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## CIVIL CONSULTANTS MEMORANDUM

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**TO: Town of South Berwick**

**FROM: Geoffrey R. Aleva, PE –President**

**SUBJECT: South Berwick Town Hall – Exterior Masonry Inspection**

**DATE: OCTOBER 3, 2023**

**PROJECT: EXTERIOR REVIEW – TOWN HALL / COMMUNITY CENTER**

This memorandum provides a summary of the visual analysis completed at the exterior of the Town Hall and the masonry entry of the Community Center. The review was requested to determine areas of concern for renovations and for safety.

### **TOWN HALL**

The near 100-year-old Town Hall exterior exhibits signs of deterioration and spalling of the decorative concrete sections along the building. The front entry stairs have been blocked from use due to debris falling from the concrete decorative façade sign piece above the door. The Town provided renovation plans from 1990 that indicated repairs to exterior sections of the building along the third floor windows. The plans detailed window replacement including replacing the concrete sills, many of these areas show deterioration that should have lasted longer than the 30 years.

The attached elevation plans prepared by Civil Consultants indicate the results of the visual inspection and provide potential repair strategies for the restoration of the building. The information presented on the plans As will be described later in this memorandum, a large portion of the work centered on the windows can be completed when they are replaced.

Most of the exterior brick work is in good condition, as areas have been repointed over the years to address observed issues. There are areas of the brick that will need to be addressed with repointing of the mortar beds. This will involve removal of existing mortar and placement of new. These areas are indicated on the attached elevation sheets.

The current issues center around the decay and deterioration of the concrete façade pieces that are showing their age. Moisture intrusion and general aging seem to be causes for the deterioration.

At the windows, many sills exhibit cracks, and several have been patched. Cracks in these sills will allow moisture to enter the building. A temporary repair is to cover the existing cracks with a flexible sealant until more permanent repairs can be completed. These repairs can occur during a window replacement project. When windows are replaced, the entire opening can be inspected. The concrete sills at that time can be replaced or repaired with a more long-term method.



The steel header above the window should also be included in the window replacement project. The steel header should be inspected, cleaned and repainted before a new window is installed. This will increase the longevity of the building.

The concrete decorative façade pieces around the building (Photograph 1) are showing their age from exposure over the years. The attached photograph indicates a typical situation. These areas can be repaired by a competent mason or concrete contractor. The repair method involves removal of all loose concrete, cleaning the exposed steel reinforcing, sealing the reinforcing and application of new



concrete surfacing. This new surface can be formed to match the original profile of the concrete. The adjacent areas may need to be cleaned to reveal hidden damage not visible for the on the ground observations.

*Photograph 1 – Concrete Banding Deterioration*

This repair strategy can also be applied to the large decorative concrete window surrounds as seen in Photograph 2. The damaged concrete will be removed, the area cleaned and repaired. The repair materials can have a similar texture to the existing to blend in with the surrounding location.

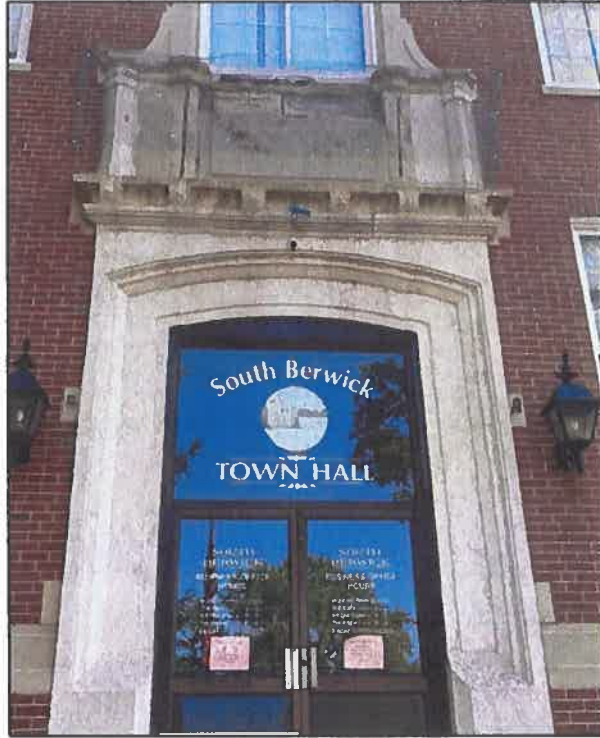


*Photograph 2 – Window Concrete Deterioration*



The repair to the main entry detail above main door will require more than a surface repair. The head sign detail has degraded to a condition that a majority of the face needs to be removed and replaced. If desired by the Town the existing detail can be recreated to have the pillars and signage above the door.

The front door decorative concrete surround appears to have had a plaster type of repair (unknown age) that does not match the remainder of the building. It is possible that this coating could be removed to restore the original appearance. A restoration contractor would need to be consulted to address this area further.



Photograph 3

The top band of the building along the roof parapet should be investigated as part of any exterior renovation project. The top side of the parapet was not visible during the inspection from the ground, but no major areas were observed that needed to be repaired. The inspection process will involve reviewing the metal flashing and connection to the masonry.



Photograph 4





The front entry stairs are in need of repair. In order to properly repair this area, the granite slab treads would need to be removed and supports investigated. It appears that most of the existing treads could be reused.



*Photograph 5*

The cost to complete exterior repairs to the building was not part of this project. We can assist the Town and consult with contractors to provide budget costs for repairs.



**COMMUNITY  
CENTER**

At the community center water is entering the brick arch entranceway covering and has caused significant damage to the masonry. As a result of the moisture intrusion, significant amounts of efflorescence and scaling is visible due to the water and moisture moving through the masonry.



*Photograph 6*

The building plans provided by Town Staff indicate that the brick

arch is supported by concrete block masonry. The block details were designed by the project architect during the renovation, not the project structural engineer. The details on the plan do not indicate how the arch of brick veneer is supported. It is our recommendation that some destructive testing and removal of finishes be completed to determine the damage to the existing masonry support. The work should be conducted by a mason with engineering oversight. Moisture is entering the brick veneer and causing the leaks and staining. The investigation will reveal if there is damage to the veneer supports. We recommend that this be completed sooner rather than later.

**ATTACHMENTS:**

- SHEETS A1 & A2 PREPARED BY CIVIL CONSULTANTS INDICATING RESULTS OF EXTERIOR VISUAL OBSERVATIONS
- SHEET A4 FROM 1990 TOWN HALL RENOVATION PROJECT
- SHEETS A8 & A9 FROM 1995 COMMUNITY CENTER RENOVATION PROJECT

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NO.	REVISIONS	DATE

TOWN HALL EXTERIOR EVALUATION  
 TAX MAP 28, LOT 170  
 TOWN OF SOUTH BERWICK  
 180 MAIN STREET  
 TOWN OF SOUTH BERWICK  
 CLIENT ADDRESS: 180 MAIN STREET SOUTH BERWICK MAINE 04159

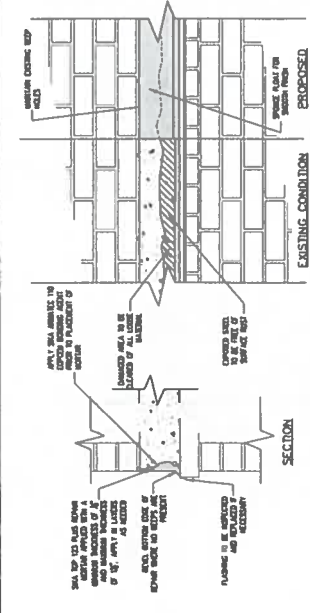
DATE: 07/20/2016  
 DRAWN BY: JWG  
 CHECKED BY: JWG  
 APPROVED BY: JWG

EXTERIOR ELEVATIONS

PROJECT NO: 13-18020

**A2**

SHEET 2 OF 3



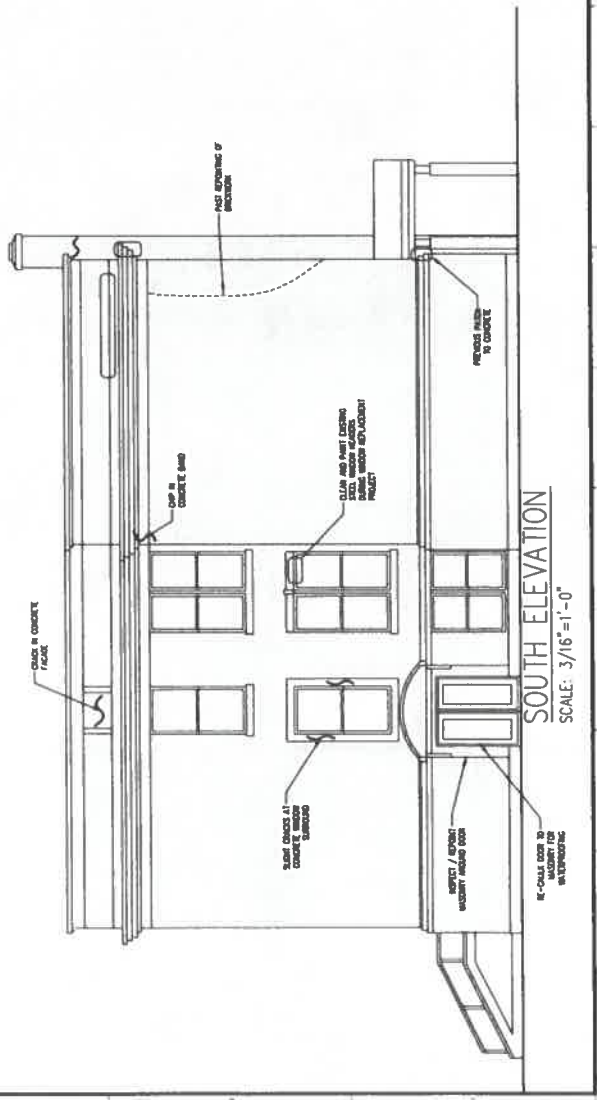
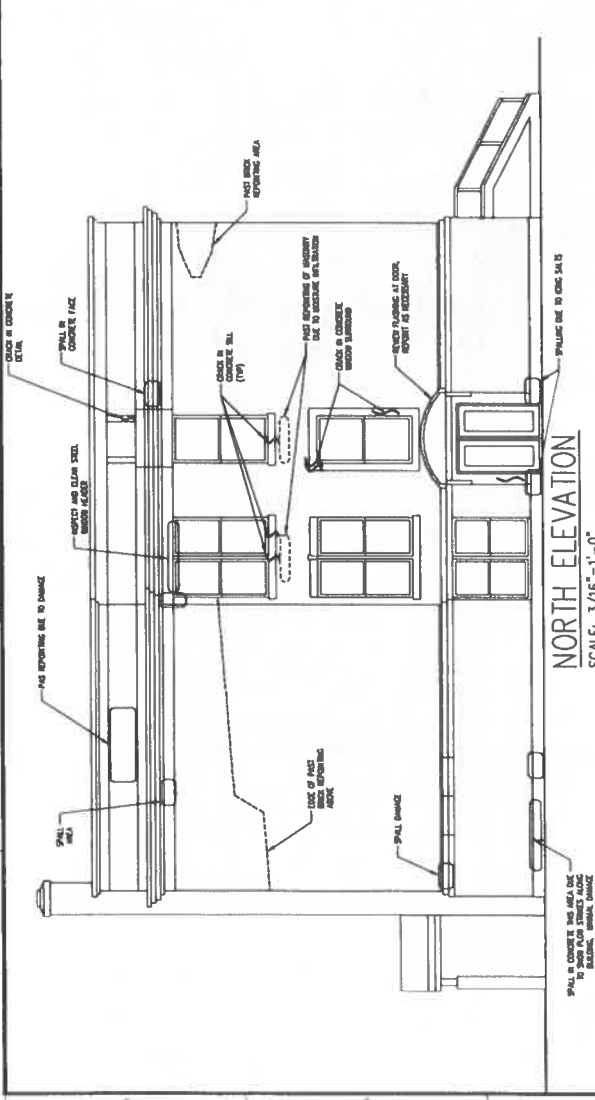
**CONCRETE REPAIR DETAIL**  
 NOT TO SCALE

**CONCRETE CONDITION NOTES**

1. FIELD WORK COMPLETED ON SEPTEMBER 2, 2013 COMPOSED OF VISUAL INSPECTION AND PHOTOGRAPHY OF THE EXTERIOR CONCRETE SURFACE. THE BUILDING EXTERIOR SURFACES IN THE EXISTING CONDITION ARE NOTED AND INDICATED ON THESE PLANS.
2. ORIGINAL PLANS OF THE BUILDING WERE NOT AVAILABLE. THE DRAWINGS INDICATED ON THESE SHEETS ARE BASED ON INFORMATION PROVIDED BY THE CLIENT AND VISUAL INSPECTION. THE CLIENT IS ADVISED THAT THE PROJECT AS SHOWN ON THESE SHEETS IS BASED ON VISUAL INSPECTION AND PHOTOGRAPHY. THESE REPAIRS ARE SOME LIMITED TO THE FINISHING WORK OF REPAIRING AND THE FIELD OF THE PLANS.

**PROPOSED EXTERIOR REPAIRS/RECONSTRUCTION - SCOPE OF WORK - ASSUMED TO BE PART OF INTERIOR RECONSTRUCTION PROJECT**

1. REPAIRS SHOULD BE CLEANED, CHASED AND REPAIRABLE AREAS THAT NEED TO BE RECONSTRUCTED SHALL BE RECONSTRUCTED WITH REPAIR MATERIALS THAT WILL BE FULLY COMPATIBLE WITH EXISTING MATERIALS AND BE WORKABLE AND HIGH PRESSURE ARE NOT TO BE USED.
2. REPAIR ALL FLOWING REPAIRS THROUGH JOINTS AND PARAMETERS DURING THE CLEANING PROCESS.
3. DURING A REPAIR RECONSTRUCTION PROJECT, ALL STEEL MEMBER LABELS TO BE RECONSTRUCTED SHALL BE RECONSTRUCTED WITH REPAIR MATERIALS THAT WILL BE FULLY COMPATIBLE WITH EXISTING MATERIALS AND BE WORKABLE AND HIGH PRESSURE ARE NOT TO BE USED. APPROXIMATELY 10% OF THE REPAIR MATERIALS SHALL BE RECONSTRUCTED WITH REPAIR MATERIALS THAT WILL BE FULLY COMPATIBLE WITH EXISTING MATERIALS AND BE WORKABLE AND HIGH PRESSURE ARE NOT TO BE USED.
4. DAMAGED RECONSTRUCTION TO BE RECONSTRUCTED. CONCRETE OF REPAIRING DAMAGED REPAIR JOINTS AND APPLYING NEW MATERIAL TO CREATE A REPAIRMENT JOINT. JOINTS TO BE REPLACED OR REPAIR SHALL HAVE CONSISTENT SIZE, TYPE, AND SECTION OF REPAIR MATERIAL. REPAIR MATERIAL SHALL BE FULLY COMPATIBLE WITH EXISTING MATERIALS. REPAIR MATERIAL SHALL HAVE A MINIMUM OF 5 YEARS WORKING WITH ACID MATERIALS.
5. DAMAGED PORTIONS OF THE PRE-CAST CONCRETE PANELS ARE TO BE CLEANED, WITH ALL LOOSE OR DAMAGED MATERIAL REMOVED. JOINTS SHALL BE FILLED WITH CONCRETE REPAIRING MATERIAL. JOINTS SHALL BE FILLED WITH CONCRETE REPAIRING MATERIAL. SET PLANS FOR LOCATIONS. APPLY JOINT REPAIRS IN APPROPRIATE LOCATIONS TO MATCH EXISTING PROFILE.
6. BRICK SEALANT CAN BE APPLIED TO BUILDING AFTER REPAIR WORK IS COMPLETED. A SEPARATE TYPE OF PRODUCT IS RECOMMENDED. DOWNSIDE SHOULD BE CONSULTED PRIOR TO SELECTION OF SEALANT MATERIAL.



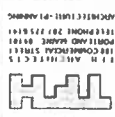
TAX MAP 28, LOT 170

180 MAIN STREET SOUTH BERWICK MAINE 04159





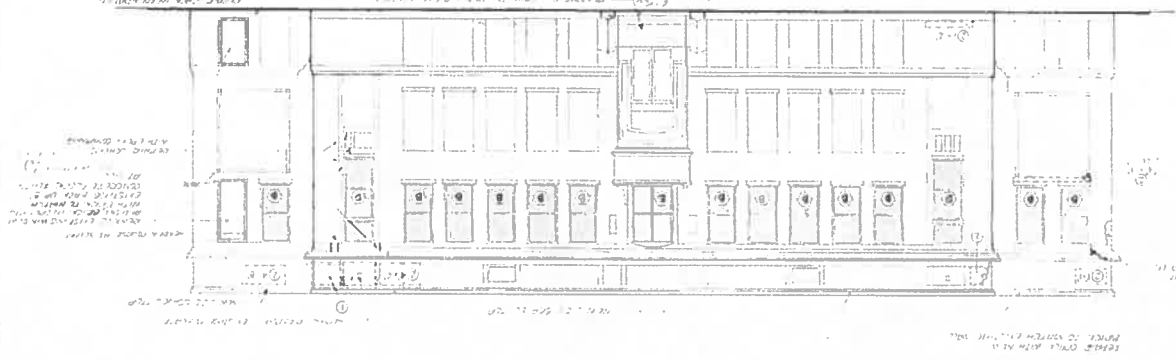
EXTERIOR ELEVATIONS  
 DATE: 11/19/90  
 PROJECT: RENOVATIONS TO TOWN HALL



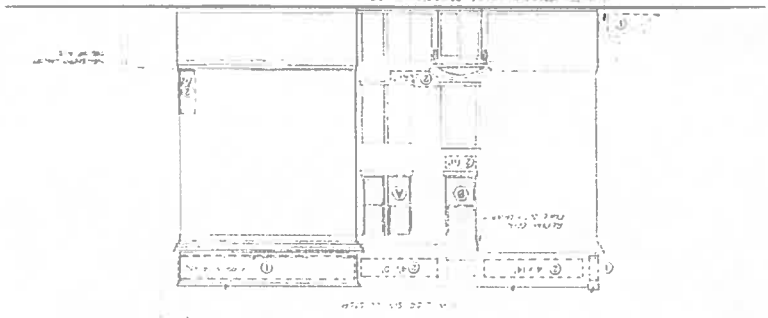
# RENOVATIONS TO TOWN HALL

Town of South Berwick

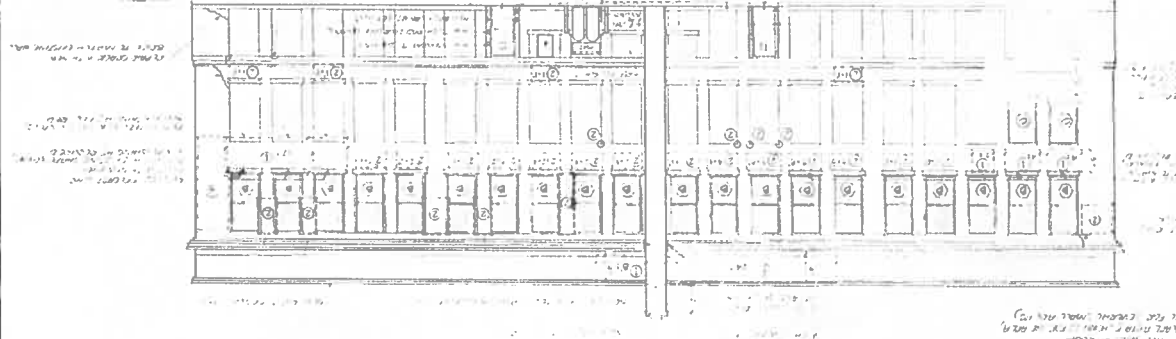
## WEST



## SOUTH



## EAST



## NORTH



**NOTE:**

SHIMBOLT & CREW MATCH ALL CONDITIONS IN THE OTHER ELEVATIONS FOR CORNER WINDOWS AND CORNER HEADS. MATCH WITH THE CORNER HEADS AND CORNER HEADS IN SHIMBOLT & CREW MATCH ALL CONDITIONS

**KEY:**

- ① RENOVATE TO ORIGINAL CONDITION
- ② EXISTING AND NOT TO BE CHANGED
- ③ TO BE REMOVED AND RECONSTRUCTED

RENOVATE TO ORIGINAL CONDITION  
 EXISTING AND NOT TO BE CHANGED  
 TO BE REMOVED AND RECONSTRUCTED

RENOVATE TO ORIGINAL CONDITION  
 EXISTING AND NOT TO BE CHANGED  
 TO BE REMOVED AND RECONSTRUCTED





# MUNICIPAL CENTER



DATE: 10/15/14  
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SHEET NO. 1 OF 1

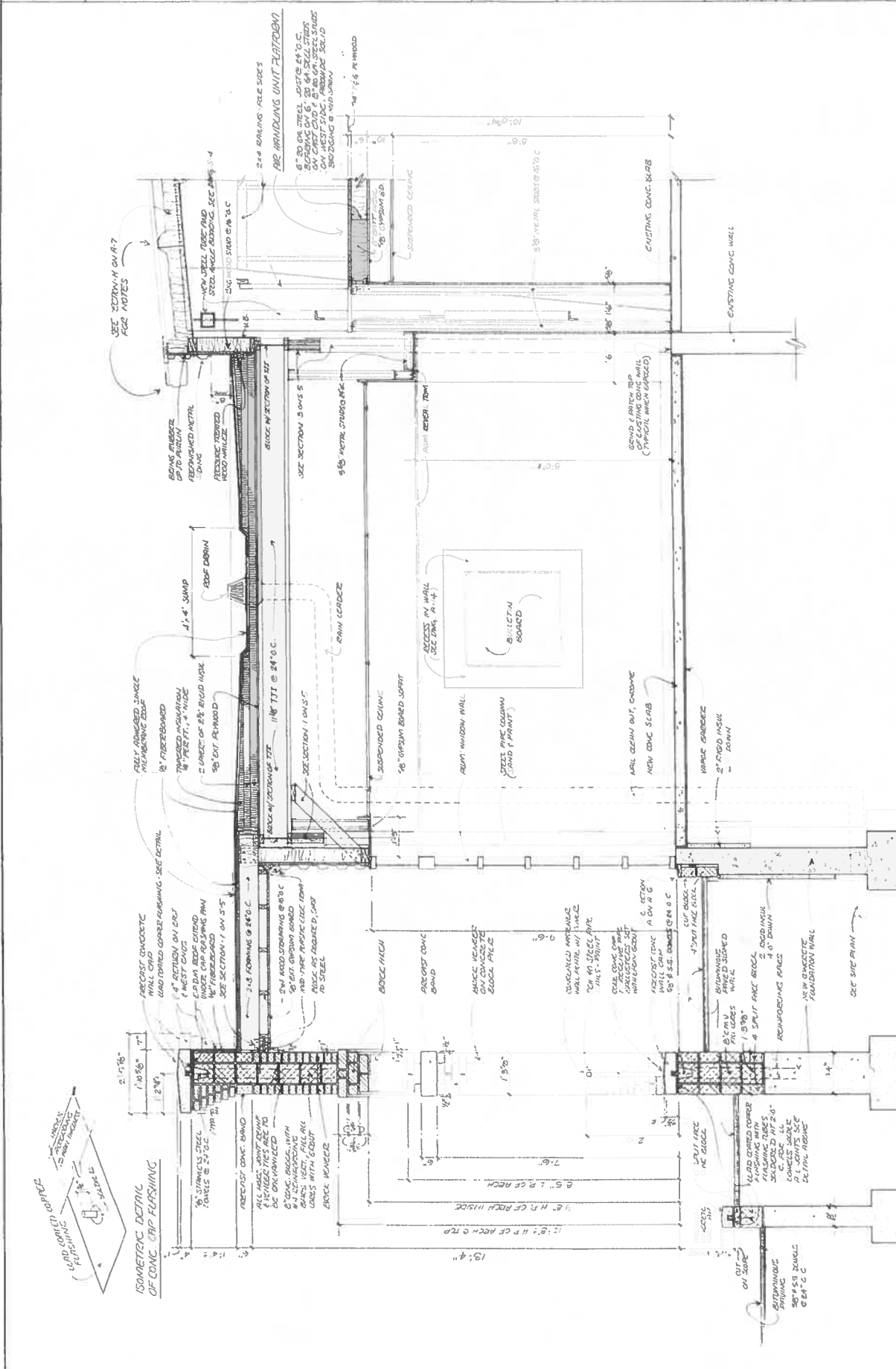
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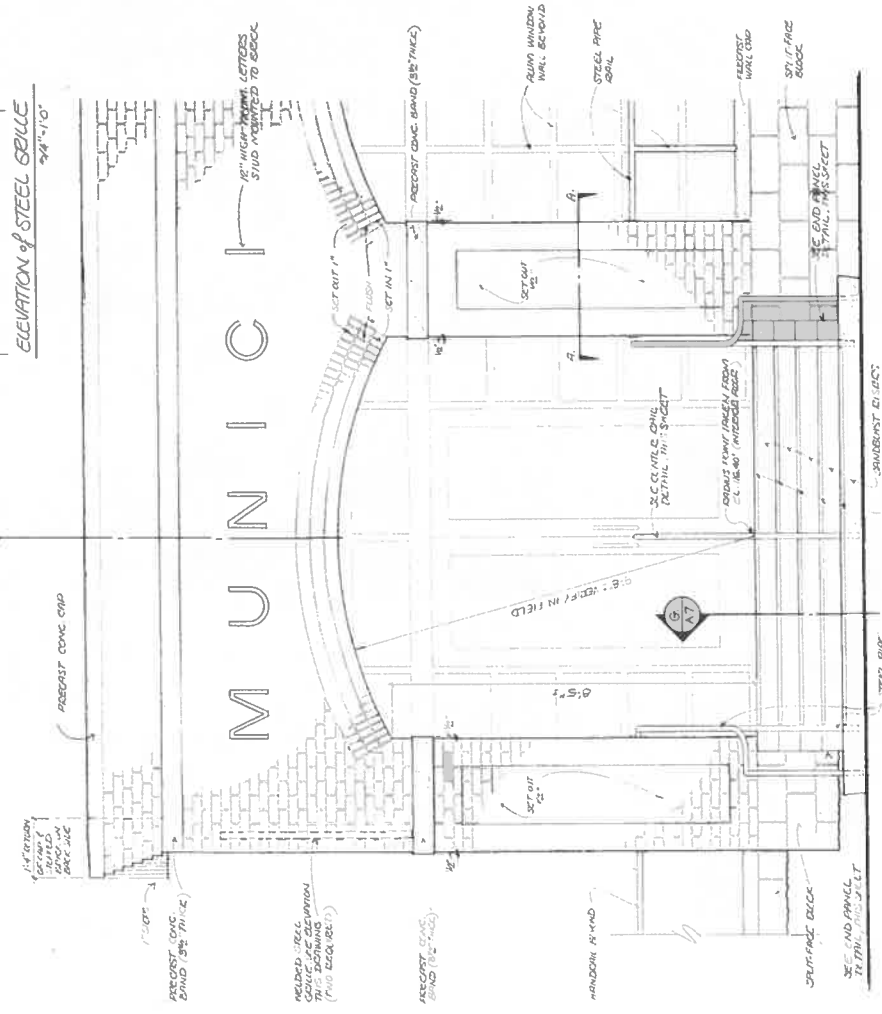
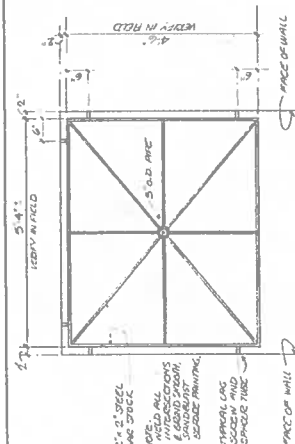
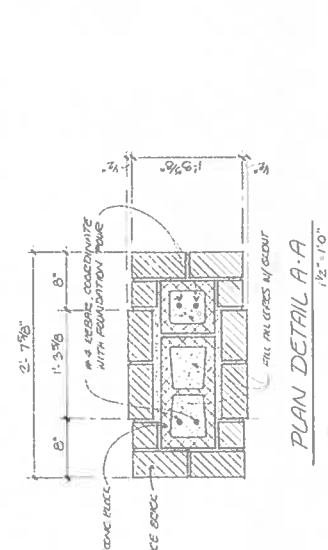
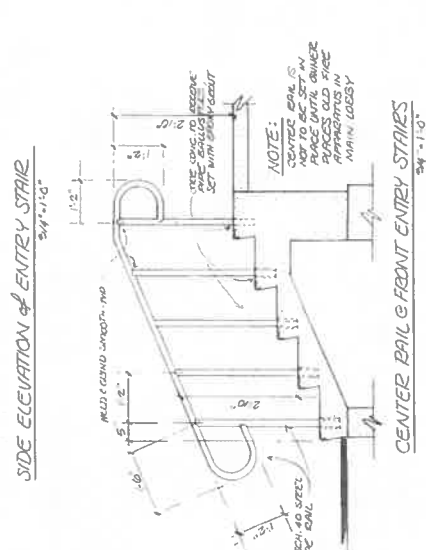
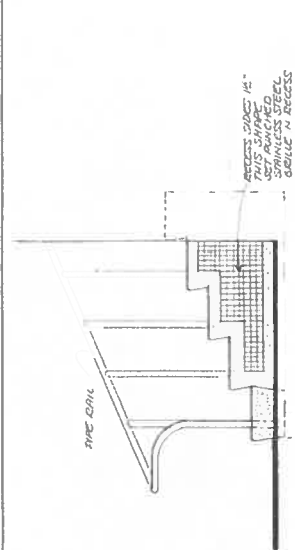
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