

SPECIFICATIONS

for

Main & Auxiliary

ANTENNA

WBJC

**BALTIMORE CITY COMMUNITY COLLEGE
BALTIMORE, MARYLAND**

**DGS PROJECT NUMBER:
CC-000-100-103**

**Date: June 10, 2010
Bid Set**

Project Classification: "A"

Notice

"Minority Business Enterprises are Encouraged to Respond to this Notice"

STATE OF MARYLAND

Department of General Services
Alvin C. Collins, Secretary
301 West Preston Street
Baltimore, Maryland 21201

Board of Public Works
Martin O' Malley, Governor
Peter Franchot, Comptroller
Nancy K. Kopp, Treasurer

Baltimore City Community College
WBJC Radio Station Antenna Site
In House Design

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Division 1 – General Requirements

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01100 Summary

WBJC Radio Station requires the procurement and installation of a main and auxiliary antenna at its television tower site located in Baltimore, MD at 1723 Reisterstown Road and Interstate 695 (Beltway).

Upon completion of the project, the Contractor shall remove all debris associated with the project. The Contractor shall leave the premises clean and free of any visible signs of construction from this project. All areas not paved and required to be accessed by vehicles shall be treated, graded, seeded, as necessary, to return the areas to the condition in which the Contractor found them before starting the project. Any paved areas damaged by the Contractor's vehicles or equipment, shall be returned to the condition they were in before the start of the project.

The time-frame for completed installation and operation of the antenna project shall be October 1, 2010.

The Contractor must have at least 20 years experience in the installation of antennas of the type mentioned in "main antenna assembly." The Contractor shall provide a minimum of three (3) references with the contact information of other antenna installations, which they have installed, similar to the ones mentioned herein. The Contractor shall be responsible for any and all support materials, structures and modifications, if necessary for the installation of the antennas.

All activities will take place during daylight hours. To maintain utmost safety, weekend activity is permissible. WBJC broadcasts its television signals 24 hours a day, seven days a week.

Safety lighting, required by the FAA, will have to be maintained. The existing lighting may be used, if practical. Or, the Contractor may use another form of safety lighting as long as it adheres to FAA standards. The Contractor shall implement and maintain appropriate safety areas to protect its, and WBJC's, personnel from accidental debris falling from the tower. Safety areas shall be clearly marked. The Contractor shall be responsible for any and all safety equipment required by its personnel. Any subcontractors performing work related to this project are also responsible for their own safety equipment and personnel.

The Contractor shall be responsible for any and all expenses incurred for the execution of this project. This includes equipment, travel, insurance, bonds, if required, and any other expenses related to the project.

Main Antenna Assembly

- 1) The main antenna, a ERI MP-8AC-DA-HW or approved equivalent, is to be supplied and installed.
- 2) The antenna and antenna installation must comply with WBJC's construction permit: BPED-20070823ADT. The Construction permit can be found at <http://www.fcc.gov/fcc-bin/fmq?list=0&facid=3654>
- 3) The installation must be complete and FCC 302-FM, Application for FM broadcast license, must be submitted to the FCC before October 12, 2010.
- 4) The antenna manufacturer is to have at least 200 directional antennas of similar design out in the field.
- 5) The antenna manufacturer is to have at least twenty years experience building "rototiller" style antennas.
- 6) The antenna manufacturer is to have at least twenty years experience in full scale testing on a full scale antenna test range.
- 7) The radiating element shall be of brass construction with an outside diameter of 1-5/8-inches. The feed point is to be a welded attachment and completely internal with a pressurized environment up to the external radiating arm. The elements should have a rugged brass construction that will withstand severe weather extremes and wind velocities up to 150 miles per hour.
- 8) All inner conductors and connectors inside the elements shall be silver plated.
- 9) Each element shall have radiused tips to avoid corona problems.
- 10) The proposed FM antenna shall have a low voltage standing wave ratio (VSWR) of 1.10:1 or less, ± 200 kHz per given channel, with field tuning.
- 11) The horizontal plane radiation pattern shall be directional in compliance with WBJC 's FCC Construction Permit BPED-20070823ADT.
- 12) The directional pattern shall be modeled on an antenna test range at full scale using a minimum 2 bay portion of the antenna array and its directors mounted on a facsimile of the 14-inch O.D. pole that will support the antenna. The antenna system shall include a directional antenna proof of performance report to authenticate the range testing and compliance with the requirements of WBJC's construction permit.
- 13) The installer will be required to furnish a Maryland licensed surveyor to direct

the tower crew in orienting the antenna properly during installation.

- 14) The antenna input impedance shall be 50 ohms and the input flange should be a 3-1/8-inch EIA female input and include an "O" ring and one set of connecting bolts, nuts, and washers.
- 15) The antenna shall include a DC shorting stub for enhanced lightning protection.
- 16) The antenna shall include stainless steel mounting brackets and hardware for pole mounting.
- 17) On-site tuning and sweeping of the antenna is to be done by full-time employees of the antenna manufacturer.
- 18) Each element of the proposed FM antenna shall be approximately 48-inches long and 24-inches high. The weight of each element and its line block shall be approximately 75 pounds.
- 19) The flanges of the interbay transmission line, input section, and DC shorting stub shall be induction welded to reduce residual stresses, premature cracking, and potential for environmental corrosion fatigue associated with TIG welds.
- 20) The manufacturer shall be able to provide pattern null fill correction and electrical beam tilt options.
- 21) The antenna shall be completely assembled and tuned to the buyer's specified operating frequency at the manufacturer's factory.
- 22) The antenna shall also be pressure tested prior to shipment to assure the antenna is leak free.
- 23) The manufacturer shall be able to provide in-house emergency repair, installation, field tuning, and warranty field service. Such service shall be provided by fulltime employees of the manufacturer who have received specific training and factory certification in the installation and repair of the purchased equipment.
- 24) The manufacture shall warrant that the antenna is free from defects in material or workmanship for a minimum of two (2) years.
- 25) General Specifications:
 - a. Elements: Eight (8) Bays
 - b. Feed Type: Center Feed
 - c. Bay Spacing: 0.5 lambda
 - d. RF Input: 3-1/8-inch center fed, EIA, female, 50 ohms

- 26) Electrical Specifications:
- a. Frequency: 91.5 MHz
 - b. Peak Power Gain: 3.340 numeric (5.237 dB)
 - c. Electrical Beam Tilt: 0.0 degrees
 - d. First Null Fill: 0%
 - e. Second Null Fill: 0%
 - f. Input Power Rating: 32 kilowatts center fed
- 27) Mechanical Specifications:
- a. System Length: 41-feet, 5-inches
 - b. Approximate Weight: 861 lbs
 - c. Approximate Wind load: 41.469ftsq CaAa sq
 - d. Input Flange: 3 1/8" female
- 28) Contractor shall provide all information needed and required for a FCC Proof of Performance per 47CFR73.316. The installation of the directional antenna shall be overseen by a qualified engineer who will provide a certification that the antenna has been installed correctly and a statement of his qualifications per 47CFR73.316. The orientation of the tower/antenna will be determined by a surveyor licensed in the State of Maryland and Contractor shall provide a certification from the surveyor that the antenna has been installed at the correct azimuth, $\pm 0.5^\circ$, as well as a statement indicating the method used to determine this and a statement of his qualifications per 47CFR73.316.
- 29) Any antenna substitution requiring change or modification to WBJC-FM approved construction permit, FCC construction permit modifications, delayed program testing, tower reanalysis or structural modifications, shall require the contractor bear all expenses related to such substitution including but not limited to the successful responsibility for any and all FCC re-filings while maintaining 100% operation of stations currently licensed effective radiated power and coverage.
- 30) The existing mounting pipe is to be replaced with:
- a) One (1) 50' , solid steel, hot-dipped galvanized, 14" diameter pipe, to serve as antenna pole, with a bolted round flange attachment to existing tower.
 - b) Pole to be designed for a 90 mph basic wind speed in accordance with the TIA-222-G Standard.
 - c) Pole to be also designed for a 40 mph basic wind speed with .75" of escalating radial ice.
 - d) Pole to meet Antenna Manufacturer's Radius of Curvature requirement of not

to less than 1600 feet.

- e) Pole to be designed for Structure Class 2, Exposure Category C, Topographic Category 1, in accordance with the default and presumptive criteria of the TIA-222-G Standard.
 - f) Manufacture to possess a current American Institute of Steel Construction (AISC) "Quality" certificate for specialized structures and submit a copy of certification with bid.
 - g) Pole mounting instructions, tower upgrade instructions and tower structural analysis report are based on a pole designed by the proposed antenna manufacturer, ERI. The bidder is responsible for any changes in the pole mounting procedure or necessary steps to upgrade the tower, resulting from the use of another pole.
- 31) Task officer is to complete the engineering portion of FCC form 302-FM, Application for Broadcast Station License and complete and sign Preparer's Certification page, in a timely manner.

Auxiliary Antenna

- 1) A new high power two bay non-directional auxiliary antenna must be supplied and installed.
- 2) This non directional Antenna will be an Electronic Research Antenna (Model SHPX-2AC FM Antenna) or approved equivalent.
- 3) The antenna manufacturer is to have at least 1000 antennas of similar design out in the field.
- 4) The antenna manufacturer is to have at least twenty years experience building "rototiller" style antennas.
- 5) The new auxiliary antenna is to be mounted on the tower in the same location of the existing auxiliary antenna.
- 6) The elements should have a rugged brass construction that will withstand severe weather extremes and wind velocities up to 150 miles per hour.
- 7) All inner conductors and connectors inside the elements shall be silver plated.
- 8) Each element shall have radiused tips to avoid corona problems.
- 9) The antenna input impedance shall be 50 ohms and the input flange should be a

3-1/8-inch EIA female input and include an “O” ring and one set of connecting bolts, nuts, and washers.

- 10) The antenna shall include a DC shorting stub for enhanced lightning protection.
- 11) On-site tuning and sweeping of the antenna is to be done by full-time employees of the antenna manufacturer.
- 12) The flanges of the interbay transmission line, input section, and DC shorting stub shall be induction welded to reduce residual stresses, premature cracking, and potential for environmental corrosion fatigue associated with TIG welds.
- 13) The antenna shall be completely assembled and tuned to the buyer’s specified operating frequency at the manufacturer’s factory.
- 14) The antenna shall also be pressure tested prior to shipment to assure the antenna is leak free.
- 15) The manufacturer shall be able to provide in-house emergency repair, installation, field tuning, and warranty field service. Such service shall be provided by fulltime employees of the manufacturer who have received specific training and factory certification in the installation and repair of the purchased equipment.
- 16) The manufacture shall warrant that the antenna is free from defects in material or workmanship for a minimum of two (2) years.
- 17) General Specifications:
 - a. Elements: 2
 - b. Feed Type: Center Feed
 - c. Bay Spacing: 128.525 in
 - d. RF Input: 20 Kw
- 18) Electrical Specifications:
 - a. Frequency: 91.5 MHz
 - b. System Gain: 0.997
- 19) Mechanical Specifications:
 - a. System Length: 14.75s ft
 - b. Approximate Weight: 250 lbs
 - c. Approximate Wind load: CaAa: 11.132 ft^2
 - d. Input Flange: EIA 3 1/8” female, center fed, 50 ohms
- 20) The task officer is to complete the engineering data on the FCC

modification of license application on behalf the station in a timely manner.

3. Transmission Lines

- 1) A 425 foot , air dielectric, flexible, 3-1/8" transmission line, Andrew type HJ8-50B, or approved equivalent, must be supplied for the main antenna.
- 2) A 250 foot , air dielectric, flexible, 3-1/8" transmission line, Andrew type HJ8-50B, or approved equivalent, must be supplied for auxiliary antenna.
- 3) All installation hardware, including hangers and grounding kits is to be included.
- 4) The transmission lines are to have EIA 3 1/8" male connectors on both ends.
- 5) Contractor will install all transmission lines, connectors, hangars, and ancillary materials.

4. Transmission line dehydrator and manifold

- 1) A dehydrator must be supplied, capable of pressurizing the main and auxiliary transmission lines and antennas.
- 2) The dehydrator is to be an Andrew MT-500B-81315, or approved equivalent.
- 3) The dehydrator shall have a sound deadening feature.
- 4) The dehydrator shall provide ample capacity for the main and aux antenna transmission line
- 5) The dehydrator shall provide adjustable output between 2-5 PSI.
- 6) The dehydrator shall provide alarms for
 - a. High humidity.
 - b. Low pressure
 - c. Mains power failure
 - d. Excessive run time
- 7) A wall-mount shelf must be provided for the dehydrator.
- 8) A manifold, and the associated tubing, must be supplied.

- 9) Separate pressure gauges and shut off valves for the two transmission lines must be supplied.
- 10) A remote indication of the manifold pressure must be supplied to the remote control system.
- 11) Interfaces will be provided to connect the manifold output lines to the main and aux transmission lines.

91.5 FM WBJC

6776 REISTERSTOWN ROAD
SUITE 202
BALTIMORE, MARYLAND 21215

DATE OF ORIGIN: 9/28/09

DRAWN BY: MC

CHECKED BY: AAT

REVISIONS

NO. DESCRIPTION

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KCI TECHNOLOGIES, INC
4601 SIX FORKS ROAD
RALEIGH, NC 27609
(919) 783-9214

PROJECT NAME:

WBJC TOWER
BALTIMORE COUNTY, MARYLAND

SHEET TITLE:

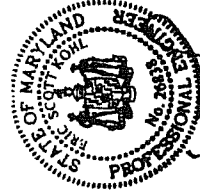
TOWER ELEVATION &
DETAILS

SHEET NO. 1

S-1

KCI JOB NO.: 02090919A

SEAL:



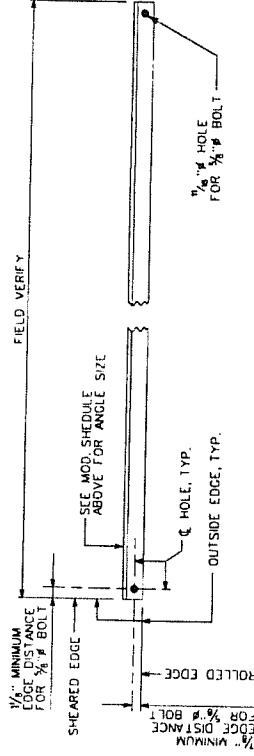
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TOWER MODIFICATION SCHEDULE

NO.	MODIFICATION DESCRIPTION	BOTTOM ELEVATION (F.T.)	TOP ELEVATION (F.T.)
1	PROPOSED L2x2x1/4 GRADE A36 SUB-HORIZONTAL BRACING	250	305
2	PROPOSED GUY WIRES W/ 1/2" # EHS, 3.5 x INITIAL TENSION @ 60° F	0	310.5
3	PROPOSED L2x2x1/4 GRADE A36 SUB-HORIZONTAL BRACING	175	190
4	PROPOSED ADDITIONAL SAME SIZE 1/2" # PIPE x 12" THICK OR REMOVE EXISTING DIAGONALS & REPLACE W/ L2x2x1/4 GRADE A36 X-BRACING	150	160
5	PROPOSED L2x2x1/4 GRADE A36 SUB-HORIZONTAL BRACING	100	125
6	PROPOSED L2x2x1/4 GRADE A36 SUB-HORIZONTAL BRACING	30	50

NOTE:

THESE PLANS ASSUME EXISTING CONNECTIONS TO TOWER AND GUY ANCHOR ARE SUFFICIENT FOR INCREASED SIZE OF GUY WIRES AND HARDWARE. CONTRACTOR SHALL FIELD VERIFY ALL GUY LUGS AND GUY ANCHOR DIMENSIONS. IF UNDESIRABLE, THE ENGINEER WILL VERIFY THE ADEQUACY OF THE ATTACHMENT POINTS.



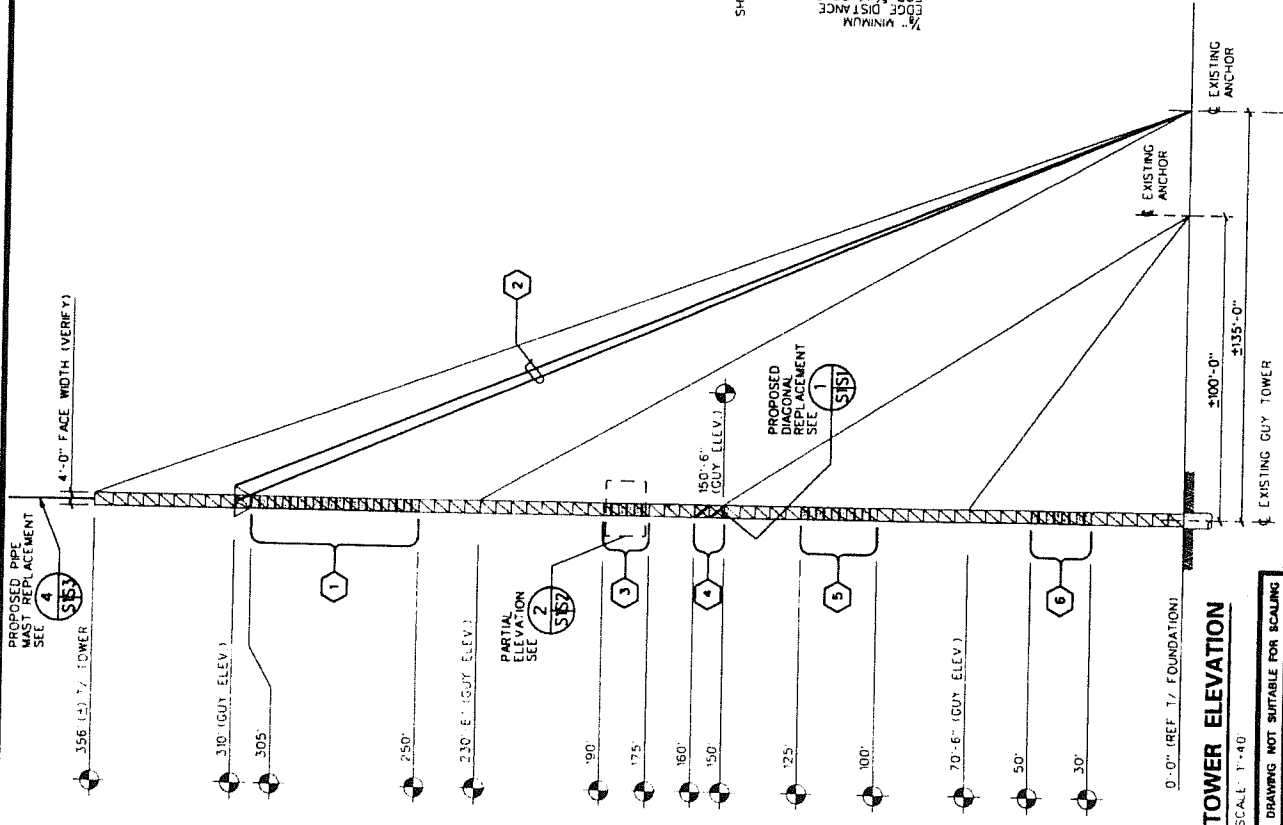
DETAIL

SCALE: 1" = 1'-0"

NOTE: CONTRACTOR'S OPTION FOR REPLACING EXISTING DIAGONALS W/ ANGLE; AS SHOWN, OR CONTACT STANLESS, INC. FOR ANGLE. ANGLE SHALL BE SUPPLIED BY WEST PENNSYLVANIA FOR PART NO. OF SPECIFIED DIAGONAL. SEE MOD SCHEDULE FOR REQUIRED SIZE.

NOTE:

CONTRACTOR SHALL REPLACE ALL PREVIOUSLY TORQUED INSTALLATION HARDWARE ASSOCIATED WITH THE PROPOSED DIAGONALS WITH LIKE KIND (I.E. BOLTS, NUTS, WASHERS, ETC.)



TOWER ELEVATION

SCALE: 1" = 40'

THIS DRAWING NOT SUITABLE FOR SCALING

DESIGN LOADING:

LOADING CASE	CODE	WIND SPEED AND ICE LOADING
1	2003 INTERNATIONAL BUILDING CODE FOR BALTIMORE COUNTY, MD	80 MPH (3-SEC GUST), NO ICE
2	11A/EIA-222-1	85 MPH, 1/2" OF RADIAL ICE

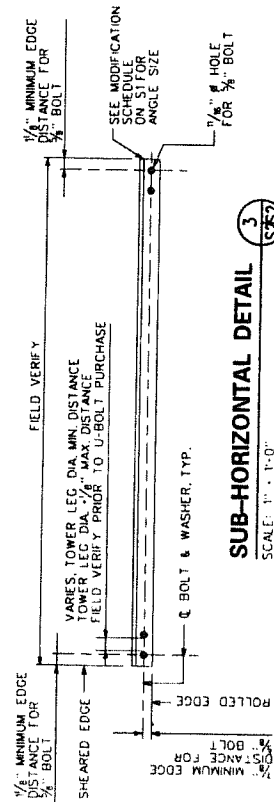
WIND LOAD REDUCED BY 25% WHEN CONSIDERED WITH ICE LOADING PER TIA STANDARD.

EXISTING AND PROPOSED APPURTENANCES

NUMBER	ELEVATION	CARRIER	MOUNT	ANTENNA INFORMATION	TRANSMISSION LINES
1	TOP	WBJC	POLE	(1)-BAY FM4-D ANTENNA	(1)-3"
2	335'	WBJC	LEG	(4)-FM ANTENNA	(1)-3 5"
3	309'	UNKNOWN	LEG	(1)-6-11 GRID ANTENNA	(1)-7/8"
4	303'	UNKNOWN	LEG	(1)-6-11 GRID ANTENNA	(1)-7/8"
5	254'	UNKNOWN	SIDE ARM	(1)-B BAY DIPOLE ANTENNA	(1)-7/8"
6	245'	WBJC	LEG	(2)-BAY FM ANTENNA	(1)-1/2"
7	215'	WBJC	LEG	(1)-BAY ERI LPK-2E FM ANTENNA	(1)-1/2"
8	150'	UNKNOWN	SIDE ARM	(1)-OGB9 900N OMN ANTENNA	(1)-7/8"
9	141'	UNKNOWN	LEG	(1)-2-11 DB-432 YAGI ANTENNA	(1)-1/2"
10	113'	AT&T	SOC ARMS	(3)-CSS SA13-B620 PANEL ANTENNAS	(3)-1/2"
11	90'	AT&T	SIDE ARMS	(6)-CSS SA13-B620 PANEL ANTENNAS	(6)-7/8"
12	TOP	WBJC	POLE	(8)-BAY ERI MP-BAC-DA-HW ANTENNA	(1)-3"
13	215'	WBJC	LEG	(2)-BAY ERI SHPX-2 ANTENNA	(1)-3"

••• DENOTES APPURTENANCES TO BE REMOVED
 ••• DENOTES PROPOSED APPURTENANCES

PROPOSED TRANSMISSION LINES SHALL BE MOUNTED ADJACENT TO THE EXISTING LINES TO BE REMOVED.



THIS DRAWING NOT SUITABLE FOR SCALING

91.5 FM WBJC

6776 REISTERSTOWN ROAD
 SUITE 202
 BALTIMORE, MARYLAND 21215

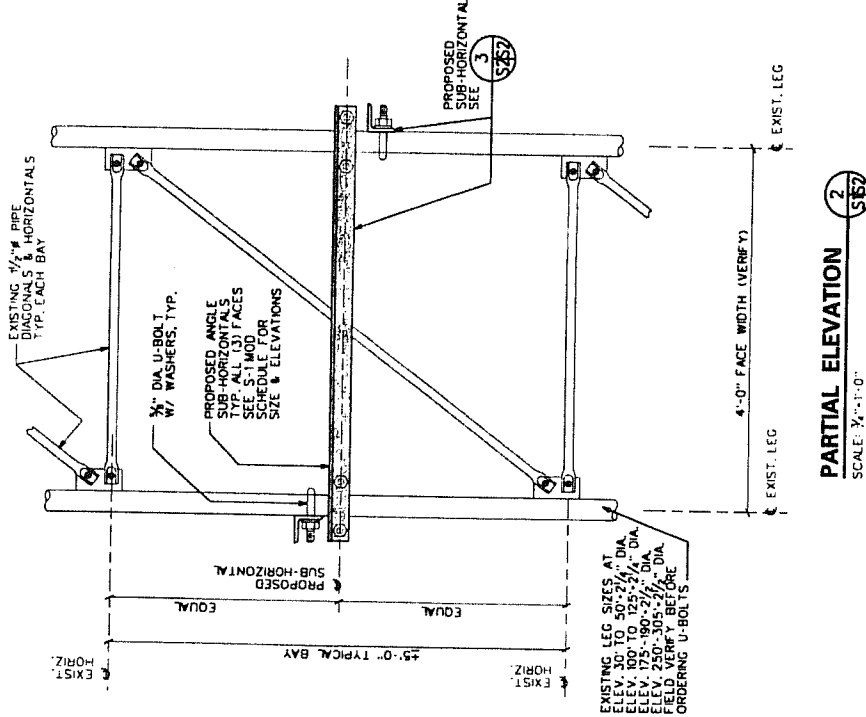
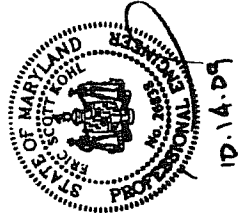
DATE OF ORIGINATION : 9/28/09
DRAWN BY : MC
CHECKED BY : A-T
REVISIONS
NO DESCRIPTION
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6



PROJECT NAME :
 WBJC TOWER
 BALTIMORE COUNTY, MARYLAND
 SHEET TITLE :

DESIGN LOADING AND DETAIL

SHEET NO. :
S-2
 KCI JOB NO. : 42090919A
 SEAL :



PARTIAL ELEVATION
 SCALE: 3/4" = 1'-0"

91.5 FM WBJC

6776 REISTERSTOWN ROAD
SUITE 202
BALTIMORE, MARYLAND 21215

DATE OF ORIGINATION : 9/28/09
DRAWN BY : MC
CHECKED BY : AM
NO. DESCRIPTION
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PROJECT NAME :
WBJC TOWER
BALTIMORE COUNTY, MARYLAND

SHEET TITLE :

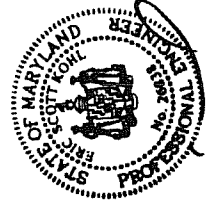
MOUNTING DETAILS

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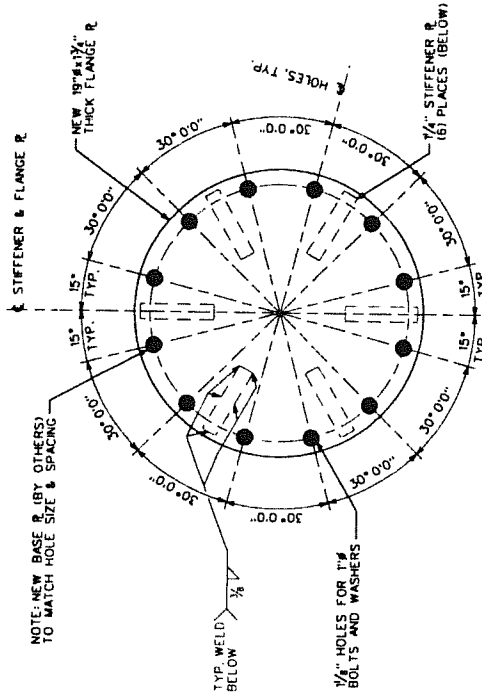
S-3

KCI JOB NO. : 12090919A

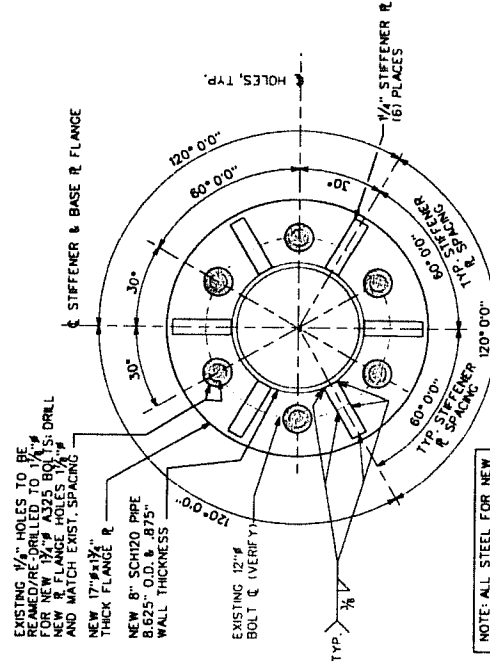
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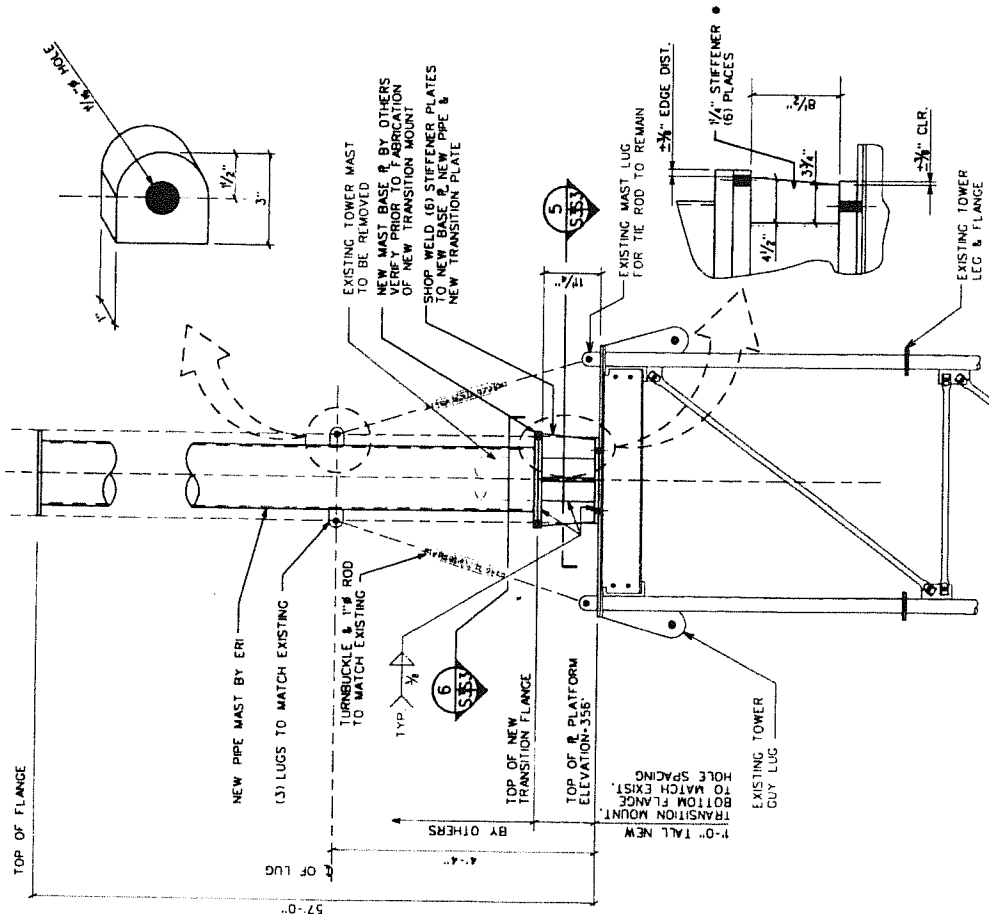
10.14.09



SECTION 6
SCALE: 1/2" = 1'-0"



SECTION 5
SCALE: 1/2" = 1'-0"



PIPE MAST DETAIL 4
SCALE: 1/2" = 1'-0"

THIS DRAWING NOT SUITABLE FOR SCALING

1. KCI recommends the tower be repainted to TIA/EIA specification. This will greatly extend the life of this tower. Surface rust is starting to show on the tower legs and other tower members. KCI recommends cleaning with a wire brush before repainting all areas with heavy surface rust.

2. The 1st guy level is in good shape. The cotter pins at this level are quite corroded and should be replaced. The next four guy levels (2 through 5) show heavy corrosion on the wire loops connecting the insulators and are starting to pit which shows loss of material. The wires are starting to lose their shape and the individual strands of the guy wires are starting to separate.
3. The hardware on the guy wires and lugs, such as thimbles, pins and cotter pins on the tower show surface rust. The guy level 4 torque arm thimbles are bent and the guy wires are not sitting on them correctly. These items should be changed and corrected.
4. The plate at the base of the tower between the insulator and the first tower section has a gouge. No corrective action required for this other than constant monitoring to make sure the gouge doesn't start to crack.

Guy Anchors

1. Anchor C outer anchor rod has a ½" thick by 1" long gage. KCI recommends that this gage is cleaned and cold galvanized to prevent surface corrosion and future loss of material.
2. The safety cables on A inner and B inner anchors show signs of material loss and the strands are starting to separate. KCI recommends that these safety cables at the anchor head be replaced.
3. There is minor surface rust on all anchor heads. KCI recommends cleaning them with a wire brush and cold galvanize to prevent future surface rust and material loss.
4. The A anchor outer level 4R, B anchor level 1, level 4R, 4L and level 5, C anchor level 4R, 4L guy anchor cotter pins are corroded and need replacement.
5. There are no ground wires on any of the guy wires. KCI is aware that there are insulators installed on the guy wires. KCI recommends that ground wires be installed on the guy wires for added safety.
6. The A & C outer anchor gravity blocks have overgrown vegetation starting to grow all over the anchor head. KCI recommends that this vegetation be cleared from the gravity blocks and anchor heads.
7. The C outer anchor head is not fully out of the ground. KCI recommends to clear the soil so to expose the anchor head.
8. The twist and out of plumb passes TIA/EIA standards but the tensions on the guy wires are not within the recommended range, see tension sheet for details.

TOWER GUY SCHEDULE

GUY LEVEL	WIRE SIZE	ANCHOR	INITIAL TENSION
1	1/2" EHS	INNER	1.1 - 2.69k
2	3/8" EHS	INNER	1.1 - 3.50k
3	3/8" EHS	OUTER	1.1 - 3.50k
4L	3/4" EHS	OUTER	1.1 - 3.50k (●)
4R	3/4" EHS	OUTER	1.1 - 3.50k (●)
5	3/4" EHS	OUTER	1.1 - 4.24k

(●) DENOTES MODIFIED GUY SIZE, SEE MOD SCHEDULE ON S-1 FOR MORE INFO

*) DENOTES MODIFIED GUY SIZE, SEE MOD SCHEDULE ON
S-1 FOR MORE INFO

91.5 FM WBJC

6776 REISTERSTOWN ROAD
SUITE 202
BALTIMORE, MARYLAND 21215

DATE OF ORIGNATION : 9/28/09

DRAWN BY : MC

CHECKED BY : AJT

REVISIONS

NO.	DESCRIPTION
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KCI TECHNOLOGIES, INC
4601 SIX FORKS ROAD
RALEIGH, NC 27609
(919)783-9214

PROJECT NAME :

**WBJC TOWER
BALTIMORE COUNTY, MARYLAND**

SHEET TITLE :

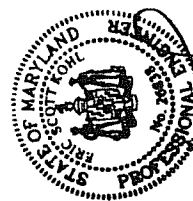
MAINTENANCE NOTES

SHEET NO. :

\$4

CCI JOB NO.: 12090919A

SEE A1 !



10.14.09

GENERAL NOTES:

1. ALL REFERENCES TO OWNER HEREIN SHALL BE CONSTRUED TO MEAN 91.5 FM-WBJC OR ITS DESIGNATED REPRESENTATIVE
2. ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS.
3. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
4. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
5. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS.
6. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO ERECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS.
7. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY SUBSTITUTION MUST BE APPROVED BY THE OWNER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
9. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST EDITION OF THE LOCAL BUILDING CODE.
10. ALL PROPOSED CELLULAR EQUIPMENT AND FIXTURES SHALL BE FURNISHED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, LICENSES, AND APPROVALS.
11. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK NEAR POWER LINES AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.
12. ALL MODIFICATIONS ARE ASSUMED TO BE MADE ON AN EMPTY TOWER. THIS MEANS THAT THE CONTRACTOR MUST MAKE PROVISIONS TO SUPPORT OR WORK AROUND EXISTING ANTENNAS AND TRANSMISSION LINES. MODIFICATIONS MUST BE CONTINUOUS THROUGH ALL AREAS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RETENSIONING ALL GUY WIRES TO THEIR INITIAL TENSION AS RECOMMENDED BY THE MANUFACTURER, AND CHECK THE TOWER ALIGNMENT AFTER COMPLETION OF ALL MODIFICATIONS.

STRUCTURAL STEEL NOTES:

1. THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE LATEST A.I.S.C. SPECIFICATIONS.
2. ALL STRUCTURAL STEEL SHALL MEET THE REQUIREMENTS OF A.I.S.C. SPECIFICATION A572 OR A-36. ALL BOLTS SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A-325 HIGH STRENGTH BOLTS.
3. ALL WELDING SHALL BE IN ACCORDANCE WITH THE LATEST AWS STRUCTURAL WELDING CODE. ALL WELDERS SHALL DISPLAY PROPER CERTIFICATION OF QUALIFICATION.
4. ALL CONNECTIONS NOT FULLY DETAILED ON THESE PLANS SHALL BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.
5. HOLES SHALL NOT BE FLAME CUT THRU STEEL UNLESS APPROVED BY THE ENGINEER.
6. WELDS SHALL BE MADE WITH E-70XX ELECTRODES UNLESS OTHERWISE NOTED.
7. HOT-DIP GALVANIZE ITEMS SPECIFIED TO BE ZINC-COATED AFTER FABRICATION WHERE PRACTICABLE. GALVANIZING: ASTM A-123, ASTM A-153/A-153M OR ASTM A-653/A-653M, G90, AS APPLICABLE.
8. REPAIR DAMAGED SURFACES WITH GALVANIZING REPAIR METHOD STICK, THICK PASTE MATERIAL OR ZINC PAINT (Z.R.C.) SPECIFICALLY DESIGNED FOR REPAIR OF GALVANIZING. CLEAN AREAS TO BE REPAIRED AND REMOVE SLAG FROM SURFACES. SURFACES TO WHICH STICK OR PASTE MATERIAL IS APPLIED WITH 3. TORCH OR PASTE: SPREAD MOISTEN MATERIAL UNIFORMLY, THEN APPLY TO BE COATED AND WIFE OFF EXCESS MATERIAL. (1-800-831-3273)

PAINTING: (IF APPLICABLE)

1. PAINT COLORS SHALL BE SELECTED TO MATCH EXISTING COLORS AND TEXTURES.
2. PROVIDE THE BEST QUALITY GRADE OF COATINGS AS REGULARLY USED BY THE MANUFACTURER. MATERIALS NOT DISPLAYING THE MANUFACTURER'S IDENTIFICATION AS A STANDARD, BEST GRADE PRODUCT WILL NOT BE ACCEPTABLE.
3. PROVIDE UNDERCOAT PAINT PRODUCED BY THE SAME MANUFACTURER AS THE FINISH COAT. USE ONLY THINNERS APPROVED BY THE PAINT MANUFACTURER, AND USE ONLY WITHIN RECOMMENDED LIMITS.
4. COMPLETELY COVER TO PROVIDE AN OPAQUE, SMOOTH SURFACE OF UNIFORM COLOR, APPEARANCE AND COVERAGE. COVER ALL SURFACES, INCLUDING JOINTS, CORNERS, CRACKS, RUST, SACS, REDNESS, OR OTHER SURFACE IMPERFECTIONS WILL NOT BE ACCEPTABLE.
5. FERROUS METALS:
1. TOUCH-UP COAT
2. FINISH COAT
SEMI-GLOSS-ALKYD ENAMEL
RED OXIDE METAL PRIMER

91.5 FM WBJC

6776 REISTERSTOWN ROAD
SUITE 202
BALTIMORE, MARYLAND 21215

DATE OF ORIGINATION : 9/28/09

DRAWN BY : MC

CHECKED BY : JMT

REVISIONS

NO DESCRIPTION

1.

2.

3.

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6.



KCI TECHNOLOGIES, INC.
4601 SIX FORKS ROAD
RALEIGH, NC 27609
(919)783-9274

PROJECT NAME :

WBJC TOWER
BALTIMORE COUNTY, MARYLAND

SHEET TITLE :

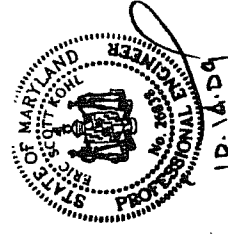
GENERAL NOTES

SHEET NO. :

S-5

KCI JOB NO. : 12090919A

SEAL:



THIS DRAWING NOT SUITABLE FOR SCALING