



CHATHAM COUNTY, NC  
 EMERGENCY OPERATIONS  
 80-A EAST STREET  
 PITTSBORO, NC 27312  
 (919) 542-8204

# CHATHAM COUNTY EMERGENCY OPERATIONS CENTER TOWER

COUNTY SERVICES RD.  
 PITTSBORO, NC 27312  
 LAT: 35° 44' 02.49"N  
 LONG: 79° 15' 41.60"W

PROPOSED 300'-0" TALL SELF-SUPPORTED TOWER AND EQUIPMENT COMPOUND

**SITE CONTACT:**

MOTOROLA SOLUTIONS, INC.  
 8720 RED OAK BLVD., SUITE 123  
 CHARLOTTE, NC 28217  
 CONTACT: HEATHER MASON  
 PHONE: (513) 470-6238

**UTILITY CONTACTS:**

ELECTRIC:  
 DUKE ENERGY PROGRESS  
 P.O. BOX 1771  
 RALEIGH, NC 27602  
 PHONE: (866) 582-6345

CALL BEFORE YOU DIG: NC ONE-CALL: 811

LAW REQUIRES THAT THE CONTRACTOR NOTIFY THE APPROVED NOTIFICATION CENTER WITHIN THREE (3) TO TWELVE (12) WORKING DAYS PRIOR TO EXCAVATION OR DEMOLITION ACTIVITIES.

**PROPERTY OWNER:**

E & J RANDELL LLC  
 809 YARMOUTH RD.  
 RALEIGH, NC 27607

**PARCEL INFORMATION:**

JURISDICTION: CHATHAM COUNTY  
 PARCEL NUMBER: 0012481  
 PARCEL PIN NUMBER: 972200329796  
 PARCEL REFERENCE: DB1728, PG0389  
 PARCEL ACREAGE: 269.586 ±  
 PARCEL ZONING: R-1  
 FLOOD MAP: 3710972200K, 11/17/2017, ZONE "X"

**ENGINEER:**

KCI ASSOCIATES OF NC, P.A.  
 4505 FALLS OF NEUSE RD., SUITE 400  
 RALEIGH, NC 27609  
 (919) 783-9214  
 ERIC S. KOHL, NC LICENSE #25949

**NOTES:**

CONTRACTOR SHALL NOTIFY OWNER FOR ACCESS TO SITE. KEEP GATES AND/OR DOORS LOCKED AT ALL TIMES.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

- T-1 COVER SHEET
- C-1 SITE OVERVIEW
- C-2 SITE PLAN
- C-3 COMPOUND PLAN
- C-4 TOWER ELEVATION

NO.	DATE	REVISION
90%	07/01/2020	90% ZONING DRAWINGS

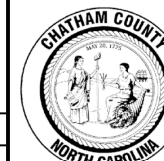
**KCI**  
 ASSOCIATES OF NC  
 4505 FALLS OF NEUSE RD., SUITE 400  
 RALEIGH, NORTH CAROLINA 27609  
 (919) 783-9214  
 ENGINEERS • PLANNERS • ECOLOGISTS

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CHATHAM COUNTY EMERGENCY OPERATION CENTER TOWER

COUNTY SERVICES RD.  
 PITTSBORO, NC 27312  
 CHATHAM COUNTY, NC

DATE OF ORIGATION : 03/01/2020  
 DRAWN BY : TNW      APPROVED BY :  
 CHECKED BY :      KCI# : 011904897\_x



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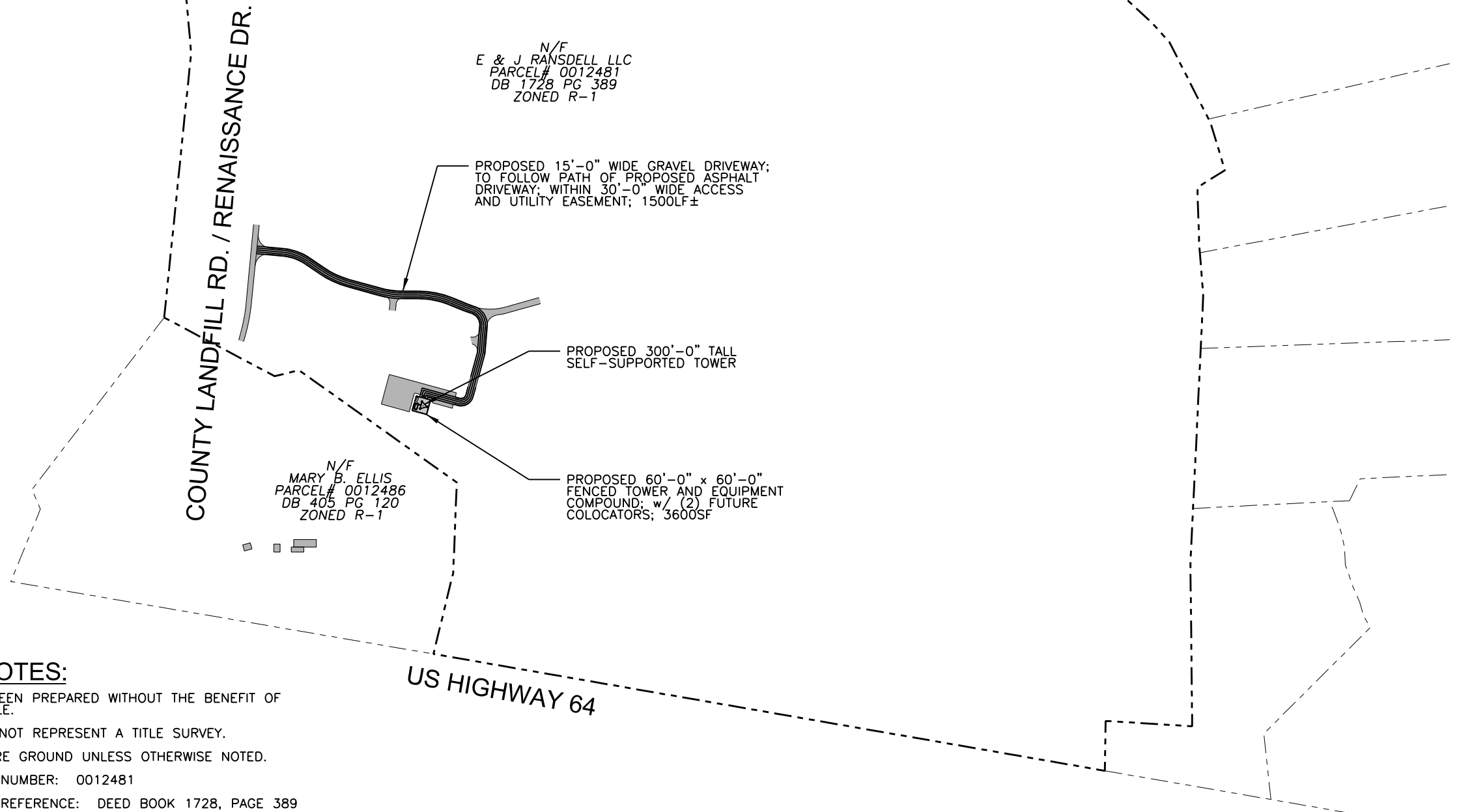
COVER SHEET

T-1

SEAL:

**TOWER FALL RADIUS NOTE:**

PROPOSED TOWER IS DESIGNED BY TOWER MANUFACTURER TO HAVE A ZERO (0) FOOT FALL RADIUS.



**CENTERLINE TOWER DATA**

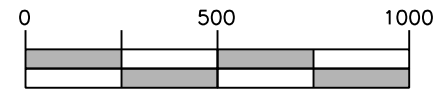
LAT 35° 44' 02.49" (NAD '83)  
 LON 79° 15' 41.60" (NAD '83)

AVERAGE GROUND ELEVATION AT CENTERLINE OF TOWER  
 ELEV. = @ 484.50' (NAVD '88)

**GENERAL NOTES:**

1. THIS PLAN HAS BEEN PREPARED WITHOUT THE BENEFIT OF A REPORT OF TITLE.
2. THIS PLAN DOES NOT REPRESENT A TITLE SURVEY.
3. ALL DISTANCES ARE GROUND UNLESS OTHERWISE NOTED.
4. SUBJECT PARCEL NUMBER: 0012481
5. SUBJECT PARCEL REFERENCE: DEED BOOK 1728, PAGE 389
6. AREA OF SUBJECT PARCEL: 269.586± ACRES
7. SUBJECT PROPERTY ZONING: R-1
8. INFORMATION SHOWN HEREON BASED ON ACTUAL FIELD SURVEY, SUBMITTED BY POINT TO POINT LAND SURVEYORS, DATED APRIL 14, 2020, AS WELL AS INFORMATION CONTAINED IN THE PUBLIC RECORDS OF THE CHATHAM COUNTY REGISTER OF DEEDS AND TAX ASSESSORS OFFICES.

1 SITE OVERVIEW  
 C-1 11x17 SCALE: 1" = 500'-0"  
 24x36 SCALE: 1" = 250'-0"



NO.	DATE	REVISION
90%	07/01/2020	90% ZONING DRAWINGS

**KCI**  
 ASSOCIATES OF NC

4505 FALLS OF NEUSE RD.,  
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 CHARLOTTE, NC 28217

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**CHATHAM COUNTY EMERGENCY OPERATION CENTER TOWER**

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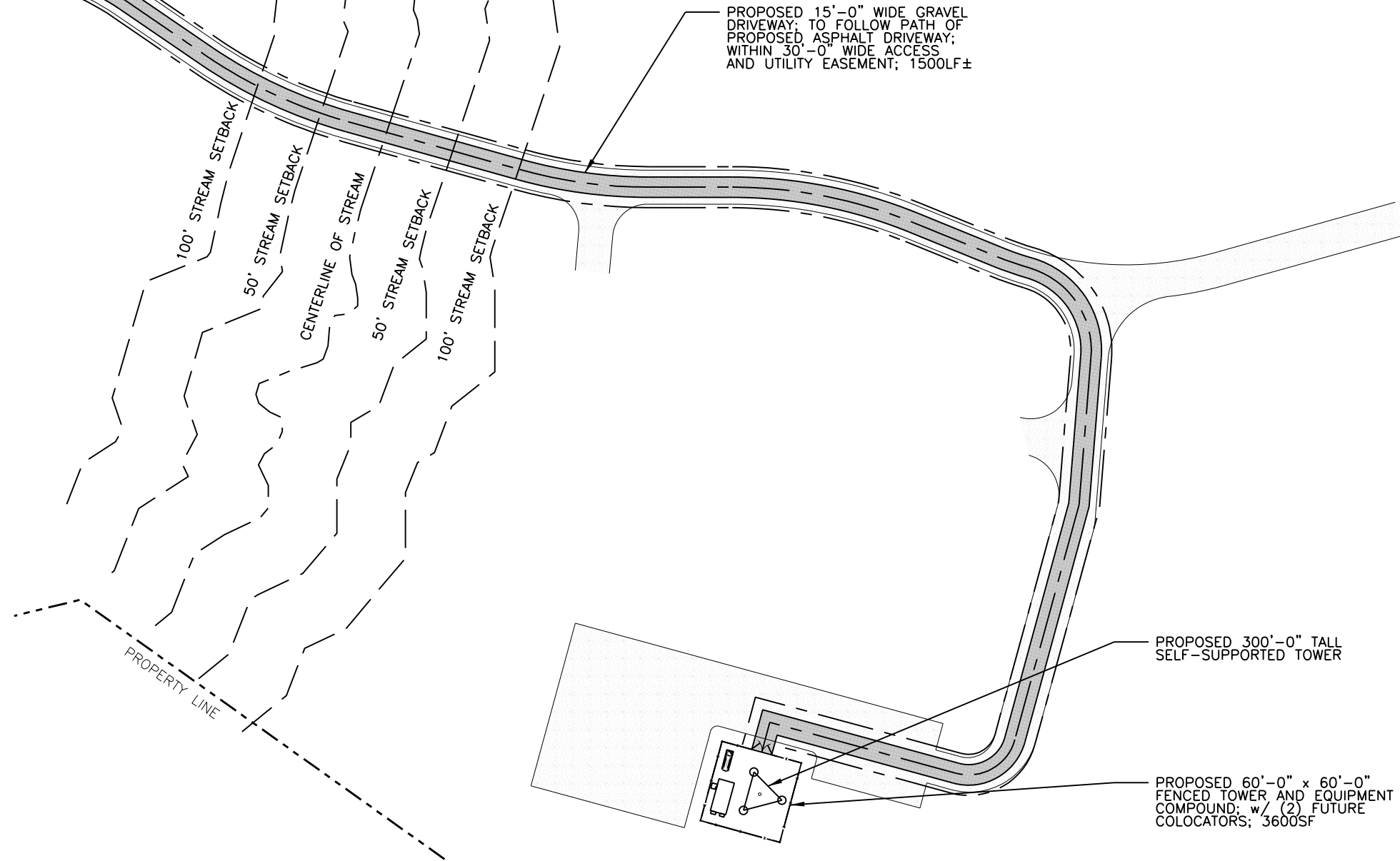
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**SITE OVERVIEW**

**C-1**

SEAL:

COUNTY LANDFILL RD. / RENAISSANCE DR.



**CONTRACTOR NOTES**

CONTRACTOR SHALL CONTACT A SUBSURFACE UTILITY LOCATOR FOR LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL VERIFY EXISTING UTILITY LOCATIONS BY TEST PIT AS NECESSARY.

LOCATION OF UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE AND FOR PLANNING PURPOSES ONLY.

ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES, THE LATEST EDITION THEREOF.

CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR THIS PROJECT FROM ALL APPLICABLE GOVERNMENT AGENCIES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.

CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS WITH APPROPRIATE UTILITY OWNERS.

THESE PLANS ARE NOT FOR RECORDATION OR CONVEYANCE.

PAVEMENT AND OTHER SURFACES DISTURBED BY CONTRACTOR (WHICH ARE NOT TO BE REMOVED) SHALL BE REPAIRED TO PRECONSTRUCTION CONDITIONS BY THE CONTRACTOR.

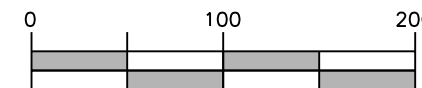
DAMAGE TO UTILITIES OR PROPERTY OF OTHERS BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED TO LIKE-NEW CONDITION.

NOTIFY "NC811" AT 811 OR 1-800-632-4949 AT LEAST 72 HOURS PRIOR TO DOING ANY EXCAVATION IN THIS AREA.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE.

THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

1  
C-2 **SITE PLAN**  
11x17 SCALE: 1" = 100'-0"  
24x36 SCALE: 1" = 50'-0"



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**KCI**  
TECHNOLOGIES

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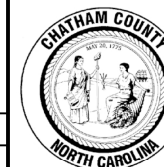
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OPERATION CENTER TOWER**

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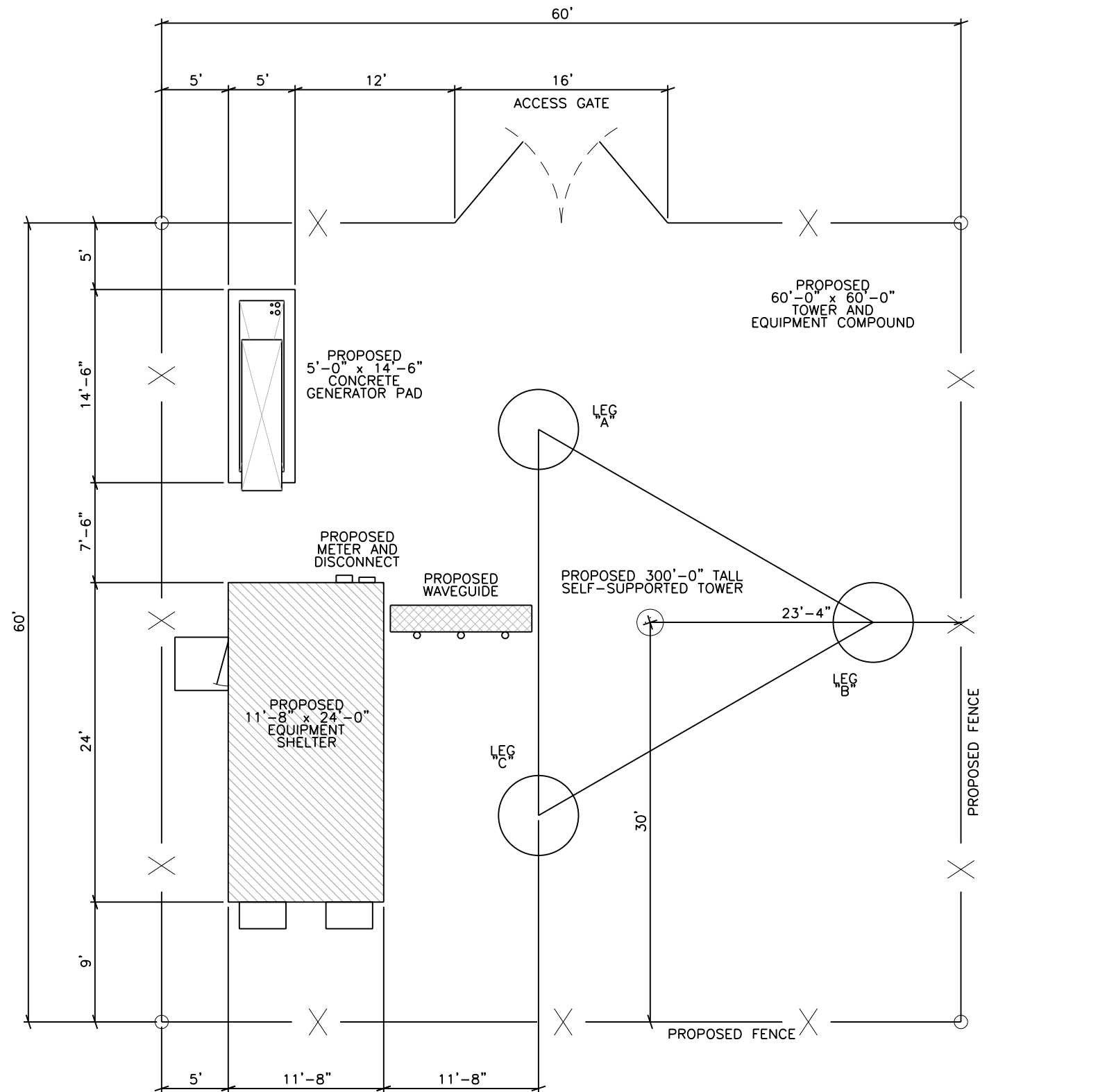
**SITE PLAN**

**C-2**

SEAL:

# CONSTRUCTION NOTES

1. PRIOR TO COMMENCING ANY EXCAVATION OR GRADING, THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE ACCURACY OF ALL SURVEY DATA AS INDICATED IN THE PLANS AND SPECIFICATIONS AND/OR AS PROVIDED BY MOTOROLA.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING ALL ESTABLISHED SURVEY CONTROL POINTS. IF THE CONTRACTOR OR ANY OF ITS SUBCONTRACTORS MOVE OR DESTROY ANY SURVEY CONTROL POINTS, THE COST INCURRED BY THE OWNER OR MOTOROLA TO RE-ESTABLISH THEM WILL BE BORNE BY THE CONTRACTOR.
3. BEFORE CLEARING, THE CONTRACTOR SHALL ENSURE THAT THE AREA TO BE CLEARED HAS BEEN PROPERLY MARKED BY THE SURVEYORS AND ANY APPROVALS REQUIRED FROM THE LOCAL AUTHORITIES HAVE BEEN OBTAINED.
4. THE CONTRACTOR SHALL ENSURE THAT ALL THE TREES, SHRUBS, STUMPS AND OTHER SURFACE OBSTRUCTIONS ARE REMOVED AND DISPOSED OF AT AN APPROVED DUMPSITE.
5. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
6. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS AND EQUIPMENT NOT SHOWN IN THE BILL OF MATERIALS AS OWNER FURNISHED, AND ALL LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
7. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO PERFORMING WORK TO FAMILIARIZE THEMSELVES WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES OR INTERFERENCES WHICH AFFECT THE WORK OF THIS CONTRACT.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
9. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
10. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, VEGETATION, AND RUBBISH, AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
11. SEED AND MULCH ALL DISTURBED AREAS NOT COVERED BY OTHER MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS.
12. ANY PROPERTY DAMAGE CAUSED BY THE CONTRACTOR OR HIS OPERATIONS SHALL BE CORRECTED AND/OR RESTORED TO THE SATISFACTION OF THE PROPERTY OWNER(S) AND MOTOROLA AT NO ADDITIONAL COST TO THE PROPERTY OWNER OR MOTOROLA.
13. WHERE POSSIBLE BY THE LOCAL CODES, AN EPA APPROVED HERBICIDE SHALL BE APPLIED TO ALL AREAS PRIOR TO LAYING DOWN THE GEOTEXTILE FABRIC, THE RATE OF APPLICATION OF THIS HERBICIDE SHALL BE A MIN. OF 10 lbs. OF PRODUCT PER ACRE, UNLESS OTHERWISE REQUIRED BY LOCAL CODES OR MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL CHECK THE LOCAL CODES PRIOR TO APPLYING DEFOLIANT. SUBSTANCE SHALL NOT BE APPLIED IF GROUND IS FROZEN OR IF DANGER OF DEFOLIANT BEING WASHED BEYOND THE INTENDED AREA IS PRESENT.



1  
C-3  
COMPOUND PLAN  
11x17 SCALE: 1" = 10'-0"  
24x36 SCALE: 1" = 5'-0"



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COMPOUND PLAN  
**C-3**

SEAL:

PROPOSED EQUIPMENT AND COAXIAL CABLE SCHEDULE									
USE	TYPE	MODEL#	ELEVATION	AZIMUTH	LEG	MOUNT	COAX	LENGTH	BANDING

**GENERAL CONSTRUCTION NOTES**

- ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS SHALL BE GROUNDED NEAR THE TOP AND BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION AND NEAR THE ENTRY PORT ON THE SHELTER. ADDITIONAL TRANSMISSION LINE GROUND KITS SHALL BE INSTALLED AS NEEDED TO LIMIT THE DISTANCE BETWEEN GROUND KITS TO A RANGE OF 50FT (MIN.) TO 65FT (MAX.). TOWER TOP AMPLIFIER SHALL BE GROUNDED TO TOWER TOP GROUND BAR.
- THE CONTRACTOR SHALL CONDUCT A SWEEP TEST ON ALL THE NEWLY INSTALLED TRANSMISSION LINES TO DETERMINE THE CABLE CONDUCTOR RESISTANCE, CABLE INSERTION LOSS, REFLECTION AND STIMULUS RESPONSE MEASUREMENTS.
- DRIP LOOPS SHALL BE INCORPORATED IN CABLE RUNS TO PREVENT WATER FROM TRICKLING DOWN THE LINES INTO THE BUILDING.
- ALL TRANSMISSION LINES SHALL BE MARKED WITH APPROPRIATE COLOR TAPE BANDS (ONE INCH WIDE COLOR TAPE) FOR IDENTIFICATION NEAR THE ANTENNA, AT THE BOTTOM OF VERTICAL RUN, JUST BEFORE ENTERING THE BUILDING AS WELL AS INSIDE THE BUILDING, BEFORE CONNECTING TO THE SURGE SUPPRESSORS. FOR COLOR CODING SCHEME, SEE EQUIPMENT AND CABLE SCHEDULE.
- ALL MICROWAVE MOUNTING PIPES AND SIDE STRUTS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
- ALL MICROWAVE ELEVATIONS ARE MEASURED FROM THE TOP OF STONE TO THE ANTENNA CENTERLINE. ALL LMR ANTENNA ELEVATIONS ARE MEASURED FROM TOP OF STONE TO THE BOTTOM OF THE RF ELEMENT, OR TOP OF MOUNTING BASE, AS APPLICABLE.
- ALL ANTENNA SIDE ARMS AND MOUNTING PIPES SHALL BE PROVIDED BY MOTOROLA WITH THE TOWER AND INSTALLED BY CONTRACTOR.
- THE CONTRACTOR SHALL PROVIDE PIPE TO PIPE CLAMPS AS NEEDED TO INSTALL THE LMR ANTENNAS TO THE MOTOROLA PROVIDED ANTENNAS SIDE ARMS & MOUNTING PIPES.
- THE CONTRACTOR OR MICROWAVE ANTENNA PROVIDER SHALL PROVIDE AND INSTALL COAX PORT BOOTS AS REQUIRED TO INSTALL THE COAX AND WAVEGUIDE WHERE THEY ENTER THE SHELTER.
- THE ICE BRIDGE SHALL BE PROVIDED BY MOTOROLA AND INSTALLED BY CONTRACTOR.
- PRIOR TO MOBILIZATION TO THE SITE, THE ANTENNA CONTRACTOR SHALL REQUEST FINAL AND LATEST ANTENNA INFORMATION FROM MOTOROLA SUCH AS MODEL, INSTALL ELEVATION, AZIMUTH AND OTHER DATA NEEDED FOR PROPER INSTALLATION.

**TOWER FALL RADIUS NOTE:**

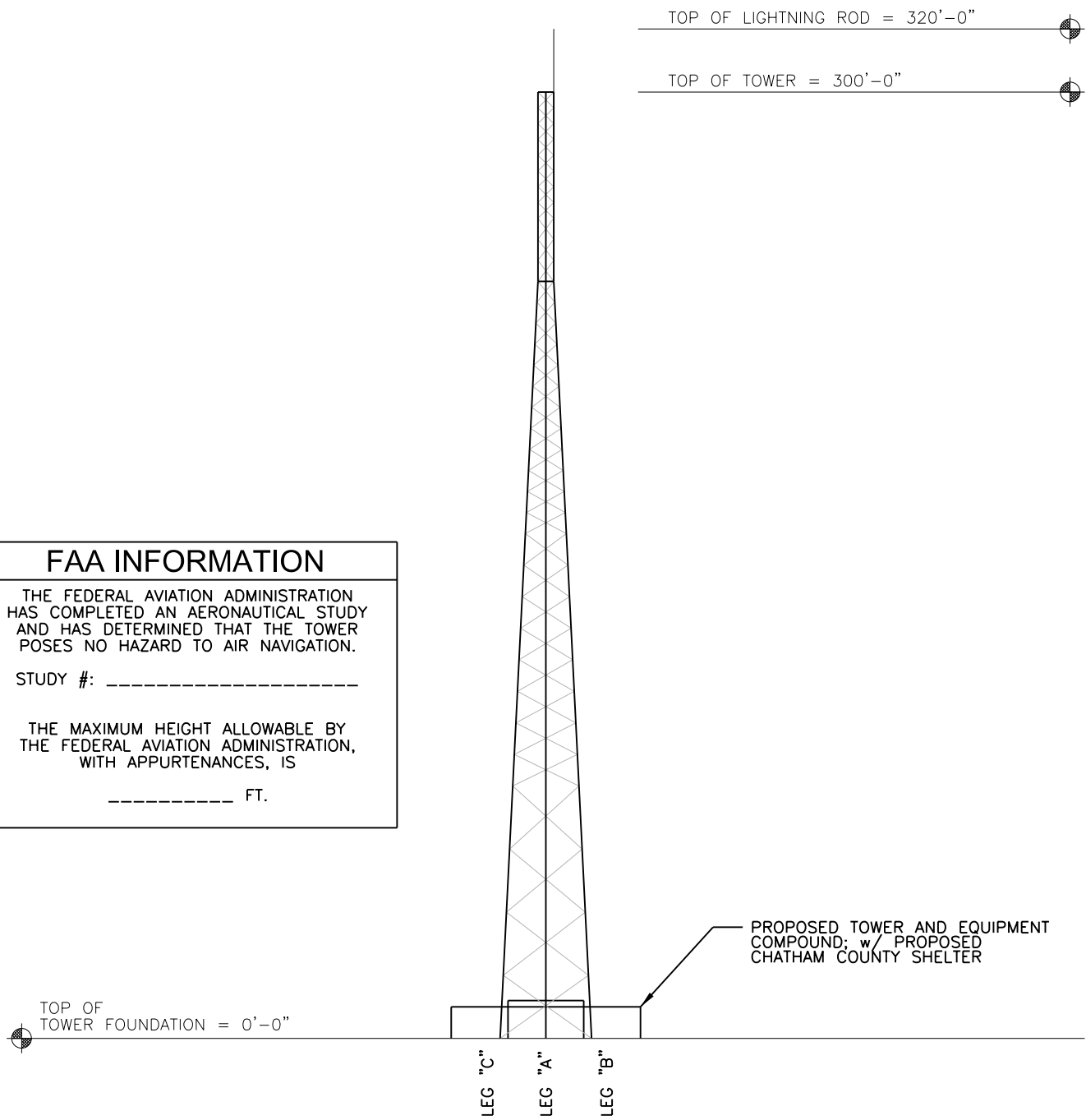
PROPOSED TOWER IS DESIGNED BY TOWER MANUFACTURER TO HAVE A ZERO (0) FOOT FALL RADIUS.

**FAA INFORMATION**

THE FEDERAL AVIATION ADMINISTRATION HAS COMPLETED AN AERONAUTICAL STUDY AND HAS DETERMINED THAT THE TOWER POSES NO HAZARD TO AIR NAVIGATION.

STUDY #: \_\_\_\_\_

THE MAXIMUM HEIGHT ALLOWABLE BY THE FEDERAL AVIATION ADMINISTRATION, WITH APPURTENANCES, IS \_\_\_\_\_ FT.



1  
C-4  
**TOWER ELEVATION**  
NOT TO SCALE

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TOWER ELEVATION

**C-4**

SEAL: