

May 23, 2011

Kenneth Kozyra
KJK Wireless
127 Ridge Road
Nashua, NH 03062

B&T Engineering, Inc.
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630
ctuttle@btengineering.com

Subject: Structural Modification Report

KJK Designation: Site Number: 853418
Site Name: Rosemont_USF

U.S. Cellular Co-Locate: Site Number: 853418
Site Name: Rosemont_USF

Engineering Firm Designation: B&T Engineering, Inc. Project Number: 82816.002

Site Data: Deering High School
370 Stevens Ave., Portland, ME 04103, Cumberland County
Latitude 43° 40' 16.5", Longitude -70° 17' 44.99"
70 Foot - Guyed Tower

Dear Mr Kozyra,

B&T Engineering, Inc. is pleased to submit this "Structural Modification Report" to determine the structural integrity of the above mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

Modified Tower with Existing + Reserved + Proposed Equipment	Sufficient Capacity
Note: See Table 1 and Table 2 for the proposed and existing/reserved loading, respectively.	

The analysis has been performed in accordance with the TIA-222-G standard and IBC 2009 based upon a wind speed of 100 mph 3-second gust.

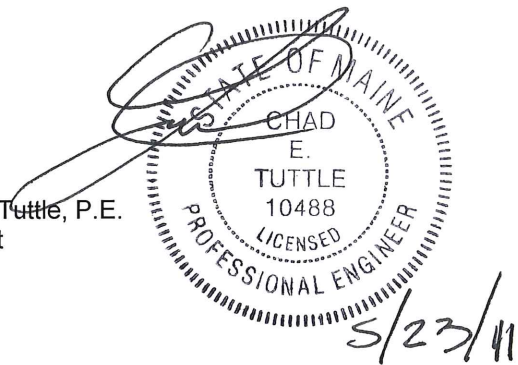
All equipment proposed in this report shall be installed in accordance with the attached drawings for the determined available structural capacity to be effective.

We at B&T Engineering, Inc. appreciate the opportunity of providing our continuing professional services to you and U.S. Cellular. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted by:


Scott S. Vance, P.E.
Vice President

Chad E. Tuttle, P.E.
President



S:\2516.002\ROSEMONT_USF--853418_TOW_MOD.dwg - Sheet(S1) - User: lsmpson - May 23, 2011 - 6:55pm

MODIFICATIONS BASED ON FAILING ANALYSIS FROM
B&T ENGINEERING DATED 05/05/11
AND ACCOMPANIED BY PASSING ANALYSIS
FROM B&T ENGINEERING DATED 05/23/11.

EXISTING MEMBER SCHEDULE				
"ELEV" (BOT)	"ELEV" (TOP)	LEGS	DIAGONALS	HORIZONTALS
41.5'	51.5'	TS 1.25"Øx0.083 PIPE	7/16"Ø SOLID ROD	7/16"Ø SOLID ROD
51.5'	61.5'	TS 1.25"Øx0.083 PIPE	7/16"Ø SOLID ROD	7/16"Ø SOLID ROD
61.5'	71.5'	TS 1.25"Øx0.083 PIPE	7/16"Ø SOLID ROD	7/16"Ø SOLID ROD
71.5'	81.5'	TS 1.25"Øx0.083 PIPE	7/16"Ø SOLID ROD	7/16"Ø SOLID ROD
81.5'	91.5'	TS 1.25"Øx0.083 PIPE	7/16"Ø SOLID ROD	7/16"Ø SOLID ROD
91.5'	101.5'	TS 1.25"Øx0.083 PIPE	7/16"Ø SOLID ROD	7/16"Ø SOLID ROD
101.5'	111.5'	TS 1.25"Øx0.083 PIPE	7/16"Ø SOLID ROD	7/16"Ø SOLID ROD

GENERAL NOTES

- 1.1 ALL WORK SHALL COMPLY WITH THE TIA-222-G STANDARD AS WELL AS ANY OTHER GOVERNING BUILDING CODES.
- 1.2 FIELD WORK WILL BE DONE AROUND EXISTING COAXIAL CABLE AND EQUIPMENT. ALL WORK SHALL BE DONE IN A MANNER SUCH THAT NO DAMAGE OCCURS TO THE EXISTING EQUIPMENT OR THE STRUCTURE.
- 1.3 A MINIMUM OF TWO COATS OF COLD GALVANIZING COMPOUND SHALL BE APPLIED TO ANY FIELD CUTS OR FIELD DRILLED HOLES.
- 1.4 THE USE OF A GAS TORCH OR WELDER WILL NOT BE PERMITTED ON THE TOWER WITHOUT THE CONSENT OF THE OWNER.
- 1.5 ALL FIELD CONNECTIONS SHALL BE MADE WITH A325X BOLTS, U.N.O. IN LIEU OF TEMPORARY BRACING, CONTRACTOR MAY HAVE A STABILITY ANALYSIS PERFORMED BY AN ENGINEER LICENSED IN THE STATE THE TOWER IS LOCATED. THE ANALYSIS SHALL USE A MINIMUM WIND SPEED OF 45 mph (3-SEC) PER TIA-1019.

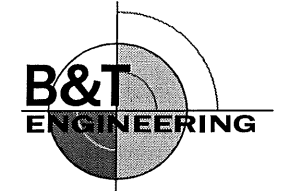
FABRICATION

- 2.1 ALL WORK SHALL BE DONE IN ACCORDANCE WITH A.I.S.C. "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
- 2.2 STRUCTURAL STEEL SHALL MEET THE FOLLOWING SPECIFICATIONS:

A. SOLID ROD (TOWER LEGS)	YIELD	ASTM SPECS
	50ksi	A572
- 2.3 ALL NEW MATERIAL INCLUDING STRUCTURAL STEEL AND FASTENERS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 AND A153.
- 2.4 WELDING SHALL MEET ANSI/AWS D1.1 STRUCTURAL WELDING CODE (LATEST REVISION). ELECTRODES SHALL BE E70 SERIES.
- 2.5 CONTRACTOR SHALL PROVIDE SHOP FABRICATION DRAWINGS TO B&T ENGINEERING 2 WEEKS PRIOR TO FABRICATION.

KEY NOTES

- # TOWER MODIFICATION I.D.
- X GUY WIRE MARK



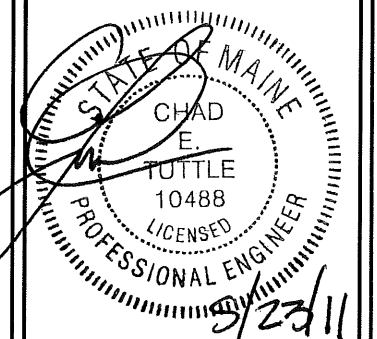
1717 S Boulder Suite 300
Tulsa, OK 74119
PH: (918) 587-4630

**KJK
WIRLESS**

ISSUED FOR:

REV	DATE	DESCRIPTION
0	05/23/11	ISSUED FOR CONSTRUCTION

PROJECT NO: 82816.002
DRAWN BY: GLS
CHECKED BY: SSV



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

ROSEMONT USF
853418
CUMBERLAND COUNTY, ME
EXISTING 70'
ROOF TOP GUYED TOWER

SHEET TITLE
TOWER ELEV., SCHEDULES
AND GENERAL NOTES

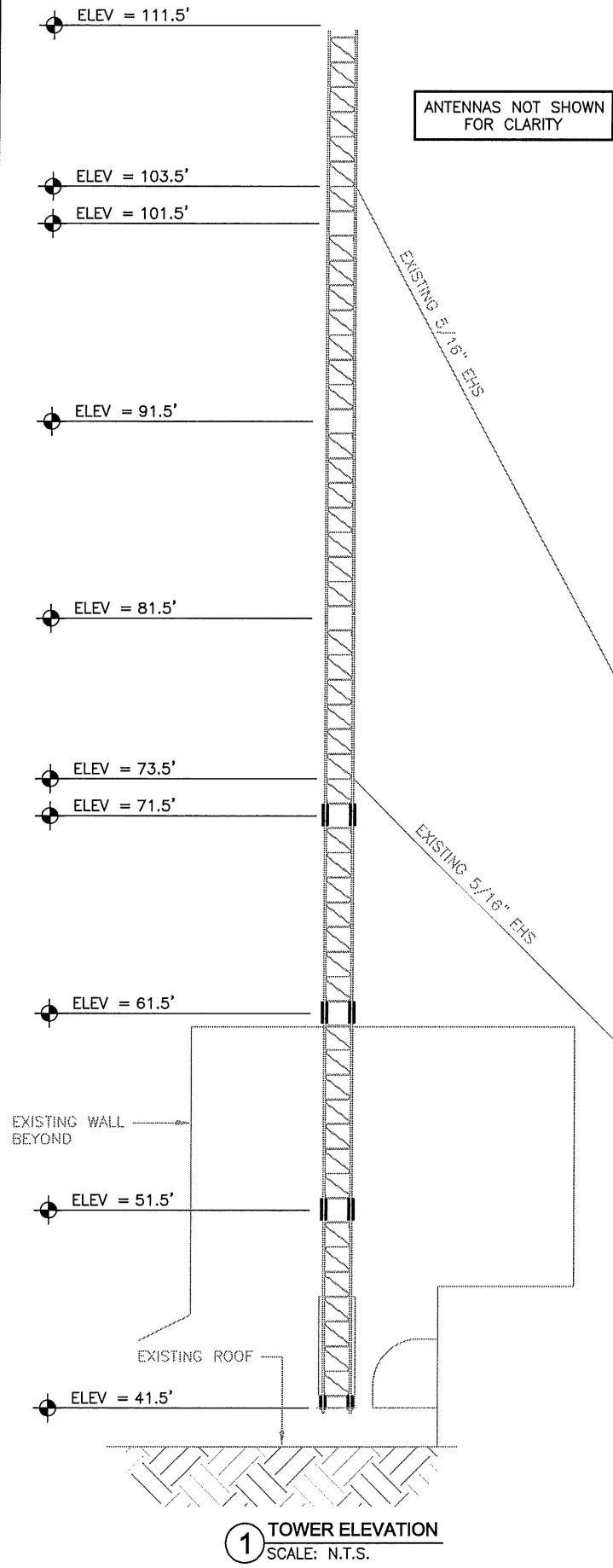
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REVISION: **0**

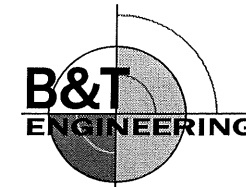
ANTENNAS NOT SHOWN FOR CLARITY

TOWER MODIFICATIONS:

- 1 CONTRACTOR SHALL BUDGET A SITE VISIT TO CHECK CRITICAL DIMENSIONS AND VERIFY UNKNOWN CONDITIONS PRIOR TO STEEL FABRICATION.
- 2 INSTALL NEW BOLTED LEG SPLICE RE: SHEET S2.
- 3 REPLACE EXISTING BOLTS WITH NEW A325X BOLTS REAM EXISTING BOLT HOLE AS REQUIRED RE: SHEET S2.

* CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR ALL REMOVE AND REPLACE PROCEDURES.
** MODIFICATIONS SHALL BE COMPLETED PRIOR TO ADDING THE PROPOSED APPURTENANCES.





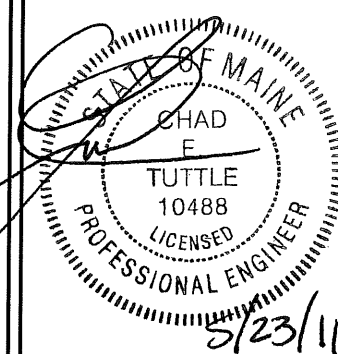
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ROSEMONT USF
853418

CUMBERLAND COUNTY, ME
EXISTING 70'
ROOF TOP GUYED TOWER

SHEET TITLE

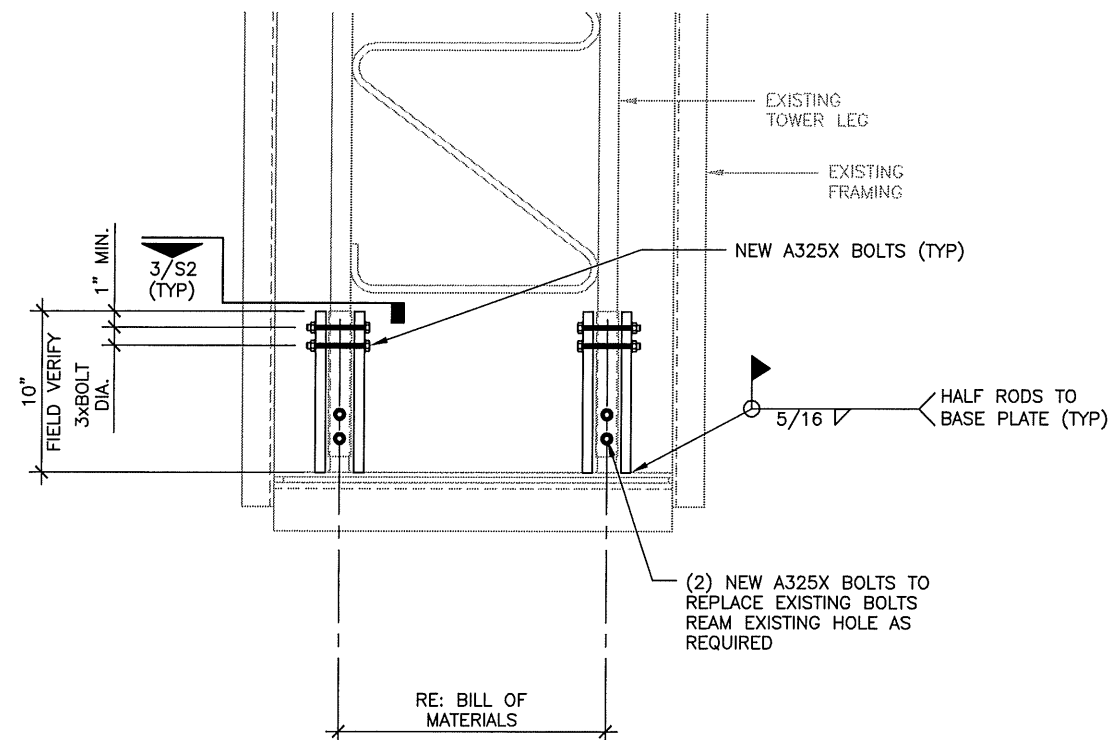
TOWER DETAILS

SHEET NUMBER:

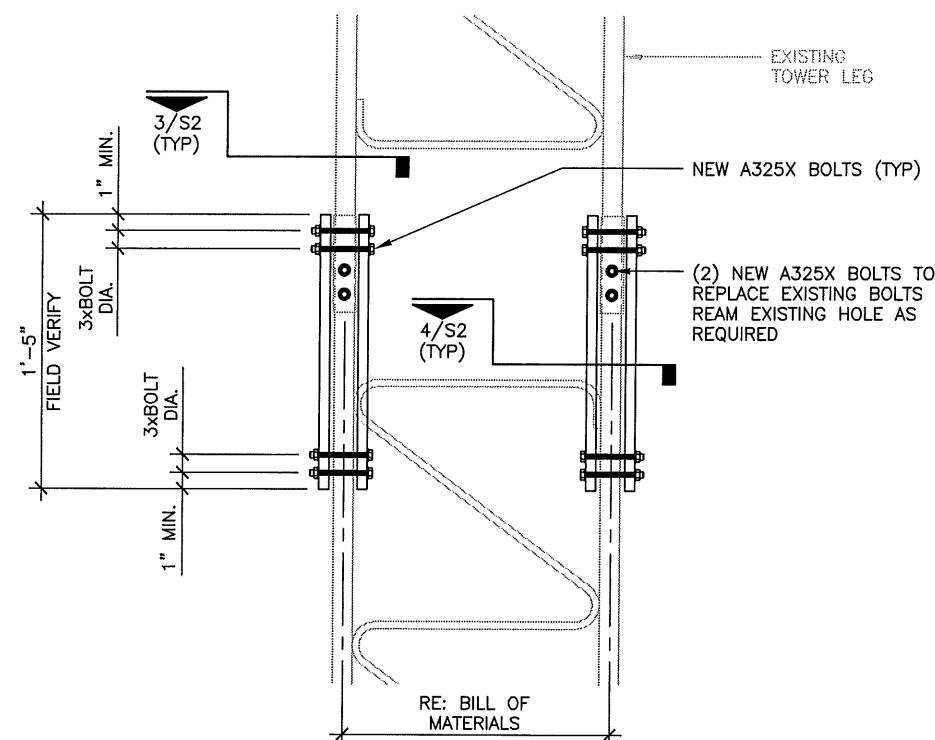
S2

REVISION:

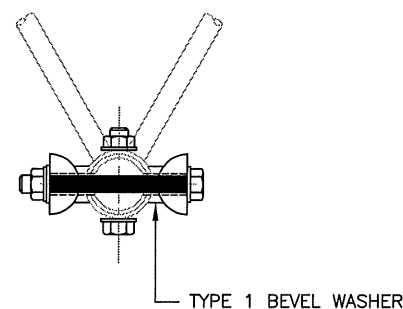
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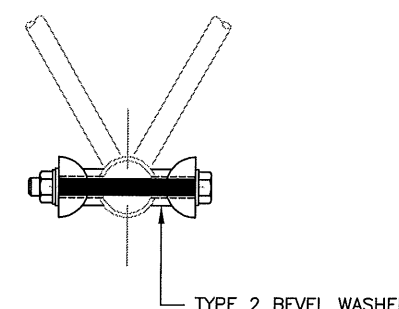
1 TOWER SECTION (41.5' ELEV.)
SCALE: N.T.S.



2 TOWER SECTION (51.5', 61.5' AND 71.5' ELEV.)
SCALE: N.T.S.



3 SECTION AT EXISTING SPLICE
SCALE: N.T.S.



4 SECTION AT EXISTING LEG
SCALE: N.T.S.

BILL OF MATERIALS

ELEVATION	BOTTOM	TOP	PC MARK	QTY	DESCRIPTION	CUT LENGTH	DETAIL	MATERIAL	HARDWARE
41.5'	1'-4 3/4"	1'-4 3/4"	---	3	BOLT SPLICE PLATE ASS'Y	0'-10"	1/S2	(2) HALF 1 1/4" S/R	(2) 3/8" x 3 1/2" A325X BOLTS
			---	6	REPLACEMENT BOLTS	---	3/S2	---	3/8" x 2 1/4" A325X BOLT
51.5'	1'-4 3/4"	1'-4 3/4"	---	3	BOLT SPLICE PLATE ASS'Y	1'-0"	2/S2	(2) HALF 1 1/4" S/R	(4) 3/8" x 3 1/2" A325X BOLTS
			---	6	REPLACEMENT BOLTS	---	3/S2	---	3/8" x 2 1/4" A325X BOLT
61.5'	1'-4 3/4"	1'-4 3/4"	---	3	BOLT SPLICE PLATE ASS'Y	1'-0"	2/S2	(2) HALF 1 1/4" S/R	(4) 3/8" x 3 1/2" A325X BOLTS
			---	6	REPLACEMENT BOLTS	---	3/S2	---	3/8" x 2 1/4" A325X BOLT
71.5'	1'-4 3/4"	1'-4 3/4"	---	3	BOLT SPLICE PLATE ASS'Y	1'-0"	2/S2	(2) HALF 1 1/4" S/R	(4) 3/8" x 3 1/2" A325X BOLTS
			---	6	REPLACEMENT BOLTS	---	3/S2	---	3/8" x 2 1/4" A325X BOLT

- PROVIDE NUT AND LOCK WASHERS WITH ALL HARDWARE, U.N.O.
- ALL MATERIAL TO BE HOT DIPPED GALVANIZED.
- ALL CUT LENGTHS ARE FOR BIDDING PURPOSES ONLY.
- ALL MATERIAL LENGTHS, DIMENSIONS AND QUANTITIES SHALL BE VERIFIED BY THE FABRICATOR PRIOR TO STEEL FABRICATION.
- QUANTITY SHOWN INDICATES THE NUMBER OF ASSEMBLIES. REF. THE MATERIAL & HARDWARE FOR ADDITIONAL QUANTITIES.