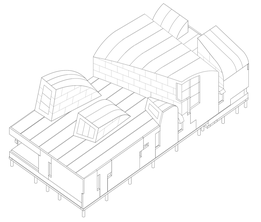
Chapel of St. Ignatius

Steven Holl Architects

KLMR KatieOkamotoLauraBuckMargauxYoungRuthWang



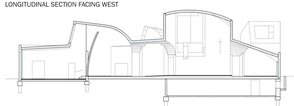
In the St. Ignatius Chapel (Seattle 1997), Steven Holl uses the concept of 'seven bottles of light in a stone box' to create a meditative quality of light and space. The 'bottles' appear to be sculpted from a single concrete mass, as in Le Corbusier's Ronchamps, but in fact, the unity of construction is an illusion. Holl constructs individual components to produce a hybrid building with complex curves and subtly unconventional angles.

The chapel rests on a concrete foundation, grade beam and poured slab, followed by a hollow concrete plank, and finished architectural concrete floor. On these rest tilt-up 9" and 10" concrete panels that act as shear walls. These concrete panels are remarkable in that they were poured on site and raised, related by cranes to interlink like a puzzle box. Once in place, the tilt-up panels are held together by two steel trusses that are welded to cast-in steel plates, these stabilize the shear walls. Where the roof geometry requires extra support, columns are concealed within the concrete partition walls. The roof 'bottles' are framed individually with welded steel tubes and supported by the roofing system of trusses and steel beams.

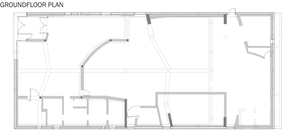
A sub-structure fills in the gaps of this system. Where the concrete panels terminate before meeting another, glazing is inserted. On the roof, each bottle volume has inset weather-proofed windows that angle to all cardinal directions, creating varied lighting atmospheres on the plaster-finished interior. Given Seattle's wet climate, the windows and walls are designed to shed water on the exterior o the building with a series of drips and weeps. All roof bottles are clad in metal decking and a Rheinzink-coated metal that also appears on exterior panels. Where the roof is flat, plywood provides structure and is sealed with EPDM.

From afar, each of the seven 'bottles of light' indicates a specific liturgical space within. Experienced from the inside, painted baffles filter light and diffuse it throughout the 8,100 sq-ft chapel. The play of northern, southern, eastern and western light comes together in the central area, illuminating sensuous curves in the ceiling. The effect is meant to inspire a feeling of buoyancy. Holl's mastery of material and atmosphere to create a gentle unity bely the diverse method of construction. The building comes together in the minute components and connection points of the chapel. For a design that focuses on a harmonious experience, it is in the details where that experience comes to life.

LONGITUDINAL SECTION FACING WEST

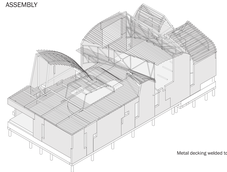


GROUNDFLOOR PLAN

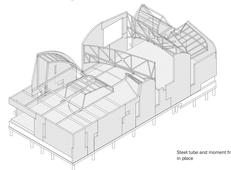


scale 1'=1/8"

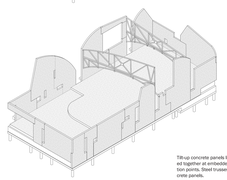
ASSEMBLY



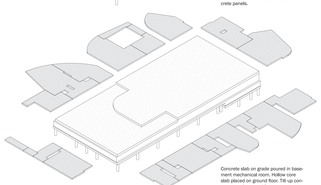
Metal decking welded to steel frame



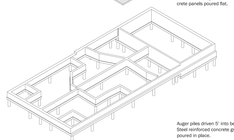
Steel tube and moment frames welded in place



Tilt-up concrete panels lifted and welded together at embedded steel connection points. Steel trusses welded to concrete panels.



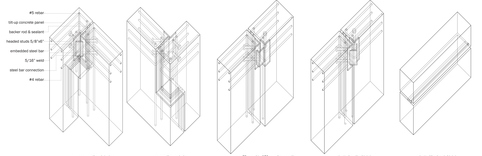
Concrete slab on grade poured in basement mechanical room. Hollow core slab placed on ground floor. Tilt up concrete panels poured flat.



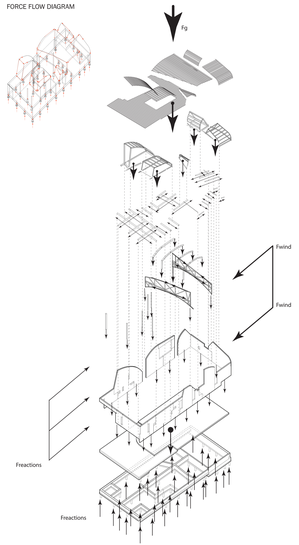
Auger piles driven 5' into bedrock. Steel reinforced concrete grade beams poured in place.

UNROLLED PANEL ELEVATION: 1'=1/4"

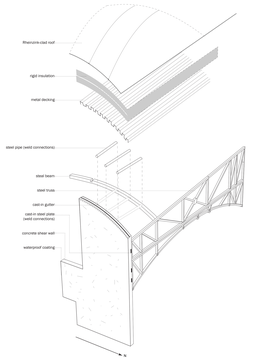
TYPICAL TILT-UP PANEL CONNECTIONS: 1'=1/8"



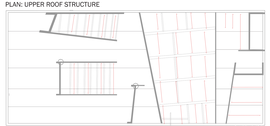
FORCE FLOW DIAGRAM



EXPLODED DETAIL AT CONCRETE PANEL & ROOF CONNECTION

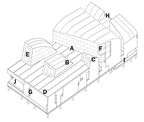


PLAN: UPPER ROOF STRUCTURE

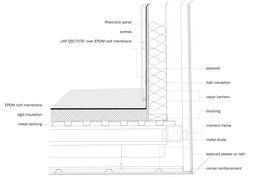


scale 1'=1/8"

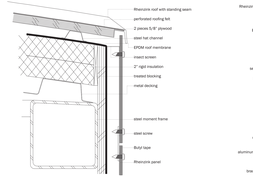
FINISHING DETAILS



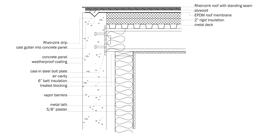
A TYPICAL TRANSITION FROM BOTTLE TO FLAT ROOF: 1"=1/8"



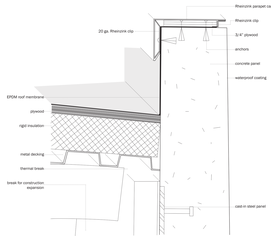
B SECTION AT BOTTLE ROOF & ZINC PANELS: 1"=1/2"



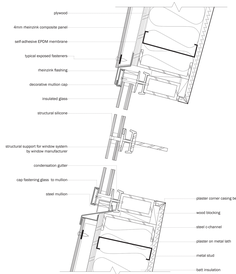
C SECTION AT BOTTLE ROOF TO CONCRETE PANEL: 1"=1/8"



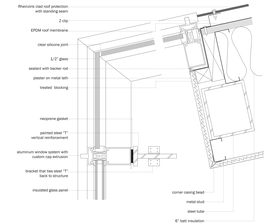
D TYPICAL PARAPET AT CONCRETE PANEL: 1"=1/4"



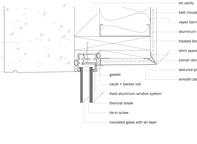
E SECTION AT SLOPED BOTTLE WINDOW FACE: 1"=1/4"



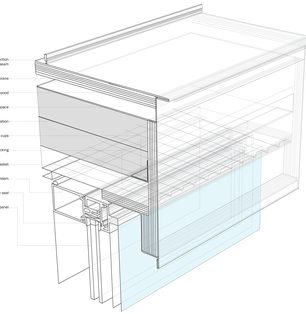
F PLAN AT WORSHIP WINDOW GLAZING DETAIL: 1"=1/4"



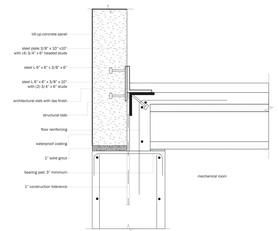
G TYPICAL FIXED LOWER WINDOW HEAD: 1"=1/2"



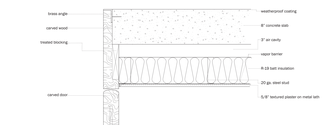
H FLAT ROOF TO WINDOW CONNECTION AT EAST WORSHIP



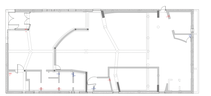
I SECTION AT TILT-UP CONCRETE PANEL BASE CONNECTION 1"=1/4"

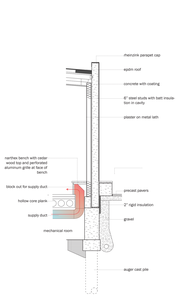


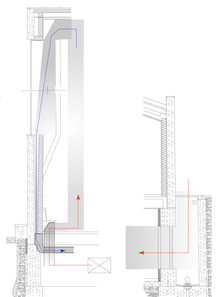
J EXTERIOR/INTERIOR WALL PLAN AT VESTIBULE: 1"=1/4"



HVAC SYSTEM:
DIAGRAMS OF SUPPLY + RETURN AIRFLOW







scale 1'=1"