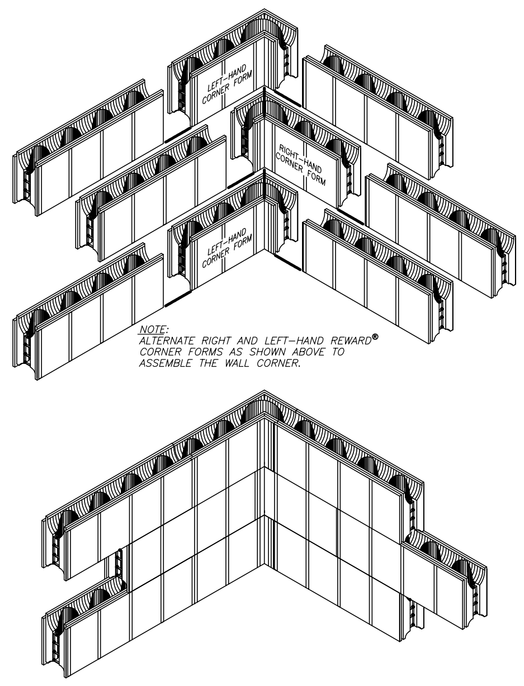


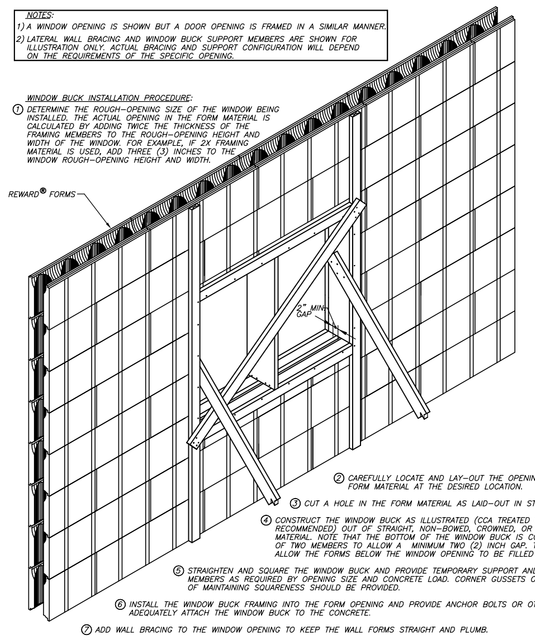
NOTE:
ALTERNATE RIGHT AND LEFT-HAND REWARD® CORNER FORMS AS SHOWN ABOVE TO ASSEMBLE THE WALL CORNER.

CORNER ASSEMBLY

NOTES:
1) A WINDOW OPENING IS SHOWN BUT A DOOR OPENING IS FRAMED IN A SIMILAR MANNER.
2) LATERAL WALL BRACING AND WINDOW BUCK SUPPORT MEMBERS ARE SHOWN FOR ILLUSTRATION ONLY. ACTUAL BRACING AND SUPPORT CONFIGURATION WILL DEPEND ON THE REQUIREMENTS OF THE SPECIFIC OPENING.

WINDOW BUCK INSTALLATION PROCEDURE:

① DETERMINE THE ROUGH-OPENING SIZE OF THE WINDOW BEING INSTALLED. THE ACTUAL OPENING IN THE FORM MATERIAL IS CALCULATED BY ADDING TWICE THE THICKness OF THE REWARD® FORM MATERIAL TO THE ROUGH OPENING HEIGHT AND WIDTH OF THE WINDOW. FOR EXAMPLE, IF 2X FRAMING MATERIAL IS USED, ADD THREE (3) INCHES TO THE WINDOW ROUGH-OPENING HEIGHT AND WIDTH.



② CAREFULLY LOCATE AND LAY-OUT THE OPENING ON THE FORM MATERIAL AT THE DESIRED LOCATION.

③ CUT A HOLE IN THE FORM MATERIAL AS LAID-OUT IN STEP ②.

④ CONSTRUCT THE WINDOW BUCK AS ILLUSTRATED (CCA TREATED LUMBER IS RECOMMENDED) OUT OF STRAIGHT, NON-BOWED, CROWNED, OR TWISTED MATERIAL. NOTE THAT THE BOTTOM OF THE WINDOW BUCK IS CONSTRUCTED OF TWO MEMBERS TO ALLOW A MINIMUM TWO (2) INCH GAP. THIS GAP WILL ALLOW THE FORMS BELOW THE WINDOW OPENING TO BE FILLED WITH CONCRETE.

⑤ STRAIGHTEN AND SQUARE THE WINDOW BUCK AND PROVIDE TEMPORARY SUPPORT AND BLOCKING MEMBERS AS REQUIRED BY OPENING SIZE AND CONCRETE LOAD. CORNER GUSSETS OR OTHER MEANS OF MAINTAINING SQUARENESS SHOULD BE PROVIDED.

⑥ INSTALL THE WINDOW BUCK FRAMING INTO THE FORM OPENING AND PROVIDE ANCHOR BOLTS OR OTHER MEANS TO ADEQUATELY ATTACH THE WINDOW BUCK TO THE CONCRETE.

⑦ ADD WALL BRACING TO THE WINDOW OPENING TO KEEP THE WALL FORMS STRAIGHT AND PLUMB.

⑧ THE FORM EDGES ADJACENT TO THE WINDOW BUCK MAY BE SEALED WITH DUCT TAPE TO AVOID BLEED WATER SEEPAGE DURING THE FORM FILLING PROCESS.

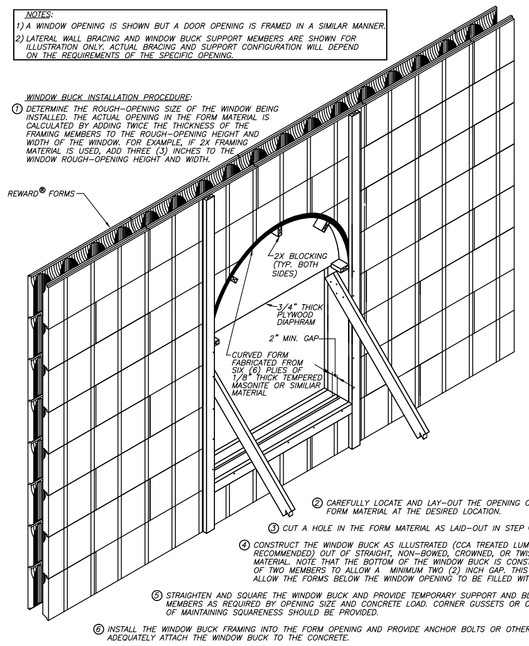
⑨ AFTER THE CONCRETE HAS CURED, ALL TEMPORARY SUPPORT AND BRACING MEMBERS CAN BE REMOVED.

WALL OPENING

NOTES:
1) A WINDOW OPENING IS SHOWN BUT A DOOR OPENING IS FRAMED IN A SIMILAR MANNER.
2) LATERAL WALL BRACING AND WINDOW BUCK SUPPORT MEMBERS ARE SHOWN FOR ILLUSTRATION ONLY. ACTUAL BRACING AND SUPPORT CONFIGURATION WILL DEPEND ON THE REQUIREMENTS OF THE SPECIFIC OPENING.

WINDOW BUCK INSTALLATION PROCEDURE:

① DETERMINE THE ROUGH-OPENING SIZE OF THE WINDOW BEING INSTALLED. THE ACTUAL OPENING IN THE FORM MATERIAL IS CALCULATED BY ADDING TWICE THE THICKNESS OF THE REWARD® FORM MATERIAL TO THE ROUGH OPENING HEIGHT AND WIDTH OF THE WINDOW. FOR EXAMPLE, IF 2X FRAMING MATERIAL IS USED, ADD THREE (3) INCHES TO THE WINDOW ROUGH-OPENING HEIGHT AND WIDTH.



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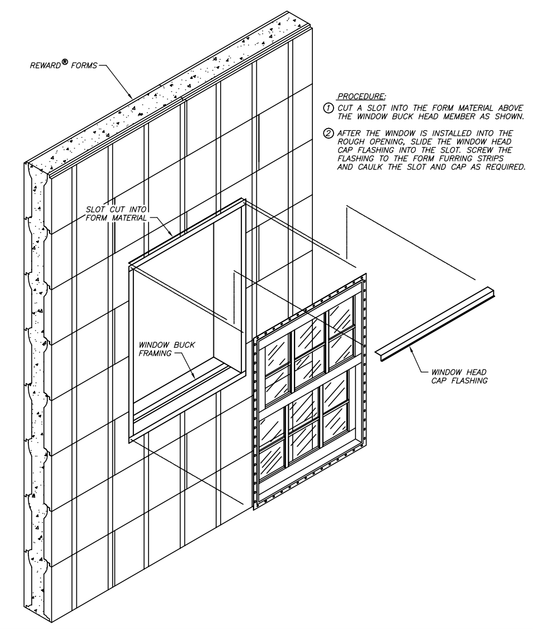
⑧ THE FORM EDGES ADJACENT TO THE WINDOW BUCK MAY BE SEALED WITH DUCT TAPE TO AVOID BLEED WATER SEEPAGE DURING THE FORM FILLING PROCESS.

⑨ AFTER THE CONCRETE HAS CURED, ALL TEMPORARY SUPPORT AND BRACING MEMBERS CAN BE REMOVED.

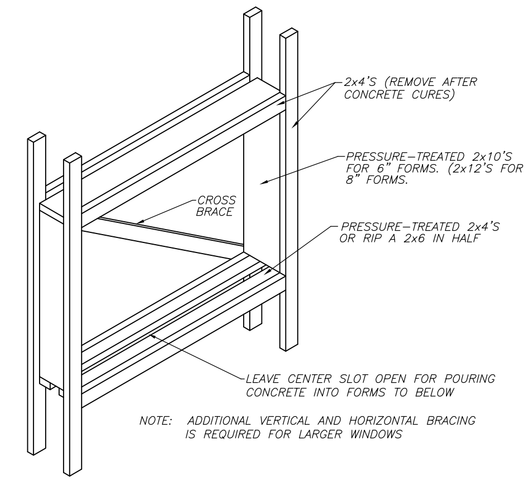
WALL OPENING WITH ARCH

NOTES:
1) A WINDOW OPENING IS SHOWN IN THE DETAIL BELOW BUT A DOOR OR OTHER OPENING MAY BE FLASHED IN A SIMILAR MANNER.
2) THIS METHOD OF FLASHING IS SHOWN FOR ILLUSTRATION ONLY. OTHER METHODS MAY BE EQUALLY EFFECTIVE.



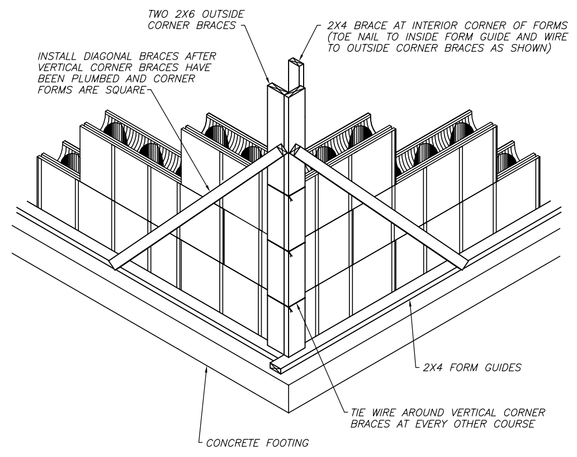
PROCEDURE:
① CUT A SLOT INTO THE FORM MATERIAL ABOVE THE WINDOW BUCK HEAD MEMBER AS SHOWN.
② AFTER THE WINDOW IS INSTALLED INTO THE ROUGH OPENING, SLIDE THE WINDOW HEAD CAP FLASHING INTO THE SLOT. SCREW THE FLASHING TO THE FORM FURRING STRIPS AND CAULK THE SLOT AND CAP AS REQUIRED.

FLASHING INSTALLATION

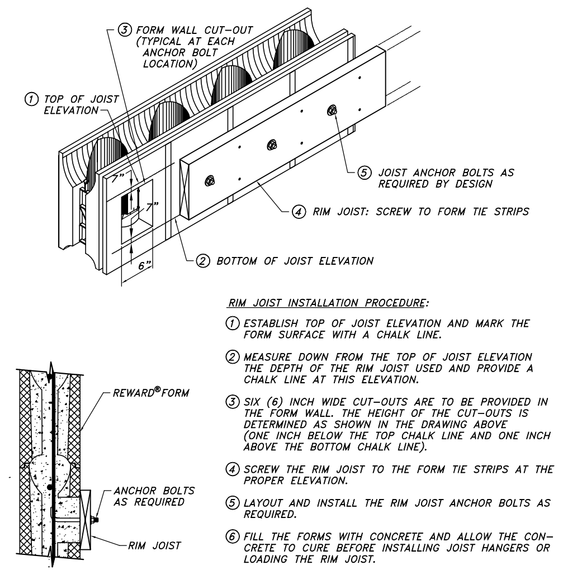


NOTE: ADDITIONAL VERTICAL AND HORIZONTAL BRACING IS REQUIRED FOR LARGER WINDOWS

WINDOW AND DOOR BUCKS



CORNER FORM BRACING



RIM JOIST INSTALLATION PROCEDURE:

① ESTABLISH TOP OF JOIST ELEVATION AND MARK THE FORM SURFACE WITH A CHALK LINE.

② MEASURE DOWN FROM THE TOP OF JOIST ELEVATION THE DEPTH OF THE RIM JOIST USED AND PROVIDE A CHALK LINE AT THIS ELEVATION.

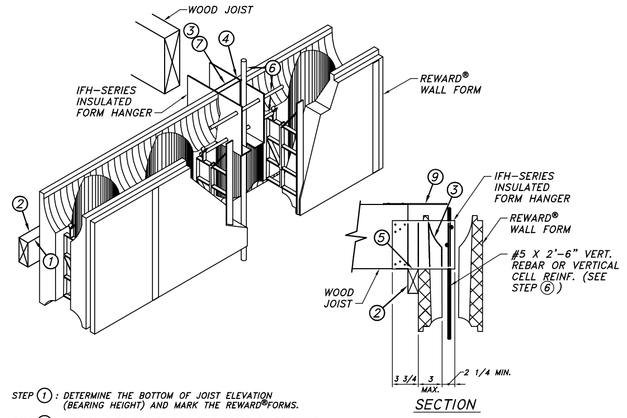
③ SIX (6) INCH WIDE CUT-OUTS ARE TO BE PROVIDED IN THE FORM WALL. THE HEIGHT OF THE CUT-OUTS IS DETERMINED AS SHOWN IN THE DRAWING ABOVE (ONE INCH BELOW THE TOP CHALK LINE AND ONE INCH ABOVE THE BOTTOM CHALK LINE).

④ SCREW THE RIM JOIST TO THE FORM TIE STRIPS AT THE PROPER ELEVATION.

⑤ LAYOUT AND INSTALL THE RIM JOIST ANCHOR BOLTS AS REQUIRED.

⑥ FILL THE FORMS WITH CONCRETE AND ALLOW THE CONCRETE TO CURE BEFORE INSTALLING JOIST HANGERS OR LOADING THE RIM JOIST.

RIM JOIST INSTALLATION



STEP ① : DETERMINE THE BOTTOM OF JOIST ELEVATION (BEARING HEIGHT) AND MARK THE REWARD®FORMS.

STEP ② : INSTALL A TEMPORARY MOUNTING BOARD BY SCREWING A CONTINUOUS 2"X4" BOARD TO THE REWARD®FORM TIE STRIPS. LOCATE THE TOP OF THE 2"X4" AT THE JOIST BEARING ELEVATION.

STEP ③ : CUT A BLOCK (W X H) FROM THE REWARD®FORM WHERE THE HANGERS ARE TO BE LOCATED. CAREFULLY REMOVE THE SECTION OF POLYSTYRENE FROM THE FORM WALL (TO BE REPLACED IN STEP ⑦). CUT AND REMOVE ALL POLYSTYRENE WHICH IS MORE THAN THREE (3) INCHES FROM THE FACE OF THE REWARD FORM FOR A DISTANCE OF THREE (3) INCHES ON EACH SIDE AND THE BOTTOM OF THE JOIST HANGER.

STEP ④ : INSERT THE JOIST HANGER INTO THE HOLE CREATED IN STEP ③ AND ADJUST TO FINAL POSITION.

STEP ⑤ : NAIL THE JOIST HANGER TO THE TEMPORARY MOUNTING BOARD.

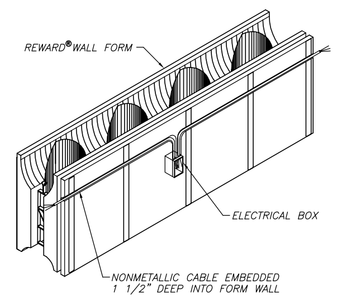
STEP ⑥ : WIRE TWO (2) HORIZONTAL BARS (#3 X 1'-0") TO THE VERTICAL BAR AFTER INSERTING THEM THROUGH THE HANGER. WHEN FACING THE HANGER FROM THE JOIST SIDE, THE TOP #3 X 1'-0" BAR SHOULD BE CENTERED ON THE HANGER AND BE LOCATED BEHIND THE #5 VERTICAL REBAR. THE BOTTOM #3 X 1'-0" BAR SHOULD BE LOCATED IN FRONT OF THE #5 VERTICAL REBAR. IF THE CORE REINFORCING IS #5 OR GREATER AND IS LOCATED WHERE THE HANGER IS TO BE INSTALLED, IT MAY BE BE USED IN LIEU OF THE SEPARATE #3 X 2'-6" REBAR CALLED OUT ABOVE.

STEP ⑦ : REPLACE THE W X H SECTION OF POLYSTYRENE (REMOVED IN STEP ③) INTO THE INSIDE OF THE JOIST HANGER, AND SECURE IT TO PREVENT DISPLACEMENT WHILE THE CONCRETE IS PLACED.

STEP ⑧ : PLACE CONCRETE INTO REWARD®FORMS, TAKING CARE TO INSURE THAT THE CONCRETE IS PLACED COMPLETELY AROUND THE HANGER AND REBAR WITH NO VOIDS. THE CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2500 PSI AT 28 DAYS.

STEP ⑨ : IF THE IFH-SERIES JOIST HANGER HEIGHT (H) IS LESS THAN 60 PERCENT OF THE JOIST DEPTH, USE ONE (1) HANY-SAG "HST-216" STRAP EAST INTO THE CONCRETE AND NAILED TO THE TOP EDGE OF THE JOIST TO PROVIDE LATERAL SUPPORT.

JOIST HANGER INSTALLATION



ELECTRICAL WIRING

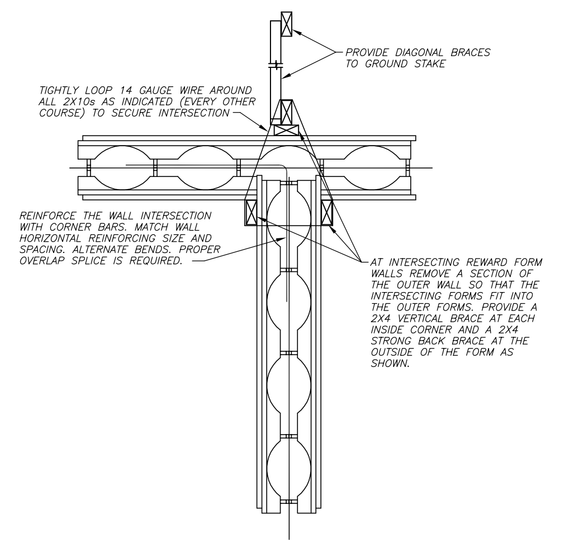
When installing electrical wiring in the REWARD® WALL SYSTEM, the latest edition of the National Electrical Code should be followed. Basically, a 1 1/2 inch deep narrow groove should be cut into the polystyrene using a router, or hot knife. Nonmetallic cable ("Romex" type NM, NEC Article 336-3) should then be pushed back into the groove so that it fits tightly and is not less than 1 1/4 inches from the nearest edge of the framing member where nails or screws are likely to penetrate (NEC Article 300-4d and 300-41a).

Electrical wiring, junction boxes, ect. are then secured in place using construction adhesives that are compatible with expanded polystyrene. Ideally, electrical boxes should be installed adjacent to the furring strips where the polystyrene is thickest.

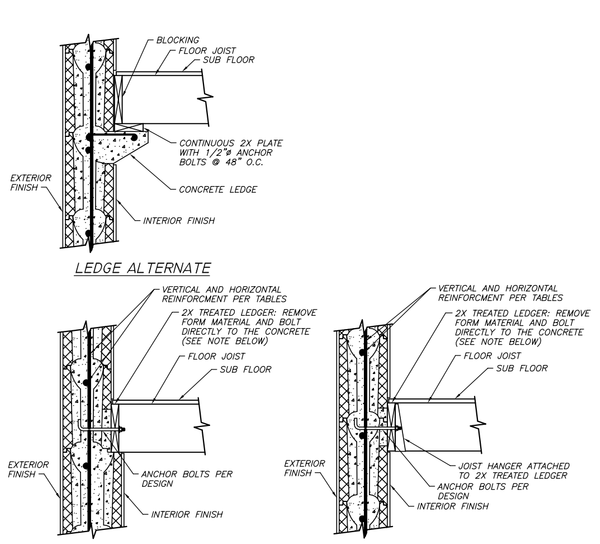
For commercial applications, electrical conduit can be used in accordance with the National Electrical Code.

NOTE: "The authority having jurisdiction may waive specific requirements in the Code or permit "alternative methods", where it is assured that equivalent objectives can be achieved by establishing and maintaining effective safety (NEC Article 90-4)."

ELECTRICAL WIRING



INTERSECTING "T" WALL



LEDGE ALTERNATE

RIM JOIST ALTERNATE
(11" FORM BELOW / 9-1/4" FORM ABOVE)

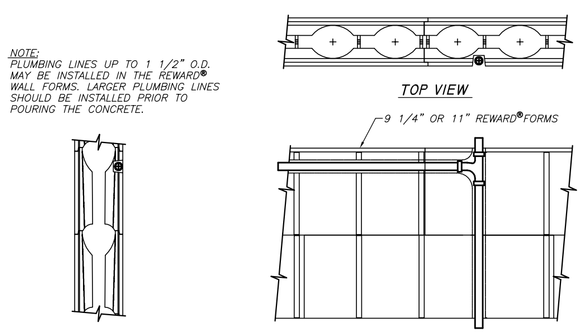
NOTE:
Provide 8" wide cut-outs in form wall at each anchor bolt location (12" O.C.). Prior to pouring concrete screw ledger to form furring strips and secure anchor bolts. See the rim joist installation detail.

RIM JOIST ALTERNATE

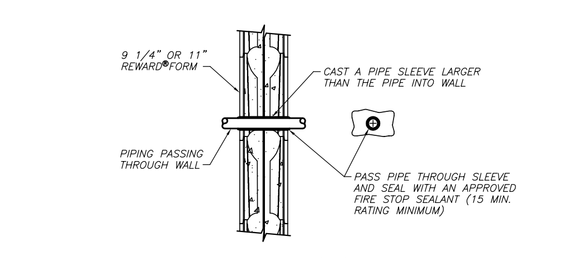
NOTE:
Provide 8" wide cut-outs in form wall at each anchor bolt location (12" O.C.). Prior to pouring concrete screw ledger to form furring strips and secure anchor bolts. See the rim joist installation detail.

FLOOR ATTACHMENTS

NOTE:
PLUMBING LINES UP TO 1 1/2" O.D. MAY BE INSTALLED IN THE REWARD® WALL FORMS. LARGER PLUMBING LINES SHOULD BE INSTALLED PRIOR TO POURING THE CONCRETE.

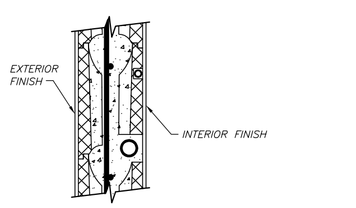


PLUMBING ROUGH-IN

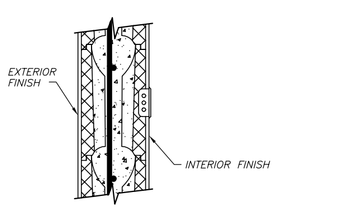


PIPE PENETRATION

PLUMBING ROUGH-IN

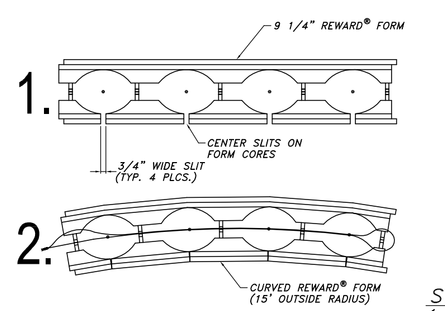


PLUMBING ROUGH-IN



ELECTRICAL ROUGH-IN

PLUMBING AND ELECTRICAL ROUGH-IN

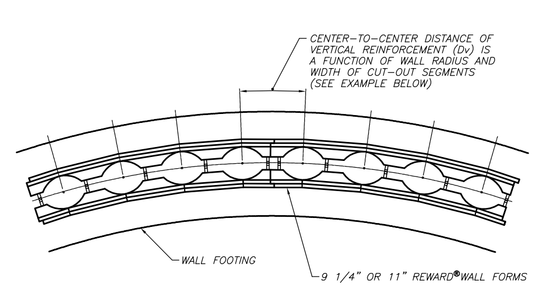


3. Curved walls down to a minimum radius of approximately 10 feet can be achieved with REWARD®FORMS by removing a small segment of expanded polystyrene from the center of each core. The illustrations above show a REWARD®FORM with 3/4 inch removed in each core and curved to a 15 foot radius. The table below shows the segment width to remove to achieve the desired outside wall radius.

OUTSIDE RADIUS OF WALL	SECTION REMOVED FROM EACH CORE (12" O.C.)	
	9 1/4" FORM	11" FORM
10 FEET	1 1/8"	1 1/4"
12 FEET	15/16"	1 1/16"
15 FEET	3/4"	7/8"
20 FEET	9/16"	5/8"
25 FEET	7/16"	1/2"
30 FEET	3/8"	7/16"
40 FEET	5/16"	5/16"
50 FEET	1/2" EVERY OTHER CORE	1/2" EVERY OTHER CORE
100 FEET	1/4" EVERY OTHER CORE	1/4" EVERY OTHER CORE

STEPS
1. RUN BOTH ENDS OF WIRE BEHIND TIE OPPOSITE OF SLIT SIDE
2. RUN WIRE THROUGH CENTER OF ALL TIES
3. RUN WIRE BEHIND TIE OPPOSITE OF SLIT SIDE ON THE OTHER END.
4. TWIST WIRE UNTIL SLITS TOUCH TO GET DESIRED RADIUS.

CURVED WALL



FORMULA TO CALCULATE THE ON CENTER DISTANCE OF VERTICAL REINFORCEMENT FOR CURVED WALLS:
Dv = Dn - (0.5Ws)
WHERE Dv = CENTER-TO-CENTER DISTANCE OF VERTICAL REBAR,
Dn = NOMINAL CENTER-TO-CENTER DISTANCE OF VERTICAL REBAR (EITHER 12" OR 24"),
Ws = SEGMENT WIDTH OF CUT-OUT IN FORM.

EXAMPLE:
9 1/4" REWARD®FORMS ARE TO BE USED TO FORM A WALL WITH AN OUTSIDE RADIUS OF 15'-0". CALCULATE THE CENTER-TO-CENTER DISTANCE OF THE VERTICAL REINFORCEMENT. A NOMINAL 12" O.C. SPACING IS REQUIRED BY DESIGN.

Dv = (12 IN.) - (0.5 X 0.75 IN.) = 11.625 INCHES

THEREFORE USE AN 11 5/8" VERTICAL REBAR SPACING.

IMPORTANT NOTE:
1. PLACE REQUIRED VERTICAL REINFORCEMENT PRIOR TO POURING THE WALL FOOTING USING ACCEPTED CONSTRUCTION PRACTICES AND FOLLOWING ACI RECOMMENDATIONS.
2. BELOW GRADE - PLACE VERTICAL REBAR INSIDE OF HORIZONTAL REBAR.
3. ABOVE GRADE - ALTERNATE VERTICAL REBAR ON EACH SIDE OF HORIZONTAL REBAR

VERTICAL REBAR LAYOUT FOR CURVED WALLS

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NEW CUSTOM RESIDENTIAL DESIGN for:
JOHN and DEBBIE STALLINGS
860 EVERGREEN DRIVE - LAKE CITY, FLORIDA
STANDARD ICF WALL DETAILS

Celebrating 51 Years of Service
1972 - 2023
N.P. Geisler, Architect
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DATE: 10 MAR 2023
COMM: 2K2301
SHEET: S.3d
3 OF 9

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