

POLYTECHNIC OF TORINO  
FACULTY OF ARCHITECTURE 1  
Diploma in Industrial Design  
***Honors theses***

**Bus stop facilities: analysis and design**

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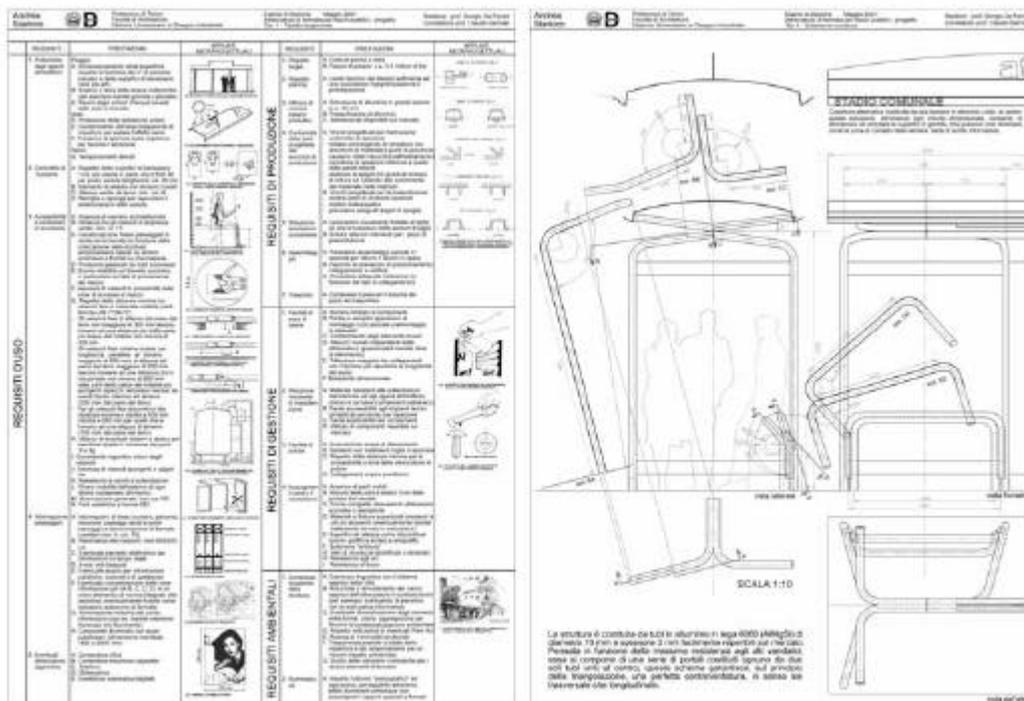
The expression “urban design” has always been the object of misunderstandings and interpretative problems; the main ambiguity concerns, perhaps, the scale limits of urban design, which can be interpreted at the same time as «a detail element and the most immediate and showy expression of public space organization».

This made it possible, in the course of the years, for the subject competences to be contended from different plan industries, just working at different scales: town planning, architecture and design. In particular, design tends to take on a meaning that goes beyond the canonical one of industrial production design, to arrive to conduct research into the functional part and the environment of single urban products. The objective of this thesis is to estimate limits and potentiality of design applied to realizing a bus shelter.

The thesis started from an analysis of those shelters that are considered emblematic either for the environmental, management and functional solutions, or because they are contextual in specific historical, cultural and political-administrative realities.

In last years, growing attention to the problems of environment oriented big urban centres facilities design to “ad hoc” solutions. In smaller towns, instead, where the quantities of installations are not such as to justify this kind of operation, the commercial catalogue remains for public subject the main instrument of choice; in this case, the shelter acquisition processes, usually carried out through tenders, imply the comparison of economic and performance competitiveness of single bids.

The designing proposal, thought for this second situation, started therefore from the definition of a metaprojectual system that gathers the main specifications of the shelter on two levels: requirements of users (of usage, production, management and environment) and performances (specifications and quantifications of the requirements).

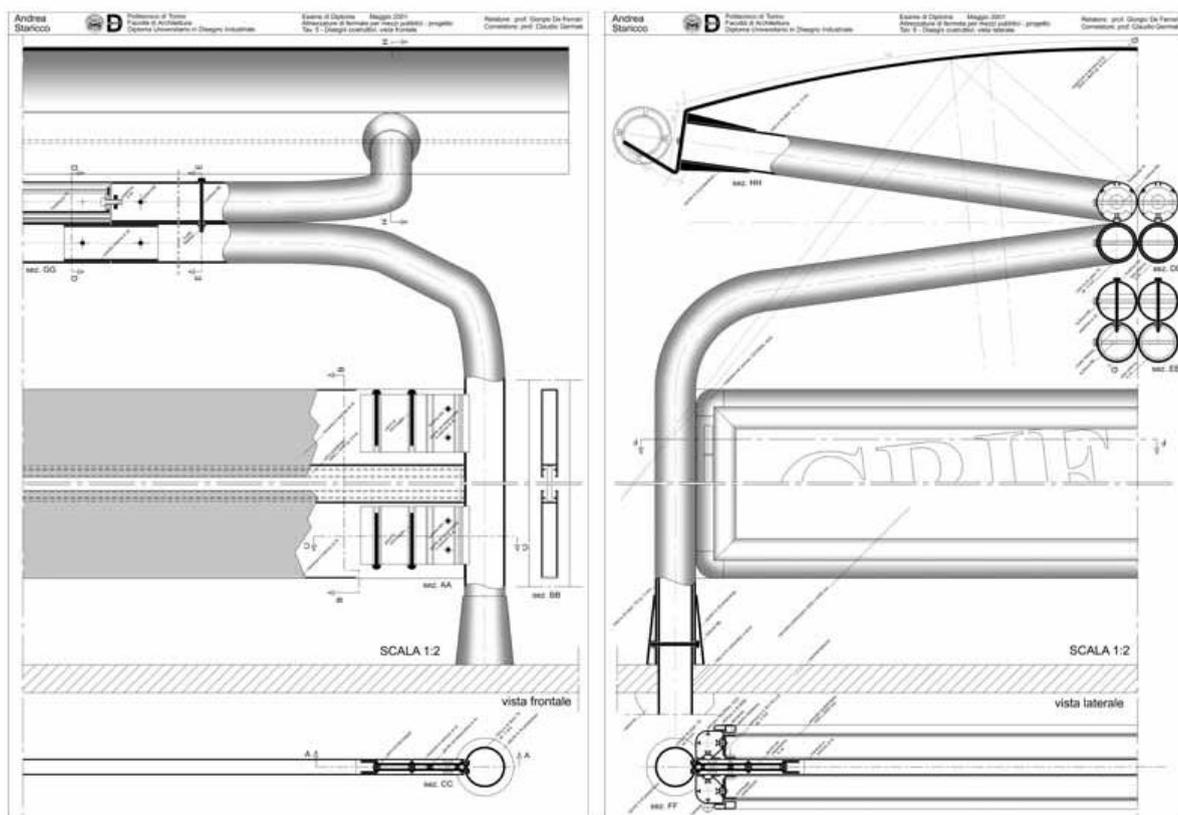


Pict.1

Among the various requirements, the environmental ones are surely the most problematic, since facility sign impact in urban surroundings depends from their satisfaction. The impossibility, in that case, to work on the specific interpretation of insertion context turned immediately the project towards easy and minimal solutions, based on the use of components which are available on the market and cheap, also in connection with the important binding prices.

The structure of the final bus shelter consists fully of tubes in AL 6060 and its conformation comes from the optimum application of triangulation static principles in spatial terms, in order to resist possible vandalistic actions. It adopts a central beam constituted of four tubes that, bending symmetrically upwards and downwards, become respectively horizontal support elements of the roof and vertical supports to the safety glasses, to the advertising boards and to a possible bus stop post. This way, the shelter roof, made of one aluminium sheet, is separated by the glasses, helping so airing in the warmest periods.

Connections between the structure and the roof are made with joints in aluminium die cast ( the only ones “ad hoc” projected), adopted also in correspondence with the connections to the ground to hide junction points; as all the others connections, they are based on mechanical joints (bolts, threaded rivets), because of aluminium unsoldering nature.



Pict. 2

The beam is thought to contain in the inside a lighting system based on reflection on the roof. It integrates in its superior part two aluminium tubular lamps (Tonduluce 70 Same) with the same diameter as the structure and with protection factors fit to external use (IP 65).



Pict. 3

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