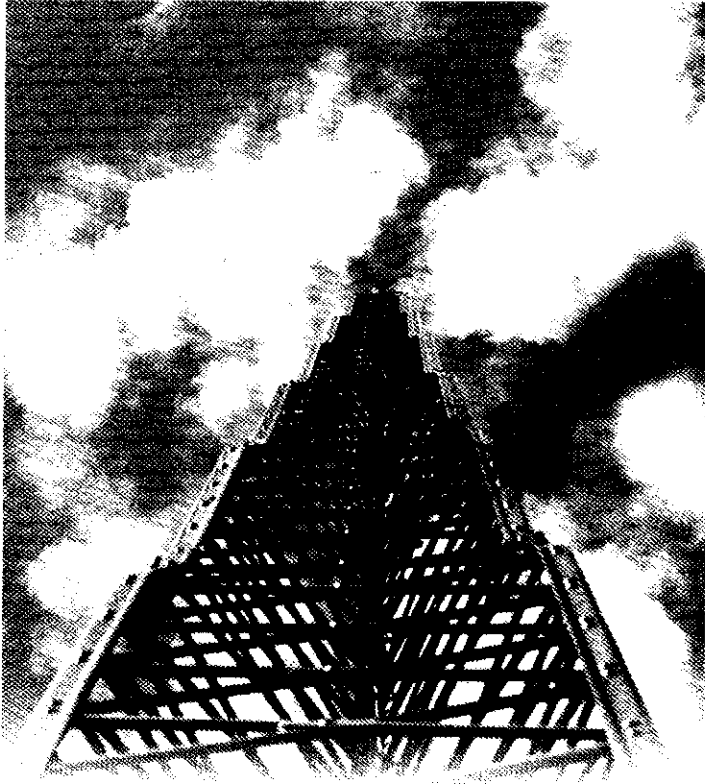




BX SERIES TOWERS



PRODUCTS FOR A
GROWING WORLD
OF TECHNOLOGY

SPECIFICATIONS

BX TOWER

Part Number
8' BX Sections

Wt.

BX1A	Offset top section w/BXT1, BXR1, BXMK2	26
BX2	Standard offset section	24
BX2A	Offset top section w/BXT2, BXR2, FL	31
BX3	Standard offset section	29
BX3A	Offset top section w/BXT3, BXR3, FL	39
BX4	Standard offset section	42
BX5	Standard offset section	60
BX6	Standard offset section	65
BX7	Standard offset section	75
BX8	Standard offset section	83

Nuts and bolts are included in section prices.

BX Accessories

BXMK2	Mast hardware kit w/rotor post for top and rotor plate	2
FL	Heavy duty mast clamp	3
TB3	Heavy duty thrust bearing, recommended for 2" O.D. tubing (for use with section 3 with field drilled hole)	2-1/2
TB4	Heavy duty thrust bearing, recommended for 3" O.D. tubing (for use with section 3 with field drilled hole)	3
BXSM	Side mount (28" - 40") w/4', 1-1/4" OD mast (fits sections 1 through 6)	12
BXHBU	Adjustable house bracket (8" - 24") (fits sections 1 through 4)	15
BXSK1	Extra step kit for section 1 (3 steps on one face)	1
BXSK2	Extra step kit for section 2 (3 steps on one face)	1
BXSK3	Extra step kit for section 3 (3 steps on one face)	1

Top and Rotor Plates

BXT1A	Top plate for section 1 with hardware nuts, bolts, and ACWS	2
BXT2A	Top plate for section 2 with hardware nuts, bolts, and ACWS	2
BXT3A	Top plate for section 3 with hardware nuts, bolts, and ACWS	2-1/2
BXR1A	Rotor plate for section 1 with hardware nuts, bolts, and ACWS	1-1/2
BXR2A	Rotor plate for section 2 with hardware nuts, bolts, and ACWS	2
BXR3A	Rotor plate for section 3 with hardware nuts, bolts, and ACWS	2-1/2

Masts

M8	8' mast (1-1/4")	6-1/2
M4	4' mast (1-1/4")	3

Refer to alphabetical/numerical price list for current prices.

Part Number Self-Supporting Standard BX Tower with (M8) 8' Mast	Wt.	Part Number Self-Supporting Heavy Duty BX Tower w/(FL) Mast Clamp	Wt.	Part Number Self-Supporting Extra H.D. BX Tower w/(FL) Mast Clamp	Wt.
BX24	96				
BX32	142	HBX32	187	HDBX32	231
BX40	205	HBX40	254	HDBX40	305
BX48	273	HBX48	328	HDBX48	397
BX56	351	HBX56	419		
BX64	450				

Note: Concrete base stubs are not included with the above towers. Order all bases as a separate item. However, three steps are included on one face of the top section on the above towers.

Part Number
4' Concrete Base Stubs (Set of 3)

(Tower height not to exceed 64 ft.)

Part Number		Wt.
BXB3	Stubs for section 3	13
BXB4	Stubs for section 4	17
BXB5	Stubs for section 5	18
BXB6	Stubs for section 6	22
BXB7	Stubs for section 7	25
BXB8	Stubs for section 8	25

Self-Supporting 4' Cylinder Base

(For use without concrete with mounting hardware)

(Tower height not to exceed 48 ft.)

Part Number		Wt.
BXCA3	For use with section 3	93
BXCA4	For use with section 4	101
BXCA5	For use with section 5	111
BXCA6	For use with section 6	121
BXCHK	Cylinder base hardware kit (fits sections 3, 4, 5, & 6)	25

Note: Cylinder base is not intended for use in loose soil (sand). ROHN does not recommend the use of cylinder bases. Cylinder bases are supplied as a convenience item only.

Self-Supporting Hinged Concrete Base for All Sections

(Tower height not to exceed 64 ft.)

Part Number		Wt.
BXHC36	Fits sections 3 through 6	21
BXHC78	Fits sections 7 and 8	51

Refer to alphabetical/numerical price list for current prices.

2522
333)

Sheet D-2795
(Replaces D-2725)

February 1, 1994



MAST ASSEMBLY **BX - STANDARD / HBX - HEAVY DUTY / HDBX - EXTRA HEAVY DUTY TOWERS**

1. Two U-bolt assemblies with "L" brackets are supplied for installing the mast. These "L" brackets are bolted through the slotted holes on the rotor and top plate with the short legs of the "L" bracket toward the outside of the tower. See Drawing C750429.
2. Run the U-bolt through the open side of the formed "V" clamp and into the "L" bracket placing the 5/16" nuts and washers on the U-bolt loosely.
3. To install the mast, place one end of it through the upper U-bolt assembly end plate and slide it down into the lower U-bolt assembly. Then tighten the U-bolt assembly to hold the mast.
4. Adjustments to make the mast vertical may be made by moving the "L" brackets in the slotted holes.
The HBX - Heavy Duty and HDBX - Extra Heavy Duty Towers are furnished with a mast clamp installed on the top plate made from a pipe floor flange, which is provided with three bolts to be used as set screws to secure the mast. The box of hardware consists of one U-bolt assembly as described above and it can be installed on the lower plate as is instructed above, if required.

ASSEMBLY INSTRUCTIONS

BREAKING DOWN THE BUNDLE

1. If your tower includes the 8' mast and/or three 4' base stubs, remove them. Remove the package of nuts, bolts and washers.
2. Lay the bundle on its side and remove the tower sections. Start with the innermost section of the package (the smallest section) and remove by pulling out with quick, firm jerks. It is not necessary nor desirable to pry the tower sections out with tools as damage may result.
3. Inspect all tower sections on delivery to make sure there are no loose or broken rivets caused by transport mishandling. If a rivet is broken or loose, it should be replaced by a snug-fitting machine bolt and nut, securely tightened.

TOWER

After you have chosen the desired type of base for your tower (concrete base with BXB concrete base stubs, BXHC hinged concrete base, or BXCA cylinder base which hinges over and requires no concrete) and it is properly installed per base instructions, bolt the base section (the largest section) to the base. Proceed with the erection as follows:

1. The legs on each higher section slide inside the previous one and should be positioned on the rivet stop in the previous leg. (This rivet stop is to prevent the tower section being installed from slipping through the previous section and is not for the purpose of aligning the assembly holes.) (Special Note: The BX8 section does not have a rivet stop in it, so extreme caution should be used when installing the BX7 section into the BX8 section.) Proceed by bolting together each section with the proper size bolts.
2. To erect the tower, section by section vertically, you should use an EFBX erection fixture for raising and locating the section being installed into the previous section. (Note: Do not use an erection fixture to lift more than the weight of one tower section at a time.) By using BXHC or BXCA base the tower can be assembled on the ground and hinged up using extreme caution. When hinging up, watch for power lines, trees, etc.
3. Loose, missing or faulty rivets should be replaced with a similar size nut and bolt which can be obtained at any local hardware.

Note: 3/8" bolts are to be used on BX1, BX2 and the top of the BX3 sections. 9/16" bolts are used on the bottom of the BX3 and all sections from BX4 through BX8 (BX8 is the largest section).

One set of cross braces on one face of the top section is purposely left off to allow easy access to the rotor plate for installing the mast and rotor. (Note: Only one person should be on the tower at one time.)

CAUTION... Be sure hinge bolts on hinged type accessories are loosened before attempting to hinge tower up or down. All hinged type bases are intended to be used to raise tower only without antenna. When raising and lowering tower on any hinge type base, the loads applied for raising the tower must be applied equally on both sides of the tower using a cradle or by using several attachment points in order to prevent overloading a tower member and to reduce the possibility of twist on the tower and hinges at the base. Special care must be taken to avoid the use of raising and lowering methods which may cause damage to tower or base. Tower must be initially raised prior to applying tension to a hoisting line to avoid a large horizontal force pulling the tower into the base. Towers and bases must only be installed and dismantled by professional and experienced installers. Field welding is prohibited on tower, base and anchor bolts.

Be sure to check anchor bolt projections per drawing C760099R7. Make sure the anchor bolt is not interfering with the raising or lowering of the hinge pipe. Check this before attempting to hinge up or lower the tower.

i.D.
Clamp

231
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NOTES ON ASSEMBLING ROTATORS

Most all makes of rotators can be installed on the rotor plate inside the top tower section of the BX standard, HBX heavy duty, and HDBX extra heavy duty towers. There is a short piece of tubing furnished with each tower that can be used as a thrust bearing (for 1-1/4" mast) with the mast clamp installed on the top plate as is described under the heading Mast Assembly. Do not install rotators on the HDBX top plate.

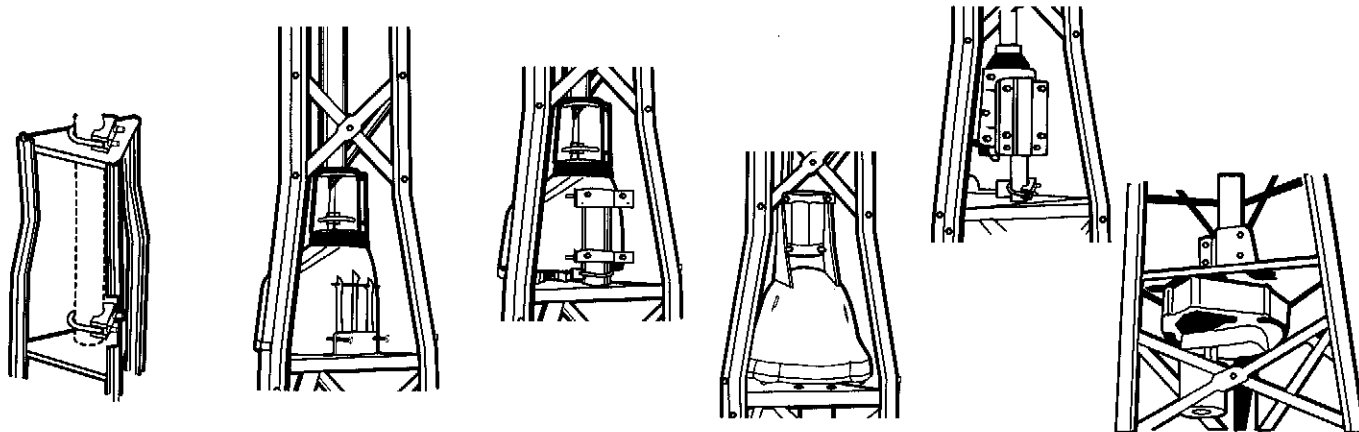
For the HBX - Heavy Duty and HDBX - Extra Heavy Duty Towers, when a rotator is used a 4" piece of tubing or pipe with an I.D. larger than the O.D. of the mast can be installed in the pipe flange clamp and used as a bearing sleeve for the mast to turn in.

FOR ASSEMBLING THE ROTATOR ITSELF, FOLLOW THE PROCEDURES OUTLINED BELOW:

Some inline model rotators mount directly to the rotor plate. (The lower housing of the rotator is not used when this is done.) The necessary holes for mounting most rotors are pre-punched in the plate itself and the bolts furnished to bolt the lower housing to the upper housing (4-1/4" x 1" bolts) are to be inserted from the bottom of the plate upward and into the rotor. It is desirable to place 3/8" nuts to act as spacers between the rotor plate and the rotator.

These nuts will prevent the terminals of the rotator and the rotor wire from shorting on the rotor plate. An 8" piece of tubing is furnished with each tower. It can be installed into the clamp ("V" clamp and "L" shaped brackets furnished for offset rotor installation only) for the offset type rotators. It is necessary to reverse the clamp assembly (to face outside of the tower), opposite that of installing a standard mast to the rotor plate. Some rotators can be mounted directly to the "L" shaped bracket as shown or to the 8' mast as previously described.

Also, some rotators mount beneath the rotor plate (as pictured). It will be necessary to increase the 1/4" holes in the rotor plate to 3/8" holes to use the 3/8" bolts furnished with these rotators. See pictorial views of typical rotor installations:



In all cases be careful during installation.

Notes:

Do not install towers near power lines. All towers should be installed out of falling distance of power lines since every electrical and telephone wire should be considered dangerous.

ROHN recommends anti-climb sections on all towers to prevent unauthorized persons from climbing towers. Only one person should be on the tower at a time.

All antenna installations must be grounded per local or national codes.

All towers should be installed and dismantled by experienced and trained personnel.

All types of antenna installations should be thoroughly inspected by qualified personnel at least twice a year and re-marked with hazard and warning labels to ensure safety and proper performance. A safety package (part number ACWS) is available which includes one anti-climb warning sign and two Danger - Watch for Wires labels along with other printed safety information.



ASSEMBLY INSTRUCTIONS BX SELF-SUPPORTING CYLINDER BASES

1. Assemble the base as shown on Drawing C750409.
2. Place the cylinder in the area the tower is to occupy. (Note: Be sure to position the base so that the tower can be hinged in the direction where there are no obstructions.) Mark off a circle approximately 2 to 3 inches larger than the cylinder.
3. Dig a hole 4 feet deep (deep enough to completely bury the cylinder below ground level).
4. Drop the cylinder in the hole and with it as vertical as possible throw the soil back into the cylinder and around it, tamping it solid after every 6 to 8 inches of fill. (Note: Be sure cylinder is flush or below the ground surface. See Drawing C750409.)
5. When the cylinder is approximately one-half full of dirt, attach the base tower section to the pipe sleeves of the base as shown on Drawing C750409. This is necessary to avoid distortion of the cylinder as you continue to fill and tamp the soil in the base.
6. Continue to fill and tamp the soil into the cylinder within 6 inches of the top.
7. Plumb the tower section by placing a level on the outside of each leg adjusting to the plumb position by loosening and realigning the BXCBI angle support brackets until the tower is plumb. (Note: The brackets must be extremely tight when the tower section is plumb.)
8. Remove the top 9/16" x 3-1/2" bolts on the pivot side of the tower that holds the pipe sleeves to the yokes. Then remove both bolts on the side opposite the pivot direction. The section can now be hinged to the ground.
9. Assemble the rest of the tower as per BX tower instructions. Hinge the tower up and when vertical put the 9/16" x 3-1/2" bolts back through the yokes and pipe sleeves. Then tighten all base bolts securely.
10. Complete filling the cylinder with dirt and tamp firmly.
11. After installation is completed, the base should be rechecked in about 30 days to be sure that the hardware remains tight and it should be rechecked every six months.

CAUTION... Be sure hinge bolts on hinged type accessories are loosened before attempting to hinge tower up or down. All hinged type bases are recommended to be used to raise tower only without antenna. When raising and lowering tower on any hinge type base, the loads applied for hinging the tower must be applied equally on both sides of the tower in order to reduce the possibility of twist on the tower and hinges at the base. Special care must be taken to avoid the use of raising and lowering methods which may cause damage to tower or hinges. Hinged bases should only be installed and dismantled by professional and experienced personnel.

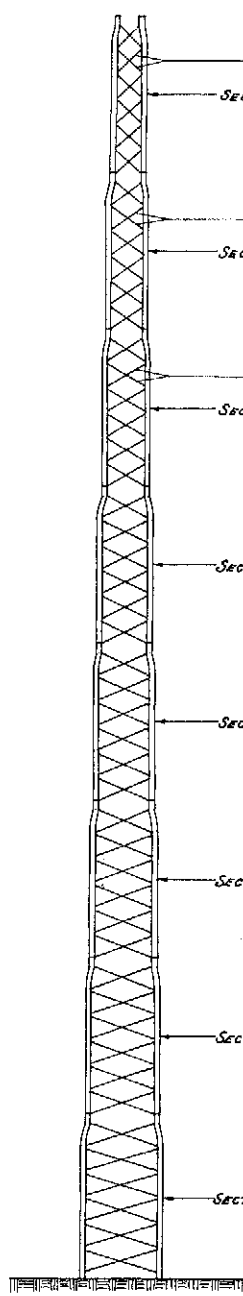
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SECTION No. BX-1

SEE NOTE BELOW FOR OMITTED BRACES

SECTION No. BX-2

SEE NOTE BELOW FOR OMITTED BRACES

SECTION No. BX-3

NOTE: WHEN THIS SECTION IS USED AS THE TOP SECTION, THESE TWO BRACES ARE OMITTED (ON ONE FACE ONLY) TO ACCOMMODATE ROTOR.

SECTION No. BX-4

SECTION No. BX-5

SECTION No. BX-6

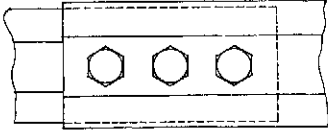
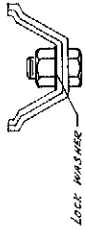
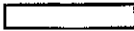
SECTION No. BX-7

SECTION No. BX-8

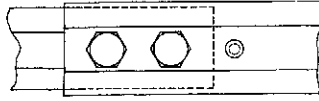
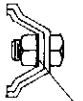
NO.	DESCRIPTION	DATE	BY
REVISIONS			
ROHN MANUFACTURING			
DIVISION BY			
BX SERIES TOWER			
TYPICAL 64' TOWER (SECTIONS 1 THRU 8)			
THIS DRAWING IS THE PROPERTY OF ROHN. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT OUR WRITTEN CONSENT.			
SCALE	MATERIAL	FINISH	WT.
DATE	DATE	DATE	DATE
5-6-76	2-8-76	2-18-76	2-19-76
DESIGNED BY	CHECKED BY	APPROVED BY	DATE
RED	RAJ	RAJ	2-19-76
TOLERANCE			DWG. NO.
±	±	±	C-750428

REFERENCE DRAWINGS:

- SECTION No. 1: DWG. No. C-750429.
- SECTIONS 2 THRU 8: DWG. No. C-750430.
- TOP PLATE, ROTOR PLATE, & MAST CLAMPS: DWG. No. C-750429.
- FOUNDATION & ANCHOR BOLT SETTING FOR HINDER CONCRETE BASE: DWG. No. C-760099.
- CYLINDER BASE INSTALLATION FOR SECTIONS 3, 4, 5 & 6: DWG. No. C-750409-82.
- DESIGN ASSUMPTIONS: DWG. No. A-750005.
- TOWER SECTION PROPERTIES: DWG. No. B-760024.
- TOWER DESIGN DATA: DWG. No. B-760025.
- TYPICAL TOWER ANALYSIS: DWG. No. A-760000.
- ALLOWABLE ANTENNA LOADS: DWG. No. A-760001.



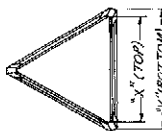
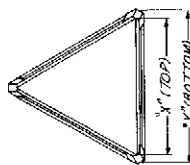
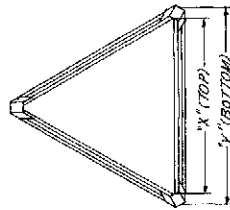
TYPICAL LEG JOINT BETWEEN SECTIONS 7-8



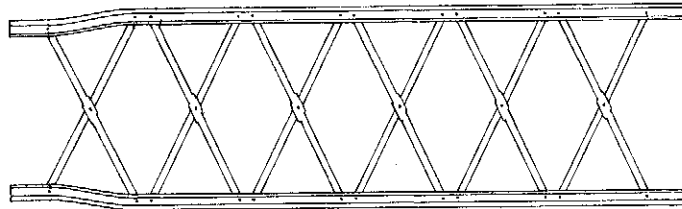
TYPICAL LEG JOINT BETWEEN SECTIONS 3-4 SECTIONS 4-5 SECTIONS 5-6 SECTIONS 6-7



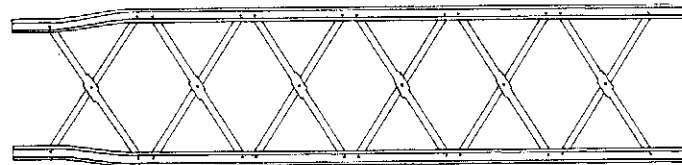
TYPICAL LEG JOINT BETWEEN SECTIONS 1-2 SECTIONS 2-3



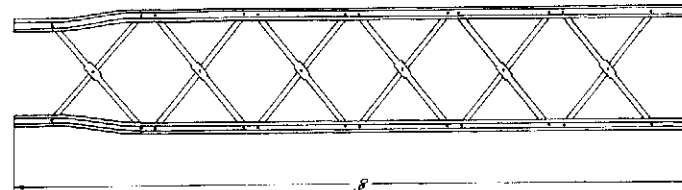
NOTE: SEE DWG. NO. C-750429 FOR DETAILS OF TYPICAL TOP PLATE AND ROTATE PLATE FOR SECTIONS 2 AND 3.



SECTIONS 7,8



SECTIONS 5,6



SECTIONS 2,3,4

SECTION No.	LEG JOINT BOLTS		"X" (Top)	"Y" (Bottom)
	LOCATION	QTY. SIZE		
BX-2	TOP	2 3/8 x 3/4	10 1/2	12 1/4
	BOTTOM	2 3/8 x 3/4		
BX-3	TOP	2 3/8 x 3/4	12 13/16	15 1/2
	BOTTOM	2 3/8 x 1		
BX-4	TOP	2 3/8 x 1	15 3/4	17 7/8
	BOTTOM	2 3/8 x 1		
BX-5	TOP	2 3/8 x 1	17 5/8	20 1/8
	BOTTOM	2 3/8 x 1		
BX-6	TOP	2 3/8 x 1	20 1/8	22 13/16
	BOTTOM	2 3/8 x 1		
BX-7	TOP	2 3/8 x 1	23	25 1/2
	BOTTOM	2 3/8 x 1		
BX-8	TOP	2 3/8 x 1	25 1/4	28 7/16
	BOTTOM	2 3/8 x 1		

NOTE: FOR STRAIGHT SECTIONS ELIMINATE "X" DIMENSION.

NO.	DESCRIPTION	DATE	BY
REVISIONS			
ROHN MANUFACTURING			
DIVISION OF			
BX SERIES TOWER (SECTIONS 2 THROUGH 8)			
TITLE			FILE NO.
THIS DRAWING IS THE PROPERTY OF ROHN. IT IS NOT TO BE REPRODUCED, COPIED, OR TRACED IN WHOLE OR IN PART WITHOUT OUR WRITTEN CONSENT.			
SCALE	ANGLES	FINISH	UNIT
DWG. BY AED	DATE 6-6-75	UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE GIVEN IN INCHES.	
CHECKED BY	DATE 2-27-75		
APPROVED BY	DATE 2-17-76		
DESIGNED BY	DATE 12-18-76		
DRW. NO. C-750430			

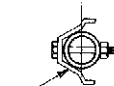
ELEVATIONS OF TYPICAL SECTIONS

BILL OF MATERIAL (P/N BXPC36)

QUAN.	PART NO.	DESCRIPTION	DMG. NO.
1	BX547	1/2" STUB PIPE 1 1/2" STD	C760070
1	BX548	1/2" STUB PIPE 1 1/2" STD	C760070
1	BX549	1/2" STUB PIPE 1 1/2" STD	C760070
3	BX544	1/2" X 20" ANCHOR BOLT	C760070
3	BX545	1/2" X 20" ANCHOR BOLT	N/A
6	BX546	1/2" X 3" WASHERS	N/A
6	BX547	1/2" X 3" WASHERS	N/A
12	BX548	1/2" X 3" WASHERS	N/A
3	BX549	1/2" X 3" WASHERS	N/A
6	BX550	1/2" X 3" WASHERS	N/A

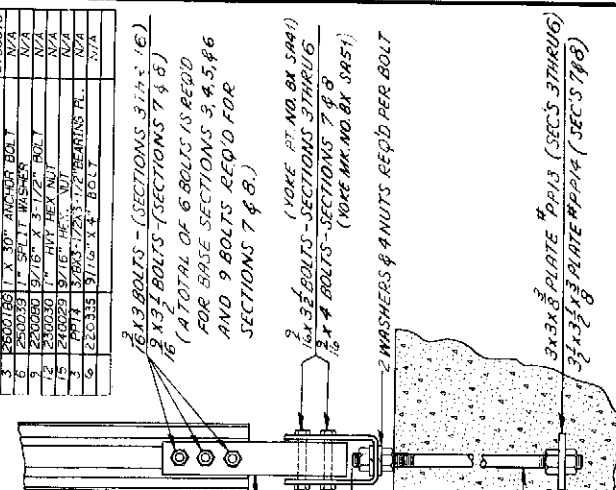
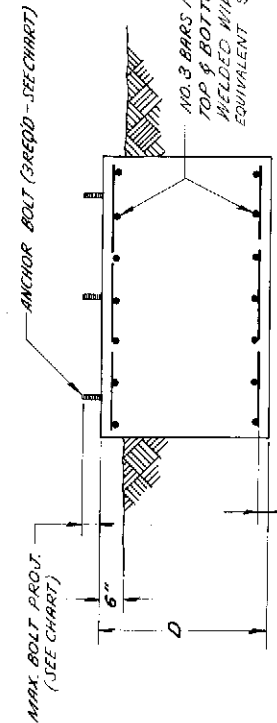
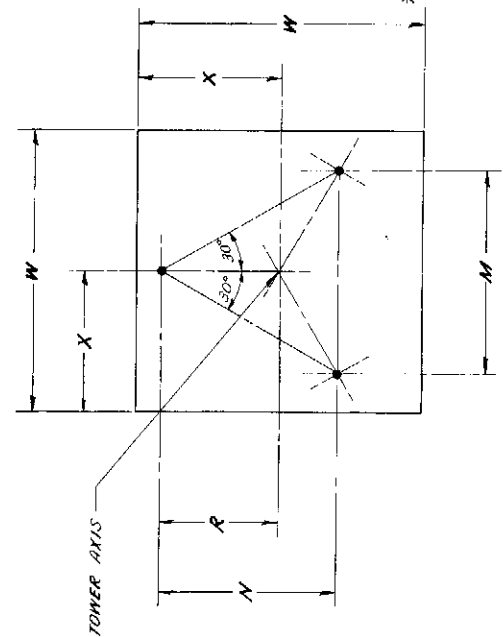
BILL OF MATERIAL (P/N BXCTB)

QUAN.	PART NO.	DESCRIPTION	DMG. NO.
1	BX551	1/2" STUB PIPE 2" STD	C760070
1	BX552	1/2" STUB PIPE 2" STD	C760070
1	BX553	1/2" STUB PIPE 2" STD	C760070
3	BX554	1/2" X 20" ANCHOR BOLT	N/A
3	BX555	1/2" X 20" ANCHOR BOLT	N/A
6	BX556	1/2" X 3" WASHERS	N/A
6	BX557	1/2" X 3" WASHERS	N/A
12	BX558	1/2" X 3" WASHERS	N/A
3	BX559	1/2" X 3" WASHERS	N/A
6	BX560	1/2" X 3" WASHERS	N/A



TOWER LEG

- FOUNDATION NOTES**
1. CONCRETE, 3000 P.S.I. MIN. ULT. STRENGTH
 2. ASTM A-615 GRADE 40 DEFORMED REBARS
 3. ALL FORMS MUST BE REMOVED FROM CONCRETE BEFORE PLACING COMPACTED BACK-FILL.
 4. FOUNDATIONS DESIGNED FOR 2000 P.S.F. SOIL.
 5. IT IS RECOMMENDED THAT A WOOD TEMPLATE BE CONSTRUCTED BY THE USER FOR HOLDING ANCHOR BOLTS AT THE PROPER DIM'S WHILE CONC. IS BEING POURED.
 - *6. REINFORCING IS RECOMMENDED FOR TEMPERATURE & SHRINKAGE CONTROL.
 7. WELDING IS PROHIBITED ON REINFORCING STEEL AND EMBEDMENTS.



16 X 3/8 BOLTS - (SECTIONS 3 & 4) (A TOTAL OF 6 BOLTS IS REQ'D FOR BASE SECTIONS 3, 4, 5, 6 AND 9 BOLTS REQ'D FOR SECTIONS 7 & 8.)

(YAKE AT NO. BX 504)

3 X 3/8 BOLTS - SECTIONS 3 THRU 6 (YAKE MK. NO. BX 3451)

2 WASHERS & 9 NUTS REQ'D PER BOLT

3 X 3/8 PLATE PP13 (SEC'S 3 THRU 6)

3 X 3/8 PLATE PP14 (SEC'S 7 & 8)

1/2" PIPE BY SACH - SEC'S 3 THRU 6

2" PIPE BY LACI - SEC'S 7 & 8

MAX. PROT. (SEE CHART)

1/2" X 20 ANCHOR BOLT - SEC'S 3 THRU 6

1/2" X 20 ANCHOR BOLT - SEC'S 7 & 8

3 FT. THICK PAD FOUNDATION

SEC. NO.	M	N	R	MAX. PROT.	ANCHOR BOLT BEARING	D	W	X	CUMUL. CONC.
3	13 1/2"	11 1/2"	7 1/2"	2 3/8"	PP13	3'-0"	3'-9"	1'-10 1/2"	1.6
4	15 1/2"	13 1/2"	9 1/2"	2 3/8"	PP13	3'-0"	4'-3"	2'-1 1/2"	2.0
5	18 1/2"	15 1/2"	10 1/2"	2 3/8"	PP13	3'-0"	4'-9"	2'-4 1/2"	2.5
6	21"	18 1/2"	12 1/2"	2 3/8"	PP13	3'-0"	5'-3"	2'-7 1/2"	3.1
7	23 1/2"	20 1/2"	13 1/2"	3 1/4"	PP14	3'-0"	6'-0"	3'-0"	4.0
8	26 1/2"	22 1/2"	15 1/2"	3 1/4"	PP14	3'-0"	6'-6"	3'-3"	4.7

4 FT. THICK PAD FOUNDATION

SEC. NO.	M	N	R	MAX. PROT.	ANCHOR BOLT BEARING	D	W	X	CUMUL. CONC.
3	13 1/2"	11 1/2"	7 1/2"	2 3/8"	PP13	4'-0"	3'-6"	1'-9"	1.8
4	15 1/2"	13 1/2"	9 1/2"	2 3/8"	PP13	4'-0"	4'-0"	2'-0"	2.4
5	18 1/2"	15 1/2"	10 1/2"	2 3/8"	PP13	4'-0"	4'-6"	2'-3"	3.0
6	21"	18 1/2"	12 1/2"	2 3/8"	PP13	4'-0"	4'-9"	2'-4 1/2"	3.4
7	23 1/2"	20 1/2"	13 1/2"	3 1/4"	PP14	4'-0"	5'-3"	2'-7 1/2"	4.1
8	26 1/2"	22 1/2"	15 1/2"	3 1/4"	PP14	4'-0"	5'-9"	2'-10 1/2"	4.9

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE GIVEN IN INCHES

Tolerances Fractions Finish Weight

Drawn by **DAK** Date **1-30-76**

Checked by **ACD** Date **2-3-76**

Approved by **W. J. ...** Date **2-3-76**

Approved by Production **W. J. ...** Date

Approved by Sales **W. J. ...** Date **2-19-76**

Unarco-Rohn
Division of Ingersoll Rand, Inc.

FOUNDATION & ANCHOR BOLT DETAILS
FOR MODEL BX TOWER

Scale **NONE**

Units of measurement: Fractions, Finish, Weight

Reproduction of this drawing is prohibited without the written consent of Unarco-Rohn, Inc.

1/4" = 1" (SEE NOTE)

REVISIONS

R1 REVISIONS IN DRAWING & COLUMN

R2 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R3 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R4 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R5 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R6 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R7 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R8 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R9 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R10 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R11 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R12 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R13 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R14 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R15 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R16 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R17 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R18 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R19 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R20 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R21 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R22 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R23 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R24 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R25 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R26 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R27 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R28 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R29 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R30 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R31 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R32 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R33 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R34 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R35 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R36 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R37 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R38 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R39 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R40 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R41 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R42 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R43 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R44 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R45 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R46 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R47 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R48 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R49 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R50 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R51 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R52 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R53 DIMS. POLY. FOR WIRE 2-30-76 P. 35

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R60 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R61 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R62 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R63 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R64 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R65 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R66 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R67 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R68 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R69 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R70 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R71 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R72 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R73 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R74 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R75 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R76 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R77 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R78 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R79 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R80 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R81 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R82 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R83 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R84 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R85 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R86 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R87 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R88 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R89 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R90 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R91 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R92 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R93 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R94 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R95 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R96 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R97 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R98 DIMS. POLY. FOR WIRE 2-30-76 P. 35

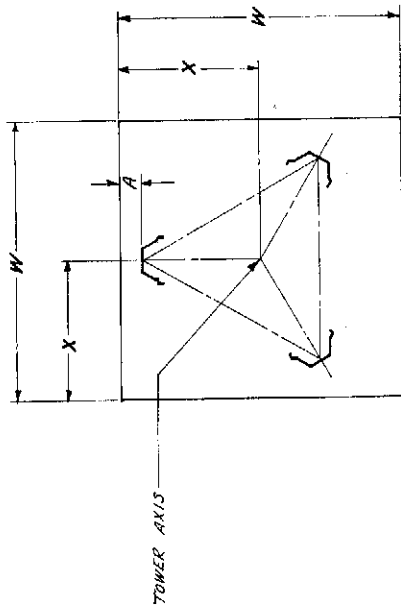
R99 DIMS. POLY. FOR WIRE 2-30-76 P. 35

R100 DIMS. POLY. FOR WIRE 2-30-76 P. 35

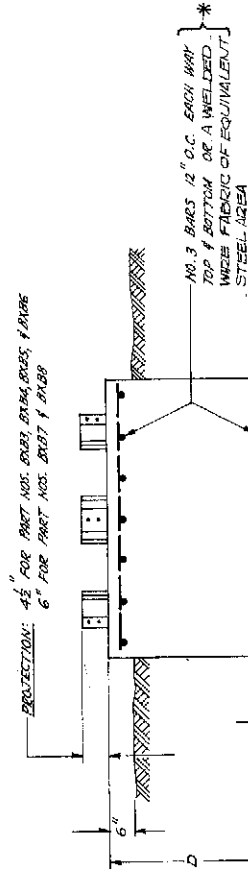
Drawing Number **C 7600 99 R 7**

FOUNDATION NOTES

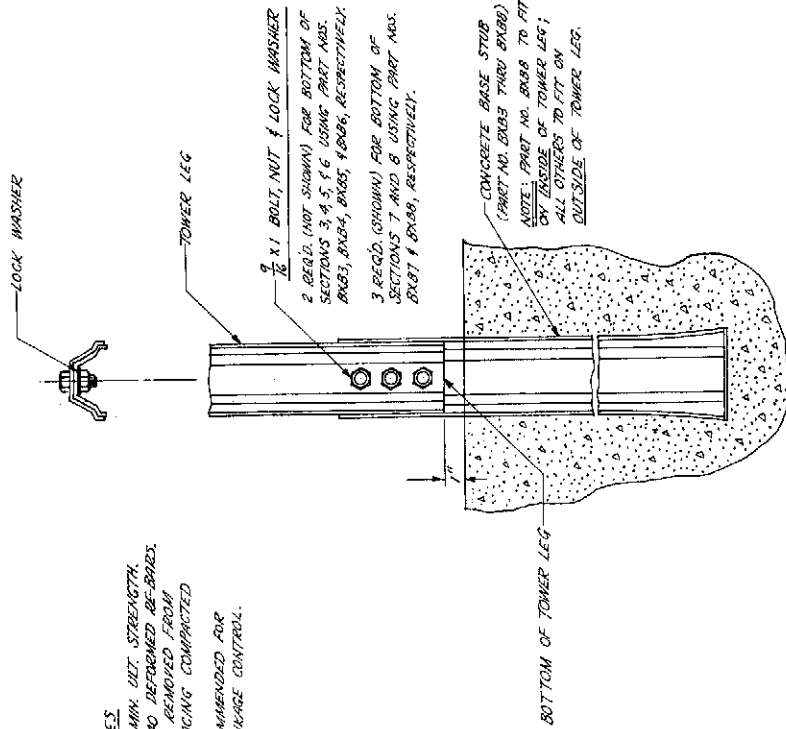
1. CONCRETE, 3000 PSI MIN. NET STRENGTH.
2. ACTING A-GS GRADE TO DEFORMED RE-BARS.
3. ALL FORMS MUST BE REMOVED FROM CONCRETE BEFORE PLACING COMPACTED BACKFILL.
- * 4. REINFORCING IS RECOMMENDED FOR TEMPERATURE & SHRINKAGE CONTROL.



PROTECTION: 4 1/2" FOR PART NOS. 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



FOUNDATION PAD				
SECT. NO.	W	X	D	CU. YDS. CONCRETE
3	3'-6"	1'-9"	4'-0"	1.8
4	4'-0"	2'-0"	4'-0"	2.4
5	4'-6"	2'-3"	4'-0"	3.0
6	4'-9"	2'-4 1/2"	4'-0"	3.4
7	5'-3"	2'-7 1/2"	4'-0"	4.1
8	5'-9"	2'-10 1/2"	4'-0"	4.9



2. REQ'D. (NOT SHOWN) FOR BOTTOM OF SECTIONS 3, 4, 5, 6 USING PART NOS. 8883, 8884, 8885, 8886, RESPECTIVELY.
3. REQ'D. (SHOWN) FOR BOTTOM OF SECTIONS 7 AND 8 USING PART NOS. 8887 & 8888, RESPECTIVELY.

CONCRETE BASE STUB (PART NO. 8888 THRU 8898)
NOTE: PART NO. 8888 TO FIT ON INSIDE OF TOWER LEG; ALL OTHERS TO FIT ON OUTSIDE OF TOWER LEG.

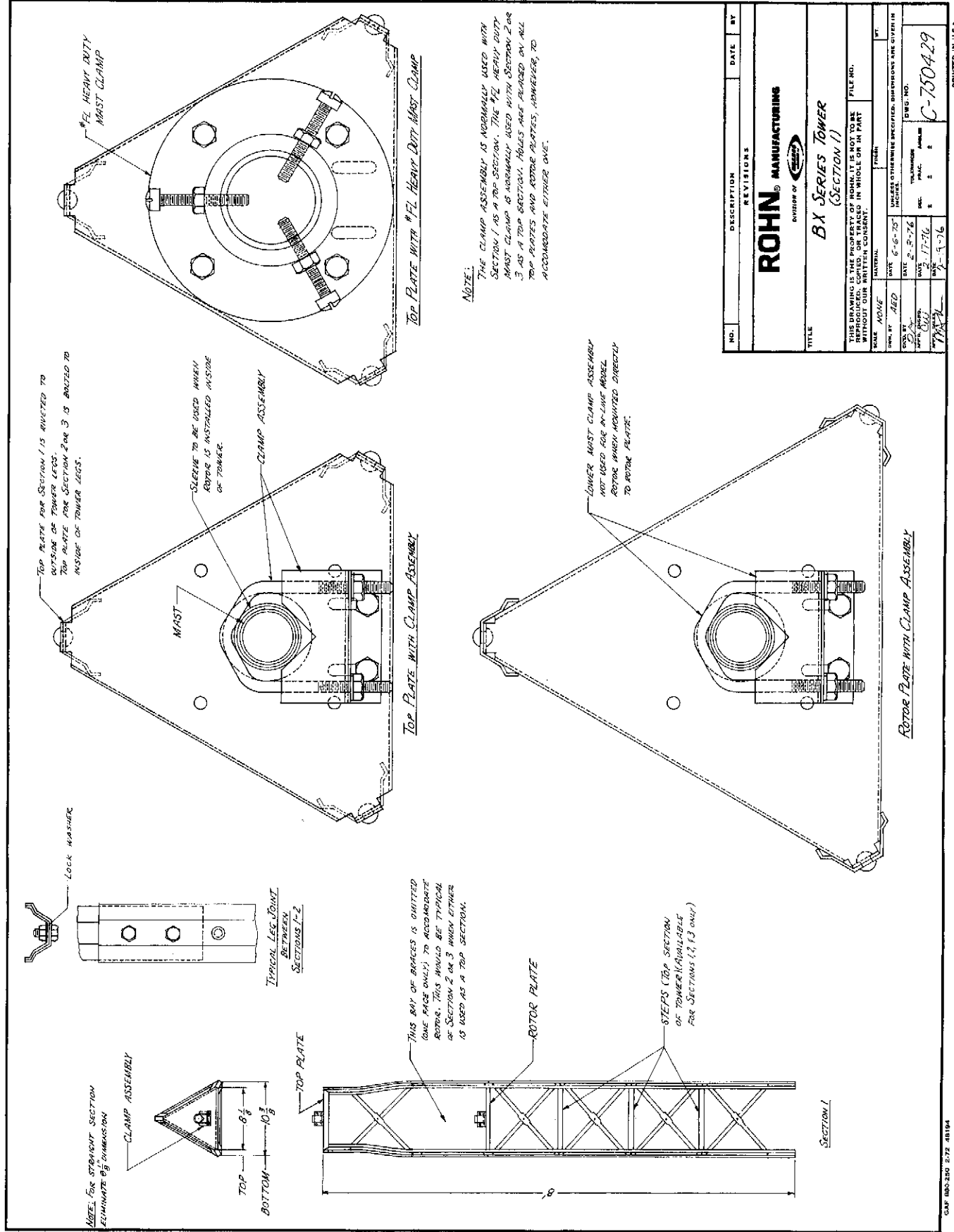
UNARCO-ROHN
Division of Unarco Industries, Inc.

FOUNDATION FOR BX TOWER FOR BX CONCRETE BASE STUBS

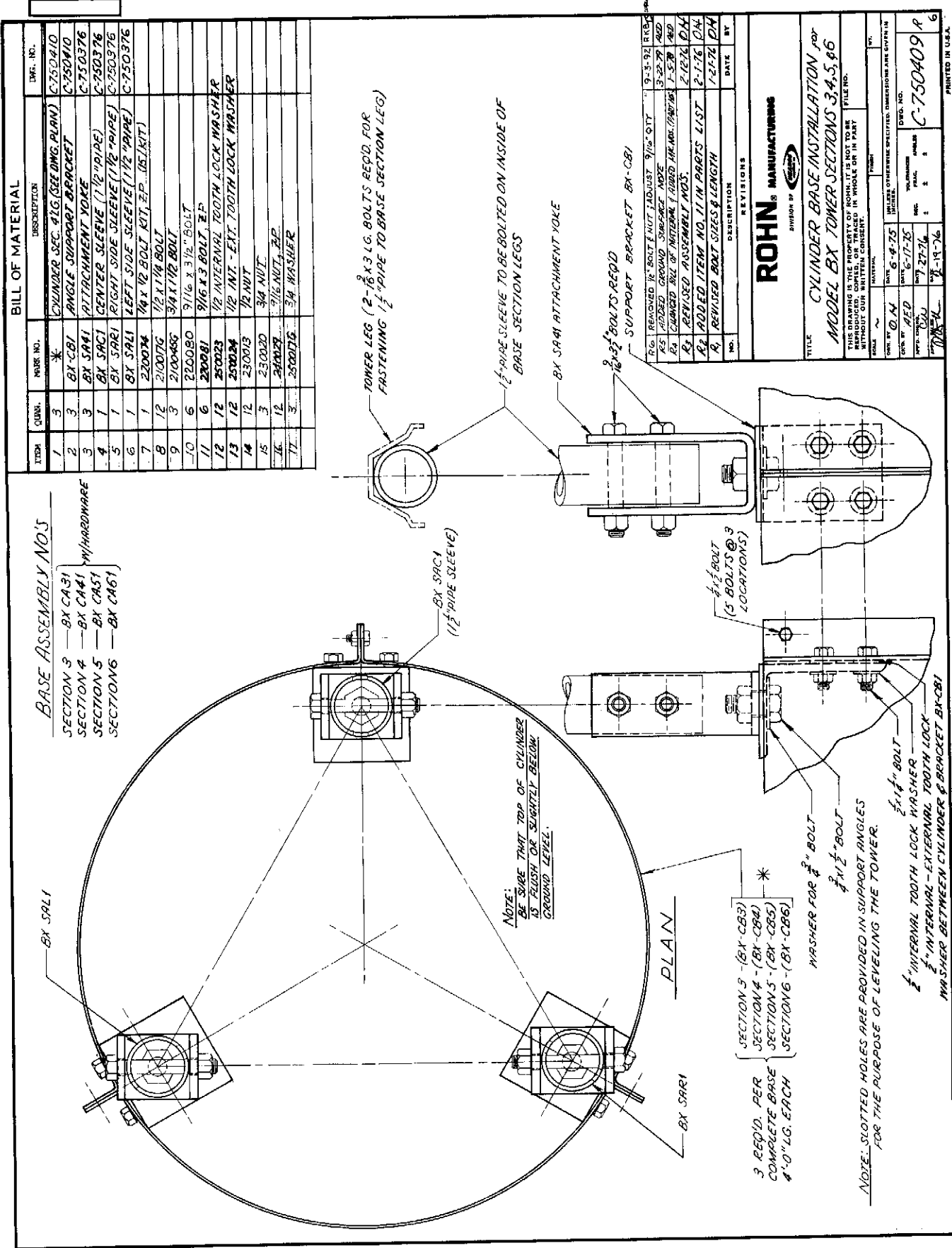
Scale: As Shown
Date: 5-24-78
Drawing Number: C7802842

Checked by: AED
Approved by Engineering: DAX
Approved by Production: CW

RAK- 3.14.78 11002074



NO.	DESCRIPTION	DATE	BY
ROHN MANUFACTURING DIVISION OF			
BX SERIES TOWER (SECTION 1)			
THIS DRAWING IS THE PROPERTY OF ROHN. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT OUR WRITTEN CONSENT.			
SCALE	AS SHOWN	WEIGHTS AND MEASUREMENTS ARE GIVEN IN INCHES UNLESS OTHERWISE SPECIFIED.	
DATE	2-5-76	REV.	NO.
DATE	2-9-76	REV.	NO.
DATE	2-17-76	REV.	NO.
DATE	2-19-76	REV.	NO.
DRAWN BY: AED		CHECKED BY: J. S. B.	
APPROVED BY: J. S. B.		DATE: 2-19-76	
PROJECT: TOWER		DWG. NO.: C-750429	



ITEM	QUANTITY	NAME NO.	DESCRIPTION	DWG. NO.
1	3	*	CYLINDER SEC. 4 LG. (SEE DNG. PLAN)	C-750410
2	3	BX-CB1	ANGLE SUPPORT BRACKET	C-750410
3	3	BX SARI	ATTACHMENT YOKE	C-750376
4	1	BX SAG1	CENTER SLEEVE (1 1/2" PIPE)	C-750376
5	1	BX SAR1	RIGHT SIDE SLEEVE (1 1/2" PIPE)	C-750376
6	1	BX SAR1	LEFT SIDE SLEEVE (1 1/2" PIPE)	C-750376
7	1	230074	1/4 X 1/2 BOLT KIT, EP. (15/16" KIT)	
8	12	210076	1/2 X 1 1/8 BOLT	
9	3	210066G	3/4 X 1 1/2 BOLT	
10	6	220080	3/16 X 3 3/4" BOLT	
11	6	220081	9/16 X 3 BOLT, EP	
12	12	250023	1/2 INTERNAL TOOTH LOCK WASHER	
13	12	250024	1/2 INT. - EXT. TOOTH LOCK WASHER	
14	12	230013	1/2 NUT	
15	3	230020	3/4 NUT	
16	12	240029	1/16 NUT, EP	
17	3	250016	3/4 WASHER	

NO.	DESCRIPTION	DATE	BY
R10	REMOVED 1/2" BOLT & NUT, ADJUST 3/16" QTY	9-5-92	RES
R5	ADDED GROUND SURFACE NOSE	3-22-79	AND
R4	CHANGED BILL OF MATERIAL, ADDED INTERNAL TOOTH LOCK WASHER	7-5-78	AND
R3	REVISED ASSEMBLY NOS.	2-17-74	DAI
R2	ADDED ITEM NO. 11 IN PARTS LIST	2-17-74	DAI
R1	REVISED BOLT SIZES & LENGTH	1-21-74	DAI

ROHN MANUFACTURING
DIVISION OF

TITLE
CYLINDER BASE INSTALLATION FOR
MODEL BX TOWER SECTIONS 3, 4, 5, 6

DATE 6-4-75
SCALE 1" = 4'-0"

DRW. NO. C-750409 R

FILE NO.

REVISIONS

NO. **DATE** **BY**

NOTE: BE SURE THAT TOP OF CYLINDER IS FLUSH OR SLIGHTLY BELOW GROUND LEVEL.

NOTE: SLOTTED HOLES ARE PROVIDED IN SUPPORT ANGLES FOR THE PURPOSE OF LEVELING THE TOWER.

3 REQ'D. PER COMPLETE BASE 4'-0" LG. EACH

- SECTION 3 - (BX-CB3)
- SECTION 4 - (BX-CB4)
- SECTION 5 - (BX-CB5)
- SECTION 6 - (BX-CB6)

WASHER FOR 3/8" BOLT

3/8" BOLT

3/8" BOLT

3/16" BOLT

1/2" INTERNAL TOOTH LOCK WASHER

1/2" INTERNAL - EXT. TOOTH LOCK WASHER BETWEEN CYLINDER & BRACKET BX-CB1

1/2" PIPE SLEEVE

BX SAG1

1/2" PIPE SLEEVE

1/2" BOLT KIT, EP. (15/16" KIT)

1/2" BOLT

3/4 X 1 1/2 BOLT

9/16 X 3 BOLT, EP

1/2 INTERNAL TOOTH LOCK WASHER

1/2 INT. - EXT. TOOTH LOCK WASHER

3/4 NUT

1/16 NUT, EP

3/4 WASHER

2-1/2" BOLTS REQ'D

SUPPORT BRACKET BX-CB1

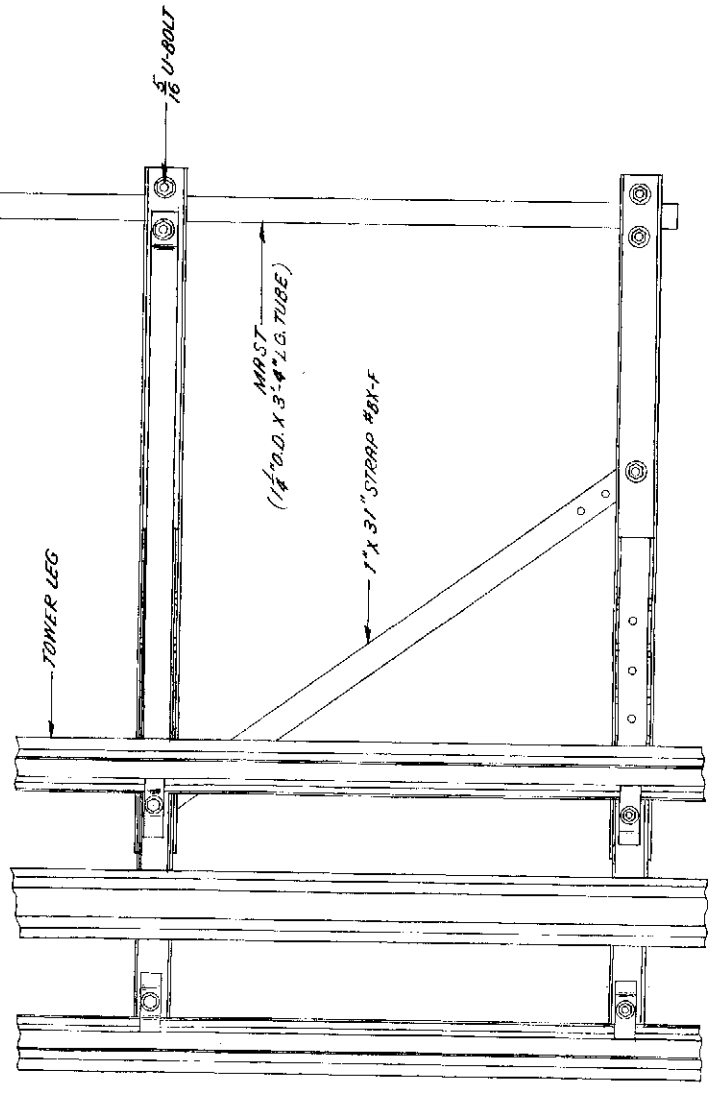
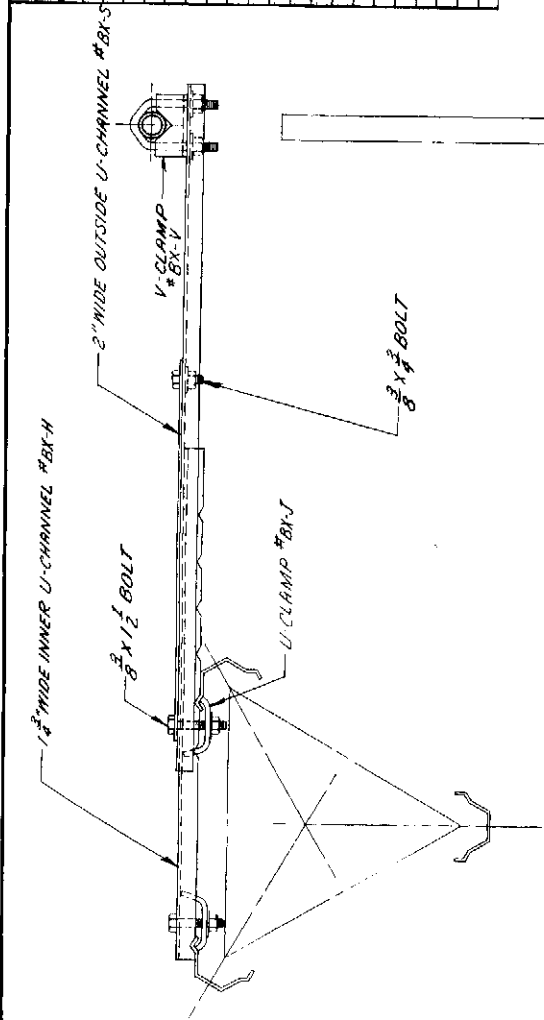
BX SARI ATTACHMENT YOKE

4-1/2 BOLT (5 BOLT LOCATIONS)

PLAN

2 1/4" INTERVAL - EXTERNAL TOOTH LOCK WASHER BETWEEN CYLINDER & BRACKET BX-01

GM 480320 2-72 48114



NOTE: WASHERS SUPPLIED FOR ALL BOLTS.

ITEM	QUAN.	PART NO.	DESCRIPTION	ENG. NO.
1	2	BX-S	2" WIDE OUTSIDE CHANNEL	C-76029-B
2	2	BX-H	1 1/4" WIDE INNER CHANNEL	C-76029-B1
3	4	BX-J	U-CLAMP	C-76029-B
4	1	BX-F	1" X 31" STRAP	C-76029-B
5	1	WASHER	1/4" O.D. X 1/8" LG. TUBE 3" X 2" LONG	C-76029-B
6	4	200021	3/8" X 1 1/2" BOLT	
7	5	200021	3/8" NUT	
8	1	200019	3/8" X 3" BOLT	
9	5	250025	3/8" WASHER	
10	2	270034	3/8" U-BOLT	
11	4	240014	3/8" NUT	
12	4	250029	3/8" WASHER	
13	2	BX-V	V-CLAMP	

R2 ADDED BILL OF MATERIAL; DELETED SKCH BRACKET 2-2577 AND BX-1
 R1 ADDED PART NOS.
 No. 1 Revision Description Date

Unarco-Rohn
 Division of Unarco Incastles, Inc.

BX-S MOUNT ASSEMBLY

Scale: _____
 Units: All dimensions are in inches unless otherwise specified, dimensions are given in inches.

Drawn by: DA Date: 10-9-78
 Checked by: DA Date: 10-10-78
 Approved by: DA Date: 10-10-78
 Approved by Production: _____ Date: _____

Part Number: 9-30-77 Drawing Number: C-750946-R3

TYPICAL TOWER ANALYSIS

TOWER DESIGN DATA: MODEL BX-64

WIND PRESSURE — 20 PSF

ANTENNA LOAD — 6 SQ. FT. AT 3 FT. ABOVE
TOWER TOP — 1/2 IN. LINE
ANTENNA WT. = 50 LBS.
LINE WT. = 0.5 LBS./FT.

NOTE: ANTENNAS DEVELOPING A LARGE TWISTING MOMENT DUE TO WIND MUST NOT BE USED ON THIS TOWER. ANTENNAS SHOULD BE LIMITED TO THOSE HAVING A MAXIMUM BOOM LENGTH OF 10 FT.

SECTION No.	8	7	6	5	4	3	2	1
DISTANCE FROM TOP (FT.)	61.7	53.7	46.0	38.3	30.7	23.0	15.3	7.7
WIND ON SECTION (LBS.)	179.7	161.7	150.0	139.5	115.5	107.7	101.1	96.0
WIND ON ANTENNA & LINE (LBS.)	5.5	5.3	5.3	5.3	5.3	5.3	5.3	127.4
TOTAL WIND ON SECTION (LBS.)	185.2	167.0	155.3	144.8	120.8	113.0	106.4	223.4
SHEAR (LBS.)	1215.9	1030.7	863.7	708.4	563.6	442.8	329.8	223.4
MOMENT (FT-LBS.)	37,770	28,790	21,530	15,500	10,620	6770	3810	1690
FACE WIDTH (FT.)	2.284	2.047	1.824	1.602	1.381	1.184	.989	.794
.866 x FACE WIDTH (FT.)	1.978	1.773	1.580	1.388	1.196	1.025	.856	.688
LEG LOAD (LBS.) ^①	19,100	16,240	13,630	11,170	8880	6600	4450	2460
SECTION WEIGHT (LBS.)	82	75	64	59	41	28	23	22
TOTAL WEIGHT (LBS.)	476	390	312	244	181	136	104	77
*LEG LOAD WITH WEIGHT (LBS.)	19,260	16,370	13,730	11,250	8940	6650	4490	2480
SHEAR ONE FACE (LBS.) ^②	815	691	579	475	378	297	221	150
cos φ	.904	.883	.858	.827	.783	.733	.667	.580
*LOAD EACH BRACE (LBS.) ^③	451	391	337	287	241	203	166	129

$$\textcircled{1} \text{ LEG LOAD} = \frac{\text{MOMENT}}{.866 \times \text{FACE WIDTH}}$$

$$\textcircled{2} \text{ SHEAR ONE FACE} = .67 \times \text{SHEAR}$$

$$\textcircled{3} \text{ LOAD EACH BRACE} = \frac{\text{SHEAR ONE FACE}}{2 \times \cos \phi}$$



* REFER TO DWG. No. B-760025 FOR ALLOWABLE LOADS OF MEMBERS & CONNECTIONS.

Dwg. No. A-760000

MODEL BX TOWER				
ALLOWABLE ANTENNA LOADS *				
WIND PRESSURE = 20 PSF (70.7 MPH)				
NOMINAL HEIGHT, FT.	COMBINATION OF TOWER SECTIONS	CATALOG No.	AREA, SQ. FT.	THRUST, LBS.
24	BX-1-2-3	BX-24	6	120
	BX-2-3-4	HBX-24	12	240
	BX-3-4-5	HDBX-24	20	400
32	BX-1-2-3-4	BX-32	6	120
	BX-2-3-4-5	HBX-32	12	240
	BX-3-4-5-6	HDBX-32	18	360
40	BX-1-2-3-4-5	BX-40	6	120
	BX-2-3-4-5-6	HBX-40	10	200
	BX-3-4-5-6-7	HDBX-40	18	360
48	BX-1-2-3-4-5-6	BX-48	6	120
	BX-2-3-4-5-6-7	HBX-48	10	200
	BX-3-4-5-6-7-8	HDBX-48	18	360
56	BX-1-2-3-4-5-6-7	BX-56	6	120
	BX-2-3-4-5-6-7-8	HBX-56	10	200
64	BX-1-2-3-4-5-6-7-8	BX-64	6	120

* THIS LOAD CAN BE APPLIED AT A POINT 3FT. ABOVE THE APEX OF THE TOWER IN ADDITION TO THE GIVEN WIND PRESSURE ACTING ON THE TOWER.

NOTE: ANTENNA TYPES SHOULD BE LIMITED TO THOSE HAVING A MAXIMUM BOOM LENGTH OF 10 FEET. NO ENGINEERING DATA RELATING TO THE USE OF BOOM LENGTHS IN EXCESS OF 10 FEET IS AVAILABLE AND THE USE OF SUCH BOOM LENGTHS IS NOT RECOMMENDED.

DWG. NO. A-760001R1

August 1, 1990

PARTS LIST P-540
(Replaces P-470)

B X T O W E R

TOWERS AS PACKAGED FOR SHIPPING		OPTIONAL ACCESSORIES																													
TOWER MODEL		BX1A	BX2	BX2A	BX3	BX3A	BX4	BX5	BX6	BX7	BX8	M8	ACWS	BXB3	BXB4	BXB5	BXB6	BXB7	BXB8	BXCA3	BXCA4	BXCA5	BXCA6	BXCHK*	BXHC36	BXHC78	BXSM	EFBX			
BX	24	X	X		X							X	X	-																	
	32	X	X		X		X					X	X																		
	40	X	X		X		X	X				X	X																		
	48	X	X		X		X	X	X			X	X																		
	56	X	X		X		X	X	X	X		X	X																		
	64	X	X		X		X	X	X	X		X	X																		
HBX	24			X	X		X					X	X																		
	32			X	X		X	X				X	X																		
	40			X	X		X	X	X			X	X																		
	48			X	X		X	X	X	X		X	X																		
	56			X	X		X	X	X	X		X	X																		
HDBX	24					X	X	X				X	X																		
	32					X	X	X	X			X	X																		
	40					X	X	X	X	X		X	X																		
	48					X	X	X	X	X		X	X																		

*Supplied with all Cylinder Bases.

NOTE: Be sure you select type of base and ORDER SEPARATELY for EX, HBX, and HDBX towers.

CAUTION AX hardware is not interchangeable with BX hardware.

All types of antenna installations should be thoroughly inspected by qualified personnel at least twice a year and re-marked with hazard and warning labels to insure safety and proper performance.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

MODEL BX TOWER DESIGN ASSUMPTIONS

TOWER MATERIAL SPECIFICATIONS:

- LEGS: ASTM A-446 GRADE C STEEL (MINIMUM YIELD POINT - 45,000 PSI)
(GALVANIZED ACCORDING TO ASTM A-525)
- BRACES: COLD ROLLED C-1017 STEEL (MINIMUM YIELD POINT - 36,000 PSI)
(GALVANIZED ACCORDING TO ASTM A-525)
- LEG SPLICE BOLTS: SAE GRADE 5 STEEL
- RIVETS: 2017-T4 ALUMINUM ALLOY

TOWER MEMBER ALLOWABLE DESIGN STRESSES:

NOTE: ALLOWABLE STRESSES BELOW HAVE BEEN INCREASED BY 33 1/3% FOR THE WIND LOAD CONDITION.^①

LEGS:

- COMPRESSION - (STRESS VARIES ACCORDING TO SLENDERNESS RATIO)^②
- BEARING - 126,000 PSI^③
- SHEAR - 24,000 PSI^④

BRACES:

- COMPRESSION - (STRESS VARIES ACCORDING TO SLENDERNESS RATIO)^②
- BEARING - 100,800 PSI^③
- SHEAR - 19,330 PSI^④

BOLTS:

- SHEAR - 29,300 PSI (THREADS EXCLUDED FROM SHEAR PLANE)^⑤

RIVETS:

- SHEAR - 18,120 PSI^⑥
- BEARING - 53,400 PSI^⑥

① PAR. 3.1.2.1 OF A.I.S.I. "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS," 1968 EDITION.
 ② A.I.S.C. MANUAL OF STEEL CONSTRUCTION, 7TH EDITION, Pgs. 5.84 & 5.86.
 ③ PAR. 4.5.3 OF A.I.S.I. SPECIFICATIONS, 1968 EDITION.
 ④ A.I.S.C. MANUAL OF STEEL CONSTRUCTION, 7TH EDITION, Pg. 5.64.
 ⑤ PAR. 4.5.4 OF A.I.S.I. SPECIFICATIONS, 1968 EDITION.
 ⑥ ALUMINUM CONSTRUCTION MANUAL, "SPECIFICATIONS FOR ALUMINUM STRUCTURES," 1967 EDITION.

TOWER SHAPE FACTORS:

INDIVIDUAL MEMBERS (LEGS, BRACES, TRANSMISSION LINES)

- SHAPE FACTOR: 1.00 FOR FLAT ELEMENTS
- .67 FOR CYLINDRICAL ELEMENTS

TOWER SECTION:

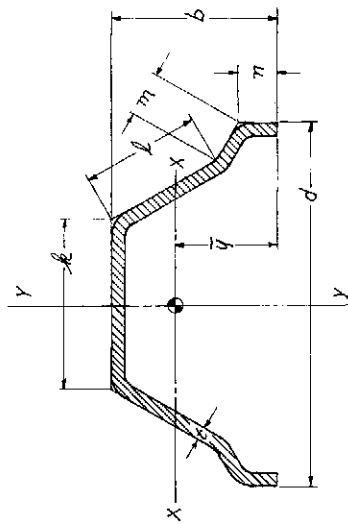
- SHAPE FACTOR: 1.50 TIMES THE PROJECTED AREA OF INDIVIDUAL MEMBERS IN ONE FACE.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

MODEL BX TOWER SECTION PROPERTIES

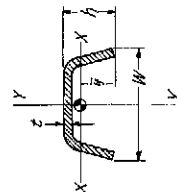
SECTION PROPERTIES OF VERTICAL ELEMENTS

SECT.	t	b	d	h	l	77	77	Area, \bar{y}	\bar{y}	I_x	I_y	r_x	r_y
	IN.	IN.	IN.	IN.	IN.	IN.	IN.	IN. ²	IN.	IN. ⁴	IN. ⁴	IN.	IN.
BX-1	.048	1.1742	2.0984	.7500	1.0134	.1934	.1999	.1637	.6990	.0236	.380	.380	.675
BX-2	.048	1.1887	2.2145	.8286	1.0198	.2114	.1999	.1698	.7882	.0256	.388	.388	.712
BX-3	.060	1.2151	2.3544	.9210	1.0298	.2330	.2068	.2228	.7239	.0346	.394	.394	.752
BX-4	.085	1.2576	2.5441	1.0422	1.0476	.2623	.2212	.3296	.7871	.0548	.408	.408	.889
BX-5	.108	1.3058	2.7661	1.1818	1.0704	.2967	.2305	.4151	.7863	.0742	.423	.423	.874
BX-6	.108	1.3428	2.9881	1.3214	1.0932	.3311	.2305	.4407	.8160	.0838	.436	.436	.944
BX-7	.1158	1.3746	3.2399	1.4784	1.1206	.3700	.2391	.5384	.8522	.1106	.453	.453	1.019
BX-8	.1158	1.5780	3.4916	1.6354	1.1480	.4089	.3794	.6043	.9769	.1540	.505	.505	1.137



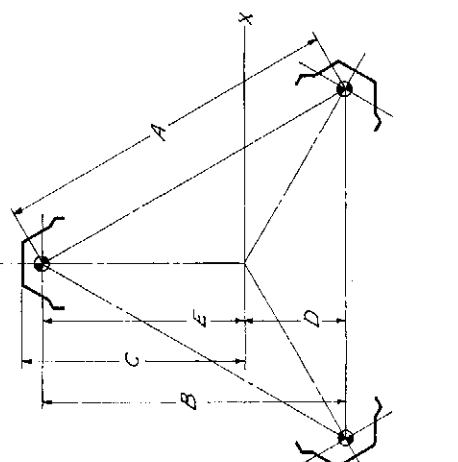
SECTION PROPERTIES OF DIAGONAL ELEMENTS

SECT.	t	h	W	Area, \bar{y}	I_x	I_y	r_x	r_y
	IN.	IN.	IN.	IN. ²	IN. ⁴	IN. ⁴	IN.	IN.
BX-1	.048	.35	.75	.054	.000620	.107	.00330	.247
BX-2	.048	.35	.75	.054	.000620	.107	.00330	.247
BX-3	.048	.35	.75	.054	.000620	.107	.00330	.247
BX-4	.060	.35	.75	.0675	.000732	.104	.00394	.242
BX-5	.075	.46	1.05	.1125	.002164	.139	.01342	.345
BX-6	.075	.46	1.05	.1125	.002164	.139	.01342	.345
BX-7	.075	.46	1.05	.1125	.002164	.139	.01342	.345
BX-8	.075	.46	1.05	.1125	.002164	.139	.01342	.345



SECTION PROPERTIES OF TOWER

SECT. (3 LEGS)	Area	A	B	C	D	E	I_x	I_y	r_x	Weight
	IN. ²	IN.	IN.	IN.	IN.	IN.	IN. ⁴	IN. ⁴	IN.	LB.
BX-1	.491	9.53	8.25	5.99	2.25	5.80	250	250	3.91	22
BX-2	.509	11.86	10.27	7.33	3.42	6.85	12.03	12.03	4.86	23
BX-3	.668	14.20	12.30	8.69	4.10	8.20	22.58	22.58	5.81	28
BX-4	.889	16.58	14.35	10.08	4.78	9.57	45.44	45.44	6.78	41
BX-5	1.245	19.23	16.65	11.62	5.35	11.10	76.94	76.94	7.86	59
BX-6	1.322	21.89	18.76	13.16	6.32	12.64	105.9	105.9	8.95	64
BX-7	1.615	24.36	21.27	14.72	7.09	14.18	162.7	162.7	10.04	75
BX-8	1.813	27.41	23.73	16.42	7.91	15.82	227.4	227.4	11.20	82



DWG. No. B-760024

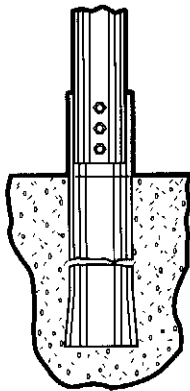
MODEL BX TOWER DESIGN DATA

SECT.	PROJECTED AREAS										WIND LOAD PER SECT., LBS.				ALLOWABLE LOADS AT VERTICAL LEG SPIRES				ALLOWABLE LOADS AT DIAGONAL CONNECTIONS								
	VERTICAL LEGS					DIAGONALS					TOTALS					AT WIND PRESSURE OF				RIVET DIA., BRACE IN.				AREA IN. ²			
	EXPOSED WIDTH (1 LEG) IN.	EXPOSED LENGTH IN.	EXPOSED AREA (1 LEG) FT. ²	EXPOSED AREA (1 FACE) FT. ²	WIDTH IN.	TOTAL EXPOSED LENGTH (1 FACE) IN.	TOTAL EXPOSED AREA (1 FACE) FT. ²	TOTAL EXPOSED SECTION AREA FT. ²	10 PSF	15 PSF	20 PSF	SPRICE BOLTS No.	SPRICE DIA. IN.	TRICK OF LEG IN.	ALLOWABLE TENSILE CAPACITY LBS.	RIVET DIA. IN.	TRICK OF BRACE IN.	AREA IN. ²	ALLOW. LOAD LBS.								
BX-1	1.73	96	1.15	2.30	.75	173.4	.90	4.800	480	720	960	2	3/8	.048	5630	5/32	.0075	.0192	400								
BX-2	1.79	96	1.19	2.38	.75	190.5	.94	5.055	506	758	1011	2	3/8	.048	5810	5/32	.0075	.0192	400								
BX-3	1.87	96	1.25	2.50	.75	209.2	1.09	5.365	53.9	80.8	107.7	2	7/16	.060	7320	5/32	.0075	.0192	400								
BX-4	1.99	96	1.33	2.66	.75	229.0	1.19	5.775	57.8	86.6	115.5	2	7/16	.065	10,910	3/16	.012	.0276	598								
BX-5	2.12	96	1.41	2.82	1.05	251.6	1.83	6.975	69.8	104.6	139.5	2	7/16	.068	13,870	1/4	.075	.0491	1000								
BX-6	2.24	96	1.49	2.98	1.05	276.6	2.02	7.500	75.0	112.5	150.0	2	7/16	.068	14,880	1/4	.075	.0491	1000								
BX-7	2.39	96	1.59	3.18	1.05	303.8	2.21	8.085	80.9	121.3	161.7	3	7/16	.158	18,340	1/4	.075	.0491	1000								
BX-8	2.65	96	1.77	3.54	1.05	335.6	2.45	8.985	89.9	134.8	179.7	3	7/16	.158	20,910	1/4	.075	.0491	1000								

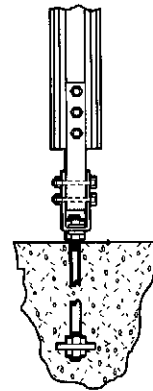
SECT.	ALLOWABLE COMPRESSIVE LOADS												
	VERTICAL LEGS					DIAGONAL BRACES							
	L _v IN.	T _v IN.	L _v /T _v	F _v PSI	CROSS-SECT. AREA (1 LEG) IN. ²	ALLOWABLE LEG LOAD, LBS.	L _b IN.	T _b IN.	L _b /T _b	F _b PSI	CROSS-SECT. AREA IN. ²	ALLOWABLE BRACE LOAD, LBS.	
BX-1	12 1/2	380	30.9	24,300	.1637	5300	15.34	.107	71.7	16,250	21,660	.054	1170
BX-2	12 1/2	388	32.2	24,380	.1698	5520	16.78	.107	78.4	15,540	20,720	.054	1120
BX-3	12 1/2	394	31.7	24,430	.2228	7280	18.41	.107	86.0	14,670	19,560	.054	1060
BX-4	12 1/2	408	30.6	24,540	.3296	10,780	20.16	.104	96.9	13,360	17,810	.0675	1200
BX-5	12 1/2	423	29.6	24,650	.4151	13,640	22.22	.139	76.9	15,370	20,490	.1125	2310
BX-6	12 1/2	436	28.7	24,740	.4407	14,540	24.41	.139	87.8	14,560	19,410	.1125	2180
BX-7	12 1/2	453	27.6	24,850	.5384	17,840	26.64	.139	95.9	13,490	17,990	.1125	2020
BX-8	12 1/2	505	24.8	25,130	.6043	20,250	29.19	.139	105.0	12,330	16,440	.1125	1850

*L_b = 1/2 L_v

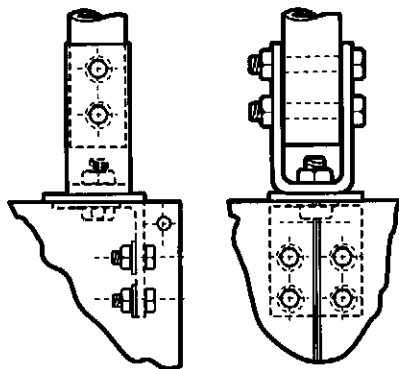
SECT. 5 & 6 REVISED, CHANGED 10-1-77
Dwa. No. B-76.0025 R1



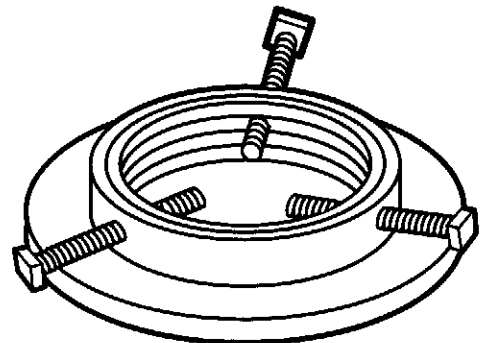
4' Concrete Base Stubs (BX B)



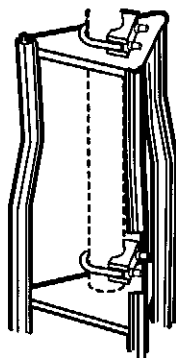
Hinged Concrete Base (BX HC)



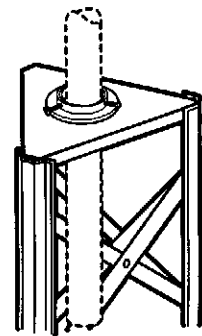
4' Cylinder Base (BX CA)



Heavy Duty Mast Clamp (FL)



Mast Hardware Kit (BX MK2)



Top Plate Assembly (BXT) Heavy Duty Mast Clamp (FL)

Tower Package - compact shipping and storage method. Includes all necessary parts and hardware. All towers are recommended to be bracketed for extra safety and to withstand gusty wind conditions.

Note: Local building and/or zoning laws frequently require a building permit. Available BX Engineering Data should be submitted for approval prior to purchasing a tower