

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

- NOTICE TO PROCEED– NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800-788-7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
- "LOOK UP" – CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT:
THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
- PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
- ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED–STD–10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).
- ALL SITE WORK TO COMPLY WITH QAS–STD–10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED–STD–10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
- IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATION SERVICES PRIOR TO THE START OF CONSTRUCTION.
- 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 CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
- ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
- CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- 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 CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
- THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
- 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.

GREENFIELD GROUNDING NOTES:

- ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
- THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
- METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
- EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
- CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
- ALL EXTERIOR GROUND CONDUCTORS THROUGH EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
- COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
- APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRIC METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- BOND ALL METALLIC OBJECTS WITHIN 6 FT. OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
- GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
- ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAILS AS WELL.)
- BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

GENERAL NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION
CARRIER: VERIZON
TOWER OWNER: CROWN CASTLE USA INC.
- THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
- THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
- NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
- SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CROWN CASTLE.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
- CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF CROWN CASTLE USA INC.
- CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°F AT TIME OF PLACEMENT.
- CONCRETE EXPOSED TO FREEZE–THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER–TO–CEMENT RATIO (W/C) OF 0.45.
- ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:
#4 BARS AND SMALLER.....40 ksi
#5 BARS AND LARGER.....60 ksi
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3"
CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 BARS AND LARGER.....2"
#5 BARS AND SMALLER.....1-1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
SLAB AND WALLS.....3/4"
BEAMS AND COLUMNS.....1-1/2"
- A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
 - ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
 - ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PER THE GOVERNING JURISDICTION.
- EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
- PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI–CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
- ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT) OR METAL–CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC ON STRAIGHTS AND SCHEDULE 80 PVC UNDER ALL TRAFFIC EASEMENTS AND ALL ELBOWS/90s. ABOVE GRADE CONDUIT TO BE SCH 80 PVC OR IMC/RMC CONDUIT. EMT IS ALLOWED AT STUB UP LOCATIONS AND INDOORS ONLY.
- LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
- WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOULD SPECIMATE WIREWAY).
- SLOTTED WIRING TUB SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
- CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON–PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER–ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
- METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
- INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "VERIZON".
- ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

CONDUCTOR COLOR CODE		
SYSTEM	CONDUCTOR	COLOR
120/240V, 1Ø	A PHASE	BLACK
	B PHASE	RED
	NEUTRAL	WHITE
	GROUND	GREEN
120/208V, 3Ø	A PHASE	BLACK
	B PHASE	RED
	C PHASE	BLUE
	NEUTRAL	WHITE
277/480V, 3Ø	GROUND	GREEN
	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
DC VOLTAGE	NEUTRAL	GREY
	GROUND	GREEN
	POS (+)	RED**
	NEG (–)	BLACK**

* SEE NEC 210.5(C)(1) AND (2)
** POLARITY MARKED AT TERMINATION

ABBREVIATIONS:

ANT	ANTENNA
(E)	EXISTING
FIF	FACILITY INTERFACE FRAME
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
GSM	GLOBAL SYSTEM FOR MOBILE
LTE	LONG TERM EVOLUTION
MGB	MASTER GROUND BAR
MW	MICROWAVE
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
(P)	PROPOSED
PPY	POWER PLANT
QTY	QUANTITY
RECT	RECTIFIER
RBS	RADIO BASE STATION
RET	REMOTE ELECTRIC TILT
RFDS	RADIO FREQUENCY DATA SHEET
RRH	REMOTE RADIO HEAD
RRU	REMOTE RADIO UNIT
SIAD	SMART INTEGRATED DEVICE
TMA	TOWER MOUNTED AMPLIFIER
TYP	TYPICAL
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
W.P.	WORK POINT

APWA UNIFORM COLOR CODE:

WHITE	PROPOSED EXCAVATION
PINK	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES
YELLOW	GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES, OR CONDUIT AND TRAFFIC LOOPS
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER, IRRIGATION, AND SLURRY LINES
GREEN	SEWERS AND DRAIN LINES



1355 WINDWARD
CONCOURSE, SUITE 410
ALPHARETTA, GA 30005
TEL: 678-990-2338
FL COA #38599

VERIZON SITE NUMBER:
5000078561

BU #: **846219**

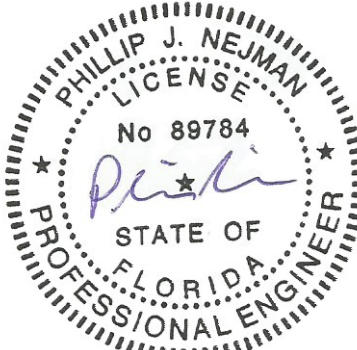
CROWN CASTLE SITE NAME
FAIRGROUNDS

682 SOUTHWEST
COMMERCE DRIVE
LAKE CITY, FL 32025

EXISTING 185'-0"
GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES/QA
0	10/15/25	MAT	CONSTRUCTION	MAT



10/15/25

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SHEET NUMBER:

T-2

REVISION:

0

EQUIPMENT LEGEND:

EXISTING

TO BE RELOCATED/REMOVED

NEW/RELOCATED



NextEdge

1355 WINDWARD
CONCOURSE, SUITE 410
ALPHARETTA, GA 30005
TEL: 678-990-2338
FL COA #38599

VERIZON SITE NUMBER:
5000078561

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CROWN CASTLE SITE NAME
FAIRGROUNDS

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EXISTING 185'-0"
GUYED TOWER

ISSUED FOR:				
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PHILLIP J. NEJMAN

LICENSE

No 89784

Phillip J. Nejman

STATE OF FLORIDA

PROFESSIONAL ENGINEER

10/15/25

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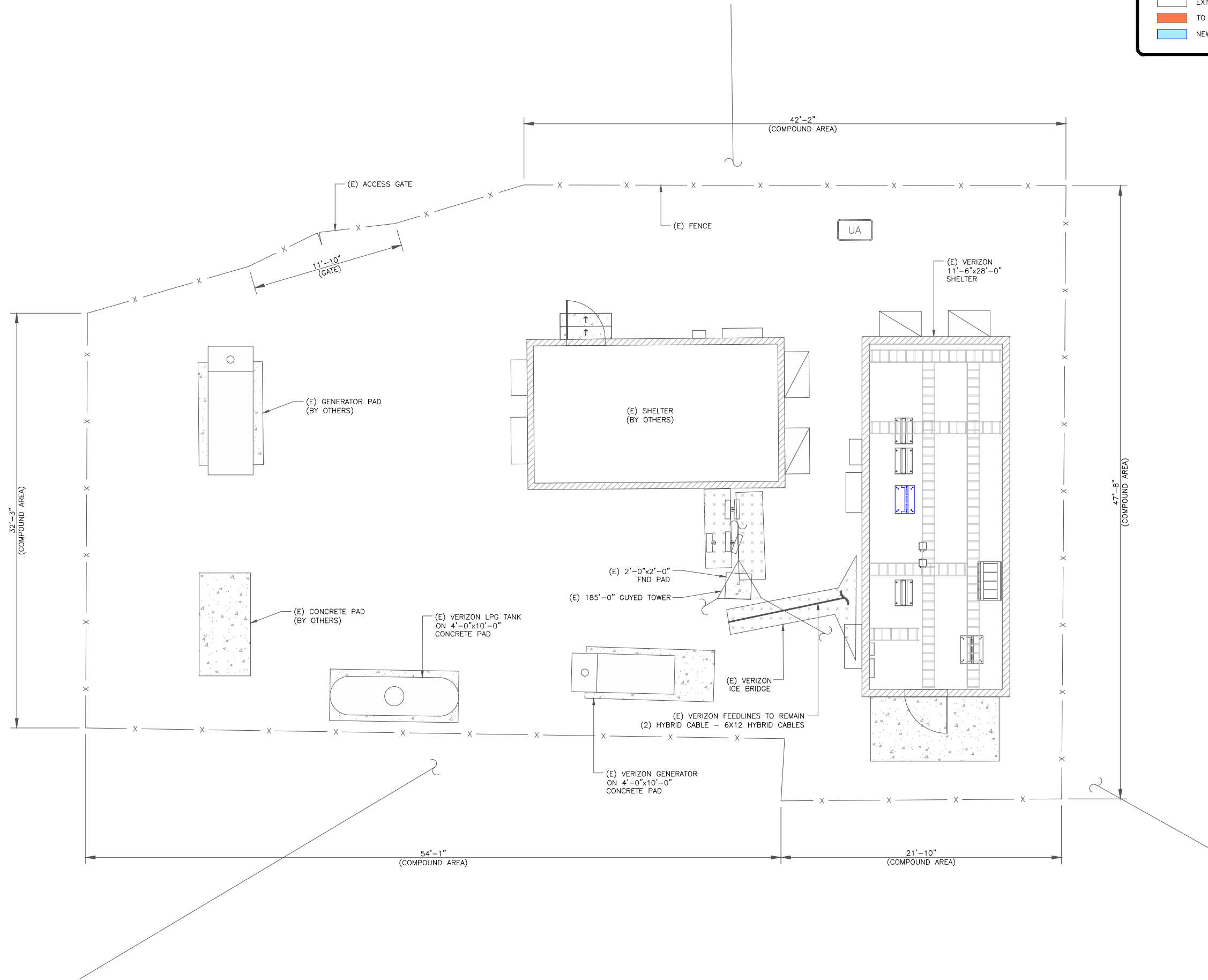
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SHEET NUMBER:

C-1.1

REVISION:

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1

SITE PLAN

SCALE:

4'

3'

2'

1'

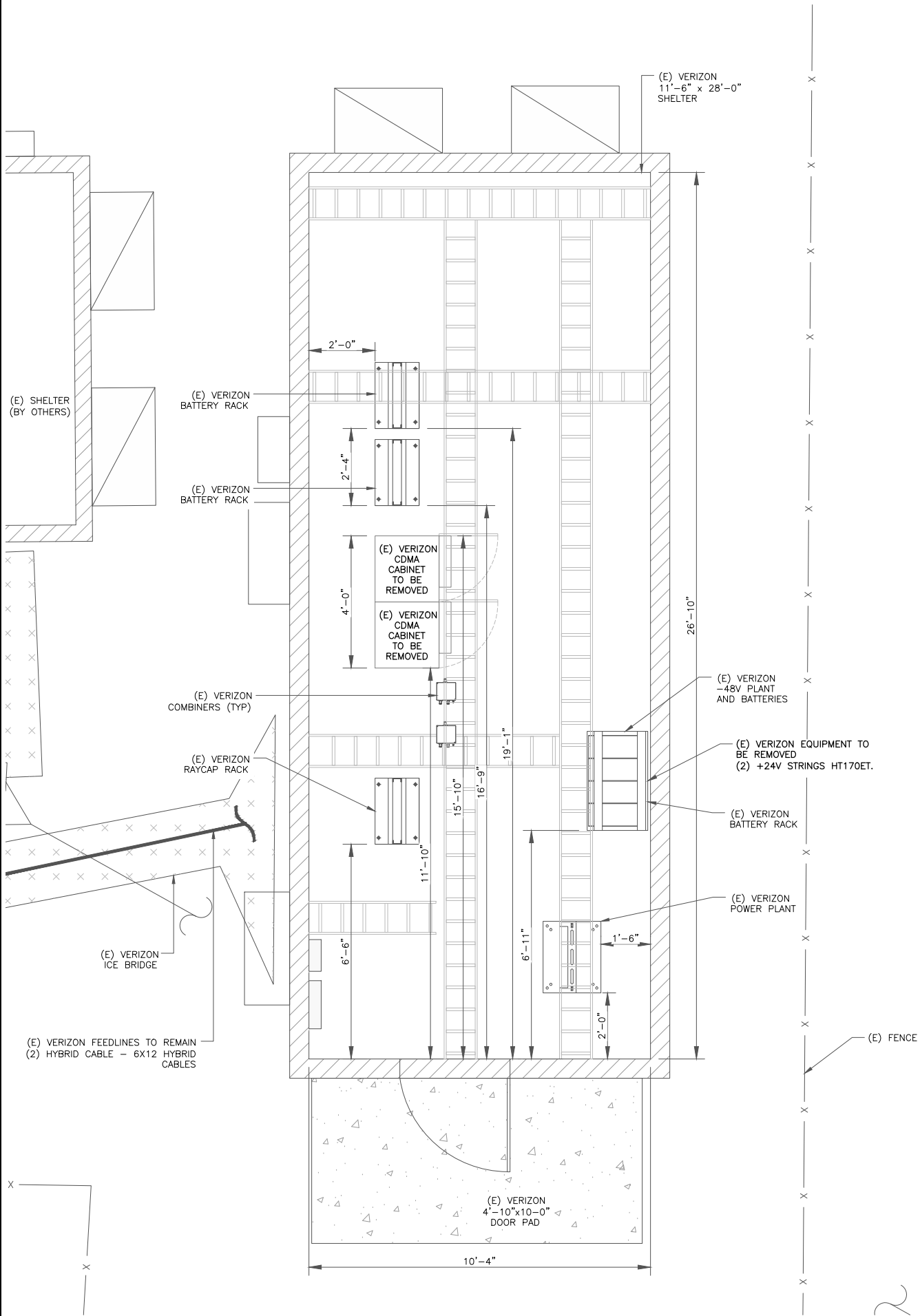
0'

1/4"=1'-0" (FULL SIZE)
1/8"=1'-0" (11x17)

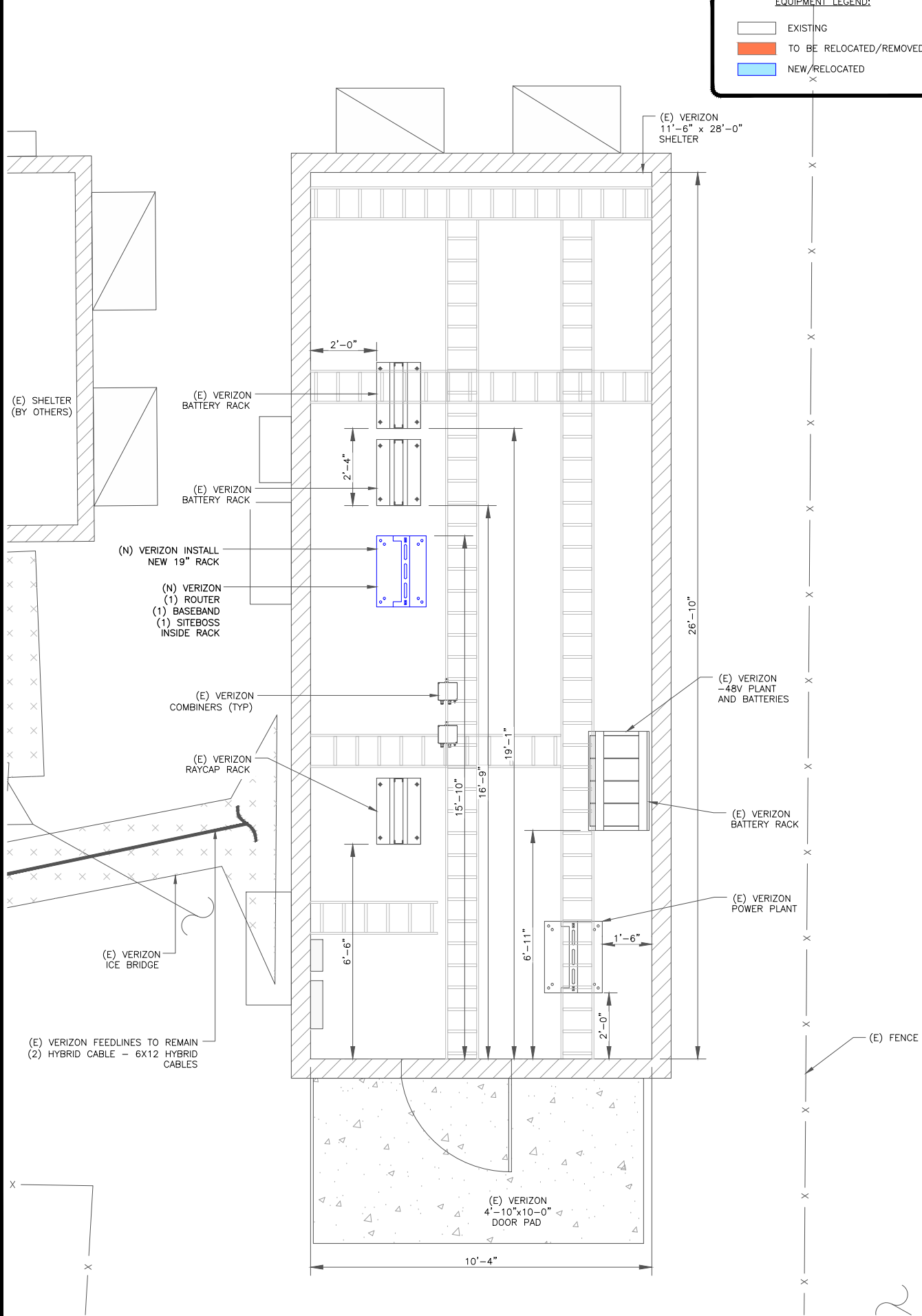
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CC VERIZON NATIONAL ANTENNA AMENDMENT_2025-08-08

CC VERIZON NATIONAL ANTENNA AMENDMENT_2025-08-08



1 EXISTING EQUIPMENT PLAN
SCALE: 1/2"=1'-0" (FULL SIZE)
1/4"=1'-0" (11x17)



2 PROPOSED EQUIPMENT PLAN
SCALE: 1/2"=1'-0" (FULL SIZE)
1/4"=1'-0" (11x17)



EQUIPMENT LEGEND:	
	EXISTING
	TO BE RELOCATED/REMOVED
	NEW/RELOCATED

verizon

CROWN CASTLE

NextEdge
1355 WINDWARD
CONCOURSE, SUITE 410
ALPHARETTA, GA 30005
TEL: 678-990-2338
FL COA #38599

VERIZON SITE NUMBER:
5000078561

BU #: **846219**

CROWN CASTLE SITE NAME
FAIRGROUNDS

682 SOUTHWEST
COMMERCE DRIVE
LAKE CITY, FL 32025

EXISTING 185'-0"
GUYED TOWER

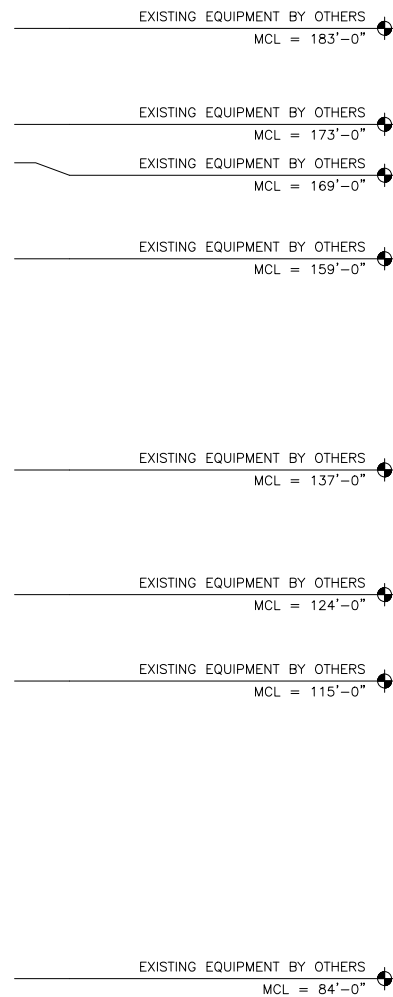
ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	DES/QA
0	10/15/25	MAT	CONSTRUCTION	MAT

PHILLIP J. NEJMAN
LICENSE
No 89784
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
10/15/25

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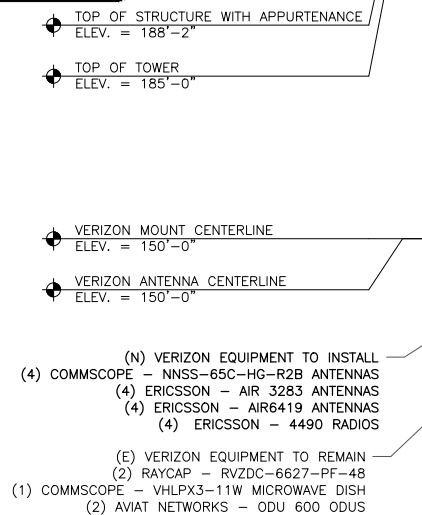
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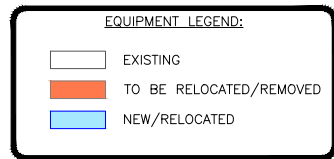
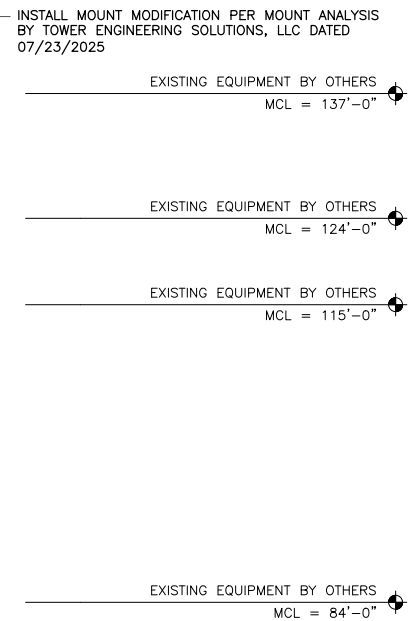
VERIZON EQUIPMENT
ANTENNA CL: 150'-0"
MOUNT CL: 150'-0"

FAA APPROVED HEIGHT
196'-0"

ASR HEIGHT FOR FUTURE USE
196'-0" PER REGISTRATION #1281312



(E) VERIZON FEEDLINES TO REMAIN
(2) HYBRID CABLE - 6X12 HYBRID CABLES



INSTALL MOUNT MODIFICATION PER MOUNT ANALYSIS
BY TOWER ENGINEERING SOLUTIONS, LLC DATED
07/23/2025

(E) 185'-0" GUYED TOWER

(E) 185'-0" GUYED TOWER

STRUCTURAL ANALYSIS NOTES:

- THE DESIGN DEPICTED IN THESE DRAWINGS IS VALID WHEN ACCOMPANIED BY A CORRESPONDING PASSING STRUCTURAL ANALYSIS.
- CONSTRUCTION MANAGER / GENERAL CONTRACTOR SHALL REVIEW THE STRUCTURAL ANALYSIS FOR ANY CONDITIONS PRIOR TO INSTALLATION.
- ANY REQUIRED STRUCTURAL MODIFICATION DESIGN OR MOUNT REPLACEMENT SHALL BE APPROVED BY EOR.

1 EXISTING TOWER ELEVATION
SCALE: 1"=10'-0" (FULL SIZE)
1"=20'-0" (11x17)

2 FINAL TOWER ELEVATION
SCALE: 1"=10'-0" (FULL SIZE)
1"=20'-0" (11x17)



VERIZON SITE NUMBER:
5000078561

BU #: 846219

CROWN CASTLE SITE NAME
FAIRGROUNDS

682 SOUTHWEST
COMMERCE DRIVE
LAKE CITY, FL 32025

EXISTING 185'-0"
GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/15/25	MAT	CONSTRUCTION	MAT



10/15/25

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SHEET NUMBER:

C-2

REVISION:

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EQUIPMENT LEGEND:

EXISTING

TO BE RELOCATED/REMOVED

NEW/RELOCATED



1355 WINDWARD CONCOURSE, SUITE 410
ALPHARETTA, GA 30005
TEL: 678-990-2338
FL COA #38599

NextEdge

VERIZON SITE NUMBER:
5000078561

BU #: 846219

CROWN CASTLE SITE NAME
FAIRGROUNDS

682 SOUTHWEST
COMMERCE DRIVE
LAKE CITY, FL 32025

EXISTING 185'-0"
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PHILLIP J. NEJMAN
LICENSE
No 89784
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

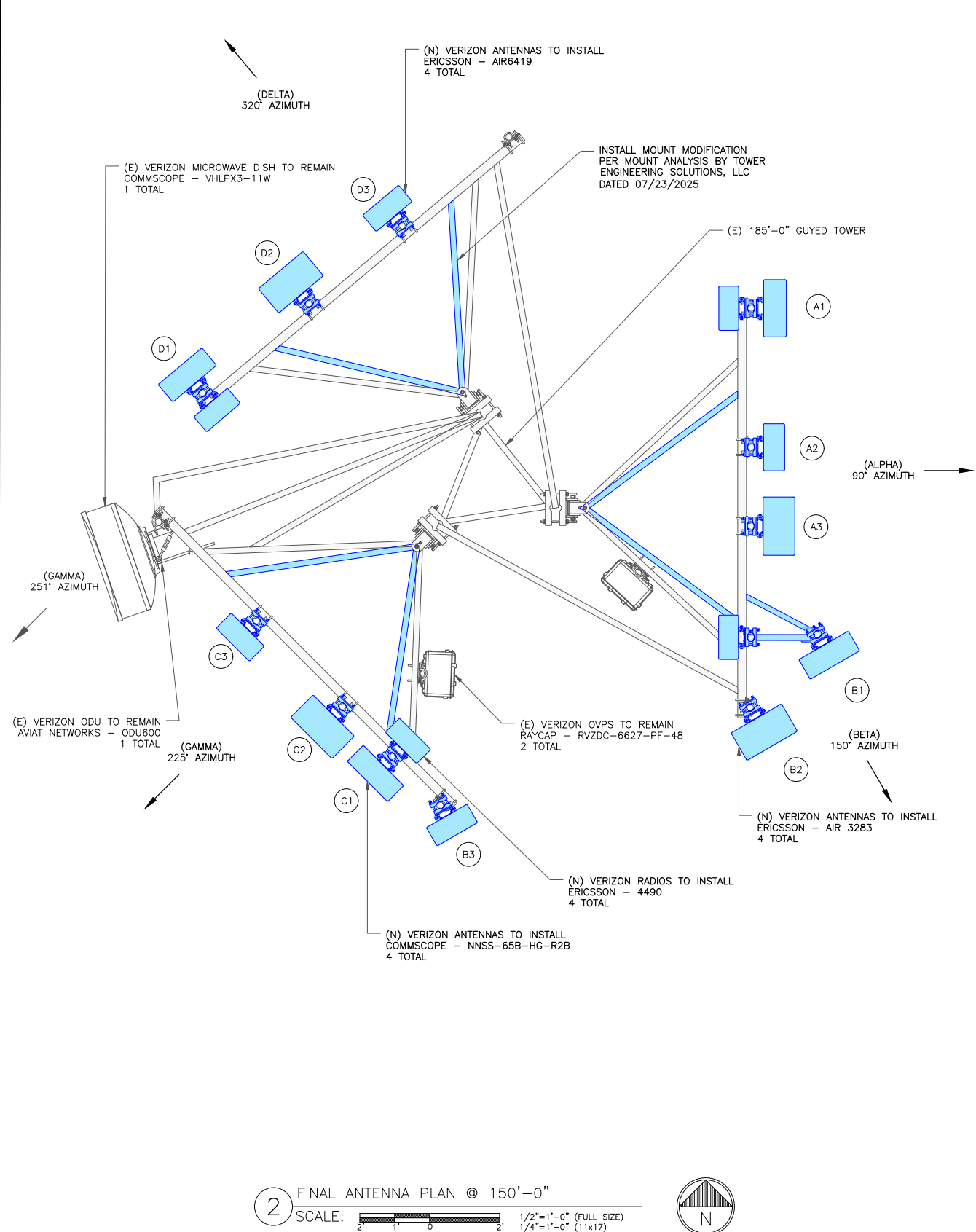
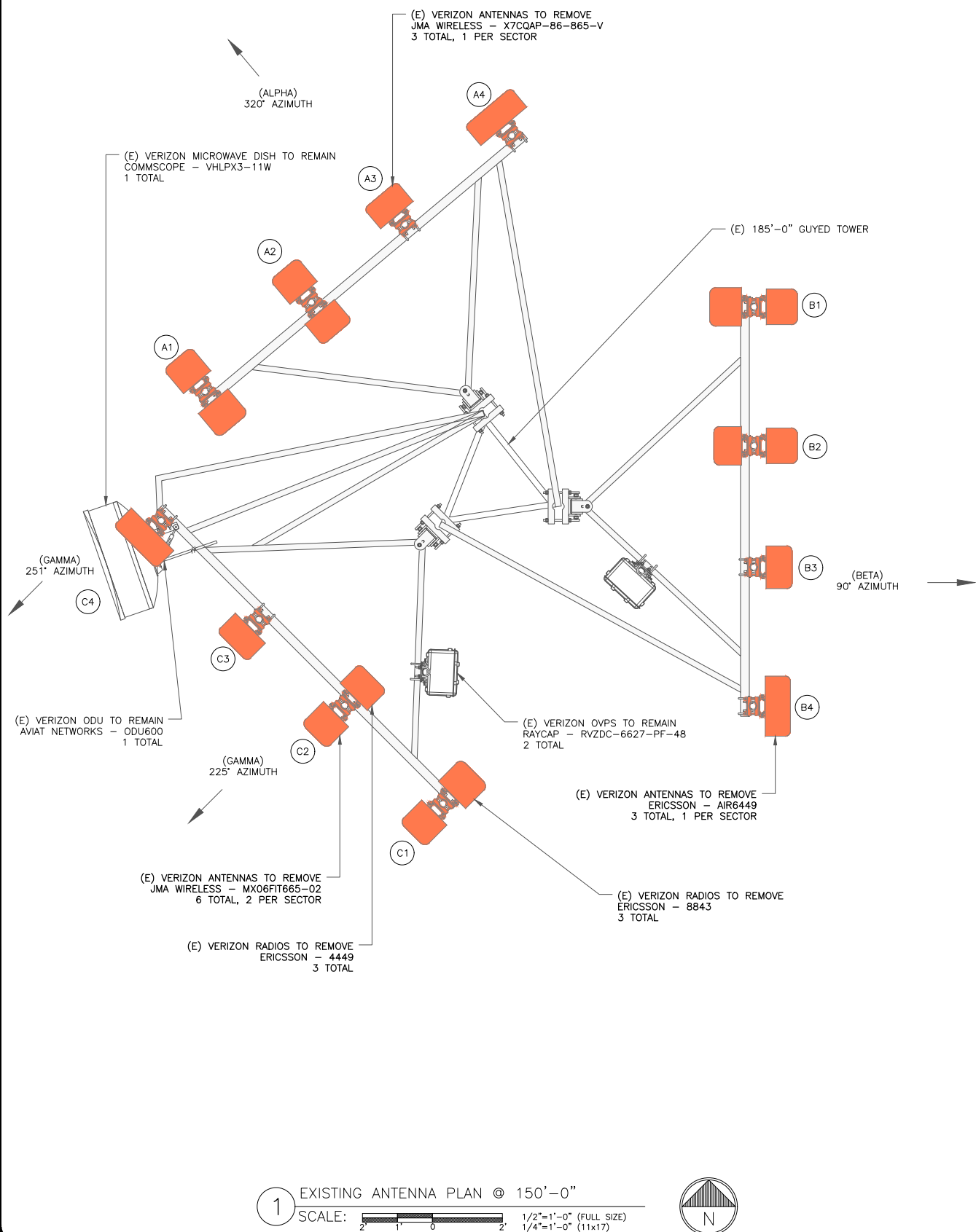
10/15/25

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C-3

REVISION:
0



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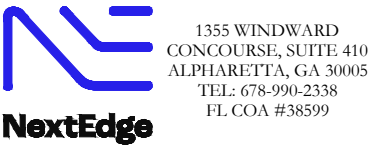
CC VERIZON NATIONAL ANTENNA AMENDMENT_2025-08-08

FINAL EQUIPMENT SCHEDULE
(GC TO VERIFY WITH CURRENT RFDS)

POSITION	ANTENNA				RADIO			DIPLEXER			TMA		SURGE PROTECTION		CABLES			
	TECH	STATUS/MANUFACTURER MODEL	AZIMUTH	RAD CENTER	QTY.	STATUS/MODEL	LOCATION	QTY.	STATUS	LOCATION	QTY.	STATUS	QTY.	STATUS/MODEL	QTY.	STATUS/TYPE	SIZE	LENGTH
A1	700, 850	(N) COMMSCOPE – NNSS–65B–HG–R2B	90°	150’–0”	1	(N) ERICSSON – 4490	TOWER	–	–	–	–	–	–	–	–	–	–	–
A2	L–SUB6	(N) ERICSSON – AIR6419	90°	150’–0”	–	–	–	–	–	–	–	–	–	–	–	–	–	–
A3	AWS3, 1900, AWS	(N) ERICSSON – AIR 3283	90°	150’–0”	–	–	–	–	–	–	–	–	–	–	–	–	–	–
B1	700, 850	(N) COMMSCOPE – NNSS–65B–HG–R2B	150°	150’–0”	1	(N) ERICSSON – 4490	TOWER	–	–	–	–	–	1	RAYCAP– RVZDC–6627–PF–48	1	(E) HYBRID CABLE	6x12	200’
B2	AWS3, 1900, AWS	(N) ERICSSON – AIR 3283	150°	150’–0”	–	–	–	–	–	–	–	–	–	–	–	–	–	–
B3	L–SUB6	(N) ERICSSON – AIR6419	150°	150’–0”	–	–	–	–	–	–	–	–	–	–	–	–	–	–
C1	700, 850	(N) COMMSCOPE – NNSS–65B–HG–R2B	225°	150’–0”	1	(N) ERICSSON – 4490	TOWER	–	–	–	–	–	1	RAYCAP– RVZDC–6627–PF–48	1	(E) HYBRID CABLE	6x12	200’
C2	AWS3, 1900, AWS	(N) ERICSSON – AIR 3283	225°	150’–0”	–	–	–	–	–	–	–	–	–	–	–	–	–	–
C3	L–SUB6	(N) ERICSSON – AIR6419	225°	150’–0”	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	–	(E) COMMSCOPE – VHLPX3–11W	251°	150’–0”	2	(E) AVIAT NETWORKS – ODU600	–	–	–	–	–	–	–	–	–	–	–	–
D1	700, 850	(N) COMMSCOPE – NNSS–65B–HG–R2B	320°	150’–0”	1	(N) ERICSSON – 4490	TOWER	–	–	–	–	–	–	–	–	–	–	–
D2	AWS3, 1900, AWS	(N) ERICSSON – AIR 3283	320°	150’–0”	–	–	–	–	–	–	–	–	–	–	–	–	–	–
D3	L–SUB6	(N) ERICSSON – AIR6419	320°	150’–0”	–	–	–	–	–	–	–	–	–	–	–	–	–	–

* REFER TO THE RFDS FOR MECHANICAL AND ELECTRICAL DOWNTILT INFORMATION

UNUSED FEEDLINES			
–	–	–	–
–	–	–	–



VERIZON SITE NUMBER:
5000078561

BU #: 846219

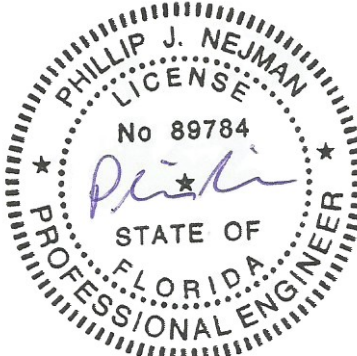
CROWN CASTLE SITE NAME
FAIRGROUNDS

682 SOUTHWEST
COMMERCE DRIVE
LAKE CITY, FL 32025

EXISTING 185'-0"
GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/15/25	MAT	CONSTRUCTION	MAT



10/15/25

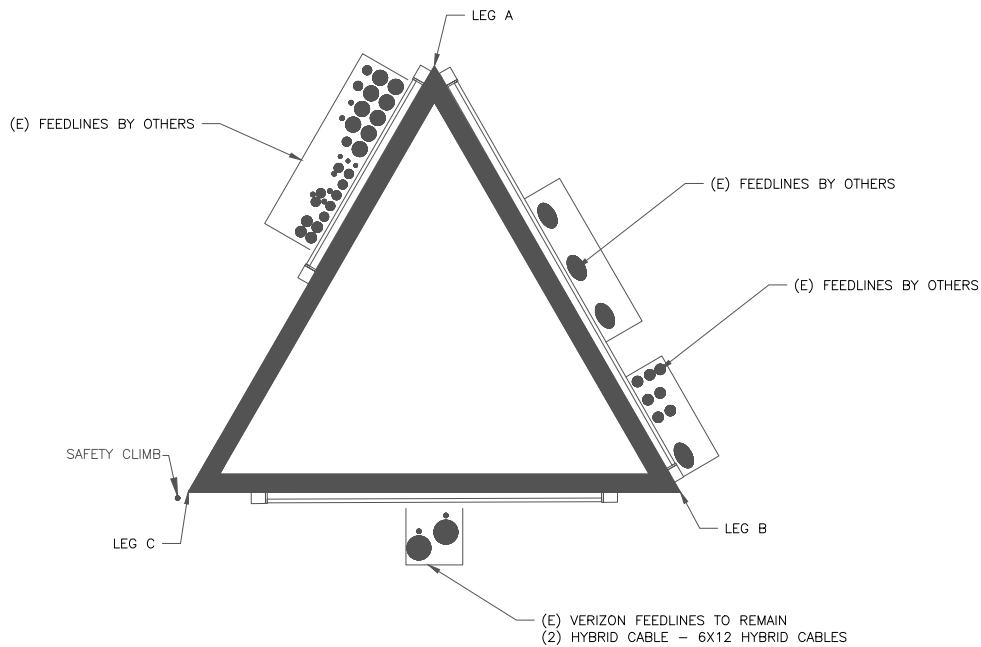
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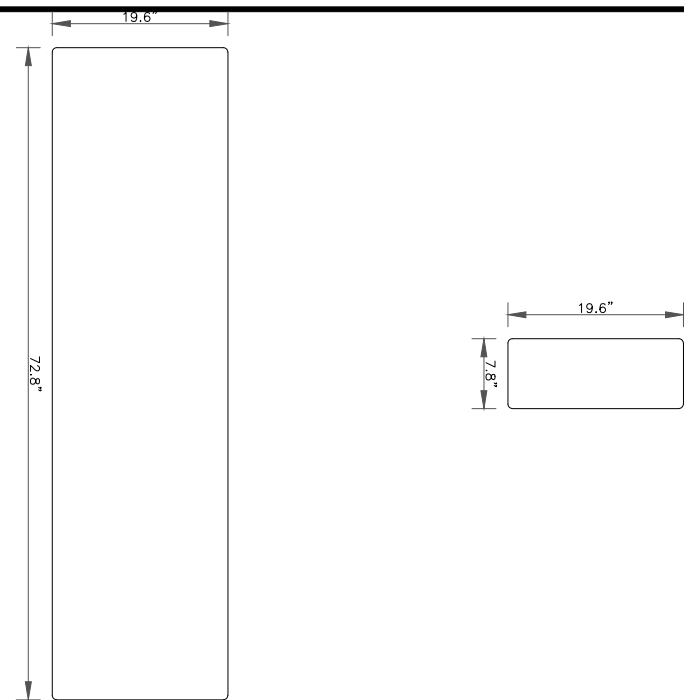
C-4

REVISION:

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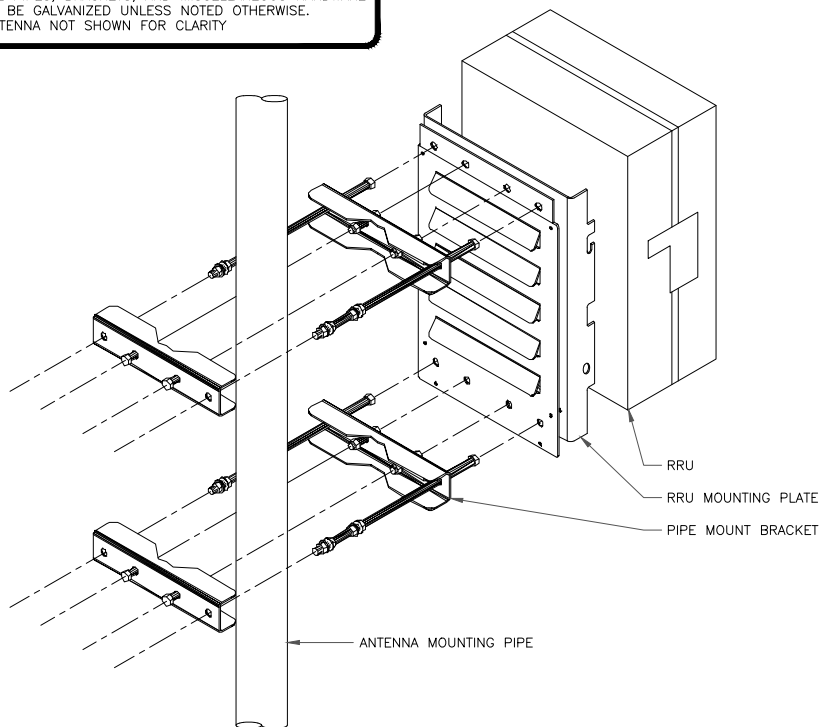
1 BASE LEVEL DETAIL
SCALE: NOT TO SCALE



ANTENNA SPECS	
MANUFACTURER	COMMSCOPE
MODEL #	NNSS-65B-HG-R2B
HxWxD	72.8" x 19.6" x 7.8"
WEIGHT	67.2 LBS

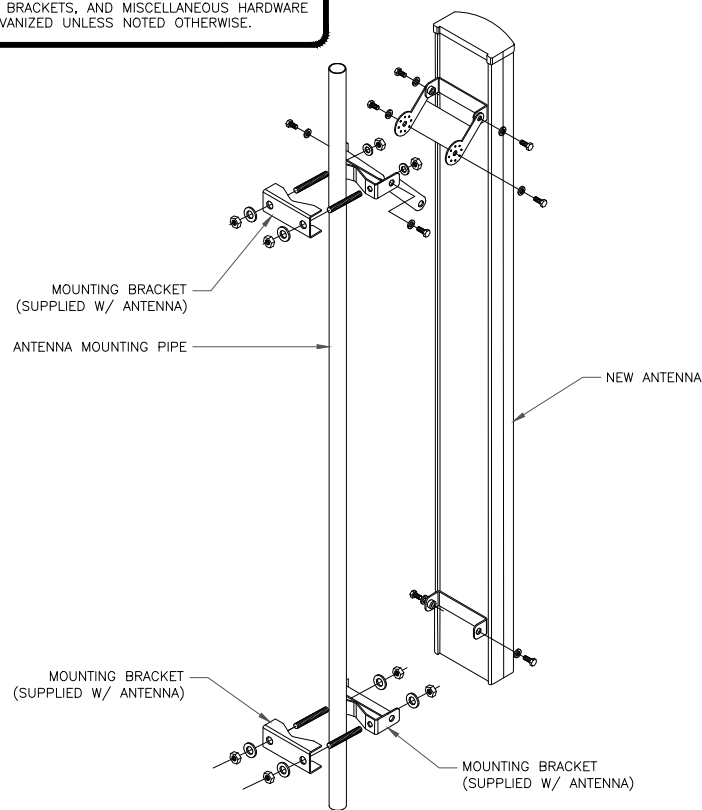
2 COMMSCOPE - NNSS-65B-HG-R2B DETAIL
SCALE: NOT TO SCALE

- INSTALLER NOTES:
1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRU'S RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
 2. DO NOT OPEN RRU PACKAGES IN THE RAIN.
 3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.
 4. ANTENNA NOT SHOWN FOR CLARITY



3 RRH MOUNTING DETAIL
SCALE: NOT TO SCALE

- INSTALLER NOTE:
1. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.



4 ANTENNA MOUNTING DETAIL
SCALE: NOT TO SCALE



RADIO SPECS	
MANUFACTURER	ERICSSON
MODEL #	4490
HxWxD	17.5" x 15.2" x 6.8"
WEIGHT	68.4 LBS

5 ERICSSON - 4490 DETAIL
SCALE: NOT TO SCALE



VERIZON SITE NUMBER:
5000078561

BU #: 846219

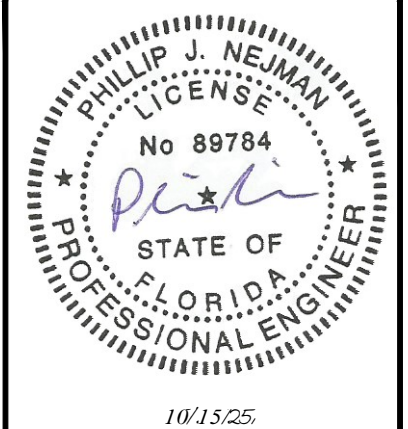
CROWN CASTLE SITE NAME
FAIRGROUNDS

682 SOUTHWEST
COMMERCE DRIVE
LAKE CITY, FL 32025

EXISTING 185'-0"
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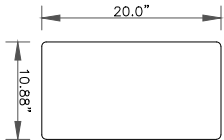
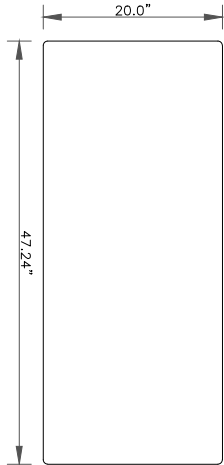
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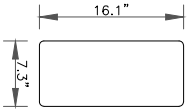
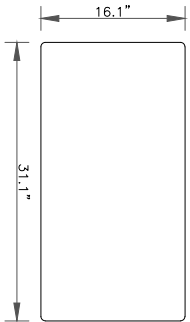
REVISION:

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ANTENNA SPECS	
MANUFACTURER	ERICSSON
MODEL #	AIR 3283
HxWxD	47.24" x 20.0" x 10.88"
WEIGHT	103.64 LBS

1 ERICSSON – AIR 3283 DETAIL
SCALE: NOT TO SCALE



ANTENNA SPECS	
MANUFACTURER	ERICSSON
MODEL #	AIR6419
HxWxD	31.1" x 16.1" x 7.3"
WEIGHT	55.4 LBS

2 ERICSSON – AIR6419 DETAIL
SCALE: NOT TO SCALE

3 NOT USED
SCALE: NOT TO SCALE



VERIZON SITE NUMBER:
5000078561

BU #: 846219

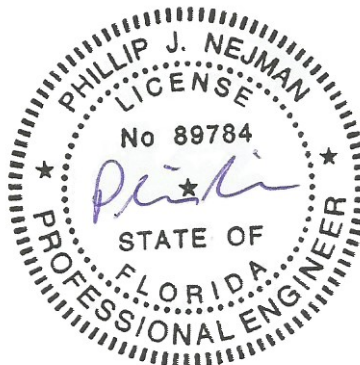
CROWN CASTLE SITE NAME
FAIRGROUNDS

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COMMERCE DRIVE
LAKE CITY, FL 32025

EXISTING 185'-0"
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SHEET NUMBER:

C-5.2

REVISION:

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4 NOT USED
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

6 NOT USED
SCALE: NOT TO SCALE

Azimuth (1) Alpha					
Cell (850 CDMA)	Red				
PCS2 (1900 LTE)	Pink	Red	Pink		
700 LTE	Lt. Green	Red	Lt. Green		
850 LTE	Purple	Red	Purple		
2100 LTE	Orange	Red	Orange		
High Band Dual Band (Shared Lines)	Orange	Pink	Red	Pink	Orange
Low Band Dual Band (Shared Lines)	Purple	Lt. Green	Red	Lt. Green	Purple
5G 28GHz	Brown	Red	Brown		
5G 39GHz	Blue	Red	Blue		
LAA	Gray	Red	Gray		
CBRS	White	Red	White		
L-Sub6 (C-Band)	Red	Red	Red		

Azimuth (2) Beta					
Cell (850 CDMA)	Blue				
PCS2 (1900 LTE)	Pink	Blue	Pink		
700 LTE	Lt. Green	Blue	Lt. Green		
850 LTE	Purple	Blue	Purple		
2100 LTE	Orange	Blue	Orange		
High Band Dual Band (Shared Lines)	Orange	Pink	Blue	Pink	Orange
Low Band Dual Band (Shared Lines)	Purple	Lt. Green	Blue	Lt. Green	Purple
5G 28GHz	Brown	Blue	Brown		
5G 39GHz	Blue	Blue	Blue		
LAA	Gray	Blue	Gray		
CBRS	White	Blue	White		
L-Sub6 (C-Band)	Red	Blue	Red		

Azimuth (3) Gamma					
Cell (850 CDMA)	Yellow				
PCS2 (1900 LTE)	Pink	Yellow	Pink		
700 LTE	Lt. Green	Yellow	Lt. Green		
850 LTE	Purple	Yellow	Purple		
2100 LTE	Orange	Yellow	Orange		
High Band Dual Band (Shared Lines)	Orange	Pink	Yellow	Pink	Orange
Low Band Dual Band (Shared Lines)	Purple	Lt. Green	Yellow	Lt. Green	Purple
5G 28GHz	Brown	Yellow	Brown		
5G 39GHz	Blue	Yellow	Blue		
LAA	Gray	Yellow	Gray		
CBRS	White	Yellow	White		
L-Sub6 (C-Band)	Red	Yellow	Red		

Azimuth (4) Delta					
Cell (850 CDMA)	Orange				
PCS2 (1900 LTE)	Pink	Orange	Pink		
700 LTE	Lt. Green	Orange	Lt. Green		
850 LTE	Purple	Orange	Purple		
2100 LTE	Orange	Orange	Orange		
High Band Dual Band (Shared Lines)	Orange	Pink	Orange	Pink	Orange
Low Band Dual Band (Shared Lines)	Purple	Lt. Green	Orange	Lt. Green	Purple
5G 28GHz	Brown	Orange	Brown		
5G 39GHz	Blue	Orange	Blue		
LAA	Gray	Orange	Gray		
CBRS	White	Orange	White		
L-Sub6 (C-Band)	Red	Orange	Red		

Azimuth (5) Epsilon					
Cell (850 CDMA)	White				
PCS2 (1900 LTE)	Pink	White	Pink		
700 LTE	Lt. Green	White	Lt. Green		
850 LTE	Purple	White	Purple		
2100 LTE	Orange	White	Orange		
High Band Dual Band (Shared Lines)	Orange	Pink	White	Pink	Orange
Low Band Dual Band (Shared Lines)	Purple	Lt. Green	White	Lt. Green	Purple
5G 28GHz	Brown	White	Brown		
5G 39GHz	Blue	White	Blue		
LAA	Gray	White	Gray		
CBRS	White	White	White		
L-Sub6 (C-Band)	Red	White	Red		

Azimuth (6) Zeta					
Cell (850 CDMA)	Gray				
PCS2 (1900 LTE)	Pink	Gray	Pink		
700 LTE	Lt. Green	Gray	Lt. Green		
850 LTE	Purple	Gray	Purple		
2100 LTE	Orange	Gray	Orange		
High Band Dual Band (Shared Lines)	Orange	Pink	Gray	Pink	Orange
Low Band Dual Band (Shared Lines)	Purple	Lt. Green	Gray	Lt. Green	Purple
5G 28GHz	Brown	Gray	Brown		
5G 39GHz	Blue	Gray	Blue		
LAA	Gray	Gray	Gray		
CBRS	White	Gray	White		
L-Sub6 (C-Band)	Red	Gray	Red		



VERIZON SITE NUMBER:
5000078561

BU #: 846219

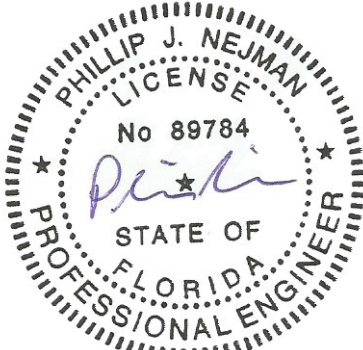
CROWN CASTLE SITE NAME
FAIRGROUNDS

682 SOUTHWEST
COMMERCE DRIVE
LAKE CITY, FL 32025

EXISTING 185'-0"
GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/15/25	MAT	CONSTRUCTION	MAT



10/15/25

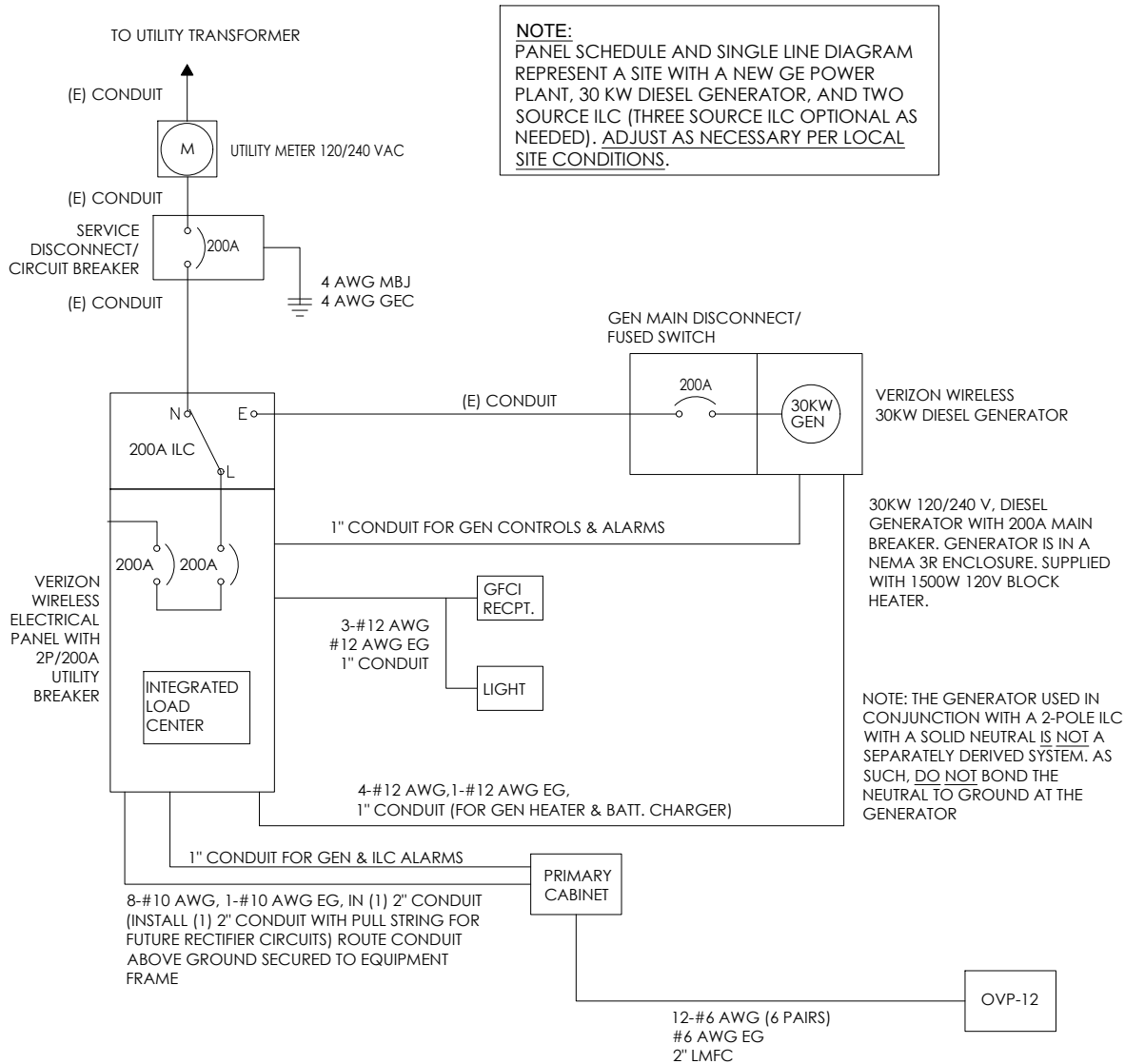
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C-6

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1 ONE-LINE DIAGRAM
SCALE: NOT TO SCALE

UTILITY NOTES:

- CONTRACTOR SHALL VERIFY AVAILABLE FAULT CURRENT WITH POWER COMPANY AND ENSURE ALL ELECTRICAL EQUIPMENT IS SUITABLE FOR AVAILABLE FAULT CURRENT.
- CONTRACTOR SHALL COORDINATE UTILITY SERVICES WITH LOCAL UTILITY COMPANIES. VERIFY ALL REQUIREMENTS WITH UTILITY COMPANY STANDARDS.
- ONE-LINE DIAGRAM IS FOR SCHEMATIC PURPOSES ONLY AND IS NOT INDICATIVE OF THE ACTUAL EQUIPMENT LAYOUT.
- ALL EQUIPMENT WILL HAVE A MINIMUM AIC OF 10 KA. CONTRACTOR TO DETERMINE AVAILABLE FAULT CURRENT BEFORE ENERGIZING EQUIPMENT. THE AMOUNT OF AVAILABLE FAULT CURRENT SHALL BE MARKED ON THE SERVICE EQUIPMENT PER NEC 110.24.
- CONTRACTOR SHALL NOTIFY UTILITY COMPANY OF CHANGES IN ELECTRICAL LOAD.
- CONTRACTOR TO VERIFY EXISTING CONDUIT(S) SIZE(S) PRIOR TO CONSTRUCTION AND MAY REUSE EXISTING CONDUIT(S) IF THEY MEET THE MINIMUM REQUIREMENTS PER NEC CODE.
- GROUNDING ELECTRODE CONDUCTOR IS SIZED FOR SINGLE 200A SERVICE ONLY. IF METER BANK SHARES A COMMON NEUTRAL/GROUND POINT, CONTRACTOR WILL INSTALL (1) 3/0 COPPER GEC INSTEAD.

GENERAL NOTES:

- ALL NEW CONDUCTORS TO BE INSTALLED SHALL BE COPPER. ALL CONDUCTORS SHALL BE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 UNLESS NOTED OTHERWISE.
- CONTRACTOR IS TO FIELD VERIFY ALL EXISTING ITEMS SHOWN ON THE ELECTRICAL ONE-LINE DIAGRAM AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- ALL GROUNDING AND BONDING PER THE NEC.

UL NOTE:

- ELECTRICAL MATERIALS, DEVICES, CONDUCTORS, APPLIANCES AND EQUIPMENT SHALL BE LABELED/LISTED BY UL OR ACCEPTED BY JURISDICTION (I.E.: LOCAL COUNTY OR STATE) APPROVED THIRD PARTY TESTING AGENCY

CONDUIT NOTES:

- ALL CONDUIT TO BE SCH40 PVC OR LTC (WITH PRIOR FSA CONSTRUCTION MANAGER APPROVAL), AS NOTED. INSTALL WEATHERPROOF FITTINGS.
- ABOVE GRADE CONDUIT RUNS TO BE MARKED WITH HAZARD TAPE TO PREVENT TRIPPING HAZARD.
- ALL ABOVE GROUND CONDUIT MUST BE RIGID METALLIC. RIGID METALLIC CONDUIT MAY ONLY BE INSTALLED ACROSS PAD WITH PRIOR FSA CM APPROVAL.

ONE-LINE DIAGRAM NOTES:

- ELECTRICAL SERVICE SHALL BE 200A, 120/240V, 1ø, 3W.
- FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT, REFER TO VENDOR PRINTS PROVIDED BY EQUIPMENT MANUFACTURER.

200A., 120/240V, 1Ø VOLTAGE DROP TABLE (<3% VOLTAGE DROP)				
≤175FT	175FT - 200FT	200FT - 255FT	255FT - 275FT	275FT - 320FT
(2) #3/0 AWG + (1) #6 AWG GND	(2) #3/0 AWG + (1) #6 AWG GND	(2) #250 KCMIL + (1) #2 AWG GND	(2) #250 KCMIL + (1) #2 AWG GND	(2) #250 KCMIL + (1) #2 AWG GND
320FT - 400FT	400FT - 440FT	440FT - 510FT	510FT - 635FT	
(2) #500 KCMIL + (1) #1/0 AWG GND	(2) #500 KCMIL + (1) #1/0 AWG GND	(2) #500 KCMIL + (1) #1/0 AWG GND	(2) #500 KCMIL + (1) #1/0 AWG GND	
VOLTAGE DROP TABLE NOTES 1. CONTRACTORS SHALL BE RESPONSIBLE FOR DE-RATING CONDUCTORS WHEN 4 OR MORE CURRENT CARRYING CONDUCTORS ARE CARRIED IN THE SAME CONDUIT PER THE NEC. 2. THE DISTANCES IN THIS TABLE ARE TOTAL DISTANCES, NOT HORIZONTAL DISTANCES. INCLUDE VERTICAL RUNS AND JUNCTIONS BOX COIL LENGTH IN THE TOTAL CONDUCTOR DISTANCE.				

PANELBOARD NAME:	VZW PANEL	VOLTS:	240	INTERRUPTING RATING:	65kA								
MODEL NUMBER	INTERSECT AA-G-3S-3R-CL	PHASE:	1 PHASE	MOUNTING LOCATION:	WALL								
PANEL LOCATION:	SHELTER	WIRE:	3	FEED LOCATION:	BOTTOM								
SUPPLIED FROM:	SERVICE	AMP MAIN:	200	NEMARATING:	3R								
	BREAKER			PHASE				PHASE			BREAKER		
LOAD DESCRIPTION	AMP	POLE	WIRE	A	B	POS.	POS.	A	B	WIRE	POLE	AMP	LOAD DESCRIPTION
HVAC1	60	2	(E)	1.8		1	2	2.4		(E)	2	40	RECTIFIER 3
					1.8	3	4		2.4				
HVAC2	60	2	(E)	1.8		5	6	2.4		(E)	2	40	RECTIFIER 4
					1.8	7	8		2.4				
LIGHTS	20	1	(E)	2.4		9	10			(E)	1	20	LTE (OFF)
RECEPTACLES	20	1	(E)		2.4	11	12			(E)	1	20	LTE (OFF)
RECEPTACLES	20	1	(E)	2.4		13	14			(E)	1	20	LTE (OFF)
GEN OUTLET	20	1	(E)		0.0	15	16			(E)	1	20	LTE (OFF)
RECEPTACLE	20	1	(E)	2.4		17	18	2.4		(E)	2	40	RECTIFIER 5
RECEPTACLE	20	1	(E)		2.4	19	20		2.4				
RECEPTACLE	20	1	(E)	2.4		21	22	1.8		(E)	2	30	RECTIFIER 6
LIGHTS	20	1	(E)		2.4	23	24		1.8				
MICROWAVE A	30	2	(E)	1.8		25	26	1.8		(E)	2	30	VZW-RECT# 2, 4, 6
					1.8	27	28		1.8				
MICROWAVE B	30	2	(E)	1.8		29	30	2.4		(E)	1	20	SMOKE DETECTS SPARE
					1.8	31	32		0.0	(E)	1	20	
RECTIFIER 1	30	2	(E)	1.8		33	34	1.8		(E)	2	30	TLC
					1.8	35	36		1.8				
RECTIFIER 2	30	2	(E)	1.8		37	38	0.0		(E)	2	40	SURGE
					1.8	39	40		0.0				
	TOTAL KVA PER PHASE			20.4	18.0			15.0	12.6	TOTAL KVA PER PHASE			
CONNECTED KVA (NEW)						66.0							CONNECTED KVA (NEW)
CONNECTED AMPS (NEW)						158.8							CONNECTED AMPS (NEW)
DEMAND KVA (NEW)						82.5							DEMAND KVA (NEW)
DEMAND AMPS (NEW)						198.5							DEMAND AMPS (NEW)

NOTES:

- ALL CONDUCTORS ARE TYPE THWN (75°) COPPER
- MAXIMUM LENGTH OF RUN FOR RECTIFIER CIRCUITS IS 50 FT.
- INTERSECT/GENERAC INTEGRATED LOAD CENTER INCLUDES 200A. MAIN DISCONNECT AND TRANSFER SWITCH FOR PORTABLE OR PERMANENT GENERATOR.
- RECTIFIER LOADS ARE CONSIDERED TO BE NON-CONTINUOUS.
- IF ADDITIONAL FUTURE LOADS ARE ADDED WHICH CAUSE TOTAL DEMAND TO EXCEED GENERATOR BREAKER SIZE, BACKUP POWER SYSTEM SHALL BE EVALUATED AND UPGRADED AS NECESSARY.

2 PROPOSED PANEL SCHEDULE
SCALE: NOT TO SCALE

verizon

CROWN CASTLE

NextEdge

1355 WINDWARD CONCOURSE, SUITE 410 ALPHARETTA, GA 30005 TEL: 678-990-2338 FL COA #38599

VERIZON SITE NUMBER:
5000078561

BU #: 846219

CROWN CASTLE SITE NAME
FAIRGROUNDS

682 SOUTHWEST COMMERCE DRIVE
LAKE CITY, FL 32025

EXISTING 185'-0"
GUYED TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	10/15/25	MAT	CONSTRUCTION	MAT

PHILLIP J. NEJMAN
LICENSE
No 89784
STATE OF FLORIDA
PROFESSIONAL ENGINEER

10/15/25

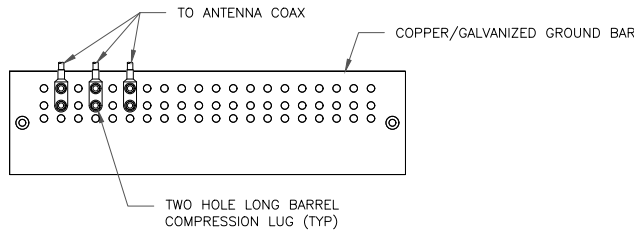
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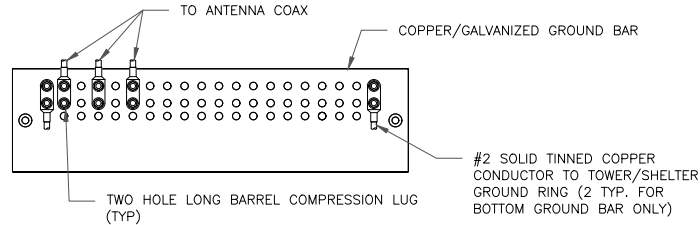
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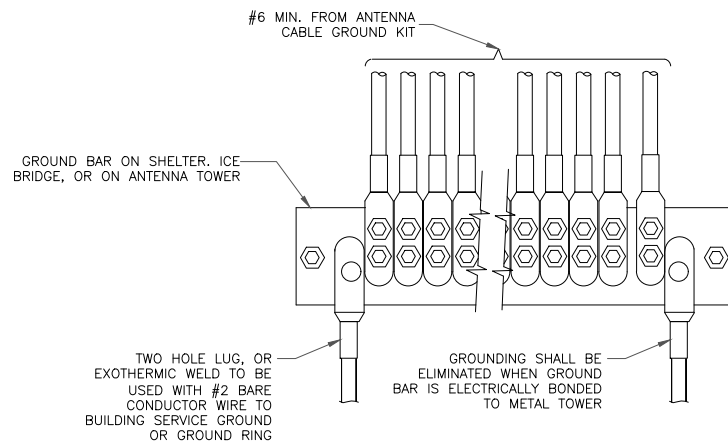
- NOTES:
1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
 2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
 3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO ANTENNA MOUNT STEEL.

1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE

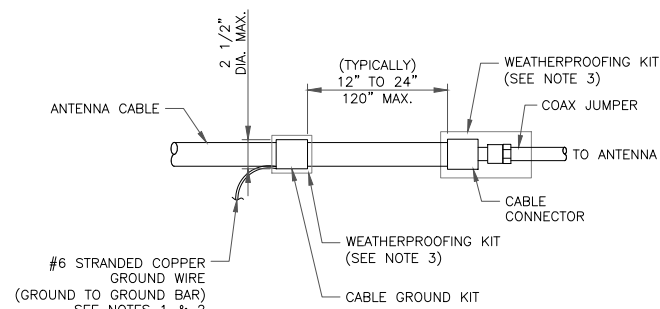


- NOTES:
1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
 2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
 3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE

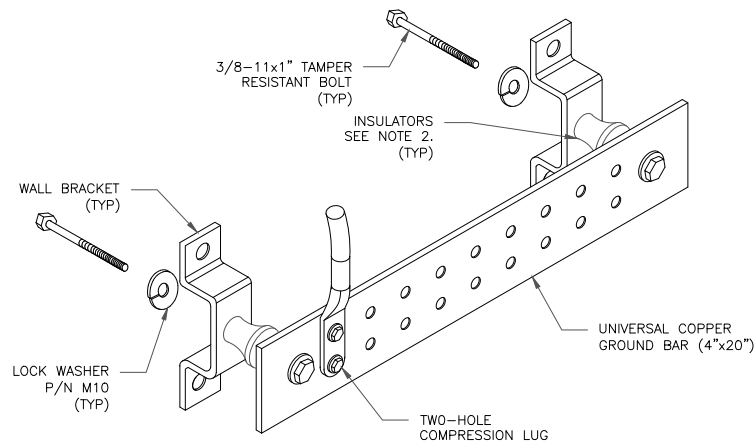


4 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE



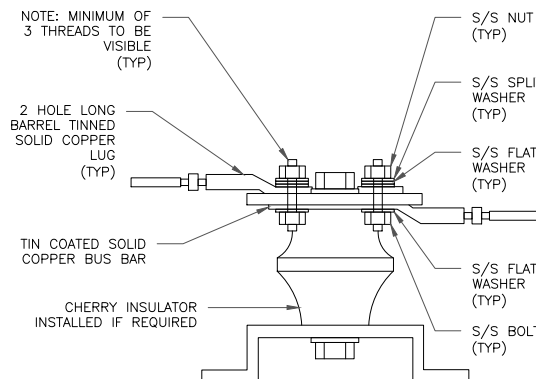
- NOTES:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
 3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

6 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



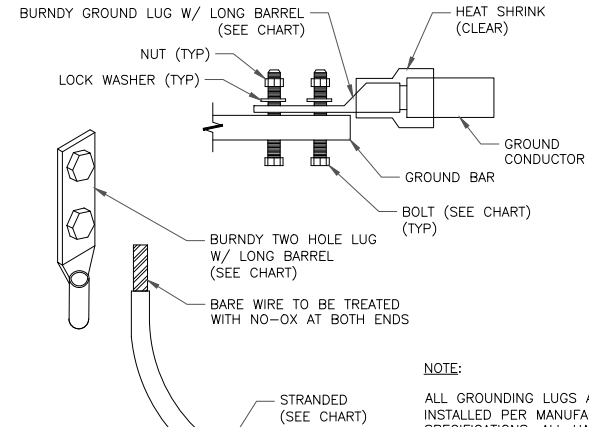
- NOTES:
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
 2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL. USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

5 GROUND BAR DETAIL
SCALE: NOT TO SCALE



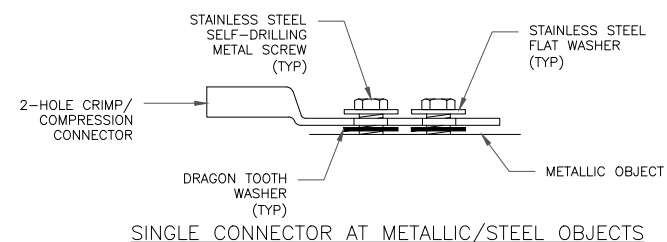
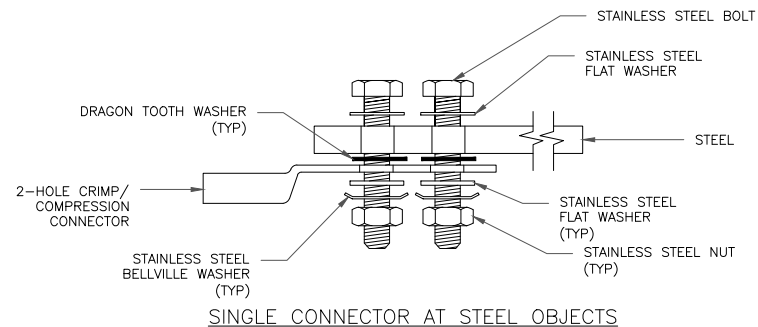
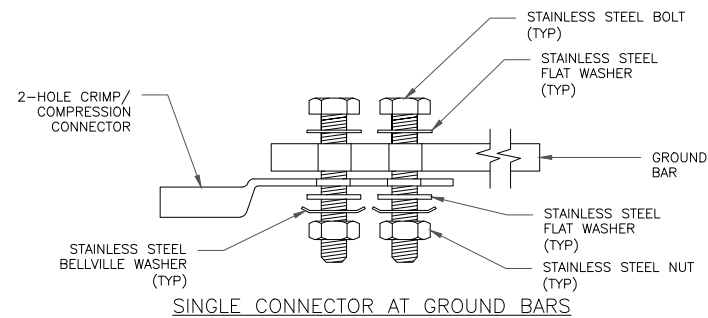
7 LUG DETAIL
SCALE: NOT TO SCALE

WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 SOLID TINNED	YA3C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 STRANDED	YA2C-2TC38	3/8" - 16 NC SS 2 BOLT
#2/0 STRANDED	YA26-2TC38	3/8" - 16 NC SS 2 BOLT
#4/0 STRANDED	YA28-2N	1/2" - 16 NC SS 2 BOLT



- NOTE:
- ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

3 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



8 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE

verizon

CROWN CASTLE

NextEdge
1355 WINDWARD CONCOURSE, SUITE 410
ALPHARETTA, GA 30005
TEL: 678-990-2338
FL COA #38599

VERIZON SITE NUMBER:
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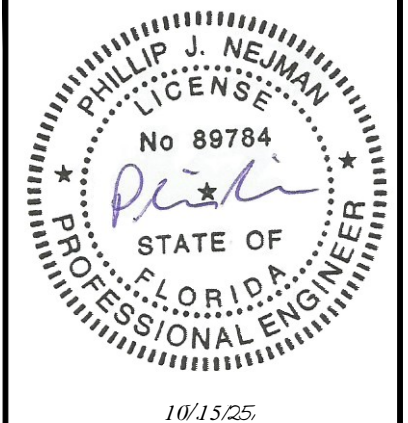
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Tower Engineering Solutions, LLC
1320 Greenway Dr. Suite 600
Irving, TX 75038
972.483.0607
TESOrders@testtower.us

Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10311542

July 23, 2025

Site Information

Site ID: 5000078561-VZW
Site Name: COMMERCE
Carrier Name: Verizon Wireless
Address: 682 SW Commerce Dr.
Lake City, Florida 32025, Columbia County
Latitude: 30.174008°
Longitude: -82.680519°

Structure Information

Tower Type: Guyed
Mount Type: Sector Frames

FUZE ID # 17500725

Analysis Results

(3) Sector Frames: 63.6% [Pass w/ Modifications]*

***Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

*****Contractor PMI Requirements:**

Included at the end of this MA report

Available & Submitted via portal at <https://pmi.vzwsmart.com>

**For additional questions and support, please reach out to:
pmisupport@testtower.us**

Report Prepared By: Sandesh K Bhujel



Executive Summary:

The objective of this report is to summarize the analysis results of the antenna support mount including the proposed modifications at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	Verizon Project Id 17500725; dated 06/30/2025
Structural analysis report	Provided by Verizon BT group; dated 06/07/2021
Post-Modification Inspection Report	Smart Tool Project #: 10100956, dated 04/06/2023
Previous Mount Analysis Report	Smart Tool Project #: 10300365, dated 9/9/2025
Proposed Mount Modification Drawings	Smart Tool Project #: 10311542

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} : 119 mph Ice Wind Speed (3-sec. Gust): 30 mph Design Ice Thickness: 0.00 in Risk Category: II Exposure Category: C Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: Method 1 Ground Elevation Factor, K_e : 0.994
Seismic Parameters:	S_s : 0.130 g S_1 : 0.059 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Live Load, L_v : 250 lbs. Maintenance Live Load, L_m : 500 lbs.
Analysis Software:	RISA-3D (V20)

Final Loading Configuration:

The following equipment has been considered for the analysis of the mount(s):

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
150.50		1		Dish	Retained
150.50	150.00	4	Ericsson	AIR3283	Added
150.50	150.00	4	Ericsson	AIR6419	Added
150.50	150.00	4	Commscope	NNSS-65C-HG-R2B	Added
150.50		4	Ericsson	4490	Added
150.50		2		OVP 12*	Retained

* Equipment to be flush mounted directly to the mount members and are not shown in the placement diagram.

It is acceptable to install up to three (3) OVPs with dimensions not to exceed 30" x 17" x 13" and 40 lbs. at any location, other than the mount face, without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required unless replacing an existing OVP.

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Tower Engineering Solutions, LLC and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Tower Engineering Solutions, LLC to verify deviation will not adversely impact the analysis.
2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.
4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.
6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Tower Engineering Solutions, LLC is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
 - Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
 - HSS (Rectangular) ASTM 500 (Gr. B-46)
 - Pipe ASTM A53 (Gr. B-35)
 - Threaded Rod F1554 (Gr. 36)
 - Bolts ASTM A325

8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Tower Engineering Solutions, LLC.

Analysis Results:

Component	Utilization %	Pass/Fail
PIPE_2.0	38.8 %	Pass
PIPE_1.25	22.5 %	Pass
PL3/8X3.5	55.7 %	Pass
A-Framing	4.9 %	Pass
C-Framing	38.5 %	Pass
Pipe to pipe	7.9 %	Pass
V-Brace	11.2 %	Pass
Tieback	5.5 %	Pass
Dish Tieback	6.4 %	Pass
Connection Check	63.6 %	Pass
Mount to Tower Interaction	27.8 %	Pass

Structure Rating – (Controlling Utilization of all Components)	63.6%
---	--------------

Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	50.0	48.8	70.6	69.4
0.5	72.4	70.4	101.7	99.7
1	93.3	90.5	131.4	128.6

Notes:

- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 3 sector(s).
- Ka factors included in (EPA)a calculations

Requirements:

The existing mount(s) will be **SUFFICIENT** for the final loading configuration (attachment 2) **after the modifications detailed in attachment 3 are successfully completed.**

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

Attachments:

1. **Contractor Required PMI Report Deliverables**
2. Antenna Placement Diagrams
3. Mount Modification Drawings
4. Mount Photos
5. Analysis Calculations

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

Electronic pdf version of this can be downloaded at <https://pmi.vzwsmart.com>
For additional questions and support, please reach out to pmisupport@testtower.us

MDG #: 5000078561

SMART Project #: 10311542

Fuze Project ID: 17500725

Purpose – to upload the proper documentation to the SMART Tool in order to allow the SMART Tool engineering vendor to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the modification was completed in accordance with the modification drawings.
- Contractor shall relay any data that can impact the performance of the mount or the mount modification, this includes safety issues.

Base Requirements:

- If installation of the modification will cause damage to the structure, the climbing facility, or safety climb if present or any installed system, SMART Tool vendor to be notified prior to install. Any special photos outside of the standard requirements will be indicated on the drawings.
- Provide “as built drawings” showing contractor’s name, preparer’s signature, and date. Any deviations from the drawings (proposed modification) shall be shown. NOTE: If loading is different than what is conveyed in the post-modification passing mount analysis (MA) contact the SMART Tool vendor immediately.
- Each photo shall be time and date stamped.
- Photos should be high resolution.
- Contractor shall ensure that the safety climb wire rope is not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope. If there is conflict, contact the SMART Tool engineer for recommendations.
- The PMI can be accessed at the following portal: <https://pmi.vzwsmart.com>

Photo Requirements:

- Photos taken at ground level
 - Photo of Gate Signs showing the tower owner, site name, and number.
 - Overall tower structure after installation of the modifications.
 - Photos of the mount after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed
- Photos taken at Mount Elevation
 - Photos showing the safety climb wire rope above and below the mount prior to modification.
 - Photos showing the climbing facility and safety climb if present.

- Photos showing each individual sector after installation of modifications. Each entire sector must be in one photo to show the interconnection of members.
 - These photos shall also certify that the placement and geometry of the equipment on the mount is as depicted in the antenna placement diagram in this form.
- Photos that show the model number of each antenna and piece of equipment installed per sector.
- Photos of each installed modification per the modification drawings; pictures shall also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
- Photos showing the distances (relative distance between collars) of the installed modifications from the appropriate reference locations shown in the modification drawings.
- Photos showing the installed modifications onto the tower (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, an elevation measurement shall be provided before the elevation change.

Material Certification:

- Materials utilized must be as per specification on the drawings or the equivalent as validated by the SMART Tool vendor.
 - If the materials are as specified on the drawings
 - The contractor shall provide the packing list, or the materials certifications for the materials utilized to perform the mount modification
 - Commscope, Metrosite, Perfect Vision, Sabre, and Site Pro have all agreed to support Verizon vendors with the necessary material certifications
 - If seeking permission to use an equivalent
 - It is required that the SMART Tool engineering vendor approval of such is included in the contractor submission package. There may be an additional charge for approval if the equivalent submission doesn't meet specifications as prescribed in the drawings.

☐ All hardware has been properly installed, and the existing hardware was inspected.

☐ The material utilized was as specified on the SMART Tool engineering vendor Mount Modification Drawings and included in the material certification folder is a packing list or invoice for these materials.

OR

☐ The material utilized was approved by a SMART Tool engineering vendor as an "equivalent" and this approval is included as part of the contractor submission.

Antenna & Equipment Placement and Geometry Confirmation:

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the sketch and table included in this form and with the mount analysis provided.

OR

- ☐ The contractor notes that the equipment on the mount is not in accordance with the sketch and has noted the differences below and provided photo documentation of any alterations.

Comments:

Was the mount modification completed in conjunction with the equipment change / installation?

- ☐ Yes ☐ No

Special Instructions / Validation as required from the MA or Mod Drawings:

Issue:

None

Response:

Special Instruction Confirmation:

- ☐ The contractor has read and acknowledges the above special instructions.

Comments:

Contractor certifies that the climbing facility / safety climb was not damaged prior to starting work:

- ☐ Yes ☐ No

Contractor certifies no new damage created during the current installation:

- ☐ Yes ☐ No

Contractor to certify the condition of the safety climb and verify no damage when leaving the site:

- ☐ Safety Climb in Good Condition ☐ Safety Climb Damaged

Comments:

Contractor to provide measurement from top of the highest equipment/steel to the bottom of the lowest equipment/steel by documenting it using the most appropriate illustration below along with supporting photos (highest and lowest measurement across all sectors):

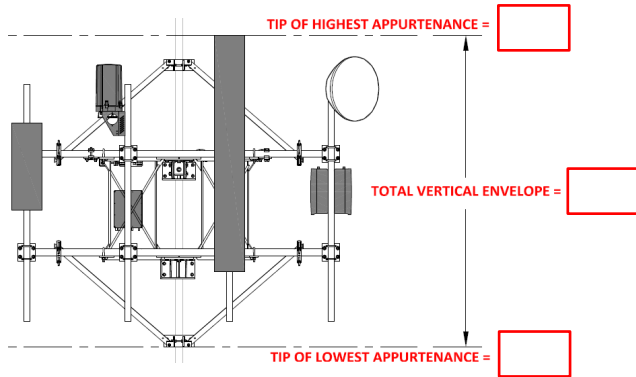


Illustration #1

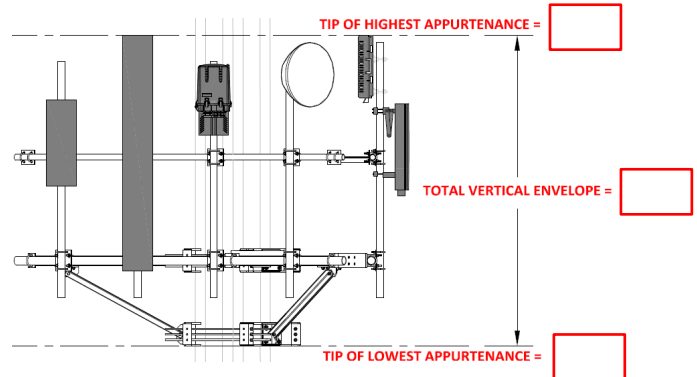


Illustration #2

Certifying Individual:

Company:	
Employee Name:	
Contact Phone:	
Email:	
Date:	

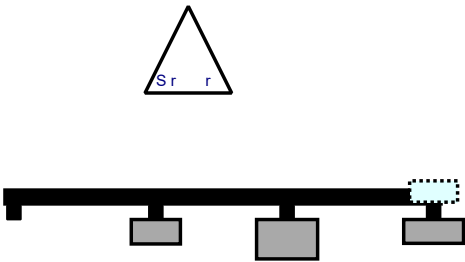
S r: A
S r r T :G d
M E : 150.00

7/23/2025

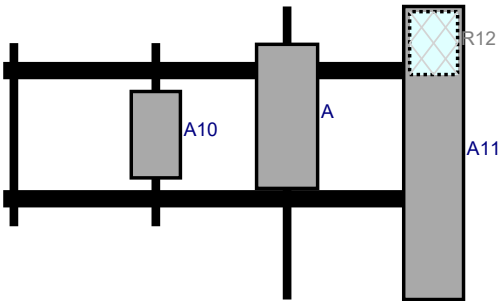


P : 1

Plan View



Front View - L S r r



4 3 2 1

R #	M d	H ()	Wd ()	H D Fr L.	P #	P P V	A P	C. A Fr T.	A H O	S	V d
A11	NNSS-65C-HG-R2B	6	1.6	141	1		Fr	4	0	Add d	
R12	44 0	20.6	15.7	141	1		B d	12	0	Add d	07/0 /2025
A	AIR32 3	47.2	20	3	2		Fr	36	0	Add d	
A10	AIR641	2.3	16.1	50	3		Fr	30	0	Add d	

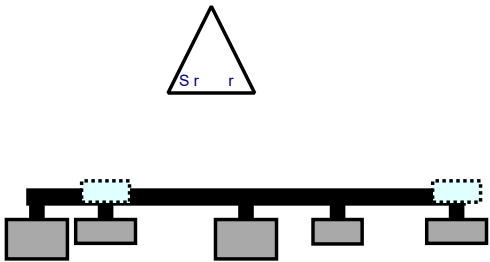
S r: B
S r r T :G d
M E : 150.00

7/23/2025

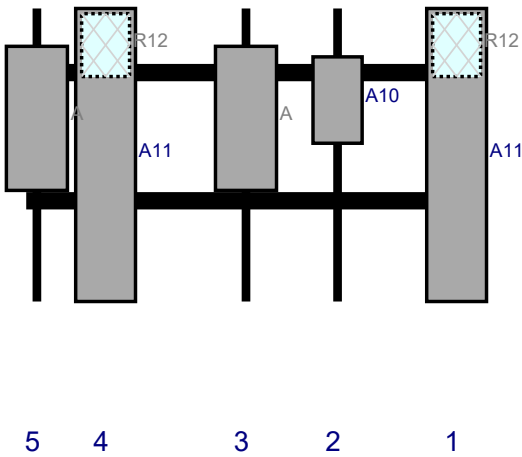


P : 2

Plan View



Front View - L S r r



R #	M d	H ()	Wd ()	H D Fr L.	P #	P P	A V P	C. A Fr T.	A H O	S	V d
A11	NNSS-65C-HG-R2B	6	1 .6	141	1		Fr	4	0	Add d	
R12	44 0	20.6	15.7	141	1		B d	12	0	Add d	07/0 /2025
A10	AIR641	2 .3	16.1	102	2		Fr	30	0	Add d	
A	AIR32 3	47.2	20	72	3		Fr	36	0	Add d	
A11	NNSS-65C-HG-R2B	6	1 .6	26	4		Fr	4	0	Add d	
R12	44 0	20.6	15.7	26	4		B d	12	0	Add d	07/0 /2025
A	AIR32 3	47.2	20	3.5	5		Fr	36	0	Add d	

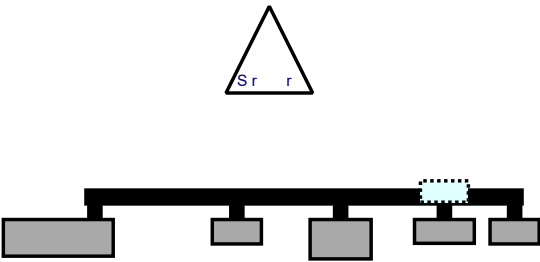
S r: C
S r r T :G d
M E : 150.00

7/23/2025

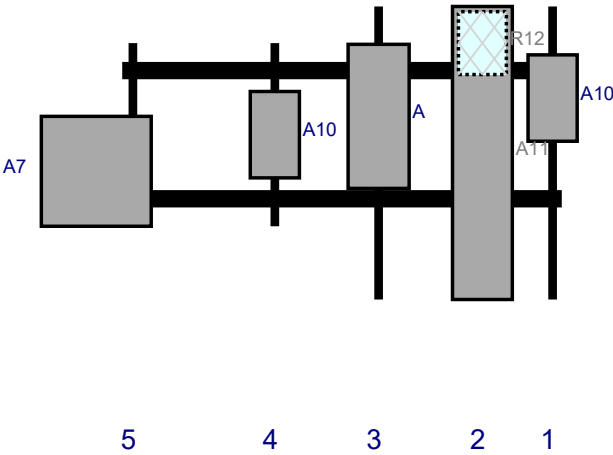


P : 3

Plan View



Front View - L S r r



R #	M d	H ()	Wd ()	HD Fr L.	P #	P P	A V P	C.A Fr T.	A H O	S	V d
A10	AIR641	2 .3	16.1	141	1		Fr	30	0	Add d	
A11	NNSS-65C-HG-R2B	6	1 .6	11	2		Fr	4	0	Add d	
R12	44 0	20.6	15.7	11	2		B d	12	0	Add d	07/0 /2025
A	AIR32 3	47.2	20	4	3		Fr	36	0	Add d	
A10	AIR641	2 .3	16.1	50	4		Fr	30	0	Add d	
A7	D	36	36	3.5	5		Fr	42	-12	R d	07/0 /2025

MOUNT MODIFICATION DRAWINGS

PROPOSED CARRIER: VERIZON

TOWER OWNER: CROWN CASTLE
TOWER OWNER SITE #: 846219

CARRIER SITE NUMBER: 5000078561-VZW
CARRIER SITE NAME: COMMERCE

COORDINATES (LATITUDE: 30.174008°, LONGITUDE: -82.680519°)

FUZE ID # 17500725

Contractor PMI Requirements			
PMI Accessed At		https://pmi.vzwsmart.com	
Smart Tool Vendor Project Number		10311542	Post MOD Analysis Report Project Number 10311542
VzW Location Code (PSLC)		5000078561	Report Dated 7/23/2025
*** PMI and Requirements embedded in Mount Analysis Report			
VzW APPROVED SMART KIT VENDORS			
Refer to Mount Modification Drawings Page for VzW SMART KIT Approved Vendors			

SHEET	SHEET TITLE	REV
ST-1	TITLE SHEET	0
SBOM	BILL OF MATERIALS	0
SGN-1	GENERAL NOTES	0
SCF-1	CLIMBING FACILITY DETAILS	0
SS-1	ANTENNA MOUNT MODIFICATION DETAILS	0
SS-1A	ANTENNA MOUNT MODIFICATION DETAILS	0
SS-1B	ANTENNA MOUNT MODIFICATION DETAILS	0
SS-2	STANDARD DETAILS	0
SS-3	MOUNT PHOTOS	0
*	SPECIFICATION SHEETS	



A CONGRUEX COMPANY

1320 GREENWAY DRIVE, SUITE 600
IRVING, TX 75038
PH: (972) 483-0607



TES JOB NO:
10311542

CUSTOMER SITE NO:
5000078561-VZW
CUSTOMER SITE NAME:
COMMERCE

682 SW COMMERCE DR.
LAKE CITY, FL 32025

JARRYD COLE TIBBETTS, P.E.
TOWER ENGINEERING SOLUTIONS
1320 GREENWAY DRIVE SUITE 600
IRVING, TX 75038
FL ENG. NO. 85109



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1	FIRST ISSUE	AW	07/24/25

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TITLE SHEET

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SHEET NUMBER:
ST-1

REV #:
0

[illegible]

VzW Mount Modification Kits - Approved Vendors			
PerfectVision Contact: Wireless Sales Email: wirelessssales@perfect-vision.com Phone Number: 844.887.6723 Website: www.perfect-vision.com		Metrosite Fabricators, LLC Contact: Kent Ramey Email: kent@metrositellc.com Phone Number: (O) 706.335.7045 (M) 706.982.9788 Website: metrositefabricators.com	
		Sabre Industries Inc Contact: Angie Welch Email: akwelch@sabreindustries.com Phone Number: 866.428.6937 Website: www.sabresitesolutions.com	
		SitePro1 Contact: Paula Boswell Email: paula.boswell@valmont.com Phone Number: 972.236.9843 Website: www.sitepro1.com	
CommScope Contact: Salvador Anguiano Email: Salvador.Anguiano@commscope.com Phone Number: 817.304.7492 Website: www.commscope.com			
The manufacturers listed are the approved vendors for the VzW Mount Kits. Each manufacturer will be aware of which kits have been through the VzW approval process and they are in turn approved to sell. Please note that the material utilized on the mount modifications will be reviewed as a part of the Desktop PMI completed by the SMART tool vendor. It will be required that the VzW kits specified are utilized in the modification. All materials required for the designed modifications but not listed in this sheet are assumed to be provided by the contractor. All parts are galvanized unless noted otherwise.			

 A CONGRUEX[®] COMPANY 1320 GREENWAY DRIVE, SUITE 600 IRVING, TX 75038 PH: (972) 483-0607			
TES JOB NO: 10311542			
CUSTOMER SITE NO: 5000078561-VZW			
CUSTOMER SITE NAME: COMMERCE			
682 SW COMMERCE DR. LAKE CITY, FL 32025			
JARRYD COLE TIBBETTS, P.E. TOWER ENGINEERING SOLUTIONS 1320 GREENWAY DRIVE SUITE 600 IRVING, TX 75038 FL ENG. NO. 95109			
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REV.	DESCRIPTION	BY	DATE
△ ①	FIRST ISSUE	AW	07/24/25
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BILL OF MATERIALS			
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SHEET NUMBER:			REV #:
SBOM			0

GENERAL NOTES

- ALL WORK SHALL COMPLY WITH THE ANSI/TIA-222-H, ANSI/ASSP A10.48, AND ANY OTHER GOVERNING BUILDING CODES AND OSHA SAFETY REGULATIONS.
- ALL WORK INDICATED ON THE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TELECOMMUNICATIONS TOWER, POLE AND FOUNDATION CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF ALL MISCELLANEOUS PARTS (SUCH AS SHIMS), TEMPORARY SUPPORTS, AND GUYINGS, ETC., PER ANSI/ASSP A10.48, TO COMPLETE THE ASSEMBLY AS SHOWN IN THE DRAWINGS.
- CONTRACTOR SHALL PROCEED WITH THE INSTALLATION WORK CAREFULLY SO THE WORK WILL NOT DAMAGE ANY EXISTING CABLE, EQUIPMENT OR THE STRUCTURE.
- THE USE OF GAS TORCH OR WELDER, ARE NOT ALLOWED ON ANY TOWER STRUCTURE WITHOUT THE CONSENT OF THE TOWER OWNER.
- GENERALLY THE CONTRACTOR IS RESPONSIBLE TO CONDUCT AN ONSITE VISIT SURVEY OF THE JOB SITE AFTER AWARD, AND REPORT ANY ISSUES WITH THE SITE TO **TES** BEFORE PROCEEDING CONSTRUCTION.
- TEMPORARILY RELOCATE ANY EXISTING COAX ATTACHED TO THE LEGS AND/OR ANY OTHER MEMBERS WHERE OBSTRUCTION WITH THE PROPOSED MODIFICATION MAY OCCUR.
- IT IS THE RESPONSIBILITY OF THE GC TO VERIFY THAT THERE IS NO INTERFERENCES (WITH SAFETY CLIMB BRACKETS, TRANSMISSION LINES, ETC.) PRIOR TO MOBILIZATION AND INSTALLATION OF THESE MODIFICATIONS.
- PLEASE NOTIFY TES IMMEDIATELY IF ANY INSTALLATION ISSUES OCCUR RELATED TO THIS DRAWING @ 972-483-0607 OR EMAIL-**PMISUPPORT@TESTOWER.US**

FABRICATION

- ALL STEEL SHALL MEET OR EXCEED THE MINIMUM STRENGTH AS SPECIFIED IN THE DRAWINGS. IF YIELD STRENGTH WAS NOT NOTED IN THE DRAWINGS, CONTRACTORS SHALL CONTACT TES FOR DIRECTION.
- ALL FIELD CUT EDGES SHALL BE GROUND SMOOTH. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINC KOTE GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

WELDING

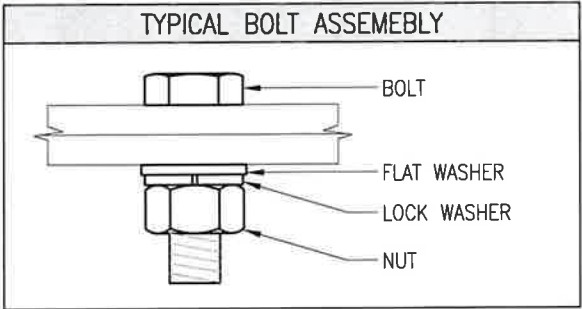
- ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS AND IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNO. (E70XX UNLESS NOTED OTHERWISE).
- PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING APPROX. 0.5" BEYOND THE PROPOSED FIELD WELD SURFACES.
- ALL WELDS SHALL BE INSPECTED VISUALLY. A MINIMUM OF 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. 100% OF WELDS SHALL BE INSPECTED IF DEFECTS ARE FOUND.
- WELD INSPECTIONS SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
- AFTER INSPECTION, ALL FIELD WELDED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINC KOTE GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.

BOLTED ASSEMBLIES AND TIGHTENING OF CONNECTIONS

- ALL HIGH STRENGTH BOLTS SHALL CONFORM TO THE PROVISIONS OF THE SPECIFICATIONS FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS AS APPROVED BY THE RCSC.
- FLANGE BOLTS SHALL BE TIGHTENED BY THE AISC "TURN-OF-THE-NUT" METHOD. THE FOLLOWING TABLE SHOULD BE USED FOR THE "TURN-OF-THE-NUT" TIGHTENING.
- SPLICE BOLTS AND ALL OTHER BOLTS IN BEARING TYPE CONNECTIONS SHALL BE TIGHTENED TO A SNUG-TIGHT CONDITION.
- THE SNUG-TIGHT CONDITION IS DEFINED AS THE TIGHTNESS ATTAINED BY EITHER A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER WITH AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.
- FOR THREADED ROD CONNECTIONS, TRIM EXCESS THREADED ROD TO NO MORE THAN 3" PAST THE NUT AND COAT WITH ZINC KOTE GALVANIZING COMPOUND.

VERIFICATION AND INSPECTION

- IF APPLICABLE, VERIFICATION INSPECTION TO BE PERFORMED SHALL BE IN ACCORDANCE TO IBC-2021 SECTION 1705.2 FOR STEEL CONSTRUCTION AND TABLE 1705.3 FOR CONCRETE CONSTRUCTION.



NOTES

- ALL DIMENSIONS REPRESENTED IN THIS SHEET ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
- THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
- SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS.
- MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCE ARE COMPROMISED.

TABLE 8.2 NUT ROTATION FROM SNUG-TIGHT
CONDITION FOR TURN-OF-NUT PRETENSIONING^{a,b}

BOLT LENGTH ^f	DISPOSITION OF OUTER FACE OF BOLTED PARTS		
	BOTH FACES NORMAL TO BOLT AXIS	ONE FACE NORMAL TO BOLT AXIS, OTHER SLOPED NOT MORE THAN 1:20 ^d	BOTH FACES SLOPED NOT MORE THAN 1:20 FROM NORMAL TO BOLT AXIS ^d
NOT MORE THAN 4d _b	1/3 TURN	1/2 TURN	2/3 TURN
MORE THAN 4d _b BUT NOT MORE THAN 8d _b	1/2 TURN	2/3 TURN	5/6 TURN
MORE THAN 8d _b BUT NOT MORE THAN 12d _b	2/3 TURN	5/6 TURN	1 TURN

^a NUT ROTATION IS RELATIVE TO BOLT REGARDLESS OF THE ELEMENT (NUT OR BOLT) BEING TURNED. FOR REQUIRED NUT ROTATIONS OF 1/2 TURN AND LESS, THE TOLERANCE IS PLUS OR MINUS 30 DEGREES; FOR REQUIRED NUT ROTATIONS OF 2/3 TURN AND MORE, THE TOLERANCE IS PLUS OR MINUS 45 DEGREES.

^b APPLICABLE ONLY TO JOINTS IN WHICH ALL MATERIAL WITHIN THE GRIP IS STEEL.

^c WHEN THE BOLT LENGTH EXCEEDS 12d_b, THE REQUIRED NUT ROTATION SHALL BE DETERMINED BY ACTUAL TESTING IN A SUITABLE TENSION CALIBRATOR THAT SIMULATES THE CONDITIONS OF SOLIDLY FITTING STEEL.

^d BEVELED WASHER NOT USED.

SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, JUNE 30, 2004
RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS

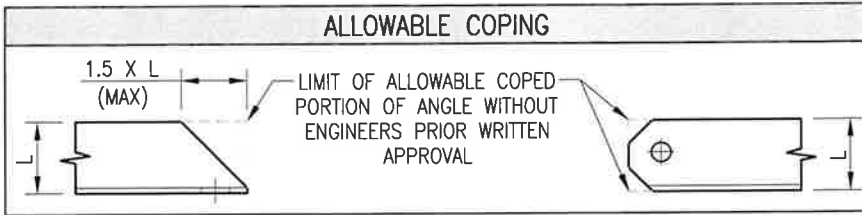
NOMINAL HOLE DIMENSIONS		
BOLT DIAMETER	STANDARD HOLE	SHORT SLOT
1/2"	9/16"	9/16" X 11/16"
5/8"	11/16"	11/16 X 7/8"
3/4"	13/16"	13/16" X 1"
7/8"	15/16"	15/16" X 1 1/8"
1"	1 1/16"	1 1/16" X 1 5/16"

BOLT EDGE AND SPACING		
BOLT DIAMETER	MIN EDGE	SPACING
1/2"	7/8"	1 1/2"
5/8"	1 1/8"	1 7/8"
3/4"	1 1/4"	2 1/4"
7/8"	1 1/2"	2 5/8"
1"	1 3/4"	3"

The diagram shows a rectangular plate with a bolt hole. The minimum edge distance is indicated as 'MIN. EDGE'.

WORKABLE GAGES	
ANGLE SIZE	GAGE
1 3/4"	1"
2"	1 1/8"
2 1/2"	1 3/8"
3"	1 3/4"
3 1/2"	2"
4"	2 1/2"

The diagram shows a gage being used to measure the angle of a structural member. The gage is labeled 'GAGE'.



TES
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PH: (972) 483-0607

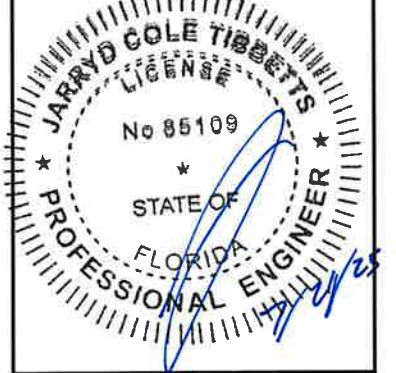
verizon

TES JOB NO:
10311542

CUSTOMER SITE NO:
5000078561-VZW
CUSTOMER SITE NAME:
COMMERCE

682 SW COMMERCE DR.
LAKE CITY, FL 32025

JARRYD COLE TIBBETTS, P.E.
TOWER ENGINEERING SOLUTIONS
1320 GREENWAY DRIVE SUITE 600
IRVING, TX 75038
FL ENG NO. 85109



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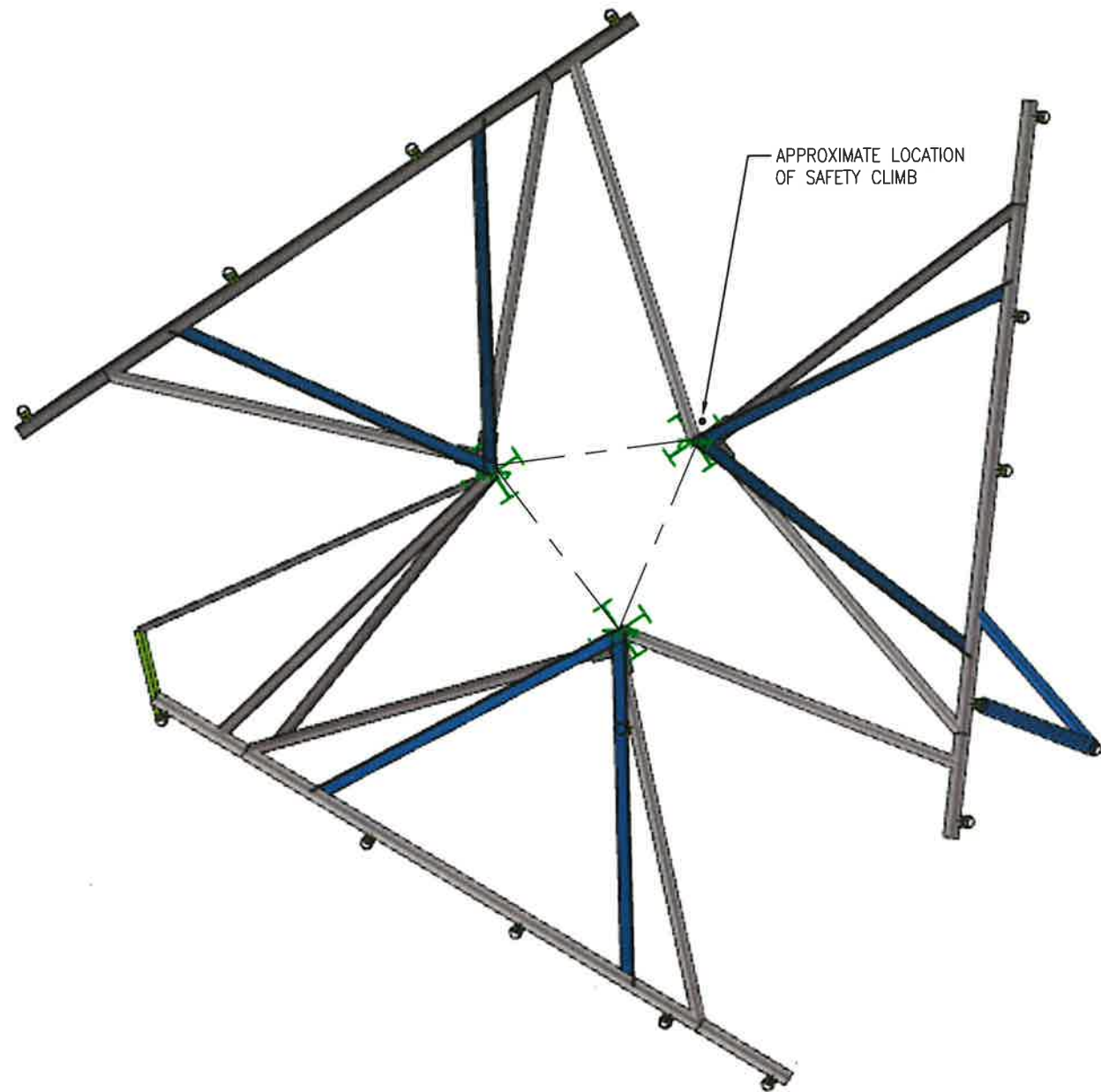
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SHEET TITLE:

GENERAL NOTES

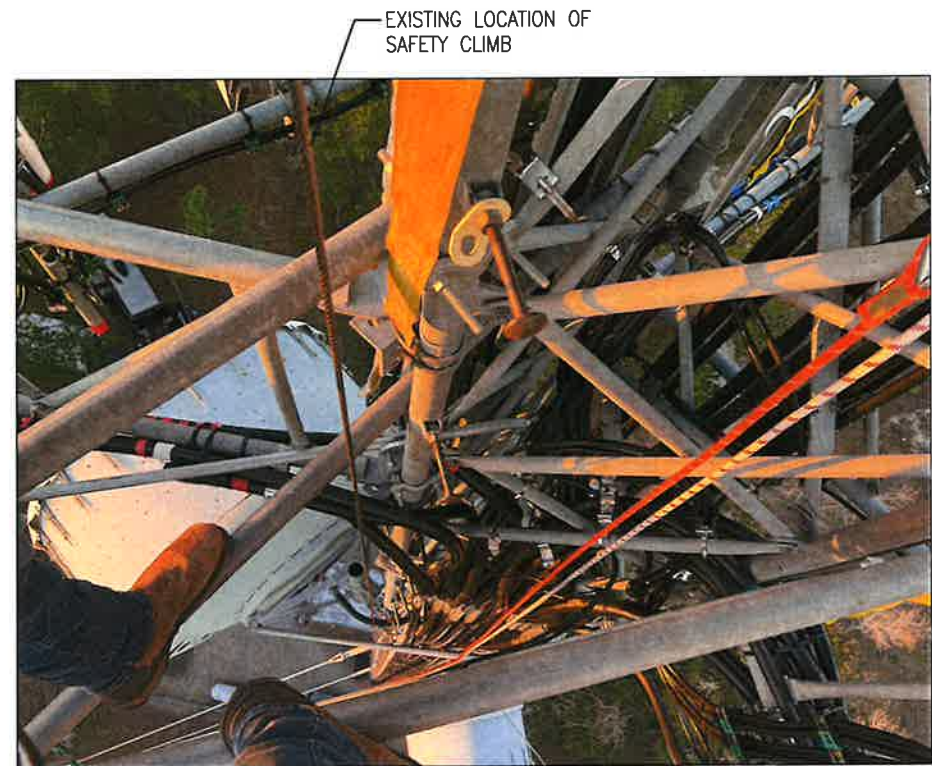
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SHEET NUMBER: SGN-1 REV #: 0



1 LOCATION OF SAFETY CLIMB
SCF-1

NOTE:
1. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB OR ANY SYSTEM INSTALLED ON THE STRUCTURE.

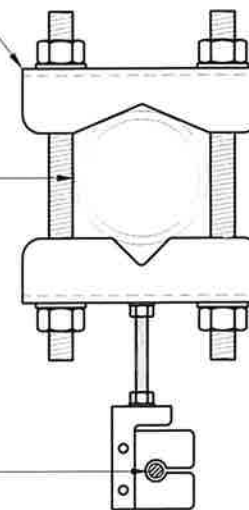


PICTURE OF SAFETY CLIMB

NEW VZSMART UNIVERSAL LEG CLAMP. SEE SHEETS SS-1 AND VZSMART-MSK9 FOR DETAILS

EXISTING TOWER LEG

EXISTING SAFETY CLIMB CABLE



2 DETAIL
SCF-1

TES
A CONGRUEX COMPANY
1320 GREENWAY DRIVE, SUITE 600
IRVING, TX 75038
PH: (972) 483-0607

verizon

TES JOB NO:
10311542

CUSTOMER SITE NO:
5000078561-VZW
CUSTOMER SITE NAME:
COMMERCE

682 SW COMMERCE DR.
LAKE CITY, FL 32025

JARRYD COLE TIBBETTS, P.E.
TOWER ENGINEERING SOLUTIONS
1320 GREENWAY DRIVE SUITE 600
IRVING, TX 75038



DRAWN BY: AW CHECKED BY: SKB/FL

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1	FIRST ISSUE	AW	07/24/25

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CLIMBING FACILITY
DETAILS

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IMPORTANT NOTE:
CONTRACTOR TO VERIFY AND CONFIRM THAT VERIZON'S OVERALL TIP TO TIP VERTICAL SPACE CONFIGURATION (EQUIPMENT AND STEEL COMBINED) DOES NOT EXCEED A MAXIMUM OF 10'-0". IF A SITE'S EXISTING, OR PROPOSED, CONFIGURATION EXCEEDS AND VIOLATES THE ALLOWED 10'-0" VERTICAL SPACE, CONTRACTOR MUST REACH OUT TO EOR IMMEDIATELY FOR A SOLUTION ON HOW TO CORRECT THE ISSUE BEFORE LEAVING THE SITE.



MOUNT MODIFICATION SCHEDULE		
SL. NO.	MOUNT MODIFICATION DESCRIPTION	REFERENCE SHEET NO.
1	INSTALL NEW VZWSMART V-BRACING KIT FOR SMALL LEGS	VZWSMART-SFK3-SL
2	INSTALL NEW VZWSMART UNIVERSAL LEG CLAMP	VZWSMART-MSK9, SCF-1

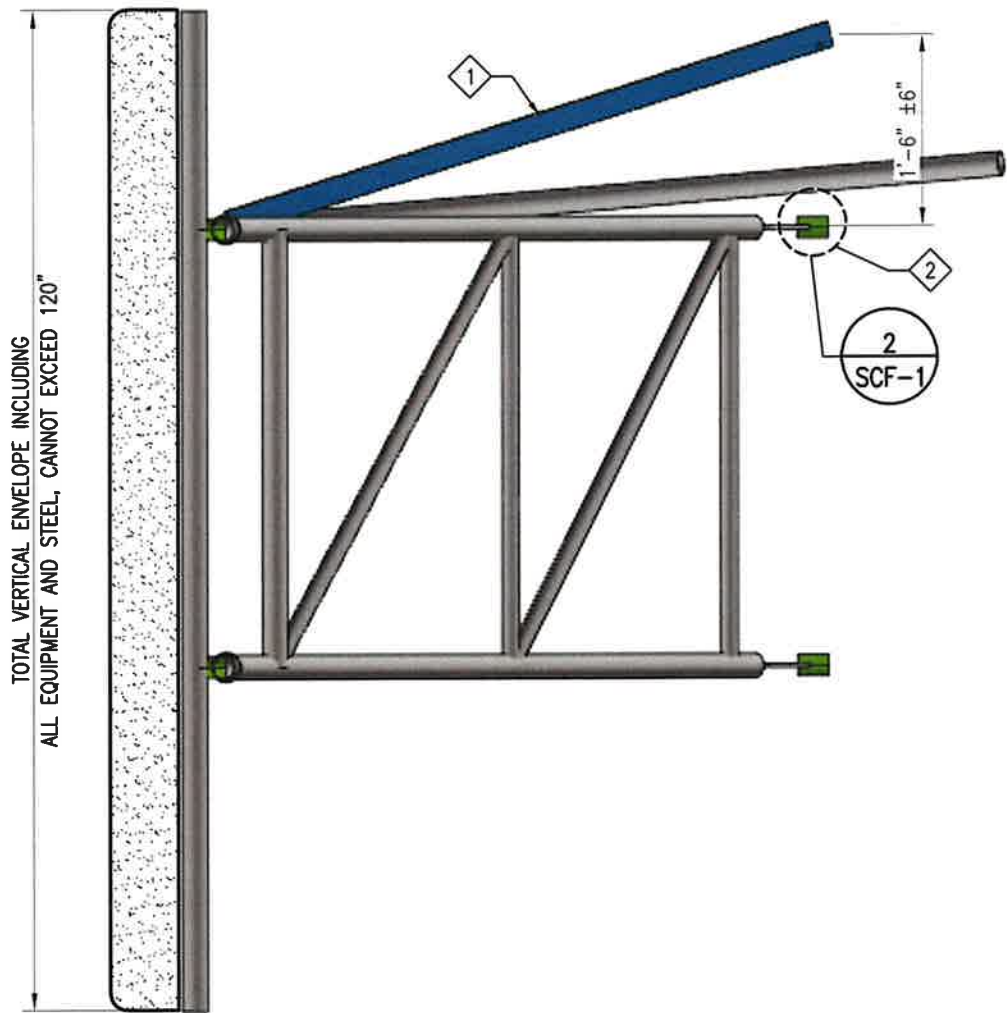
FIELD CUTTING AND FIELD DRILLING MAY BE NECESSARY TO ACHIEVE THE REQUIRED DIMENSIONS

FOR THREADED ROD CONNECTIONS, TRIM EXCESS THREADED ROD TO NO MORE THAN 3" PAST THE NUT AND COAT WITH ZINC KOTE GALVANIZING COMPOUND.

IF EXISTING TOWER IS PAINTED, CONTRACTOR TO VERIFY WITH TOWER OWNER IF NEW MODIFICATION MEMBERS ARE TO BE PAINTED TO MATCH EXISTING TOWER COLOR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEAN-UP, REMOVAL AND DISPOSAL OF EXCESS MATERIALS USED AND REMOVED FROM THE STRUCTURE AT THE COMPLETION OF THE PROJECT.

MEMBERS IN BLUE COLOR ARE NEW REINFORCEMENTS AND MEMBERS IN AQUA COLOR (IF SHOWN) ARE RELOCATED MEMBERS



TES

A CONGRUEX[®] COMPANY

1320 GREENWAY DRIVE, SUITE 600

IRVING, TX 75038

PH: (972) 483-0607

verizon

TES JOB NO:
10311542

CUSTOMER SITE NO:
5000078561-VZW

CUSTOMER SITE NAME:
COMMERCE

682 SW COMMERCE DR.
LAKE CITY, FL 32025

JARRYD COLE TIBBETTS, P.E.
TOWER ENGINEERING SOLUTIONS
1320 GREENWAY DRIVE SUITE 600
IRVING, TX 75038
FL ENG. NO. 85109

JARRYD COLE TIBBETTS
LICENSE
No 85109
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

7/24/25

DRAWN BY: AW

CHECKED BY: SKB/FL

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	AW	07/24/25

SHEET TITLE:

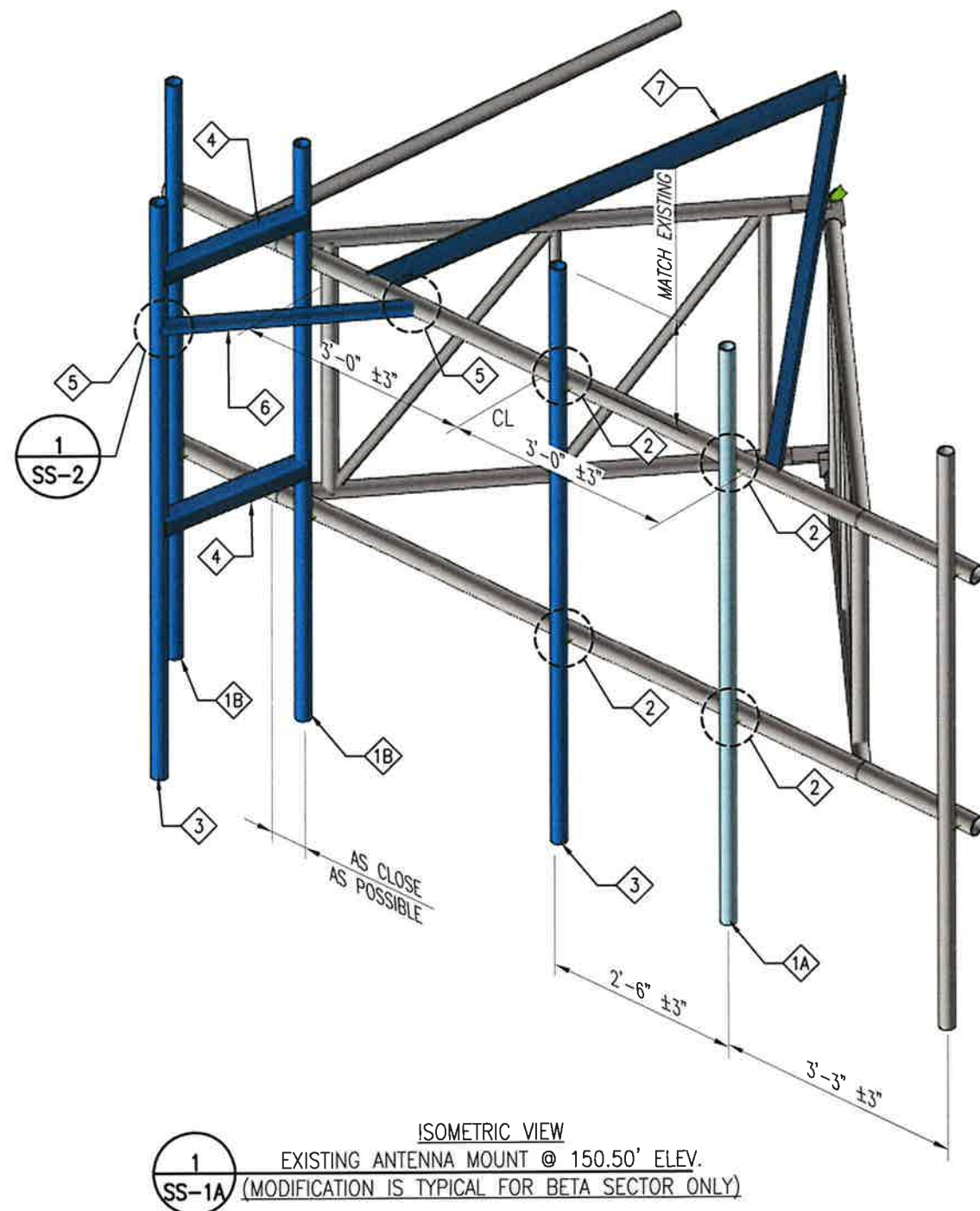
ANTENNA MOUNT
MODIFICATION DETAILS

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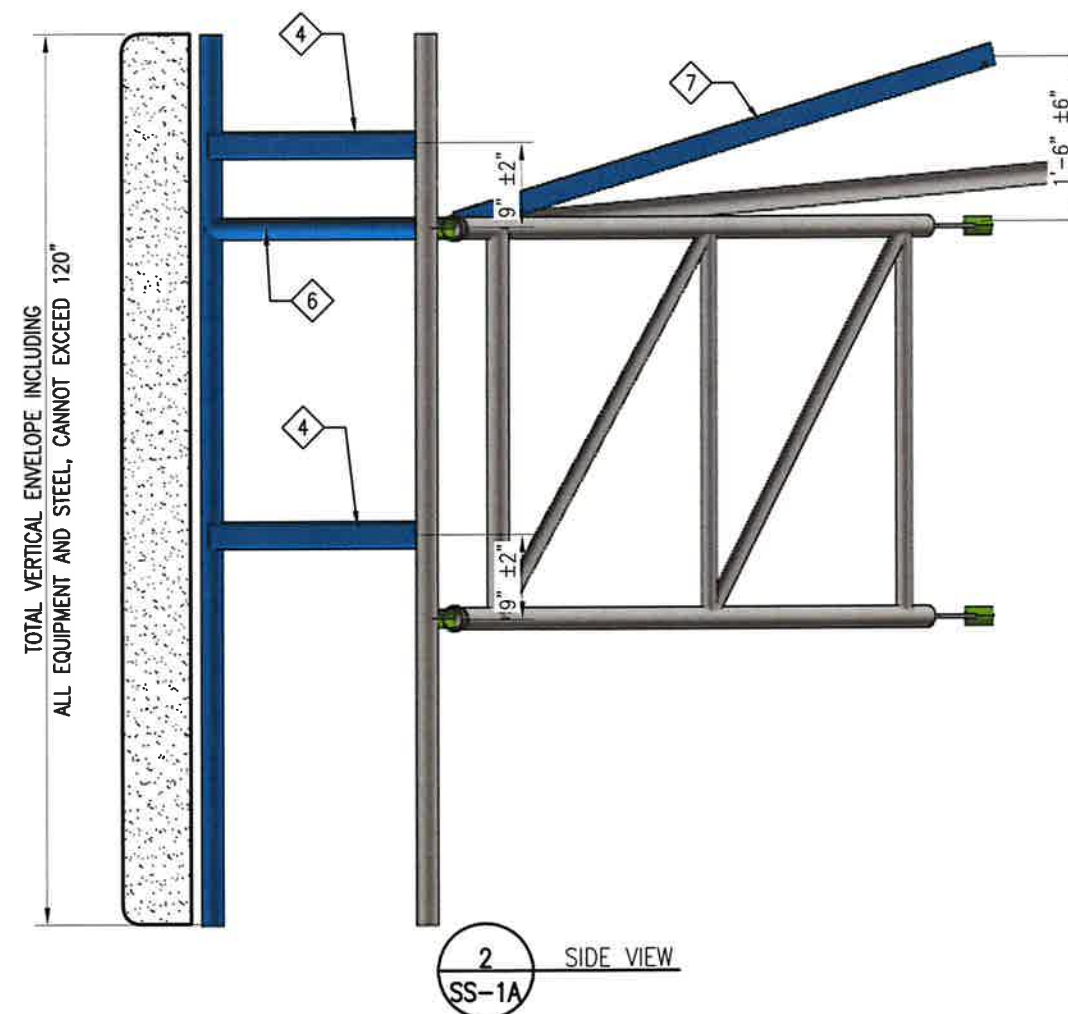
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CONTRACTOR TO VERIFY AND CONFIRM THAT VERIZON'S OVERALL TIP TO TIP VERTICAL SPACE CONFIGURATION (EQUIPMENT AND STEEL COMBINED) DOES NOT EXCEED A MAXIMUM OF 10'-0". IF A SITE'S EXISTING, OR PROPOSED, CONFIGURATION EXCEEDS AND VIOLATES THE ALLOWED 10'-0" VERTICAL SPACE, CONTRACTOR MUST REACH OUT TO EOR IMMEDIATELY FOR A SOLUTION ON HOW TO CORRECT THE ISSUE BEFORE LEAVING THE SITE.



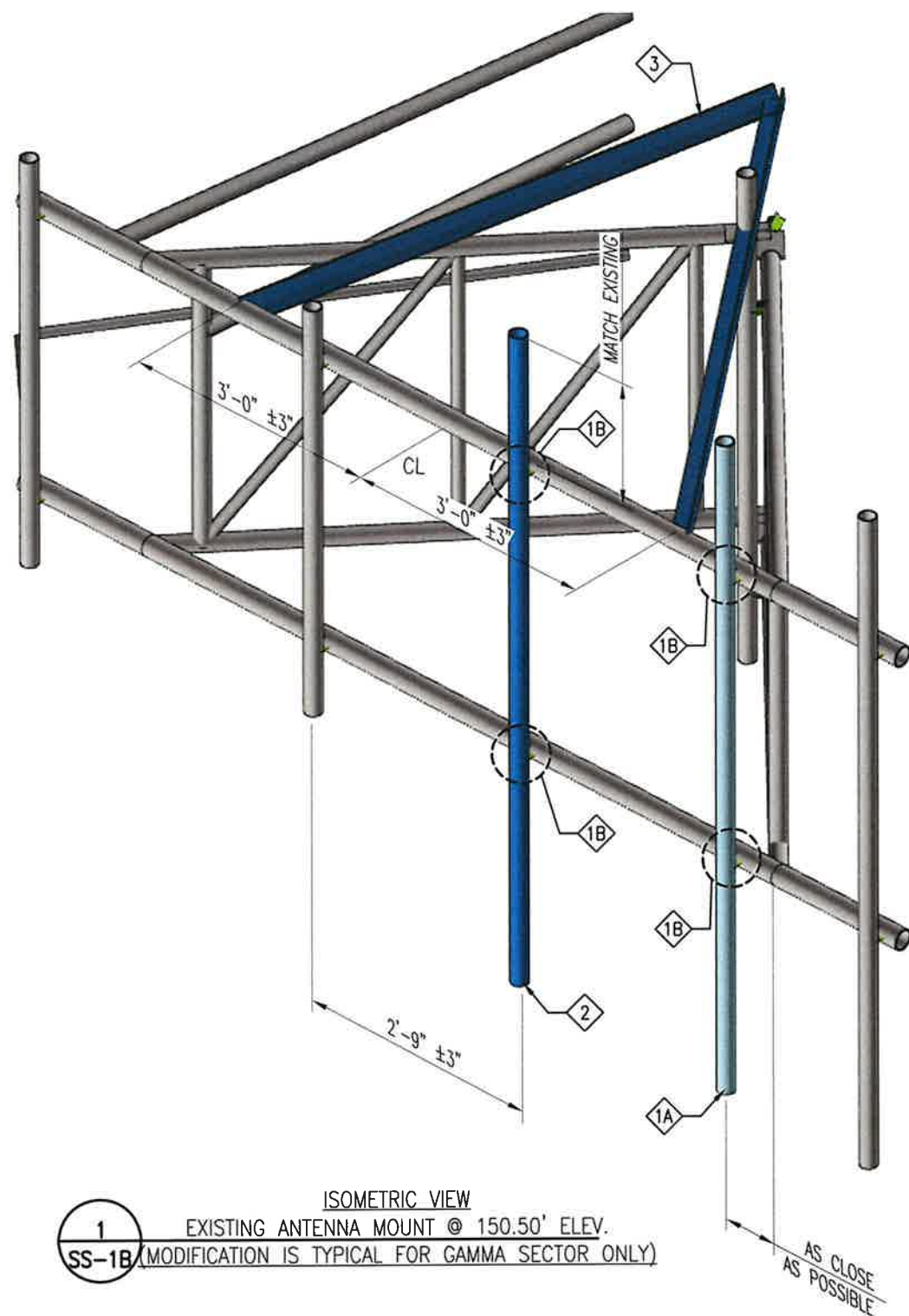
SL. NO.	MOUNT MODIFICATION DESCRIPTION	REFERENCE SHEET NO.
1	A. RELOCATE EXISTING ANTENNA MOUNT (AQUA COLOR) AS SHOWN B. REPLACE EXISTING ANTENNA MOUNT PIPE WITH NEW ANTENNA MOUNT PIPE 2 SCHE40 (2.375" OD X 0.154" THK) x 96" LONG	VZWSMART-PIPE
2	INSTALL NEW VZWSMART CROSSOVER PLATE KIT	VZWSMART-MSK1
3	INSTALL NEW ANTENNA MOUNT PIPE 2 SCHE40 (2.375" OD X 0.154" THK) x 96" LONG	VZWSMART-PIPE
4	INSTALL NEW SITE PRO 24" UNIVERSAL STANDOFF PIPE-TO-PIPE KIT	SOPTP24-U
5	INSTALL NEW VZWSMART UNIVERSAL ADJUSTABLE CROSSOVER	VZWSMART-MSK14
6	INSTALL NEW TIE BACK PIPE 2 SCHE40 (2.375" OD X 0.154" THK) x 72" LONG	VZWSMART-PIPE
7	INSTALL NEW VZWSMART V-BRACING KIT FOR SMALL LEGS	VZWSMART-SFK3-SL

MEMBERS IN BLUE COLOR ARE NEW REINFORCEMENTS AND MEMBERS IN AQUA COLOR (IF SHOWN) ARE RELOCATED MEMBERS



SS-1A	0
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CONTRACTOR TO VERIFY AND CONFIRM THAT VERIZON'S OVERALL TIP TO TIP VERTICAL SPACE CONFIGURATION (EQUIPMENT AND STEEL COMBINED) DOES NOT EXCEED A MAXIMUM OF 10'-0". IF A SITE'S EXISTING, OR PROPOSED, CONFIGURATION EXCEEDS AND VIOLATES THE ALLOWED 10'-0" VERTICAL SPACE, CONTRACTOR MUST REACH OUT TO EOR IMMEDIATELY FOR A SOLUTION ON HOW TO CORRECT THE ISSUE BEFORE LEAVING THE SITE.



ISOMETRIC VIEW

EXISTING ANTENNA MOUNT @ 150.50' ELEV.

(MODIFICATION IS TYPICAL FOR GAMMA SECTOR ONLY)

~~AS CLOSE
AS POSSIBLE~~

<u>MOUNT MODIFICATION SCHEDULE</u>		
SL. NO.	MOUNT MODIFICATION DESCRIPTION	REFERENCE SHEET NO.
1	A. RELOCATE EXISTING ANTENNA MOUNT (AQUA COLOR) AS SHOWN	VZWSMART-MSK1
	B. INSTALL NEW VZWSMART CROSSOVER PLATE KIT	
2	INSTALL NEW ANTENNA MOUNT PIPE 2 SCHE40 (2.375" OD X 0.154" THK) x 96" LONG	VZWSMART-PIPE
3	INSTALL NEW VZWSMART V-BRACING KIT FOR SMALL LEGS	VZWSMART-SFK3-SL

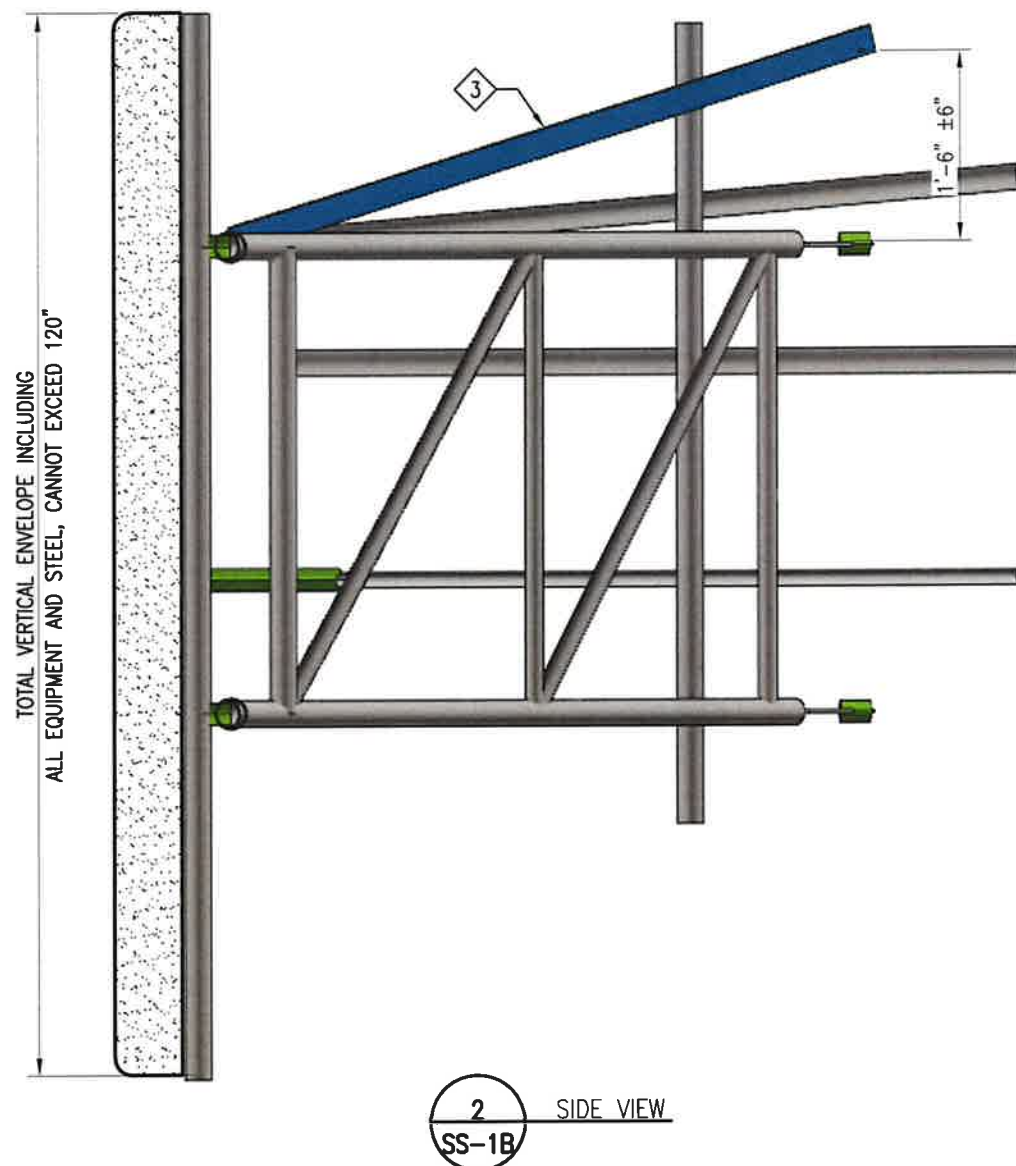
FIELD CUTTING AND FIELD DRILLING MAY BE NECESSARY TO ACHIEVE THE REQUIRED DIMENSIONS

FOR THREADED ROD CONNECTIONS, TRIM EXCESS THREADED ROD TO NO MORE THAN 3" PAST THE NUT AND COAT WITH ZINC KOTE GALVANIZING COMPOUND.

IF EXISTING TOWER IS PAINTED, CONTRACTOR TO VERIFY WITH TOWER OWNER IF NEW MODIFICATION MEMBERS ARE TO BE PAINTED TO MATCH EXISTING TOWER COLOR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEAN-UP, REMOVAL AND DISPOSAL OF EXCESS MATERIALS USED AND REMOVED FROM THE STRUCTURE AT THE COMPLETION OF THE PROJECT.

MEMBERS IN BLUE COLOR ARE NEW REINFORCEMENTS AND MEMBERS IN AQUA COLOR (IF SHOWN) ARE RELOCATED MEMBERS

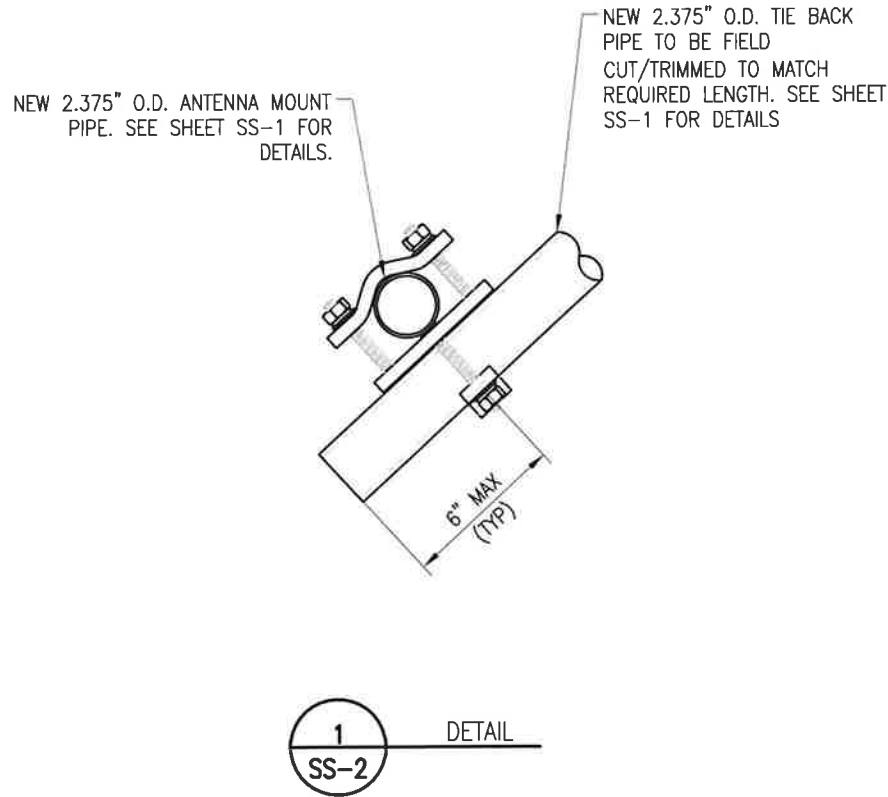


SIDE VIEW



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- NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.
 2. ALL HOLES ARE 11/16" DIA. U.N.O



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IRVING, TX 75038
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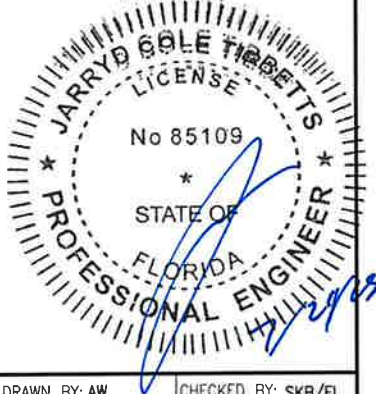
verizon

TES JOB NO:
10311542

CUSTOMER SITE NO:
5000078561-VZW
CUSTOMER SITE NAME:
COMMERCE

682 SW COMMERCE DR.
LAKE CITY, FL 32025

JARRYD COLE TIBBETTS, P.E.
TOWER ENGINEERING SOLUTIONS
1320 GREENWAY DRIVE SUITE 600
IRVING, TX 75038
FL ENG. NO. 85109



DRAWN BY: AW CHECKED BY: SKB/FL

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SHEET NUMBER: SS-2 REV #: 0

NOTE:
EXISTING RRUS/EQUIPMENT MAY BE RELOCATED
ALONG THE MEMBER TO ACCOMMODATE THE
INSTALLATION OF NEW MOUNT MODIFICATION

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1320 GREENWAY DRIVE, SUITE 600
IRVING, TX 75038
PH: (972) 483-0607

verizon

TES JOB NO:
10311542

CUSTOMER SITE NO:
5000078561-VZW
CUSTOMER SITE NAME:
COMMERCE

682 SW COMMERCE DR.
LAKE CITY, FL 32025

JARRYD COLE TIBBETTS, P.E.
TOWER ENGINEERING SOLUTIONS
1320 GREENWAY DRIVE SUITE 600
IRVING, TX 75038
FL ENG. NO. 85109



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REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	AW	07/24/25

SHEET TITLE:

MOUNT PHOTOS

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SHEET NUMBER: SS-3 REV #: 0



EXISTING ANTENNA MOUNT
@ 150.50' ELEV

PHOTO 1

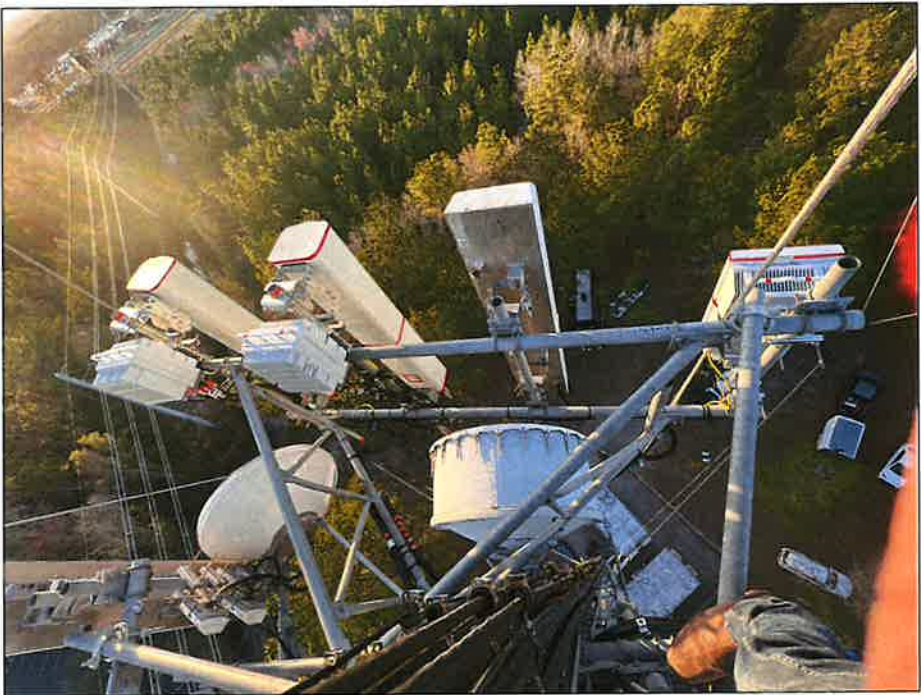


PHOTO 2



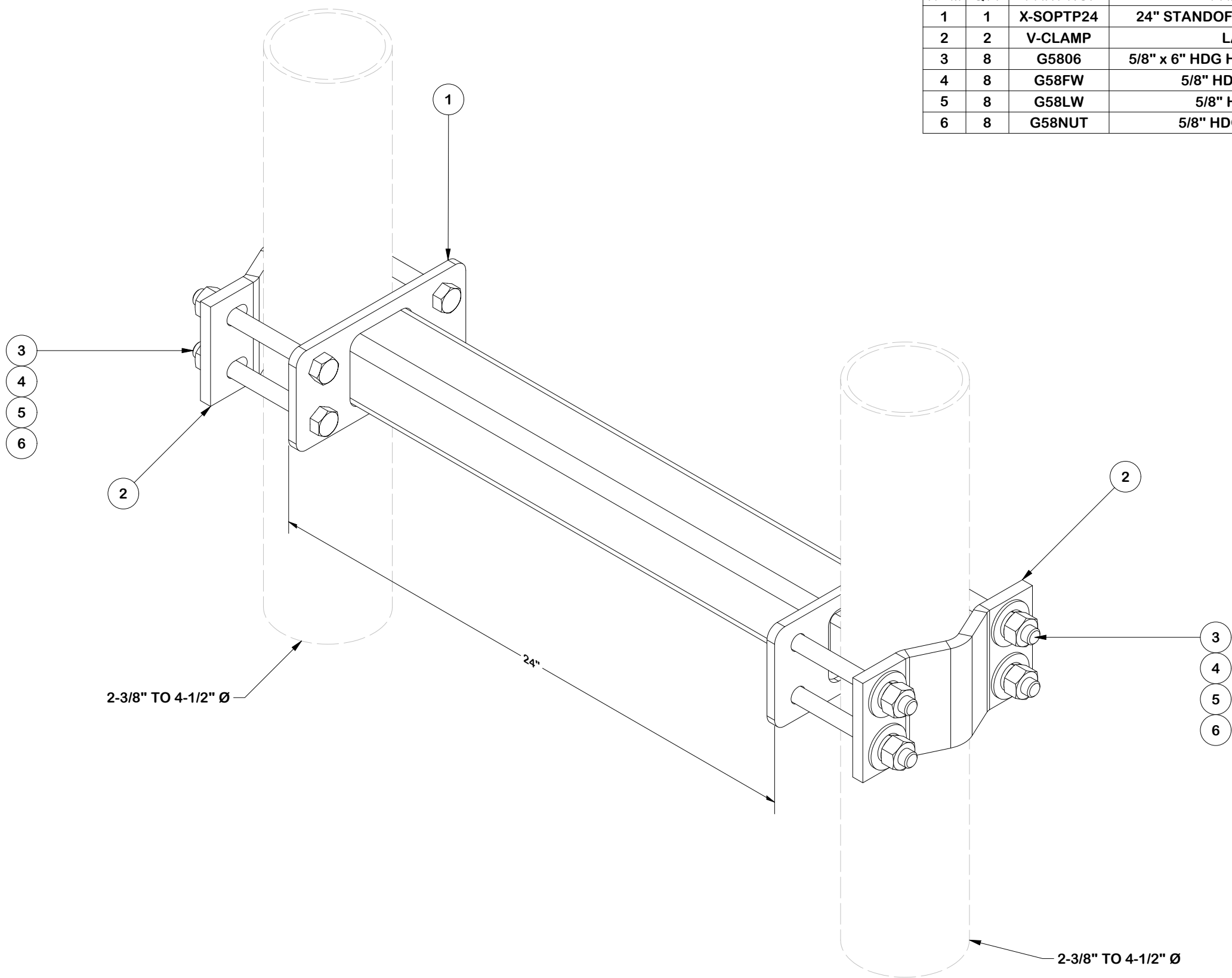
PHOTO 3



PHOTO 4

THE FOLLOWING DRAWINGS ARE INCLUDED FOR REFERENCE ONLY
PLEASE REFER TO THE INSTALLATION DRAWINGS FOR ACTUAL INSTALLATION DETAILS

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	X-SOFTP24	24" STANDOFF PIPE-TO-PIPE WELDMENT		23.99	23.99
2	2	V-CLAMP	LARGE V-CLAMP	8 21/32 in	5.55	11.09
3	8	G5806	5/8" x 6" HDG HEX BOLT GR5 FULL THREAD	6 in	0.62	4.94
4	8	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	0.56
5	8	G58LW	5/8" HDG LOCKWASHER		0.03	0.21
6	8	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	1.04
					TOTAL WT. #	44.35



FINISH:
HOT DIP GALVANIZED.

TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
SAWED, SHEARED AND GAS CUT EDGES ($\pm 0.030"$)
DRILLED AND GAS CUT HOLES ($\pm 0.030"$) - NO CONING OF HOLES
LASER CUT EDGES AND HOLES ($\pm 0.010"$) - NO CONING OF HOLES
BENDS AND ANGLES ARE $\pm 1/2$ DEGREE
ALL OTHER MACHINING ($\pm 0.030"$)
ALL OTHER ASSEMBLY ($\pm 0.060"$)

PROPRIETARY NOTE:
THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

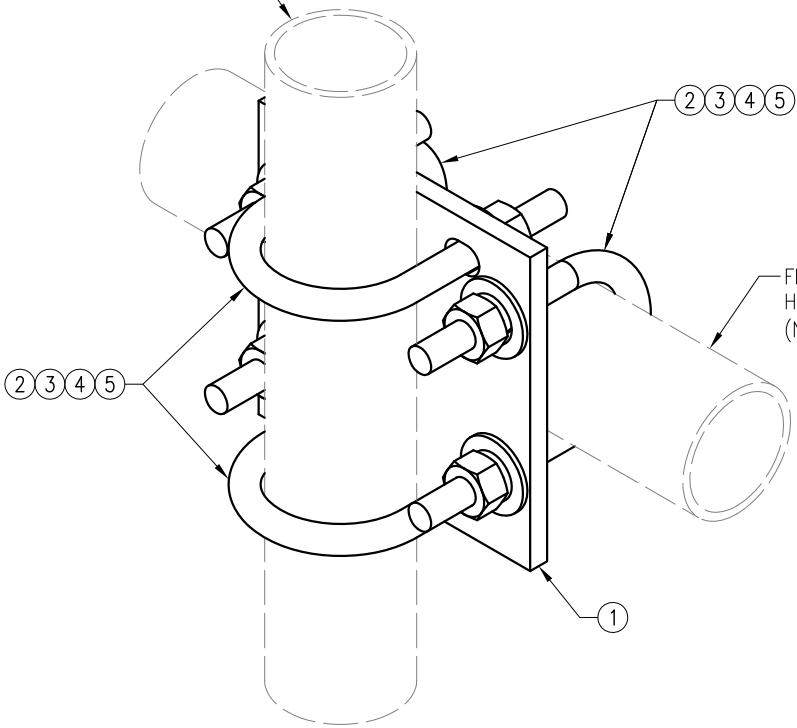
DESCRIPTION			
24" UNIVERSAL STANDOFF PIPE-TO-PIPE KIT			

CPD NO. NCS		DRAWN BY SDR 8/20/2024		ENG. APPROVAL 11/5/2024	
CLASS 87	SUB 02	DRAWING USAGE CUSTOMER		CHECKED BY JET 11/5/2024	

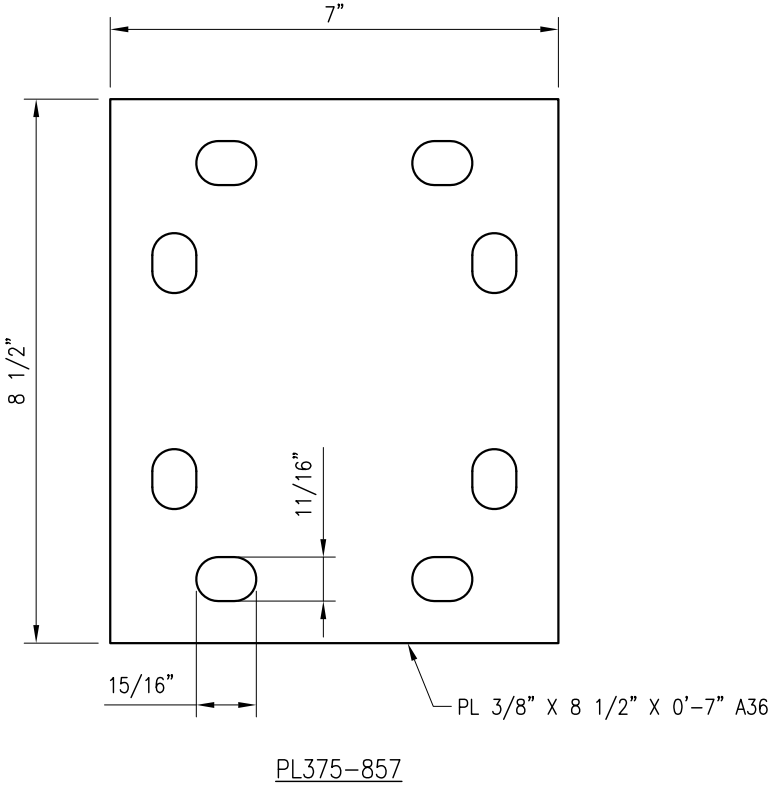
SITE PRO 1 A valmont COMPANY		Engineering Support Team: 1-888-753-7446	
PART NO. SOFTP24-U			
DWG. NO. SOFTP24-U			



FITS 2.375" O.D. AND 2.875" O.D.
VERTICAL PIPE.
(NOT INCLUDED IN THIS KIT)



FITS 2.375" O.D. AND 2.875" O.D.
HORIZONTAL PIPE.
(NOT INCLUDED IN THIS KIT)



NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-MSK1 (CROSSOVER PLATE)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-857	PL 3/8" X 8 1/2" X 0'-7" A36	MSK1-F1	6
2	4	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	8	LW-625	5/8" HDG LOCK WASHER	---	0
5	8	NUT-625	5/8" HDG HEX NUT	---	1
GALVANIZED WT					14

DRAWN BY: H.R

CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
01	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:

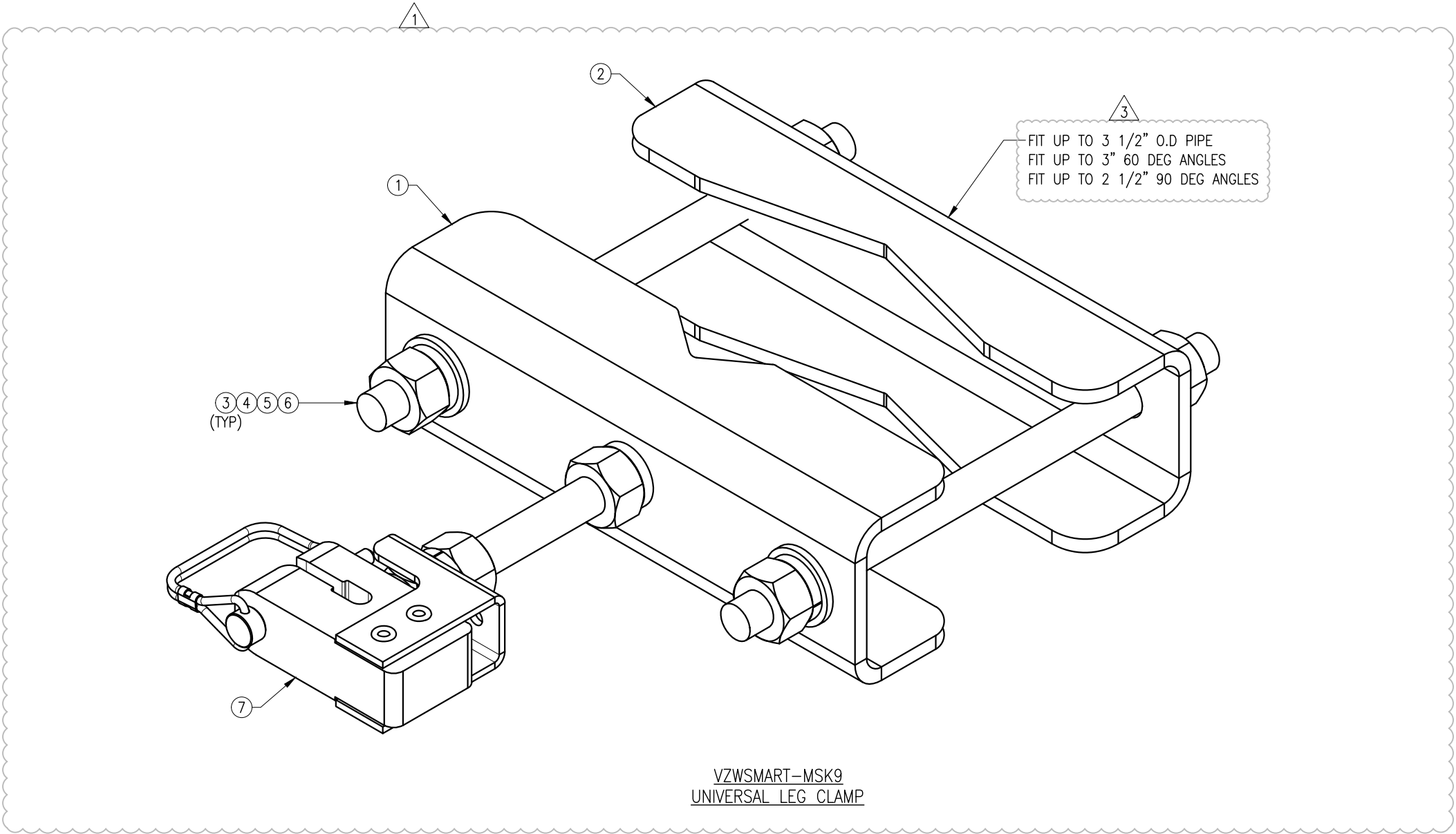
VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER:

VZWSMART-MSK1

REV #:

0

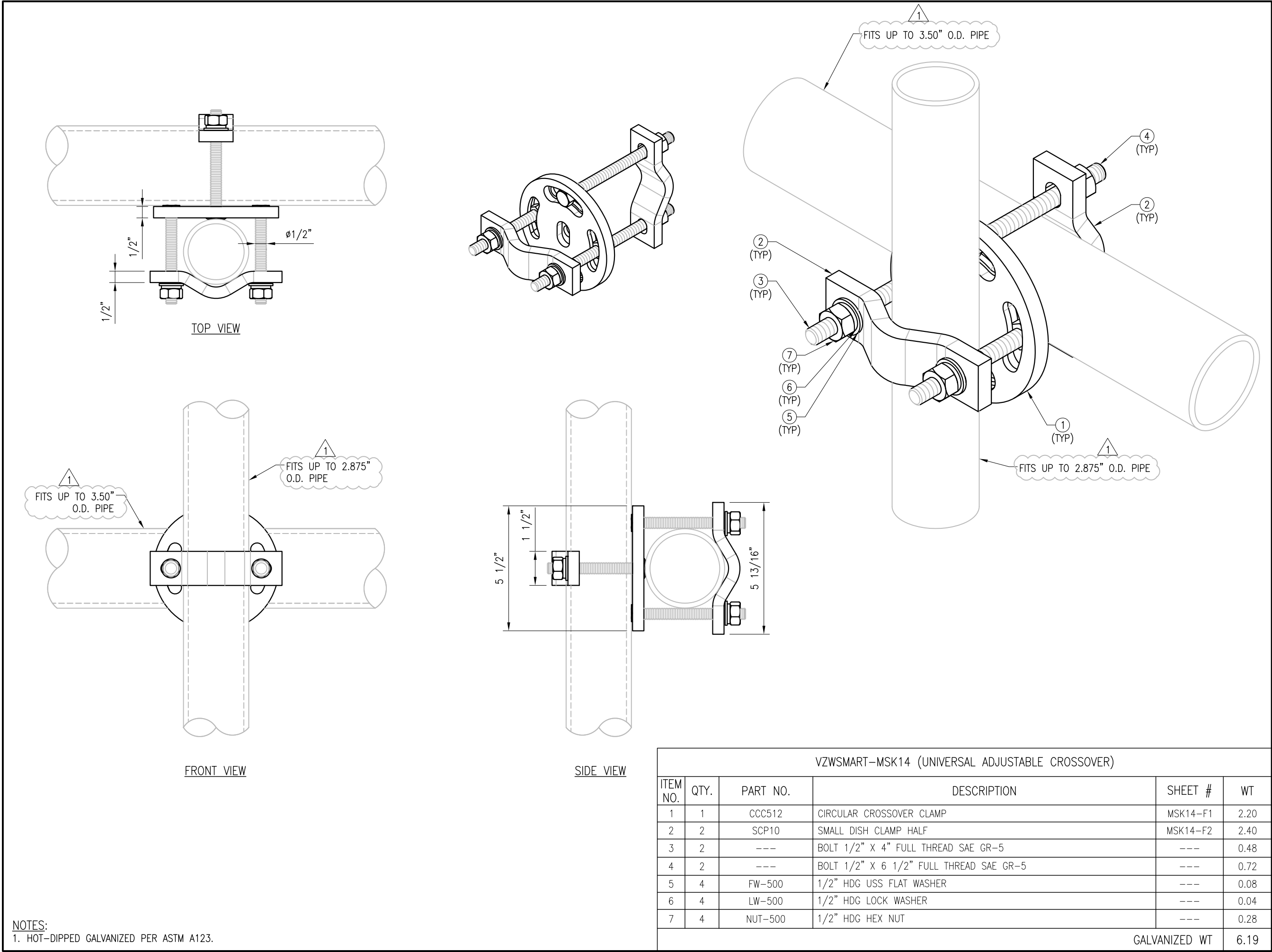


VZWSMART-MSK9
UNIVERSAL LEG CLAMP

VZWSMART-MSK9 (UNIVERSAL LEG CLAMP)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP51875-625	PL 3/16" X 5 3/16" X 6 1/4" A36 BENT PLATE	MSK9-F1	2
2	1	BP56875-625	PL 3/16" X 5 11/16" X 6 1/4" A36 BENT PLATE	MSK9-F2	2
3	2	---	THREADED ROD 5/8" DIA. X 10" $F_y = 36\text{KSI HDG}$	---	--
4	4	FW-625	5/8" HDG USS FLAT WASHER	---	0
5	4	LW-625	5/8" HDG LOCK WASHER	---	0
6	4	NUT-625	5/8" HDG HEX NUT	---	2
7	1	VZWSMART-CG-SM	VZWSMART WIRE ROPE GUIDE - STUD MOUNT	---	1
				GALVANIZED WT	7

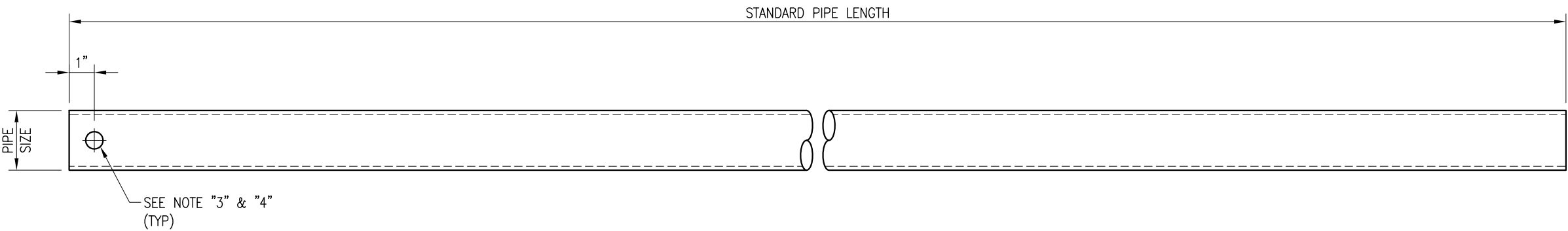
NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

DRAWN BY: FL		CHECKED BY: KW/BT	
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1	REVISED	BT	02/16/23
2	REVISED	SK	07/12/23
3	REVISED	RI	08/23/23
△			
SHEET TITLE:			
VZWSMART-MSK9 UNIVERSAL LEG CLAMP			
SHEET NUMBER:		REV #:	
VZWSMART-MSK9		3	



REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	JBM	06/13/22
2	REVISED	RI	08/23/23
3			
4			
5			

SHEET TITLE:
VZWSMART-MSK14
UNIVERSAL ADJUSTABLE
CROSSOVER



VZWSMART Standard Pipe		
VZWSMART Number	Size	Length
P40-238X048	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	48"
P40-238X072	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	72"
P40-238X096	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	96"
P40-238X120	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	120"
P40-238X126	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	126"
P40-238X150	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	150"
P40-238X174	PIPE 2 SCH40 (2.375" OD x 0.154" THK)	174"
P40-278X048	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	48"
P40-278X072	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	72"
P40-278X096	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	96"
P40-278X120	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	120"
P40-278X126	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	126"
P40-278X150	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	150"
P40-278X174	PIPE 2.5 SCH40 (2.875" OD x 0.203" THK)	174"
P40-312X048	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	48"
P40-312X060	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	72"
P40-312X126	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	126"
P40-312X150	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	150"
P40-312X174	PIPE 3 SCH40 (3.5" OD x 0.216" THK)	174"

NOTE:
APPROVED SMART KIT VENDORS ARE ALLOWED TO SUBSTITUTE AT THEIR DISCRETION
PIPES LISTED ON THIS PAGE FOR CUSTOM LENGTH COMPONENTS OF MATCHING SIZE.
SUBSTITUTIONS SHALL MEET THE ORIGINAL STRUCTURAL INTENT.

- NOTES:
1. ALL PIPE GRADE A53-B OR BETTER.
 2. HOT-DIPPED GALVANIZED PER ASTM A123.
 3. ALL HOLES ARE 11/16" DIA. U.N.O
 4. HOLES MAY OR MAY NOT BE PRESENT, DEPEND UPON MANUFACTURE DISCRETION.
 5. ALL FIELD CUT AND DRILLED SURFACES SHALL BE REPAIRED WITH A MINIMUM OF TWO COATS OF ZINGA OR ZINC COTE PER ASTM A780 AND MANUFACTURER’S RECOMMENDATIONS.

VzW
SMART Tool[©]
Vendor



DRAWN BY: BT CHECKED BY: HMA/KW

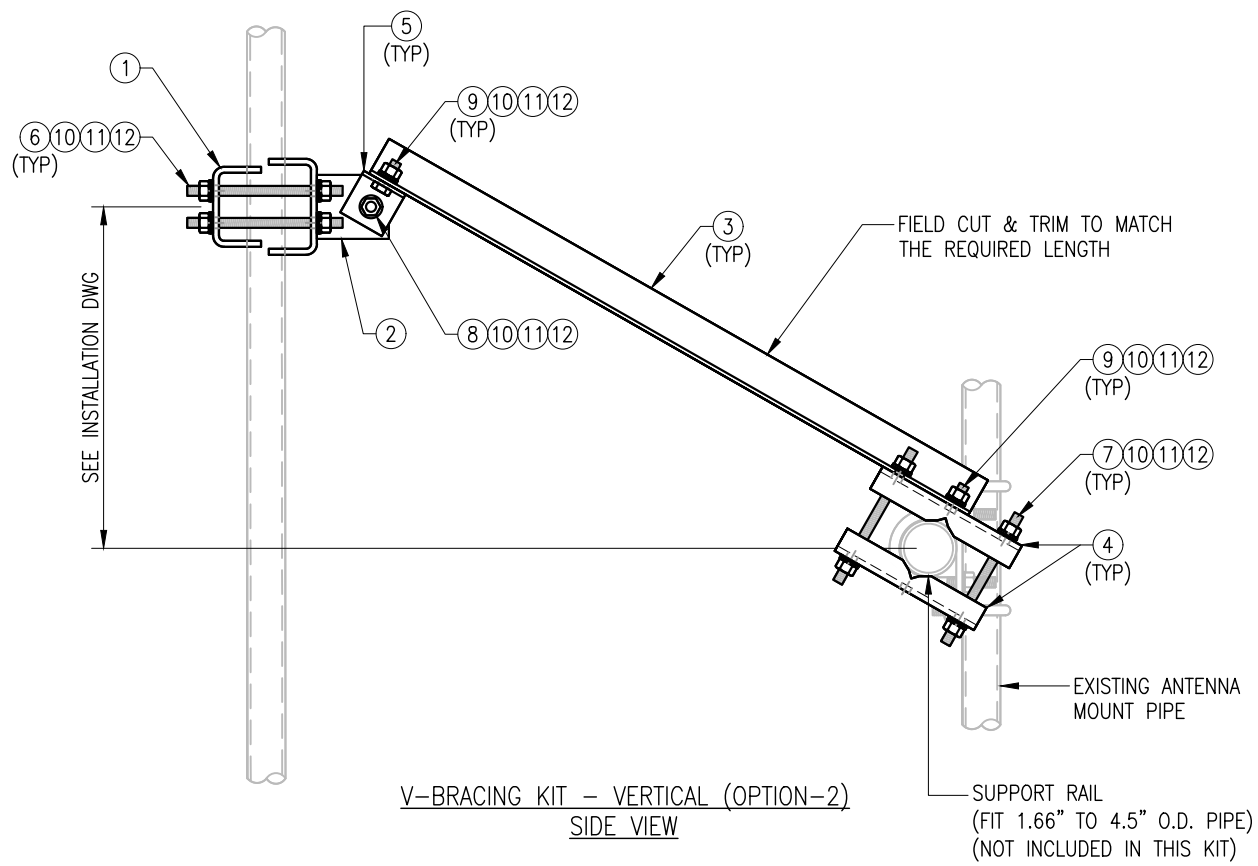
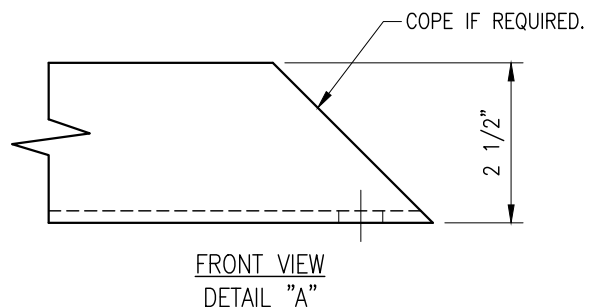
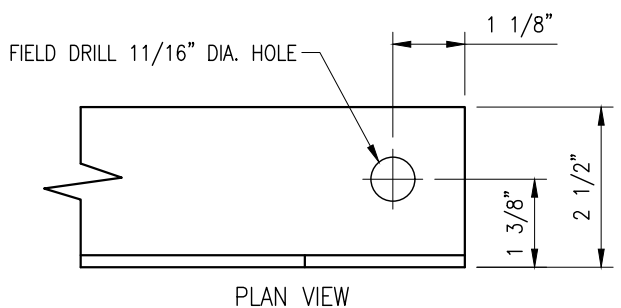
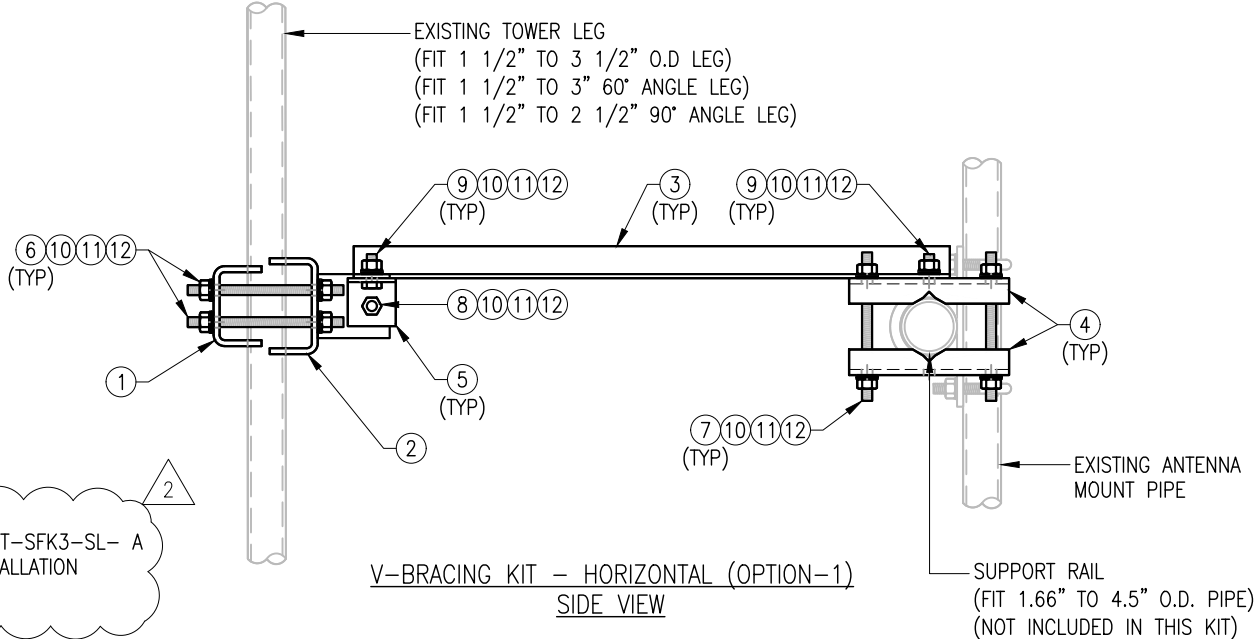
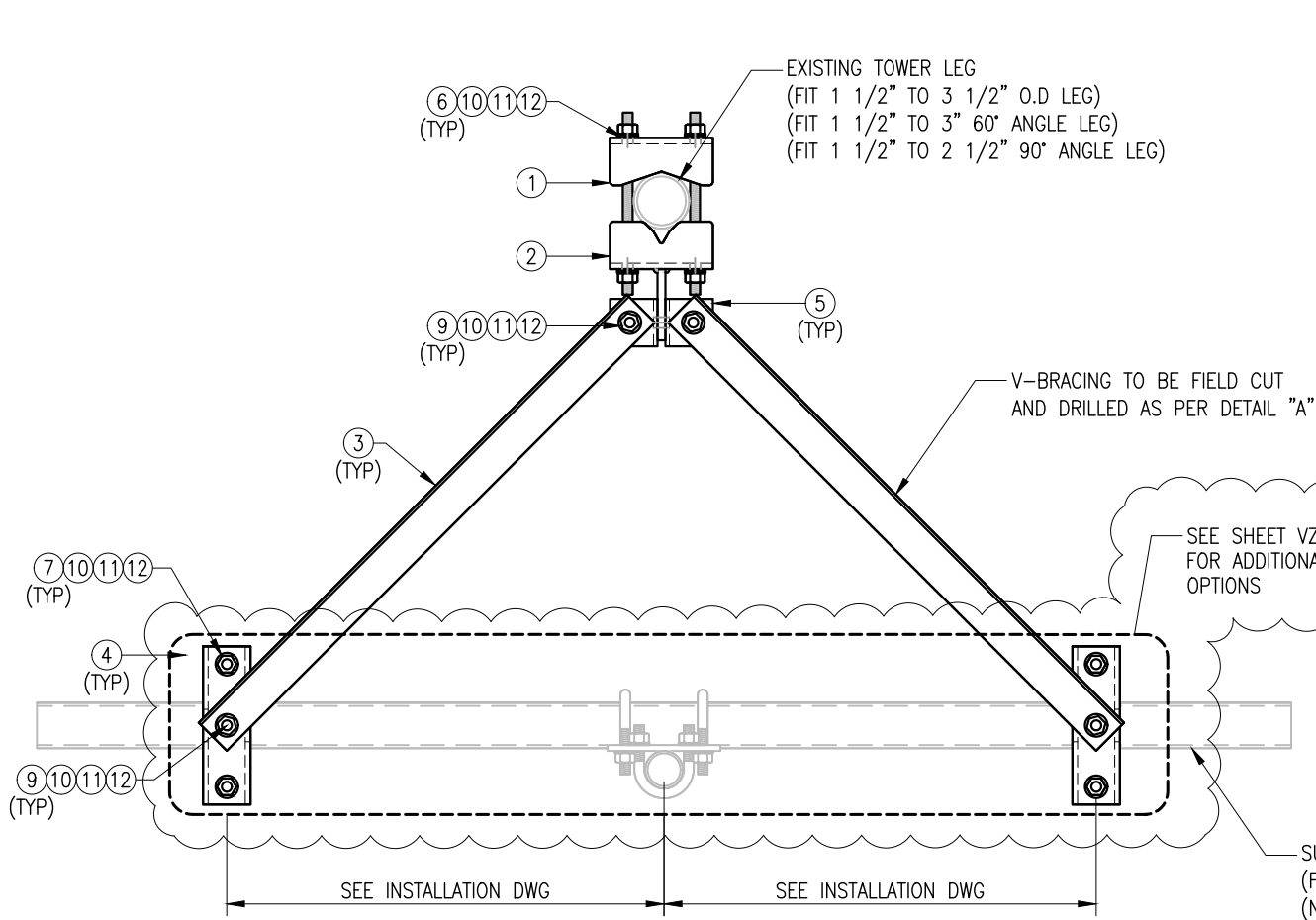
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△ 1	FIRST ISSUE	BT	08/04/21
△			
△			
△			
△			

SHEET TITLE:

VZWSMART
STANDARD PIPE

SHEET NUMBER: REV #:

VZWSMART-PIPE 0



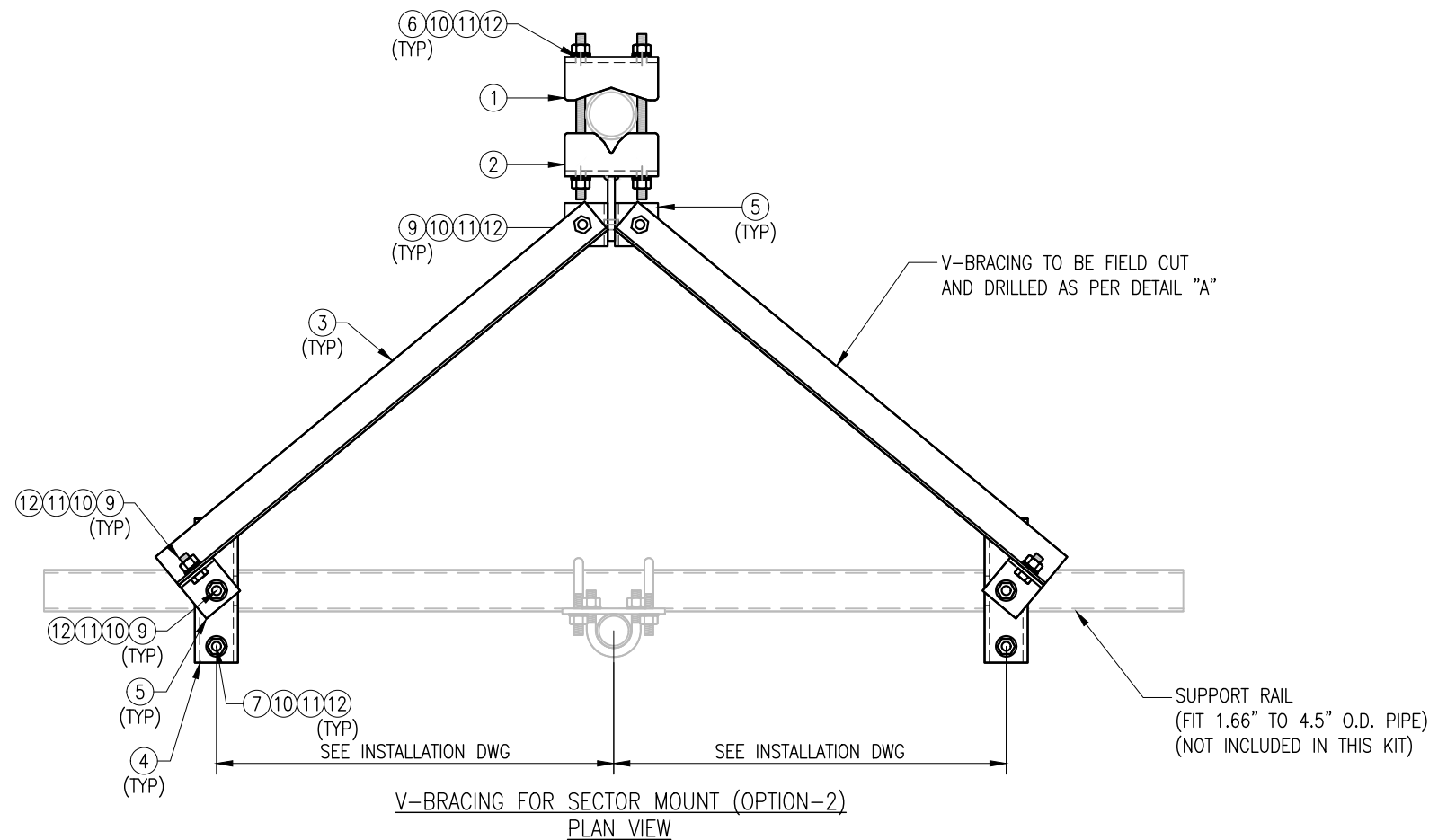
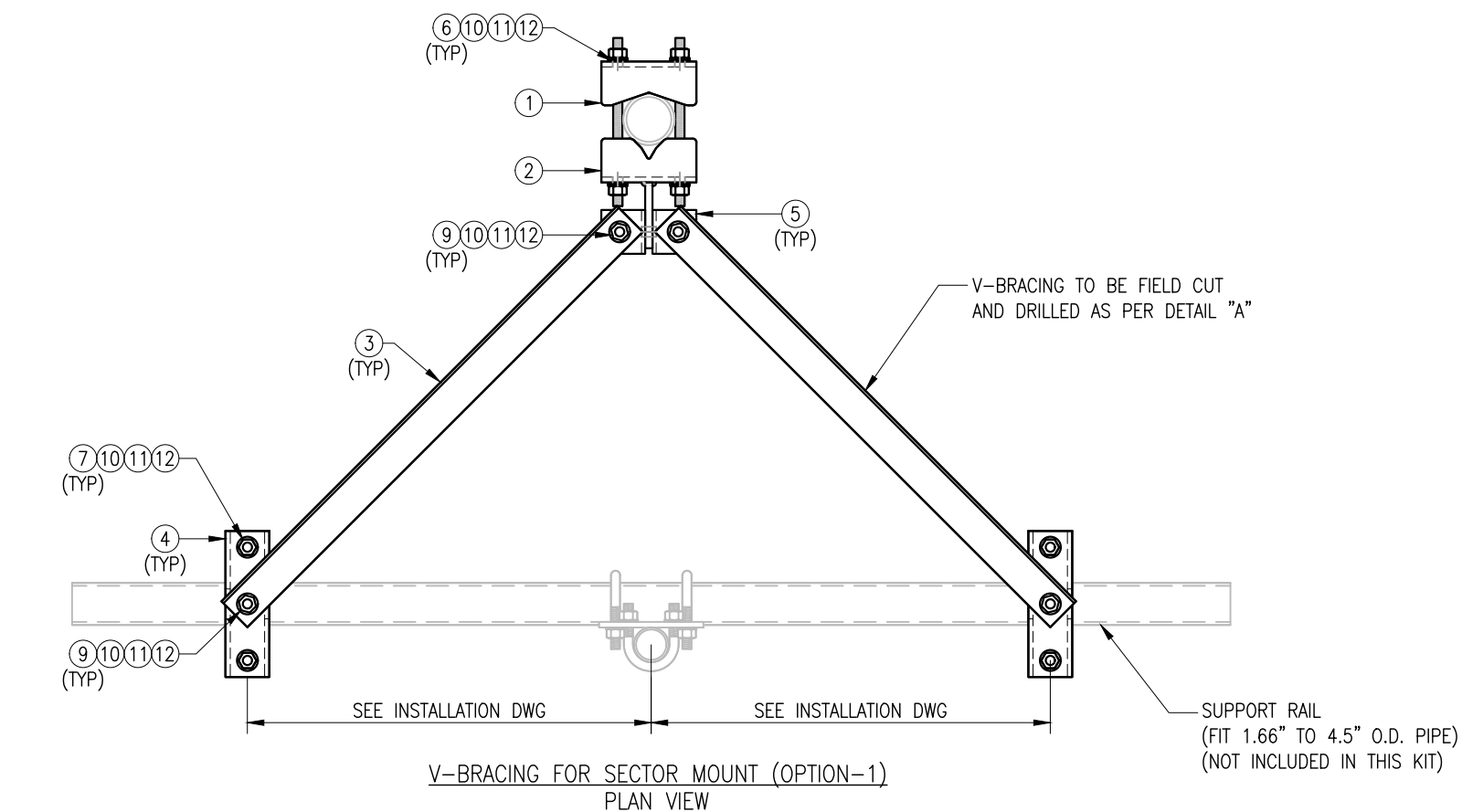
VZWSMART-SFK3-SL (V-BRACING KIT FOR SMALL LEGS)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP9625-65	PL 3/8" X 9 5/8" X 6 1/2" A36 BENT PLATE	VBSM-SL-F1	12
2	1	BRKW-VBSM-SL	WELDMENT BRACKET	VBSM-SL-F3	11
3	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	VBSM-F5	67
4	4	BP6875-10	PL 1/4" X 6 7/8" X 10" A36 BENT PLATE	VBSM-F2	20
5	4	AL-333	L 3" X 3" X 1/4" X 3" A36	VBSM-F2	5
6	4	---	THREADED ROD 5/8" DIA. X 1'-0" Fy=36 KSI HDG	---	---
7	4	---	THREADED ROD 5/8" DIA. X 10" Fy=36 KSI HDG	---	---
8	1	---	BOLT 5/8" X 2 1/4" A325	---	---
9	6	---	BOLT 5/8" X 1 3/4" A325	---	---
10	23	FW-625	5/8" HDG USS FLAT WASHER	---	2
11	23	LW-625	5/8" HDG LOCK WASHER	---	0
12	23	NUT-625	5/8" HDG HEX NUT	---	2
GALVANIZED WT					119

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

DRAWN BY: BT CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	04/10/21
1	REVISED	AW	08/23/23
2	REVISED	JM	11/30/23

SHEET TITLE:	
VZWSMART-SFK3-SL V-BRACING KIT FOR SMALL LEGS	
SHEET NUMBER:	REV #:
VZWSMART-SFK3-SL	2



NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

DRAWN BY: BT CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	04/10/21
1	REVISED	AW	08/23/23
2	REVISED	JM	11/30/23

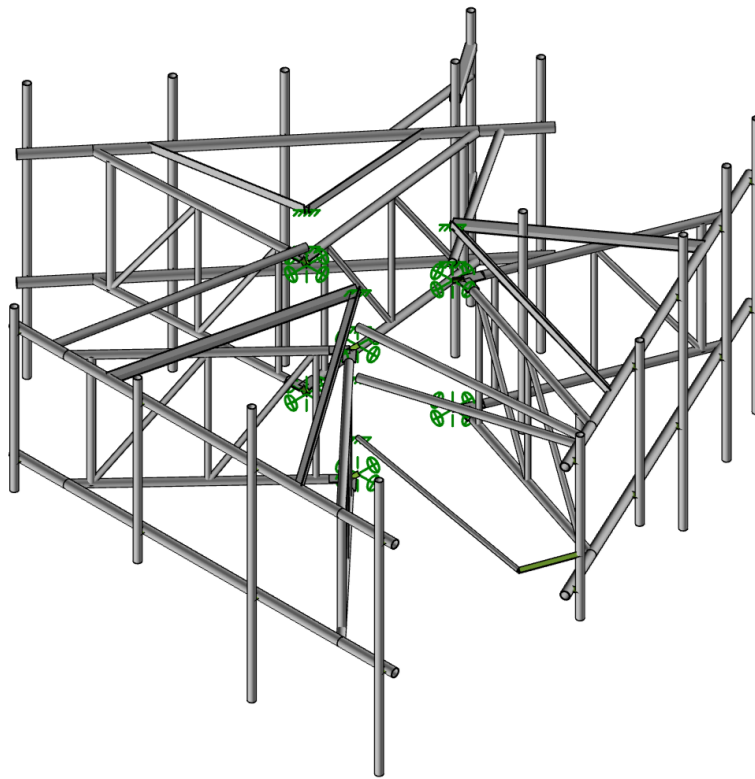
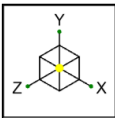
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ADDITIONAL
INSTALLATION OPTIONS

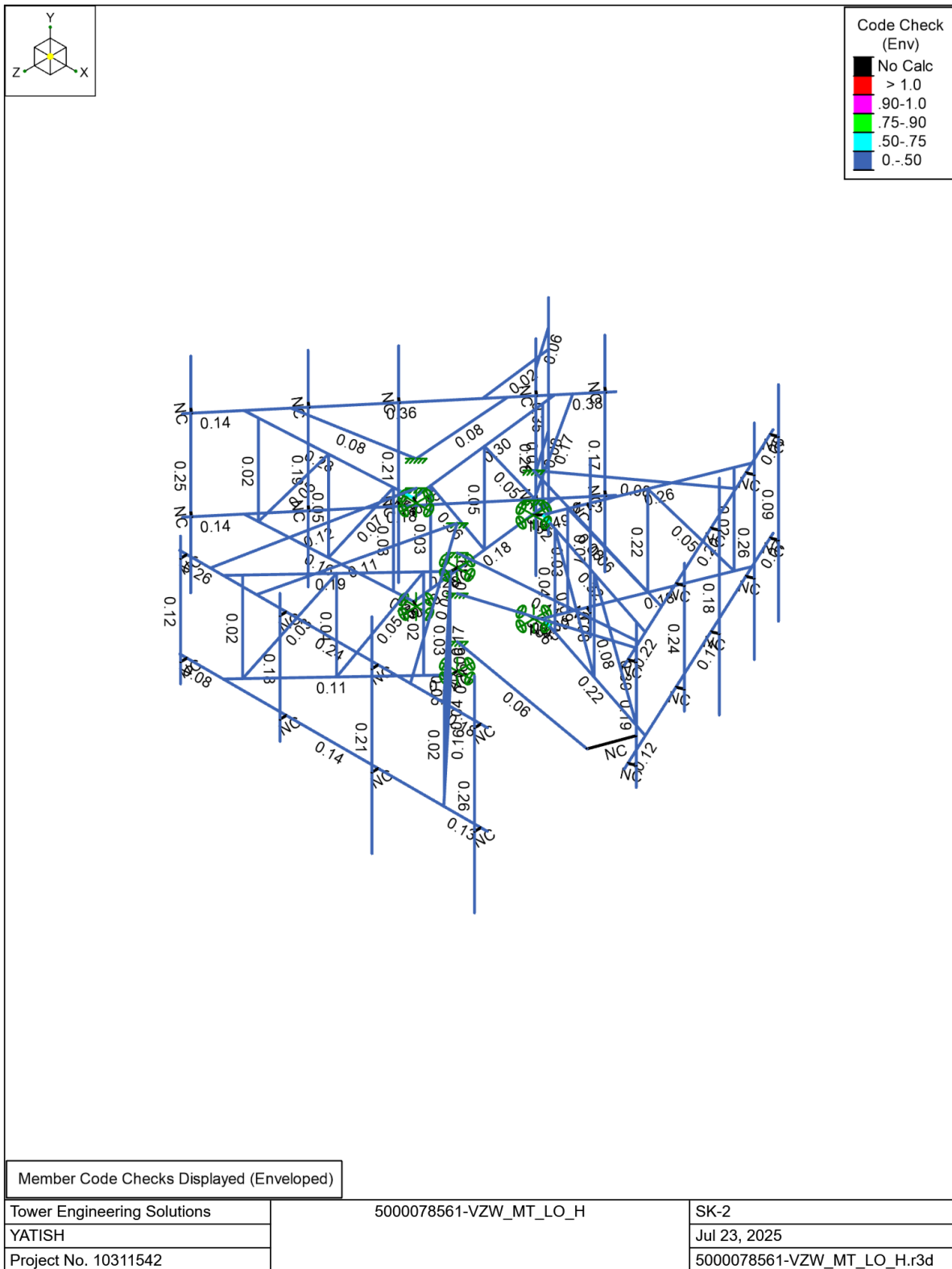
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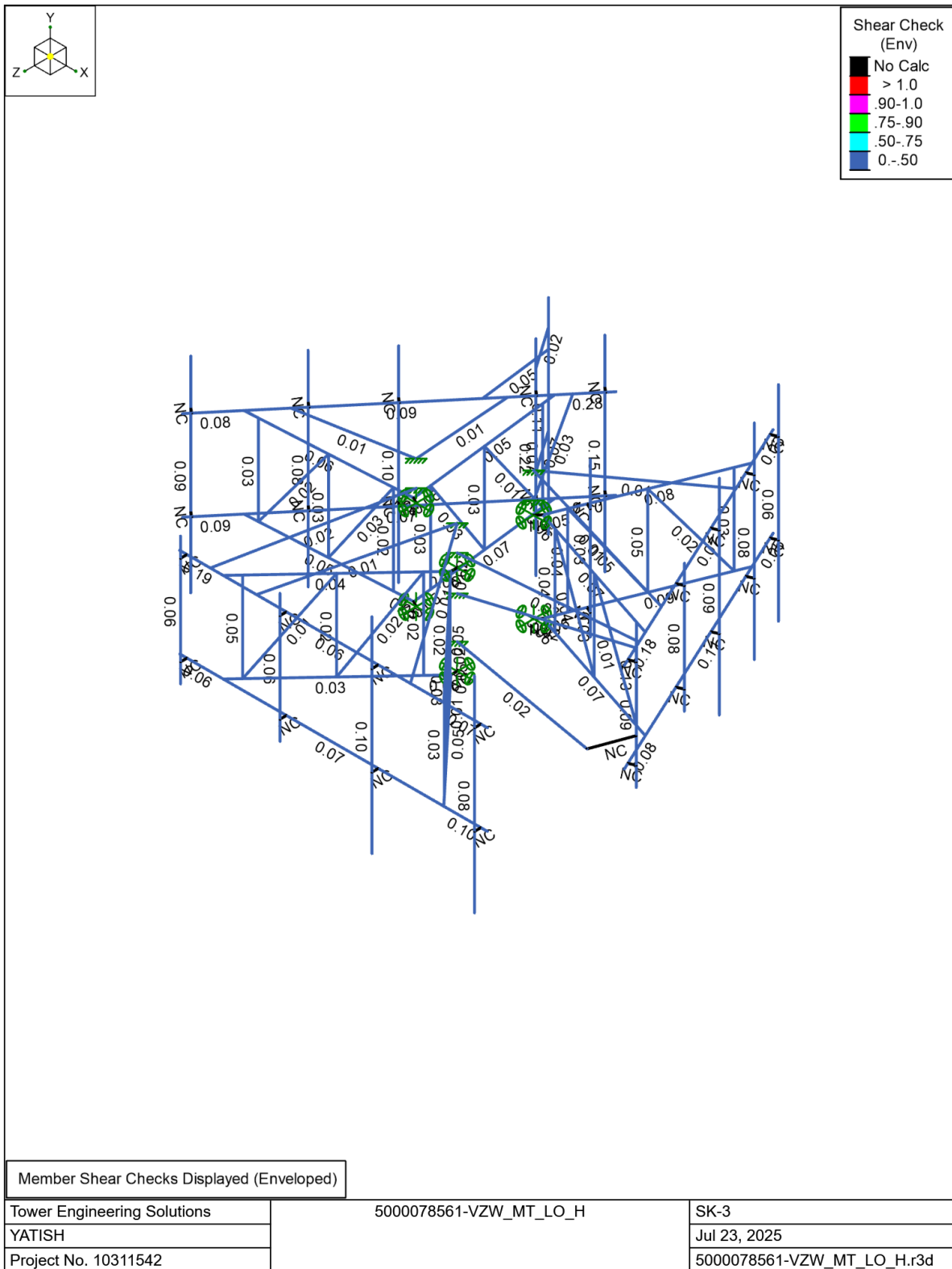
VZWSMART-SFK3-SL-A 2

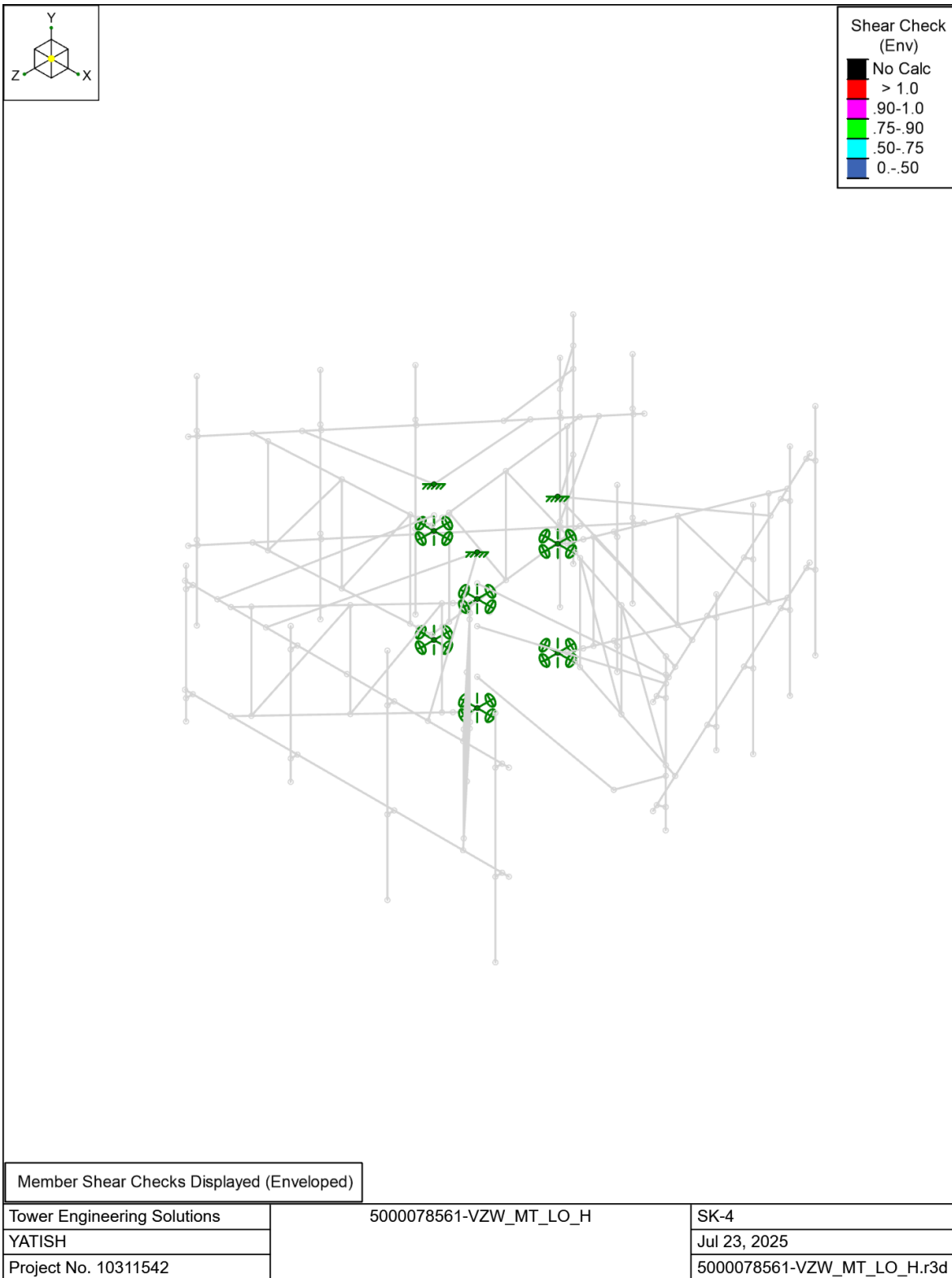




Tower Engineering Solutions	5000078561-VZW_MT_LO_H	SK-1
YATISH		Jul 23, 2025
Project No. 10311542		5000078561-VZW_MT_LO_H.r3d







Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed
1	Antenna D	None				93	
2	Antenna Di	None					
3	Antenna Wo (0 Deg)	None				93	
4	Antenna Wo (30 Deg)	None				93	
5	Antenna Wo (60 Deg)	None				93	
6	Antenna Wo (90 Deg)	None				93	
7	Antenna Wo (120 Deg)	None				93	
8	Antenna Wo (150 Deg)	None				93	
9	Antenna Wo (180 Deg)	None				93	
10	Antenna Wo (210 Deg)	None				93	
11	Antenna Wo (240 Deg)	None				93	
12	Antenna Wo (270 Deg)	None				93	
13	Antenna Wo (300 Deg)	None				93	
14	Antenna Wo (330 Deg)	None				93	
15	Antenna Wi (0 Deg)	None					
16	Antenna Wi (30 Deg)	None					
17	Antenna Wi (60 Deg)	None					
18	Antenna Wi (90 Deg)	None					
19	Antenna Wi (120 Deg)	None					
20	Antenna Wi (150 Deg)	None					
21	Antenna Wi (180 Deg)	None					
22	Antenna Wi (210 Deg)	None					
23	Antenna Wi (240 Deg)	None					
24	Antenna Wi (270 Deg)	None					
25	Antenna Wi (300 Deg)	None					
26	Antenna Wi (330 Deg)	None					
27	Antenna Wm (0 Deg)	None				93	
28	Antenna Wm (30 Deg)	None				93	
29	Antenna Wm (60 Deg)	None				93	
30	Antenna Wm (90 Deg)	None				93	
31	Antenna Wm (120 Deg)	None				93	
32	Antenna Wm (150 Deg)	None				93	
33	Antenna Wm (180 Deg)	None				93	
34	Antenna Wm (210 Deg)	None				93	
35	Antenna Wm (240 Deg)	None				93	
36	Antenna Wm (270 Deg)	None				93	
37	Antenna Wm (300 Deg)	None				93	
38	Antenna Wm (330 Deg)	None				93	
39	Structure D	None		-1			
40	Structure Di	None					
41	Structure Wo (0 Deg)	None					204
42	Structure Wo (30 Deg)	None					204
43	Structure Wo (60 Deg)	None					204
44	Structure Wo (90 Deg)	None					204
45	Structure Wo (120 Deg)	None					204
46	Structure Wo (150 Deg)	None					204
47	Structure Wo (180 Deg)	None					204
48	Structure Wo (210 Deg)	None					204
49	Structure Wo (240 Deg)	None					204
50	Structure Wo (270 Deg)	None					204
51	Structure Wo (300 Deg)	None					204
52	Structure Wo (330 Deg)	None					204
53	Structure Wi (0 Deg)	None					204
54	Structure Wi (30 Deg)	None					204
55	Structure Wi (60 Deg)	None					204

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed
56	Structure Wi (90 Deg)	None					204
57	Structure Wi (120 Deg)	None					204
58	Structure Wi (150 Deg)	None					204
59	Structure Wi (180 Deg)	None					204
60	Structure Wi (210 Deg)	None					204
61	Structure Wi (240 Deg)	None					204
62	Structure Wi (270 Deg)	None					204
63	Structure Wi (300 Deg)	None					204
64	Structure Wi (330 Deg)	None					204
65	Structure Wm (0 Deg)	None					204
66	Structure Wm (30 Deg)	None					204
67	Structure Wm (60 Deg)	None					204
68	Structure Wm (90 Deg)	None					204
69	Structure Wm (120 Deg)	None					204
70	Structure Wm (150 Deg)	None					204
71	Structure Wm (180 Deg)	None					204
72	Structure Wm (210 Deg)	None					204
73	Structure Wm (240 Deg)	None					204
74	Structure Wm (270 Deg)	None					204
75	Structure Wm (300 Deg)	None					204
76	Structure Wm (330 Deg)	None					204
77	Lm1	None				1	
78	Lm2	None				1	
79	Lv1	None				1	
80	Lv2	None				1	
81	Antenna Ev	None				93	
82	Antenna Eh (0 Deg)	None				62	
83	Antenna Eh (90 Deg)	None				62	
84	Structure Ev	ELY		-0.028			
85	Structure Eh (0 Deg)	ELZ			-0.069		
86	Structure Eh (90 Deg)	ELX	0.069				

Load Combinations

	Description	Solve	P-Delta	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor	BLC Factor
1	1.2D+1.0Wo (0 Deg)	Yes	Y	1	1.2	39	1.2	3	1	41	1								
2	1.2D+1.0Wo (30 Deg)	Yes	Y	1	1.2	39	1.2	4	1	42	1								
3	1.2D+1.0Wo (60 Deg)	Yes	Y	1	1.2	39	1.2	5	1	43	1								
4	1.2D+1.0Wo (90 Deg)	Yes	Y	1	1.2	39	1.2	6	1	44	1								
5	1.2D+1.0Wo (120 Deg)	Yes	Y	1	1.2	39	1.2	7	1	45	1								
6	1.2D+1.0Wo (150 Deg)	Yes	Y	1	1.2	39	1.2	8	1	46	1								
7	1.2D+1.0Wo (180 Deg)	Yes	Y	1	1.2	39	1.2	9	1	47	1								
8	1.2D+1.0Wo (210 Deg)	Yes	Y	1	1.2	39	1.2	10	1	48	1								
9	1.2D+1.0Wo (240 Deg)	Yes	Y	1	1.2	39	1.2	11	1	49	1								
10	1.2D+1.0Wo (270 Deg)	Yes	Y	1	1.2	39	1.2	12	1	50	1								
11	1.2D+1.0Wo (300 Deg)	Yes	Y	1	1.2	39	1.2	13	1	51	1								
12	1.2D+1.0Wo (330 Deg)	Yes	Y	1	1.2	39	1.2	14	1	52	1								
13	1.2D + 1.0Di + 1.0Wi (0 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	15	1	53	1				
14	1.2D + 1.0Di + 1.0Wi (30 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	16	1	54	1				
15	1.2D + 1.0Di + 1.0Wi (60 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	17	1	55	1				
16	1.2D + 1.0Di + 1.0Wi (90 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	18	1	56	1				
17	1.2D + 1.0Di + 1.0Wi (120 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	19	1	57	1				
18	1.2D + 1.0Di + 1.0Wi (150 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	20	1	58	1				
19	1.2D + 1.0Di + 1.0Wi (180 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	21	1	59	1				
20	1.2D + 1.0Di + 1.0Wi (210 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	22	1	60	1				
21	1.2D + 1.0Di + 1.0Wi (240 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	23	1	61	1				

Load Combinations (Continued)

Description	Solve	P-Delta	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor	BLCFactor
22 1.2D + 1.0Di + 1.0Wi (270 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	24	1	62	1				
23 1.2D + 1.0Di + 1.0Wi (300 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	25	1	63	1				
24 1.2D + 1.0Di + 1.0Wi (330 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	26	1	64	1				
25 1.2D + 1.5Lm1 + 1.0Wm (0 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	27	1	65	1						
26 1.2D + 1.5Lm1 + 1.0Wm (30 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	28	1	66	1						
27 1.2D + 1.5Lm1 + 1.0Wm (60 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	29	1	67	1						
28 1.2D + 1.5Lm1 + 1.0Wm (90 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	30	1	68	1						
29 1.2D + 1.5Lm1 + 1.0Wm (120 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	31	1	69	1						
30 1.2D + 1.5Lm1 + 1.0Wm (150 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	32	1	70	1						
31 1.2D + 1.5Lm1 + 1.0Wm (180 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	33	1	71	1						
32 1.2D + 1.5Lm1 + 1.0Wm (210 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	34	1	72	1						
33 1.2D + 1.5Lm1 + 1.0Wm (240 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	35	1	73	1						
34 1.2D + 1.5Lm1 + 1.0Wm (270 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	36	1	74	1						
35 1.2D + 1.5Lm1 + 1.0Wm (300 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	37	1	75	1						
36 1.2D + 1.5Lm1 + 1.0Wm (330 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	38	1	76	1						
37 1.2D + 1.5Lm2 + 1.0Wm (0 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	27	1	65	1						
38 1.2D + 1.5Lm2 + 1.0Wm (30 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	28	1	66	1						
39 1.2D + 1.5Lm2 + 1.0Wm (60 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	29	1	67	1						
40 1.2D + 1.5Lm2 + 1.0Wm (90 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	30	1	68	1						
41 1.2D + 1.5Lm2 + 1.0Wm (120 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	31	1	69	1						
42 1.2D + 1.5Lm2 + 1.0Wm (150 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	32	1	70	1						
43 1.2D + 1.5Lm2 + 1.0Wm (180 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	33	1	71	1						
44 1.2D + 1.5Lm2 + 1.0Wm (210 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	34	1	72	1						
45 1.2D + 1.5Lm2 + 1.0Wm (240 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	35	1	73	1						
46 1.2D + 1.5Lm2 + 1.0Wm (270 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	36	1	74	1						
47 1.2D + 1.5Lm2 + 1.0Wm (300 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	37	1	75	1						
48 1.2D + 1.5Lm2 + 1.0Wm (330 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	38	1	76	1						
49 1.2D + 1.5Lv1	Yes	Y	1	1.2	39	1.2	79	1.5										
50 1.2D + 1.5Lv2	Yes	Y	1	1.2	39	1.2	80	1.5										
51 1.4D	Yes	Y	1	1.4	39	1.4												
52 1.2D + 1.0Ev + 1.0Eh (0 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	1	83		ELZ	1	ELX	
53 1.2D + 1.0Ev + 1.0Eh (30 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.866	83	0.5	ELZ	0.866	ELX	0.5
54 1.2D + 1.0Ev + 1.0Eh (60 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.5	83	0.866	ELZ	0.5	ELX	0.866
55 1.2D + 1.0Ev + 1.0Eh (90 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	1	ELZ		ELX	1
56 1.2D + 1.0Ev + 1.0Eh (120 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.5	83	0.866	ELZ	-0.5	ELX	0.866
57 1.2D + 1.0Ev + 1.0Eh (150 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.866	83	0.5	ELZ	-0.866	ELX	0.5
58 1.2D + 1.0Ev + 1.0Eh (180 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-1	83		ELZ	-1	ELX	
59 1.2D + 1.0Ev + 1.0Eh (210 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.866	83	-0.5	ELZ	-0.866	ELX	-0.5
60 1.2D + 1.0Ev + 1.0Eh (240 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.5	83	-0.866	ELZ	-0.5	ELX	-0.866
61 1.2D + 1.0Ev + 1.0Eh (270 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	-1	ELZ		ELX	-1
62 1.2D + 1.0Ev + 1.0Eh (300 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.5	83	-0.866	ELZ	0.5	ELX	-0.866
63 1.2D + 1.0Ev + 1.0Eh (330 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.866	83	-0.5	ELZ	0.866	ELX	-0.5
64 0.9D - 1.0Ev + 1.0Eh (0 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	1	83		ELZ	1	ELX	
65 0.9D - 1.0Ev + 1.0Eh (30 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.866	83	0.5	ELZ	0.866	ELX	0.5
66 0.9D - 1.0Ev + 1.0Eh (60 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.5	83	0.866	ELZ	0.5	ELX	0.866
67 0.9D - 1.0Ev + 1.0Eh (90 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82		83	1	ELZ		ELX	1
68 0.9D - 1.0Ev + 1.0Eh (120 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.5	83	0.866	ELZ	-0.5	ELX	0.866
69 0.9D - 1.0Ev + 1.0Eh (150 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.866	83	0.5	ELZ	-0.866	ELX	0.5
70 0.9D - 1.0Ev + 1.0Eh (180 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-1	83		ELZ	-1	ELX	
71 0.9D - 1.0Ev + 1.0Eh (210 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.866	83	-0.5	ELZ	-0.866	ELX	-0.5
72 0.9D - 1.0Ev + 1.0Eh (240 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.5	83	-0.866	ELZ	-0.5	ELX	-0.866
73 0.9D - 1.0Ev + 1.0Eh (270 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82		83	-1	ELZ		ELX	-1
74 0.9D - 1.0Ev + 1.0Eh (300 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.5	83	-0.866	ELZ	0.5	ELX	-0.866
75 0.9D - 1.0Ev + 1.0Eh (330 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.866	83	-0.5	ELZ	0.866	ELX	-0.5

Load Combination Design

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
1	1.2D+1.0Wo (0 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	1.2D+1.0Wo (30 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	1.2D+1.0Wo (60 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	1.2D+1.0Wo (90 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	1.2D+1.0Wo (120 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	1.2D+1.0Wo (150 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	1.2D+1.0Wo (180 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	1.2D+1.0Wo (210 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
9	1.2D+1.0Wo (240 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
10	1.2D+1.0Wo (270 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	1.2D+1.0Wo (300 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	1.2D+1.0Wo (330 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	1.2D + 1.0Di + 1.0Wi (0 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	1.2D + 1.0Di + 1.0Wi (30 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	1.2D + 1.0Di + 1.0Wi (60 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	1.2D + 1.0Di + 1.0Wi (90 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17	1.2D + 1.0Di + 1.0Wi (120 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	1.2D + 1.0Di + 1.0Wi (150 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19	1.2D + 1.0Di + 1.0Wi (180 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20	1.2D + 1.0Di + 1.0Wi (210 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21	1.2D + 1.0Di + 1.0Wi (240 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
22	1.2D + 1.0Di + 1.0Wi (270 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23	1.2D + 1.0Di + 1.0Wi (300 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24	1.2D + 1.0Di + 1.0Wi (330 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25	1.2D + 1.5Lm1 + 1.0Wm (0 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26	1.2D + 1.5Lm1 + 1.0Wm (30 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27	1.2D + 1.5Lm1 + 1.0Wm (60 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
28	1.2D + 1.5Lm1 + 1.0Wm (90 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
29	1.2D + 1.5Lm1 + 1.0Wm (120 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
30	1.2D + 1.5Lm1 + 1.0Wm (150 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
31	1.2D + 1.5Lm1 + 1.0Wm (180 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
32	1.2D + 1.5Lm1 + 1.0Wm (210 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
33	1.2D + 1.5Lm1 + 1.0Wm (240 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
34	1.2D + 1.5Lm1 + 1.0Wm (270 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
35	1.2D + 1.5Lm1 + 1.0Wm (300 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
36	1.2D + 1.5Lm1 + 1.0Wm (330 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
37	1.2D + 1.5Lm2 + 1.0Wm (0 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
38	1.2D + 1.5Lm2 + 1.0Wm (30 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
39	1.2D + 1.5Lm2 + 1.0Wm (60 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
40	1.2D + 1.5Lm2 + 1.0Wm (90 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
41	1.2D + 1.5Lm2 + 1.0Wm (120 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
42	1.2D + 1.5Lm2 + 1.0Wm (150 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
43	1.2D + 1.5Lm2 + 1.0Wm (180 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
44	1.2D + 1.5Lm2 + 1.0Wm (210 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
45	1.2D + 1.5Lm2 + 1.0Wm (240 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
46	1.2D + 1.5Lm2 + 1.0Wm (270 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
47	1.2D + 1.5Lm2 + 1.0Wm (300 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
48	1.2D + 1.5Lm2 + 1.0Wm (330 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
49	1.2D + 1.5Lv1		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
50	1.2D + 1.5Lv2		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
51	1.4D		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
52	1.2D + 1.0Ev + 1.0Eh (0 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
53	1.2D + 1.0Ev + 1.0Eh (30 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
54	1.2D + 1.0Ev + 1.0Eh (60 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
55	1.2D + 1.0Ev + 1.0Eh (90 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Load Combination Design (Continued)

	Description	Service	Hot Rolled	Cold Formed	Wood	Concrete	Masonry	Aluminum	Stainless	Connection
56	1.2D + 1.0Ev + 1.0Eh (120 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
57	1.2D + 1.0Ev + 1.0Eh (150 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
58	1.2D + 1.0Ev + 1.0Eh (180 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
59	1.2D + 1.0Ev + 1.0Eh (210 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
60	1.2D + 1.0Ev + 1.0Eh (240 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
61	1.2D + 1.0Ev + 1.0Eh (270 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
62	1.2D + 1.0Ev + 1.0Eh (300 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
63	1.2D + 1.0Ev + 1.0Eh (330 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
64	0.9D - 1.0Ev + 1.0Eh (0 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
65	0.9D - 1.0Ev + 1.0Eh (30 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
66	0.9D - 1.0Ev + 1.0Eh (60 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
67	0.9D - 1.0Ev + 1.0Eh (90 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
68	0.9D - 1.0Ev + 1.0Eh (120 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
69	0.9D - 1.0Ev + 1.0Eh (150 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
70	0.9D - 1.0Ev + 1.0Eh (180 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
71	0.9D - 1.0Ev + 1.0Eh (210 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
72	0.9D - 1.0Ev + 1.0Eh (240 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
73	0.9D - 1.0Ev + 1.0Eh (270 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
74	0.9D - 1.0Ev + 1.0Eh (300 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
75	0.9D - 1.0Ev + 1.0Eh (330 Deg)		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	N1	6.841106	-4.5	6.626732	
2	N2	6.841106	-1.75	6.376732	
3	N3	6.841106	1.75	6.376732	
4	N4	6.841106	3.5	6.626732	
5	N5	-4.905228	-1.75	6.376732	
6	N6	7.091106	-1.75	6.376732	
7	N7	-4.905228	1.75	6.376732	
8	N8	7.091106	1.75	6.376732	
9	N9	-3.208228	-1.75	6.376732	
10	N10	-3.208228	1.75	6.376732	
11	N11	5.394106	-1.75	6.376732	
12	N12	5.394106	1.75	6.376732	
13	N13	-1.064419	1.75	4.096837	
14	N14	-1.064419	-1.75	4.096837	
15	N15	3.250297	-1.75	4.096837	
16	N16	3.250297	1.75	4.096837	
17	N17	0.58027	1.75	2.347745	
18	N18	0.58027	-1.75	2.347745	
19	N19	1.605608	-1.75	2.347745	
20	N20	1.605608	1.75	2.347745	
21	N21	-2.839833	1.75	5.984953	
22	N22	-2.839833	-1.75	5.984953	
23	N23	5.025711	-1.75	5.984953	
24	N24	5.025711	1.75	5.984953	
25	N25	6.841106	-1.75	6.626732	
26	N26	6.841106	1.75	6.626732	
27	N27	0.778544	1.75	2.136884	
28	N28	1.407334	1.75	2.136884	
29	N29	0.778544	-1.75	2.136884	
30	N30	1.407334	-1.75	2.136884	
31	N31	1.092939	-1.75	1.802514	
32	N32	1.092939	1.75	1.802514	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
33	N33	2.841106	-4.5	6.626732	
34	N34	2.841106	-1.75	6.376732	
35	N35	2.841106	1.75	6.376732	
36	N36	2.841106	3.5	6.626732	
37	N37	2.841106	-1.75	6.626732	
38	N38	2.841106	1.75	6.626732	
39	N39	-0.742224	-2.5	6.626732	
40	N40	-0.742224	-1.75	6.376732	
41	N41	-0.742224	1.75	6.376732	
42	N42	-0.742224	2.5	6.626732	
43	N43	-0.742224	-1.75	6.626732	
44	N44	-0.742224	1.75	6.626732	
45	N45	-4.617224	-2.5	6.626732	
46	N46	-4.617224	-1.75	6.376732	
47	N47	-4.617224	1.75	6.376732	
48	N48	-4.617224	2.5	6.626732	
49	N49	-4.617224	-1.75	6.626732	
50	N50	-4.617224	1.75	6.626732	
51	N51	-3.708228	1.75	6.376732	
52	N52	-1.890986	2.25	0.170256	
53	N53	1.092939	0.875	1.552514	
54	N54	0	0	0	
55	N55	1.092939	2.25	1.552514	
56	N56	2.691741	1.75	-9.043085	
57	N57	1.145545	-1.75	-2.326578	
58	N58	5.896595	-1.75	-2.170254	
59	N59	7.760818	-1.75	1.236034	
60	N60	7.655956	-1.75	1.602708	
61	N61	2.586087	-1.75	-9.269662	
62	N62	7.655956	1.75	1.602708	
63	N63	2.586087	1.75	-9.269662	
64	N64	6.938773	-1.75	0.064704	
65	N65	6.938773	1.75	0.064704	
66	N66	3.30327	-1.75	-7.731658	
67	N67	3.30327	1.75	-7.731658	
68	N68	2.918318	-4.5	-9.14874	
69	N69	2.691741	-1.75	-9.043085	
70	N70	2.918318	3.5	-9.14874	
71	N71	2.918318	-1.75	-9.14874	
72	N72	2.918318	1.75	-9.14874	
73	N73	4.932235	-4.5	-4.829881	
74	N74	4.705658	-1.75	-4.724226	
75	N75	4.705658	1.75	-4.724226	
76	N76	4.932235	3.5	-4.829881	
77	N77	4.932235	-1.75	-4.829881	
78	N78	4.932235	1.75	-4.829881	
79	N79	6.123172	-2.5	-2.275909	
80	N80	5.896595	1.75	-2.170254	
81	N81	6.123172	2.5	-2.275909	
82	N82	6.123172	-1.75	-2.275909	
83	N83	6.123172	1.75	-2.275909	
84	N84	7.760818	-2.5	1.236034	
85	N85	7.534241	-1.75	1.341689	
86	N86	7.534241	1.75	1.341689	
87	N87	7.760818	2.5	1.236034	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
88	N88	7.760818	1.75	1.236034	
89	N89	7.150082	1.75	0.517858	
90	N90	6.42801	1.75	-0.103601	
91	N91	6.42801	-1.75	-0.103601	
92	N92	3.103887	1.75	-7.232206	
93	N93	3.103887	-1.75	-7.232206	
94	N94	3.966476	1.75	-0.91472	
95	N95	3.966473	-1.75	-0.914721	
96	N96	1.686183	1.75	-1.666117	
97	N97	1.686182	-1.75	-1.666117	
98	N98	1.252856	1.75	-2.595389	
99	N99	1.252856	-1.75	-2.595389	
100	N100	2.142995	1.75	-4.825182	
101	N101	2.142996	-1.75	-4.825182	
102	N102	1.411283	1.75	-1.756701	
103	N103	1.411283	-1.75	-1.756701	
104	N104	1.145545	1.75	-2.326578	
105	N105	1.469204	1.75	-3.13734	
106	N106	1.695781	1.75	-3.031685	
107	N107	1.469204	-1.75	-3.13734	
108	N108	1.695781	-1.75	-3.031685	
109	N109	1.695781	3.416667	-3.031685	
110	N110	1.695781	-2.583333	-3.031685	
111	N111	0.975372	-1.75	-1.900329	
112	N112	0.975372	1.75	-1.900329	
113	N113	0.814675	2.25	-1.708817	
114	N114	-9.306397	1.75	1.508356	
115	N115	-2.565724	-1.75	0.071167	
116	N116	-5.611547	-1.75	-2.894995	
117	N117	-2.132636	-1.75	-7.429931	
118	N118	-1.756	-1.75	-7.489857	
119	N119	-9.467094	-1.75	1.699867	
120	N120	-1.756	1.75	-7.489857	
121	N121	-9.467094	1.75	1.699867	
122	N122	-2.84681	-1.75	-6.18988	
123	N123	-2.84681	1.75	-6.18988	
124	N124	-8.376284	-1.75	0.39989	
125	N125	-8.376284	1.75	0.39989	
126	N126	-9.497908	-4.5	1.347659	
127	N127	-9.306397	-1.75	1.508356	
128	N128	-9.497908	3.5	1.347659	
129	N129	-9.497908	-1.75	1.347659	
130	N130	-9.497908	1.75	1.347659	
131	N131	-7.410027	-4.5	-1.140581	
132	N132	-7.218516	-1.75	-0.979884	
133	N133	-7.218516	1.75	-0.979884	
134	N134	-7.410027	3.5	-1.140581	
135	N135	-7.410027	-1.75	-1.140581	
136	N136	-7.410027	1.75	-1.140581	
137	N137	-5.803058	-4.5	-3.055692	
138	N138	-5.611547	1.75	-2.894995	
139	N139	-5.803058	3.5	-3.055692	
140	N140	-5.803058	-1.75	-3.055692	
141	N141	-5.803058	1.75	-3.055692	
142	N142	-2.132636	-4.5	-7.429931	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
143	N143	-1.941125	-1.75	-7.269234	
144	N144	-1.941125	1.75	-7.269234	
145	N145	-2.132636	3.5	-7.429931	
146	N146	-2.132636	1.75	-7.429931	
147	N147	-2.525417	1.75	-6.572902	
148	N148	-2.783489	1.75	-5.655842	
149	N149	-2.783489	-1.75	-5.655842	
150	N150	-7.839364	1.75	0.369514	
151	N151	-7.839363	-1.75	0.369514	
152	N152	-2.478323	1.75	-3.082139	
153	N153	-2.478322	-1.75	-3.082139	
154	N154	-2.195626	1.75	-0.697939	
155	N155	-2.195626	-1.75	-0.697939	
156	N156	-2.854701	1.75	0.087515	
157	N157	-2.854701	-1.75	0.087515	
158	N158	-5.251769	1.75	0.223126	
159	N159	-5.251771	-1.75	0.223126	
160	N160	-2.161546	1.75	-0.410514	
161	N161	-2.161546	-1.75	-0.410514	
162	N162	-2.565724	1.75	0.071167	
163	N163	-2.107492	-1.75	0.045256	
164	N164	-2.107492	1.75	0.045256	
165	N165	6.42801	0.875	-0.103601	
166	N166	1.092939	1.75	1.552514	
167	N167	1.092939	-1.75	1.552514	
168	N168	0.814675	1.75	-1.708817	
169	N169	0.814675	-1.75	-1.708817	
170	N170	-1.890986	1.75	0.170256	
171	N171	-1.890986	-1.75	0.170256	
172	N172	-3.168204	1.75	-5.806858	
173	N173	-3.359715	3.5	-5.967555	
174	N174	-3.359715	1.75	-5.967555	
175	N175	-3.359715	-1.75	-5.967555	
176	N176	-3.168204	-1.75	-5.806858	
177	N177	-3.359715	-4.5	-5.967555	
178	N178	-3.359715	2.5	-5.967555	
179	N179	-3.359715	-1	-5.967555	
180	N180	-4.506868	2.5	-7.605859	
181	N181	-4.506868	3.5	-7.605859	
182	N182	-4.506868	-4.5	-7.605859	
183	N183	-4.506868	-1	-7.605859	
184	N184	-4.506868	1.75	-7.605859	
185	N185	1.092939	1.75	6.376732	
186	N186	4.092939	1.75	6.376732	
187	N187	-1.907061	1.75	6.376732	
188	N188	6.388876	1.75	-1.114553	
189	N189	-3.683184	1.75	-5.193128	
190	N190	3.853167	1.75	-6.5524	
191	N191	-7.53991	1.75	-0.596862	
192	N192	1.092939	3.25	1.552514	
193	N193	0.798047	3.25	-1.72277	
194	N194	-1.890986	3.25	0.170256	
195	N195	3.51472	1.75	-7.278202	
196	N196	3.741297	1.75	-7.383856	
197	N197	3.741297	-1.75	-7.383856	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
198	N198	3.741297	-4.5	-7.383856	
199	N199	3.51472	-1.75	-7.278202	
200	N200	3.741297	3.5	-7.383856	
201	N201	-4.132386	1.75	-4.657791	
202	N202	7.760818	-0.75	1.236034	
203	N203	7.247788	-0.75	2.645573	
204	N204	1.092939	-0.75	1.552514	

Node Boundary Conditions

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
1	N5						
2	N6						
3	N7						
4	N8						
5	N9						
6	N10						
7	N11						
8	N12						
9	N1						
10	N2						
11	N3						
12	N4						
13	N25						
14	N26						
15	N33						
16	N34						
17	N35						
18	N36						
19	N37						
20	N38						
21	N39						
22	N40						
23	N41						
24	N42						
25	N43						
26	N44						
27	N45						
28	N46						
29	N47						
30	N48						
31	N49						
32	N50						
33	N51						
34	N52	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
35	N55	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
36	N56						
37	N58						
38	N59						
39	N60						
40	N61						
41	N62						
42	N63						
43	N64						
44	N65						
45	N66						

Node Boundary Conditions (Continued)

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
46	N67						
47	N68						
48	N69						
49	N70						
50	N71						
51	N72						
52	N73						
53	N74						
54	N75						
55	N76						
56	N77						
57	N78						
58	N79						
59	N80						
60	N81						
61	N82						
62	N83						
63	N84						
64	N85						
65	N86						
66	N87						
67	N88						
68	N89						
69	N113	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
70	N114						
71	N116						
72	N117						
73	N118						
74	N119						
75	N120						
76	N121						
77	N122						
78	N123						
79	N124						
80	N125						
81	N126						
82	N127						
83	N128						
84	N129						
85	N130						
86	N131						
87	N132						
88	N133						
89	N134						
90	N135						
91	N136						
92	N138						
93	N140						
94	N141						
95	N143						
96	N144						
97	N146						
98	N147						
99	N53	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
100	N166	Reaction	Reaction	Reaction	Reaction		Reaction

Node Boundary Conditions (Continued)

	Node Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot [k-ft/rad]	Y Rot [k-ft/rad]	Z Rot [k-ft/rad]
101	N167	Reaction	Reaction	Reaction	Reaction		Reaction
102	N168	Reaction	Reaction	Reaction	Reaction		Reaction
103	N169	Reaction	Reaction	Reaction	Reaction		Reaction
104	N170	Reaction	Reaction	Reaction	Reaction		Reaction
105	N171	Reaction	Reaction	Reaction	Reaction		Reaction
106	N174						
107	N175						
108	N176						
109	N172						
110	N178						
111	N179						
112	N180						
113	N183						
114	N184						
115	N192	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
116	N193	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
117	N194	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
118	N196						
119	N197						
120	N198						
121	N199						
122	N195						
123	N200						
124	N202						
125	N203						
126	N204	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1	A-Framing	PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical	1.02	0.627	0.627	1.25
2	B-Framing	HSS2X2X4	Beam	SquareTube	A500 Gr. B (46ksi)	Typical	1.51	0.747	0.747	1.31
3	C-Framing	PIPE 2.5	Beam	Pipe	A53 Gr. B (35 ksi)	Typical	1.61	1.45	1.45	2.89
4	D-Framing	LL2.5X2.5X4X0	Beam	Double Angle (No Gap)	A36 (36ksi)	Typical	2.38	2.57	1.38	0.052
5	E-Framing	PIPE 2.0	Beam	Pipe	A53 Gr. B (35 ksi)	Typical	1.02	0.627	0.627	1.25
6	Pipe to pipe	HSS3X3X4	Beam	Tube	A500 Gr. B (46ksi)	Typical	2.44	3.02	3.02	5.08
7	V-Brace	L2.5X2.5X4	Beam	Single Angle	A36 (36ksi)	Typical	1.19	0.692	0.692	0.026
8	Tieback	PIPE 2.0	Beam	HSS Pipe	A53 Gr. B (35 ksi)	Typical	1.02	0.627	0.627	1.25
9	Dish Tieback	PIPE 1.0	Beam	HSS Pipe	A53 Gr. B (35 ksi)	Typical	0.469	0.083	0.083	0.166

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in ²]	Iyy [in ⁴]	Izz [in ⁴]	J [in ⁴]
1	CF1A	1.5CU1.25X035	Beam	None	A607 C1 Gr.55	Typical	0.131	0.022	0.052	5.4e-5

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e ⁶ F ⁻¹]	Density [k/ft ³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A53 Gr. B (35 ksi)	29000	11154	0.3	0.65	0.49	35	1.5	60	1.2
2	A500 Gr. B (46ksi)	29000	11154	0.3	0.65	0.49	46	1.5	58	1.2
3	A36 (36ksi)	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2

Cold Formed Steel Properties

Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [$10^{-6}/^{\circ}\text{F}^{-1}$]	Density [k/ft ³]	Yield [ksi]	Fu [ksi]
1 A607 C1 Gr.55	29500	11346	0.3	0.65	0.49	55	70

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	MP1A	N4	N1		PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
2	M2	N21	N22		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
3	M3	N24	N23		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
4	M4	N13	N14		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
5	M5	N17	N18		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
6	M6	N20	N19		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
7	M7	N16	N15		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
8	M8	N17	N14		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
9	M9	N13	N22		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
10	M10	N20	N15		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
11	M11	N16	N23		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
12	M12	N2	N25		RIGID	None	None	RIGID	Typical
13	M13	N3	N26		RIGID	None	None	RIGID	Typical
14	M14	N27	N10		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
15	M15	N29	N9		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
16	M16	N28	N12		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
17	M17	N30	N11		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
18	M18	N27	N32	90	PL3/8X3.5	None	None	A36 (36ksi)	Typical
19	M19	N28	N32	90	PL3/8X3.5	None	None	A36 (36ksi)	Typical
20	M20	N30	N31	90	PL3/8X3.5	None	None	A36 (36ksi)	Typical
21	M21	N29	N31	90	PL3/8X3.5	None	None	A36 (36ksi)	Typical
22	MP2A	N36	N33		PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
23	M23	N34	N37		RIGID	None	None	RIGID	Typical
24	M24	N35	N38		RIGID	None	None	RIGID	Typical
25	MP3A	N42	N39		PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
26	M26	N40	N43		RIGID	None	None	RIGID	Typical
27	M27	N41	N44		RIGID	None	None	RIGID	Typical
28	MP4A	N48	N45		PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
29	M29	N46	N49		RIGID	None	None	RIGID	Typical
30	M30	N47	N50		RIGID	None	None	RIGID	Typical
31	M31	N51	N52	353.002	PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
32	M32	N80	N83		RIGID	None	None	RIGID	Typical
33	M33	N98	N99	5	PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
34	M34	N90	N91	5	PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
35	M35	N96	N95		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
36	M36	N89	N55	353.428	PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
37	M37	N94	N91		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
38	M38	N100	N93		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
39	M39	N104	N112	90	PL3/8X3.5	None	None	A36 (36ksi)	Typical
40	M40	N56	N72		RIGID	None	None	RIGID	Typical
41	M41	N102	N65		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
42	M42	N57	N66		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
43	M43	N102	N112	90	PL3/8X3.5	None	None	A36 (36ksi)	Typical
44	M44	N107	N108		RIGID	None	None	RIGID	Typical
45	M45	N74	N77		RIGID	None	None	RIGID	Typical
46	MP4C	N81	N79	5	PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
47	MP3C	N76	N73	5	PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
48	M48	N86	N88		RIGID	None	None	RIGID	Typical
49	MP1C	N70	N68	5	PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
50	M50	N92	N93	5	PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
51	M51	N94	N95	5	PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
52	M52	N96	N97	5	PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
53	MP7C	N100	N101	5	PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
54	M54	N98	N101		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
55	M55	N69	N71		RIGID	None	None	RIGID	Typical
56	M56	N103	N64		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
57	M57	N104	N67		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
58	M58	N75	N78		RIGID	None	None	RIGID	Typical
59	M59	N58	N82		RIGID	None	None	RIGID	Typical
60	MP5C	N87	N84	5	PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
61	M61	N85	N59		RIGID	None	None	RIGID	Typical
62	M62	N105	N106		RIGID	None	None	RIGID	Typical
63	MP6C	N109	N110	5	PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
64	M64	N103	N111	90	PL3/8X3.5	None	None	A36 (36ksi)	Typical
65	M65	N57	N111	90	PL3/8X3.5	None	None	A36 (36ksi)	Typical
66	M66	N138	N141		RIGID	None	None	RIGID	Typical
67	M67	N156	N157	10	PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
68	M68	N148	N149	10	PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
69	M69	N154	N153		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
70	M70	N147	N113	354.754	PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
71	M71	N152	N149		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
72	M72	N158	N151		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
73	M73	N162	N164	90	PL3/8X3.5	None	None	A36 (36ksi)	Typical
74	M74	N114	N130		RIGID	None	None	RIGID	Typical
75	M75	N160	N123		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
76	M76	N115	N124		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
77	M77	N160	N164	90	PL3/8X3.5	None	None	A36 (36ksi)	Typical
78	M78	N132	N135		RIGID	None	None	RIGID	Typical
79	MP3B	N139	N137	10	PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
80	MP2B	N134	N131	10	PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
81	M81	N144	N146		RIGID	None	None	RIGID	Typical
82	MP1B	N128	N126	10	PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
83	M83	N150	N151	10	PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
84	M84	N152	N153	10	PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
85	M85	N154	N155	10	PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
86	M86	N158	N159	10	PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
87	M87	N156	N159		PIPE 1.25	None	None	A53 Gr. B (35 ksi)	Typical
88	M88	N127	N129		RIGID	None	None	RIGID	Typical
89	M89	N161	N122		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
90	M90	N162	N125		PIPE 2.0	None	None	A53 Gr. B (35 ksi)	Typical
91	M91	N133	N136		RIGID	None	None	RIGID	Typical
92	M92	N116	N140		RIGID	None	None	RIGID	Typical
93	MP5B	N145	N142	10	PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
94	M94	N143	N117		RIGID	None	None	RIGID	Typical
95	M95	N161	N163	90	PL3/8X3.5	None	None	A36 (36ksi)	Typical
96	M96	N115	N163	90	PL3/8X3.5	None	None	A36 (36ksi)	Typical
97	M97	N165	N53	10.273	A-Framing	Column	Pipe	A53 Gr. B (35 ksi)	Typical
98	M98	N7	N10		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
99	M99	N10	N12		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
100	M100	N12	N8		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
101	M101	N5	N9		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
102	M102	N9	N11		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
103	M103	N11	N6		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
104	M104	N120	N123		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
105	M105	N123	N125		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
106	M106	N125	N121		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
107	M107	N118	N122		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
108	M108	N122	N124		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
109	M109	N124	N119		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
110	M110	N62	N65		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
111	M111	N65	N67		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
112	M112	N67	N63		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
113	M113	N60	N64		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
114	M114	N64	N66		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
115	M115	N66	N61		C-Framing	Beam	Pipe	A53 Gr. B (35 ksi)	Typical
116	M116	N32	N166		RIGID	None	None	RIGID	Typical
117	M117	N31	N167		RIGID	None	None	RIGID	Typical
118	M118	N164	N170		RIGID	None	None	RIGID	Typical
119	M119	N163	N171		RIGID	None	None	RIGID	Typical
120	M120	N112	N168		RIGID	None	None	RIGID	Typical
121	M121	N111	N169		RIGID	None	None	RIGID	Typical
122	M122	N172	N174		RIGID	None	None	RIGID	Typical
123	M123	N176	N175		RIGID	None	None	RIGID	Typical
124	M124	N173	N177	10	PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
125	MP4B	N181	N182	25	PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
126	M126	N180	N178		Pipe to pipe	Beam	Tube	A500 Gr. B (46ksi)	Typical
127	M127	N183	N179		Pipe to pipe	Beam	Tube	A500 Gr. B (46ksi)	Typical
128	M128	N187	N192		V-Brace	Beam	Single Angle	A36 (36ksi)	Typical
129	M129	N192	N186		V-Brace	Beam	Single Angle	A36 (36ksi)	Typical
130	M130	N188	N193		V-Brace	Beam	Single Angle	A36 (36ksi)	Typical
131	M131	N193	N190		V-Brace	Beam	Single Angle	A36 (36ksi)	Typical
132	M132	N189	N194		V-Brace	Beam	Single Angle	A36 (36ksi)	Typical
133	M133	N194	N191		V-Brace	Beam	Single Angle	A36 (36ksi)	Typical
134	M134	N199	N197		RIGID	None	None	RIGID	Typical
135	MP2C	N200	N198	5	PIPE 2.0	Column	Pipe	A53 Gr. B (35 ksi)	Typical
136	M136	N195	N196		RIGID	None	None	RIGID	Typical
137	M137	N184	N201		Tieback	Beam	HSS Pipe	A53 Gr. B (35 ksi)	Typical
138	M138	N203	N202		RIGID	None	None	RIGID	Typical
139	M139	N203	N204		Dish Tieback	Beam	HSS Pipe	A53 Gr. B (35 ksi)	Typical

Member Advanced Data

	Label	I Release	J Release	Physical	Deflection Ratio Options	Activation	Seismic DR
1	MP1A			Yes	** NA **		None
2	M2	BenPIN	BenPIN	Yes	** NA **		None
3	M3	BenPIN	BenPIN	Yes	** NA **		None
4	M4	BenPIN	BenPIN	Yes	** NA **		None
5	M5	BenPIN	BenPIN	Yes	** NA **		None
6	M6	BenPIN	BenPIN	Yes	** NA **		None
7	M7	BenPIN	BenPIN	Yes	** NA **		None
8	M8	BenPIN	BenPIN	Yes	** NA **		None
9	M9	BenPIN	BenPIN	Yes	** NA **		None
10	M10	BenPIN	BenPIN	Yes	** NA **		None
11	M11	BenPIN	BenPIN	Yes	** NA **		None
12	M12			Yes	** NA **	Exclude	None
13	M13			Yes	** NA **	Exclude	None
14	M14			Yes	** NA **		None
15	M15			Yes	** NA **		None
16	M16			Yes	** NA **		None
17	M17			Yes	** NA **		None
18	M18			Yes	** NA **		None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Activation	Seismic DR
19	M19			Yes	** NA **		None
20	M20			Yes	** NA **		None
21	M21			Yes	** NA **		None
22	MP2A			Yes	** NA **		None
23	M23			Yes	** NA **	Exclude	None
24	M24			Yes	** NA **	Exclude	None
25	MP3A			Yes	** NA **		None
26	M26			Yes	** NA **	Exclude	None
27	M27			Yes	** NA **	Exclude	None
28	MP4A			Yes	** NA **		None
29	M29			Yes	** NA **	Exclude	None
30	M30			Yes	** NA **	Exclude	None
31	M31	BenPIN		Yes	** NA **		None
32	M32			Yes	** NA **	Exclude	None
33	M33	BenPIN	BenPIN	Yes	** NA **		None
34	M34	BenPIN	BenPIN	Yes	** NA **		None
35	M35	BenPIN	BenPIN	Yes	** NA **		None
36	M36	BenPIN		Yes	** NA **		None
37	M37	BenPIN	BenPIN	Yes	** NA **		None
38	M38	BenPIN	BenPIN	Yes	** NA **		None
39	M39			Yes	** NA **		None
40	M40			Yes	** NA **	Exclude	None
41	M41			Yes	** NA **		None
42	M42			Yes	** NA **		None
43	M43			Yes	** NA **		None
44	M44			Yes	** NA **		None
45	M45			Yes	** NA **	Exclude	None
46	MP4C			Yes	** NA **		None
47	MP3C			Yes	** NA **		None
48	M48			Yes	** NA **	Exclude	None
49	MP1C			Yes	** NA **		None
50	M50	BenPIN	BenPIN	Yes	** NA **		None
51	M51	BenPIN	BenPIN	Yes	** NA **		None
52	M52	BenPIN	BenPIN	Yes	** NA **		None
53	MP7C	BenPIN	BenPIN	Yes	** NA **		None
54	M54	BenPIN	BenPIN	Yes	** NA **		None
55	M55			Yes	** NA **	Exclude	None
56	M56			Yes	** NA **		None
57	M57			Yes	** NA **		None
58	M58			Yes	** NA **	Exclude	None
59	M59			Yes	** NA **	Exclude	None
60	MP5C			Yes	** NA **		None
61	M61			Yes	** NA **	Exclude	None
62	M62			Yes	** NA **		None
63	MP6C			Yes	** NA **		None
64	M64			Yes	** NA **		None
65	M65			Yes	** NA **		None
66	M66			Yes	** NA **	Exclude	None
67	M67	BenPIN	BenPIN	Yes	** NA **		None
68	M68	BenPIN	BenPIN	Yes	** NA **		None
69	M69	BenPIN	BenPIN	Yes	** NA **		None
70	M70	BenPIN		Yes	** NA **		None
71	M71	BenPIN	BenPIN	Yes	** NA **		None
72	M72	BenPIN	BenPIN	Yes	** NA **		None
73	M73			Yes	** NA **		None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Activation	Seismic DR
74	M74			Yes	** NA **	Exclude	None
75	M75			Yes	** NA **		None
76	M76			Yes	** NA **		None
77	M77			Yes	** NA **		None
78	M78			Yes	** NA **	Exclude	None
79	MP3B			Yes	** NA **		None
80	MP2B			Yes	** NA **		None
81	M81			Yes	** NA **	Exclude	None
82	MP1B			Yes	** NA **		None
83	M83	BenPIN	BenPIN	Yes	** NA **		None
84	M84	BenPIN	BenPIN	Yes	** NA **		None
85	M85	BenPIN	BenPIN	Yes	** NA **		None
86	M86	BenPIN	BenPIN	Yes	** NA **		None
87	M87	BenPIN	BenPIN	Yes	** NA **		None
88	M88			Yes	** NA **	Exclude	None
89	M89			Yes	** NA **		None
90	M90			Yes	** NA **		None
91	M91			Yes	** NA **	Exclude	None
92	M92			Yes	** NA **	Exclude	None
93	MP5B			Yes	** NA **		None
94	M94			Yes	** NA **	Exclude	None
95	M95			Yes	** NA **		None
96	M96			Yes	** NA **		None
97	M97	BenPIN	BenPIN	Yes	** NA **		None
98	M98			Yes	Default		None
99	M99			Yes	Default		None
100	M100			Yes	Default		None
101	M101			Yes	Default		None
102	M102			Yes	Default		None
103	M103			Yes	Default		None
104	M104			Yes	Default		None
105	M105			Yes	Default		None
106	M106			Yes	Default		None
107	M107			Yes	Default		None
108	M108			Yes	Default		None
109	M109			Yes	Default		None
110	M110			Yes	Default		None
111	M111			Yes	Default		None
112	M112			Yes	Default		None
113	M113			Yes	Default		None
114	M114			Yes	Default		None
115	M115			Yes	Default		None
116	M116			Yes	** NA **		None
117	M117			Yes	** NA **		None
118	M118			Yes	** NA **		None
119	M119			Yes	** NA **		None
120	M120			Yes	** NA **		None
121	M121			Yes	** NA **		None
122	M122			Yes	** NA **	Exclude	None
123	M123			Yes	** NA **	Exclude	None
124	M124			Yes	** NA **		None
125	MP4B			Yes	** NA **		None
126	M126			Yes	Default		None
127	M127			Yes	Default		None
128	M128	BenPIN	BenPIN	Yes	Default		None

Member Advanced Data (Continued)

	Label	I Release	J Release	Physical	Deflection Ratio Options	Activation	Seismic DR
129	M129	BenPIN	BenPIN	Yes	Default		None
130	M130	BenPIN	BenPIN	Yes	Default		None
131	M131	BenPIN	BenPIN	Yes	Default		None
132	M132	BenPIN	BenPIN	Yes	Default		None
133	M133	BenPIN	BenPIN	Yes	Default		None
134	M134			Yes	** NA **	Exclude	None
135	MP2C			Yes	** NA **		None
136	M136			Yes	** NA **	Exclude	None
137	M137	BenPIN	BenPIN	Yes	Default		None
138	M138			Yes	** NA **		None
139	M139	BenPIN	BenPIN	Yes	Default		None

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
1	MP1A	PIPE 2.0	8	Lbyy			N/A	N/A	Lateral
2	M2	PIPE 2.0	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
3	M3	PIPE 2.0	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
4	M4	PIPE 1.25	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
5	M5	PIPE 1.25	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
6	M6	PIPE 1.25	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
7	M7	PIPE 1.25	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
8	M8	PIPE 1.25	4.244	Lbyy	0.65	0.65	N/A	N/A	Lateral
9	M9	PIPE 1.25	4.355	Lbyy	0.65	0.65	N/A	N/A	Lateral
10	M10	PIPE 1.25	4.244	Lbyy	0.65	0.65	N/A	N/A	Lateral
11	M11	PIPE 1.25	4.355	Lbyy	0.65	0.65	N/A	N/A	Lateral
12	M14	PIPE 2.0	5.82	Lbyy			N/A	N/A	Lateral
13	M15	PIPE 2.0	5.82	Lbyy			N/A	N/A	Lateral
14	M16	PIPE 2.0	5.82	Lbyy			N/A	N/A	Lateral
15	M17	PIPE 2.0	5.82	Lbyy			N/A	N/A	Lateral
16	M18	PL3/8X3.5	0.459	Lbyy			N/A	N/A	Lateral
17	M19	PL3/8X3.5	0.459	Lbyy			N/A	N/A	Lateral
18	M20	PL3/8X3.5	0.459	Lbyy			N/A	N/A	Lateral
19	M21	PL3/8X3.5	0.459	Lbyy			N/A	N/A	Lateral
20	MP2A	PIPE 2.0	8	Lbyy			N/A	N/A	Lateral
21	MP3A	PIPE 2.0	5	Lbyy			N/A	N/A	Lateral
22	MP4A	PIPE 2.0	5	Lbyy			N/A	N/A	Lateral
23	M31	PIPE 2.0	6.486	Lbyy			N/A	N/A	Lateral
24	M33	PIPE 1.25	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
25	M34	PIPE 2.0	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
26	M35	PIPE 1.25	4.244	Lbyy	0.65	0.65	N/A	N/A	Lateral
27	M36	PIPE 2.0	6.165	Lbyy			N/A	N/A	Lateral
28	M37	PIPE 1.25	4.355	Lbyy	0.65	0.65	N/A	N/A	Lateral
29	M38	PIPE 1.25	4.355	Lbyy	0.65	0.65	N/A	N/A	Lateral
30	M39	PL3/8X3.5	0.459	Lbyy			N/A	N/A	Lateral
31	M41	PIPE 2.0	5.82	Lbyy			N/A	N/A	Lateral
32	M42	PIPE 2.0	5.82	Lbyy			N/A	N/A	Lateral
33	M43	PL3/8X3.5	0.459	Lbyy			N/A	N/A	Lateral
34	MP4C	PIPE 2.0	5	Lbyy			N/A	N/A	Lateral
35	MP3C	PIPE 2.0	8	Lbyy			N/A	N/A	Lateral
36	MP1C	PIPE 2.0	8	Lbyy			N/A	N/A	Lateral
37	M50	PIPE 2.0	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
38	M51	PIPE 1.25	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
39	M52	PIPE 1.25	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
40	MP7C	PIPE 1.25	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
41	M54	PIPE 1.25	4.244	Lbyy	0.65	0.65	N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
42	M56	PIPE 2.0	5.82	Lbyy			N/A	N/A	Lateral
43	M57	PIPE 2.0	5.82	Lbyy			N/A	N/A	Lateral
44	MP5C	PIPE 2.0	5	Lbyy			N/A	N/A	Lateral
45	MP6C	PIPE 2.0	6	Lbyy			N/A	N/A	Lateral
46	M64	PL3/8X3.5	0.459	Lbyy			N/A	N/A	Lateral
47	M65	PL3/8X3.5	0.459	Lbyy			N/A	N/A	Lateral
48	M67	PIPE 1.25	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
49	M68	PIPE 2.0	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
50	M69	PIPE 1.25	4.244	Lbyy	0.65	0.65	N/A	N/A	Lateral
51	M70	PIPE 2.0	5.922	Lbyy			N/A	N/A	Lateral
52	M71	PIPE 1.25	4.355	Lbyy	0.65	0.65	N/A	N/A	Lateral
53	M72	PIPE 1.25	4.355	Lbyy	0.65	0.65	N/A	N/A	Lateral
54	M73	PL3/8X3.5	0.459	Lbyy			N/A	N/A	Lateral
55	M75	PIPE 2.0	5.82	Lbyy			N/A	N/A	Lateral
56	M76	PIPE 2.0	5.82	Lbyy			N/A	N/A	Lateral
57	M77	PL3/8X3.5	0.459	Lbyy			N/A	N/A	Lateral
58	MP3B	PIPE 2.0	8	Lbyy			N/A	N/A	Lateral
59	MP2B	PIPE 2.0	8	Lbyy			N/A	N/A	Lateral
60	MP1B	PIPE 2.0	8	Lbyy			N/A	N/A	Lateral
61	M83	PIPE 2.0	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
62	M84	PIPE 1.25	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
63	M85	PIPE 1.25	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
64	M86	PIPE 1.25	3.5	Lbyy	0.65	0.65	N/A	N/A	Lateral
65	M87	PIPE 1.25	4.244	Lbyy	0.65	0.65	N/A	N/A	Lateral
66	M89	PIPE 2.0	5.82	Lbyy			N/A	N/A	Lateral
67	M90	PIPE 2.0	5.82	Lbyy			N/A	N/A	Lateral
68	MP5B	PIPE 2.0	8	Lbyy			N/A	N/A	Lateral
69	M95	PL3/8X3.5	0.459	Lbyy			N/A	N/A	Lateral
70	M96	PL3/8X3.5	0.459	Lbyy			N/A	N/A	Lateral
71	M97	A-Framing	5.586	Lbyy			N/A	N/A	Lateral
72	M98	C-Framing	1.697	Lbyy	2.1	2.1	N/A	N/A	Lateral
73	M99	C-Framing	8.602	Lbyy			N/A	N/A	Lateral
74	M100	C-Framing	1.697	Lbyy	2.1	2.1	N/A	N/A	Lateral
75	M101	C-Framing	1.697	Lbyy	2.1	2.1	N/A	N/A	Lateral
76	M102	C-Framing	8.602	Lbyy			N/A	N/A	Lateral
77	M103	C-Framing	1.697	Lbyy	2.1	2.1	N/A	N/A	Lateral
78	M104	C-Framing	1.697	Lbyy	2.1	2.1	N/A	N/A	Lateral
79	M105	C-Framing	8.602	Lbyy			N/A	N/A	Lateral
80	M106	C-Framing	1.697	Lbyy	2.1	2.1	N/A	N/A	Lateral
81	M107	C-Framing	1.697	Lbyy	2.1	2.1	N/A	N/A	Lateral
82	M108	C-Framing	8.602	Lbyy			N/A	N/A	Lateral
83	M109	C-Framing	1.697	Lbyy	2.1	2.1	N/A	N/A	Lateral
84	M110	C-Framing	1.697	Lbyy	2.1	2.1	N/A	N/A	Lateral
85	M111	C-Framing	8.602	Lbyy			N/A	N/A	Lateral
86	M112	C-Framing	1.697	Lbyy	2.1	2.1	N/A	N/A	Lateral
87	M113	C-Framing	1.697	Lbyy	2.1	2.1	N/A	N/A	Lateral
88	M114	C-Framing	8.602	Lbyy			N/A	N/A	Lateral
89	M115	C-Framing	1.697	Lbyy	2.1	2.1	N/A	N/A	Lateral
90	M124	PIPE 2.0	8	Lbyy			N/A	N/A	Lateral
91	MP4B	PIPE 2.0	8	Lbyy			N/A	N/A	Lateral
92	M126	Pipe to pipe	2	Lbyy			N/A	N/A	Lateral
93	M127	Pipe to pipe	2	Lbyy			N/A	N/A	Lateral
94	M128	V-Brace	5.876	Lbyy			N/A	N/A	Lateral
95	M129	V-Brace	5.876	Lbyy			N/A	N/A	Lateral
96	M130	V-Brace	5.82	Lbyy			N/A	N/A	Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length [ft]	Lcomp top [ft]	K y-y	K z-z	Channel Conn.	a [ft]	Function
97	M131	V-Brace	5.908	Lbyy			N/A	N/A	Lateral
98	M132	V-Brace	5.85	Lbyy			N/A	N/A	Lateral
99	M133	V-Brace	5.895	Lbyy			N/A	N/A	Lateral
100	MP2C	PIPE 2.0	8	Lbyy			N/A	N/A	Lateral
101	M137	Tieback	2.972	Lbyy			N/A	N/A	Lateral
102	M139	Dish Tieback	6.251	Lbyy			N/A	N/A	Lateral

Cold Formed Steel Design Parameters

No Data to Print...									
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Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	Y	-25	3.5
2	MP5C	My	-0.019	3.5
3	MP5C	Mz	-0.016	3.5
4	MP6C	Y	-32	1
5	MP6C	My	0	1
6	MP6C	Mz	0	1
7	MP7C	Y	-32	1.75
8	MP7C	My	0	1.75
9	MP7C	Mz	0	1.75
10	MP2A	Y	-55	2
11	MP2A	My	-0.041	2
12	MP2A	Mz	0	2
13	MP2A	Y	-55	4
14	MP2A	My	-0.041	4
15	MP2A	Mz	0	4
16	MP3B	Y	-55	2
17	MP3B	My	0.027	2
18	MP3B	Mz	-0.032	2
19	MP3B	Y	-55	4
20	MP3B	My	0.027	4
21	MP3B	Mz	-0.032	4
22	MP3C	Y	-55	2
23	MP3C	My	0.004	2
24	MP3C	Mz	0.041	2
25	MP3C	Y	-55	4
26	MP3C	My	0.004	4
27	MP3C	Mz	0.041	4
28	MP5B	Y	-55	2
29	MP5B	My	0.041	2
30	MP5B	Mz	0.007	2
31	MP5B	Y	-55	4
32	MP5B	My	0.041	4
33	MP5B	Mz	0.007	4
34	MP1C	Y	-35.5	2
35	MP1C	My	0.026	2
36	MP1C	Mz	0.005	2
37	MP1C	Y	-35.5	3
38	MP1C	My	0.026	3
39	MP1C	Mz	0.005	3
40	MP2B	Y	-35.5	2
41	MP2B	My	0.017	2
42	MP2B	Mz	-0.02	2

Member Point Loads (BLC 1 : Antenna D) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
43	MP2B	Y	-35.5	3
44	MP2B	My	0.017	3
45	MP2B	Mz	-0.02	3
46	MP3A	Y	-35.5	2
47	MP3A	My	-0.027	2
48	MP3A	Mz	0	2
49	MP3A	Y	-35.5	3
50	MP3A	My	-0.027	3
51	MP3A	Mz	0	3
52	MP4C	Y	-35.5	2
53	MP4C	My	0.002	2
54	MP4C	Mz	0.027	2
55	MP4C	Y	-35.5	3
56	MP4C	My	0.002	3
57	MP4C	Mz	0.027	3
58	MP1A	Y	-53.7	1
59	MP1A	My	-0.04	1
60	MP1A	Mz	0	1
61	MP1A	Y	-53.7	7
62	MP1A	My	-0.04	7
63	MP1A	Mz	0	7
64	MP1B	Y	-53.7	1
65	MP1B	My	0.026	1
66	MP1B	Mz	-0.031	1
67	MP1B	Y	-53.7	7
68	MP1B	My	0.026	7
69	MP1B	Mz	-0.031	7
70	MP2C	Y	-53.7	1
71	MP2C	My	0.004	1
72	MP2C	Mz	0.04	1
73	MP2C	Y	-53.7	7
74	MP2C	My	0.004	7
75	MP2C	Mz	0.04	7
76	MP4B	Y	-53.7	1
77	MP4B	My	0.04	1
78	MP4B	Mz	0.007	1
79	MP4B	Y	-53.7	7
80	MP4B	My	0.04	7
81	MP4B	Mz	0.007	7
82	MP1A	Y	-68.4	1
83	MP1A	My	0.026	1
84	MP1A	Mz	0.022	1
85	MP1B	Y	-68.4	1
86	MP1B	My	0.026	1
87	MP1B	Mz	0.022	1
88	MP2C	Y	-68.4	1
89	MP2C	My	0.026	1
90	MP2C	Mz	0.022	1
91	MP4B	Y	-68.4	1
92	MP4B	My	0.026	1
93	MP4B	Mz	0.022	1

Member Point Loads (BLC 3 : Antenna Wo (0 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	0	3.5
2	MP5C	Z	-182.688	3.5
3	MP5C	Mx	0.117	3.5
4	MP6C	X	0	1
5	MP6C	Z	-155.589	1
6	MP6C	Mx	0	1
7	MP7C	X	0	1.75
8	MP7C	Z	-155.589	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	0	2
11	MP2A	Z	-158.039	2
12	MP2A	Mx	0	2
13	MP2A	X	0	4
14	MP2A	Z	-158.039	4
15	MP2A	Mx	0	4
16	MP3B	X	0	2
17	MP3B	Z	-109.3	2
18	MP3B	Mx	0.063	2
19	MP3B	X	0	4
20	MP3B	Z	-109.3	4
21	MP3B	Mx	0.063	4
22	MP3C	X	0	2
23	MP3C	Z	-75.615	2
24	MP3C	Mx	-0.056	2
25	MP3C	X	0	4
26	MP3C	Z	-75.615	4
27	MP3C	Mx	-0.056	4
28	MP5B	X	0	2
29	MP5B	Z	-155.535	2
30	MP5B	Mx	-0.02	2
31	MP5B	X	0	4
32	MP5B	Z	-155.535	4
33	MP5B	Mx	-0.02	4
34	MP1C	X	0	2
35	MP1C	Z	-73.644	2
36	MP1C	Mx	-0.01	2
37	MP1C	X	0	3
38	MP1C	Z	-73.644	3
39	MP1C	Mx	-0.01	3
40	MP2B	X	0	2
41	MP2B	Z	-52.832	2
42	MP2B	Mx	0.03	2
43	MP2B	X	0	3
44	MP2B	Z	-52.832	3
45	MP2B	Mx	0.03	3
46	MP3A	X	0	2
47	MP3A	Z	-74.771	2
48	MP3A	Mx	0	2
49	MP3A	X	0	3
50	MP3A	Z	-74.771	3
51	MP3A	Mx	0	3
52	MP4C	X	0	2
53	MP4C	Z	-37.67	2
54	MP4C	Mx	-0.028	2
55	MP4C	X	0	3

Member Point Loads (BLC 3 : Antenna Wo (0 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP4C	Z	-37.67	3
57	MP4C	Mx	-0.028	3
58	MP1A	X	0	1
59	MP1A	Z	-222.615	1
60	MP1A	Mx	0	1
61	MP1A	X	0	7
62	MP1A	Z	-222.615	7
63	MP1A	Mx	0	7
64	MP1B	X	0	1
65	MP1B	Z	-125.635	1
66	MP1B	Mx	0.072	1
67	MP1B	X	0	7
68	MP1B	Z	-125.635	7
69	MP1B	Mx	0.072	7
70	MP2C	X	0	1
71	MP2C	Z	-58.608	1
72	MP2C	Mx	-0.044	1
73	MP2C	X	0	7
74	MP2C	Z	-58.608	7
75	MP2C	Mx	-0.044	7
76	MP4B	X	0	1
77	MP4B	Z	-217.631	1
78	MP4B	Mx	-0.028	1
79	MP4B	X	0	7
80	MP4B	Z	-217.631	7
81	MP4B	Mx	-0.028	7
82	MP1A	X	0	1
83	MP1A	Z	-78.717	1
84	MP1A	Mx	-0.025	1
85	MP1B	X	0	1
86	MP1B	Z	-78.717	1
87	MP1B	Mx	-0.025	1
88	MP2C	X	0	1
89	MP2C	Z	-78.717	1
90	MP2C	Mx	-0.025	1
91	MP4B	X	0	1
92	MP4B	Z	-78.717	1
93	MP4B	Mx	-0.025	1

Member Point Loads (BLC 4 : Antenna Wo (30 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	78.869	3.5
2	MP5C	Z	-136.605	3.5
3	MP5C	Mx	0.027	3.5
4	MP6C	X	85.625	1
5	MP6C	Z	-148.308	1
6	MP6C	Mx	0	1
7	MP7C	X	85.625	1.75
8	MP7C	Z	-148.308	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	68.638	2
11	MP2A	Z	-118.884	2
12	MP2A	Mx	-0.051	2
13	MP2A	X	68.638	4
14	MP2A	Z	-118.884	4

Member Point Loads (BLC 4 : Antenna Wo (30 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
15	MP2A	Mx	-0.051	4
16	MP3B	X	38.744	2
17	MP3B	Z	-67.107	2
18	MP3B	Mx	0.057	2
19	MP3B	X	38.744	4
20	MP3B	Z	-67.107	4
21	MP3B	Mx	0.057	4
22	MP3C	X	51.154	2
23	MP3C	Z	-88.601	2
24	MP3C	Mx	-0.063	2
25	MP3C	X	51.154	4
26	MP3C	Z	-88.601	4
27	MP3C	Mx	-0.063	4
28	MP5B	X	74.162	2
29	MP5B	Z	-128.452	2
30	MP5B	Mx	0.038	2
31	MP5B	X	74.162	4
32	MP5B	Z	-128.452	4
33	MP5B	Mx	0.038	4
34	MP1C	X	35.199	2
35	MP1C	Z	-60.966	2
36	MP1C	Mx	0.018	2
37	MP1C	X	35.199	3
38	MP1C	Z	-60.966	3
39	MP1C	Mx	0.018	3
40	MP2B	X	19.256	2
41	MP2B	Z	-33.353	2
42	MP2B	Mx	0.028	2
43	MP2B	X	19.256	3
44	MP2B	Z	-33.353	3
45	MP2B	Mx	0.028	3
46	MP3A	X	32.712	2
47	MP3A	Z	-56.66	2
48	MP3A	Mx	-0.025	2
49	MP3A	X	32.712	3
50	MP3A	Z	-56.66	3
51	MP3A	Mx	-0.025	3
52	MP4C	X	24.843	2
53	MP4C	Z	-43.029	2
54	MP4C	Mx	-0.031	2
55	MP4C	X	24.843	3
56	MP4C	Z	-43.029	3
57	MP4C	Mx	-0.031	3
58	MP1A	X	90.65	1
59	MP1A	Z	-157.01	1
60	MP1A	Mx	-0.068	1
61	MP1A	X	90.65	7
62	MP1A	Z	-157.01	7
63	MP1A	Mx	-0.068	7
64	MP1B	X	31.168	1
65	MP1B	Z	-53.985	1
66	MP1B	Mx	0.046	1
67	MP1B	X	31.168	7
68	MP1B	Z	-53.985	7
69	MP1B	Mx	0.046	7

Member Point Loads (BLC 4 : Antenna Wo (30 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
70	MP2C	X	55.861	1
71	MP2C	Z	-96.754	1
72	MP2C	Mx	-0.069	1
73	MP2C	X	55.861	7
74	MP2C	Z	-96.754	7
75	MP2C	Mx	-0.069	7
76	MP4B	X	101.641	1
77	MP4B	Z	-176.048	1
78	MP4B	Mx	0.052	1
79	MP4B	X	101.641	7
80	MP4B	Z	-176.048	7
81	MP4B	Mx	0.052	7
82	MP1A	X	49.935	1
83	MP1A	Z	-86.491	1
84	MP1A	Mx	-0.009	1
85	MP1B	X	49.935	1
86	MP1B	Z	-86.491	1
87	MP1B	Mx	-0.009	1
88	MP2C	X	49.935	1
89	MP2C	Z	-86.491	1
90	MP2C	Mx	-0.009	1
91	MP4B	X	49.935	1
92	MP4B	Z	-86.491	1
93	MP4B	Mx	-0.009	1

Member Point Loads (BLC 5 : Antenna Wo (60 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	141.503	3.5
2	MP5C	Z	-81.697	3.5
3	MP5C	Mx	-0.056	3.5
4	MP6C	X	145.233	1
5	MP6C	Z	-83.85	1
6	MP6C	Mx	0	1
7	MP7C	X	145.233	1.75
8	MP7C	Z	-83.85	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	82.92	2
11	MP2A	Z	-47.874	2
12	MP2A	Mx	-0.062	2
13	MP2A	X	82.92	4
14	MP2A	Z	-47.874	4
15	MP2A	Mx	-0.062	4
16	MP3B	X	73.352	2
17	MP3B	Z	-42.35	2
18	MP3B	Mx	0.06	2
19	MP3B	X	73.352	4
20	MP3B	Z	-42.35	4
21	MP3B	Mx	0.06	4
22	MP3C	X	124.019	2
23	MP3C	Z	-71.603	2
24	MP3C	Mx	-0.045	2
25	MP3C	X	124.019	4
26	MP3C	Z	-71.603	4
27	MP3C	Mx	-0.045	4
28	MP5B	X	94.657	2

Member Point Loads (BLC 5 : Antenna Wo (60 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
29	MP5B	Z	-54.65	2
30	MP5B	Mx	0.063	2
31	MP5B	X	94.657	4
32	MP5B	Z	-54.65	4
33	MP5B	Mx	0.063	4
34	MP1C	X	45.754	2
35	MP1C	Z	-26.416	2
36	MP1C	Mx	0.03	2
37	MP1C	X	45.754	3
38	MP1C	Z	-26.416	3
39	MP1C	Mx	0.03	3
40	MP2B	X	36.164	2
41	MP2B	Z	-20.879	2
42	MP2B	Mx	0.029	2
43	MP2B	X	36.164	3
44	MP2B	Z	-20.879	3
45	MP2B	Mx	0.029	3
46	MP3A	X	40.471	2
47	MP3A	Z	-23.366	2
48	MP3A	Mx	-0.03	2
49	MP3A	X	40.471	3
50	MP3A	Z	-23.366	3
51	MP3A	Mx	-0.03	3
52	MP4C	X	58.971	2
53	MP4C	Z	-34.047	2
54	MP4C	Mx	-0.022	2
55	MP4C	X	58.971	3
56	MP4C	Z	-34.047	3
57	MP4C	Mx	-0.022	3
58	MP1A	X	85.449	1
59	MP1A	Z	-49.334	1
60	MP1A	Mx	-0.064	1
61	MP1A	X	85.449	7
62	MP1A	Z	-49.334	7
63	MP1A	Mx	-0.064	7
64	MP1B	X	66.411	1
65	MP1B	Z	-38.342	1
66	MP1B	Mx	0.054	1
67	MP1B	X	66.411	7
68	MP1B	Z	-38.342	7
69	MP1B	Mx	0.054	7
70	MP2C	X	167.228	1
71	MP2C	Z	-96.549	1
72	MP2C	Mx	-0.061	1
73	MP2C	X	167.228	7
74	MP2C	Z	-96.549	7
75	MP2C	Mx	-0.061	7
76	MP4B	X	108.803	1
77	MP4B	Z	-62.818	1
78	MP4B	Mx	0.072	1
79	MP4B	X	108.803	7
80	MP4B	Z	-62.818	7
81	MP4B	Mx	0.072	7
82	MP1A	X	82.338	1
83	MP1A	Z	-47.538	1

Member Point Loads (BLC 5 : Antenna Wo (60 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
84	MP1A	Mx	0.016	1
85	MP1B	X	82.338	1
86	MP1B	Z	-47.538	1
87	MP1B	Mx	0.016	1
88	MP2C	X	82.338	1
89	MP2C	Z	-47.538	1
90	MP2C	Mx	0.016	1
91	MP4B	X	82.338	1
92	MP4B	Z	-47.538	1
93	MP4B	Mx	0.016	1

Member Point Loads (BLC 6 : Antenna Wo (90 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	194	3.5
2	MP5C	Z	0	3.5
3	MP5C	Mx	-0.149	3.5
4	MP6C	X	148.488	1
5	MP6C	Z	0	1
6	MP6C	Mx	0	1
7	MP7C	X	148.488	1.75
8	MP7C	Z	0	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	74.984	2
11	MP2A	Z	0	2
12	MP2A	Mx	-0.056	2
13	MP2A	X	74.984	4
14	MP2A	Z	0	4
15	MP2A	Mx	-0.056	4
16	MP3B	X	123.723	2
17	MP3B	Z	0	2
18	MP3B	Mx	0.06	2
19	MP3B	X	123.723	4
20	MP3B	Z	0	4
21	MP3B	Mx	0.06	4
22	MP3C	X	157.408	2
23	MP3C	Z	0	2
24	MP3C	Mx	0.01	2
25	MP3C	X	157.408	4
26	MP3C	Z	0	4
27	MP3C	Mx	0.01	4
28	MP5B	X	77.488	2
29	MP5B	Z	0	2
30	MP5B	Mx	0.057	2
31	MP5B	X	77.488	4
32	MP5B	Z	0	4
33	MP5B	Mx	0.057	4
34	MP1C	X	38.513	2
35	MP1C	Z	0	2
36	MP1C	Mx	0.028	2
37	MP1C	X	38.513	3
38	MP1C	Z	0	3
39	MP1C	Mx	0.028	3
40	MP2B	X	59.324	2
41	MP2B	Z	0	2
42	MP2B	Mx	0.029	2

Member Point Loads (BLC 6 : Antenna Wo (90 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
43	MP2B	X	59.324	3
44	MP2B	Z	0	3
45	MP2B	Mx	0.029	3
46	MP3A	X	37.386	2
47	MP3A	Z	0	2
48	MP3A	Mx	-0.028	2
49	MP3A	X	37.386	3
50	MP3A	Z	0	3
51	MP3A	Mx	-0.028	3
52	MP4C	X	74.487	2
53	MP4C	Z	0	2
54	MP4C	Mx	0.005	2
55	MP4C	X	74.487	3
56	MP4C	Z	0	3
57	MP4C	Mx	0.005	3
58	MP1A	X	57.353	1
59	MP1A	Z	0	1
60	MP1A	Mx	-0.043	1
61	MP1A	X	57.353	7
62	MP1A	Z	0	7
63	MP1A	Mx	-0.043	7
64	MP1B	X	154.332	1
65	MP1B	Z	0	1
66	MP1B	Mx	0.074	1
67	MP1B	X	154.332	7
68	MP1B	Z	0	7
69	MP1B	Mx	0.074	7
70	MP2C	X	221.359	1
71	MP2C	Z	0	1
72	MP2C	Mx	0.014	1
73	MP2C	X	221.359	7
74	MP2C	Z	0	7
75	MP2C	Mx	0.014	7
76	MP4B	X	62.336	1
77	MP4B	Z	0	1
78	MP4B	Mx	0.046	1
79	MP4B	X	62.336	7
80	MP4B	Z	0	7
81	MP4B	Mx	0.046	7
82	MP1A	X	69.126	1
83	MP1A	Z	0	1
84	MP1A	Mx	0.026	1
85	MP1B	X	69.126	1
86	MP1B	Z	0	1
87	MP1B	Mx	0.026	1
88	MP2C	X	69.126	1
89	MP2C	Z	0	1
90	MP2C	Mx	0.026	1
91	MP4B	X	69.126	1
92	MP4B	Z	0	1
93	MP4B	Mx	0.026	1

Member Point Loads (BLC 7 : Antenna Wo (120 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	189.617	3.5
2	MP5C	Z	109.475	3.5
3	MP5C	Mx	-0.216	3.5
4	MP6C	X	115.031	1
5	MP6C	Z	66.413	1
6	MP6C	Mx	0	1
7	MP7C	X	115.031	1.75
8	MP7C	Z	66.413	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	82.92	2
11	MP2A	Z	47.874	2
12	MP2A	Mx	-0.062	2
13	MP2A	X	82.92	4
14	MP2A	Z	47.874	4
15	MP2A	Mx	-0.062	4
16	MP3B	X	134.697	2
17	MP3B	Z	77.767	2
18	MP3B	Mx	0.02	2
19	MP3B	X	134.697	4
20	MP3B	Z	77.767	4
21	MP3B	Mx	0.02	4
22	MP3C	X	113.202	2
23	MP3C	Z	65.357	2
24	MP3C	Mx	0.056	2
25	MP3C	X	113.202	4
26	MP3C	Z	65.357	4
27	MP3C	Mx	0.056	4
28	MP5B	X	73.352	2
29	MP5B	Z	42.35	2
30	MP5B	Mx	0.06	2
31	MP5B	X	73.352	4
32	MP5B	Z	42.35	4
33	MP5B	Mx	0.06	4
34	MP1C	X	36.164	2
35	MP1C	Z	20.879	2
36	MP1C	Mx	0.029	2
37	MP1C	X	36.164	3
38	MP1C	Z	20.879	3
39	MP1C	Mx	0.029	3
40	MP2B	X	63.778	2
41	MP2B	Z	36.822	2
42	MP2B	Mx	0.01	2
43	MP2B	X	63.778	3
44	MP2B	Z	36.822	3
45	MP2B	Mx	0.01	3
46	MP3A	X	40.471	2
47	MP3A	Z	23.366	2
48	MP3A	Mx	-0.03	2
49	MP3A	X	40.471	3
50	MP3A	Z	23.366	3
51	MP3A	Mx	-0.03	3
52	MP4C	X	54.102	2
53	MP4C	Z	31.236	2
54	MP4C	Mx	0.027	2
55	MP4C	X	54.102	3

Member Point Loads (BLC 7 : Antenna Wo (120 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP4C	Z	31.236	3
57	MP4C	Mx	0.027	3
58	MP1A	X	85.449	1
59	MP1A	Z	49.334	1
60	MP1A	Mx	-0.064	1
61	MP1A	X	85.449	7
62	MP1A	Z	49.334	7
63	MP1A	Mx	-0.064	7
64	MP1B	X	188.474	1
65	MP1B	Z	108.816	1
66	MP1B	Mx	0.028	1
67	MP1B	X	188.474	7
68	MP1B	Z	108.816	7
69	MP1B	Mx	0.028	7
70	MP2C	X	145.705	1
71	MP2C	Z	84.123	1
72	MP2C	Mx	0.072	1
73	MP2C	X	145.705	7
74	MP2C	Z	84.123	7
75	MP2C	Mx	0.072	7
76	MP4B	X	66.411	1
77	MP4B	Z	38.342	1
78	MP4B	Mx	0.054	1
79	MP4B	X	66.411	7
80	MP4B	Z	38.342	7
81	MP4B	Mx	0.054	7
82	MP1A	X	41.545	1
83	MP1A	Z	23.986	1
84	MP1A	Mx	0.024	1
85	MP1B	X	41.545	1
86	MP1B	Z	23.986	1
87	MP1B	Mx	0.024	1
88	MP2C	X	41.545	1
89	MP2C	Z	23.986	1
90	MP2C	Mx	0.024	1
91	MP4B	X	41.545	1
92	MP4B	Z	23.986	1
93	MP4B	Mx	0.024	1

Member Point Loads (BLC 8 : Antenna Wo (150 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	106.648	3.5
2	MP5C	Z	184.719	3.5
3	MP5C	Mx	-0.2	3.5
4	MP6C	X	68.188	1
5	MP6C	Z	118.106	1
6	MP6C	Mx	0	1
7	MP7C	X	68.188	1.75
8	MP7C	Z	118.106	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	68.638	2
11	MP2A	Z	118.884	2
12	MP2A	Mx	-0.051	2
13	MP2A	X	68.638	4
14	MP2A	Z	118.884	4

Member Point Loads (BLC 8 : Antenna Wo (150 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
15	MP2A	Mx	-0.051	4
16	MP3B	X	74.162	2
17	MP3B	Z	128.452	2
18	MP3B	Mx	-0.038	2
19	MP3B	X	74.162	4
20	MP3B	Z	128.452	4
21	MP3B	Mx	-0.038	4
22	MP3C	X	44.909	2
23	MP3C	Z	77.785	2
24	MP3C	Mx	0.061	2
25	MP3C	X	44.909	4
26	MP3C	Z	77.785	4
27	MP3C	Mx	0.061	4
28	MP5B	X	61.861	2
29	MP5B	Z	107.147	2
30	MP5B	Mx	0.06	2
31	MP5B	X	61.861	4
32	MP5B	Z	107.147	4
33	MP5B	Mx	0.06	4
34	MP1C	X	29.662	2
35	MP1C	Z	51.376	2
36	MP1C	Mx	0.029	2
37	MP1C	X	29.662	3
38	MP1C	Z	51.376	3
39	MP1C	Mx	0.029	3
40	MP2B	X	35.199	2
41	MP2B	Z	60.966	2
42	MP2B	Mx	-0.018	2
43	MP2B	X	35.199	3
44	MP2B	Z	60.966	3
45	MP2B	Mx	-0.018	3
46	MP3A	X	32.712	2
47	MP3A	Z	56.66	2
48	MP3A	Mx	-0.025	2
49	MP3A	X	32.712	3
50	MP3A	Z	56.66	3
51	MP3A	Mx	-0.025	3
52	MP4C	X	22.031	2
53	MP4C	Z	38.16	2
54	MP4C	Mx	0.03	2
55	MP4C	X	22.031	3
56	MP4C	Z	38.16	3
57	MP4C	Mx	0.03	3
58	MP1A	X	90.65	1
59	MP1A	Z	157.01	1
60	MP1A	Mx	-0.068	1
61	MP1A	X	90.65	7
62	MP1A	Z	157.01	7
63	MP1A	Mx	-0.068	7
64	MP1B	X	101.641	1
65	MP1B	Z	176.048	1
66	MP1B	Mx	-0.052	1
67	MP1B	X	101.641	7
68	MP1B	Z	176.048	7
69	MP1B	Mx	-0.052	7

Member Point Loads (BLC 8 : Antenna Wo (150 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
70	MP2C	X	43.435	1
71	MP2C	Z	75.231	1
72	MP2C	Mx	0.059	1
73	MP2C	X	43.435	7
74	MP2C	Z	75.231	7
75	MP2C	Mx	0.059	7
76	MP4B	X	77.166	1
77	MP4B	Z	133.656	1
78	MP4B	Mx	0.074	1
79	MP4B	X	77.166	7
80	MP4B	Z	133.656	7
81	MP4B	Mx	0.074	7
82	MP1A	X	26.384	1
83	MP1A	Z	45.698	1
84	MP1A	Mx	0.025	1
85	MP1B	X	26.384	1
86	MP1B	Z	45.698	1
87	MP1B	Mx	0.025	1
88	MP2C	X	26.384	1
89	MP2C	Z	45.698	1
90	MP2C	Mx	0.025	1
91	MP4B	X	26.384	1
92	MP4B	Z	45.698	1
93	MP4B	Mx	0.025	1

Member Point Loads (BLC 9 : Antenna Wo (180 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	0	3.5
2	MP5C	Z	182.688	3.5
3	MP5C	Mx	-0.117	3.5
4	MP6C	X	0	1
5	MP6C	Z	155.589	1
6	MP6C	Mx	0	1
7	MP7C	X	0	1.75
8	MP7C	Z	155.589	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	0	2
11	MP2A	Z	158.039	2
12	MP2A	Mx	0	2
13	MP2A	X	0	4
14	MP2A	Z	158.039	4
15	MP2A	Mx	0	4
16	MP3B	X	0	2
17	MP3B	Z	109.3	2
18	MP3B	Mx	-0.063	2
19	MP3B	X	0	4
20	MP3B	Z	109.3	4
21	MP3B	Mx	-0.063	4
22	MP3C	X	0	2
23	MP3C	Z	75.615	2
24	MP3C	Mx	0.056	2
25	MP3C	X	0	4
26	MP3C	Z	75.615	4
27	MP3C	Mx	0.056	4
28	MP5B	X	0	2

Member Point Loads (BLC 9 : Antenna Wo (180 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
29	MP5B	Z	155.535	2
30	MP5B	Mx	0.02	2
31	MP5B	X	0	4
32	MP5B	Z	155.535	4
33	MP5B	Mx	0.02	4
34	MP1C	X	0	2
35	MP1C	Z	73.644	2
36	MP1C	Mx	0.01	2
37	MP1C	X	0	3
38	MP1C	Z	73.644	3
39	MP1C	Mx	0.01	3
40	MP2B	X	0	2
41	MP2B	Z	52.832	2
42	MP2B	Mx	-0.03	2
43	MP2B	X	0	3
44	MP2B	Z	52.832	3
45	MP2B	Mx	-0.03	3
46	MP3A	X	0	2
47	MP3A	Z	74.771	2
48	MP3A	Mx	0	2
49	MP3A	X	0	3
50	MP3A	Z	74.771	3
51	MP3A	Mx	0	3
52	MP4C	X	0	2
53	MP4C	Z	37.67	2
54	MP4C	Mx	0.028	2
55	MP4C	X	0	3
56	MP4C	Z	37.67	3
57	MP4C	Mx	0.028	3
58	MP1A	X	0	1
59	MP1A	Z	222.615	1
60	MP1A	Mx	0	1
61	MP1A	X	0	7
62	MP1A	Z	222.615	7
63	MP1A	Mx	0	7
64	MP1B	X	0	1
65	MP1B	Z	125.635	1
66	MP1B	Mx	-0.072	1
67	MP1B	X	0	7
68	MP1B	Z	125.635	7
69	MP1B	Mx	-0.072	7
70	MP2C	X	0	1
71	MP2C	Z	58.608	1
72	MP2C	Mx	0.044	1
73	MP2C	X	0	7
74	MP2C	Z	58.608	7
75	MP2C	Mx	0.044	7
76	MP4B	X	0	1
77	MP4B	Z	217.631	1
78	MP4B	Mx	0.028	1
79	MP4B	X	0	7
80	MP4B	Z	217.631	7
81	MP4B	Mx	0.028	7
82	MP1A	X	0	1
83	MP1A	Z	78.717	1

Member Point Loads (BLC 9 : Antenna Wo (180 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
84	MP1A	Mx	0.025	1
85	MP1B	X	0	1
86	MP1B	Z	78.717	1
87	MP1B	Mx	0.025	1
88	MP2C	X	0	1
89	MP2C	Z	78.717	1
90	MP2C	Mx	0.025	1
91	MP4B	X	0	1
92	MP4B	Z	78.717	1
93	MP4B	Mx	0.025	1

Member Point Loads (BLC 10 : Antenna Wo (210 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	-78.869	3.5
2	MP5C	Z	136.605	3.5
3	MP5C	Mx	-0.027	3.5
4	MP6C	X	-85.625	1
5	MP6C	Z	148.308	1
6	MP6C	Mx	0	1
7	MP7C	X	-85.625	1.75
8	MP7C	Z	148.308	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	-68.638	2
11	MP2A	Z	118.884	2
12	MP2A	Mx	0.051	2
13	MP2A	X	-68.638	4
14	MP2A	Z	118.884	4
15	MP2A	Mx	0.051	4
16	MP3B	X	-38.744	2
17	MP3B	Z	67.107	2
18	MP3B	Mx	-0.057	2
19	MP3B	X	-38.744	4
20	MP3B	Z	67.107	4
21	MP3B	Mx	-0.057	4
22	MP3C	X	-51.154	2
23	MP3C	Z	88.601	2
24	MP3C	Mx	0.063	2
25	MP3C	X	-51.154	4
26	MP3C	Z	88.601	4
27	MP3C	Mx	0.063	4
28	MP5B	X	-74.162	2
29	MP5B	Z	128.452	2
30	MP5B	Mx	-0.038	2
31	MP5B	X	-74.162	4
32	MP5B	Z	128.452	4
33	MP5B	Mx	-0.038	4
34	MP1C	X	-35.199	2
35	MP1C	Z	60.966	2
36	MP1C	Mx	-0.018	2
37	MP1C	X	-35.199	3
38	MP1C	Z	60.966	3
39	MP1C	Mx	-0.018	3
40	MP2B	X	-19.256	2
41	MP2B	Z	33.353	2
42	MP2B	Mx	-0.028	2

Member Point Loads (BLC 10 : Antenna Wo (210 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
43	MP2B	X	-19.256	3
44	MP2B	Z	33.353	3
45	MP2B	Mx	-0.028	3
46	MP3A	X	-32.712	2
47	MP3A	Z	56.66	2
48	MP3A	Mx	0.025	2
49	MP3A	X	-32.712	3
50	MP3A	Z	56.66	3
51	MP3A	Mx	0.025	3
52	MP4C	X	-24.843	2
53	MP4C	Z	43.029	2
54	MP4C	Mx	0.031	2
55	MP4C	X	-24.843	3
56	MP4C	Z	43.029	3
57	MP4C	Mx	0.031	3
58	MP1A	X	-90.65	1
59	MP1A	Z	157.01	1
60	MP1A	Mx	0.068	1
61	MP1A	X	-90.65	7
62	MP1A	Z	157.01	7
63	MP1A	Mx	0.068	7
64	MP1B	X	-31.168	1
65	MP1B	Z	53.985	1
66	MP1B	Mx	-0.046	1
67	MP1B	X	-31.168	7
68	MP1B	Z	53.985	7
69	MP1B	Mx	-0.046	7
70	MP2C	X	-55.861	1
71	MP2C	Z	96.754	1
72	MP2C	Mx	0.069	1
73	MP2C	X	-55.861	7
74	MP2C	Z	96.754	7
75	MP2C	Mx	0.069	7
76	MP4B	X	-101.641	1
77	MP4B	Z	176.048	1
78	MP4B	Mx	-0.052	1
79	MP4B	X	-101.641	7
80	MP4B	Z	176.048	7
81	MP4B	Mx	-0.052	7
82	MP1A	X	-49.935	1
83	MP1A	Z	86.491	1
84	MP1A	Mx	0.009	1
85	MP1B	X	-49.935	1
86	MP1B	Z	86.491	1
87	MP1B	Mx	0.009	1
88	MP2C	X	-49.935	1
89	MP2C	Z	86.491	1
90	MP2C	Mx	0.009	1
91	MP4B	X	-49.935	1
92	MP4B	Z	86.491	1
93	MP4B	Mx	0.009	1

Member Point Loads (BLC 11 : Antenna Wo (240 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	-141.503	3.5
2	MP5C	Z	81.697	3.5
3	MP5C	Mx	0.056	3.5
4	MP6C	X	-145.233	1
5	MP6C	Z	83.85	1
6	MP6C	Mx	0	1
7	MP7C	X	-145.233	1.75
8	MP7C	Z	83.85	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	-82.92	2
11	MP2A	Z	47.874	2
12	MP2A	Mx	0.062	2
13	MP2A	X	-82.92	4
14	MP2A	Z	47.874	4
15	MP2A	Mx	0.062	4
16	MP3B	X	-73.352	2
17	MP3B	Z	42.35	2
18	MP3B	Mx	-0.06	2
19	MP3B	X	-73.352	4
20	MP3B	Z	42.35	4
21	MP3B	Mx	-0.06	4
22	MP3C	X	-124.019	2
23	MP3C	Z	71.603	2
24	MP3C	Mx	0.045	2
25	MP3C	X	-124.019	4
26	MP3C	Z	71.603	4
27	MP3C	Mx	0.045	4
28	MP5B	X	-94.657	2
29	MP5B	Z	54.65	2
30	MP5B	Mx	-0.063	2
31	MP5B	X	-94.657	4
32	MP5B	Z	54.65	4
33	MP5B	Mx	-0.063	4
34	MP1C	X	-45.754	2
35	MP1C	Z	26.416	2
36	MP1C	Mx	-0.03	2
37	MP1C	X	-45.754	3
38	MP1C	Z	26.416	3
39	MP1C	Mx	-0.03	3
40	MP2B	X	-36.164	2
41	MP2B	Z	20.879	2
42	MP2B	Mx	-0.029	2
43	MP2B	X	-36.164	3
44	MP2B	Z	20.879	3
45	MP2B	Mx	-0.029	3
46	MP3A	X	-40.471	2
47	MP3A	Z	23.366	2
48	MP3A	Mx	0.03	2
49	MP3A	X	-40.471	3
50	MP3A	Z	23.366	3
51	MP3A	Mx	0.03	3
52	MP4C	X	-58.971	2
53	MP4C	Z	34.047	2
54	MP4C	Mx	0.022	2
55	MP4C	X	-58.971	3

Member Point Loads (BLC 11 : Antenna Wo (240 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP4C	Z	34.047	3
57	MP4C	Mx	0.022	3
58	MP1A	X	-85.449	1
59	MP1A	Z	49.334	1
60	MP1A	Mx	0.064	1
61	MP1A	X	-85.449	7
62	MP1A	Z	49.334	7
63	MP1A	Mx	0.064	7
64	MP1B	X	-66.411	1
65	MP1B	Z	38.342	1
66	MP1B	Mx	-0.054	1
67	MP1B	X	-66.411	7
68	MP1B	Z	38.342	7
69	MP1B	Mx	-0.054	7
70	MP2C	X	-167.228	1
71	MP2C	Z	96.549	1
72	MP2C	Mx	0.061	1
73	MP2C	X	-167.228	7
74	MP2C	Z	96.549	7
75	MP2C	Mx	0.061	7
76	MP4B	X	-108.803	1
77	MP4B	Z	62.818	1
78	MP4B	Mx	-0.072	1
79	MP4B	X	-108.803	7
80	MP4B	Z	62.818	7
81	MP4B	Mx	-0.072	7
82	MP1A	X	-82.338	1
83	MP1A	Z	47.538	1
84	MP1A	Mx	-0.016	1
85	MP1B	X	-82.338	1
86	MP1B	Z	47.538	1
87	MP1B	Mx	-0.016	1
88	MP2C	X	-82.338	1
89	MP2C	Z	47.538	1
90	MP2C	Mx	-0.016	1
91	MP4B	X	-82.338	1
92	MP4B	Z	47.538	1
93	MP4B	Mx	-0.016	1

Member Point Loads (BLC 12 : Antenna Wo (270 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	-194	3.5
2	MP5C	Z	0	3.5
3	MP5C	Mx	0.149	3.5
4	MP6C	X	-148.488	1
5	MP6C	Z	0	1
6	MP6C	Mx	0	1
7	MP7C	X	-148.488	1.75
8	MP7C	Z	0	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	-74.984	2
11	MP2A	Z	0	2
12	MP2A	Mx	0.056	2
13	MP2A	X	-74.984	4
14	MP2A	Z	0	4

Member Point Loads (BLC 12 : Antenna Wo (270 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
15	MP2A	Mx	0.056	4
16	MP3B	X	-123.723	2
17	MP3B	Z	0	2
18	MP3B	Mx	-0.06	2
19	MP3B	X	-123.723	4
20	MP3B	Z	0	4
21	MP3B	Mx	-0.06	4
22	MP3C	X	-157.408	2
23	MP3C	Z	0	2
24	MP3C	Mx	-0.01	2
25	MP3C	X	-157.408	4
26	MP3C	Z	0	4
27	MP3C	Mx	-0.01	4
28	MP5B	X	-77.488	2
29	MP5B	Z	0	2
30	MP5B	Mx	-0.057	2
31	MP5B	X	-77.488	4
32	MP5B	Z	0	4
33	MP5B	Mx	-0.057	4
34	MP1C	X	-38.513	2
35	MP1C	Z	0	2
36	MP1C	Mx	-0.028	2
37	MP1C	X	-38.513	3
38	MP1C	Z	0	3
39	MP1C	Mx	-0.028	3
40	MP2B	X	-59.324	2
41	MP2B	Z	0	2
42	MP2B	Mx	-0.029	2
43	MP2B	X	-59.324	3
44	MP2B	Z	0	3
45	MP2B	Mx	-0.029	3
46	MP3A	X	-37.386	2
47	MP3A	Z	0	2
48	MP3A	Mx	0.028	2
49	MP3A	X	-37.386	3
50	MP3A	Z	0	3
51	MP3A	Mx	0.028	3
52	MP4C	X	-74.487	2
53	MP4C	Z	0	2
54	MP4C	Mx	-0.005	2
55	MP4C	X	-74.487	3
56	MP4C	Z	0	3
57	MP4C	Mx	-0.005	3
58	MP1A	X	-57.353	1
59	MP1A	Z	0	1
60	MP1A	Mx	0.043	1
61	MP1A	X	-57.353	7
62	MP1A	Z	0	7
63	MP1A	Mx	0.043	7
64	MP1B	X	-154.332	1
65	MP1B	Z	0	1
66	MP1B	Mx	-0.074	1
67	MP1B	X	-154.332	7
68	MP1B	Z	0	7
69	MP1B	Mx	-0.074	7

Member Point Loads (BLC 12 : Antenna Wo (270 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
70	MP2C	X	-221.359	1
71	MP2C	Z	0	1
72	MP2C	Mx	-0.014	1
73	MP2C	X	-221.359	7
74	MP2C	Z	0	7
75	MP2C	Mx	-0.014	7
76	MP4B	X	-62.336	1
77	MP4B	Z	0	1
78	MP4B	Mx	-0.046	1
79	MP4B	X	-62.336	7
80	MP4B	Z	0	7
81	MP4B	Mx	-0.046	7
82	MP1A	X	-69.126	1
83	MP1A	Z	0	1
84	MP1A	Mx	-0.026	1
85	MP1B	X	-69.126	1
86	MP1B	Z	0	1
87	MP1B	Mx	-0.026	1
88	MP2C	X	-69.126	1
89	MP2C	Z	0	1
90	MP2C	Mx	-0.026	1
91	MP4B	X	-69.126	1
92	MP4B	Z	0	1
93	MP4B	Mx	-0.026	1

Member Point Loads (BLC 13 : Antenna Wo (300 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	-189.617	3.5
2	MP5C	Z	-109.475	3.5
3	MP5C	Mx	0.216	3.5
4	MP6C	X	-115.031	1
5	MP6C	Z	-66.413	1
6	MP6C	Mx	0	1
7	MP7C	X	-115.031	1.75
8	MP7C	Z	-66.413	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	-82.92	2
11	MP2A	Z	-47.874	2
12	MP2A	Mx	0.062	2
13	MP2A	X	-82.92	4
14	MP2A	Z	-47.874	4
15	MP2A	Mx	0.062	4
16	MP3B	X	-134.697	2
17	MP3B	Z	-77.767	2
18	MP3B	Mx	-0.02	2
19	MP3B	X	-134.697	4
20	MP3B	Z	-77.767	4
21	MP3B	Mx	-0.02	4
22	MP3C	X	-113.202	2
23	MP3C	Z	-65.357	2
24	MP3C	Mx	-0.056	2
25	MP3C	X	-113.202	4
26	MP3C	Z	-65.357	4
27	MP3C	Mx	-0.056	4
28	MP5B	X	-73.352	2

Member Point Loads (BLC 13 : Antenna Wo (300 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
29	MP5B	Z	-42.35	2
30	MP5B	Mx	-0.06	2
31	MP5B	X	-73.352	4
32	MP5B	Z	-42.35	4
33	MP5B	Mx	-0.06	4
34	MP1C	X	-36.164	2
35	MP1C	Z	-20.879	2
36	MP1C	Mx	-0.029	2
37	MP1C	X	-36.164	3
38	MP1C	Z	-20.879	3
39	MP1C	Mx	-0.029	3
40	MP2B	X	-63.778	2
41	MP2B	Z	-36.822	2
42	MP2B	Mx	-0.01	2
43	MP2B	X	-63.778	3
44	MP2B	Z	-36.822	3
45	MP2B	Mx	-0.01	3
46	MP3A	X	-40.471	2
47	MP3A	Z	-23.366	2
48	MP3A	Mx	0.03	2
49	MP3A	X	-40.471	3
50	MP3A	Z	-23.366	3
51	MP3A	Mx	0.03	3
52	MP4C	X	-54.102	2
53	MP4C	Z	-31.236	2
54	MP4C	Mx	-0.027	2
55	MP4C	X	-54.102	3
56	MP4C	Z	-31.236	3
57	MP4C	Mx	-0.027	3
58	MP1A	X	-85.449	1
59	MP1A	Z	-49.334	1
60	MP1A	Mx	0.064	1
61	MP1A	X	-85.449	7
62	MP1A	Z	-49.334	7
63	MP1A	Mx	0.064	7
64	MP1B	X	-188.474	1
65	MP1B	Z	-108.816	1
66	MP1B	Mx	-0.028	1
67	MP1B	X	-188.474	7
68	MP1B	Z	-108.816	7
69	MP1B	Mx	-0.028	7
70	MP2C	X	-145.705	1
71	MP2C	Z	-84.123	1
72	MP2C	Mx	-0.072	1
73	MP2C	X	-145.705	7
74	MP2C	Z	-84.123	7
75	MP2C	Mx	-0.072	7
76	MP4B	X	-66.411	1
77	MP4B	Z	-38.342	1
78	MP4B	Mx	-0.054	1
79	MP4B	X	-66.411	7
80	MP4B	Z	-38.342	7
81	MP4B	Mx	-0.054	7
82	MP1A	X	-41.545	1
83	MP1A	Z	-23.986	1

Member Point Loads (BLC 13 : Antenna Wo (300 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
84	MP1A	Mx	-0.024	1
85	MP1B	X	-41.545	1
86	MP1B	Z	-23.986	1
87	MP1B	Mx	-0.024	1
88	MP2C	X	-41.545	1
89	MP2C	Z	-23.986	1
90	MP2C	Mx	-0.024	1
91	MP4B	X	-41.545	1
92	MP4B	Z	-23.986	1
93	MP4B	Mx	-0.024	1

Member Point Loads (BLC 14 : Antenna Wo (330 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	-106.648	3.5
2	MP5C	Z	-184.719	3.5
3	MP5C	Mx	0.2	3.5
4	MP6C	X	-68.188	1
5	MP6C	Z	-118.106	1
6	MP6C	Mx	0	1
7	MP7C	X	-68.188	1.75
8	MP7C	Z	-118.106	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	-68.638	2
11	MP2A	Z	-118.884	2
12	MP2A	Mx	0.051	2
13	MP2A	X	-68.638	4
14	MP2A	Z	-118.884	4
15	MP2A	Mx	0.051	4
16	MP3B	X	-74.162	2
17	MP3B	Z	-128.452	2
18	MP3B	Mx	0.038	2
19	MP3B	X	-74.162	4
20	MP3B	Z	-128.452	4
21	MP3B	Mx	0.038	4
22	MP3C	X	-44.909	2
23	MP3C	Z	-77.785	2
24	MP3C	Mx	-0.061	2
25	MP3C	X	-44.909	4
26	MP3C	Z	-77.785	4
27	MP3C	Mx	-0.061	4
28	MP5B	X	-61.861	2
29	MP5B	Z	-107.147	2
30	MP5B	Mx	-0.06	2
31	MP5B	X	-61.861	4
32	MP5B	Z	-107.147	4
33	MP5B	Mx	-0.06	4
34	MP1C	X	-29.662	2
35	MP1C	Z	-51.376	2
36	MP1C	Mx	-0.029	2
37	MP1C	X	-29.662	3
38	MP1C	Z	-51.376	3
39	MP1C	Mx	-0.029	3
40	MP2B	X	-35.199	2
41	MP2B	Z	-60.966	2
42	MP2B	Mx	0.018	2

Member Point Loads (BLC 14 : Antenna Wo (330 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
43	MP2B	X	-35.199	3
44	MP2B	Z	-60.966	3
45	MP2B	Mx	0.018	3
46	MP3A	X	-32.712	2
47	MP3A	Z	-56.66	2
48	MP3A	Mx	0.025	2
49	MP3A	X	-32.712	3
50	MP3A	Z	-56.66	3
51	MP3A	Mx	0.025	3
52	MP4C	X	-22.031	2
53	MP4C	Z	-38.16	2
54	MP4C	Mx	-0.03	2
55	MP4C	X	-22.031	3
56	MP4C	Z	-38.16	3
57	MP4C	Mx	-0.03	3
58	MP1A	X	-90.65	1
59	MP1A	Z	-157.01	1
60	MP1A	Mx	0.068	1
61	MP1A	X	-90.65	7
62	MP1A	Z	-157.01	7
63	MP1A	Mx	0.068	7
64	MP1B	X	-101.641	1
65	MP1B	Z	-176.048	1
66	MP1B	Mx	0.052	1
67	MP1B	X	-101.641	7
68	MP1B	Z	-176.048	7
69	MP1B	Mx	0.052	7
70	MP2C	X	-43.435	1
71	MP2C	Z	-75.231	1
72	MP2C	Mx	-0.059	1
73	MP2C	X	-43.435	7
74	MP2C	Z	-75.231	7
75	MP2C	Mx	-0.059	7
76	MP4B	X	-77.166	1
77	MP4B	Z	-133.656	1
78	MP4B	Mx	-0.074	1
79	MP4B	X	-77.166	7
80	MP4B	Z	-133.656	7
81	MP4B	Mx	-0.074	7
82	MP1A	X	-26.384	1
83	MP1A	Z	-45.698	1
84	MP1A	Mx	-0.025	1
85	MP1B	X	-26.384	1
86	MP1B	Z	-45.698	1
87	MP1B	Mx	-0.025	1
88	MP2C	X	-26.384	1
89	MP2C	Z	-45.698	1
90	MP2C	Mx	-0.025	1
91	MP4B	X	-26.384	1
92	MP4B	Z	-45.698	1
93	MP4B	Mx	-0.025	1

Member Point Loads (BLC 27 : Antenna Wm (0 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	0	3.5
2	MP5C	Z	-11.611	3.5
3	MP5C	Mx	0.007	3.5
4	MP6C	X	0	1
5	MP6C	Z	-9.888	1
6	MP6C	Mx	0	1
7	MP7C	X	0	1.75
8	MP7C	Z	-9.888	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	0	2
11	MP2A	Z	-10.044	2
12	MP2A	Mx	0	2
13	MP2A	X	0	4
14	MP2A	Z	-10.044	4
15	MP2A	Mx	0	4
16	MP3B	X	0	2
17	MP3B	Z	-6.947	2
18	MP3B	Mx	0.004	2
19	MP3B	X	0	4
20	MP3B	Z	-6.947	4
21	MP3B	Mx	0.004	4
22	MP3C	X	0	2
23	MP3C	Z	-4.806	2
24	MP3C	Mx	-0.004	2
25	MP3C	X	0	4
26	MP3C	Z	-4.806	4
27	MP3C	Mx	-0.004	4
28	MP5B	X	0	2
29	MP5B	Z	-9.885	2
30	MP5B	Mx	-0.001	2
31	MP5B	X	0	4
32	MP5B	Z	-9.885	4
33	MP5B	Mx	-0.001	4
34	MP1C	X	0	2
35	MP1C	Z	-4.68	2
36	MP1C	Mx	-0.00061	2
37	MP1C	X	0	3
38	MP1C	Z	-4.68	3
39	MP1C	Mx	-0.00061	3
40	MP2B	X	0	2
41	MP2B	Z	-3.358	2
42	MP2B	Mx	0.002	2
43	MP2B	X	0	3
44	MP2B	Z	-3.358	3
45	MP2B	Mx	0.002	3
46	MP3A	X	0	2
47	MP3A	Z	-4.752	2
48	MP3A	Mx	0	2
49	MP3A	X	0	3
50	MP3A	Z	-4.752	3
51	MP3A	Mx	0	3
52	MP4C	X	0	2
53	MP4C	Z	-2.394	2
54	MP4C	Mx	-0.002	2
55	MP4C	X	0	3

Member Point Loads (BLC 27 : Antenna Wm (0 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP4C	Z	-2.394	3
57	MP4C	Mx	-0.002	3
58	MP1A	X	0	1
59	MP1A	Z	-14.148	1
60	MP1A	Mx	0	1
61	MP1A	X	0	7
62	MP1A	Z	-14.148	7
63	MP1A	Mx	0	7
64	MP1B	X	0	1
65	MP1B	Z	-7.985	1
66	MP1B	Mx	0.005	1
67	MP1B	X	0	7
68	MP1B	Z	-7.985	7
69	MP1B	Mx	0.005	7
70	MP2C	X	0	1
71	MP2C	Z	-3.725	1
72	MP2C	Mx	-0.003	1
73	MP2C	X	0	7
74	MP2C	Z	-3.725	7
75	MP2C	Mx	-0.003	7
76	MP4B	X	0	1
77	MP4B	Z	-13.832	1
78	MP4B	Mx	-0.002	1
79	MP4B	X	0	7
80	MP4B	Z	-13.832	7
81	MP4B	Mx	-0.002	7
82	MP1A	X	0	1
83	MP1A	Z	-5.003	1
84	MP1A	Mx	-0.002	1
85	MP1B	X	0	1
86	MP1B	Z	-5.003	1
87	MP1B	Mx	-0.002	1
88	MP2C	X	0	1
89	MP2C	Z	-5.003	1
90	MP2C	Mx	-0.002	1
91	MP4B	X	0	1
92	MP4B	Z	-5.003	1
93	MP4B	Mx	-0.002	1

Member Point Loads (BLC 28 : Antenna Wm (30 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	5.012	3.5
2	MP5C	Z	-8.682	3.5
3	MP5C	Mx	0.002	3.5
4	MP6C	X	5.442	1
5	MP6C	Z	-9.426	1
6	MP6C	Mx	0	1
7	MP7C	X	5.442	1.75
8	MP7C	Z	-9.426	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	4.362	2
11	MP2A	Z	-7.556	2
12	MP2A	Mx	-0.003	2
13	MP2A	X	4.362	4
14	MP2A	Z	-7.556	4

Member Point Loads (BLC 28 : Antenna Wm (30 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
15	MP2A	Mx	-0.003	4
16	MP3B	X	2.462	2
17	MP3B	Z	-4.265	2
18	MP3B	Mx	0.004	2
19	MP3B	X	2.462	4
20	MP3B	Z	-4.265	4
21	MP3B	Mx	0.004	4
22	MP3C	X	3.251	2
23	MP3C	Z	-5.631	2
24	MP3C	Mx	-0.004	2
25	MP3C	X	3.251	4
26	MP3C	Z	-5.631	4
27	MP3C	Mx	-0.004	4
28	MP5B	X	4.713	2
29	MP5B	Z	-8.164	2
30	MP5B	Mx	0.002	2
31	MP5B	X	4.713	4
32	MP5B	Z	-8.164	4
33	MP5B	Mx	0.002	4
34	MP1C	X	2.237	2
35	MP1C	Z	-3.875	2
36	MP1C	Mx	0.001	2
37	MP1C	X	2.237	3
38	MP1C	Z	-3.875	3
39	MP1C	Mx	0.001	3
40	MP2B	X	1.224	2
41	MP2B	Z	-2.12	2
42	MP2B	Mx	0.002	2
43	MP2B	X	1.224	3
44	MP2B	Z	-2.12	3
45	MP2B	Mx	0.002	3
46	MP3A	X	2.079	2
47	MP3A	Z	-3.601	2
48	MP3A	Mx	-0.002	2
49	MP3A	X	2.079	3
50	MP3A	Z	-3.601	3
51	MP3A	Mx	-0.002	3
52	MP4C	X	1.579	2
53	MP4C	Z	-2.735	2
54	MP4C	Mx	-0.002	2
55	MP4C	X	1.579	3
56	MP4C	Z	-2.735	3
57	MP4C	Mx	-0.002	3
58	MP1A	X	5.761	1
59	MP1A	Z	-9.979	1
60	MP1A	Mx	-0.004	1
61	MP1A	X	5.761	7
62	MP1A	Z	-9.979	7
63	MP1A	Mx	-0.004	7
64	MP1B	X	1.981	1
65	MP1B	Z	-3.431	1
66	MP1B	Mx	0.003	1
67	MP1B	X	1.981	7
68	MP1B	Z	-3.431	7
69	MP1B	Mx	0.003	7

Member Point Loads (BLC 28 : Antenna Wm (30 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
70	MP2C	X	3.55	1
71	MP2C	Z	-6.149	1
72	MP2C	Mx	-0.004	1
73	MP2C	X	3.55	7
74	MP2C	Z	-6.149	7
75	MP2C	Mx	-0.004	7
76	MP4B	X	6.46	1
77	MP4B	Z	-11.189	1
78	MP4B	Mx	0.003	1
79	MP4B	X	6.46	7
80	MP4B	Z	-11.189	7
81	MP4B	Mx	0.003	7
82	MP1A	X	3.174	1
83	MP1A	Z	-5.497	1
84	MP1A	Mx	-0.000551	1
85	MP1B	X	3.174	1
86	MP1B	Z	-5.497	1
87	MP1B	Mx	-0.000551	1
88	MP2C	X	3.174	1
89	MP2C	Z	-5.497	1
90	MP2C	Mx	-0.000551	1
91	MP4B	X	3.174	1
92	MP4B	Z	-5.497	1
93	MP4B	Mx	-0.000551	1

Member Point Loads (BLC 29 : Antenna Wm (60 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	8.993	3.5
2	MP5C	Z	-5.192	3.5
3	MP5C	Mx	-0.004	3.5
4	MP6C	X	9.23	1
5	MP6C	Z	-5.329	1
6	MP6C	Mx	0	1
7	MP7C	X	9.23	1.75
8	MP7C	Z	-5.329	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	5.27	2
11	MP2A	Z	-3.043	2
12	MP2A	Mx	-0.004	2
13	MP2A	X	5.27	4
14	MP2A	Z	-3.043	4
15	MP2A	Mx	-0.004	4
16	MP3B	X	4.662	2
17	MP3B	Z	-2.692	2
18	MP3B	Mx	0.004	2
19	MP3B	X	4.662	4
20	MP3B	Z	-2.692	4
21	MP3B	Mx	0.004	4
22	MP3C	X	7.882	2
23	MP3C	Z	-4.551	2
24	MP3C	Mx	-0.003	2
25	MP3C	X	7.882	4
26	MP3C	Z	-4.551	4
27	MP3C	Mx	-0.003	4
28	MP5B	X	6.016	2

Member Point Loads (BLC 29 : Antenna Wm (60 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
29	MP5B	Z	-3.473	2
30	MP5B	Mx	0.004	2
31	MP5B	X	6.016	4
32	MP5B	Z	-3.473	4
33	MP5B	Mx	0.004	4
34	MP1C	X	2.908	2
35	MP1C	Z	-1.679	2
36	MP1C	Mx	0.002	2
37	MP1C	X	2.908	3
38	MP1C	Z	-1.679	3
39	MP1C	Mx	0.002	3
40	MP2B	X	2.298	2
41	MP2B	Z	-1.327	2
42	MP2B	Mx	0.002	2
43	MP2B	X	2.298	3
44	MP2B	Z	-1.327	3
45	MP2B	Mx	0.002	3
46	MP3A	X	2.572	2
47	MP3A	Z	-1.485	2
48	MP3A	Mx	-0.002	2
49	MP3A	X	2.572	3
50	MP3A	Z	-1.485	3
51	MP3A	Mx	-0.002	3
52	MP4C	X	3.748	2
53	MP4C	Z	-2.164	2
54	MP4C	Mx	-0.001	2
55	MP4C	X	3.748	3
56	MP4C	Z	-2.164	3
57	MP4C	Mx	-0.001	3
58	MP1A	X	5.431	1
59	MP1A	Z	-3.135	1
60	MP1A	Mx	-0.004	1
61	MP1A	X	5.431	7
62	MP1A	Z	-3.135	7
63	MP1A	Mx	-0.004	7
64	MP1B	X	4.221	1
65	MP1B	Z	-2.437	1
66	MP1B	Mx	0.003	1
67	MP1B	X	4.221	7
68	MP1B	Z	-2.437	7
69	MP1B	Mx	0.003	7
70	MP2C	X	10.628	1
71	MP2C	Z	-6.136	1
72	MP2C	Mx	-0.004	1
73	MP2C	X	10.628	7
74	MP2C	Z	-6.136	7
75	MP2C	Mx	-0.004	7
76	MP4B	X	6.915	1
77	MP4B	Z	-3.992	1
78	MP4B	Mx	0.005	1
79	MP4B	X	6.915	7
80	MP4B	Z	-3.992	7
81	MP4B	Mx	0.005	7
82	MP1A	X	5.233	1
83	MP1A	Z	-3.021	1

Member Point Loads (BLC 29 : Antenna Wm (60 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
84	MP1A	Mx	0.001	1
85	MP1B	X	5.233	1
86	MP1B	Z	-3.021	1
87	MP1B	Mx	0.001	1
88	MP2C	X	5.233	1
89	MP2C	Z	-3.021	1
90	MP2C	Mx	0.001	1
91	MP4B	X	5.233	1
92	MP4B	Z	-3.021	1
93	MP4B	Mx	0.001	1

Member Point Loads (BLC 30 : Antenna Wm (90 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	12.33	3.5
2	MP5C	Z	0	3.5
3	MP5C	Mx	-0.009	3.5
4	MP6C	X	9.437	1
5	MP6C	Z	0	1
6	MP6C	Mx	0	1
7	MP7C	X	9.437	1.75
8	MP7C	Z	0	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	4.766	2
11	MP2A	Z	0	2
12	MP2A	Mx	-0.004	2
13	MP2A	X	4.766	4
14	MP2A	Z	0	4
15	MP2A	Mx	-0.004	4
16	MP3B	X	7.863	2
17	MP3B	Z	0	2
18	MP3B	Mx	0.004	2
19	MP3B	X	7.863	4
20	MP3B	Z	0	4
21	MP3B	Mx	0.004	4
22	MP3C	X	10.004	2
23	MP3C	Z	0	2
24	MP3C	Mx	0.000654	2
25	MP3C	X	10.004	4
26	MP3C	Z	0	4
27	MP3C	Mx	0.000654	4
28	MP5B	X	4.925	2
29	MP5B	Z	0	2
30	MP5B	Mx	0.004	2
31	MP5B	X	4.925	4
32	MP5B	Z	0	4
33	MP5B	Mx	0.004	4
34	MP1C	X	2.448	2
35	MP1C	Z	0	2
36	MP1C	Mx	0.002	2
37	MP1C	X	2.448	3
38	MP1C	Z	0	3
39	MP1C	Mx	0.002	3
40	MP2B	X	3.77	2
41	MP2B	Z	0	2
42	MP2B	Mx	0.002	2

Member Point Loads (BLC 30 : Antenna Wm (90 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
43	MP2B	X	3.77	3
44	MP2B	Z	0	3
45	MP2B	Mx	0.002	3
46	MP3A	X	2.376	2
47	MP3A	Z	0	2
48	MP3A	Mx	-0.002	2
49	MP3A	X	2.376	3
50	MP3A	Z	0	3
51	MP3A	Mx	-0.002	3
52	MP4C	X	4.734	2
53	MP4C	Z	0	2
54	MP4C	Mx	0.000309	2
55	MP4C	X	4.734	3
56	MP4C	Z	0	3
57	MP4C	Mx	0.000309	3
58	MP1A	X	3.645	1
59	MP1A	Z	0	1
60	MP1A	Mx	-0.003	1
61	MP1A	X	3.645	7
62	MP1A	Z	0	7
63	MP1A	Mx	-0.003	7
64	MP1B	X	9.809	1
65	MP1B	Z	0	1
66	MP1B	Mx	0.005	1
67	MP1B	X	9.809	7
68	MP1B	Z	0	7
69	MP1B	Mx	0.005	7
70	MP2C	X	14.068	1
71	MP2C	Z	0	1
72	MP2C	Mx	0.00092	1
73	MP2C	X	14.068	7
74	MP2C	Z	0	7
75	MP2C	Mx	0.00092	7
76	MP4B	X	3.962	1
77	MP4B	Z	0	1
78	MP4B	Mx	0.003	1
79	MP4B	X	3.962	7
80	MP4B	Z	0	7
81	MP4B	Mx	0.003	7
82	MP1A	X	4.393	1
83	MP1A	Z	0	1
84	MP1A	Mx	0.002	1
85	MP1B	X	4.393	1
86	MP1B	Z	0	1
87	MP1B	Mx	0.002	1
88	MP2C	X	4.393	1
89	MP2C	Z	0	1
90	MP2C	Mx	0.002	1
91	MP4B	X	4.393	1
92	MP4B	Z	0	1
93	MP4B	Mx	0.002	1

Member Point Loads (BLC 31 : Antenna Wm (120 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	12.051	3.5
2	MP5C	Z	6.958	3.5
3	MP5C	Mx	-0.014	3.5
4	MP6C	X	7.311	1
5	MP6C	Z	4.221	1
6	MP6C	Mx	0	1
7	MP7C	X	7.311	1.75
8	MP7C	Z	4.221	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	5.27	2
11	MP2A	Z	3.043	2
12	MP2A	Mx	-0.004	2
13	MP2A	X	5.27	4
14	MP2A	Z	3.043	4
15	MP2A	Mx	-0.004	4
16	MP3B	X	8.561	2
17	MP3B	Z	4.942	2
18	MP3B	Mx	0.001	2
19	MP3B	X	8.561	4
20	MP3B	Z	4.942	4
21	MP3B	Mx	0.001	4
22	MP3C	X	7.195	2
23	MP3C	Z	4.154	2
24	MP3C	Mx	0.004	2
25	MP3C	X	7.195	4
26	MP3C	Z	4.154	4
27	MP3C	Mx	0.004	4
28	MP5B	X	4.662	2
29	MP5B	Z	2.692	2
30	MP5B	Mx	0.004	2
31	MP5B	X	4.662	4
32	MP5B	Z	2.692	4
33	MP5B	Mx	0.004	4
34	MP1C	X	2.298	2
35	MP1C	Z	1.327	2
36	MP1C	Mx	0.002	2
37	MP1C	X	2.298	3
38	MP1C	Z	1.327	3
39	MP1C	Mx	0.002	3
40	MP2B	X	4.053	2
41	MP2B	Z	2.34	2
42	MP2B	Mx	0.00061	2
43	MP2B	X	4.053	3
44	MP2B	Z	2.34	3
45	MP2B	Mx	0.00061	3
46	MP3A	X	2.572	2
47	MP3A	Z	1.485	2
48	MP3A	Mx	-0.002	2
49	MP3A	X	2.572	3
50	MP3A	Z	1.485	3
51	MP3A	Mx	-0.002	3
52	MP4C	X	3.438	2
53	MP4C	Z	1.985	2
54	MP4C	Mx	0.002	2
55	MP4C	X	3.438	3

Member Point Loads (BLC 31 : Antenna Wm (120 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP4C	Z	1.985	3
57	MP4C	Mx	0.002	3
58	MP1A	X	5.431	1
59	MP1A	Z	3.135	1
60	MP1A	Mx	-0.004	1
61	MP1A	X	5.431	7
62	MP1A	Z	3.135	7
63	MP1A	Mx	-0.004	7
64	MP1B	X	11.978	1
65	MP1B	Z	6.916	1
66	MP1B	Mx	0.002	1
67	MP1B	X	11.978	7
68	MP1B	Z	6.916	7
69	MP1B	Mx	0.002	7
70	MP2C	X	9.26	1
71	MP2C	Z	5.346	1
72	MP2C	Mx	0.005	1
73	MP2C	X	9.26	7
74	MP2C	Z	5.346	7
75	MP2C	Mx	0.005	7
76	MP4B	X	4.221	1
77	MP4B	Z	2.437	1
78	MP4B	Mx	0.003	1
79	MP4B	X	4.221	7
80	MP4B	Z	2.437	7
81	MP4B	Mx	0.003	7
82	MP1A	X	2.64	1
83	MP1A	Z	1.524	1
84	MP1A	Mx	0.002	1
85	MP1B	X	2.64	1
86	MP1B	Z	1.524	1
87	MP1B	Mx	0.002	1
88	MP2C	X	2.64	1
89	MP2C	Z	1.524	1
90	MP2C	Mx	0.002	1
91	MP4B	X	2.64	1
92	MP4B	Z	1.524	1
93	MP4B	Mx	0.002	1

Member Point Loads (BLC 32 : Antenna Wm (150 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	6.778	3.5
2	MP5C	Z	11.74	3.5
3	MP5C	Mx	-0.013	3.5
4	MP6C	X	4.334	1
5	MP6C	Z	7.506	1
6	MP6C	Mx	0	1
7	MP7C	X	4.334	1.75
8	MP7C	Z	7.506	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	4.362	2
11	MP2A	Z	7.556	2
12	MP2A	Mx	-0.003	2
13	MP2A	X	4.362	4
14	MP2A	Z	7.556	4

Member Point Loads (BLC 32 : Antenna Wm (150 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
15	MP2A	Mx	-0.003	4
16	MP3B	X	4.713	2
17	MP3B	Z	8.164	2
18	MP3B	Mx	-0.002	2
19	MP3B	X	4.713	4
20	MP3B	Z	8.164	4
21	MP3B	Mx	-0.002	4
22	MP3C	X	2.854	2
23	MP3C	Z	4.944	2
24	MP3C	Mx	0.004	2
25	MP3C	X	2.854	4
26	MP3C	Z	4.944	4
27	MP3C	Mx	0.004	4
28	MP5B	X	3.932	2
29	MP5B	Z	6.81	2
30	MP5B	Mx	0.004	2
31	MP5B	X	3.932	4
32	MP5B	Z	6.81	4
33	MP5B	Mx	0.004	4
34	MP1C	X	1.885	2
35	MP1C	Z	3.265	2
36	MP1C	Mx	0.002	2
37	MP1C	X	1.885	3
38	MP1C	Z	3.265	3
39	MP1C	Mx	0.002	3
40	MP2B	X	2.237	2
41	MP2B	Z	3.875	2
42	MP2B	Mx	-0.001	2
43	MP2B	X	2.237	3
44	MP2B	Z	3.875	3
45	MP2B	Mx	-0.001	3
46	MP3A	X	2.079	2
47	MP3A	Z	3.601	2
48	MP3A	Mx	-0.002	2
49	MP3A	X	2.079	3
50	MP3A	Z	3.601	3
51	MP3A	Mx	-0.002	3
52	MP4C	X	1.4	2
53	MP4C	Z	2.425	2
54	MP4C	Mx	0.002	2
55	MP4C	X	1.4	3
56	MP4C	Z	2.425	3
57	MP4C	Mx	0.002	3
58	MP1A	X	5.761	1
59	MP1A	Z	9.979	1
60	MP1A	Mx	-0.004	1
61	MP1A	X	5.761	7
62	MP1A	Z	9.979	7
63	MP1A	Mx	-0.004	7
64	MP1B	X	6.46	1
65	MP1B	Z	11.189	1
66	MP1B	Mx	-0.003	1
67	MP1B	X	6.46	7
68	MP1B	Z	11.189	7
69	MP1B	Mx	-0.003	7

Member Point Loads (BLC 32 : Antenna Wm (150 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
70	MP2C	X	2.76	1
71	MP2C	Z	4.781	1
72	MP2C	Mx	0.004	1
73	MP2C	X	2.76	7
74	MP2C	Z	4.781	7
75	MP2C	Mx	0.004	7
76	MP4B	X	4.904	1
77	MP4B	Z	8.494	1
78	MP4B	Mx	0.005	1
79	MP4B	X	4.904	7
80	MP4B	Z	8.494	7
81	MP4B	Mx	0.005	7
82	MP1A	X	1.677	1
83	MP1A	Z	2.904	1
84	MP1A	Mx	0.002	1
85	MP1B	X	1.677	1
86	MP1B	Z	2.904	1
87	MP1B	Mx	0.002	1
88	MP2C	X	1.677	1
89	MP2C	Z	2.904	1
90	MP2C	Mx	0.002	1
91	MP4B	X	1.677	1
92	MP4B	Z	2.904	1
93	MP4B	Mx	0.002	1

Member Point Loads (BLC 33 : Antenna Wm (180 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	0	3.5
2	MP5C	Z	11.611	3.5
3	MP5C	Mx	-0.007	3.5
4	MP6C	X	0	1
5	MP6C	Z	9.888	1
6	MP6C	Mx	0	1
7	MP7C	X	0	1.75
8	MP7C	Z	9.888	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	0	2
11	MP2A	Z	10.044	2
12	MP2A	Mx	0	2
13	MP2A	X	0	4
14	MP2A	Z	10.044	4
15	MP2A	Mx	0	4
16	MP3B	X	0	2
17	MP3B	Z	6.947	2
18	MP3B	Mx	-0.004	2
19	MP3B	X	0	4
20	MP3B	Z	6.947	4
21	MP3B	Mx	-0.004	4
22	MP3C	X	0	2
23	MP3C	Z	4.806	2
24	MP3C	Mx	0.004	2
25	MP3C	X	0	4
26	MP3C	Z	4.806	4
27	MP3C	Mx	0.004	4
28	MP5B	X	0	2

Member Point Loads (BLC 33 : Antenna Wm (180 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
29	MP5B	Z	9.885	2
30	MP5B	Mx	0.001	2
31	MP5B	X	0	4
32	MP5B	Z	9.885	4
33	MP5B	Mx	0.001	4
34	MP1C	X	0	2
35	MP1C	Z	4.68	2
36	MP1C	Mx	0.00061	2
37	MP1C	X	0	3
38	MP1C	Z	4.68	3
39	MP1C	Mx	0.00061	3
40	MP2B	X	0	2
41	MP2B	Z	3.358	2
42	MP2B	Mx	-0.002	2
43	MP2B	X	0	3
44	MP2B	Z	3.358	3
45	MP2B	Mx	-0.002	3
46	MP3A	X	0	2
47	MP3A	Z	4.752	2
48	MP3A	Mx	0	2
49	MP3A	X	0	3
50	MP3A	Z	4.752	3
51	MP3A	Mx	0	3
52	MP4C	X	0	2
53	MP4C	Z	2.394	2
54	MP4C	Mx	0.002	2
55	MP4C	X	0	3
56	MP4C	Z	2.394	3
57	MP4C	Mx	0.002	3
58	MP1A	X	0	1
59	MP1A	Z	14.148	1
60	MP1A	Mx	0	1
61	MP1A	X	0	7
62	MP1A	Z	14.148	7
63	MP1A	Mx	0	7
64	MP1B	X	0	1
65	MP1B	Z	7.985	1
66	MP1B	Mx	-0.005	1
67	MP1B	X	0	7
68	MP1B	Z	7.985	7
69	MP1B	Mx	-0.005	7
70	MP2C	X	0	1
71	MP2C	Z	3.725	1
72	MP2C	Mx	0.003	1
73	MP2C	X	0	7
74	MP2C	Z	3.725	7
75	MP2C	Mx	0.003	7
76	MP4B	X	0	1
77	MP4B	Z	13.832	1
78	MP4B	Mx	0.002	1
79	MP4B	X	0	7
80	MP4B	Z	13.832	7
81	MP4B	Mx	0.002	7
82	MP1A	X	0	1
83	MP1A	Z	5.003	1

Member Point Loads (BLC 33 : Antenna Wm (180 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
84	MP1A	Mx	0.002	1
85	MP1B	X	0	1
86	MP1B	Z	5.003	1
87	MP1B	Mx	0.002	1
88	MP2C	X	0	1
89	MP2C	Z	5.003	1
90	MP2C	Mx	0.002	1
91	MP4B	X	0	1
92	MP4B	Z	5.003	1
93	MP4B	Mx	0.002	1

Member Point Loads (BLC 34 : Antenna Wm (210 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	-5.012	3.5
2	MP5C	Z	8.682	3.5
3	MP5C	Mx	-0.002	3.5
4	MP6C	X	-5.442	1
5	MP6C	Z	9.426	1
6	MP6C	Mx	0	1
7	MP7C	X	-5.442	1.75
8	MP7C	Z	9.426	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	-4.362	2
11	MP2A	Z	7.556	2
12	MP2A	Mx	0.003	2
13	MP2A	X	-4.362	4
14	MP2A	Z	7.556	4
15	MP2A	Mx	0.003	4
16	MP3B	X	-2.462	2
17	MP3B	Z	4.265	2
18	MP3B	Mx	-0.004	2
19	MP3B	X	-2.462	4
20	MP3B	Z	4.265	4
21	MP3B	Mx	-0.004	4
22	MP3C	X	-3.251	2
23	MP3C	Z	5.631	2
24	MP3C	Mx	0.004	2
25	MP3C	X	-3.251	4
26	MP3C	Z	5.631	4
27	MP3C	Mx	0.004	4
28	MP5B	X	-4.713	2
29	MP5B	Z	8.164	2
30	MP5B	Mx	-0.002	2
31	MP5B	X	-4.713	4
32	MP5B	Z	8.164	4
33	MP5B	Mx	-0.002	4
34	MP1C	X	-2.237	2
35	MP1C	Z	3.875	2
36	MP1C	Mx	-0.001	2
37	MP1C	X	-2.237	3
38	MP1C	Z	3.875	3
39	MP1C	Mx	-0.001	3
40	MP2B	X	-1.224	2
41	MP2B	Z	2.12	2
42	MP2B	Mx	-0.002	2

Member Point Loads (BLC 34 : Antenna Wm (210 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
43	MP2B	X	-1.224	3
44	MP2B	Z	2.12	3
45	MP2B	Mx	-0.002	3
46	MP3A	X	-2.079	2
47	MP3A	Z	3.601	2
48	MP3A	Mx	0.002	2
49	MP3A	X	-2.079	3
50	MP3A	Z	3.601	3
51	MP3A	Mx	0.002	3
52	MP4C	X	-1.579	2
53	MP4C	Z	2.735	2
54	MP4C	Mx	0.002	2
55	MP4C	X	-1.579	3
56	MP4C	Z	2.735	3
57	MP4C	Mx	0.002	3
58	MP1A	X	-5.761	1
59	MP1A	Z	9.979	1
60	MP1A	Mx	0.004	1
61	MP1A	X	-5.761	7
62	MP1A	Z	9.979	7
63	MP1A	Mx	0.004	7
64	MP1B	X	-1.981	1
65	MP1B	Z	3.431	1
66	MP1B	Mx	-0.003	1
67	MP1B	X	-1.981	7
68	MP1B	Z	3.431	7
69	MP1B	Mx	-0.003	7
70	MP2C	X	-3.55	1
71	MP2C	Z	6.149	1
72	MP2C	Mx	0.004	1
73	MP2C	X	-3.55	7
74	MP2C	Z	6.149	7
75	MP2C	Mx	0.004	7
76	MP4B	X	-6.46	1
77	MP4B	Z	11.189	1
78	MP4B	Mx	-0.003	1
79	MP4B	X	-6.46	7
80	MP4B	Z	11.189	7
81	MP4B	Mx	-0.003	7
82	MP1A	X	-3.174	1
83	MP1A	Z	5.497	1
84	MP1A	Mx	0.000551	1
85	MP1B	X	-3.174	1
86	MP1B	Z	5.497	1
87	MP1B	Mx	0.000551	1
88	MP2C	X	-3.174	1
89	MP2C	Z	5.497	1
90	MP2C	Mx	0.000551	1
91	MP4B	X	-3.174	1
92	MP4B	Z	5.497	1
93	MP4B	Mx	0.000551	1

Member Point Loads (BLC 35 : Antenna Wm (240 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	-8.993	3.5
2	MP5C	Z	5.192	3.5
3	MP5C	Mx	0.004	3.5
4	MP6C	X	-9.23	1
5	MP6C	Z	5.329	1
6	MP6C	Mx	0	1
7	MP7C	X	-9.23	1.75
8	MP7C	Z	5.329	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	-5.27	2
11	MP2A	Z	3.043	2
12	MP2A	Mx	0.004	2
13	MP2A	X	-5.27	4
14	MP2A	Z	3.043	4
15	MP2A	Mx	0.004	4
16	MP3B	X	-4.662	2
17	MP3B	Z	2.692	2
18	MP3B	Mx	-0.004	2
19	MP3B	X	-4.662	4
20	MP3B	Z	2.692	4
21	MP3B	Mx	-0.004	4
22	MP3C	X	-7.882	2
23	MP3C	Z	4.551	2
24	MP3C	Mx	0.003	2
25	MP3C	X	-7.882	4
26	MP3C	Z	4.551	4
27	MP3C	Mx	0.003	4
28	MP5B	X	-6.016	2
29	MP5B	Z	3.473	2
30	MP5B	Mx	-0.004	2
31	MP5B	X	-6.016	4
32	MP5B	Z	3.473	4
33	MP5B	Mx	-0.004	4
34	MP1C	X	-2.908	2
35	MP1C	Z	1.679	2
36	MP1C	Mx	-0.002	2
37	MP1C	X	-2.908	3
38	MP1C	Z	1.679	3
39	MP1C	Mx	-0.002	3
40	MP2B	X	-2.298	2
41	MP2B	Z	1.327	2
42	MP2B	Mx	-0.002	2
43	MP2B	X	-2.298	3
44	MP2B	Z	1.327	3
45	MP2B	Mx	-0.002	3
46	MP3A	X	-2.572	2
47	MP3A	Z	1.485	2
48	MP3A	Mx	0.002	2
49	MP3A	X	-2.572	3
50	MP3A	Z	1.485	3
51	MP3A	Mx	0.002	3
52	MP4C	X	-3.748	2
53	MP4C	Z	2.164	2
54	MP4C	Mx	0.001	2
55	MP4C	X	-3.748	3

Member Point Loads (BLC 35 : Antenna Wm (240 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
56	MP4C	Z	2.164	3
57	MP4C	Mx	0.001	3
58	MP1A	X	-5.431	1
59	MP1A	Z	3.135	1
60	MP1A	Mx	0.004	1
61	MP1A	X	-5.431	7
62	MP1A	Z	3.135	7
63	MP1A	Mx	0.004	7
64	MP1B	X	-4.221	1
65	MP1B	Z	2.437	1
66	MP1B	Mx	-0.003	1
67	MP1B	X	-4.221	7
68	MP1B	Z	2.437	7
69	MP1B	Mx	-0.003	7
70	MP2C	X	-10.628	1
71	MP2C	Z	6.136	1
72	MP2C	Mx	0.004	1
73	MP2C	X	-10.628	7
74	MP2C	Z	6.136	7
75	MP2C	Mx	0.004	7
76	MP4B	X	-6.915	1
77	MP4B	Z	3.992	1
78	MP4B	Mx	-0.005	1
79	MP4B	X	-6.915	7
80	MP4B	Z	3.992	7
81	MP4B	Mx	-0.005	7
82	MP1A	X	-5.233	1
83	MP1A	Z	3.021	1
84	MP1A	Mx	-0.001	1
85	MP1B	X	-5.233	1
86	MP1B	Z	3.021	1
87	MP1B	Mx	-0.001	1
88	MP2C	X	-5.233	1
89	MP2C	Z	3.021	1
90	MP2C	Mx	-0.001	1
91	MP4B	X	-5.233	1
92	MP4B	Z	3.021	1
93	MP4B	Mx	-0.001	1

Member Point Loads (BLC 36 : Antenna Wm (270 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	-12.33	3.5
2	MP5C	Z	0	3.5
3	MP5C	Mx	0.009	3.5
4	MP6C	X	-9.437	1
5	MP6C	Z	0	1
6	MP6C	Mx	0	1
7	MP7C	X	-9.437	1.75
8	MP7C	Z	0	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	-4.766	2
11	MP2A	Z	0	2
12	MP2A	Mx	0.004	2
13	MP2A	X	-4.766	4
14	MP2A	Z	0	4

Member Point Loads (BLC 36 : Antenna Wm (270 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
15	MP2A	Mx	0.004	4
16	MP3B	X	-7.863	2
17	MP3B	Z	0	2
18	MP3B	Mx	-0.004	2
19	MP3B	X	-7.863	4
20	MP3B	Z	0	4
21	MP3B	Mx	-0.004	4
22	MP3C	X	-10.004	2
23	MP3C	Z	0	2
24	MP3C	Mx	-0.000654	2
25	MP3C	X	-10.004	4
26	MP3C	Z	0	4
27	MP3C	Mx	-0.000654	4
28	MP5B	X	-4.925	2
29	MP5B	Z	0	2
30	MP5B	Mx	-0.004	2
31	MP5B	X	-4.925	4
32	MP5B	Z	0	4
33	MP5B	Mx	-0.004	4
34	MP1C	X	-2.448	2
35	MP1C	Z	0	2
36	MP1C	Mx	-0.002	2
37	MP1C	X	-2.448	3
38	MP1C	Z	0	3
39	MP1C	Mx	-0.002	3
40	MP2B	X	-3.77	2
41	MP2B	Z	0	2
42	MP2B	Mx	-0.002	2
43	MP2B	X	-3.77	3
44	MP2B	Z	0	3
45	MP2B	Mx	-0.002	3
46	MP3A	X	-2.376	2
47	MP3A	Z	0	2
48	MP3A	Mx	0.002	2
49	MP3A	X	-2.376	3
50	MP3A	Z	0	3
51	MP3A	Mx	0.002	3
52	MP4C	X	-4.734	2
53	MP4C	Z	0	2
54	MP4C	Mx	-0.000309	2
55	MP4C	X	-4.734	3
56	MP4C	Z	0	3
57	MP4C	Mx	-0.000309	3
58	MP1A	X	-3.645	1
59	MP1A	Z	0	1
60	MP1A	Mx	0.003	1
61	MP1A	X	-3.645	7
62	MP1A	Z	0	7
63	MP1A	Mx	0.003	7
64	MP1B	X	-9.809	1
65	MP1B	Z	0	1
66	MP1B	Mx	-0.005	1
67	MP1B	X	-9.809	7
68	MP1B	Z	0	7
69	MP1B	Mx	-0.005	7

Member Point Loads (BLC 36 : Antenna Wm (270 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
70	MP2C	X	-14.068	1
71	MP2C	Z	0	1
72	MP2C	Mx	-0.00092	1
73	MP2C	X	-14.068	7
74	MP2C	Z	0	7
75	MP2C	Mx	-0.00092	7
76	MP4B	X	-3.962	1
77	MP4B	Z	0	1
78	MP4B	Mx	-0.003	1
79	MP4B	X	-3.962	7
80	MP4B	Z	0	7
81	MP4B	Mx	-0.003	7
82	MP1A	X	-4.393	1
83	MP1A	Z	0	1
84	MP1A	Mx	-0.002	1
85	MP1B	X	-4.393	1
86	MP1B	Z	0	1
87	MP1B	Mx	-0.002	1
88	MP2C	X	-4.393	1
89	MP2C	Z	0	1
90	MP2C	Mx	-0.002	1
91	MP4B	X	-4.393	1
92	MP4B	Z	0	1
93	MP4B	Mx	-0.002	1

Member Point Loads (BLC 37 : Antenna Wm (300 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	-12.051	3.5
2	MP5C	Z	-6.958	3.5
3	MP5C	Mx	0.014	3.5
4	MP6C	X	-7.311	1
5	MP6C	Z	-4.221	1
6	MP6C	Mx	0	1
7	MP7C	X	-7.311	1.75
8	MP7C	Z	-4.221	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	-5.27	2
11	MP2A	Z	-3.043	2
12	MP2A	Mx	0.004	2
13	MP2A	X	-5.27	4
14	MP2A	Z	-3.043	4
15	MP2A	Mx	0.004	4
16	MP3B	X	-8.561	2
17	MP3B	Z	-4.942	2
18	MP3B	Mx	-0.001	2
19	MP3B	X	-8.561	4
20	MP3B	Z	-4.942	4
21	MP3B	Mx	-0.001	4
22	MP3C	X	-7.195	2
23	MP3C	Z	-4.154	2
24	MP3C	Mx	-0.004	2
25	MP3C	X	-7.195	4
26	MP3C	Z	-4.154	4
27	MP3C	Mx	-0.004	4
28	MP5B	X	-4.662	2

Member Point Loads (BLC 37 : Antenna Wm (300 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
29	MP5B	Z	-2.692	2
30	MP5B	Mx	-0.004	2
31	MP5B	X	-4.662	4
32	MP5B	Z	-2.692	4
33	MP5B	Mx	-0.004	4
34	MP1C	X	-2.298	2
35	MP1C	Z	-1.327	2
36	MP1C	Mx	-0.002	2
37	MP1C	X	-2.298	3
38	MP1C	Z	-1.327	3
39	MP1C	Mx	-0.002	3
40	MP2B	X	-4.053	2
41	MP2B	Z	-2.34	2
42	MP2B	Mx	-0.00061	2
43	MP2B	X	-4.053	3
44	MP2B	Z	-2.34	3
45	MP2B	Mx	-0.00061	3
46	MP3A	X	-2.572	2
47	MP3A	Z	-1.485	2
48	MP3A	Mx	0.002	2
49	MP3A	X	-2.572	3
50	MP3A	Z	-1.485	3
51	MP3A	Mx	0.002	3
52	MP4C	X	-3.438	2
53	MP4C	Z	-1.985	2
54	MP4C	Mx	-0.002	2
55	MP4C	X	-3.438	3
56	MP4C	Z	-1.985	3
57	MP4C	Mx	-0.002	3
58	MP1A	X	-5.431	1
59	MP1A	Z	-3.135	1
60	MP1A	Mx	0.004	1
61	MP1A	X	-5.431	7
62	MP1A	Z	-3.135	7
63	MP1A	Mx	0.004	7
64	MP1B	X	-11.978	1
65	MP1B	Z	-6.916	1
66	MP1B	Mx	-0.002	1
67	MP1B	X	-11.978	7
68	MP1B	Z	-6.916	7
69	MP1B	Mx	-0.002	7
70	MP2C	X	-9.26	1
71	MP2C	Z	-5.346	1
72	MP2C	Mx	-0.005	1
73	MP2C	X	-9.26	7
74	MP2C	Z	-5.346	7
75	MP2C	Mx	-0.005	7
76	MP4B	X	-4.221	1
77	MP4B	Z	-2.437	1
78	MP4B	Mx	-0.003	1
79	MP4B	X	-4.221	7
80	MP4B	Z	-2.437	7
81	MP4B	Mx	-0.003	7
82	MP1A	X	-2.64	1
83	MP1A	Z	-1.524	1

Member Point Loads (BLC 37 : Antenna Wm (300 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
84	MP1A	Mx	-0.002	1
85	MP1B	X	-2.64	1
86	MP1B	Z	-1.524	1
87	MP1B	Mx	-0.002	1
88	MP2C	X	-2.64	1
89	MP2C	Z	-1.524	1
90	MP2C	Mx	-0.002	1
91	MP4B	X	-2.64	1
92	MP4B	Z	-1.524	1
93	MP4B	Mx	-0.002	1

Member Point Loads (BLC 38 : Antenna Wm (330 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	-6.778	3.5
2	MP5C	Z	-11.74	3.5
3	MP5C	Mx	0.013	3.5
4	MP6C	X	-4.334	1
5	MP6C	Z	-7.506	1
6	MP6C	Mx	0	1
7	MP7C	X	-4.334	1.75
8	MP7C	Z	-7.506	1.75
9	MP7C	Mx	0	1.75
10	MP2A	X	-4.362	2
11	MP2A	Z	-7.556	2
12	MP2A	Mx	0.003	2
13	MP2A	X	-4.362	4
14	MP2A	Z	-7.556	4
15	MP2A	Mx	0.003	4
16	MP3B	X	-4.713	2
17	MP3B	Z	-8.164	2
18	MP3B	Mx	0.002	2
19	MP3B	X	-4.713	4
20	MP3B	Z	-8.164	4
21	MP3B	Mx	0.002	4
22	MP3C	X	-2.854	2
23	MP3C	Z	-4.944	2
24	MP3C	Mx	-0.004	2
25	MP3C	X	-2.854	4
26	MP3C	Z	-4.944	4
27	MP3C	Mx	-0.004	4
28	MP5B	X	-3.932	2
29	MP5B	Z	-6.81	2
30	MP5B	Mx	-0.004	2
31	MP5B	X	-3.932	4
32	MP5B	Z	-6.81	4
33	MP5B	Mx	-0.004	4
34	MP1C	X	-1.885	2
35	MP1C	Z	-3.265	2
36	MP1C	Mx	-0.002	2
37	MP1C	X	-1.885	3
38	MP1C	Z	-3.265	3
39	MP1C	Mx	-0.002	3
40	MP2B	X	-2.237	2
41	MP2B	Z	-3.875	2
42	MP2B	Mx	0.001	2

Member Point Loads (BLC 38 : Antenna Wm (330 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
43	MP2B	X	-2.237	3
44	MP2B	Z	-3.875	3
45	MP2B	Mx	0.001	3
46	MP3A	X	-2.079	2
47	MP3A	Z	-3.601	2
48	MP3A	Mx	0.002	2
49	MP3A	X	-2.079	3
50	MP3A	Z	-3.601	3
51	MP3A	Mx	0.002	3
52	MP4C	X	-1.4	2
53	MP4C	Z	-2.425	2
54	MP4C	Mx	-0.002	2
55	MP4C	X	-1.4	3
56	MP4C	Z	-2.425	3
57	MP4C	Mx	-0.002	3
58	MP1A	X	-5.761	1
59	MP1A	Z	-9.979	1
60	MP1A	Mx	0.004	1
61	MP1A	X	-5.761	7
62	MP1A	Z	-9.979	7
63	MP1A	Mx	0.004	7
64	MP1B	X	-6.46	1
65	MP1B	Z	-11.189	1
66	MP1B	Mx	0.003	1
67	MP1B	X	-6.46	7
68	MP1B	Z	-11.189	7
69	MP1B	Mx	0.003	7
70	MP2C	X	-2.76	1
71	MP2C	Z	-4.781	1
72	MP2C	Mx	-0.004	1
73	MP2C	X	-2.76	7
74	MP2C	Z	-4.781	7
75	MP2C	Mx	-0.004	7
76	MP4B	X	-4.904	1
77	MP4B	Z	-8.494	1
78	MP4B	Mx	-0.005	1
79	MP4B	X	-4.904	7
80	MP4B	Z	-8.494	7
81	MP4B	Mx	-0.005	7
82	MP1A	X	-1.677	1
83	MP1A	Z	-2.904	1
84	MP1A	Mx	-0.002	1
85	MP1B	X	-1.677	1
86	MP1B	Z	-2.904	1
87	MP1B	Mx	-0.002	1
88	MP2C	X	-1.677	1
89	MP2C	Z	-2.904	1
90	MP2C	Mx	-0.002	1
91	MP4B	X	-1.677	1
92	MP4B	Z	-2.904	1
93	MP4B	Mx	-0.002	1

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M113	Y	-500	%6

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M117	Y	-500	%94

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M2	Y	-250	%50

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	M4	Y	-250	%50

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	Y	-0.693	3.5
2	MP5C	My	-0.000531	3.5
3	MP5C	Mz	-0.000446	3.5
4	MP6C	Y	-0.887	1
5	MP6C	My	0	1
6	MP6C	Mz	0	1
7	MP7C	Y	-0.887	1.75
8	MP7C	My	0	1.75
9	MP7C	Mz	0	1.75
10	MP2A	Y	-1.525	2
11	MP2A	My	-0.001	2
12	MP2A	Mz	0	2
13	MP2A	Y	-1.525	4
14	MP2A	My	-0.001	4
15	MP2A	Mz	0	4
16	MP3B	Y	-1.525	2
17	MP3B	My	0.000735	2
18	MP3B	Mz	-0.000876	2
19	MP3B	Y	-1.525	4
20	MP3B	My	0.000735	4
21	MP3B	Mz	-0.000876	4
22	MP3C	Y	-1.525	2
23	MP3C	My	0.0001	2
24	MP3C	Mz	0.001	2
25	MP3C	Y	-1.525	4
26	MP3C	My	0.0001	4
27	MP3C	Mz	0.001	4
28	MP5B	Y	-1.525	2
29	MP5B	My	0.001	2
30	MP5B	Mz	0.000199	2
31	MP5B	Y	-1.525	4
32	MP5B	My	0.001	4
33	MP5B	Mz	0.000199	4

Member Point Loads (BLC 81 : Antenna Ev) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
34	MP1C	Y	-0.985	2
35	MP1C	My	0.000727	2
36	MP1C	Mz	0.000128	2
37	MP1C	Y	-0.985	3
38	MP1C	My	0.000727	3
39	MP1C	Mz	0.000128	3
40	MP2B	Y	-0.985	2
41	MP2B	My	0.000475	2
42	MP2B	Mz	-0.000566	2
43	MP2B	Y	-0.985	3
44	MP2B	My	0.000475	3
45	MP2B	Mz	-0.000566	3
46	MP3A	Y	-0.985	2
47	MP3A	My	-0.000738	2
48	MP3A	Mz	0	2
49	MP3A	Y	-0.985	3
50	MP3A	My	-0.000738	3
51	MP3A	Mz	0	3
52	MP4C	Y	-0.985	2
53	MP4C	My	6.4e-5	2
54	MP4C	Mz	0.000736	2
55	MP4C	Y	-0.985	3
56	MP4C	My	6.4e-5	3
57	MP4C	Mz	0.000736	3
58	MP1A	Y	-1.489	1
59	MP1A	My	-0.001	1
60	MP1A	Mz	0	1
61	MP1A	Y	-1.489	7
62	MP1A	My	-0.001	7
63	MP1A	Mz	0	7
64	MP1B	Y	-1.489	1
65	MP1B	My	0.000718	1
66	MP1B	Mz	-0.000856	1
67	MP1B	Y	-1.489	7
68	MP1B	My	0.000718	7
69	MP1B	Mz	-0.000856	7
70	MP2C	Y	-1.489	1
71	MP2C	My	9.7e-5	1
72	MP2C	Mz	0.001	1
73	MP2C	Y	-1.489	7
74	MP2C	My	9.7e-5	7
75	MP2C	Mz	0.001	7
76	MP4B	Y	-1.489	1
77	MP4B	My	0.001	1
78	MP4B	Mz	0.000194	1
79	MP4B	Y	-1.489	7
80	MP4B	My	0.001	7
81	MP4B	Mz	0.000194	7
82	MP1A	Y	-1.897	1
83	MP1A	My	0.000727	1
84	MP1A	Mz	0.00061	1
85	MP1B	Y	-1.897	1
86	MP1B	My	0.000727	1
87	MP1B	Mz	0.00061	1
88	MP2C	Y	-1.897	1

Member Point Loads (BLC 81 : Antenna Ev) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
89	MP2C	My	0.000727	1
90	MP2C	Mz	0.00061	1
91	MP4B	Y	-1.897	1
92	MP4B	My	0.000727	1
93	MP4B	Mz	0.00061	1

Member Point Loads (BLC 82 : Antenna Eh (0 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	Z	-1.733	3.5
2	MP5C	Mx	0.001	3.5
3	MP6C	Z	-2.219	1
4	MP6C	Mx	0	1
5	MP7C	Z	-2.219	1.75
6	MP7C	Mx	0	1.75
7	MP2A	Z	-3.813	2
8	MP2A	Mx	0	2
9	MP2A	Z	-3.813	4
10	MP2A	Mx	0	4
11	MP3B	Z	-3.813	2
12	MP3B	Mx	0.002	2
13	MP3B	Z	-3.813	4
14	MP3B	Mx	0.002	4
15	MP3C	Z	-3.813	2
16	MP3C	Mx	-0.003	2
17	MP3C	Z	-3.813	4
18	MP3C	Mx	-0.003	4
19	MP5B	Z	-3.813	2
20	MP5B	Mx	-0.000497	2
21	MP5B	Z	-3.813	4
22	MP5B	Mx	-0.000497	4
23	MP1C	Z	-2.461	2
24	MP1C	Mx	-0.000321	2
25	MP1C	Z	-2.461	3
26	MP1C	Mx	-0.000321	3
27	MP2B	Z	-2.461	2
28	MP2B	Mx	0.001	2
29	MP2B	Z	-2.461	3
30	MP2B	Mx	0.001	3
31	MP3A	Z	-2.461	2
32	MP3A	Mx	0	2
33	MP3A	Z	-2.461	3
34	MP3A	Mx	0	3
35	MP4C	Z	-2.461	2
36	MP4C	Mx	-0.002	2
37	MP4C	Z	-2.461	3
38	MP4C	Mx	-0.002	3
39	MP1A	Z	-3.723	1
40	MP1A	Mx	0	1
41	MP1A	Z	-3.723	7
42	MP1A	Mx	0	7
43	MP1B	Z	-3.723	1
44	MP1B	Mx	0.002	1
45	MP1B	Z	-3.723	7
46	MP1B	Mx	0.002	7
47	MP2C	Z	-3.723	1

Member Point Loads (BLC 82 : Antenna Eh (0 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
48	MP2C	Mx	-0.003	1
49	MP2C	Z	-3.723	7
50	MP2C	Mx	-0.003	7
51	MP4B	Z	-3.723	1
52	MP4B	Mx	-0.000485	1
53	MP4B	Z	-3.723	7
54	MP4B	Mx	-0.000485	7
55	MP1A	Z	-4.742	1
56	MP1A	Mx	-0.002	1
57	MP1B	Z	-4.742	1
58	MP1B	Mx	-0.002	1
59	MP2C	Z	-4.742	1
60	MP2C	Mx	-0.002	1
61	MP4B	Z	-4.742	1
62	MP4B	Mx	-0.002	1

Member Point Loads (BLC 83 : Antenna Eh (90 Deg))

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
1	MP5C	X	1.733	3.5
2	MP5C	Mx	-0.001	3.5
3	MP6C	X	2.219	1
4	MP6C	Mx	0	1
5	MP7C	X	2.219	1.75
6	MP7C	Mx	0	1.75
7	MP2A	X	3.813	2
8	MP2A	Mx	-0.003	2
9	MP2A	X	3.813	4
10	MP2A	Mx	-0.003	4
11	MP3B	X	3.813	2
12	MP3B	Mx	0.002	2
13	MP3B	X	3.813	4
14	MP3B	Mx	0.002	4
15	MP3C	X	3.813	2
16	MP3C	Mx	0.000249	2
17	MP3C	X	3.813	4
18	MP3C	Mx	0.000249	4
19	MP5B	X	3.813	2
20	MP5B	Mx	0.003	2
21	MP5B	X	3.813	4
22	MP5B	Mx	0.003	4
23	MP1C	X	2.461	2
24	MP1C	Mx	0.002	2
25	MP1C	X	2.461	3
26	MP1C	Mx	0.002	3
27	MP2B	X	2.461	2
28	MP2B	Mx	0.001	2
29	MP2B	X	2.461	3
30	MP2B	Mx	0.001	3
31	MP3A	X	2.461	2
32	MP3A	Mx	-0.002	2
33	MP3A	X	2.461	3
34	MP3A	Mx	-0.002	3
35	MP4C	X	2.461	2
36	MP4C	Mx	0.000161	2
37	MP4C	X	2.461	3

Member Point Loads (BLC 83 : Antenna Eh (90 Deg)) (Continued)

	Member Label	Direction	Magnitude [lb, k-ft]	Location [(ft, %)]
38	MP4C	Mx	0.000161	3
39	MP1A	X	3.723	1
40	MP1A	Mx	-0.003	1
41	MP1A	X	3.723	7
42	MP1A	Mx	-0.003	7
43	MP1B	X	3.723	1
44	MP1B	Mx	0.002	1
45	MP1B	X	3.723	7
46	MP1B	Mx	0.002	7
47	MP2C	X	3.723	1
48	MP2C	Mx	0.000243	1
49	MP2C	X	3.723	7
50	MP2C	Mx	0.000243	7
51	MP4B	X	3.723	1
52	MP4B	Mx	0.003	1
53	MP4B	X	3.723	7
54	MP4B	Mx	0.003	7
55	MP1A	X	4.742	1
56	MP1A	Mx	0.002	1
57	MP1B	X	4.742	1
58	MP1B	Mx	0.002	1
59	MP2C	X	4.742	1
60	MP2C	Mx	0.002	1
61	MP4B	X	4.742	1
62	MP4B	Mx	0.002	1

Member Area Loads

No Data to Print...

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N52	max	615.501	2	189.007	2	2133.554	8	-0.013	5	0.09	10	0.022	8
2		min	-618.022	8	-153.614	8	-2141.657	2	-0.045	11	-0.088	4	-0.02	2
3	N55	max	1876.801	5	183.986	11	369.195	11	0.038	6	0.115	6	0.108	31
4		min	-2008.236	11	-136.858	5	-341.444	5	-0.024	36	-0.107	12	0.024	64
5	N113	max	1996.708	8	316.009	8	2823.978	8	0.063	8	0.152	3	0.012	9
6		min	-1981.021	2	-272.055	2	-2815.857	2	0.036	65	-0.12	9	-0.073	3
7	N53	max	1004.192	5	13.529	51	279.247	11	0.021	5	0	75	0.008	11
8		min	-855.514	11	8.43	69	-320.877	5	-0.026	11	0	1	-0.007	5
9	N166	max	1400.837	9	632.135	50	2642.472	2	-0.13	5	0	75	0.051	8
10		min	-1917.55	3	299.439	5	-4245.371	8	-0.279	50	0	1	-0.007	49
11	N167	max	645.548	11	1183.167	47	2065.947	12	-0.125	5	0	75	0.056	8
12		min	-19.624	49	283.649	5	49.384	6	-0.266	50	0	1	-0.007	49
13	N168	max	3062.14	11	913.187	32	1337.796	1	0.239	7	0	75	0.333	32
14		min	-4437.907	5	406.264	64	16.468	7	0.124	1	0	1	0.127	64
15	N169	max	2304.204	10	853.392	32	21.12	2	0.215	8	0	75	0.317	33
16		min	-293.369	4	379.049	64	-1696.323	8	0.12	64	0	1	0.121	64
17	N170	max	2456.235	1	865.615	4	5274.363	2	0.207	51	0	75	-0.143	9
18		min	-506.645	7	478.985	72	-3267.365	8	0.128	72	0	1	-0.327	3
19	N171	max	-62.191	11	804.701	4	-431.561	12	0.2	4	0	75	-0.141	9
20		min	-2406.305	5	455.708	72	-2222.283	6	0.122	72	0	1	-0.307	3
21	N192	max	15.551	49	293.545	6	395.674	12	0	6	0	49	0	8
22		min	-168.44	12	-82.777	12	-890.046	6	0	12	0	8	0	49
23	N193	max	435.234	9	409.511	3	654.851	3	0	9	0	26	0	33

Envelope Node Reactions (Continued)

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
24		min	-1078.203	3	-125.22	9	-309.291	9	-0.001	27	0	8	0	3
25	N194	max	708.009	10	316.412	10	654.395	10	0	5	0	6	0	10
26		min	-213.399	4	-14.437	4	-21.094	4	0	12	0	1	0	4
27	N204	max	120.193	11	6.992	51	25.118	12	0.007	5	0	75	0.001	5
28		min	-151.112	5	4.354	75	-31.327	6	-0.008	11	0	1	-0.001	11
29	Totals:	max	6209.489	10	4500.154	26	6749.857	1						
30		min	-6209.484	4	2725.945	71	-6749.856	7						

Node Reactions

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N52	300.918	101.619	-1036.157	-0.027	-0.018	-0.008
2	1	N55	-1467.227	137.824	298.995	-0.013	-0.099	0.024
3	1	N113	-1537.43	-207.364	-2205.552	0.039	0.11	-0.063
4	1	N53	-669.054	11.734	234.519	-0.022	0	0.007
5	1	N166	-686.761	440.747	1009.493	-0.195	0	0.015
6	1	N167	464.763	417.463	1972.019	-0.192	0	0.005
7	1	N168	1851.314	448.238	1337.796	0.124	0	0.139
8	1	N169	853.71	433.428	-109.082	0.126	0	0.138
9	1	N170	2456.235	781.219	4954.599	0.178	0	-0.298
10	1	N171	-1210.524	732.283	-569.991	0.169	0	-0.281
11	1	N192	-78.919	34.042	16.376	0	0	0
12	1	N193	-595.922	240.782	398.11	0	0	0
13	1	N194	291.727	172.174	427.033	0	0	0
14	1	N204	27.203	5.966	21.7	-0.005	0	-0.001
15	1	Totals:	0.033	3750.154	6749.857			
16	1	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
17	2	N52	615.501	189.007	-2141.657	-0.015	-0.052	-0.02
18	2	N55	-868.738	88.008	171.397	-0.007	-0.048	0.026
19	2	N113	-1981.021	-272.055	-2815.857	0.036	0.145	-0.07
20	2	N53	-388.202	11.709	130.079	-0.016	0	0.005
21	2	N166	-1758.829	326.715	2642.472	-0.142	0	0.003
22	2	N167	233.836	308.129	1472.116	-0.14	0	-0.003
23	2	N168	656.824	432.108	1246.551	0.124	0	0.136
24	2	N169	315.602	405.053	21.12	0.121	0	0.13
25	2	N170	2290.046	806.777	5274.363	0.178	0	-0.312
26	2	N171	-1724.074	752.524	-957.816	0.172	0	-0.293
27	2	N192	10.531	170.021	-415.873	0	0	0
28	2	N193	-885.969	335.092	513.939	0	0	0
29	2	N194	224.721	191.066	560.995	0	0	0
30	2	N204	-36.922	6.002	8.216	-0.003	0	-0.001
31	2	Totals:	-3296.693	3750.155	5710.044			
32	2	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
33	3	N52	546.371	173.865	-1950.705	-0.015	-0.068	-0.02
34	3	N55	296.918	-6.796	-52.252	0.008	0.018	0.032
35	3	N113	-1972.537	-267.951	-2787.236	0.04	0.152	-0.073
36	3	N53	192.446	11.575	-59.319	-0.003	0	0.001
37	3	N166	-1917.55	312.111	2206.601	-0.136	0	0.006
38	3	N167	108.823	294.911	1030.554	-0.132	0	0.006
39	3	N168	-1401.278	451.221	832.287	0.144	0	0.143
40	3	N169	-219.159	406.465	-46.658	0.131	0	0.13
41	3	N170	2125.267	851.743	5014.576	0.191	0	-0.327
42	3	N171	-2088.278	791.445	-1439.136	0.185	0	-0.307
43	3	N192	3.489	212.986	-559.637	0	0	0
44	3	N193	-1078.203	409.511	654.851	0	0	0
45	3	N194	4.559	103.074	326.615	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
46	3	N204	-76.938	5.996	-8.961	0.001	0	0
47	3	Totals:	-5476.069	3750.155	3161.578			
48	3	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
49	4	N52	396.312	137.837	-1510.305	-0.015	-0.088	-0.018
50	4	N55	1468.748	-102.63	-260.034	0.024	0.066	0.037
51	4	N113	-1368.85	-177.569	-1938.124	0.047	0.107	-0.064
52	4	N53	779.037	11.297	-241.088	0.013	0	-0.004
53	4	N166	-1716.354	322.592	1392.894	-0.141	0	0.01
54	4	N167	72.939	305.943	756.666	-0.136	0	0.013
55	4	N168	-3555.061	536.964	446.602	0.188	0	0.168
56	4	N169	-293.369	474.878	-503.47	0.165	0	0.15
57	4	N170	1671.978	865.615	3803.846	0.205	0	-0.325
58	4	N171	-2393.936	804.701	-1844.658	0.2	0	-0.304
59	4	N192	-26.002	227.5	-639.251	0	0	0
60	4	N193	-913.125	351.508	579.186	0	0	0
61	4	N194	-213.399	-14.437	-21.094	0	0	0
62	4	N204	-118.403	5.954	-21.183	0.005	0	0.001
63	4	Totals:	-6209.484	3750.153	-0.013			
64	4	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
65	5	N52	358.93	126.162	-1385.247	-0.013	-0.087	-0.018
66	5	N55	1876.801	-136.858	-341.444	0.035	0.095	0.04
67	5	N113	-316.67	-22.947	-447.84	0.053	0.032	-0.04
68	5	N53	1004.192	11.086	-320.877	0.021	0	-0.007
69	5	N166	-1637.292	299.439	1128.122	-0.13	0	0.01
70	5	N167	30.067	283.649	394.661	-0.125	0	0.015
71	5	N168	-4437.907	632.955	293.552	0.227	0	0.197
72	5	N169	162.608	560.046	-1081.743	0.198	0	0.177
73	5	N170	681.614	770.399	1272.521	0.198	0	-0.276
74	5	N171	-2406.305	721.9	-2116.113	0.196	0	-0.26
75	5	N192	3.904	284.622	-855.986	0	0	0
76	5	N193	-532.52	204.806	278.807	0	0	0
77	5	N194	-149.393	8.958	26.597	0	0	0
78	5	N204	-151.112	5.935	-27.96	0.007	0	0.001
79	5	Totals:	-5513.085	3750.153	-3182.951			
80	5	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
81	6	N52	161.214	64.918	-618.164	-0.017	-0.04	-0.009
82	6	N55	1661.151	-118.932	-326.286	0.038	0.115	0.042
83	6	N113	758.721	135.321	1092.997	0.057	-0.033	-0.014
84	6	N53	944.85	11.069	-318.473	0.02	0	-0.006
85	6	N166	-1109.781	325.731	-83.751	-0.143	0	0.019
86	6	N167	43.214	309.678	49.384	-0.134	0	0.027
87	6	N168	-4027.793	676.105	171.915	0.238	0	0.212
88	6	N169	712.34	601.984	-1417.307	0.208	0	0.192
89	6	N170	-251.549	631.715	-1454.722	0.181	0	-0.209
90	6	N171	-1932.745	598.249	-2222.283	0.178	0	-0.2
91	6	N192	14.748	293.545	-890.046	0	0	0
92	6	N193	-247.919	101.778	38.48	0	0	0
93	6	N194	85.257	113.025	262.542	0	0	0
94	6	N204	-129.81	5.966	-31.327	0.006	0	0.001
95	6	Totals:	-3318.103	3750.152	-5747.041			
96	6	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
97	7	N52	-299.658	-65.523	1030.509	-0.032	0.02	0.01
98	7	N55	1334.582	-90.424	-274.389	0.037	0.107	0.043
99	7	N113	1553.472	252.614	2221.639	0.061	-0.078	0.002
100	7	N53	831.089	11.142	-282.108	0.017	0	-0.005

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
101	7	N166	158.295	451.131	-2620.558	-0.201	0	0.039
102	7	N167	213.569	430.475	141.272	-0.188	0	0.048
103	7	N168	-3225.897	688.859	16.468	0.239	0	0.216
104	7	N169	1157.979	620.602	-1565.329	0.21	0	0.198
105	7	N170	-506.645	559.391	-2955.162	0.177	0	-0.172
106	7	N171	-1253.22	534.286	-2083.528	0.169	0	-0.166
107	7	N192	-72.207	177.789	-512.948	0	0	0
108	7	N193	-37.942	41.806	-48.999	0	0	0
109	7	N194	206.385	132.019	210.961	0	0	0
110	7	N204	-59.829	5.985	-27.684	0.004	0	0.001
111	7	Totals:	-0.028	3750.151	-6749.856			
112	7	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
113	8	N52	-618.022	-153.614	2133.554	-0.043	0.053	0.022
114	8	N55	728.687	-39.54	-148.05	0.031	0.057	0.042
115	8	N113	1996.708	316.009	2823.978	0.063	-0.113	0.009
116	8	N53	557.396	11.33	-181.632	0.011	0	-0.003
117	8	N166	1238.454	566.539	-4245.371	-0.254	0	0.051
118	8	N167	442.949	538.087	639.54	-0.238	0	0.056
119	8	N168	-2020.742	703.961	114.892	0.238	0	0.219
120	8	N169	1691.659	647.618	-1696.323	0.215	0	0.206
121	8	N170	-343.947	534.262	-3267.365	0.177	0	-0.158
122	8	N171	-738.845	513.562	-1697.094	0.166	0	-0.154
123	8	N192	-164.42	42.857	-84.775	0	0	0
124	8	N193	246.864	-51.386	-166.078	0	0	0
125	8	N194	276.413	114.478	78.794	0	0	0
126	8	N204	3.545	5.986	-14.111	0.002	0	0
127	8	Totals:	3296.7	3750.151	-5710.042			
128	8	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
129	9	N52	-549.9	-138.989	1947.739	-0.044	0.07	0.022
130	9	N55	-446.235	56.412	76.376	0.016	-0.01	0.036
131	9	N113	1981.697	310.672	2787.372	0.059	-0.12	0.012
132	9	N53	-24.235	11.645	7.213	-0.002	0	0.001
133	9	N166	1400.837	582.254	-3817.394	-0.261	0	0.048
134	9	N167	566.755	551.36	1082.212	-0.247	0	0.047
135	9	N168	53.682	683.203	532.633	0.218	0	0.212
136	9	N169	2223.924	645.967	-1629.923	0.205	0	0.206
137	9	N170	-171.357	491.748	-2994.344	0.164	0	-0.143
138	9	N171	-375.44	474.15	-1219.113	0.153	0	-0.141
139	9	N192	-158.827	-0.755	60.637	0	0	0
140	9	N193	435.234	-125.22	-309.291	0	0	0
141	9	N194	496.09	201.741	311.265	0	0	0
142	9	N204	43.849	5.963	3.043	-0.002	0	0
143	9	Totals:	5476.075	3750.151	-3161.577			
144	9	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
145	10	N52	-398.774	-102.869	1510.015	-0.043	0.09	0.02
146	10	N55	-1612.176	151.365	287.195	-0.001	-0.058	0.03
147	10	N113	1369.753	220.719	1938.217	0.052	-0.074	0.002
148	10	N53	-624.43	11.832	195.691	-0.018	0	0.006
149	10	N166	1197.625	571.662	-3009.052	-0.256	0	0.044
150	10	N167	602.932	540.88	1356.987	-0.243	0	0.04
151	10	N168	2201.367	597.55	907.331	0.173	0	0.188
152	10	N169	2304.204	579.983	-1172.709	0.17	0	0.187
153	10	N170	299.116	479.678	-1776.803	0.15	0	-0.147
154	10	N171	-72.67	461.503	-815.782	0.138	0	-0.144
155	10	N192	-128.679	-15.802	142.052	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
156	10	N193	276.206	-68.658	-232.7	0	0	0
157	10	N194	708.009	316.412	654.395	0	0	0
158	10	N204	87.006	5.898	15.175	-0.006	0	-0.001
159	10	Totals:	6209.489	3750.152	0.014			
160	10	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
161	11	N52	-361.621	-91.343	1387.353	-0.045	0.089	0.02
162	11	N55	-2008.236	183.986	369.195	-0.011	-0.088	0.027
163	11	N113	317.062	68.22	458.249	0.047	0.003	-0.022
164	11	N53	-855.514	11.808	279.247	-0.026	0	0.008
165	11	N166	1119.546	595.555	-2748.133	-0.267	0	0.044
166	11	N167	645.548	562.941	1719.792	-0.255	0	0.038
167	11	N168	3062.14	504.17	1052.152	0.135	0	0.159
168	11	N169	1854.661	496.043	-592.802	0.138	0	0.16
169	11	N170	1297.371	571.766	739.498	0.157	0	-0.195
170	11	N171	-62.191	546.125	-541.047	0.143	0	-0.188
171	11	N192	-159.082	-73.283	359.444	0	0	0
172	11	N193	-95.301	76.105	70.154	0	0	0
173	11	N194	638.513	292.201	608.133	0	0	0
174	11	N204	120.193	5.859	21.716	-0.008	0	-0.001
175	11	Totals:	5513.091	3750.153	3182.951			
176	11	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
177	12	N52	-161.943	-29.673	620.639	-0.041	0.043	0.011
178	12	N55	-1790.782	165.842	352.385	-0.014	-0.107	0.026
179	12	N113	-749.697	-89.21	-1074.671	0.043	0.066	-0.048
180	12	N53	-790.229	11.753	274.368	-0.025	0	0.008
181	12	N166	587.707	568.563	-1539.676	-0.255	0	0.035
182	12	N167	633.281	537.758	2065.947	-0.245	0	0.026
183	12	N168	2647.581	461.808	1177.072	0.124	0	0.144
184	12	N169	1303.377	453.174	-256.842	0.129	0	0.145
185	12	N170	2216.909	708.52	3453.232	0.174	0	-0.261
186	12	N171	-533.669	669.594	-431.561	0.161	0	-0.247
187	12	N192	-168.44	-82.777	395.674	0	0	0
188	12	N193	-380.799	179.491	310.895	0	0	0
189	12	N194	406.774	189.406	374.463	0	0	0
190	12	N204	98.038	5.903	25.118	-0.007	0	-0.001
191	12	Totals:	3318.109	3750.154	5747.042			
192	12	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
193	13	N52	1.551	18.2	-3.996	-0.03	0.001	0.001
194	13	N55	-114.989	28.072	21.503	0.011	0	0.034
195	13	N113	-37.013	17.165	-47.392	0.05	0.02	-0.032
196	13	N53	61.913	11.61	-17.581	-0.003	0	0.001
197	13	N166	-265.618	448.979	-800.378	-0.2	0	0.027
198	13	N167	339.484	426.618	1093.534	-0.191	0	0.026
199	13	N168	-600.886	563.877	701.651	0.179	0	0.176
200	13	N169	998.231	523.69	-812.501	0.166	0	0.167
201	13	N170	1019.424	673.052	1102.049	0.177	0	-0.237
202	13	N171	-1231.668	636.398	-1303.658	0.169	0	-0.225
203	13	N192	-75.417	100.074	-227.371	0	0	0
204	13	N193	-328.457	144.73	179.737	0	0	0
205	13	N194	249.258	151.696	320.614	0	0	0
206	13	N204	-15.808	5.992	-1.731	-0.001	0	0
207	13	Totals:	0.004	3750.153	204.479			
208	13	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
209	14	N52	12.569	21.272	-42.613	-0.029	0	0
210	14	N55	-102.174	26.946	17.965	0.011	0.002	0.034

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
211	14	N113	-46.396	15.923	-58.624	0.05	0.022	-0.032
212	14	N53	67.344	11.608	-20.312	-0.003	0	0.001
213	14	N166	-302.474	445.501	-747.004	-0.198	0	0.027
214	14	N167	332.201	423.404	1079.504	-0.19	0	0.026
215	14	N168	-628.934	563.331	696.961	0.18	0	0.176
216	14	N169	980.099	523.227	-810.582	0.166	0	0.167
217	14	N170	1022.327	675.095	1118.271	0.177	0	-0.238
218	14	N171	-1250.99	638.204	-1314.766	0.17	0	-0.226
219	14	N192	-71.851	103.694	-238.693	0	0	0
220	14	N193	-336.052	146.867	181.102	0	0	0
221	14	N194	239.435	149.088	316.819	0	0	0
222	14	N204	-16.712	5.992	-2.031	-0.001	0	0
223	14	Totals:	-101.608	3750.153	175.996			
224	14	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
225	15	N52	14.99	22.213	-54.035	-0.029	-0.001	0
226	15	N55	-70.777	24.4	11.354	0.012	0.004	0.034
227	15	N113	-52.314	15.225	-66.107	0.05	0.023	-0.033
228	15	N53	83.701	11.602	-25.952	-0.003	0	0.001
229	15	N166	-316.898	443.434	-731.604	-0.197	0	0.026
230	15	N167	327.059	421.484	1062.312	-0.189	0	0.026
231	15	N168	-686.382	564.165	687.208	0.18	0	0.176
232	15	N169	966.235	524.02	-816.77	0.167	0	0.167
233	15	N170	1024.069	677.054	1124.841	0.178	0	-0.239
234	15	N171	-1266.52	639.945	-1330.268	0.17	0	-0.227
235	15	N192	-73.38	106.739	-248.826	0	0	0
236	15	N193	-338.197	147.793	182.81	0	0	0
237	15	N194	230.732	146.087	308.502	0	0	0
238	15	N204	-16.859	5.992	-2.694	0	0	0
239	15	Totals:	-174.541	3750.153	100.772			
240	15	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
241	16	N52	13.272	22.093	-53.284	-0.029	-0.003	0
242	16	N55	-39.814	21.879	5.728	0.012	0.006	0.034
243	16	N113	-45.118	16.258	-57.525	0.05	0.021	-0.033
244	16	N53	99.979	11.596	-31.068	-0.002	0	0.001
245	16	N166	-317.924	442.39	-736.656	-0.197	0	0.026
246	16	N167	325.215	420.507	1047.746	-0.188	0	0.026
247	16	N168	-743.15	566.073	676.648	0.181	0	0.177
248	16	N169	965.348	525.778	-830.43	0.168	0	0.168
249	16	N170	1020.136	678.037	1106.049	0.178	0	-0.239
250	16	N171	-1277.014	640.845	-1347.866	0.17	0	-0.227
251	16	N192	-75.508	108.881	-257.803	0	0	0
252	16	N193	-334.816	146.654	182.086	0	0	0
253	16	N194	224.997	143.171	299.339	0	0	0
254	16	N204	-16.725	5.992	-2.966	0	0	0
255	16	Totals:	-201.123	3750.153	0			
256	16	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
257	17	N52	13.434	22.054	-54.147	-0.029	-0.003	0
258	17	N55	-28.79	20.924	3.111	0.013	0.007	0.034
259	17	N113	-16.496	20.345	-18.289	0.05	0.019	-0.032
260	17	N53	106.146	11.593	-33.673	-0.002	0	0.001
261	17	N166	-316.402	441.296	-740.92	-0.196	0	0.026
262	17	N167	326.662	419.489	1033.072	-0.188	0	0.026
263	17	N168	-765.448	567.831	668.978	0.182	0	0.177
264	17	N169	976.025	527.388	-845.267	0.169	0	0.168
265	17	N170	1000.83	676.009	1039.714	0.179	0	-0.238

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
266	17	N171	-1275.391	639.11	-1359.434	0.17	0	-0.226
267	17	N192	-73.595	111.032	-266.813	0	0	0
268	17	N193	-328.868	144.244	176.295	0	0	0
269	17	N194	224.055	142.848	299.323	0	0	0
270	17	N204	-17.428	5.992	-3.141	0	0	0
271	17	Totals:	-175.266	3750.153	-101.191			
272	17	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
273	18	N52	10.326	20.784	-38.31	-0.029	-0.001	0
274	18	N55	-30.052	21.027	1.918	0.013	0.009	0.034
275	18	N113	17.821	25.389	30.777	0.051	0.016	-0.031
276	18	N53	107.173	11.592	-34.989	-0.002	0	0.001
277	18	N166	-299.844	441.387	-764.901	-0.196	0	0.027
278	18	N167	331.235	419.571	1021.041	-0.188	0	0.026
279	18	N168	-761.99	569.051	664.608	0.182	0	0.178
280	18	N169	990.413	528.498	-856.282	0.169	0	0.169
281	18	N170	975.364	671.879	957.565	0.178	0	-0.236
282	18	N171	-1259.168	635.514	-1360.02	0.17	0	-0.224
283	18	N192	-72.237	112.129	-270.691	0	0	0
284	18	N193	-321.448	141.81	169.308	0	0	0
285	18	N194	228.646	145.529	307.006	0	0	0
286	18	N204	-18.265	5.992	-3.751	0	0	0
287	18	Totals:	-102.028	3750.153	-176.719			
288	18	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
289	19	N52	-0.777	17.515	3.564	-0.029	0.001	0.001
290	19	N55	-32.054	21.296	1.95	0.013	0.009	0.034
291	19	N113	38.394	28.439	59.635	0.051	0.015	-0.03
292	19	N53	108.456	11.592	-35.281	-0.002	0	0.001
293	19	N166	-261.564	443.989	-822.05	-0.197	0	0.027
294	19	N167	338.209	421.975	1021.511	-0.189	0	0.027
295	19	N168	-752.283	570.12	663.843	0.183	0	0.178
296	19	N169	1006.305	529.451	-863.157	0.169	0	0.169
297	19	N170	961.318	668.527	908.832	0.178	0	-0.234
298	19	N171	-1236.96	632.574	-1352.877	0.17	0	-0.223
299	19	N192	-75.868	110.392	-264.808	0	0	0
300	19	N193	-312.491	139.519	165.826	0	0	0
301	19	N194	237.249	148.771	312.794	0	0	0
302	19	N204	-17.93	5.992	-4.262	0	0	0
303	19	Totals:	0.002	3750.153	-204.478			
304	19	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
305	20	N52	-11.796	14.443	42.176	-0.03	0.003	0.001
306	20	N55	-44.874	22.423	5.487	0.013	0.007	0.034
307	20	N113	47.776	29.679	70.862	0.051	0.013	-0.03
308	20	N53	103.031	11.594	-32.553	-0.002	0	0.001
309	20	N166	-224.706	447.465	-875.411	-0.199	0	0.028
310	20	N167	345.492	425.189	1035.539	-0.19	0	0.027
311	20	N168	-724.23	570.665	668.538	0.183	0	0.179
312	20	N169	1024.434	529.914	-865.075	0.169	0	0.169
313	20	N170	958.41	666.485	892.618	0.177	0	-0.233
314	20	N171	-1217.636	630.766	-1341.771	0.169	0	-0.222
315	20	N192	-79.435	106.774	-253.491	0	0	0
316	20	N193	-304.899	137.382	164.461	0	0	0
317	20	N194	247.075	151.38	316.588	0	0	0
318	20	N204	-17.027	5.992	-3.961	0	0	0
319	20	Totals:	101.614	3750.153	-175.995			
320	20	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
321	21	N52	-14.219	13.501	53.599	-0.03	0.004	0.002
322	21	N55	-76.281	24.97	12.099	0.012	0.005	0.034
323	21	N113	53.692	30.376	78.338	0.051	0.012	-0.03
324	21	N53	86.676	11.6	-26.916	-0.003	0	0.001
325	21	N166	-210.276	449.533	-890.811	-0.2	0	0.028
326	21	N167	350.632	427.108	1052.73	-0.191	0	0.027
327	21	N168	-666.767	569.829	678.296	0.182	0	0.178
328	21	N169	1038.294	529.121	-858.889	0.168	0	0.169
329	21	N170	956.666	664.529	886.058	0.177	0	-0.232
330	21	N171	-1202.106	629.024	-1326.271	0.169	0	-0.221
331	21	N192	-77.909	103.729	-243.361	0	0	0
332	21	N193	-302.758	136.458	162.749	0	0	0
333	21	N194	255.782	154.382	324.905	0	0	0
334	21	N204	-16.88	5.992	-3.299	-0.001	0	0
335	21	Totals:	174.547	3750.153	-100.772			
336	21	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
337	22	N52	-12.503	13.621	52.852	-0.03	0.006	0.002
338	22	N55	-107.242	27.491	17.726	0.012	0.003	0.034
339	22	N113	46.49	29.343	69.752	0.05	0.013	-0.03
340	22	N53	70.39	11.607	-21.796	-0.003	0	0.001
341	22	N166	-209.247	450.578	-885.762	-0.2	0	0.028
342	22	N167	352.476	428.084	1067.297	-0.192	0	0.027
343	22	N168	-610	567.921	688.852	0.181	0	0.178
344	22	N169	1039.184	527.364	-845.23	0.167	0	0.168
345	22	N170	960.61	663.549	904.859	0.176	0	-0.232
346	22	N171	-1191.613	628.124	-1308.676	0.168	0	-0.221
347	22	N192	-75.782	101.588	-234.383	0	0	0
348	22	N193	-306.136	137.595	163.473	0	0	0
349	22	N194	261.514	157.296	334.065	0	0	0
350	22	N204	-17.013	5.992	-3.027	-0.001	0	0
351	22	Totals:	201.129	3750.153	0.001			
352	22	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
353	23	N52	-12.665	13.66	53.717	-0.03	0.006	0.002
354	23	N55	-118.258	28.445	20.343	0.011	0.002	0.034
355	23	N113	17.865	25.257	30.524	0.05	0.016	-0.031
356	23	N53	64.219	11.61	-19.188	-0.003	0	0.001
357	23	N166	-210.767	451.673	-881.501	-0.201	0	0.028
358	23	N167	351.028	429.101	1081.971	-0.192	0	0.027
359	23	N168	-587.715	566.165	696.517	0.18	0	0.177
360	23	N169	1028.511	525.754	-830.391	0.167	0	0.168
361	23	N170	979.931	665.575	971.183	0.176	0	-0.233
362	23	N171	-1193.239	629.861	-1297.106	0.168	0	-0.222
363	23	N192	-77.695	99.436	-225.373	0	0	0
364	23	N193	-312.079	140.005	169.267	0	0	0
365	23	N194	262.446	157.617	334.081	0	0	0
366	23	N204	-16.309	5.992	-2.851	-0.001	0	0
367	23	Totals:	175.272	3750.153	101.191			
368	23	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
369	24	N52	-9.556	14.93	37.882	-0.03	0.004	0.001
370	24	N55	-116.993	28.342	21.536	0.011	0	0.034
371	24	N113	-16.444	20.215	-18.532	0.05	0.018	-0.031
372	24	N53	63.193	11.61	-17.873	-0.003	0	0.001
373	24	N166	-227.327	451.583	-857.529	-0.201	0	0.028
374	24	N167	346.456	429.021	1094.004	-0.192	0	0.027
375	24	N168	-591.178	564.945	700.886	0.18	0	0.177

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
376	24	N169	1014.124	524.644	-819.376	0.167	0	0.167
377	24	N170	1005.39	669.701	1053.314	0.177	0	-0.235
378	24	N171	-1209.462	633.458	-1296.515	0.169	0	-0.224
379	24	N192	-79.052	98.338	-221.491	0	0	0
380	24	N193	-319.499	142.439	176.255	0	0	0
381	24	N194	257.855	154.937	326.402	0	0	0
382	24	N204	-15.472	5.992	-2.242	-0.001	0	0
383	24	Totals:	102.034	3750.153	176.72			
384	24	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
385	25	N52	19.472	23.169	-65.898	-0.029	0	0
386	25	N55	-301.791	54.647	50.453	-0.024	0.021	0.107
387	25	N113	-97.501	8.181	-134.562	0.05	0.023	-0.033
388	25	N53	181.813	11.385	-54.752	-0.024	0	0.007
389	25	N166	-290.447	446.152	-695.841	-0.198	0	0.026
390	25	N167	346.83	423.882	1115.695	-0.19	0	0.025
391	25	N168	-1354.282	896.253	290.087	0.177	0	0.328
392	25	N169	2159.1	840.034	-186.326	0.159	0	0.313
393	25	N170	1084.436	677.837	1256.773	0.178	0	-0.239
394	25	N171	-1232.939	640.771	-1280.164	0.169	0	-0.228
395	25	N192	-75.856	100.668	-229.277	0	0	0
396	25	N193	-655.016	219.59	43.432	0	0	0
397	25	N194	246.005	151.522	323.584	0	0	0
398	25	N204	-29.813	6.063	-4.215	-0.004	0	-0.001
399	25	Totals:	0.011	4500.154	428.99			
400	25	COG (ft):	X: 1.194	Y: 0.049	Z: -0.79			
401	26	N52	39.58	28.745	-136.085	-0.029	-0.002	-0.001
402	26	N55	-263.404	51.383	42.371	-0.024	0.024	0.107
403	26	N113	-125.68	4.107	-173.113	0.049	0.026	-0.034
404	26	N53	199.344	11.36	-61.226	-0.023	0	0.007
405	26	N166	-358.833	438.864	-592.314	-0.195	0	0.026
406	26	N167	332.203	416.987	1083.978	-0.187	0	0.025
407	26	N168	-1430.695	895.37	283.909	0.177	0	0.328
408	26	N169	2125.087	838.256	-177.903	0.159	0	0.312
409	26	N170	1073.966	679.448	1276.867	0.178	0	-0.24
410	26	N171	-1265.6	642.071	-1304.771	0.17	0	-0.228
411	26	N192	-70.084	109.275	-256.616	0	0	0
412	26	N193	-673.19	225.532	50.839	-0.001	0	0
413	26	N194	241.662	152.685	332.048	0	0	0
414	26	N204	-33.869	6.072	-5.077	-0.003	0	-0.001
415	26	Totals:	-209.511	4500.154	362.907			
416	26	COG (ft):	X: 1.194	Y: 0.049	Z: -0.79			
417	27	N52	35.216	27.798	-124.102	-0.028	-0.003	-0.001
418	27	N55	-188.813	45.201	28.117	-0.023	0.028	0.107
419	27	N113	-124.95	4.405	-171.058	0.05	0.026	-0.034
420	27	N53	236.102	11.308	-73.169	-0.022	0	0.007
421	27	N166	-369.029	437.903	-619.784	-0.195	0	0.026
422	27	N167	324.293	416.145	1055.881	-0.186	0	0.025
423	27	N168	-1562.287	896.885	257.158	0.179	0	0.329
424	27	N169	2091.286	838.286	-181.916	0.159	0	0.312
425	27	N170	1063.272	682.234	1259.966	0.178	0	-0.241
426	27	N171	-1288.725	644.56	-1335.264	0.17	0	-0.229
427	27	N192	-70.488	112.025	-265.801	0	0	0
428	27	N193	-685.145	230.214	59.871	-0.001	0	0
429	27	N194	227.68	147.112	317.206	0	0	0
430	27	N204	-36.433	6.077	-6.171	-0.003	0	-0.001

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
431	27	Totals:	-348.022	4500.154	200.934			
432	27	COG (ft):	X: 1.194	Y: 0.049	Z: -0.79			
433	28	N52	25.647	25.505	-96.194	-0.029	-0.004	0
434	28	N55	-114.273	39.014	14.804	-0.022	0.031	0.107
435	28	N113	-86.341	10.139	-117.087	0.05	0.023	-0.033
436	28	N53	273.602	11.254	-84.838	-0.021	0	0.007
437	28	N166	-356.177	438.572	-671.328	-0.195	0	0.026
438	28	N167	322.002	416.829	1038.445	-0.186	0	0.026
439	28	N168	-1699.297	902.627	232.646	0.182	0	0.33
440	28	N169	2086.511	842.457	-210.701	0.162	0	0.314
441	28	N170	1033.977	683.062	1182.816	0.179	0	-0.241
442	28	N171	-1308.072	645.386	-1360.971	0.171	0	-0.229
443	28	N192	-72.384	112.965	-270.921	0	0	0
444	28	N193	-674.69	226.536	55.039	0	0	0
445	28	N194	213.993	139.724	295.24	0	0	0
446	28	N204	-39.129	6.084	-6.949	-0.003	0	-0.001
447	28	Totals:	-394.633	4500.154	0.001			
448	28	COG (ft):	X: 1.194	Y: 0.049	Z: -0.79			
449	29	N52	23.278	24.768	-88.319	-0.028	-0.004	0
450	29	N55	-88.603	36.843	9.605	-0.021	0.033	0.108
451	29	N113	-19.457	19.904	-22.679	0.05	0.018	-0.032
452	29	N53	288.013	11.231	-89.987	-0.021	0	0.007
453	29	N166	-351.18	437.078	-688.035	-0.194	0	0.026
454	29	N167	319.285	415.418	1015.413	-0.186	0	0.026
455	29	N168	-1754.847	908.8	223.052	0.184	0	0.332
456	29	N169	2115.339	847.75	-247.42	0.164	0	0.315
457	29	N170	970.812	677.104	1022.389	0.179	0	-0.238
458	29	N171	-1308.805	640.07	-1378.322	0.171	0	-0.226
459	29	N192	-70.47	116.607	-284.718	0	0	0
460	29	N193	-650.731	217.259	35.88	0	0	0
461	29	N194	218.217	141.233	298.226	0	0	0
462	29	N204	-41.224	6.089	-7.374	-0.003	0	0
463	29	Totals:	-350.372	4500.154	-202.289			
464	29	COG (ft):	X: 1.194	Y: 0.049	Z: -0.79			
465	30	N52	10.652	20.862	-39.574	-0.029	-0.001	0
466	30	N55	-102.407	38.012	10.62	-0.021	0.035	0.108
467	30	N113	48.633	29.938	75.015	0.051	0.014	-0.03
468	30	N53	284.104	11.236	-89.777	-0.021	0	0.007
469	30	N166	-317.52	438.77	-764.954	-0.195	0	0.027
470	30	N167	320.093	417.047	993.442	-0.186	0	0.027
471	30	N168	-1728.562	911.518	215.317	0.185	0	0.333
472	30	N169	2150.294	850.409	-268.828	0.164	0	0.316
473	30	N170	911.915	668.347	849.456	0.178	0	-0.234
474	30	N171	-1278.771	632.217	-1385.168	0.17	0	-0.222
475	30	N192	-69.827	117.192	-286.95	0	0	0
476	30	N193	-632.672	210.711	20.583	0	0	0
477	30	N194	233.04	147.809	313.154	0	0	0
478	30	N204	-39.841	6.085	-7.588	-0.003	0	0
479	30	Totals:	-210.87	4500.154	-365.251			
480	30	COG (ft):	X: 1.194	Y: 0.049	Z: -0.79			
481	31	N52	-18.697	12.547	65.445	-0.03	0.003	0.001
482	31	N55	-123.145	39.847	13.967	-0.021	0.034	0.108
483	31	N113	98.932	37.421	146.818	0.051	0.011	-0.029
484	31	N53	276.723	11.247	-87.391	-0.021	0	0.007
485	31	N166	-236.74	446.811	-926.543	-0.199	0	0.028

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
486	31	N167	330.866	424.709	999.343	-0.19	0	0.028
487	31	N168	-1677.65	912.308	205.397	0.185	0	0.333
488	31	N169	2178.701	851.619	-278.308	0.164	0	0.317
489	31	N170	896.2	663.74	754.069	0.177	0	-0.231
490	31	N171	-1235.672	628.192	-1376.361	0.169	0	-0.22
491	31	N192	-75.429	109.804	-262.919	0	0	0
492	31	N193	-619.254	206.876	15.019	0	0	0
493	31	N194	240.54	148.958	309.839	0	0	0
494	31	N204	-35.366	6.075	-7.362	-0.003	0	-0.001
495	31	Totals:	0.007	4500.154	-428.986			
496	31	COG (ft):	X: 1.194	Y: 0.049	Z: -0.79			
497	32	N52	-38.82	6.968	135.622	-0.03	0.005	0.002
498	32	N55	-161.562	43.115	22.044	-0.022	0.031	0.108
499	32	N113	127.11	41.49	185.338	0.051	0.009	-0.029
500	32	N53	259.221	11.273	-80.933	-0.022	0	0.007
501	32	N166	-168.321	454.105	-1030.037	-0.202	0	0.029
502	32	N167	345.486	431.597	1031.054	-0.193	0	0.028
503	32	N168	-1601.194	913.187	211.604	0.185	0	0.333
504	32	N169	2212.696	853.392	-286.734	0.165	0	0.317
505	32	N170	906.656	662.131	734.006	0.177	0	-0.231
506	32	N171	-1203.008	626.891	-1351.759	0.169	0	-0.219
507	32	N192	-81.212	101.2	-235.596	0	0	0
508	32	N193	-601.102	200.939	7.606	0	0	0
509	32	N194	244.894	147.8	301.383	0	0	0
510	32	N204	-31.313	6.067	-6.501	-0.003	0	-0.001
511	32	Totals:	209.53	4500.154	-362.904			
512	32	COG (ft):	X: 1.194	Y: 0.049	Z: -0.79			
513	33	N52	-34.46	7.913	123.66	-0.03	0.006	0.002
514	33	N55	-236.19	49.301	36.302	-0.022	0.027	0.107
515	33	N113	126.353	41.187	183.25	0.051	0.009	-0.028
516	33	N53	222.459	11.325	-68.992	-0.022	0	0.007
517	33	N166	-158.11	455.071	-1002.599	-0.203	0	0.029
518	33	N167	353.391	432.439	1059.155	-0.194	0	0.028
519	33	N168	-1469.536	911.665	238.369	0.183	0	0.333
520	33	N169	2246.487	853.36	-282.727	0.164	0	0.317
521	33	N170	917.382	659.354	750.96	0.177	0	-0.23
522	33	N171	-1179.886	624.4	-1321.279	0.168	0	-0.219
523	33	N192	-80.814	98.448	-226.404	0	0	0
524	33	N193	-589.162	196.259	-1.435	0	0	0
525	33	N194	258.874	153.37	316.217	0	0	0
526	33	N204	-28.749	6.061	-5.406	-0.003	0	-0.001
527	33	Totals:	348.04	4500.154	-200.931			
528	33	COG (ft):	X: 1.194	Y: 0.049	Z: -0.79			
529	34	N52	-24.887	10.206	95.763	-0.03	0.007	0.002
530	34	N55	-310.707	55.485	49.626	-0.024	0.024	0.107
531	34	N113	87.711	35.455	129.279	0.05	0.012	-0.029
532	34	N53	184.904	11.379	-57.296	-0.023	0	0.007
533	34	N166	-170.97	454.401	-951.077	-0.202	0	0.028
534	34	N167	355.683	431.758	1076.594	-0.193	0	0.027
535	34	N168	-1332.549	905.924	262.837	0.181	0	0.331
536	34	N169	2251.286	849.199	-253.941	0.162	0	0.316
537	34	N170	946.746	658.534	828.138	0.176	0	-0.23
538	34	N171	-1160.55	623.576	-1295.581	0.167	0	-0.219
539	34	N192	-78.915	97.506	-221.277	0	0	0
540	34	N193	-599.594	199.932	3.401	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
541	34	N194	272.537	160.746	338.164	0	0	0
542	34	N204	-26.045	6.054	-4.629	-0.004	0	-0.001
543	34	Totals:	394.652	4500.154	0.002			
544	34	COG (ft):	X: 1.194	Y: 0.049	Z: -0.79			
545	35	N52	-22.519	10.943	87.897	-0.03	0.007	0.002
546	35	N55	-336.329	57.65	54.828	-0.024	0.022	0.107
547	35	N113	20.824	25.698	34.913	0.05	0.017	-0.031
548	35	N53	170.47	11.401	-52.132	-0.024	0	0.007
549	35	N166	-175.963	455.898	-934.386	-0.203	0	0.028
550	35	N167	358.4	433.167	1099.629	-0.194	0	0.027
551	35	N168	-1277.089	899.761	272.398	0.178	0	0.33
552	35	N169	2222.485	843.911	-217.215	0.16	0	0.314
553	35	N170	1009.942	664.48	988.504	0.176	0	-0.233
554	35	N171	-1159.825	628.899	-1278.217	0.168	0	-0.222
555	35	N192	-80.831	93.862	-207.477	0	0	0
556	35	N193	-623.516	209.201	22.57	0	0	0
557	35	N194	268.291	159.234	335.184	0	0	0
558	35	N204	-23.949	6.048	-4.205	-0.004	0	-0.001
559	35	Totals:	350.391	4500.154	202.292			
560	35	COG (ft):	X: 1.194	Y: 0.049	Z: -0.79			
561	36	N52	-9.885	14.851	39.154	-0.03	0.004	0.001
562	36	N55	-322.517	56.479	53.806	-0.024	0.021	0.107
563	36	N113	-47.23	15.667	-62.75	0.05	0.021	-0.032
564	36	N53	174.402	11.396	-52.352	-0.024	0	0.007
565	36	N166	-209.64	454.203	-857.48	-0.202	0	0.028
566	36	N167	357.595	431.542	1121.605	-0.193	0	0.026
567	36	N168	-1303.391	897.046	280.146	0.177	0	0.329
568	36	N169	2187.523	841.249	-195.805	0.159	0	0.313
569	36	N170	1068.785	673.228	1161.382	0.177	0	-0.237
570	36	N171	-1189.85	636.751	-1271.358	0.169	0	-0.225
571	36	N192	-81.468	93.275	-205.237	0	0	0
572	36	N193	-641.579	215.75	37.868	0	0	0
573	36	N194	253.48	152.664	320.265	0	0	0
574	36	N204	-25.335	6.052	-3.991	-0.004	0	-0.001
575	36	Totals:	210.889	4500.154	365.254			
576	36	COG (ft):	X: 1.194	Y: 0.049	Z: -0.79			
577	37	N52	19.472	23.169	-65.898	-0.029	0	0
578	37	N55	-162.542	31.935	29.95	0.01	-0.002	0.033
579	37	N113	-97.501	8.181	-134.562	0.05	0.023	-0.033
580	37	N53	37.508	11.62	-10.009	-0.004	0	0.001
581	37	N166	-290.447	446.152	-695.841	-0.198	0	0.026
582	37	N167	346.83	1173.882	1115.695	-0.201	0	0.025
583	37	N168	-515.27	559.356	724.72	0.177	0	0.175
584	37	N169	992.607	520.623	-791.551	0.165	0	0.166
585	37	N170	1084.436	677.837	1256.773	0.178	0	-0.239
586	37	N171	-1232.939	640.771	-1280.164	0.169	0	-0.228
587	37	N192	-75.856	100.668	-229.277	0	0	0
588	37	N193	-338.196	148.445	186.994	0	0	0
589	37	N194	246.005	151.522	323.584	0	0	0
590	37	N204	-14.103	5.991	-1.427	-0.001	0	0
591	37	Totals:	0.005	4500.153	428.988			
592	37	COG (ft):	X: 0.107	Y: 0.049	Z: -0.78			
593	38	N52	39.58	28.745	-136.085	-0.029	-0.002	-0.001
594	38	N55	-124.278	28.737	21.877	0.011	0.001	0.033
595	38	N113	-125.68	4.107	-173.113	0.049	0.026	-0.034

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
596	38	N53	55.138	11.613	-16.526	-0.003	0	0.001
597	38	N166	-358.833	438.864	-592.314	-0.195	0	0.026
598	38	N167	332.203	1166.987	1083.978	-0.198	0	0.025
599	38	N168	-591.51	558.363	718.708	0.177	0	0.175
600	38	N169	958.543	518.861	-783.253	0.165	0	0.166
601	38	N170	1073.966	679.448	1276.867	0.178	0	-0.24
602	38	N171	-1265.6	642.071	-1304.771	0.17	0	-0.228
603	38	N192	-70.084	109.275	-256.616	0	0	0
604	38	N193	-356.472	154.405	194.393	0	0	0
605	38	N194	241.662	152.685	332.048	0	0	0
606	38	N204	-18.155	5.992	-2.287	-0.001	0	0
607	38	Totals:	-209.517	4500.153	362.906			
608	38	COG (ft):	X: 0.107	Y: 0.049	Z: -0.78			
609	39	N52	35.216	27.798	-124.102	-0.028	-0.003	-0.001
610	39	N55	-49.919	22.677	7.64	0.012	0.005	0.034
611	39	N113	-124.95	4.405	-171.058	0.05	0.026	-0.034
612	39	N53	92.069	11.599	-28.546	-0.003	0	0.001
613	39	N166	-369.029	437.903	-619.784	-0.195	0	0.026
614	39	N167	324.293	1166.145	1055.881	-0.197	0	0.025
615	39	N168	-722.797	559.626	692.274	0.179	0	0.175
616	39	N169	924.631	518.958	-787.519	0.165	0	0.166
617	39	N170	1063.272	682.234	1259.967	0.178	0	-0.241
618	39	N171	-1288.725	644.559	-1335.264	0.17	0	-0.229
619	39	N192	-70.488	112.025	-265.801	0	0	0
620	39	N193	-368.574	159.118	203.417	0	0	0
621	39	N194	227.68	147.112	317.206	0	0	0
622	39	N204	-20.706	5.993	-3.378	0	0	0
623	39	Totals:	-348.028	4500.153	200.933			
624	39	COG (ft):	X: 0.107	Y: 0.049	Z: -0.78			
625	40	N52	25.647	25.505	-96.194	-0.029	-0.004	0
626	40	N55	24.39	16.612	-5.656	0.013	0.008	0.034
627	40	N113	-86.341	10.139	-117.088	0.05	0.023	-0.033
628	40	N53	129.742	11.584	-40.292	-0.002	0	0
629	40	N166	-356.177	438.572	-671.328	-0.195	0	0.026
630	40	N167	322.002	1166.829	1038.445	-0.198	0	0.026
631	40	N168	-859.51	565.074	668.085	0.182	0	0.177
632	40	N169	919.74	523.236	-816.565	0.168	0	0.167
633	40	N170	1033.976	683.062	1182.816	0.179	0	-0.241
634	40	N171	-1308.072	645.386	-1360.972	0.171	0	-0.229
635	40	N192	-72.384	112.965	-270.921	0	0	0
636	40	N193	-358.256	155.472	198.579	0	0	0
637	40	N194	213.993	139.724	295.24	0	0	0
638	40	N204	-23.39	5.993	-4.152	0	0	0
639	40	Totals:	-394.64	4500.153	0			
640	40	COG (ft):	X: 0.107	Y: 0.049	Z: -0.78			
641	41	N52	23.278	24.768	-88.319	-0.028	-0.004	0
642	41	N55	49.977	14.483	-10.848	0.014	0.01	0.034
643	41	N113	-19.457	19.904	-22.679	0.05	0.018	-0.032
644	41	N53	144.218	11.577	-45.471	-0.001	0	0
645	41	N166	-351.18	437.078	-688.035	-0.194	0	0.026
646	41	N167	319.285	1165.418	1015.413	-0.197	0	0.026
647	41	N168	-914.97	571.097	658.59	0.184	0	0.179
648	41	N169	948.533	528.613	-853.363	0.17	0	0.169
649	41	N170	970.812	677.104	1022.389	0.179	0	-0.238
650	41	N171	-1308.805	640.07	-1378.322	0.171	0	-0.226

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
651	41	N192	-70.47	116.607	-284.718	0	0	0
652	41	N193	-334.335	146.206	179.421	0	0	0
653	41	N194	218.217	141.233	298.226	0	0	0
654	41	N204	-25.482	5.994	-4.575	0	0	0
655	41	Totals:	-350.378	4500.153	-202.29			
656	41	COG (ft):	X: 0.107	Y: 0.049	Z: -0.78			
657	42	N52	10.652	20.862	-39.574	-0.029	-0.001	0
658	42	N55	36.213	15.629	-9.836	0.014	0.012	0.034
659	42	N113	48.633	29.938	75.015	0.051	0.014	-0.03
660	42	N53	140.277	11.578	-45.248	-0.001	0	0
661	42	N166	-317.52	438.77	-764.954	-0.195	0	0.027
662	42	N167	320.093	1167.047	993.442	-0.198	0	0.027
663	42	N168	-888.768	573.816	650.769	0.185	0	0.18
664	42	N169	983.514	531.306	-874.702	0.17	0	0.169
665	42	N170	911.915	668.347	849.456	0.178	0	-0.234
666	42	N171	-1278.771	632.217	-1385.168	0.17	0	-0.222
667	42	N192	-69.827	117.192	-286.95	0	0	0
668	42	N193	-316.224	139.648	164.133	0	0	0
669	42	N194	233.04	147.809	313.154	0	0	0
670	42	N204	-24.104	5.994	-4.79	0	0	0
671	42	Totals:	-210.877	4500.153	-365.252			
672	42	COG (ft):	X: 0.107	Y: 0.049	Z: -0.78			
673	43	N52	-18.697	12.547	65.445	-0.03	0.003	0.001
674	43	N55	15.543	17.427	-6.493	0.014	0.011	0.034
675	43	N113	98.932	37.421	146.818	0.051	0.011	-0.029
676	43	N53	132.836	11.581	-42.837	-0.001	0	0
677	43	N166	-236.74	446.811	-926.543	-0.199	0	0.028
678	43	N167	330.866	1174.709	999.343	-0.201	0	0.028
679	43	N168	-837.969	574.65	640.739	0.185	0	0.18
680	43	N169	1011.951	532.521	-884.102	0.17	0	0.17
681	43	N170	896.2	663.74	754.069	0.177	0	-0.231
682	43	N171	-1235.672	628.192	-1376.361	0.169	0	-0.22
683	43	N192	-75.429	109.804	-262.919	0	0	0
684	43	N193	-302.729	135.798	158.579	0	0	0
685	43	N194	240.54	148.958	309.839	0	0	0
686	43	N204	-19.632	5.993	-4.566	0	0	0
687	43	Totals:	0.001	4500.153	-428.988			
688	43	COG (ft):	X: 0.107	Y: 0.049	Z: -0.78			
689	44	N52	-38.82	6.968	135.622	-0.03	0.005	0.002
690	44	N55	-22.751	20.63	1.574	0.013	0.008	0.034
691	44	N113	127.11	41.49	185.338	0.051	0.009	-0.029
692	44	N53	115.235	11.589	-36.336	-0.002	0	0.001
693	44	N166	-168.321	454.105	-1030.037	-0.202	0	0.029
694	44	N167	345.486	1181.597	1031.054	-0.204	0	0.028
695	44	N168	-761.685	575.64	646.781	0.185	0	0.18
696	44	N169	1045.997	534.278	-892.404	0.171	0	0.17
697	44	N170	906.656	662.13	734.006	0.177	0	-0.231
698	44	N171	-1203.008	626.891	-1351.759	0.169	0	-0.219
699	44	N192	-81.212	101.2	-235.596	0	0	0
700	44	N193	-284.475	129.843	151.176	0	0	0
701	44	N194	244.894	147.8	301.383	0	0	0
702	44	N204	-15.583	5.991	-3.706	0	0	0
703	44	Totals:	209.523	4500.153	-362.905			
704	44	COG (ft):	X: 0.107	Y: 0.049	Z: -0.78			
705	45	N52	-34.46	7.913	123.66	-0.03	0.006	0.002

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
706	45	N55	-97.148	26.694	15.814	0.012	0.004	0.034
707	45	N113	126.353	41.187	183.25	0.051	0.009	-0.028
708	45	N53	78.3	11.603	-24.319	-0.003	0	0.001
709	45	N166	-158.11	455.071	-1002.599	-0.203	0	0.029
710	45	N167	353.391	1182.439	1059.155	-0.205	0	0.028
711	45	N168	-630.332	574.37	673.229	0.183	0	0.18
712	45	N169	1079.9	534.18	-888.143	0.17	0	0.17
713	45	N170	917.382	659.354	750.96	0.177	0	-0.23
714	45	N171	-1179.886	624.4	-1321.279	0.168	0	-0.219
715	45	N192	-80.814	98.448	-226.404	0	0	0
716	45	N193	-272.388	125.133	142.142	0	0	0
717	45	N194	258.874	153.37	316.217	0	0	0
718	45	N204	-13.03	5.991	-2.615	-0.001	0	0
719	45	Totals:	348.034	4500.153	-200.932			
720	45	COG (ft):	X: 0.107	Y: 0.049	Z: -0.78			
721	46	N52	-24.887	10.206	95.763	-0.03	0.007	0.002
722	46	N55	-171.433	32.756	29.123	0.011	0.001	0.034
723	46	N113	87.711	35.455	129.279	0.05	0.012	-0.029
724	46	N53	40.572	11.618	-12.545	-0.004	0	0.001
725	46	N166	-170.97	454.401	-951.077	-0.202	0	0.028
726	46	N167	355.683	1181.758	1076.594	-0.205	0	0.027
727	46	N168	-493.644	568.922	697.374	0.181	0	0.178
728	46	N169	1084.815	529.912	-859.096	0.168	0	0.169
729	46	N170	946.746	658.534	828.138	0.176	0	-0.23
730	46	N171	-1160.55	623.576	-1295.581	0.167	0	-0.219
731	46	N192	-78.915	97.506	-221.277	0	0	0
732	46	N193	-282.682	128.773	146.984	0	0	0
733	46	N194	272.537	160.746	338.164	0	0	0
734	46	N204	-10.339	5.99	-1.841	-0.001	0	0
735	46	Totals:	394.646	4500.153	0.001			
736	46	COG (ft):	X: 0.107	Y: 0.049	Z: -0.78			
737	47	N52	-22.519	10.943	87.897	-0.03	0.007	0.002
738	47	N55	-196.972	34.878	34.317	0.011	-0.001	0.033
739	47	N113	20.824	25.698	34.913	0.05	0.017	-0.031
740	47	N53	26.072	11.624	-7.352	-0.004	0	0.001
741	47	N166	-175.963	455.898	-934.386	-0.203	0	0.028
742	47	N167	358.4	1183.167	1099.629	-0.205	0	0.027
743	47	N168	-438.273	562.909	706.835	0.178	0	0.176
744	47	N169	1056.049	524.54	-822.291	0.166	0	0.167
745	47	N170	1009.942	664.48	988.504	0.176	0	-0.233
746	47	N171	-1159.825	628.899	-1278.217	0.168	0	-0.222
747	47	N192	-80.831	93.862	-207.477	0	0	0
748	47	N193	-306.566	138.03	166.152	0	0	0
749	47	N194	268.291	159.234	335.184	0	0	0
750	47	N204	-8.246	5.989	-1.418	-0.001	0	0
751	47	Totals:	350.384	4500.153	202.291			
752	47	COG (ft):	X: 0.107	Y: 0.049	Z: -0.78			
753	48	N52	-9.885	14.851	39.154	-0.03	0.004	0.001
754	48	N55	-183.2	33.731	33.299	0.01	-0.003	0.033
755	48	N113	-47.23	15.667	-62.75	0.05	0.021	-0.032
756	48	N53	30.037	11.623	-7.585	-0.004	0	0.001
757	48	N166	-209.64	454.203	-857.48	-0.202	0	0.028
758	48	N167	357.595	1181.542	1121.605	-0.205	0	0.026
759	48	N168	-464.493	560.194	714.669	0.177	0	0.175
760	48	N169	1021.061	521.843	-800.951	0.165	0	0.167

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
761	48	N170	1068.784	673.228	1161.382	0.177	0	-0.237
762	48	N171	-1189.85	636.751	-1271.358	0.169	0	-0.225
763	48	N192	-81.468	93.275	-205.237	0	0	0
764	48	N193	-324.681	144.59	181.442	0	0	0
765	48	N194	253.48	152.664	320.265	0	0	0
766	48	N204	-9.627	5.99	-1.203	-0.001	0	0
767	48	Totals:	210.883	4500.153	365.253			
768	48	COG (ft):	X: 0.107	Y: 0.049	Z: -0.78			
769	49	N52	1.825	20.498	-1.778	-0.044	0.008	-0.008
770	49	N55	-73.529	24.685	11.726	0.012	0.005	0.034
771	49	N113	0.686	22.802	6.12	0.05	0.017	-0.031
772	49	N53	85.189	11.601	-26.434	-0.003	0	0.001
773	49	N166	2.248	629.115	-1153.544	-0.278	0	-0.007
774	49	N167	-19.624	595.815	1459.735	-0.265	0	-0.007
775	49	N168	-676.576	566.997	682.752	0.181	0	0.177
776	49	N169	1002.265	526.57	-837.829	0.168	0	0.168
777	49	N170	990.381	670.79	1005.444	0.177	0	-0.235
778	49	N171	-1234.315	634.486	-1328.268	0.169	0	-0.224
779	49	N192	15.551	123.443	-304.409	0	0	0
780	49	N193	-320.477	142.125	172.78	0	0	0
781	49	N194	243.249	150.232	316.702	0	0	0
782	49	N204	-16.869	5.992	-2.996	-0.001	0	0
783	49	Totals:	0.003	4125.153	0.001			
784	49	COG (ft):	X: -0.34	Y: 0.372	Z: -0.592			
785	50	N52	1.27	19.81	-1.185	-0.04	0.005	-0.005
786	50	N55	-73.529	24.685	11.726	0.012	0.005	0.034
787	50	N113	0.686	22.802	6.12	0.05	0.017	-0.031
788	50	N53	85.189	11.601	-26.434	-0.003	0	0.001
789	50	N166	-141.395	632.135	-973.728	-0.279	0	-0.006
790	50	N167	155.785	598.219	1264.173	-0.266	0	-0.006
791	50	N168	-676.576	566.997	682.752	0.181	0	0.177
792	50	N169	1002.265	526.57	-837.829	0.168	0	0.168
793	50	N170	990.381	670.79	1005.444	0.177	0	-0.235
794	50	N171	-1234.315	634.486	-1328.268	0.169	0	-0.224
795	50	N192	-15.661	118.707	-289.256	0	0	0
796	50	N193	-320.477	142.125	172.78	0	0	0
797	50	N194	243.249	150.232	316.702	0	0	0
798	50	N204	-16.869	5.992	-2.996	-0.001	0	0
799	50	Totals:	0.003	4125.153	0.001			
800	50	COG (ft):	X: -0.178	Y: 0.372	Z: -0.763			
801	51	N52	0.45	20.833	-0.246	-0.034	0.002	0.001
802	51	N55	-85.787	28.805	13.679	0.014	0.005	0.04
803	51	N113	0.811	26.605	7.155	0.059	0.02	-0.036
804	51	N53	99.373	13.529	-30.833	-0.003	0	0.001
805	51	N166	-307.472	521.396	-946.379	-0.232	0	0.032
806	51	N167	395.289	494.477	1233.752	-0.221	0	0.031
807	51	N168	-789.28	662.209	796.517	0.211	0	0.207
808	51	N169	1169.272	613.561	-977.446	0.195	0	0.196
809	51	N170	1155.345	783.762	1172.942	0.207	0	-0.275
810	51	N171	-1439.932	738.977	-1549.647	0.198	0	-0.261
811	51	N192	-88.267	122.81	-287.123	0	0	0
812	51	N193	-373.901	165.87	201.575	0	0	0
813	51	N194	283.777	175.351	369.549	0	0	0
814	51	N204	-19.674	6.992	-3.495	-0.001	0	0
815	51	Totals:	0.003	4375.178	0			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
816	51	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
817	52	N52	7.068	20.127	-22.279	-0.03	0.001	0.001
818	52	N55	-126.289	29.41	21.988	0.011	0.001	0.034
819	52	N113	-51.315	15.608	-67.771	0.051	0.021	-0.033
820	52	N53	60.721	11.879	-18.173	-0.003	0	0.001
821	52	N166	-277.408	457.277	-785.095	-0.203	0	0.028
822	52	N167	348.891	434.423	1106.401	-0.195	0	0.027
823	52	N168	-593.452	574.969	715.626	0.183	0	0.18
824	52	N169	1017.939	534.195	-830.841	0.17	0	0.17
825	52	N170	1064.324	690.27	1165.731	0.182	0	-0.243
826	52	N171	-1262.547	652.359	-1340.014	0.174	0	-0.231
827	52	N192	-78.551	105.013	-241.6	0	0	0
828	52	N193	-342.99	150.922	187.719	0	0	0
829	52	N194	249.538	154.238	327.465	0	0	0
830	52	N204	-15.926	6.13	-2.482	-0.001	0	0
831	52	Totals:	0.004	3836.823	216.674			
832	52	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
833	53	N52	16.6	22.895	-57.176	-0.03	0	0
834	53	N55	-97.747	27.033	16.723	0.012	0.003	0.034
835	53	N113	-72.207	12.569	-97.439	0.051	0.023	-0.033
836	53	N53	73.1	11.874	-22.207	-0.003	0	0.001
837	53	N166	-311.739	454.088	-735.807	-0.202	0	0.027
838	53	N167	342.639	431.408	1095.566	-0.193	0	0.026
839	53	N168	-650.154	575.51	713.221	0.183	0	0.18
840	53	N169	1003.132	534.433	-830.806	0.17	0	0.17
841	53	N170	1068.554	693.009	1198.751	0.182	0	-0.244
842	53	N171	-1281.491	654.789	-1351.437	0.174	0	-0.232
843	53	N192	-76.211	108.448	-252.852	0	0	0
844	53	N193	-348.462	152.525	189.661	0	0	0
845	53	N194	242.438	152.109	324.089	0	0	0
846	53	N204	-16.785	6.13	-2.651	-0.001	0	0
847	53	Totals:	-108.334	3836.823	187.64			
848	53	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
849	54	N52	21.788	24.424	-76.808	-0.03	-0.002	0
850	54	N55	-63.172	24.18	10.194	0.012	0.005	0.035
851	54	N113	-73.567	12.413	-99.321	0.051	0.022	-0.033
852	54	N53	89.239	11.868	-27.534	-0.003	0	0.001
853	54	N166	-334.795	451.644	-711.748	-0.201	0	0.027
854	54	N167	337.467	429.098	1081.087	-0.192	0	0.026
855	54	N168	-718.122	577.305	706.875	0.184	0	0.181
856	54	N169	994.302	535.8	-837.838	0.171	0	0.171
857	54	N170	1057.974	693.986	1186.203	0.182	0	-0.244
858	54	N171	-1295.436	655.668	-1364.876	0.174	0	-0.232
859	54	N192	-74.189	111.675	-263.815	0	0	0
860	54	N193	-348.417	152.223	188.152	0	0	0
861	54	N194	237.061	150.409	320.698	0	0	0
862	54	N204	-17.771	6.131	-2.931	0	0	0
863	54	Totals:	-187.638	3836.823	108.337			
864	54	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
865	55	N52	21.245	24.304	-75.92	-0.029	-0.002	0
866	55	N55	-31.818	21.613	4.148	0.013	0.007	0.035
867	55	N113	-55.027	15.183	-72.91	0.051	0.021	-0.033
868	55	N53	104.816	11.861	-32.727	-0.002	0	0.001
869	55	N166	-340.405	450.598	-719.363	-0.2	0	0.027
870	55	N167	334.762	428.111	1066.84	-0.192	0	0.026

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
871	55	N168	-779.162	579.874	698.286	0.186	0	0.181
872	55	N169	993.813	537.931	-850.056	0.172	0	0.172
873	55	N170	1035.414	692.94	1131.441	0.182	0	-0.244
874	55	N171	-1300.645	654.76	-1376.732	0.174	0	-0.232
875	55	N192	-73.026	113.828	-271.554	0	0	0
876	55	N193	-342.867	150.096	183.595	0	0	0
877	55	N194	234.845	149.594	318.199	0	0	0
878	55	N204	-18.618	6.131	-3.247	0	0	0
879	55	Totals:	-216.673	3836.823	0			
880	55	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
881	56	N52	15.115	22.567	-54.746	-0.029	-0.001	0
882	56	N55	-12.093	20.023	0.205	0.013	0.008	0.035
883	56	N113	-21.547	20.136	-25.278	0.051	0.019	-0.032
884	56	N53	115.659	11.857	-36.396	-0.002	0	0.001
885	56	N166	-327.063	451.23	-756.617	-0.201	0	0.027
886	56	N167	335.25	428.713	1056.646	-0.192	0	0.027
887	56	N168	-816.905	582.528	689.76	0.187	0	0.182
888	56	N169	1001.798	540.254	-864.185	0.172	0	0.172
889	56	N170	1006.908	690.15	1049.132	0.182	0	-0.243
890	56	N171	-1295.718	652.307	-1383.826	0.174	0	-0.231
891	56	N192	-73.032	114.331	-273.992	0	0	0
892	56	N193	-333.299	146.715	177.21	0	0	0
893	56	N194	236.39	149.885	317.263	0	0	0
894	56	N204	-19.101	6.131	-3.514	0	0	0
895	56	Totals:	-187.639	3836.823	-108.337			
896	56	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
897	57	N52	5.043	19.679	-18.967	-0.03	0	0.001
898	57	N55	-9.286	19.834	-0.578	0.013	0.008	0.035
899	57	N113	17.895	25.943	30.798	0.052	0.016	-0.032
900	57	N53	118.866	11.855	-37.561	-0.002	0	0.001
901	57	N166	-298.348	453.371	-813.513	-0.202	0	0.027
902	57	N167	338.799	430.741	1053.234	-0.193	0	0.027
903	57	N168	-821.235	584.555	683.584	0.187	0	0.183
904	57	N169	1016.111	542.145	-876.438	0.173	0	0.173
905	57	N170	980.094	686.365	961.35	0.182	0	-0.241
906	57	N171	-1281.978	648.966	-1384.259	0.174	0	-0.229
907	57	N192	-74.206	113.049	-270.48	0	0	0
908	57	N193	-322.283	142.986	170.709	0	0	0
909	57	N194	241.283	151.202	318.142	0	0	0
910	57	N204	-19.091	6.131	-3.661	0	0	0
911	57	Totals:	-108.336	3836.823	-187.64			
912	57	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
913	58	N52	-6.277	16.413	21.836	-0.03	0.001	0.001
914	58	N55	-24.149	21.099	2.007	0.013	0.008	0.035
915	58	N113	52.736	31.049	80.3	0.052	0.014	-0.031
916	58	N53	113.58	11.857	-35.908	-0.002	0	0.001
917	58	N166	-261.945	456.449	-874.815	-0.203	0	0.028
918	58	N167	344.457	433.652	1057.517	-0.194	0	0.027
919	58	N168	-790.989	585.411	681.415	0.187	0	0.183
920	58	N169	1032.919	543.098	-883.536	0.173	0	0.173
921	58	N170	962.155	682.601	891.604	0.181	0	-0.239
922	58	N171	-1263.105	645.632	-1377.916	0.173	0	-0.227
923	58	N192	-76.235	110.327	-261.959	0	0	0
924	58	N193	-312.769	139.909	165.832	0	0	0
925	58	N194	248.214	153.194	320.598	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
926	58	N204	-18.59	6.131	-3.649	0	0	0
927	58	Totals:	0.002	3836.823	-216.674			
928	58	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
929	59	N52	-15.811	13.644	56.729	-0.03	0.003	0.001
930	59	N55	-52.703	23.478	7.27	0.013	0.006	0.035
931	59	N113	73.631	34.085	109.956	0.052	0.013	-0.03
932	59	N53	101.21	11.863	-31.88	-0.002	0	0.001
933	59	N166	-227.609	459.638	-924.093	-0.204	0	0.028
934	59	N167	350.708	436.665	1068.35	-0.195	0	0.028
935	59	N168	-734.266	584.867	683.831	0.187	0	0.183
936	59	N169	1047.718	542.859	-883.572	0.173	0	0.173
937	59	N170	957.912	679.866	858.598	0.181	0	-0.238
938	59	N171	-1244.157	643.2	-1366.497	0.173	0	-0.226
939	59	N192	-78.577	106.893	-250.712	0	0	0
940	59	N193	-307.307	138.308	163.887	0	0	0
941	59	N194	255.321	155.326	323.975	0	0	0
942	59	N204	-17.731	6.131	-3.48	0	0	0
943	59	Totals:	108.34	3836.823	-187.639			
944	59	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
945	60	N52	-21.003	12.115	76.363	-0.031	0.004	0.002
946	60	N55	-87.286	26.333	13.8	0.012	0.005	0.035
947	60	N113	74.983	34.24	111.829	0.052	0.013	-0.03
948	60	N53	85.071	11.869	-26.553	-0.003	0	0.001
949	60	N166	-204.543	462.085	-948.148	-0.206	0	0.029
950	60	N167	355.877	438.973	1082.829	-0.197	0	0.028
951	60	N168	-666.284	583.07	690.179	0.186	0	0.182
952	60	N169	1056.546	541.492	-876.541	0.172	0	0.173
953	60	N170	968.502	678.89	871.161	0.181	0	-0.237
954	60	N171	-1230.215	642.321	-1353.061	0.172	0	-0.226
955	60	N192	-80.603	103.668	-239.752	0	0	0
956	60	N193	-307.355	138.611	165.395	0	0	0
957	60	N194	260.698	157.025	327.365	0	0	0
958	60	N204	-16.746	6.131	-3.2	-0.001	0	0
959	60	Totals:	187.644	3836.823	-108.336			
960	60	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
961	61	N52	-20.461	12.234	75.48	-0.031	0.005	0.002
962	61	N55	-118.635	28.899	19.849	0.012	0.003	0.035
963	61	N113	56.433	31.472	85.421	0.051	0.015	-0.031
964	61	N53	69.484	11.876	-21.355	-0.003	0	0.001
965	61	N166	-198.928	463.132	-940.541	-0.206	0	0.029
966	61	N167	358.581	439.96	1097.076	-0.197	0	0.028
967	61	N168	-605.251	580.502	698.76	0.185	0	0.182
968	61	N169	1057.04	539.362	-864.323	0.171	0	0.172
969	61	N170	991.087	679.936	925.923	0.181	0	-0.238
970	61	N171	-1225.01	643.232	-1341.205	0.172	0	-0.226
971	61	N192	-81.768	101.514	-232.013	0	0	0
972	61	N193	-312.899	140.737	169.952	0	0	0
973	61	N194	262.904	157.837	329.862	0	0	0
974	61	N204	-15.897	6.13	-2.884	-0.001	0	0
975	61	Totals:	216.679	3836.823	0.001			
976	61	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
977	62	N52	-14.33	13.972	54.31	-0.031	0.004	0.002
978	62	N55	-138.347	30.487	23.793	0.012	0.001	0.034
979	62	N113	22.951	26.522	37.801	0.051	0.017	-0.031
980	62	N53	58.632	11.88	-17.681	-0.003	0	0.001

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
981	62	N166	-212.275	462.499	-903.297	-0.206	0	0.028
982	62	N167	358.094	439.36	1107.272	-0.197	0	0.028
983	62	N168	-567.529	577.851	707.275	0.184	0	0.181
984	62	N169	1049.063	537.041	-850.193	0.171	0	0.171
985	62	N170	1019.606	682.723	1008.217	0.181	0	-0.239
986	62	N171	-1229.939	645.687	-1334.109	0.173	0	-0.228
987	62	N192	-81.761	101.01	-229.57	0	0	0
988	62	N193	-322.458	144.116	176.339	0	0	0
989	62	N194	261.351	157.545	330.797	0	0	0
990	62	N204	-15.413	6.13	-2.617	-0.001	0	0
991	62	Totals:	187.645	3836.823	108.338			
992	62	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
993	63	N52	-4.253	16.86	18.529	-0.03	0.003	0.001
994	63	N55	-141.147	30.674	24.576	0.011	0.001	0.034
995	63	N113	-16.483	20.716	-18.266	0.051	0.019	-0.032
996	63	N53	55.424	11.881	-16.516	-0.003	0	0.001
997	63	N166	-241	460.356	-846.404	-0.205	0	0.028
998	63	N167	354.548	437.333	1110.686	-0.196	0	0.027
999	63	N168	-563.212	575.827	713.448	0.183	0	0.18
1000	63	N169	1034.752	535.15	-837.938	0.17	0	0.171
1001	63	N170	1046.409	686.505	1095.985	0.181	0	-0.241
1002	63	N171	-1243.678	649.028	-1333.672	0.173	0	-0.229
1003	63	N192	-80.583	102.291	-233.079	0	0	0
1004	63	N193	-333.47	147.844	182.842	0	0	0
1005	63	N194	256.459	156.228	329.92	0	0	0
1006	63	N204	-15.423	6.13	-2.469	-0.001	0	0
1007	63	Totals:	108.342	3836.823	187.64			
1008	63	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
1009	64	N52	6.956	14.837	-22.225	-0.021	0.001	0
1010	64	N55	-104.491	22.086	18.514	0.008	0	0.024
1011	64	N113	-51.536	8.873	-69.591	0.036	0.016	-0.024
1012	64	N53	35.489	8.447	-10.343	-0.002	0	0.001
1013	64	N166	-199.387	324.456	-544.84	-0.144	0	0.02
1014	64	N167	248.55	309.344	793.165	-0.138	0	0.019
1015	64	N168	-393.163	406.264	513.397	0.129	0	0.127
1016	64	N169	721.118	379.049	-582.673	0.12	0	0.121
1017	64	N170	771.109	490.133	867.905	0.129	0	-0.173
1018	64	N171	-897.072	465.912	-946.513	0.124	0	-0.165
1019	64	N192	-56.119	73.797	-168.674	0	0	0
1020	64	N193	-248.014	108.744	136.538	0	0	0
1021	64	N194	177.5	109.649	233.61	0	0	0
1022	64	N204	-10.935	4.354	-1.596	-0.001	0	0
1023	64	Totals:	0.003	2725.945	216.674			
1024	64	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
1025	65	N52	16.486	17.604	-57.119	-0.021	-0.001	0
1026	65	N55	-75.958	19.712	13.251	0.008	0.002	0.024
1027	65	N113	-72.427	5.844	-99.25	0.036	0.017	-0.024
1028	65	N53	47.876	8.443	-14.381	-0.002	0	0.001
1029	65	N166	-233.705	321.295	-495.566	-0.143	0	0.019
1030	65	N167	242.29	306.307	782.336	-0.137	0	0.019
1031	65	N168	-449.832	406.783	511.002	0.13	0	0.127
1032	65	N169	706.298	379.299	-582.647	0.12	0	0.121
1033	65	N170	775.346	492.832	900.896	0.13	0	-0.174
1034	65	N171	-916.022	468.373	-957.917	0.124	0	-0.166
1035	65	N192	-53.782	77.228	-179.92	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1036	65	N193	-253.506	110.352	138.483	0	0	0
1037	65	N194	170.397	107.52	230.237	0	0	0
1038	65	N204	-11.795	4.354	-1.764	0	0	0
1039	65	Totals:	-108.335	2725.945	187.64			
1040	65	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
1041	66	N52	21.673	19.131	-76.75	-0.021	-0.002	0
1042	66	N55	-41.392	16.863	6.722	0.009	0.003	0.024
1043	66	N113	-73.784	5.688	-101.129	0.036	0.017	-0.024
1044	66	N53	64.025	8.439	-19.713	-0.002	0	0.001
1045	66	N166	-256.752	318.868	-471.517	-0.142	0	0.019
1046	66	N167	237.114	303.982	767.862	-0.136	0	0.018
1047	66	N168	-517.759	408.544	504.667	0.131	0	0.128
1048	66	N169	697.449	380.687	-589.69	0.121	0	0.121
1049	66	N170	764.76	493.805	888.346	0.13	0	-0.174
1050	66	N171	-929.959	469.256	-971.352	0.124	0	-0.166
1051	66	N192	-51.765	80.452	-190.881	0	0	0
1052	66	N193	-253.484	110.056	136.976	0	0	0
1053	66	N194	165.016	105.819	226.839	0	0	0
1054	66	N204	-12.78	4.354	-2.044	0	0	0
1055	66	Totals:	-187.639	2725.945	108.337			
1056	66	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
1057	67	N52	21.13	19.011	-75.86	-0.021	-0.002	0
1058	67	N55	-10.046	14.3	0.677	0.009	0.005	0.025
1059	67	N113	-55.241	8.45	-74.721	0.036	0.016	-0.024
1060	67	N53	79.61	8.434	-24.91	-0.002	0	0
1061	67	N166	-262.358	317.826	-479.135	-0.141	0	0.019
1062	67	N167	234.409	302.992	753.619	-0.135	0	0.019
1063	67	N168	-578.762	411.077	496.088	0.132	0	0.129
1064	67	N169	696.943	382.842	-601.915	0.122	0	0.122
1065	67	N170	742.182	492.791	833.612	0.13	0	-0.174
1066	67	N171	-935.152	468.325	-983.22	0.124	0	-0.166
1067	67	N192	-50.604	82.605	-198.622	0	0	0
1068	67	N193	-247.953	107.936	132.419	0	0	0
1069	67	N194	162.798	105.003	224.326	0	0	0
1070	67	N204	-13.629	4.354	-2.36	0	0	0
1071	67	Totals:	-216.674	2725.945	0			
1072	67	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
1073	68	N52	15	17.275	-54.684	-0.021	-0.002	0
1074	68	N55	9.673	12.712	-3.265	0.009	0.006	0.025
1075	68	N113	-21.759	13.387	-27.096	0.037	0.014	-0.023
1076	68	N53	90.457	8.431	-28.582	-0.001	0	0
1077	68	N166	-249.018	318.447	-516.384	-0.142	0	0.019
1078	68	N167	234.9	303.602	743.425	-0.136	0	0.019
1079	68	N168	-616.481	413.702	487.567	0.133	0	0.13
1080	68	N169	704.915	385.185	-616.047	0.123	0	0.123
1081	68	N170	713.652	490.062	751.352	0.129	0	-0.172
1082	68	N171	-930.203	465.829	-990.338	0.124	0	-0.164
1083	68	N192	-50.612	83.109	-201.066	0	0	0
1084	68	N193	-238.395	104.559	126.034	0	0	0
1085	68	N194	164.342	105.29	223.374	0	0	0
1086	68	N204	-14.112	4.354	-2.627	0	0	0
1087	68	Totals:	-187.64	2725.945	-108.337			
1088	68	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
1089	69	N52	4.928	14.389	-18.906	-0.021	-0.001	0
1090	69	N55	12.481	12.524	-4.049	0.01	0.007	0.025

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1091	69	N113	17.685	19.177	28.97	0.037	0.011	-0.022
1092	69	N53	93.665	8.43	-29.746	-0.001	0	0
1093	69	N166	-220.31	320.565	-573.269	-0.143	0	0.019
1094	69	N167	238.456	305.649	740.01	-0.137	0	0.019
1095	69	N168	-620.807	415.714	481.392	0.134	0	0.13
1096	69	N169	719.223	387.088	-628.298	0.124	0	0.123
1097	69	N170	686.813	486.351	663.627	0.129	0	-0.171
1098	69	N171	-916.441	462.435	-990.802	0.124	0	-0.163
1099	69	N192	-51.785	81.831	-197.562	0	0	0
1100	69	N193	-227.378	100.833	119.531	0	0	0
1101	69	N194	169.237	106.605	224.237	0	0	0
1102	69	N204	-14.102	4.354	-2.775	0	0	0
1103	69	Totals:	-108.337	2725.945	-187.64			
1104	69	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
1105	70	N52	-6.391	11.125	21.897	-0.021	0.001	0.001
1106	70	N55	-2.378	13.787	-1.464	0.01	0.006	0.025
1107	70	N113	52.526	24.267	78.462	0.037	0.009	-0.022
1108	70	N53	88.374	8.431	-28.092	-0.001	0	0
1109	70	N166	-183.919	323.613	-634.557	-0.144	0	0.02
1110	70	N167	244.122	308.584	744.287	-0.138	0	0.02
1111	70	N168	-590.578	416.575	479.216	0.134	0	0.13
1112	70	N169	736.037	388.042	-635.388	0.124	0	0.124
1113	70	N170	668.855	482.652	593.931	0.129	0	-0.169
1114	70	N171	-897.552	459.053	-984.489	0.123	0	-0.161
1115	70	N192	-53.813	79.112	-189.049	0	0	0
1116	70	N193	-217.852	97.754	114.652	0	0	0
1117	70	N194	176.171	108.596	226.683	0	0	0
1118	70	N204	-13.601	4.354	-2.763	0	0	0
1119	70	Totals:	0.001	2725.945	-216.674			
1120	70	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
1121	71	N52	-15.923	8.358	56.787	-0.022	0.003	0.001
1122	71	N55	-30.924	16.162	3.798	0.009	0.005	0.025
1123	71	N113	73.42	27.294	108.109	0.037	0.008	-0.021
1124	71	N53	75.996	8.435	-24.059	-0.002	0	0
1125	71	N166	-149.595	326.775	-683.821	-0.145	0	0.02
1126	71	N167	250.381	311.619	755.114	-0.139	0	0.02
1127	71	N168	-533.888	416.053	481.622	0.133	0	0.13
1128	71	N169	750.849	387.79	-635.415	0.124	0	0.124
1129	71	N170	664.604	479.956	560.955	0.128	0	-0.168
1130	71	N171	-878.599	456.591	-973.088	0.123	0	-0.16
1131	71	N192	-56.151	75.682	-177.808	0	0	0
1132	71	N193	-212.37	96.148	112.704	0	0	0
1133	71	N194	183.282	110.727	230.057	0	0	0
1134	71	N204	-12.743	4.354	-2.594	0	0	0
1135	71	Totals:	108.339	2725.945	-187.639			
1136	71	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
1137	72	N52	-21.114	6.829	76.419	-0.022	0.004	0.001
1138	72	N55	-65.497	19.013	10.327	0.009	0.003	0.025
1139	72	N113	74.769	27.448	109.978	0.037	0.008	-0.021
1140	72	N53	59.847	8.44	-18.728	-0.002	0	0.001
1141	72	N166	-126.539	329.204	-707.867	-0.147	0	0.02
1142	72	N167	255.555	313.942	769.588	-0.14	0	0.02
1143	72	N168	-465.947	414.289	487.959	0.132	0	0.13
1144	72	N169	759.696	386.403	-628.374	0.123	0	0.123
1145	72	N170	675.2	478.985	573.519	0.128	0	-0.167

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1146	72	N171	-864.664	455.708	-959.657	0.122	0	-0.16
1147	72	N192	-58.173	72.459	-166.85	0	0	0
1148	72	N193	-212.395	96.445	114.21	0	0	0
1149	72	N194	188.662	112.427	233.453	0	0	0
1150	72	N204	-11.757	4.354	-2.314	0	0	0
1151	72	Totals:	187.643	2725.945	-108.336			
1152	72	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
1153	73	N52	-20.573	6.949	75.535	-0.022	0.004	0.001
1154	73	N55	-96.838	21.574	16.375	0.008	0.001	0.025
1155	73	N113	56.216	24.689	83.572	0.037	0.009	-0.021
1156	73	N53	44.252	8.444	-13.526	-0.002	0	0.001
1157	73	N166	-120.927	330.248	-700.256	-0.147	0	0.021
1158	73	N167	258.259	314.932	783.832	-0.141	0	0.02
1159	73	N168	-404.951	411.757	496.53	0.131	0	0.129
1160	73	N169	760.207	384.25	-616.148	0.122	0	0.122
1161	73	N170	697.802	479.998	628.253	0.128	0	-0.168
1162	73	N171	-859.476	456.641	-947.789	0.122	0	-0.16
1163	73	N192	-59.336	70.305	-159.109	0	0	0
1164	73	N193	-217.92	98.563	118.767	0	0	0
1165	73	N194	190.87	113.241	235.964	0	0	0
1166	73	N204	-10.908	4.354	-1.998	-0.001	0	0
1167	73	Totals:	216.678	2725.945	0.001			
1168	73	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
1169	74	N52	-14.441	8.685	54.363	-0.022	0.004	0.001
1170	74	N55	-116.545	23.161	20.318	0.008	0	0.024
1171	74	N113	22.732	19.754	35.96	0.036	0.012	-0.022
1172	74	N53	33.394	8.447	-9.849	-0.002	0	0.001
1173	74	N166	-134.273	329.626	-663.017	-0.147	0	0.02
1174	74	N167	257.769	314.323	794.028	-0.141	0	0.02
1175	74	N168	-367.253	409.136	505.04	0.13	0	0.128
1176	74	N169	752.242	381.908	-602.015	0.121	0	0.122
1177	74	N170	726.346	482.724	710.499	0.128	0	-0.169
1178	74	N171	-864.427	459.139	-940.668	0.123	0	-0.162
1179	74	N192	-59.326	69.8	-156.661	0	0	0
1180	74	N193	-227.468	101.938	125.154	0	0	0
1181	74	N194	189.318	112.951	236.916	0	0	0
1182	74	N204	-10.423	4.354	-1.731	-0.001	0	0
1183	74	Totals:	187.644	2725.945	108.338			
1184	74	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			
1185	75	N52	-4.365	11.573	18.583	-0.022	0.003	0.001
1186	75	N55	-119.345	23.348	21.101	0.008	0	0.024
1187	75	N113	-16.704	13.965	-20.097	0.036	0.014	-0.023
1188	75	N53	30.187	8.448	-8.684	-0.003	0	0.001
1189	75	N166	-162.99	327.506	-606.135	-0.146	0	0.02
1190	75	N167	254.215	312.278	797.444	-0.14	0	0.019
1191	75	N168	-362.941	407.125	511.213	0.129	0	0.127
1192	75	N169	737.936	380.004	-589.763	0.12	0	0.121
1193	75	N170	753.175	486.433	798.209	0.129	0	-0.171
1194	75	N171	-878.187	462.533	-940.2	0.123	0	-0.163
1195	75	N192	-58.148	71.078	-160.161	0	0	0
1196	75	N193	-238.482	105.664	131.659	0	0	0
1197	75	N194	184.424	111.637	236.054	0	0	0
1198	75	N204	-10.433	4.354	-1.583	-0.001	0	0
1199	75	Totals:	108.341	2725.945	187.64			
1200	75	COG (ft):	X: -0.09	Y: 0.409	Z: -1.25			



Company : Tower Engineering Solutions
Designer : YATISH
Job Number : Project No. 10311542
Model Name : 5000078561-VZW_MT_LO_H

7/23/2025
2:15:33 PM
Checked By : _____

Node Reactions (Continued)

LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
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Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks

Member	Shape	Code Check	Loc[ft]	LC Shear Check	Loc[ft]	DirLC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	M104	PIPE 2.5	0.385	1.697	2	0.285	1.202	8 45708.844	50715	3.596	3.596	1 H1-1b
2	M124	PIPE 2.0	0.264	4.5	8	0.217	1	8 14916.096	32130	1.872	1.872	1 H1-1b
3	M98	PIPE 2.5	0.255	1.697	8	0.186	1.697	2 45708.844	50715	3.596	3.596	1 H1-1b
4	M110	PIPE 2.5	0.223	1.697	11	0.184	1.697	11 45708.844	50715	3.596	3.596	1 H1-1b
5	MP5B	PIPE 2.0	0.172	1.75	8	0.146	1.75	3 14916.096	32130	1.872	1.872	1 H1-1b
6	M34	PIPE 2.0	0.388	0.875	5	0.134	0	5 30196.78	32130	1.872	1.872	1 H1-1b
7	M114	PIPE 2.5	0.173	0	10	0.114	8.602	4 27678.13	50715	3.596	3.596	1 H1-1b
8	MP4B	PIPE 2.0	0.346	4.5	7	0.106	1.75	8 14916.096	32130	1.872	1.872	1 H1-1b
9	MP2A	PIPE 2.0	0.212	1.75	8	0.104	1.75	9 14916.096	32130	1.872	1.872	1 H1-1b
10	MP3B	PIPE 2.0	0.213	1.75	8	0.099	1.75	9 14916.096	32130	1.872	1.872	1 H1-1b
11	M107	PIPE 2.5	0.126	1.697	7	0.097	1.697	8 45708.844	50715	3.596	3.596	1 H1-1b
12	M103	PIPE 2.5	0.131	0	1	0.096	0	7 45708.844	50715	3.596	3.596	1 H1-1b
13	M105	PIPE 2.5	0.357	0	8	0.094	0	2 27678.13	50715	3.596	3.596	1 H1-1b
14	MP5C	PIPE 2.0	0.187	4.219	29	0.092	3.281	5 23808.54	32130	1.872	1.872	1 H1-1b
15	MP3C	PIPE 2.0	0.178	1.75	11	0.092	1.75	5 14916.096	32130	1.872	1.872	1 H1-1b
16	M109	PIPE 2.5	0.135	0	5	0.091	0	6 45708.844	50715	3.596	3.596	1 H1-1b
17	M42	PIPE 2.0	0.179	5.82	4	0.09	5.335	4 21406.329	32130	1.872	1.872	1 H1-1b
18	MP1B	PIPE 2.0	0.249	5.25	5	0.086	1.75	10 14916.096	32130	1.872	1.872	1 H1-1b
19	M57	PIPE 2.0	0.261	0.242	5	0.084	5.335	10 21406.329	32130	1.872	1.872	1 H1-1b
20	MP2C	PIPE 2.0	0.262	5.25	10	0.082	1.75	5 14916.096	32130	1.872	1.872	1 H1-1b
21	MP2B	PIPE 2.0	0.193	1.75	2	0.082	1.75	3 14916.096	32130	1.872	1.872	1 H1-1b
22	M113	PIPE 2.5	0.123	1.697	10	0.08	1.697	10 45708.844	50715	3.596	3.596	1 H1-1b
23	M106	PIPE 2.5	0.142	0	12	0.078	0	5 45708.844	50715	3.596	3.596	1 H1-1b
24	MP1A	PIPE 2.0	0.259	5.25	1	0.077	1.75	2 14916.096	32130	1.872	1.872	1 H1-1b
25	MP4C	PIPE 2.0	0.237	0.781	11	0.075	0.781	11 23808.54	32130	1.872	1.872	1 H1-1b
26	M100	PIPE 2.5	0.178	0	8	0.075	0	12 45708.844	50715	3.596	3.596	1 H1-1b
27	M56	PIPE 2.0	0.22	0.303	34	0.073	5.335	34 21406.329	32130	1.872	1.872	1 H1-1b
28	M68	PIPE 2.0	0.019	3.5	2	0.072	3.5	2 30196.78	32130	1.872	1.872	1 H1-1b*
29	M127	HSS3X3X4	0.079	2	8	0.071	2 z	8 97902.683	101016	8.556	8.556	1.345 H1-1b
30	M108	PIPE 2.5	0.182	0	7	0.07	0	3 27678.13	50715	3.596	3.596	1 H1-1b
31	M41	PIPE 2.0	0.32	0	11	0.068	0	35 21406.329	32130	1.872	1.872	1 H1-1b
32	M102	PIPE 2.5	0.142	8.602	7	0.068	8.602	1 27678.13	50715	3.596	3.596	1 H1-1b
33	M89	PIPE 2.0	0.18	5.82	8	0.066	5.335	8 21406.329	32130	1.872	1.872	1 H1-1b
34	M111	PIPE 2.5	0.202	0	11	0.066	8.602	9 27678.13	50715	3.596	3.596	1 H1-1b
35	M77	PL3/8X3.5	0.45	0.459	3	0.063	0 y	2 37107.772	42525	0.332	3.055	1.003 H1-1b
36	M101	PIPE 2.5	0.085	1.697	2	0.063	1.697	2 45708.844	50715	3.596	3.596	1 H1-1b
37	MP4A	PIPE 2.0	0.118	0.781	2	0.063	4.219	8 23808.54	32130	1.872	1.872	1 H1-1b
38	M64	PL3/8X3.5	0.557	0.459	34	0.062	0.459 z	35 37107.772	42525	0.332	3.101	1.037 H1-1b
39	M99	PIPE 2.5	0.236	0	2	0.06	0	8 27678.13	50715	3.596	3.596	1 H1-1b
40	M18	PL3/8X3.5	0.282	0.459	50	0.06	0.459 y	11 37107.772	42525	0.332	3.101	1.069 H1-1b
41	M65	PL3/8X3.5	0.39	0.459	8	0.06	0.459 y	30 37107.772	42525	0.332	3.101	1.111 H1-1b
42	M43	PL3/8X3.5	0.523	0.459	29	0.06	0 y	6 37107.772	42525	0.332	3.101	1.021 H1-1b
43	M90	PIPE 2.0	0.28	0.242	2	0.06	5.335	4 21406.329	32130	1.872	1.872	1 H1-1b
44	MP3A	PIPE 2.0	0.182	0.781	2	0.059	0.781	8 23808.54	32130	1.872	1.872	1 H1-1b
45	M73	PL3/8X3.5	0.537	0.459	3	0.056	0 y	8 37107.772	42525	0.332	3.101	1.045 H1-1b
46	MP1C	PIPE 2.0	0.087	5.25	9	0.055	1.75	12 14916.096	32130	1.872	1.872	1 H1-1b
47	M21	PL3/8X3.5	0.269	0.459	49	0.055	0.005 y	8 37107.772	42525	0.332	3.101	1.082 H1-1b
48	M137	PIPE 2.0	0.021	2.972	8	0.055	2.972	8 28901.8	32130	1.872	1.872	1 H1-1b*
49	M39	PL3/8X3.5	0.493	0.459	6	0.055	0 y	30 37107.772	42525	0.332	3.101	1.03 H1-1b
50	M75	PIPE 2.0	0.302	2.728	8	0.053	5.335	2 21406.329	32130	1.872	1.872	1 H1-1a
51	M96	PL3/8X3.5	0.386	0.459	3	0.052	0.459 y	6 37107.772	42525	0.332	3.101	1.021 H1-1b
52	M2	PIPE 2.0	0.015	3.5	49	0.052	3.5	2 30196.78	32130	1.872	1.872	1 H1-1b*
53	M95	PL3/8X3.5	0.386	0.459	4	0.051	0.459 y	3 37107.772	42525	0.332	3.101	1.129 H1-1b
54	M17	PIPE 2.0	0.157	0.303	11	0.051	5.335	7 21406.329	32130	1.872	1.872	1 H1-1b
55	M16	PIPE 2.0	0.165	0.242	9	0.05	5.335	12 21406.329	32130	1.872	1.872	1 H1-1b

Envelope AISC 15TH (360-16): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code	Check	Loc[ft]	LC	Shear	Check	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
56	M76	PIPE 2.0	0.164	0.303	3		0.05	5.335	12		21406.329	32130	1.872	1.872	1	H1-1b	
57	M54	PIPE 1.25	0.059	4.244	6		0.049	4.244	11		16271.96	19687.5	0.801	0.801	1	H1-1b*	
58	M20	PL3/8X3.5	0.363	0.459	11		0.048	0.459	y	1	37107.772	42525	0.332	3.101	1.036	H1-1b	
59	M115	PIPE 2.5	0.066	0	9		0.047	0	8		45708.844	50715	3.596	3.596	1	H1-1b	
60	MP7C	PIPE 1.25	0.225	1.75	8		0.045	3.5	11		17294.934	19687.5	0.801	0.801	1	H1-1b	
61	M52	PIPE 1.25	0.04	3.5	34		0.039	3.5	30		17294.934	19687.5	0.801	0.801	1	H1-1b*	
62	M35	PIPE 1.25	0.087	0	34		0.037	4.244	11		16271.96	19687.5	0.801	0.801	1	H1-1b*	
63	M14	PIPE 2.0	0.192	0.242	3		0.037	0	50		21406.329	32130	1.872	1.872	1	H1-1b	
64	M33	PIPE 1.25	0.027	3.5	8		0.036	3.5	30		17294.934	19687.5	0.801	0.801	1	H1-1b*	
65	M15	PIPE 2.0	0.107	0.303	49		0.035	0	50		21406.329	32130	1.872	1.872	1	H1-1b	
66	M86	PIPE 1.25	0.055	3.5	3		0.035	3.5	2		17294.934	19687.5	0.801	0.801	1	H1-1b*	
67	M83	PIPE 2.0	0.019	3.5	4		0.033	3.5	9		30196.78	32130	1.872	1.872	1	H1-1b*	
68	M84	PIPE 1.25	0.051	3.5	51		0.031	3.5	3		17294.934	19687.5	0.801	0.801	1	H1-1b*	
69	MP6C	PIPE 2.0	0.065	1.625	2		0.031	5.125	31		20866.733	32130	1.872	1.872	1	H1-1b	
70	M87	PIPE 1.25	0.067	4.244	3		0.03	4.244	1		16271.958	19687.5	0.801	0.801	1	H1-1b*	
71	M69	PIPE 1.25	0.061	0	51		0.03	4.244	8		16271.96	19687.5	0.801	0.801	1	H1-1b*	
72	M50	PIPE 2.0	0.02	3.5	9		0.029	3.5	12		30196.78	32130	1.872	1.872	1	H1-1b*	
73	M36	PIPE 2.0	0.109	6.165	6		0.029	6.165	36		20369.988	32130	1.872	1.872	1	H1-1b	
74	M112	PIPE 2.5	0.079	0	5		0.029	0	6		45708.844	50715	3.596	3.596	1	H1-1b	
75	M3	PIPE 2.0	0.016	3.5	12		0.028	3.5	2		30196.78	32130	1.872	1.872	1	H1-1b*	
76	M51	PIPE 1.25	0.075	3.5	34		0.028	3.5	11		17294.934	19687.5	0.801	0.801	1	H1-1b*	
77	M85	PIPE 1.25	0.028	3.5	51		0.027	3.5	3		17294.934	19687.5	0.801	0.801	1	H1-1b*	
78	M7	PIPE 1.25	0.046	3.5	8		0.026	3.5	2		17294.934	19687.5	0.801	0.801	1	H1-1b*	
79	M70	PIPE 2.0	0.173	5.922	3		0.025	5.922	9		21101.842	32130	1.872	1.872	1	H1-1b	
80	M67	PIPE 1.25	0.031	3.5	3		0.025	3.5	3		17294.934	19687.5	0.801	0.801	1	H1-1b*	
81	M72	PIPE 1.25	0.053	4.355	3		0.024	4.355	3		16108.804	19687.5	0.801	0.801	1	H1-1b*	
82	M4	PIPE 1.25	0.039	3.5	50		0.022	3.5	2		17294.934	19687.5	0.801	0.801	1	H1-1b*	
83	M19	PL3/8X3.5	0.388	0.459	8		0.022	0.459	z	11	37107.772	42525	0.332	3.101	1.02	H1-1b	
84	M10	PIPE 1.25	0.058	0	8		0.022	4.244	3		16271.96	19687.5	0.801	0.801	1	H1-1b*	
85	M126	HSS3X3X4	0.057	0	8		0.022	2	y	7	97902.683	101016	8.556	8.556	1.596	H1-1b	
86	M139	PIPE 1.0	0.064	3.126	1		0.021	6.251	11		3332.229	14773.5	0.465	0.465	1	H1-1b	
87	M31	PIPE 2.0	0.115	0	8		0.02	6.486	11		19401.402	32130	1.872	1.872	1	H1-1b*	
88	M38	PIPE 1.25	0.048	4.355	8		0.019	4.355	9		16108.804	19687.5	0.801	0.801	1	H1-1b*	
89	M8	PIPE 1.25	0.049	0	50		0.018	4.244	4		16271.96	19687.5	0.801	0.801	1	H1-1b*	
90	M5	PIPE 1.25	0.023	3.5	50		0.018	3.5	3		17294.934	19687.5	0.801	0.801	1	H1-1b*	
91	M97	PIPE 2.0	0.049	0	5		0.018	5.586	12		22101.357	32130	1.872	1.872	1	H1-1b*	
92	M6	PIPE 1.25	0.027	3.5	8		0.017	3.5	4		17294.934	19687.5	0.801	0.801	1	H1-1b*	
93	M11	PIPE 1.25	0.045	0	8		0.015	4.355	11		16108.804	19687.5	0.801	0.801	1	H1-1b*	
94	M9	PIPE 1.25	0.035	0	49		0.012	4.355	12		16108.804	19687.5	0.801	0.801	1	H1-1b*	
95	M37	PIPE 1.25	0.077	0	33		0.012	4.355	11		16108.806	19687.5	0.801	0.801	1	H1-1b*	
96	M71	PIPE 1.25	0.05	0	4		0.011	4.355	4		16108.804	19687.5	0.801	0.801	1	H1-1b*	
97	M128	L2.5X2.5X4	0.112	2.938	11		0.007	5.876	z	11	12563.447	38556	1.114	2.165	1.136	H2-1	
98	M130	L2.5X2.5X4	0.077	2.91	7		0.006	5.82	z	7	12802.937	38556	1.114	2.17	1.136	H2-1	
99	M133	L2.5X2.5X4	0.082	2.947	7		0.006	5.895	z	7	12481.835	38556	1.114	2.164	1.136	H2-1	
100	M131	L2.5X2.5X4	0.082	2.954	11		0.006	5.908	z	11	12424.528	38556	1.114	2.162	1.136	H2-1	
101	M129	L2.5X2.5X4	0.087	2.938	3		0.006	5.876	z	9	12563.447	38556	1.114	2.165	1.136	H2-1	
102	M132	L2.5X2.5X4	0.082	2.925	3		0.005	5.85	z	4	12671.808	38556	1.114	2.168	1.136	H2-1	

Envelope AISI S100-16: LRFD Member Cold Formed Steel Code Checks

No Data to Print...

 TES A CONGRUEX COMPANY	Threaded Bolts Connection Check		Date	
			7/23/2025	
	Customer:	VZW	TIA Standard:	ANSI/TIA-222-H
	Carrier:	VZW	Mount Elev. [ft]:	150.5
	Site Name:	COMMERCE	Engineer Name:	S. Bhujel
	Site Number:	5000078561-VZW	TES Project #:	10311542
NOTE: The results for all load combinations are presented in the Results Summary Table.				

RISA Member Label =	M117	
I or J End?	J	
Load Combination # =	47	
Con. Configuration # =	6	
Bolt Material =	A36	
Bolt Diameter =	0.5	[in]
# U-Bolts =	2	
Bolt Fy =	36	[KSI]
Bolt Fu =	58	[KSI]
Vertical Spacing, Sv =	4.0	[in]
Bracket/Plate Height, Hb =	6.0	[in]
Tower Leg Type =	Round	
Tower Leg Size =	2.50	[in]
Bolt Pretension, P =	3.9270	[Kips/bolt]

Check Tension:

Applied Tension, T =	3.9270	[Kips/bolt]
Tension Capacity, ΦRnt =	6.1726	[Kips/bolt]
Tension Check, (T/ΦRnt) =	63.6%	

Check Sliding:

Applied Shear, Vy =	0.5916	[Kips/bolt]
Sliding Capacity, ΦRns =	2.3562	[Kips/bolt]
Sliding Check, (Vy/ΦRns) =	25.1%	

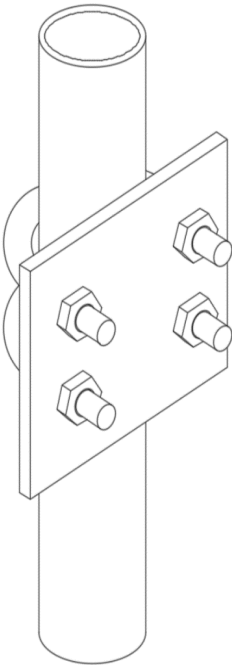
Check Rotation:

Applied Moment, My =	0.0000	[K-Ft]
Rotation Capacity, ΦRnr =	0.4909	[K-Ft]
Rotation Check, (My/ΦRnr) =	Pass	

Check Interaction:

$$\left(\frac{V_{us}}{\phi_u R_{ns}}\right)^2 + \left(\frac{T_{ur}}{\phi_u R_{nr}}\right)^2 \leq 1.0$$

Interaction Ratio =	0.0630
Max Usage =	25.1%

	Configuration 6
	Notes

 TES A CONGRUEX COMPANY	Threaded Bolts Connection Check			Date
	Customer:	VZW	TIA Standard:	ANSI/TIA-222-H
	Carrier:	VZW	Mount Elev. [ft]:	150.5
	Site Name:	COMMERCE	Engineer Name:	S. Bhujel
	Site Number:	5000078561-VZW	TES Project #:	10311542

Results Summary Table

Member Label	Member End	LC	Max. Tension [Kips]	Shear [Kips]	My [K-Ft]	Tension Check	Sliding Check	Rotation Check	Interaction Check
M116	J	1	3.9270	0.2204	0.0000	63.6%	9.4%	Pass	9.4%
M116	J	2	3.9270	0.1634	0.0000	63.6%	6.9%	Pass	6.9%
M116	J	3	3.9270	0.1561	0.0000	63.6%	6.6%	Pass	6.6%
M116	J	4	3.9270	0.1613	0.0000	63.6%	6.8%	Pass	6.8%
M116	J	5	3.9270	0.1497	0.0000	63.6%	6.4%	Pass	6.4%
M116	J	6	3.9270	0.1629	0.0000	63.6%	6.9%	Pass	6.9%
M116	J	7	3.9270	0.2256	0.0000	63.6%	11.5%	Pass	11.5%
M116	J	8	3.9270	0.2833	0.0000	63.6%	16.5%	Pass	16.5%
M116	J	9	3.9270	0.2911	0.0000	63.6%	16.3%	Pass	16.3%
M116	J	10	3.9270	0.2858	0.0000	63.6%	15.0%	Pass	15.0%
M116	J	11	3.9270	0.2978	0.0000	63.6%	15.3%	Pass	15.3%
M116	J	12	3.9270	0.2843	0.0000	63.6%	13.4%	Pass	13.4%
M116	J	13	3.9270	0.2245	0.0000	63.6%	10.0%	Pass	10.0%
M116	J	14	3.9270	0.2228	0.0000	63.6%	9.9%	Pass	9.9%
M116	J	15	3.9270	0.2217	0.0000	63.6%	9.9%	Pass	9.9%
M116	J	16	3.9270	0.2212	0.0000	63.6%	9.8%	Pass	9.8%
M116	J	17	3.9270	0.2206	0.0000	63.6%	9.8%	Pass	9.8%
M116	J	18	3.9270	0.2207	0.0000	63.6%	9.8%	Pass	9.8%
M116	J	19	3.9270	0.2220	0.0000	63.6%	9.9%	Pass	9.9%
M116	J	20	3.9270	0.2237	0.0000	63.6%	10.1%	Pass	10.1%
M116	J	21	3.9270	0.2248	0.0000	63.6%	10.1%	Pass	10.1%
M116	J	22	3.9270	0.2253	0.0000	63.6%	10.1%	Pass	10.1%
M116	J	23	3.9270	0.2258	0.0000	63.6%	10.2%	Pass	10.2%
M116	J	24	3.9270	0.2258	0.0000	63.6%	10.1%	Pass	10.1%
M116	J	25	3.9270	0.2231	0.0000	63.6%	9.9%	Pass	9.9%
M116	J	26	3.9270	0.2194	0.0000	63.6%	9.7%	Pass	9.7%
M116	J	27	3.9270	0.2190	0.0000	63.6%	9.7%	Pass	9.7%
M116	J	28	3.9270	0.2193	0.0000	63.6%	9.7%	Pass	9.7%
M116	J	29	3.9270	0.2185	0.0000	63.6%	9.7%	Pass	9.7%
M116	J	30	3.9270	0.2194	0.0000	63.6%	9.8%	Pass	9.8%
M116	J	31	3.9270	0.2234	0.0000	63.6%	10.1%	Pass	10.1%
M116	J	32	3.9270	0.2271	0.0000	63.6%	10.3%	Pass	10.3%
M116	J	33	3.9270	0.2275	0.0000	63.6%	10.3%	Pass	10.3%
M116	J	34	3.9270	0.2272	0.0000	63.6%	10.3%	Pass	10.3%
M116	J	35	3.9270	0.2279	0.0000	63.6%	10.3%	Pass	10.3%
M116	J	36	3.9270	0.2271	0.0000	63.6%	10.2%	Pass	10.2%
M116	J	37	3.9270	0.2231	0.0000	63.6%	9.9%	Pass	9.9%
M116	J	38	3.9270	0.2194	0.0000	63.6%	9.7%	Pass	9.7%
M116	J	39	3.9270	0.2190	0.0000	63.6%	9.7%	Pass	9.7%
M116	J	40	3.9270	0.2193	0.0000	63.6%	9.7%	Pass	9.7%
M116	J	41	3.9270	0.2185	0.0000	63.6%	9.7%	Pass	9.7%
M116	J	42	3.9270	0.2194	0.0000	63.6%	9.8%	Pass	9.8%
M116	J	43	3.9270	0.2234	0.0000	63.6%	10.1%	Pass	10.1%
M116	J	44	3.9270	0.2271	0.0000	63.6%	10.3%	Pass	10.3%
M116	J	45	3.9270	0.2275	0.0000	63.6%	10.3%	Pass	10.3%

 TES A CONGRUEX COMPANY	Threaded Bolts Connection Check			Date
	Customer:	VZW	TIA Standard:	7/23/2025
	Carrier:	VZW	Mount Elev. [ft]:	ANSI/TIA-222-H
	Site Name:	COMMERCE	Engineer Name:	150.5
	Site Number:	5000078561-VZW	TES Project #:	S. Bhujel
				10311542

Results Summary Table (continued)

Member Label	Member End	LC	Max. Tension [Kips]	Shear [Kips]	My [K-Ft]	Tension Check	Sliding Check	Rotation Check	Interaction Check
M116	J	46	3.9270	0.2272	0.0000	63.6%	10.3%	Pass	10.3%
M116	J	47	3.9270	0.2279	0.0000	63.6%	10.3%	Pass	10.3%
M116	J	48	3.9270	0.2271	0.0000	63.6%	10.2%	Pass	10.2%
M116	J	49	3.9270	0.3146	0.0000	63.6%	14.4%	Pass	14.4%
M116	J	50	3.9270	0.3161	0.0000	63.6%	14.3%	Pass	14.3%
M116	J	51	3.9270	0.2607	0.0000	63.6%	11.8%	Pass	11.8%
M116	J	52	3.9270	0.2286	0.0000	63.6%	10.2%	Pass	10.2%
M116	J	53	3.9270	0.2270	0.0000	63.6%	10.1%	Pass	10.1%
M116	J	54	3.9270	0.2258	0.0000	63.6%	10.0%	Pass	10.0%
M116	J	55	3.9270	0.2253	0.0000	63.6%	10.0%	Pass	10.0%
M116	J	56	3.9270	0.2256	0.0000	63.6%	10.1%	Pass	10.1%
M116	J	57	3.9270	0.2267	0.0000	63.6%	10.1%	Pass	10.1%
M116	J	58	3.9270	0.2282	0.0000	63.6%	10.3%	Pass	10.3%
M116	J	59	3.9270	0.2298	0.0000	63.6%	10.4%	Pass	10.4%
M116	J	60	3.9270	0.2310	0.0000	63.6%	10.4%	Pass	10.4%
M116	J	61	3.9270	0.2316	0.0000	63.6%	10.5%	Pass	10.5%
M116	J	62	3.9270	0.2312	0.0000	63.6%	10.4%	Pass	10.4%
M116	J	63	3.9270	0.2302	0.0000	63.6%	10.3%	Pass	10.3%
M116	J	64	3.9270	0.1622	0.0000	63.6%	7.1%	Pass	7.1%
M116	J	65	3.9270	0.1606	0.0000	63.6%	7.0%	Pass	7.0%
M116	J	66	3.9270	0.1594	0.0000	63.6%	7.0%	Pass	7.0%
M116	J	67	3.9270	0.1589	0.0000	63.6%	7.0%	Pass	7.0%
M116	J	68	3.9270	0.1592	0.0000	63.6%	7.0%	Pass	7.0%
M116	J	69	3.9270	0.1603	0.0000	63.6%	7.1%	Pass	7.1%
M116	J	70	3.9270	0.1618	0.0000	63.6%	7.2%	Pass	7.2%
M116	J	71	3.9270	0.1634	0.0000	63.6%	7.2%	Pass	7.2%
M116	J	72	3.9270	0.1646	0.0000	63.6%	7.3%	Pass	7.3%
M116	J	73	3.9270	0.1651	0.0000	63.6%	7.3%	Pass	7.3%
M116	J	74	3.9270	0.1648	0.0000	63.6%	7.3%	Pass	7.3%
M116	J	75	3.9270	0.1638	0.0000	63.6%	7.2%	Pass	7.2%
M117	J	1	3.9270	0.2087	0.0000	63.6%	8.9%	Pass	8.9%
M117	J	2	3.9270	0.1541	0.0000	63.6%	6.5%	Pass	6.5%
M117	J	3	3.9270	0.1475	0.0000	63.6%	6.3%	Pass	6.3%
M117	J	4	3.9270	0.1530	0.0000	63.6%	6.5%	Pass	6.5%
M117	J	5	3.9270	0.1418	0.0000	63.6%	6.0%	Pass	6.0%
M117	J	6	3.9270	0.1548	0.0000	63.6%	6.6%	Pass	6.6%
M117	J	7	3.9270	0.2152	0.0000	63.6%	9.1%	Pass	9.1%
M117	J	8	3.9270	0.2690	0.0000	63.6%	11.4%	Pass	11.4%
M117	J	9	3.9270	0.2757	0.0000	63.6%	11.7%	Pass	11.7%
M117	J	10	3.9270	0.2704	0.0000	63.6%	11.5%	Pass	11.5%
M117	J	11	3.9270	0.2815	0.0000	63.6%	11.9%	Pass	11.9%
M117	J	12	3.9270	0.2689	0.0000	63.6%	11.4%	Pass	11.4%
M117	J	13	3.9270	0.2133	0.0000	63.6%	9.1%	Pass	9.1%
M117	J	14	3.9270	0.2117	0.0000	63.6%	9.0%	Pass	9.0%
M117	J	15	3.9270	0.2107	0.0000	63.6%	8.9%	Pass	8.9%
M117	J	16	3.9270	0.2103	0.0000	63.6%	8.9%	Pass	8.9%

	Threaded Bolts Connection Check			Date
				7/23/2025
	Customer:	VZW	TIA Standard:	ANSI/TIA-222-H
	Carrier:	VZW	Mount Elev. [ft]:	150.5
	Site Name:	COMMERCE	Engineer Name:	S. Bhujel
	Site Number:	5000078561-VZW	TES Project #:	10311542

Results Summary Table (continued)

Member Label	Member End	LC	Max. Tension [Kips]	Shear [Kips]	My [K-Ft]	Tension Check	Sliding Check	Rotation Check	Interaction Check
M117	J	17	3.9270	0.2097	0.0000	63.6%	8.9%	Pass	8.9%
M117	J	18	3.9270	0.2098	0.0000	63.6%	8.9%	Pass	8.9%
M117	J	19	3.9270	0.2110	0.0000	63.6%	9.0%	Pass	9.0%
M117	J	20	3.9270	0.2126	0.0000	63.6%	9.0%	Pass	9.0%
M117	J	21	3.9270	0.2136	0.0000	63.6%	9.1%	Pass	9.1%
M117	J	22	3.9270	0.2140	0.0000	63.6%	9.1%	Pass	9.1%
M117	J	23	3.9270	0.2146	0.0000	63.6%	9.1%	Pass	9.1%
M117	J	24	3.9270	0.2145	0.0000	63.6%	9.1%	Pass	9.1%
M117	J	25	3.9270	0.2119	0.0000	63.6%	9.0%	Pass	9.0%
M117	J	26	3.9270	0.2085	0.0000	63.6%	8.8%	Pass	8.8%
M117	J	27	3.9270	0.2081	0.0000	63.6%	8.8%	Pass	8.8%
M117	J	28	3.9270	0.2084	0.0000	63.6%	8.8%	Pass	8.8%
M117	J	29	3.9270	0.2077	0.0000	63.6%	8.8%	Pass	8.8%
M117	J	30	3.9270	0.2085	0.0000	63.6%	8.9%	Pass	8.9%
M117	J	31	3.9270	0.2124	0.0000	63.6%	9.0%	Pass	9.0%
M117	J	32	3.9270	0.2158	0.0000	63.6%	9.2%	Pass	9.2%
M117	J	33	3.9270	0.2162	0.0000	63.6%	9.2%	Pass	9.2%
M117	J	34	3.9270	0.2159	0.0000	63.6%	9.2%	Pass	9.2%
M117	J	35	3.9270	0.2166	0.0000	63.6%	9.2%	Pass	9.2%
M117	J	36	3.9270	0.2158	0.0000	63.6%	9.2%	Pass	9.2%
M117	J	37	3.9270	0.5869	0.0000	63.6%	24.9%	Pass	24.9%
M117	J	38	3.9270	0.5835	0.0000	63.6%	24.8%	Pass	24.8%
M117	J	39	3.9270	0.5831	0.0000	63.6%	24.7%	Pass	24.7%
M117	J	40	3.9270	0.5834	0.0000	63.6%	24.8%	Pass	24.8%
M117	J	41	3.9270	0.5827	0.0000	63.6%	24.7%	Pass	24.7%
M117	J	42	3.9270	0.5835	0.0000	63.6%	24.8%	Pass	24.8%
M117	J	43	3.9270	0.5874	0.0000	63.6%	24.9%	Pass	24.9%
M117	J	44	3.9270	0.5908	0.0000	63.6%	25.1%	Pass	25.1%
M117	J	45	3.9270	0.5912	0.0000	63.6%	25.1%	Pass	25.1%
M117	J	46	3.9270	0.5909	0.0000	63.6%	25.1%	Pass	25.1%
M117	J	47	3.9270	0.5916	0.0000	63.6%	25.1%	Pass	25.1%
M117	J	48	3.9270	0.5908	0.0000	63.6%	25.1%	Pass	25.1%
M117	J	49	3.9270	0.2979	0.0000	63.6%	12.6%	Pass	12.6%
M117	J	50	3.9270	0.2991	0.0000	63.6%	12.7%	Pass	12.7%
M117	J	51	3.9270	0.2472	0.0000	63.6%	10.5%	Pass	10.5%
M117	J	52	3.9270	0.2172	0.0000	63.6%	9.2%	Pass	9.2%
M117	J	53	3.9270	0.2157	0.0000	63.6%	9.2%	Pass	9.2%
M117	J	54	3.9270	0.2145	0.0000	63.6%	9.1%	Pass	9.1%
M117	J	55	3.9270	0.2141	0.0000	63.6%	9.1%	Pass	9.1%
M117	J	56	3.9270	0.2144	0.0000	63.6%	9.1%	Pass	9.1%
M117	J	57	3.9270	0.2154	0.0000	63.6%	9.1%	Pass	9.1%
M117	J	58	3.9270	0.2168	0.0000	63.6%	9.2%	Pass	9.2%
M117	J	59	3.9270	0.2183	0.0000	63.6%	9.3%	Pass	9.3%
M117	J	60	3.9270	0.2195	0.0000	63.6%	9.3%	Pass	9.3%
M117	J	61	3.9270	0.2200	0.0000	63.6%	9.3%	Pass	9.3%

 TES A CONGRUEX [®] COMPANY	Threaded Bolts Connection Check			Date
	Customer:	VZW	TIA Standard:	ANSI/TIA-222-H
	Carrier:	VZW	Mount Elev. [ft]:	150.5
	Site Name:	COMMERCE	Engineer Name:	S. Bhujel
	Site Number:	5000078561-VZW	TES Project #:	10311542

Results Summary Table (continued)

Member Label	Member End	LC	Max. Tension [Kips]	Shear [Kips]	My [K-Ft]	Tension Check	Sliding Check	Rotation Check	Interaction Check
M117	J	62	3.9270	0.2197	0.0000	63.6%	9.3%	Pass	9.3%
M117	J	63	3.9270	0.2187	0.0000	63.6%	9.3%	Pass	9.3%
M117	J	64	3.9270	0.1547	0.0000	63.6%	6.6%	Pass	6.6%
M117	J	65	3.9270	0.1532	0.0000	63.6%	6.5%	Pass	6.5%
M117	J	66	3.9270	0.1520	0.0000	63.6%	6.5%	Pass	6.5%
M117	J	67	3.9270	0.1515	0.0000	63.6%	6.4%	Pass	6.4%
M117	J	68	3.9270	0.1518	0.0000	63.6%	6.4%	Pass	6.4%
M117	J	69	3.9270	0.1528	0.0000	63.6%	6.5%	Pass	6.5%
M117	J	70	3.9270	0.1543	0.0000	63.6%	6.5%	Pass	6.5%
M117	J	71	3.9270	0.1558	0.0000	63.6%	6.6%	Pass	6.6%
M117	J	72	3.9270	0.1570	0.0000	63.6%	6.7%	Pass	6.7%
M117	J	73	3.9270	0.1575	0.0000	63.6%	6.7%	Pass	6.7%
M117	J	74	3.9270	0.1572	0.0000	63.6%	6.7%	Pass	6.7%
M117	J	75	3.9270	0.1561	0.0000	63.6%	6.6%	Pass	6.6%
M118	J	1	3.9270	0.3906	0.0000	63.6%	23.5%	Pass	23.5%
M118	J	2	3.9270	0.4034	0.0000	63.6%	24.3%	Pass	24.3%
M118	J	3	3.9270	0.4259	0.0000	63.6%	25.0%	Pass	25.0%
M118	J	4	3.9270	0.4328	0.0000	63.6%	23.3%	Pass	23.3%
M118	J	5	3.9270	0.3852	0.0000	63.6%	17.7%	Pass	17.7%
M118	J	6	3.9270	0.3159	0.0000	63.6%	13.4%	Pass	13.4%
M118	J	7	3.9270	0.2797	0.0000	63.6%	11.9%	Pass	11.9%
M118	J	8	3.9270	0.2671	0.0000	63.6%	11.3%	Pass	11.3%
M118	J	9	3.9270	0.2459	0.0000	63.6%	10.4%	Pass	10.4%
M118	J	10	3.9270	0.2398	0.0000	63.6%	10.2%	Pass	10.2%
M118	J	11	3.9270	0.2859	0.0000	63.6%	13.4%	Pass	13.4%
M118	J	12	3.9270	0.3543	0.0000	63.6%	19.6%	Pass	19.6%
M118	J	13	3.9270	0.3365	0.0000	63.6%	15.7%	Pass	15.7%
M118	J	14	3.9270	0.3375	0.0000	63.6%	15.8%	Pass	15.8%
M118	J	15	3.9270	0.3385	0.0000	63.6%	15.8%	Pass	15.8%
M118	J	16	3.9270	0.3390	0.0000	63.6%	15.8%	Pass	15.8%
M118	J	17	3.9270	0.3380	0.0000	63.6%	15.7%	Pass	15.7%
M118	J	18	3.9270	0.3359	0.0000	63.6%	15.6%	Pass	15.6%
M118	J	19	3.9270	0.3343	0.0000	63.6%	15.5%	Pass	15.5%
M118	J	20	3.9270	0.3332	0.0000	63.6%	15.4%	Pass	15.4%
M118	J	21	3.9270	0.3323	0.0000	63.6%	15.3%	Pass	15.3%
M118	J	22	3.9270	0.3318	0.0000	63.6%	15.3%	Pass	15.3%
M118	J	23	3.9270	0.3328	0.0000	63.6%	15.4%	Pass	15.4%
M118	J	24	3.9270	0.3349	0.0000	63.6%	15.6%	Pass	15.6%
M118	J	25	3.9270	0.3389	0.0000	63.6%	16.0%	Pass	16.0%
M118	J	26	3.9270	0.3397	0.0000	63.6%	16.0%	Pass	16.0%
M118	J	27	3.9270	0.3411	0.0000	63.6%	16.1%	Pass	16.1%
M118	J	28	3.9270	0.3415	0.0000	63.6%	16.0%	Pass	16.0%
M118	J	29	3.9270	0.3386	0.0000	63.6%	15.7%	Pass	15.7%
M118	J	30	3.9270	0.3342	0.0000	63.6%	15.4%	Pass	15.4%
M118	J	31	3.9270	0.3319	0.0000	63.6%	15.2%	Pass	15.2%

 TES A CONGRUEX [®] COMPANY	Threaded Bolts Connection Check			Date
	Customer:	VZW	TIA Standard:	ANSI/TIA-222-H
	Carrier:	VZW	Mount Elev. [ft]:	150.5
	Site Name:	COMMERCE	Engineer Name:	S. Bhujel
	Site Number:	5000078561-VZW	TES Project #:	10311542

Results Summary Table (continued)

Member Label	Member End	LC	Max. Tension [Kips]	Shear [Kips]	My [K-Ft]	Tension Check	Sliding Check	Rotation Check	Interaction Check
M118	J	32	3.9270	0.3311	0.0000	63.6%	15.2%	Pass	15.2%
M118	J	33	3.9270	0.3297	0.0000	63.6%	15.1%	Pass	15.1%
M118	J	34	3.9270	0.3293	0.0000	63.6%	15.2%	Pass	15.2%
M118	J	35	3.9270	0.3322	0.0000	63.6%	15.4%	Pass	15.4%
M118	J	36	3.9270	0.3366	0.0000	63.6%	15.8%	Pass	15.8%
M118	J	37	3.9270	0.3389	0.0000	63.6%	16.0%	Pass	16.0%
M118	J	38	3.9270	0.3397	0.0000	63.6%	16.0%	Pass	16.0%
M118	J	39	3.9270	0.3411	0.0000	63.6%	16.1%	Pass	16.1%
M118	J	40	3.9270	0.3415	0.0000	63.6%	16.0%	Pass	16.0%
M118	J	41	3.9270	0.3386	0.0000	63.6%	15.7%	Pass	15.7%
M118	J	42	3.9270	0.3342	0.0000	63.6%	15.4%	Pass	15.4%
M118	J	43	3.9270	0.3319	0.0000	63.6%	15.2%	Pass	15.2%
M118	J	44	3.9270	0.3311	0.0000	63.6%	15.2%	Pass	15.2%
M118	J	45	3.9270	0.3297	0.0000	63.6%	15.1%	Pass	15.1%
M118	J	46	3.9270	0.3293	0.0000	63.6%	15.2%	Pass	15.2%
M118	J	47	3.9270	0.3322	0.0000	63.6%	15.4%	Pass	15.4%
M118	J	48	3.9270	0.3366	0.0000	63.6%	15.8%	Pass	15.8%
M118	J	49	3.9270	0.3354	0.0000	63.6%	15.6%	Pass	15.6%
M118	J	50	3.9270	0.3354	0.0000	63.6%	15.6%	Pass	15.6%
M118	J	51	3.9270	0.3919	0.0000	63.6%	18.5%	Pass	18.5%
M118	J	52	3.9270	0.3451	0.0000	63.6%	16.2%	Pass	16.2%
M118	J	53	3.9270	0.3465	0.0000	63.6%	16.3%	Pass	16.3%
M118	J	54	3.9270	0.3470	0.0000	63.6%	16.3%	Pass	16.3%
M118	J	55	3.9270	0.3465	0.0000	63.6%	16.2%	Pass	16.2%
M118	J	56	3.9270	0.3451	0.0000	63.6%	16.1%	Pass	16.1%
M118	J	57	3.9270	0.3432	0.0000	63.6%	15.9%	Pass	15.9%
M118	J	58	3.9270	0.3413	0.0000	63.6%	15.8%	Pass	15.8%
M118	J	59	3.9270	0.3399	0.0000	63.6%	15.7%	Pass	15.7%
M118	J	60	3.9270	0.3394	0.0000	63.6%	15.7%	Pass	15.7%
M118	J	61	3.9270	0.3400	0.0000	63.6%	15.8%	Pass	15.8%
M118	J	62	3.9270	0.3414	0.0000	63.6%	15.9%	Pass	15.9%
M118	J	63	3.9270	0.3433	0.0000	63.6%	16.1%	Pass	16.1%
M118	J	64	3.9270	0.2451	0.0000	63.6%	11.2%	Pass	11.2%
M118	J	65	3.9270	0.2464	0.0000	63.6%	11.3%	Pass	11.3%
M118	J	66	3.9270	0.2469	0.0000	63.6%	11.3%	Pass	11.3%
M118	J	67	3.9270	0.2464	0.0000	63.6%	11.2%	Pass	11.2%
M118	J	68	3.9270	0.2450	0.0000	63.6%	11.1%	Pass	11.1%
M118	J	69	3.9270	0.2432	0.0000	63.6%	11.0%	Pass	11.0%
M118	J	70	3.9270	0.2413	0.0000	63.6%	10.8%	Pass	10.8%
M118	J	71	3.9270	0.2400	0.0000	63.6%	10.8%	Pass	10.8%
M118	J	72	3.9270	0.2395	0.0000	63.6%	10.8%	Pass	10.8%
M118	J	73	3.9270	0.2400	0.0000	63.6%	10.8%	Pass	10.8%
M118	J	74	3.9270	0.2414	0.0000	63.6%	10.9%	Pass	10.9%
M118	J	75	3.9270	0.2432	0.0000	63.6%	11.1%	Pass	11.1%

			Threaded Bolts Connection Check					Date	
			Customer:		VZW		TIA Standard:		ANSI/TIA-222-H
			Carrier:		VZW		Mount Elev. [ft]:		150.5
			Site Name:		COMMERCE		Engineer Name:		S. Bhujel
			Site Number:		5000078561-VZW		TES Project #:		10311542
M119	J	1	3.9270	0.3661	0.0000	63.6%	15.5%	Pass	15.5%

Results Summary Table (continued)

Member Label	Member End	LC	Max. Tension [Kips]	Shear [Kips]	My [K-Ft]	Tension Check	Sliding Check	Rotation Check	Interaction Check
M119	J	2	3.9270	0.3763	0.0000	63.6%	16.0%	Pass	16.0%
M119	J	3	3.9270	0.3957	0.0000	63.6%	16.8%	Pass	16.8%
M119	J	4	3.9270	0.4024	0.0000	63.6%	17.1%	Pass	17.1%
M119	J	5	3.9270	0.3610	0.0000	63.6%	15.3%	Pass	15.3%
M119	J	6	3.9270	0.2991	0.0000	63.6%	12.7%	Pass	12.7%
M119	J	7	3.9270	0.2671	0.0000	63.6%	11.3%	Pass	11.3%
M119	J	8	3.9270	0.2568	0.0000	63.6%	10.9%	Pass	10.9%
M119	J	9	3.9270	0.2371	0.0000	63.6%	10.1%	Pass	10.1%
M119	J	10	3.9270	0.2308	0.0000	63.6%	9.8%	Pass	9.8%
M119	J	11	3.9270	0.2731	0.0000	63.6%	11.6%	Pass	11.6%
M119	J	12	3.9270	0.3348	0.0000	63.6%	14.2%	Pass	14.2%
M119	J	13	3.9270	0.3182	0.0000	63.6%	13.5%	Pass	13.5%
M119	J	14	3.9270	0.3191	0.0000	63.6%	13.5%	Pass	13.5%
M119	J	15	3.9270	0.3200	0.0000	63.6%	13.6%	Pass	13.6%
M119	J	16	3.9270	0.3204	0.0000	63.6%	13.6%	Pass	13.6%
M119	J	17	3.9270	0.3196	0.0000	63.6%	13.6%	Pass	13.6%
M119	J	18	3.9270	0.3178	0.0000	63.6%	13.5%	Pass	13.5%
M119	J	19	3.9270	0.3163	0.0000	63.6%	13.4%	Pass	13.4%
M119	J	20	3.9270	0.3154	0.0000	63.6%	13.4%	Pass	13.4%
M119	J	21	3.9270	0.3145	0.0000	63.6%	13.3%	Pass	13.3%
M119	J	22	3.9270	0.3141	0.0000	63.6%	13.3%	Pass	13.3%
M119	J	23	3.9270	0.3149	0.0000	63.6%	13.4%	Pass	13.4%
M119	J	24	3.9270	0.3167	0.0000	63.6%	13.4%	Pass	13.4%
M119	J	25	3.9270	0.3204	0.0000	63.6%	13.6%	Pass	13.6%
M119	J	26	3.9270	0.3210	0.0000	63.6%	13.6%	Pass	13.6%
M119	J	27	3.9270	0.3223	0.0000	63.6%	13.7%	Pass	13.7%
M119	J	28	3.9270	0.3227	0.0000	63.6%	13.7%	Pass	13.7%
M119	J	29	3.9270	0.3200	0.0000	63.6%	13.6%	Pass	13.6%
M119	J	30	3.9270	0.3161	0.0000	63.6%	13.4%	Pass	13.4%
M119	J	31	3.9270	0.3141	0.0000	63.6%	13.3%	Pass	13.3%
M119	J	32	3.9270	0.3134	0.0000	63.6%	13.3%	Pass	13.3%
M119	J	33	3.9270	0.3122	0.0000	63.6%	13.3%	Pass	13.3%
M119	J	34	3.9270	0.3118	0.0000	63.6%	13.2%	Pass	13.2%
M119	J	35	3.9270	0.3144	0.0000	63.6%	13.3%	Pass	13.3%
M119	J	36	3.9270	0.3184	0.0000	63.6%	13.5%	Pass	13.5%
M119	J	37	3.9270	0.3204	0.0000	63.6%	13.6%	Pass	13.6%
M119	J	38	3.9270	0.3210	0.0000	63.6%	13.6%	Pass	13.6%
M119	J	39	3.9270	0.3223	0.0000	63.6%	13.7%	Pass	13.7%
M119	J	40	3.9270	0.3227	0.0000	63.6%	13.7%	Pass	13.7%
M119	J	41	3.9270	0.3200	0.0000	63.6%	13.6%	Pass	13.6%
M119	J	42	3.9270	0.3161	0.0000	63.6%	13.4%	Pass	13.4%
M119	J	43	3.9270	0.3141	0.0000	63.6%	13.3%	Pass	13.3%
M119	J	44	3.9270	0.3134	0.0000	63.6%	13.3%	Pass	13.3%

			Threaded Bolts Connection Check					Date	
								7/23/2025	
			Customer:	VZW		TIA Standard:		ANSI/TIA-222-H	
			Carrier:	VZW		Mount Elev. [ft]:		150.5	
			Site Name:	COMMERCE		Engineer Name:		S. Bhujel	
			Site Number:	5000078561-VZW		TES Project #:		10311542	
M119	J	45	3.9270	0.3122	0.0000	63.6%	13.3%	Pass	13.3%
M119	J	46	3.9270	0.3118	0.0000	63.6%	13.2%	Pass	13.2%

Results Summary Table (continued)

Member Label	Member End	LC	Max. Tension [Kips]	Shear [Kips]	My [K-Ft]	Tension Check	Sliding Check	Rotation Check	Interaction Check
M119	J	47	3.9270	0.3144	0.0000	63.6%	13.3%	Pass	13.3%
M119	J	48	3.9270	0.3184	0.0000	63.6%	13.5%	Pass	13.5%
M119	J	49	3.9270	0.3172	0.0000	63.6%	13.5%	Pass	13.5%
M119	J	50	3.9270	0.3172	0.0000	63.6%	13.5%	Pass	13.5%
M119	J	51	3.9270	0.3695	0.0000	63.6%	15.7%	Pass	15.7%
M119	J	52	3.9270	0.3262	0.0000	63.6%	13.8%	Pass	13.8%
M119	J	53	3.9270	0.3274	0.0000	63.6%	13.9%	Pass	13.9%
M119	J	54	3.9270	0.3278	0.0000	63.6%	13.9%	Pass	13.9%
M119	J	55	3.9270	0.3274	0.0000	63.6%	13.9%	Pass	13.9%
M119	J	56	3.9270	0.3262	0.0000	63.6%	13.8%	Pass	13.8%
M119	J	57	3.9270	0.3245	0.0000	63.6%	13.8%	Pass	13.8%
M119	J	58	3.9270	0.3228	0.0000	63.6%	13.7%	Pass	13.7%
M119	J	59	3.9270	0.3216	0.0000	63.6%	13.6%	Pass	13.6%
M119	J	60	3.9270	0.3212	0.0000	63.6%	13.6%	Pass	13.6%
M119	J	61	3.9270	0.3216	0.0000	63.6%	13.6%	Pass	13.6%
M119	J	62	3.9270	0.3228	0.0000	63.6%	13.7%	Pass	13.7%
M119	J	63	3.9270	0.3245	0.0000	63.6%	13.8%	Pass	13.8%
M119	J	64	3.9270	0.2330	0.0000	63.6%	9.9%	Pass	9.9%
M119	J	65	3.9270	0.2342	0.0000	63.6%	9.9%	Pass	9.9%
M119	J	66	3.9270	0.2346	0.0000	63.6%	10.0%	Pass	10.0%
M119	J	67	3.9270	0.2342	0.0000	63.6%	9.9%	Pass	9.9%
M119	J	68	3.9270	0.2329	0.0000	63.6%	9.9%	Pass	9.9%
M119	J	69	3.9270	0.2312	0.0000	63.6%	9.8%	Pass	9.8%
M119	J	70	3.9270	0.2295	0.0000	63.6%	9.7%	Pass	9.7%
M119	J	71	3.9270	0.2283	0.0000	63.6%	9.7%	Pass	9.7%
M119	J	72	3.9270	0.2279	0.0000	63.6%	9.7%	Pass	9.7%
M119	J	73	3.9270	0.2283	0.0000	63.6%	9.7%	Pass	9.7%
M119	J	74	3.9270	0.2296	0.0000	63.6%	9.7%	Pass	9.7%
M119	J	75	3.9270	0.2313	0.0000	63.6%	9.8%	Pass	9.8%
M120	J	1	3.9270	0.2241	0.0000	63.6%	9.5%	Pass	9.5%
M120	J	2	3.9270	0.2161	0.0000	63.6%	9.5%	Pass	9.5%
M120	J	3	3.9270	0.2256	0.0000	63.6%	10.6%	Pass	10.6%
M120	J	4	3.9270	0.2685	0.0000	63.6%	13.7%	Pass	13.7%
M120	J	5	3.9270	0.3165	0.0000	63.6%	16.7%	Pass	16.7%
M120	J	6	3.9270	0.3381	0.0000	63.6%	17.4%	Pass	17.4%
M120	J	7	3.9270	0.3444	0.0000	63.6%	16.9%	Pass	16.9%
M120	J	8	3.9270	0.3520	0.0000	63.6%	16.4%	Pass	16.4%
M120	J	9	3.9270	0.3416	0.0000	63.6%	14.9%	Pass	14.9%
M120	J	10	3.9270	0.2988	0.0000	63.6%	12.7%	Pass	12.7%
M120	J	11	3.9270	0.2521	0.0000	63.6%	10.7%	Pass	10.7%
M120	J	12	3.9270	0.2309	0.0000	63.6%	9.8%	Pass	9.8%
M120	J	13	3.9270	0.2819	0.0000	63.6%	12.7%	Pass	12.7%

			Threaded Bolts Connection Check					Date	
								7/23/2025	
			Customer:	VZW		TIA Standard:		ANSI/TIA-222-H	
			Carrier:	VZW		Mount Elev. [ft]:		150.5	
			Site Name:	COMMERCE		Engineer Name:		S. Bhujel	
			Site Number:	5000078561-VZW		TES Project #:		10311542	
M120	J	14	3.9270	0.2817	0.0000	63.6%	12.7%	Pass	12.7%
M120	J	15	3.9270	0.2821	0.0000	63.6%	12.8%	Pass	12.8%
M120	J	16	3.9270	0.2830	0.0000	63.6%	12.8%	Pass	12.8%

Results Summary Table (continued)

Member Label	Member End	LC	Max. Tension [Kips]	Shear [Kips]	My [K-Ft]	Tension Check	Sliding Check	Rotation Check	Interaction Check
M120	J	17	3.9270	0.2839	0.0000	63.6%	12.9%	Pass	12.9%
M120	J	18	3.9270	0.2845	0.0000	63.6%	12.9%	Pass	12.9%
M120	J	19	3.9270	0.2851	0.0000	63.6%	12.9%	Pass	12.9%
M120	J	20	3.9270	0.2853	0.0000	63.6%	12.9%	Pass	12.9%
M120	J	21	3.9270	0.2849	0.0000	63.6%	12.9%	Pass	12.9%
M120	J	22	3.9270	0.2840	0.0000	63.6%	12.8%	Pass	12.8%
M120	J	23	3.9270	0.2831	0.0000	63.6%	12.8%	Pass	12.8%
M120	J	24	3.9270	0.2825	0.0000	63.6%	12.7%	Pass	12.7%
M120	J	25	3.9270	0.4481	0.0000	63.6%	20.4%	Pass	20.4%
M120	J	26	3.9270	0.4477	0.0000	63.6%	20.5%	Pass	20.5%
M120	J	27	3.9270	0.4484	0.0000	63.6%	20.6%	Pass	20.6%
M120	J	28	3.9270	0.4513	0.0000	63.6%	20.8%	Pass	20.8%
M120	J	29	3.9270	0.4544	0.0000	63.6%	21.0%	Pass	21.0%
M120	J	30	3.9270	0.4558	0.0000	63.6%	21.1%	Pass	21.1%
M120	J	31	3.9270	0.4562	0.0000	63.6%	21.0%	Pass	21.0%
M120	J	32	3.9270	0.4566	0.0000	63.6%	21.0%	Pass	21.0%
M120	J	33	3.9270	0.4558	0.0000	63.6%	20.8%	Pass	20.8%
M120	J	34	3.9270	0.4530	0.0000	63.6%	20.6%	Pass	20.6%
M120	J	35	3.9270	0.4499	0.0000	63.6%	20.4%	Pass	20.4%
M120	J	36	3.9270	0.4485	0.0000	63.6%	20.4%	Pass	20.4%
M120	J	37	3.9270	0.2797	0.0000	63.6%	12.6%	Pass	12.6%
M120	J	38	3.9270	0.2792	0.0000	63.6%	12.6%	Pass	12.6%
M120	J	39	3.9270	0.2798	0.0000	63.6%	12.7%	Pass	12.7%
M120	J	40	3.9270	0.2825	0.0000	63.6%	12.9%	Pass	12.9%
M120	J	41	3.9270	0.2855	0.0000	63.6%	13.0%	Pass	13.0%
M120	J	42	3.9270	0.2869	0.0000	63.6%	13.1%	Pass	13.1%
M120	J	43	3.9270	0.2873	0.0000	63.6%	13.0%	Pass	13.0%
M120	J	44	3.9270	0.2878	0.0000	63.6%	13.0%	Pass	13.0%
M120	J	45	3.9270	0.2872	0.0000	63.6%	12.9%	Pass	12.9%
M120	J	46	3.9270	0.2845	0.0000	63.6%	12.8%	Pass	12.8%
M120	J	47	3.9270	0.2815	0.0000	63.6%	12.6%	Pass	12.6%
M120	J	48	3.9270	0.2801	0.0000	63.6%	12.6%	Pass	12.6%
M120	J	49	3.9270	0.2835	0.0000	63.6%	12.8%	Pass	12.8%
M120	J	50	3.9270	0.2835	0.0000	63.6%	12.8%	Pass	12.8%
M120	J	51	3.9270	0.3311	0.0000	63.6%	15.1%	Pass	15.1%
M120	J	52	3.9270	0.2875	0.0000	63.6%	13.0%	Pass	13.0%
M120	J	53	3.9270	0.2878	0.0000	63.6%	13.0%	Pass	13.0%
M120	J	54	3.9270	0.2887	0.0000	63.6%	13.1%	Pass	13.1%
M120	J	55	3.9270	0.2899	0.0000	63.6%	13.2%	Pass	13.2%
M120	J	56	3.9270	0.2913	0.0000	63.6%	13.3%	Pass	13.3%
M120	J	57	3.9270	0.2923	0.0000	63.6%	13.3%	Pass	13.3%

			Threaded Bolts Connection Check					Date	
								7/23/2025	
			Customer:	VZW		TIA Standard:		ANSI/TIA-222-H	
			Carrier:	VZW		Mount Elev. [ft]:		150.5	
			Site Name:	COMMERCE		Engineer Name:		S. Bhujel	
			Site Number:	5000078561-VZW		TES Project #:		10311542	
M120	J	58	3.9270	0.2927	0.0000	63.6%	13.3%	Pass	13.3%
M120	J	59	3.9270	0.2924	0.0000	63.6%	13.3%	Pass	13.3%
M120	J	60	3.9270	0.2915	0.0000	63.6%	13.2%	Pass	13.2%
M120	J	61	3.9270	0.2903	0.0000	63.6%	13.1%	Pass	13.1%

Results Summary Table (continued)

Member Label	Member End	LC	Max. Tension [Kips]	Shear [Kips]	My [K-Ft]	Tension Check	Sliding Check	Rotation Check	Interaction Check
M120	J	62	3.9270	0.2889	0.0000	63.6%	13.0%	Pass	13.0%
M120	J	63	3.9270	0.2879	0.0000	63.6%	13.0%	Pass	13.0%
M120	J	64	3.9270	0.2031	0.0000	63.6%	9.0%	Pass	9.0%
M120	J	65	3.9270	0.2034	0.0000	63.6%	9.0%	Pass	9.0%
M120	J	66	3.9270	0.2043	0.0000	63.6%	9.1%	Pass	9.1%
M120	J	67	3.9270	0.2055	0.0000	63.6%	9.2%	Pass	9.2%
M120	J	68	3.9270	0.2069	0.0000	63.6%	9.2%	Pass	9.2%
M120	J	69	3.9270	0.2079	0.0000	63.6%	9.3%	Pass	9.3%
M120	J	70	3.9270	0.2083	0.0000	63.6%	9.3%	Pass	9.3%
M120	J	71	3.9270	0.2080	0.0000	63.6%	9.2%	Pass	9.2%
M120	J	72	3.9270	0.2071	0.0000	63.6%	9.2%	Pass	9.2%
M120	J	73	3.9270	0.2059	0.0000	63.6%	9.1%	Pass	9.1%
M120	J	74	3.9270	0.2046	0.0000	63.6%	9.0%	Pass	9.0%
M120	J	75	3.9270	0.2036	0.0000	63.6%	9.0%	Pass	9.0%
M121	J	1	3.9270	0.2167	0.0000	63.6%	9.2%	Pass	9.2%
M121	J	2	3.9270	0.2025	0.0000	63.6%	8.6%	Pass	8.6%
M121	J	3	3.9270	0.2032	0.0000	63.6%	8.7%	Pass	8.7%
M121	J	4	3.9270	0.2374	0.0000	63.6%	10.1%	Pass	10.1%
M121	J	5	3.9270	0.2800	0.0000	63.6%	11.9%	Pass	11.9%
M121	J	6	3.9270	0.3010	0.0000	63.6%	12.8%	Pass	12.8%
M121	J	7	3.9270	0.3103	0.0000	63.6%	13.2%	Pass	13.2%
M121	J	8	3.9270	0.3238	0.0000	63.6%	13.7%	Pass	13.7%
M121	J	9	3.9270	0.3230	0.0000	63.6%	13.7%	Pass	13.7%
M121	J	10	3.9270	0.2900	0.0000	63.6%	12.3%	Pass	12.3%
M121	J	11	3.9270	0.2480	0.0000	63.6%	10.5%	Pass	10.5%
M121	J	12	3.9270	0.2266	0.0000	63.6%	9.6%	Pass	9.6%
M121	J	13	3.9270	0.2618	0.0000	63.6%	11.1%	Pass	11.1%
M121	J	14	3.9270	0.2616	0.0000	63.6%	11.1%	Pass	11.1%
M121	J	15	3.9270	0.2620	0.0000	63.6%	11.1%	Pass	11.1%
M121	J	16	3.9270	0.2629	0.0000	63.6%	11.2%	Pass	11.2%
M121	J	17	3.9270	0.2637	0.0000	63.6%	11.2%	Pass	11.2%
M121	J	18	3.9270	0.2642	0.0000	63.6%	11.2%	Pass	11.2%
M121	J	19	3.9270	0.2647	0.0000	63.6%	11.2%	Pass	11.2%
M121	J	20	3.9270	0.2650	0.0000	63.6%	11.2%	Pass	11.2%
M121	J	21	3.9270	0.2646	0.0000	63.6%	11.2%	Pass	11.2%
M121	J	22	3.9270	0.2637	0.0000	63.6%	11.2%	Pass	11.2%
M121	J	23	3.9270	0.2629	0.0000	63.6%	11.2%	Pass	11.2%
M121	J	24	3.9270	0.2623	0.0000	63.6%	11.1%	Pass	11.1%
M121	J	25	3.9270	0.4200	0.0000	63.6%	17.8%	Pass	17.8%
M121	J	26	3.9270	0.4191	0.0000	63.6%	17.8%	Pass	17.8%

 TES A CONGRUEX [®] COMPANY			Threaded Bolts Connection Check					Date	
			Customer:		VZW		TIA Standard:		7/23/2025
			Carrier:		VZW		Mount Elev. [ft]:		ANSI/TIA-222-H
			Site Name:		COMMERCE		Engineer Name:		150.5
			Site Number:		5000078561-VZW		TES Project #:		S. Bhujel
									10311542
M121	J	27	3.9270	0.4191	0.0000	63.6%	17.8%	Pass	17.8%
M121	J	28	3.9270	0.4212	0.0000	63.6%	17.9%	Pass	17.9%
M121	J	29	3.9270	0.4239	0.0000	63.6%	18.0%	Pass	18.0%
M121	J	30	3.9270	0.4252	0.0000	63.6%	18.0%	Pass	18.0%
M121	J	31	3.9270	0.4258	0.0000	63.6%	18.1%	Pass	18.1%

Results Summary Table (continued)

Member Label	Member End	LC	Max. Tension [Kips]	Shear [Kips]	My [K-Ft]	Tension Check	Sliding Check	Rotation Check	Interaction Check
M121	J	32	3.9270	0.4267	0.0000	63.6%	18.1%	Pass	18.1%
M121	J	33	3.9270	0.4267	0.0000	63.6%	18.1%	Pass	18.1%
M121	J	34	3.9270	0.4246	0.0000	63.6%	18.0%	Pass	18.0%
M121	J	35	3.9270	0.4220	0.0000	63.6%	17.9%	Pass	17.9%
M121	J	36	3.9270	0.4206	0.0000	63.6%	17.9%	Pass	17.9%
M121	J	37	3.9270	0.2603	0.0000	63.6%	11.0%	Pass	11.0%
M121	J	38	3.9270	0.2594	0.0000	63.6%	11.0%	Pass	11.0%
M121	J	39	3.9270	0.2595	0.0000	63.6%	11.0%	Pass	11.0%
M121	J	40	3.9270	0.2616	0.0000	63.6%	11.1%	Pass	11.1%
M121	J	41	3.9270	0.2643	0.0000	63.6%	11.2%	Pass	11.2%
M121	J	42	3.9270	0.2657	0.0000	63.6%	11.3%	Pass	11.3%
M121	J	43	3.9270	0.2663	0.0000	63.6%	11.3%	Pass	11.3%
M121	J	44	3.9270	0.2671	0.0000	63.6%	11.3%	Pass	11.3%
M121	J	45	3.9270	0.2671	0.0000	63.6%	11.3%	Pass	11.3%
M121	J	46	3.9270	0.2650	0.0000	63.6%	11.2%	Pass	11.2%
M121	J	47	3.9270	0.2623	0.0000	63.6%	11.1%	Pass	11.1%
M121	J	48	3.9270	0.2609	0.0000	63.6%	11.1%	Pass	11.1%
M121	J	49	3.9270	0.2633	0.0000	63.6%	11.2%	Pass	11.2%
M121	J	50	3.9270	0.2633	0.0000	63.6%	11.2%	Pass	11.2%
M121	J	51	3.9270	0.3068	0.0000	63.6%	13.0%	Pass	13.0%
M121	J	52	3.9270	0.2671	0.0000	63.6%	11.3%	Pass	11.3%
M121	J	53	3.9270	0.2672	0.0000	63.6%	11.3%	Pass	11.3%
M121	J	54	3.9270	0.2679	0.0000	63.6%	11.4%	Pass	11.4%
M121	J	55	3.9270	0.2690	0.0000	63.6%	11.4%	Pass	11.4%
M121	J	56	3.9270	0.2701	0.0000	63.6%	11.5%	Pass	11.5%
M121	J	57	3.9270	0.2711	0.0000	63.6%	11.5%	Pass	11.5%
M121	J	58	3.9270	0.2715	0.0000	63.6%	11.5%	Pass	11.5%
M121	J	59	3.9270	0.2714	0.0000	63.6%	11.5%	Pass	11.5%
M121	J	60	3.9270	0.2707	0.0000	63.6%	11.5%	Pass	11.5%
M121	J	61	3.9270	0.2697	0.0000	63.6%	11.4%	Pass	11.4%
M121	J	62	3.9270	0.2685	0.0000	63.6%	11.4%	Pass	11.4%
M121	J	63	3.9270	0.2676	0.0000	63.6%	11.4%	Pass	11.4%
M121	J	64	3.9270	0.1895	0.0000	63.6%	8.0%	Pass	8.0%
M121	J	65	3.9270	0.1896	0.0000	63.6%	8.0%	Pass	8.0%
M121	J	66	3.9270	0.1903	0.0000	63.6%	8.1%	Pass	8.1%
M121	J	67	3.9270	0.1914	0.0000	63.6%	8.1%	Pass	8.1%
M121	J	68	3.9270	0.1926	0.0000	63.6%	8.2%	Pass	8.2%
M121	J	69	3.9270	0.1935	0.0000	63.6%	8.2%	Pass	8.2%
M121	J	70	3.9270	0.1940	0.0000	63.6%	8.2%	Pass	8.2%

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 TES A CONGRUEX® COMPANY	Mount Tower Interaction Check			
	Customer:	VZW	Project No:	10311542
	Carrier:	VZW	Date:	7/23/2025
	Site Name:	COMMERCE	TIA Standard:	ANSI/TIA-222-I
	Site Number:	5000078561	Engineer Name:	S. Bhujel

Applied Loads

Controlling Load Case: 5
Top Bay Panel Elevation: 149.9 ft
Bottom Bay Panel Elevation: 147.5 ft

Leg: A
Node #: N166
Node / Load Application Elevation: 152.3 ft
Applied Vertical Load (P_u): 299.4 lb
Applied Lateral Load (V_u): 1988.3 lb
Applied Moment (M_u): 0.130 k-ft
Applied Torsional Moment (M_{ut}): 0.000 k-ft

Leg: A
Node #: N167
Node / Load Application Elevation: 148.8 ft
Applied Vertical Load (P_u): 283.6 lb
Applied Lateral Load (V_u): 395.8 lb
Applied Moment (M_u): 0.126 k-ft
Applied Torsional Moment (M_{ut}): 0.000 k-ft

Leg: C
Node #: N168
Node / Load Application Elevation: 152.25 ft
Applied Vertical Load: 633.0 lb
Resultant Applied Lateral Load: 4447.6 lb
Resultant Applied Moment: 0.301 k-ft
Applied Torsional Moment: 0.000 k-ft

Leg: C
Node #: N169
Node / Load Application Elevation: 148.8 ft
Applied Vertical Load: 560.0 lb
Resultant Applied Lateral Load: 1093.9 lb
Resultant Applied Moment: 0.266 k-ft
Applied Torsional Moment: 0.000 k-ft

Leg: B
Node #: N170
Node / Load Application Elevation: 152.25 ft
Applied Vertical Load: 770.4 lb
Resultant Applied Lateral Load: 1443.6 lb
Resultant Applied Moment: 0.340 k-ft
Applied Torsional Moment: 0.000 k-ft

Leg: B
Node #: N171
Node / Load Application Elevation: 148.8 ft
Applied Vertical Load: 721.9 lb
Resultant Applied Lateral Load: 3204.4 lb
Resultant Applied Moment: 0.326 k-ft
Applied Torsional Moment: 0.000 k-ft

Leg: A
Node #: N192
Node / Load Application Elevation: 153.75 ft
Applied Vertical Load: 284.6 lb
Resultant Applied Lateral Load: 856.0 lb
Resultant Applied Moment: 0.000 k-ft
Applied Torsional Moment: 0.000 k-ft

Leg: C
Node #: N193
Node / Load Application Elevation: 153.8 ft
Applied Vertical Load: 204.8 lb
Resultant Applied Lateral Load: 601.1 lb
Resultant Applied Moment: 0.000 k-ft
Applied Torsional Moment: 0.000 k-ft

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	Site Number:	5000078561	Engineer Name:	S. Bhujel

Design Loads

Max Axial (P_u):	0.722 k
Max Shear / Torsion (V_u):	1.678 k
Max Moment (M_u):	1.483 k-ft

Cross-Sectional Properties and Design Considerations

Member:	PSP Rohn 2.5 STD
Steel Grade:	A572 Gr. 50
Yield Strength:	50 ksi
Ultimate Strength:	65 ksi
Elastic Modulus:	29000 ksi
Shear Modulus:	11200 ksi
Area:	1.704 in ²
Plastic Modulus, X Axis:	1.452 in ³
Plastic Modulus, Y Axis:	1.452 in ³
Radius of Gyration, X Axis:	0.947 in
Radius of Gyration, Y Axis:	0.947 in
Radius of Gyration, Z Axis:	0.947 in
Length:	2.44 ft
K:	1.00
B_1 :	1.001

Factored Strength

Leg Compressive Strength (ϕP_n):	71.52 k
Leg Shear Strength (ϕV_n):	46.01 k
Leg Flexural Strength (ϕM_n):	5.45 k-ft

Maximum Usage:	27.8%
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