BUILDING ENVELOPE

CONTINUOUS AIRTIGHT LAYER (RED)

R-61 NORTH WALL INSULATION

R-17 SLAB INSULATION

SOLAR PANELS

R-55 ROOF INSULATION

TRIPLE GLAZED WINDOWS

R-51 WALL INSULATION
SOUTH, EAST & WEST WALLS (R-51)

- siding
- 3/4” strapping
- 2” foil faced rigid insulation (taped)
- 2” rigid insulation
- weather barrier (majvest by siga)
- sheathing
- 2x8 wood stud, Fill cavity with dense-packed cellulose
- 5/8” gwb
TYPICAL WALL - FOUNDATION

R-17 SLAB

2X8 STUD WALL FILLED WITH DENSE PACKED CELLULOSE INSULATION
SHEATHING - TAPE AND SEALED AS AIR SEALING LAYER AND VAPOR CONTROL LAYER
SIGA MAJVEST WRB (ADDED BY CONTRACTOR)
2" RIGID POLYSIO INSULATION - SEAMS TAPE
2" RIGID FOIL-FACED POLYSIO INSULATION - SEAMS TAPE AND STAGGERED AS WRB
ACETYLATED WOOD SIDING (OR METAL SIDING OVER ADDED HORIZONTAL STRAPPING)
SILL PLATE TAPE SEALED TO VAPOR BARRIER
VAPOR BARRIER TO TURN UP FOUNDATION WALL AND LAP OVER TOP OF WALL AS A CAPILLARY BREAK - TURN UP AND SEAL TO SHEATHING SEALED TO SILL PLATE
3/4" VERTICAL STRAPPING ALIGNED WITH FRAMING
FOUNDATION WATERPROOFING
4" RIGID EPS INSULATION
VAPOR BARRIER
4" REINFORCED CONCRETE SLAB - POLISHED
1" EPS THERMAL BREAK
4" MIN. CRUSHED STONE BED
INTERIOR 4" DRAIN TILE AND RADON VENT
(2) LAYERS 2" RIGID MINERAL FIBER DRAIN BOARD AND INSULATION
CEMENT BOARD FINISH
4" EXTERIOR DRAIN TILE SURROUNDED BY CRUSHED STONE AND FILTER FABRIC
REINFORCED CONCRETE FOOTING AS SCHEDULED
R-51 WALL

2X8 STUD WALL FILLED WITH DENSE PACKED CELLULOSE INSULATION

SILL PLATE TAPE SEALED TO CAPILLARY BREAK/VAPOR BARRIER

SILL SEAL GASKET - TAPE AND SEALED TO VAPOR BARRIER

VAPOR BARRIER TO TURN UP FOUNDATION WALL AND LAP OVER TOP OF WALL AS A CAPILLARY BREAK - TURN UP AND SEAL TO SHEATHING-SEALED TO SILL PLATE

1" EPS THERMAL BREAK

4" REINFORCED CONCRETE SLAB - POLISHED VAPOR BARRIER

4" TYPE IX RIGID EPS INSULATION

INTERIOR 4" DRAIN TILE AND RADON VENT

4" MIN. CRUSHED STONE BED

TYPICAL WALL - FOUNDATION
THERMAL BRIDGE MODEL – TYPICAL FOUNDATION WALL

PSI VALUE = 0.077 BTU/HR/FT
PSI VALUE = 0.025 BTU/HR/FT

THERMAL BRIDGE MODEL – INTERIOR FOOTING
R-51 WALL

- GYPSUM WALL BOARD
- BASE TRIM AS SCHEDULED
- 2X8 STUD WALL FILLED WITH DENSE PACKED CELLULOSE INSULATION
- SILL PLATES - SEALED TO DECK
- FLOORING FINISH AS SCHEDULED
- 3/4" FLOOR SHEATHING
- 1 3/4" X 7 1/4" LVL RIM JOIST
- CAVITIES BETWEEN AND AROUND JOISTS FILLED WITH DENSE PACKED CELLULOSE
- TOP BEARING OPEN WEB WOOD JOISTS
- FIELD APPLIED SHEATHING TO CONTAIN CELLULOSE AT TOP OF WALL
- 3/4" STRAPPING
- GYPSUM WALL BOARD FINISHED CEILING

TYPICAL WALL – AT FLOOR
TYPICAL WALL – ROOF EXTERIOR

R-55 ROOF

- ROOF FRAMING, 16” TJI SPACED PER STRUCTURAL REQUIREMENTS, CAVITIES FILLED WITH DENSE PACKED CELLULOSE
- 2X WEB STIFFENER OVER BEARING LOCATIONS
- PLYWOOD BLOCKING AND INSULATION STOP
- TAPERED TOP PLATE
- WRB WRAPS OVER WALL AND IS TAPE SEALED TO CEILING SHEATHING
- TAPERED TOP PLATE - SEAL TO SHEATHING, TAPE SEAL TO CEILING SHEATHING
- 5/8” ZIP SYSTEM ROOF SHEATHING
- FIRESTONE UNA-CLADGUARD SELF ADHERED ROOF UNDERLAYMENT - LAP OVER FASCIA
- PREFINISHED METAL ROOF EDGE TO MATCH TYPICAL WINDOW FRAME FINISH
- 1X BLOCKING
- FIELD-FORMED METAL FASCIA TO MATCH TYPICAL WINDOW FRAME FINISH
- 2X STRUCTURAL FASCIA
- METAL SOFIT PANEL, PREFINISHED, MATCH METAL FASCIA FINISH
R-55 ROOF

24 GA. PREFINISHED STANDING SEAM METAL ROOF

FIRESTONE UNA-CLADGUARD SELF ADHERED ROOF UNDERLAYMENT - LAP OVER FASCIA

5/8" ZIP SYSTEM ROOF SHEATHING

PLYWOOD BLOCKING AND INSULATION STOP

ROOF FRAMING, 18" TJI SPACED PER STRUCTURAL REQUIREMENTS. CAVITIES FILLED WITH DENSE PACKED CELLULOSE

2x WEB STIFFENER OVER BEARING LOCATIONS

TAPERED TOP PLATE

WRB WRAPS OVER WALL AND IS TAPE SEALED TO CEILING SHEATHING

TYPICAL WALL – ROOF INTERIOR