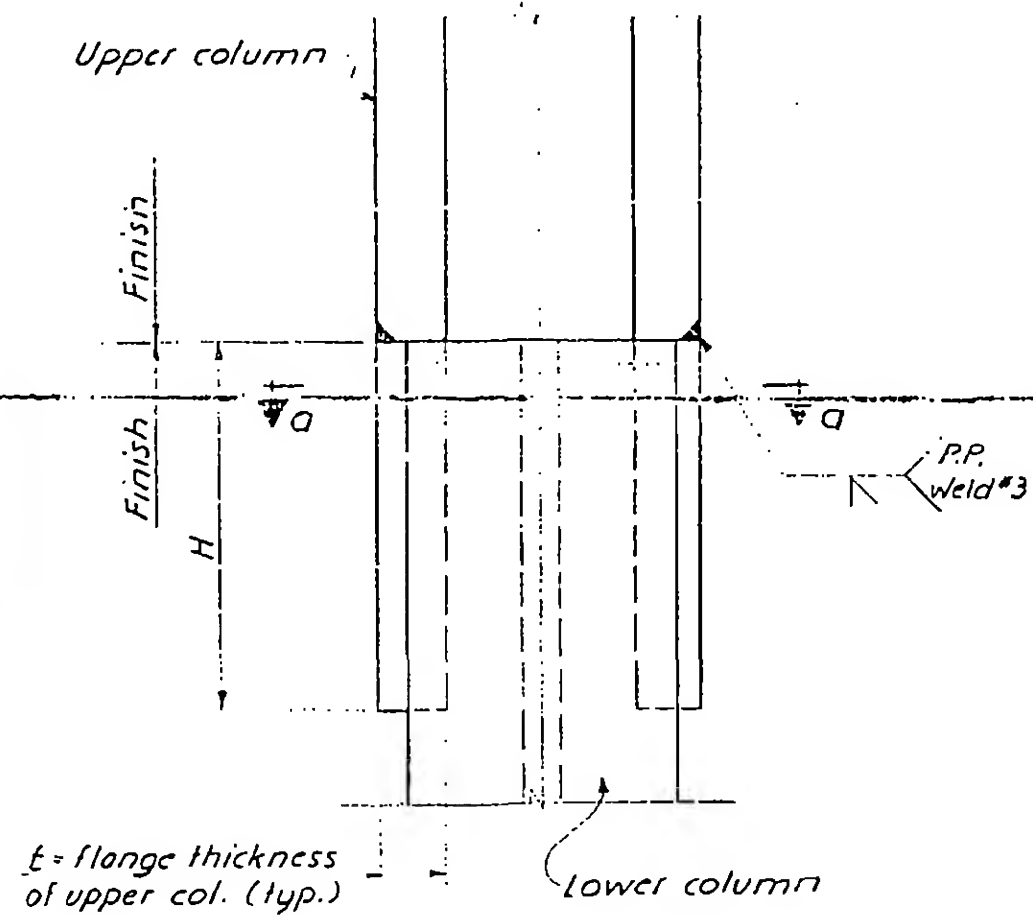
Structural & Civil Engineers

PROJECT *THE WORLD TRADE CENTER*

TITLE COLUMN SPLICE DETAIL

DATE 6-7-68

REVISIONS



Section a-a

SCHEDULE

[illegible]

Notes:

1. All R's to have Fy same as lower col.
2. All welds to be E 70 xx.



10-JK2-39

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

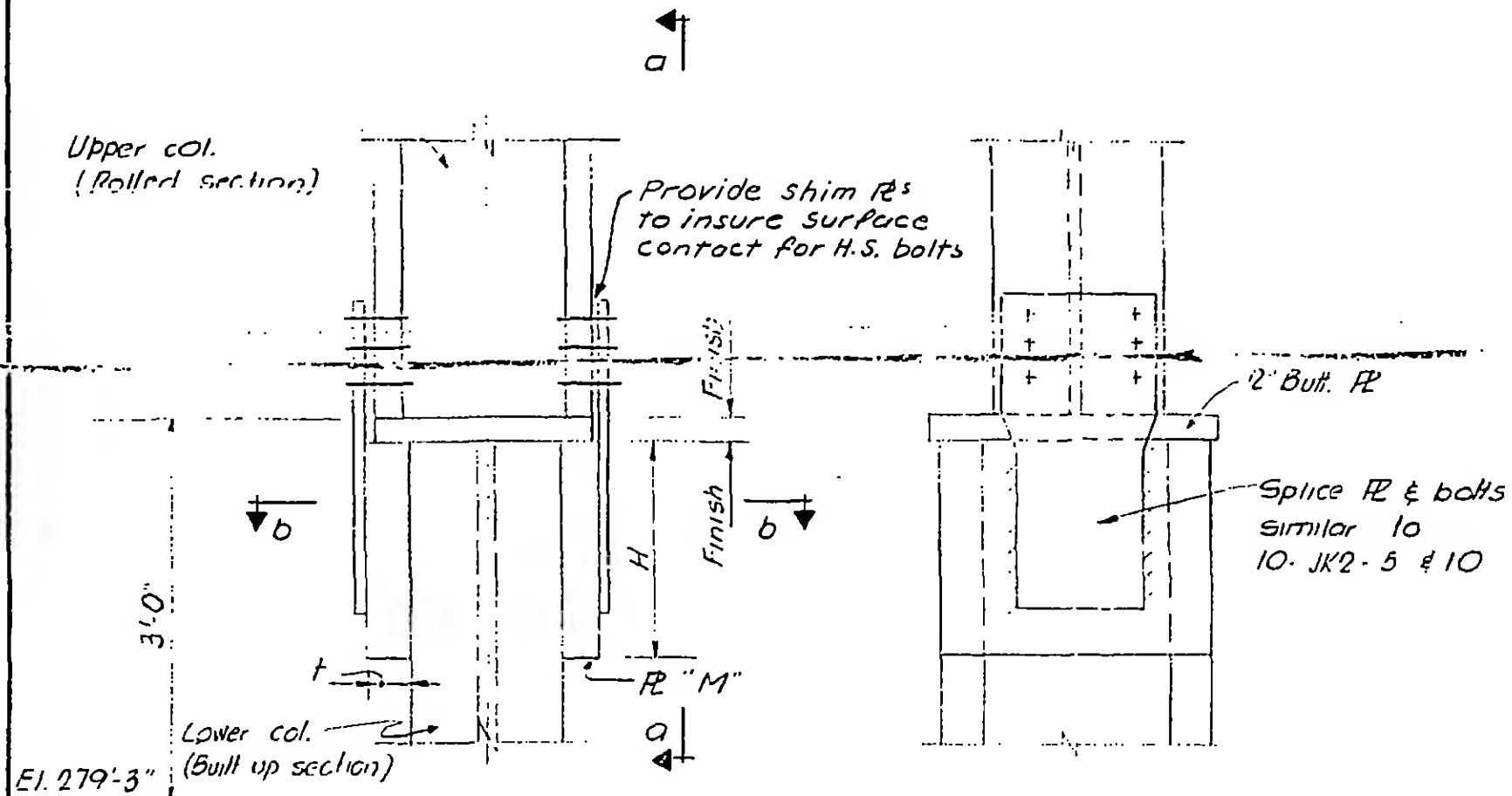
Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SPLICE DETAIL

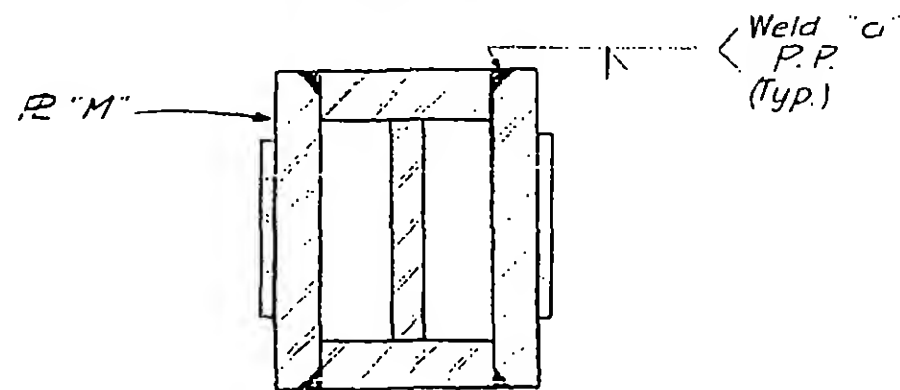
DATE 6-7-68

REVISIONS



Elevation

Section a-a



Notes.

1. See 10-JK2-41 for schedule
2. PL M to have F_y same as lower col.
3. All welds to be E 70xx



10-JK2-40

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SPLICE DETAIL

DATE 6-7-68

REVISIONS

11-5-68

DETAIL NO	COLUMN SIZES		R "M"		WELD "a" (P. P.)
	UPPER	LOWER	t	H	
1	14 WF 211	2 R's 12 x 2 ³ / ₄ 1 R 14 ¹ / ₂ x 1 ¹ / ₂	2"	2'-0"	1 ¹ / ₄ "
2	14 WF 219	2 R's 12 x 2 ³ / ₄ 1 R 14 ¹ / ₂ x 1 ¹ / ₂	2 ¹ / ₁₆ "	2'-4"	1 ¹ / ₄ "
3	14 WF 167	2 R's 12 x 2 ¹ / ₂ 1 R 15 x 1	1 ¹¹ / ₁₆ "	1'-10"	1 ¹ / ₈ "
4	14 WF 142	2 R's 12 x 2 1 R 16 x 1	1 ¹ / ₂ "	1'-10"	1"
5	14 WF 264	2 R's 12 x 3 1 R 14 x 2	2 ³ / ₈ "	2'-6"	1 ³ / ₈ "
6	14 WF 228	2 R's 12 x 5 1 R 10 x 3	2 ¹ / ₈ "	2'-4"	1 ³ / ₁₆ "
7	14 WF 211	2 R's 12 x 5 1 R 10 x 3	2"	2'-2"	1 ¹ / ₈ "
8	14 WF 150	2 R's 12 x 2 1 R 16 x 1	1 ⁹ / ₁₆ "	2'-0"	1"
9	14 WF 136	2 R's 12 x 2 1 R 16 x 1	1 ¹ / ₂ "	2'-2"	7 ⁷ / ₈ "
10	14 WF 176	2 R's 12 x 5 1 R 10 x 3	1 ³ / ₄ "	2'-0"	1 ¹ / ₈ "
11	14 WF 119	2 R's 12 x 5 1 R 10 x 3	1 ³ / ₈ "	1'-10"	7 ⁷ / ₈ "

NOTE:

1. See Detail on 10-JK2 40

10-JK2-41



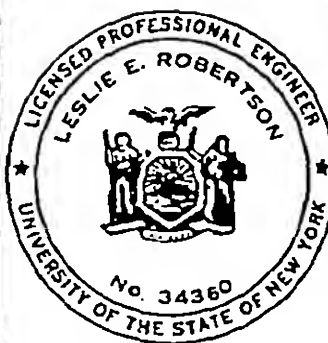
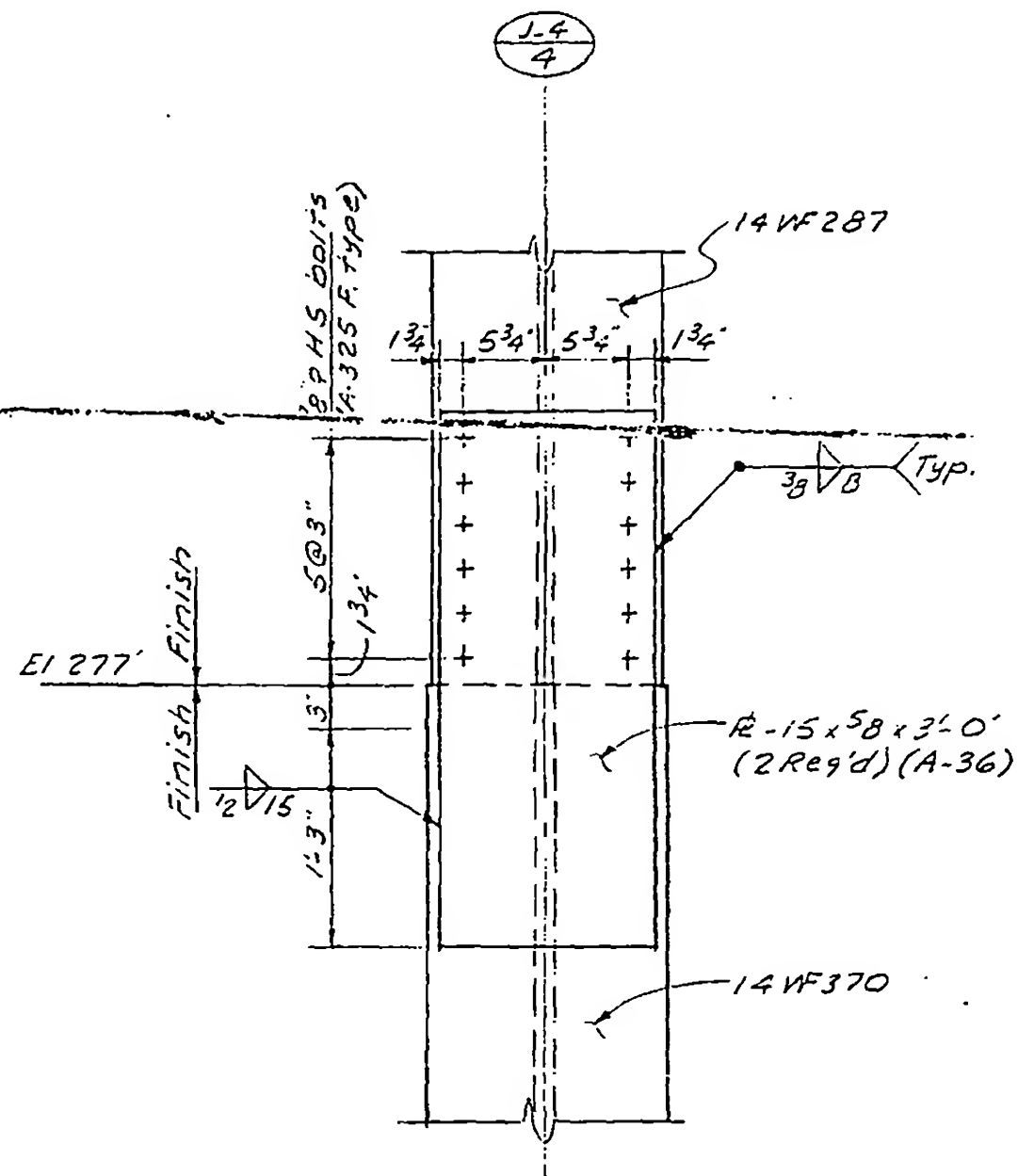
Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE	COLUMN SPLICE DETAIL
-------	----------------------

DATE 4-18-69

REVISIONS



DESIGNED

DRAWN
A.F.

REVIEWED
F. J.

10-JKZ-42

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

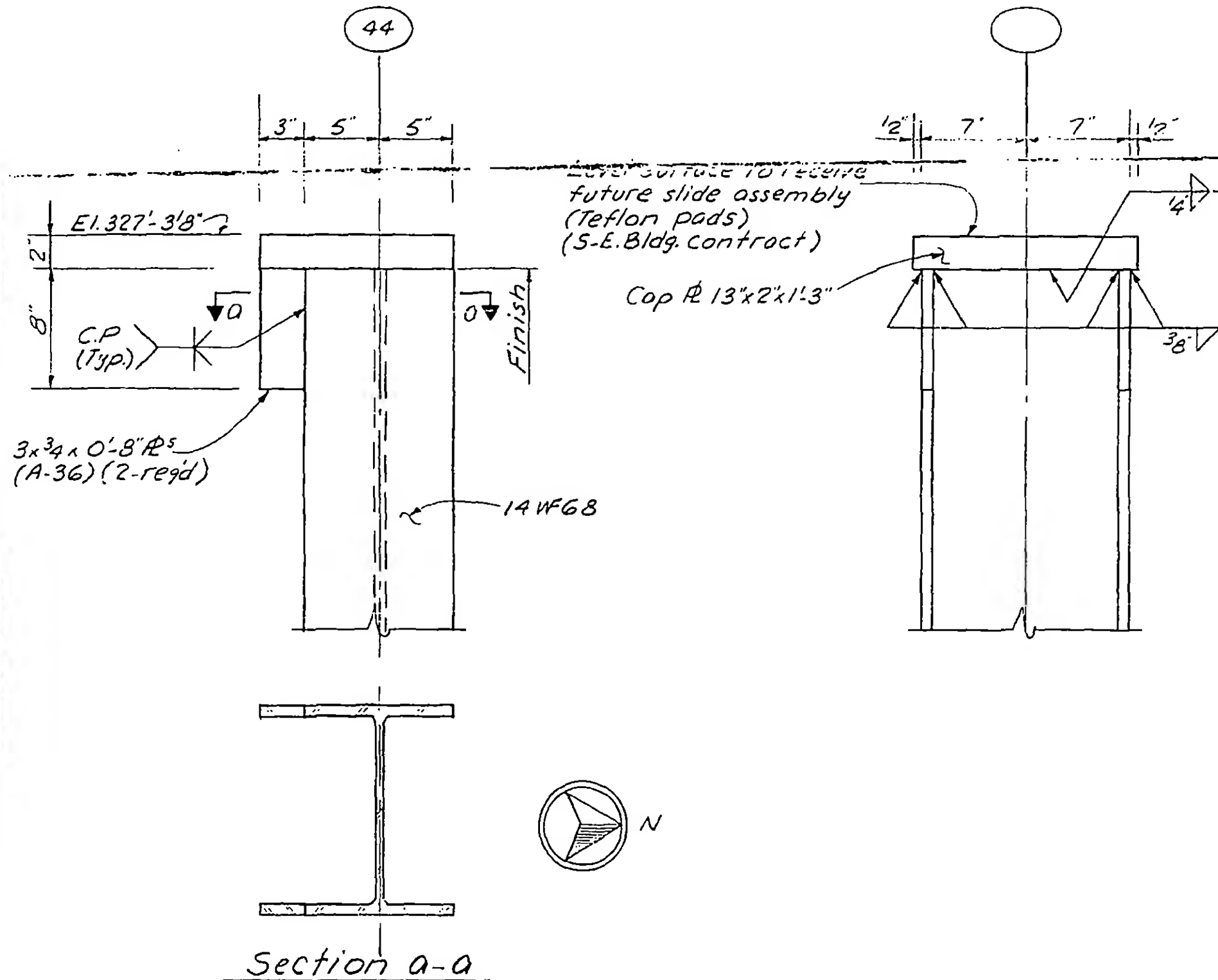
Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE DETAIL OF COLUMN CAP OVER COL. K44-1

DATE 8-10-70

REVISIONS



DESIGNED

DRAWN A.L. FRANQUI

REVIEWED E. LIU

10-JK2-43

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE TYPICAL DETAIL OF COLUMN BASE-PLATE

DATE 10-20-67

REVISIONS

11-8-67
Gen revisions
2-28-68
6-7-68
9-4-68

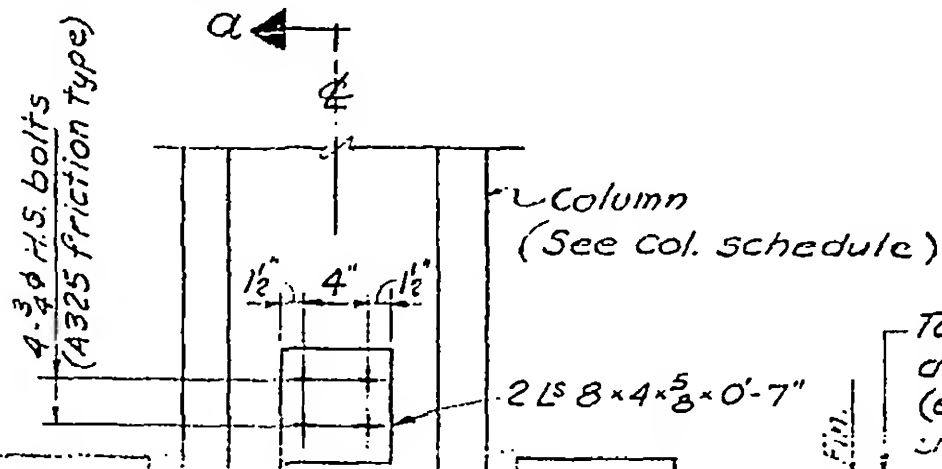
Design thickness
as shown in
col. schedule

Top of Ftg.
(by others)

Grout 'G'
min. 2"
(See sch. below)

Provide proper shims (3" x 3")
as reqd. to level the base R
(3 per col. base R)

Ftg. depth
min. 1'-0" or 6"
below bott. of
anchor bolts
whichever is
larger



Top of base R
at El. 241'
(except as
shown on Plans)

Fin.
(if reqd.)

1 5/16" hole
(Typ.)

B. to B. of LS
equal to col.
web thickness + 1/2"

2-1" ϕ 3/4" A. Bolts

Section a-a

Design thickness (T)	Grout thickness (G)
N	2"
N 1/8	2 3/8"
N 1/4	2 1/4"
N 3/8	2 1/8"
N 1/2	2"
N 5/8	2 3/8"
N 3/4	2 1/4"
N 7/8	2 1/8"

Where N is any integer
or base R thickness

Plan

10-JK3-2

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

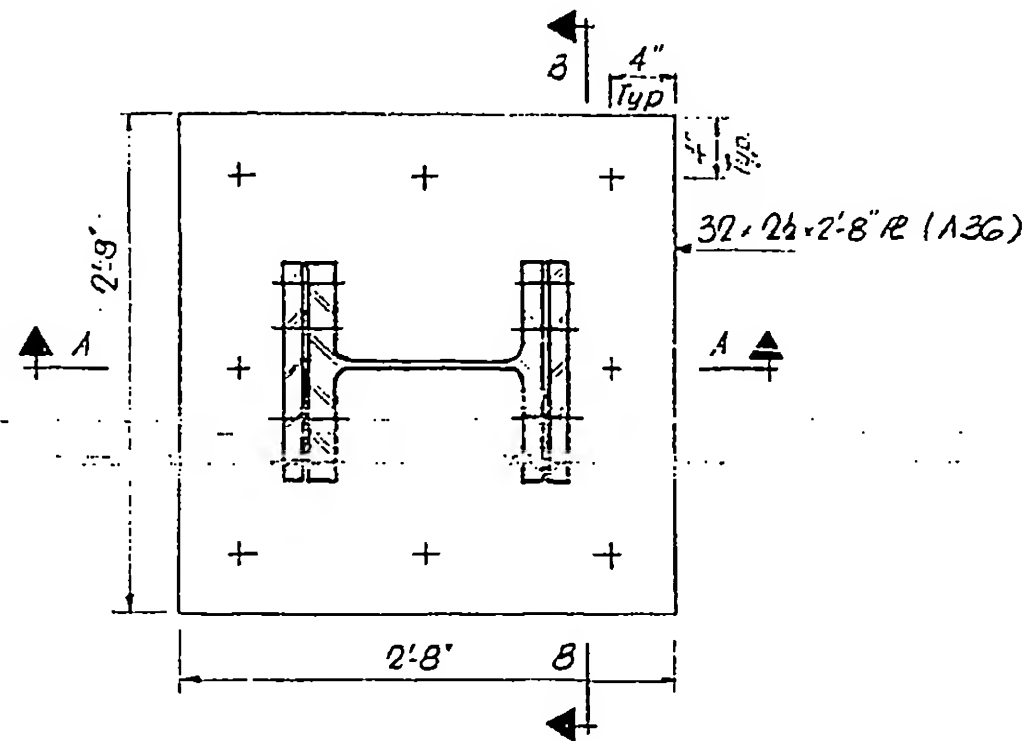
PROJECT THE WORLD TRADE CENTER

TITLE DETAIL OF COLUMN BASE PLATE J3-14

DATE 6-7-68

REVISIONS

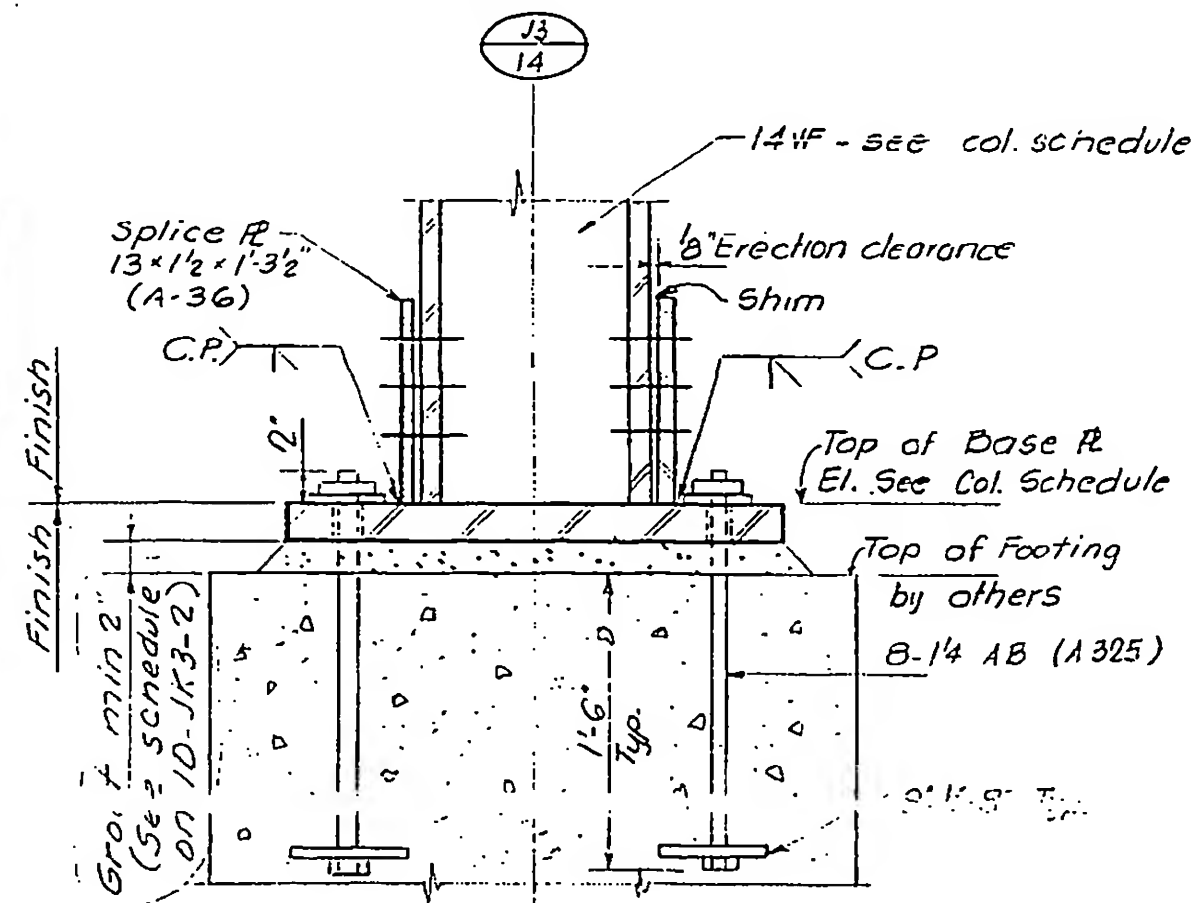
9-4-68



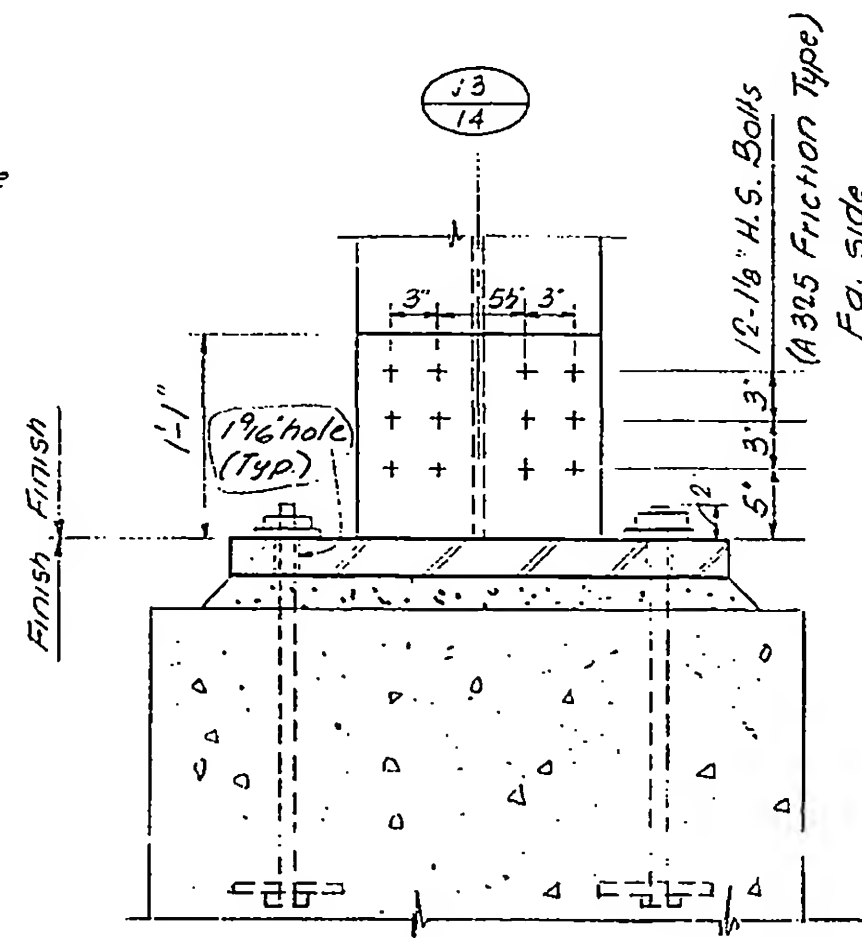
Notes:

1. All welds to be E 70 xx
2. Provide leveling shim R's as shown on 10-JK3-2

Plan

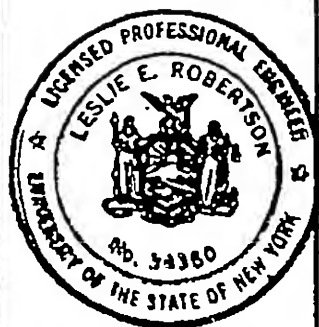


Section A-A



Section B-B

10-JK3-2A



SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

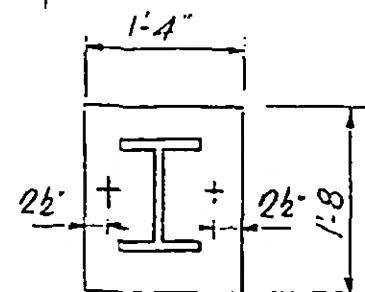
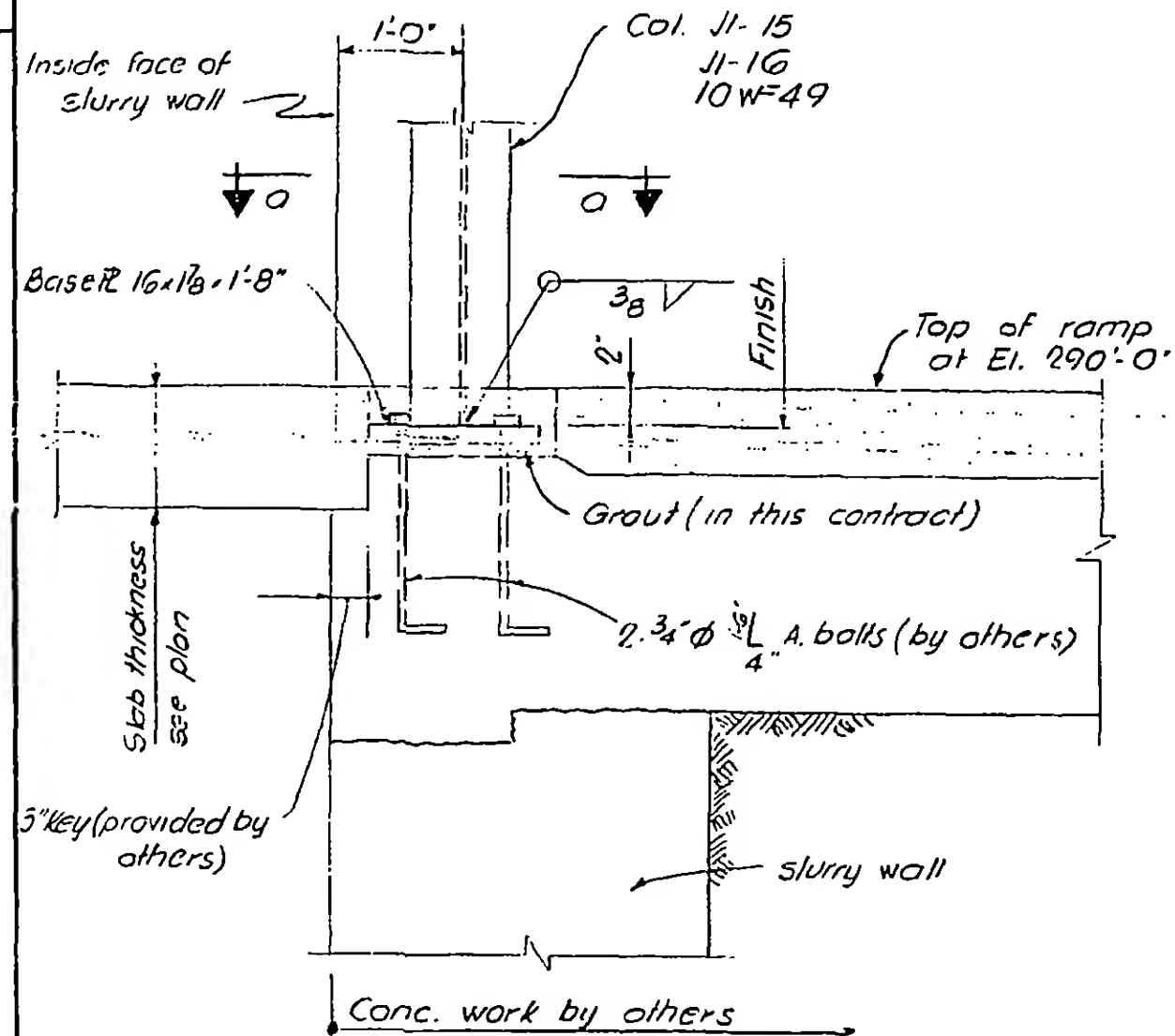
Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN BASE R DETAIL AT TRUCK RAMPS

DATE 6-7-68

REVISIONS



Section a-a



10-JK3-2B

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

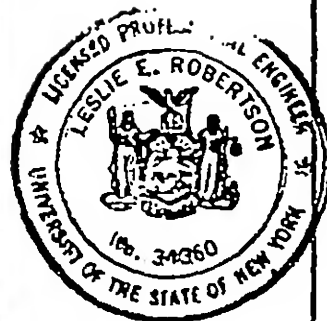
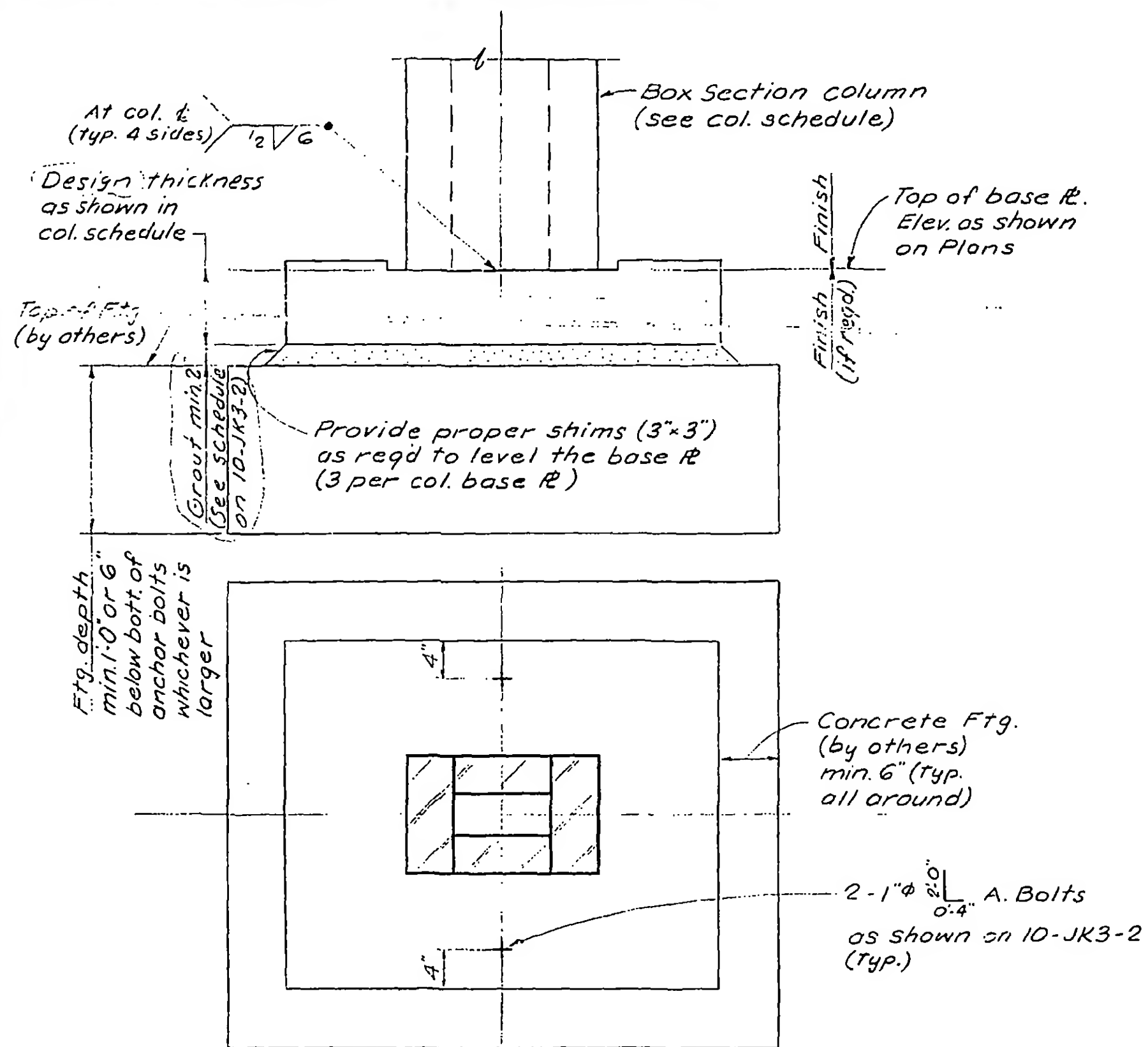
PROJECT THE WORLD TRADE CENTER

TITLE TYP. COLUMN BASE & DET. UNDER BOX SECT. COL.

DATE 6-28-68

REVISIONS

9-4-68



10-JK3-2C

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

Structural & Civil Engineers

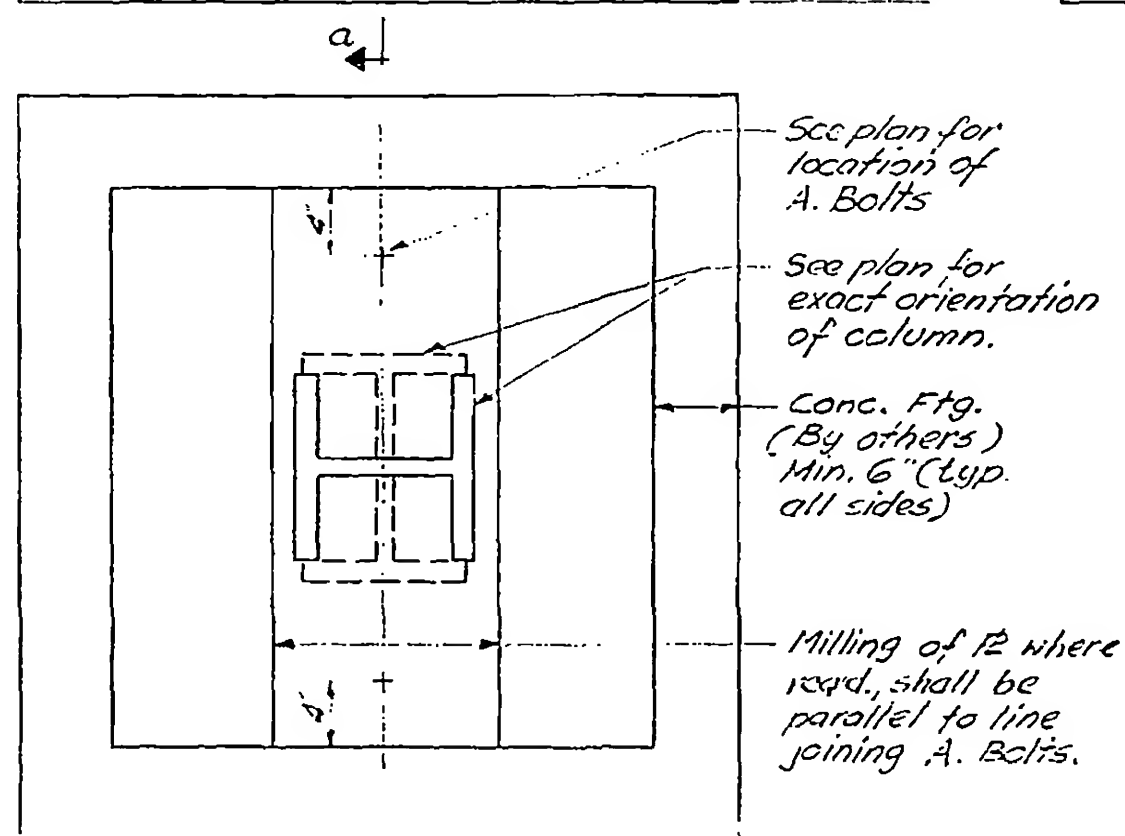
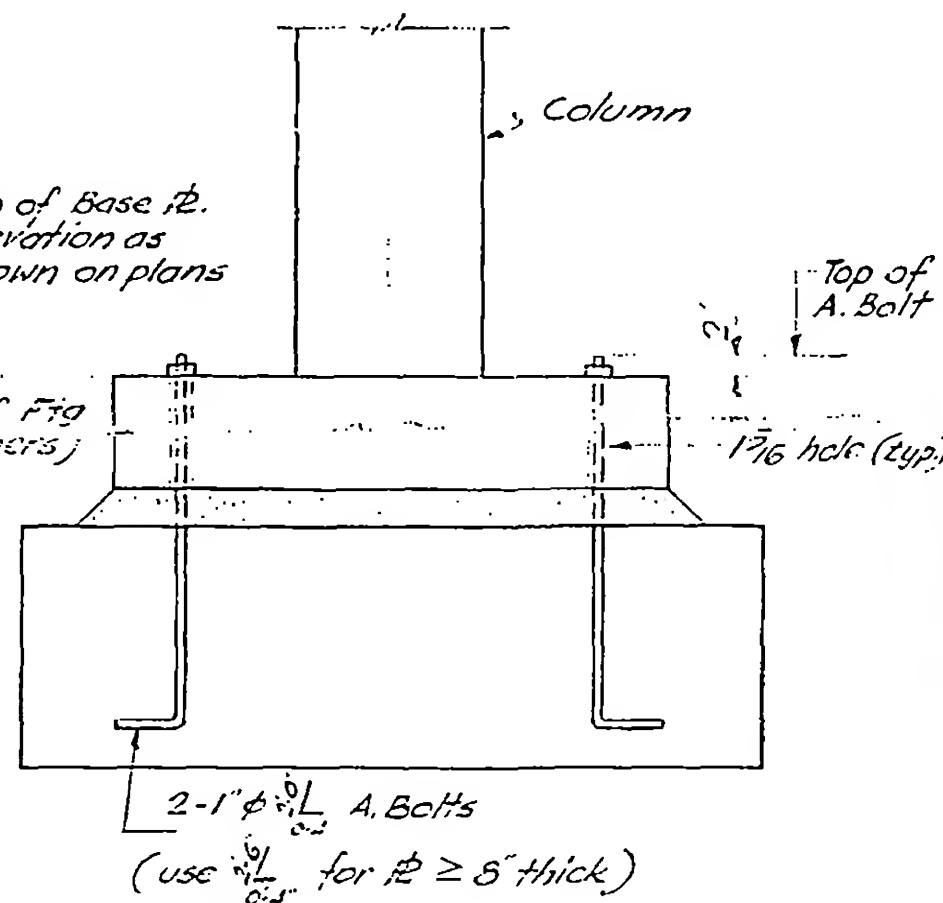
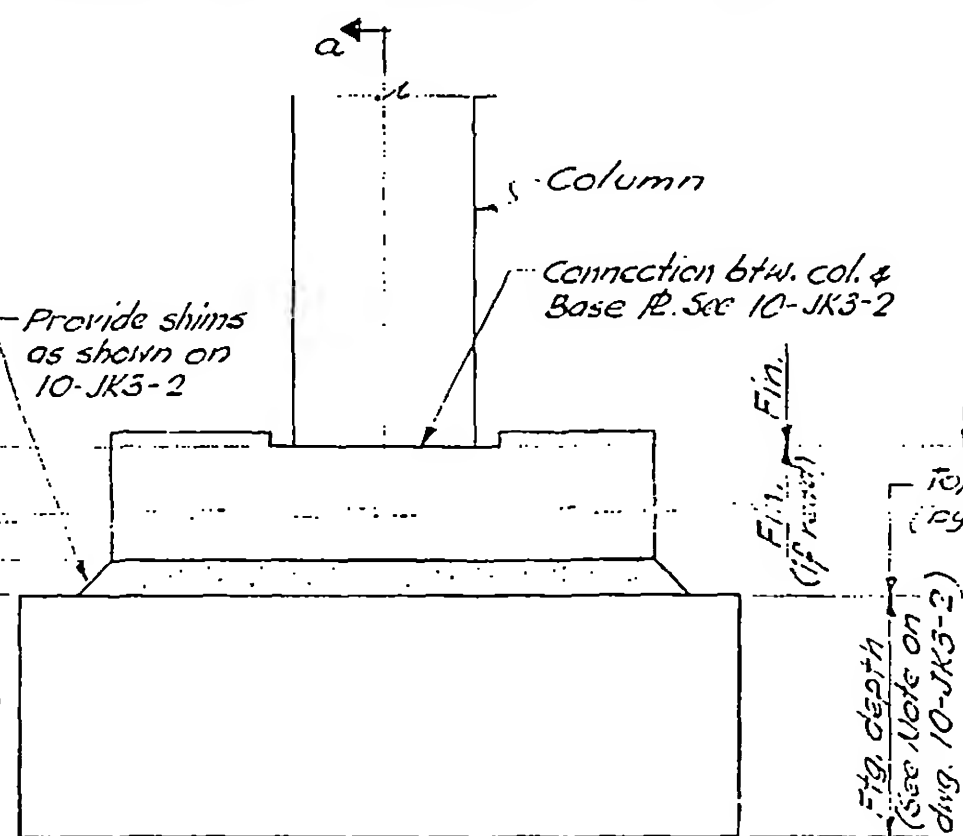
PROJECT THE WORLD TRADE CENTER

TITLE TYP DETAIL OF COLUMN BASE - R2S (with * * as shown on plans)

DATE 8-9-68

REVISIONS

Design thickness as shown in col schedule or on plans
Grout 'G' Min 2" (See schedule below)



Plan

Design thickness (T)	Grout thickness (G)
N	2"
N/5	2 1/8"
N/4	2 1/4"
N/3	2 1/2"
N/2	2"
N/3	2 5/8"
N/4	2 1/4"
N/5	2 1/8"

Where N is any integer of base R thickness



DESIGNED

DRAWN

REVIEWED

10-JK3-2D

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

Structural & Civil Engineers

PROJECT

THE WORLD TRADE CENTER

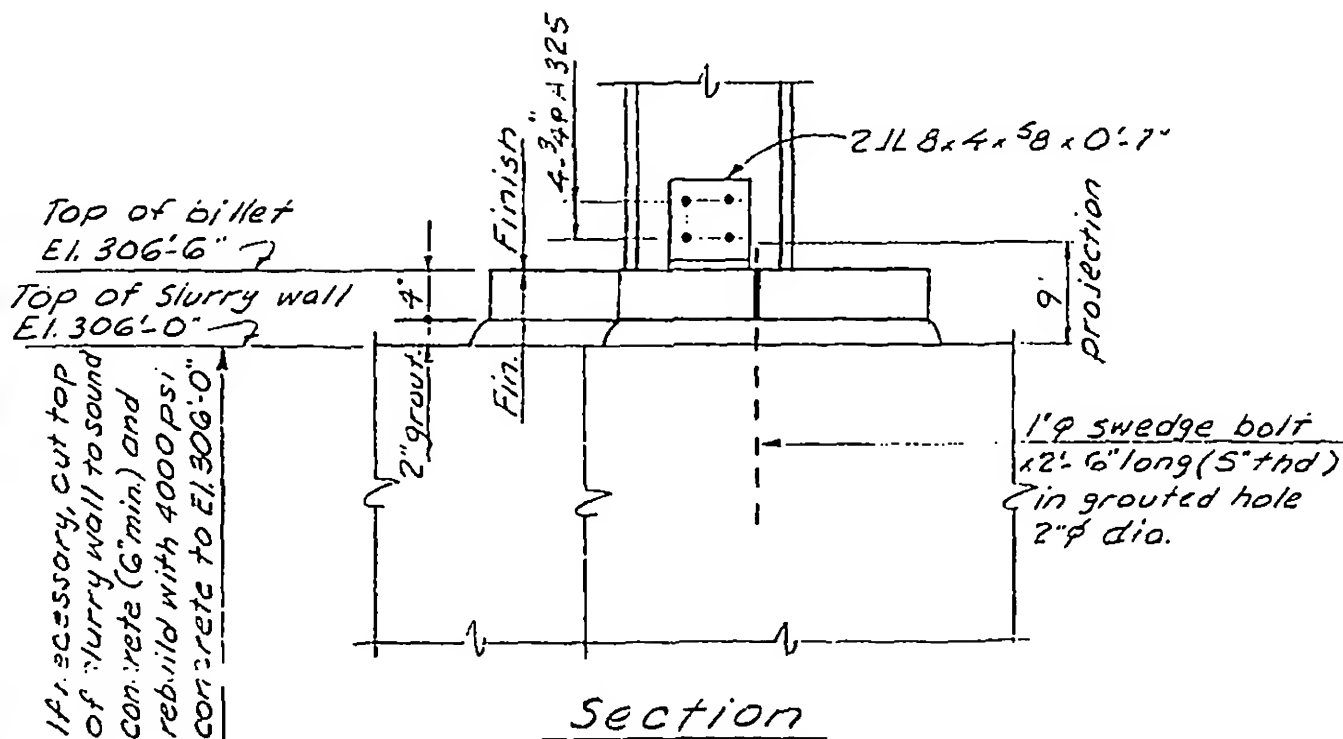
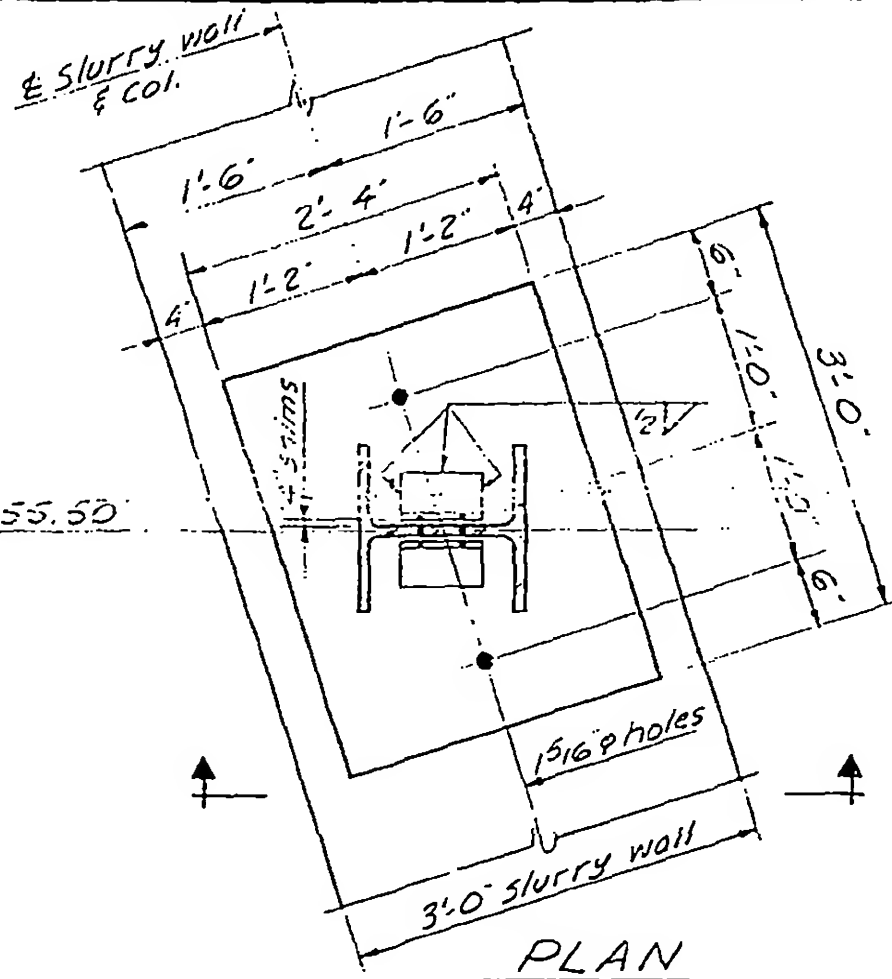
TITLE

DETAIL OF COLUMN BASE PLATE M42-3

DATE

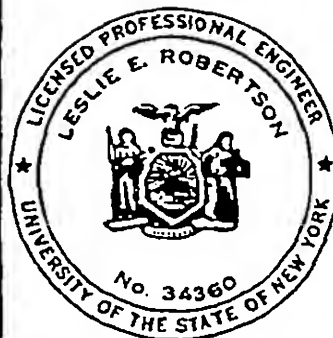
4-17-69

REVISIONS



Notes:

1. Provide proper shims (3"x3") as required to level the billet plate (3 req'd.)
2. All material shown to be A-36 steel.
3. All welds to be E70xx



DESIGNED

DRAWN
A.L. FRANQUI

REVIEWED

E.L.

10-JK3-2E

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

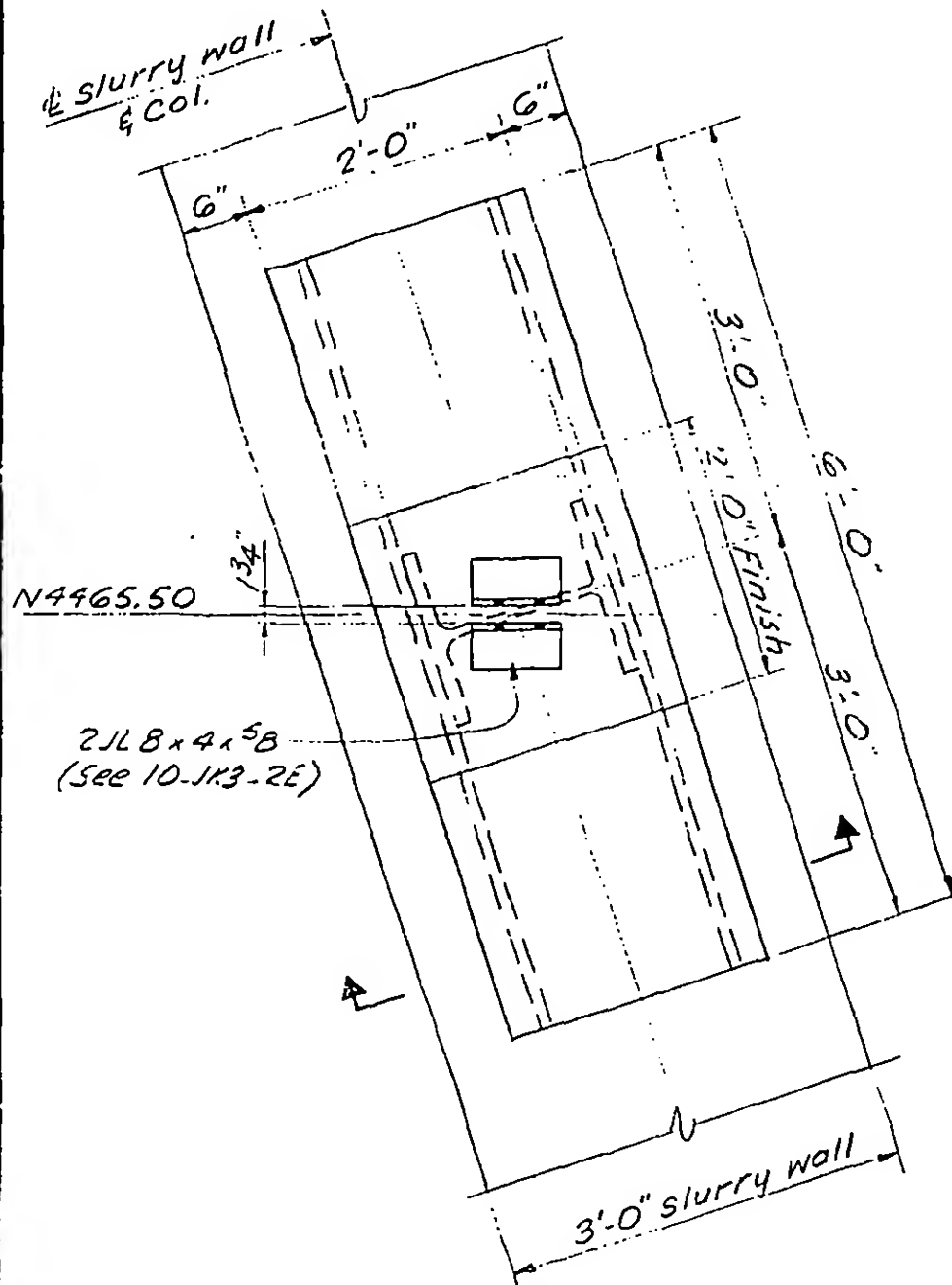
Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

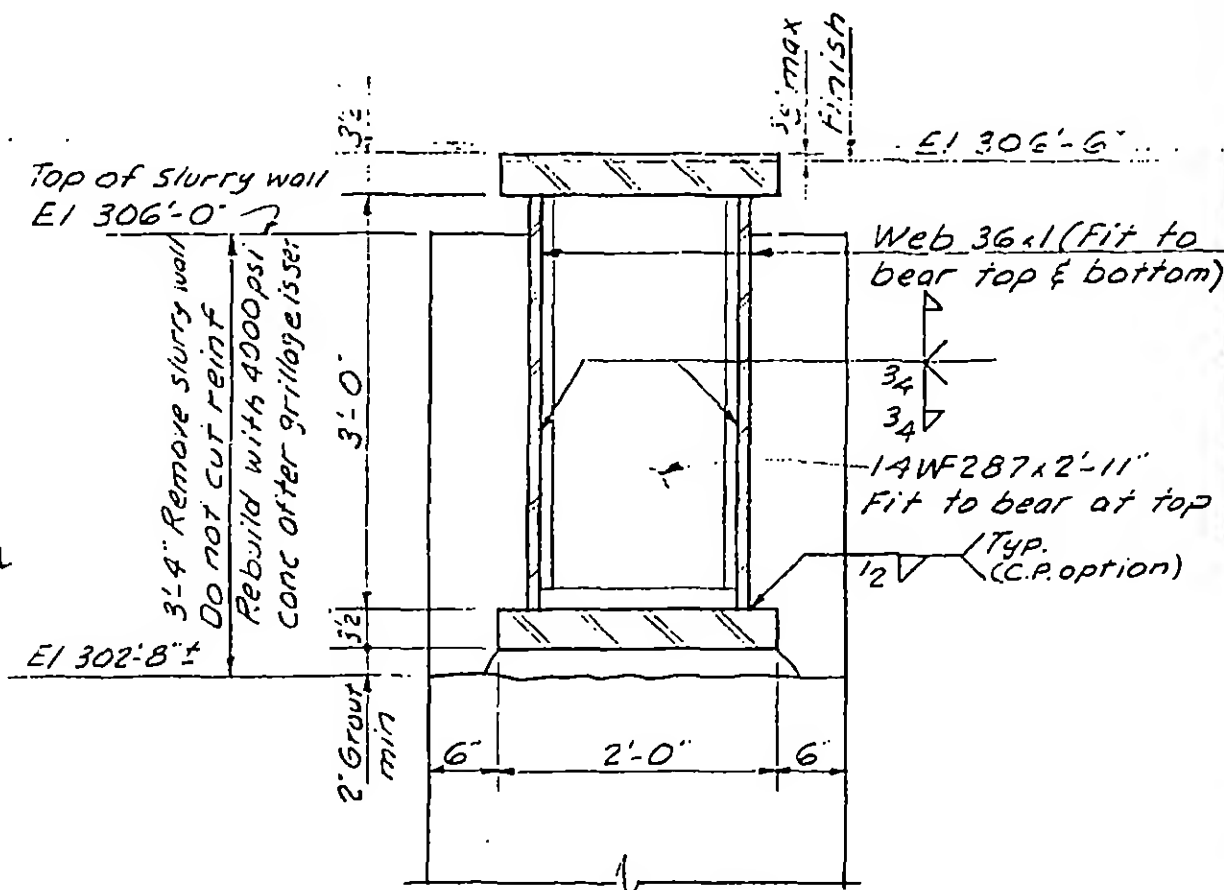
TITLE DETAIL OF COLUMN BASE M48-5

DATE 4-17-69

REVISIONS



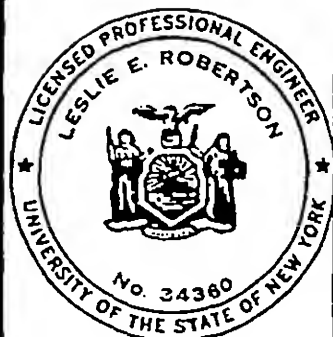
Plan
(Column not shown)



Section

Notes:

1. All material shown to be A-36 steel.
2. All welds to be E70xx.



DRAWN
S.C.

REVIEWED
E.L.

10-JK3-2F

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN BASE PLATE SCHEDULE AT EL. 310'-0"

DATE 10-15-68

REVISIONS

11-5-68

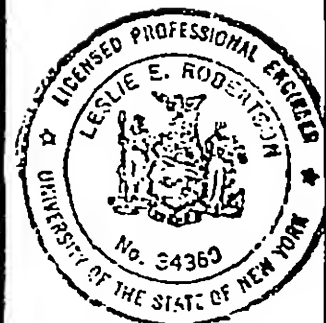
3-17-69

3-19-69

COLUMN		DETAIL	R 'A'					R 'D' & 'E'					H.S. BOLTS	
MARK	SECTION	TYPE	b	c	d	f	*t ₁	t ₂	m	n	s		J (A-325)	H (A-490)
C 3-22	14 WF 87	II-A		by others				1/2						
C 4-23	14 WF 87	II-A		by others				1/2						
C 5-22	14 WF 95	II-A		by others				1/2						
C 6-18	14 WF 95	II-A		by others				1/2						
C 8-16	14 WF 111	II-A		by others				1/2						
C 8-17	14 WF 95	II-A		by others				1/2						
C 10-5	14 WF 158	I-A		by others				1/2						
C 10-7	14 WF 142	I	21	20			2	1/2	5 1/2	8 1/2	13			
C 10-8	14 WF 127	I	20	20			2	1/2	5	8 1/2	13			
C 11-10	14 WF 136	II-A		by others				1/2						
C 12-4	14 WF 111	IV	20	20			2	1/2	7 1/2	3 1/2	10 1/2			
C 12-5	14 WF 111	IV	20	20			2	1/2	7 1/2	3 1/2	10 1/2			
C 12-6	14 WF 111	VII	20	20	10"		2	1	7 1/2	3 1/2	10	6-7/8" φ	28-7/8" φ	
C 12-7	14 WF 95	V	20	19			2	1/2	5	8 1/4	12 3/4			
J 14-8	14 WF 193	IV	21	21			2	1/2	8 1/4	3 3/4	11 1/2			
J 14-9	14 WF 264	VI	22	22			2	1/2	5 1/2	9	14			
J 14-10	14 WF 202	IV	21	21			2	1/2	8 1/4	3 3/4	11 1/2			
J 14-11	14 WF 202	VI	21	21			2	1/2	5 1/4	8 1/2	13 1/4			
J 14-12	14 WF 264	VI	22	22			2	1/2	5 1/2	9	14			
J 16-1	14 WF 264	VI	22	22			2	1/2	5 1/2	9	14			
J 16-2	14 WF 202	IV	21	21			2	1/2	8 1/4	3 3/4	11 1/2			
J 16-3	14 WF 202	VI	21	21			2	1/2	5 1/4	8 1/2	13 1/4			
J 16-4	14 WF 264	VI	22	22			2	1/2	5 1/2	9	14			
J 16-51	14 WF 87	VI	20	19			2	1/2	5	8	12 1/2			
J 2-23B	14 WF 78	II	13	15			2	1/2						

Notes:

1. All plates to have $F_y = 42$ ksi.
2. All welds to be E 70XX.
3. See Dwg. 10-JK3-4 thru 10 for type & details.
4. Columns with "C" designation, by others.
5. *—In no case shall t_1 be less than thickness of beam cover- R , if any.



DESIGNED

DRAWN
S.C.REVIEWED
E.L.

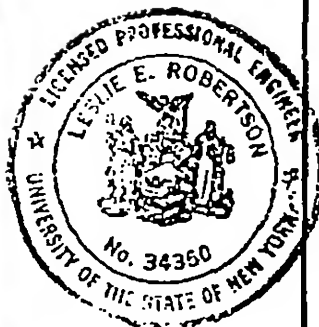
10-JK3-3

REVISIONS
11-5-68
3-17-69
3-19-69

COLUMN		DETAIL TYPE	R 'A'					R 'D' & 'E'					H. S. BOLTS	
MARK	SECTION		b	c	ℓ	f	*t ₁	t ₂	m	n	s	J (A-325)	H (A-490)	
J 18-1	14 WF 228	IV	22"	22"			2"	1/2"	8 1/4"	3 3/4"	11 1/2"			
J 18-2	14 WF 84	VI	17	19			2	1/2	5	8	12 1/2			
J 18-3	14 WF 84	IV	19	17			2	1/2	8 1/4	3 3/4	11 1/2			
J 18-4	14 WF 228	IV	22	22			2	1/2	8 1/4	3 3/4	11 1/2			
J 18-51	14 WF 87	VI	20	19			2	1/2	5	8	12 1/2			
J 20-1	14 WF 228	IV	22	22			2	1/2	8 1/4	3 3/4	11 1/2			
J 20-2	14 WF 87	VI	20	19			2	1/2	5	8	12 1/2			
J 20-3	14 WF 57	VII	26	19	10"	10"	2	1	6 1/2	7 1/2	12 1/4	6 - 7/8" φ	28 - 7/8" φ	
J 20-4	14 WF 228	VII	22	22	11	9	2	1	7 3/4	4 1/2	11 1/4	6 - 7/8" φ	28 - 7/8" φ	
J 20-51	14 WF 87	VI	20	19			2	1/2	5	8	12 1/2			
J 22-1	14 WF 87	V	20	19			2	1/2	5	8	12 1/2			
J 22-2	14 WF 228	VI	22	22	cut corner of R at girder J&N		2 1/8	1/2	5 1/2	9	14			
E 22-3	14 WF 95	V	19	20			2	1/2	7 1/2	3 1/2	10 1/2			
J 23-5	14 WF 87	V	19	20			2	1/2	7 1/2	3 1/2	10 1/2			
J 23-6	14 WF 228	VII A	22	22	11	6	2	1	7 1/2	8 1/2	15	6 - 3/4" φ	14 - 7/8" φ	
J 23-7	14 WF 111	VII A	20	20	10	6	2	1	7 1/2	3 1/2	10	6 - 3/4" φ	14 - 7/8" φ	
K 26-1	14 WF 202	VI	21	21			2	1/2	5 1/4	8 1/2	13 1/4			
K 26-2	14 WF 264	VI	22	22			2	1/2	5 1/2	9	14			
K 26-3	14 WF 202	VI	21	21			2	1/2	5 1/4	8 1/2	13 1/4			
K 26-4	14 WF 202	VI	21	21			2	1/2	5 1/4	8 1/2	13 1/4			
K 26-5	14 WF 264	VII	28	22	11	11	2	1	8	8	15	6 - 7/8" φ	28 - 7/8" φ	
K 26-6	14 WF 202	VI	21	21			2	1/2	5 1/4	8 1/2	13 1/4			
K 26-7	14 WF 314	VI	22	23			2	1/2	5	9	13 1/2			
K 28-1	14 WF 202	III	17	17			2	1/2						
K 28-2	14 WF 264	IV	22	22			2	1/2	8 1/4	3 3/4	11 1/2			
K 28-3	14 WF 202	VI	21	21			2	1/2	5 1/4	8 1/2	13 1/4			
K 28-4	14 WF 202	VI	21	21			2	1/2	5 1/4	8 1/2	13 1/4			
K 28-5	14 WF 264	VI	22	22			2	1/2	5 1/2	9	14			
K 28-6	14 WF 202	V	21	21			2	1/2	5 1/4	8 1/2	13 1/4			

Notes:

- All plates to have Fy = 42 ksi.
- All welds to be E 70XX.
- See Dwg. 10-JK3-4 thru 10 for type & details.
- Columns with "E" designation, by others.
- * — In no case shall t₁ be less than thickness of beam cover R, if any.



DESIGNED
DRAWN S.C.
REVIEWED E.L.

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN BASE PLATE SCHEDULE AT EL. 310'-0"

DATE 10-15-68

REVISIONS

11-5-68

3-17-69

4-14-70

COLUMN		DETAIL	R 'A'						R 'D' & 'E'					H. S. BOLTS	
MARK	SECTION	TYPE	b	c	l	f	*t ₁	t ₂	m	n	s	J (A-325)	H (A-490)		
K 28 - 7	14 WF 264	IV	22"	22"			2"	1/2"	8 1/4"	3 3/4"	11 1/2"				
K 30 - 1	14 WF 84	II	13	16			2	1/2							
K 30 - 2	14 WF 228	V	22	22			2	1/2	5 1/4	8 1/2	13 1/4				
K 30 - 3	14 WF 84	IV	19	17			2	1/2	7	2 3/4	9 1/4				
K 30 - 4	14 WF 84	VII A	19	17	9 1/2"	6"	2	1	6 3/4	5 1/2	11 1/4	6 - 3/4" φ	14 - 1" φ		
K 30 - 5	14 WF 228	VI	22	22			2	1	7 1/2	8 1/2	15				
K 30 - 6	14 WF 84	VII A	20	19	8 1/2		2	1	5 1/2	7 1/2	12	6 - 3/4" φ	14 - 7/8" φ		
K 30 - 7	14 WF 228	IV	22	22			2	1/2	8 1/4	3 3/4	11 1/2				
K 33 - 1	14 WF 87	II	16	15			2	1/2							
K 33 - 2	14 WF 228	IV	22	22			2	1/2	8 1/4	3 3/4	11 1/2				
K 33 - 3	14 WF 87	VII A	19	20	9 1/2	6	2	1	7 1/2	5	11 1/2	6 - 3/4" φ	14 - 1 1/8" φ		
K 33 - 4	14 WF 87	VII A	26	20	9 1/2	6	2	1	7 1/2	5	11 1/2	6 - 3/4" φ	14 - 1 1/8" φ		
K 33 - 5	14 WF 228	VII A	22	22	11		2	1	5 1/2	8 3/4	13 1/4	6 - 3/4" φ	14 - 3/8" φ		
K 33 - 6	14 WF 87	VII	25	20	9 1/2	9 1/2	2	1	7 1/2	6	12 1/2	6 - 3/4" φ	28 - 1" φ		
K 33 - 7	14 WF 228	IV	22	22			2	1/2	8 1/4	3 3/4	11 1/2				
K 36 - 1	14 WF 87	II	16	15			2	1/2							
K 36 - 2	14 WF 228	II	17	17			2	1/2							
K 36 - 3	14 WF 87	V	20	19			2	1/2	5	8	12 1/2				
K 36 - 4	14 WF 87	VII	28	19	10	9	2	1	5 1/2	7 1/2	12	6 - 1" φ	28 - 7/8" φ		
K 36 - 5	14 WF 228	IV	22	22			2	1/2	8 1/4	3 3/4	11 1/2				
K 36 - 6	14 WF 87	VII A	24 1/2	20	9 3/4	6	2	1	6	7 1/2	12 1/2	6 - 3/4" φ	14 - 1" φ		
K 36 - 7	14 WF 228	VII	32	22	11	11	2	1	7 3/4	4 1/2	11 1/4	6 - 3/4" φ	28 - 7/8" φ		
M 36 - 8	14 WF 127	V	19 1/2	19 1/2			2	1/2	5	8	12 1/2				
K 39 - 1	14 WF 202	II	18	17			2	1/2							
K 39 - 2	14 WF 264	I	18	17			2	1/2							
K 39 - 3	14 WF 202	V	21	21			2	1/2	8	3 1/2	10 1/2				
K 39 - 4	14 WF 202	VI	21	21			2	1/2	5 1/4	8 1/2	13 1/4				
K 39 - 5	14 WF 264	VI	22	22			2	1/2	5 1/2	9	14				
K 39 - 6	14 WF 202	V	21	21			2	1/2	8	3 1/2	10 1/2				
K 39 - 7	14 WF 264	VI	22	22			2	1/2	5 1/2	9	14				

Notes:

1. All plates to have $F_y = 42$ ksi.
2. All welds to be E 70XX.
3. See Dwg. 10-JK3-4 thru 10 for type & details.
4. Columns with "M" designation, by others.
5. * — In no case shall t_1 be less than thickness of beam cover R , if any.



DESIGNED

DRAWN

S.C.

REVIEWED

E.L.

10-JK3-3B

Structural & Civil Engineers

TITLE COLUMN BASE PLATE SCHEDULE AT EL. 310'-0"

DATE 11-5-68.

REVISIONS

3-17-69

3-21-69

[illegible]

Notes :

1. All plates to have $F_y = 42 \text{ ksi}$.
2. All welds to be E 70XX.
3. See Dwg. 10-JK3-4 thru 10 for type & details.
4. Columns with "M" designation, by others.
5. * — In no case shall t_f be less than thickness of beam cover R , if any.

10-JK3-3C



DESIGNED

DRAWN
S.C.

REVIEWED
E.L.

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

Structural & Civil Engineers

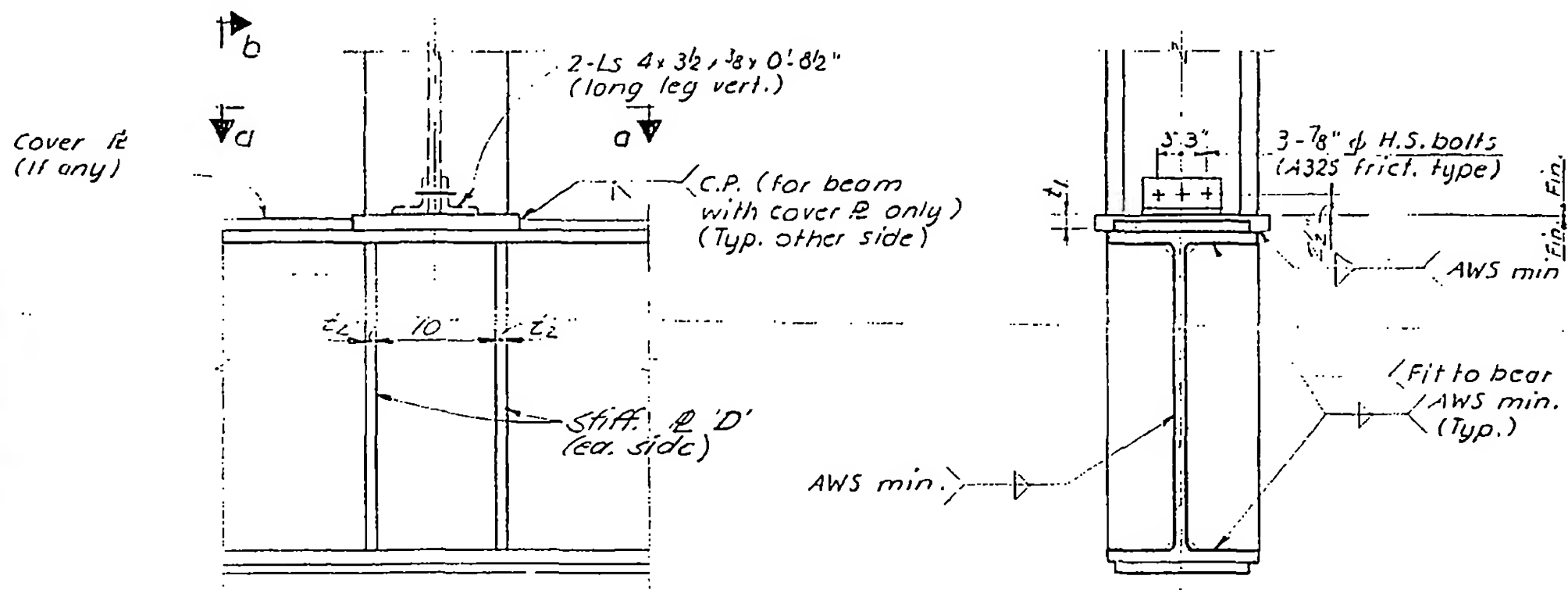
PROJECT THE WORLD TRADE CENTER

TITLE COLUMN BASE PLATE DETAIL AT EL. 310'-0"

DATE 10-15-68

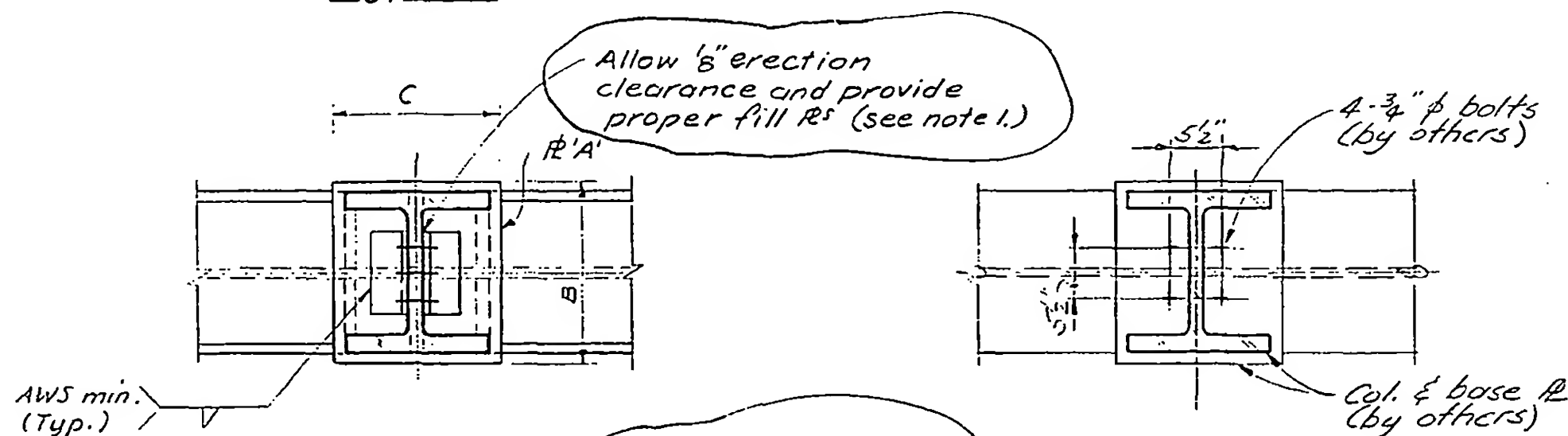
REVISIONS

11-5-68



Type I

Section b-b



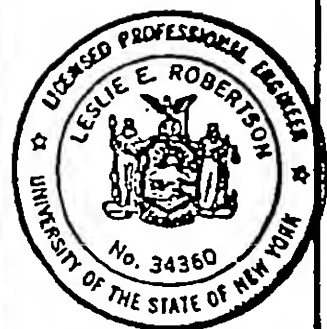
Section a-a

Type I-A

NOTES:

1. For columns with designation other than "J" or "K", fill Pls & bolts to be provided by others.

10-JK3-4



DESIGNED

DRAWN

REVIEWED

Structural & Civil Engineers

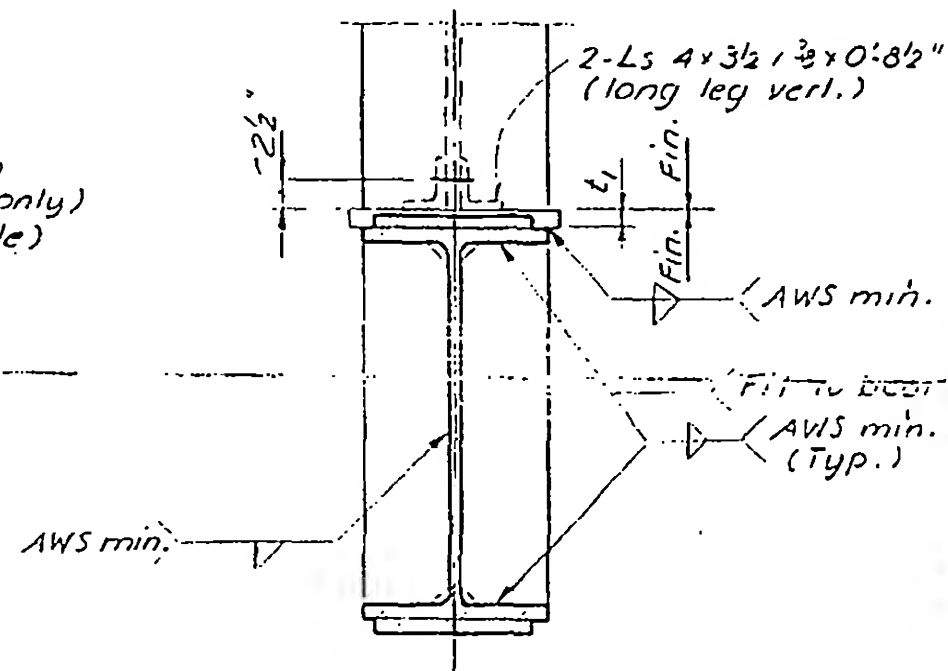
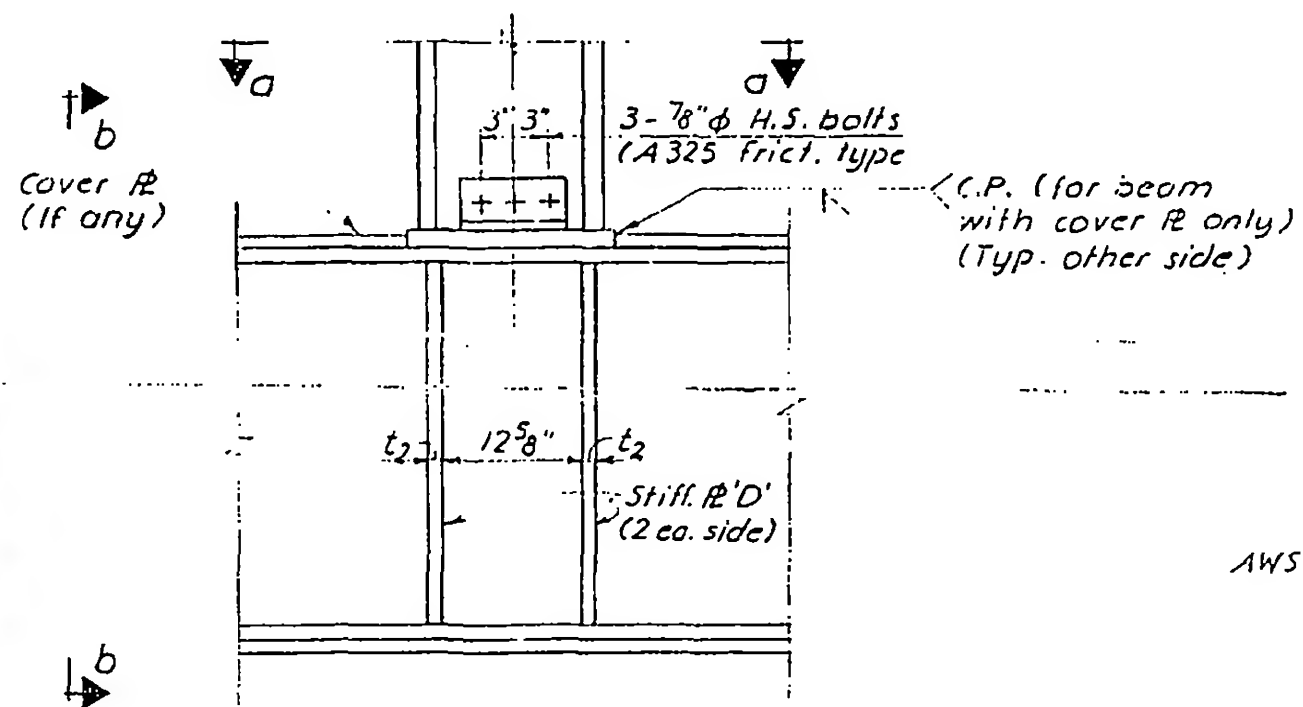
PROJECT THE WORLD TRADE CENTER

TITLE COLUMN BASE PLATE DETAIL AT EL. 310'-0"

DATE 10-15-68

REVISIONS

11-5-68

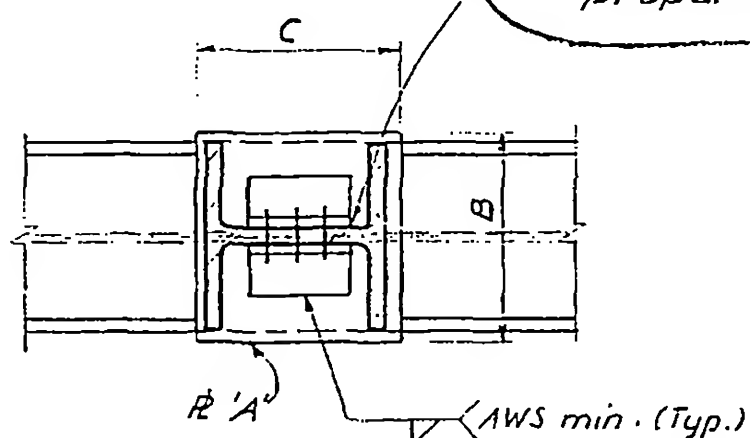


Section b-b

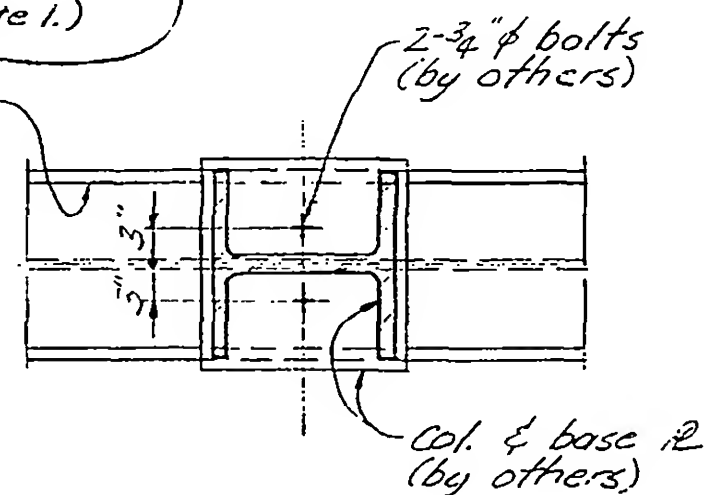
Type II

- Allow '3" erection clearance and provide proper fill @s (see note 1.)

cover Φ
(if any)



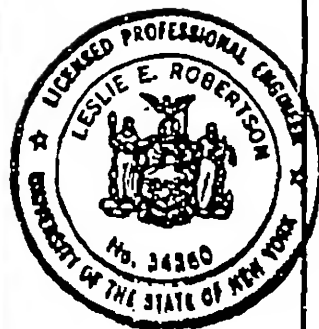
Section a-a



Type II-A

NOTES:

1. For Columns with designation other than "J" or "K", fill T's & bolts to be provided by others.



24-4200

PLAY

REVIEWED

10-JK3-5

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

Structural & Civil Engineers

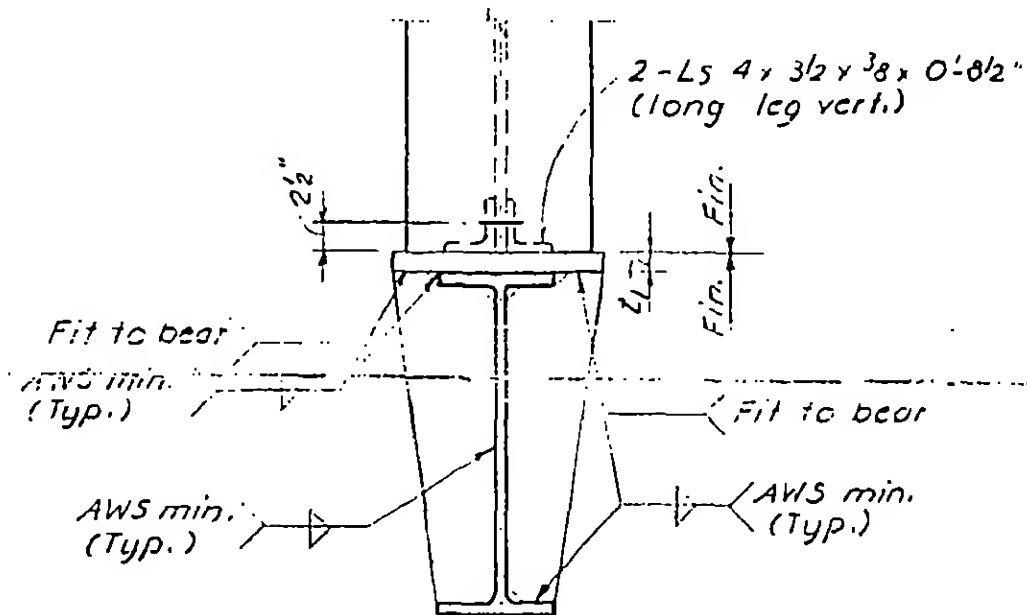
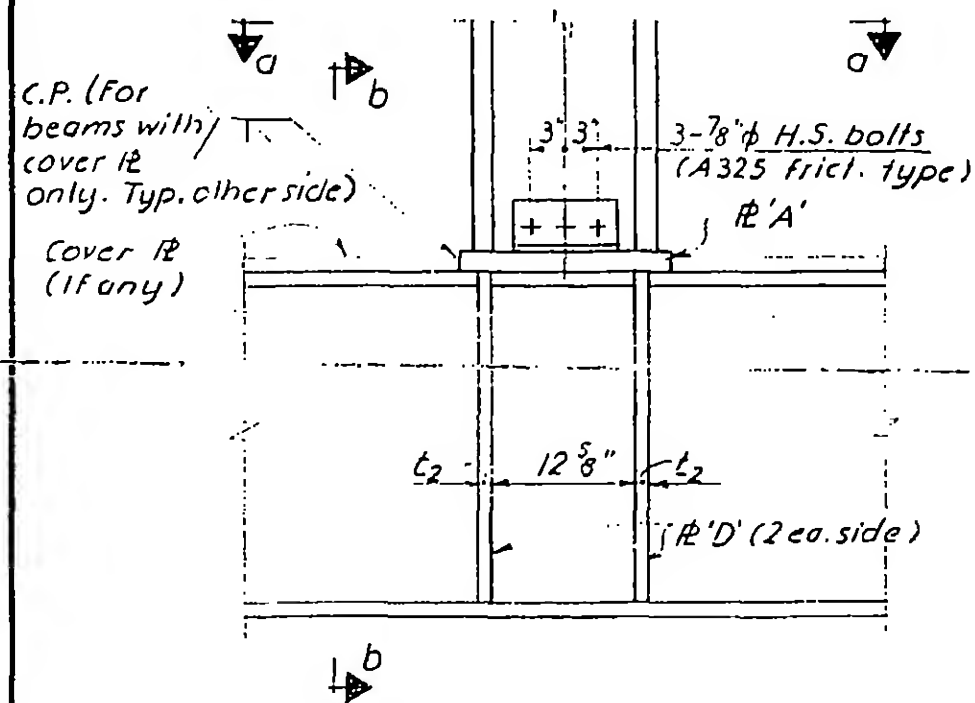
PROJECT THE WORLD TRADE CENTER

TITLE COLUMN BASE PLATE DETAIL AT EL. 310'-0"

DATE 10-15-68

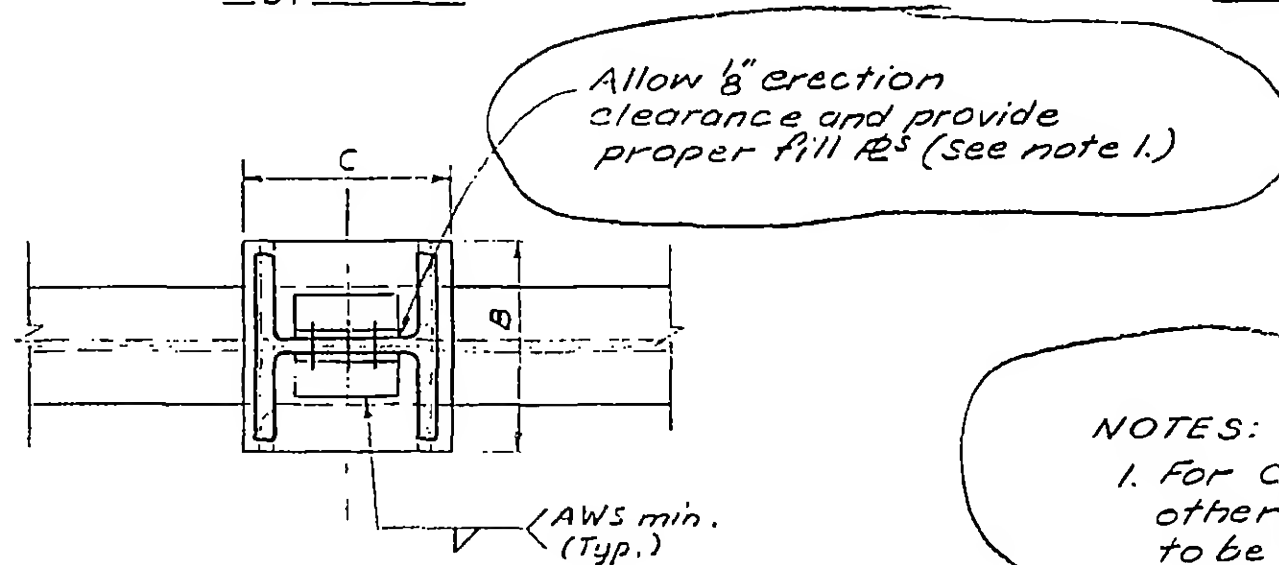
REVISIONS

11-5-68



Type III

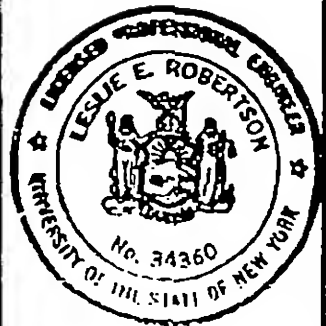
Section b-b



Section a-a

NOTES:

1. For columns with designation other than "J" or "K", fill Pl's & bolts to be provided by others.



DESIGNED

DRAWN

REVIEWED

10-JK3-6

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

Structural & Civil Engineers

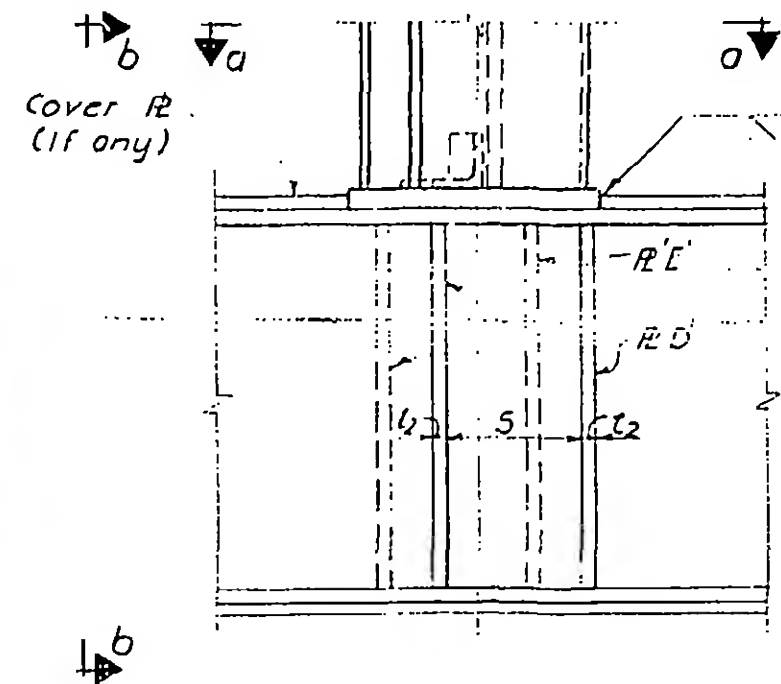
PROJECT THE WORLD TRADE CENTER

TITLE COLUMN BASE PLATE DETAIL AT EL. 310'-0"

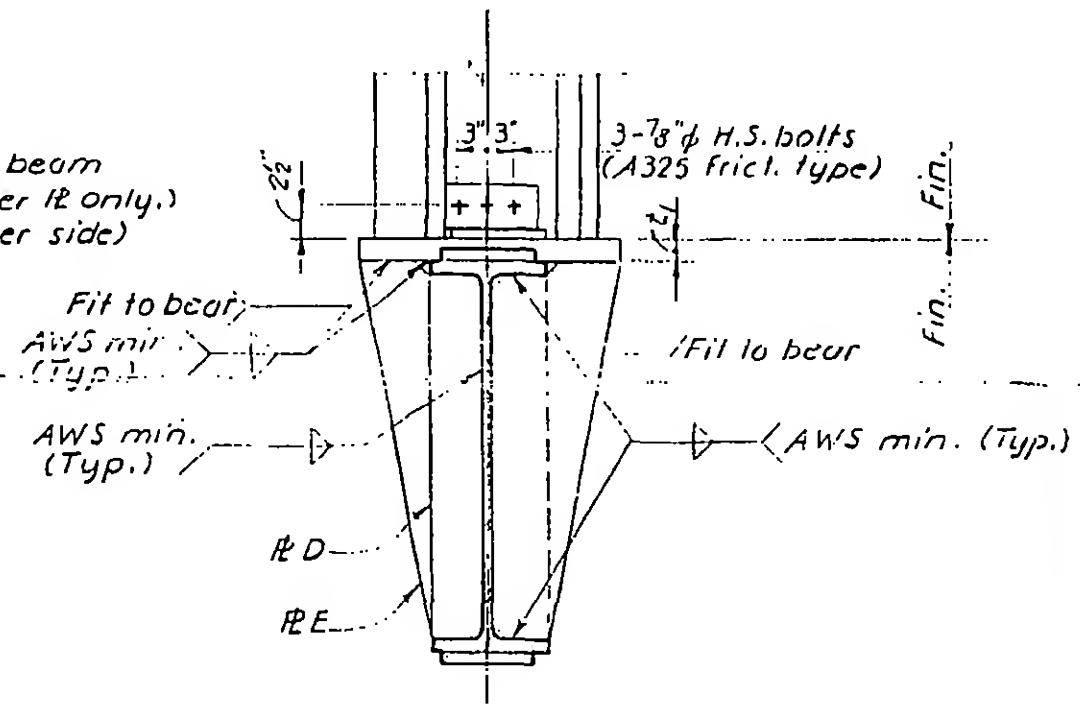
DATE 10-15-68

REVISIONS

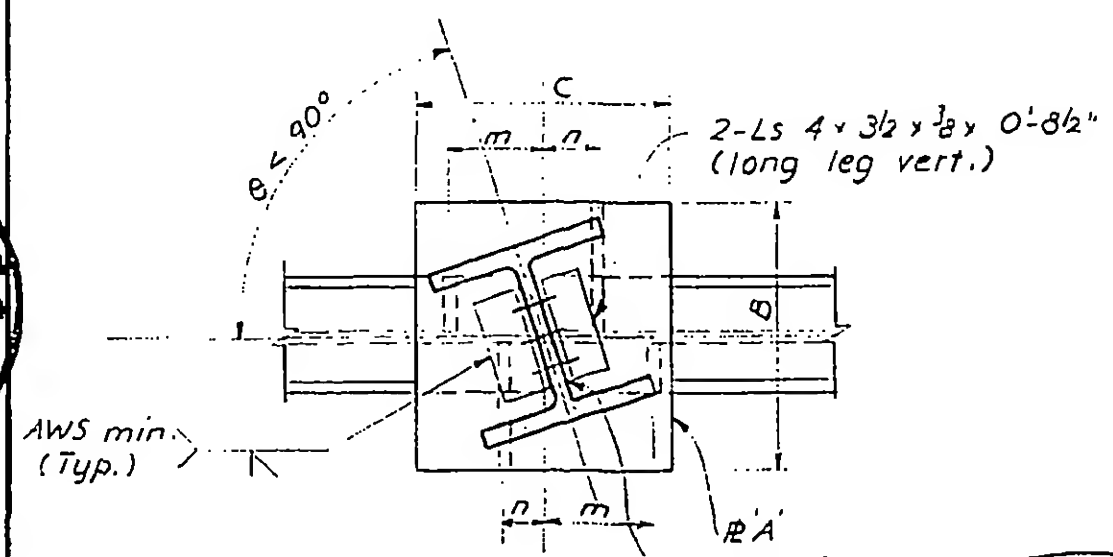
11-5-68



Type IV



Section b-b

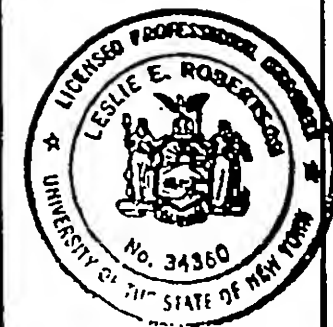


Section a-a

Allow 1/8" erection clearance and provide proper fill PLs (See note 1.)

NOTES:

1. For columns with designation other than "J" or "K", fill PLs & bolts to be provided by others.



DESIGNED

DRAWN

REVIEWED

10-JK3-7

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

Structural & Civil Engineers

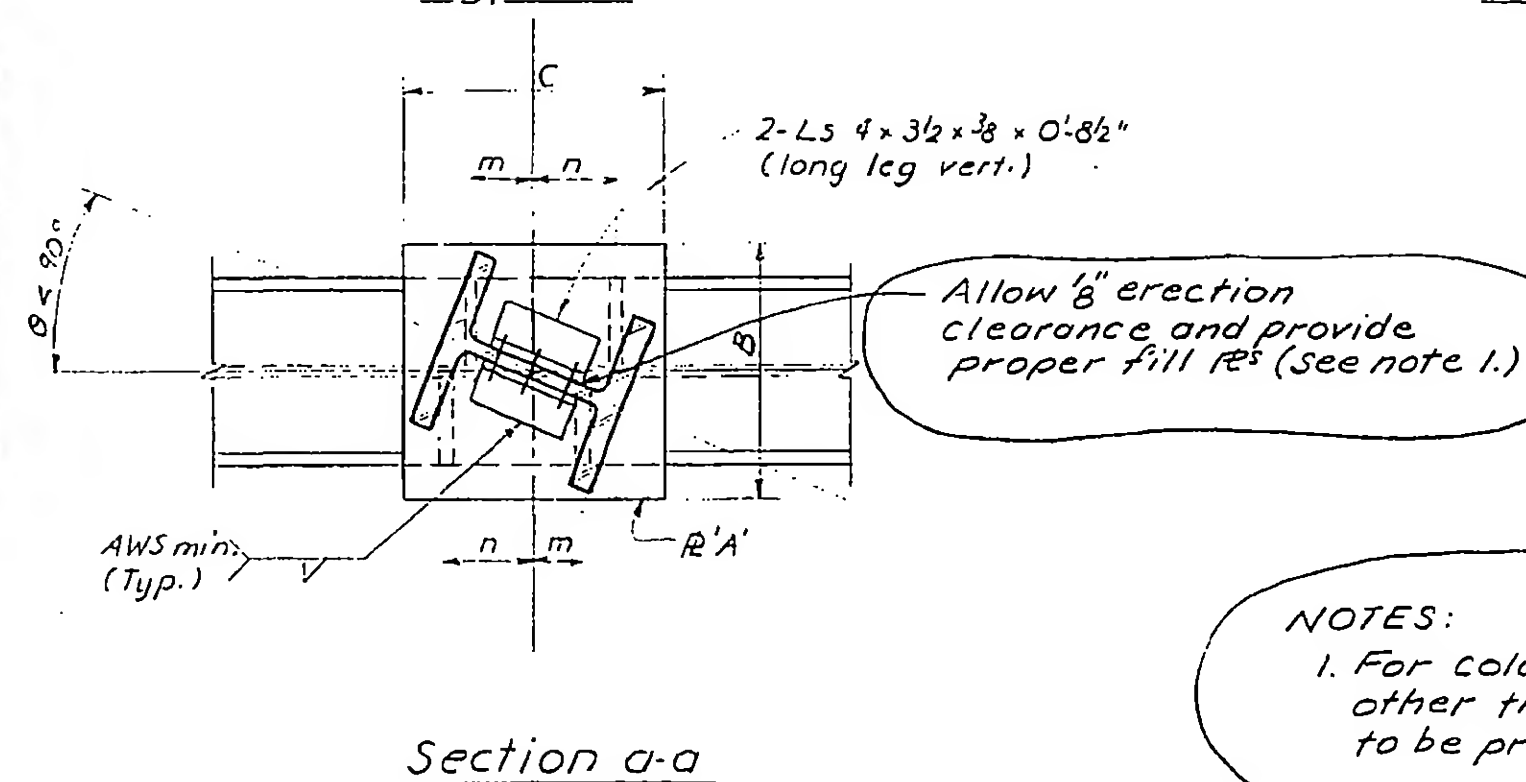
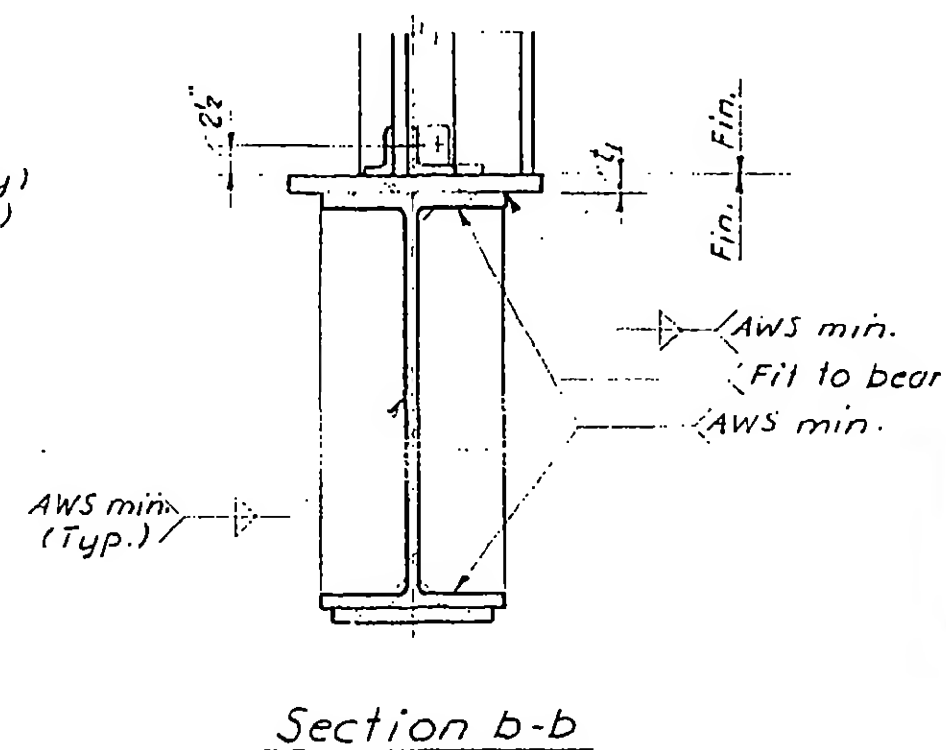
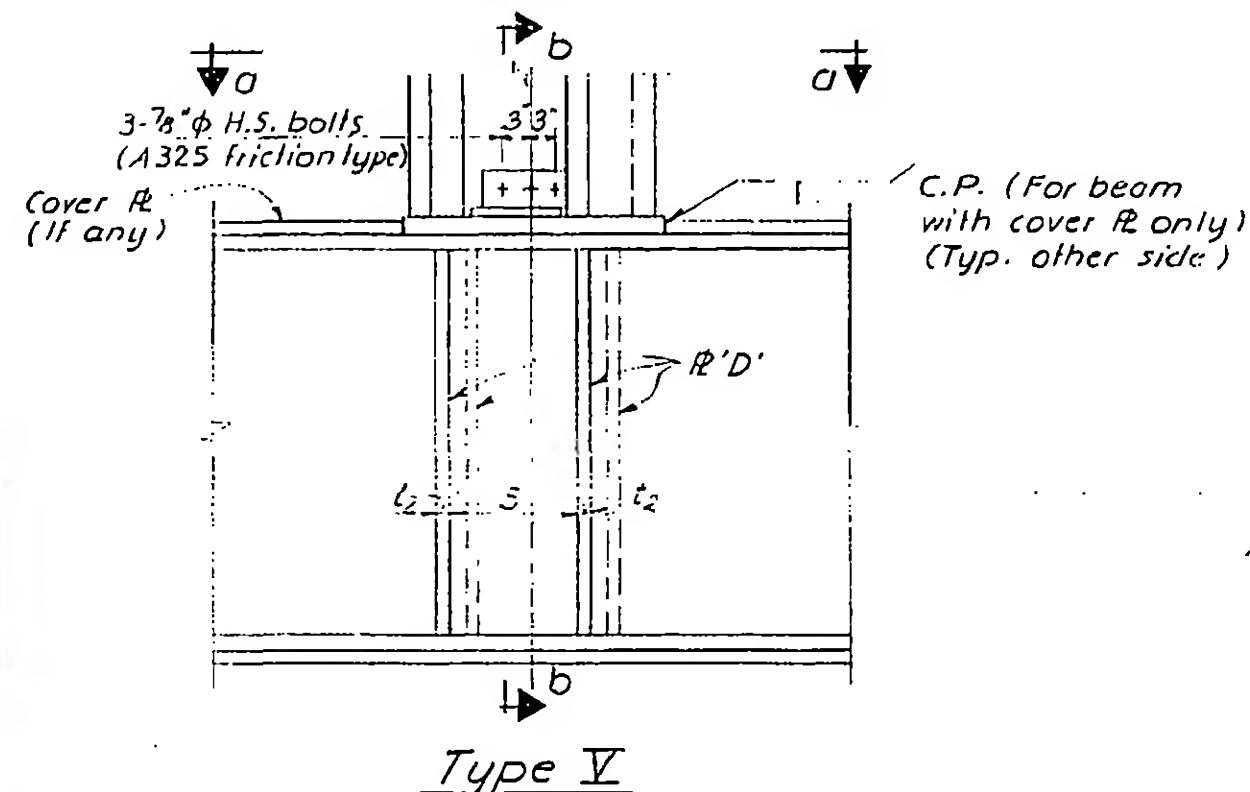
PROJECT THE WORLD TRADE CENTER

TITLE COLUMN BASE PLATE DETAIL AT EL. 310'-0"

DATE 10-15-68

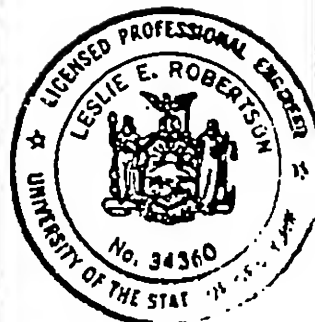
REVISIONS

11-5-68



NOTES:

1. For columns with designation other than "J" or "K", fill R 's & bolts to be provided by others.



DESIGNED

DRAWN

REVIEWED

10-JK3-8

SKILLING, HELLE. CHRISTIANSEN. ROBERTSON

Structural & Civil Engineers

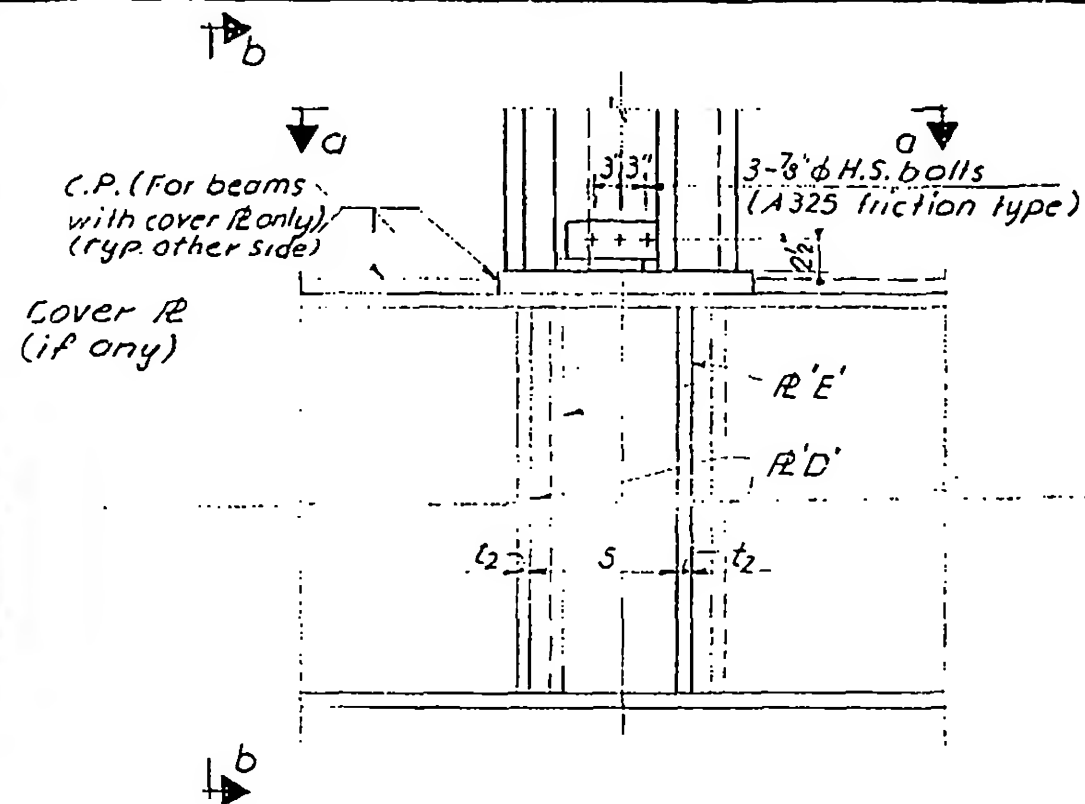
PROJECT THE WORLD TRADE CENTER

TITLE COLUMN BASE PLATE DETAIL AT EL. 310'-0"

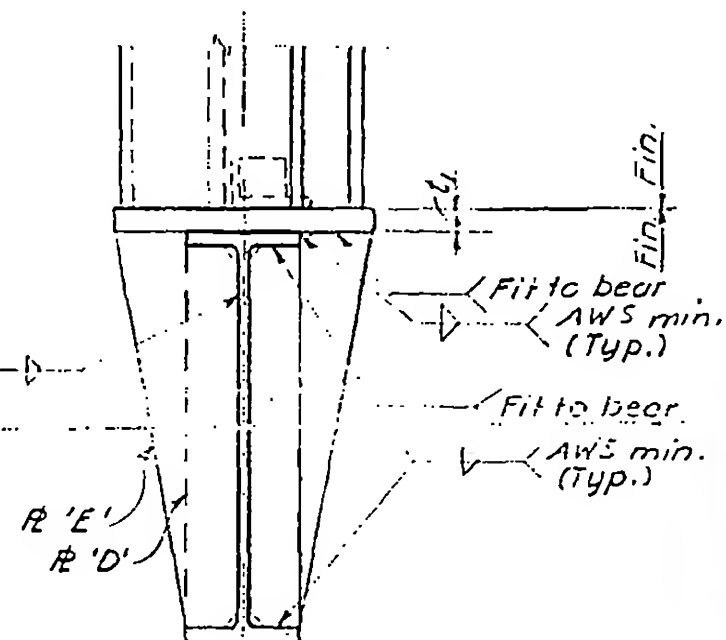
DATE 10-15-68

REVISIONS

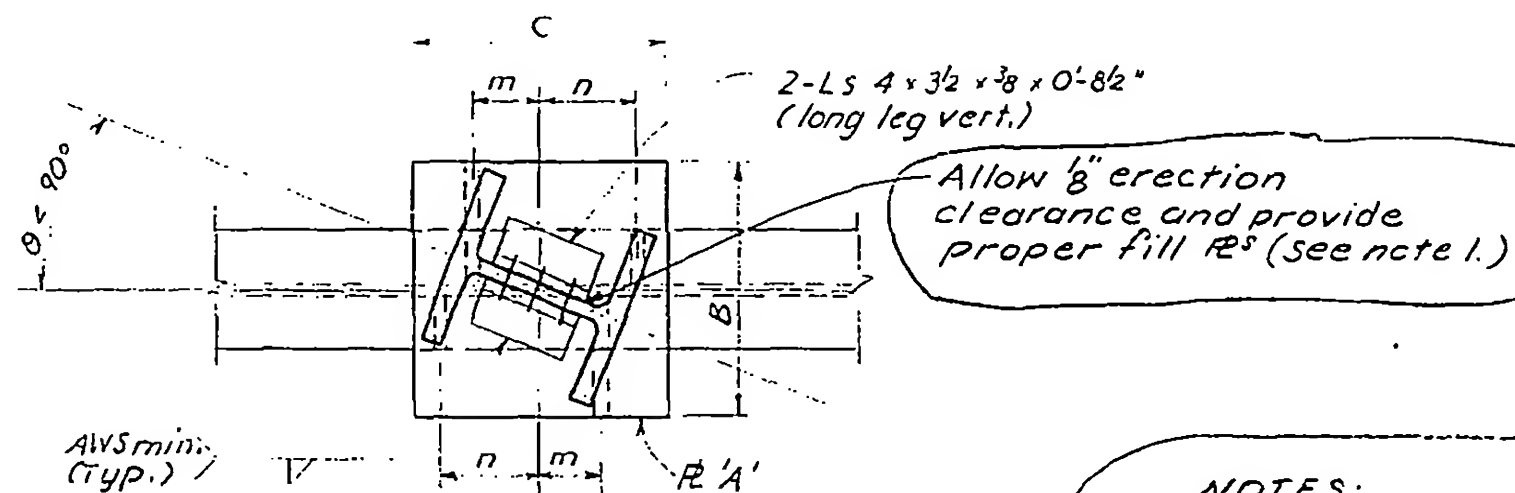
11-5-68



Type VI



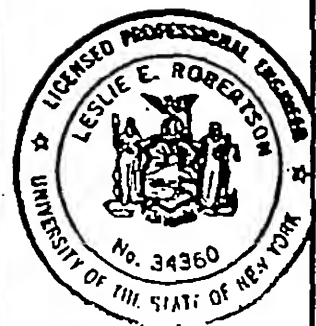
Section b-b



Section a-a

NOTES:

1. For Columns with designation other than "J" or "K", fill R's & bolts to be provided by others.



DESIGNED

DRAWN

REVIEWED

10-JK3-9

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

Structural & Civil Engineers

PROJECT

THE WORLD TRADE CENTER

TITLE

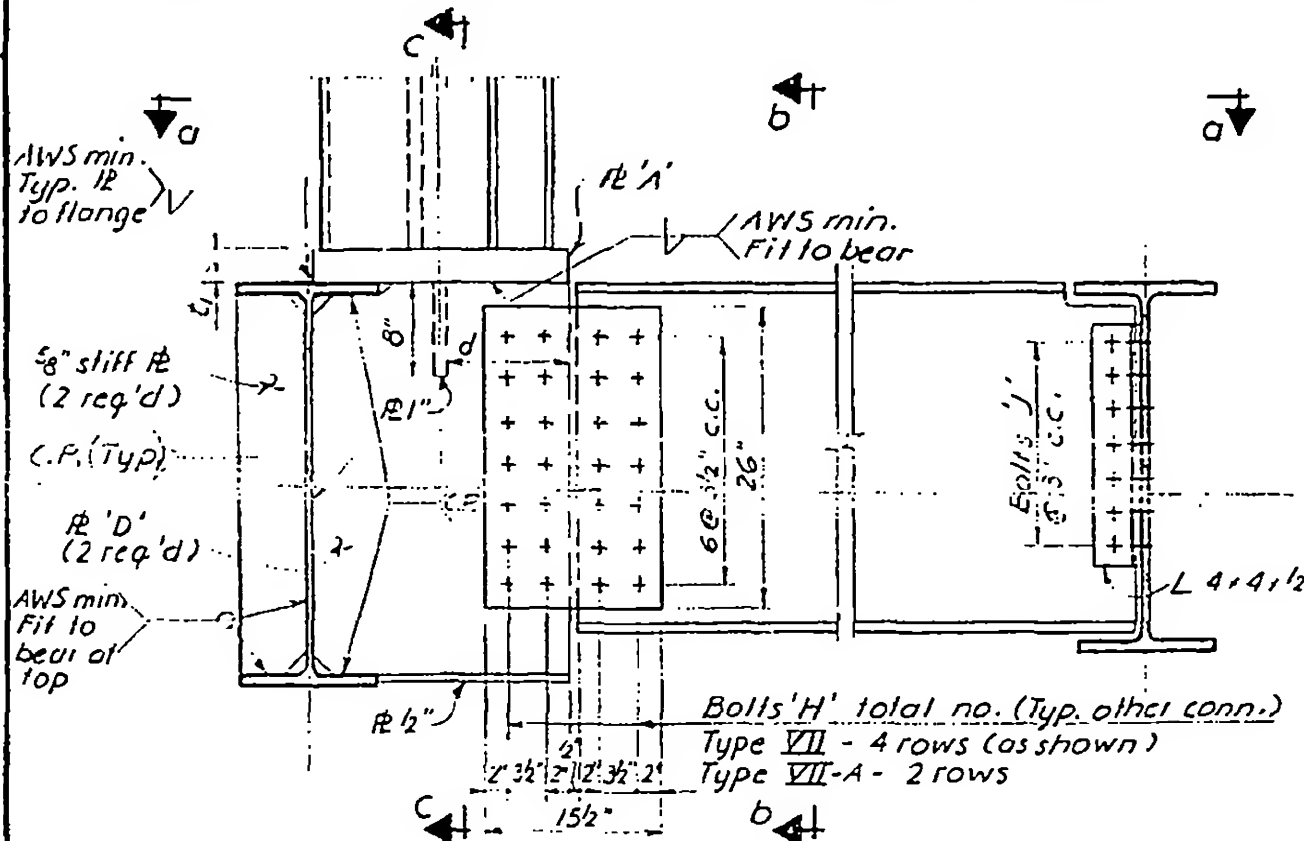
COLUMN BASE PLATE DETAIL AT EL. 310'-0"

DATE

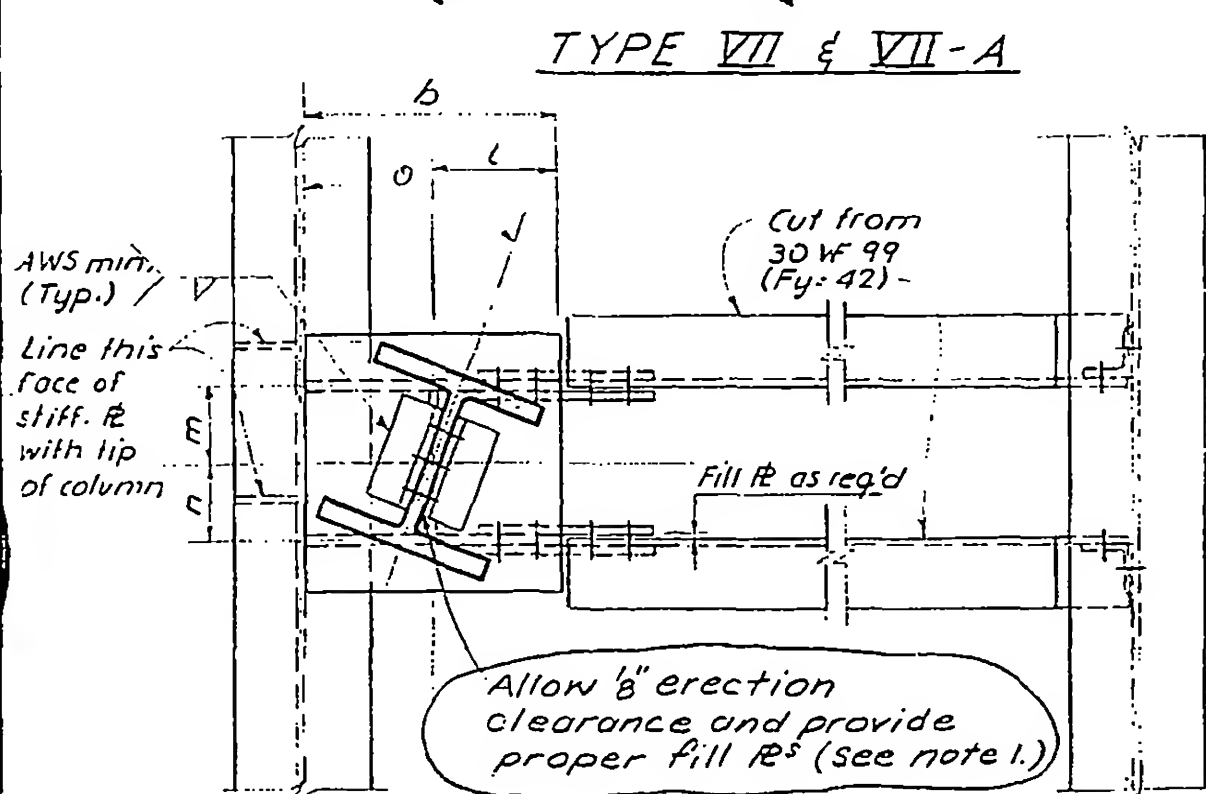
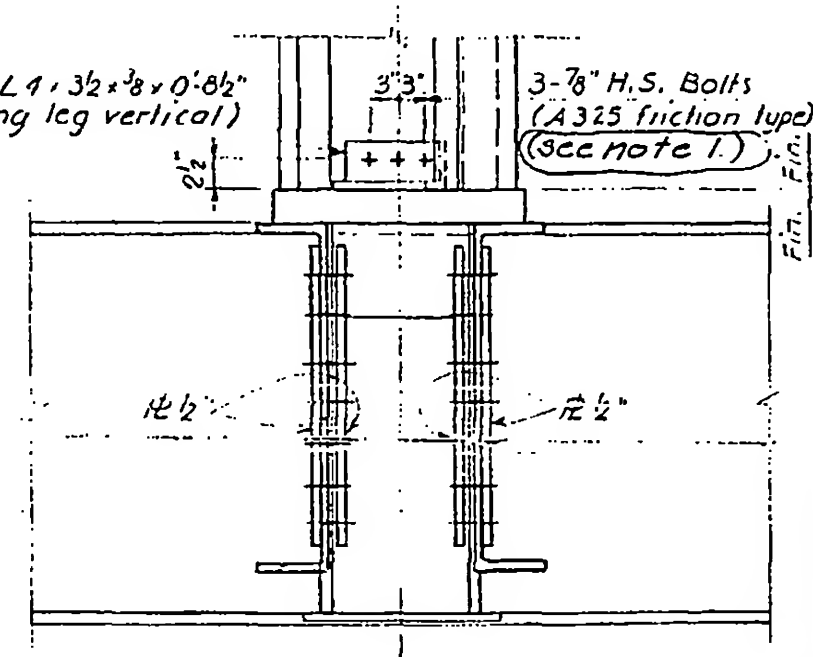
10-15-68

REVISIONS

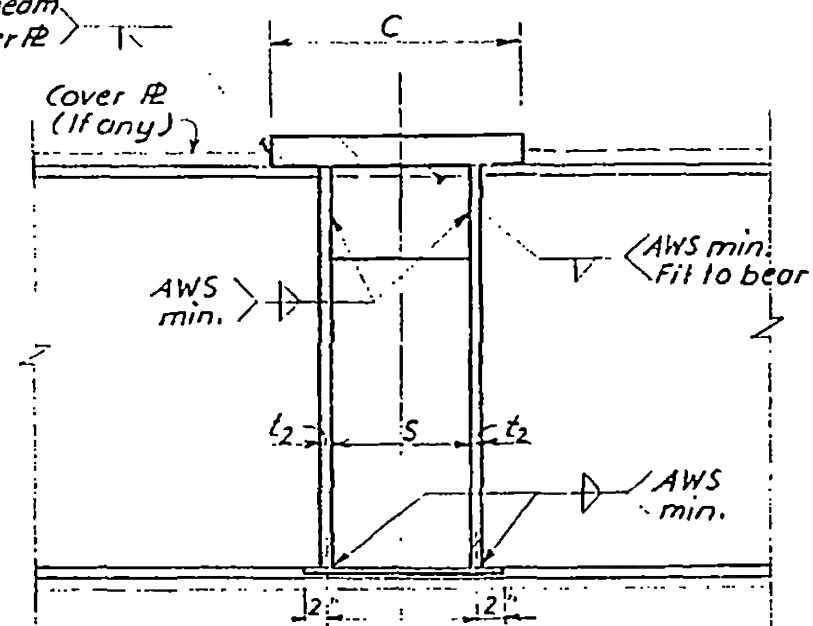
11-5-68



Bolts 'H' total no. (Typ. other conn.)
 Type VII - 4 rows (as shown)
 Type VII-A - 2 rows



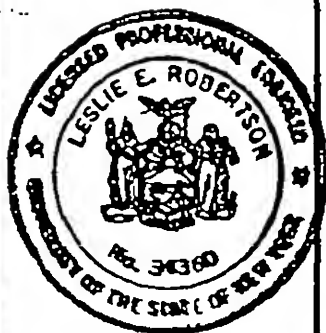
C.P. (For beam with cover R only)
 Cover R (if any)



NOTES:

1. For columns with designation other than "J" or "K," these bolts & fill R 's to be provided by others.

10-JK3-10



DESIGNED

DRAWN

REVIEWED

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

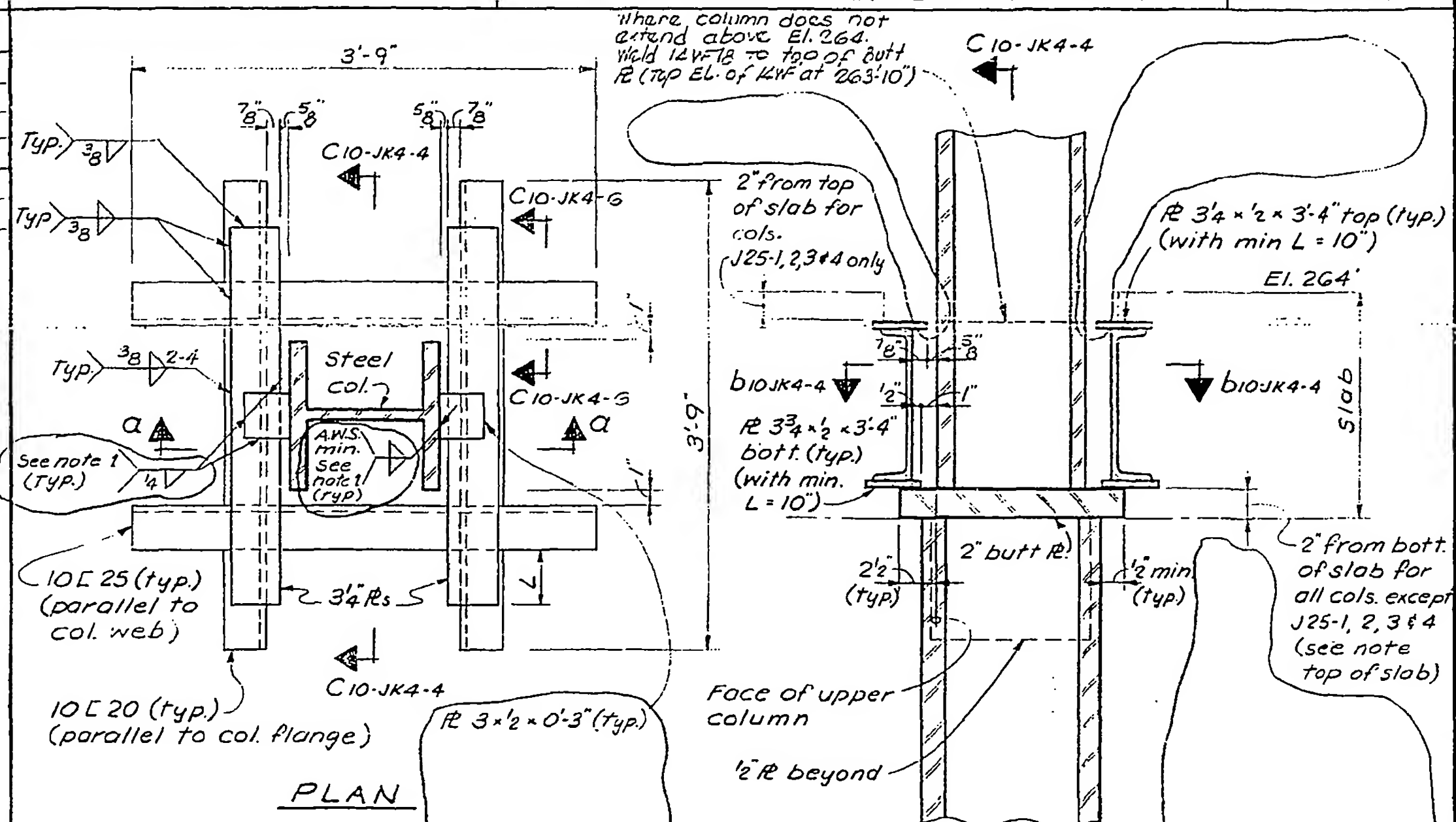
PROJECT THE WORLD TRADE CENTER

TITLE TYPICAL COLUMN SHEAR-HEAD DETAIL AT EL. 264'

DATE 10-20-67

REVISIONS

11-8-67
11-24-67
2-16-68
6-7-68
6-28-68
1-20-69



Notes:

1. Use field weld for columns already shipped out.

SECTION a-a



DRAWN
S.C.

REVIEWED
E.L.

10-JK4-3

Structural & Civil Engineers

TITLE TYPICAL COLUMN SHEAR-HEAD DETAIL AT EL. 264

DATE 10-20-67

11-24-67

1-20-69



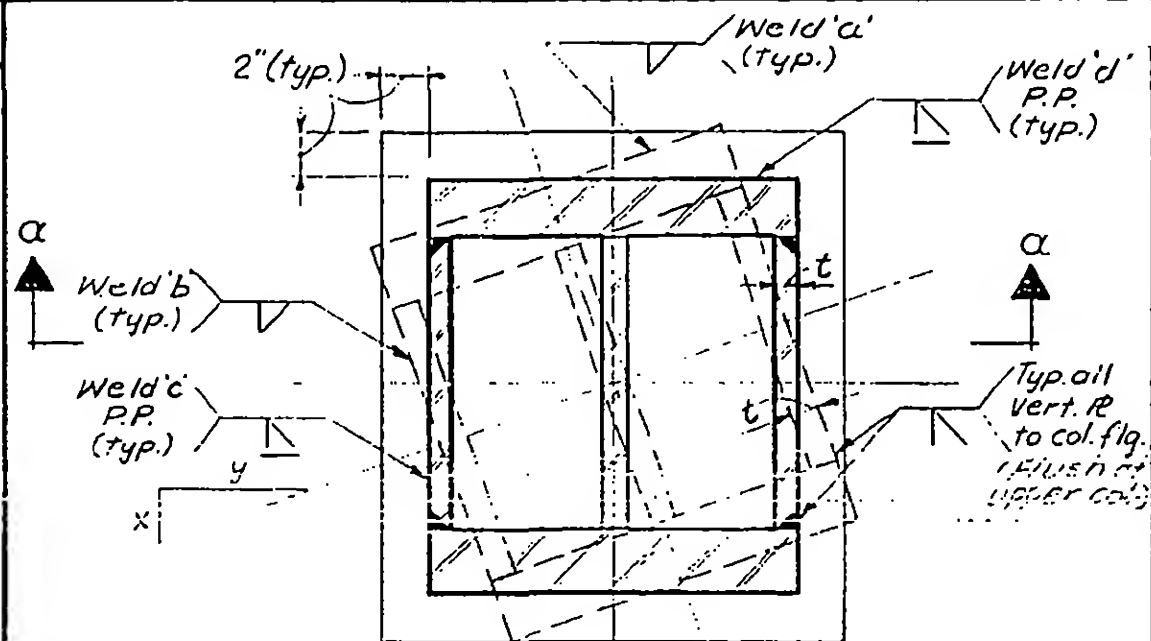
5.C.

REVIEWED
E.L.

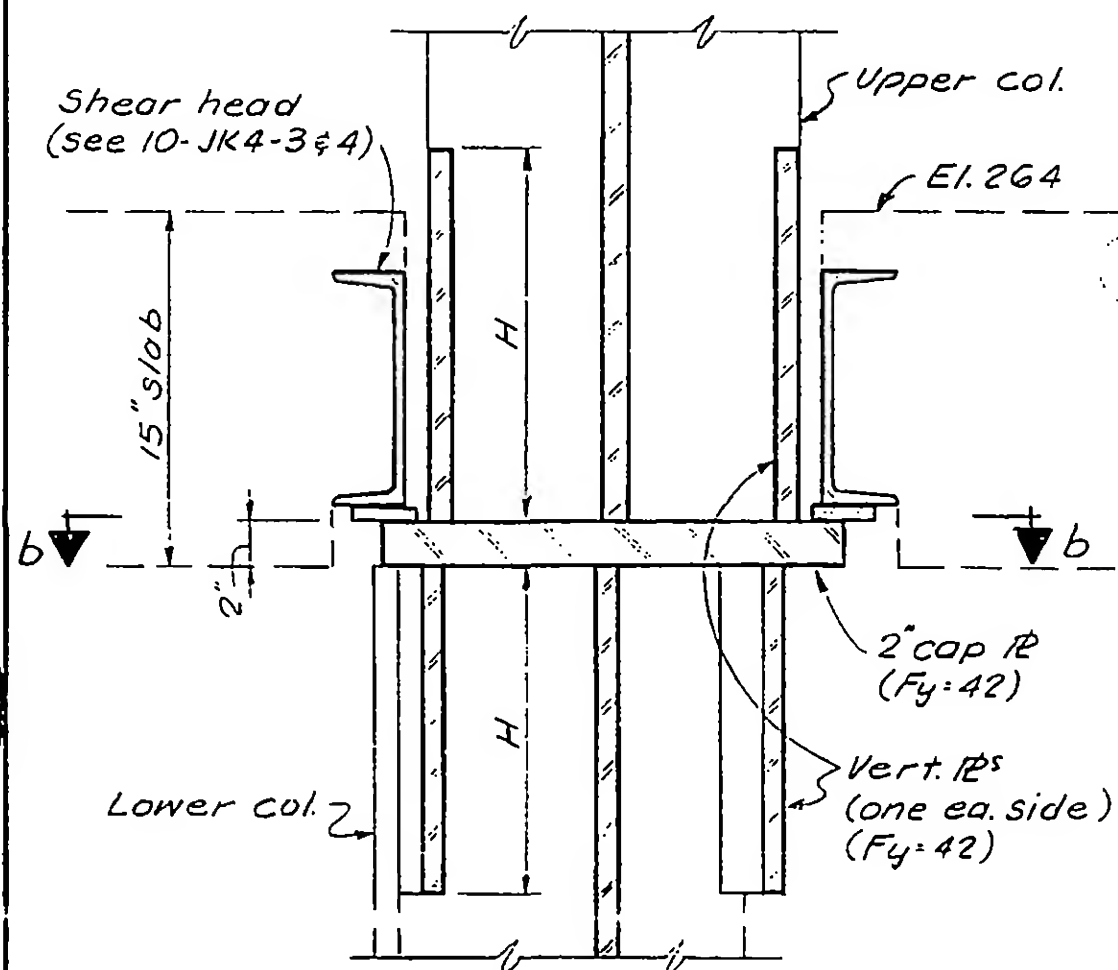
10-JK4-4

REVISIONS

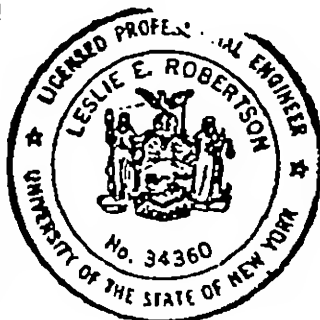
9-4-68



Section b-b



Section a-a

[illegible]

10-JKA-4B

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE COLUMN SHEAR HEAD DETAIL - TYPE V, W, X

DATE 11-24-67

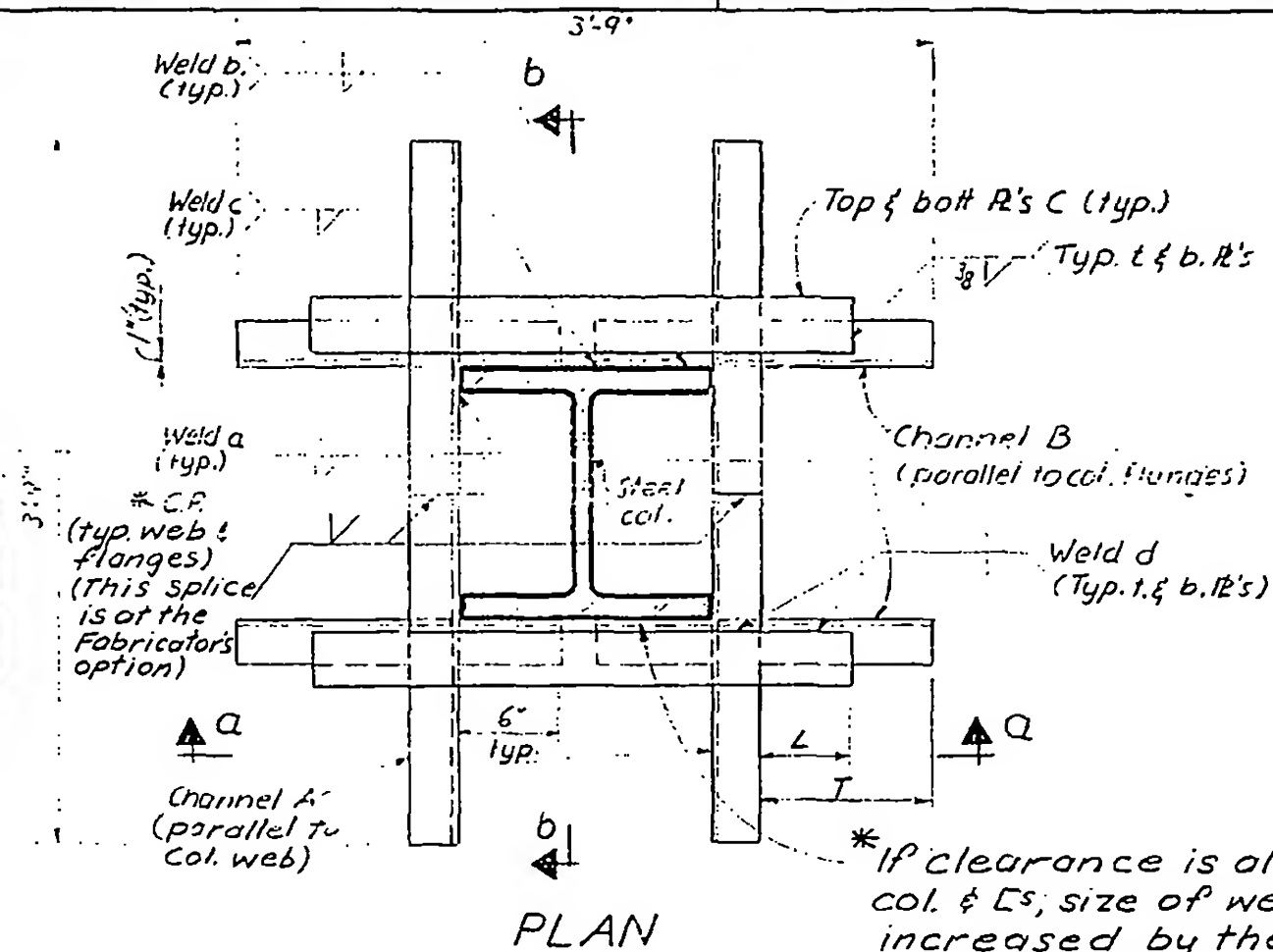
REVISIONS

1-5-68

1-29-68

6-28-68

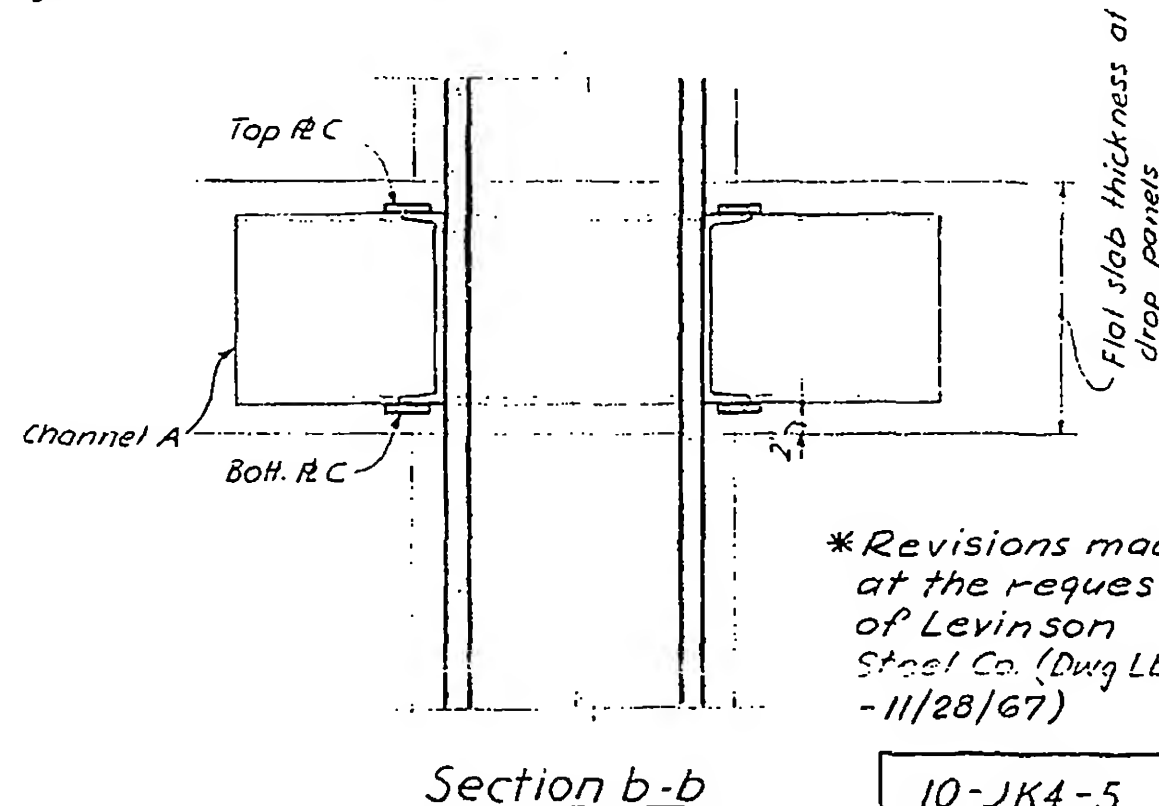
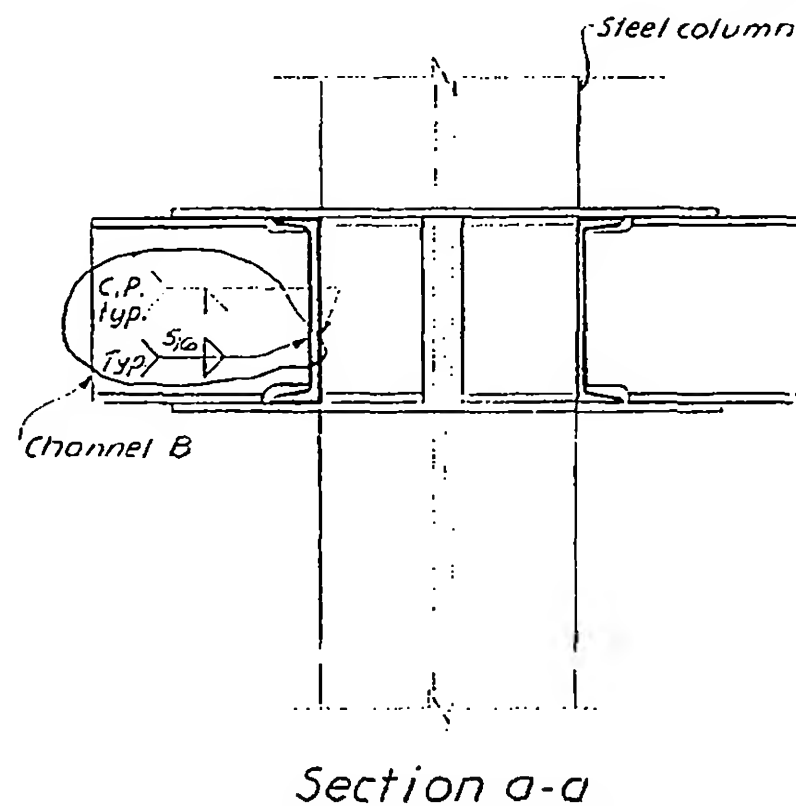
12-3-68



SCHEDULE				
(All material with $F_y = 50 \text{ ksi} - E 70$ welding)				
SHEAR HEAD TYPE				
Member Sizes		V	W	X
	Channel A	$12 \times 3\frac{1}{2} \text{ L } 32.9$	$12 \times 3\frac{1}{2} \text{ L } 32.9$	$10 \times 4 \text{ L } 33.6$
Weld Sizes	Channel B	$12 \times 3\frac{1}{2} \text{ L } 37$	$12 \times 4 \text{ L } 45$	$10 \times 4 \text{ L } 33.6$
	R's C	$3\frac{1}{2} \times \frac{1}{2} \times 3'-2"$	$3\frac{1}{2} \times \frac{1}{2} \times 3'-4"$	$3\frac{1}{2} \times \frac{1}{2} \times 3'-4"$
	* min. L	3"	10"	10"
	a	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
	b	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{1}{2}$
	c	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{1}{2}$
	d	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$

** For large columns where $L \geq T$, reduce L so that $T-L = \frac{1}{2}"$.

* If clearance is allowed between col. & E's, size of weld a, b & c has to be increased by the dimension of this gap. (max. clearance = '8")



* Revisions made at the request of Levinson Steel Co. (Dwg LEV. #9 - 11/28/67)



10-JK4-5

WORTHINGTON SKILLING, HELLE & JACKSON

Civil & Structural Engineers

PROJECT THE WORLD TRADE CENTER

TITLE

COLUMN SHEAR - HEAD DETAILS - TYPE Y

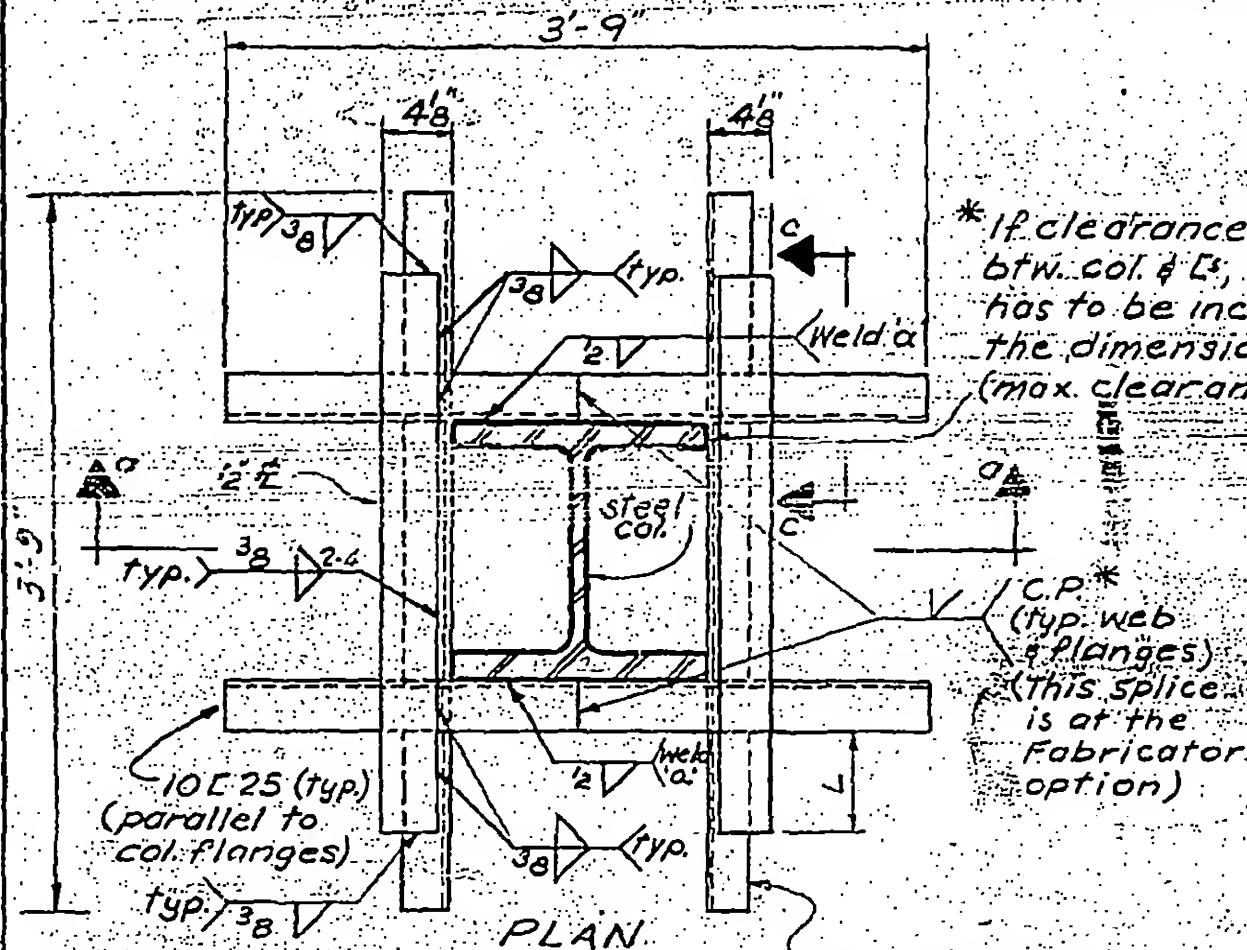
DATE 11-24-67

REVISIONS

1-5-68

6-28-68

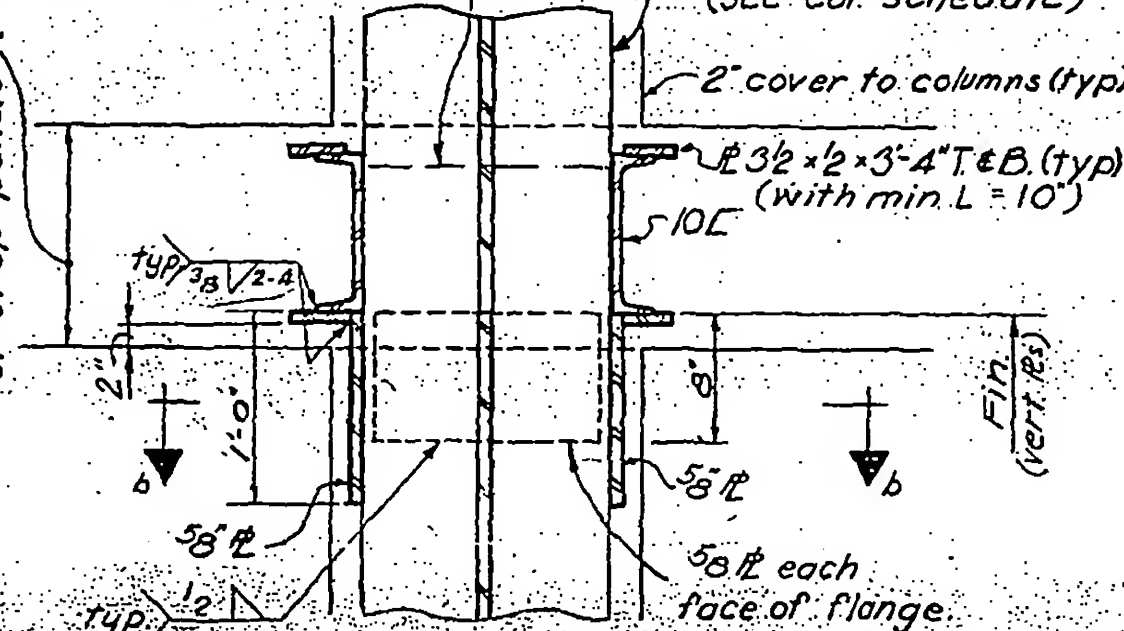
12-3-68



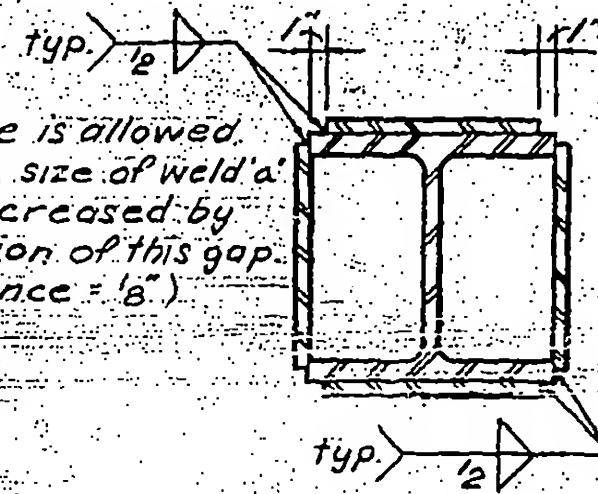
PLAN

Where no column above this floor, top of lower col. shall be 1" below top of E, and weld 'a' shall be on the inside face of E.

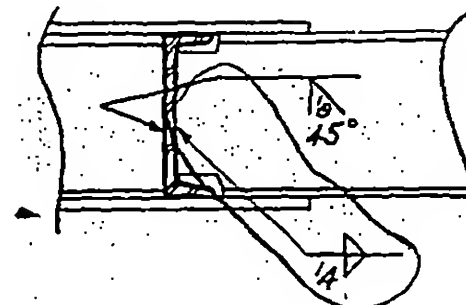
Flat slab thickness of drop panels



SECTION a-a



SECTION b-b



SECTION c-c

* Revisions made at the request of Levinson Steel Co. (Dwg. LEV. #9 - 11/28/67)



10-JK4-G

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

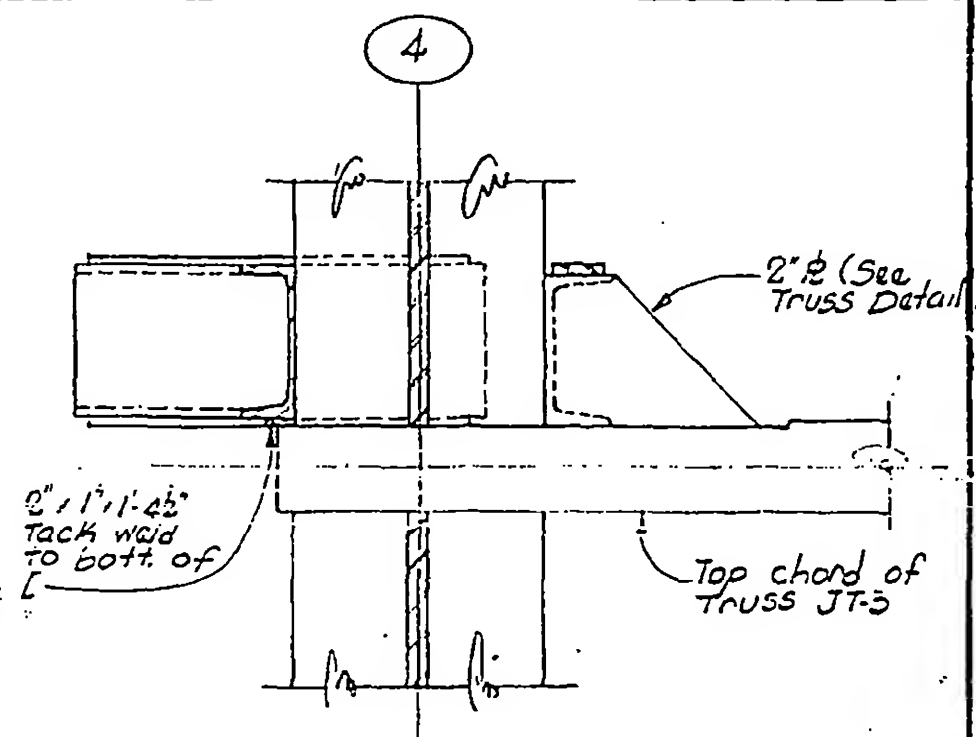
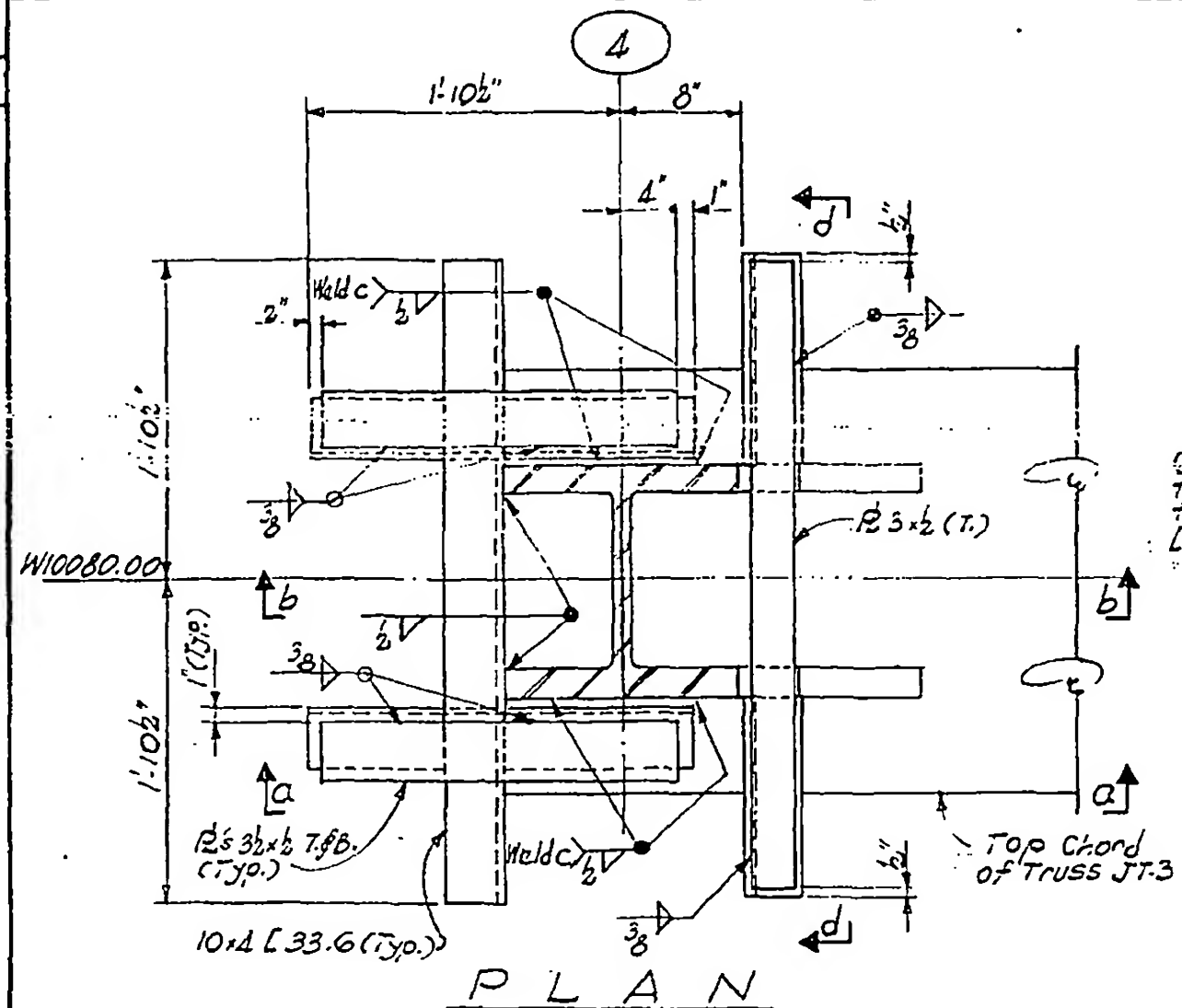
TITLE

SHEAR HEAD DETAIL

DATE 4-5-68

REVISIONS

12-3-68

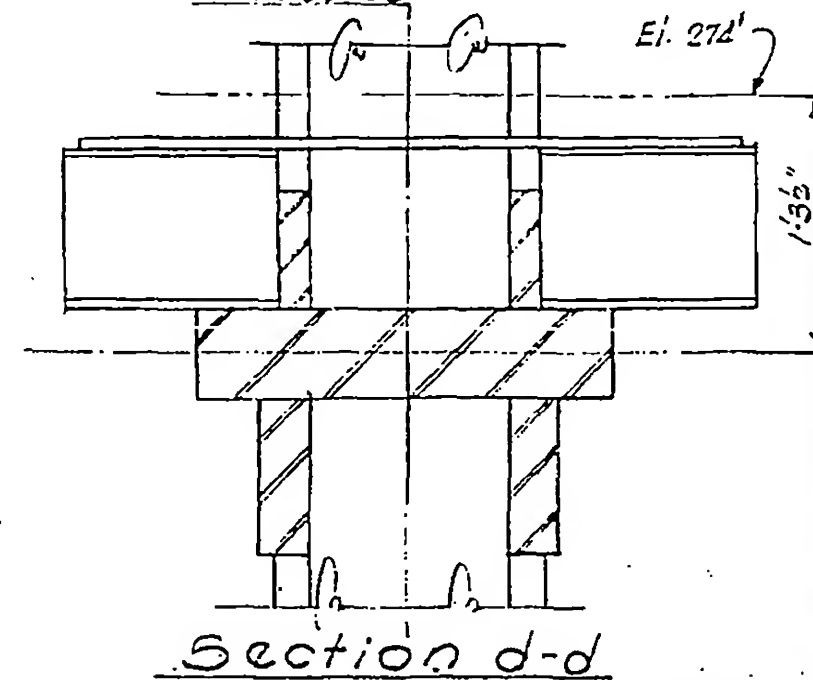
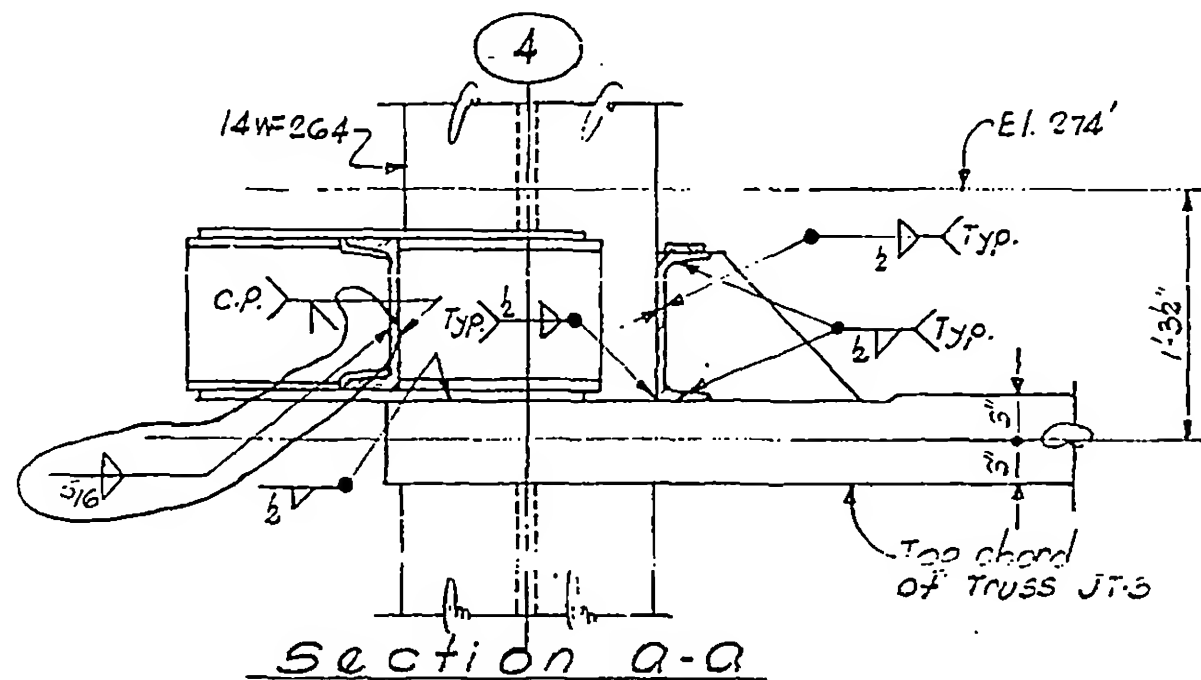


Note:

1. If clearance is allowed between column & truss, size of weld C has to be increased by the dimension of this gap (max. clearance = 1/8")

2. All material to be $F_y = 50 \text{ KSI}$

W10080.00



10-JK4-7



SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE

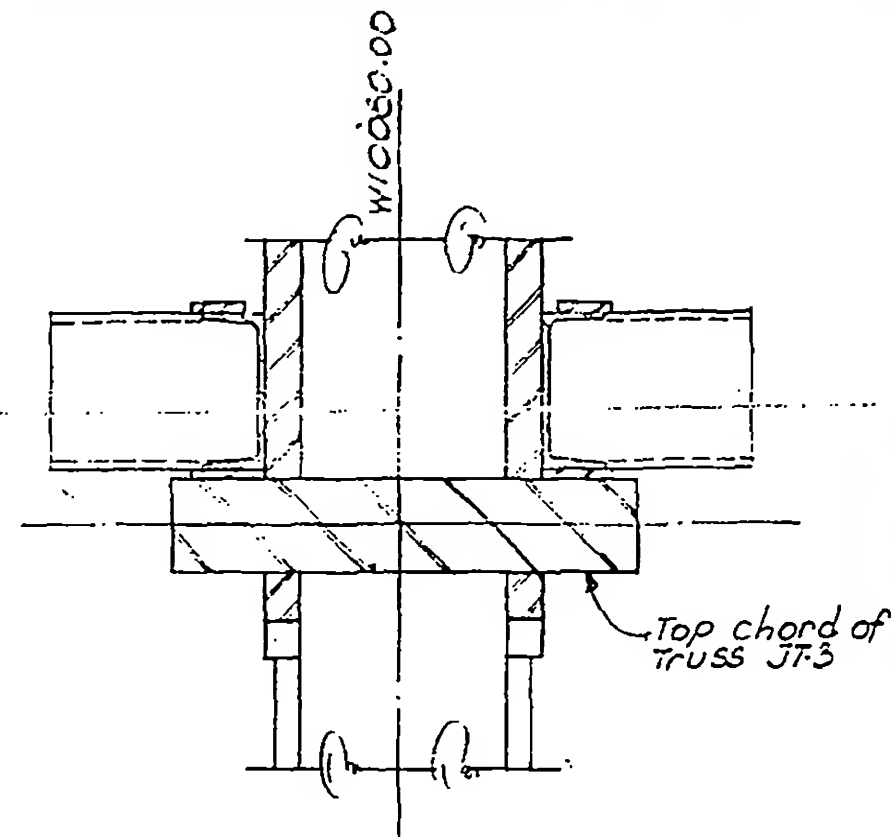
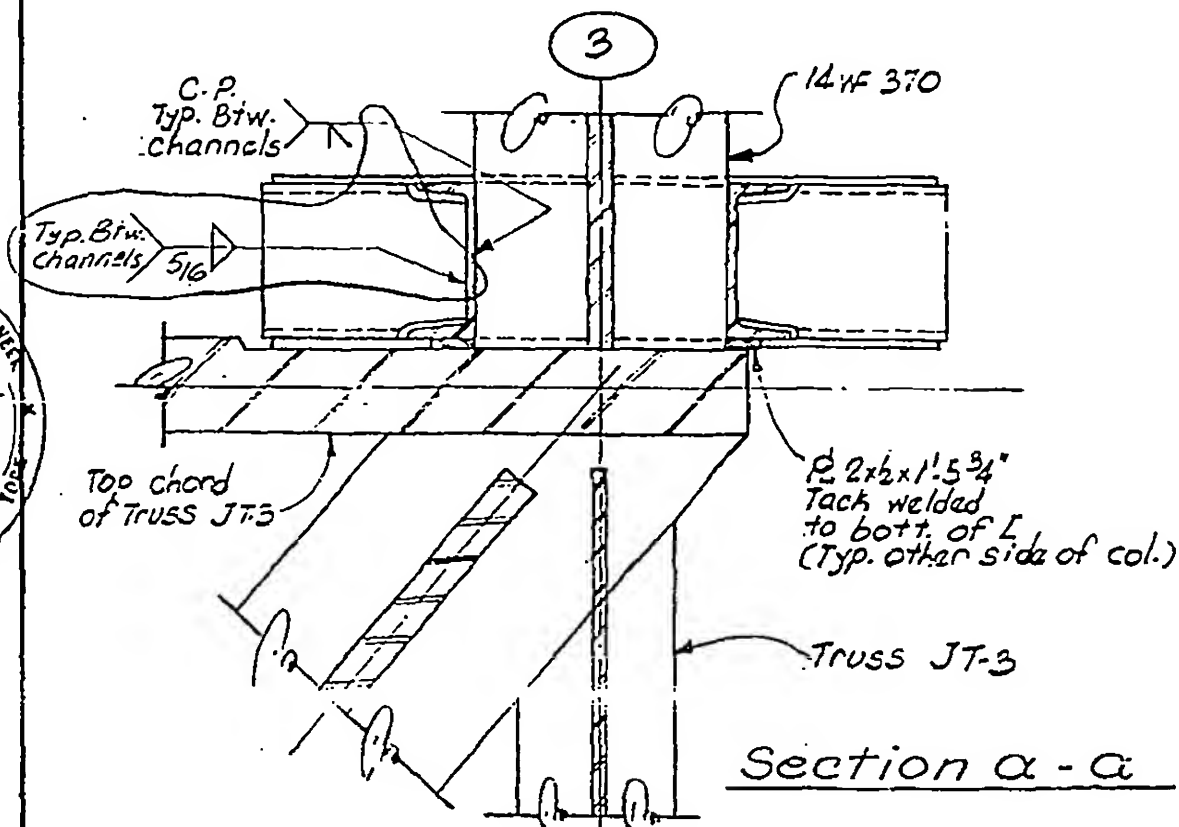
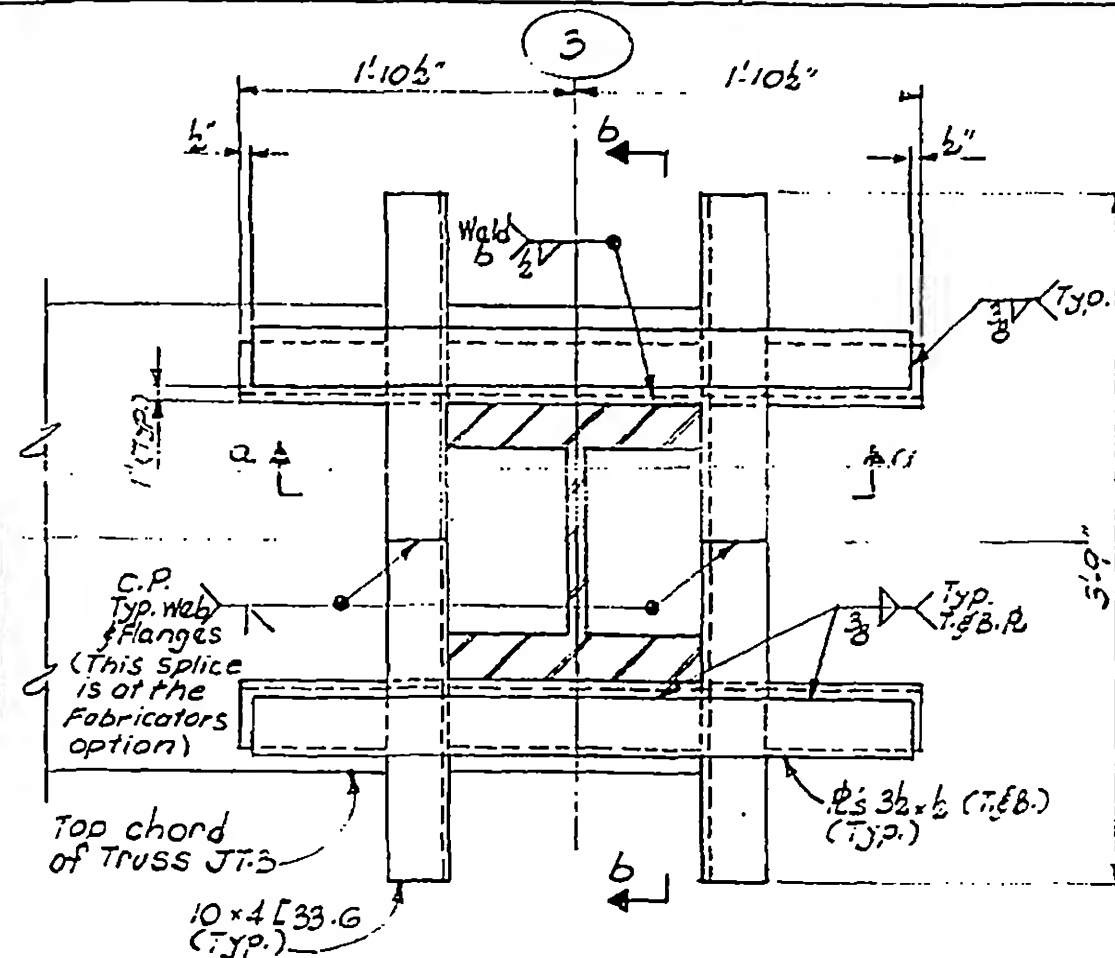
SHEAR HEAD DETAIL

DATE 4-5-68

REVISIONS

6-28-68

12-3-68



Section b-b

Note:

1. If clearance is allowed between column & channels, size of weld b has to be increased by the dimension of this gap. (max. clearance = 1/8")
2. All material to be $F_y = 50 \text{ ksi}$.



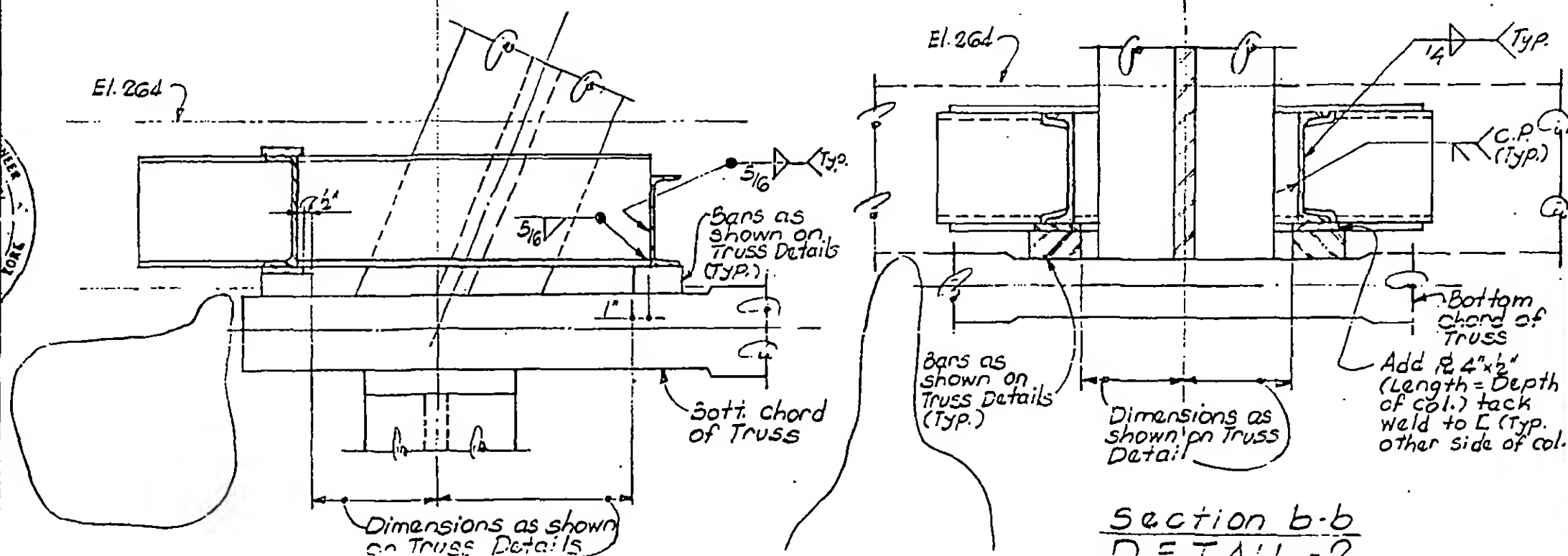
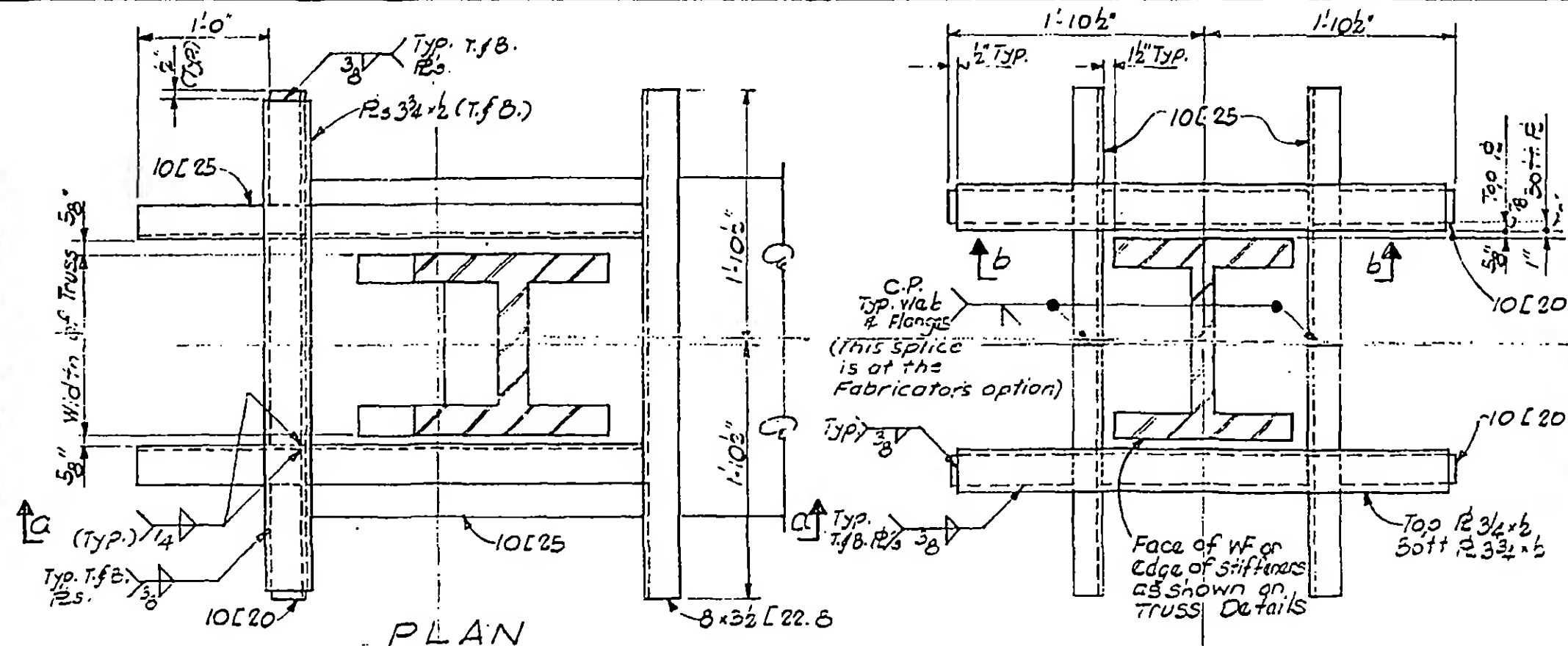
10-JK4-8

REVISIONS

6-28-68

12-3-68

1-20-69



Section a-a
DETAIL-1
(All material $F_y = 50 \text{ ksi}$)

Section b-b
DETAIL-2
(All material $F_y = 50 \text{ ksi}$)

DRAWN

S.C.

REVIEWED

E.L.

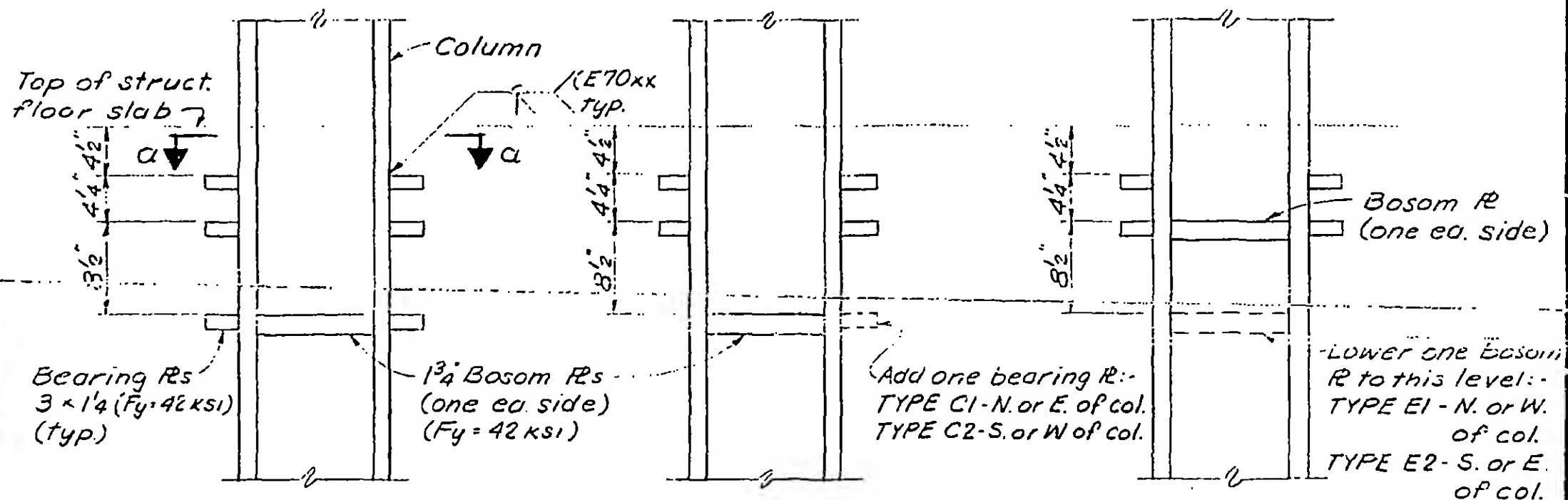
10-JK4-9

PROJECT: THE WORLD TRADE CENTER

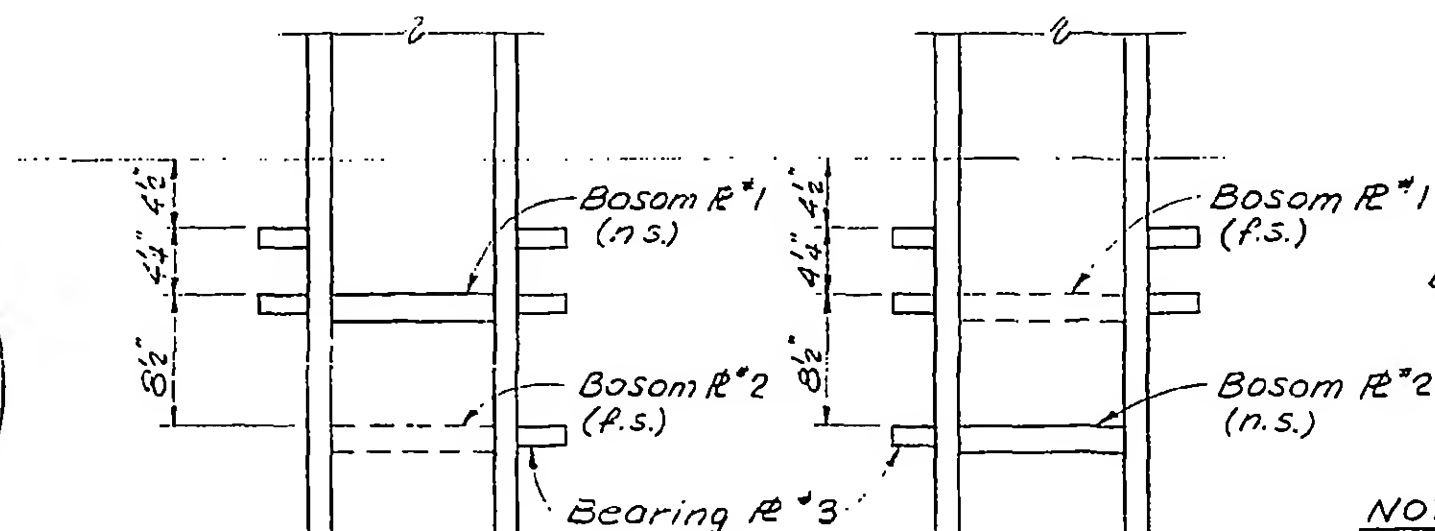
TITLE: DETAIL OF COLUMN BOSOM RS - TYPE A, B, C, D, E, F & G

DATE: 11-24-67

REVISIONS

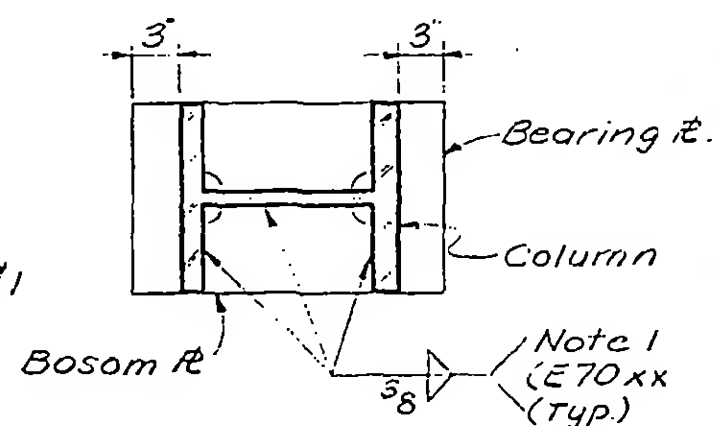


TYPE A

TYPE B
TYPE CTYPE D
TYPE E

TYPE F

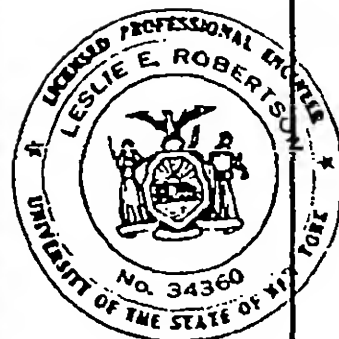
TYPE G



Section a-a

NOTES:

1. Use 1/2" weld on either column flanges or web when the thickness exceeds 2 1/4".
2. When a steel beam frames to the col. omit bearing Rs or bosom R on the side the beam occurs.



TYPE F1:-
R #2 - W. or N. of col.
R #3 - N. or E. of col.

TYPE F2:-
R #2 - W. or N. of col.
R #3 - S. or W. of col.

TYPE G1:-
R #2 - E. or S. of col.
R #3 - N. or E. of col.

TYPE G2:-
R #2 - E. or S. of col.
R #3 - S. or W. of col.

10-JK4-10

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT

THE WORLD TRADE CENTER

TITLE

DETAIL OF COLUMN BOSOM R^s - TYPE H

DATE

2-9-68

REVISIONS

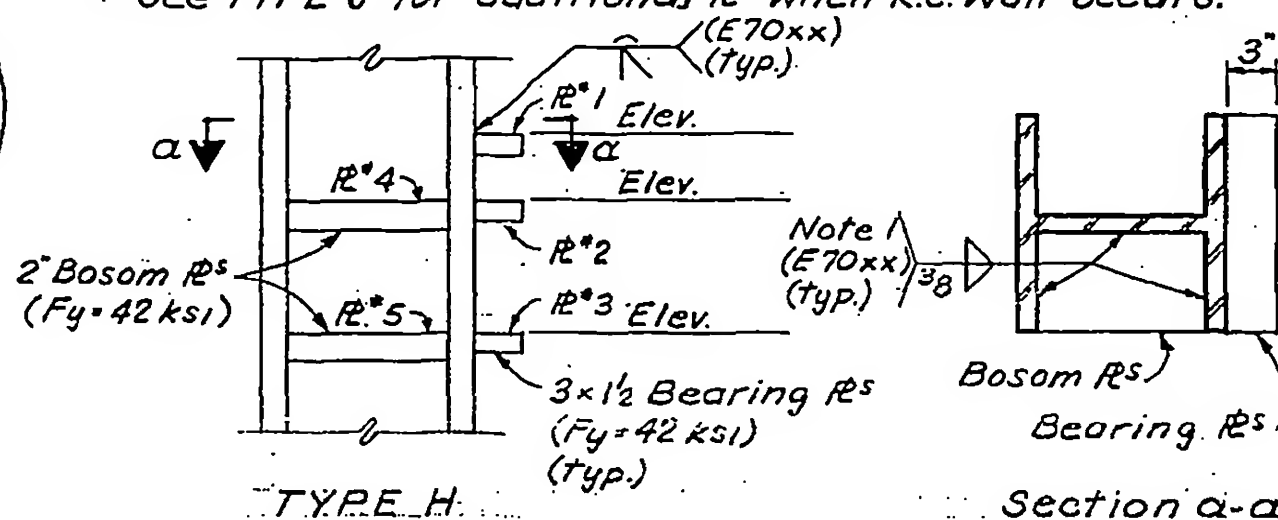
6-7-68

COLUMN No.	ELEVATION AT TOP OF PLATES																			
	NORTH					SOUTH					EAST					WEST				
	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5
J5-1				292'-10 1/2"					292'-10 1/2"							293'-6"	292'-10 1/2"			
				282'-10 1/2"					282'-10 1/2"							283'-6"	282'-10 1/2"			
				272'-10 1/2"					272'-10 1/2"							273'-6"	272'-10 1/2"			
J8-53				292'-10 1/2"					292'-10 1/2"							293'-5"	292'-10 1/2"			
				282'-10 1/2"					282'-10 1/2"							283'-6"	282'-10 1/2"			
				272'-10 1/2"					272'-10 1/2"							273'-6"	272'-10 1/2"			
				251'-10 1/2"					251'-10 1/2"							252'-6"	251'-10 1/2"			
J5-3				292'-10 1/2"					292'-10 1/2"		293'-6"	292'-10 1/2"								
				282'-10 1/2"					282'-10 1/2"		283'-6"	282'-10 1/2"								
				272'-10 1/2"					272'-10 1/2"		273'-6"	272'-10 1/2"								
J8-54	293'-6"	292'-10 1/2"				293'-6"	292'-10 1/2"									292'-10 1/2"				
	283'-5"	282'-10 1/2"				283'-6"	282'-10 1/2"									282'-10 1/2"				
	273'-6"	272'-10 1/2"				273'-6"	272'-10 1/2"									272'-10 1/2"				
	252'-6"	251'-10 1/2"				252'-6"	251'-10 1/2"									251'-10 1/2"				
J4-16					248'-4"					248'-4"				248'-6"					248'-6"	
J5-14					248'-4"					248'-4"				248'-6"					248'-6"	
J5-17					248'-4"					248'-4"				248'-6"					248'-6"	
J6-13					248'-4"					248'-4"				248'-6"					248'-6"	

* See TYPE J for additional R^s when R.C. wall occurs.

NOTE:-

1. Use 1/2" weld on either column flanges or web when the thickness exceeds 2 1/4".



10-JK4-10A

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers.

PROJECT THE WORLD TRADE CENTER

TITLE DETAIL OF COLUMN BOSOM RS - TYPE H

DATE 11-24-67

REVISIONS

2-16-68

5-1-68

6-7-68

12-3-68

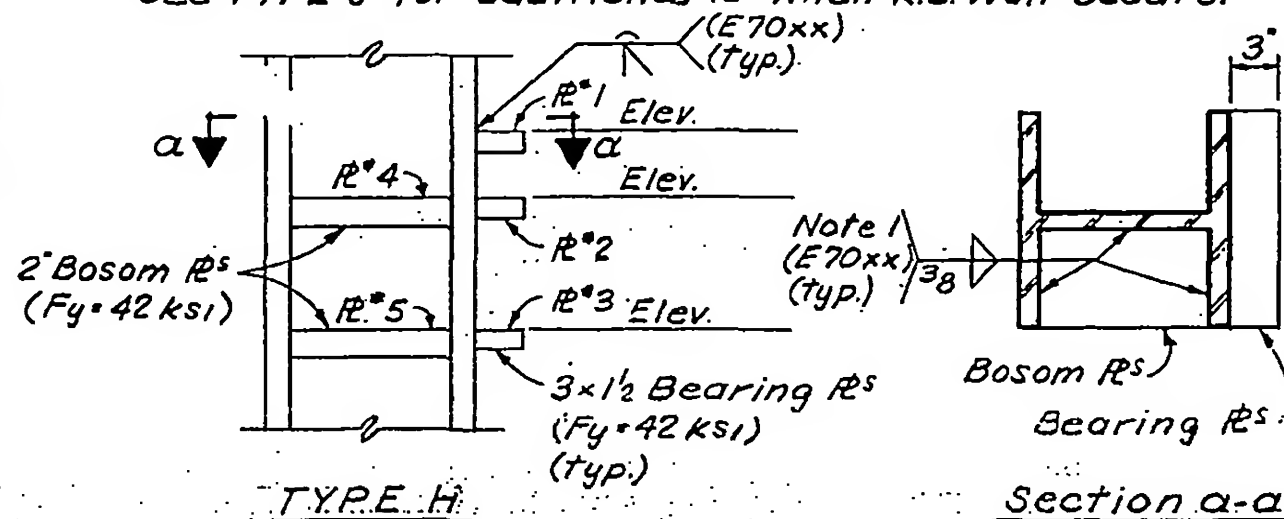
2-4-69

COLUMN No.	ELEVATION AT TOP OF PLATES																			
	NORTH					SOUTH					EAST					WEST				
	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5
J11-7	283'-6"	282'-11"	282'-2 1/2"			283'-6"	282'-11"	282'-2 1/2"						282'-11"	282'-2 1/2"					282'-2 1/2"
J11-8*																			281'-1"	280'-1"
J11-9					279'-3"					279'-3"						280'-3"	279'-9"	279'-3"		
J13-5	283'-6"	282'-11"	282'-2 1/2"												282'-2 1/2"					282'-2 1/2"
J13-6*																				282'-2 1/2"
J14-7				278'-6"	277'-4"					277'-4"										
K27-3				251'-6 1/2"																
K31-10						283'-6"	283'-1"	282'-6 1/2"												
K31-11										280'-7"	281'-3"		277'-7 1/2"							
K31-12					278'-4"					278'-3"	279'-0"		277'-7 1/2"			279'-0"		277'-7 1/2"		
K35-10	283'-6"	283'-1"	282'-6 1/2"			283'-6"	283'-1"								282'-6 1/2"					
K35-11					280'-7"					280'-7"	277'-8"	281'-1"		280'-1"		281'-1"		280'-1"		
K35-12					278'-3"					277'-1"	279'-0"		277'-9"			279'-0"		277'-9"		
K35-53	296'-0"	294'-0"	293'-1"			296'-0"	294'-0"	293'-1"						296'-0"	294'-0"	293'-1"				
K35-54			300'-0"					300'-0"							300'-0"					300'-0"
K35-55		295'-0"	293'-0"					295'-0"	293'-0"											
K37-1					292'-9"								292'-11"					292'-11"		
K37-4	296'-0"	294'-0"	293'-1"			296'-0"	294'-0"	293'-1"						296'-0"	294'-0"	293'-1"				
K37-5			300'-0"					300'-0"							300'-0"					300'-0"
K37-6		295'-0"	293'-0"					295'-0"	293'-0"											
K37-10	283'-6"	283'-1"	282'-6 1/2"												282'-6 1/2"					282'-6 1/2"

* See TYPE J for additional RS when R.C. wall occurs.

NOTE:-

1. Use 1/2" weld on either column flanges or web when the thickness exceeds 2 1/4".



DRAWN

S.C.

REVIEWED

E.L.

10-JK4-10B

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE DETAIL OF COLUMN BOSOM RS - TYPE H

DATE 9-20-68

REVISIONS

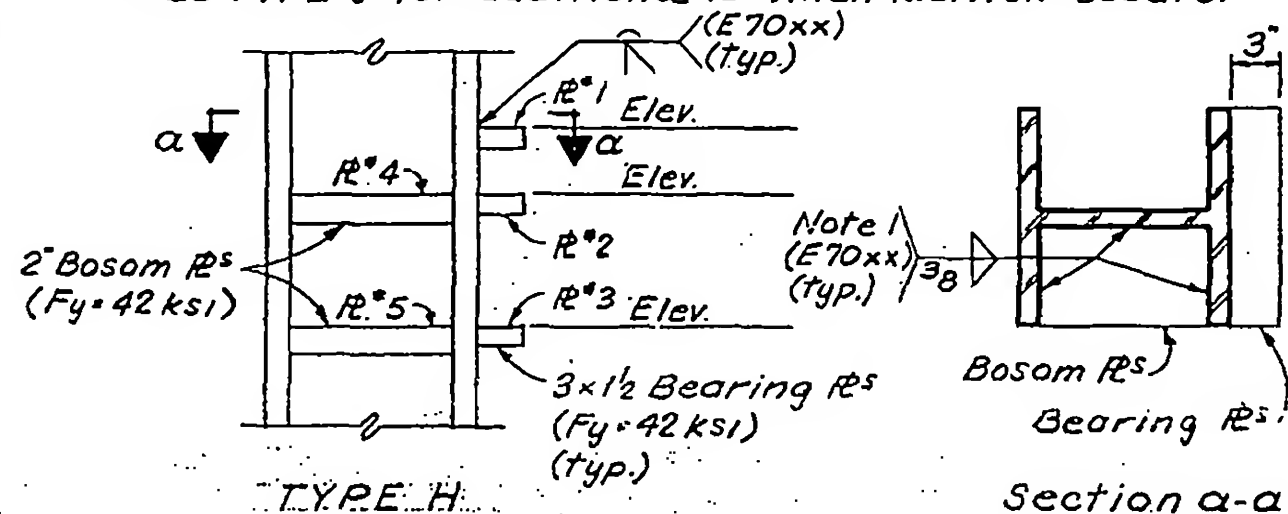
12-17-68

2-4-69

3-12-69

COLUMN No.	ELEVATION AT TOP OF PLATES																			
	NORTH					SOUTH					EAST					WEST				
	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5
K38-2				278'-1"	277'-1"				278'-4"				278'-3 1/2"					278'-3 1/2"		
K40-1										248'-4"			248'-7 1/2"							
K40-2				248'-4"					248'-4"				248'-7 1/2"					248'-7 1/2"		
K41-2					282'-7"					282'-9"			282'-11"							
K41-6		277'-0"	275'-0"				277'-0"	275'-0"												
K43-1		283'-3 1/2"	282'-7"				283'-3 1/2"	282'-7"												282'-6 3/4"
K43-2					282'-9"					282'-9"			282'-11"							
K43-52		283'-3 1/2"	282'-7"												282'-10 1/2"					282'-10 1/2"
K43-53	283'-6"	282'-10 1/2"	273'-6"												282'-10 1/2"					282'-10 1/2"
K44-3					272'-7"								272'-11"					272'-11"		
K45-1						283'-6"	282'-10 1/2"						282'-10 1/2"							282'-10 1/2"
K45-4	276'-0"	274'-9 1/2"				276'-0"	274'-9 1/2"						274'-8"							274'-8"
K45-5	278'-11 1/2"	277'-8 1/2"				278'-11 1/2"	277'-8 1/2"						277'-7 1/2"							277'-7 1/2"
K45-6	281'-9"	280'-6 1/2"				281'-9"	280'-6 1/2"						280'-5"							280'-5"
K47-51						283'-3 1/2"	282'-7"						282'-6 1/2"							282'-6 1/2"

* See TYPE J for additional RS when R.C. wall occurs.



NOTE:

1. Use 1/2" weld on either column flanges or web when the thickness exceeds 2 1/4".

DRAWN
S.C.REVIEWED
E.L.

70-JK4-10C

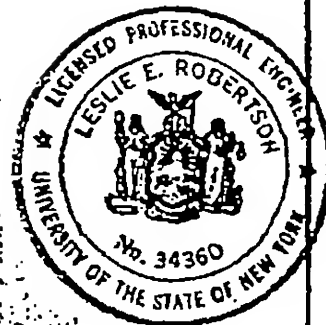
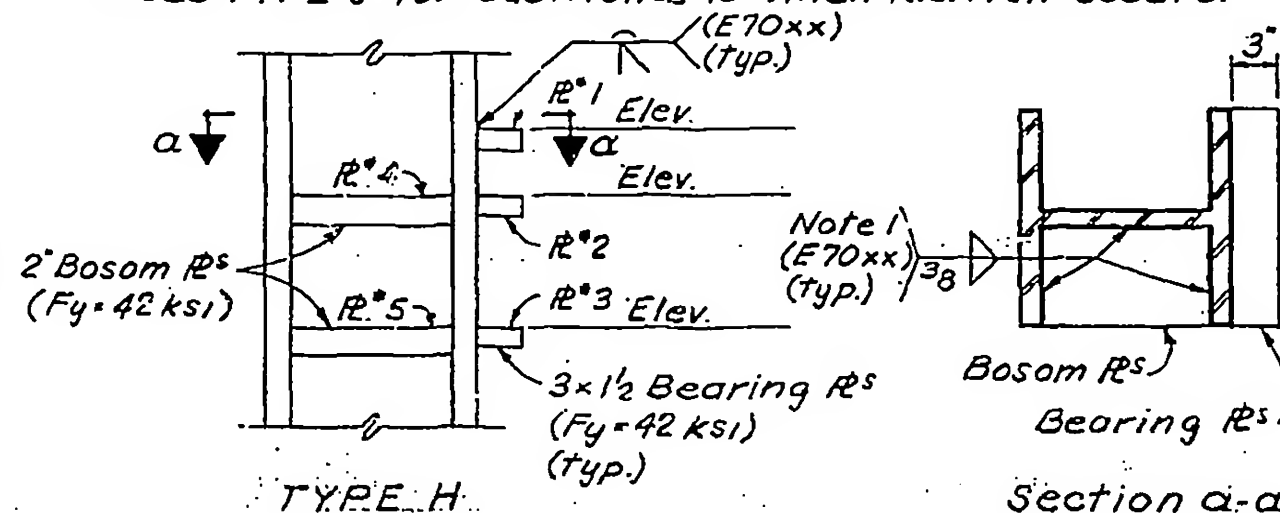
REVISIONS

COLUMN No.	ELEVATION AT TOP OF PLATES																			
	NORTH					SOUTH					EAST					WEST				
	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5	#1	#2	#3	#4	#5
K51-55	327'-6" Int. RS 84'-0" oc. 283'-6"					327'-6" Int. RS 84'-0" oc. 283'-6"														
K53-54	327'-6" Int. RS 84'-0" oc. 283'-6"					327'-6" Int. RS 84'-0" oc. 283'-6"														
K53-55	327'-6" Int. RS 84'-0" oc. 283'-6"					327'-6" Int. RS 84'-0" oc. 283'-6"														
K53-56						327'-6" Int. RS 84'-0" oc. 283'-6"														
K53-57	327'-6" Int. RS 84'-0" oc. 283'-6"					327'-6" Int. RS 84'-0" oc. 283'-6"														

* See TYPE J for additional RS when R.C. wall occurs.

NOTE:-

1. Use 1/2" weld on either column flanges or web when the thickness exceeds 2 1/4".



DRAWN
S.C.
REVIEWED
E.L.

10-JK4-10D

Structural & Civil Engineers

PROJECT *THE WORLD TRADE CENTER*

TITLE DETAIL OF COLUMN BOSOM #5 - TYPE H

DATE... 5-1-68

REVISIONS

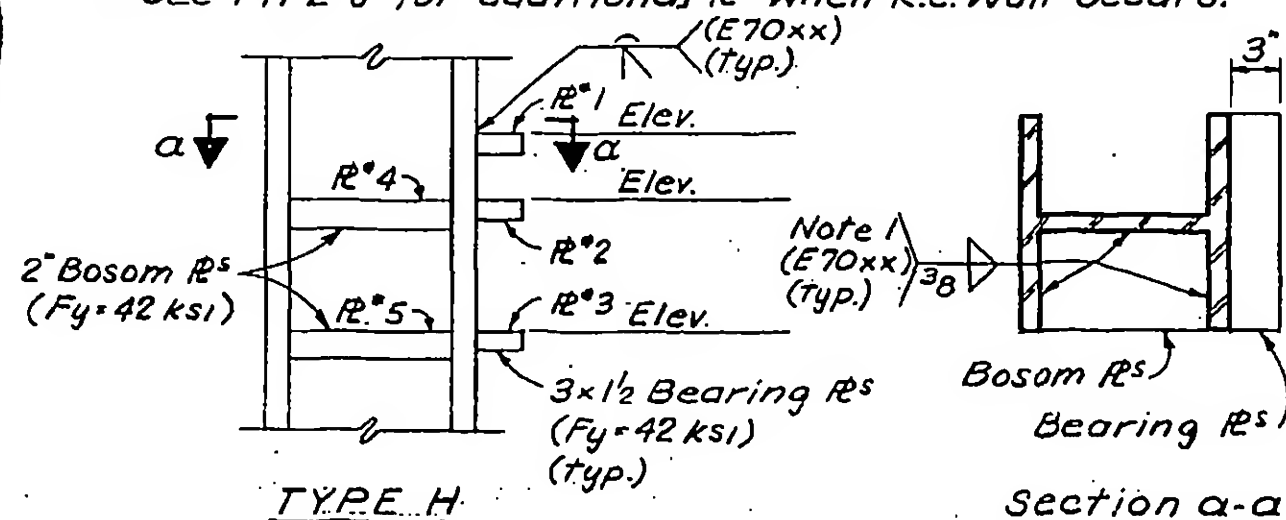
6-7-68

[illegible]

* See TYPE J for additional R^s when R.C. wall occurs.

NOTE:-

1. Use $\frac{1}{2}$ " weld on either column flanges or web when the thickness exceeds $2\frac{1}{4}$ ".



10-JK4-10E

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE DETAIL OF COLUMN BOSOM RS - TYPE H

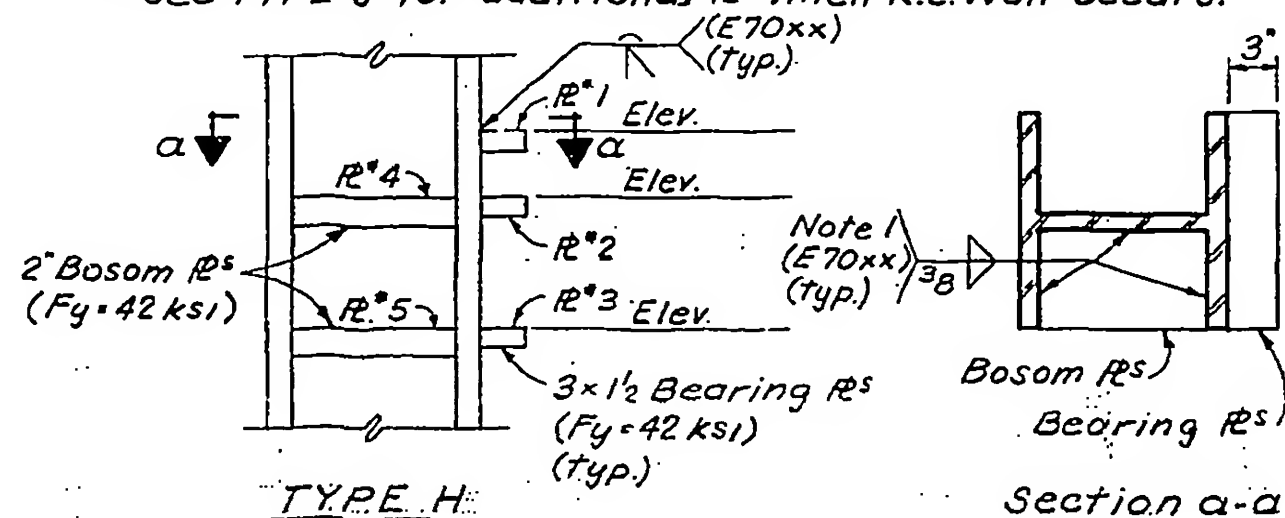
DATE 6-7-68

REVISIONS

9-4-68

COLUMN No.	ELEVATION AT TOP OF PLATES																			
	NORTH					SOUTH					EAST					WEST				
	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5
J72-1			248'-6"					248'-6"							248'-4"					248'-4"
J72-2			248'-6"					248'-6"							248'-4"					248'-4"
J72-4					248'-4"					248'-4"			248'-6"					248'-6"		
J72-6			248'-6"					248'-6"					(248'-6")					(248'-6")		
J72-7			↑					↑					(248'-4")					(248'-4")		(248'-4")
J72-8			↑					↑							↑					↑
J72-9			↑					↑							↑					↑
J72-10			↑					↑							↑					↑
J72-11			↑					↑							↑					↑
J72-12			↓					↓							↓					↓
K72-13			248'-6"					248'-6"							248'-4"					248'-4"
K72-15					248'-4"					248'-4"			248'-6"					248'-6"		
K72-16					↑					↑			↑					↑		
K72-17					↓					↓			↓					↓		
K72-18					248'-4"					248'-4"			248'-6"					248'-6"		

* See TYPE J for additional RS when R.C. wall occurs.



NOTE:-

1. Use 1/2" weld on either column flanges or web when the thickness exceeds 2 1/4".



TO-JK4-10F

SKILLING - HELLE - CHRISTIANSEN - ROBERTSON

Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

TITLE DETAIL OF COLUMN BOSOM RS - TYPE H

DATE 6-7-68

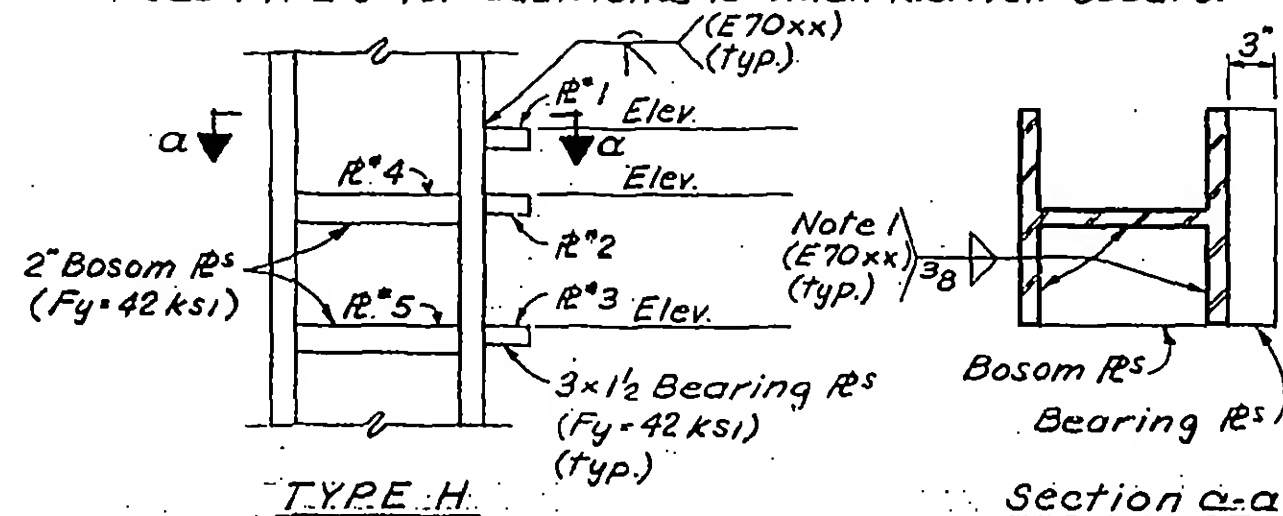
REVISIONS

9-1-68

3-30-70

COLUMN No.	ELEVATION AT TOP OF PLATES																			
	NORTH					SOUTH					EAST					WEST				
	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5	*1	*2	*3	*4	*5
J74-1					248'-4"					248'-4"			248'-6"					248'-6"		
J74-2					248'-4"					248'-4"			248'-6"					248'-6"		
J74-3					248'-4"					248'-4"			248'-6"					248'-6"		
J74-5			248'-6"					248'-6"					248'-6"					248'-6"		
J74-6			248'-6"		284'-6"			248'-6"			284'-6"			248'-4"				248'-4"		248'-4"
J74-7			248'-6"					248'-6"					248'-4"							248'-4"
J74-8			↑					↑					↑							↑
J74-9			↓					↓					↓							↓
J74-10			↓					↓					↓							↓
J74-11			↓					↓					↓							↓
K74-12			248'-6"					248'-6"					248'-4"							248'-4"
K74-13			278'-4"					278'-4"												
K74-14			248'-6"					248'-6"					248'-4"							248'-4"
K74-15			↑					↑					↑							↑
K74-16			↓					↓					↓							↓
K74-17			248'-6"					248'-6"					248'-4"							248'-4"
K74-18					248'-4"					248'-4"			248'-6"					248'-6"		
K74-19					248'-4"					248'-4"			248'-6"					248'-6"		

* See TYPE J for additional RS when R.C. wall occurs.



NOTE:-

1. Use 1/2" weld on either column flanges or web when the thickness exceeds 2 1/4".



DRAWN

S.C.

REVIEWED

E.L.

10-JK4-10.6

Structural & Civil Engineers

PROJECT *THE WORLD TRADE CENTER*

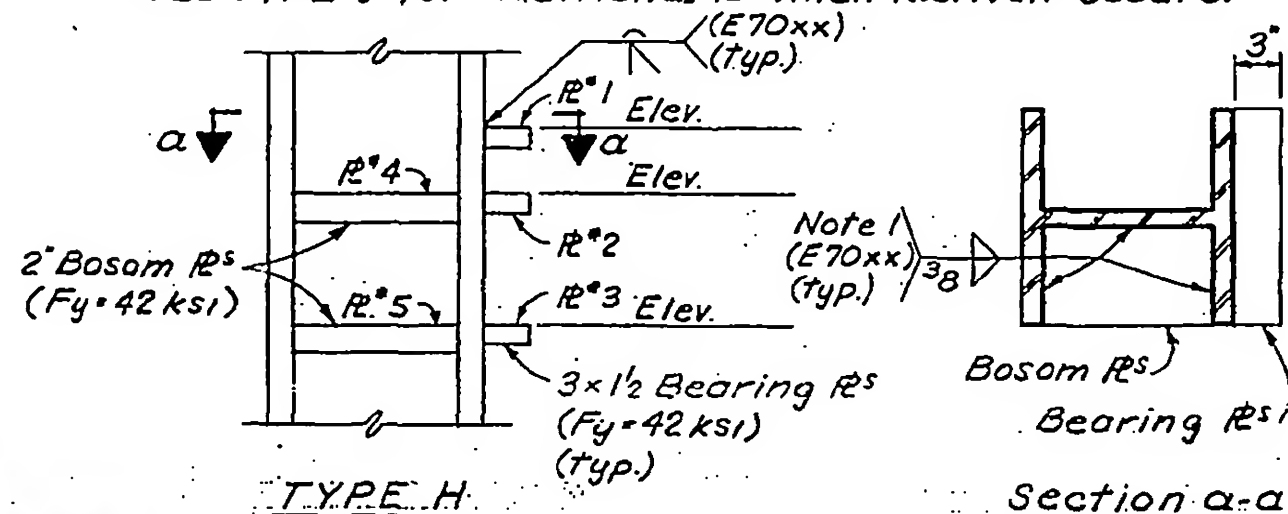
TITLE *DETAIL OF COLUMN BOSOM RS - TYPE H*

DATE 4-18-69

REVISIONS

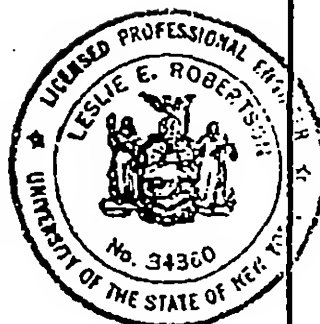
[illegible]

* See TYPE J for additional R's when R.C. wall occurs.



NOTE:-

1. Use $\frac{1}{2}$ " weld on either column flanges or web when the thickness exceeds $2\frac{1}{4}$ ".



DRAWN
S.C.
REVIEWED
E.L.

TO-JK4-10H

PROJECT THE WORLD TRADE CENTER

TITLE DETAIL OF COLUMN BOSOM R^s - TYPE J

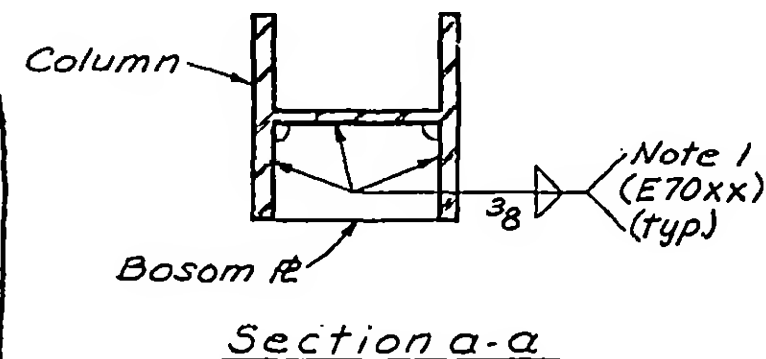
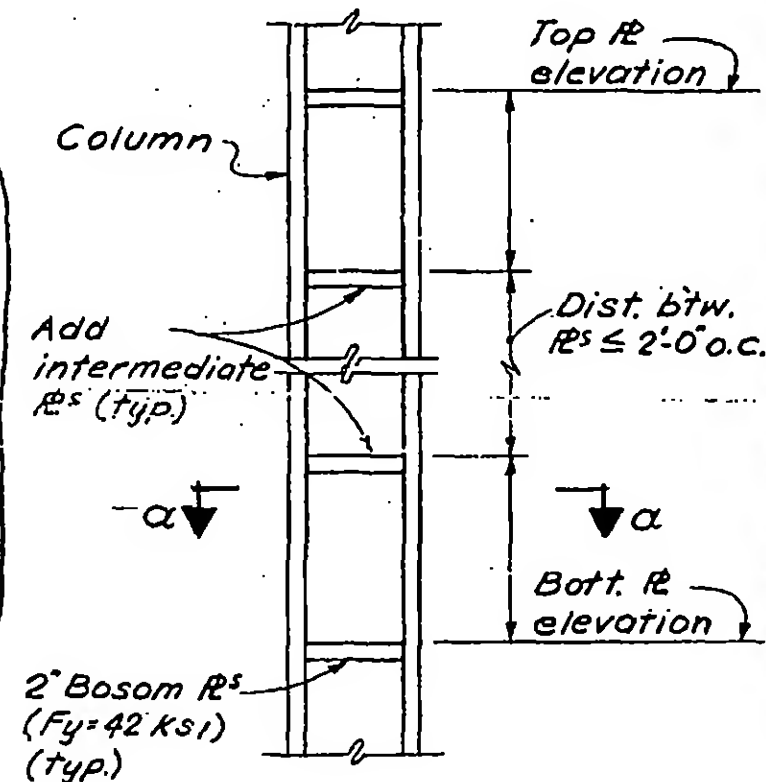
DATE 2-9-68

REVISIONS

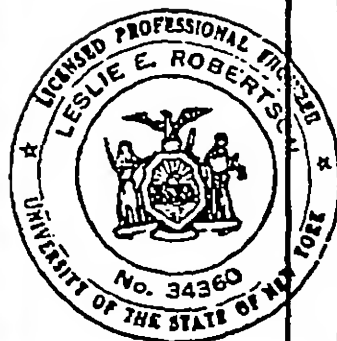
5-1-68

COLUMN No.	ELEVATION OF PLATES							
	NORTH		SOUTH		EAST		WEST	
	TOP R	BOTT. R	TOP R	BOTT. R	TOP R	BOTT. R	TOP R	BOTT. R
J2-16	283'-8"	273'-1"	283'-8"	273'-1"				
J2-17					300'-0"	273'-1"	300'-0"	273'-1"
J3-13					295'-5"	282'-3"		
J3-57					293'-6"	282'-3"		
J4-13					293'-6"	282'-3"		
J5-7							304'-6"	290'-0"
J5-14					*293'-6"	*282'-3"		
J6-12					293'-6"	282'-3"		
J7-13					293'-6"	289'-6"		
J8-10					*293'-6"	*282'-3"		
J8-10					273'-2"	269'-0"		

* No intermediate R's Req'd.

**NOTE:-**

1. Use 1/2" weld on either column flanges or web when the thickness exceeds 2 1/4".



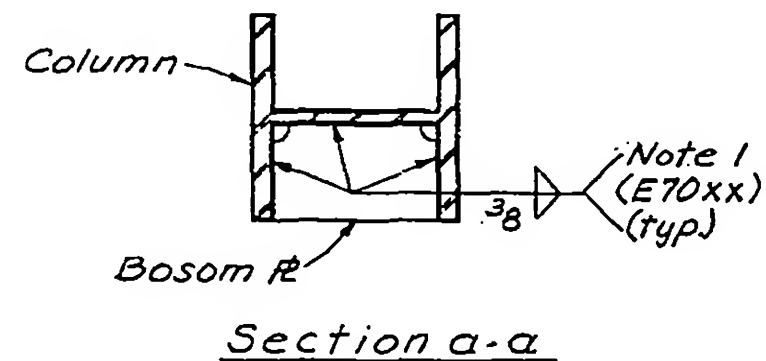
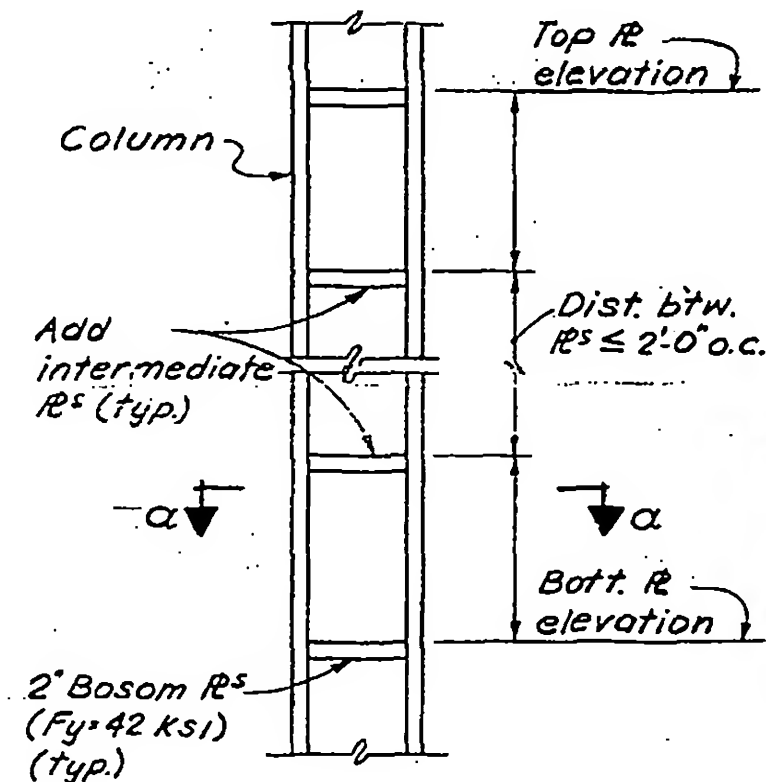
Structural & Civil Engineers

PROJECT	THE WORLD TRADE CENTER	TITLE	DETAIL OF COLUMN BOSOM #S - TYPE J
---------	------------------------	-------	------------------------------------

DATE 11-24-67

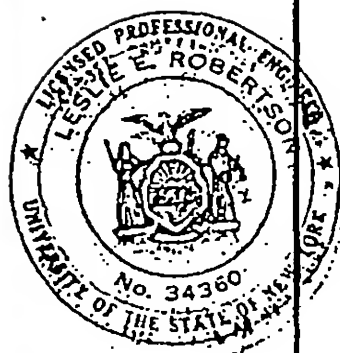
REVISIONS

6-7-68

[illegible]

NOTE:-

1. Use '2 weld on either column flanges or web when the thickness exceeds $2\frac{1}{4}$ ".



10-JK4-12

Structural & Civil Engineers

PROJECT *THE WORLD TRADE CENTER*

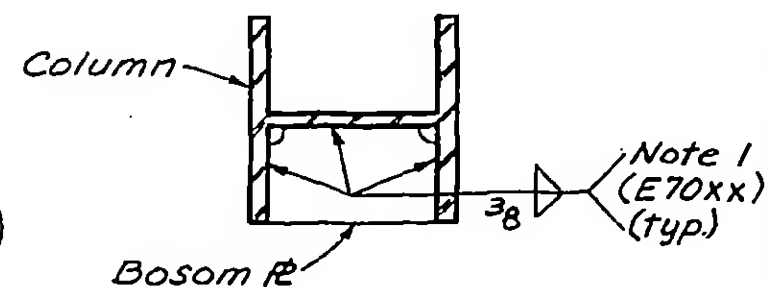
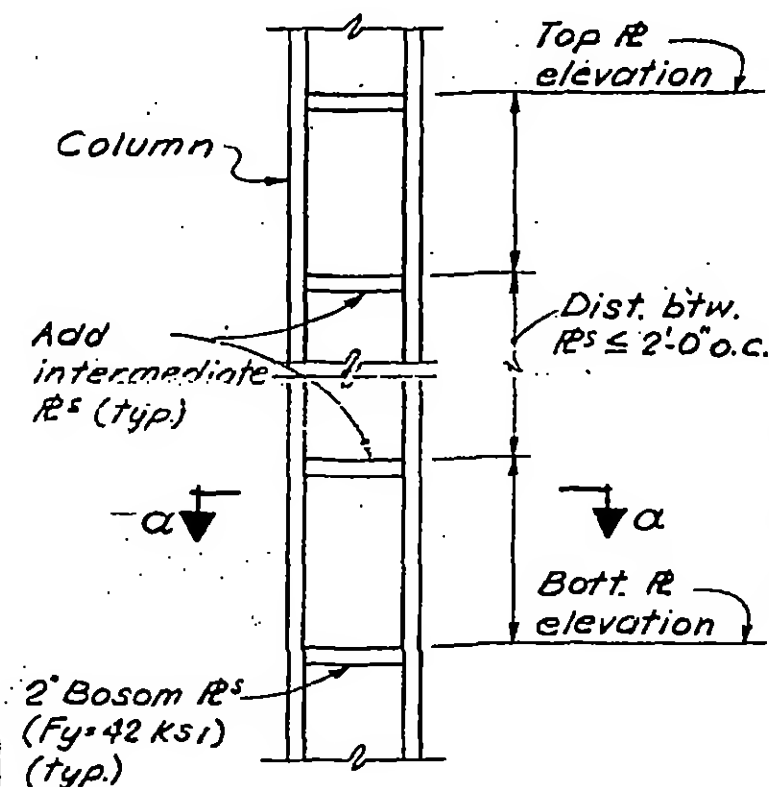
TITLE DETAIL OF COLUMN BOSOM P's - TYPE J

DATE 6-7-68

REVISIONS

9-20-68

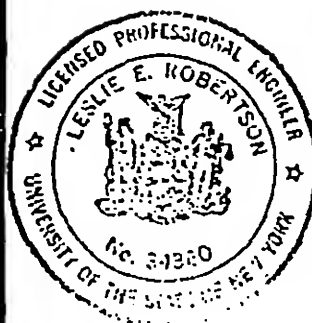
2-4-69

[illegible]

Section a-a

NOTE:-

1. Use $\frac{1}{2}$ " weld on either column flanges or web when the thickness exceeds $2\frac{1}{4}$ ".

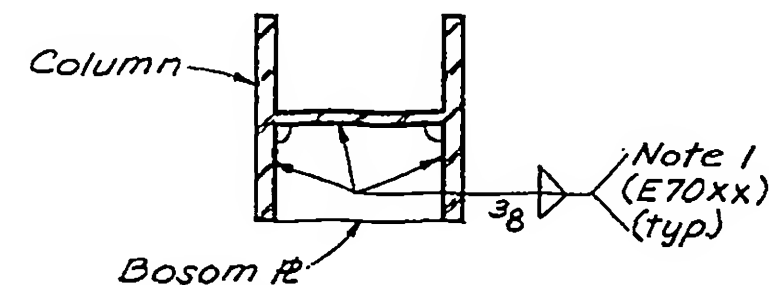
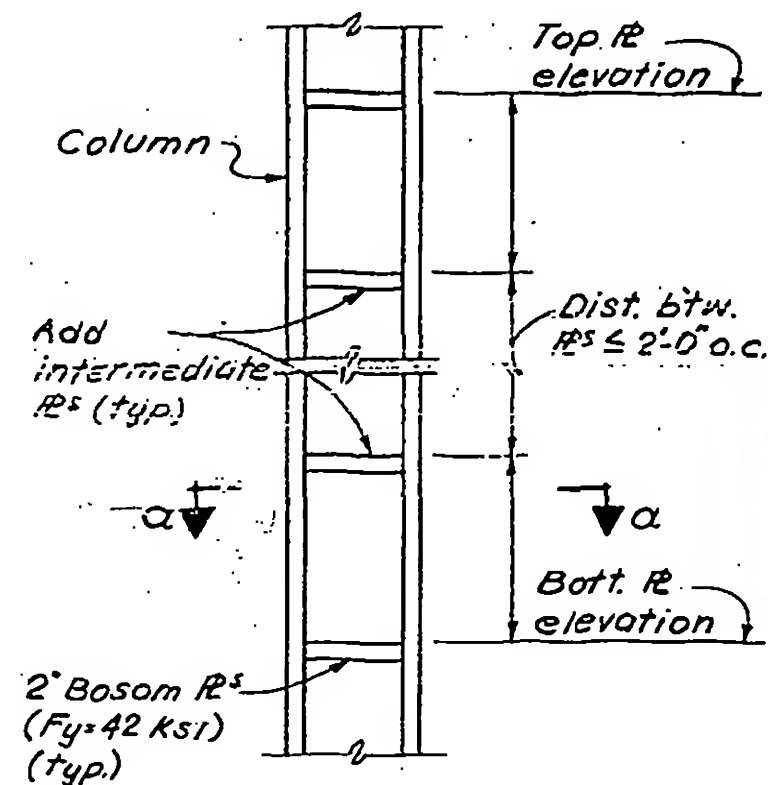


DRAWN
S.C.

REVIEWED
E.L.

10-JK4-15

REVISIONS

[illegible]

Section a-a

NOTE:-

1. Use '2 weld on either column flanges or web when the thickness exceeds $2\frac{1}{4}$ ".
2. Where beam occurs, the interrupted R. may be omitted.

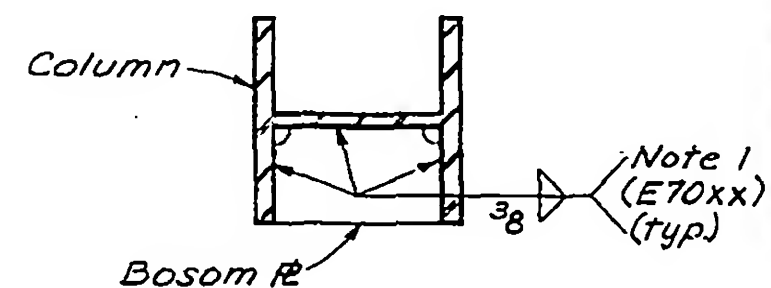
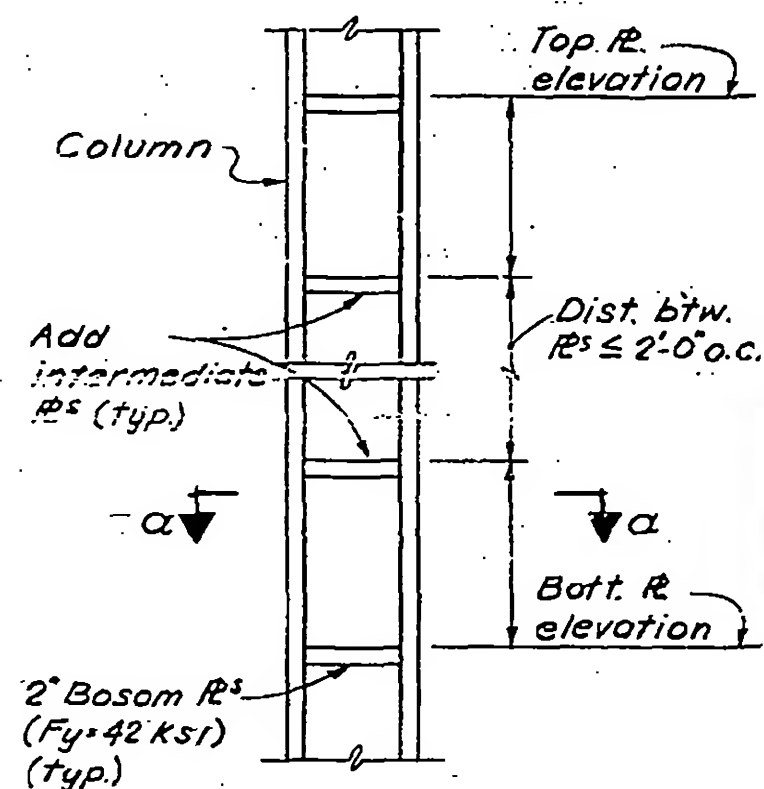


DRAWN
S.C.

REVIEWED
File:

10-JK4-16

REVISIONS

[illegible]

Section a-a

NOTE:-

1. Use $\frac{1}{2}$ " weld on either column flanges or web when the thickness exceeds $2\frac{1}{4}$ ".



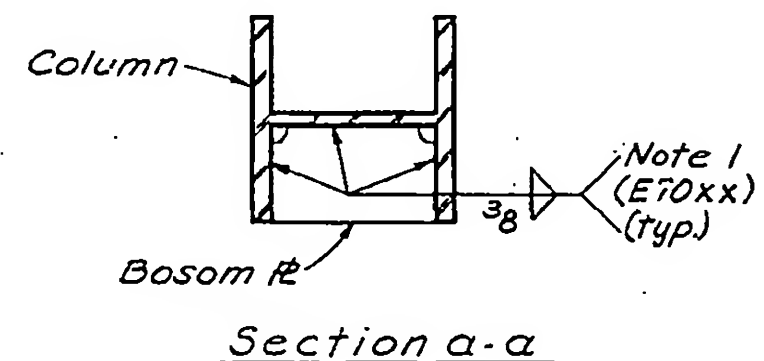
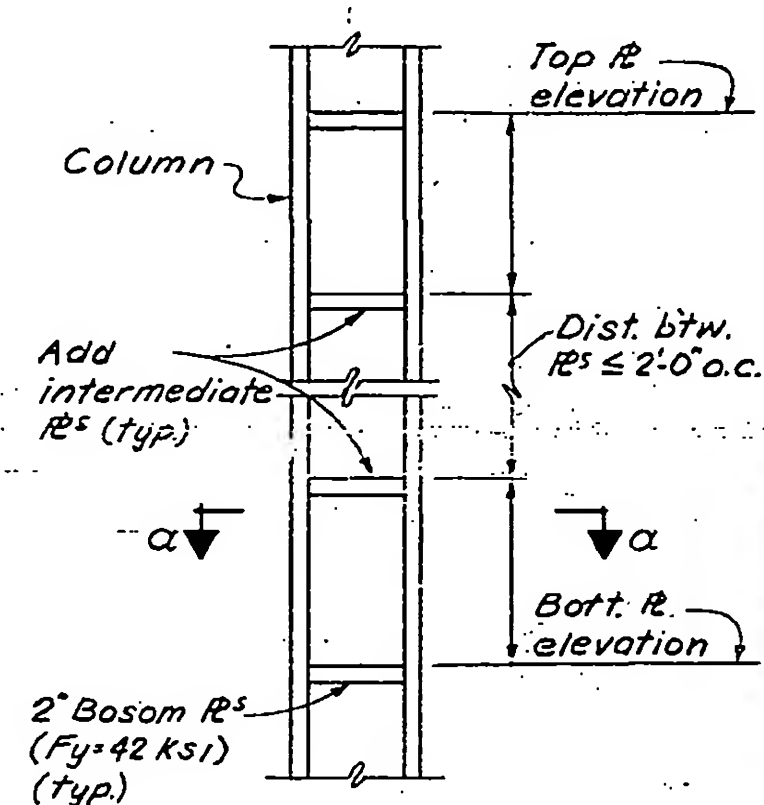
Structural & Civil Engineers

DATE 5-1-68

12-17-68

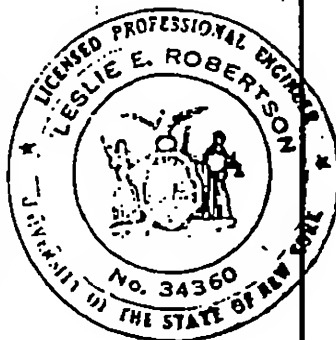
COLUMN No.	ELEVATION OF PLATES							
	NORTH		SOUTH		EAST		WEST	
	TOP R.	BOTT. R.	TOP R.	BOTT. R.	TOP R.	BOTT. R.	TOP R.	BOTT. R.
J72-4	279'0"	273'1"						
J73-4	*276'0"	*273'1"						
K75-23	282'0"	273'3"						

*...No Intermediate ϕ 's are req'd.



"NOTE:-

1. Use $\frac{1}{2}$ " weld on either column flanges or web when the thickness exceeds $2\frac{1}{4}$ ".



10-JK4-30

SKILLING, HELLE, CHRISTIANSEN, ROBERTSON

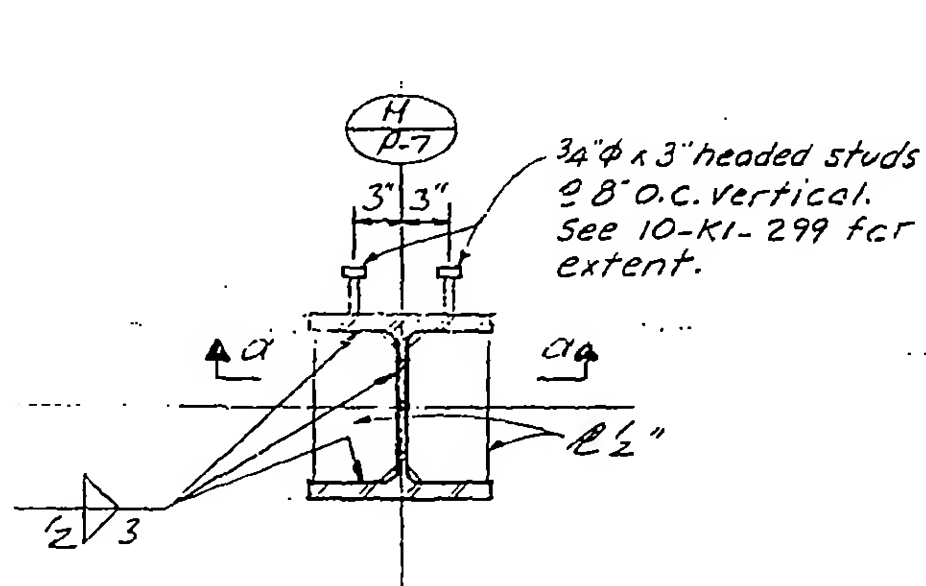
Structural & Civil Engineers

PROJECT THE WORLD TRADE CENTER

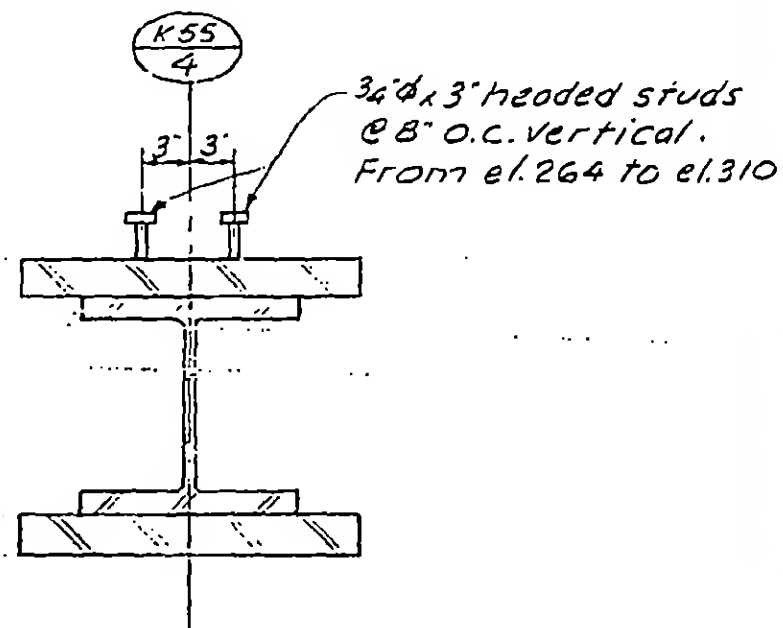
TITLE DETAIL FOR NEW COLUMNS IN HOTEL AREA

DATE 12-23-71

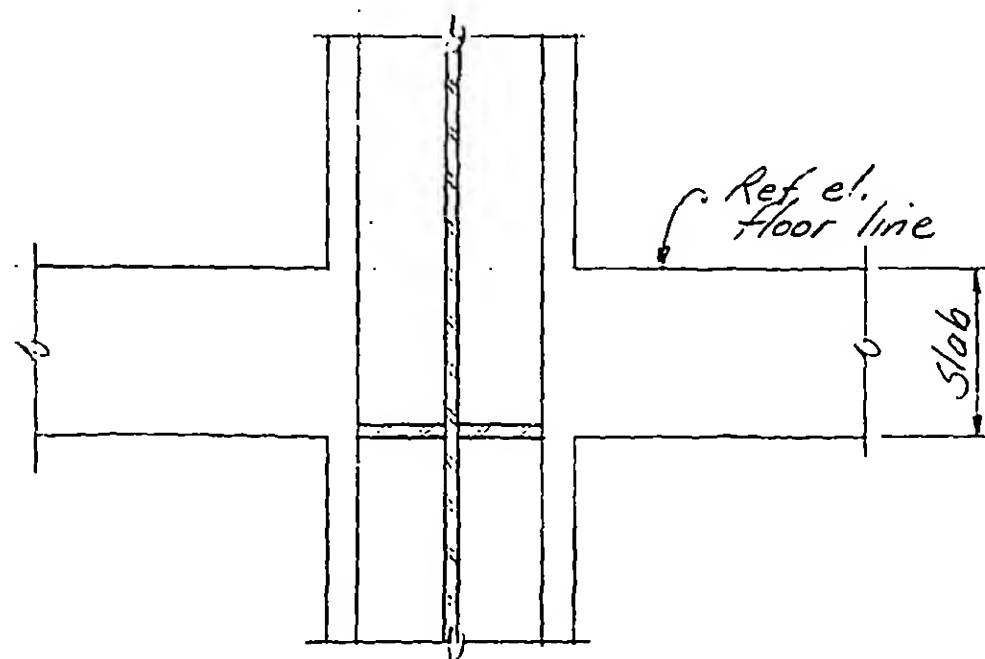
REVISIONS



Section A-A



Detail B



Section a-a



DESIGNED
K. Chiang
DRAWN

REVIEWED
M. J. B. [signature]

10-JKS-2

1040-4, 3