



CURVED BRIDGE SITE PLAN



OFFICE OF CHERYL BARTON
KPFF
OTAK

**FIELDS PARK/ CENTENNIAL MILL
PEDESTRIAN BRIDGE**

SCHEMATIC DESIGN

11 JANUARY 2010

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STRAIGHT BRIDGE SITE PLAN



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PROJECT NARRATIVE:

The pedestrian bridge will connect Fields Park and the North Pearl District directly to Centennial Mills and the river. The park, bridge and mill will be the culmination of the north park block linking the surrounding neighborhood directly to the river.

The bridge is programmed for pedestrian and bicycle traffic and will have a 15' wide clear path. Crossing the bridge from the park to the mill one will have multiple options to reach both the wharf level and Naito Boulevard via an open stair adjacent to the landing point in the northwest corner of Elevator C or by traversing through a multi-story open archway leading to both an oversized elevator and a large stair component down to the open aired public wharf. Bike parking will be accommodated on the mill side of the bridge allowing bicyclist secured parking once entering the mill complex.

The bridge will span from a take off point in the northeast section of the park over a small portion of that corner of the park, the railroad right of way, Naito Boulevard and connect to the "bridge" level of Elevator C in the northwest corner of the Centennial Mills complex. The bridge will be supported by a raised abutment in the park, span to a column support at the edge of the park and railroad right of way, span to a second column support between the railroad right of way and Naito Boulevard and then cantilever the remaining distance over Naito Boulevard touching onto Elevator C. This cantilevered concept both accommodates the space constraints for a column support on the mill side of Naito but also sets up a contrast between what is envisioned to be a simple, light and modern bridge structure with the massive nature of Elevator C.

Presently, two concepts are being considered: curved or straight. Both combine a particular bridge typology with the above mentioned cantilever typology.

The curved option is a beam bridge that would grow out of the elliptical and organic character of the park. Both in plan, section and elevation the monolithic box beam structure would curve, bend and mold to both the formal gestures evolving out of the park and also the practical structural stresses and moments of the particular spans, supports and cantilever. The structure and columns would be wrapped in corten steel plates while non-structural components would be glass rails and a light weight wear surface.

The straight option is a truss bridge that would directly align with the archway through Elevator C thus allowing direct views through to the river from the park landing vantage point. Envisioned as part of the language of the wharf this option will act as a "gangplank" linking the wharf and mill complex to the park and neighborhood. Two support trusses will support a lightweight deck and are being studied as a re-interpretation and exploration of truss design. Using Statics, different designs and materials will be explored to determine the most efficient and optimal use of materials from both an economic and structural analysis.

Portland Pedestrian Bridge

Outline Program

- 20' wide (15' clear), 5% slope max
- bike lane/pedestrian lane, two-way, width??
- bike parking on east side: # of bikes, covered?, location
- dog area on west side: size, accommodations, etc
- direct access to Naito on east side (stairs)
- direct access (stair) to Naito on west side of Naito???
- Elevator on east side for wharf access
- Lighting requirements
- 25' clear for railroad clearance (confirm), other railroad requirements (fence)



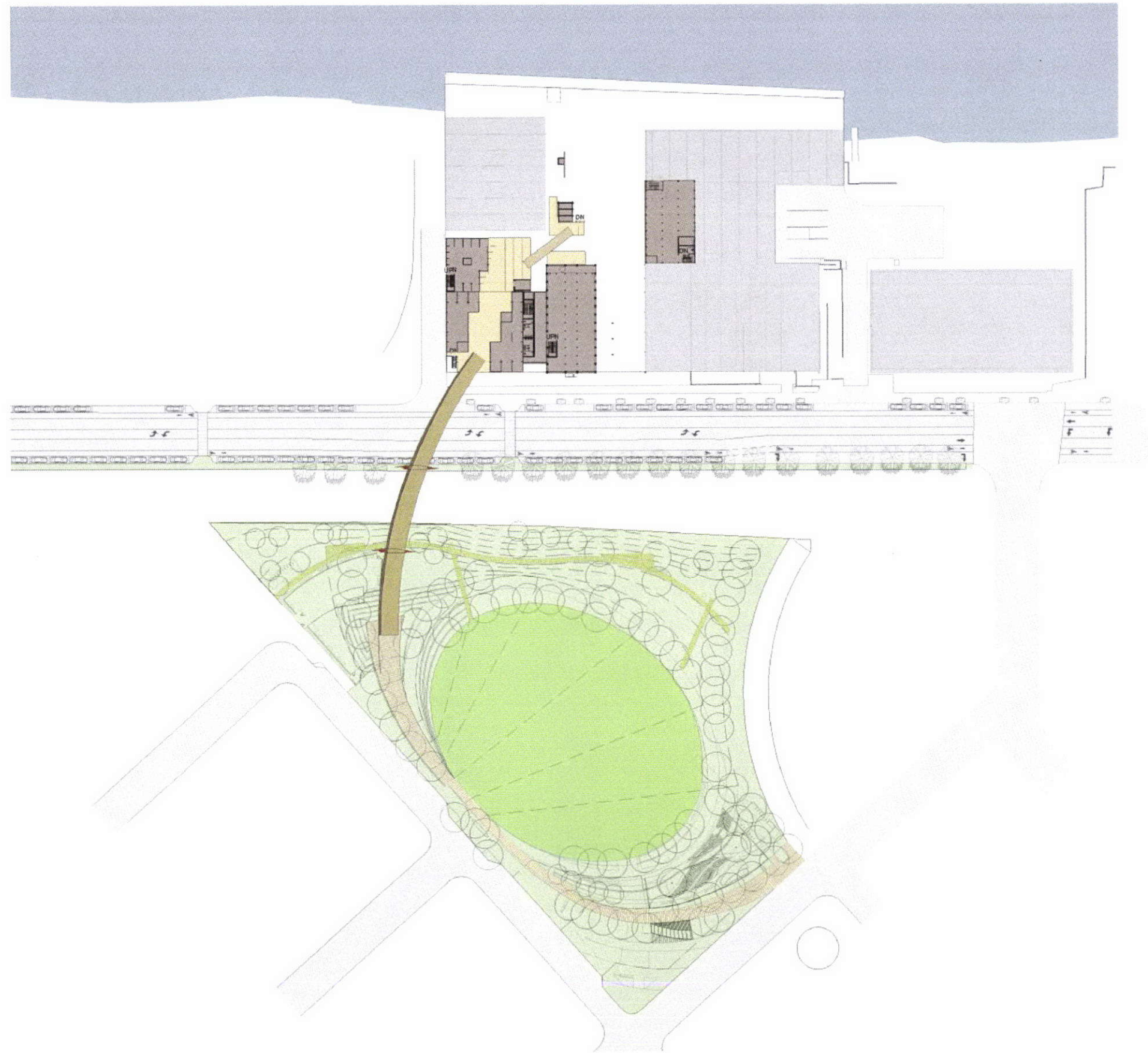
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PROJECT INFORMATION

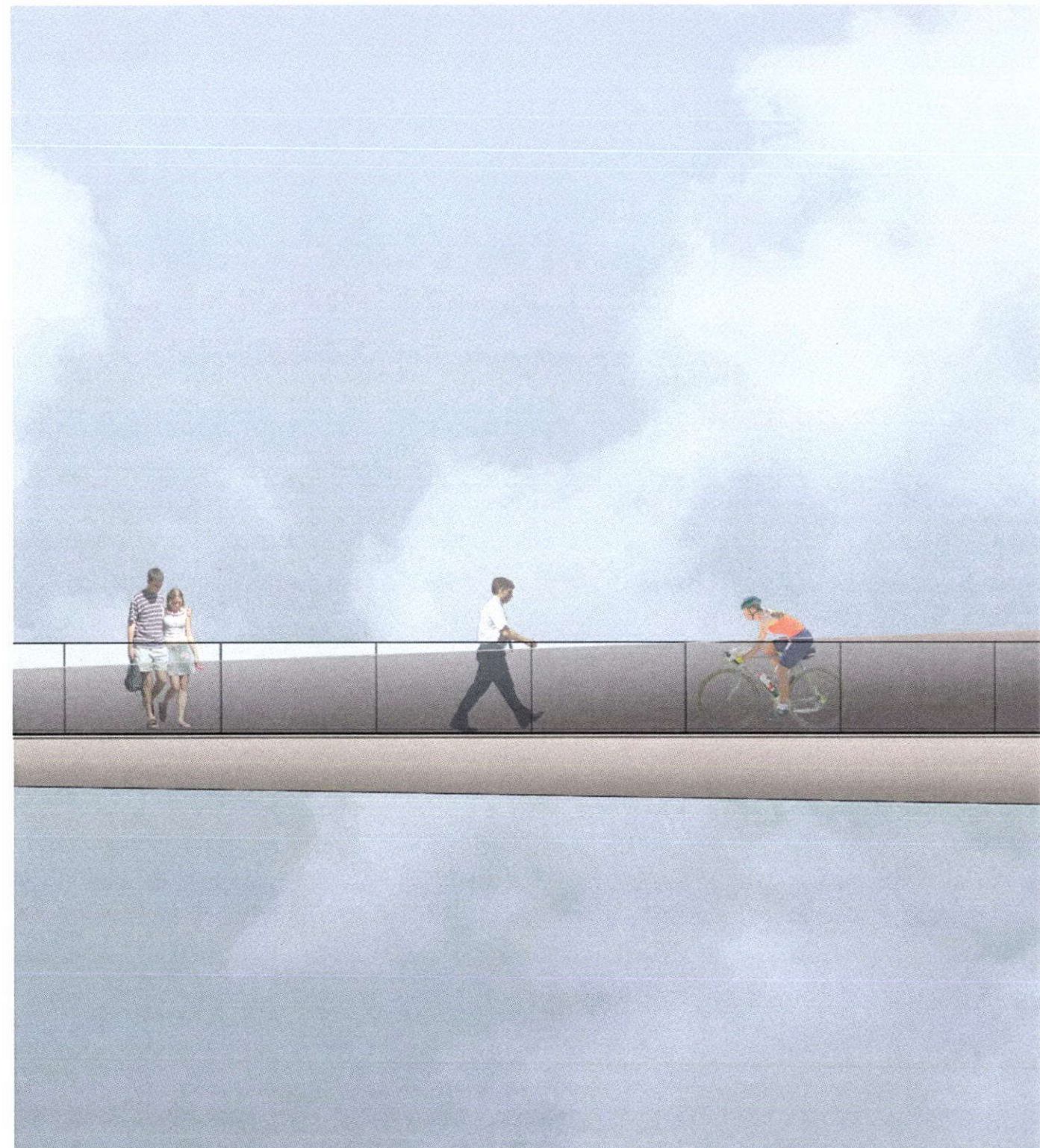
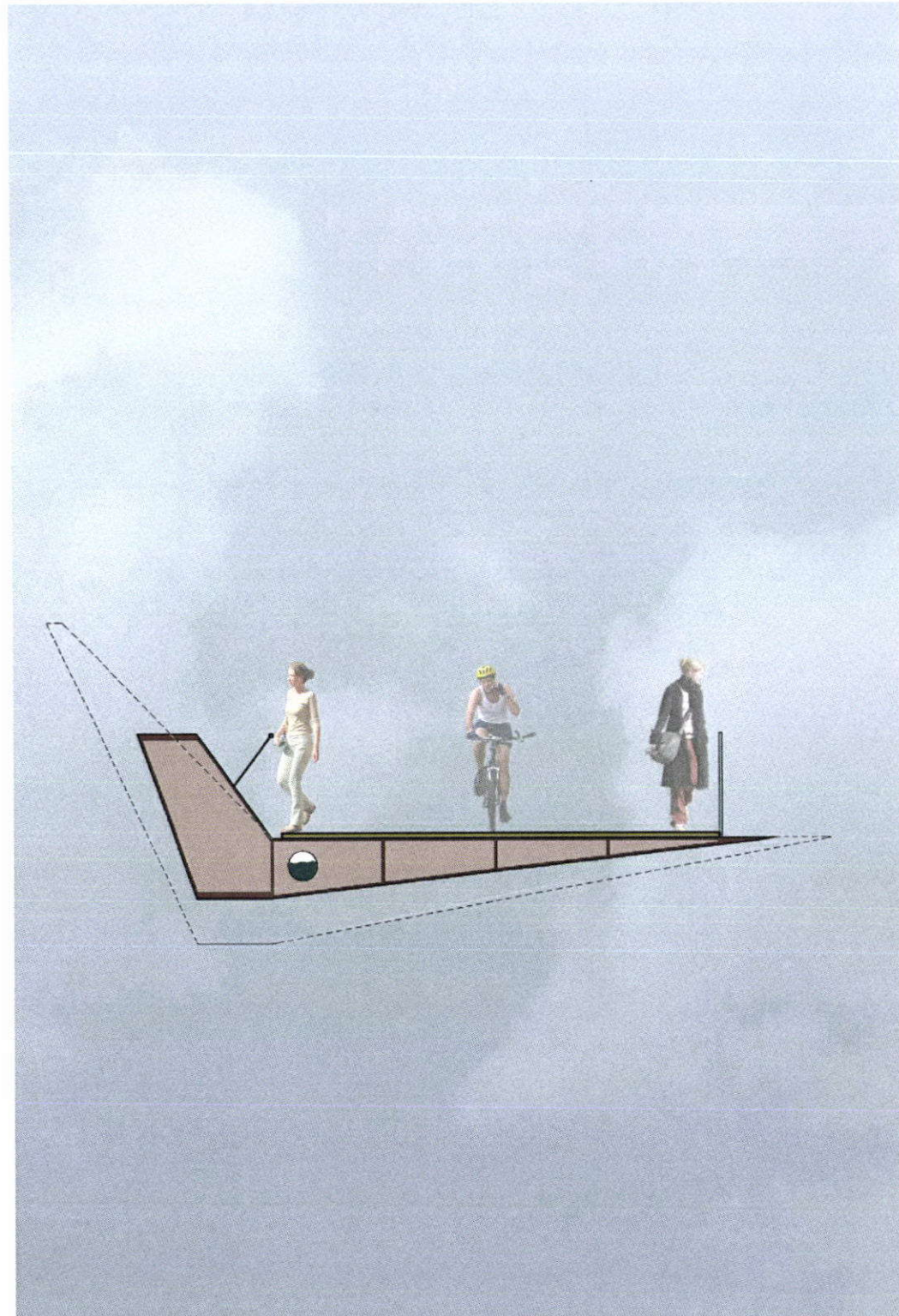
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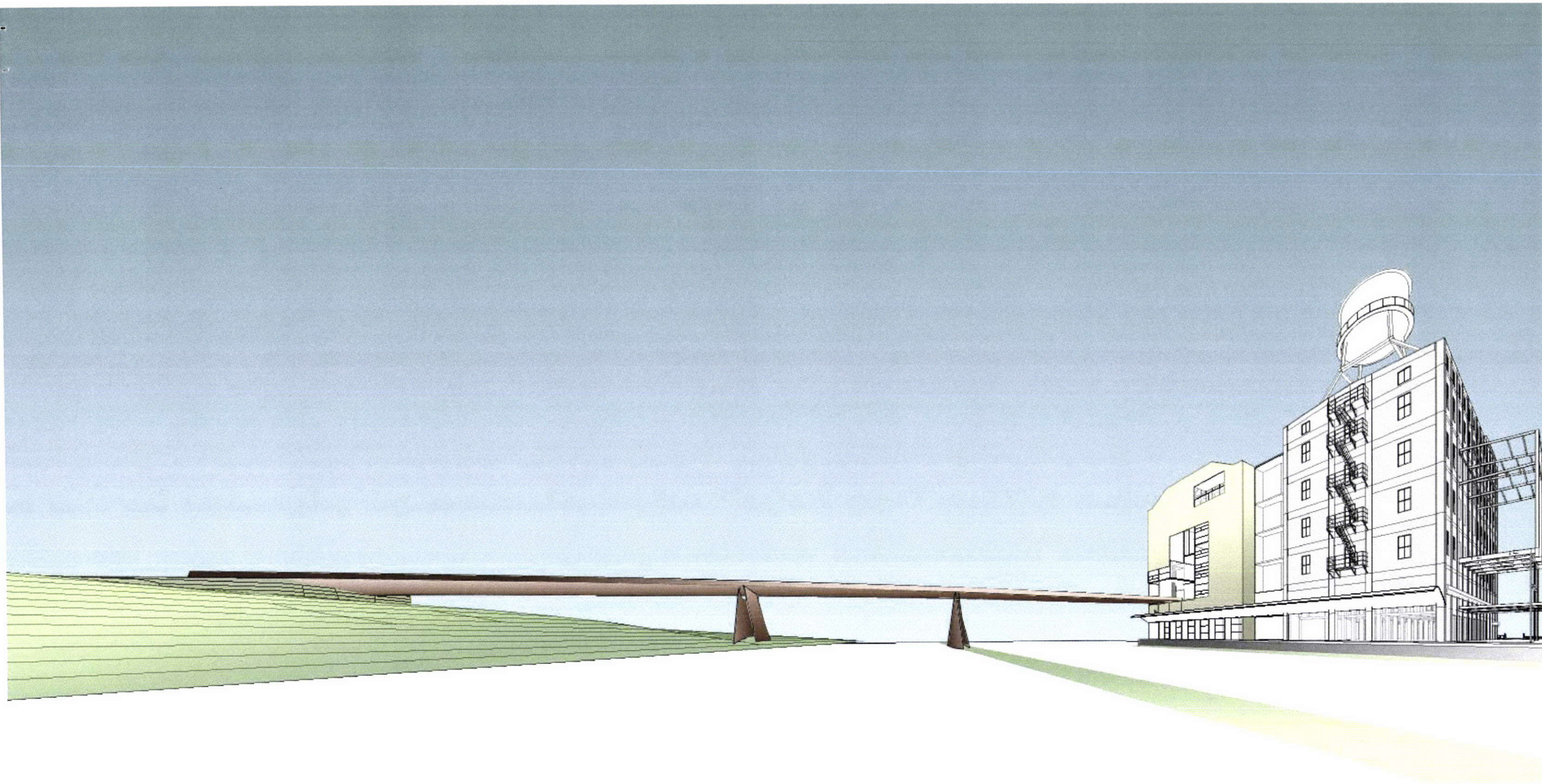
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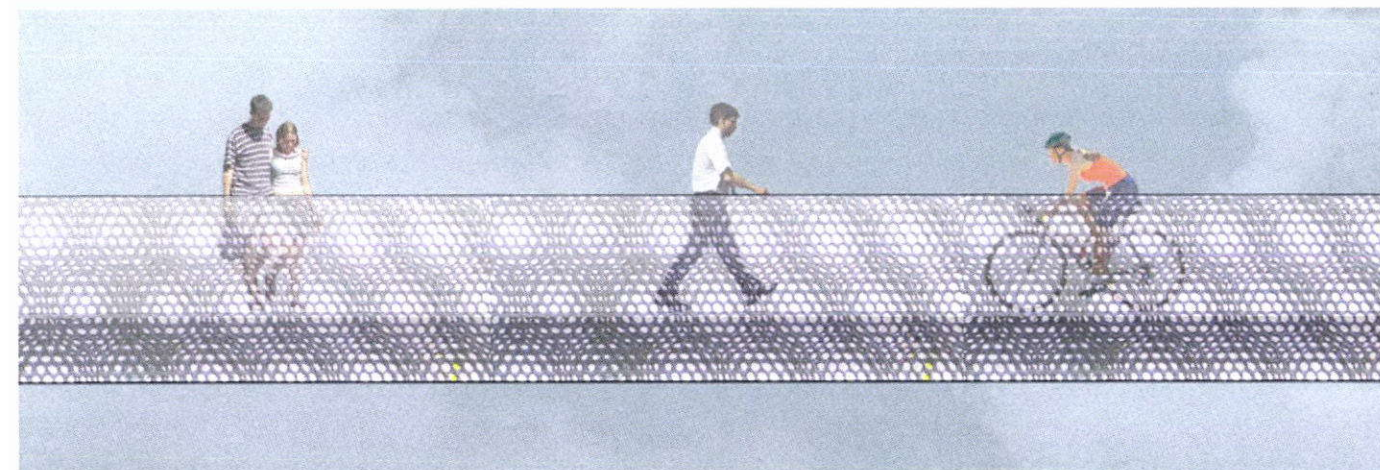
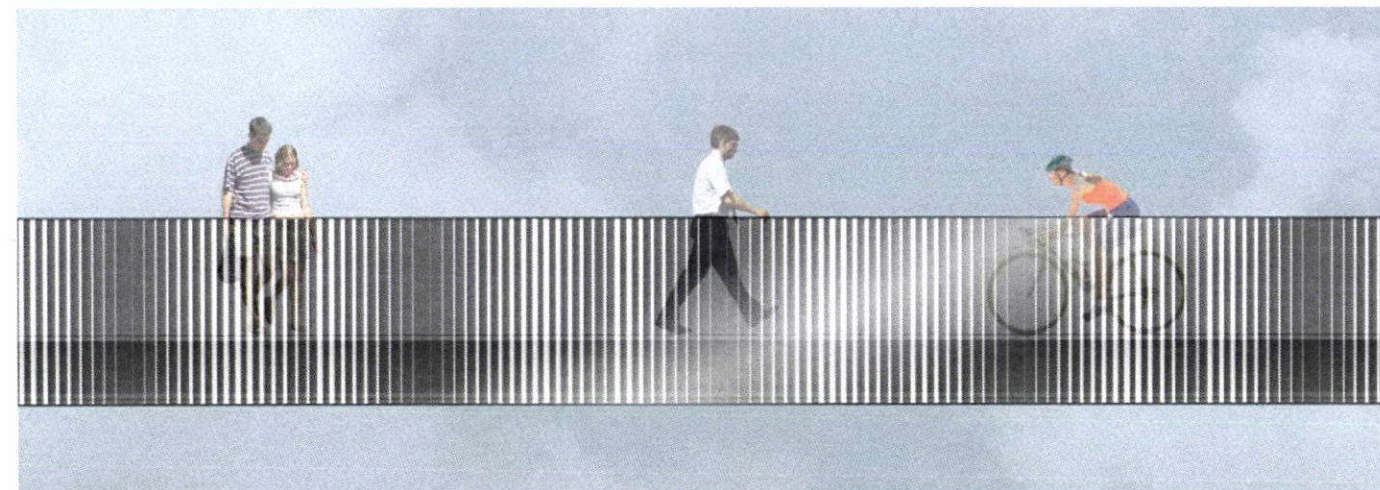
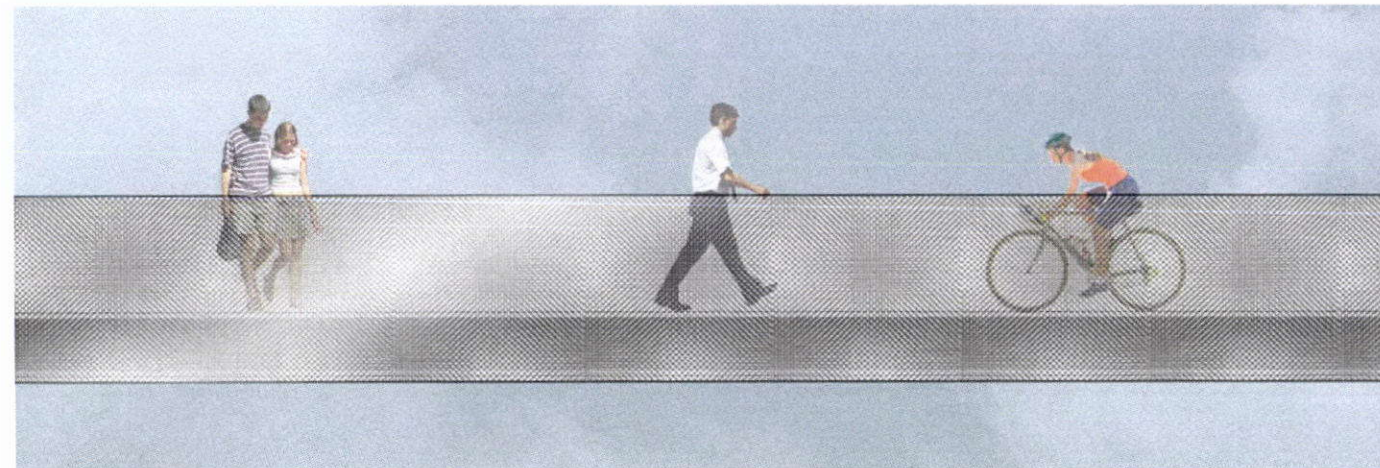
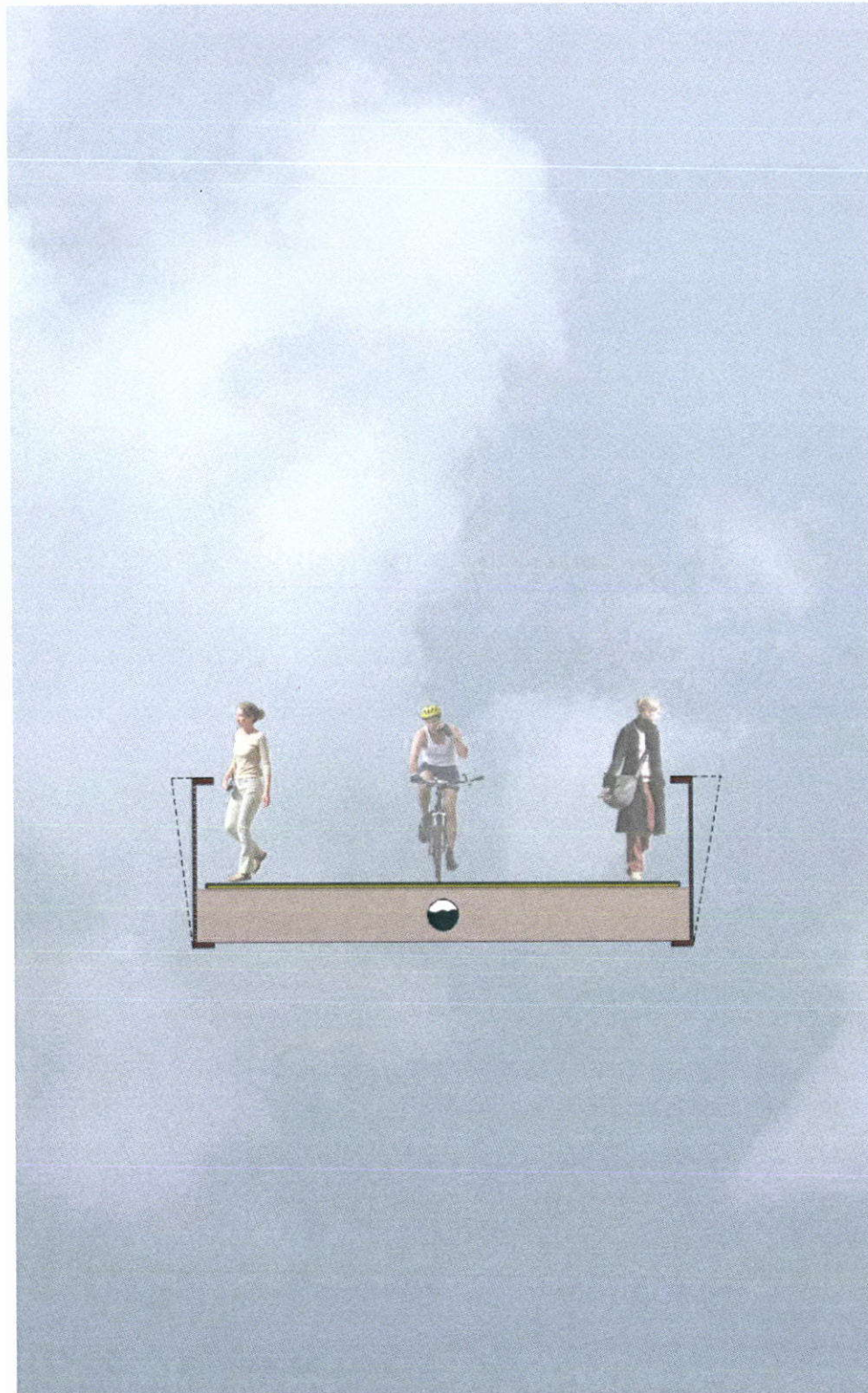


CURVED BRIDGE SECTION & ELEVATION

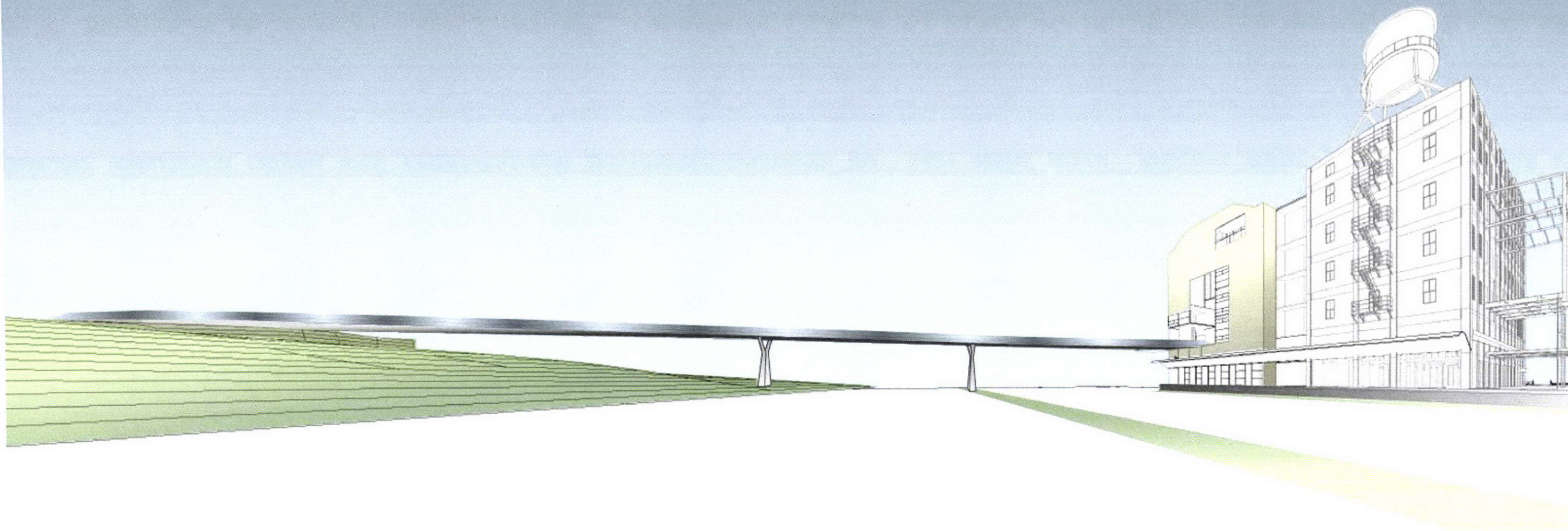


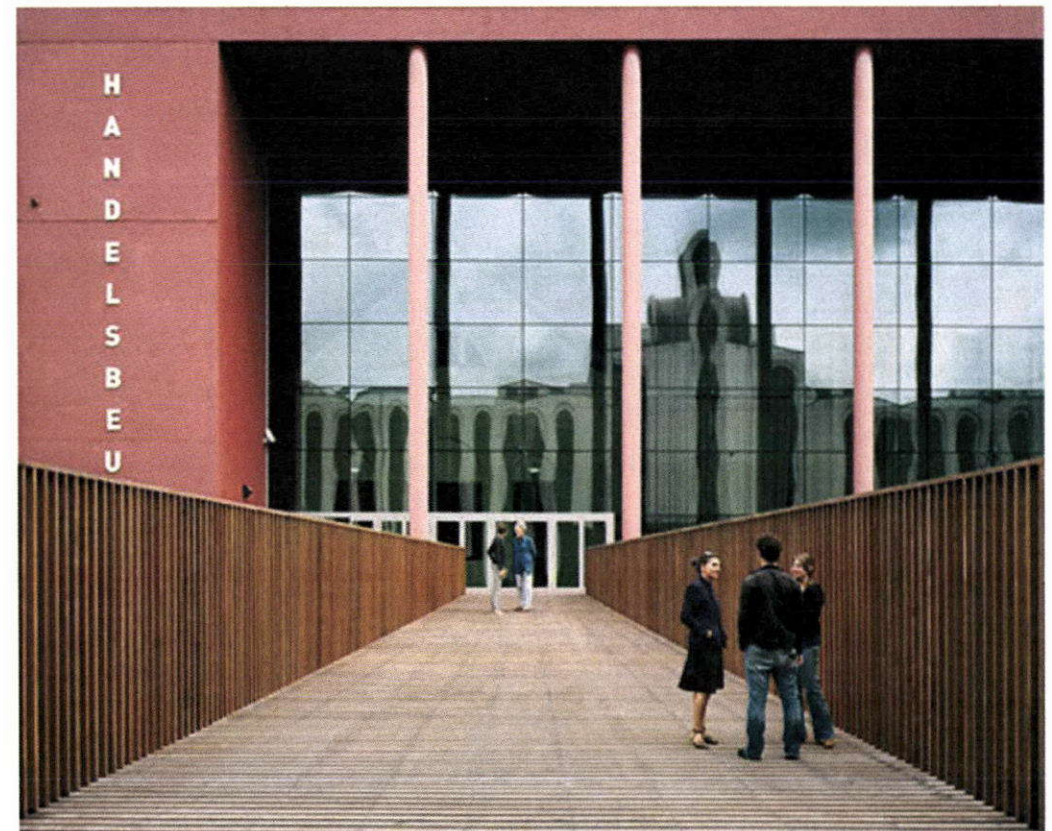
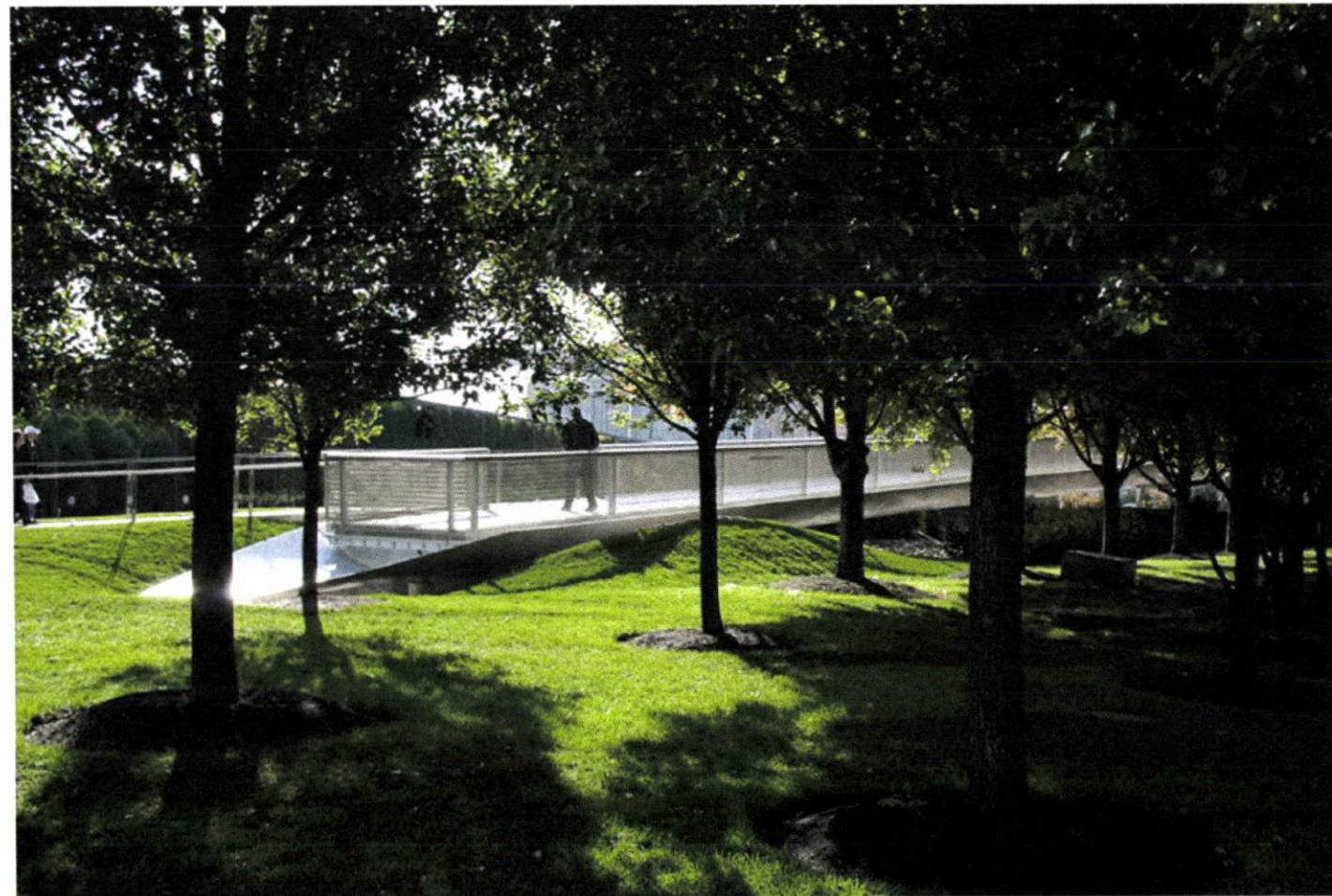


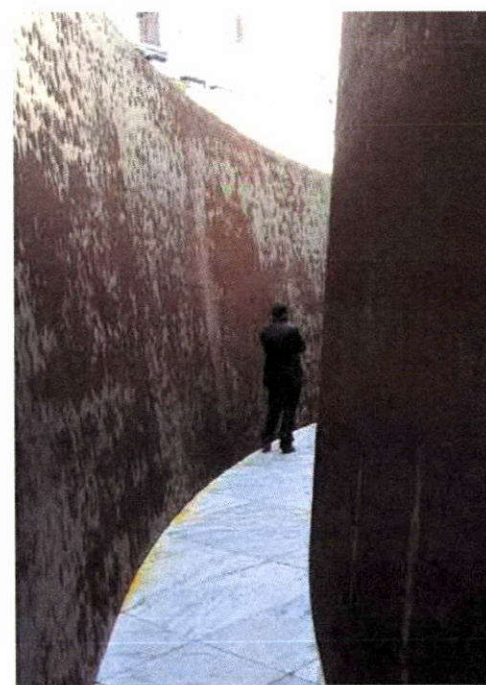
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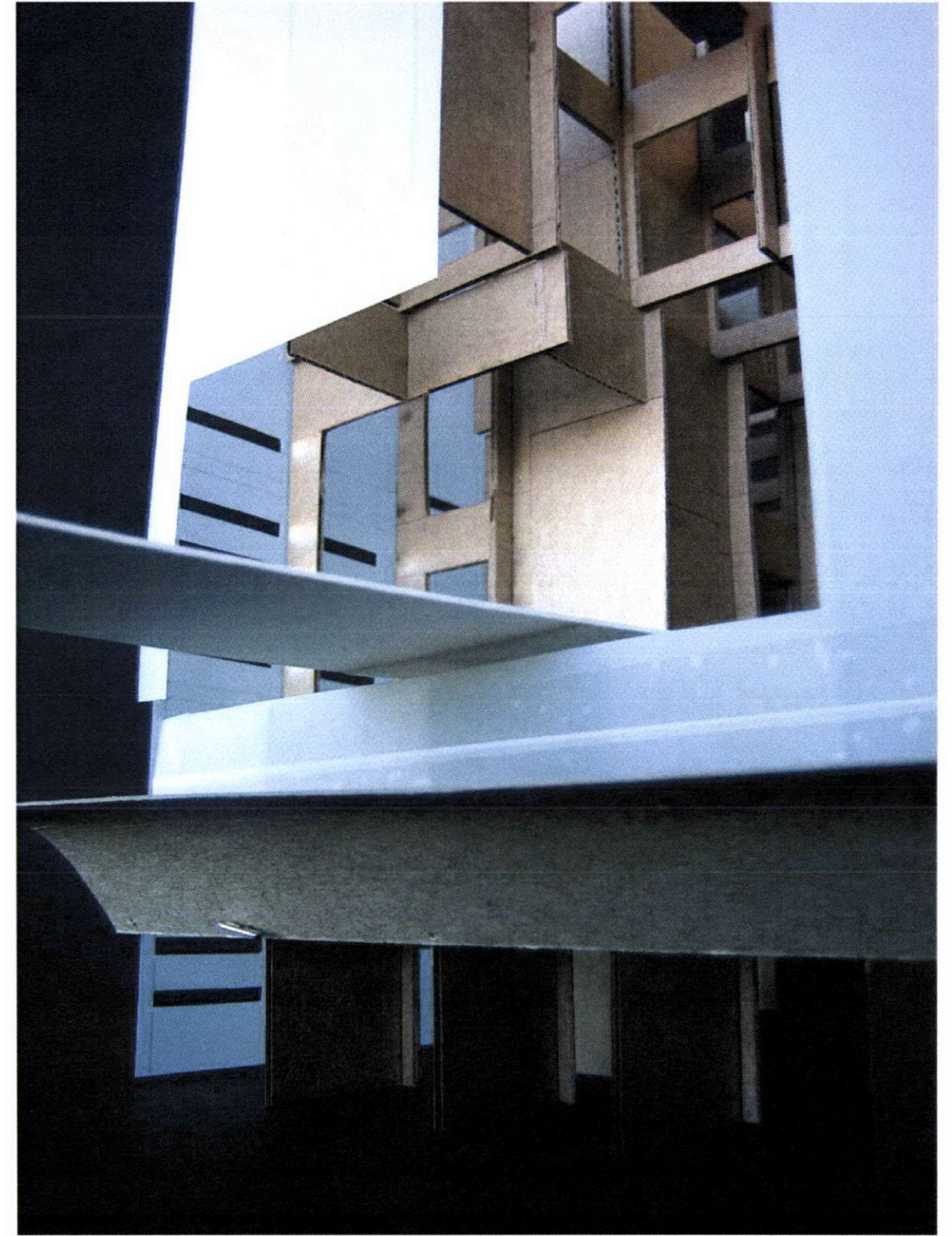
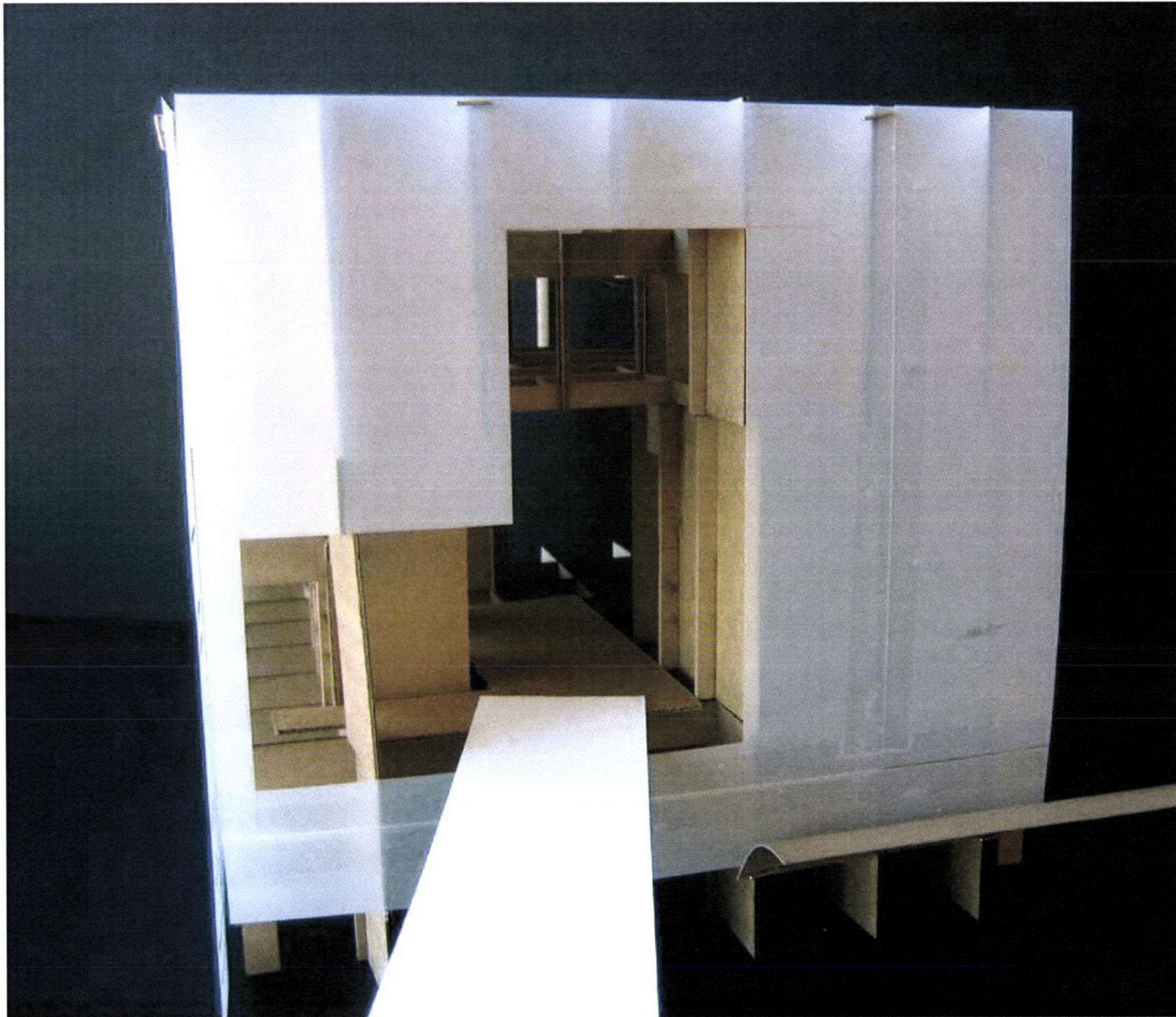


STRAIGHT BRIDGE SECTION & ELEVATIONS

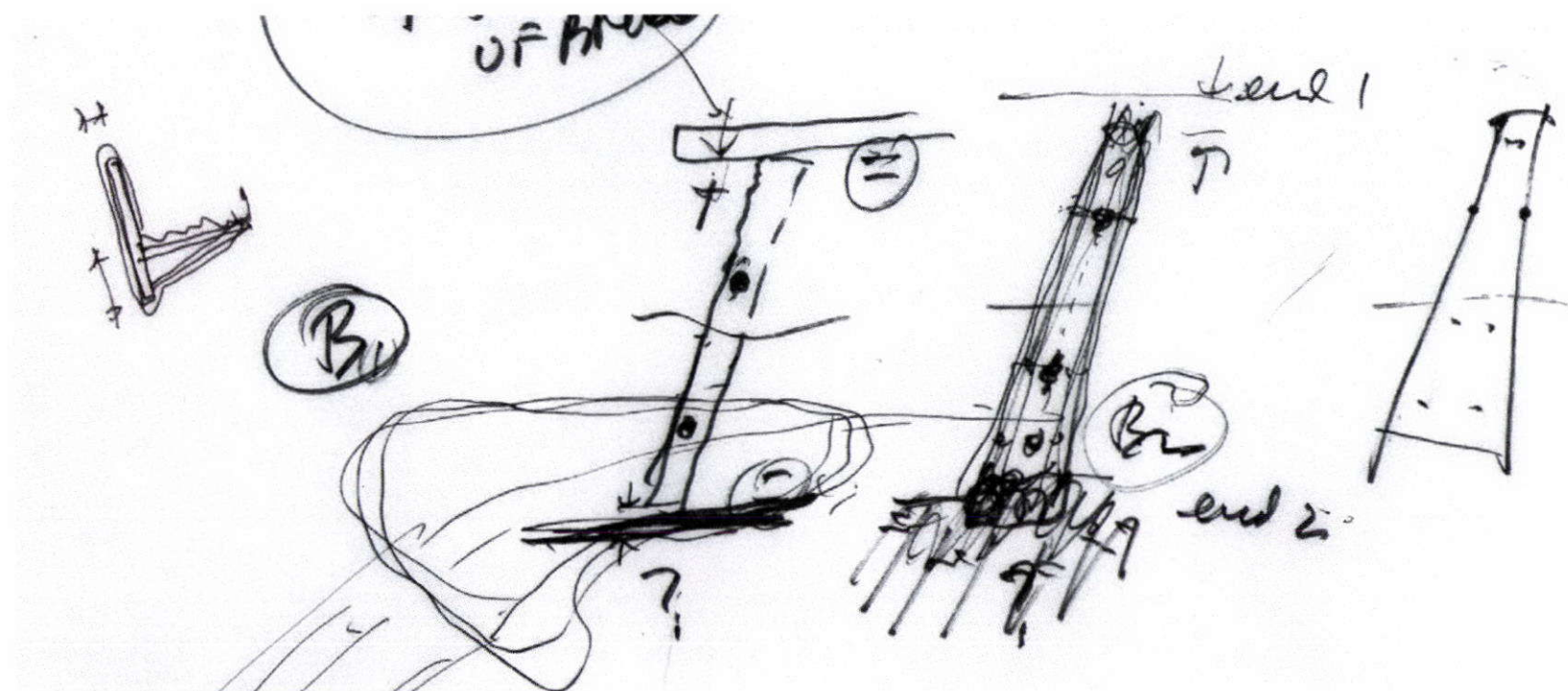
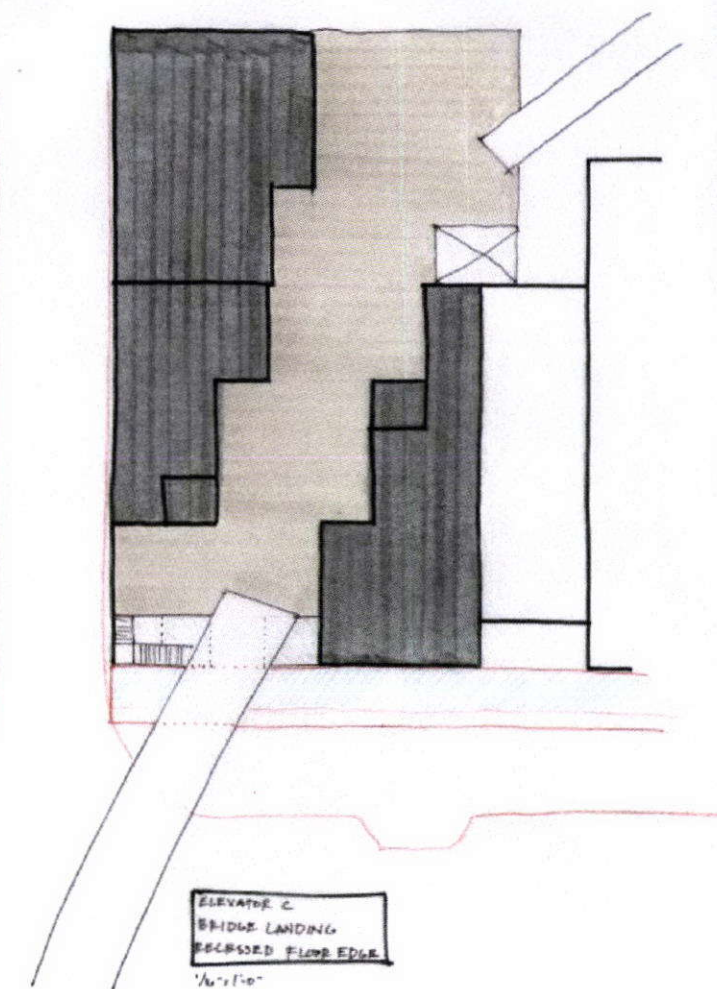
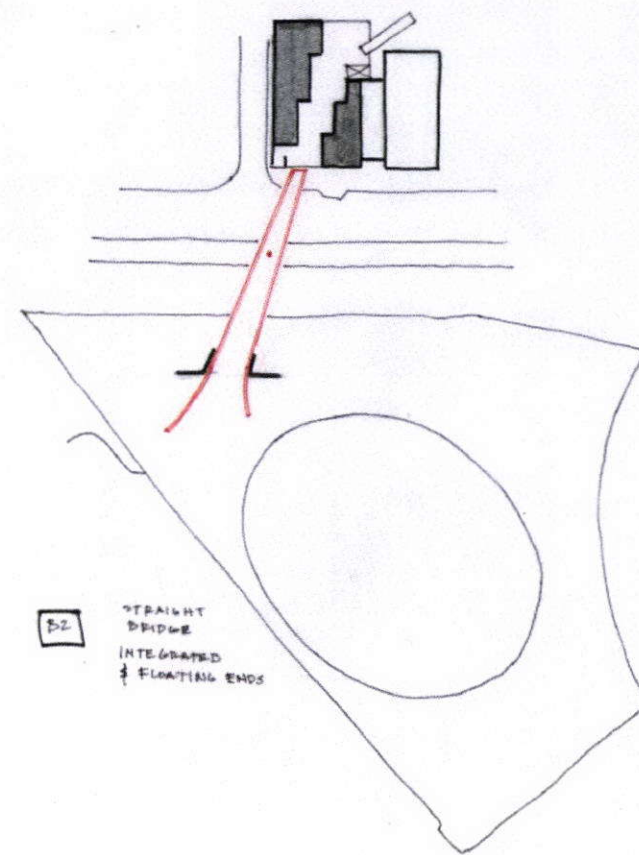
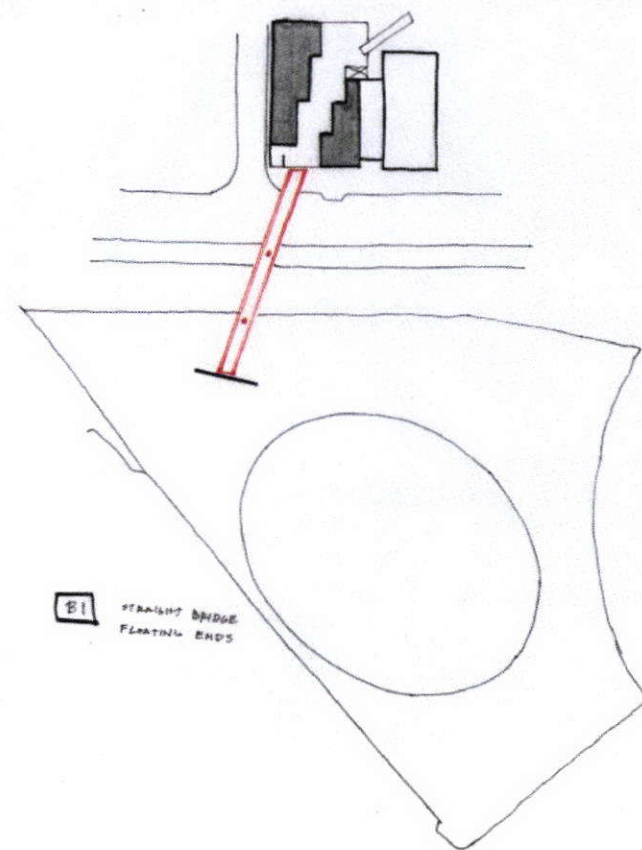
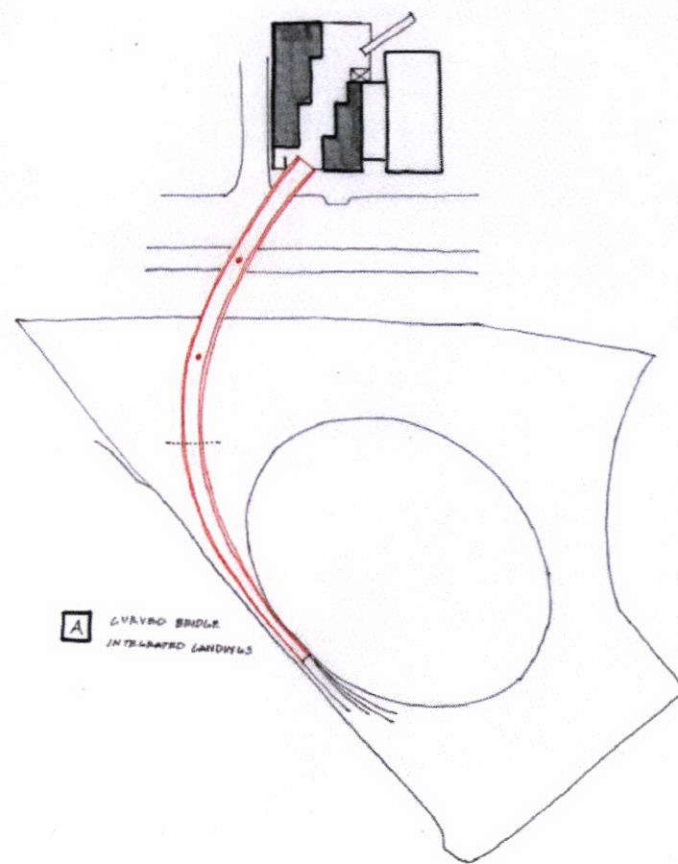








STUDY MODEL IMAGES



A BOX BEAM
BOTH SIDES - BY
BEING SQUARE, CAN
SIDE BOX
PARTS BE
SWAPPED?

DIMAS AS
SHOWN IN
YOUR
WHEEL-UP

B TUBED TUBES
AT SHOWN WOULD HAVE
COLUMNS @ 2' DIA. A.
WENT VARIATIONS IN
NUMBER IS POSSIBLE
TO "PUSH UP" A
MORE CONVENTIONAL
SOLUTION?

C HEAVY STEEL
PLATE GIRD W/IN/BEAMS.
COULD WE LOWER CUT
THESE STEEL PLATES TO
MAKE A CONTINUOUS
MEMBER BUT ALLOW
OPENINGS? HOW
PROFESSIONAL COULD IT
BE? WHAT FOR CENTRAL
@ C. STEEL IS PROPOSED?

TRUSS TYPE 1

TRUSS TYPE 2

