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The versatility of precast concrete lends itself readily to architectural expression of a wide range of patterns, textures and cultural idioms that help make retail projects noteworthy and profitable.



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IDEAS

Modern translation of a Beaux Arts tradition



Printemps Retail Store, Denver, Colorado



*Architect:
Roth + Sheppard Architects
Denver, Colorado*

*Structural Engineer:
Design Structures Inc.
Denver, Colorado*

*Owner:
Realities Inc.
Denver, Colorado*

The heritage of the upscale Printemps retailing company in Denver is 19th century Beaux Arts architectural design, as used in its original store in France. But for its first U.S. store, the retailer wanted a translation of a traditional European aesthetic into a memorable American vernacular. Image, human scale and an inviting presence were also important attributes for the new store.

Limited to a four-month construction period and working within a limited budget, designers chose precast concrete to create a 20th century design that echoes its 19th century past. A total of 250 precast concrete panels, created with white cement and limestone aggregate, clad the building and form a free-standing arcade that invites pedestrians in to view the store's exterior display windows. The wall and arcade panels, with their deep reveals, minimal joints and sandblasted finish, are reminiscent of 19th century stone construction.

The 30 ft. high arcade provides sup-

port for steel-framed-arches that are set into the precast concrete panels, forming repetitive openings that give a sense of progression leading to the store's entrances, which are highlighted with glazed canopies.

Convex and concave shapes, and massive bullnosed window frames add interest to the store's facade. The repetitive use of such shapes allows for high utilization of minimal forms and reduces the forming cost per square foot of precast concrete, while creating economical architectural impact.

The building provides Printemps with approximately 100,000 sq. ft. of floor space, divided equally among two floors and a basement.

In this shopping mall, East meets West



Koreatown Plaza, Los Angeles, California

Architect:
Gruen Associates
Los Angeles, California

Structural Engineer:
Brandow & Johnson Associates
Los Angeles, California

Owner:
Korean Shopping Center, Inc.
Los Angeles, California

This retail mall offers Korean and non-Korean shoppers an international food court, specialty shops and restaurants, as well as the convenience of a supermarket and a bank. The project, which is located in the Korean section of the city, combines traditional Oriental scale, proportions and massing with modern American materials and technology to create an inviting contemporary architectural expression.

Because precast concrete is a durable, low-maintenance material that can be produced in a variety of colors and textures, it was chosen as the building's major cladding material. A total of 174 precast concrete panels are used for spandrels, wall panels and covers for interior columns.

On the exterior, sandblasted precast concrete panels delineate the main building shape and roof massing and provide a foil for rectangular patterns of glass block and blue glazed tile.

The mall's interior space is organized around a skylighted three-level central court. A glass-enclosed elevator and several escalators facilitate movement between the three shopping levels. Access to all levels is provided from a main street entrance, as well as from an adjoining five-level, 710-car parking structure. Precast concrete facade panels also cover the parking structure, allowing for a consistency and permanency of the material, versatility of the texture and color, while achieving different finishes to delineate the building's design.

Precast, prestressed concrete platform supports two-block-long mall

Architects:
Cluts, O'Brien, Strother
Architects, Inc.
Eden Prairie, Minnesota

**Pauly, Olsen, Bettendorf, Eastwood
& Associates, Ltd.**
Saint Cloud, Minnesota

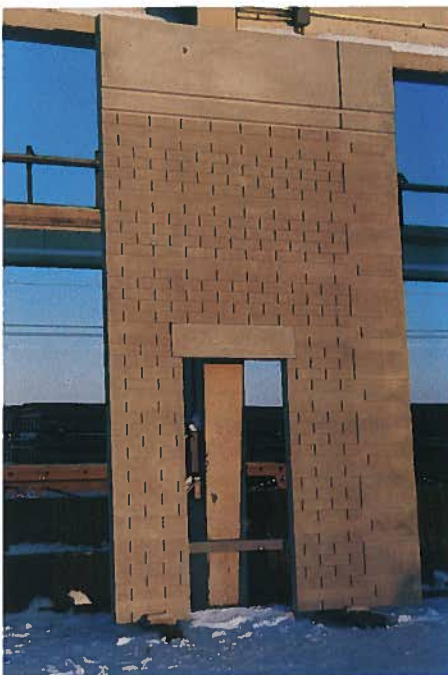
Engineer:
Larson Engineering of Minnesota
White Bear Lake, Minnesota

Owner:
New Ulm Mall Partners
New Ulm, Minnesota



Marktplatz Mall, New Ulm, Minnesota

Built on bluffs along the Minnesota River, New Ulm is a city of hills. So the developers of this two-block-long mall chose to elevate the mall, putting the shopping area on the level of a



main street where an existing department store could become a part of the new mall. The design creates space for parking underneath the mall and allows through traffic to drive under the facility, avoiding the need to close the street that bisects the two-block site.

To elevate the mall, a fire-rated platform was designed. Bids were taken on two structural concepts: a cast-in-place, post-tensioned concrete scheme and a precast, prestressed concrete design. The ensuing bids proved the precast, prestressed concrete to be the most economical option. The platform structure consists of 187 10-ft. wide, 18 in. deep double tees, 55 8-ft. wide, 24 in. deep double tees, 128 inverted tee beams, 51 rectangular beams and 96 solid flat slabs. Insulation plus non-bonded topping was placed directly on top of the precast, prestressed concrete platform.

For the exterior walls of the mall, designers chose precast concrete wall panels to create a simulated brick pattern that would be compati-

ble with the German-influenced architectural styles of the surrounding downtown buildings. The decision was based on economy and speed of erection, as well as strict quality control conditions for plant manufactured concrete members where uniform finishes are assured. Wall panel forms were lined with rubber mats to produce the patterned brick texture. After erection, the 168 panels were colored to obtain a pleasing contrasting pattern that contributes to the ethnic flavor of the finished design.

The precast, prestressed concrete was erected during severe winter weather, taking 19 days to erect the platform structure and nine days to complete erection of the wall panels.

Classic without being classical



San Francisco Centre, San Francisco, California

*Architect:
Whisler-Patri
San Francisco, California*

*Structural Engineer:
CYGNA Consulting Engineers
San Francisco, California*

*Owner:
The Gordon Company
Los Angeles, California*

One of the few vertical malls in the U.S., this innovative \$140 million, 670,000 sq. ft. urban retail center is anchored by a department store without street-level access. The nine-story, ten-level center boasts a "store in the sky" with a 330,000 sq. ft. major department store occupying the top five floors.

Another innovative feature of the mall is its use of spiral escalators to carry shoppers within a central, oval-shaped atrium.

The design goal was to compliment the neo-classical urban fabric of Market Street and Hallidie Plaza without repeating traditional historical motifs. In other words, create a building that is classic but not classical, and truly of its time both technologically and aesthetically.

A total of 75,300 sq. ft. of precast concrete panels clads the building's exterior walls. By using precast concrete units instead of cast-in-place concrete, the owner saved approximately \$500,000. The advantages of precast concrete were several. Precast concrete technology assures truer shapes and more consistent finishes than would have been possible with cast-in-place concrete. Considering the unique design objective of this project, precast concrete gave the architect greater design freedom by offering a wider choice of colors and finishes without increasing production cost. The use of precast concrete reduces construction time and makes it possible to work to a fast track construction schedule, suiting the urban location of this project.

Ribbed structural wall panels contribute textural design interest to retail store

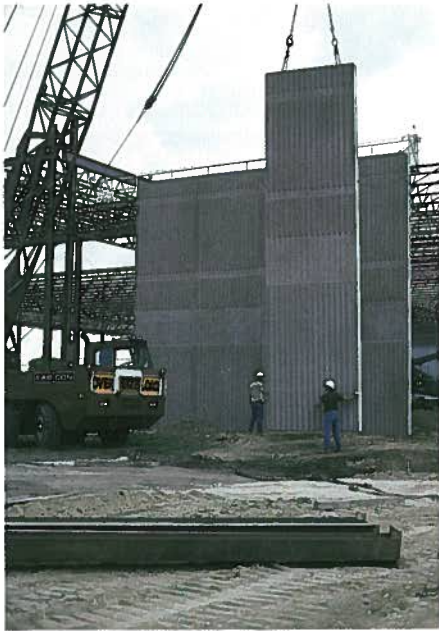
Architect:
Ritter, Suppes, Plautz Architects Ltd.
Minneapolis, Minnesota

Engineer:
Rudin Structures
Minneapolis, Minnesota

Owner:
Welsh/GSB Investments, Inc.
Eden Prairie, Minnesota



Levitz Furniture, Brooklyn Park, Minnesota



Precast concrete panels featuring red rock exposed aggregate and a ribbed texture add interest and scale to the exterior walls of the Levitz Furniture retail store.

The panels function structurally as well, carrying the building's roof loads. This structural capacity of architectural precast concrete is an added benefit that is not readily available with other facade materials. The panels are insulated with 2 1/2 in. of polystyrene, and are 12 in. thick sandwich units that include an 8 in. hollow-core structural back and a 1 1/2 in. thick decorative front. Coverage of the insulated sandwich panels totals at approximately 25,000 sq. ft. It took just ten days to erect 27,467 sq. ft. of panels, a total of 119 units ranging in height from 32 ft. to 42 ft.

The building's structural steel roof system was erected and supported with temporary shoring; the precast concrete panels were delivered to the site, set directly on the concrete frost footing and lifted up against the light steel beam supporting the bar joists. The beam was then welded to plates cast into the back of the precast concrete panels, transferring the roof loads to the panels, and the temporary shoring removed.

Simplicity and economy make supermarket building a bargain

Architect:
Ankeny, Kell, Richter &
Associates, Ltd.
Saint Paul, Minnesota

Structural Engineer:
Reigstad & Associates
Saint Paul, Minnesota

Owner:
Juba's Super Valu
Blue Earth, Minnesota



Juba's Super Valu, Blue Earth, Minnesota



Simplicity and economy were the underlying reasons for the choice of precast, prestressed concrete for this supermarket building. A total of 58 10-ft. wide precast, prestressed concrete insulated wall panels form the walls of the store. Once the panels were in place, paint on their interior faces was all that was needed to finish the interior walls. The exterior face of the panels was broom finished by the precaster and required no additional finish treatment after erection.

The wall panels on the north and south walls do double duty by carrying roof loads as well as insulating the building. Insulation in the walls consists of 2 in. of rigid insulation, sandwiched between two solid layers of precast, prestressed concrete.

The precast, prestressed concrete double tee roof system was also left

exposed, requiring only paint as a ceiling finish. This smooth, dense surface also provides a clean and sterile environment suitable for food storage. The space between the double tee stems easily accommodated fluorescent strip lighting fixtures, as well as mechanical and electrical equipment. The double tee span of 48 ft. creates an open interior space within which the supermarket managers can flexibly arrange the store layout and display shelving.

The erection of the 121 precast, prestressed concrete building components for this 16,632 sq. ft. project was completed in just eight days, ensuring prompt occupancy of the building by the owner.

Precast concrete panels speed construction

*Architect/Engineer:
Planmark Inc.
Minneapolis, Minnesota*

*Owner:
Twin Valu Stores
Green Bay, Wisconsin*

Construction of this 169,000 sq. ft. store went quickly, with only 20 days needed to erect the 254 panels that make up the 56,682 sq. ft. of exterior walls. As ease of construction was a priority for the owner, the combination of a precast concrete wall with a standard joist girder and bar joist structural steel framing system made it possible to erect each building shell in record time.

The panels are 12 in. thick sandwich units that enclose 2 1/2 in. of polystyrene insulation. The choice of plant manufactured concrete allows



Twin Valu Store, Cuyahoga Falls, Ohio

for control of pouring and curing conditions, therefore providing the highest quality surface possible. A hollow-core structural back enables the panels to carry roof loads.

The panels provide a backdrop for the store's logo and an attention-getting band of bright color. The retail facility houses a variety store and a supermarket.

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