ATTACHMENT 1

NEW CINGULAR WIRELESS PCS, LLC
WIRELESS COMMUNICATIONS FACILITY #SR1252
BRIDGEWATER

111 SECOND HILL ROAD
BRIDGEWATER, CONNECTICUT

PROJECT SUMMARY

SITE NUMBER:	SR1252
SITE NAME:	BRIDGEWATER
SITE ADDRESS:	111 SECOND HILL ROAD BRIDGEWATER, CT 06752
PROPERTY OWNER:	ROBERT REIBE 111 SECOND HILL ROAD BRIDGEWATER, CT 06752
APPLICANT:	NEW CINGULAR WIRELESS PCS, LLC 500 ENTERPRISE DRIVE ROCKY HILL, CT 06067
CONTACT:	BRYON MORAWSKI (860) 513-7223
1A COORDINATES:	41° 33' 17.9"N 72° 22' 15.2"W
HORIZONTAL DATUM:	NAD 83
GROUND ELEVATION:	908' AMSL
SITE PARCEL NO.:	28-50
CURRENT ZONING:	RR3
ENGINEER:	CLOUGH HARBOUR & ASSOCIATES LLP 2139 SILAS DEANE HIGHWAY SUITE 212 ROCKY HILL, CT 06067
CONTACT:	PAUL LUSITANI (860) 257-4557

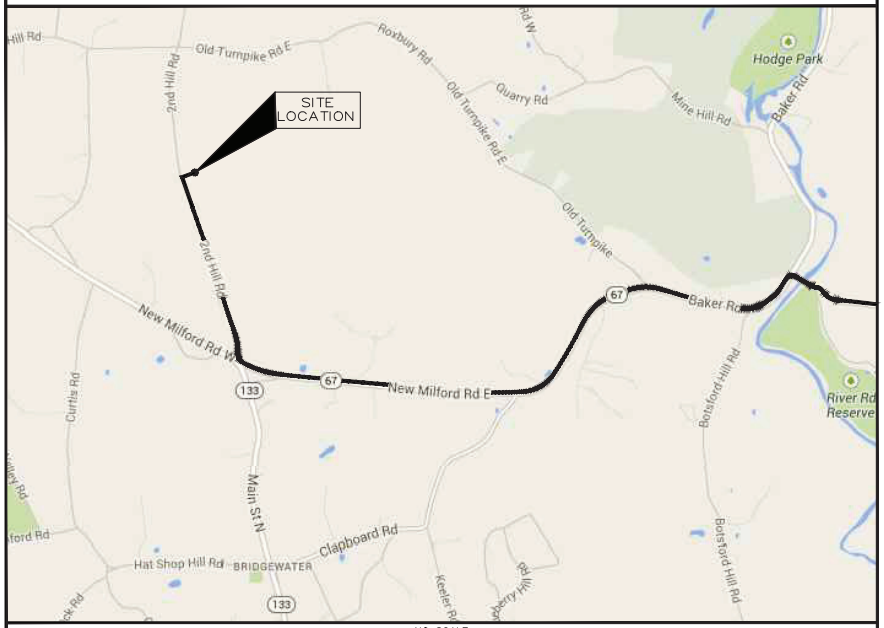
DRIVING DIRECTIONS

FROM HARTFORD:
1. TAKE I-84W.
2. TAKE EXIT 15 FOR US-6E/CT-67N.
3. TAKE A RIGHT ONTO MAIN ST NORTH (US-6E/CT-67N).
4. TAKE A LEFT ONTO ROXBURY RD (CT-67N) AND CONTINUE ONTO SOUTHBURY RD (CT-67N).
5. TAKE A LEFT ONTO CHURCH STREET/WELLERS BRIDGE RD.
6. TAKE A LEFT ONTO BAKERS RD (CT-67N) AND CONTINUE ONTO NEW MILFORD RD E (CT-67N).
7. TAKE A RIGHT ONTO SECOND HILL RD. ACCESS DRIVE WILL BE ON RIGHT JUST PAST 111 SECOND HILL ROAD.

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF A 160' MONOPOLE TOWER WITH PANEL ANTENNAS AT AN ELEVATION OF 156' ON THE TOWER. TELECOMMUNICATIONS EQUIPMENT WILL BE PLACED WITHIN A 45' X 90' FENCED COMPOUND AREA AT THE TOWER BASE.

VICINITY MAP



NO SCALE

DECEMBER 16, 2013

SHEET INDEX

SHEET NO:	SHEET TITLE	REVISION HISTORY NO:	REVISION HISTORY DATE
T01	TITLE SHEET	1	12 / 16 / 13
C01	SITE PLAN	1	12 / 16 / 13
C02	SITE GRADING PLAN	1	12 / 16 / 13
C03	SITE LAYOUT PLAN	1	12 / 16 / 13
C04	SITE LANDSCAPING PLAN	1	12 / 16 / 13
C05	ACCESS DRIVE PROFILE & ENVIRONMENTAL NOTES	1	12 / 16 / 13
C06	COMPOUND PLAN & SITE NOTES	1	12 / 16 / 13
C07	ELEVATION & DETAILS	1	12 / 16 / 13
C08	SITE DETAILS	1	12 / 16 / 13
C09	SITE DETAILS	1	12 / 16 / 13
C10	SITE DETAILS	1	12 / 16 / 13
C11	SITE DETAILS	1	12 / 16 / 13
C12	SITE DETAILS	1	12 / 16 / 13
C13	SITE DETAILS	1	12 / 16 / 13
C14	GUIDERAIL DETAILS	1	12 / 16 / 13
C15	STRUCTURAL DETAILS	1	12 / 16 / 13
C16	STRUCTURAL DETAILS	1	12 / 16 / 13
C17	STRUCTURAL NOTES	1	12 / 16 / 13

DO NOT SCALE DRAWINGS

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

CALL before you DIG FOR CT 1-800-922-4455

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ROCKY HILL, CT 06067

SAI
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SALEM, NH 03079

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2139 Silas Deane Highway, Suite 212 • Rocky Hill, CT 06067-2336
Main: (860) 257-4557 • www.chacompanies.com

CHA PROJECT NO:
18301 – 1071 – 43000

NO.	SUBMITTAL		
0	11/13/13	D&M PLAN SUBMISSION	
	BY: JDM	CHK: PAL	APP'D: JPS
1	12/16/13	REVISED RF INFORMATION	
	BY: PAL	CHK: PAL	APP'D: JPS

STATE OF CONNECTICUT
JOHN P. SOBIECH
No. 17827
LICENSED PROFESSIONAL ENGINEER

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BRIDGEWATER, CT
06752
LITCHFIELD COUNTY

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T01

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 RESEARCH OR OTHER SOURCES OF INFORMATION. IT IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD SURVEY, AND IS SUBJECT TO SUCH CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE.

TYPE OF SURVEY: COMPILATION PLAN

BOUNDARY DETERMINATION CATEGORY: NONE

CLASS OF ACCURACY: HORIZONTAL CLASS A–2
VERTICAL CLASS V–2
TOPOGRAPHIC CLASS T–2

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

3. BASE MAPPING PREPARED BY CHA FROM A DECEMBER 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 SURFACE 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 OBSERVATIONS REFERENCED TO NAD83 CONNECTICUT ZONE. COORDINATES SHOWN, IF ANY, ARE EXPRESSED IN U.S. SURVEY FEET. ELEVATIONS ARE REFERENCED TO NAVD88. TOP OF STRUCTURE HEIGHT AS SHOWN, IF ANY, DETERMINED BY VERTICAL ANGLE OR BY ACTUAL LOCATION.
INFORMATION SHOWN BASED ON FAA 1A CERTIFICATION
ACCURACY LEVEL DEFINED AS;
HORIZONTAL: ±20 FEET / 15 METERS
VERTICAL: ±3 FEET / 6 METERS

9. SITE FALLS WITHIN ZONE "C" DEFINED AS AREAS OF MINIMAL FLOODING, AS SHOWN ON FLOOD INSURANCE RATE MAP, TOWN OF BRIDGEWATER, CONNECTICUT, LITCHFIELD COUNTY, COMMUNITY PANEL NUMBER 090184 0001 B, EFFECTIVE DATE NOVEMBER 1, 1979.

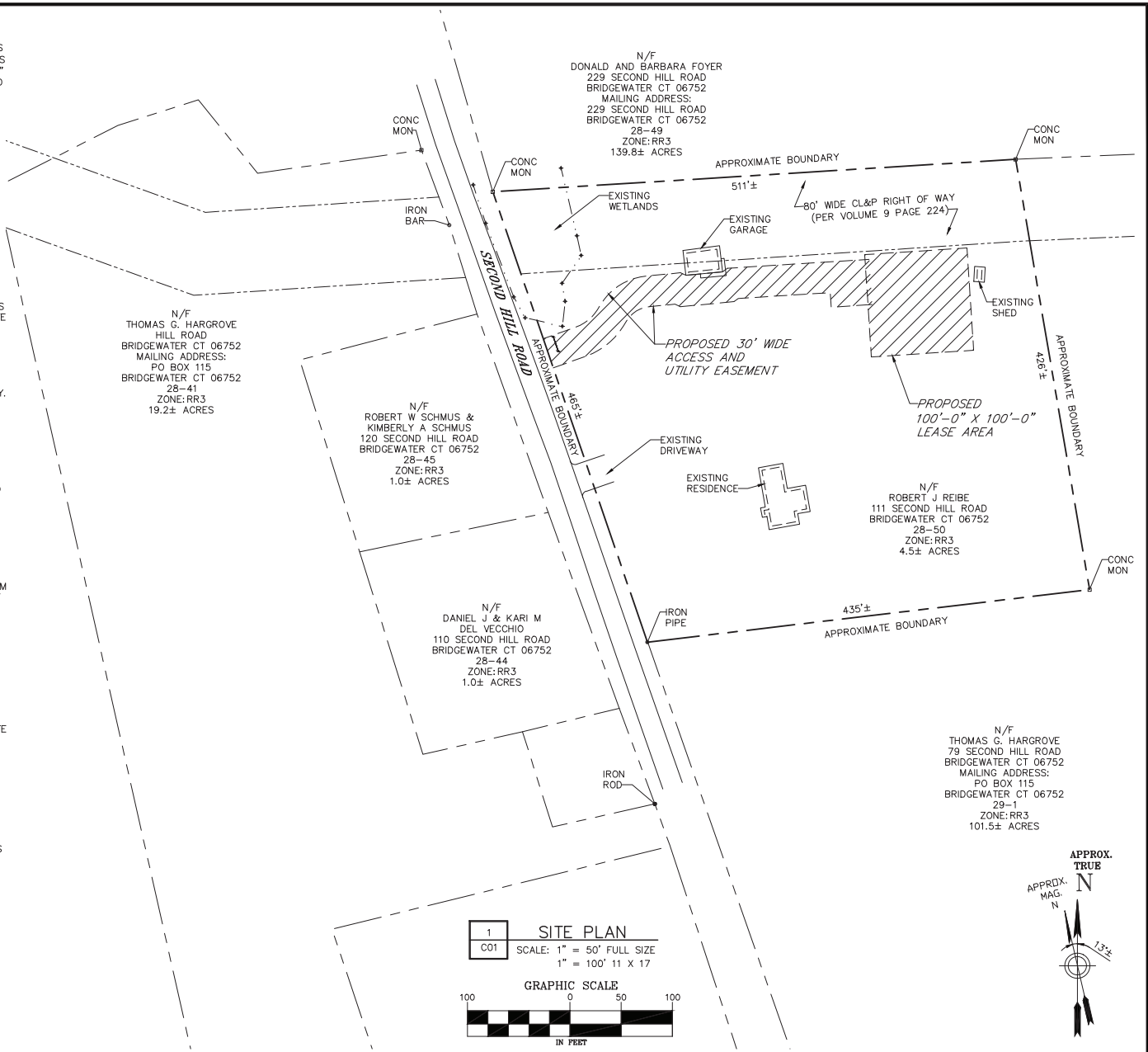
MAP REFERENCES:

1. MAP ENTITLED "42.461 ACRES PREPARED FOR STATE OF CONNECTICUT LOWENTHAL PROPERTY" AS PREPARED BY LINWOOD R. GEE & SON INC., DATED MAY 8, 1990 AND FILED IN THE BRIDGEWATER TOWN CLERKS OFFICE AS MAP NO. 931.

2. MAP ENTITLED "114.735 ACRES (SHEET 1 OF 2) MAP SHOWING DEVELOPMENT RIGHTS TO BE AQUIRED BY THE STATE OF CONNECTICUT FROM ANDRE VONDERWEIDT AND MARILENE VONERWEIDT" AS PREPARED BY SAMUEL P. BERTACINI, DATED FEBRUARY 1983 AND FILED IN THE BRIDGEWATER TOWN CLERKS OFFICE AS MAP NO. 904A.

3. MAP ENTITLED "SHEET 1 OF 2 PROPERTY SURVEY PREPARED FOR ELEANOR LOWENTHAL, ANNE C. HERMANS, JAMES D. LOWENTHAL, KATHERINE LEVIN, BARALEVIN & JENNIFER LEVIN" AS PREPARED BY NEW ENGLAND LAND SURVEYING, PC., DATED MAY 20, 2009 AND FILED IN THE BRIDGEWATER TOWN CLERKS OFFICE AS MAP NO. 1155A.

4. TOWN OF BRIDGEWATER TAX MAP NUMBER 28.



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SHEET TITLE
SITE PLAN

SHEET NUMBER
C01

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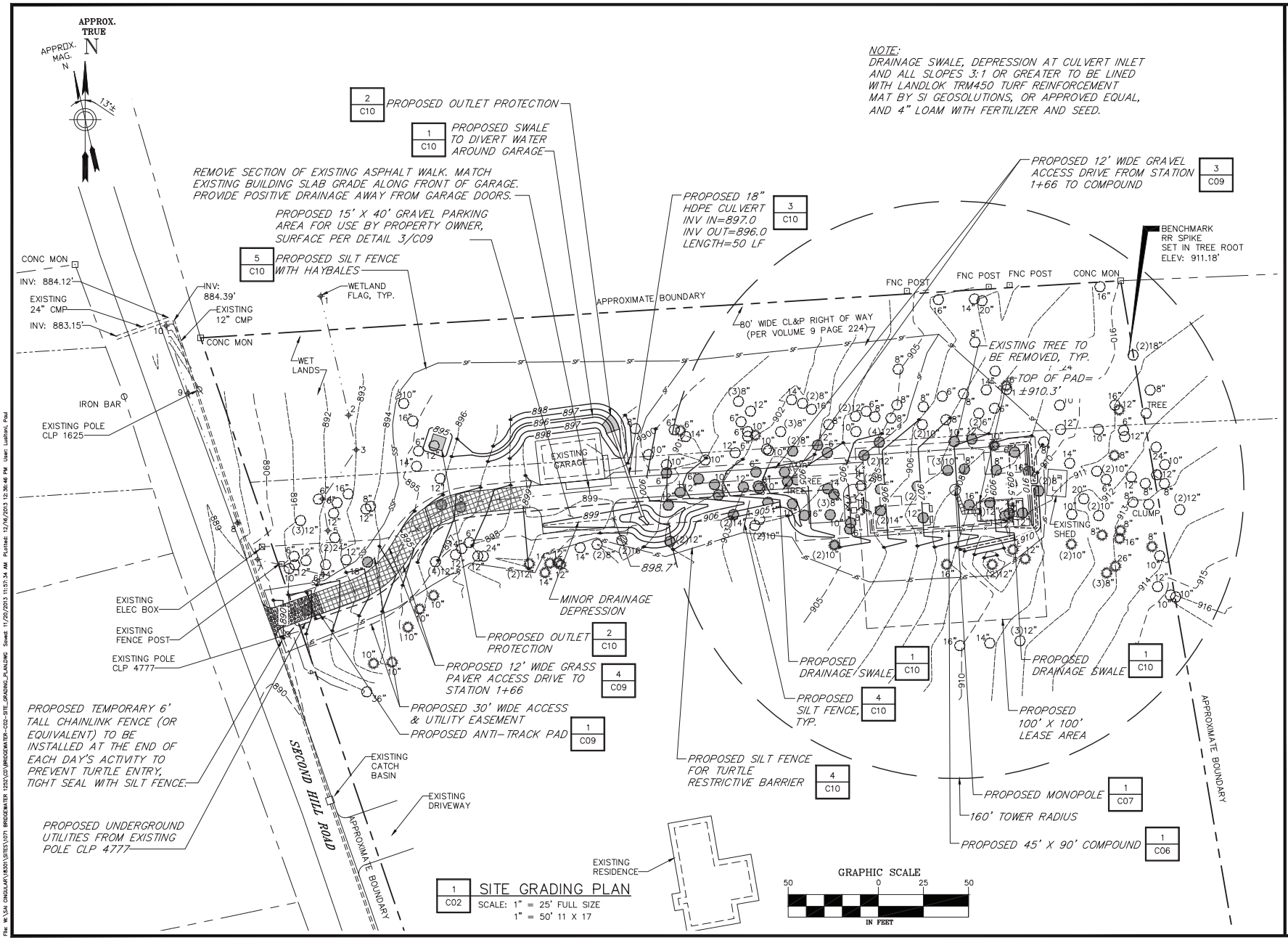

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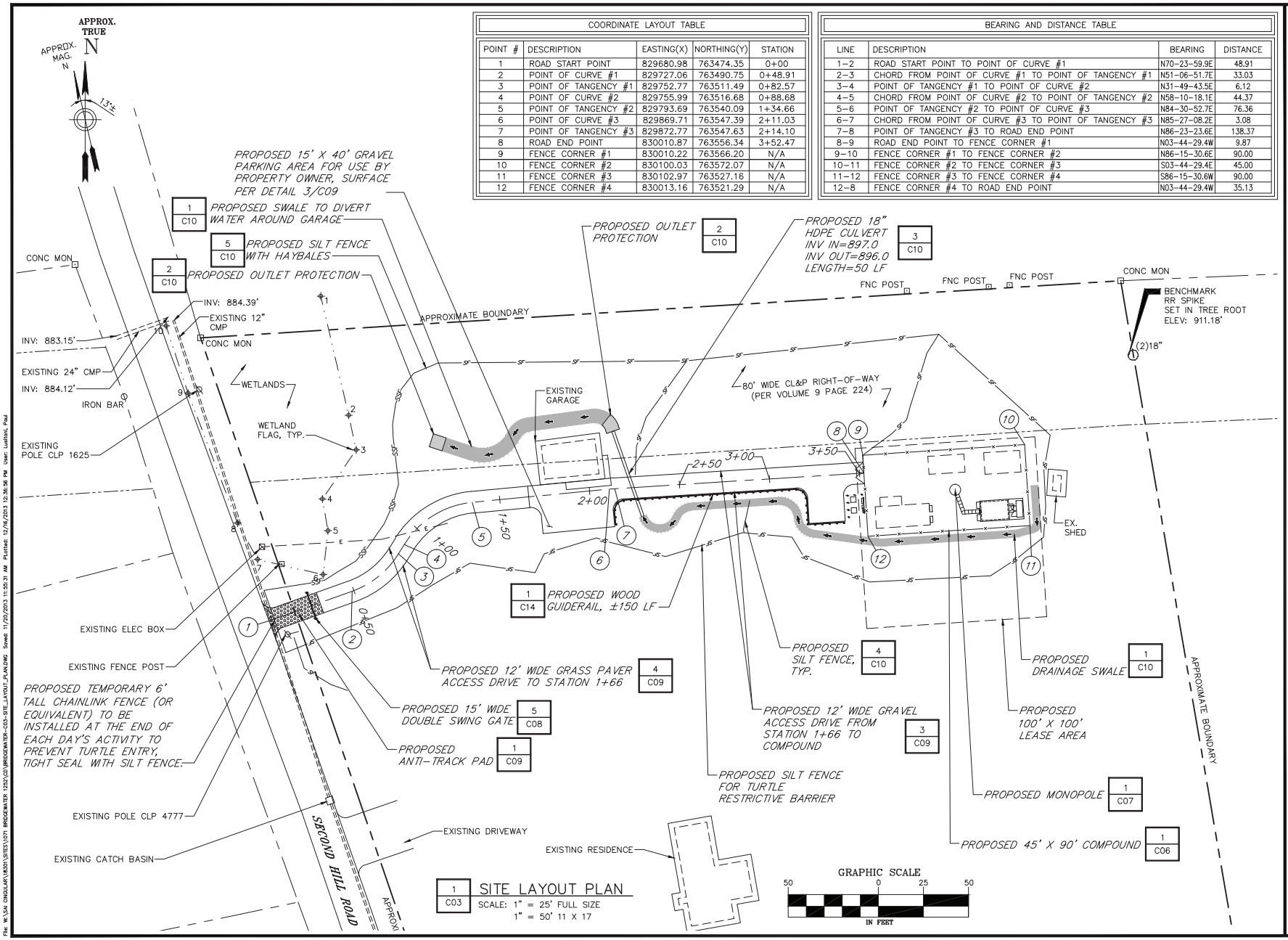
SITE GRADING PLAN

SHEET NUMBER
C02



COORDINATE LAYOUT TABLE				
POINT #	DESCRIPTION	EASTING(X)	NORTHING(Y)	STATION
1	ROAD START POINT	829680.98	763474.35	0+00
2	POINT OF CURVE #1	829727.06	763490.75	0+48.91
3	POINT OF TANGENCY #1	829752.77	763511.49	0+82.57
4	POINT OF CURVE #2	829755.99	763516.68	0+88.68
5	POINT OF TANGENCY #2	829793.69	763540.09	1+34.66
6	POINT OF CURVE #3	829869.71	763547.39	2+11.03
7	POINT OF TANGENCY #3	829872.77	763547.63	2+14.10
8	ROAD END POINT	830010.87	763556.34	3+52.47
9	FENCE CORNER #1	830010.22	763566.20	N/A
10	FENCE CORNER #2	830100.03	763572.07	N/A
11	FENCE CORNER #3	830102.97	763527.16	N/A
12	FENCE CORNER #4	830013.16	763521.29	N/A

BEARING AND DISTANCE TABLE			
LINE	DESCRIPTION	BEARING	DISTANCE
1–2	ROAD START POINT TO POINT OF CURVE #1	N70-23-59.9E	48.91
2–3	CHORD FROM POINT OF CURVE #1 TO POINT OF TANGENCY #1	N51-06-51.7E	33.03
3–4	POINT OF TANGENCY #1 TO POINT OF CURVE #2	N31-49-43.5E	6.12
4–5	CHORD FROM POINT OF CURVE #2 TO POINT OF TANGENCY #2	N58-10-18.1E	44.37
5–6	POINT OF TANGENCY #2 TO POINT OF CURVE #3	N84-30-52.7E	76.36
6–7	CHORD FROM POINT OF CURVE #3 TO POINT OF TANGENCY #3	N85-27-08.2E	3.08
7–8	POINT OF TANGENCY #3 TO ROAD END POINT	N86-23-23.6E	138.37
8–9	ROAD END POINT TO FENCE CORNER #1	N03-44-29.4W	9.87
9–10	FENCE CORNER #1 TO FENCE CORNER #2	N86-15-30.6E	90.00
10–11	FENCE CORNER #2 TO FENCE CORNER #3	S03-44-29.4E	45.00
11–12	FENCE CORNER #3 TO FENCE CORNER #4	S86-15-30.6W	90.00
12–8	FENCE CORNER #4 TO ROAD END POINT	N03-44-29.4W	35.13

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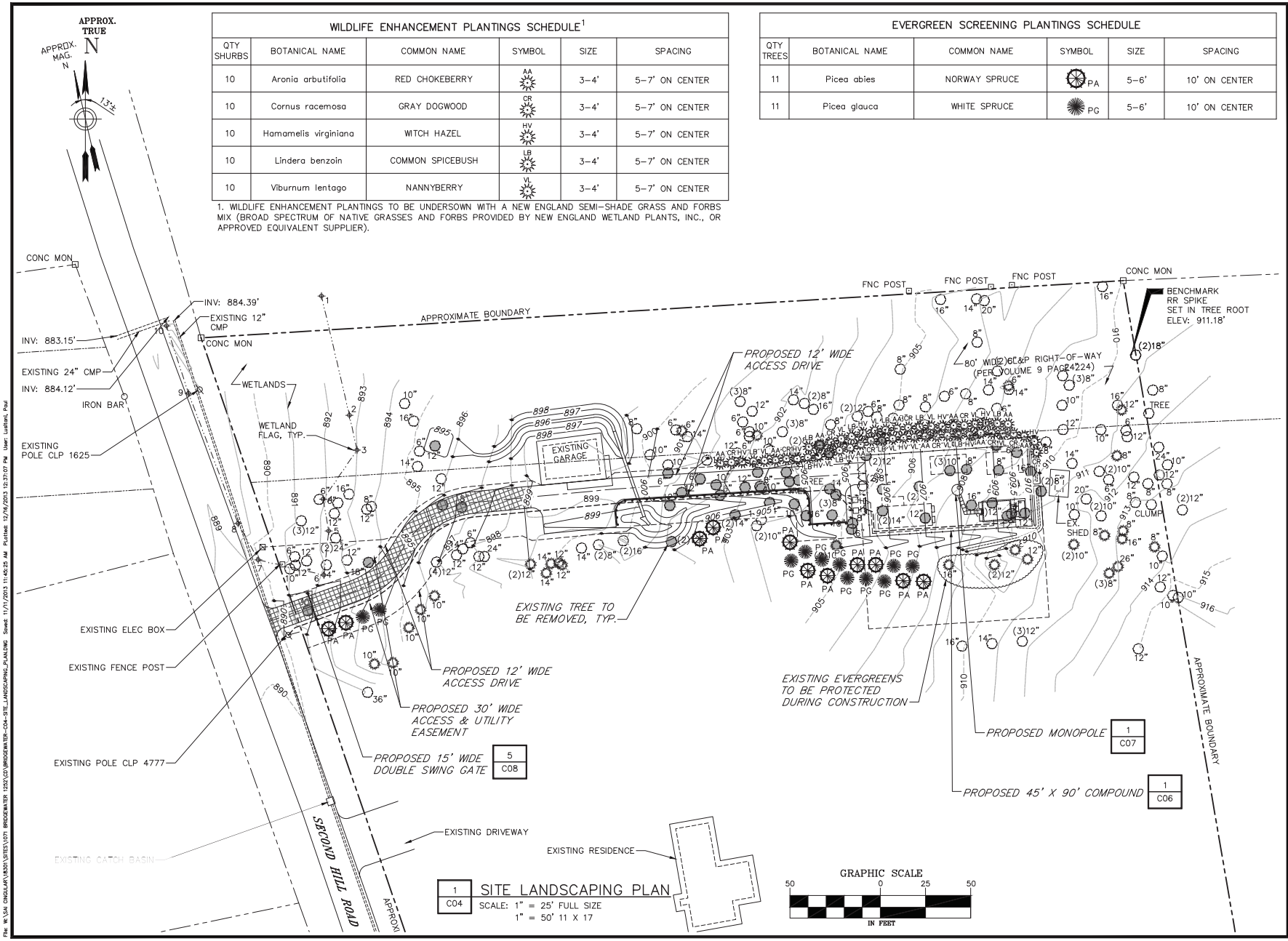
SITE LAYOUT PLAN

SHEET NUMBER
C03

WILDLIFE ENHANCEMENT PLANTINGS SCHEDULE[1]					
QTY SHURBS	BOTANICAL NAME	COMMON NAME	SYMBOL	SIZE	SPACING
10	Aronia arbutifolia	RED CHOKEBERRY	AA	3–4'	5–7' ON CENTER
10	Cornus racemosa	GRAY DOGWOOD	CR	3–4'	5–7' ON CENTER
10	Hamamelis virginiana	WITCH HAZEL	HV	3–4'	5–7' ON CENTER
10	Lindera benzoin	COMMON SPICEBUSH	LB	3–4'	5–7' ON CENTER
10	Viburnum lentago	NANNYBERRY	VL	3–4'	5–7' ON CENTER

1. WILDLIFE ENHANCEMENT PLANTINGS TO BE UNDERSOWN WITH A NEW ENGLAND SEMI–SHADE GRASS AND FORBS MIX (BROAD SPECTRUM OF NATIVE GRASSES AND FORBS PROVIDED BY NEW ENGLAND WETLAND PLANTS, INC., OR APPROVED EQUIVALENT SUPPLIER).

EVERGREEN SCREENING PLANTINGS SCHEDULE					
QTY TREES	BOTANICAL NAME	COMMON NAME	SYMBOL	SIZE	SPACING
11	Picea abies	NORWAY SPRUCE	PA	5–6'	10' ON CENTER
11	Picea glauca	WHITE SPRUCE	PG	5–6'	10' ON CENTER



1 C04 SITE LANDSCAPING PLAN
SCALE: 1" = 25' FULL SIZE
1" = 50' 11 X 17

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SHEET TITLE
SITE LANDSCAPING PLAN

SHEET NUMBER
C04

ENVIRONMENTAL NOTES:

WOOD TURTLE PROTECTION PROGRAM

THE CONSTRUCTION AREA IS LOCATED IN PROXIMITY TO WOOD TURTLE (GLYPTEMYS INSCULPTA) HABITAT, A STATE SPECIAL CONCERN SPECIES. THE FOLLOWING PROTECTIVE MEASURES WILL AVOID UNINTENTIONAL MORTALITY TO WOOD TURTLE AS A RESULT OF CONSTRUCTION ACTIVITIES FOR THE SITE IMPROVEMENTS PROPOSED. THESE PROTECTIVE MEASURES SATISFY RECOMMENDATIONS FROM THE CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION ("CTDEEP") WILDLIFE DIVISION AS SPECIFIED IN A MARCH 26, 2013 LETTER. THIS PROTECTION PLAN IS VALID UNTIL MARCH 26, 2014, AT WHICH POINT IF CONSTRUCTION HAS NOT BEEN INITIATED, A NEW NATURAL DIVERSITY DATA BASE REVIEW REQUEST FROM CTDEEP IS REQUIRED.

IT IS OF THE UTMOST IMPORTANCE THAT THE CONTRACTOR COMPLIES WITH THE REQUIREMENTS FOR THE INSTALLATION OF PROTECTIVE MEASURES AND THE EDUCATION OF EMPLOYEES AND SUBCONTRACTORS PERFORMING WORK ON THE PROJECT SITE IF WORK WILL OCCUR DURING THE WOOD TURTLE'S ACTIVE PERIOD (APRIL 1 TO NOVEMBER 15). ALL-POINTS TECHNOLOGY CORPORATION, P.C. ("APT") WILL SERVE AS THE ENVIRONMENTAL MONITOR FOR THIS PROJECT TO ENSURE THAT THE WOOD TURTLE PROTECTION MEASURES ARE IMPLEMENTED PROPERLY AND WILL PROVIDE AN EDUCATION SESSION ON WOOD TURTLE PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONTACT DEAN GUSTAFSON, SENIOR WETLAND SCIENTIST AT APT, AT LEAST 5 BUSINESS DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING. MR. GUSTAFSON CAN BE REACHED BY PHONE AT (860) 984-9515 OR VIA EMAIL AT DGUSTAFSON@ALLPOINTSTECH.COM.

THE PROPOSED WOOD TURTLE PROTECTION PROGRAM CONSISTS OF SEVERAL COMPONENTS: ISOLATION OF THE PROJECT PERIMETER; PERIODIC INSPECTION AND MAINTENANCE OF ISOLATION STRUCTURES; TURTLE SWEEPS; EDUCATION OF ALL CONTRACTORS AND SUB-CONTRACTORS PRIOR TO INITIATION OF WORK ON THE SITE; PROTECTIVE MEASURES; AND, REPORTING.

1. ISOLATION MEASURES

a. INSTALLATION OF CONVENTIONAL SILT FENCING, WHICH WILL ALSO SERVE AS AN ISOLATION OF THE WORK ZONE FROM SURROUNDING AREAS AND IS REQUIRED FOR EROSION CONTROL COMPLIANCE, SHALL BE PERFORMED BY THE CONTRACTOR FOLLOWING CLEARING ACTIVITIES AND PRIOR TO ANY EARTHWORK. APT WILL INSPECT THE WORK ZONE AREA PRIOR TO AND FOLLOWING EROSION CONTROL BARRIER INSTALLATION TO ENSURE THE AREA IS FREE OF WOOD TURTLES PRIOR TO START OF CONSTRUCTION ACTIVITIES.

b. THE FENCING WILL CONSIST OF CONVENTIONAL EROSION CONTROL WOVEN FABRIC, INSTALLED APPROXIMATELY SIX INCHES BELOW SURFACE GRADE TO BURY THE BOTTOM OF THE SILT FENCE AND STAKED AT SEVEN TO TEN-FOOT INTERVALS USING FOUR-FOOT OAK STAKES OR APPROVED EQUIVALENT. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNATING A QUALIFIED ON-SITE CONSTRUCTION PERSON TO BE RESPONSIBLE FOR THE DAILY INSPECTION AND UPKEEP OF ALL EROSION AND SEDIMENTATION CONTROLS.

c. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A RESERVE SUPPLY OF EROSION CONTROLS ON SITE FOR USE AS REQUIRED OR AS DIRECTED BY THE ENVIRONMENTAL MONITOR.

d. THE ENVIRONMENTAL MONITOR WILL MONITOR THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS THROUGHOUT THE DURATION OF THE PROJECT'S CONSTRUCTION. INSPECTIONS WILL BE PERFORMED AS FOLLOWS: 1) WEEKLY OR 2) BIWEEKLY, WHICH INCLUDES INSPECTIONS FOLLOWING PRECIPITATION EVENTS TOTALING 0.25 INCH OR GREATER.

e. THE EXTENT OF THE BARRIER FENCING WILL EFFECTIVELY ISOLATE THE CONSTRUCTION AREA, INCLUDING EQUIPMENT AND MATERIAL STORAGE AREAS, FROM POSSIBLE MIGRATING TURTLES. FIELD CONDITIONS MAY REQUIRE THE INSTALLATION OF ADDITIONAL BARRIER FENCING AT THE DIRECTION OF APT.

f. NO EQUIPMENT, VEHICLES OR CONSTRUCTION MATERIALS SHALL BE STORED OUTSIDE OF BARRIER FENCING.

g. ALL SILT FENCING SHALL BE REMOVED WITHIN 30 DAYS OF COMPLETION OF WORK AND PERMANENT STABILIZATION OF SITE SOILS SO THAT REPTILE AND AMPHIBIAN MOVEMENT BETWEEN UPLANDS AND WETLANDS IS NOT RESTRICTED.

CONTRACTOR EDUCATION:

a. PRIOR TO WORK ON SITE, THE CONTRACTOR SHALL ATTEND AN EDUCATIONAL SESSION AT THE PRE-CONSTRUCTION MEETING WITH APT. THIS ORIENTATION AND EDUCATIONAL SESSION WILL CONSIST OF AN INTRODUCTORY SESSION WITH PHOTOS IDENTIFYING WOOD TURTLE, STRESSING THE NON-AGGRESSIVE NATURE OF THIS SPECIES AND THE ABSENCE OF NEED TO DESTROY ANIMALS THAT MIGHT BE ENCOUNTERED, HOW TO PROPERLY HANDLE THESE SPECIES IF ENCOUNTERED AND THE NEED TO FOLLOW PROTECTIVE MEASURES AS DESCRIBED IN SECTION 3. WORKERS WILL ALSO BE PROVIDED INFORMATION REGARDING THE IDENTIFICATION OF OTHER TURTLE SPECIES THAT COULD BE ENCOUNTERED.

b. THE EDUCATION SESSION WILL ALSO FOCUS ON MEANS TO DISCRIMINATE BETWEEN THE SPECIES OF CONCERN AND OTHER NATIVE SPECIES TO AVOID UNNECESSARY "FALSE ALARMS". ENCOUNTERS WITH ANY SPECIES OF TURTLES WILL BE DOCUMENTED.

c. THE CONTRACTOR WILL BE PROVIDED WITH CELL PHONE AND EMAIL CONTACTS FOR APT ENVIRONMENTAL MONITOR STAFF TO IMMEDIATELY REPORT ANY ENCOUNTERS WITH WOOD TURTLE. EDUCATIONAL POSTER MATERIALS WILL BE PROVIDED BY APT AND DISPLAYED ON THE JOB SITE TO MAINTAIN WORKER AWARENESS AS THE PROJECT PROGRESSES.

PROTECTIVE MEASURES

a. A THOROUGH COVER SEARCH OF THE CONSTRUCTION AREA WILL BE PERFORMED BY AN APT ENVIRONMENTAL MONITOR FOR WOOD TURTLE PRIOR TO AND FOLLOWING INSTALLATION OF SILT FENCING TO REMOVE ANY SPECIES FROM THE WORK ZONE PRIOR TO THE INITIATION OF CONSTRUCTION ACTIVITIES.

b. PRIOR TO THE START OF CONSTRUCTION EACH DAY, THE CONTRACTOR SHALL SEARCH THE ENTIRE WORK AREA FOR WOOD TURTLE.

c. IF WOOD TURTLE ARE FOUND, IT SHOULD BE CAREFULLY GRASPED IN BOTH HANDS, ONE ON EACH SIDE OF THE SHELL, BETWEEN THE TURTLE'S FORELIMBS AND THE HIND LIMBS, AND PLACED JUST OUTSIDE OF THE ISOLATION BARRIER IN THE APPROXIMATE DIRECTION IT WAS HEADING.

d. SPECIAL CARE SHALL BE TAKEN BY THE CONTRACTOR DURING EARLY MORNING AND EVENING HOURS SO THAT POSSIBLE BASKING OR FORAGING TURTLES ARE NOT HARMED BY CONSTRUCTION ACTIVITIES.

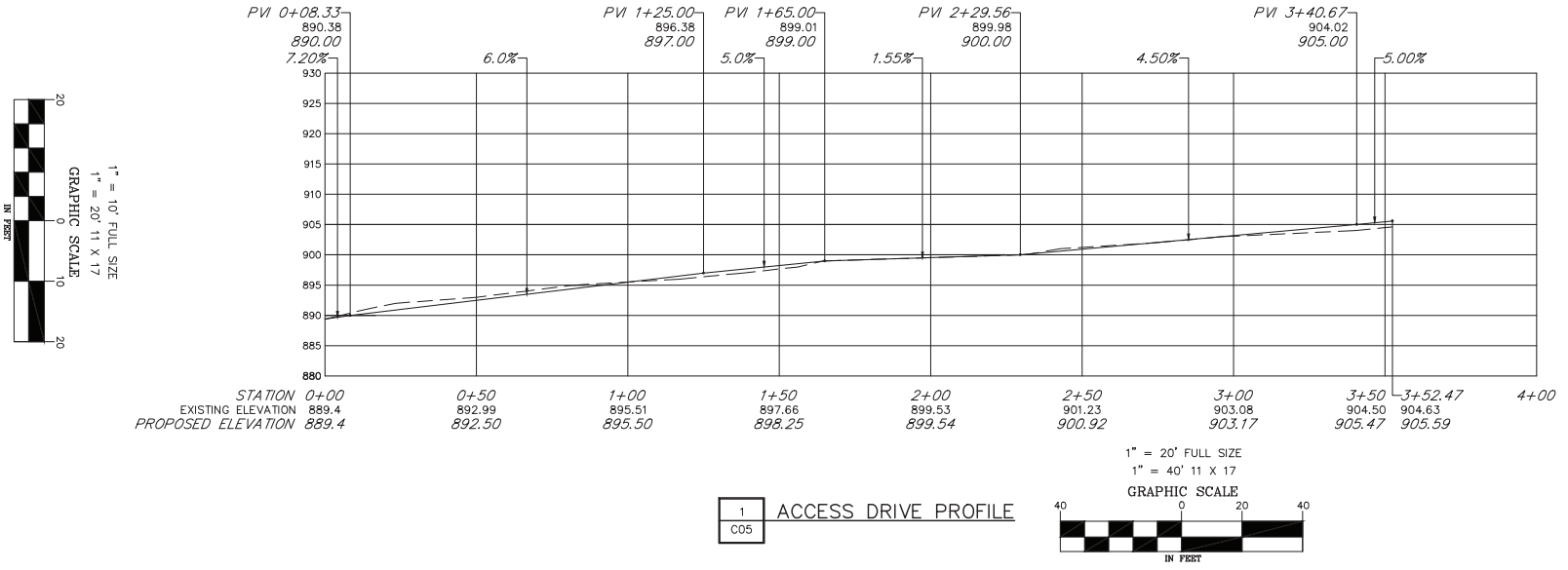
e. EROSION CONTROL MEASURES WILL BE REMOVED NO LATER THAN 30 DAYS FOLLOWING FINAL SITE STABILIZATION SO AS NOT TO IMPEDE MIGRATION OF TURTLES OR OTHER WILDLIFE.

4. REPORTING

a. BIWEEKLY INSPECTION REPORTS (BRIEF NARRATIVE AND APPLICABLE PHOTOS) WILL BE SUBMITTED BY THE ENVIRONMENTAL MONITOR TO THE CONNECTICUT SITING COUNCIL FOR COMPLIANCE VERIFICATION. ANY OBSERVATIONS OF WOOD TURTLE WILL BE INCLUDED IN THE REPORTS.

b. FOLLOWING COMPLETION OF THE CONSTRUCTION PROJECT, APT WILL PROVIDE A SUMMARY REPORT TO CTDEEP DOCUMENTING THE MONITORING AND MAINTENANCE OF THE BARRIER FENCE AND OBSERVATIONS OF ANY WOOD TURTLE ENCOUNTERED. ANY OBSERVATIONS OF WOOD TURTLE WILL INCLUDE PHOTO-DOCUMENTATION (IF POSSIBLE) ALONG WITH SPECIFIC INFORMATION ON THE LOCATION AND DISPOSITION OF THE ANIMAL.

THE WOOD TURTLE PROTECTION PROGRAM DETAILED ABOVE WILL ADEQUATELY PROTECT THIS SPECIAL CONCERN SPECIES IN THE EVENT THAT THIS SPECIES IS ENCOUNTERED IN THE PROJECT AREA DURING CONSTRUCTION ACTIVITIES. WITH ADHERENCE TO THESE PROTECTIVE MEASURES, NEW CINGULAR WIRELESS PCS, LLC ("AT&T") PROPOSED DEVELOPMENT AT THIS PROPERTY WILL NOT HAVE AN ADVERSE EFFECT ON WOOD TURTLE.



1 / C05 ACCESS DRIVE PROFILE

1" = 20' FULL SIZE
1" = 40' 11 X 17
GRAPHIC SCALE
40 0 20 40
IN FEET

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2139 Silas Deane Highway, Suite 212 • Rocky Hill, CT 06067-2336
Main: (860) 257-4557 • www.chacompanies.com

CHA PROJECT NO:
18301 – 1071 – 43000

NO.	SUBMITTAL		
0	11/13/13	D&M PLAN SUBMISSION	
	BY: JDM	CHK: PAL	APP'D: JPS
1	12/16/13	REVISED RF INFORMATION	
	BY: PAL	CHK: PAL	APP'D: JPS

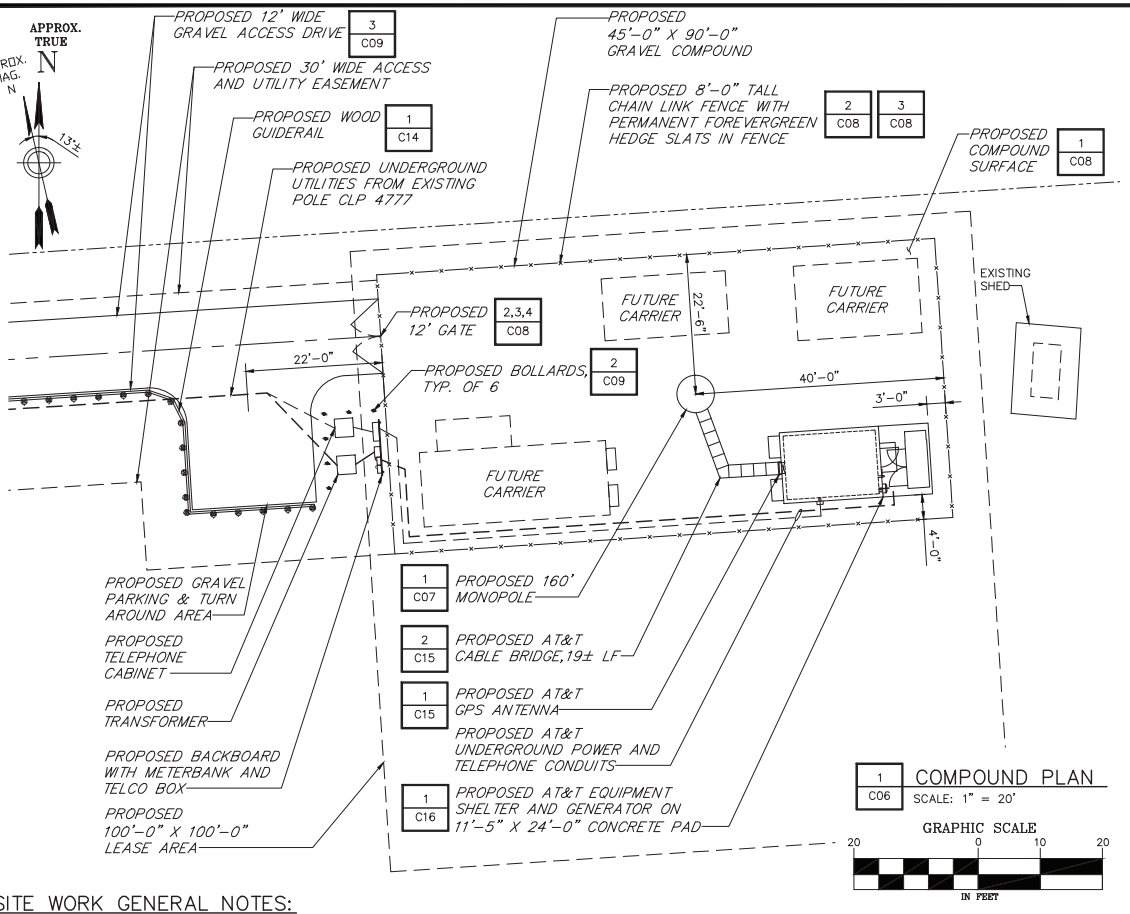
STATE OF CONNECTICUT
JOHN P. SOBIECH
No. 17827
LICENSED PROFESSIONAL ENGINEER

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

SITE ID:
SR1252
SITE NAME:
BRIDGEWATER
SITE ADDRESS:
111 SECOND HILL ROAD
BRIDGEWATER, CT
06752
LITCHFIELD COUNTY

SHEET TITLE
ACCESS DRIVE PROFILE & ENVIRONMENTAL NOTES

SHEET NUMBER
C05



SITE WORK GENERAL NOTES:

1. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWING AND AS STIPULATED HEREIN.
2. RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
3. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE EQUIPMENT AREA.
4. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
5. THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
6. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.
7. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING.
8. CONTRACTOR IS TO SUPPLY COMBINATION LOCKS PER OWNER SPECIFICATIONS.
9. 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 OFFICE.
10. TEMPORARY 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.
11. STILLING BASIN SHALL BE UTILIZED FOR ANY DE-WATERING DISCHARGE WHICH MAY OCCUR DURING CONSTRUCTION OPERATIONS.
12. CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO ANY GRADING ACTIVITIES IN LOCATIONS SHOWN ON THIS PLAN.
13. 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.
14. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
15. 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.
16. NOT 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 AND SHALL NOT EXCEED 90 DAYS. LAND SHOULD NOT BE LEFT EXPOSED DURING THE WINTER MONTHS.
17. ANY DISTURBED AREAS OUTSIDE LIMITS OF CONSTRUCTION SHALL BE TOPSOILED, SEEDED WITH RYE GRASS, AND MACHINE HAY MULCHED TO PREVENT EROSION. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDED AREAS AT A RATE OF 2 TONS PER ACRES. BALES SHALL BE UNSPOILED, AIR-DRIED, AND FREE FROM WEED, SEEDS, AND ANY COARSE MATERIAL.

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 OFFICE.
2. TEMPORARY 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. STILLING BASIN SHALL BE UTILIZED FOR ANY DE-WATERING DISCHARGE WHICH MAY OCCUR DURING CONSTRUCTION OPERATIONS.
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 AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE 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 THEY REACH 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.
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Main: (860) 257-4557 • www.chacompanies.com

CHA PROJECT NO:
18301 – 1071 – 43000

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1	12/16/13	REVISED RF INFORMATION	
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STATE OF CONNECTICUT
JOHN P. SOBIECH
No. 17827
LICENSED PROFESSIONAL ENGINEER

SITE ID:
SR1252
SITE NAME:
BRIDGEWATER
SITE ADDRESS:
111 SECOND HILL ROAD
BRIDGEWATER, CT
06752
LITCHFIELD COUNTY

SHEET TITLE
COMPOUND PLAN
& SITE NOTES

SHEET NUMBER
C06

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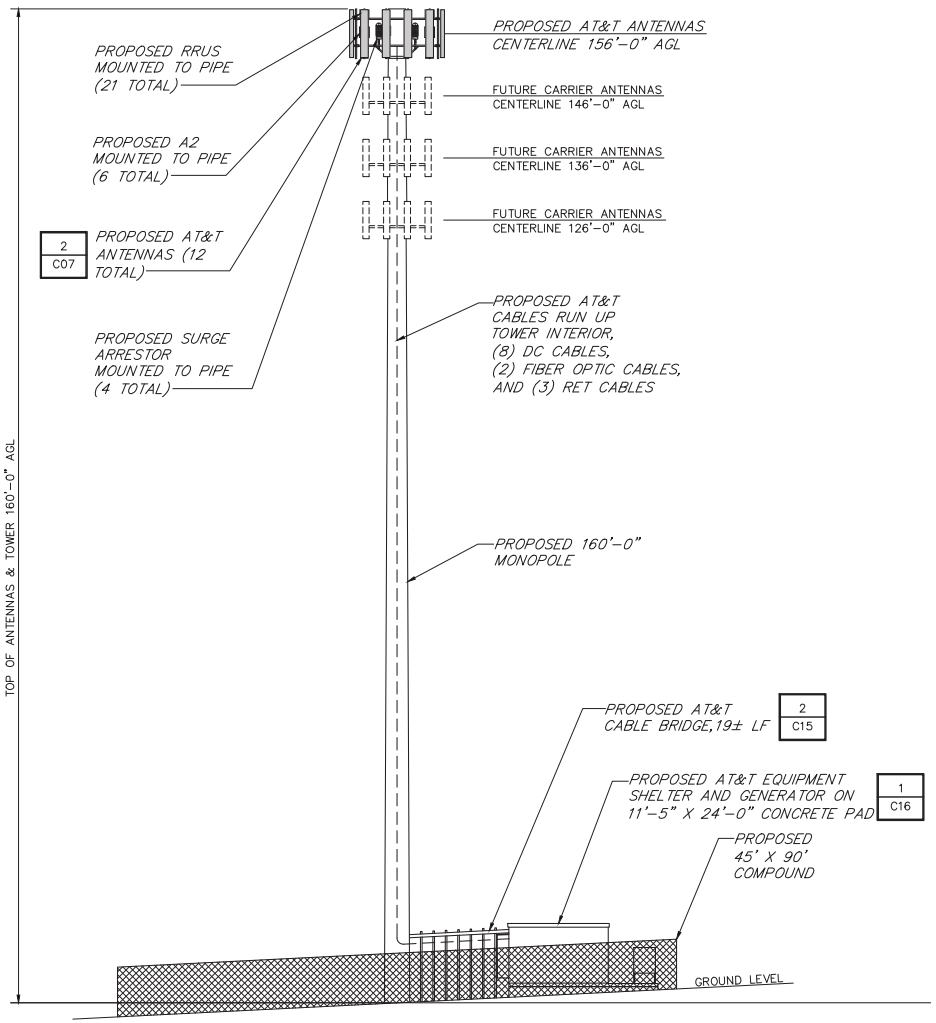


1 C07 TOWER ELEVATION

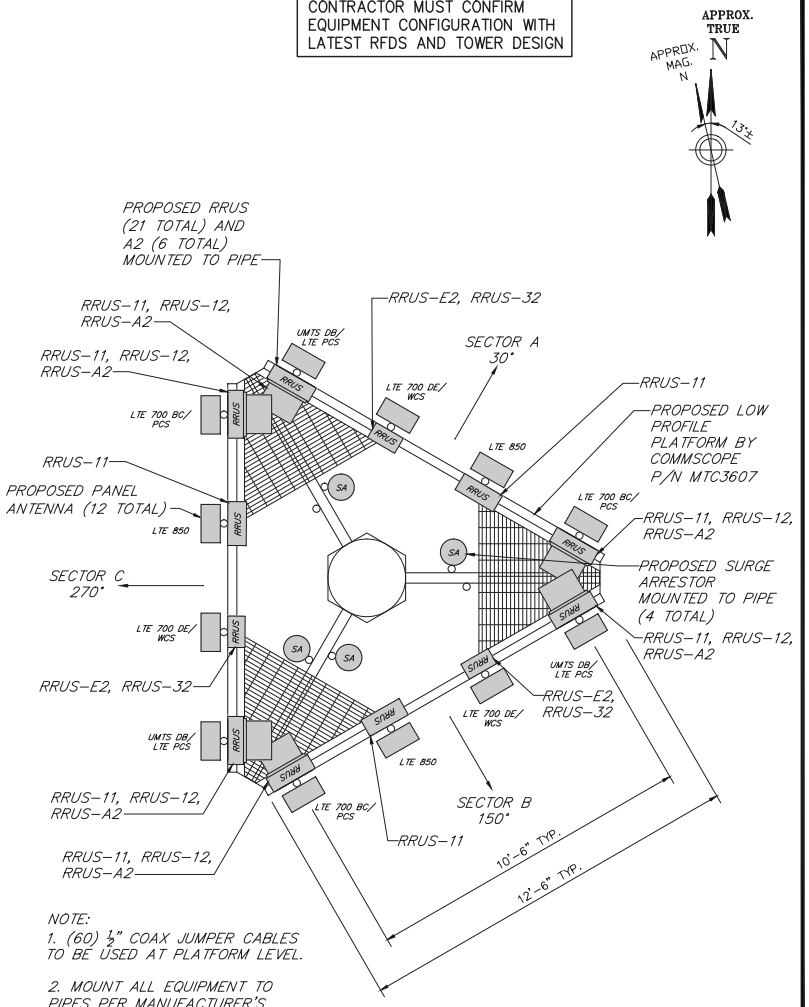
SCALE: 1" = 10' FULL SIZE
1" = 20' 11 X 17

GRAPHIC SCALE

20 0 10 20

IN FEET

CONTRACTOR MUST CONFIRM EQUIPMENT CONFIGURATION WITH LATEST RFDS AND TOWER DESIGN



NOTE:
1. (60) ½" COAX JUMPER CABLES TO BE USED AT PLATFORM LEVEL.

2. MOUNT ALL EQUIPMENT TO PIPES PER MANUFACTURER'S RECOMMENDATIONS.

2 C07 ANTENNA ARRAY

NOT TO SCALE

- BOTH THE TOWER STRUCTURE AND FOUNDATION WILL BE/HAVE BEEN DESIGNED BY OTHERS.
- PRIOR TO CONSTRUCTION, THE FINAL TOWER FOUNDATION DESIGN SHOULD BE COMPARED TO THE SITE PLAN TO AVOID POTENTIAL CONFLICTS.

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111 SECOND HILL ROAD
BRIDGEWATER, CT
06752
LITCHFIELD COUNTY

SHEET TITLE
ELEVATION
& DETAILS

SHEET NUMBER
C07

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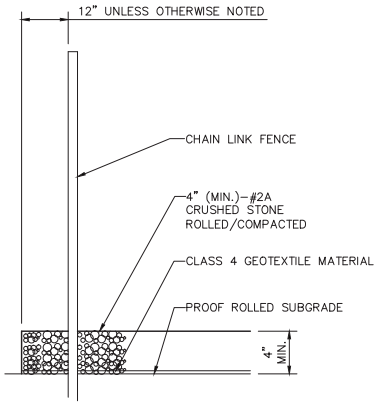
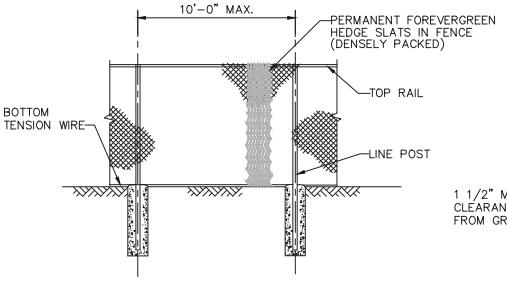
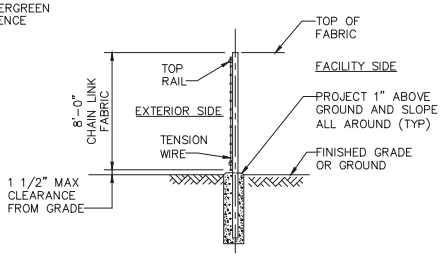


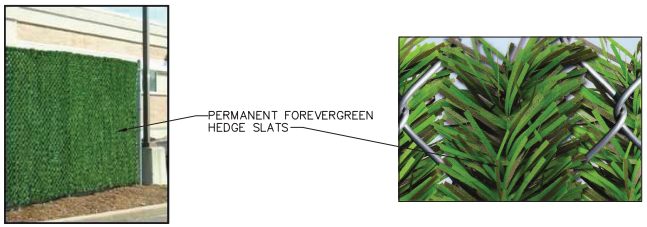
1 SITE AREA SURFACING
C08 NO SCALE



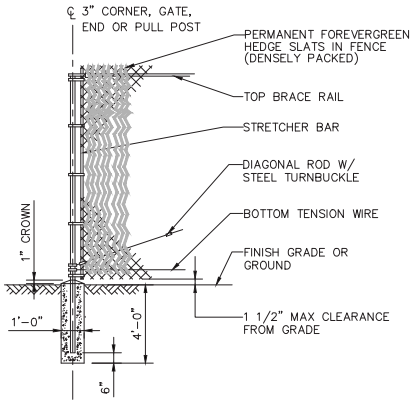
TYPICAL ELEVATION



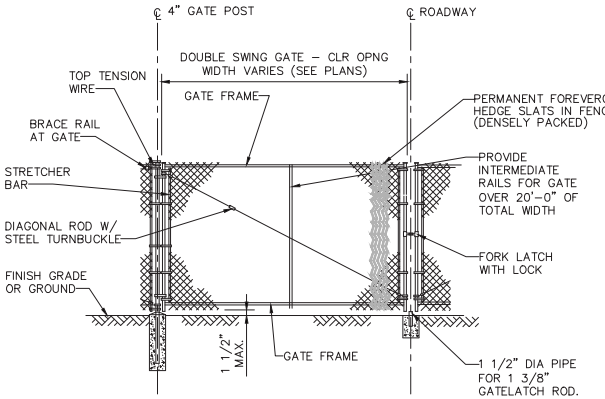
TYPICAL SECTION



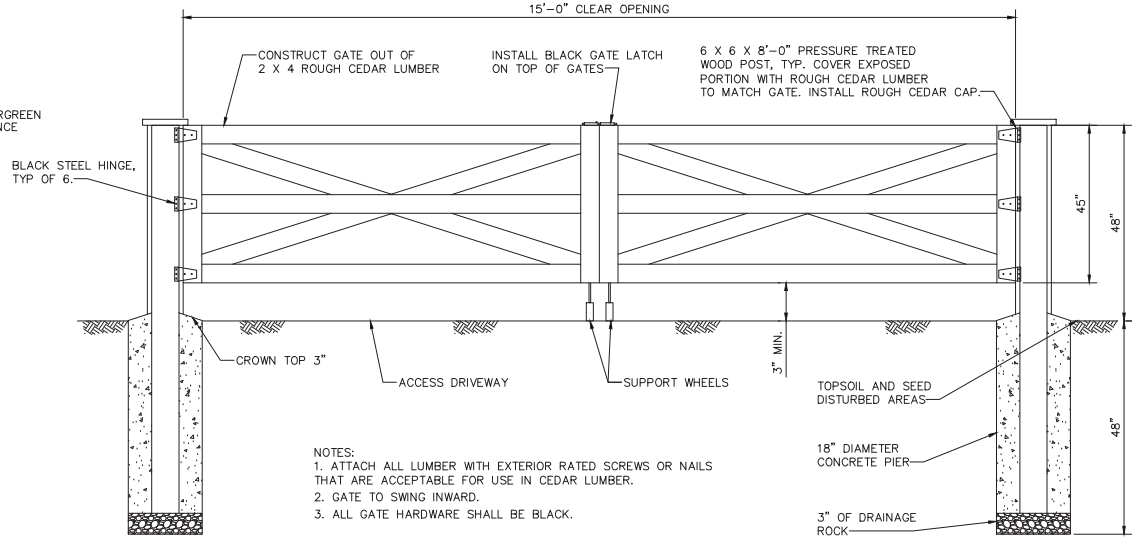
2 WOVEN WIRE FENCE
C08 NO SCALE



3 CORNER, GATE, END OR PULL POST
C08 NO SCALE



4 WOVEN WIRE SWING GATE, DOUBLE DETAIL
C08 NO SCALE



NOTES:
1. ATTACH ALL LUMBER WITH EXTERIOR RATED SCREWS OR NAILS THAT ARE ACCEPTABLE FOR USE IN CEDAR LUMBER.
2. GATE TO SWING INWARD.
3. ALL GATE HARDWARE SHALL BE BLACK.

5 DOUBLE WIDE A–FRAME SWING GATE
C08 NO SCALE

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SHEET TITLE
SITE DETAILS

SHEET NUMBER
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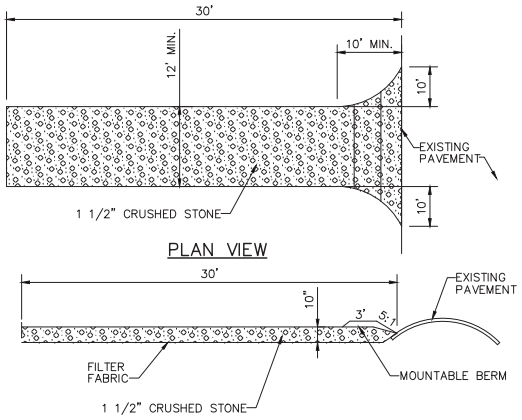
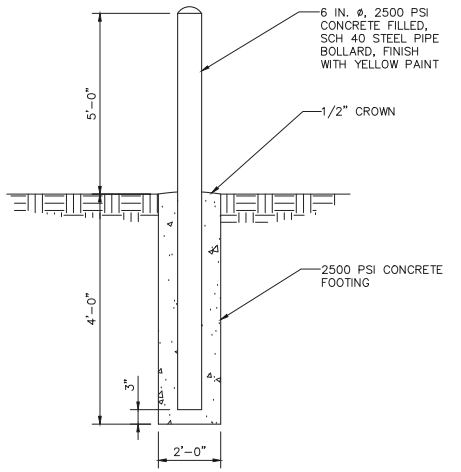


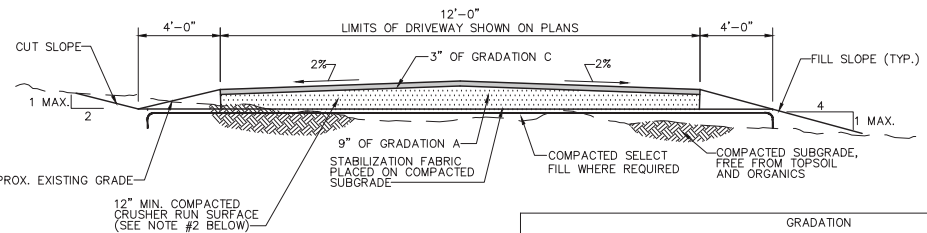
NOTES:

1. ENTRANCE WIDTH SHALL BE A TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.

1	CONSTRUCTION DEBRIS ANTI-TRACKING PAD
C09	NO SCALE



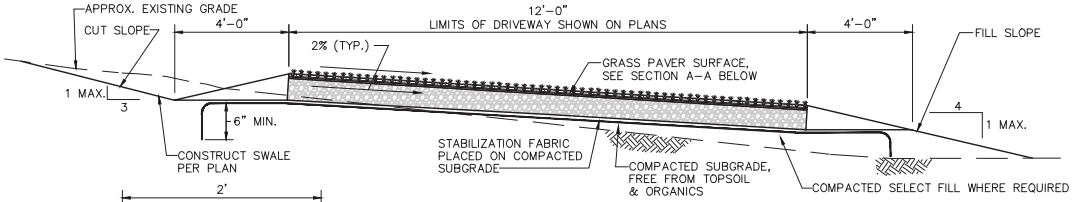
2	BOLLARD DETAIL
C09	NO SCALE

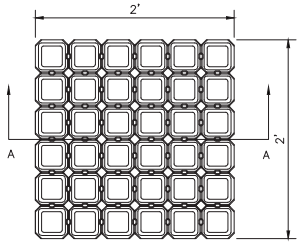


NOTES:
1. WHERE REQUIRED BY THE ENGINEER, THE PROPOSED DRIVEWAY BED SHALL BE OVER-EXCAVATED AND FILLED WITH BANK RUN GRAVEL. THE MATERIAL USED SHALL BE APPROVED BY THE ENGINEER. THE CONTRACTOR WILL BE PAID EXTRA FOR OVER-EXCAVATION AND BACKFILL WITH BANK RUN GRAVEL, ON A UNIT PRICE BASIS.
2. THE MATERIALS FOR THE ROLLED BANK GRAVEL SURFACE AND TRAFFIC-BOUND GRAVEL SURFACE SHALL CONSIST OF SOUND, TOUGH, DURABLE PARTICLES OF BANK OR CRUSHED GRAVEL. ALL MATERIALS SHALL BE FREE FROM THIN OR ELONGATED PIECES, LUMPS OF CLAY, LOAM, VEGETABLE MATTER, OR SAND. BINDER MAY BE ADDED AND INCORPORATED BY APPROVED METHODS AS SPECIFIED ELSE WHERE. THE BOTTOM 9" SHALL MEET GRADING "A" AND THE TOP 3" SHALL CONFORM TO GRADING "C".

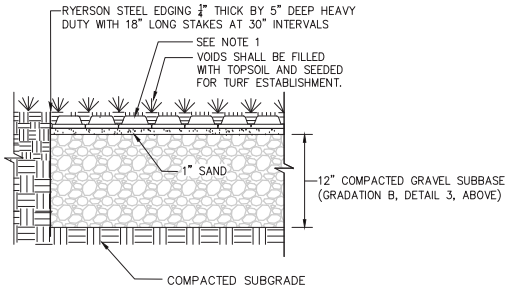
SQUARE MESH SIEVES	GRADATION A	GRADATION B	GRADATION C
	PERCENT PASSING BY WEIGHT (MASS)		
PASS 5" (125mm)		100	
PASS 3.5" (90mm)	100	90-100	
PASS 1.5" (37.5mm)	55-100	55-95	100
PASS 0.75" (19mm)			45-80
PASS 0.25" (6.3mm)	25-60	25-60	25-60
PASS #10 (2.0mm)	15-45	15-45	15-45
PASS #40 (425um)	5-25	5-25	5-25
PASS #100 (150um)	0-10	0-10	0-10
PASS #200 (75um)	0-5	0-5	0-5

3	GRAVEL DRIVEWAY SECTION
C09	NO SCALE





PLAN VIEW



SECTION A-A


CHECKER BLOCK FINISHED PRODUCT

NOTES:
1. 24" X 24" X 4" CHECKER BLOCK CONCRETE PAVERS BY HASTINGS ARCHITECTURAL & ORNAMENTAL CONCRETE PRODUCTS, 24" X 24" X 1.5" DRIVABLE GRASS BY SOIL RETENTION PLANTABLE CONCRETE SYSTEMS, OR APPROVED EQUAL
2. WHERE REQUIRED BY THE ENGINEER, THE PROPOSED DRIVEWAY BED SHALL BE OVER-EXCAVATED AND FILLED WITH BANK RUN GRAVEL. THE MATERIAL USED SHALL BE APPROVED BY THE ENGINEER. THE CONTRACTOR WILL BE PAID EXTRA FOR OVER- EXCAVATION AND BACKFILL WITH BANK RUN GRAVEL, ON A UNIT PRICE BASIS.

4	PITCHED DRIVEWAY SECTION
C09	NO SCALE

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CHA PROJECT NO:
18301 - 1071 - 43000

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	BY: JDM	CHK: PAL	APP'D: JPS
1	12/16/13	REVISED RF INFORMATION	
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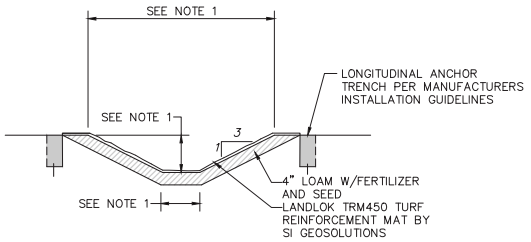
STATE OF CONNECTICUT * JOHN P. SOBIECH * No. 17827 * LICENSED PROFESSIONAL ENGINEER *

SITE ID:
SR1252
SITE NAME:
BRIDGEWATER
SITE ADDRESS:
111 SECOND HILL ROAD
BRIDGEWATER, CT
06752
LITCHFIELD COUNTY

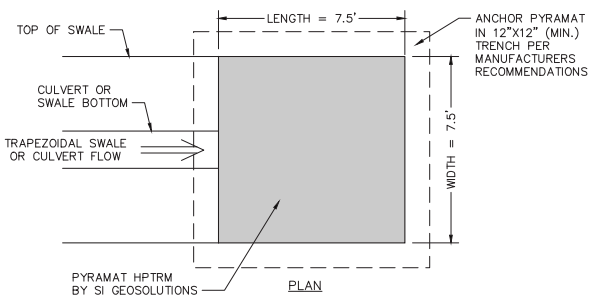
SHEET TITLE
SITE DETAILS

SHEET NUMBER
C09

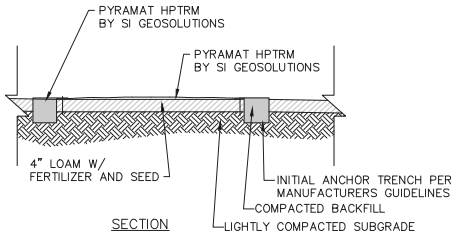


NOTES:
1. DIMENSION VARIES, REFER TO GRADING PLANS.
2. INSTALL PER MANUFACTURERS RECOMMENDATIONS, SEE SHEETS C11–C13.

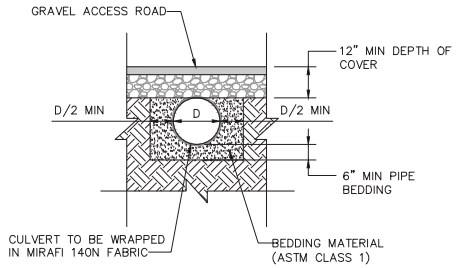
1 / C10 — VEGETATED DRAINAGE SWALE
NO SCALE

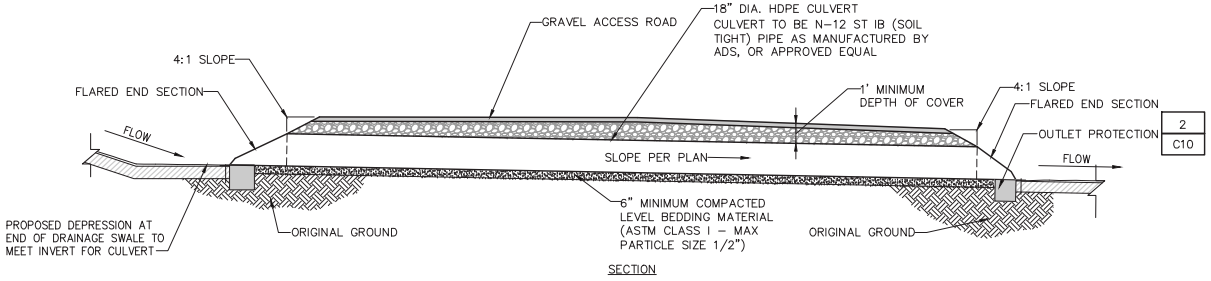


NOTE:
1. INSTALL PER MANUFACTURERS RECOMMENDATIONS, SEE SHEETS C11–C13.



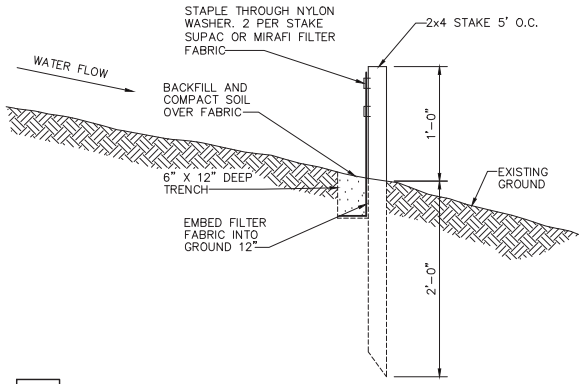
2 / C10 — OUTLET PROTECTION
NO SCALE



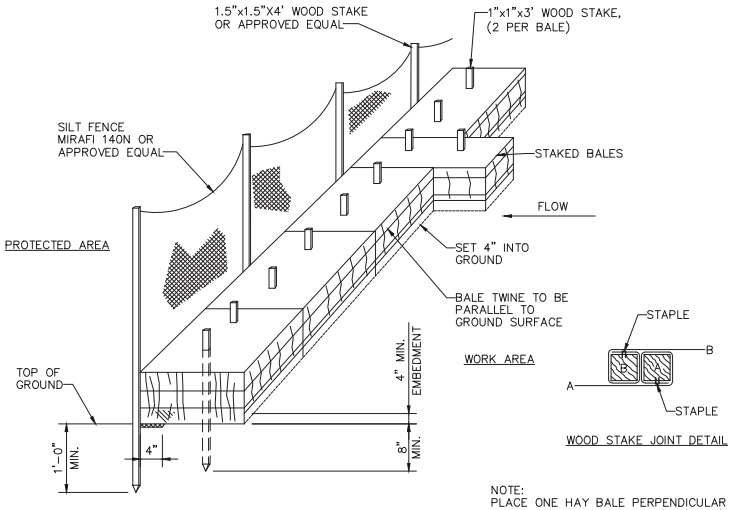


3 / C10 — TYPICAL CULVERT INSTALLATION
NO SCALE

NOTE:
1. THE GOETEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
2. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 12" INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
3. WOVEN WIRE FENCES SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID–SECTION, AND BOTTOM.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN ONE ANOTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
6. FENCE POSTS SHALL BE A MINIMUM OF 36" LONG AND DRIVEN A MINIMUM OF 24" INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED TO PREVENT BULGES IN THE SILT FENCE DUE TO DEPOSITION OF SEDIMENT.



4 / C10 — SILT FENCE DETAIL
NO SCALE



NOTE:
PLACE ONE HAY BALE PERPENDICULAR ALONG HAY BALE BARRIER (100' O.C.)

5 / C10 — SILT FENCE/HAY BALE BARRIER
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SITE PREPARATION

- Grade and compact area of TRM/HPTRM installation as directed and approved by Engineer. Subgrade shall be uniform and smooth. Remove all rocks, clods, vegetation or other objects so the installed mat will have direct contact with soil surface.
- Prepare seedbed by loosening the top 2-3 in (50-75 mm) minimum of soil.
- Incorporate amendments such as lime and fertilizer and/or wet the soil, if needed.
- Do not mulch areas where mat is to be placed.

SEEDING

- Apply seed to soil surface before installing mat. Disturbed areas shall be reseeded.
- When soil filling, first install the mat, apply seed and then soil-fill per guidelines (see page 8).
- Consult project plans and/or specifications for seed types and application rates.

SOIL FILLING

- Soil filling is suggested for optimum performance.
- After seeding, spread and lightly rake ½-¾ in (12-19 mm) minimum of fine site soil or topsoil into the mat and completely fill the voids using backside of rake or other flat tool.
- If equipment must operate on the mat, make sure it is of the rubber-tired type. No tracked equipment or sharp turns are allowed on the mat.
- Avoid any traffic over the mat if loose or wet soil conditions exist.
- Smooth soil-fill in order to just expose the top netting of matrix. Do not place excessive soil above the mat.
- Broadcast additional seed and install a Landlok® ECB above the soil-filled mat (if desired).
- Hydraulically-applied mulch or seed may be used as an alternate to soil-fill on select applications. Consult manufacturer's technical representative for more information.
- Consult manufacturer's technical representative or local distributor for installation assistance, particularly if unique conditions apply (sandy soils and infertile environments).

INSTALLATION ON STABLE SOIL SLOPES

- Excavate a 12 x 6 in (300 x 15 mm) minimum longitudinal anchor trench 2-3 ft (600-900 mm) over crest of slope (see Figure 2).
- Install top end of mat into trench and secure to bottom using suggested ground anchoring devices (see Tables 1 and 2 on page 7) spaced every 12 in (300 mm) minimum. Backfill and compact soil into trench (see Figure 2).
- Unroll mat down slope. Landlok® 1051 shall have the geotextile on bottom.
- Overlaps shall be 6 in (150 mm) minimum and anchored every 18 in (450 mm) minimum along the overlap. Secure using suggested ground anchoring devices shown in Table 1 for appropriate frequency and pattern. Overlaps are shingled away from prevailing winds (see Figure 1).
- Unroll mat in a manner to maintain direct contact with soil. Secure mat to ground surface using ground anchoring devices (see Table 1). Anchors shall be placed in accordance with the Anchor Pattern Guide on page 7.
- Excavate a 12 x 6 in (300 x 150 mm) key anchor trench at toe of slope (see Figure 3).
- Place bottom end of mat into key anchor trench at toe of slope and secure to bottom of trench using suggested ground anchoring devices (see Tables 1 and 2) spaced every 12 in (300 mm) minimum. Backfill and compact soil into trench (see Figure 3).
- If the potential for standing and/or flowing water exists at the toe of slope, the key anchor trench at the toe detail (see Figure 3) is not sufficient. Consult the project engineer for the appropriate detail.
- Irrigate as necessary to establish/maintain vegetation. Do not over-irrigate.

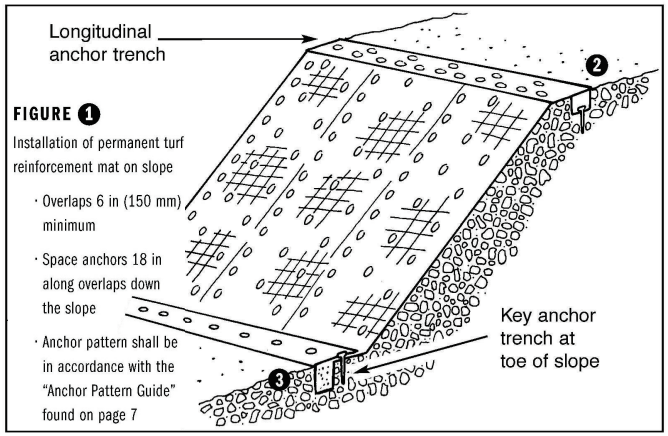
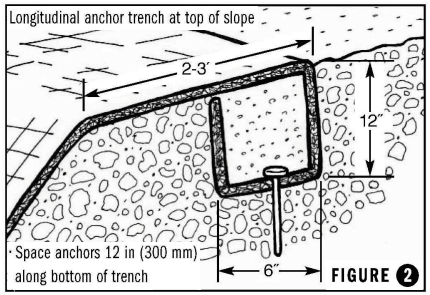


FIGURE 1
Installation of permanent turf reinforcement mat on slope

- Overlaps 6 in (150 mm) minimum
- Space anchors 18 in along overlaps down the slope
- Anchor pattern shall be in accordance with the "Anchor Pattern Guide" found on page 7



- Space anchors 12 in (300 mm) along bottom of trench

FIGURE 2

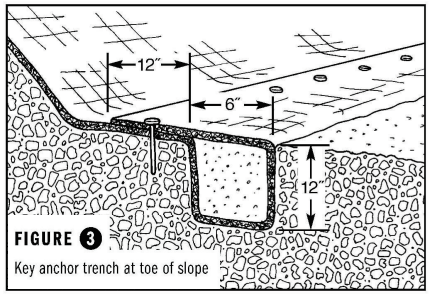


FIGURE 3
Key anchor trench at toe of slope

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INSTALLATION IN STORM WATER CHANNELS

- Figure 4 shows general installation layout and details for TRMs and HPTRMs in storm water channels.
- Excavate an initial anchor trench 12 in (300 mm) minimum deep and 12 in (300 mm) minimum wide across the channel at downstream end of project (see Figure 5). Deeper initial anchor trench is needed in channels that have the potential for scour.
- Excavate longitudinal anchor trenches 12 in (300 mm) minimum deep and 6 in (150 mm) minimum wide along both sides of the installation to bury edges of mat (see Figure 6). The trench shall be located 2-3 ft (600-900 mm) over crest of slope.
- Place roll end into the initial anchor trench and secure with anchoring devices at 12 in (300 mm) minimum intervals (see Figure 5). Position adjacent rolls and secure in anchor trench in same manner. Backfill and compact soil into trench.
- Unroll mat in the upstream direction over the compacted trench.
- Continue installation as described above, overlapping adjacent rolls as follows:
  - Roll edge: 6 in (150 mm) minimum with upslope mat on top. Secure with one row of ground anchoring devices on 12 in (300 mm) minimum intervals (see Figure 7).
  - Roll end: 12 in (300 mm) minimum with upstream mat on top. Secure with two rows of ground anchoring devices staggered 12 in (300 mm) minimum apart on 12 in (300 mm) minimum intervals (see Figure 8).
- Fold and secure mat rolls snugly into intermittent check slots. Lay mat in the bottom and fold back against itself. Anchor through both layers of blanket or mat at 1 ft (300 mm) intervals then backfill and compact soil (Figure 9). Continue rolling upstream over the compacted slot to the next check slot or terminal anchor trench. Check slots are placed at 25 to 30 ft (7.6 to 9.1 m) intervals perpendicular to flow.
- An alternate method to the intermittent check slot is the simulated check slot. This method includes placing two staggered rows of anchors on 4 in (100 mm) centers at 30 ft (9.1 m) intervals (see Figure 10).
- Excavate terminal anchor trench 12 in wide x 12 in deep (300 x 300 mm) minimum across the channel at the upstream end of the project (see Figure 11). Deeper terminal anchor trench is needed in channels that have the potential for scour.
- Anchor, backfill and compact upstream end of mat in 12 x 12 in (300 x 300 mm) minimum terminal anchor trench (see Figure 11). Unroll mat in downstream direction over compacted trench with a minimum 2 ft (600 mm) lap. Secure with anchors in accordance with Figure 8.
- Secure mat using suggested ground anchoring devices (see Tables 1 and 2 on page 7) for appropriate frequency and pattern (see Anchor Pattern Guide on page 7).
- Seed and fill with soil for enhanced performance. See Soil Filling Section on page 8.
- When using Landlok® 1051, seed after installing mat and then fill with soil.
- Irrigate as necessary to establish/maintain vegetation. Do not over irrigate.

NOTE: If you encounter roll with factory overlap, install factory seam such that it shingles in the direction of the flow of water. Place anchoring devices in accordance with Figure 8 "Overlap at roll end" on page 5.

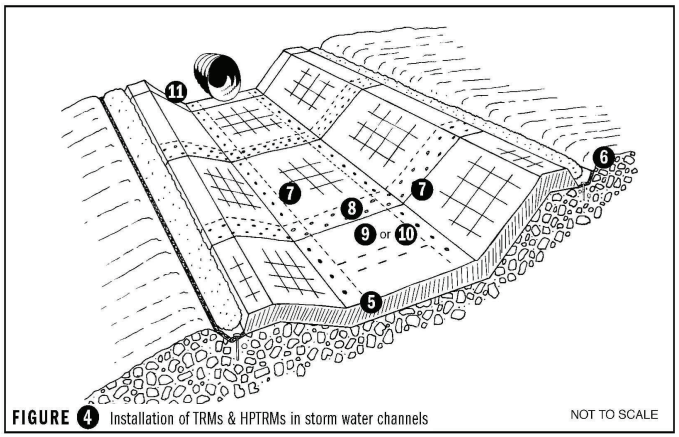

FIGURE 4 Installation of TRMs & HPTRMs in storm water channels — NOT TO SCALE

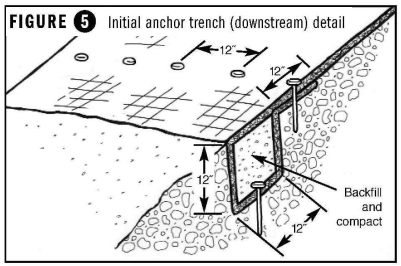

FIGURE 5 Initial anchor trench (downstream) detail

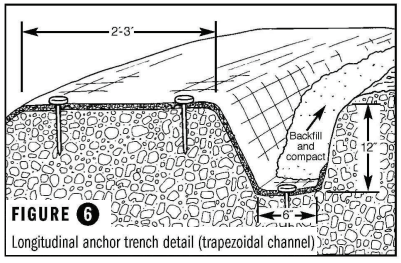

FIGURE 6 Longitudinal anchor trench detail (trapezoidal channel)

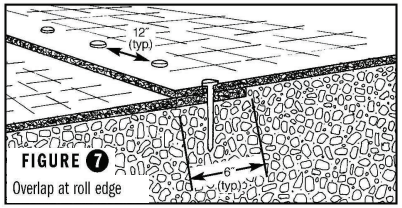

FIGURE 7 Overlap at roll edge

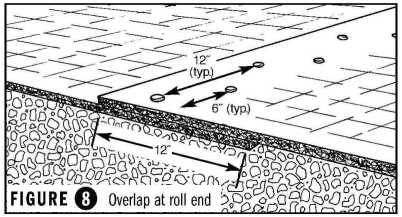

FIGURE 8 Overlap at roll end

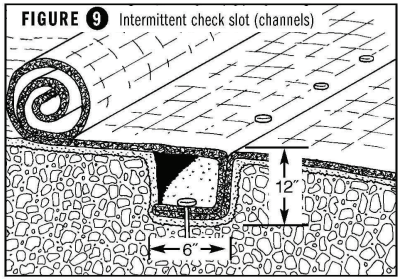

FIGURE 9 Intermittent check slot (channels)

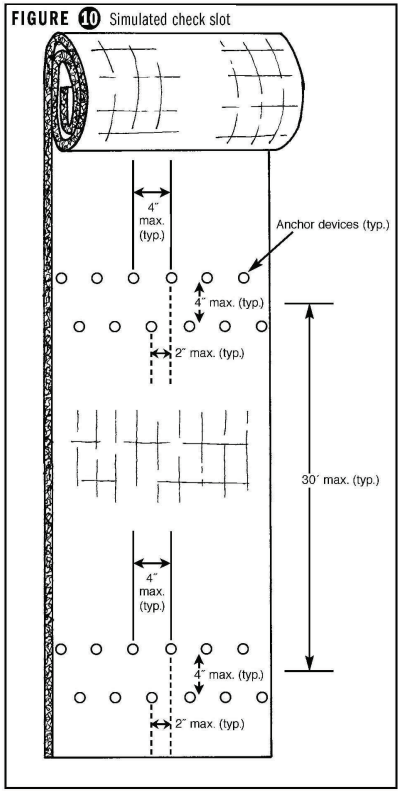

FIGURE 10 Simulated check slot

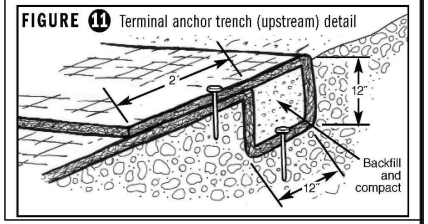

FIGURE 11 Terminal anchor trench (upstream) detail

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MAINTENANCE

All slopes, channels, banks and other transition structures shall be maintained to assure the expected design life of the reinforced vegetated system. Here are a few tips that should prove helpful:

- Monitoring
  - Should be conducted semi-annually and after major storm events. This should include: observing the condition of the vegetation; testing the irrigation system; checking condition of all permanent erosion control systems; observing sediment and debris deposits that need removal.
- Vegetation
  - Repair and maintenance of various types of vegetation shall be consistent with their original design intent, including:
    - Grass/Turf Areas: applications shall be maintained for adequate cover and height.
    - Mowing: grasses shall be mowed according to normal maintenance schedules as determined by local jurisdictions or maintenance agreements; operations shall not start until vegetation achieves a minimum height of 6 in (150 mm); mower blades shall be greater than 6 in (150 mm) above the mat.
    - Unvegetated Areas: shall be re-seeded and soil-filled (if applicable).
- Sediment and Debris Deposits
  - Accumulation of sediment and debris can reduce the hydraulic capacity of channels, clog inlet and outlet structures and can damage existing vegetation. Sediment and debris removal is a vital part of system maintenance.
    - Removal: shall be done carefully to avoid damage. When excavation is within 12 in (300 mm) minimum of matting, removal shall be done by hand or with a visual "spotter." If equipment must operate on the mat, make sure it is of the rubber-tired type. No tracked equipment or sharp turns are allowed on the mat.
      - Alternatively, "stake chasers" or some other form of permanent visual markers can be utilized to provide a visual marker for maintenance activities.
- Damaged Sections
  - Missing or damaged sections of the matting should be replaced per the installation guidelines.
    - Repairing Rips or Holes: these should be patched with identical matting material. First, carefully cut out the damaged section with a knife. Then replace and compact soil to the elevation of the surrounding subgrade and plant seed. Cut a piece of replacement material a minimum of 12 in (300 mm) larger than the rip or tear. Use ties to attach the replacement material to the existing material. At overlaps, the upstream and upslope material should be on top. Secure the replacement material with ground anchoring devices spaced every 6 in (150 mm) around the circumference of the repair and at the frequency and spacing shown in the Anchor Pattern Guide on page 7. Seed and soil fill replacement area.

SPECIAL TRANSITION GUIDELINES

- Pipe Inlets/Outlets (HPTRMs Only)
  - Review the construction drawings and project specifications to evaluate the required area to be treated.
  - Excavate an anchor trench 12 x 12 in (300 x 300 mm) minimum above the pipe to bury end of HPTRM roll. The trench shall be located a minimum 2-3 ft (600-900 mm) above the pipe inlet/outlet.
  - Backfill and compact soil into trench.
  - Cut HPTRM to meet project requirements, slope length and pipe diameter.
  - Unroll HPTRM down the slope and secure around pipe circumference with ground anchoring devices spaced 6 in (150 mm) minimum. Also, the HPTRM can be secured around the pipe in a 12 x 12 in (300 x 300 mm) minimum trench filled with concrete slurry.

GROUND ANCHORING DEVICES

- Ground anchoring devices are used to secure the mat to the soil using the suggested anchor device (see Tables 1 and 2 on page 7) at a minimum frequency and pattern shown on the Anchor Pattern Guide on page 7.
- U-shaped wire staples or metal geotextile pins can be used to anchor mat to the ground surface. Wire staples should be a minimum thickness of 8 gauge (4.3 mm). Metal pins should be at least 0.20 in (5 mm) diameter steel with a 1 ½ in (38 mm) steel washer at the head of the pin. Wire staples and metal pins should be driven flush to the soil surface. All anchors should be between 6-24 in (150-600 mm) long and have sufficient ground penetration to resist pullout. Longer anchors may be required for loose soils. Heavier metal stakes may be required in rocky soils.

TABLE 1: SUGGESTED GROUND ANCHORING DEVICE SELECTION*

		DEGRADABLE STAKES	WIRE STAPLES	METAL PIN/WASHERS OR NAIL/WASHERS	PERCUSSION DRIVEN ANCHORS
PRODUCT	LANDLOK® ECBs	●	●		
	LANDLOK® TRMs		●	●	
	PYRAMAT®		●	●	●
APPLICATION	SLOPES	●	●	●	●
	BANKS			●	●
	CHANNELS		●	●	●

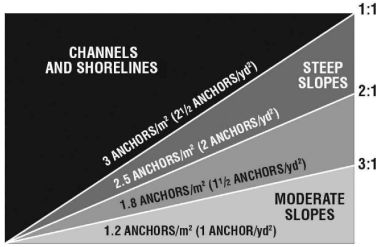
TABLE 2: SUGGESTED LENGTHS OF GROUND ANCHORING DEVICES*

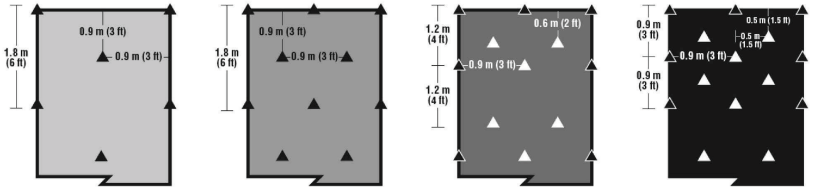
		6-INCH	12-INCH	18-INCH	24-INCH
SOIL TYPES	ROCKY	●			
	CLAYEY	●	●		
	SILTY		●	●	
	SANDY			●	●

*The performance of ground anchoring devices is highly dependent on numerous site/project specific variables. It is the sole responsibility of the project engineer and/or contractor to select the appropriate anchor type and length. Anchoring shall be selected to hold the mat in intimate contact with the soil subgrade and resist pullout in accordance with the project's design intent.

ANCHOR PATTERN GUIDE

- The shaded areas in the diagram provide anchor suggestions based on slope gradient and/or anticipated flow conditions. When the correct number of anchors has been determined, refer to the four illustrations below to establish anchor pattern. Increased anchoring may be required depending upon site conditions.





1.2 ANCHORS/m² (1 ANCHOR/yd²) | 1.8 ANCHORS/m² (1½ ANCHORS/yd²) | 2.5 ANCHORS/m² (2 ANCHORS/yd²) | 3 ANCHORS/m² (2½ ANCHORS/yd²)

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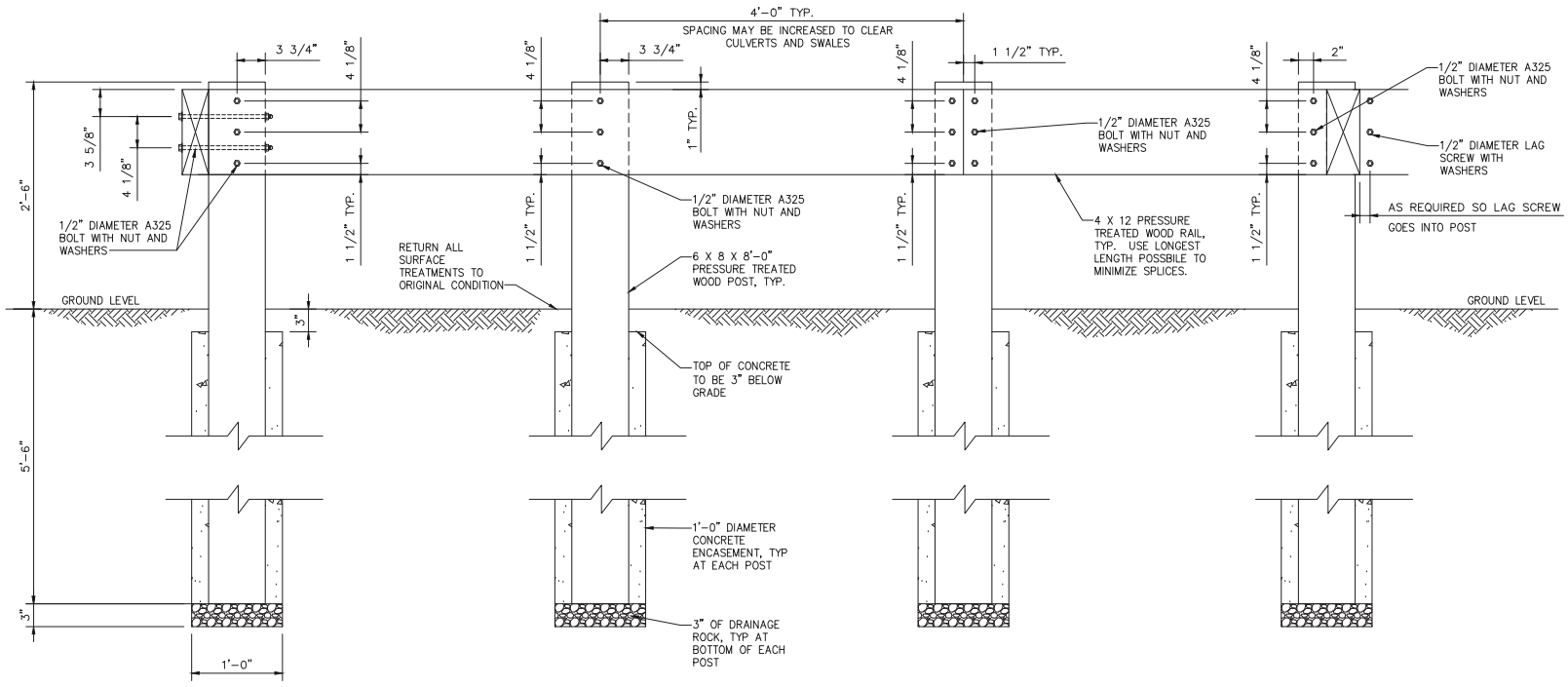
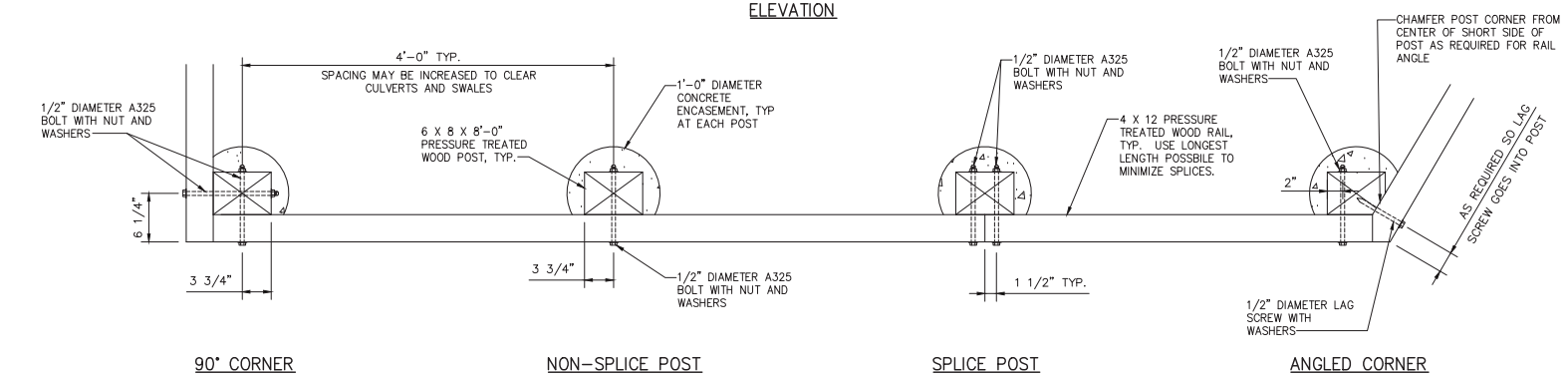


ELEVATION



PLAN

NOTES:
1. ALL BOLTS, NUTS, WASHERS, AND LAG SCREWS SHALL BE GALVANIZED.
2. ALL WOODS POSTS AND RAILS SHALL BE PRESSURE TREATED.

1	GUIDERAIL DETAIL
C14	SCALE: 3/4" = 1'-0"

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CHA PROJECT NO:
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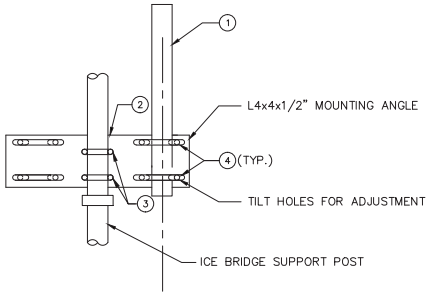
1	12/16/13	REVISED RF INFORMATION	
	BY: PAL	CHK: PAL	APP'D: JPS

STATE OF CONNECTICUT
JOHN P. SOBIECH
No. 17827
LICENSED PROFESSIONAL ENGINEER

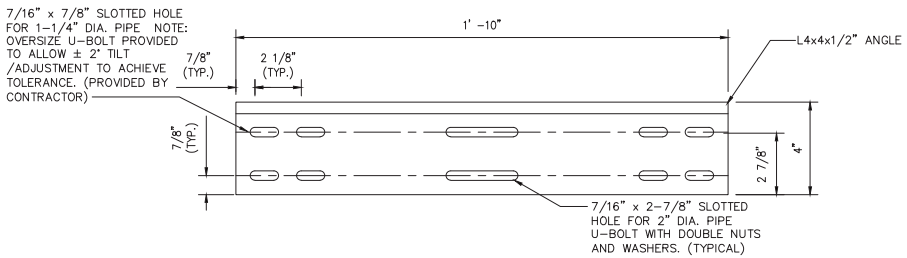
SITE ID:
SR1252
SITE NAME:
BRIDGEWATER
SITE ADDRESS:
111 SECOND HILL ROAD
BRIDGEWATER, CT
06752
LITCHFIELD COUNTY

SHEET TITLE
GUIDERAIL DETAILS

SHEET NUMBER
C14



GPS ANTENNA MOUNTING BRACKET



MOUNTING BRACKET PLATE

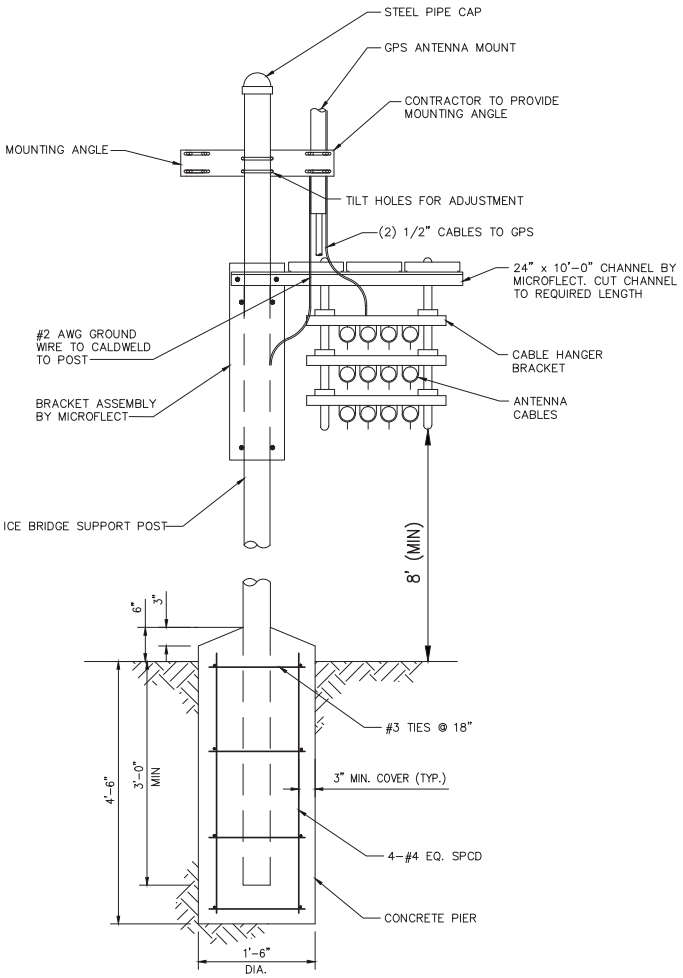
ITEM #	DESCRIPTION	QUANTITY (EACH)
1	1-1/2" SCH. 40 X 18" LG. MIN SS OR GALV. PIPE	1
2	ANGLE 4" X 4" X 1/2" GALV.(A-36)	1
3	STD. U-BOLT FOR 2" PIPE W/ DOUBLE HEX NUTS AND WASHER, GALV.	2
4	STD. U-BOLT FOR 2" PIPE W/ DOUBLE HEX NUTS AND WASHER, GALV. (SEE NOTE 2)	2

BILL OF MATERIALS

NOTES:

1. THE MOUNTING PLATE SHALL BE FABRICATED AS SHOWN AND ATTACHED TO THE APPROPRIATE SUPPORT STRUCTURE USING U-BOLTS. THE SUPPORT PIPE SHALL THEN BE ATTACHED TO THE MOUNTING PLATE USING THE OVERSIZE U-BOLTS PROVIDED TO ALLOW ADJUSTMENT. IT IS CRITICAL THAT THE GPS ANTENNA IS MOUNTED SUCH THAT IT IS WITHIN 2 DEGREES OF VERTICAL AND THE BASE OF THE ANTENNA IS WITHIN 2 DEGREES OF LEVEL.

1 / C15 GPS ANTENNA
NO SCALE



2 / C15 ICE BRIDGE SUPPORT POST W/GPS DETAIL
NO SCALE

NOTES:

1. LOCATION OF ANTENNA MOUNTING PIPE MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.

2. THE GPS ANTENNA LOCATION MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.

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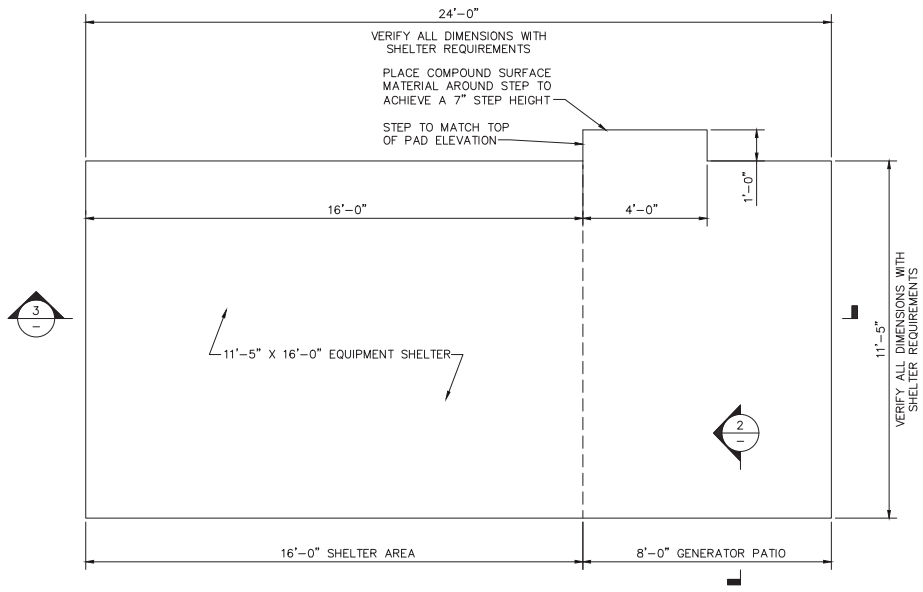
STATE OF CONNECTICUT
JOHN P. SOBIECH
No. 17827
LICENSED PROFESSIONAL ENGINEER

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

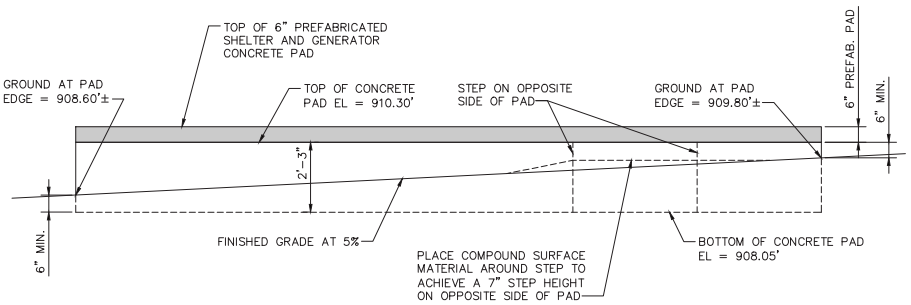
SITE ID:
SR1252
SITE NAME:
BRIDGEWATER
SITE ADDRESS:
111 SECOND HILL ROAD
BRIDGEWATER, CT
06752
LITCHFIELD COUNTY

SHEET TITLE
STRUCTURAL DETAILS

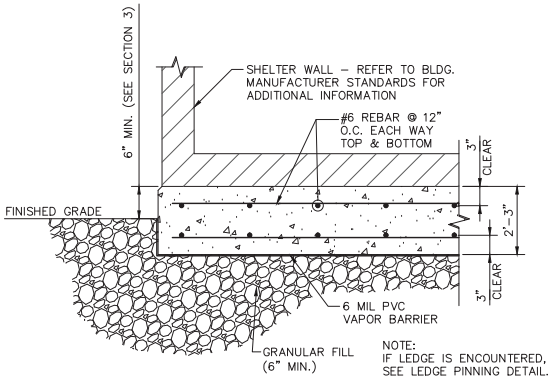
SHEET NUMBER
C15



1 / C16 FOUNDATION PLAN
NO SCALE



3 / C16 FOUNDATION SECTION



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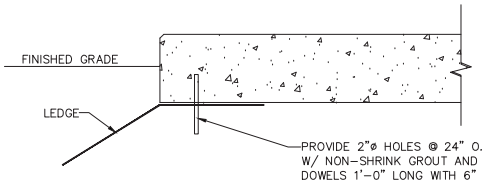

NOTE:
CONTRACTOR TO EXCAVATE TO ALLOW THE FOOTING TO REST ON LEVEL ROCK.

PAD LEDGE PINNING DETAIL

2 / C16 PAD FOUNDATION

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BRIDGEWATER, CT
06752
LITCHFIELD COUNTY

SHEET TITLE
STRUCTURAL DETAILS

SHEET NUMBER
C16

GENERAL NOTES

1. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
2. DO NOT CHANGE SIZE NOR SPACING OF STRUCTURAL ELEMENTS.
3. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
4. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
5. BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
6. DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
7. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE APPROVAL.
8. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
9. CONTRACTOR TO FOLLOW ALL STATE, LOCAL AND NATIONAL CODES AS APPLICABLE.

DESIGN DATA

LIVE LOADS: PER INTERNATIONAL BUILDING CODE
WIND LOADS: PER INTERNATIONAL BUILDING CODE & TIA/EIA-222-F
ICE LOADS: 1/2" RADIAL ON ALL COMPONENTS & CABLE
SNOW LOAD: PER INTERNATIONAL BUILDING CODE
SEISMIC LOADS: PER INTERNATIONAL BUILDING CODE

ANTENNA SUPPORT BRACKET NOTES

1. DESIGN RESPONSIBILITY OF ANTENNA MOUNTING BRACKETS AND POLES AND ALL COMPONENTS THERE OF AND ATTACHMENT THERE TO SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER. MFR. SHALL PROVIDE TO THE ENGINEER FOR APPROVAL, DRAWINGS DETAILING ALL COMPONENTS OF THE ASSEMBLY, INCLUDING CONNECTIONS, DESIGN LOADS, AND ALL OTHER PERTINENT DATA. ALL SUBMISSIONS SHALL BEAR THE STAMP AND SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE THE WORK IS BEING PERFORMED.
2. BRACKETS SHALL BE DESIGNED TO SUPPORT CURRENT AND FUTURE PANEL ANTENNAS AND COAXIAL CABLES AS SHOWN.

STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. ALL INTERIOR STRUCTURAL STEEL USED SHALL BE, WHEN DELIVERED, FINISHED WITH ONE COAT FABRICATOR'S NON-LEAD, RED OXIDE PRIMER. PRIMING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARS, AND WELDS IN THE PRIMED AREAS SHALL BE REPAIRED BY FIELD TOUCHUP PRIOR TO COMPLETION OF THE WORK.
3. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A123 UNLESS OTHERWISE NOTED. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARS, AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED BY FIELD TOUCHUP PRIOR TO COMPLETION OF THE WORK USING ZRC COLD GALVANIZING COMPOUND OR APPROVED EQUAL.
4. DO NOT PLACE HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
5. CONNECTIONS:
   A. ALL WELDING SHALL BE DONE BY A CERTIFIED WELDER USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION ", 9TH EDITION. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
   B. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4" DIA) AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
   C. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. GALVANIZED ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
   D. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.
   E. ALL BOLTED CONNECTIONS SHALL HAVE A FLAT WASHER & NUT TIGHTENED TO AISC "SNUGTIGHT" CRITERIA, UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL NOTES (CONT.)

6. STRUCTURAL STEEL GRATING SHALL BE 1 1/2" X 3/16" GALVANIZED STEEL BAR GRATING (IKG BORDEN TYPE-WB OR EQUAL) ATTACHED @ 1'-6" o.c. WITH GRATING CLAMPS, UNLESS OTHERWISE NOTED.
7. NEW STRUCTURAL STEEL LOCATED WITHIN A BUILDING OR ENCLOSURE SHALL BE FIRERATED PER LOCAL CODE.
8. REINFORCING BARS: ASTM A625, GRADE 60 DEFORMED BARS.
9. WELDED WIRE MESH: TO ASTM A185. PROVIDE IN FLAT SHEETS ONLY. VERTICAL PLACEMENT TOLERANCE TO BE 3/8 INCH.
10. THE CONTRACTOR SHALL FABRICATE ALL REINFORCEMENT AND FURNISH ALL ACCESSORIES, BOLSTERS, CHAIRS, SPACER BARS AND SUPPORTS NECESSARY TO SECURE THE REINFORCEMENT UNLESS INDICATED OTHERWISE.
11. IN SLABS WHERE REINFORCING IS SHOWN IN ONE DIRECTION ONLY, PROVIDE INDICATED TEMPERATURE REINFORCEMENT AT 90 DEGREES TO PRINCIPAL REINFORCEMENT.
12. LAP SPLICES:

    a) CONCRETE: PROVIDE CLASS B TENSION LAP SPLICES U.N.O.

    b) WELDED WIRE MESH: MINIMUM LAP 8 INCHES, MEASURED BETWEEN OUTERMOST CROSS-WIRES OF EACH SHEET.

CONCRETE NOTES

1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING APPLICABLE CODES: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"; ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
2. MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLACING CONCRETE. PREPARE AND SUBMIT MIX DESIGNS FOR EACH TYPE AND STRENGTH OF CONCRETE IN ACCORDANCE WITH ACI 211, "PROPORTIONING CONCRETE MIXTURES, AND ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
3. CONCRETE (EXCEPT TREMIE MIX) SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED (±1.5%) WITH A MAXIMUM 4" SLUMP, AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI UNLESS OTHERWISE NOTED.
4. MAXIMUM AGGREGATE SIZE SHALL BE 3/4".
5. THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT:	ASTM C 150, TYPE I
REINFORCEMENT:	ASTM A 615, GRADE 60
NORMAL WEIGHT AGGREGATE:	ASTM C 33
WATER:	POTABLE
ADMIXTURES:	NON-CHLORIDE CONTAINING

6. REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315.
7. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
8. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

   CONCRETE CAST AGAINST EARTH.....3 IN.

   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER .....2 IN.
   #5 AND SMALLER & WWF .....1 1/2 IN.

   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL .....3/4 IN.
   BEAMS AND COLUMNS .....1 1/2 IN.
9. A CHAMFER 1" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
10. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURES WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE.
11. CURING COMPOUNDS SHALL CONFORM TO ASTM C-309.
12. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI-301.
13. DO NOT WELD OR TACKWELD REINFORCING STEEL.
14. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.

CONCRETE NOTES (CONT.)

15. LOCATE ADDITIONAL CONSTRUCTION JOINTS REQUIRED TO FACILITATE CONSTRUCTION AS ACCEPTABLE TO ENGINEER. PLACE REINFORCEMENT CONTINUOUSLY THROUGH JOINT.
16. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
17. PLACE CONCRETE IN A UNIFORM MANNER TO PREVENT THE FORMATION OF COLD JOINTS AND OTHER PLANES OF WEAKNESS. VIBRATE THE CONCRETE TO FULLY EMBED REINFORCING. DO NOT USE VIBRATORS TO TRANSPORT CONCRETE THROUGH CHUTES OR FORMWORK.
18. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
19. DO NOT ALLOW CONCRETE SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 14 DAYS AFTER PLACEMENT.
20. FOR COLD-WEATHER AND HOT-WEATHER CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS MINIMUM.
21. READY-MIX CONCRETE SUPPLIERS TO BE NRMCA-CERTIFIED.
22. NO ADDITIONAL WATER SHALL BE ADDED TO THE CONCRETE AT THE JOB SITE.
23. HOT WEATHER CONCRETE: COMPLY WITH ACI 305R.
24. NO PLASTIZISOR TO BE USED IN TREMIE MIX.

EXCAVATIONS/FOUNDATION

1. FOUNDATION EXCAVATION SHALL BE HAND-TRIMMED TO REMOVE LOOSE MATERIALS.
2. DO NOT PLACE FOOTINGS IN WATER OR ON FROZEN GROUND.
3. SOIL BEARING SURFACES, PREVIOUSLY ACCEPTED BY GEOTECHNICAL ENGINEER, WHICH ARE ALLOWED TO BECOME SATURATED, FROZEN OR DISTURBED SHALL BE REWORKED TO SATISFACTION OF GEOTECHNICAL ENGINEER.
4. DO NOT ALLOW GROUND BENEATH FOOTINGS TO FREEZE.
5. ALL STRUCTURAL BACKFILL AND SUBBASE UNDER SLABS SHALL BE SELECT STRUCTURAL FILL MEETING THE GRADATION AND SOUNDNESS REQUIREMENTS IN ACCORDANCE WITH THE FOLLOWING GRADATION:
   A. GRADATION. THE MATERIAL SHALL HAVE THE FOLLOWING GRADATION:

SEIVE SIZE	PERCENT PASSING BY WEIGHT
4 INCH	100
NO. 40	0 TO 70
NO. 200	0 TO 15

   B. MATERIALS SHALL BE SUBSTANTIALLY FREE OF SHALE OR OTHER SOFT, POOR DURABILITY PARTICLES. IF TESTING IS ELECTED BY OWNER, MATERIAL WITH A MAGNESIUM SULFATE SOUNDNESS LOSS EXCEEDING 30% WILL BE REJECTED.
6. COMPACT TO 95% STANDARD PROCTOR DENSITY PER ASTM D-698.
7. SUBGRADE BELOW SLAB-ON-GRADE SHALL BE REVIEWED AND ACCEPTED BY GEOTECHNICAL ENGINEER BEFORE CONCRETE SLAB PLACEMENT.
8. ALL LOOSE AND/OR ORGANIC MATERIAL SHALL BE REMOVED PRIOR TO PREPARATION OF THE AREA FOR PLACEMENT OF STRUCTURAL BACKFILL. OVERALL PLAN AREA OF WORK SHALL EXTEND 3'-0" MINIMUM BEYOND THE FINAL DIMENSIONS.
9. SCARIFY THE EXISTING SOILS TO A DEPTH OF 6" AND RE-COMPACT USING A PLATE TAMPER. ANY SOFT AREAS SHALL BE OVEREXCAVATED 12" AND BACKFILLED WITH MATERIALS AND COMPACTION REQUIREMENTS SHOWN ON THE DRAWINGS.
10. PLACEMENT AND COMPACTION OF STRUCTURAL BACKFILL AND SUBBASE SHALL BE DONE IN 8" LIFTS. EXCAVATE FOR THE FOOTING EDGE AS SHOWN ON THE DRAWINGS.
11. CONTRACTOR TO GRADE SITE LEVEL WITH EXISTING, TWO FEET BEYOND PROPOSED EQUIPMENT PAD FOOTPRINT, THEN TAPER TO EXISTING GRADE IF REQUIRED AT A MAXIMUM OF 3:1 SLOPE.

DESIGN NOTES

MATERIALS:	
STRUCTURAL STEEL	A572 GRADE 50
ANGLES AND PLATES	A36
RECTANGULAR STRUCTURAL TUBING	A500 GRADE B (46 KSI)
STANDARD PIPE	A501 OR A53 GRADE B
HIGH STRENGTH BOLTS	A325 N OR SC CLASS A
ANCHOR BOLTS	A307
WELDING ELECTRODES	E70XX
CONCRETE (28 DAYS):	
FOOTINGS	4000 PSI
SLAB-ON-GRADE	4000 PSI
ALL OTHER CONCRETE	3000 PSI
REINFORCING STEEL	A615 GRADE GO
WELDED WIRE FABRIC	A185
HEADED STUDS	A108

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STATE OF CONNECTICUT
JOHN P. SOBIECH
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BRIDGEWATER, CT
06752
LITCHFIELD COUNTY

SHEET TITLE
STRUCTURAL NOTES

SHEET NUMBER
C17

ATTACHMENT 2

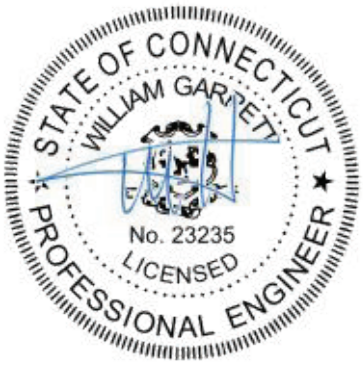
AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	**160 ft Monopole**
ATC Site Name	:	**Bridgewater CT, CT**
ATC Site Number	:	**281862**
Engineering Number	:	**54781121**
Proposed Carrier	:	**AT&T Mobility**
Carrier Site Name	:	**Bridgewater North**
Carrier Site Number	:	**SR1252/FA#10107963**
Site Location	:	**111 Second Hill Rd** **Bridgewater, CT 06752-1017** **41.554972,-73.370889**
County	:	**Litchfield**
Date	:	**December 26, 2013**
Max Usage	:	**100%**
Result	:	**Pass**

Bhumi Shah, E.I.
Structural Engineer I

BBShah



Dec 26 2013 12:29 PM

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Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 160 ft monopole to reflect the change in loading by AT&T Mobility.

Supporting Documents

Tower Drawings	TransAmerican Job #23513-0649, dated November 12, 2013
Foundation Drawing	TransAmerican Job #23513-0649, dated November 12, 2013
Geotechnical Report	Clarence Welti Associates Project - AT&T Tower Site #1252, dated September 10, 2013

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/EIA-222.

Basic Wind Speed:	80 mph (Fastest Mile)
Basic Wind Speed w/ Ice:	69 mph (Fastest Mile)w/ 1/2" radial ice concurrent
Code:	ANSI/TIA/EIA-222-F / 2003 IBC , Sec. 1609.1.1, Exception (5) & Sec. 3108.4 w/ 2005 CT Supplement & 2009 CT Amendment

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

Existing and Reserved Equipment

Mount Elev.[1] (ft)	Qty.	Antenna	Lines	Carrier
150.0	1	105 sq. ft of area w/o ice and 125 sq. ft of area w/1/2" ice	(18) 1 5/8" Coax	Future Carriers
140.0	1	105 sq. ft of area w/o ice and 125 sq. ft of area w/1/2" ice	(18) 1 5/8" Coax	
130.0	1	105 sq. ft of area w/o ice and 125 sq. ft of area w/1/2" ice	(18) 1 5/8" Coax	

Proposed Equipment

Elevation[1] (ft)		Qty.	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
156.0	156.0	4	Raycap DC6-48-60-18-8F	Low Profile Platform	(15) 1 5/8" Coax	AT&T Mobility
		15	Ericsson RRUS			
		12	Andrew SBNH-1D6565C			

[1]Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	96%	Pass
Shaft	100%	Pass
Base Plate	64%	Pass

Foundations

Reaction Component	Original Design Reactions	Analysis Reactions	% of Design
Moment (Kips-Ft)	3,550.0	3,499.9	99%
Shear (Kips)	30.0	28.7	96%

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Deflection (ft)	Sway (Rotation) (°)
156.0	3.671	2.772

***Deflection and Sway was evaluated considering a design wind speed of 50 mph (Fastest Mile) per ANSI/TIA/EIA-222-F.**

AMERICAN TOWER®
CORPORATION

Standard Conditions

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

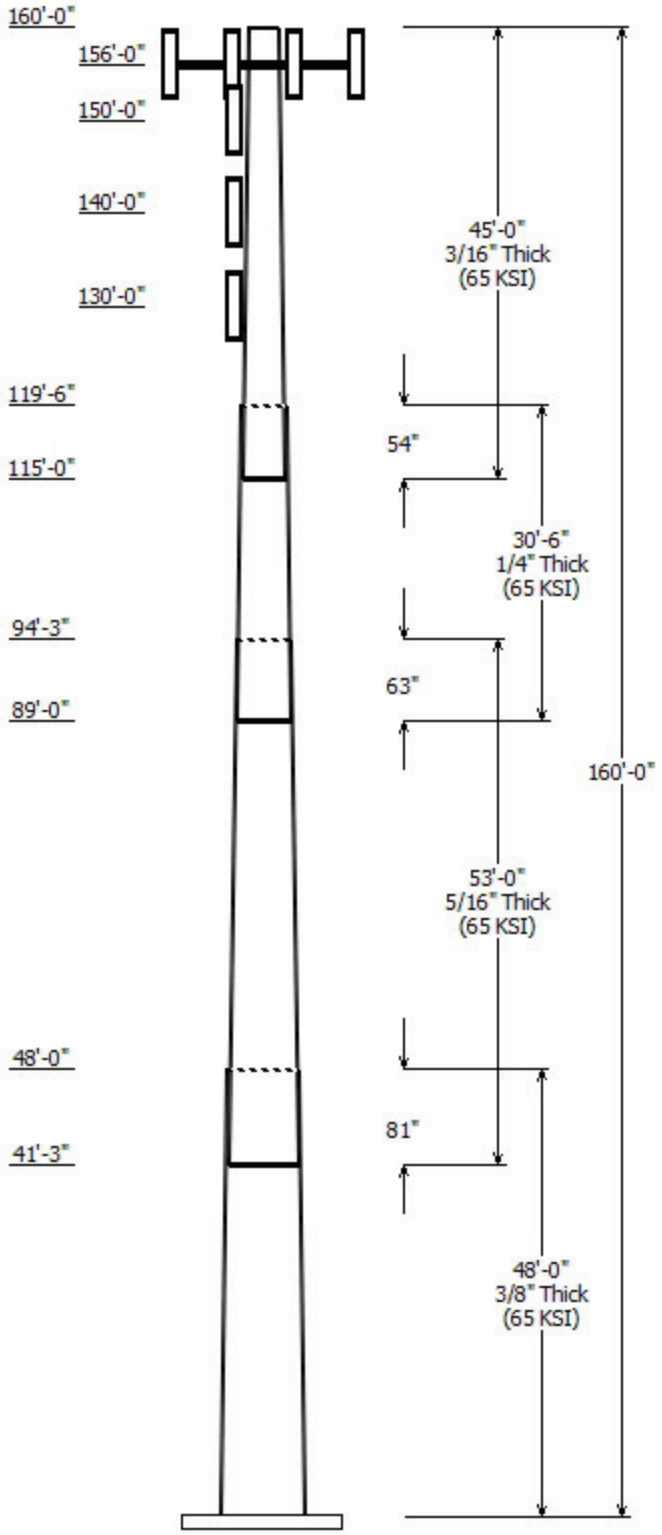
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Tower Services, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Tower Services, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Job Information

Pole :	281862
Code:	TIA/EIA-222 Rev F
Description :	160' Transamerican monopole
Client :	AT&T Mobility
Location :	Bridgewater CT, CT
Shape :	18 Sides
Height :	160.00 (ft)
Base Elev (ft):	0.00
Taper:	0.25000 (in/ft)

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	48.000	46.50	58.50	0.375		0.000	0.250000	65
2	53.000	35.56	48.81	0.313	Slip Joint	81.000	0.250000	65
3	30.500	29.75	37.37	0.250	Slip Joint	63.000	0.250000	65
4	45.000	20.00	31.25	0.188	Slip Joint	54.000	0.250000	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
156.000	156.000	1	Flat Low Profile Platform
156.000	156.000	12	Andrew SBNH-1D6565C
156.000	156.000	15	Ericsson RRUS
156.000	156.000	4	Raycap DC6-48-60-18-8F
150.000	150.000	1	105 sq. ft of area w/o ice and
140.000	140.000	1	105 sq. ft of area w/o ice and
130.000	130.000	1	105 sq. ft of area w/o ice and

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	130.0	1 5/8" Coax	No
0.000	140.0	1 5/8" Coax	No
0.000	150.0	1 5/8" Coax	No
0.000	156.0	1 5/8" Coax	No

Load Cases

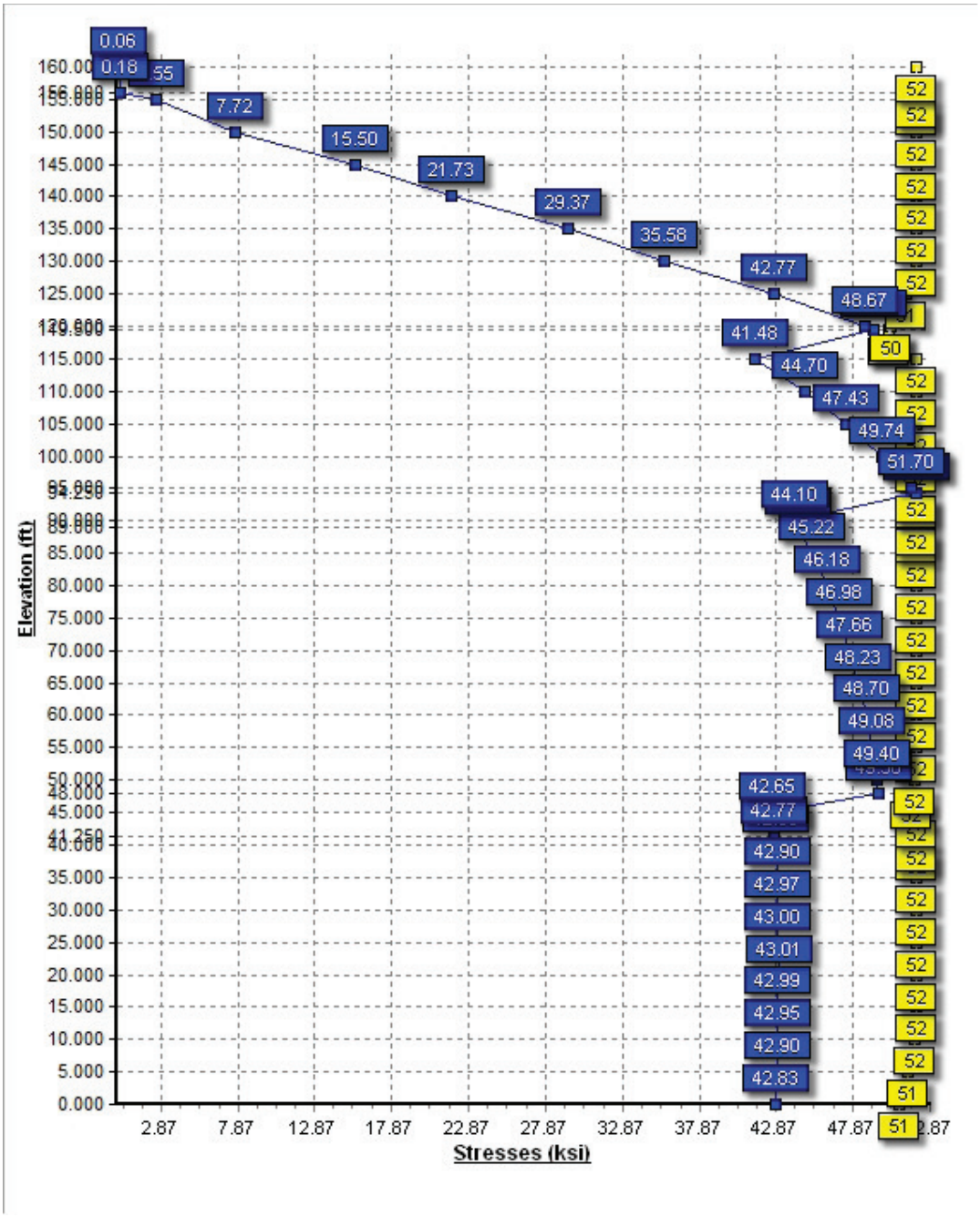
No Ice	80.00 mph Wind with No Ice
Ice	69.28 mph Wind with Ice
Twist/Sway	50.00 mph Wind with No Ice

Reactions

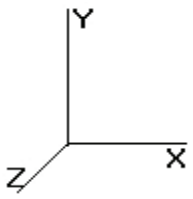
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
No Ice	3499.87	28.65	39.20
Ice	3016.44	23.95	46.57
Twist/Sway	1369.41	11.19	39.23

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000


Elevation (ft)
Stresses (ksi)
2.87
7.87
12.87
17.87
22.87
27.87
32.87
37.87
42.87
47.87
0.06
0.18
55
7.72
15.50
21.73
29.37
35.58
42.77
48.67
41.48
44.70
47.43
49.74
51.70
44.10
45.22
46.18
46.98
47.66
48.23
48.70
49.08
49.40
42.65
42.77
42.90
42.97
43.00
43.01
42.99
42.95
42.90
42.83
50
52
51

Pole :	281862	Code: TIA/EIA-222 Rev F	12/26/2013 11:04:14 AM
Location :	Bridgewater CT, CT		Page: 1
Height :	160.0 (ft)		
Base Dia :	58.50 (in)		
Top Dia :	20.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.250000 (in/ft)		



Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (sqin)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (sqin)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-18	48.000	0.3750	65		0.00	10,133	58.50	0.00	69.18	29530.1	26.10	156.00	46.50	48.00	54.90	14756.5	20.45	124.00	0.250000
2-18	53.000	0.3125	65	Slip	81.00	7,490	48.81	41.25	48.10	14296.2	26.13	156.20	35.56	94.25	34.96	5488.7	18.66	113.80	0.250000
3-18	30.500	0.2500	65	Slip	63.00	2,743	37.37	89.00	29.46	5129.6	24.95	149.50	29.75	119.50	23.41	2573.7	19.57	119.00	0.250000
4-18	45.000	0.1875	65	Slip	54.00	2,318	31.25	115.00	18.49	2253.5	27.98	166.67	20.00	160.00	11.79	584.7	17.40	106.67	0.250000
				Shaft Weight		22,685													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor	Distance From Face (ft)	Vert Ecc (ft)
156.00	Andrew SBNH-1D6565C	12	66.10	11.440	0.70	132.00	12.370	0.70	0.000	0.000
156.00	Ericsson RRUS	15	44.10	3.130	0.50	66.50	4.070	0.50	0.000	0.000
156.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000
156.00	Raycap DC6-48-60-18-8F	4	20.00	1.110	0.67	35.10	1.460	0.67	0.000	0.000
150.00	105 sq. ft of area w/o ice and	1	1800.00	105.00	0.81	2,500.00	125.000	0.81	0.000	0.000
140.00	105 sq. ft of area w/o ice and	1	1800.00	105.00	0.81	2,500.00	125.000	0.81	0.000	0.000
130.00	105 sq. ft of area w/o ice and	1	1800.00	105.00	0.81	2,500.00	125.000	0.81	0.000	0.000
	Totals	35	8434.70			11,921.90			Number of Loadings :	7

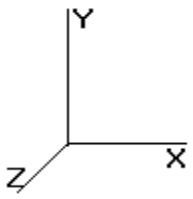
Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	No Ice Weight (lb/ft)	No Ice CaAa (sf/ft)	Ice Weight (lb/ft)	Ice CaAa (sf/ft)	Exposed To Wind
0.00	156.00	(15) 1 5/8" Coax	12.30	0.00	0.00	0.00	N
0.00	150.00	(18) 1 5/8" Coax	14.76	0.00	0.00	0.00	N
0.00	140.00	(18) 1 5/8" Coax	14.76	0.00	0.00	0.00	N
0.00	130.00	(18) 1 5/8" Coax	14.76	0.00	0.00	0.00	N
		Total Weight	8,118.00 (lb)		0.00 (lb)		

Pole : 281862
Location : Bridgewater CT, CT
Height : 160.0 (ft)
Base Dia : 58.50 (in)
Top Dia : 20.00 (in)
Shape : 18 Sides
Taper : 0.250000 (in/ft)

Code: TIA/EIA-222 Rev F

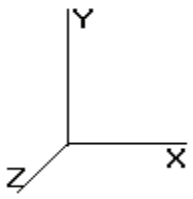
Base Elev : 0.000 (ft)



Segment Properties (Max Len : 5 ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Weight (lb)
0.00		0.3750	58.500	69.181	29,530.1	26.10	156.00	65	51	0.0
5.00		0.3750	57.250	67.693	27,665.6	25.51	152.67	65	51	1,164.4
10.00		0.3750	56.000	66.205	25,881.3	24.92	149.33	65	52	1,139.1
15.00		0.3750	54.750	64.718	24,175.4	24.33	146.00	65	52	1,113.8
20.00		0.3750	53.500	63.230	22,546.2	23.75	142.67	65	52	1,088.4
25.00		0.3750	52.250	61.742	20,991.8	23.16	139.33	65	52	1,063.1
30.00		0.3750	51.000	60.254	19,510.6	22.57	136.00	65	52	1,037.8
35.00		0.3750	49.750	58.766	18,100.8	21.98	132.67	65	52	1,012.5
40.00		0.3750	48.500	57.279	16,760.5	21.39	129.33	65	52	987.2
41.25	Bot - Section 2	0.3750	48.188	56.907	16,436.1	21.25	128.50	65	52	242.8
45.00		0.3750	47.250	55.791	15,488.1	20.81	126.00	65	52	1,326.9
48.00	Top - Section 1	0.3125	47.125	46.430	12,855.2	25.18	150.80	65	52	1,042.8
50.00		0.3125	46.625	45.935	12,447.7	24.90	149.20	65	52	314.3
55.00		0.3125	45.375	44.695	11,466.7	24.19	145.20	65	52	771.0
60.00		0.3125	44.125	43.455	10,538.7	23.49	141.20	65	52	749.9
65.00		0.3125	42.875	42.215	9,662.2	22.78	137.20	65	52	728.8
70.00		0.3125	41.625	40.975	8,835.7	22.08	133.20	65	52	707.7
75.00		0.3125	40.375	39.736	8,057.7	21.37	129.20	65	52	686.6
80.00		0.3125	39.125	38.496	7,326.7	20.67	125.20	65	52	665.5
85.00		0.3125	37.875	37.256	6,641.4	19.96	121.20	65	52	644.4
89.00	Bot - Section 3	0.3125	36.875	36.264	6,124.9	19.40	118.00	65	52	500.3
90.00		0.3125	36.625	36.016	6,000.2	19.25	117.20	65	52	222.9
94.25	Top - Section 2	0.2500	36.063	28.416	4,604.6	24.02	144.25	65	52	930.3
95.00		0.2500	35.875	28.267	4,532.6	23.89	143.50	65	52	72.3
100.0		0.2500	34.625	27.276	4,072.0	23.01	138.50	65	52	472.5
105.0		0.2500	33.375	26.284	3,643.8	22.13	133.50	65	52	455.6
110.0		0.2500	32.125	25.292	3,246.6	21.25	128.50	65	52	438.8
115.0	Bot - Section 4	0.2500	30.875	24.300	2,879.5	20.37	123.50	65	52	421.9
119.5	Top - Section 3	0.1875	30.125	17.816	2,017.4	26.92	160.67	65	50	643.2
120.0		0.1875	30.000	17.742	1,992.2	26.80	160.00	65	50	30.2
125.0		0.1875	28.750	16.998	1,752.0	25.63	153.33	65	51	295.5
130.0		0.1875	27.500	16.254	1,531.9	24.45	146.67	65	52	282.9
135.0		0.1875	26.250	15.510	1,331.0	23.28	140.00	65	52	270.2
140.0		0.1875	25.000	14.766	1,148.6	22.10	133.33	65	52	257.6
145.0		0.1875	23.750	14.022	983.6	20.92	126.67	65	52	244.9
150.0		0.1875	22.500	13.278	835.2	19.75	120.00	65	52	232.2
155.0		0.1875	21.250	12.534	702.5	18.57	113.33	65	52	219.6
156.0		0.1875	21.000	12.386	677.8	18.34	112.00	65	52	42.4
160.0		0.1875	20.000	11.790	584.7	17.40	106.67	65	52	164.5
										22,684.8

Pole :	281862	Code: TIA/EIA-222 Rev F	12/26/2013 11:04:14 AM
Location :	Bridgewater CT, CT		Page: 3
Height :	160.0 (ft)		
Base Dia :	58.50 (in)		
Top Dia :	20.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.250000 (in/ft)		



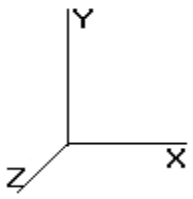
Load Case: No Ice — 80.00 mph Wind with No Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Shaft Segment Forces

Seg Top Elev (ft)	Description		Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	16.384	27.68	390.00	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	16.384	27.68	381.66	0.650	0.000	5.00	24.115	15.67	434.0	0.0	1,164.4
10.00		0.00	1.00	16.384	27.68	373.33	0.650	0.000	5.00	23.594	15.34	424.6	0.0	1,139.1
15.00		0.00	1.00	16.384	27.68	365.00	0.650	0.000	5.00	23.073	15.00	415.3	0.0	1,113.8
20.00		0.00	1.00	16.384	27.68	356.66	0.650	0.000	5.00	22.552	14.66	405.9	0.0	1,088.4
25.00		0.00	1.00	16.384	27.68	348.33	0.650	0.000	5.00	22.031	14.32	396.5	0.0	1,063.1
30.00		0.00	1.00	16.384	27.68	340.00	0.650	0.000	5.00	21.510	13.98	387.1	0.0	1,037.8
35.00		0.00	1.01	16.662	28.15	334.46	0.650	0.000	5.00	20.990	13.64	384.2	0.0	1,012.5
40.00		0.00	1.05	17.310	29.25	332.34	0.650	0.000	5.00	20.469	13.30	389.2	0.0	987.2
41.25	Bot - Section 2	0.00	1.06	17.463	29.51	331.65	0.650	0.000	1.25	5.036	3.27	96.6	0.0	242.8
45.00		0.00	1.09	17.902	30.25	329.27	0.650	0.000	3.75	15.107	9.82	297.1	0.0	1,326.9
48.00	Top - Section 1	0.00	1.11	18.235	30.81	327.04	0.650	0.000	3.00	11.875	7.72	237.9	0.0	1,042.8
50.00		0.00	1.12	18.449	31.17	329.84	0.650	0.000	2.00	7.813	5.08	158.3	0.0	314.3
55.00		0.00	1.15	18.959	32.04	325.40	0.650	0.000	5.00	19.167	12.46	399.2	0.0	771.0
60.00		0.00	1.18	19.436	32.84	320.39	0.650	0.000	5.00	18.646	12.12	398.1	0.0	749.9
65.00		0.00	1.21	19.885	33.60	314.89	0.650	0.000	5.00	18.125	11.78	395.9	0.0	728.8
70.00		0.00	1.24	20.311	34.32	308.97	0.650	0.000	5.00	17.604	11.44	392.8	0.0	707.7
75.00		0.00	1.26	20.715	35.00	302.66	0.650	0.000	5.00	17.083	11.10	388.7	0.0	686.6
80.00		0.00	1.28	21.101	35.66	296.00	0.650	0.000	5.00	16.563	10.77	383.9	0.0	665.5
85.00		0.00	1.31	21.469	36.28	289.04	0.650	0.000	5.00	16.042	10.43	378.3	0.0	644.4
89.00	Bot - Section 3	0.00	1.32	21.753	36.76	283.26	0.650	0.000	4.00	12.458	8.10	297.7	0.0	500.3
90.00		0.00	1.33	21.823	36.88	281.79	0.650	0.000	1.00	3.104	2.02	74.4	0.0	222.9
94.25	Top - Section 2	0.00	1.35	22.113	37.37	275.43	0.650	0.000	4.25	12.960	8.42	314.8	0.0	930.3
95.00		0.00	1.35	22.163	37.45	278.16	0.650	0.000	0.75	2.248	1.46	54.7	0.0	72.3
100.0		0.00	1.37	22.490	38.00	270.44	0.650	0.000	5.00	14.688	9.55	362.9	0.0	472.5
105.0		0.00	1.39	22.806	38.54	262.50	0.650	0.000	5.00	14.167	9.21	354.9	0.0	455.6
110.0		0.00	1.41	23.111	39.05	254.36	0.650	0.000	5.00	13.646	8.87	346.4	0.0	438.8
115.0	Bot - Section 4	0.00	1.42	23.406	39.55	246.02	0.650	0.000	5.00	13.125	8.53	337.5	0.0	421.9
119.5	Top - Section 3	0.00	1.44	23.664	39.99	238.35	0.650	0.000	4.50	11.508	7.48	299.1	0.0	643.2
120.0		0.00	1.44	23.692	40.04	240.50	0.650	0.000	0.50	1.253	0.81	32.6	0.0	30.2
125.0		0.00	1.46	23.970	40.51	231.83	0.650	0.000	5.00	12.240	7.96	322.3	0.0	295.5
130.0	Appertunance(s)	0.00	1.48	24.241	40.96	222.99	0.650	0.000	5.00	11.719	7.62	312.0	0.0	282.9
135.0		0.00	1.49	24.503	41.41	214.01	0.650	0.000	5.00	11.198	7.28	301.4	0.0	270.2
140.0	Appertunance(s)	0.00	1.51	24.759	41.84	204.88	0.650	0.000	5.00	10.677	6.94	290.4	0.0	257.6
145.0		0.00	1.52	25.009	42.26	195.61	0.650	0.000	5.00	10.156	6.60	279.0	0.0	244.9
150.0	Appertunance(s)	0.00	1.54	25.252	42.67	186.22	0.650	0.000	5.00	9.635	6.26	267.3	0.0	232.2
155.0		0.00	1.55	25.490	43.07	176.70	0.650	0.000	5.00	9.115	5.92	255.2	0.0	219.6
156.0	Appertunance(s)	0.00	1.55	25.537	43.15	174.78	0.650	0.000	1.00	1.760	1.14	49.4	0.0	42.4
160.0		0.00	1.57	25.722	43.47	167.06	0.650	0.000	4.00	6.833	4.44	193.1	0.0	164.5
							Totals:		160.00			11,508.9	0.0	22,684.8

Pole :	281862	Code: TIA/EIA-222 Rev F	12/26/2013 11:04:14 AM
Location :	Bridgewater CT, CT		Page: 4
Height :	160.0 (ft)		
Base Dia :	58.50 (in)		
Top Dia :	20.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.250000 (in/ft)		



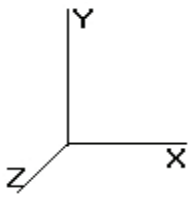
Load Case: No Ice — 80.00 mph Wind with No Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
130.0	105 sq. ft of area w	1	24.241	40.967	0.81	85.05	0.000	0.000	3,484.20	0.00	0.00	1,800.00
140.0	105 sq. ft of area w	1	24.759	41.843	0.81	85.05	0.000	0.000	3,558.76	0.00	0.00	1,800.00
150.0	105 sq. ft of area w	1	25.252	42.676	0.81	85.05	0.000	0.000	3,629.61	0.00	0.00	1,800.00
156.0	Raycap DC6-48-60-18-	4	25.537	43.157	0.67	2.97	0.000	0.000	128.38	0.00	0.00	80.00
156.0	Ericsson RRUS	15	25.537	43.157	0.50	23.48	0.000	0.000	1,013.11	0.00	0.00	661.50
156.0	Andrew SBNH-	12	25.537	43.157	0.70	96.10	0.000	0.000	4,147.23	0.00	0.00	793.20
156.0	Flat Low Profile Pla	1	25.537	43.157	1.00	26.10	0.000	0.000	1,126.40	0.00	0.00	1,500.00
									17,087.71			8,434.70

Pole :	281862	Code: TIA/EIA-222 Rev F	12/26/2013 11:04:14 AM
Location :	Bridgewater CT, CT		Page: 5
Height :	160.0 (ft)		
Base Dia :	58.50 (in)		
Top Dia :	20.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.250000 (in/ft)		



Load Case: No Ice — 80.00 mph Wind with No Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

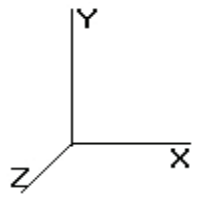
Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	434.01	1,447.28	0.00	0.00
10.00	424.64	1,421.97	0.00	0.00
15.00	415.26	1,396.65	0.00	0.00
20.00	405.89	1,371.34	0.00	0.00
25.00	396.51	1,346.03	0.00	0.00
30.00	387.14	1,320.72	0.00	0.00
35.00	384.17	1,295.40	0.00	0.00
40.00	389.21	1,270.09	0.00	0.00
41.25	96.60	313.57	0.00	0.00
45.00	297.10	1,539.11	0.00	0.00
48.00	237.87	1,212.49	0.00	0.00
50.00	158.33	427.46	0.00	0.00
55.00	399.16	1,053.88	0.00	0.00
60.00	398.09	1,032.78	0.00	0.00
65.00	395.92	1,011.69	0.00	0.00
70.00	392.78	990.60	0.00	0.00
75.00	388.74	969.50	0.00	0.00
80.00	383.91	948.41	0.00	0.00
85.00	378.33	927.32	0.00	0.00
89.00	297.71	726.66	0.00	0.00
90.00	74.41	279.46	0.00	0.00
94.25	314.81	1,170.75	0.00	0.00
95.00	54.73	114.77	0.00	0.00
100.0	362.86	755.40	0.00	0.00
105.0	354.90	738.53	0.00	0.00
110.0	346.43	721.65	0.00	0.00
115.0	337.47	704.78	0.00	0.00
119.5	299.15	897.80	0.00	0.00
120.0	32.60	58.54	0.00	0.00
125.0	322.29	578.42	0.00	0.00
130.0	3,796.25	2,365.77	0.00	0.00
135.0	301.41	479.31	0.00	0.00
140.0	3,849.16	2,266.66	0.00	0.00
145.0	279.01	380.20	0.00	0.00
150.0	3,896.89	2,167.54	0.00	0.00
155.0	255.21	281.09	0.00	0.00
156.0	6,464.51	3,089.40	0.00	0.00
160.0	193.08	164.53	0.00	0.00
Totals:	28,596.57	39,237.53	0.00	0.00

Pole : 281862
Location : Bridgewater CT, CT
Height : 160.0 (ft)
Base Dia : 58.50 (in)
Top Dia : 20.00 (in)
Shape : 18 Sides
Taper : 0.250000 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: No Ice — 80.00 mph Wind with No Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

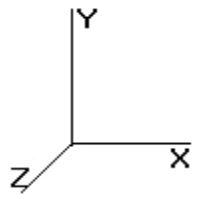
Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-28.654	-39.195	0.000	0.000	0.000	-3,499.868	0.000	0.000	0.000	0.000
5.00	-28.327	-37.666	0.000	0.000	0.000	-3,356.603	-0.089	0.000	0.089	-0.165
10.00	-28.005	-36.163	0.000	0.000	0.000	-3,214.968	-0.353	0.000	0.353	-0.334
15.00	-27.685	-34.685	0.000	0.000	0.000	-3,074.948	-0.795	0.000	0.795	-0.507
20.00	-27.369	-33.232	0.000	0.000	0.000	-2,936.525	-1.421	0.000	1.421	-0.684
25.00	-27.056	-31.805	0.000	0.000	0.000	-2,799.683	-2.235	0.000	2.235	-0.865
30.00	-26.746	-30.404	0.000	0.000	0.000	-2,664.406	-3.240	0.000	3.240	-1.050
35.00	-26.433	-29.028	0.000	0.000	0.000	-2,530.677	-4.441	0.000	4.441	-1.239
40.00	-26.073	-27.713	0.000	0.000	0.000	-2,398.512	-5.843	0.000	5.843	-1.433
41.25	-26.017	-27.356	0.000	0.000	0.000	-2,365.921	-6.225	0.000	6.225	-1.484
45.00	-25.740	-25.764	0.000	0.000	0.000	-2,268.358	-7.451	0.000	7.451	-1.634
48.00	-25.510	-24.513	0.000	0.000	0.000	-2,191.140	-8.517	0.000	8.517	-1.757
50.00	-25.406	-24.020	0.000	0.000	0.000	-2,140.121	-9.271	0.000	9.271	-1.840
55.00	-25.067	-22.875	0.000	0.000	0.000	-2,013.092	-11.326	0.000	11.326	-2.078
60.00	-24.723	-21.753	0.000	0.000	0.000	-1,887.758	-13.631	0.000	13.631	-2.320
65.00	-24.374	-20.654	0.000	0.000	0.000	-1,764.146	-16.192	0.000	16.192	-2.566
70.00	-24.022	-19.577	0.000	0.000	0.000	-1,642.278	-19.014	0.000	19.014	-2.817
75.00	-23.667	-18.523	0.000	0.000	0.000	-1,522.172	-22.100	0.000	22.100	-3.072
80.00	-23.310	-17.492	0.000	0.000	0.000	-1,403.840	-25.454	0.000	25.454	-3.330
85.00	-22.945	-16.495	0.000	0.000	0.000	-1,287.291	-29.080	0.000	29.080	-3.591
89.00	-22.637	-15.736	0.000	0.000	0.000	-1,195.513	-32.178	0.000	32.178	-3.804
90.00	-22.583	-15.406	0.000	0.000	0.000	-1,172.876	-32.981	0.000	32.981	-3.859
94.25	-22.220	-14.209	0.000	0.000	0.000	-1,076.901	-36.517	0.000	36.517	-4.085
95.00	-22.202	-14.028	0.000	0.000	0.000	-1,060.236	-37.162	0.000	37.162	-4.127
100.0	-21.857	-13.182	0.000	0.000	0.000	-949.227	-41.651	0.000	41.651	-4.442
105.0	-21.511	-12.358	0.000	0.000	0.000	-839.946	-46.468	0.000	46.468	-4.755
110.0	-21.165	-11.557	0.000	0.000	0.000	-732.394	-51.609	0.000	51.609	-5.062
115.0	-20.817	-10.785	0.000	0.000	0.000	-626.570	-57.065	0.000	57.065	-5.359
119.5	-20.458	-9.870	0.000	0.000	0.000	-532.893	-62.236	0.000	62.236	-5.617
120.0	-20.452	-9.748	0.000	0.000	0.000	-522.664	-62.825	0.000	62.825	-5.646
125.0	-20.124	-9.093	0.000	0.000	0.000	-420.405	-68.915	0.000	68.915	-5.983
130.0	-16.131	-7.069	0.000	0.000	0.000	-319.787	-75.337	0.000	75.337	-6.284
135.0	-15.805	-6.561	0.000	0.000	0.000	-239.133	-82.050	0.000	82.050	-6.543
140.0	-11.734	-4.718	0.000	0.000	0.000	-160.109	-89.009	0.000	89.009	-6.756
145.0	-11.422	-4.347	0.000	0.000	0.000	-101.437	-96.162	0.000	96.162	-6.918
150.0	-7.294	-2.659	0.000	0.000	0.000	-44.326	-103.455	0.000	103.455	-7.024
155.0	-7.007	-2.410	0.000	0.000	0.000	-7.855	-110.822	0.000	110.822	-7.068
156.0	-0.212	-0.139	0.000	0.000	0.000	-0.847	-112.300	0.000	112.300	-7.070
160.0	-0.193	0.000	0.000	0.000	0.000	0.000	-118.208	0.000	118.208	-7.071

Pole : 281862
Location : Bridgewater CT, CT
Height : 160.0 (ft)
Base Dia : 58.50 (in)
Top Dia : 20.00 (in)
Shape : 18 Sides
Taper : 0.250000 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: No Ice — 80.00 mph Wind with No Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

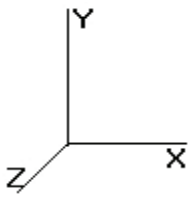
Calculated Stresses

Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.57	0.83	0.00	0.00	0.00	42.24	42.83	50.9	0.0	0.842
5.00	0.56	0.84	0.00	0.00	0.00	42.32	42.90	51.4	0.0	0.835
10.00	0.55	0.85	0.00	0.00	0.00	42.38	42.95	51.9	0.0	0.828
15.00	0.54	0.86	0.00	0.00	0.00	42.43	42.99	52.0	0.0	0.827
20.00	0.53	0.87	0.00	0.00	0.00	42.45	43.01	52.0	0.0	0.827
25.00	0.52	0.88	0.00	0.00	0.00	42.46	43.00	52.0	0.0	0.827
30.00	0.50	0.89	0.00	0.00	0.00	42.43	42.97	52.0	0.0	0.827
35.00	0.49	0.91	0.00	0.00	0.00	42.38	42.90	52.0	0.0	0.825
40.00	0.48	0.92	0.00	0.00	0.00	42.29	42.80	52.0	0.0	0.823
41.25	0.48	0.92	0.00	0.00	0.00	42.26	42.77	52.0	0.0	0.823
45.00	0.46	0.93	0.00	0.00	0.00	42.16	42.65	52.0	0.0	0.821
48.00	0.53	1.11	0.00	0.00	0.00	48.94	49.50	51.7	0.0	0.958
50.00	0.52	1.11	0.00	0.00	0.00	48.84	49.40	51.9	0.0	0.952
55.00	0.51	1.13	0.00	0.00	0.00	48.53	49.08	52.0	0.0	0.944
60.00	0.50	1.15	0.00	0.00	0.00	48.16	48.70	52.0	0.0	0.937
65.00	0.49	1.16	0.00	0.00	0.00	47.69	48.23	52.0	0.0	0.928
70.00	0.48	1.18	0.00	0.00	0.00	47.14	47.66	52.0	0.0	0.917
75.00	0.47	1.20	0.00	0.00	0.00	46.47	46.98	52.0	0.0	0.904
80.00	0.45	1.22	0.00	0.00	0.00	45.67	46.18	52.0	0.0	0.888
85.00	0.44	1.24	0.00	0.00	0.00	44.73	45.22	52.0	0.0	0.870
89.00	0.43	1.26	0.00	0.00	0.00	43.85	44.34	52.0	0.0	0.853
90.00	0.43	1.26	0.00	0.00	0.00	43.62	44.10	52.0	0.0	0.848
94.25	0.50	1.58	0.00	0.00	0.00	51.39	51.96	52.0	0.0	1.000
95.00	0.50	1.58	0.00	0.00	0.00	51.13	51.70	52.0	0.0	0.995
100.00	0.48	1.62	0.00	0.00	0.00	49.18	49.74	52.0	0.0	0.957
105.00	0.47	1.65	0.00	0.00	0.00	46.87	47.43	52.0	0.0	0.912
110.00	0.46	1.69	0.00	0.00	0.00	44.15	44.70	52.0	0.0	0.860
115.00	0.44	1.73	0.00	0.00	0.00	40.93	41.48	52.0	0.0	0.798
119.50	0.55	2.31	0.00	0.00	0.00	48.48	49.20	50.2	0.0	0.980
120.00	0.55	2.32	0.00	0.00	0.00	47.95	48.67	50.3	0.0	0.968
125.00	0.53	2.39	0.00	0.00	0.00	42.03	42.77	51.3	0.0	0.834
130.00	0.43	2.00	0.00	0.00	0.00	34.98	35.58	52.0	0.0	0.684
135.00	0.42	2.05	0.00	0.00	0.00	28.73	29.37	52.0	0.0	0.565
140.00	0.32	1.60	0.00	0.00	0.00	21.23	21.73	52.0	0.0	0.418
145.00	0.31	1.64	0.00	0.00	0.00	14.92	15.50	52.0	0.0	0.298
150.00	0.20	1.11	0.00	0.00	0.00	7.28	7.72	52.0	0.0	0.148
155.00	0.19	1.13	0.00	0.00	0.00	1.45	2.55	52.0	0.0	0.049
156.00	0.01	0.03	0.00	0.00	0.00	0.16	0.18	52.0	0.0	0.003
160.00	0.00	0.03	0.00	0.00	0.00	0.00	0.06	52.0	0.0	0.001

Pole : 281862
Location : Bridgewater CT, CT
Height : 160.0 (ft)
Base Dia : 58.50 (in)
Top Dia : 20.00 (in)
Shape : 18 Sides
Taper : 0.250000 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



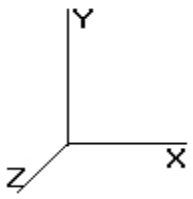
Load Case: Ice — 69.28 mph Wind with Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Shaft Segment Forces

Seg Top Elev (ft)	Description		Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	12.287	20.76	337.74	0.650	0.500	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	12.287	20.76	330.52	0.650	0.500	5.00	24.531	15.95	331.1	178.2	1,342.6
10.00		0.00	1.00	12.287	20.76	323.30	0.650	0.500	5.00	24.010	15.61	324.1	174.3	1,313.4
15.00		0.00	1.00	12.287	20.76	316.09	0.650	0.500	5.00	23.490	15.27	317.1	170.5	1,284.2
20.00		0.00	1.00	12.287	20.76	308.87	0.650	0.500	5.00	22.969	14.93	310.0	166.6	1,255.1
25.00		0.00	1.00	12.287	20.76	301.65	0.650	0.500	5.00	22.448	14.59	303.0	162.8	1,225.9
30.00		0.00	1.00	12.287	20.76	294.44	0.650	0.500	5.00	21.927	14.25	296.0	158.9	1,196.7
35.00		0.00	1.01	12.496	21.11	289.64	0.650	0.500	5.00	21.406	13.91	293.8	155.1	1,167.6
40.00		0.00	1.05	12.982	21.93	287.80	0.650	0.500	5.00	20.885	13.58	297.8	151.2	1,138.4
41.25	Bot - Section 2	0.00	1.06	13.096	22.13	287.21	0.650	0.500	1.25	5.140	3.34	73.9	37.6	280.4
45.00		0.00	1.09	13.426	22.69	285.14	0.650	0.500	3.75	15.420	10.02	227.4	112.0	1,438.9
48.00	Top - Section 1	0.00	1.11	13.676	23.11	283.22	0.650	0.500	3.00	12.125	7.88	182.2	88.2	1,130.9
50.00		0.00	1.12	13.836	23.38	285.64	0.650	0.500	2.00	7.979	5.19	121.3	58.2	372.5
55.00		0.00	1.15	14.218	24.02	281.79	0.650	0.500	5.00	19.583	12.73	305.9	141.6	912.5
60.00		0.00	1.18	14.576	24.63	277.46	0.650	0.500	5.00	19.063	12.39	305.2	137.7	887.6
65.00		0.00	1.21	14.913	25.20	272.70	0.650	0.500	5.00	18.542	12.05	303.8	133.8	862.6
70.00		0.00	1.24	15.232	25.74	267.56	0.650	0.500	5.00	18.021	11.71	301.5	130.0	837.7
75.00		0.00	1.26	15.536	26.25	262.10	0.650	0.500	5.00	17.500	11.38	298.7	126.1	812.7
80.00		0.00	1.28	15.825	26.74	256.34	0.650	0.500	5.00	16.979	11.04	295.2	122.3	787.8
85.00		0.00	1.31	16.101	27.21	250.31	0.650	0.500	5.00	16.458	10.70	291.1	118.4	762.8
89.00	Bot - Section 3	0.00	1.32	16.314	27.57	245.30	0.650	0.500	4.00	12.792	8.31	229.2	92.3	592.6
90.00		0.00	1.33	16.366	27.65	244.03	0.650	0.500	1.00	3.188	2.07	57.3	23.2	246.1
94.25	Top - Section 2	0.00	1.35	16.583	28.02	238.52	0.650	0.500	4.25	13.314	8.65	242.5	95.9	1,026.2
95.00		0.00	1.35	16.621	28.09	240.89	0.650	0.500	0.75	2.311	1.50	42.2	16.8	89.2
100.0		0.00	1.37	16.866	28.50	234.20	0.650	0.500	5.00	15.104	9.82	279.8	108.4	580.9
105.0		0.00	1.39	17.103	28.90	227.33	0.650	0.500	5.00	14.583	9.48	274.0	104.5	560.2
110.0		0.00	1.41	17.332	29.29	220.27	0.650	0.500	5.00	14.063	9.14	267.7	100.7	539.4
115.0	Bot - Section 4	0.00	1.42	17.554	29.66	213.05	0.650	0.500	5.00	13.542	8.80	261.1	96.8	518.7
119.5	Top - Section 3	0.00	1.44	17.747	29.99	206.41	0.650	0.500	4.50	11.883	7.72	231.7	85.1	728.2
120.0		0.00	1.44	17.768	30.02	208.27	0.650	0.500	0.50	1.294	0.84	25.3	9.4	39.7
125.0		0.00	1.46	17.977	30.38	200.76	0.650	0.500	5.00	12.656	8.23	249.9	90.3	385.8
130.0	Appertunance(s)	0.00	1.48	18.179	30.72	193.11	0.650	0.500	5.00	12.135	7.89	242.3	86.4	369.3
135.0		0.00	1.49	18.376	31.05	185.33	0.650	0.500	5.00	11.615	7.55	234.5	82.5	352.8
140.0	Appertunance(s)	0.00	1.51	18.568	31.38	177.42	0.650	0.500	5.00	11.094	7.21	226.3	78.7	336.2
145.0		0.00	1.52	18.755	31.69	169.40	0.650	0.500	5.00	10.573	6.87	217.8	74.8	319.7
150.0	Appertunance(s)	0.00	1.54	18.938	32.00	161.26	0.650	0.500	5.00	10.052	6.53	209.1	71.0	303.2
155.0		0.00	1.55	19.116	32.30	153.02	0.650	0.500	5.00	9.531	6.20	200.1	67.1	286.7
156.0	Appertunance(s)	0.00	1.55	19.151	32.36	151.36	0.650	0.500	1.00	1.844	1.20	38.8	13.3	55.7
160.0		0.00	1.57	19.290	32.60	144.67	0.650	0.500	4.00	7.167	4.66	151.9	50.6	215.1
							Totals:		160.00			8,860.6	3,871.1	26,555.9

Pole :	281862	Code: TIA/EIA-222 Rev F	12/26/2013 11:04:15 AM
Location :	Bridgewater CT, CT		Page: 9
Height :	160.0 (ft)		
Base Dia :	58.50 (in)		
Top Dia :	20.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.250000 (in/ft)		

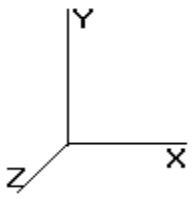


Load Case: Ice — 69.28 mph Wind with Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
130.0	105 sq. ft of area w	1	18.179	30.723	0.81	101.25	0.000	0.000	3,110.71	0.00	0.00	2,500.00
140.0	105 sq. ft of area w	1	18.568	31.381	0.81	101.25	0.000	0.000	3,177.28	0.00	0.00	2,500.00
150.0	105 sq. ft of area w	1	18.938	32.005	0.81	101.25	0.000	0.000	3,240.53	0.00	0.00	2,500.00
156.0	Raycap DC6-48-60-18-	4	19.151	32.366	0.67	3.91	0.000	0.000	126.64	0.00	0.00	140.40
156.0	Ericsson RRUS	15	19.151	32.366	0.50	30.53	0.000	0.000	987.97	0.00	0.00	997.50
156.0	Andrew SBNH-	12	19.151	32.366	0.70	103.91	0.000	0.000	3,363.05	0.00	0.00	1,584.00
156.0	Flat Low Profile Pla	1	19.151	32.366	1.00	31.60	0.000	0.000	1,022.76	0.00	0.00	1,700.00
									15,028.96			11,921.90



Load Case: Ice — 69.28 mph Wind with Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

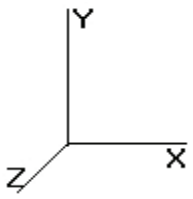
Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	331.11	1,625.48	0.00	0.00
10.00	324.08	1,596.31	0.00	0.00
15.00	317.05	1,567.14	0.00	0.00
20.00	310.02	1,537.97	0.00	0.00
25.00	302.99	1,508.80	0.00	0.00
30.00	295.96	1,479.63	0.00	0.00
35.00	293.83	1,450.46	0.00	0.00
40.00	297.83	1,421.29	0.00	0.00
41.25	73.94	351.13	0.00	0.00
45.00	227.42	1,651.06	0.00	0.00
48.00	182.15	1,300.67	0.00	0.00
50.00	121.28	485.62	0.00	0.00
55.00	305.86	1,195.44	0.00	0.00
60.00	305.22	1,170.49	0.00	0.00
65.00	303.75	1,145.53	0.00	0.00
70.00	301.54	1,120.58	0.00	0.00
75.00	298.65	1,095.63	0.00	0.00
80.00	295.16	1,070.68	0.00	0.00
85.00	291.10	1,045.73	0.00	0.00
89.00	229.24	818.93	0.00	0.00
90.00	57.31	302.68	0.00	0.00
94.25	242.55	1,266.65	0.00	0.00
95.00	42.19	131.60	0.00	0.00
100.0	279.85	863.79	0.00	0.00
105.0	273.99	843.05	0.00	0.00
110.0	267.74	822.32	0.00	0.00
115.0	261.12	801.59	0.00	0.00
119.5	231.66	982.85	0.00	0.00
120.0	25.26	67.95	0.00	0.00
125.0	249.93	668.68	0.00	0.00
130.0	3,353.06	3,152.17	0.00	0.00
135.0	234.46	561.85	0.00	0.00
140.0	3,403.57	3,045.34	0.00	0.00
145.0	217.83	455.03	0.00	0.00
150.0	3,449.65	2,938.51	0.00	0.00
155.0	200.15	348.20	0.00	0.00
156.0	5,539.22	4,489.87	0.00	0.00
160.0	151.87	215.14	0.00	0.00
Totals:	23,889.58	46,595.84	0.00	0.00

Pole : 281862
Location : Bridgewater CT, CT
Height : 160.0 (ft)
Base Dia : 58.50 (in)
Top Dia : 20.00 (in)
Shape : 18 Sides
Taper : 0.250000 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: Ice — 69.28 mph Wind with Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

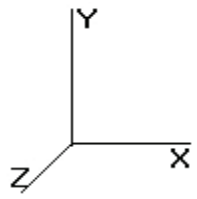
Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-23.948	-46.565	0.000	0.000	0.000	-3,016.444	0.000	0.000	0.000	0.000
5.00	-23.728	-44.881	0.000	0.000	0.000	-2,896.706	-0.077	0.000	0.077	-0.142
10.00	-23.509	-43.225	0.000	0.000	0.000	-2,778.068	-0.304	0.000	0.304	-0.288
15.00	-23.292	-41.599	0.000	0.000	0.000	-2,660.524	-0.686	0.000	0.686	-0.438
20.00	-23.077	-40.001	0.000	0.000	0.000	-2,544.065	-1.227	0.000	1.227	-0.591
25.00	-22.863	-38.433	0.000	0.000	0.000	-2,428.684	-1.930	0.000	1.930	-0.748
30.00	-22.650	-36.894	0.000	0.000	0.000	-2,314.372	-2.799	0.000	2.799	-0.908
35.00	-22.434	-35.383	0.000	0.000	0.000	-2,201.124	-3.839	0.000	3.839	-1.073
40.00	-22.170	-33.927	0.000	0.000	0.000	-2,088.954	-5.053	0.000	5.053	-1.242
41.25	-22.140	-33.544	0.000	0.000	0.000	-2,061.242	-5.385	0.000	5.385	-1.286
45.00	-21.940	-31.853	0.000	0.000	0.000	-1,978.217	-6.447	0.000	6.447	-1.417
48.00	-21.773	-30.524	0.000	0.000	0.000	-1,912.398	-7.372	0.000	7.372	-1.524
50.00	-21.712	-29.988	0.000	0.000	0.000	-1,868.853	-8.026	0.000	8.026	-1.597
55.00	-21.476	-28.724	0.000	0.000	0.000	-1,760.295	-9.810	0.000	9.810	-1.804
60.00	-21.235	-27.485	0.000	0.000	0.000	-1,652.917	-11.813	0.000	11.813	-2.016
65.00	-20.989	-26.272	0.000	0.000	0.000	-1,546.745	-14.040	0.000	14.040	-2.232
70.00	-20.739	-25.085	0.000	0.000	0.000	-1,441.803	-16.495	0.000	16.495	-2.452
75.00	-20.486	-23.923	0.000	0.000	0.000	-1,338.109	-19.183	0.000	19.183	-2.676
80.00	-20.230	-22.787	0.000	0.000	0.000	-1,235.681	-22.106	0.000	22.106	-2.903
85.00	-19.964	-21.686	0.000	0.000	0.000	-1,134.531	-25.269	0.000	25.269	-3.133
89.00	-19.731	-20.841	0.000	0.000	0.000	-1,054.679	-27.973	0.000	27.973	-3.321
90.00	-19.701	-20.499	0.000	0.000	0.000	-1,034.948	-28.674	0.000	28.674	-3.369
94.25	-19.422	-19.210	0.000	0.000	0.000	-951.220	-31.763	0.000	31.763	-3.569
95.00	-19.425	-19.027	0.000	0.000	0.000	-936.654	-32.326	0.000	32.326	-3.606
100.0	-19.177	-18.090	0.000	0.000	0.000	-839.532	-36.251	0.000	36.251	-3.885
105.0	-18.927	-17.178	0.000	0.000	0.000	-743.648	-40.466	0.000	40.466	-4.161
110.0	-18.675	-16.291	0.000	0.000	0.000	-649.015	-44.968	0.000	44.968	-4.433
115.0	-18.417	-15.434	0.000	0.000	0.000	-555.642	-49.750	0.000	49.750	-4.697
119.5	-18.135	-14.434	0.000	0.000	0.000	-472.766	-54.284	0.000	54.284	-4.926
120.0	-18.146	-14.315	0.000	0.000	0.000	-463.699	-54.801	0.000	54.801	-4.951
125.0	-17.905	-13.583	0.000	0.000	0.000	-372.969	-60.145	0.000	60.145	-5.250
130.0	-14.317	-10.699	0.000	0.000	0.000	-283.444	-65.785	0.000	65.785	-5.517
135.0	-14.066	-10.111	0.000	0.000	0.000	-211.860	-71.682	0.000	71.682	-5.747
140.0	-10.391	-7.399	0.000	0.000	0.000	-141.532	-77.798	0.000	77.798	-5.935
145.0	-10.141	-6.948	0.000	0.000	0.000	-89.578	-84.086	0.000	84.086	-6.079
150.0	-6.402	-4.388	0.000	0.000	0.000	-38.874	-90.497	0.000	90.497	-6.171
155.0	-6.167	-4.061	0.000	0.000	0.000	-6.863	-96.974	0.000	96.974	-6.210
156.0	-0.174	-0.197	0.000	0.000	0.000	-0.697	-98.273	0.000	98.273	-6.212
160.0	-0.152	0.000	0.000	0.000	0.000	0.000	-103.467	0.000	103.467	-6.212

Pole : 281862
Location : Bridgewater CT, CT
Height : 160.0 (ft)
Base Dia : 58.50 (in)
Top Dia : 20.00 (in)
Shape : 18 Sides
Taper : 0.250000 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



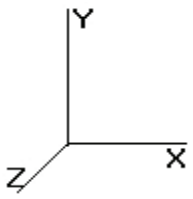
Load Case: Ice — 69.28 mph Wind with Ice — 24 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.67	0.70	0.00	0.00	0.00	36.41	37.10	50.9	0.0	0.729
5.00	0.66	0.71	0.00	0.00	0.00	36.52	37.20	51.4	0.0	0.724
10.00	0.65	0.72	0.00	0.00	0.00	36.62	37.30	51.9	0.0	0.719
15.00	0.64	0.73	0.00	0.00	0.00	36.71	37.37	52.0	0.0	0.719
20.00	0.63	0.74	0.00	0.00	0.00	36.78	37.43	52.0	0.0	0.720
25.00	0.62	0.75	0.00	0.00	0.00	36.83	37.48	52.0	0.0	0.721
30.00	0.61	0.76	0.00	0.00	0.00	36.86	37.49	52.0	0.0	0.721
35.00	0.60	0.77	0.00	0.00	0.00	36.86	37.48	52.0	0.0	0.721
40.00	0.59	0.78	0.00	0.00	0.00	36.83	37.45	52.0	0.0	0.720
41.25	0.59	0.78	0.00	0.00	0.00	36.82	37.43	52.0	0.0	0.720
45.00	0.57	0.79	0.00	0.00	0.00	36.77	37.36	52.0	0.0	0.719
48.00	0.66	0.95	0.00	0.00	0.00	42.71	43.40	51.7	0.0	0.840
50.00	0.65	0.95	0.00	0.00	0.00	42.65	43.33	51.9	0.0	0.835
55.00	0.64	0.97	0.00	0.00	0.00	42.44	43.11	52.0	0.0	0.829
60.00	0.63	0.98	0.00	0.00	0.00	42.16	42.83	52.0	0.0	0.824
65.00	0.62	1.00	0.00	0.00	0.00	41.82	42.47	52.0	0.0	0.817
70.00	0.61	1.02	0.00	0.00	0.00	41.38	42.03	52.0	0.0	0.809
75.00	0.60	1.04	0.00	0.00	0.00	40.85	41.49	52.0	0.0	0.798
80.00	0.59	1.06	0.00	0.00	0.00	40.20	40.84	52.0	0.0	0.786
85.00	0.58	1.08	0.00	0.00	0.00	39.42	40.05	52.0	0.0	0.770
89.00	0.57	1.10	0.00	0.00	0.00	38.69	39.31	52.0	0.0	0.756
90.00	0.57	1.10	0.00	0.00	0.00	38.49	39.10	52.0	0.0	0.752
94.25	0.68	1.38	0.00	0.00	0.00	45.39	46.13	52.0	0.0	0.887
95.00	0.67	1.38	0.00	0.00	0.00	45.17	45.90	52.0	0.0	0.883
100.00	0.66	1.42	0.00	0.00	0.00	43.49	44.22	52.0	0.0	0.851
105.00	0.65	1.45	0.00	0.00	0.00	41.50	42.23	52.0	0.0	0.812
110.00	0.64	1.49	0.00	0.00	0.00	39.13	39.85	52.0	0.0	0.767
115.00	0.64	1.53	0.00	0.00	0.00	36.30	37.03	52.0	0.0	0.712
119.50	0.81	2.05	0.00	0.00	0.00	43.01	43.97	50.2	0.0	0.876
120.00	0.81	2.06	0.00	0.00	0.00	42.54	43.50	50.3	0.0	0.865
125.00	0.80	2.12	0.00	0.00	0.00	37.29	38.26	51.3	0.0	0.746
130.00	0.66	1.78	0.00	0.00	0.00	31.00	31.81	52.0	0.0	0.612
135.00	0.65	1.83	0.00	0.00	0.00	25.46	26.30	52.0	0.0	0.506
140.00	0.50	1.42	0.00	0.00	0.00	18.77	19.43	52.0	0.0	0.374
145.00	0.50	1.46	0.00	0.00	0.00	13.18	13.90	52.0	0.0	0.268
150.00	0.33	0.97	0.00	0.00	0.00	6.38	6.92	52.0	0.0	0.133
155.00	0.32	0.99	0.00	0.00	0.00	1.26	2.34	52.0	0.0	0.045
156.00	0.02	0.03	0.00	0.00	0.00	0.13	0.16	52.0	0.0	0.003
160.00	0.00	0.03	0.00	0.00	0.00	0.00	0.04	52.0	0.0	0.001

Pole :	281862	Code: TIA/EIA-222 Rev F	12/26/2013 11:04:15 AM
Location :	Bridgewater CT, CT		Page: 13
Height :	160.0 (ft)		
Base Dia :	58.50 (in)		
Top Dia :	20.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.250000 (in/ft)		



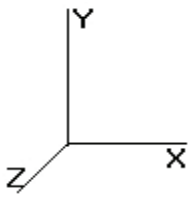
Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 23 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Shaft Segment Forces

Seg Top Elev (ft)	Description		Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		0.00	1.00	6.400	10.81	243.75	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		0.00	1.00	6.400	10.81	238.54	0.650	0.000	5.00	24.115	15.67	169.5	0.0	1,164.4
10.00		0.00	1.00	6.400	10.81	233.33	0.650	0.000	5.00	23.594	15.34	165.9	0.0	1,139.1
15.00		0.00	1.00	6.400	10.81	228.12	0.650	0.000	5.00	23.073	15.00	162.2	0.0	1,113.8
20.00		0.00	1.00	6.400	10.81	222.91	0.650	0.000	5.00	22.552	14.66	158.6	0.0	1,088.4
25.00		0.00	1.00	6.400	10.81	217.70	0.650	0.000	5.00	22.031	14.32	154.9	0.0	1,063.1
30.00		0.00	1.00	6.400	10.81	212.50	0.650	0.000	5.00	21.510	13.98	151.2	0.0	1,037.8
35.00		0.00	1.01	6.509	10.99	209.04	0.650	0.000	5.00	20.990	13.64	150.1	0.0	1,012.5
40.00		0.00	1.05	6.762	11.42	207.71	0.650	0.000	5.00	20.469	13.30	152.0	0.0	987.2
41.25	Bot - Section 2	0.00	1.06	6.821	11.52	207.28	0.650	0.000	1.25	5.036	3.27	37.7	0.0	242.8
45.00		0.00	1.09	6.993	11.81	205.79	0.650	0.000	3.75	15.107	9.82	116.1	0.0	1,326.9
48.00	Top - Section 1	0.00	1.11	7.123	12.03	204.40	0.650	0.000	3.00	11.875	7.72	92.9	0.0	1,042.8
50.00		0.00	1.12	7.207	12.17	206.15	0.650	0.000	2.00	7.813	5.08	61.8	0.0	314.3
55.00		0.00	1.15	7.406	12.51	203.37	0.650	0.000	5.00	19.167	12.46	155.9	0.0	771.0
60.00		0.00	1.18	7.592	12.83	200.24	0.650	0.000	5.00	18.646	12.12	155.5	0.0	749.9
65.00		0.00	1.21	7.768	13.12	196.81	0.650	0.000	5.00	18.125	11.78	154.7	0.0	728.8
70.00		0.00	1.24	7.934	13.40	193.10	0.650	0.000	5.00	17.604	11.44	153.4	0.0	707.7
75.00		0.00	1.26	8.092	13.67	189.16	0.650	0.000	5.00	17.083	11.10	151.9	0.0	686.6
80.00		0.00	1.28	8.242	13.93	185.00	0.650	0.000	5.00	16.563	10.77	150.0	0.0	665.5
85.00		0.00	1.31	8.387	14.17	180.65	0.650	0.000	5.00	16.042	10.43	147.8	0.0	644.4
89.00	Bot - Section 3	0.00	1.32	8.497	14.36	177.04	0.650	0.000	4.00	12.458	8.10	116.3	0.0	500.3
90.00		0.00	1.33	8.525	14.40	176.12	0.650	0.000	1.00	3.104	2.02	29.1	0.0	222.9
94.25	Top - Section 2	0.00	1.35	8.638	14.59	172.14	0.650	0.000	4.25	12.960	8.42	123.0	0.0	930.3
95.00		0.00	1.35	8.657	14.63	173.85	0.650	0.000	0.75	2.248	1.46	21.4	0.0	72.3
100.0		0.00	1.37	8.785	14.84	169.02	0.650	0.000	5.00	14.688	9.55	141.7	0.0	472.5
105.0		0.00	1.39	8.908	15.05	164.06	0.650	0.000	5.00	14.167	9.21	138.6	0.0	455.6
110.0		0.00	1.41	9.028	15.25	158.97	0.650	0.000	5.00	13.646	8.87	135.3	0.0	438.8
115.0	Bot - Section 4	0.00	1.42	9.143	15.45	153.76	0.650	0.000	5.00	13.125	8.53	131.8	0.0	421.9
119.5	Top - Section 3	0.00	1.44	9.244	15.62	148.97	0.650	0.000	4.50	11.508	7.48	116.9	0.0	643.2
120.0		0.00	1.44	9.255	15.64	150.31	0.650	0.000	0.50	1.253	0.81	12.7	0.0	30.2
125.0		0.00	1.46	9.363	15.82	144.89	0.650	0.000	5.00	12.240	7.96	125.9	0.0	295.5
130.0	Appertunance(s)	0.00	1.48	9.469	16.00	139.37	0.650	0.000	5.00	11.719	7.62	121.9	0.0	282.9
135.0		0.00	1.49	9.572	16.17	133.75	0.650	0.000	5.00	11.198	7.28	117.7	0.0	270.2
140.0	Appertunance(s)	0.00	1.51	9.672	16.34	128.05	0.650	0.000	5.00	10.677	6.94	113.4	0.0	257.6
145.0		0.00	1.52	9.769	16.51	122.26	0.650	0.000	5.00	10.156	6.60	109.0	0.0	244.9
150.0	Appertunance(s)	0.00	1.54	9.864	16.67	116.38	0.650	0.000	5.00	9.635	6.26	104.4	0.0	232.2
155.0		0.00	1.55	9.957	16.82	110.43	0.650	0.000	5.00	9.115	5.92	99.7	0.0	219.6
156.0	Appertunance(s)	0.00	1.55	9.975	16.85	109.24	0.650	0.000	1.00	1.760	1.14	19.3	0.0	42.4
160.0		0.00	1.57	10.048	16.98	104.41	0.650	0.000	4.00	6.833	4.44	75.4	0.0	164.5
							Totals:		160.00			4,495.6	0.0	22,684.8

Pole :	281862	Code: TIA/EIA-222 Rev F	12/26/2013 11:04:15 AM
Location :	Bridgewater CT, CT		Page: 14
Height :	160.0 (ft)		
Base Dia :	58.50 (in)		
Top Dia :	20.00 (in)	Base Elev : 0.000 (ft)	
Shape :	18 Sides		
Taper :	0.250000 (in/ft)		

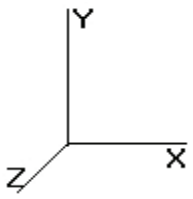


Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 23 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Discrete Appurtenance Segment Forces

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
130.0	105 sq. ft of area w	1	9.469	16.003	0.81	85.05	0.000	0.000	1,361.02	0.00	0.00	1,800.00
140.0	105 sq. ft of area w	1	9.672	16.345	0.81	85.05	0.000	0.000	1,390.14	0.00	0.00	1,800.00
150.0	105 sq. ft of area w	1	9.864	16.670	0.81	85.05	0.000	0.000	1,417.82	0.00	0.00	1,800.00
156.0	Raycap DC6-48-60-18-	4	9.975	16.858	0.67	2.97	0.000	0.000	50.15	0.00	0.00	80.00
156.0	Ericsson RRUS	15	9.975	16.858	0.50	23.48	0.000	0.000	395.75	0.00	0.00	661.50
156.0	Andrew SBNH-	12	9.975	16.858	0.70	96.10	0.000	0.000	1,620.01	0.00	0.00	793.20
156.0	Flat Low Profile Pla	1	9.975	16.858	1.00	26.10	0.000	0.000	440.00	0.00	0.00	1,500.00
									6,674.89			8,434.70



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 23 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

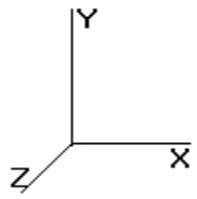
Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	169.54	1,447.28	0.00	0.00
10.00	165.87	1,421.97	0.00	0.00
15.00	162.21	1,396.65	0.00	0.00
20.00	158.55	1,371.34	0.00	0.00
25.00	154.89	1,346.03	0.00	0.00
30.00	151.23	1,320.72	0.00	0.00
35.00	150.07	1,295.40	0.00	0.00
40.00	152.03	1,270.09	0.00	0.00
41.25	37.73	313.57	0.00	0.00
45.00	116.05	1,539.11	0.00	0.00
48.00	92.92	1,212.49	0.00	0.00
50.00	61.85	427.46	0.00	0.00
55.00	155.92	1,053.88	0.00	0.00
60.00	155.50	1,032.78	0.00	0.00
65.00	154.66	1,011.69	0.00	0.00
70.00	153.43	990.60	0.00	0.00
75.00	151.85	969.50	0.00	0.00
80.00	149.96	948.41	0.00	0.00
85.00	147.79	927.32	0.00	0.00
89.00	116.29	726.66	0.00	0.00
90.00	29.07	279.46	0.00	0.00
94.25	122.97	1,170.75	0.00	0.00
95.00	21.38	114.77	0.00	0.00
100.0	141.74	755.40	0.00	0.00
105.0	138.63	738.53	0.00	0.00
110.0	135.32	721.65	0.00	0.00
115.0	131.82	704.78	0.00	0.00
119.5	116.85	897.80	0.00	0.00
120.0	12.73	58.54	0.00	0.00
125.0	125.89	578.42	0.00	0.00
130.0	1,482.91	2,365.77	0.00	0.00
135.0	117.74	479.31	0.00	0.00
140.0	1,503.58	2,266.66	0.00	0.00
145.0	108.99	380.20	0.00	0.00
150.0	1,522.22	2,167.54	0.00	0.00
155.0	99.69	281.09	0.00	0.00
156.0	2,525.20	3,089.40	0.00	0.00
160.0	75.42	164.53	0.00	0.00
Totals:	11,170.53	39,237.53	0.00	0.00

Pole : 281862
Location : Bridgewater CT, CT
Height : 160.0 (ft)
Base Dia : 58.50 (in)
Top Dia : 20.00 (in)
Shape : 18 Sides
Taper : 0.250000 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 23 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

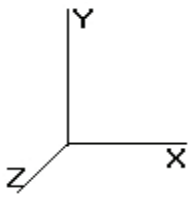
Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-11.192	-39.231	0.000	0.000	0.000	-1,369.411	0.000	0.000	0.000	0.000
5.00	-11.065	-37.771	0.000	0.000	0.000	-1,313.452	-0.035	0.000	0.035	-0.065
10.00	-10.939	-36.337	0.000	0.000	0.000	-1,258.129	-0.138	0.000	0.138	-0.131
15.00	-10.814	-34.928	0.000	0.000	0.000	-1,203.436	-0.311	0.000	0.311	-0.198
20.00	-10.691	-33.544	0.000	0.000	0.000	-1,149.365	-0.556	0.000	0.556	-0.268
25.00	-10.569	-32.186	0.000	0.000	0.000	-1,095.910	-0.874	0.000	0.874	-0.338
30.00	-10.449	-30.853	0.000	0.000	0.000	-1,043.064	-1.268	0.000	1.268	-0.411
35.00	-10.328	-29.545	0.000	0.000	0.000	-990.819	-1.738	0.000	1.738	-0.485
40.00	-10.187	-28.268	0.000	0.000	0.000	-939.182	-2.287	0.000	2.287	-0.561
41.25	-10.166	-27.948	0.000	0.000	0.000	-926.448	-2.436	0.000	2.436	-0.581
45.00	-10.058	-26.401	0.000	0.000	0.000	-888.327	-2.916	0.000	2.916	-0.640
48.00	-9.969	-25.182	0.000	0.000	0.000	-858.154	-3.334	0.000	3.334	-0.688
50.00	-9.929	-24.745	0.000	0.000	0.000	-838.216	-3.629	0.000	3.629	-0.720
55.00	-9.798	-23.677	0.000	0.000	0.000	-788.572	-4.433	0.000	4.433	-0.813
60.00	-9.665	-22.630	0.000	0.000	0.000	-739.584	-5.336	0.000	5.336	-0.908
65.00	-9.530	-21.605	0.000	0.000	0.000	-691.261	-6.339	0.000	6.339	-1.005
70.00	-9.394	-20.601	0.000	0.000	0.000	-643.613	-7.444	0.000	7.444	-1.103
75.00	-9.257	-19.619	0.000	0.000	0.000	-596.644	-8.653	0.000	8.653	-1.203
80.00	-9.120	-18.658	0.000	0.000	0.000	-550.360	-9.967	0.000	9.967	-1.304
85.00	-8.979	-17.720	0.000	0.000	0.000	-504.763	-11.388	0.000	11.388	-1.406
89.00	-8.859	-16.988	0.000	0.000	0.000	-468.849	-12.602	0.000	12.602	-1.490
90.00	-8.839	-16.701	0.000	0.000	0.000	-459.990	-12.917	0.000	12.917	-1.511
94.25	-8.699	-15.526	0.000	0.000	0.000	-422.424	-14.303	0.000	14.303	-1.600
95.00	-8.693	-15.401	0.000	0.000	0.000	-415.900	-14.556	0.000	14.556	-1.617
100.0	-8.561	-14.632	0.000	0.000	0.000	-372.434	-16.316	0.000	16.316	-1.740
105.0	-8.429	-13.880	0.000	0.000	0.000	-329.630	-18.205	0.000	18.205	-1.863
110.0	-8.297	-13.146	0.000	0.000	0.000	-287.487	-20.221	0.000	20.221	-1.983
115.0	-8.163	-12.431	0.000	0.000	0.000	-246.005	-22.362	0.000	22.362	-2.100
119.5	-8.024	-11.531	0.000	0.000	0.000	-209.270	-24.391	0.000	24.391	-2.202
120.0	-8.024	-11.462	0.000	0.000	0.000	-205.258	-24.622	0.000	24.622	-2.213
125.0	-7.899	-10.872	0.000	0.000	0.000	-165.139	-27.013	0.000	27.013	-2.345
130.0	-6.334	-8.559	0.000	0.000	0.000	-125.645	-29.534	0.000	29.534	-2.463
135.0	-6.209	-8.075	0.000	0.000	0.000	-93.973	-32.171	0.000	32.171	-2.565
140.0	-4.611	-5.873	0.000	0.000	0.000	-62.929	-34.905	0.000	34.905	-2.649
145.0	-4.490	-5.494	0.000	0.000	0.000	-39.873	-37.715	0.000	37.715	-2.713
150.0	-2.867	-3.401	0.000	0.000	0.000	-17.425	-40.580	0.000	40.580	-2.754
155.0	-2.755	-3.124	0.000	0.000	0.000	-3.088	-43.476	0.000	43.476	-2.772
156.0	-0.083	-0.161	0.000	0.000	0.000	-0.333	-44.056	0.000	44.056	-2.772
160.0	-0.075	0.000	0.000	0.000	0.000	0.000	-46.378	0.000	46.378	-2.773

Pole : 281862
Location : Bridgewater CT, CT
Height : 160.0 (ft)
Base Dia : 58.50 (in)
Top Dia : 20.00 (in)
Shape : 18 Sides
Taper : 0.250000 (in/ft)

Code: TIA/EIA-222 Rev F

Base Elev : 0.000 (ft)



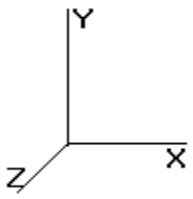
Load Case: Twist/Sway — 50.00 mph Wind with No Ice — 23 Iterations

Gust Response Factor : 1.69
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Calculated Stresses

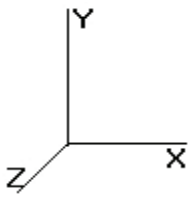
Seg Elev (ft)	Applied Stresses Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)	Allowable Stress (Fb) (ksi)		Stress Ratio
0.00	0.57	0.33	0.00	0.00	0.00	16.53	17.10	50.9	0.0	0.336
5.00	0.56	0.33	0.00	0.00	0.00	16.56	17.13	51.4	0.0	0.333
10.00	0.55	0.33	0.00	0.00	0.00	16.59	17.14	51.9	0.0	0.330
15.00	0.54	0.34	0.00	0.00	0.00	16.60	17.15	52.0	0.0	0.330
20.00	0.53	0.34	0.00	0.00	0.00	16.62	17.16	52.0	0.0	0.330
25.00	0.52	0.35	0.00	0.00	0.00	16.62	17.15	52.0	0.0	0.330
30.00	0.51	0.35	0.00	0.00	0.00	16.61	17.13	52.0	0.0	0.330
35.00	0.50	0.35	0.00	0.00	0.00	16.59	17.11	52.0	0.0	0.329
40.00	0.49	0.36	0.00	0.00	0.00	16.56	17.06	52.0	0.0	0.328
41.25	0.49	0.36	0.00	0.00	0.00	16.55	17.05	52.0	0.0	0.328
45.00	0.47	0.36	0.00	0.00	0.00	16.51	17.00	52.0	0.0	0.327
48.00	0.54	0.43	0.00	0.00	0.00	19.17	19.72	51.7	0.0	0.382
50.00	0.54	0.44	0.00	0.00	0.00	19.13	19.68	51.9	0.0	0.379
55.00	0.53	0.44	0.00	0.00	0.00	19.01	19.56	52.0	0.0	0.376
60.00	0.52	0.45	0.00	0.00	0.00	18.87	19.40	52.0	0.0	0.373
65.00	0.51	0.45	0.00	0.00	0.00	18.69	19.22	52.0	0.0	0.370
70.00	0.50	0.46	0.00	0.00	0.00	18.47	18.99	52.0	0.0	0.365
75.00	0.49	0.47	0.00	0.00	0.00	18.21	18.73	52.0	0.0	0.360
80.00	0.48	0.48	0.00	0.00	0.00	17.91	18.41	52.0	0.0	0.354
85.00	0.48	0.49	0.00	0.00	0.00	17.54	18.03	52.0	0.0	0.347
89.00	0.47	0.49	0.00	0.00	0.00	17.20	17.69	52.0	0.0	0.340
90.00	0.46	0.49	0.00	0.00	0.00	17.11	17.59	52.0	0.0	0.338
94.25	0.55	0.62	0.00	0.00	0.00	20.16	20.73	52.0	0.0	0.399
95.00	0.54	0.62	0.00	0.00	0.00	20.06	20.63	52.0	0.0	0.397
100.00	0.54	0.63	0.00	0.00	0.00	19.29	19.86	52.0	0.0	0.382
105.00	0.53	0.65	0.00	0.00	0.00	18.39	18.96	52.0	0.0	0.365
110.00	0.52	0.66	0.00	0.00	0.00	17.33	17.89	52.0	0.0	0.344
115.00	0.51	0.68	0.00	0.00	0.00	16.07	16.62	52.0	0.0	0.320
119.50	0.65	0.91	0.00	0.00	0.00	19.04	19.75	50.2	0.0	0.393
120.00	0.65	0.91	0.00	0.00	0.00	18.83	19.54	50.3	0.0	0.389
125.00	0.64	0.94	0.00	0.00	0.00	16.51	17.23	51.3	0.0	0.336
130.00	0.53	0.79	0.00	0.00	0.00	13.74	14.33	52.0	0.0	0.276
135.00	0.52	0.81	0.00	0.00	0.00	11.29	11.89	52.0	0.0	0.229
140.00	0.40	0.63	0.00	0.00	0.00	8.35	8.81	52.0	0.0	0.169
145.00	0.39	0.65	0.00	0.00	0.00	5.87	6.36	52.0	0.0	0.122
150.00	0.26	0.44	0.00	0.00	0.00	2.86	3.21	52.0	0.0	0.062
155.00	0.25	0.44	0.00	0.00	0.00	0.57	1.12	52.0	0.0	0.022
156.00	0.01	0.01	0.00	0.00	0.00	0.06	0.08	52.0	0.0	0.002
160.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	52.0	0.0	0.000

Pole :	**281862**	**Code: TIA/EIA-222 Rev F**	**12/26/2013 11:04:15 AM**
Location :	**Bridgewater CT, CT**		**Page: 18**
Height :	**160.0 (ft)**		
Base Dia :	**58.50 (in)**		
Top Dia :	**20.00 (in)**	**Base Elev : 0.000 (ft)**	
Shape :	**18 Sides**		
Taper :	**0.250000 (in/ft)**		



Analysis Summary

	Reactions						Max Stresses			
Load Case	**Shear FX (kips)**	**Shear FZ (kips)**	**Axial FY (kips)**	**Moment MX (ft-kips)**	**Moment MY (ft-kips)**	**Moment MZ (ft-kips)**	**Combined Stress (ksi)**	**Allowable Stress (ksi)**	**Elev (ft)**	**Stress Ratio**
No Ice	**28.7**	**0.00**	**39.20**	**0.00**	**0.00**	**3499.87**	**51.96**	**52.0**	**94.25**	**1.000**
Ice	**23.9**	**0.00**	**46.57**	**0.00**	**0.00**	**3016.44**	**46.13**	**52.0**	**94.25**	**0.887**
Twist/Sway	**11.2**	**0.00**	**39.23**	**0.00**	**0.00**	**1369.41**	**20.73**	**52.0**	**94.25**	**0.399**



Base Summary

Reactions

Original Design			Analysis			
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment Design %
3,550.00	40.00	30.00	3,499.87	46.57	28.65	98.59

Base Plate

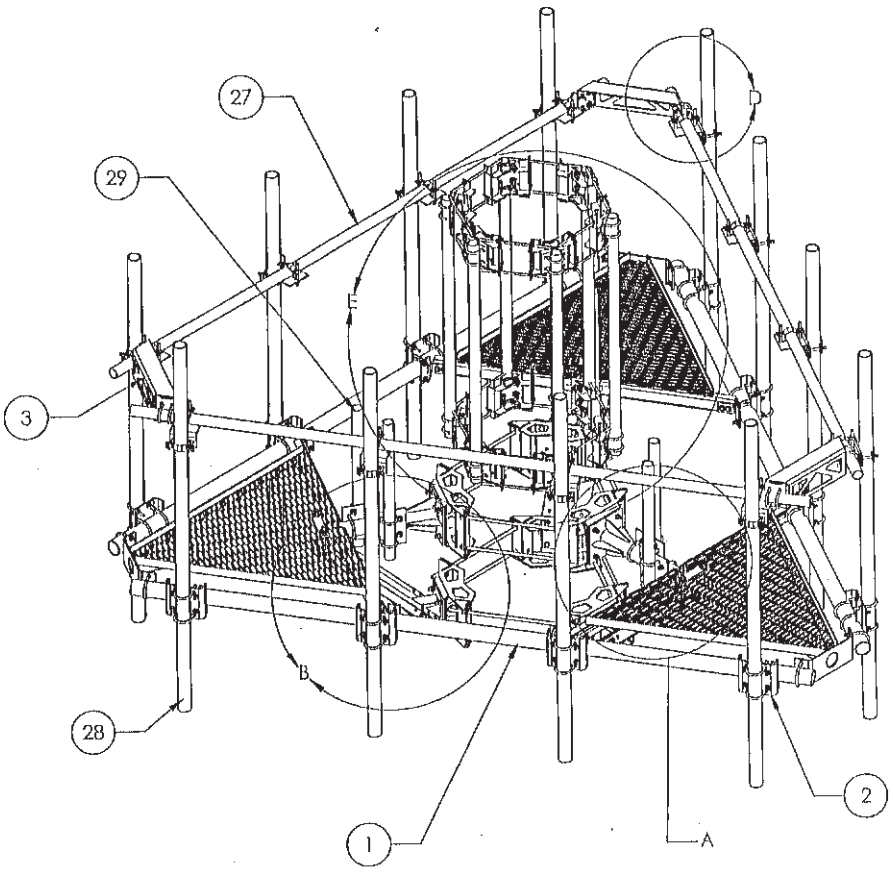
Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Moment (kip-in)	Allow Stress (ksi)	Applied Stress (ksi)	Stress Ratio
50.0	2.250	71.500	Round	0	0.00	13.262	359.06	50.00	32.09	0.64

Anchor Bolts

								Start	Compression			Tension		
Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Arrange	Cluster Dist (in)	Angle (deg)	Force (kip)	Allow (kip)	Ratio	Force (kip)	Allow (kip)	Ratio
65.50	14	2.25" 18J	2.25	75.00	100.00	Radial	0.00	0.0	186.53	195.00	0.96	179.87	195.00	0.92

ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT
1	MC-PK12S-B	LOW PROFILE CO-LOCATION PLATFORM KIT	1	859.05 LBS
2	MT-219M-H	3.5" OD X 2-7/8" OD Clamp Bracket Assembly	12	12.78 LBS
3	MT19525	Corner Weldment	3	14.76 LBS
4	GUB-4240	1/2" X 2-1/2" X 4" GALV U-BOLT	48	0.56 LBS
5	XAU01	Angle BRK	12	3.59 LBS
6	MTC323704	Clamp Bar	6	2.37 LBS
7	ACP10	1.5" - 3.5" O.D. CLAMP HALF	24	0.61 LBS
8	DCP10	SMALL CLAMP HALF	6	2.21 LBS
9	MT-379-6	1/2" X 6" GALV THREADED ROD	48	0.33 LBS
10	GWF-04	1/2" GALV FLAT WASHER	96	0.03 LBS
11	GWL-04	1/2" GALV LOCK WASHER	144	0.01 LBS
12	GN-04	1/2" GALV HEX NUT	144	0.04 LBS
13	MTC306503	CW 1030 Ringmount Weldment	3	28.02 LBS
14	MT38430B7	3/4" X 30" GALV THREADED ROD GRADE B7	6	3.73 LBS
15	GWL-06	3/4" GALV LOCK WASHER	12	0.04 LBS
16	GN-06	3/4" GALV HEX NUT	12	0.14 LBS
17	MTC313802	Kicker Mount Standoff	3	13.08 LBS
18	MTC323701	Left Kicker	3	14.36 LBS
19	MTC323702	Right Kicker	3	14.36 LBS
20	MT-381-8	5/8" X 8" GALV THREADED ROD	9	0.69 LBS
21	GB-0520A	5/8" X 2" GALV BOLT KIT (A325)	12	0.27 LBS
22	GWF-05	5/8" GALV FLAT WASHER	12	0.06 LBS
23	GWL-05	5/8" GALV LOCK WASHER	18	0.03 LBS
24	GN-05	5/8" GALV HEX NUT	18	0.08 LBS
25	XP2030.01	CROSSOVER PLATE ϕ2-3/8" O.D. TO ϕ3-1/2" O.D.	6	7.30 LBS
26	GUB-4355	1/2" X 3-5/8" X 5" GALV U-BOLT	12	0.71 LBS
27	MT-651-150	ϕ2.375" OD x 150" PIPE	3	45.42 LBS
28	MT54696	ϕ2.875" O.D. X 96 PIPE	12	46.51 LBS
29	MT-649	2 3/8" x 36" Pipe	6	10.90 LBS
30	MTC320001	RRU Ringmount	12	10.52 LBS
31	MT37916	1/2" X 16" GALV THREADED ROD	24	0.88 LBS
32	MT-650-63	ϕ2.375" OD x 63" PIPE	6	19.08 LBS

REVISIONS				
REV.	ZONE	DESCRIPTION	BY	DATE
A		INITIAL RELEASE	DRR	10/18/13



NOTES:
1. ALL METRIC DIMENSIONS ARE IN BRACKETS.
2. FITS MONOPOLES ϕ10"–ϕ30".

ALL DIMENSIONS ARE IN INCHES U.O.S.
TOLERANCES UNLESS OTHERWISE SPECIFIED:
.X = ± .12 ANGLES ±2°
.XX = ± .06 FRACTIONS ±1/32
.XXX= ± .031
REMOVE BURRS AND BREAK EDGES .005

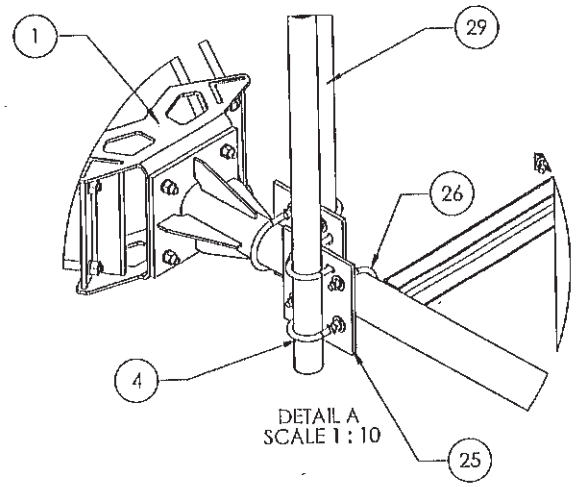
DO NOT SCALE THIS PRINT

DRAWN BY	DRR	SHEET	1 of 3
CHECKED BY	IP	SIZE	MIS
DATE	10/18/13	MATERIAL	A36, A500, A529
REVISION	A	FINISH	Galv A123
WEIGHT		WEIGHT	2528.27 LBS

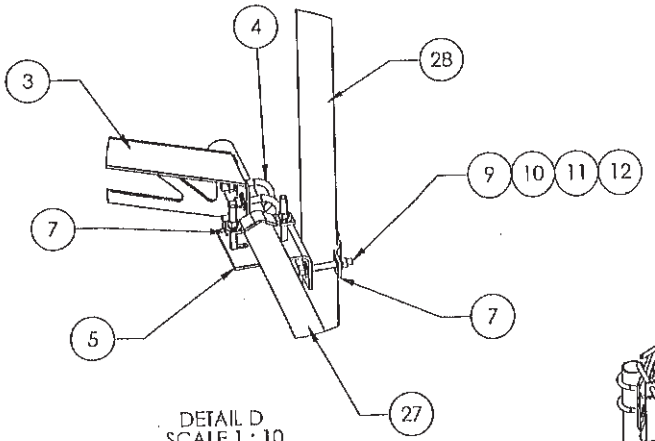
PART NUMBER: MTC3607R
DESCRIPTION: Low Profile Co-Location Platform Kit
DRAWING TYPE: ASSEMBLY DRAWING

COMMSCOPE®
Hickory, NC 28602 U.S.A.

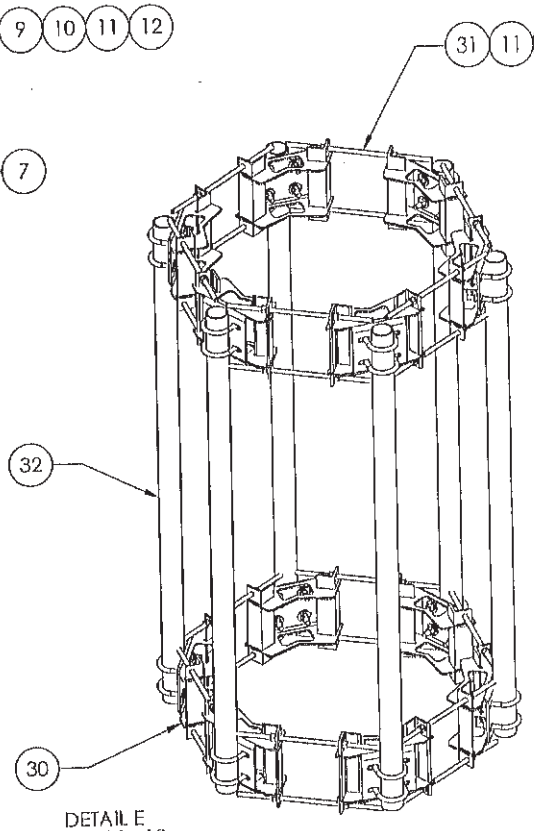
SOME ITEMS OMITED
FOR CLARITY



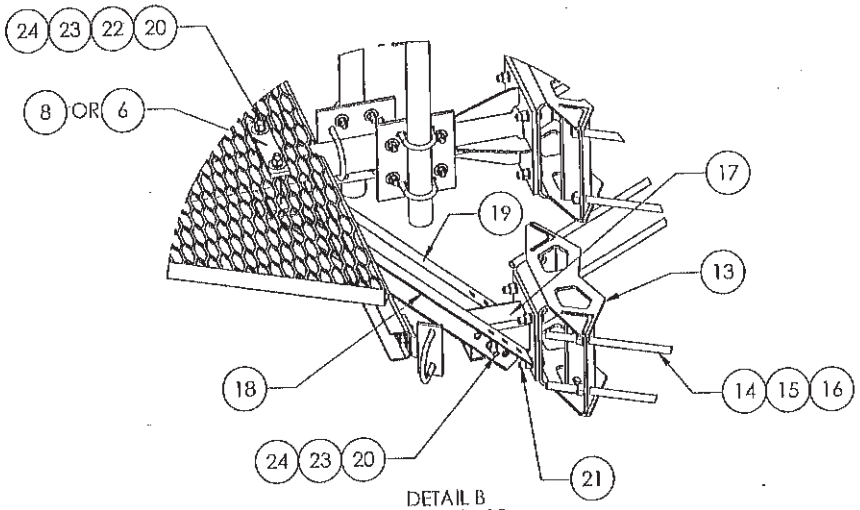
DETAIL A
SCALE 1 : 10



DETAIL D
SCALE 1 : 10



DETAIL E
SCALE 1 : 13



DETAIL B
SCALE 1 : 12

ALL DIMENSIONS ARE IN INCHES U.O.S.
TOLERANCES UNLESS OTHERWISE SPECIFIED:
.X = ± .12 ANGLES ±2°
.XX = ± .06 FRACTIONS ±1/32
.XXX= ± .021

REMOVE BURRS AND BREAK EDGES .005

DO NOT SCALE THIS PRINT

DRAWN BY	DRR
CHECKED BY	TP
DATE	10/18/13
REVISION	A
SHEET	2 of 3
SIZE	ANSI
MATERIAL	A36, A500, A529
FINISH	Galv A123
WEIGHT	2528.27 LBS
PART NUMBER / REVISION	MTC3607R
DESCRIPTION	Low Profile Co-Location Platform Kit
DRAWING TYPE	ASSEMBLY DRAWING

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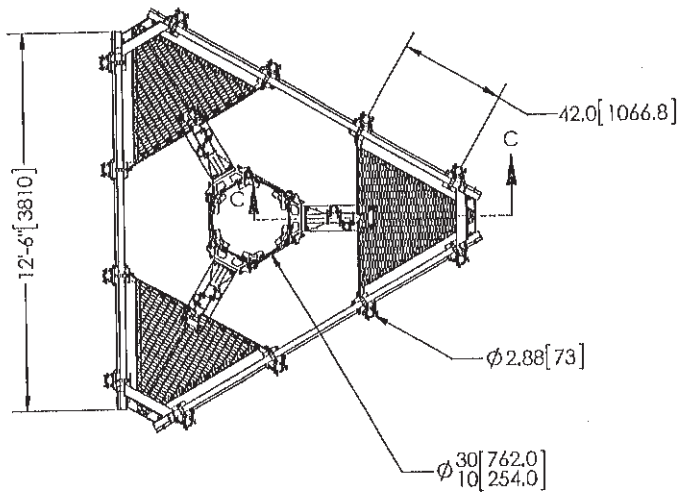

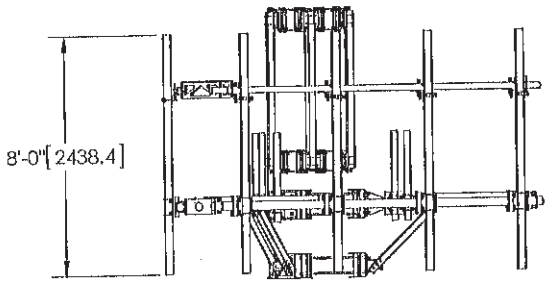

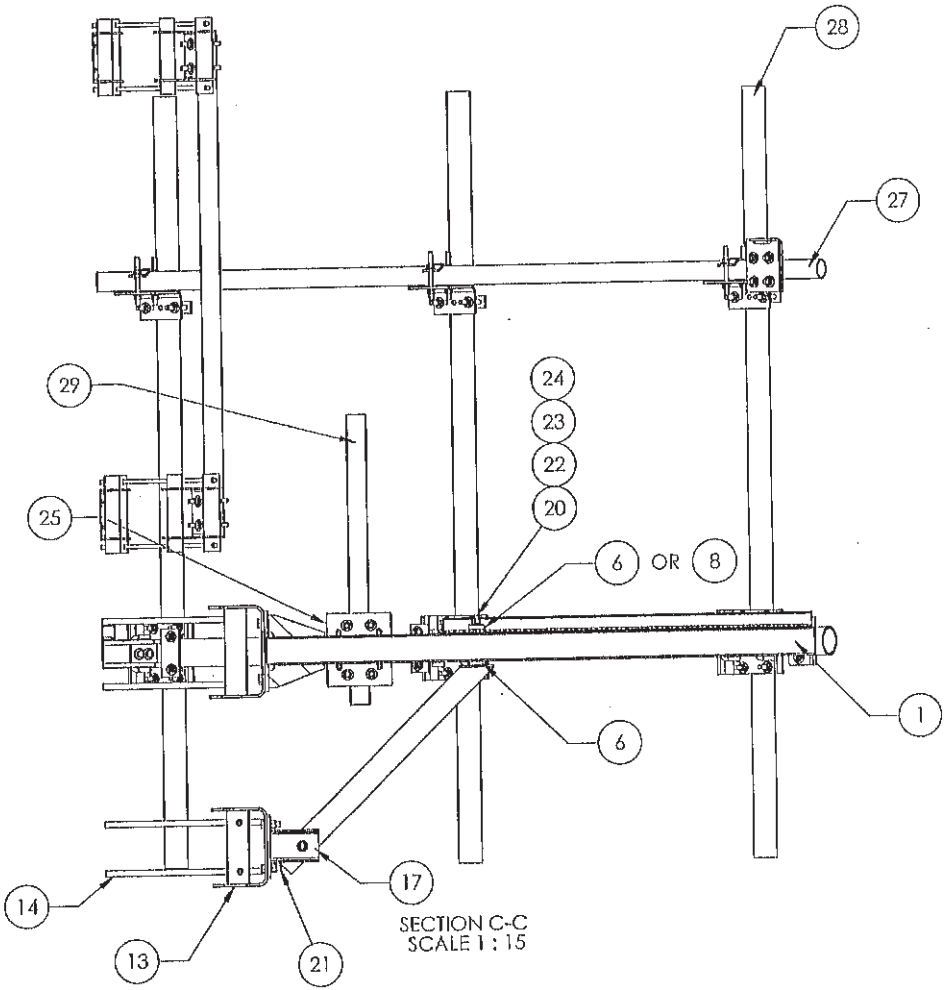

SECTION C-C
SCALE 1 : 15

ALL DIMENSIONS ARE IN INCHES U.O.S.
TOLERANCES UNLESS OTHERWISE SPECIFIED:
.X = ± .12 ANGLES ±2°
.XX = ± .06 FRACTIONS ±1/32
.XXX = ± .031
REMOVE BURRS AND BREAK EDGES .005
DO NOT SCALE THIS PRINT

DRAWN BY	DRR	SHEET	3 of 3
CHECKED BY	TP	SIZE	NTS
DATE	10/18/11	MATERIAL	A36, A500, A529
REVISION	A	FINISH	Galv A123
		WEIGHT	2528.27 LBS

PART NUMBER	MTC3607R
DESCRIPTION	Low Profile Co-Location Platform Kit
DRAWING TYPE	ASSEMBLY DRAWING

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