

**PULLMAN
& COMLEY^{LLC}**
ATTORNEYS

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April 12, 2011

Via Federal Express

Linda Roberts, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Docket 396, 49 Brainerd Road, East Lyme, CT D&M Plans

Dear Ms. Roberts:

On behalf of SBA Towers II LLC, the Certificate holder, enclosed please find **20** sets of development and management plans ("D&M"), including D&M plans and tower drawings, relevant to the East Lyme Facility approved by the Siting Council in Docket No. 396. The enclosed items are being filed in accordance with the Council's Decision and Order and Certificate of Environmental Compatibility and Public Need ("Certificate") dated March 3, 2011. Please note that, once approved, SBA will provide a final, stamped set of plans to the Council.

Development and Management Plan

The proposed Development and Management ("D&M") Plan for the East Lyme Facility includes a steel monopole 170' above grade level ("AGL"), as provided in Order No.1. As shown in the enclosed design documents, the tower and foundation are designed to accommodate four platforms and associated carrier antennas. As required by Order No. 1, SBA will require all carriers to utilize low profile or t-arm installations.

As required by Order No. 2, the proposed D&M Plan includes detailed plans of the compound, carrier equipment building, fencing, landscaping, access road and utility line. Also included are construction plans for the site clearing, drainage and erosion and sedimentation control measures consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

SBA, prior to commencement of operation and as provided in Order No. 3, will provide to the Council worst-case modeling of electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base.

As required by Order No. 6, SBA will provide reasonable space, free of charge, for any Town of East Lyme public safety service, if requested.

As required by Order No. 11, SBA will provide to the Council written notice two weeks prior to the commencement of site construction and written notice at the completion of site construction.

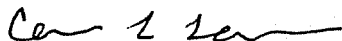
While not required by the Decision and Order, SBA has also included a wetland buffer planting plan, as shown on sheet L-1.

Conclusion

In accordance with the provisions of RCSA Section 16-50j-77, SBA hereby notifies the Council of its intention to commence clearing and related site work immediately upon D&M plan approval and to commence other construction activities immediately upon issuance of a building permit by the Town of East Lyme. The supervisor for all construction related matters on this project is Mr. Ernest Lacasse. Mr. Lacasse is located at SBA's office in Westborough, Massachusetts and can be reached by telephone at (860) 665-7878.

SBA respectfully requests that this matter be included on the Council's next agenda for review and approval. In the event that the Council requires additional information prior to completing its review of the D&M Plan, SBA respectfully requests that partial approval be granted in order to allow SBA to commence clearing and excavation work. Thank you for your consideration of the enclosed.

Respectfully submitted,



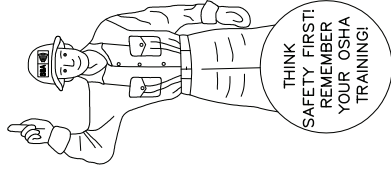
Carrie L. Larson

Enclosures

cc: Service List
Ernest Lacasse

ABBREVIATIONS

AB	ANCHOR BOLT	GR	GRADE	SIM	SIMILAR
AC	ASPHALTIC CONCRETE	GYP	GYPSUM	SIM	SPECIFICATIONS
A/C	AIR CONDITIONING	GFCI	GROUND FAULT CIRCUIT INTERRUPT	SS	STAINLESS STEEL
ADJ	ADJUSTABLE	GND	GROUND	STL	STEEL
A.T.F.	ABOVE FINISH FLOOR	HC	HOLLOW CORE	STOR	STORAGE
ARCH	ARCHITECTURAL	HDW	HARDWARE	STRUCT	STRUCTURAL
APPROX	APPROXIMATELY	HTR	HEATER	SUSP	SUSPENDED
A.G.L.	ABOVE GRADE LEVEL	HM	HOLLOW METAL	SW	SWITCH
A.M.S.L.	ABOVE MEAN SEA LEVEL	HORIZ	HORIZONTAL	SWBO	SWITCHBOARD
BD	BOARD	HR	HOUR	THK	THICK
BUG	BUG	HT	HEIGHT	TI	TENANT IMPROVEMENT
BLKG	BLOCKING	HT	HEIGHT	TMA	TOWER MOUNTED AMPLIFIER
BOT	BOTTOM	HV	HIGH VOLTAGE	TOS	TOP OF SURFACE
BSMT	BASEMENT	ID	INSIDE DIMENSION	TS	TUBE STEEL
BTS	BASE TRANSCIVER	INS	INSULATION	TYP	TYPICAL
C	COURSE(S)	INT	INTERIOR	U	UNDERGROUND
CEM	CEMENT	JT	JOINT	UNO	UNLESS NOTED
CL	CHAIN LINK	LAM	LAMINATED	VCT	VINYL
CLG	CEILING	LBS	POUNDS	VERT	VERTICAL
CLR	CLEAR	LBT	LIGHT	V.F.	VERIFY IN FIELD
COL	COLUMN	LNA	LOW NOISE AMPLIFIER	VG	VERTICAL GRAIN
CONC	CONCRETE	MFR	MANUFACTURER	W/	WITH
CONST	CONSTRUCTION	MAT	MATERIAL	WD	WOOD
CONT	CONTINUOUS	MAX	MAXIMUM	WR	WATER RESISTANT
CORR	CORRIDOR	MECH	MECHANICAL	WT	WEIGHT
CO	CONDUIT ONLY	MIN	MINIMUM	WTR	WATER
DIA	DIAMETER	MISC	MISCELLANEOUS	XTMR	TRANSFORMER
DBL	DOUBLE	ML	METAL LATH	AT	AT
DEPT	DEPARTMENT	MO	MASONRY OPENING	CH	CHANNEL
DEMO	DEMOLITION	MS	MACHINE SCREW	CL	CENTERLINE
DM	DIMENSION	MTD	MOUNTED	CL	CENTERLINE
DN	DOWN	MTL	METAL	CL	CENTERLINE
DR	DOOR	(N)	NEW	CL	CENTERLINE
DTL	DETAIL	NC	NOT IN CONTRACT	CL	CENTERLINE
DWG	DRAWING	NO	NUMBER	CL	CENTERLINE
(E)	EXISTING	NTS	NOT TO SCALE	CL	CENTERLINE
EA	EACH	O	OVERHEAD	CL	CENTERLINE
ELEC	ELECTRIC	OA	OVERALL	CL	CENTERLINE
ELEV	ELEVATION	O.C.	ON CENTER	CL	CENTERLINE
EQUIP	EQUIPMENT	OPNG	OPENING	CL	CENTERLINE
EXP	EXPANSION	OPP	OPPOSITE	CL	CENTERLINE
EXT	EXTERIOR	PARTN	PARTITION	CL	CENTERLINE
FA	FIRE ALARM	PL	PLATE	CL	CENTERLINE
FB	FLAT BAR	PLAS	PLASTER	CL	CENTERLINE
FF	FINISH FLOOR	PLYWD	PLYWOOD	CL	CENTERLINE
FH	FLAT HEAD	POC	POINT OF CONNECTION	CL	CENTERLINE
FIN	FINISH(ED)	PROP	PROPERTY	CL	CENTERLINE
FLR	FLOOR	PT	PRESSURE TREATED	CL	CENTERLINE
FOS	FACE OF STUDS	R	RISER	CL	CENTERLINE
FS	FINISH SURFACE	REQD	REQUIRED	CL	CENTERLINE
FT	FOOT, FEET	RD	ROOF DRAIN	CL	CENTERLINE
FTG	FOOTING	RM	ROOM	CL	CENTERLINE
FW	FINISH WALL	RMS	ROOMS	CL	CENTERLINE
F.G.	FINISH GRADE	RO	ROUGH OPENING	CL	CENTERLINE
FUT	FUTURE	SC	SOLID CORE	CL	CENTERLINE
GA	GAUGE	SCHED	SCHEDULE	CL	CENTERLINE
GALV	GALVANIZED	SECT	SECTION	CL	CENTERLINE
GL	GLASS	SHT	SHEET	CL	CENTERLINE



SYMBOLS:

	SECTION NUMBER		MASONRY
	SHEET NUMBER		BRICK
	BUILDING SECTION REFERENCE		CONCRETE
	DETAIL NUMBER		EARTH
	DETAIL SECTION REFERENCE		STEEL
	DETAIL NUMBER		GRAVEL
	DETAIL SECTION REFERENCE		CENTER LINE
	DETAIL NUMBER		PROPERTY LINE
	DETAIL SECTION REFERENCE		LEASE LINE
	DETAIL NUMBER		EASEMENT LINE
	DETAIL SECTION REFERENCE		RIGHT-OF-WAY
	DETAIL NUMBER		CHAIN LINK FENCE
	DETAIL SECTION REFERENCE		WOOD FENCE
	DETAIL NUMBER		SILT FENCE
	DETAIL SECTION REFERENCE		BELOW GRADE ELECTRIC
	DETAIL NUMBER		BELOW GRADE TELEPHONE
	DETAIL SECTION REFERENCE		OVERHEAD ELECTRIC/TELEPHONE
	DETAIL NUMBER		OVERHEAD TELEPHONE
	DETAIL SECTION REFERENCE		OVERHEAD ELECTRIC
	DETAIL NUMBER		CONTOUR
	DETAIL SECTION REFERENCE		TREE PROTECTION FENCE
	DETAIL NUMBER		TREE LINE
	DETAIL SECTION REFERENCE		TREES, SHRUBS, BUSHES
	DETAIL NUMBER		SANITARY SEWER LINE
	DETAIL SECTION REFERENCE		WATER LINE
	DETAIL NUMBER		NATURAL GAS LINE

	KEY NOTE REFERENCE
	DOOR NUMBER
	AREA AND/OR ROOM NUMBER
	MECHANICAL UNIT
	UTILITY POLE
	WORK POINT
	REVISION OR CONTROL POINT
	(REFERENCE POINT) ELEVATION REFERENCE



SBA TOWERS II LLC
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FAX: (561) 226-9368

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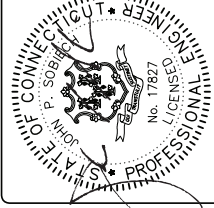
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DRAWN BY: PAL

CHECKED BY: PAL

REVISIONS

NO.	DATE	DESCRIPTION
1	04/06/11	ISSUED FOR D&M



PROJECT No. 15363-1046-43000

SITE NAME: EAST LYME

SITE NUMBER: CT11794

SITE ADDRESS: 49 BRAINERD ROAD
NIAHTIC (EAST LYME), CT 06357

DESIGN TYPE: RAW LAND

SHEET TITLE: ABBREVIATIONS & SYMBOLS LEGEND

DRAWING NO. T-2

REVISION A



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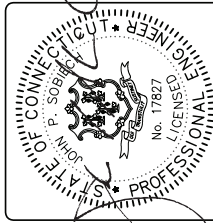
ASE PROJECT #: 15363-1046-43000

DRAWN BY: PAL

CHECKED BY: PAL

REVISIONS

NO.	DATE	DESCRIPTION
1	05/06/11	ISSUED FOR O&M



PROJECT NO: 15363-1046-43000

SITE NAME: EAST LYME

SITE NUMBER: CT11794

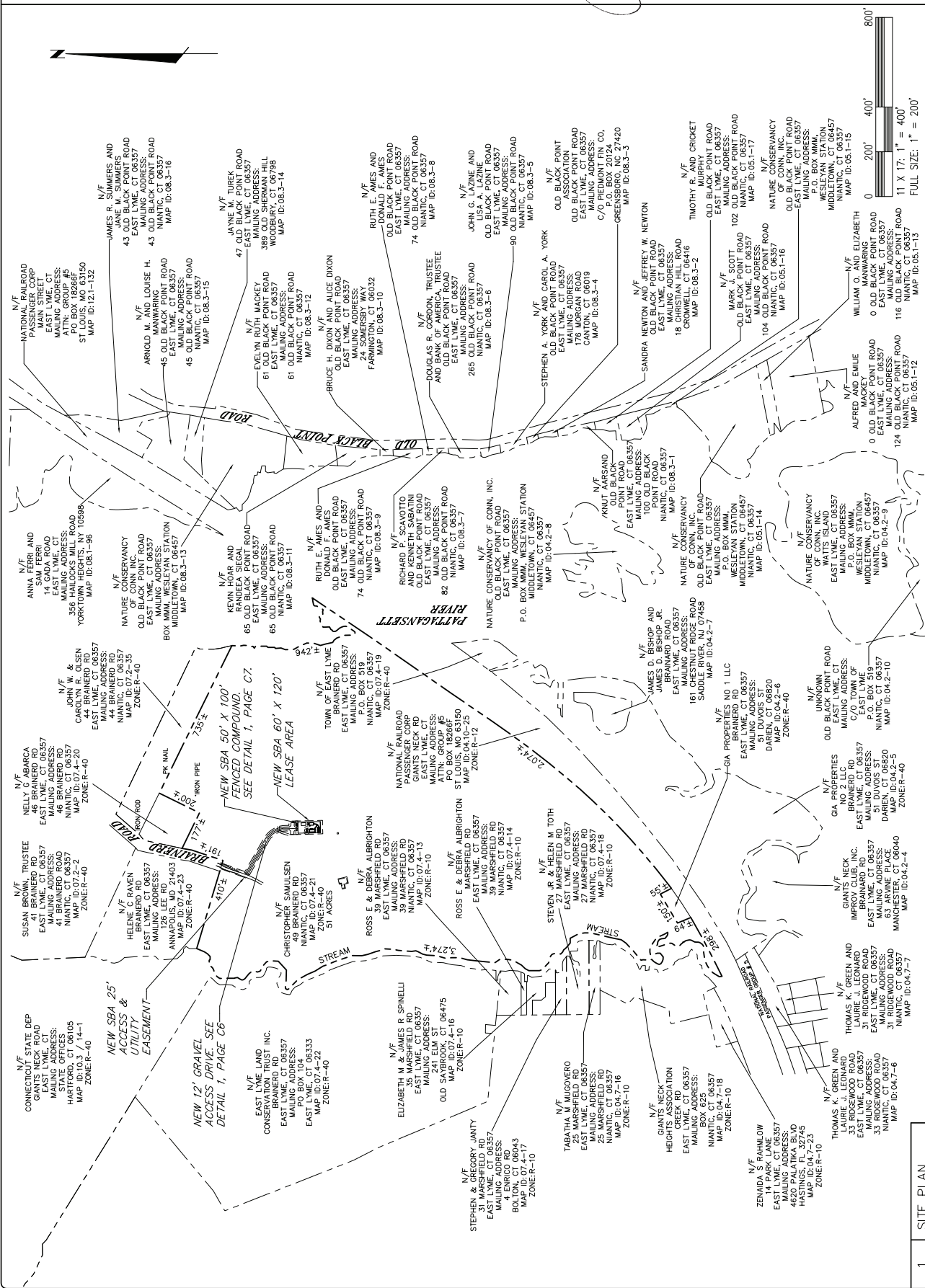
SITE ADDRESS: 49 BRAINERD ROAD

DESIGN TYPE: RAW LAND

SHEET TITLE: SITE PLAN

DRAWING NO: C-1

REVISION: A



SURVEY NOTES:

1. THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS INC. ON SEPTEMBER 26, 1996. THE BOUNDARY LINES SHOWN ON THIS PLAN WERE COMPILED FROM OTHER MAPS, RECORD SURVEYS, AND FIELD SURVEYS. THE SURVEY WAS CONDUCTED AS A FIELD SURVEY, AND IS SUBJECT TO SUCH CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE.

TYPE OF SURVEY: COMPILED PLAN

BOUNDARY DETERMINATION CATEGORY: NONE

CLASS OF ACCURACY: HORIZONTAL CLASS A-2
VERTICAL CLASS A-2
TOPOGRAPHIC CLASS T-2

2. PROPERTY LINE SHOWN HEREON ARE FROM RECORD DEEDS PLOTS AND TAX MAPS AS OVERLAIN ON ANY MONUMENTATION OR OTHER EVIDENCE THAT MAY HAVE BEEN LOCATED DURING THE TOPOGRAPHIC SURVEY. THE PROPERTY LINES SHOWN ARE APPROXIMATE AND DO NOT PRESENT A PROPERTY/BOUNDARY OPINION.

3. BASE MAPPING PREPARED BY CHA FROM AN AUGUST 2009 AND AUGUST 2010 FIELD SURVEY.

4. NORTH ORIENTATION IS TRUE NORTH BASED ON GPS OBSERVATIONS TAKEN AT THE TIME OF THE FIELD SURVEY.

5. UNDERGROUND UTILITIES, STRUCTURES AND FACILITIES HAVE BEEN SHOWN FROM SURVEY LOCATIONS AND MEASUREMENTS OBTAINED FROM A FIELD SURVEY. THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHER UTILITIES WHICH THE EXISTENCE OF ARE NOT KNOWN. SIZE, TYPE AND LOCATION OF ALL UTILITIES AND STRUCTURES MUST BE VERIFIED BY PROPER AUTHORITIES PRIOR TO ANY AND ALL CONSTRUCTION. CALL DIG SAFE PRIOR.

6. SUBJECT TO ANY STATEMENT OF FACTS THAT AN UP-TO-DATE ABSTRACT OF TITLE WOULD DISCLOSE.

7. SUBJECT TO ALL RIGHTS, EASEMENTS, COVENANTS OR RESTRICTIONS OF RECORD.

8. LATITUDE/LONGITUDE/ELEVATIONS WERE OBTAINED FROM GPS OBSERVATION. LATITUDE/LONGITUDE ARE REFERENCED TO NAD83 CONNECTICUT ZONE. COORDINATES SHOWN, IF ANY, ARE EXPRESSED IN DEGREES, MINUTES AND SECONDS. ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL. STRUCTURE HEIGHT AS SHOWN, IF ANY, IS DETERMINED BY VERTICAL ANGLE OR BY ACTUAL LOCATION.

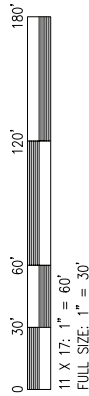
9. SITE FALLS WITHIN ZONE "C" DEFINED AS AREAS OF MINIMAL FLOODING AS SHOWN ON FLOOD INSURANCE RATE MAP, TOWN OF EAST LYME, CONNECTICUT, NEW LONDON COUNTY, PANEL 11 OF 15, COMMUNITY PANEL NUMBER 090096 0011 C, REVISED JUNE 15, 1984.

10. WETLANDS SHOWN AS DELINEATED BY VANASSE HANGEN BRUSTLIN, INC. ON 7/29/09 AND LOCATED BY CHA DURING THE TIME OF THE FIELD SURVEY.

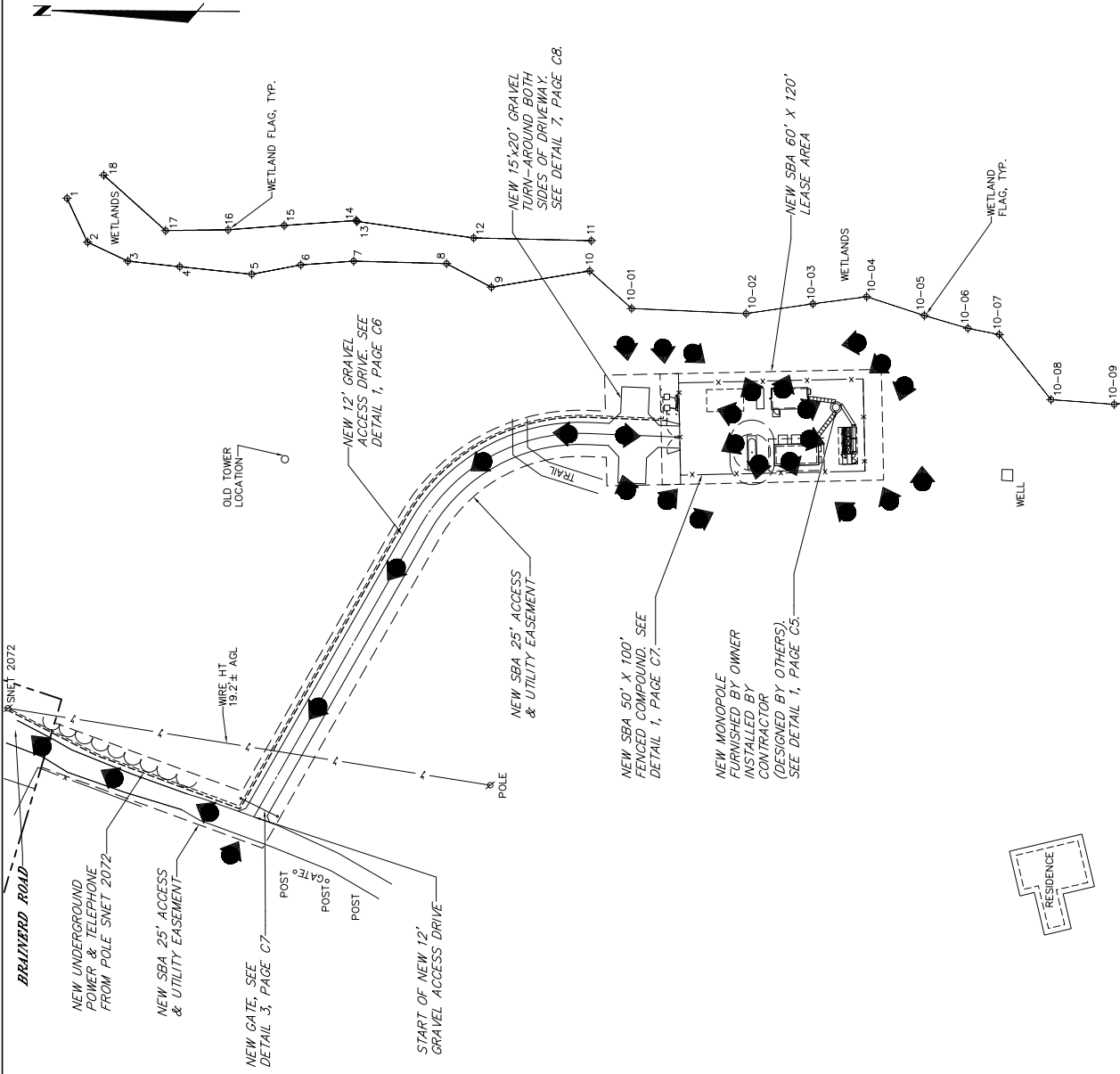
MAP REFERENCES:

1. MAP ENTITLED "PROPERTY SURVEY OF A PORTION OF PROPERTY NOW OR FORMERLY OF ELSIE B. RAVEN" PREPARED BY ROBERT L. BUCHER, L.S., DATED APRIL 1978 AND FILED IN THE OFFICE OF THE TOWN CLERK OF EAST LYME IN DRAWER NO 1 AS MAP NO. 27.

2. MAP ENTITLED "MAP OF THE PRELIMINARY AND FINAL PLAN OF A SUBDIVISION TO BE KNOWN AS MINER SUBDIVISION BRAINERD ROAD" AND DATED MARCH 3, 1967.



1 PHOTO PLAN



SBA TOWERS II LLC
5900 BROKEN SOUND
BOCA RATON, FL 33487-2797
TEL: (561) 226-9623
FAX: (561) 226-9368

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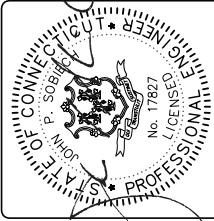
DRAWN BY: PAL

CHECKED BY: PAL

REVISIONS

NO. DATE DESCRIPTION

1 04/06/11 ISSUED FOR D&M



PROJECT NO. 15363-1046-43000

SITE NAME: EAST LYME

SITE NUMBER: CT11794

SITE ADDRESS: 49 BRAINERD ROAD

NIANTIC (EAST LYME), CT 06357

DESIGN TYPE: RAW LAND

SHEET TITLE: PHOTO PLAN

DRAWING NO. C-2

REVISION: A

GRADING NOTES:

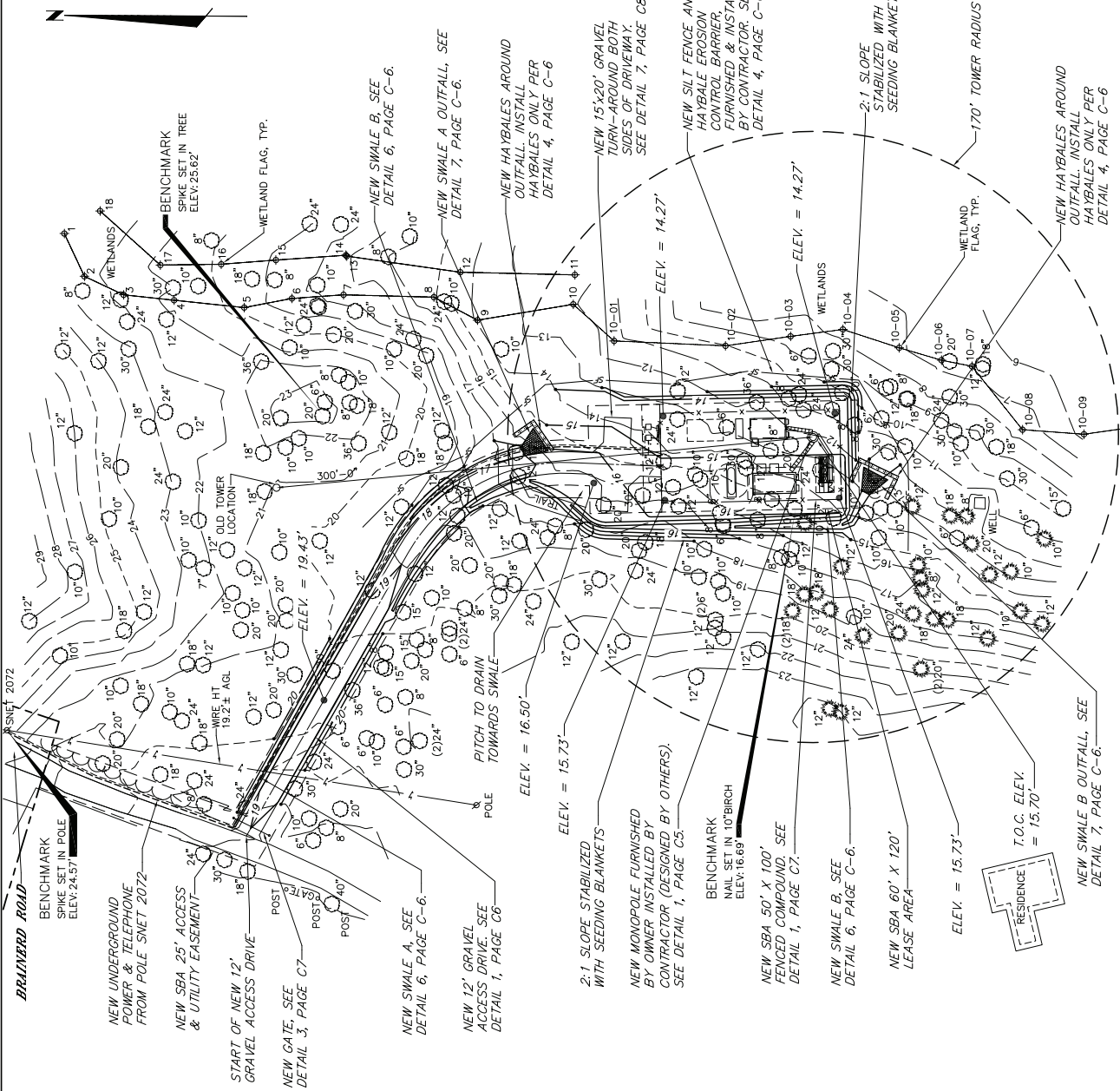
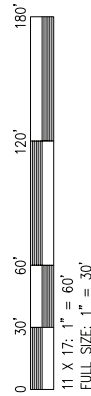
1. ALL ELEVATIONS ARE FINISHED GRADE.
2. ALL REQUIRED POSITIVE DRAINAGE FROM SITE AT ALL TIMES.
3. USE TYPAR 3401 OR EQUIVALENT.

EROSION CONTROL NOTES:

1. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES SHALL BE IN CONFORMANCE WITH STATE OF CONNECTICUT GUIDELINES FOR EROSION AND SEDIMENT CONTROL AND COORDINATED WITH THE TOWN/COUNTY CODE ENFORCEMENT OFFICES.
2. ANY SILT FENCE EROSION CONTROL BARRIER SHALL BE MAINTAINED THROUGHOUT SITE CONSTRUCTION. STOCK PILE ON SITE 100 FT. OF SILT FENCE FOR EMERGENCY USE. TEMPORARY EROSION BARRIERS SHALL REMAIN IN PLACE UNTIL PERMANENT VEGETATIVE GROUND COVER IS ESTABLISHED.
3. ALL DISTURBED AREAS OUTSIDE THE LIMITS OF THE EQUIPMENT LEASE AREA AND ACCESS ROADWAY SHALL BE PERMANENTLY ESTABLISHED WITH A VEGETATIVE GROUND COVER.
4. STILING BASIN SHALL BE UTILIZED FOR ANY DE-WATERING OPERATIONS WHICH MAY OCCUR DURING CONSTRUCTION.
5. PROPOSED CONSTRUCTION IMPACTS AND PERMANENT IMPROVEMENTS SHALL NOT SIGNIFICANTLY IMPACT STORM WATER RUNOFF PATTERNS, VOLUME OR PEAK FLOW RATES. THE FLAT GRADE OF THE EQUIPMENT COMPOUND AND STONE SURFACE WILL PROMOTE STORM WATER INFILTRATION.
6. CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO ANY GRADING ACTIVITIES IN LOCATIONS SHOWN ON THIS PLAN.
7. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL EVENT. ANY DAMAGE TO THE FENCE SHALL BE REPAIRED IMMEDIATELY.
8. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
9. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN EACH DEPOSIT IS APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
10. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATION.
11. NO GREATER THAN 80,000 SQUARE FEET OF LAND SHALL BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME. ANY EXPOSED AREAS SHALL BE COVERED WITH MULCH OR LEFT EXPOSED DURING THE WINTER MONTHS.
12. ANY DISTURBED AREAS OUTSIDE LIMITS OF ROAD, COMPOUND, AND SWALES SHALL BE TOPSOILED, SEEDED WITH SOY CRASS, AND COVERED WITH HAY MULCH TO PREVENT EROSION. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDER AREAS AT A RATE OF 2 TONS PER ACRES. BALES SHALL BE UNSPILLED, AIR-DRIED, AND FREE FROM WEED, SEEDS, AND ANY COARSE MATERIAL.

NOTE:

CONTRACTOR REQUIRED TO PROVIDE POSITIVE DRAINAGE "OFF" LEASE AREA.



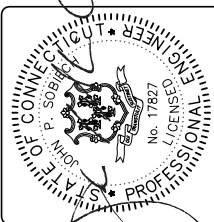
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Civil Engineering
200 Main Street, Suite 201, Westport, CT 06880
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DATE PROJECTED:	15083-1046-0000
DRAWN BY:	PAL
CHECKED BY:	PAL

REVISIONS	NO.	DATE	DESCRIPTION
	1	04/06/11	ISSUED FOR O&M



PROJECT NO.	15363-1046-43000
SITE NAME	EAST LYME
SITE NUMBER	CT11794
SITE ADDRESS	49 BRAINERD ROAD NANTIC (EAST LYME), CT 06357
DESIGN TYPE	RAW LAND

SHEET TITLE	SITE GRADING PLAN
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DRAWING NO.	C-3
REVISION	A

GRADING NOTES:

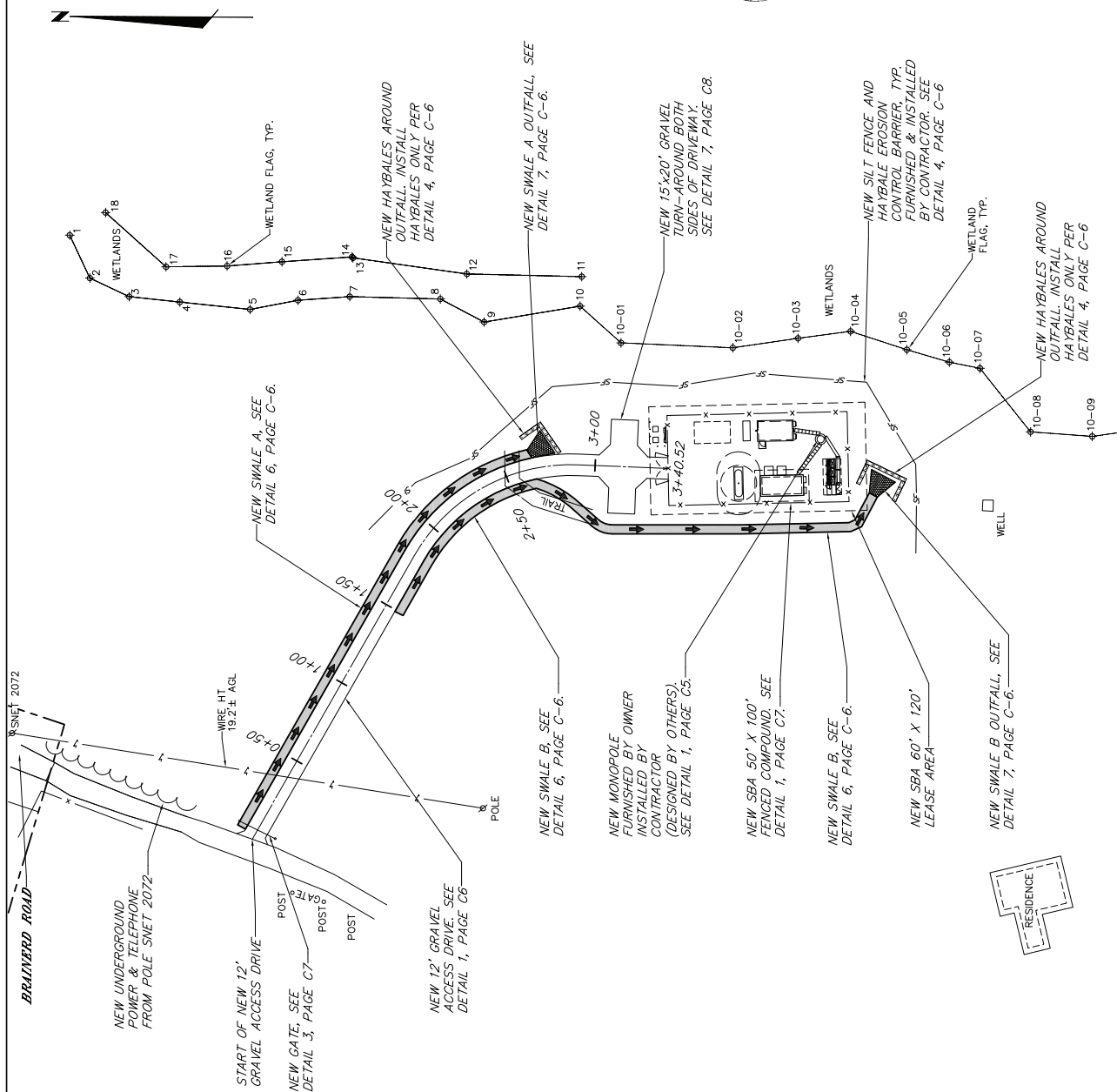
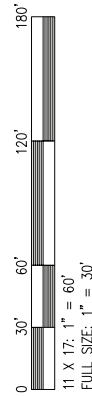
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NOTE:

CONTRACTOR REQUIRED TO PROVIDE POSITIVE DRAINAGE "OFF" LEASE AREA.



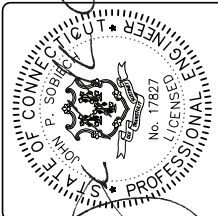
SBA
SBA TOWERS II LLC
5900 BROKEN SOUND
BOCA RATON, FL 33487-2797
TEL: (561) 226-9623
FAX: (561) 226-9368

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CHA
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New South Wales State of the Art Design Award

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ASE PROJECT #:	15363-1046-43000
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CHECKED BY:	PAL

REVISIONS	
NO.	DESCRIPTION
1	04/06/11 ISSUED FOR O&M



PROJECT NO.
15363-1046-43000

SITE NAME
EAST LYME

SITE NUMBER
CT11794

SITE ADDRESS
49 BRAINERD ROAD
NANTIC (EAST LYME), CT 06357

DESIGN TYPE
RAW LAND

SHEET TITLE
DRAINAGE LAYOUT PLAN

DRAWING NO.
C-3A

REVISION
A



SBA TOWERS II LLC
5900 BROKEN SOUND
BOCA RATON, FL 33487-2787
TEL: (561) 226-9623
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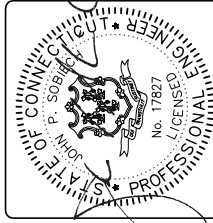
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DRAWN BY: PAL

CHECKED BY: PAL

REVISIONS

NO.	DATE	DESCRIPTION
1	04/06/11	ISSUED FOR D&M



PROJECT NO. 15363-1046-43000

SITE NAME: EAST LYME

SITE NUMBER: CT11794

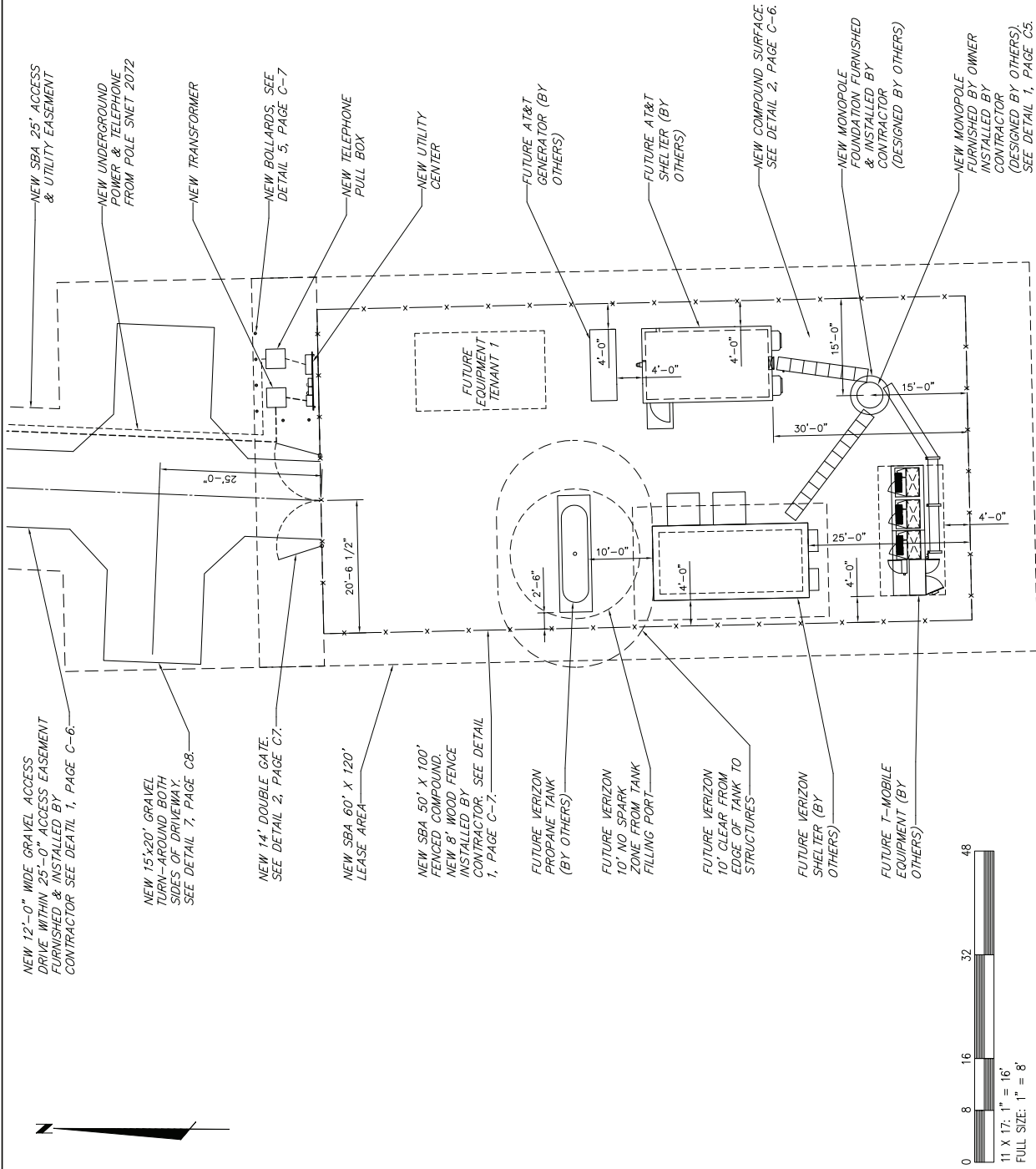
SITE ADDRESS: 49 BRAINERD ROAD

DESIGN TYPE: RAW LAND

SHEET TITLE: ENLARGED SITE PLAN

DRAWING NO. C-4

REVISION A



PROPOSED AT&T (6) PRH MOUNTED TO TOWER

PROPOSED AT&T SURGE ARRESTOR MOUNTED TO TOWER

2
6'-5"

T&T LIGHTNING ROD
ELEV.: +174'-0" AGL

T&T MONOPOLE
ELEV.: +170'-0" AGL

AT&T ANTENNAS
ELEV.: +167'-6" AGL

T-MOBILE ANTENNAS
ELEV.: +157'-0" AGL

VERIZON ANTENNAS
ELEV.: +147'-0" AGL

Ø OF FUTURE CARRIER 1 ANTENNA
ELEV.: +137'-0" AGL

FUTURE ANTENNA MOUNTING PLATES
FURNISHED BY TENANT
INSTALLED BY TENANT CONTRACTOR

FUTURE TENANT ANTENNA
FURNISHED BY TENANT
INSTALLED BY TENANT CONTRACTOR

FUTURE ANTENNA MOUNTING PIPE
FURNISHED BY TENANT
INSTALLED BY TENANT CONTRACTOR

170' MONOPOLE

NEW MONOPOLE
FURNISHED BY OWNER
INSTALLED BY CONTRACTOR
MONOPOLE FOUNDATION
(DESIGNED BY OTHERS)

NEW WOOD FENCE
FURNISHED BY CONTRACTOR
SEE DRAWING C-7 FOR DETAILS

3
6'-5"

T&T FOUNDATION
ELEV.: +1'-0" AGL

EXISTING GRADE
ELEV.: +0'-0" AGL

STRUCTURAL NOTES:

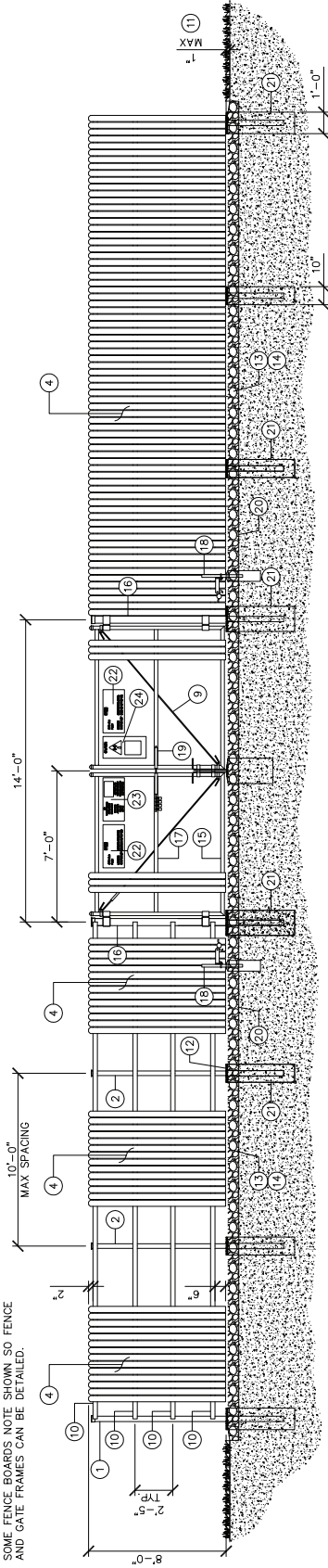
1. STRUCTURAL CALCULATION PREPARED BY OTHERS. CONTRACTOR TO COORDINATE WITH AN SBA REPRESENTATIVE TO OBTAIN A COPY.
2. CONTRACTOR TO REFER TO TOWER STRUCTURAL CALCULATIONS FOR ADDITIONAL LOADS. NO ERECTION OR MODIFICATION OF TOWER SHALL BE MADE WITHOUT APPROVAL OF STRUCTURAL ENGINEER.

1 ELEVATION VIEW

SCALE: N.T.S.

[illegible]

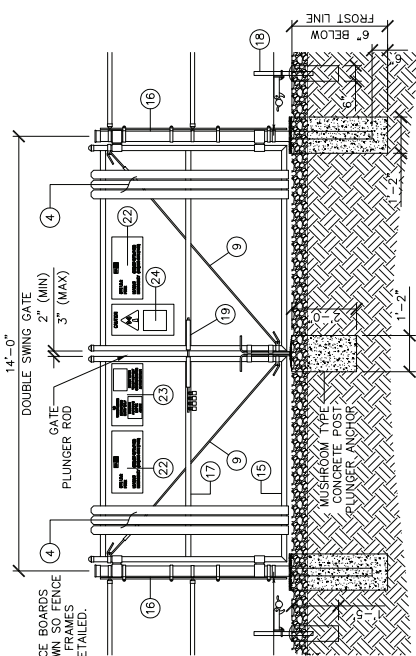
NOTE: FENCE BOARDS NOTE SHOWN SO FENCE AND GATE FRAMES CAN BE DETAILED.



1 TYPICAL FENCING DETAIL

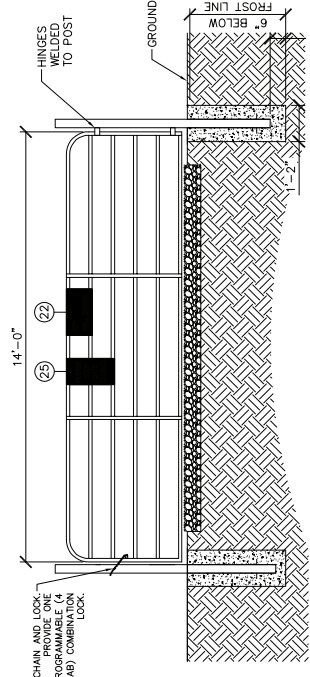
SCALE: N.T.S.

NOTE: SOME FENCE BOARDS AND GATE FRAMES CAN BE DETAILED.



2 DOUBLE-SWING GATE DETAIL

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



3 SINGLE "CATTLE" GATE DETAIL

SCALE: N.T.S.

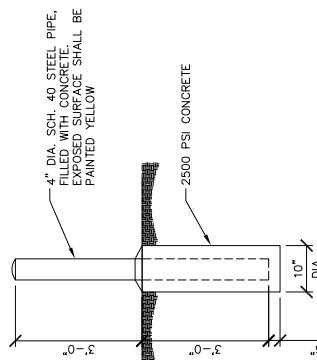
GENERAL NOTES:

1. INSTALL FENCING PER ASTM F-567
2. INSTALL SWING GATES PER ASTM F-900
3. LOCAL ORNANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.
4. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS. ALL PIPE TO BE GALVANIZED (HOT DIP, ASTM A120 GRADE "A" STEEL). ALL GATE FRAMES SHALL BE WELDED. ALL WELDING SHALL BE COATED WITH (3) COATS OF COLD GALV. (OR EQUAL).
5. ALL OPEN POSTS SHALL HAVE END-CAPS.
6. USE GALVANIZED LAG SCREW TO MOUNT ALL SIGNS.
7. ALL SIGNS MUST BE MOUNTED ON EXTERIOR OF WOOD FENCE.
8. MUSHROOM ANCHOR & PLUNGER REQUIRED FOR GATE.
9. G.C. RESPONSIBLE FOR SBA GATE LOCK

BALLOON REFERENCE NOTES:

- 1 CORNER, END OR PULL POST: 3" O.D. SCHEDULE 40 PIPE.
- 2 LINE POSTS: 2 1/2" NOMINAL SCHEDULE 40 PIPE, PER ASTM-F1083. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 10'-0" O.C.
- 3 TOP RAIL & BRACE RAIL: 1-5/8" O.D. STANDARD ROUND PIPE, PER ASTM-F1083.
- 4 5/8" X 6" X 8'-0" DOG EAR WOOD FENCE BOARD. NAIL TO 2 X 4 WITH GALVANIZED SPIRAL NAILS.
- 5 TIE WIRE: 9 GA ALUMINUM. A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED 12" O.C. POSTS/GATES AND 24" RAILS/WIRE.
- 6 TENSION WIRE: 9 GA ALUMINUM
- 7 BARBED WIRE: NOT REQUIRED
- 8 3/16" X 3/4" (MIN) FULL HEIGHT STRETCHER BAR.
- 9 3/8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBuckle OR DIAGONAL TURNBuckle TO SECURE TO POSTS WITH A GALVANIZED CLIP AND A U-BOLT.
- 10 SECURE CLIP TO 2 X 4 WITH LAG SCREWS.
- 11 1" MAXIMUM CLEARANCE FROM FINISH GRADE.
- 12 FENCE POST FOUNDATION TO BE 1" FINISH ABOVE FINISHED GRADE
- 13 6" COMPACTED BASE MATERIAL
- 14 FINISH GRADE SHALL BE UNIFORM AND LEVEL.
- 15 WELDED GATE FRAME: 2" O.D., SCHEDULE 40 PIPE, PER ASTM-F1083.
- 16 GATE POST 4" O.D., SCHEDULE 40 PIPE, PER ASTM-F1083.
- 17 GATE FRAME BRACE RAIL: 1 1/2" NOMINAL PIPE, PER ASTM-F1083.
- 18 DUCK BILL OPEN GATE HOLDER. VERIFY LOCATION IN FIELD PRIOR TO INSTALLATION.
- 19 STYME LOCK MULTI-TENANT LOCKING DEVICE
- 20 GEOTEXTILE FABRIC
- 21 CONCRETE FOUNDATION (MIN. 3000 PSI). MINIMUM DEPTH: 6" BELOW FROST LINE
- 22 12" x 24" SBA SITE INFORMATION SIGN.
- 23 12" x 24" NO TRESPASSING SIGN.
- 24 12" x 24" RF CAUTION SIGN.
- 25 18" x 12" KEEP GATE CLOSED SIGN.

NOTES



4 BOLLARD DETAIL

SCALE: N.T.S.

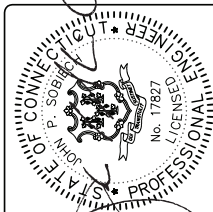
FENCING NOTES



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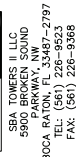
ASE PROJECT #:	15363-1046-43000
DRAWN BY:	PAL
CHECKED BY:	PAL

REVISIONS	
NO.	DATE DESCRIPTION
1	05/08/11 ISSUED FOR O&M

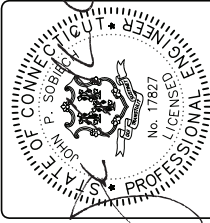


PROJECT NO.	15363-1046-43000
SITE NAME	EAST LYME
SITE NUMBER	CT11794
SITE ADDRESS	49 BRAINERD ROAD NIAHTIC (EAST LYME), CT 06357
DESIGN TYPE	RAW LAND
SHEET TITLE	FENCE DETAILS

DRAWING NO.	C-7
REVISION	A



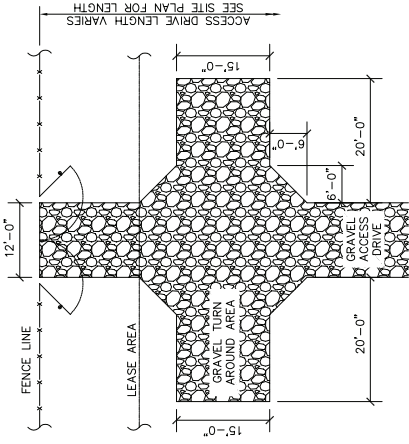
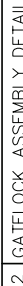
A&E PROJECT #:	15363-1046-43000
DRAWN BY:	PAL
CHECKED BY:	PAL

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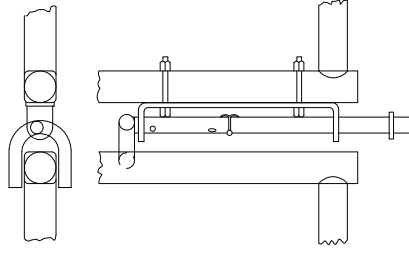
PROJECT No. 15363 - 1046-43000
SITE NAME: EAST LYME
SITE NUMBER: CT11794
SITE ADDRESS: 49 BRAINERD ROAD NIANTIC (EAST LYME), CT 06357
DESIGN TYPE: RAW LAND
SHEET TITLE: FENCE DETAILS

DRAWING NO.	REVISION
C-8	A

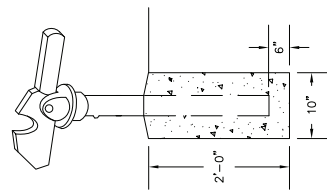
1. DRILL 3/8" HOLES IN THE GATE LEAF USING THE GATE DIMENSIONS PROVIDED.
2. SLIDE THE CARRIAGE BOLTS IN THE SLOTS ON THE BACK OF PART "B" AND PUSH THE BOLTS THROUGH THE HOLES DRILLED IN THE GATE. FORCE THE NUT AND THE LOCKWASH ON THE OTHER END AND CUT OFF EXCESS OF THE NUT AND THE LOCKWASH.
3. ADD THE NUMBER OF SLEEVES NEEDED FOR THE NUMBER OF LOOKS AND SLIDE THE LOCKING BAR INTO PLACE THROUGH BOTH PART "A" AND PART "B". NOW INSTALL THE LOCKS.
4. IF THE GATE HAS NO CENTER BAR IN THE GATE LEAF YOU MAY NEED TO MOUNT THE STEELCLOCK VERTICALLY USING THE SAME DIMENSIONS ON THE GATE FACE.
5. WHEN THE OPERATION MAY ALSO BE USED ON SLIDING GATES WITH MULTIPLE LOOKS.



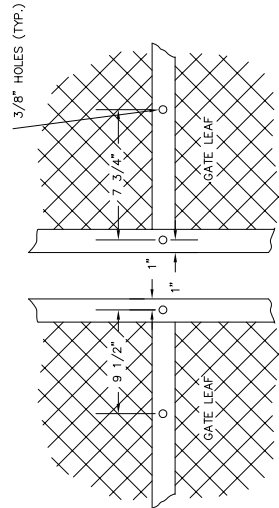
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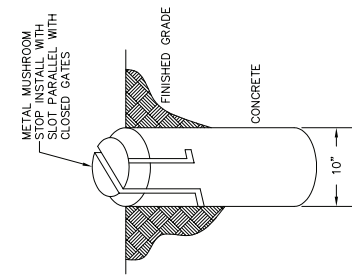
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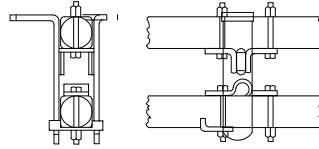
SCALE: N.T.S.



SCALE: N.T.S.



SCALE: N.T.S.



SCALE: N.T.S.

3	MUSHROOM STOP DETAIL
---	----------------------

5	LATCH ASSEMBLY DETAILS
---	------------------------



11. ALL PLANTINGS TO BE SPACED AS NOTED ON THE WETLAND BUFFER PLANTING PLAN TO SIMULATE NATURAL GROWTH PATTERNS.
12. THE EROSION CONTROL BARRIERS SHALL BE DISASSEMBLED AND PROPERLY DISPOSED OF FOLLOWING PLANTING OF THE WETLAND BUFFER ENHANCEMENT AREA AND COMPLETE STABILIZATION OF EXPOSED SOILS. SEDIMENT COLLECTED BY THESE DEVICES WILL BE REMOVED AND DISPOSED OF IN A MANNER THAT PREVENTS EROSION AND TRANSPORT TO NEARBY WETLANDS.

DRAWING NO.	1-1
REVISION	A



Structural Design Report

170' Monopole

located at: East Lyme, CT

Site Number: CT11974-S

prepared for: SBA NETWORK SERVICES INC

by: Sabre Towers & Poles™

Job Number: 42498

April 4, 2011

Monopole Profile.....	1
Foundation Design Summary.....	2
Pole Calculation.....	C1-C10
Foundation Calculations.....	A1-A2

Monopole by

IRJ

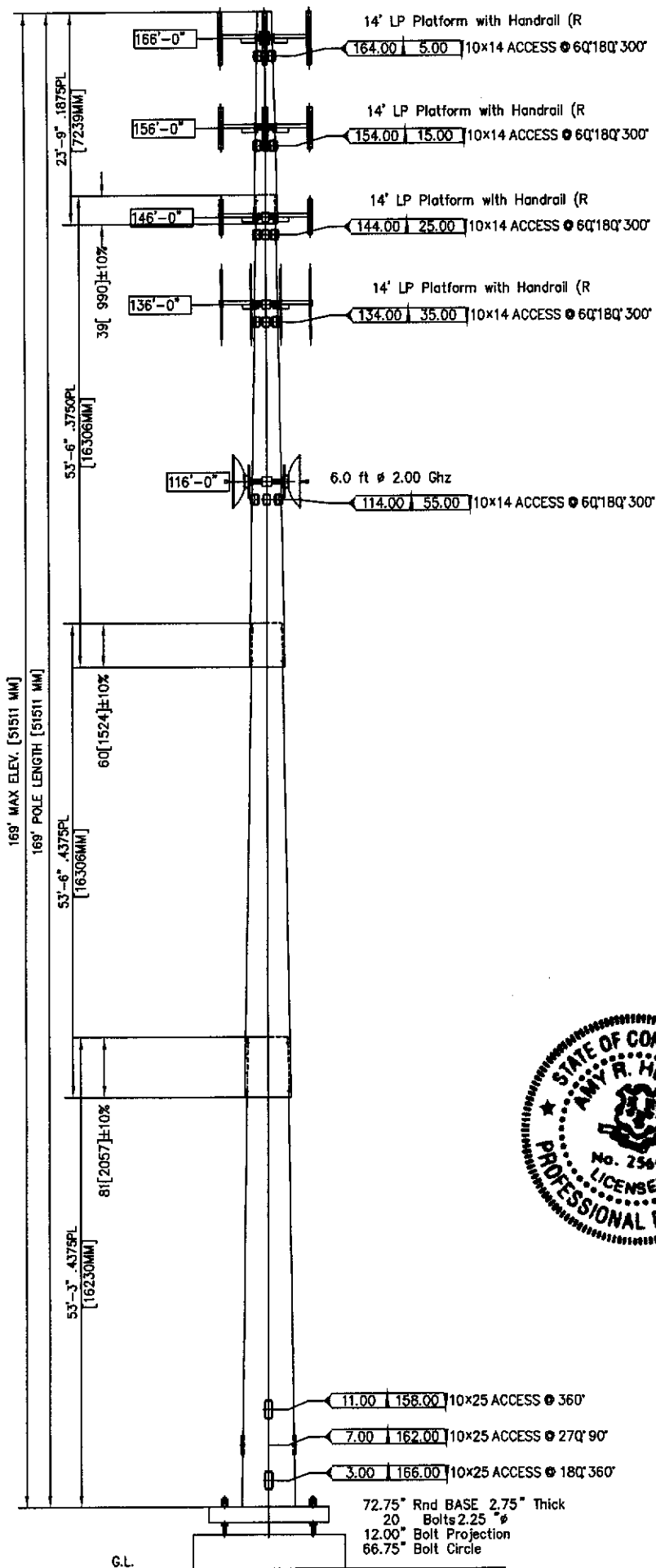
Foundation by

AKH

Approved by

AKH





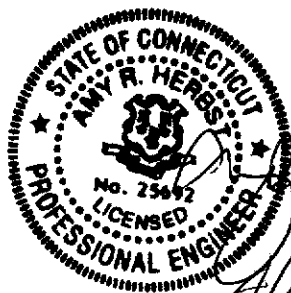
POLE SPECIFICATIONS	
POLE HEIGHT	169.00 FEET
TAPER	.2730 IN/FT
POLE SHAPE	18 SIDED POLYGON
ORIENTATION	FLAT-FLAT

Lev	Qty	Elev ft.	Future	DESCRIPTION
1	1	166.00	F	14' LP Platform with Handrail (R
	9	166.00	F	P90-15-XLH-RR
	6	166.00	F	TMA
	1	166.00	F	DC6-48-60-18-8F
	6	166.00	F	RRUS 11
2	1	156.00	F	14' LP Platform with Handrail (R
	9	156.00	F	APX16DWV-16DWV-S-E-ACU
	6	156.00	F	KRY 112 134/1
3	1	146.00	F	14' LP Platform with Handrail (R
	6	146.00	F	SC-E 6014
	3	146.00	F	BXA-70063/4CF
	3	146.00	F	BXA-185063/8CF
4	1	136.00	F	14' LP Platform with Handrail (R
	12	136.00	F	DBB48H90E-XY.
	6	136.00	F	TMA
5	2	116.00	F	Pipe Mount (up to 6' Dish)
	2	116.00	F	6' SOLID DISH W/ RADOME 2.00 Ghz

Load Case	DESCRIPTION	Res. Axial (kips)	Base Shear (kips)	React Mom (ft-k)	Disp DEFL (ft)	Top SWAY (deg)
1)	3s Gusted Wind	62.8	55.5	6776	17.1	11.81
2)	3s Gusted Wind 0.9	47.6	55.5	6666	16.7	11.51
3)	3s Gusted Wind&Ice	85.1	9.5	1116	2.8	1.89
4)	Service Loads	50.6	7.8	946	2.4	1.65

Sec	LENGTH (ft)	Flat-Flat TOP#	Flat-Flat BOT#	THICK (in)	WEIGHT (lbs)	STEEL SPEC	FINISH
1	23.75	16.00	22.48	.1875	1300	A572-65	Galv
2	53.50	21.22	35.83	.3750	6900	A572-65	Galv
3	53.50	33.71	48.32	.4375	10900	A572-65	Galv
4	53.25	45.60	60.14	.4375	16200	A572-65	Galv
TOTAL					35300		
ABolt Cluster	Bolt#	Hole#					
AB	84.00	2.25	2.625		2700	A615-75	Galv-18"

- 1) FULL HEIGHT STEP BOLTS
- 2) ANTENNA FEED LINES RUN INSIDE POLE
- 3) THE MONOPOLE WAS DESIGNED IN ACCORDANCE WITH ANSI/TIA-222-G, STRUCTURE CLASS II, EXPOSURE CATEGORY C, TOPOGRAPHIC CATEGORY 1.



SBA NETWORK SERVICES INC



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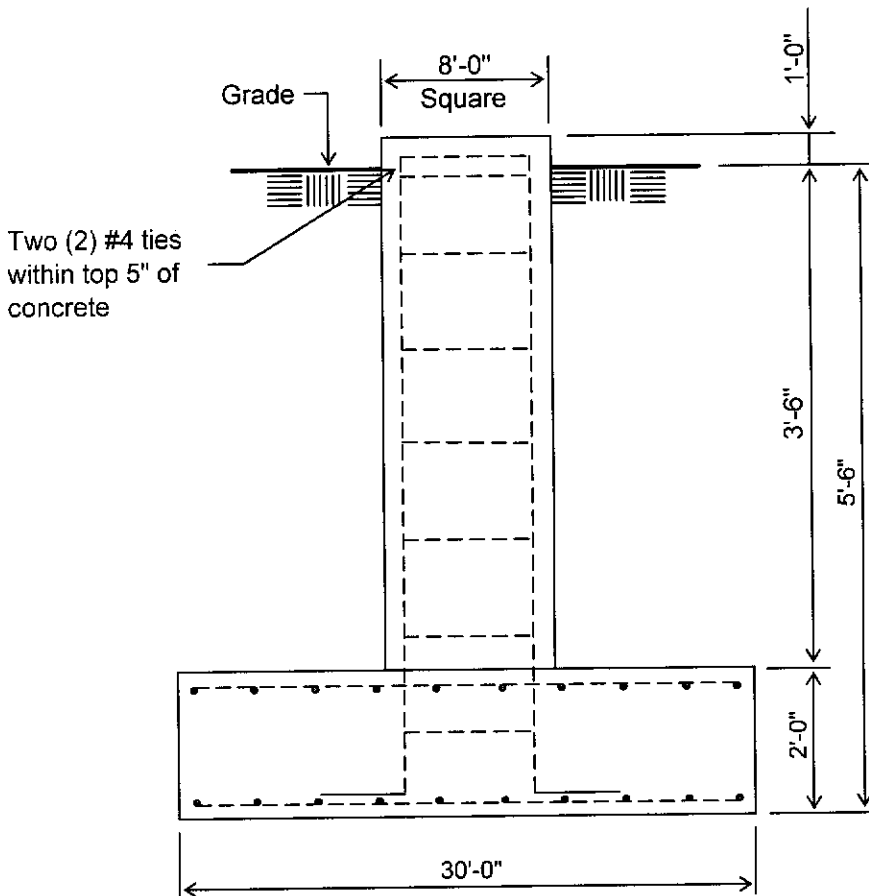
East Lyme, CT
CT11974-S

170.00 MONOPOLE

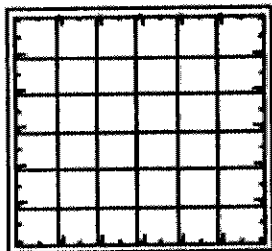
42498	SIZE	DRAWING NO.	REV
DATE	31Mar11	A	42498-PE
DRAWN BY	-	REFERENCE DRAWING	SCALE
CHECKED BY	TRJ	N.T.S.	PAGE 1

Customer: SBA NETWORK SERVICES INC
Site: East Lyme, CT CT11974-S

170' Monopole at
120 mph Wind with no ice and 50 mph Wind with 0.75 in. Ice per ANSI/TIA-222-G-2005.
Antenna Loading per Page 1



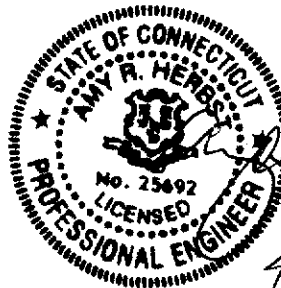
ELEVATION VIEW
(77.34 Cu. Yds. each)
(1 REQUIRED; NOT TO SCALE)



Typical pier cross-section

Notes:

- 1). Concrete shall have a minimum 28-day compressive strength of 4000 PSI, in accordance with ACI 318-05
- 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 Tower Engineering Professionals, Inc., project no. 103196.01, dated March 18, 2011.
- 6). See the geotechnical report for compaction requirements, if specified.
- 7). The foundation is based on 1.15 times the following factored loads:
Moment (kip-ft) = 6776.67
Axial (kips) = 62.813
Shear (kips) = 55.54



Rebar Schedule per Pad and Pier	
Pier	(48) #9 vertical rebar w/hooks at bottom w/#4 ties, two within top 5" of top of pier then 12" C/C
Pad	(54) #8 horizontal rebar evenly spaced each way top and bottom (216 Total)

SABRE COMMUNICATIONS CORP
2101 Murray Street
Sioux City, IA 51101

JOB: 00-42498
SBA NETWORK SERVICES INC
East Lyme, CT

31-Mar-11 13:30
Ph 712.258.6690
Fx 712.258.8250

TOP	DIAMETER	16.00 in.	[16.25 in. Point-Point]
BOTTOM	DIAMETER	60.14 in.	[61.06 in. Point-Point]
POLE	HEIGHT	169.00 ft.	18 SIDED FLAT ORIENTATION
BASE	HEIGHT	1.00 ft.	ABOVE GROUND
E-MODULUS		29000 ksi	[12000 ksi SHEAR MODULUS]

APPURTENANCES

ATTACH POINTS:	NO.	X,ft	Qty	Description	Status
	1	166.00	1	14' LP Platform with Handrail (R	Future Appurt
	2	165.90	1	User Defined Loading	Future Appurt
	3	156.00	1	14' LP Platform with Handrail (R	Future Appurt
	4	146.00	1	14' LP Platform with Handrail (R	Future Appurt
	5	136.00	1	14' LP Platform with Handrail (R	Future Appurt
	6	116.00	2	Pipe Mount (up to 6' Dish)	Future Appurt

Some wind forces may have been derived from full-scale wind tunnel tests.

Pole Section	Bottom X,ft.	Thick in.	Connect Type	LAP in.	Taper in/ft	Length ft.	Weight lbs	Steel Spec	Pole Finish
1	23.75	.18750	SLIP-JNT	39.	.2730	23.75	916	A572-65	GALVANIZE
2	74.00	.37500	SLIP-JNT	60.	.2730	53.50	6099	A572-65	GALVANIZE
3	122.50	.43750	SLIP-JNT	81.	.2730	53.50	10257	A572-65	GALVANIZE
4	169.00	.43750	C-WELD		.2730	53.25	13191	A572-65	GALVANIZE

SECTION PROPERTIES

X,ft	UP,ft	D,in	T,in	Area in ²	Iz in ⁴	IxIy in ⁴	SxSy in ³	w/t	d/t	F _y (ksi)	
169.00	.00	16.00	.1875	9.41	594	297	36.6	13.28	85.3	65.00	TOP
166.00	3.00	16.82	.1875	9.90	692	346	40.5	14.05	89.7	65.00	P01
165.90	3.10	16.85	.1875	9.91	694	347	40.6	14.08	89.8	65.00	P02
160.90	8.10	18.21	.1875	10.73	880	440	47.6	15.36	97.1	65.00	
156.00	13.00	19.55	.1875	11.52	1090	545	54.9	16.62	104.3	65.00	P03
151.00	18.00	20.91	.1875	12.33	1338	669	63.0	17.90	111.5	65.00	
148.50	20.50	21.60	.1875	12.74	1474	737	67.2	18.55	115.2	65.00	Slip-B01
146.00	23.00	21.90	.3750	25.62	3002	1501	135.0	8.54	58.4	65.00	P04
145.25	23.75	22.11	.3750	25.87	3088	1544	137.6	8.63	59.0	65.00	Slip-T02
140.25	28.75	23.47	.3750	27.49	3706	1853	155.5	9.27	62.6	65.00	
136.00	33.00	24.63	.3750	28.87	4294	2147	171.7	9.82	65.7	65.00	P05
131.00	38.00	26.00	.3750	30.50	5058	2529	191.6	10.46	69.3	65.00	
126.00	43.00	27.36	.3750	32.12	5912	2956	212.8	11.10	73.0	65.00	
121.00	48.00	28.73	.3750	33.75	6854	3427	234.9	11.75	76.6	65.00	
116.00	53.00	30.09	.3750	35.37	7892	3946	258.3	12.39	80.3	65.00	P06
111.00	58.00	31.46	.3750	37.00	9030	4515	282.7	13.03	83.9	65.00	
106.00	63.00	32.82	.3750	38.62	10274	5137	308.2	13.67	87.5	65.00	
101.00	68.00	34.19	.3750	40.25	11624	5812	334.8	14.31	91.2	65.00	
100.00	69.00	34.46	.3750	40.57	11908	5954	340.3	14.44	91.9	65.00	Slip-B02
95.00	74.00	35.08	.4375	48.10	14582	7291	409.4	12.37	80.2	65.00	Slip-T03
90.00	79.00	36.44	.4375	49.99	16372	8186	442.4	12.92	83.3	65.00	
85.00	84.00	37.81	.4375	51.89	18306	9153	476.8	13.47	86.4	65.00	
80.00	89.00	39.17	.4375	53.79	20386	10193	512.5	14.02	89.5	65.00	
75.00	94.00	40.54	.4375	55.68	22618	11309	549.5	14.57	92.7	65.00	
70.00	99.00	41.90	.4375	57.58	25008	12504	587.8	15.12	95.8	65.00	
65.00	104.00	43.27	.4375	59.47	27558	13779	627.3	15.67	98.9	65.00	
60.00	109.00	44.63	.4375	61.37	30278	15139	668.1	16.22	102.0	65.00	
55.00	114.00	46.00	.4375	63.26	33172	16586	710.2	16.78	105.1	65.00	
53.25	115.75	46.47	.4375	63.93	34226	17113	725.3	16.97	106.2	65.00	Slip-B03
48.25	120.75	46.96	.4375	64.61	35330	17665	740.8	17.17	107.3	65.00	
46.50	122.50	47.44	.4375	65.27	36430	18215	756.2	17.36	108.4	65.00	Slip-T04
41.50	127.50	48.81	.4375	67.17	39696	19848	801.0	17.91	111.6	65.00	
36.50	132.50	50.17	.4375	69.06	43154	21577	847.0	18.46	114.7	65.00	
31.50	137.50	51.54	.4375	70.96	46804	23402	894.4	19.01	117.8	65.00	
26.50	142.50	52.90	.4375	72.85	50654	25327	943.0	19.56	120.9	65.00	
21.50	147.50	54.27	.4375	74.75	54714	27357	992.9	20.11	124.0	65.00	
16.50	152.50	55.63	.4375	76.64	58980	29490	1044.1	20.66	127.2	65.00	
11.50	157.50	57.00	.4375	78.54	63466	31733	1096.6	21.21	130.3	65.00	
6.50	162.50	58.36	.4375	80.43	68174	34087	1150.4	21.76	133.4	65.00	
1.50	167.50	59.73	.4375	82.33	73106	36553	1205.4	22.31	136.5	65.00	
.00	169.00	60.14	.4375	82.90	74630	37315	1222.1	22.47	137.5	65.00	BASE

SABRE COMMUNICATIONS CORP
2101 Murray Street
Sioux City, IA 51101

JOB: 00-42498
SBA NETWORK SERVICES INC
East Lyme, CT

31-Mar-11 13:30
Ph 712.258.6690
Fx 712.258.8250

CASE - 1: 3s Gusted Wind

ANSI-TIA-222-G

WIND	OLF	1.60	GUSTED WIND (3sec)	120.0 mph	193.1 kph
VERTICAL	OLF	1.20	EXP-CAT/STRUC CLASS	C-II	
DESIGN	ICE	.00 in	EXP-POWER COEFF.	.2105	
GUST FACTOR	(Gh)	1.10	REFERENCE HEIGHT	900.0 ft	
FORCE COEFF	(Cf)	.65	PRESSURE @ 32.7 ft	61.6 psf	2949.4 Pa
IMPORTANCE FAC	(I)	1.00	BASE ABOVE Grd	1.0	
DIRECTION FAC	(Kd)	.95	CREST HEIGHT	.0 ft	
TOPOGRAPHIC CAT		1			

APPURTENANCES

Sabre Areas

#	Qty	Description		Center Line Elev-Ft	WEIGHT each Lbs	AREA each Ft^2	Tx-CABLE		WIND Psf	FORCES		
							Type	Qty #/Ft		Tra-Y Kips	Ax-Z Kips	MOM. Lg-X Ft-K
- 1	1	14' LP Platform with Handrail (R		166.0	1704	80.7			87.1	7.03	-2.0	-10.5
	9	P90-15-XLH-RR		166.0	64		1 5/8"	12 1.04	86.9		-3.2	
	6	TMA		166.0	8		None	1 .00	86.9		-1.1	
	1	DC6-48-60-18-8F		166.0	20		7/16"	3 .27	86.9		-1.2	
2	1	User Defined Loading		165.9	5	.1			86.9	.01	.0	.0
	6	RRUS 11		166.0	55	2.9	None	1 .00	86.9	1.53	-4	-.2
- 3	1	14' LP Platform with Handrail (R		156.0	1704	66.6			86.0	5.73	-2.0	-8.6
	9	APX16DWV-16DWV-S-E-ACU		156.0	40		1 5/8"	12 1.04	85.8		-2.8	
	6	KRY 112 134/1		156.0	10		None	1 .00	85.8		-1.1	
- 4	1	14' LP Platform with Handrail (R		146.0	1704	61.8			84.8	5.24	-2.0	-7.9
	6	SC-E 6014		146.0	15		1 5/8"	6 1.04	84.6		-1.2	
	3	BXA-70063/4CF		146.0	9		1 5/8"	3 1.04	84.6		-.6	
	3	BXA-185063/8CF		146.0	10		1 5/8"	3 1.04	84.6		-.6	
- 5	1	14' LP Platform with Handrail (R		136.0	1704	86.5			83.5	7.23	-2.0	-10.8
	12	DB848H90E-XY.		136.0	28		1 5/8"	18 1.04	83.4		-3.5	
	6	TMA		136.0	8		None	1 .00	83.4		-.1	
6	2	Pipe Mount (up to 6' Dish)		116.0	49	.1			80.6	.02	-.1	.0
	2	6' SOLID DISH W/ RADOME		116.0	330	24.4	1 5/8"	12 1.04	80.6	3.94	-2.5	

RESULTS

		WIND	ICE	:--- FORCES, kips ---:				:---MOMENTS, ft-kips---:			F'y	Inter
X, ft	Kzt	psf	in	ShearX	ShearY	AxialZ	BendX	BendY	TorqZ	ksi	4.8.2	
169.00	1.00	56.70	.00	.0	.01	-.1	.0	.0	.0	82.55	.000	
166.00	1.00	56.49	.00	.0	8.14	-4.0	-10.9	.0	.0	82.55	.049	
165.90	1.00	56.48	.00	.0	10.07	-4.2	-11.9	.0	.0	82.55	.054	
160.90	1.00	56.12	.00	.0	10.51	-4.5	-62.2	.0	.0	82.55	.218	
156.00	1.00	55.76	.00	.0	17.54	-8.4	-122.3	.0	.0	81.83	.375	
151.00	1.00	55.38	.00	.0	17.88	-8.8	-210.0	.0	.0	80.32	.565	
148.50	1.00	55.19	.00	.0	18.13	-9.0	-254.7	.0	.0	79.57	.646	
146.00	1.00	54.99	.00	.0	24.27	-12.6	-307.8	.0	.0	82.55	.376	
145.25	1.00	54.93	.00	.0	24.60	-13.2	-326.1	.0	.0	82.55	.390	
140.25	1.00	54.53	.00	.0	25.13	-13.9	-449.1	.0	.0	82.55	.474	
136.00	1.00	54.18	.00	.0	33.71	-18.9	-566.8	.0	.0	82.55	.543	
131.00	1.00	53.76	.00	.0	34.25	-19.7	-735.3	.0	.0	82.55	.629	
126.00	1.00	53.32	.00	.0	34.80	-20.7	-906.7	.0	.0	82.55	.698	
121.00	1.00	52.87	.00	.0	35.37	-21.6	-1080.8	.0	.0	82.55	.752	
116.00	1.00	52.41	.00	.0	40.23	-24.7	-1257.5	.0	.0	82.55	.797	
111.00	1.00	51.93	.00	.0	40.81	-25.8	-1458.3	.0	.0	82.55	.844	
106.00	1.00	51.43	.00	.0	41.40	-26.9	-1662.5	.0	.0	82.55	.881	
101.00	1.00	50.92	.00	.0	41.77	-27.6	-1870.0	.0	.0	82.55	.912	
100.00	1.00	50.81	.00	.0	42.20	-28.8	-1911.7	.0	.0	82.55	.918	
95.00	1.00	50.27	.00	.0	42.90	-30.8	-2122.5	.0	.0	82.55	.847	
90.00	1.00	49.71	.00	.0	43.57	-32.3	-2336.7	-.1	.0	82.55	.862	
85.00	1.00	49.12	.00	.0	44.22	-33.7	-2555.0	-.1	.0	82.55	.875	
80.00	1.00	48.51	.00	.0	44.88	-35.1	-2775.8	-.1	.0	82.55	.884	
75.00	1.00	47.86	.00	.0	45.56	-36.5	-3000.0	-.1	.0	82.55	.891	
70.00	1.00	47.18	.00	.0	46.24	-38.0	-3228.3	-.1	.0	82.55	.897	
65.00	1.00	46.46	.00	.0	46.93	-39.5	-3459.2	-.1	.0	82.55	.900	
60.00	1.00	45.69	.00	.0	47.63	-41.0	-3694.2	-.1	.0	82.30	.905	
55.00	1.00	44.88	.00	.0	48.10	-42.2	-3931.7	-.1	.0	81.65	.913	
53.25	1.00	44.58	.00	.0	48.59	-43.7	-4015.8	-.1	.0	81.43	.916	
48.25	1.00	43.68	.00	.0	49.07	-45.2	-4259.2	-.1	.0	81.19	.954	
46.50	1.00	43.35	.00	.0	49.54	-46.8	-4345.0	-.1	.0	80.97	.956	
41.50	1.00	42.35	.00	.0	50.21	-48.8	-4592.5	-.1	.0	80.32	.962	
36.50	1.00	41.25	.00	.0	50.86	-50.5	-4843.3	-.1	.0	79.67	.968	
31.50	1.00	40.02	.00	.0	51.51	-52.2	-5098.3	-.1	.0	79.02	.973	
26.50	1.00	38.64	.00	.0	52.16	-53.9	-5355.8	-.1	.0	78.38	.977	
21.50	1.00	37.04	.00	.0	52.83	-55.7	-5616.7	-.1	.0	77.73	.981	
16.50	1.00	35.13	.00	.0	53.52	-57.6	-5880.8	-.1	.0	77.08	.986	
11.50	1.00	34.05	.00	.0	54.22	-59.4	-6148.3	-.1	.0	76.43	.989	

SABRE COMMUNICATIONS CORP

JOB: 00-42498

31-Mar-11 13:30

2101 Murray Street

SBA NETWORK SERVICES INC

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Sioux City, IA 51101

East Lyme, CT

Fx 712.258.8250

6.50	1.00	34.05	.00	.0	54.94	-61.3	-6419.2	-.1	.0	75.79	.993
1.50	1.00	34.05	.00	.0	55.41	-62.6	-6694.2	-.1	.0	75.14	.997
.00	1.00	34.05	.00	.0	55.54	-62.8	6776.7	.1	.0	74.94	.998

DISPLACEMENTS

ELEV	DEFLECTION feet				ROTATION, degrees			
X, ft	X	Y	Z	XY-Result	X	Y	Z	XY-Result
169.00	.00	17.05	-1.22	17.05<10.09%>	-11.81	.00	.00	11.81

SABRE COMMUNICATIONS CORP

2101 Murray Street
Sioux City, IA 51101

JOB: 00-42498

SBA NETWORK SERVICES INC
East Lyme, CT

31-Mar-11 13:30

Ph 712.258.6690

Fx 712.258.8250

CASE - 2: 3s Gusted Wind 0.9 Dead

ANSI-TIA-222-G

WIND OLF	1.60	GUSTED WIND (3sec)	120.0 mph	193.1 kph
VERTICAL OLF	.90	EXP-CAT/STRUC CLASS	C-II	
DESIGN ICE	.00 in	EXP-POWER COEFF.	.2105	
GUST FACTOR (Gh)	1.10	REFERENCE HEIGHT	900.0 ft	
FORCE COEFF (Cf)	.65	PRESSURE @ 32.7 ft	61.6 psf	2949.4 Pa
IMPORTANCE FAC (I)	1.00	BASE ABOVE Grd	1.0	
DIRECTION FAC (Kd)	.95	CREST HEIGHT	.0 ft	
TOPOGRAPHIC CAT	1			

APPURTENANCES

Sabre Areas

#	Qty	Description		Center Line Elev-Ft	WEIGHT each Lbs	AREA each Ft^2	Tx-CABLE		WIND Psf	FORCES MOM.		
							Type	Qty #/Ft		Tra-Y Kips	Ax-Z Kips	Lg-X Ft-K
- 1	1	14' LP Platform with Handrail (R		166.0	1704	80.7			87.1	7.03	-1.5	-10.5
	9	P90-15-XLH-RR		166.0	64		1 5/8"	12 1.04	86.9		-2.4	
	6	TMA		166.0	8		None	1 .00	86.9		.0	
	1	DC6-48-60-18-8F		166.0	20		7/16"	3 .27	86.9		-1.1	
2	1	User Defined Loading		165.9	5	.1			86.9	.01	.0	.0
	6	RRUS 11		166.0	55	2.9	None	1 .00	86.9	1.53	-.3	-.2
- 3	1	14' LP Platform with Handrail (R		156.0	1704	66.6			86.0	5.73	-1.5	-8.6
	9	APX16DWV-16DWV-S-E-ACU		156.0	40		1 5/8"	12 1.04	85.8		-2.1	
	6	KRY 112 134/1		156.0	10		None	1 .00	85.8		-.1	
- 4	1	14' LP Platform with Handrail (R		146.0	1704	61.8			84.8	5.24	-1.5	-7.9
	6	SC-E 6014		146.0	15		1 5/8"	6 1.04	84.6		-.9	
	3	BXA-70063/4CF		146.0	9		1 5/8"	3 1.04	84.6		-.4	
	3	BXA-185063/8CF		146.0	10		1 5/8"	3 1.04	84.6		-.4	
- 5	1	14' LP Platform with Handrail (R		136.0	1704	86.5			83.5	7.23	-1.5	-10.8
	12	DB848H90E-XY.		136.0	28		1 5/8"	18 1.04	83.4		-2.6	
	6	TMA		136.0	8		None	1 .00	83.4		.0	
6	2	Pipe Mount (up to 6' Dish)		116.0	49	.1			80.6	.02	-.1	.0
	2	6' SOLID DISH W/ RADOME		116.0	330	24.4	1 5/8"	12 1.04	80.6	3.94	-1.9	

RESULTS

		WIND	ICE	:--- FORCES, kips ---:				:---MOMENTS, ft-kips---:			F'y	Inter
X, ft	Kzt	psf	in	ShearX	ShearY	AxialZ	BendX	BendY	TorqZ	ksi	4.8.2	
169.00	1.00	56.70	.00	.0	.00	.0	.0	.0	.0	82.55	.000	
166.00	1.00	56.49	.00	.0	7.84	-2.7	-10.9	.0	.0	82.55	.048	
165.90	1.00	56.48	.00	.0	9.74	-2.8	-11.9	.0	.0	82.55	.052	
160.90	1.00	56.12	.00	.0	10.18	-3.0	-60.6	.0	.0	82.55	.210	
156.00	1.00	55.76	.00	.0	16.95	-5.7	-119.0	.0	.0	81.83	.361	
151.00	1.00	55.38	.00	.0	17.30	-6.0	-203.8	.0	.0	80.32	.545	
148.50	1.00	55.19	.00	.0	17.55	-6.2	-247.0	.0	.0	79.57	.624	
146.00	1.00	54.99	.00	.0	23.47	-8.7	-298.8	.0	.0	82.55	.363	
145.25	1.00	54.93	.00	.0	23.80	-9.1	-316.3	.0	.0	82.55	.377	
140.25	1.00	54.53	.00	.0	24.32	-9.7	-435.3	.0	.0	82.55	.458	
136.00	1.00	54.18	.00	.0	32.66	-13.2	-549.6	.0	.0	82.55	.524	
131.00	1.00	53.76	.00	.0	33.21	-13.9	-712.8	.0	.0	82.55	.608	
126.00	1.00	53.32	.00	.0	33.79	-14.6	-879.2	.0	.0	82.55	.674	
121.00	1.00	52.87	.00	.0	34.38	-15.4	-1047.5	.0	.0	82.55	.727	
116.00	1.00	52.41	.00	.0	39.17	-17.6	-1220.0	.0	.0	82.55	.771	
111.00	1.00	51.93	.00	.0	39.79	-18.5	-1415.8	.0	.0	82.55	.817	
106.00	1.00	51.43	.00	.0	40.41	-19.4	-1614.2	.0	.0	82.55	.853	
101.00	1.00	50.92	.00	.0	40.80	-19.9	-1816.7	.0	.0	82.55	.884	
100.00	1.00	50.81	.00	.0	41.24	-20.9	-1857.5	.0	.0	82.55	.889	
95.00	1.00	50.27	.00	.0	41.96	-22.4	-2063.3	.0	.0	82.55	.821	
90.00	1.00	49.71	.00	.0	42.65	-23.7	-2273.3	-.1	.0	82.55	.837	
85.00	1.00	49.12	.00	.0	43.34	-24.7	-2486.7	-.1	.0	82.55	.849	
80.00	1.00	48.51	.00	.0	44.05	-25.9	-2703.3	-.1	.0	82.55	.859	
75.00	1.00	47.86	.00	.0	44.76	-27.0	-2923.3	-.1	.0	82.55	.866	
70.00	1.00	47.18	.00	.0	45.49	-28.1	-3147.5	-.1	.0	82.55	.872	
65.00	1.00	46.46	.00	.0	46.22	-29.3	-3375.0	-.1	.0	82.55	.876	
60.00	1.00	45.69	.00	.0	46.96	-30.5	-3605.8	-.1	.0	82.30	.882	
55.00	1.00	44.88	.00	.0	47.47	-31.5	-3840.8	-.1	.0	81.65	.890	
53.25	1.00	44.58	.00	.0	47.99	-32.6	-3923.3	-.1	.0	81.43	.893	
48.25	1.00	43.68	.00	.0	48.49	-33.8	-4163.3	-.1	.0	81.19	.930	
46.50	1.00	43.35	.00	.0	48.99	-35.0	-4248.3	-.1	.0	80.97	.933	
41.50	1.00	42.35	.00	.0	49.72	-36.6	-4493.3	-.1	.0	80.32	.939	
36.50	1.00	41.25	.00	.0	50.43	-37.9	-4741.7	-.1	.0	79.67	.945	
31.50	1.00	40.02	.00	.0	51.14	-39.3	-4994.2	-.1	.0	79.02	.950	
26.50	1.00	38.64	.00	.0	51.85	-40.7	-5250.0	-.1	.0	78.38	.955	
21.50	1.00	37.04	.00	.0	52.59	-42.1	-5509.2	-.1	.0	77.73	.960	
16.50	1.00	35.13	.00	.0	53.34	-43.5	-5772.5	-.1	.0	77.08	.965	
11.50	1.00	34.05	.00	.0	54.11	-44.9	-6039.2	-.1	.0	76.43	.969	

SABRE COMMUNICATIONS CORP

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31-Mar-11 13:30

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East Lyme, CT

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6.50	1.00	34.05	.00	.0	54.90	-46.4	-6309.2	-.1	.0	75.79	.974
1.50	1.00	34.05	.00	.0	55.42	-47.4	-6584.2	-.1	.0	75.14	.978
.00	1.00	34.05	.00	.0	55.55	-47.6	6666.7	.1	.0	74.94	.979

DISPLACEMENTS

ELEV	DEFLECTION feet				ROTATION, degrees			
X, ft	X	Y	Z	XY-Result	X	Y	Z	XY-Result
169.00	.00	16.65	-1.16	16.65< 9.85%>	-11.51	.00	.00	11.51

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CASE - 3: 3s Gusted Wind&Ice

ANSI-TIA-222-G

WIND OLF	1.00	GUSTED WIND (3sec)	50.0 mph	80.5 kph
VERTICAL OLF	1.20	EXP-CAT/STRUC CLASS	C-II	
DESIGN ICE	.75 in	EXP-POWER COEFF.	.2105	
GUST FACTOR (Gh)	1.10	REFERENCE HEIGHT	900.0 ft	
FORCE COEFF (Cf)	1.20	PRESSURE @ 32.7 ft	6.7 psf	320.0 Pa
IMPORTANCE FAC (I)	1.00	BASE ABOVE Grd	1.0	
DIRECTION FAC (Kd)	.95	CREST HEIGHT	.0 ft	
TOPOGRAPHIC CAT	1			

APPURTENANCES

Sabre Areas

#	Qty	Description	Center Line Elev-Ft	WEIGHT each Lbs	AREA each Ft^2	Tx-CABLE		WIND Psf	FORCES			MOM. Lg-X Ft-K
						Type	Qty #/Ft		Tra-Y Kips	Ax-Z Kips		
- 1	1	14' LP Platform with Handrail (R	166.0	1874	98.2			9.4	.93	-7.4	-1.4	
	9	P90-15-XLH-RR	166.0	111		1 5/8"	12 1.04	9.4		-5.9		
	6	TMA	166.0	11		None	1 .00	9.4		-.3		
	1	DC6-48-60-18-8F	166.0	39		7/16"	3 .27	9.4		-.3		
2	1	User Defined Loading	165.9	5	.1			9.4	.00	.0	.0	
	6	RRUS 11	166.0	74	3.3	None	1 .00	9.4	.19	-.4	.0	
- 3	1	14' LP Platform with Handrail (R	156.0	1874	81.6			9.3	.76	-7.3	-1.1	
	9	APX16DWV-16DWV-S-E-ACU	156.0	74		1 5/8"	12 1.04	9.3		-4.8		
	6	KRY 112 134/1	156.0	16		None	1 .00	9.3		-.5		
- 4	1	14' LP Platform with Handrail (R	146.0	1874	75.4			9.2	.69	-7.3	-1.0	
	6	SC-E 6014	146.0	42		1 5/8"	6 1.04	9.2		-2.3		
	3	BXA-70063/4CF	146.0	38		1 5/8"	3 1.04	9.2		-1.2		
	3	BXA-185063/8CF	146.0	27		1 5/8"	3 1.04	9.2		-1.0		
- 5	1	14' LP Platform with Handrail (R	136.0	1874	112.6			9.1	1.02	-7.3	-1.5	
	12	DB848H90E-XY.	136.0	55		1 5/8"	18 1.04	9.0		-6.3		
	6	TMA	136.0	11		None	1 .00	9.0		-.3		
6	2	Pipe Mount (up to 6' Dish)	116.0	53	.1			8.7	.00	-.1	.0	
	2	6' SOLID DISH W/ RADOME	116.0	838	25.1	1 5/8"	12 1.04	8.7	.44	-2.5		

RESULTS

X, ft	Kzt	WIND psf	ICE in	--- FORCES, kips ---			--- MOMENTS, ft-kips ---			F'y ksi	Inter 4.8.2
				ShearX	ShearY	AxialZ	BendX	BendY	TorqZ		
169.00	1.00	11.36	1.77	.0	.01	-.1	.0	.0	.0	82.55	.000
166.00	1.00	11.32	1.76	.0	1.26	-8.9	-1.5	.0	.0	82.55	.018
165.90	1.00	11.31	1.76	.0	1.54	-9.5	-1.6	.0	.0	82.55	.019
160.90	1.00	11.24	1.76	.0	1.65	-9.9	-9.3	.0	.0	82.55	.044
156.00	1.00	11.17	1.75	.0	2.76	-17.9	-18.5	.0	.0	81.83	.076
151.00	1.00	11.09	1.75	.0	2.84	-18.3	-32.3	.0	.0	80.32	.106
148.50	1.00	11.05	1.74	.0	2.90	-18.6	-39.4	.0	.0	79.57	.119
146.00	1.00	11.02	1.74	.0	3.83	-25.6	-47.7	.0	.0	82.55	.071
145.25	1.00	11.00	1.74	.0	3.91	-26.2	-50.6	.0	.0	82.55	.073
140.25	1.00	10.92	1.73	.0	4.02	-27.1	-70.1	.0	.0	82.55	.086
136.00	1.00	10.85	1.73	.0	5.40	-36.7	-88.8	.0	.0	82.55	.101
131.00	1.00	10.77	1.72	.0	5.52	-37.7	-115.8	.0	.0	82.55	.114
126.00	1.00	10.68	1.72	.0	5.64	-38.6	-143.3	.0	.0	82.55	.125
121.00	1.00	10.59	1.71	.0	5.76	-39.6	-171.5	.0	.0	82.55	.134
116.00	1.00	10.50	1.70	.0	6.38	-43.3	-200.3	.0	.0	82.55	.142
111.00	1.00	10.40	1.69	.0	6.50	-44.4	-232.2	.0	.0	82.55	.149
106.00	1.00	10.30	1.69	.0	6.62	-45.6	-264.7	.0	.0	82.55	.155
101.00	1.00	10.20	1.68	.0	6.70	-46.3	-297.8	.0	.0	82.55	.159
100.00	1.00	10.18	1.68	.0	6.79	-47.6	-304.5	.0	.0	82.55	.160
95.00	1.00	10.07	1.67	.0	6.93	-49.6	-338.4	.0	.0	82.55	.147
90.00	1.00	9.96	1.66	.0	7.07	-51.3	-373.1	.0	.0	82.55	.150
85.00	1.00	9.84	1.65	.0	7.20	-52.8	-408.4	.0	.0	82.55	.152
80.00	1.00	9.72	1.64	.0	7.34	-54.3	-444.5	.0	.0	82.55	.154
75.00	1.00	9.59	1.63	.0	7.48	-55.9	-481.2	.0	.0	82.55	.155
70.00	1.00	9.45	1.62	.0	7.63	-57.5	-518.6	.0	.0	82.55	.156
65.00	1.00	9.31	1.61	.0	7.77	-59.1	-556.8	.0	.0	82.55	.157
60.00	1.00	9.15	1.60	.0	7.91	-60.8	-595.6	.0	.0	82.30	.158
55.00	1.00	8.99	1.58	.0	8.01	-62.1	-635.1	.0	.0	81.65	.159
53.25	1.00	8.93	1.58	.0	8.11	-63.8	-649.2	.0	.0	81.43	.160
48.25	1.00	8.75	1.56	.0	8.21	-65.4	-689.7	.0	.0	81.19	.167
46.50	1.00	8.68	1.56	.0	8.31	-67.1	-704.1	.0	.0	80.97	.167
41.50	1.00	8.48	1.54	.0	8.44	-69.3	-745.6	.0	.0	80.32	.169
36.50	1.00	8.26	1.52	.0	8.58	-71.2	-787.8	.0	.0	79.67	.170
31.50	1.00	8.02	1.50	.0	8.71	-73.2	-830.7	.0	.0	79.02	.171
26.50	1.00	7.74	1.47	.0	8.84	-75.2	-874.2	.0	.0	78.38	.172
21.50	1.00	7.42	1.44	.0	8.98	-77.2	-918.3	.0	.0	77.73	.173
16.50	1.00	7.04	1.41	.0	9.12	-79.3	-963.3	.0	.0	77.08	.175
11.50	1.00	6.82	1.36	.0	9.26	-81.4	-1009.2	.0	.0	76.43	.176

SABRE COMMUNICATIONS CORP	JOB: 00-42498	31-Mar-11 13:30
2101 Murray Street	SBA NETWORK SERVICES INC	Ph 712.258.6690
Sioux City, IA 51101	East Lyme, CT	Fx 712.258.8250

6.50	1.00	6.82	1.29	.0	9.41	-83.5	-1055.0	.0	.0	75.79	.177
1.50	1.00	6.82	1.16	.0	9.51	-84.9	-1102.5	.0	.0	75.14	.178
.00	1.00	6.82	1.06	.0	9.53	-85.1	1116.7	.0	.0	74.94	.178

DISPLACEMENTS

ELEV	DEFLECTION feet				ROTATION, degrees			
X, ft	X	Y	Z	XY-Result	X	Y	Z	XY-Result
169.00	.00	2.76	-.04	2.76< 1.63%>	-1.89	.00	.00	1.89

SABRE COMMUNICATIONS CORP
2101 Murray Street
Sioux City, IA 51101

JOB: 00-42498
SBA NETWORK SERVICES INC
East Lyme, CT

31-Mar-11 13:30
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Fx 712.258.8250

CASE - 4: Service Loads

ANSI-TIA-222-G

WIND	OLF	1.00	GUSTED WIND (3sec)	60.0 mph	96.6 kph
VERTICAL	OLF	1.00	EXP-CAT/STRUC CLASS	C-II	
DESIGN	ICE	.00	EXP-POWER COEFF.	.2105	
GUST FACTOR	(Gh)	1.10	REFERENCE HEIGHT	900.0 ft	
FORCE COEFF	(Cf)	.65	PRESSURE @ 32.7 ft	8.6 psf	412.3 Pa
IMPORTANCE FAC	(I)	1.00	BASE ABOVE Grd	1.0	
DIRECTION FAC	(Kd)	.85	CREST HEIGHT	.0 ft	
TOPOGRAPHIC CAT		1			

APPURTENANCES

Sabre Areas

#	Qty	Description	Center Line Elev-Ft	WEIGHT each Lbs	AREA each Ft^2	Tx-CABLE		WIND Psf	FORCES		
						Type	Qty #/Ft		Tra-Y Kips	Ax-Z Kips	MOM. Lg-X Ft-K
- 1	1	14' LP Platform with Handrail (R	166.0	1704	80.7			12.2	.98	-1.7	-1.5
	9	P90-15-XLH-RR	166.0	64		1 5/8"	12 1.04	12.1		-2.6	
	6	TMA	166.0	8		None	1 .00	12.1		.0	
	1	DC6-48-60-18-8F	166.0	20		7/16"	3 .27	12.1		-.2	
2	1	User Defined Loading	165.9	5	.1			12.1	.00	.0	.0
	6	RRUS 11	166.0	55	2.9	None	1 .00	12.1	.21	-.3	.0
- 3	1	14' LP Platform with Handrail (R	156.0	1704	66.6			12.0	.80	-1.7	-1.2
	9	APX16DWV-16DWV-S-E-ACU	156.0	40		1 5/8"	12 1.04	12.0		-2.3	
	6	KRY 112 134/1	156.0	10		None	1 .00	12.0		-.1	
- 4	1	14' LP Platform with Handrail (R	146.0	1704	61.8			11.9	.73	-1.7	-1.1
	6	SC-E 6014	146.0	15		1 5/8"	6 1.04	11.8		-1.0	
	3	BXA-70063/4CF	146.0	9		1 5/8"	3 1.04	11.8		-.5	
	3	BXA-185063/8CF	146.0	10		1 5/8"	3 1.04	11.8		-.5	
- 5	1	14' LP Platform with Handrail (R	136.0	1704	86.5			11.7	1.01	-1.7	-1.5
	12	DB848H90E-XY.	136.0	28		1 5/8"	18 1.04	11.7		-2.9	
	6	TMA	136.0	8		None	1 .00	11.7		.0	
6	2	Pipe Mount (up to 6' Dish)	116.0	49	.1			11.3	.00	-.1	.0
	2	6' SOLID DISH W/ RADOME	116.0	330	24.4	1 5/8"	12 1.04	11.3	.55	-2.1	

RESULTS

X, ft	Kzt	WIND psf	ICE in	--- FORCES, kips ---			--- MOMENTS, ft-kips ---			F'y ksi	Inter 4.8.2
				ShearX	ShearY	Axiaz	BendX	BendY	TorqZ		
169.00	1.00	7.93	.00	.0	.00	.0	.0	.0	.0	82.55	.000
166.00	1.00	7.90	.00	.0	1.13	-4.6	-1.5	.0	.0	82.55	.012
165.90	1.00	7.90	.00	.0	1.41	-5.0	-1.7	.0	.0	82.55	.013
160.90	1.00	7.85	.00	.0	1.47	-5.2	-8.7	.0	.0	82.55	.036
156.00	1.00	7.79	.00	.0	2.45	-9.5	-17.1	.0	.0	81.83	.062
151.00	1.00	7.74	.00	.0	2.49	-9.7	-29.3	.0	.0	80.32	.088
148.50	1.00	7.72	.00	.0	2.53	-9.8	-35.5	.0	.0	79.57	.099
146.00	1.00	7.69	.00	.0	3.38	-13.7	-43.0	.0	.0	82.55	.059
145.25	1.00	7.68	.00	.0	3.43	-14.1	-45.5	.0	.0	82.55	.061
140.25	1.00	7.62	.00	.0	3.50	-14.6	-62.6	.0	.0	82.55	.072
136.00	1.00	7.57	.00	.0	4.69	-19.7	-79.0	.0	.0	82.55	.084
131.00	1.00	7.52	.00	.0	4.77	-20.2	-102.5	.0	.0	82.55	.095
126.00	1.00	7.45	.00	.0	4.84	-20.7	-126.3	.0	.0	82.55	.105
121.00	1.00	7.39	.00	.0	4.92	-21.3	-150.5	.0	.0	82.55	.112
116.00	1.00	7.33	.00	.0	5.60	-24.1	-175.1	.0	.0	82.55	.119
111.00	1.00	7.26	.00	.0	5.68	-24.8	-203.1	.0	.0	82.55	.125
106.00	1.00	7.19	.00	.0	5.76	-25.4	-231.5	.0	.0	82.55	.130
101.00	1.00	7.12	.00	.0	5.81	-25.9	-260.3	.0	.0	82.55	.134
100.00	1.00	7.10	.00	.0	5.87	-26.7	-266.1	.0	.0	82.55	.135
95.00	1.00	7.03	.00	.0	5.97	-28.1	-295.4	.0	.0	82.55	.124
90.00	1.00	6.95	.00	.0	6.07	-29.2	-325.3	.0	.0	82.55	.127
85.00	1.00	6.87	.00	.0	6.16	-30.1	-355.7	.0	.0	82.55	.128
80.00	1.00	6.78	.00	.0	6.25	-31.0	-386.4	.0	.0	82.55	.130
75.00	1.00	6.69	.00	.0	6.35	-31.9	-417.7	.0	.0	82.55	.130
70.00	1.00	6.60	.00	.0	6.45	-32.9	-449.4	.0	.0	82.55	.131
65.00	1.00	6.50	.00	.0	6.55	-33.9	-481.7	.0	.0	82.55	.132
60.00	1.00	6.39	.00	.0	6.65	-35.0	-514.4	.0	.0	82.30	.132
55.00	1.00	6.27	.00	.0	6.72	-35.8	-547.7	.0	.0	81.65	.134
53.25	1.00	6.23	.00	.0	6.79	-36.9	-559.4	.0	.0	81.43	.134
48.25	1.00	6.11	.00	.0	6.86	-38.0	-593.3	.0	.0	81.19	.140
46.50	1.00	6.06	.00	.0	6.93	-39.2	-605.3	.0	.0	80.97	.140
41.50	1.00	5.92	.00	.0	7.03	-40.6	-640.0	.0	.0	80.32	.141
36.50	1.00	5.77	.00	.0	7.12	-41.8	-675.1	.0	.0	79.67	.142
31.50	1.00	5.60	.00	.0	7.22	-43.0	-710.8	.0	.0	79.02	.143
26.50	1.00	5.40	.00	.0	7.32	-44.2	-746.8	.0	.0	78.38	.143
21.50	1.00	5.18	.00	.0	7.42	-45.5	-783.4	.0	.0	77.73	.144
16.50	1.00	4.91	.00	.0	7.52	-46.8	-820.5	.0	.0	77.08	.145
11.50	1.00	4.76	.00	.0	7.62	-48.2	-858.3	.0	.0	76.43	.145

SABRE COMMUNICATIONS CORP	JOB: 00-42498	31-Mar-11 13:30
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6.50	1.00	4.76	.00	.0	7.73	-49.5	-895.8	.0	.0	75.79	.146
1.50	1.00	4.76	.00	.0	7.80	-50.4	-935.0	.0	.0	75.14	.147
.00	1.00	4.76	.00	.0	7.82	-50.6	946.7	.0	.0	74.94	.147

DISPLACEMENTS

ELEV	DEFLECTION feet				ROTATION, degrees				Micro
X, ft	X	Y	Z	XY-Result	X	Y	Z	XY-Result	Allow
169.00	.00	2.39	-.03	2.39< 1.41%>	-1.65	.00	.00	1.65	

SABRE COMMUNICATIONS CORP
2101 Murray Street
Sioux City, IA 51101

JOB: 00-42498
SBA NETWORK SERVICES INC
East Lyme, CT

31-Mar-11 13:30
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SHAPE: 18 SIDED POLYGON with FLAT-FLAT ORIENTATION
BOLTS: EVENLY SPACED BOLTS 10.44 in. ON CENTER
LOCATE:

POLE DATA

DIAMETER =	60.14 in.	BASE	AXIAL FORCE=	-62.8 kips	Vert
PLATE =	.4375 in.	ACTIONS	SHEAR X =	55.5 kips	Long
TAPER =	.2730 in/ft		SHEAR Y =	.0 kips	Tran
POLE Fy =	65.00 ksi		X-AXIS MOM =	4791.1 ft-kips	Tran
			Y-Axis MOM =	4791.1 ft-kips	Long
			Z-Axis MOM =	.0 ft-kips	Vert

DESIGN CASE = 1 3s Gusted Wind

Design: ANY Orientation Reactions at 45.00 deg to X-AXIS

BOLT LOADS

AXIAL - COMPRESSION	=	246.80 kips	
AXIAL - TENSION	=	240.51 kips	
SHEAR	=	2.78 kips	
AXIAL STRESS	=	75.94 ksi	
SHEAR STRESS	=	.90 ksi	
YIELD STRENGTH Fy	=	75.00 ksi	
ULT. STRENGTH Fu	=	100.00 ksi	
ALLOW STRESS Fa [.80 x 1.00]	=	80.00 ksi	Interaction .972 TIA-G
SHEAR Fv [.80 x .40]	=	32.00 ksi	
TENSION AREA REQUIRED	=	3.08 in^2	
TENSION AREA FURNISHED	=	3.25 in^2	
ROOT AREA FURNISHED	=	3.07 in^2	

A615 ::: ANCHOR BOLT DESIGN USED

20 Bolts on a	66.750 in.	Bolt Circle	SHIP
2.250 in. Diameter	67.13 in.	Embedded	(lbs)
12.00 in. Exposed	84.00 in.	Total Length	2693

CONCRETE - Fc= 4000 psi

ANCHOR BOLTS are STRAIGHT w\ UPLIFT NUT

BASE PLATE

[Bend Model: 1/4 Circ]
YIELD STRENGTH = 50.0 ksi
BEND LINE WIDTH = 47.7 in.
PLATE MOMENT = 3651.4 in-k
THICKNESS REQD = 2.608 in.
BENDING STRESS = 40.5 ksi
ALLOWABLE STRESS = 45.0 ksi
[Fy x .90 x 1.00]

BASE PLATE USED

2.75 in.	THICK	SHIP
72.75 in.	ROUND	(lbs)
47.75 in.	CENTER HOLE	1752

LOAD CASE SUMMARY

							ABolt-Str		Plate-Str		
FORCES-(kips)				MOMENTS-(ft-k)			Allow		Actual	Allow	Design
LC	Axial	ShearX	ShearY	X-axis	Y-axis	TorQ	CSR	ksi	ksi	ksi	Code
1	62.8	55.5	.0	6776	0	0	.972	75.00	40.47	45.00	TIA-G
2	47.6	55.5	.0	6666	0	0	.954	75.00	39.69	45.00	TIA-G
3	85.1	9.5	.0	1116	0	0	.175	75.00	7.35	45.00	TIA-G
4	50.6	7.8	.0	946	0	0	.144	75.00	6.03	45.00	TIA-G

MAT FOUNDATION DESIGN BY SABRE TOWERS & POLES

170' Monopole SBA NETWORK SERVICES INC East Lyme, CT (42498) 4-4-11 ARH

Overall Loads:

Factored Moment (ft-kips)	7793/1705
Factored Axial (kips)	72.23495
Factored Shear (kips)	63.871
Bearing Design Strength (ksf)	12
Water Table Below Grade (ft)	999
Width of Mat (ft)	30
Thickness of Mat (ft)	2
Depth to Bottom of Slab (ft)	5.5
Quantity of Bolts in Bolt Circle	20
Bolt Circle Diameter (in)	66.75
Top of Concrete to Top of Bottom Threads (in)	60
Diameter of Pier (ft)	9.03
Ht. of Pier Above Ground (ft)	1
Ht. of Pier Below Ground (ft)	3.5
Quantity of Bars in Mat	54
Bar Diameter in Mat (in)	1
Area of Bars in Mat (in ²)	42.41
Spacing of Bars in Mat (in)	6.66
Quantity of Bars Pier	48
Bar Diameter in Pier (in)	1.128
Tie Bar Diameter in Pier (in)	0.5
Spacing of Ties (in)	12
Area of Bars in Pier (in ²)	47.97
Spacing of Bars in Pier (in)	6.56
f _c (ksi)	4
f _y (ksi)	60
Unit Wt. of Soil (kcf)	0.12
Unit Wt. of Concrete (kcf)	0.15

Volume of Concrete (yd³) 77.34

Two-Way Shear Action:

Average d (in)	20
ϕV_c (kips)	1524.1
$\phi V_c = \phi(2 + 4/\beta_c)f_c^{1/2}b_o d$	2295.4
$\phi V_c = \phi(\alpha_s d/b_o + 2)f_c^{1/2}b_o d$	1524.1
$\phi V_c = \phi 4f_c^{1/2}b_o d$	1530.2
Shear perimeter, b _o (in)	403.25
β_c	1

One-Way Shear:

ϕV_c (kips)	774.1
-------------------	-------

Stability:

Overturning Design Strength (ft-k)	8286.4
------------------------------------	--------

Max. Net Bearing Press. (ksf)

3.38

Ultimate Bearing Pressure (ksf)
Bearing ϕ_s

16.00
0.75

Minimum Pier Diameter (ft)
Equivalent Square b (ft)

7.06
8.00

Recommended Spacing (in)

6 to 12

Minimum Pier A_s (in²)
Recommended Spacing (in)

46.11
6 to 12

V_u (kips)

124.1

V_u (kips)

458.9

Total Applied M (ft-k)

8208.3

MAT FOUNDATION DESIGN BY SABRE TOWERS & POLES (CONTINUED)

170' Monopole SBA NETWORK SERVICES INC East Lyme, CT (42498) 4-4-11 ARH

Pier Design:

ϕV_n (kips)	1013.9	V_u (kips)	63.9
$\phi V_c = \phi 2(1 + N_u / (2000 A_g)) f_c^{1/2} b_w d$	1013.9		
V_s (kips)	0.0	*** $V_s \text{ max} = 4 f_c^{1/2} b_w d$ (kips)	2376.4
Maximum Spacing (in)	4.35	(Only if Shear Ties are Required)	
Actual Hook Development (in)	19.00	Req'd Hook Development l_{dh} (in)	14.98
		*** Ref. To Spacing Requirements ACI 11.5.4.3	

Flexure in Slab:

ϕM_n (ft-kips)	3618.6	M_u (ft-kips)	3352.5
a (in)	2.08		
Steel Ratio	0.00589		
β_1	0.85		
Maximum Steel Ratio (.75 p_b)	0.0214		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	177.00	Required Development in Pad (in)	43.76

Condition	1 is OK, 0 Fails
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Interaction Diagram Visual Check	1
Two-Way Shear Action	1
One-Way Shear Action	1
Overturning	1
Flexure	1
Steel Ratio	1
Length of Development in Pad	1
Hook Development	1