

# The Evolution of the Stopera

A Study of Past Plans and Their Influence on the Final Design

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## Abstract

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The Stopera is an integration of a music theatre and a city hall, situated at Waterlooplein in Amsterdam. Before the combination, it was supposed to be a separate music theatre by Bijvoet & Holt at Ferdinand Bolstraat and a city hall by Holzbauer at the Waterlooplein. The architects made multiple iterations for both separate designs. This thesis examines the elements retained from these separate plans that merge the city hall and music theatre.

The research questions follow: *“How did the design elements of Bijvoet & Holt’s music theatre (1978), Holzbauer’s city hall (1978), Holzbauer’s Stopera (1979), the collaboration between the stakeholders, and the financial constraints influence the final design of Holzbauer & Dam’s Stopera (1981)?”*.

The research includes an analysis of the most recent version of the drawings of each project and the written statements provided by the architects. The book “Rumoer aan de Amstel”, written by De Liagre Böhl, is used as a red thread of historical context, while newspaper articles offer insight into the collaboration among the involved parties and the final expenses. Additionally, the program of requirements published by the municipality provides an overview of the program of the Stopera.

Research shows that various elements of both projects are recognisable in the design of the Stopera. For instance, the windows from the music theatre and Holzbauer’s proposal look similar to the windows of the Stopera. Furthermore, the functional layout of the city hall and Holzbauer’s proposal of integration are recognisable in the design of the Stopera. It is important to note that the collaboration among the different stakeholders was far from seamless, which may have contributed to unexpectedly high final expenses.

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## Introduction

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Initially, this thesis started with an interest in protest against city renewal focused on the 60s and 70s in Amsterdam. The case of the Stopera drew attention due to the rich and sensitive history of the location. De Liagre Böhl (2016) wrote a book about this case, detailing the transition from the initial need for a city hall and music theatre to their eventual realisation at Waterlooplein. Although he already discussed the protests related to this urban renewal, he didn't write about the evolution of the designs from the music theatre of Bijvoet & Holt to the Stopera of Holzbauer & Dam, which will be the subject of this thesis.

The methodology for this research involves an analysis of the architectural drawings and researching secondary literature. The architectural drawings include: floor plans, site plans, sections and elevations. These drawings are gathered from the City Archive of Amsterdam and the New Institute of Rotterdam. Several iterations were made for every project. This thesis concentrates on the final iteration of every project. So this includes: the music theatre by Bijvoet & Holt in 1978, the city hall by Holzbauer in 1978, the Stopera by Holzbauer in 1979, and the Stopera by Holzbauer & Dam in 1981. In situations where the earlier iterations are relevant to the analysis, these will also be included. For instance, the drawings of earlier iterations are of better quality and illustrate the same as the final version. Some drawings feature written statements of the architect, which play a significant role in the analytical research. The drawings of each design are gathered in one image booklet as an appendix, divided into the same chapters as this thesis.

The book “Rumoer aan de Amstel” by De Liagre Böhl (2016) provides the historical context of each project, thereby facilitating navigation through the evolution of the Stopera. Additionally, consultation of the program of requirements for the Stopera is done to get an overview of the program. Newspaper articles are used to investigate the collaboration among the involved parties and to analyse the final expenses with the realisation of the Stopera.

This thesis is organised into chapters arranged in chronological order. The first chapter focuses on an analysis of the music theatre designed by Bijvoet & Holt, followed by an analysis of the city hall designed by Holzbauer. Hereafter, Holzbauer's proposal for the Stopera will be analysed while highlighting design similarities between the proposal and the city hall and music theatre. After Holzbauer's proposal, a brief overview of the program of requirements will be presented, along with an analysis of the collaboration among the stakeholders. A further chapter will delve into the study of Holzbauer & Dam's Stopera, particularly the similarities between this design and the three previous projects. After the analysis of the Stopera, a budget overview of the projects will be given. The thesis will end with answering the research question and discussing the findings and methodology in the discussion. To conclude, this thesis will answer the following research question:

*“How did the design elements of Bijvoet & Holt's music theatre (1978), Holzbauer's city hall (1978), Holzbauer's Stopera (1979), the collaboration between the stakeholders, and the financial constraints influence the final design of Holzbauer & Dam's Stopera (1981)?”.*

The research question is divided into eight sub-questions. The first five sub-questions will be answered for each project. The following sub-questions will be answered:

1. What was the location of “the project”?
2. What was the program of “the project”?
3. How were the plans for “the project” organised?

4. How did the spaces of “the project” in the sections look?
5. How did the elevations of “the project” look?
6. How was the collaboration between the architects?
7. What was the program of requirements before and after the combination?
8. What were the expenses before and after the combination?

## Music Theatre

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In the 1920s, the municipality of Amsterdam held their first competition for an Opera House at Museumplein, which was won by architect Staal in 1925. However, the project was never realised, due to financial constraints and the desire to preserve the square’s aesthetics. In the 1950s, the municipality assigned the task of designing a music theatre at Frederiksplein to Bijvoet & Holt. It is noteworthy to mention that the plot was never owned by the municipality. Ultimately, a new location was found at the old RAI terrain on the Ferdinand Bolstraat. In 1961, Bijvoet & Holt produced their first design for this location (De Liagre Böhl, 2016), with the final design emerging in 1978 (Bijvoet & Holt, 1978). Nevertheless, progress on the construction of the building got stalled, therefore, it was never constructed (De Liagre Böhl, 2016). De Liagre Böhl (2016) observes that from the moment the music theatre relocated to Ferdinand Bolstraat, it was referred to as an opera building rather than a music theatre, despite looking at the architectural drawings, the architects’ designation kept referring to a music theatre.

On the 20th of January 1960, the city council decided to establish the music theatre at the old RAI terrain, situated along Ferdinand Bolstraat in the southern part of the Pijp neighbourhood. During this period, the Pijp was characterised as a poor and overcrowded neighbourhood. The city council thought that the music theatre would give the neighbourhood a positive boost. However, the decision formed unrest among the citizens. The *Algemeen Handelsblad* reported that the public was overwhelmingly opposed, with 95,5 per cent of the voters rejecting the location. They thought the creative function didn’t suit the characteristics of the neighbourhood. The music theatre would be located next to Hotel Okura, so the hotel would benefit financially from the visitors and artists of the music theatre. Ultimately, the music theatre was never realised, resulting in an insurance claim of 6 million guilders by the hotel, which was negotiated down to 1.7 million guilders by the municipality (De Liagre Böhl, 2016).

The old RAI terrain had a total area of 62,400 square metres, with dimensions of 240 metres in width and 260 metres in length (De Liagre Böhl, 2016). The building’s geometric form contradicted the urban context. Bijvoet & Holt kept the east of this terrain open, potentially designed for use as a public square, as illustrated in Figure 1 (Bijvoet & Holt, 1978).

De Liagre Böhl (2016) notes that Bijvoet & Holt expressed that this expansive area afforded them design flexibility, as only 25 per cent of the total terrain was needed to fit the program, which is a surface of 15,500 m<sup>2</sup>. Notably, the program of requirements for the music theatre wasn’t found in the archives. The music theatre accommodated multiple organisations, including the National Ballet (HNB), the National Opera (NOS) and an unidentified organisation represented by the abbreviation HTO, as illustrated in the floor plans in Figure 2 (Bijvoet & Holt, 1976).

An examination of the drawings revealed four primary functional components of the music theatre, as shown in Figures 2 to 4. The main program of the theatre was the theatre hall, the technical theatre rooms, public service spaces and the offices. The theatre hall was situated at the centre of the building, with the repetition room located behind it. Beneath the backstage area were technical facilities, and

above the backstage area were the ateliers. Adjacent to both the backstage and repetition room was a storage and montage room, which was twice the size of the backstage, designed for the storage and construction of decor and props (Bijvoet & Holt, 1976).

The technical facilities were arranged around and behind the theatre hall, with public service spaces, such as the wardrobe and foyer, positioned in front of the theatre hall. The offices and dressing rooms occupied all orientations, except the western side, which was dedicated to a public entry. The main entrance featured a prominent overhang, which may have been designed to invite the visitor to enter. After entering, the visitors took the stairs to the wardrobe, followed by a staircase to the foyer. The spatial organisation was differentiated by public and private areas, as evidenced by the design of the staircases: public staircases were larger and aesthetically pleasing, while private staircases looked more functional. The division of public and private was further portrayed in the building's facades, as illustrated in Figures 5 to 8. Varied window designs characterised the brick facades, while offices and dressing rooms had smaller square-shaped windows, the public ground floor had more and bigger windows. The big windows were set back from the upper floors, which created a shadow on the facade (Bijvoet & Holt, 1976).

## City Hall

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Simultaneously, the municipality also desired a city hall since the 1800s, while they had a city hall, which was inadequate in size and representation. In the 1930s, the municipality held a competition for a new city hall at Frederiksplein, which was won by Berghoef & Vegter in 1942. They made a total of seven designs for the city hall; however, in 1961, the municipality stopped the collaboration. A few years later, another competition was organised in the late 1960s at Waterlooplein, which was won by Holzbauer in 1968 (De Liagre Böhl, 2016). The latest version of the architectural drawings in the archive dates from 1978 (Holzbauer, 1978a; Holzbauer, 1978b). Unfortunately, the project remained unrealised due to affordability and high energy costs (De Liagre Böhl, 2016).

The city hall was designed for the vacant plot at Waterlooplein, an area that became available after the Second World War due to the non-return of the Jewish community. Many buildings were demolished or degraded as some Jewish residents returned. The city council was discussing the potential of this location for the new city hall, seeing it as a central and charismatic location within the urban context of Amsterdam. However, journalists were sceptical regarding the municipality's decision because they had concerns about the expense of cleaning the polluted ground. Strangely enough, the journalists didn't write about the sensitive historical context that caused the vacancy of the plot (De Liagre Böhl, 2016).

The implementation of the design, situated between Waterlooplein and the crossing of the Amstel and Zwanenburgwal, followed the orthogonal shape defined by the two canals and the square, as shown in Figures 9 and 10 (Holzbauer, 1970; Holzbauer, 1978). The ground area of the design was 163 metres by 92/106 metres (Gemeente Amsterdam, 1986). In his proposal, Holzbauer (1970) mentioned three starting points:

- The spacious central hall with reception and conference halls, and space for the civil registry;
- The L-shaped office wing of four stories;
- Courtrooms with related spaces for the public, journalists, aldermen and members of the municipality.

The 1978 site plan (Figure 9) illustrated these three foundational elements, with the side facing Waterlooplein and Zwanenburgwal bordered by an L-shaped block of four stories with offices (Holzbauer, 1970; Holzbauer, 1978). According to Holzbauer (1970), the total surface of the offices was 12,500 square metres, which was approximately 2,500 square metres more than mentioned in the program of requirements. Consequently, the layout of the offices was flexible, featuring cabinet walls and movable interior walls (Holzbauer, 1970).

Holzbauer (1970) called the central hall, enclosed by the L-shaped office block, the heart of the building, accessible by four entrances. The hall was closed off from the open space with glazed interior walls. This openness was one of the most important themes of Holzbauer (Holzbauer, 1970).

The stepwise increasing ceiling of the central hall formed the foundation for the external terrace, which was characterised by a series of differentiated levels. The highest levels offered a view overlooking the Amstel (Holzbauer, 1970). Holzbauer maintained a quay width of 32 metres at the Amstel and a width of 30 metres at the Zwanenburgwal (Gemeente Amsterdam, 1986). The design consideration likely had to do with the interaction of the terraces and the building's surroundings. Furthermore, on top of the terraces was placed a block with on two sides an overhang, which accommodates the courtrooms. Holzbauer (1970) described this as a tower rising between the citizens, emphasising the function of the courtroom.

The building's design incorporated an underground car park, accessible through two entrances located in distinct spots, with a total capacity of approximately five hundred cars. The 1970 floor plans indicated the technical programs, workshops, kitchen and space for staff within the basement level, as shown in Figures 11 and 12. This arrangement allows both visitors and staff to enter the building directly from the basement, while the ground floor could be accessed as well via four entrances in four different orientations. The vertical circulation within the building was organised through five cores, each with two elevators and a staircase on one side. The opposite side of each core was used for sanitary facilities (Holzbauer, 1970).

Holzbauer (1970) didn't only explain his vision in terms of space and function but also through an aesthetic view. In his proposal, he detailed the use of various materials, with the main construction made of concrete, which is visible in numerous areas. The walls and their finish were made of red-brown brick, combined with the tiles in the same colour, as the wall and floor finish. Notably, the construction of the glazed interior walls and skylights would be made of rust-brown Corten steel (Holzbauer, 1970).

The elevations presented in 1970 showed that the exterior materials were used on expansive surfaces, which created a bigger contrast between closed (brick) and open (glass) materials, as illustrated in Figures 13 and 14. The staircases and sanitary rooms were concealed behind a closed brick surface. The ground floor's reduced area formed an overhang by the bigger upper floors that cast shadows upon the facade, thereby introducing an additional layer to the minimalistic modern facade (Holzbauer, 1970).

## Proposal of the Stopera

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In early February 1979, architect Holzbauer was walking from the Amstel to his house while looking at the vacant plot at the Waterlooplein, which was intended for his city hall that remained unrealised. Out of the blue, he came up with the innovative idea to combine the two enormous yet unrealised projects. In an interview with Haagse Post, he said: "Then I suddenly thought: that's it, a town hall and an opera house together! I had followed the history of the opera, and I had always thought that this place, in the

Ferdinand Bolstraat, was crazy” (De Liagre Böhl, 2016, p.125). Following this statement, on February 19th, he wrote the first letter to Mayor Wim Polak, suggesting that the program of the city hall could become smaller. By March 26th, he wrote another letter, in which he presented the proposal for the combination of the music theatre and the city hall, later referred to as the Stopera by the public and journalists (De Liagre Böhl, 2016).

The word Stopera had a two-sided meaning, while it meant Stop Opera, which had a negative meaning, it was also a conflation of the words Stadhuis (city hall) and Opera (music theatre) (De Liagre Böhl, 2016). The municipality and other involved parties didn’t like the name. For instance, Beerenhout, the outpost of the Indian neighbourhood, wrote a letter to Lemstra, secretary of the municipality, expressing his dissatisfaction with the name. He noted that Richter-Roechholt, a city historian, thought of a more suitable name, OpeRaadhuis, which was a conflation of Opera (music theatre) and Raadhuis (city hall), which Beerenhout argued possessed a more friendly tone (Gemeente Amsterdam, 1986). However, this name wasn’t found in other documents or newspapers.

The integration of both plans required combining both programs, wherein the surfaces of the two buildings needed to fit into one building. In his proposal, Holzbauer (1979) explained how both programs could coexist in one building. He described copying the program of requirements of the music theatre directly into the design. Thereby, he even expanded the office area of the city hall from 12,000 square metres to 14,000 square metres, while proposing earlier in his letter on February 19 to Mayor Polak to shrink the program of the city hall from 430,000 square metres to 300,000 square metres. This initial communication also underlined the desire to only include the big office without representative rooms and council hall towers (De Liagre Böhl, 2016). In contrast, the plans of 1979 still included the council hall, located differently yet still present (Holzbauer, 1979). In his letter dated March 26, 1979, Holzbauer proposed sharing spaces that could be used for the city hall and the music theatre, such as hallways, foyers, a canteen, car parking, and service rooms (De Liagre Böhl, 2016).

The floor plans from 1979, as shown in Figures 15, 16 and 17, illustrated the recognisable identity of the city hall and music theatre, with the city hall placed mainly in the L-shaped block, similar to the original city hall. The music theatre occupied the space previously designated for the civil registry office, the department of military affairs and the courtroom in the design of the city hall, with the courtroom relocated in the L-shaped office block. Notably, the roof terrace was sacrificed by this combination of both programs (Holzbauer, 1979). The ground surface of this design was 167 by 132 metres, while the city hall had a surface of 163 by 92/106 metres. Thereby, the quay width at both canals became smaller. The width of the quay at Amstel was 15 metres and at Zwanenburgwal 25 metres, compared to a width of 32 metres at Amstel and 30 metres at Zwanenburgwal for the city hall design (Gemeente Amsterdam, 1986).

The design features three entrances, similar to Holzbauer’s approach to the city hall, whereas the music theatre of Bijvoet & Holt was characterised by a single entrance, potentially due to the different urban contexts. The entrances facilitated access to the public ground floor, while the central hall served as a corridor connecting the entrances and the city hall and music theatre. The upper floors were reachable via four circulation cores, a design feature that Holzbauer similarly incorporated in the city hall, although his design of the city hall proposed five circulation cores (Holzbauer, 1979).

The elevations, as shown in Figures 19 and 20, revealed the concept of varied window shapes, which are differentiated according to the functional spaces they illuminate. The offices within the city hall are characterised by smaller square windows than the windows of the offices of theatre offices. The ground floor featured the biggest windows, designated for public functions, accentuated by portal detailing



(Holzbauer, 1979). This architectural principle paralleled the observation of the elevation of Bijvoet & Holt's music theatre.

## Collaboration

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Following Holzbauer's proposal for the Stopera in 1979, the municipality also involved the architects responsible for the music theatre: Bijvoet & Holt. Unfortunately, the two architects were ageing; Bijvoet sadly passed away during the project of the Stopera, and Holt opted to withdraw. He put his son-in-law, Dam, in the position (Kunstredactie NRC Handelsblad, 1986).

The project saw the involvement of three different parties collaborating: the municipality, which served as the client, the construction firm, a consortium made up of various contractors including HBM, Ballast Nedam, and Hillen & Roose, and the architectural duo, Holzbauer & Dam (Ter Horst & Kool, 1987a). Stamuco was tasked with time management, which relied on the architects' work pace. This collaboration was done by a traditional model, which means that the architects led and managed the enormous project (Ter Horst & Kool, 1987b).

Holzbauer and Dam weren't best friends (Kunstredactie NRC Handelsblad, 1986). In an interview in the newspaper *Vrij Nederland*, Holzbauer expressed dissatisfaction with their collaboration, contrasting sharply with Dam's statement of an excellent partnership (Kunstredactie NRC Handelsblad, 1986). In the interview, Dam answered a question about the presence of Holzbauer, where Dam stated that Holzbauer comes now and then, while Holzbauer negates the statement and claims that he was more regularly in the office (Kunstredactie NRC Handelsblad, 1986). These contrasting exchanges underline that the collaboration was far from smooth.

Following his selection for the task, Dam got a lot of reproaches for quickly marrying Holt's daughter to get the assignment, he stated in an interview in *Trouw*. However, he clarified in an interview with *Trouw* that he was already married to her and that he was chosen from a list of architects (De Lange, 2011). During a visit to the Stopera with journalist De Lange, Dam only discussed the music theatre, suggesting that the architects worked separately on both. When he talked to staff in the music theatre, Dam said: "I made this beautiful theatre 25 years ago" (De Lange, 2011, para. 1). He also claimed it to be a "Super Theatre" (De Lange, 2011, para. 2). This could emphasise that he independently worked on the music theatre.

The difficult collaboration caused delays, mainly during the construction. The drawings took longer than anticipated or required corrections. At the tender stage, only between five and ten per cent of the drawings were finished, a significant contrast to the normal percentage between forty and fifty at this stage. This incomplete set of drawings makes the job of the constructor difficult (Ter Hors & Kool, 1987b). So, this rough collaboration impacted not only the relationship but also influenced the project's workflow and timeline.

## Program of Requirements

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On June 11, 1980, the municipality created a new program of requirements. This document provides a brief description of the city hall, music theatre, and general functions. Additionally, it outlines the

required spaces for each function along with the corresponding square meter specifications (Gemeente Amsterdam, 1980).

The city hall program was categorised into three primary functions: the seat of municipal administration, the secretary's office, and an interaction space between the municipality and citizens. Each department within the municipality had its office divided into smaller spaces. Similarly, the music theatre was divided into main functions, namely: play, workshops/ateliers, public spaces, production preparation, and changing rooms/lounges for artists. By merging the two buildings, the municipality aimed to maximise the integration of general spaces. The program of requirements emphasised that further research should be conducted on maximising the integration of these spaces (Gemeente Amsterdam, 1980).

Throughout the process, the program of requirements underwent several changes due to the different visions among the architects, particularly concerning the central part of the building. These differences had financial implications (Ter Horst & Kool, 1987b). These changes were combined and mentioned in the City Archive of the Municipality of Amsterdam (Gemeente Amsterdam, 1986).

## Stopera

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In 1980, Holzbauer & Dam presented the final design of the Stopera (De Liagre Böhl, 2016). Following this presentation, they further refined the architectural drawings. The most recent iteration of the architectural drawings archived in the City Archive of Amsterdam dates from 1981 (Holzbauer & Dam, 1981a; Holzbauer & Dam, 1981b). These drawings were only accessible by visiting the archive and couldn't be reproduced by scanning. The drawings didn't include any statements written by the architects.

As per Holzbauer's proposal and the city hall, the Stopera intended to align the orthogonal grid of Waterlooplein and Zwanenburgwal, as shown in Figure 21. However, an alteration occurred at the Amstel-facing side and the street; the theatre component was rotated, in contrast to the orthogonal shape of the proposal and the city hall. The rotation introduced a curvature on the Amstel-facing side, a significant difference from Holzbauer's original vision (Holzbauer & Dam, 1981a). The Office of the Adviser for the Council of State reviewed the implementation in the urban context, and he concluded that the zoning plan could never be granted based on its urban contextual fit (Van Rooy, 1982). The adviser noted four points:

- The one-sided use conflicted with the diverse culture of the city centre;
- The substantial massing of the buildings contrasted with the small-scale urban context;
- It dominantly influenced its surroundings;
- The layout of the plan area was inadequate for the location of the market (Van Rooy, 1982).

The program of this design was more defined than in Holzbauer's proposal. The program of requirements written in 1980 was likely a contributing factor to increasing the architects' specificity. However, the layout of the offices within the L-shaped block remained open for alternative design iterations, as mentioned in the floor plans (Holzbauer & Dam, 1981a). Moreover, the 1980 program of requirements was incomplete, with several criteria not written down yet.

The layout of the floor plans has been adjusted, as shown in Figure 22. Notably, the orientation of the theatre experienced a change by rotating nearly 90 degrees. The theatre's curved shape served as a

public space, like the foyer and entrance into the theatre hall, while technical and support facilities occupied spaces behind and around the stage. Hereby, the public and private were split effectively, similar to Bijvoet & Holt's music theatre. The central hall was in this design, the same as Holzbauer's proposal, still a transitional space between the offices and the music theatre. Only one more entrance has been added than in Holzbauer's proposal. Furthermore, a connection from the central hall to the wardrobe has been introduced, wherein Holzbauer's proposal for the wardrobe was unspecified in his architectural drawings (Holzbauer & Dam, 1981a).

The circulation of this design was similar to Holzbauer's city hall and earlier proposal. Vertical circulation was facilitated through five cores, one more than Holzbauer's proposal and consistent with the city hall. It could be that Holzbauer intended to optimise space by eliminating one core. However, it could be that the fifth core was needed to make the vertical circulation work.

Aesthetically, the exterior of the Stopera shared similarities with both Bijvoet & Holt's music theatre and Holzbauer's proposal, in particular the square-shaped windows. In both Holzbauer's proposal and Bijvoet & Holt's music theatre, the largest windows were situated on the ground floor, connecting with its public function (Holzbauer & Dam, 1981b). In an interview, Dam claimed his authorship of the facades on the Amstel. However, Holzbauer invalidates Dam's statement in another interview (Kunstredactie NRC Handelsblad, 1986). Comparing Holzbauer & Dam's Stopera with Holzbauer's proposal confirms the argument of Holzbauer regarding the language of the windows.

The elevation drawings feature three different materials: glass and two solid materials, the latter unspecified in the drawings, as shown in Figures 25 to 27 (Holzbauer & Dam, 1981a). Current observation reveals the use of white tiles and brick. While the drawings indicate the material of the white tiles through hatching, the brick material remains untitled in the drawings, suggesting uncertainty of material selection. Notably, bricks were also used in both the music theatre and the city hall (Bijvoet & Holt, 1978; Holzbauer, 1970).

## Budget

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The individual projects of the city hall and music theatre were mainly unrealised due to financial difficulties. Initially, the national government promised the municipality 220 million guilders to facilitate the construction of the city hall. However, the energy costs of this design were higher than the norm of 30 per cent of the costs of government buildings. As a result, the municipality didn't receive the funding from the national government (De Liagre Böhl, 2016).

In 1979, Mayor Wim Polak, Jan Schaefer (alderman of urban renewal), and Holzbauer visited the cabinet in The Hague. They presented the master plan for the Stopera (Holzbauer's proposal). The energy costs of this iteration fulfilled the norms of government buildings, thereby enabling the municipality to receive the funding of 220 million guilders for the city hall component. It should be noted that the government didn't fund the music theatre component, because they previously didn't promise that funding (De Liagre Böhl, 2016).

The needed investment required 350 million guilders for the master plan of the Stopera (De Liagre Böhl, 2016), while the actual construction costs were 306 million guilders (De Jong, 1988). In contrast, the cost of the separate plans of the music theatre and the city hall would have totalled 434 million guilders. Given that the Stopera met the energy norm, the municipality received funding of 220 million

guilders for the city hall part, and this means that the Stopera would cost 130 million guilders (De Liagre Böhl, 2016).

However, during the construction phase, unforeseen costs emerged. In September 1985, Stamuco claimed 700,000 guilders for the needed extra construction work attributed to delays of the architects (De Liagre Böhl, 2016). By April 1986, the College of Mayor and Aldermen asked the city council for 16,7 million guilders of extra credit (De Jong, 1988; De Liagre Böhl, 2016). In September 1986, they even requested another 80.3 million guilders (De Liagre Böhl, 2016), as noted by de Jong (1988), to 96 million guilders. Additionally, the municipality needed to pay Hotel Okura at the old RAI terrain 1.7 million guilders as an insurance claim for not building the music theatre on its original site (De Liagre Böhl, 2016). While de Jong (1988) opted not to account for the first money claim of Stamuco and the insurance of Hotel Okura, he did acknowledge an additional 25 million guilders claimed by the architects as the project was nearly finished.

According to De Liagre Böhl (2016), the total unforeseen costs were 93.7 million guilders. However, according to de Jong (1988), the total was 137.7 million guilders. If both findings were combined and assumed that the second credit claim was 96 million guilders, the total unexpected costs would be 140.1 million guilders. The municipality expected lower unforeseen costs because it was a combination of two already-developed projects. Normally, the expectation of the unanticipated costs is 10 per cent of the total costs, but they adjusted it down to 5 per cent (13.75 million guilders) (Ter Horst & Kool, 1987a). This resulted in a shortfall of nearly 130 million guilders. When considering the total costs of the Stopera, which reached 270.1 million guilders, it remained more cost-effective than the combined expense of the two individual projects, when the municipality received the funding for the city hall of 220 million guilders. These findings are noteworthy given that the two individual designs were not realised due to financial difficulties.

## Conclusion

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The central research question of this thesis is:

*“How did the design elements of Bijvoet & Holt’s music theatre (1978), Holzbauer’s city hall (1978), Holzbauer’s Stopera (1979), the collaboration between the stakeholders, and the financial constraints influence the final design of Holzbauer & Dam’s Stopera (1981)?”.*

The analysis of the floor plans of Holzbauer’s proposal for the Stopera and Holzbauer’s city hall revealed that the layouts had a resemblance. Notably, the L-shaped office block is a consistent feature in all three designs. The positioning of the theatre hall within the proposal aligns with its placement in the Stopera, only rotated 90 degrees. Furthermore, the layout of the theatre shares similarities with Bijvoet & Holt’s music theatre and Holzbauer’s proposal, wherein the technical and supporting facilities are located around and behind the stage. The central hall functions as a connector between the music theatre and the city hall in both Holzbauer’s proposal and Holzbauer & Dam’s Stopera.

Circulation within the building is facilitated through vertical circulation cores, which were introduced in Holzbauer’s city hall drawings. In the design of the city hall, he drew five cores and in the proposal of the Stopera, four. Ultimately, the Stopera had five cores, like the city hall.

The facades of the buildings also had notable similarities. The window language is consistent across Bijvoet & Holt’s music theatre and Holzbauer’s proposal, where three varied window shapes are used.

Moreover, in all four projects, an open public plinth was created. The material usage is aligned, as both Bijvoet & Holt's music theatre and the city hall used bricks as the primary exterior material, although the material of the proposal remained unspecified.

In terms of spatial dimensions, the city hall had an area of 430,000 square meters. Holzbauer proposed a reduction of this area to 300,000 square meters. The program-needed surface of the music theatre is indicated to be 15,500 square meters, based on the statement of Holzbauer that he copied the program of the music theatre. This results in a total area of 315,000 square meters. This calculation is indicative, as some programs were combined, and the surface of the music theatre was only based on the program-needed area.

The collaborative process among the involved parties was full of difficulties, which likely influenced design decisions. Hasty choices were often made for political reasons, while the architects had contrasting visions. Thereby, Holzbauer was already working on the project at this location, Dam just stepped in later.

The Stopera has cost in total of 270.1 million guilders, supported by national funding of 220 million guilders. In contrast, the music theatre and city hall would have cost 434 million guilders when built independently. Thus, this makes the Stopera 163.9 million guilders cheaper than separate projects, primarily due to the national funding received for the city hall component. However, in the absence of funding, the Stopera had overall higher costs, driven by the unforeseen costs of 140.1 million guilders that were caused by the troubled cooperation of the architects, Stamuco, and the municipality.

## Discussion

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During the research, several factors occurred that could potentially influence the results of the thesis. For the analysis, only the most recent version of the drawings was used. However, there remains a possibility that certain design elements from earlier iterations were integrated into the final designs of the Stopera. Examining these earlier iterations could provide valuable insights into the evolution of the designs.

Three of the four designs were created at the same location, at Waterlooplein, while the music theatre was located in a different spot, at the old RAI-terrain. This difference in location may explain why not many elements of Bijvoet & Holt's music theatre were directly used in the design of the Stopera. One might wonder how the design of the Stopera might have developed if a design for the music theatre at Waterlooplein had been made.

Holzbauer initially proposed the idea of combining the two buildings, and he also made the first proposal. This early involvement likely allowed him to infuse more of his vision and knowledge from the city hall into the final design than the music theatre, as he never made a design for the individual music theatre. The knowledge of Bijvoet & Holt could have been overlooked during the process, given Holzbauer's leading role in the early design stage of the Stopera.

It is important to note that archives have limits. There is a possibility that more recent versions of the drawings were not included in the archive. Furthermore, not all sets of drawings had written statements. These statements were significantly useful in the research, which raises the concern that some important information may have been overlooked.

## Ausblick

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The final design of the Stopera emerged from a complex evolutionary process involving multiple influencing factors. It is an interesting thought how these factors influenced the final result.

The collaboration among the three key stakeholders, the municipality, Stamuco and the architects, was characterised by significant challenges, which made it messy. The architects faced difficulties navigating their communication, resulting in project delays. This working dynamic may be perceived as unprofessional, particularly as it resulted in financial consequences for the municipality. Consequently, this situation adversely affected the citizens of Amsterdam, leading to budget cuts and potentially increased municipal taxes. It is noteworthy to mention that the construction of a city hall, mostly designed for the benefit of the citizens, financially disadvantaged those very citizens. In the future, extra research can be done on the expenses for the Stopera because the sources do not align with each other. Thereby, the influence of Stopera's expenses on the municipality's budget over the last decades could be examined.

The tender stage started while the drawing set remained incomplete, and this was evident even during the building's construction. This raises questions about the reasoning behind this rush. Was it driven by governmental pressure to secure the funding? Or did they just want to finish this endless project?

This accelerated timeline is reflected in the design itself, which presents mainly two different and separate designs combined as one. It provokes speculation as to whether a more integrated result could have been achieved if the project had not been rushed or if it had been designed by one architect. From this thought, it is reasonable that a more integrated design could have been designed for the two buildings.

Furthermore, the implementation of the building within its urban context raises questions of fairness. The Stopera occupies a bigger expanse of the Waterlooplein market than originally intended and fails to contribute to the surrounding community. For instance, Holzbauer's design for the city hall included a publicly accessible rooftop terrace offering views of the Amstel, a feature that has been erased in the final design. This decision raises the question of decision-making surrounding the inclusion of the roof terrace. Was the removal a strategic intervention to conserve square metres, or did the client express a preference against this feature?

Moreover, it would be beneficial to do a thorough examination of the communication among the three stakeholders involved in the design decisions. Were choices primarily driven by financial reasons or influenced by the personal preferences of the stakeholders? Further research into the underlying motivations for these design choices is warranted to get an understanding of the evolution of the design.

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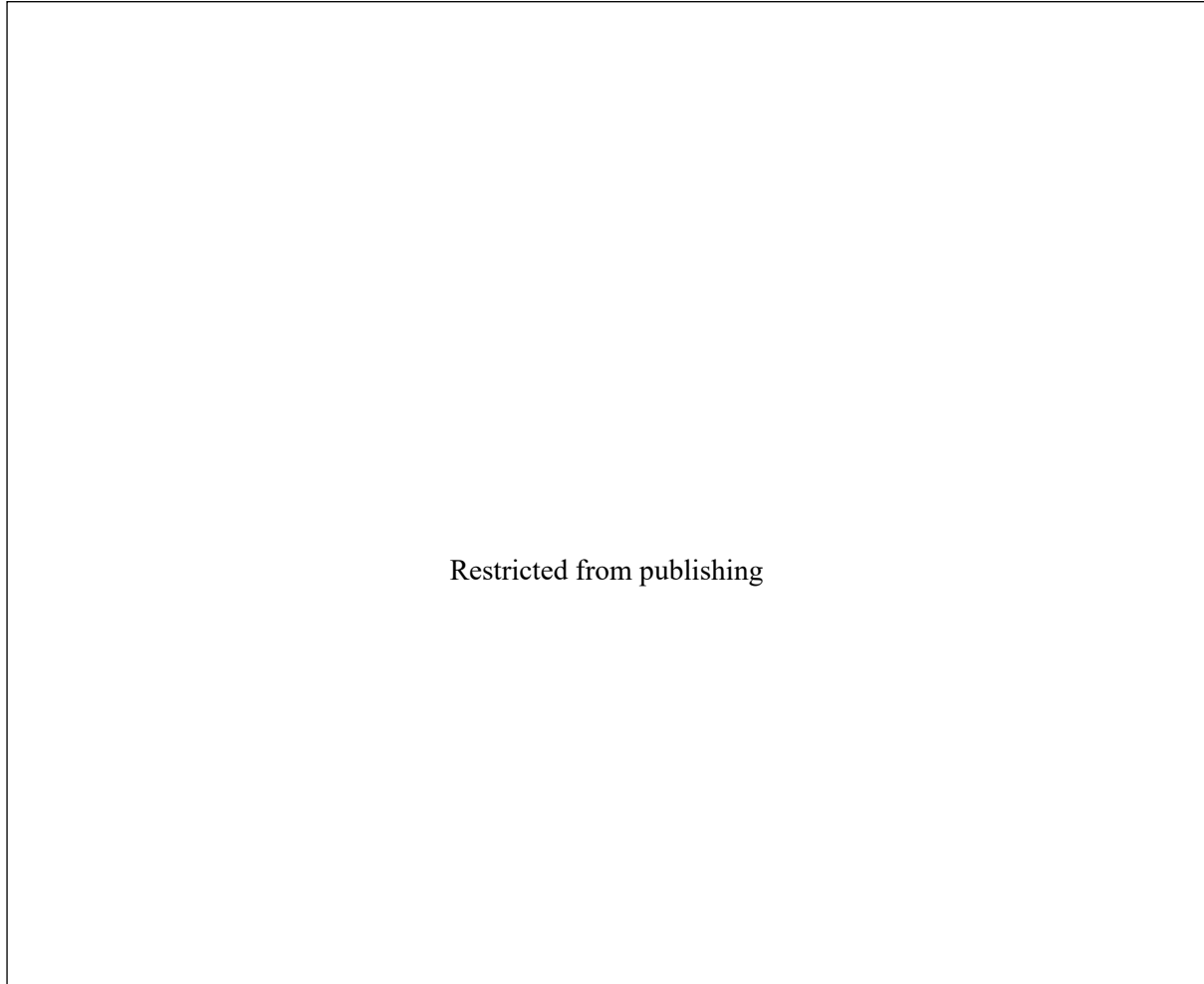
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## Appendix: Image Booklet

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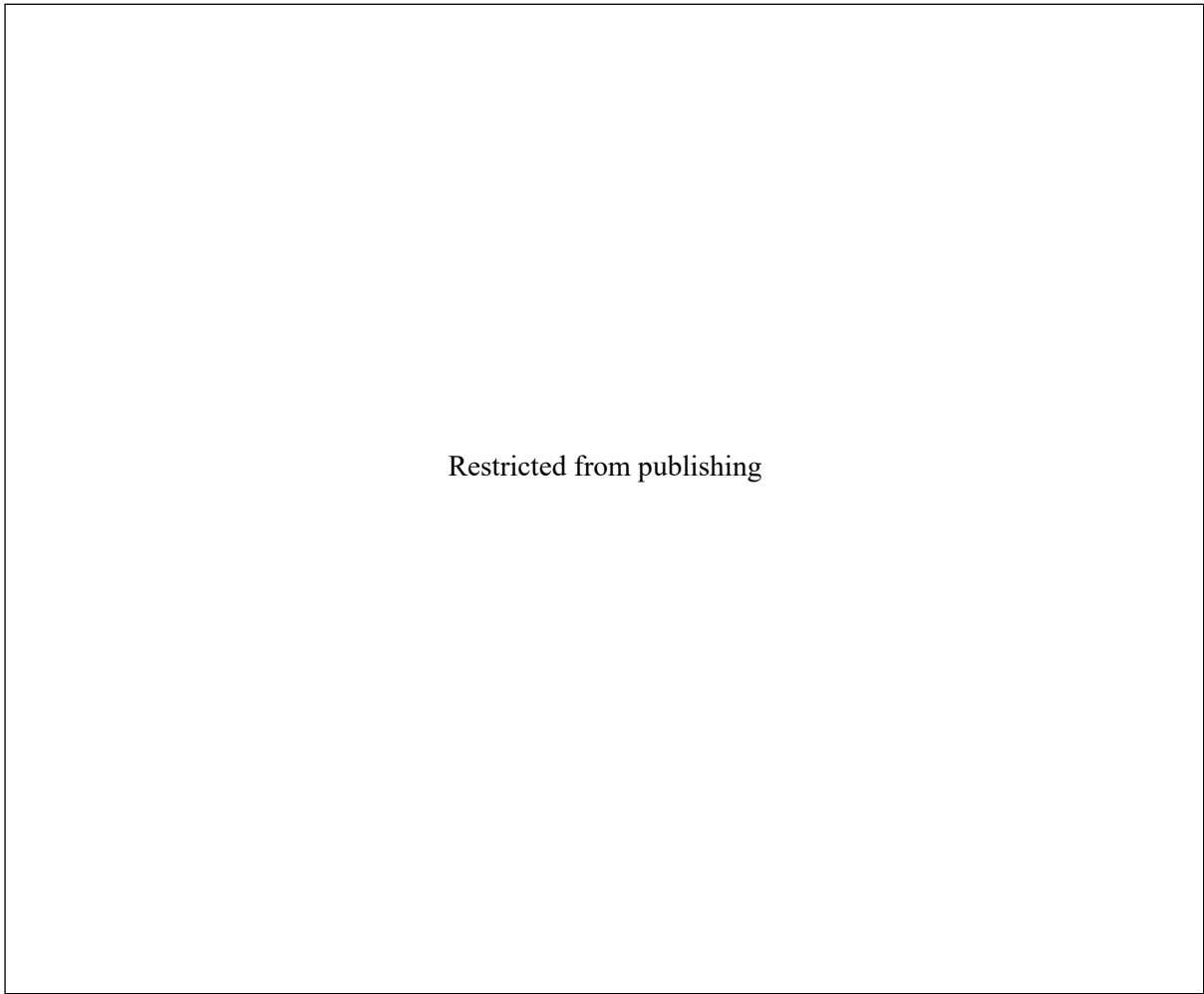
### Music Theatre

**Figure 1:** Site Plan Music Theatre Bijvoet & Holt 1978



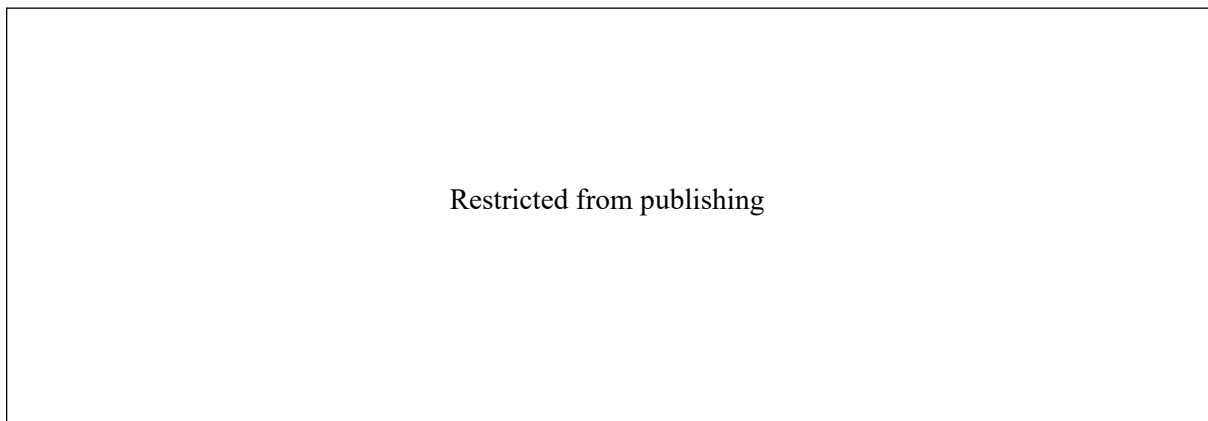
Source: (Bijvoet & Holt, 1978)

**Figure 2:** Plan 3 Music Theatre Bijvoet & Holt 1976



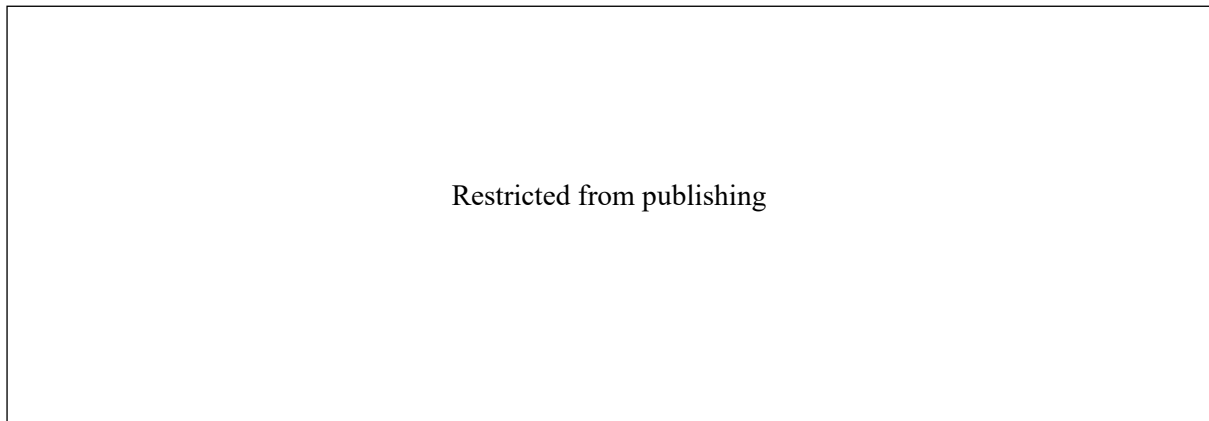
Source: (Bijvoet & Holt, 1976)

**Figure 3:** Section A-A Music Theatre Bijvoet & Holt 1976



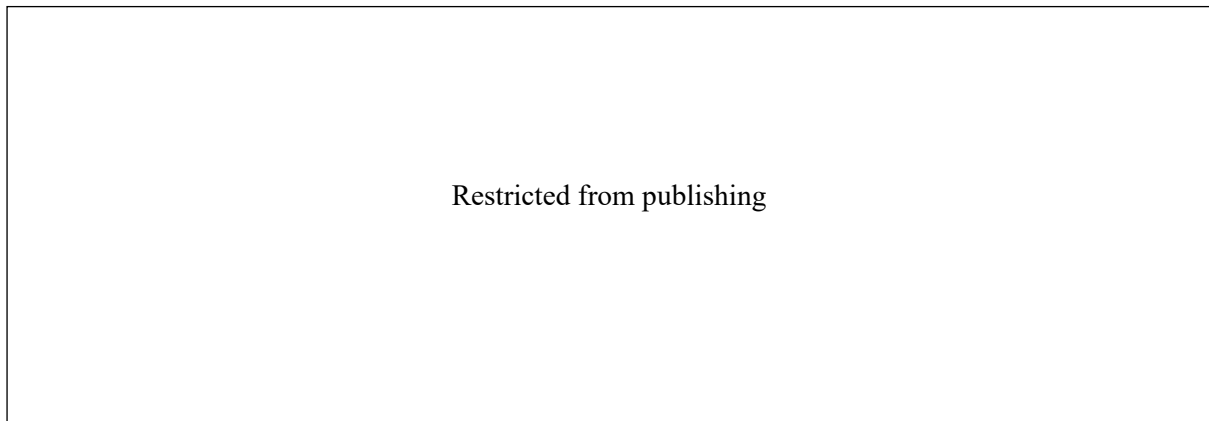
Source: (Bijvoet & Holt, 1976)

**Figure 4:** Section C-C Music Theatre Bijvoet & Holt 1976



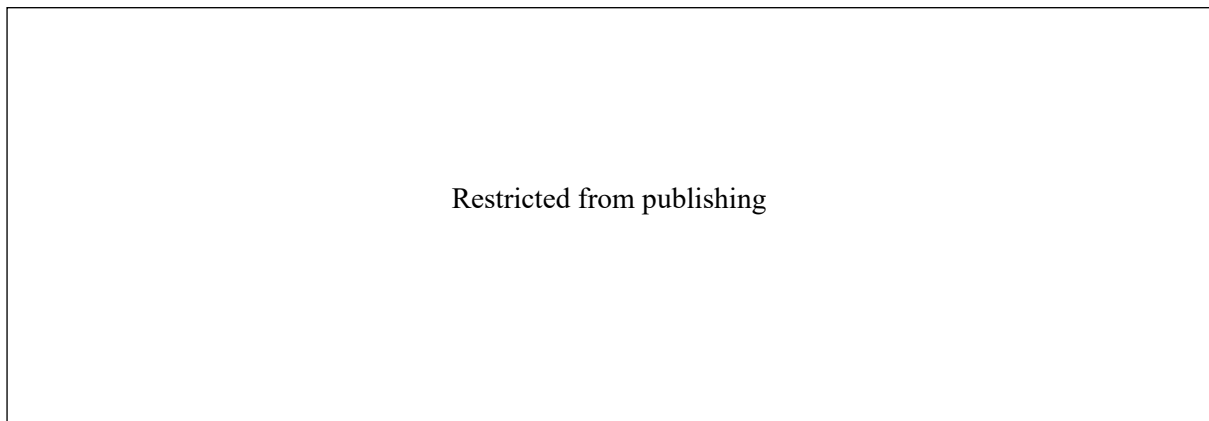
Source: (Bijvoet & Holt, 1976)

**Figure 5:** South elevation by Bijvoet & Holt



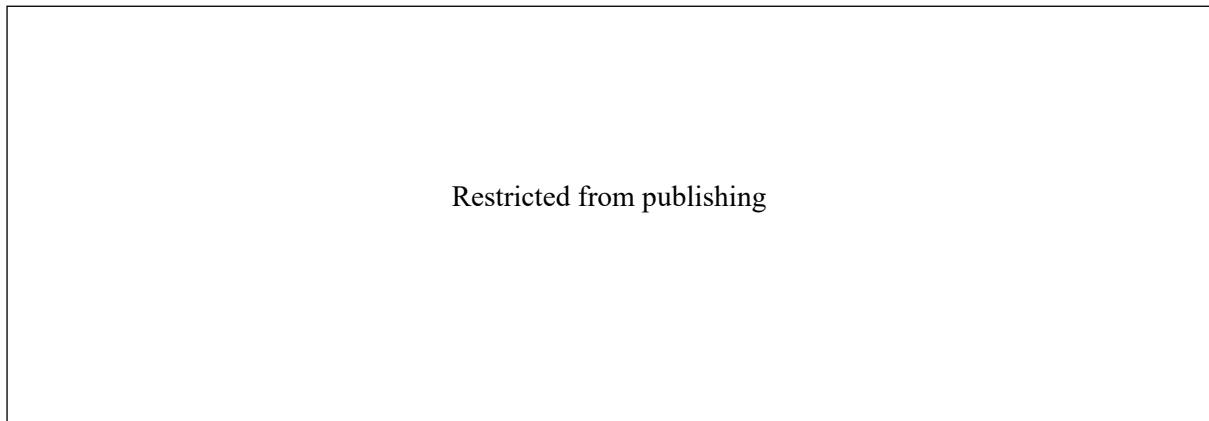
Source: (Bijvoet & Holt, 1976)

**Figure 6:** North elevation by Bijvoet & Holt



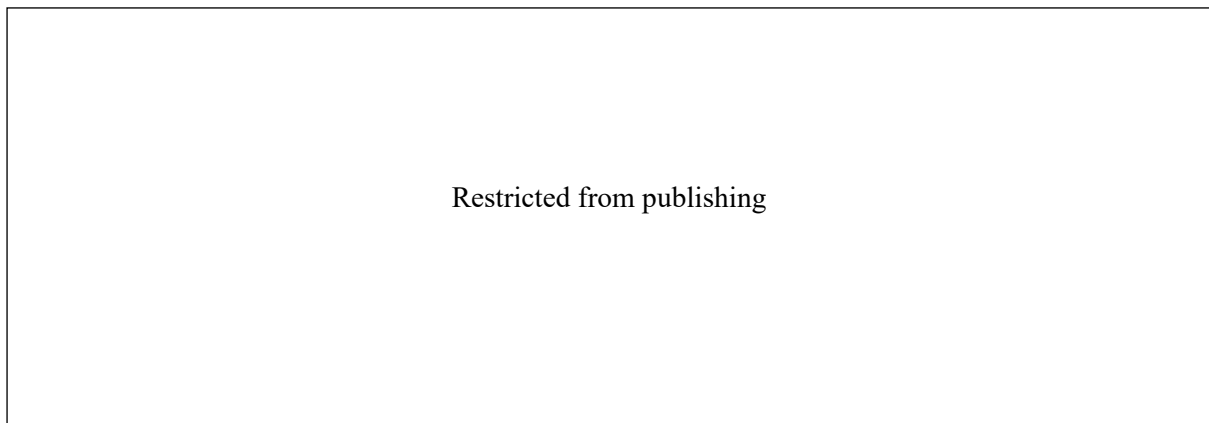
Source: (Bijvoet & Holt, 1976)

**Figure 7:** West elevation by Bijvoet & Holt



Source: (Bijvoet & Holt, 1976)

**Figure 8:** East elevation by Bijvoet & Holt



Source: (Bijvoet & Holt, 1976)

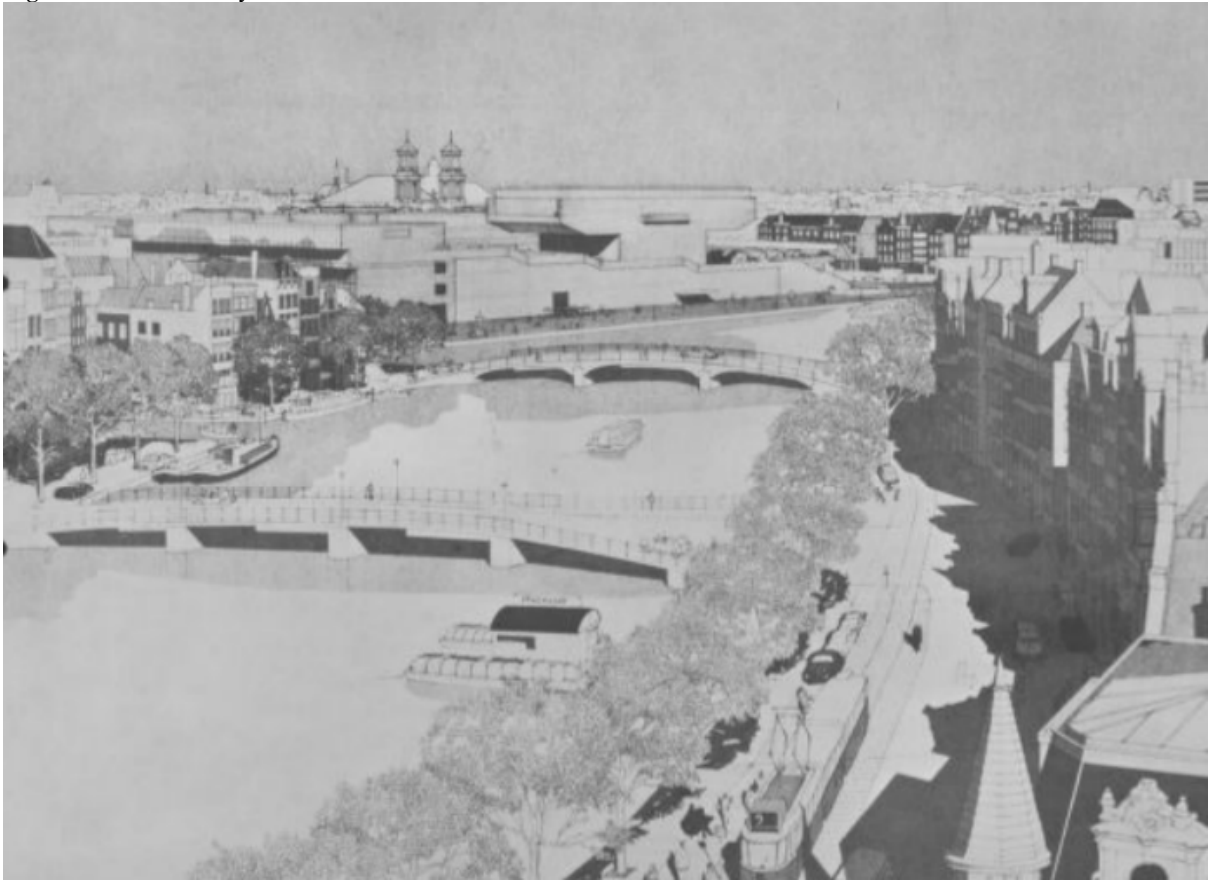
## City Hall

**Figure 9:** Site Plan City Hall of Holzbauer 1978



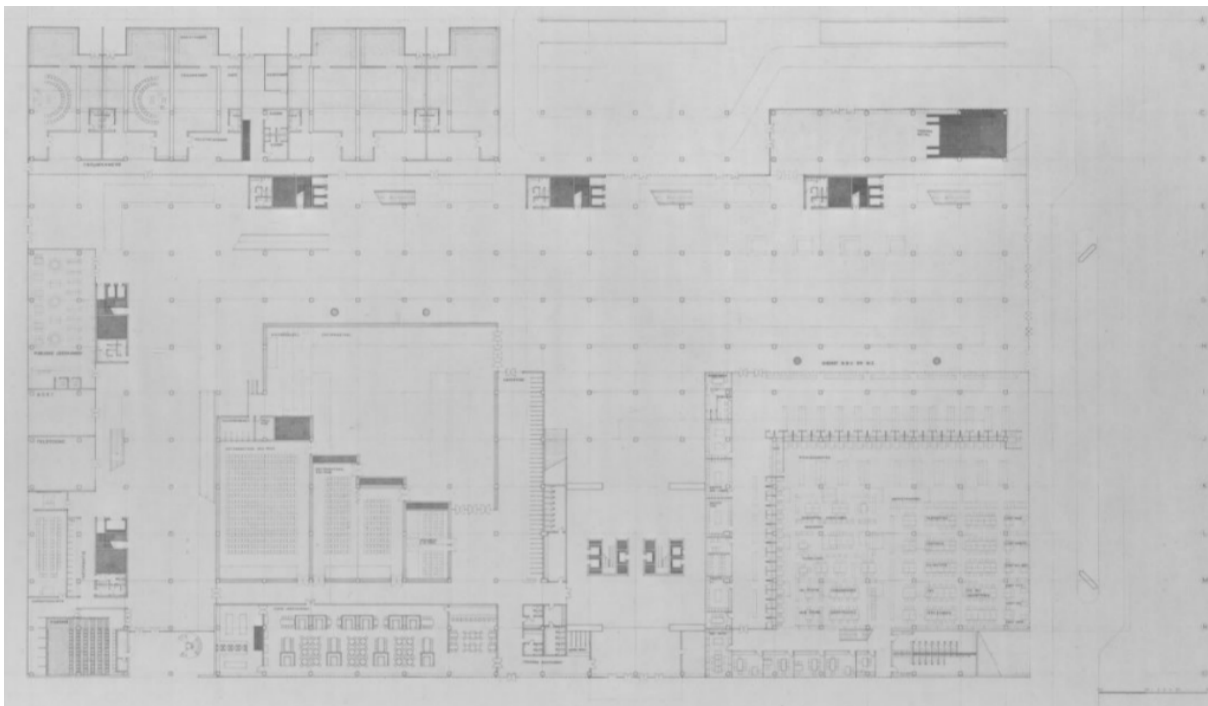
Source: (Holzbauer, 1978)

**Figure 10:** Situation City Hall of Holzbauer 1970



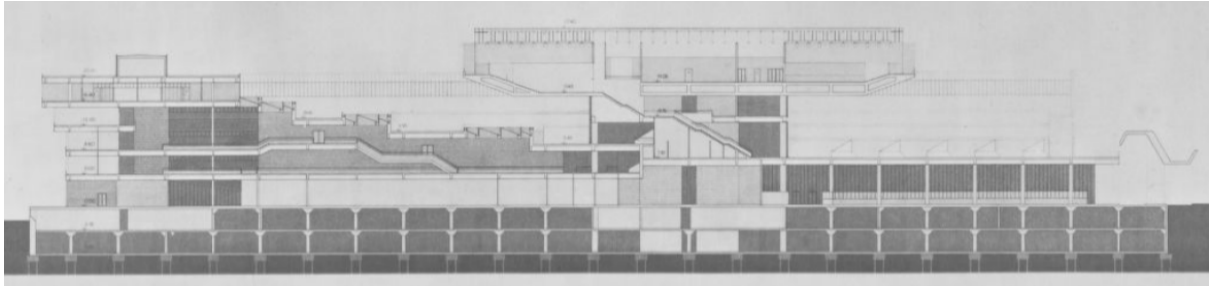
Source: (Holzbauer, 1970)

**Figure 11:** Ground Floor Plan of City Hall of Holzbauer 1970



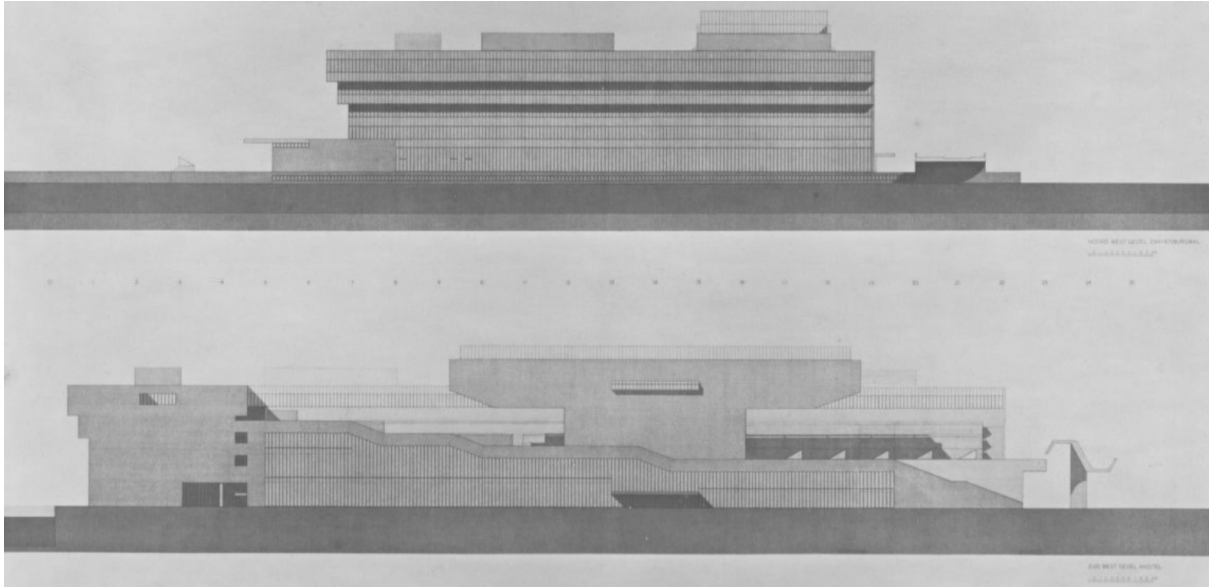
Source: (Holzbauer, 1970)

**Figure 12:** Section of City Hall of Holzbauer 1970



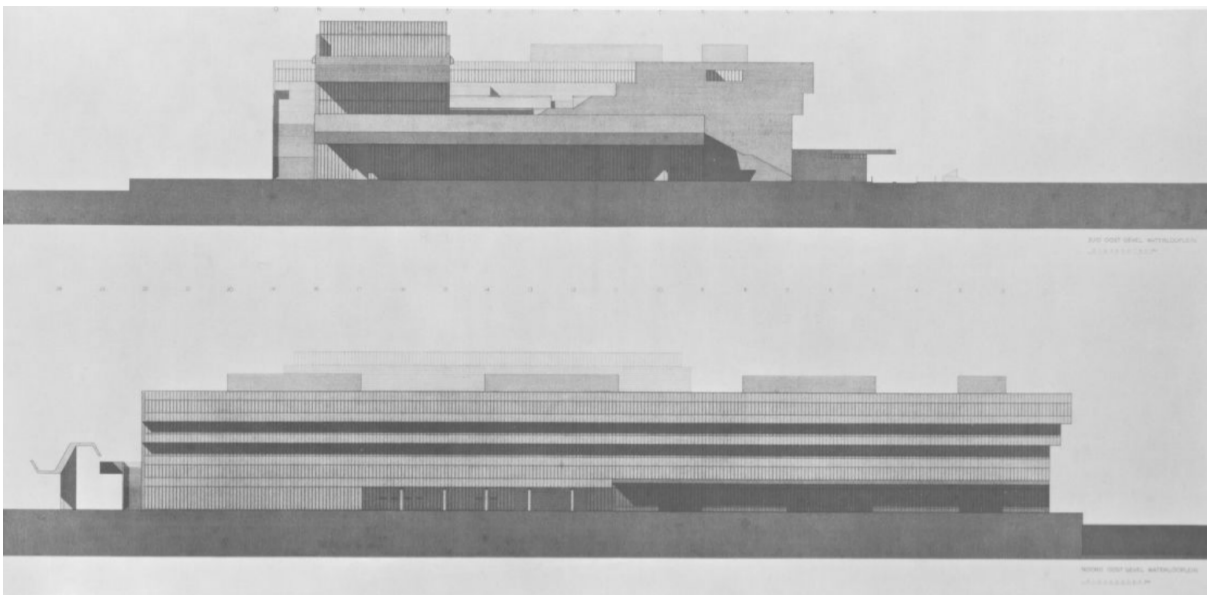
Source: (Holzbauer, 1970)

**Figure 13:** South West Elevation Amstel and North East Elevation Zwanenburgwal City Hall of Holzbauer 1970



Source: (Holzbauer, 1970)

**Figure 14:** South East Elevation Waterlooplein and North West Elevation Waterlooplein City Hall of Holzbauer 1970

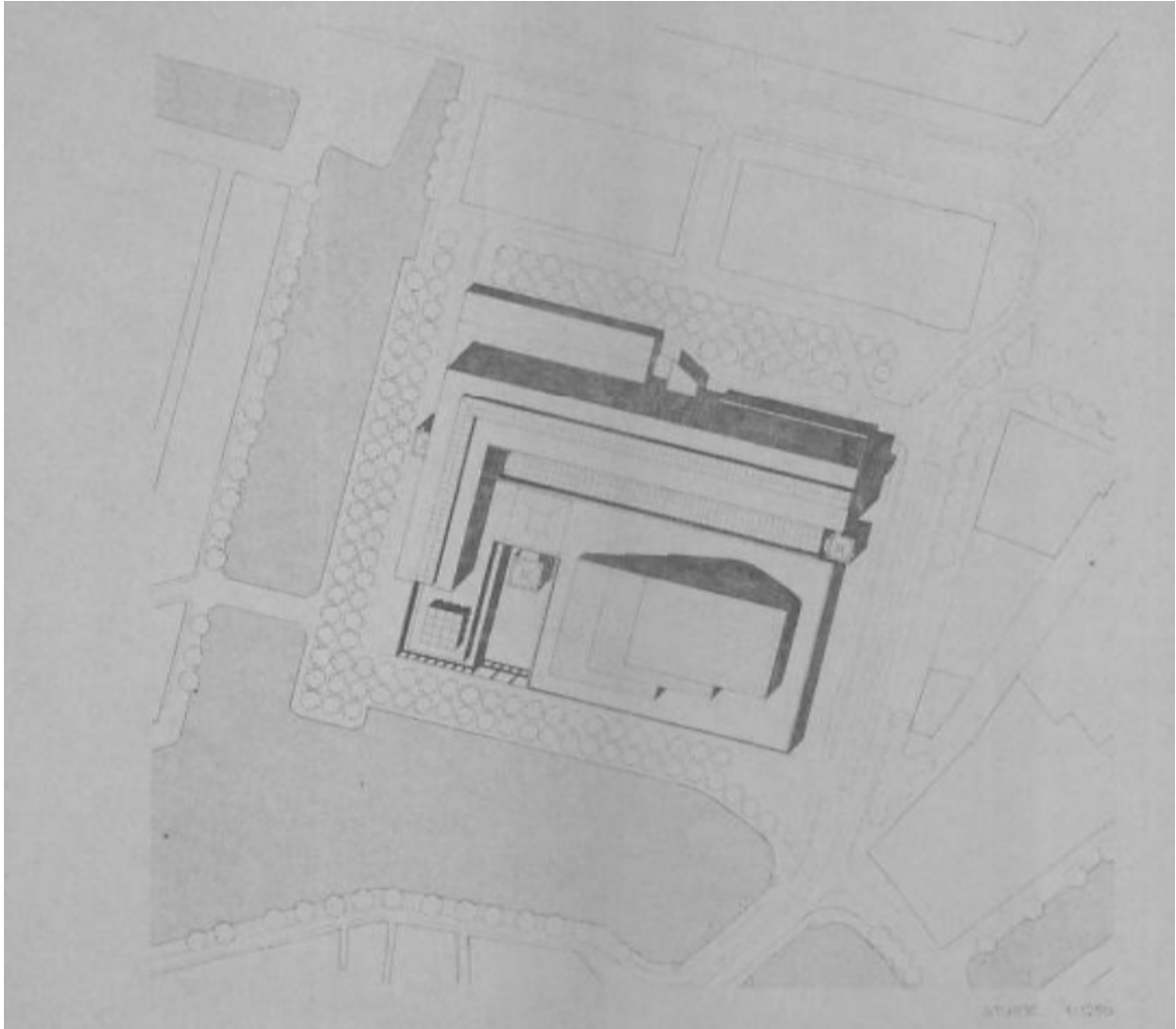


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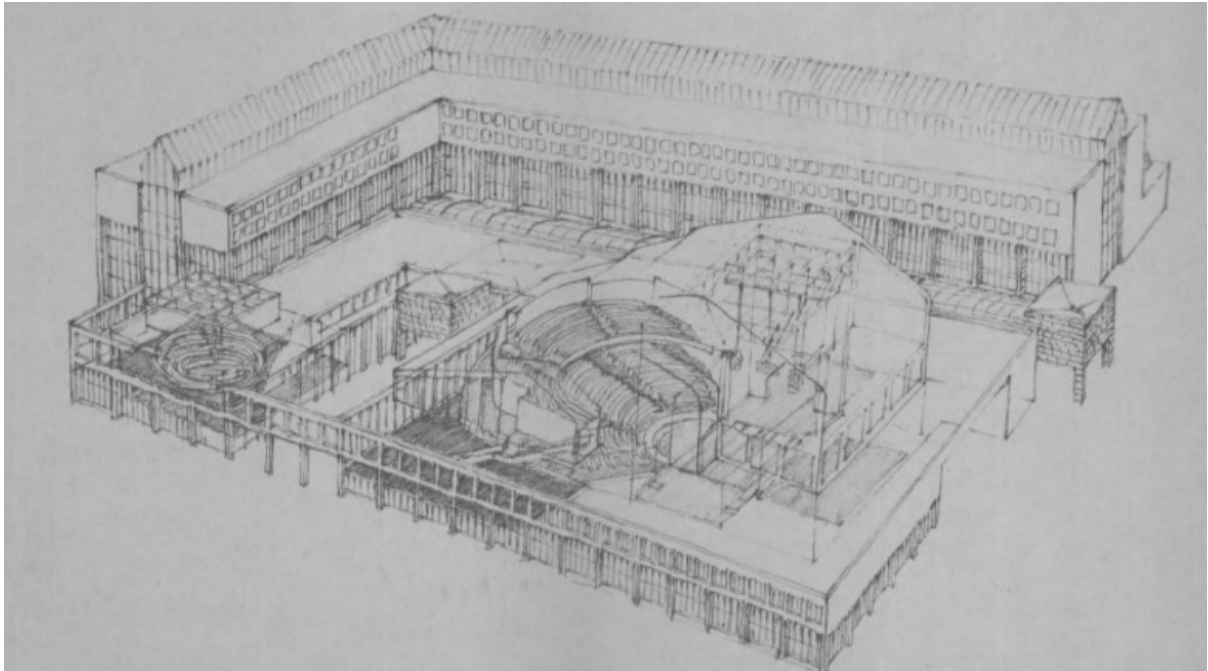
## Proposal of Stopera

**Figure 15:** Site Plan Stopera of Holzbauer 1979



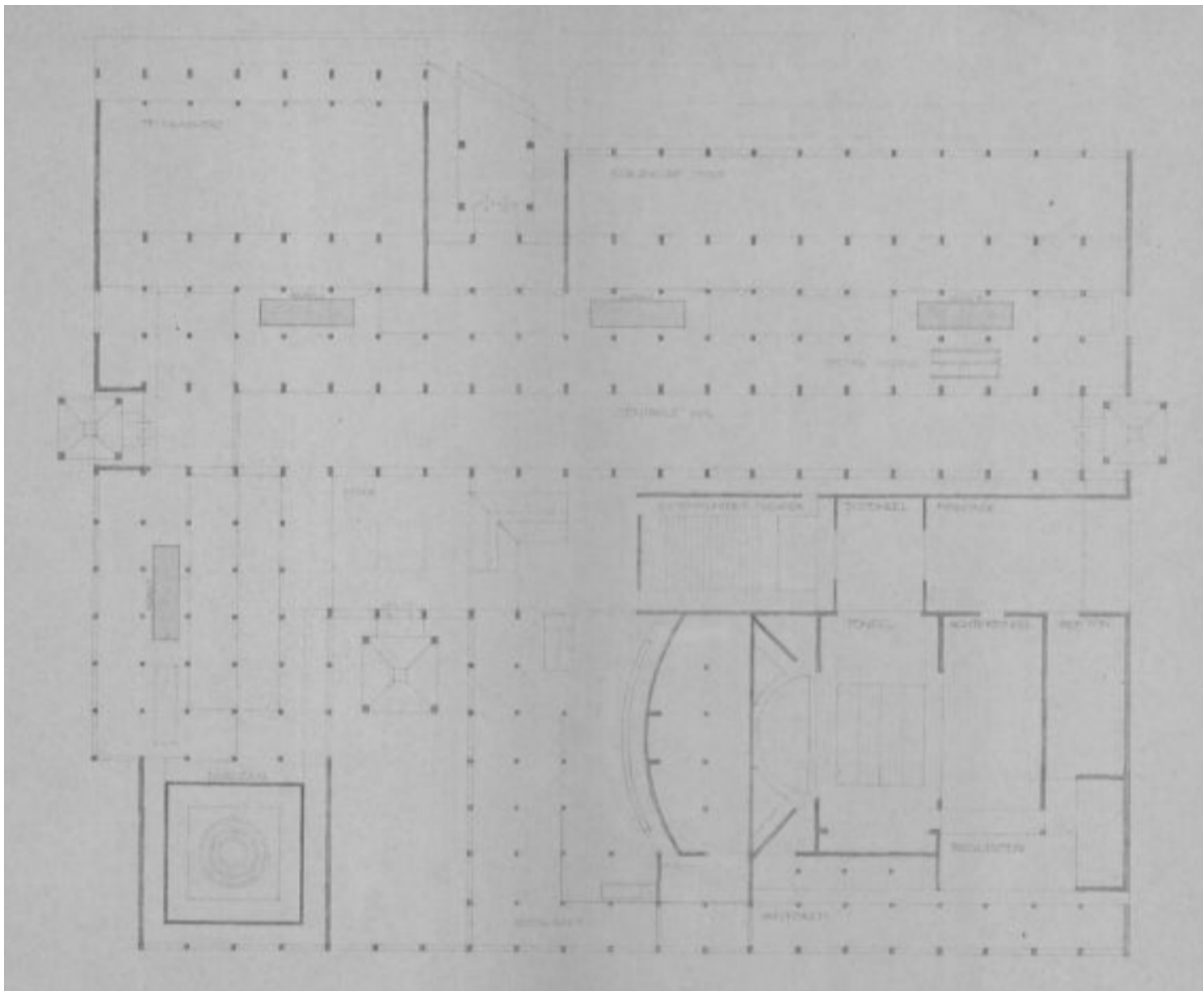
Source: (Holzbauer, 1979)

**Figure 16: The Integration of Music Theatre in Stopera of Holzbauer 1979**



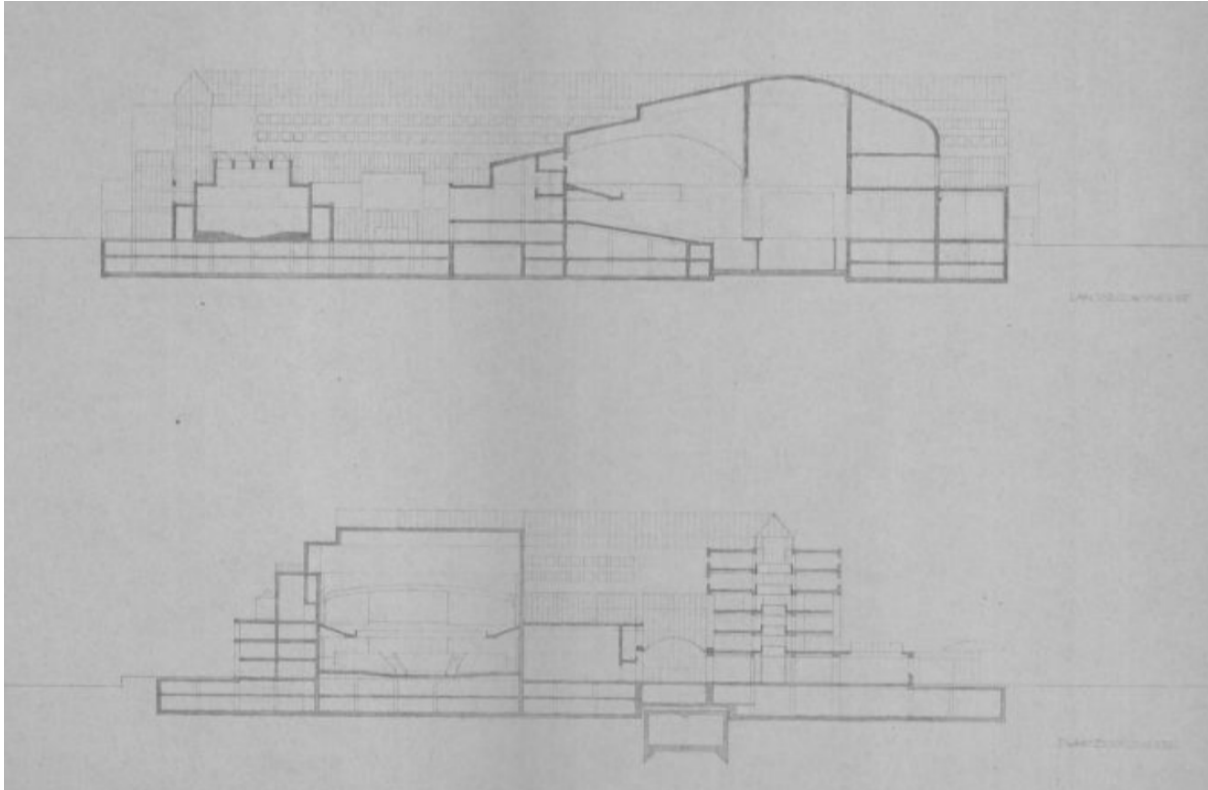
Source: (Holzbauer, 1979)

**Figure 17: Ground Floor Plan Stopera of Holzbauer 1979**



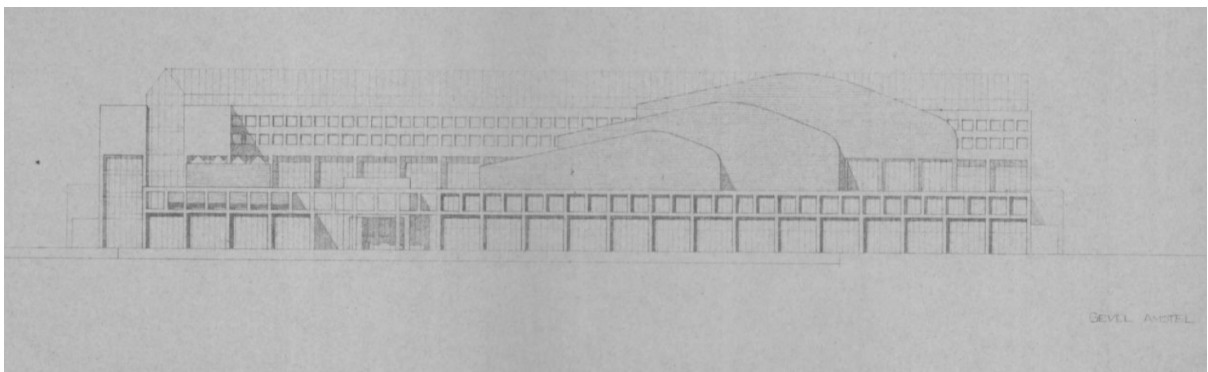
Source: (Holzbauer, 1979)

**Figure 18:** Longitudinal and Cross Section Stopera of Holzbauer 1979



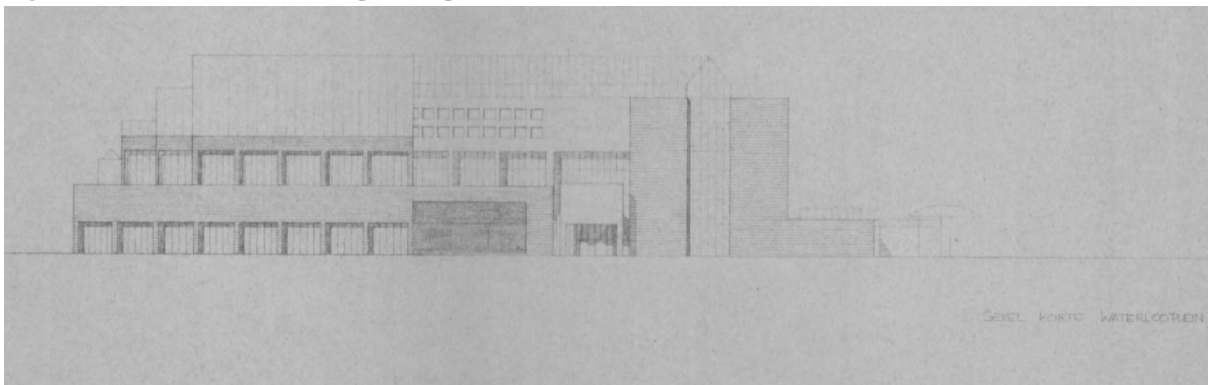
Source: (Holzbauer, 1979)

**Figure 19:** Elevation Amstel Stopera of Holzbauer 1979



Source: (Holzbauer, 1979)

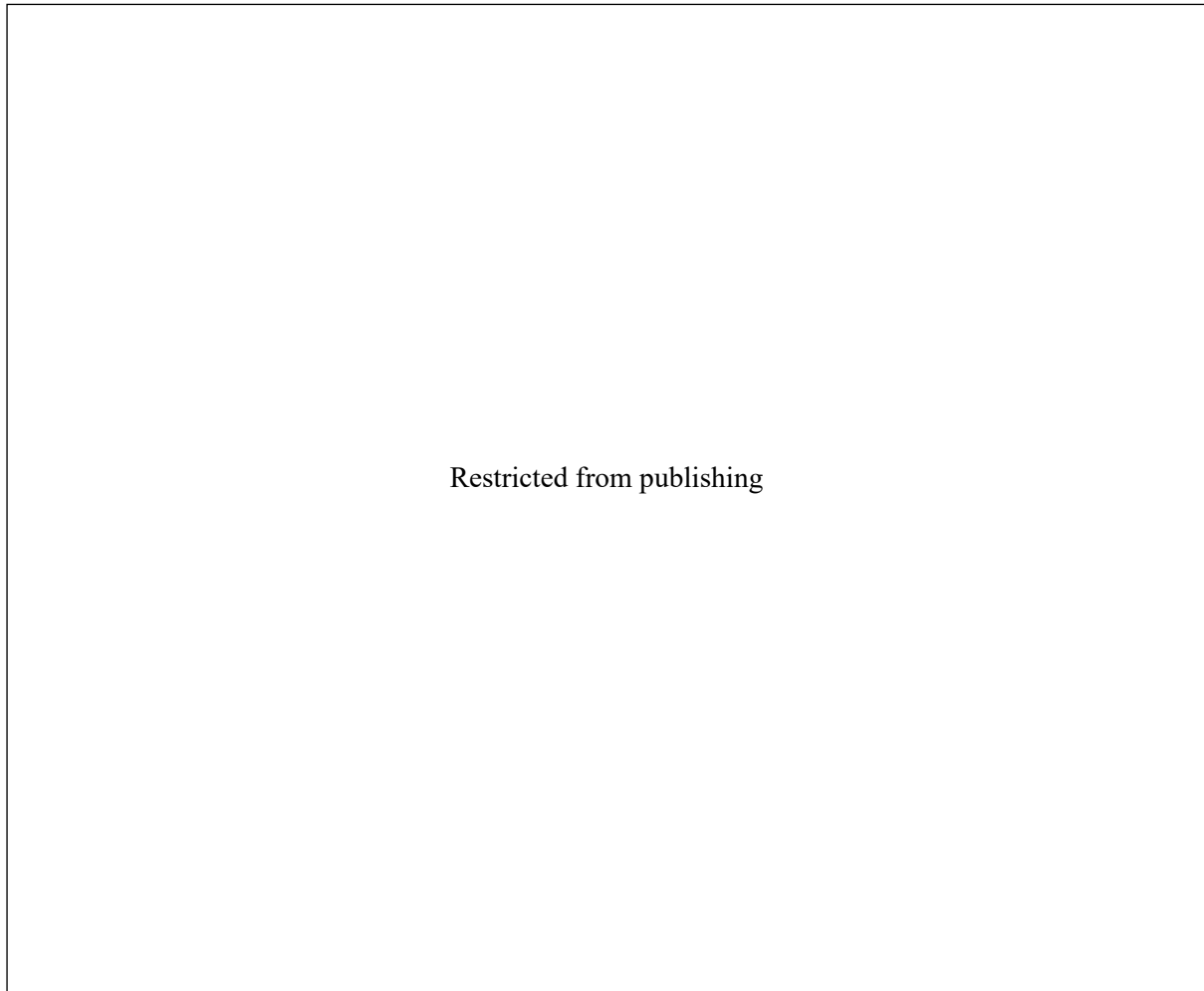
**Figure 20:** Elevation Short Waterlooplein Stopera of Holzbauer 1979



Source: (Holzbauer, 1979)

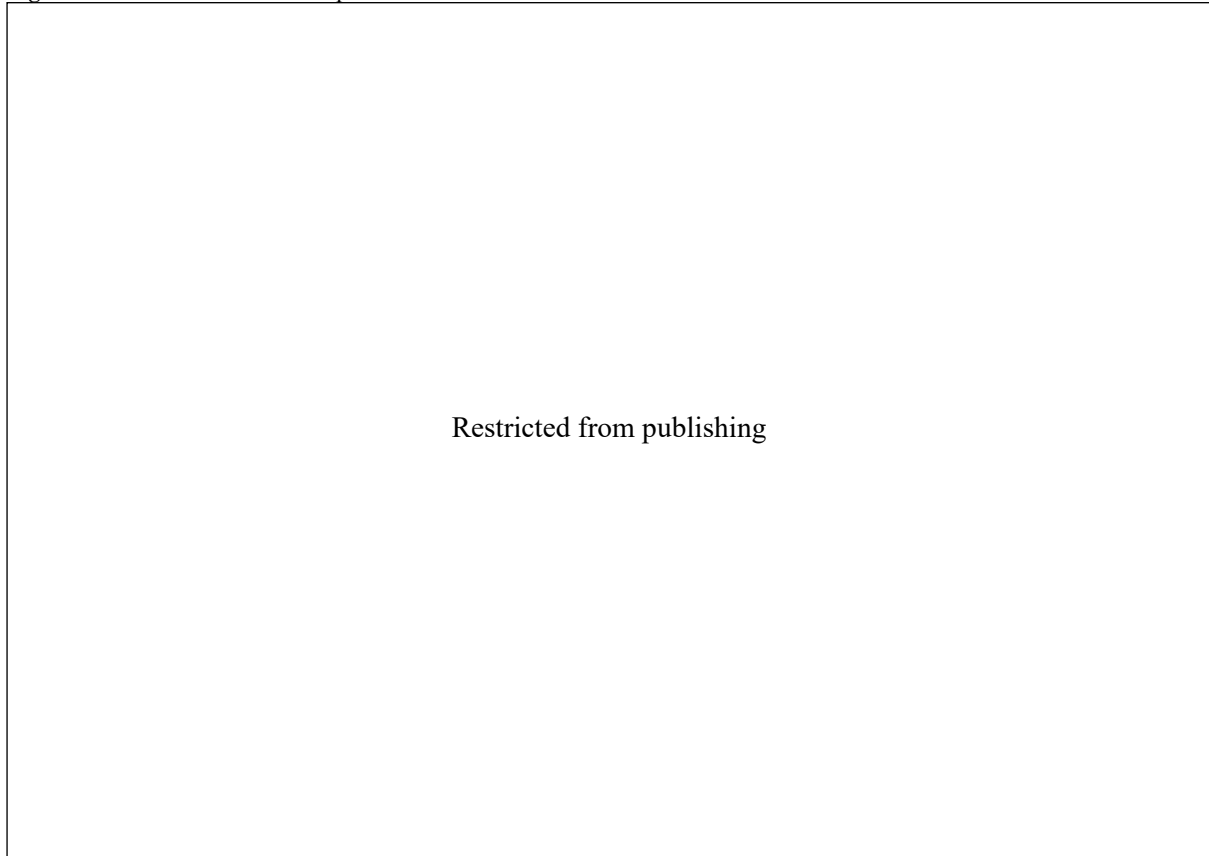
## Stopera

**Figure 21:** Site Plan Stopera of Holzbauer & Dam 1981



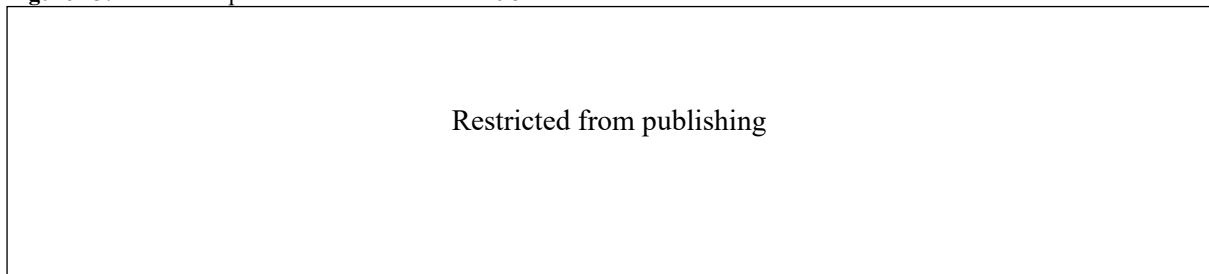
Source: (Holzbauer & Dam, 1981a)

**Figure 22:** Ground Floor Plan Stopera of Holzbauer & Dam 1981



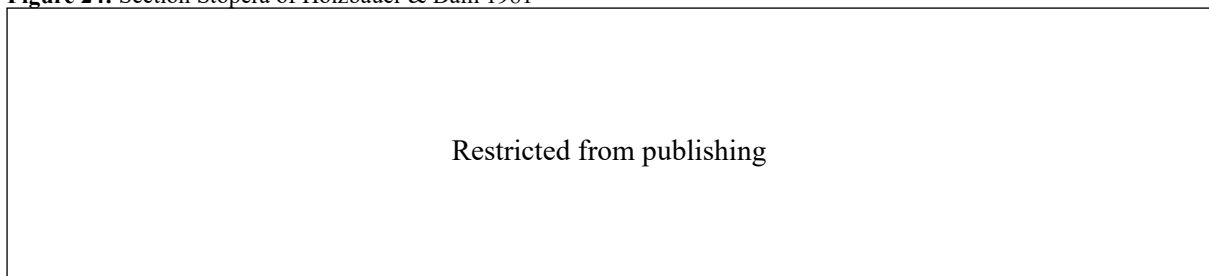
Source: (Holzbauer & Dam, 1981a)

**Figure 23:** Section Stopera of Holzbauer & Dam 1981



Source: (Holzbauer & Dam, 1981a)

**Figure 24:** Section Stopera of Holzbauer & Dam 1981



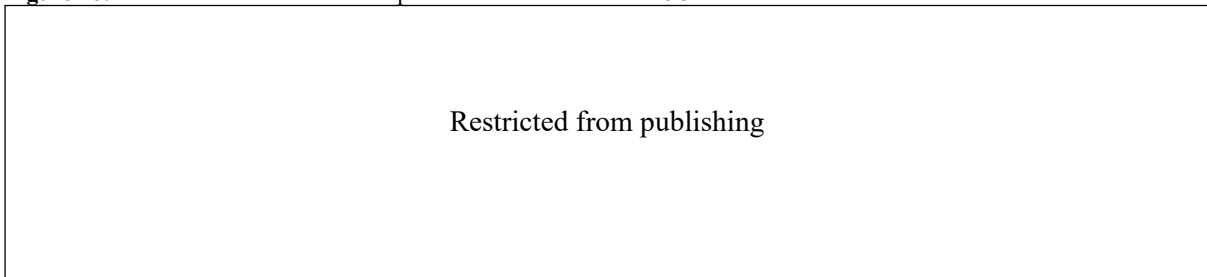
Source: (Holzbauer & Dam, 1981a)

**Figure 25:** Part Northwest Elevation Stopera of Holzbauer & Dam 1981



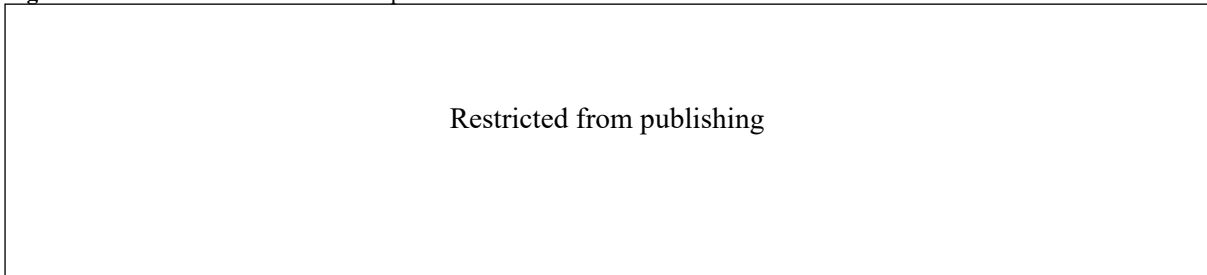
Source: (Holzbauer & Dam, 1981b)

**Figure 26:** Part Southwest Elevation Stopera of Holzbauer & Dam 1981



Source: (Holzbauer & Dam, 1981b)

**Figure 27:** Part Southeast Elevation Stopera of Holzbauer & Dam 1981



Source: (Holzbauer & Dam, 1981b)

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