



BOONE COUNTY, MISSOURI

Request for Bid #: 47-01NOV18 – Radio Tower Foundation and Site Construction –
Radio Tower in Hallsville

ADDENDUM #1 - Issued October 24, 2018

This addendum is issued in accordance with the Request for Bid and is hereby incorporated into and made a part of the Request for Bid documents. Offerors are reminded that receipt of this addendum should be acknowledged and submitted with Offeror's Response Form.

Specifications for the above noted Request for Bid and the work covered thereby are herein modified as follows, and except as set forth herein, otherwise remain unchanged and in full force and effect.

1. **REPLACE** the four (4) Sabre "Foundation" drawings with the attached sheets which include the cover sheet with engineer seal, page 3, and page 4 that detail the specific dimensions, quantities, and reinforcing steel required for both the spread footing and the drilled pier options.
2. **PDF Drawings:** Replace the PDF drawings in the Request for Bid with the PDF drawings posted on our web page at www.showmeboone.com / Purchasing / Bidding Opportunities / 47-01NOV18
3. **ADD Bonding Requirements:** In the event the bid amount exceeds \$50,000, the bidders shall be required to furnish the following bonds:

Bid Bond: If Bidder's total bid price exceed \$50,000, the bid response shall be accompanied by a proposal guaranty equaling 5% of the total amount of the bid. The bond shall be executed by some surety company authorized to do business in the State of Missouri, as a guarantee on the part of the bidder that if his bid be accepted, he will within ten (10) days after receipt of notice of such acceptance, enter into a contract and furnish a Performance Bond/Labor and Material Payment Bond to do the work advertised; and, in case of default, forfeit such bid bond.

Performance Bond and Labor and Materials Payment Bond: The successful Contractor shall pay for and furnish, when applicable, within 10 days after written notice of acceptance of estimate, Performance and Labor and Materials Bonds. Contractor shall provide and pay the cost of Performance and Payment Bonds, on forms generally used by County, each in full amount of the "Not to Exceed" amount for the stipulated work, issued by a Surety Company licensed in Missouri, with an "A" minimum rating of performance as stated in the most current publication of "Best's Key Rating Guide, Property Liability," which shall show a financial strength rating of at least five (5) times the Contract Price. Each Bond shall be accompanied by a "Power of Attorney" authorizing the attorney-in-fact to bind the surety and certified to include the date of the bond.

4. The County received the following questions and is providing a response below:
 - a. General Specifications 1.14. – Does the Contractor pay for the special inspections or does the County pay them?

Response: The Contractor shall pay for the special inspections.

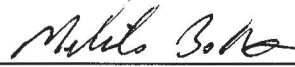
- b. Would you clarify the dimensions of the proposed compound fence so we can calculate the amount of gravel and geo-textile that is needed?

Response: The site drawings in details 1 and 2 of ME1 site plan did not pick up the fence and related details on the PDF in the bid. See County web site for separate PDF attachment: www.showmeboone.com / Purchasing / Bidding Opportunities / 47-01NOV18

- c. RE: Geo-tech report – Does a low volume change layer need to be included under the proposed concrete pads?

Response: Per Eric Lidholm, the Geotech engineer: This layer is not specifically required for the pads.

By:



Melinda Bobbitt, CPPO, CPPB
Director of Purchasing

BIDDER has examined **Addendum #1** to Request for Proposal #47-01NOV18 – **Radio Tower Foundation and Site Construction – Radio Tower in Hallsville**, receipt of which is hereby acknowledged:

Company Name: _____

Address: _____

Phone Number: _____

E-mail: _____

Authorized Representative Signature: _____ Date: _____

Authorized Representative Printed Name: _____

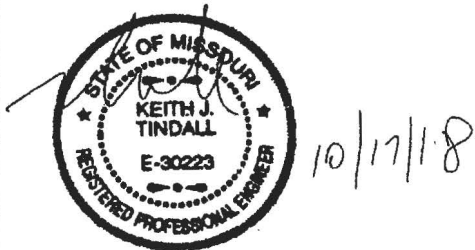


Structural Design Report
180' S3R Series SD Self-Supporting Tower
Site: Hallsville, MO

Prepared for: BOONE COUNTY, MO
by: Sabre Towers & Poles™

Job Number: 414025
Revision A
October 17, 2018

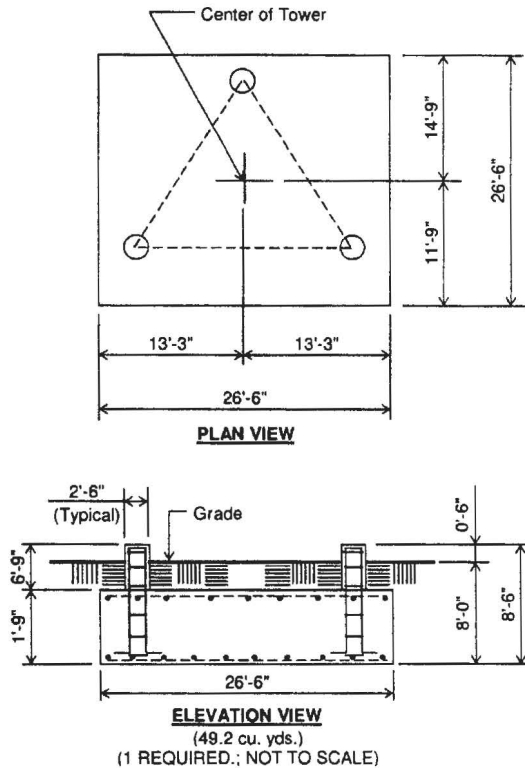
Tower Profile.....	1-2
Foundation Design Summary (Option 1).....	3
Foundation Design Summary (Option 2).....	4
Maximum Leg Loads.....	5
Maximum Diagonal Loads.....	6
Maximum Foundation Loads.....	7
Calculations.....	8-26



Customer: BOONE COUNTY, MO

Site: Hallsville, MO

180 ft. Model S3R Series SD Self Supporting Tower At
94 mph Wind with no ice and 40 mph Wind with 1 in. Ice per ANSI/TIA-222-G.



CAUTION: Center of tower is not in center of slab.

Notes:

- 1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-11.
- 2) Rebar to conform to ASTM specification A615 Grade 60.
- 3) All rebar to have a minimum of 3" concrete cover.
- 4) All exposed concrete corners to be chamfered 3/4".
- 5) The foundation design is based on the geotechnical report by Crockett GTL, Project No. G18307, dated 3/29/18.
- 6) See the geotechnical report for compaction requirements, if specified.
- 7) The foundation is based on the following factored loads:
Factored download (kips) = 53.45
Factored overturn (kip-ft) = 6,874.17
Factored shear (kips) = 65.17
- 8) 6.25' of soil cover is required over the entire area of the foundation slab.
- 9) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

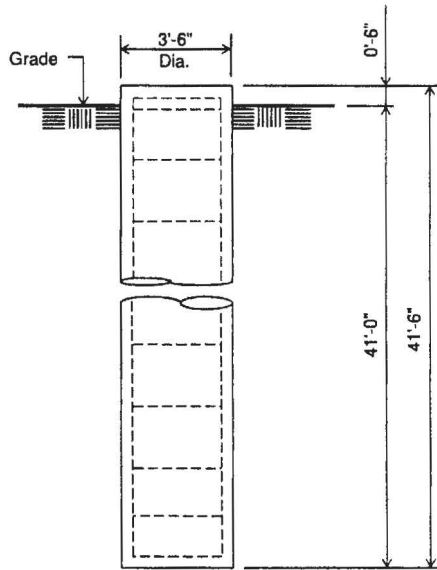
Rebar Schedule per Mat and per Pier	
Pier	(12) #11 vertical rebar w/ hooks at bottom w/ #4 rebar ties, two (2) within top 5" of pier then 12" C/C
Mat	(48) #9 horizontal rebar evenly spaced each way top and bottom. (192 total)
Anchor Bolts per Leg	
(6) 1.5" dia. x 78" F1554-105 on a 10.25" B.C. w/ 8.5" max. projection above concrete.	

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7101 Southbridge Dr - P.O. Box 658 - Sioux City, IA 51102-0658 - Phone 712.258.6690 - Fax 712.258.8250

Customer: BOONE COUNTY, MO
Site: Hallsville, MO

180 ft. Model S3R Series SD Self Supporting Tower At
94 mph Wind with no ice and 40 mph Wind with 1 in. Ice per ANSI/TIA-222-G.



ELEVATION VIEW

(14.8 cu. yds.)

(3 REQUIRED; NOT TO SCALE)

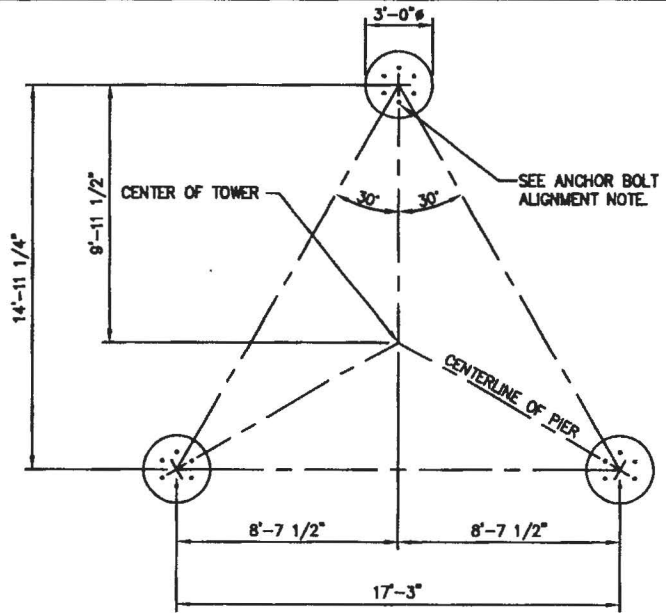
Notes:

- 1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-11.
- 2) Rebar to conform to ASTM specification A615 Grade 60.
- 3) All rebar to have a minimum of 3" concrete cover.
- 4) All exposed concrete corners to be chamfered 3/4".
- 5) The foundation design is based on the geotechnical report by Crockett GTL, Project No. G18307, dated 3/29/18.
- 6) See the geotechnical report for drilled pier installation requirements, if specified.
- 7) The foundation is based on the following factored loads:
Factored uplift (kips) = 430.00
Factored download (kips) = 468.00
Factored shear (kips) = 39.00
- 8) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

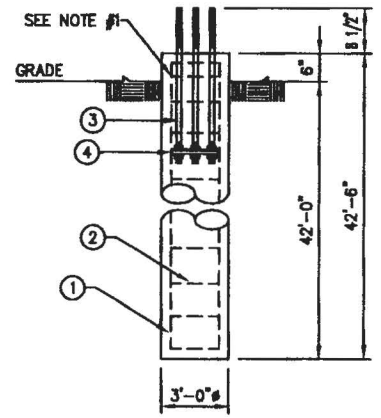
Rebar Schedule per Pier	
Pier	(16) #9 vertical rebar w/ #4 rebar ties, two (2) within top 5" of pier then 11" C/C
Anchor Bolts per Leg	
	(6) 1.5" dia. x 78" F1554-105 on a 10.25" B.C. w/ 8.5" max. projection above concrete.

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PLAN VIEW



ELEVATION VIEW

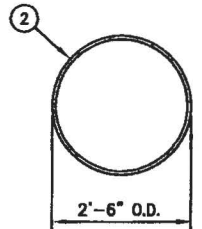
REINFORCING STEEL SCHEDULE								
ITEM	LOCATION	NO. REQ'D.	BAR SPC'G.	SIZE	CUT LGTH.	TOTAL LGTH.	TOTAL WT.	SHAPE
①	PIER VERTICAL REINFORCING	42	EQUALLY SPACED	#10	42'-0"	1764'-0"	7590 LBS.	STRAIGHT
②	PIER TIES	132	SPACED 12" C/C	#4	9'-1"	1199'-0"	801 LBS.	○
TOTAL REBAR WT.							8391 LBS.	

ANCHOR BOLT SCHEDULE				
ITEM	PART NO.	NO. REQ'D.	ANCHOR BOLT SIZE	SPACING
③	C40041060	18	1 1/2" x 6'-6"	EQUALLY SPACED

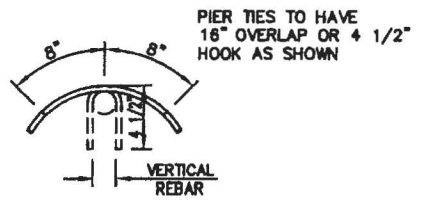
TEMPLATE SCHEDULE			
ITEM	PART NO.	NO. REQ'D.	BOLT CIRCLE
④	C30139210	6	10 1/4"

CONCRETE REQ'D	
PER PIER	11.13 CU. YDS.
TOTAL	33.39 CU. YDS.

SEE PAGE 2 FOR GENERAL NOTES



REBAR DETAIL
(PIER TIES)



PIER TIE HOOK DETAIL

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES		MATERIAL:	
TOLERANCES: FRACTIONS ± 1/16"		TOLERANCES DO NOT APPLY TO RAW MATERIAL	
ANGLES ± 1/2 DEG.			
DECIMALS ± .010"			
REV	DATE	DRN/CHK	DESCRIPTION

Sabre Industries
Towers and Poles

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FOUNDATION: 180 FT. MODEL SSR-SD			
SITE: HALLSVILLE, MO			
CUSTOMER: BOONE COUNTY, MO			
JOB NO. 414025	SIZE B	DRAWING NO. 414025-F1	REV 0
DATE 07/19/18	DRAWN BY DLK	CHECKED BY KD	SCALE NONE
PAGE 1 OF 2			




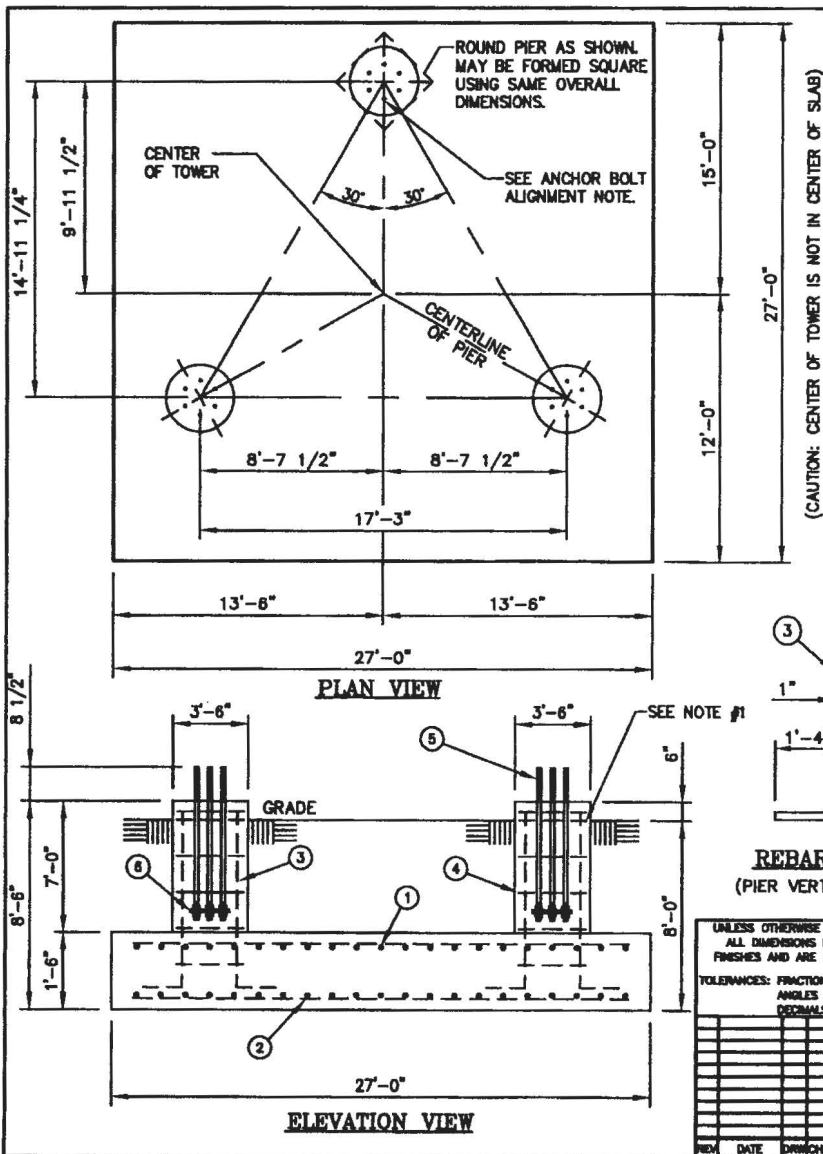
GENERAL NOTES

1. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI, IN ACCORDANCE WITH ACI 318-11. (2 REBAR TIES REQ'D IN THE TOP 5")
2. REBARS TO CONFORM TO ASTM SPECIFICATION A615 GRADE 60.
3. ALL REBAR TO HAVE A MINIMUM OF 3" CONCRETE COVER.
4. ALL EXPOSED CONCRETE CORNERS TO BE CHAMFERED 3/4".
5. THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT BY CROCKETT GTL PROJECT NO. G18307, DATED: 3/29/18
6. SEE THE GEOTECHNICAL REPORT FOR DRILLED PIER INSTALLATION REQUIREMENTS, IF SPECIFIED.
7. THE BOTTOM ANCHOR BOLT TEMPLATE SHALL BE POSITIONED AS CLOSELY AS POSSIBLE TO THE BOTTOM OF THE ANCHOR BOLTS.
8. DISTANCE BETWEEN CENTER OF ANCHOR BOLT CAGE AND THE CENTER OF THE PIER NOT TO EXCEED 1/2" WITHOUT APPROVAL FROM ENGINEER OF RECORD.
9. ONE ANCHOR BOLT MUST BE ALIGNED DIRECTLY WITH THE CENTER OF THE TOWER (TYPICAL).

BASE REACTIONS

TOTAL FOUNDATION		INDIVIDUAL FOOTING	
SHEAR (KIPS)	64.74	SHEAR (KIPS)	38.28
AXIAL (KIPS)	189.88	COMPRESSION (KIPS)	462
MOMENT (FT-KIPS)	6798	UPLIFT (KIPS)	423

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES		MATERIAL:	 Sabre Industries Towers and Poles		FOUNDATION: 180 FT. MODEL S3R-SD																			
TOLERANCES: FRACTIONS ± 1/16" ANGLES ± 1/2 DEG. DECIMALS ± .010"		TOLERANCES DO NOT APPLY TO RAW MATERIAL			SITE: HALLSVILLE, MO																			
<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DRWING</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			REV	DATE	DRWING	DESCRIPTION													CONFIDENTIAL This document and the information contained herein is the confidential trade secret property of Sabre Communications Corporation ("Sabre") and must not be reproduced, copied or used, in whole or in part, for any purpose without the prior written consent of Sabre. © 2018 Sabre Communications Corporation. All rights reserved.		CUSTOMER: BOONE COUNTY, MO			
			REV	DATE	DRWING	DESCRIPTION																		
JOB NO. 414025	SIZE	DRAWING NO.		REV																				
DATE 07/19/18	B	414025-F1		0																				
DRAWN BY DLK	CHECKED BY KD ✓	SCALE	PAGE																					
		NONE	2 OF 2																					



CAUTION: CENTER OF TOWER IS NOT IN CENTER OF SLAB

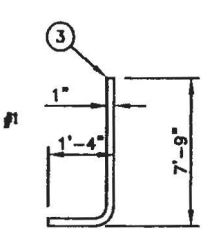
REINFORCING STEEL SCHEDULE								
ITEM	LOCATION	NO. REQ'D.	BAR SPC'G.	SIZE	CUT LGTH.	TOTAL LGTH.	TOTAL WT.	SHAPE
①	PAD TOP REINFORCING	86	EQUALLY SPACED	#10	26'-6"	2279'-0"	9807 LBS.	STRAIGHT
②	PAD BOTTOM REINFORCING	86	EQUALLY SPACED	#10	26'-6"	2279'-0"	9807 LBS.	STRAIGHT
③	PIER VERTICAL REINFORCING	48	EQUALLY SPACED	#8	9'-1"	438'-0"	1164 LBS.	
④	PIER TIES	30	SPACED 11" C/C	#4	10'-8"	320'-0"	214 LBS.	
TOTAL REBAR WT.							20992 LBS.	

ANCHOR BOLT SCHEDULE				
ITEM	PART NO.	NO. REQ'D.	ANCHOR BOLT SIZE	SPACING
⑤	C40041060	18	1 1/2" x 6'-6"	EQUALLY SPACED

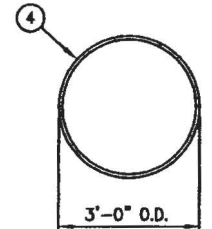
TEMPLATE SCHEDULE			
ITEM	PART NO.	NO. REQ'D.	BOLT CIRCLE
⑥	C30139210	6	10 1/4"

CONCRETE REQ'D	ROUND PIERS	SQUARE PIERS
PAD	40.50 CU. YDS.	40.50 CU. YDS.
PIERS	7.48 CU. YDS.	9.53 CU. YDS.
TOTAL	47.98 CU. YDS.	50.03 CU. YDS.

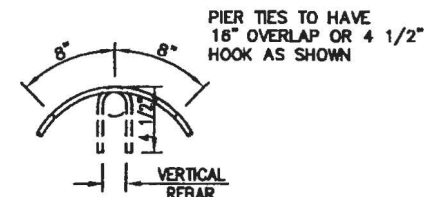
SEE PAGE 2 FOR GENERAL NOTES



REBAR DETAIL (PIER VERTICAL REBAR)



REBAR DETAIL (PIER TIES)



PIER TIE HOOK DETAIL

REV	DATE	BY	DESCRIPTION

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FOUNDATION: 180 FT. MODEL S3R-SD			
SITE: HALLSVILLE, MO			
CUSTOMER: BOONE COUNTY, MO			
JOB NO. 414025	SIZE B	DRAWING NO. 414025-F2	REV 0
DATE 07/19/18	DRAWN BY DLK	CHECKED BY KD	SCALE NONE PAGE 1 OF 2



GENERAL NOTES

1. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI, IN ACCORDANCE WITH ACI 318-11. (2 REBAR TIES REQ'D IN THE TOP 5")
2. REBAR TO CONFORM TO ASTM SPECIFICATION A615 GRADE 60.
3. ALL REBAR TO HAVE A MINIMUM OF 3" CONCRETE COVER.
4. ALL EXPOSED CONCRETE CORNERS TO BE CHAMFERED 3/4".
5. THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT BY CROCKETT GTL PROJECT NO. G18307, DATED: 3/29/18
6. SEE THE GEOTECHNICAL REPORT FOR COMPACTION REQUIREMENTS, IF SPECIFIED.
7. 6.5 FT OF SOIL COVER IS REQUIRED OVER THE ENTIRE AREA OF THE FOUNDATION SLAB.
8. THE BOTTOM ANCHOR BOLT TEMPLATE SHALL BE POSITIONED AS CLOSELY AS POSSIBLE TO THE BOTTOM OF THE ANCHOR BOLTS.
9. DISTANCE BETWEEN CENTER OF ANCHOR BOLT CAGE AND THE CENTER OF THE PIER NOT TO EXCEED 1/2" WITHOUT APPROVAL FROM ENGINEER OF RECORD.
10. ONE ANCHOR BOLT MUST BE ALIGNED DIRECTLY WITH THE CENTER OF THE TOWER (TYPICAL).

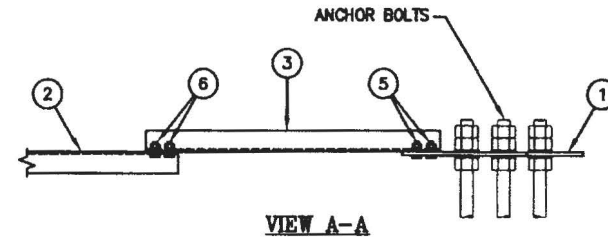
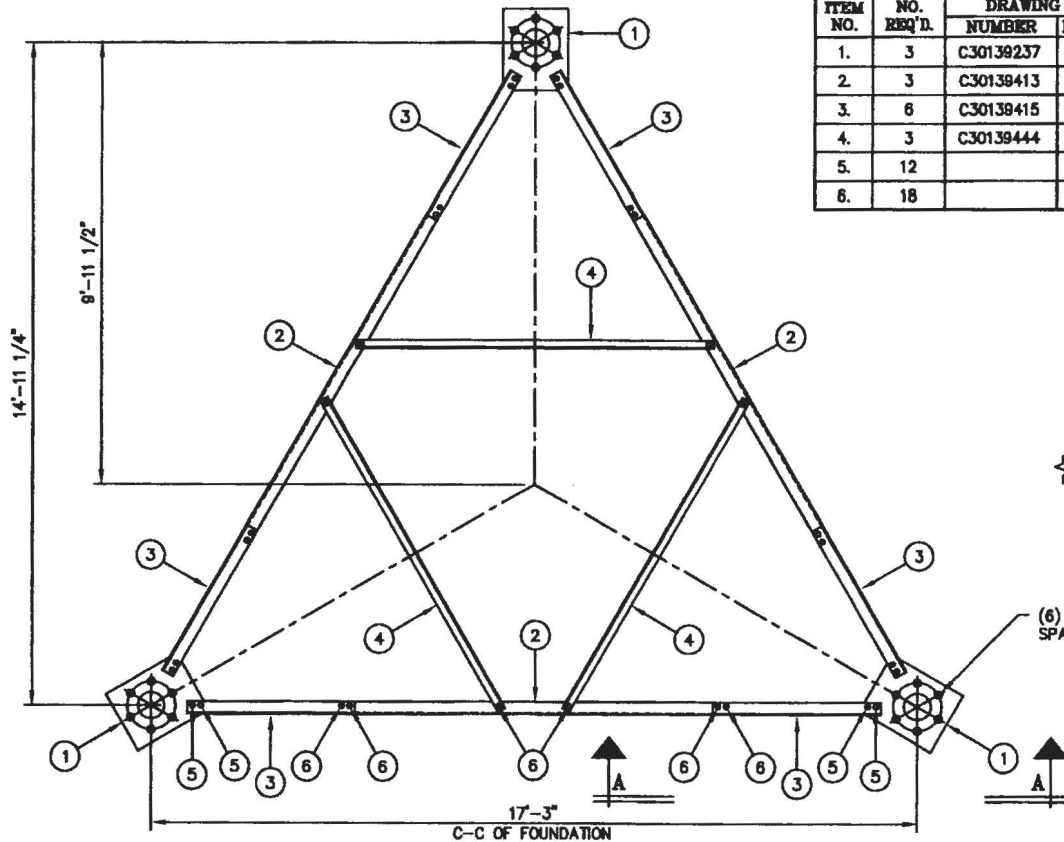
BASE REACTIONS

TOTAL FOUNDATION		INDIVIDUAL FOOTING	
SHEAR (KIPS)	64.74	SHEAR (KIPS)	38.28
AXIAL (KIPS)	169.88	COMPRESSION (KIPS)	462
MOMENT (FT-KIPS)	6798	UPLIFT (KIPS)	423

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES		MATERIAL:			FOUNDATION: 180 FT. MODEL S3R-SD				
TOLERANCES: FRACTIONS ± 1/16" ANGLES ± 1/2 DEG. DECIMALS ± .010"		TOLERANCES DO NOT APPLY TO RAW MATERIAL.			SITE: HALLSVILLE, MO				
				CUSTOMER: BOONE COUNTY, MO					
				JOB NO. 414025		SIZE	DRAWING NO.		REV
				DATE	07/18/18	B	414025-F2		0
				DRAWN BY	DLK			SCALE	PAGE
				CHECKED BY	KD ✓			NONE	2 OF 2
REV	DATE	DRIVER	DESCRIPTION	<p style="text-align: center;">CONFIDENTIAL</p> <p>This document and the information contained herein is the confidential trade secret property of Sabre Communications Corporation ("Sabre") and must not be reproduced, copied or used, in whole or in part, for any purpose without the prior written consent of Sabre. © 2018 Sabre Communications Corporation. All rights reserved.</p>					

C30400129 LEG TO LEG TEMPLATE

ITEM NO.	NO. REQ'D.	DRAWING		PART NO.	DESCRIPTION	WEIGHT LBS.	PAINT
		NUMBER	REV				
1.	3	C30139237	0	C30139237	PLATE, ANCHOR BOLT TEMPLATE, 1 1/2" A.B. ON A 10 1/4" B.C.	97	N/R
2.	3	C30139413	0	C30139413	ANGLE, TEMPLATE SUPPORT, 3 X 3 X 3/16 X 10'-0"	111	N/R
3.	6	C30139415	0	C30139415	ANGLE, TEMPLATE SUPPORT, 3 X 3 X 3/16 X 3'-3 1/4"	73	N/R
4.	3	C30139444	0	C30139444	ANGLE, TEMPLATE SUPPORT, 2 1/2 X 2 1/2 X 3/16 X 8'-1 1/2"	75	N/R
5.	12			C40026023	BOLT ASSEMBLY, 5/8" X 2 A325	6	
6.	18			C40026022	BOLT ASSEMBLY, 5/8" X 1 3/4 A325	8	
TOTAL WEIGHT IN LBS.						370	



(6) 1 1/2" ANCHOR BOLTS
SPACED 60" APART ON A 10 1/4" BOLT CIRCLE

NOTE:

1. ALWAYS COMPARE THE DIMENSIONS SHOWN ON THIS DRAWING WITH THE PROPER CONCRETE FOUNDATION DRAWING, PRIOR TO PLACING CONCRETE.
2. ONE ANCHOR BOLT MUST BE ALIGNED DIRECTLY WITH THE CENTER OF THE TOWER (TYPICAL AT ALL (3) LEGS).
3. VERIFY ANCHOR BOLT CENTER-TO-CENTER SPACING ON ALL (3) FACES AND ALIGNMENT OF ANCHOR BOLTS WITH THE CENTER OF THE TOWER AT ALL (3) LEGS PRIOR TO PLACING CONCRETE.
4. PROVIDE NECESSARY SUPPORT TO ELIMINATE ANY MOVEMENT DURING CONCRETE PLACEMENT AND CURING.

PLAN VIEW

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES		MATERIAL:	
TOLERANCES: FRACTIONS ± 1/16" ANGLES ± 1/2 DEG. DECIMALS ± .010"		TOLERANCES DO NOT APPLY TO RAW MATERIAL.	
REV	DATE	DRAWN	DESCRIPTION

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**LEG TO LEG TEMPLATE INSTALLATION
FOR MODEL S3R-SD SECTION 08
BASE SPREAD 17'-3" C-C OF FOUNDATION
(6) 1 1/2" A.B. ON A 10 1/4" B.C.**

REF. 9031090	SIZE	DRAWING NO.	REV
DATE 8/18/16	B	C30400129	1
DRAWN BY DJE	SCALE	PAGE	
CHECKED BY KTW	None	1 OF 1	