

 **Material Handling USA**
800-326-4403

**MEZZANINE
INSTALLATION PROCEDURE**

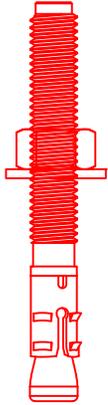
Thank you for choosing a Panel-Built Mezzanine. Every effort has been made in the design and manufacture of each Panel-Built Mezzanine to make installation as worry free as possible. This procedure is intended for individuals with a good working knowledge of basic construction techniques.

Check your shipping package prior to starting to ensure that all parts and components have been included as listed on the packing list.

Take a moment to read through the instructions prior to starting and study the parts and components and how they will work with each other.

These few moments will save you time later.

PARTS I.D. PAGE



$\frac{1}{2}$ "X4 $\frac{1}{4}$ " WEDGE ANCHOR



$\frac{1}{2}$ "X3" BOLT



$\frac{1}{2}$ "X2" BOLT



$\frac{3}{8}$ "X3" BOLT



$\frac{3}{8}$ "X2 $\frac{1}{2}$ " BOLT



$\frac{3}{8}$ "X1 $\frac{1}{2}$ " BOLT

PRELIMINARY JOB REVIEW

1. THOROUGHLY REVIEW THE INSTRUCTION MANUAL AND THE INSTALLATION DRAWINGS. THE INSTALLATION DRAWINGS ARE PLACED IN THE HARDWARE BOX SHIPPED WITH THE MEZZANINE STRUCTURE.
2. THESE INSTRUCTIONS ARE INTENDED FOR PERSONNEL EXPERIENCED IN THE CONSTRUCTION OF MEZZANINES.
3. THE SAFETY PRECAUTIONS USED DURING ERECTION ARE THE RESPONSIBILITY OF THE INSTALLER. OSHA GUIDELINES ARE SUGGESTED.
4. MAKE SURE YOU HAVE ALL NECESSARY TOOLS. REFER TO TOOL LIST INCLUDED IN THIS MANUAL.
5. MAKE SURE ALL SAFETY GUIDELINES ARE FOLLOWED.
6. SITE CHECK. VERIFY THAT THERE ARE NO OBSTRUCTIONS TO HINDER ERECTION OF MEZZANINE.

RECEIVING AND UNLOADING OF MATERIALS:

UPON ARRIVAL OF THE SHIPMENT, YOU SHOULD ALWAYS:

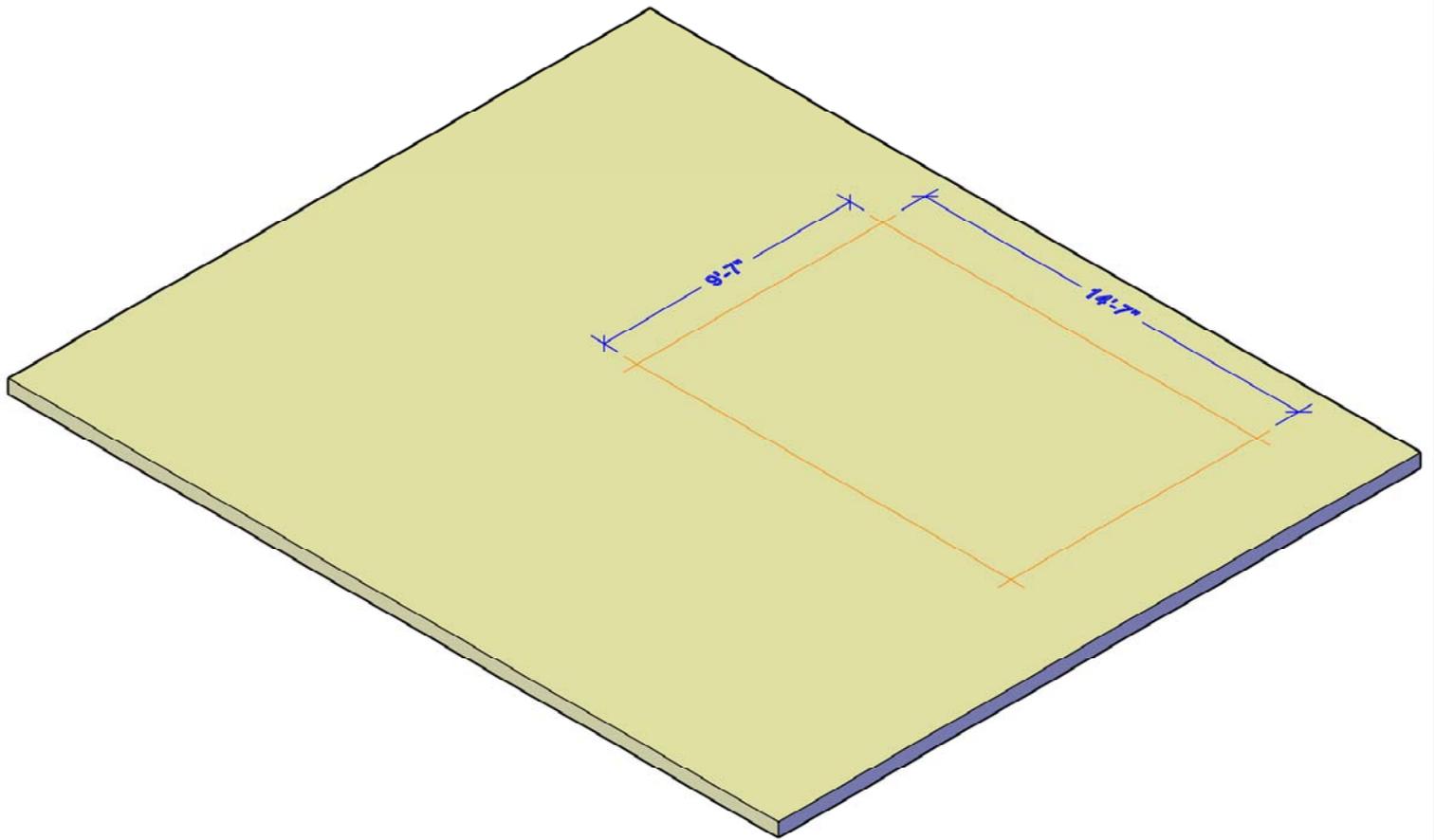
1. VERIFY THAT ALL THE REQUIRED PIECES FOR INSTALLATION WERE SHIPPED TO THE JOB SITE. A "BILL OF MATERIALS" IS SHIPPED WITH THE MEZZANINE. CONTACT PANEL-BUILT IMMEDIATELY IF THERE ARE ANY DISCREPANCIES BETWEEN THE "BILL OF MATERIALS" AND ACTUAL SHIPPED GOODS.
2. IF MERCHANDISE IS DELIVERED IN DAMAGED CONDITION, DO NOT REJECT SHIPMENT. ANY DAMAGES OR SHORTAGES, ACTUAL OR POTENTIAL, MUST BE NOTED BY THE DRIVER ON THE FREIGHT BILL. PURCHASER MUST NOTIFY PANEL-BUILT WITHIN 10 DAYS OF ANY FREIGHT DAMAGES. DAMAGED MERCHANDISE AND PACKAGING MUST BE RETAINED BY PURCHASER UNTIL INSPECTION BY CARRIER AND/OR PANEL-BUILT. PANEL-BUILT SHALL NOT BE RESPONSIBLE FOR ANY LOSSES SUSTAINED DUE TO PURCHASER'S FAILURE TO COMPLY WITH THIS FREIGHT CLAIM PROCEDURE. PANEL-BUILT'S INVOICE MUST BE PAID IN FULL WHEN DUE, IRRESPECTIVE OF PENDING FREIGHT CLAIM.
3. MOVE ALL MEZZANINE COMPONENTS TO THE AREA OF ASSEMBLY. ARRANGE THE PIECES ON THE FLOOR SO THAT THE IDENTIFICATION CODES ARE EASILY READ.

TOOL LIST

25', 50', 100' RULERS
CHALKLINE
MARKERS
SIX FOOT LEVELS (2)
HAMMER DRILL
SOCKET WRENCHES
IMPACT WRENCH
SCREW GUNS
C-CLAMPS
CIRCULAR SAW
SAWS-ALL
FORK LIFT
MECHANICAL LIFT
LADDERS
2 POUND HAMMER
SHOP VAC
PAINT BRUSHES FOR TOUCH-UP
PRY BARS
SPUD WRENCH

RECOMMENDED MINIMUM SAFETY EQUIPMENT

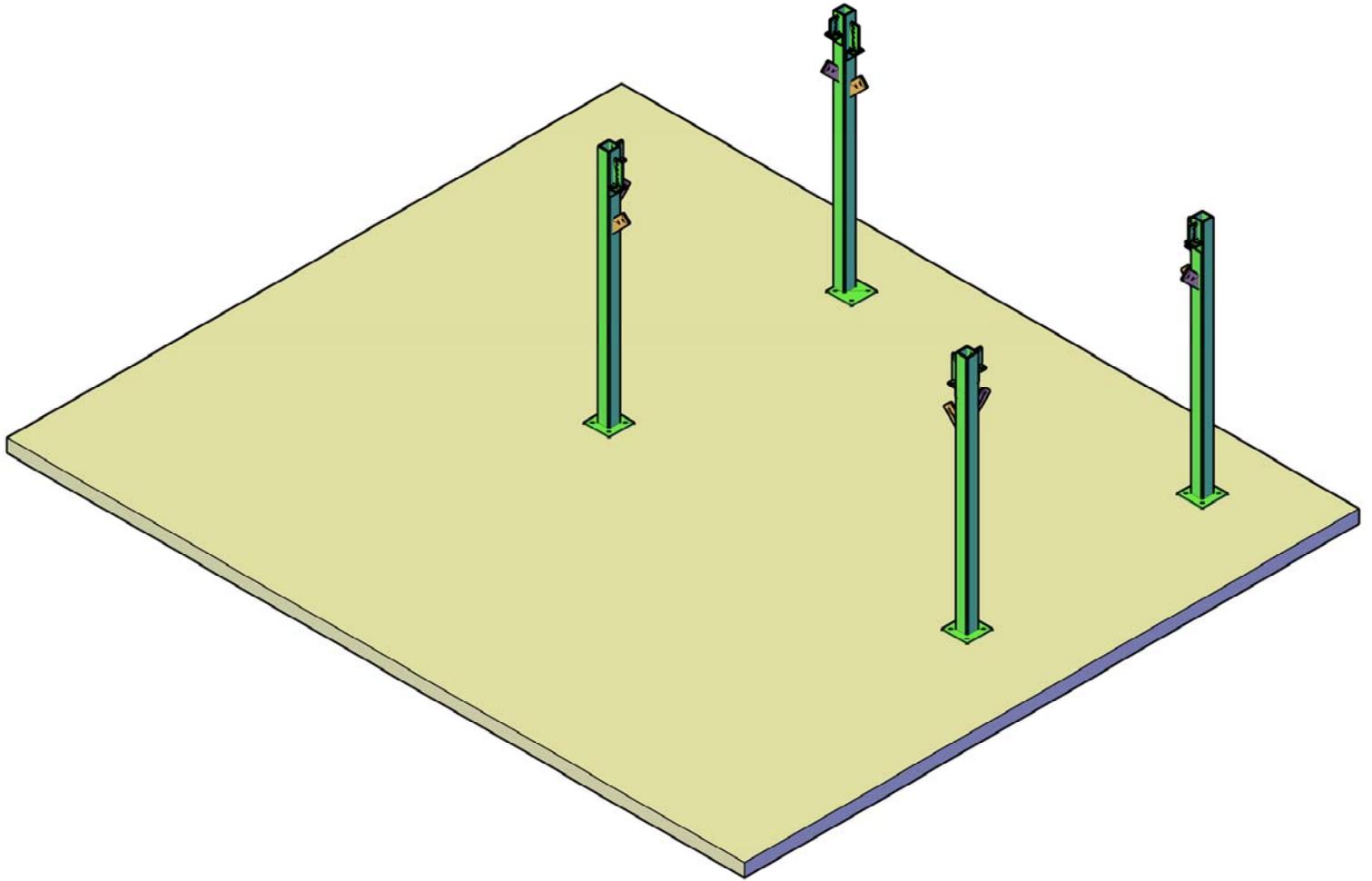
PROTECTIVE EYEWEAR
STEEL-TOED SHOES
GLOVES
HEARING PROTECTION
HARD HAT



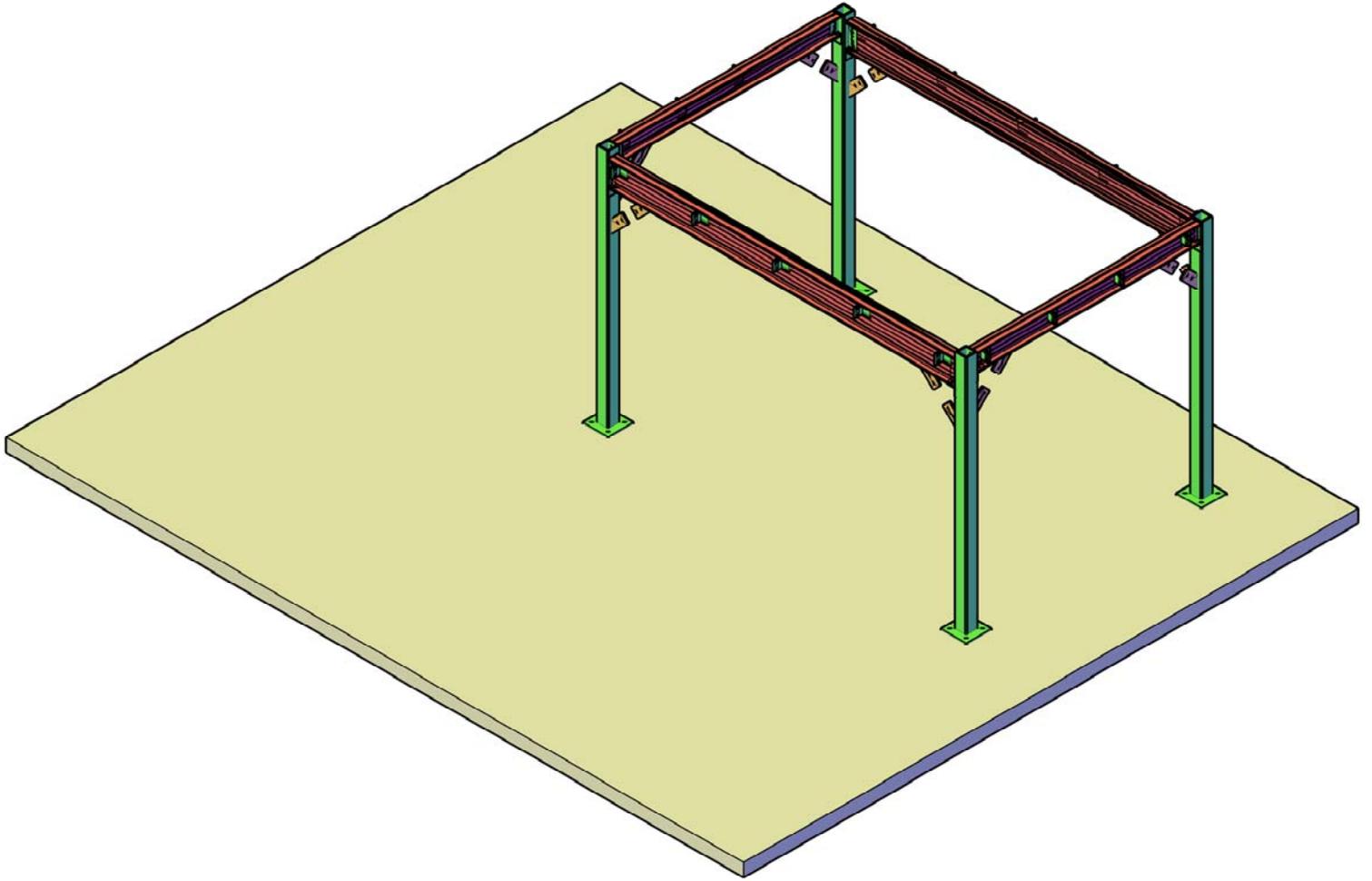
COLUMNS

LISTED BELOW ARE SOME GUIDELINES FOR THE INSTALLATION OF THE COLUMNS AND BEAMS. REMEMBER THAT THIS IS AN OVERVIEW AND THAT ALL MEZZANINES CAN DIFFER IN CONSTRUCTION. PLEASE REMEMBER TO CONSULT THE ACTUAL DRAWINGS SENT WITH YOUR SPECIFIC MEZZANINE. AS AN INSTALLER, YOU WILL WANT TO SELECT A STARTING POINT FOR THE MEZZANINE. THIS WILL IN MOST CASES BE THE CRITICAL AREA, SUCH AS NEXT TO ADJOINING WALLS.

1. LOCATE THE STARTING POINT.
2. USING THE FLOOR PLAN INCLUDED WITH THE MEZZANINE SHIPMENT, MARK OUT LOCATION OF ALL COLUMNS. DIMENSION LINES ON THE FLOOR PLAN ARE TO THE CENTER LINE OF THE COLUMNS. CHECK LAYOUT FOR SQUARE BY USING THE 6-8-10 TRIANGLE METHOD. OR ON LARGER PROJECTS USE EQUAL DIMENSIONS FOR DIAGONAL MEASUREMENTS. BEGIN THE INSTALLATION OF THE COLUMNS AT THE STARTING POINT.

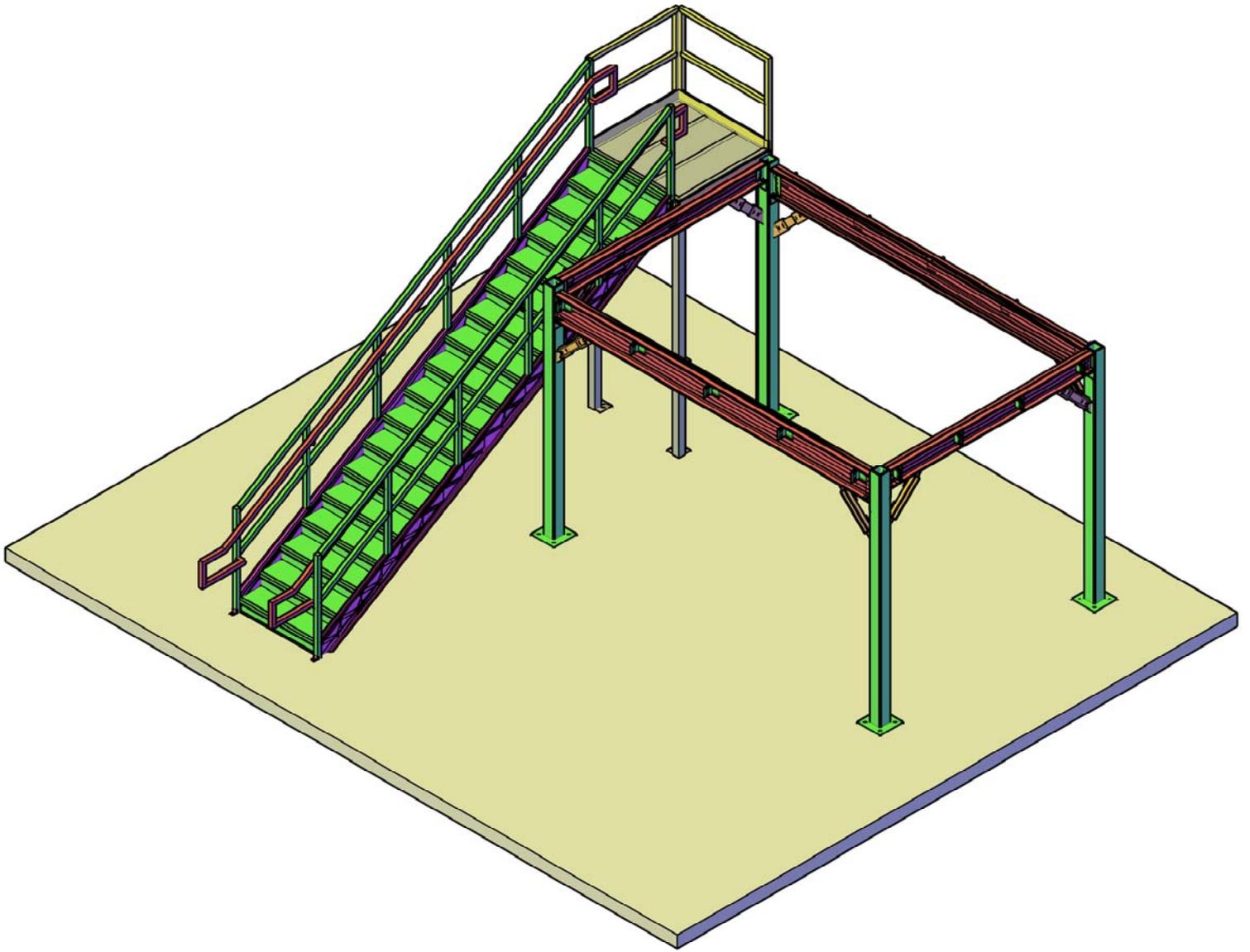


3. INSTALL THE COLUMN AT THE STARTING POINT. ALL COLUMNS ARE MARKED ON THE FLOOR PLAN AND ON THE BASE OF THE COLUMN WITH A COLUMN NUMBER. COLUMNS ARE DESIGNATED WITH A "C". PAY CLOSE ATTENTION TO THE COLUMN TOP ORIENTATION SO THAT IT WILL ACCEPT THE OTHER FRAMING MEMBERS. USE THE WEDGE ANCHORS PROVIDED TO ANCHOR THE COLUMN. DO NOT ANCHOR THE COLUMN UNTIL IT HAS BEN CHECKED FOR PLUMB BY USING A SIX FOOT LEVEL. CHECK FOR PLUMBNESS BY USING THE SIX FOOT LEVEL ON TWO ADJACENT SIDES OF THE COLUMNS. COLUMNS SHOULD BE PLUMBED BY USING SHIMS OR HIGH STRENGTH GROUT.
4. INSTALL THE ANCHOR BOLT BY USING A HAMMER DRILL TO DRILL A HOLE THE SAME DIAMETER AS THE ANCHOR BOLT. THOROUGHLY CLEAN THE HOLE REMOVING ALL DUST AND DEBRIS. DRIVE THE ANCHOR BOLT INTO THE HOLES SO THAT $1\frac{1}{4}$ " OF THE ANCHOR BOLT IS EXPOSED ABOVE THE SLAB. (NOTE: PLACE NUT AND WASHER ON ANCHOR BOLT WHEN DRIVING INTO THE SLAB.) USE A FLAT WASHER FOLLOWED BY A LOCK WASHER WHEN TIGHTENING THE NUT ON THE WEDGE ANCHOR. TIGHTEN THE NUTS FINGER TIGHT, THEN TWO OR THREE ADDITIONAL TURNS TO ACHIEVE PROPER TORQUE.



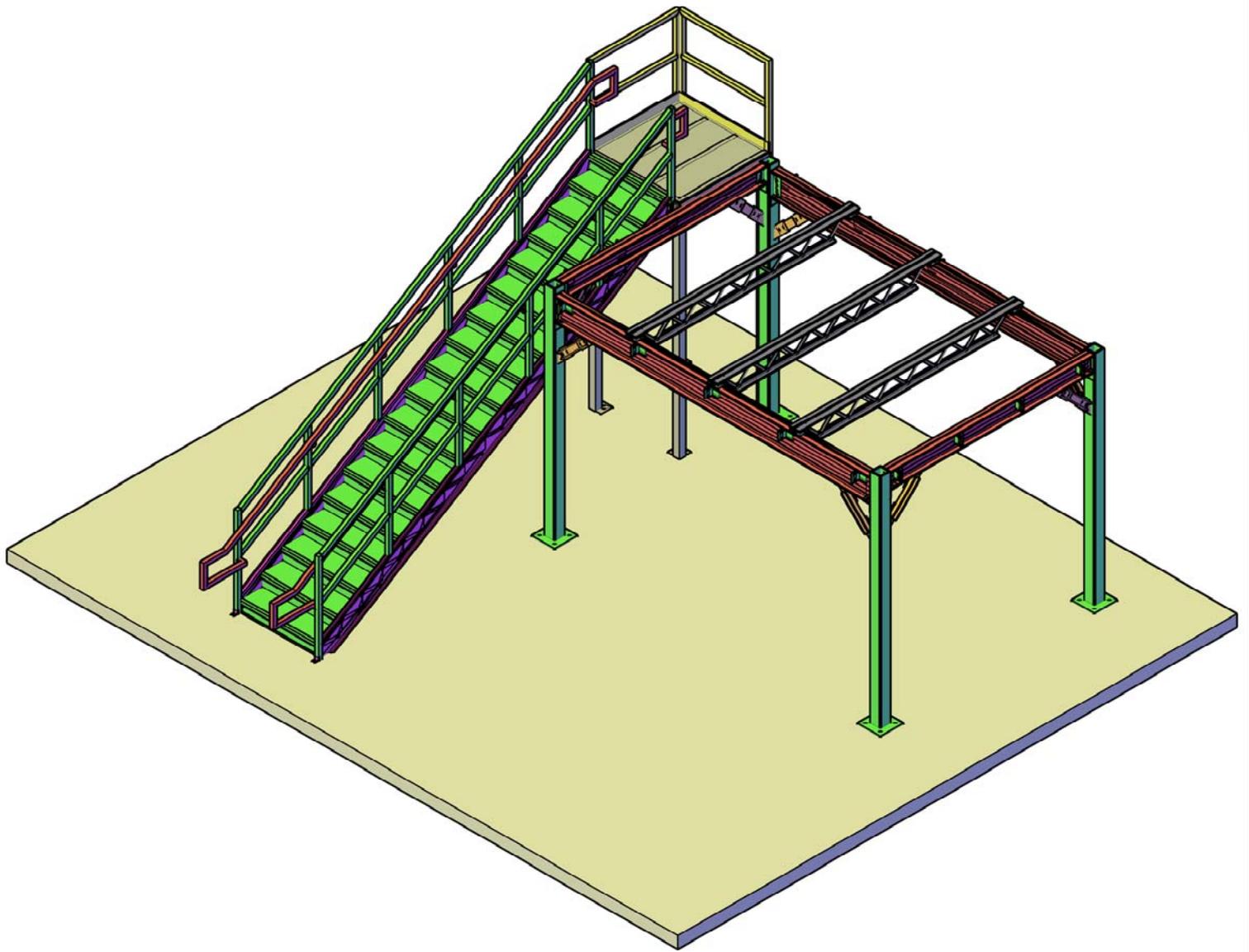
BEAMS

1. LOCATE MAIN BEAMS AND INTERMEDIATE BEAMS BY MATCHING THE PIECE MARKS ON THE BEAMS TO THE PIECE MARKS ON THE DRAWINGS. BEAMS ARE DESIGNATED WITH A "B".
2. CONNECT THE BEAMS TO THE COLUMNS WITH THE $\frac{1}{2}$ "X2" BOLT. THERE SHOULD BE A FLAT WASHER NEXT TO THE BOLT HEAD WITH A LOCK WASHER NEXT TO THE NUT.
3. PLEASE REFERENCE PANEL-BUILT'S TURN-OF-NUT INSTALLATION SHEET FOR THE CORRECT AMOUNT OF TURNS FOR EACH GIVEN BOLT DIAMETER.



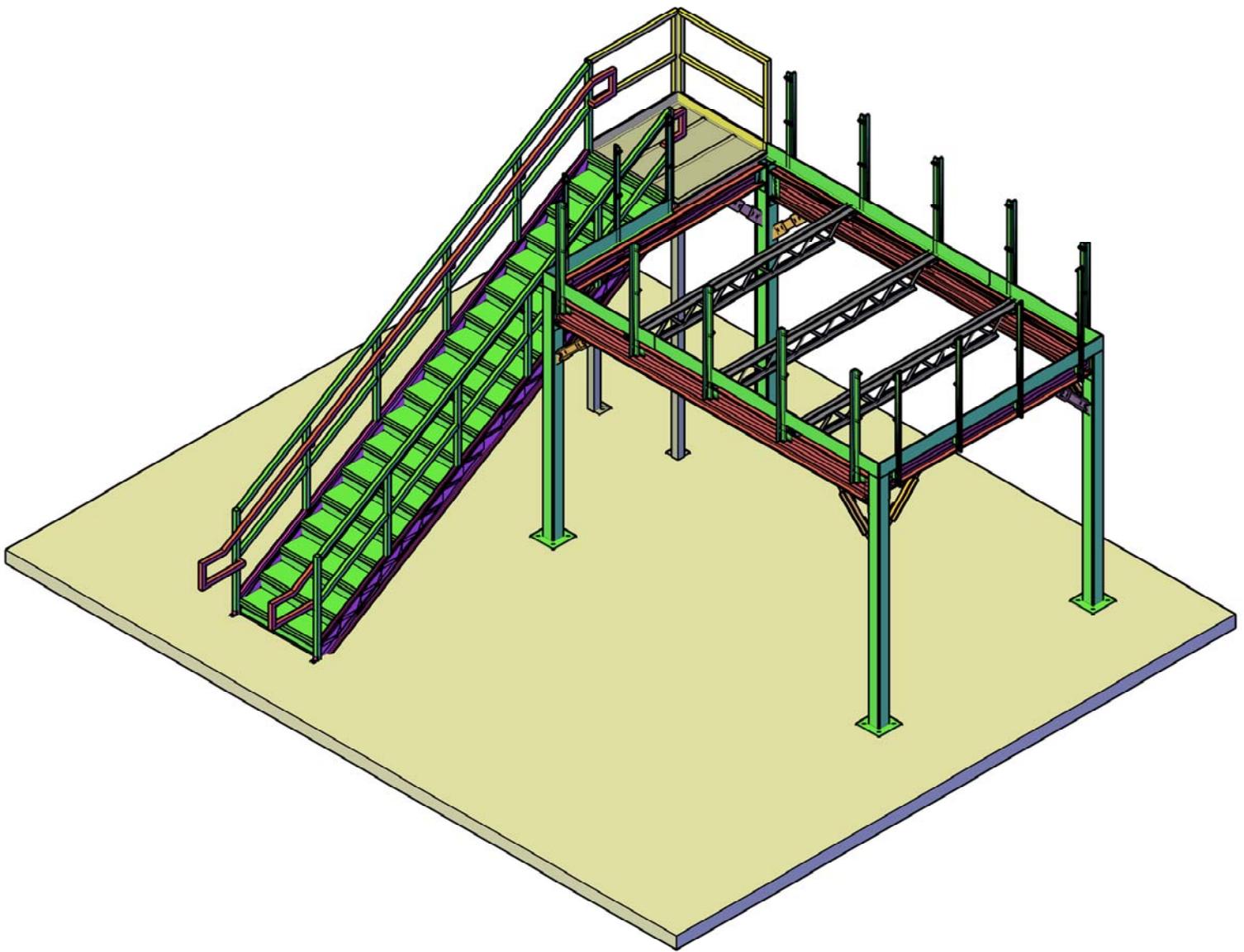
BEAMS

1. LOCATE MAIN BEAMS AND INTERMEDIATE BEAMS BY MATCHING THE PIECE MARKS ON THE BEAMS TO THE PIECE MARKS ON THE DRAWINGS. BEAMS ARE DESIGNATED WITH A "B".
2. CONNECT THE BEAMS TO THE COLUMNS WITH THE $\frac{1}{2}$ "X2" BOLT. THERE SHOULD BE A FLAT WASHER NEXT TO THE BOLT HEAD WITH A LOCK WASHER NEXT TO THE NUT.
3. PLEASE REFERENCE PANEL-BUILT'S TURN-OF-NUT INSTALLATION SHEET FOR THE CORRECT AMOUNT OF TURNS FOR EACH GIVEN BOLT DIAMETER.



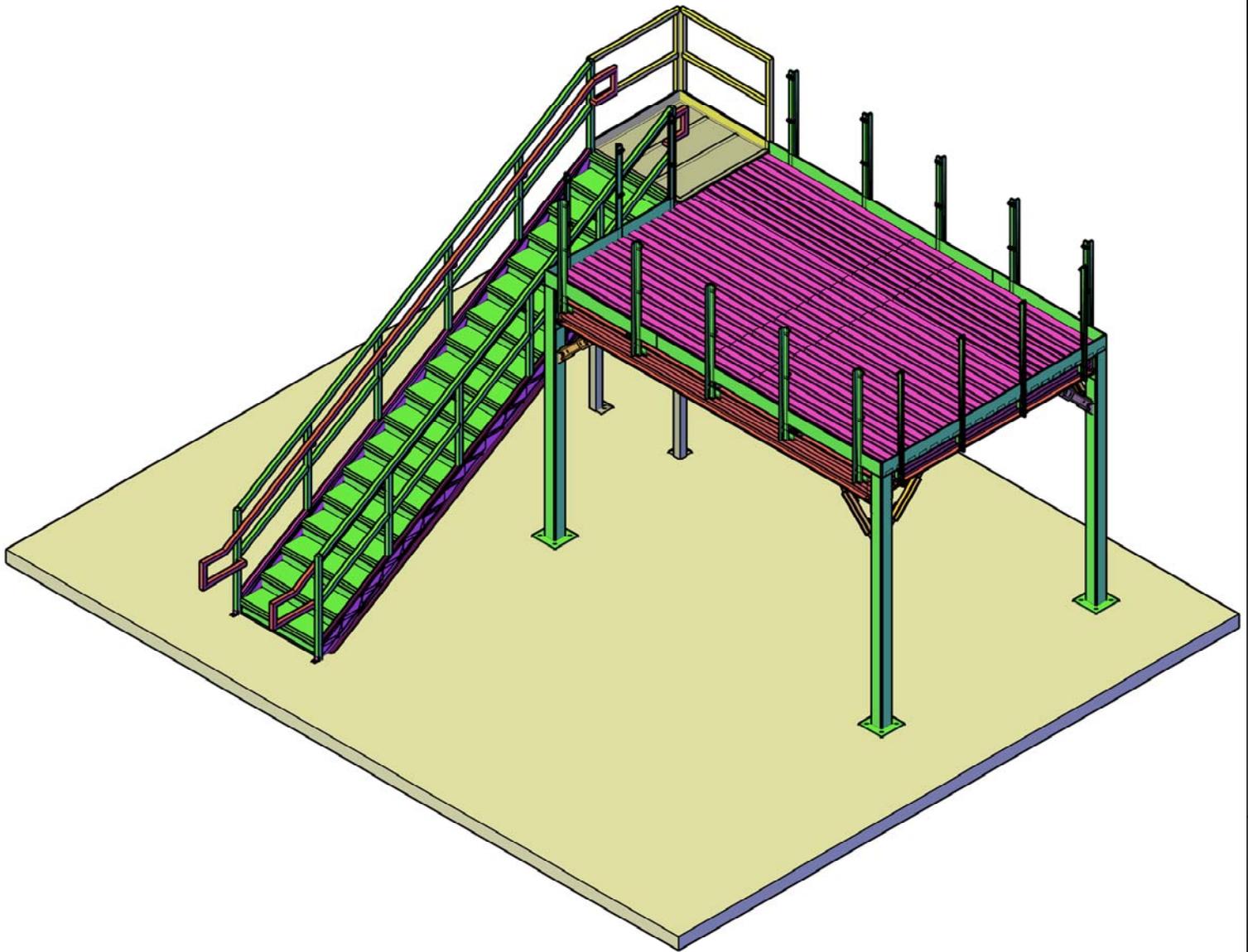
BAR JOIST

1. LOCATE THE BAR JOISTS BY MATCHING THE PIECE MARKS ON THE JOISTS TO THE PIECE MARKS ON THE DRAWINGS. BAR JOISTS ARE DESIGNATED WITH A "J". IF THERE IS ONLY ONE TYPE OF JOIST, INDIVIDUAL JOISTS WILL NOT BE MARKED.
2. THE ENDS OF THE BAR JOISTS SIT ON TOP OF THE MAIN BEAMS.
3. CONNECT THE JOISTS TO THE BEAMS USING THE $\frac{1}{2}$ "X2" BOLTS, NUTS AND WASHERS. A TOTAL OF FOUR BOLTS PER BAR JOIST ARE USED, TWO ON EACH END. BEAMS AND JOISTS ARE PREDRILLED.
4. INSTALL THE BRIDGING ANGLE PERPENDICULAR TO THE BOTTOM CHORD OF THE BAR JOISTS. THE BRIDGING ANGLE IS TO BE ATTACHED TO THE BOTTOM CHORD OF THE BAR JOISTS WITH TEK SCREWS. USE ONE SCREW THROUGH THE BRIDGING INTO EACH JOIST. NUMBER OF ROWS OF BRIDGING ANGLE WILL BE SHOWN ON THE DRAWING.



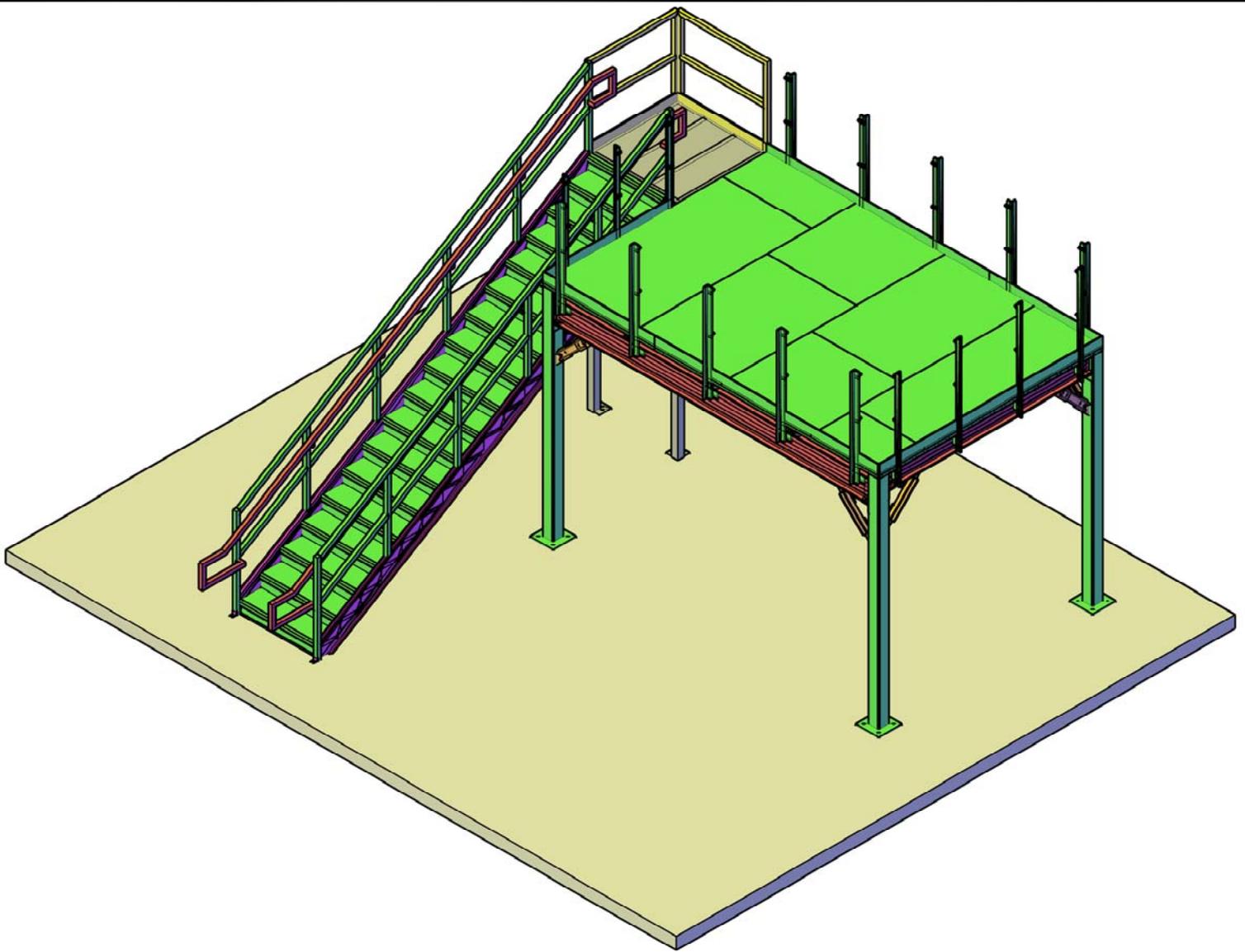
KICKPLATE/TRIM PLACE/GUARDRAIL

1. ATTACH GUARDRAIL TO ANGLE GUSSETS LOCATED ON BEAM. USE $\frac{3}{8}$ " X $1\frac{1}{2}$ " BOLTS.
2. IF A MEZZANINE HAS BAR JOISTS, FIRST PLACE TRIM PIECE ON TIP OF THE BEAM/BAR JOIST BEFORE PLACING KICKPLATE.
3. THE KICKPLATE MATERIAL IS A 14 GAUGE MATERIAL BENT AT A 90 DEGREE ANGLE WITH A $1\frac{1}{2}$ " LEG AND A $6\frac{1}{2}$ " LEG.
4. KICKPLATE IS TO BE INSTALLED WITH THE $1\frac{1}{2}$ " LEG PLACED ON TOP OF THE STEEL BEAMS AND JOISTS AND BELOW THE DECKING MATERIAL.
5. THE $6\frac{1}{2}$ " LEG ACTS AS A COVER FOR THE CORRUGATED DECK AND PLYWOOD OR OTHER DECKING MATERIAL. THE $6\frac{1}{2}$ " LEG GOES IN THE VERTICAL POSITION, THE $1\frac{1}{2}$ " LEG IS HORIZONTAL.
6. THE KICKPLATE IS TO BE FASTENED TO THE STEEL BEAMS AND JOISTS WHEN THE DECKING MATERIAL IS INSTALLED.
7. SECTIONS OF THE KICKPLATE LINE UP END TO END. USE A KICKPLATE SPLICE CAP FOR THE SEAM OF THE KICKPLATE.
8. REVERSE ONE SECTION OF KICKPALTE AT GATE SECTIONS TO SERVE AS AN EDGE PROTECTOR FOR THE DECKING MATERIAL. (THIS SECTION IS SCREWED DOWN ON TOP OF THE DECKING INSTEAD OF UNDERNEATH.)



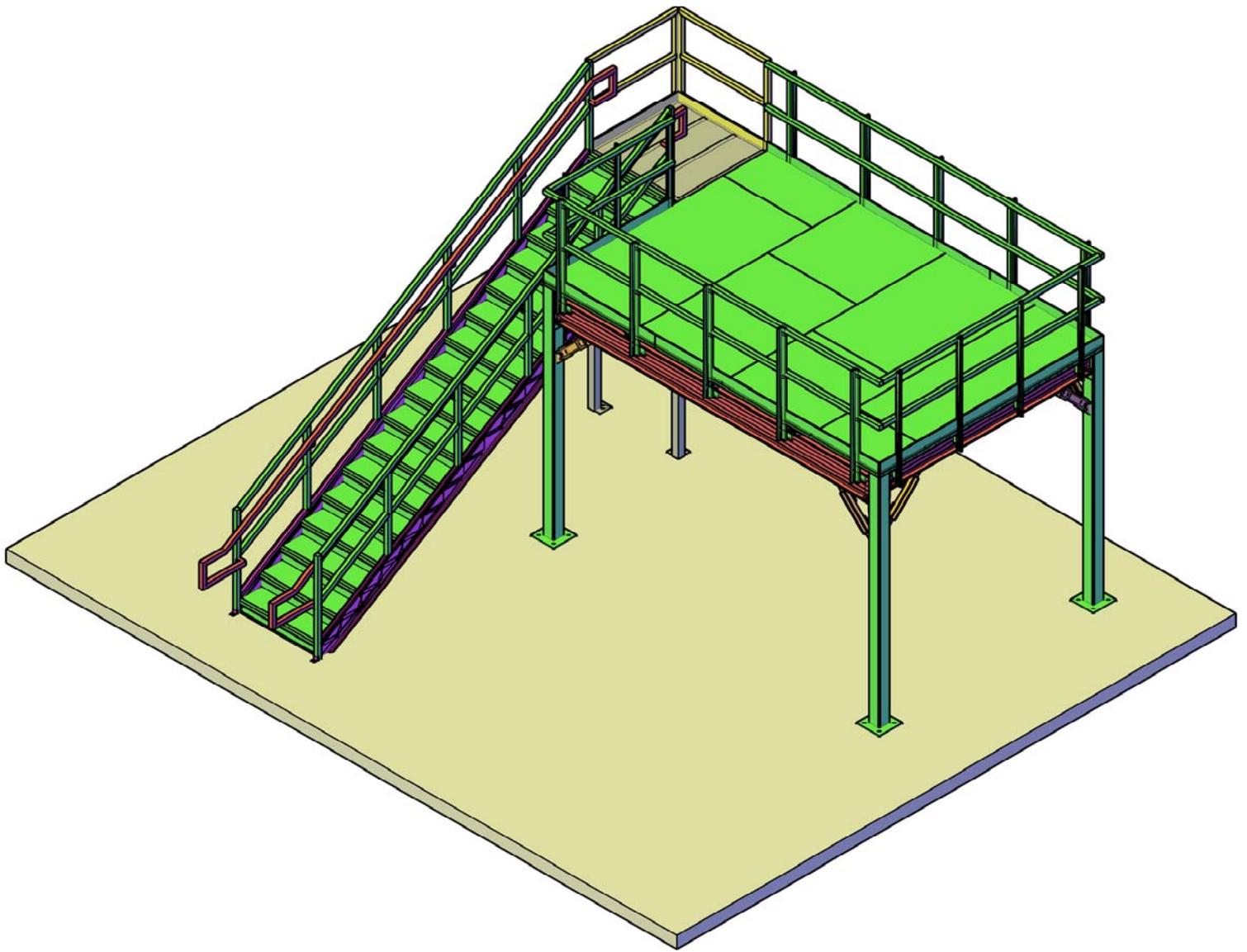
CORRUGATED DECK

1. LAY OUT ALL DECKING MATERIAL AS SHOWN ON DECKING LAYOUT PLAN.
2. AS A CAUTION, DO NOT PLACE THE ENTIRE STACK OF PLYWOOD IN ONE LOCATION ON THE MEZZANINE. THE PLYWOOD IS HEAVY AND MUST BE SPREAD OUT IN SEVERAL STACKS AS NOT TO OVERLOAD THE BEAMS AND JOISTS DURING CONSTRUCTION.
3. STARTING AT ONE SIDE OF THE MEZZANINE, POSITION THE DECKING ALIGNING THE SIDE OF THE DECKING WITH THE EDGE OF THE MEZZANINE. (AT THIS POINT, THE KICKPLATE SHOULD BE INSTALLED BENEATH THE DECKING.)
4. VERIFY THAT ALL LAPS OF THE DECKING OCCUR OVER A BEAM OR JOIST.
5. IF WHITE DECKING IS USED MAKE SURE THE WHITE SIDE IS ON THE BOTTOM.
6. FASTEN DECKING TO THE STRUCTURAL STEEL BEAMS OR JOISTS USING TEK 5 SCREWS PLACED IN PARALLEL ROWS AT ONE FOOT CENTERS ON ALL BEAMS PERPENDICULAR TO THE DECKING SPAN AND ALL PERIMETER BEAMS.
7. PROCEED WITH THE NEXT PIECE OF DECKING, NESTING IT INTO THE EDGE OF THE FIRST PIECE OF DECKING. MAKE SURE IT IS PARALLEL TO THE FIRST PIECE OF DECKING.
8. FASTEN AS BEFORE AND CONTINUE UNTIL ALL DECKING HAS BEEN INSTALLED.
9. WHEN YOU GET TO THE END OF THE MEZZANINE, EITHER INCREASE THE NESTING OR CUT THE REMAINING DECK TO THE BEAM EDGE.



PLYWOOD DECK

1. LAYOUT ALL PLYWOOD AS SHOWN ON THE PLYWOOD LAYOUT DRAWING.
2. THE PLYWOOD RUNS IN THE OPPOSITE DIRECTION AS THE CORRUGATED STEEL DECK.
3. THE ROWS OF PLYWOOD ARE STAGGERED SO THE JOINTS DO NOT LINE UP.
4. AS A CAUTION, DO NOT PLACE THE ENTIRE STACK OF PLYWOOD IN ONE LOCATION ON THE MEZZANINE. THE PLYWOOD IS HEAVY AND MUST BE SPREAD OUT IN SEVERAL STACKS AS NOT TO OVERLOAD THE BEAMS AND JOISTS DURING CONSTRUCTION.
5. ATTACH THE PLYWOOD USING GRABBER SCREWS. USE FORTY SCREWS PER SHEET OF PLYWOOD. LAY THE SCREWS OUT IN EIGHT ROWS OF FIVE SCREWS EACH.
6. ALL PLYWOOD SCREWS ARE TO BE PLACED IN THE TOP RIBS OF THE DECKING MATERIAL.
7. KEEP ALL SCREWS ONE TO TWO INCHES FROM THE EDGE OF THE PLYWOOD.



GUARDRAIL

1. ATTACH 1 ½" SQUARE TUBE TO GUARDRAIL POSTS USING #12X1 ¼" TEK SCREW. TOP AND INTERMEDIATE RAIL.