

TOWN OF CORTLAND, ILLINOIS

Public Safety Building Planning Report

LDG# 2023-001

April 17, 2023

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Project Team

Town of Cortland

Brandy Willams	Engineer and Zoning Administrator
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Larson & Darby Group

Stephen Nelson, AIA, LEED AP	CEO/Architect
William Waldorf	Structural Engineer
Alan Hulstedt, AIA, LEED AP	Architect

Introduction

Larson & Darby Group (LDG) is proud to partner with the Town of Cortland, Illinois to provide a preliminary planning document that will help the Town to determine the potential for utilizing the existing building at 50 West Maple Avenue, formerly the Cortland Elementary School.

This document aims to provide the Town with an understanding of the current structural connections of the building and to identify the portions of the building that can be utilized by the Town for the functions portrayed to LDG; and which portions of the building could be removed and where it should be separated. Furthermore, it will provide a Preliminary Rough Order of Magnitude Professional Opinion of Probable Project Costs for each of the phases identified by Town Staff while including a Preliminary Floor Plan Option.

LDG began the process by meeting with Mrs. Brandy Williams of the Town of Cortland to determine the potential needs of the Town and identify the expected uses of the building. Mrs. Williams stated that the Town of Cortland will be looking to relocate the existing Police department from the Public Works building into this building. After more discussions it was also determined that the Report should evaluate the ability of this Building to house the Town Hall functions as well.

Through the collective efforts of the Town of Cortland, Illinois and the Larson & Darby Group, we have developed this Facility Evaluation Study. This document is intended to be a preliminary reference document to assist the Town with its long-range strategic planning goals with respect to a new Public Safety and Town Hall Facility.

Existing Structural Summary

The current facility consists of an original brick and block schoolhouse with at least 3 large building additions. The identifiable additions are referred to as the Gymnasium Addition, Library Addition, and Classroom Addition in this report. The exact construction date of the Original Building and the Gymnasium Addition was not identified, the Library Addition was built in 1975 and the Classroom Addition was built in the late 1990s.

The Original Building consists of a two-story classroom building of brick and masonry bearing walls over a concrete foundation with an integral concrete slab and beam floor system. There is a concrete wall basement under this portion of the building. A monumental staircase at the North side of the building served as the main entrance to the facility prior to the additions.

The Gymnasium Addition consists of a two-story stairwell of brick and block exterior bearing walls with concrete beams and floors to match the Original Schoolhouse. The classroom and gymnasium portion utilizes brick and block exterior bearing walls with block interior bearing walls and steel roof joists. There is no basement, however there are tunnels for piping under the gymnasium and classrooms. The floor of the Gymnasium Addition aligns with the floor of the Original Building. The stairwell portion of the addition also encloses a ramp and steps down to the exit on the East side of the building.

The Library Addition consists of brick and block exterior walls with steel roof joists on steel beams and interior columns. Portions of the roof framing of this addition have been connected to the Original Building and Gymnasium Addition walls. Multiple floor slab elevation changes are required in this addition to connect the new floor elevation with the floor elevation of the Gymnasium addition. It is believed that this portion is constructed as a slab on grade with foundation walls at the perimeter to extend below frost.

The Classroom Addition consists of brick and block exterior walls with steel bar joists roof structure on interior bearing walls. It is believed that this portion is constructed as a slab on grade with foundation walls at the perimeter to extend below frost and the floor slab aligns with the Library Addition.

Building Demolition Recommendation

In discussions with the Town of Cortland, it was determined that the Original School Building will not be utilized by the Town due to age, condition, layout, and accessibility concerns and therefore should be demolished. In evaluating the ability of the additions to be separated from the Original Building it was determined that it is possible to keep the majority of the Gymnasium and Library Additions intact, however each will have a portion removed to properly separate them from the Original School Building.

The East connection of the Library Addition should be removed back to the first interior column. The portion between the first column and the Gymnasium Addition stairwell has a sloped floor and the roof in this area bears on the south wall of the Original Building and the north wall of the Gymnasium Addition. Therefore, to assist in fully removing the Original Building this portion of the Library Addition should be removed. There are interior columns that will support the remaining Library Addition roof, however a new exterior wall will be required after the Original Building is removed, for frost and column stiffness concerns.

The two-story stairwell of the Gymnasium Addition will need to be removed back to the corridor doors leading to the classrooms. This portion has multiple floor elevation changes while the second floor and roof bear on the south exterior wall of the Original Building. There are interior bearing walls and steel bar joists that will support the remaining portion of the Gymnasium Addition. A new exterior north wall will need to be constructed after the Original Building is removed for frost concerns.

Once the Library and Gymnasium Additions are separated the above grade portion of the Original Building can be removed. The basement walls and foundations should remain in place so not to disturb the foundations of the adjacent building additions. The basement walls should be cut down below grade, the basement floor slab broken up to allow drainage and this area should be filled with material suitable for above grade construction activities. The new construction design team will need to determine if the Original Building can be used for fill in this area.

An new foundation wall will be required to protect the footings of the additions from frost exposure that could damage the building additions to remain.

A phasing plan depicting the demolition area is attached as Appendix A.

Renovation Phases Recommendation

Upon review of the facility and discussions with the Town of Cortland, a preliminary layout of the facility was developed. It was discussed that the Town desired the facility be constructed in phases to allow the use of the building as soon as possible. Therefore, the following phases were developed:

Phase 1 – Renovation of the Classroom Addition to Cortland Police Offices

This phase will house the Cortland Police offices, breakroom, kitchenette, and roll call/meeting room and could be completed with minimal impact on the remainder of the facility. It would allow the Cortland Police to occupy the building further freeing up space elsewhere in the Town. There will be minor impacts to the Occupants during the remaining phases of the project.

Phase 2 – Demolition of the Original School Building

Removal of this portion of the Facility is required prior to renovation of the remaining Additions. This will also include temporary exterior walls for each of the Additions to remain.

Phase 3 – Construction of New Public Entry

Construction of the Entry will need to be completed prior to the first frost after the demolition. This will protect the footings of the additions that were not designed to be exposed to the freezing temperatures. It will also provide one entrance for the public to access Town Services and Police Services once phase 4 and 5 have been completed.

Phase 4 – Renovation of Gymnasium Addition to Cortland Town Hall

The Town Hall wing will include offices for all staff, a Board Room, small meeting room, restrooms, kitchenette, break room, reception space, file storage, and a connection to the new public entry.

Phase 5 – Renovation of Library Addition to Cortland Police Support Spaces

The support spaces will include a sally port, holding cells, locker rooms, evidence storage, interrogation rooms, exercise room, file storage, and reception spaces. This space will connect the office wing with the new public entry.

The preliminary code review determined that the building construction and proposed use of the building will not require any new fire walls to be constructed inside the building and It will not require the existing fire sprinkler system to be operational.

A preliminary floor plan was developed for estimating purposes and is attached as Appendix B. Further development of the plan with Town personnel will be required during the preliminary Design phase of the project. This plan was created to better estimate the interior construction requirements and depict the potential spaces that the Town may be able to utilize.

Rough Order of Magnitude Opinion of Probable Project Costs

The following ROM Opinion of Probable Project Costs have been created using RSMeans Construction Cost Data. RSMeans is the industry leading construction cost estimating data and is updated quarterly. These Opinions have been prepared based on the attached floor plans, using Illinois average costs, and being constructed in quarter two of 2023. While these numbers are updated regularly, they are still a guide and are not actual project costs. There is a twenty percent contingency also added to these figures, as no design decisions have been made at this time that will impact the overall project costs.



Cortland, Illinois
New Public Safety Building Study
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PHASE 1 - ROUGH ORDER OF MAGNITUDE
Opinion of Probable Project Costs

		RSMeans data from GBORDIAN
Project Type:	Interior renovation	
Location:	Cortland, IL	Costs are derived from a building model with basic components. Scope differences and market conditions can cause costs to vary significantly.
Project Area (S.F.):	4500 (Phase 1 - PD Office Area)	
Labor Type:	STD	
Data Release:	Year 2023 Quarter 1	

Division of Work	Cost Per S.F.	Cost
1 General Requirements		\$9,000
2 Existing Conditions		\$98,000
7 Thermal and Moisture Protection		\$153,000
8 Openings		\$133,000
9 Finishes		\$156,000
33 Utilities		\$270,000
SubTotal	\$182.00	\$819,000
Contractor Fees (General Conditions, Overhead, Profit)		\$205,000
Anticipated Construction Costs	\$227.56	\$1,024,000
Design Contingency (20% at Schematic phase)		\$204,800
Furniture, Fixtures, and Equipment		\$133,120
Inflation (7%)		\$71,680
Recommended Construction Budget	\$318.58	\$1,433,600



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PHASE 2 - ROUGH ORDER OF MAGNITUDE
Opinion of Probable Project Costs

		RSMeans data from CORDIAN
Project Type:	Interior renovation	
Location:	Cortland, IL	Costs are derived from a building model with basic components. Scope differences and market conditions can cause costs to vary significantly.
Project Area (S.F.):	3700 (Phase 2 - Demolition of Original School)	
Labor Type:	STD	
Data Release:	Year 2023 Quarter 1	

Division of Work	Cost Per S.F.	Cost
1 General Requirements		\$7,000
2 Existing Conditions		\$129,300
7 Thermal and Moisture Protection		\$56,000
32 Exterior Improvements		\$13,300
SubTotal	\$55.57	\$205,600
Contractor Fees (General Conditions, Overhead, Profit)		\$51,400
Anticipated Construction Costs	\$69.46	\$257,000
Design Contingency (20% at Schematic phase)		\$51,400
Inflation (7%)		\$17,990
Recommended Construction Budget	\$88.21	\$326,390

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PHASE 3 - ROUGH ORDER OF MAGNITUDE
Opinion of Probable Project Costs

Project Type:	New Construction: Office, 1 Story with E.I.F.S. / Rigid Steel	RSMeans data from GBORDIAN
Location:	Cortland, IL	Costs are derived from a building model with basic components. Scope differences and market conditions can cause costs to vary significantly.
Project Area (S.F.):	2000 (Phase 3 - Public Entry)	
Labor Type:	STD	
Data Release:	Year 2023 Quarter 1	

Division of Work	Cost Per S.F.	Cost
Substructure		\$63,000
Shell		\$175,400
Interiors		\$64,000
Utilities		\$186,000
SubTotal	\$244.20	\$488,400
Contractor Fees (General Conditions, Overhead, Profit)		\$122,100
Anticipated Construction Costs	\$305.25	\$610,500
Design Contingency (20% at Schematic phase)		\$122,100
Furniture, Fixtures, and Equipment		\$79,365
Inflation (7%)		\$42,735
Recommended Construction Budget	\$427.35	\$854,700



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PHASE 4 - ROUGH ORDER OF MAGNITUDE
Opinion of Probable Project Costs

		RSMeans data from GBORDIAN
Project Type:	Interior renovation	
Location:	Cortland, IL	Costs are derived from a building model with basic components. Scope differences and market conditions can cause costs to vary significantly.
Project Area (S.F.):	7000 (Phase 4 - Town Hall)	
Labor Type:	STD	
Data Release:	Year 2023 Quarter 1	

Division of Work	Cost Per S.F.	Cost
1 General Requirements		\$13,000
2 Existing Conditions		\$101,200
5 Structural Steel		\$98,000
7 Thermal and Moisture Protection		\$279,000
8 Openings		\$122,000
9 Finishes		\$574,000
33 Utilities		\$435,000
SubTotal	\$231.74	\$1,622,200
Contractor Fees (General Conditions, Overhead, Profit)		\$405,550
Anticipated Construction Costs	\$289.68	\$2,027,750
Design Contingency (20% at Schematic phase)		\$405,550
Furniture, Fixtures, and Equipment		\$263,608
Inflation (7%)		\$141,943
Recommended Construction Budget	\$405.55	\$2,838,850

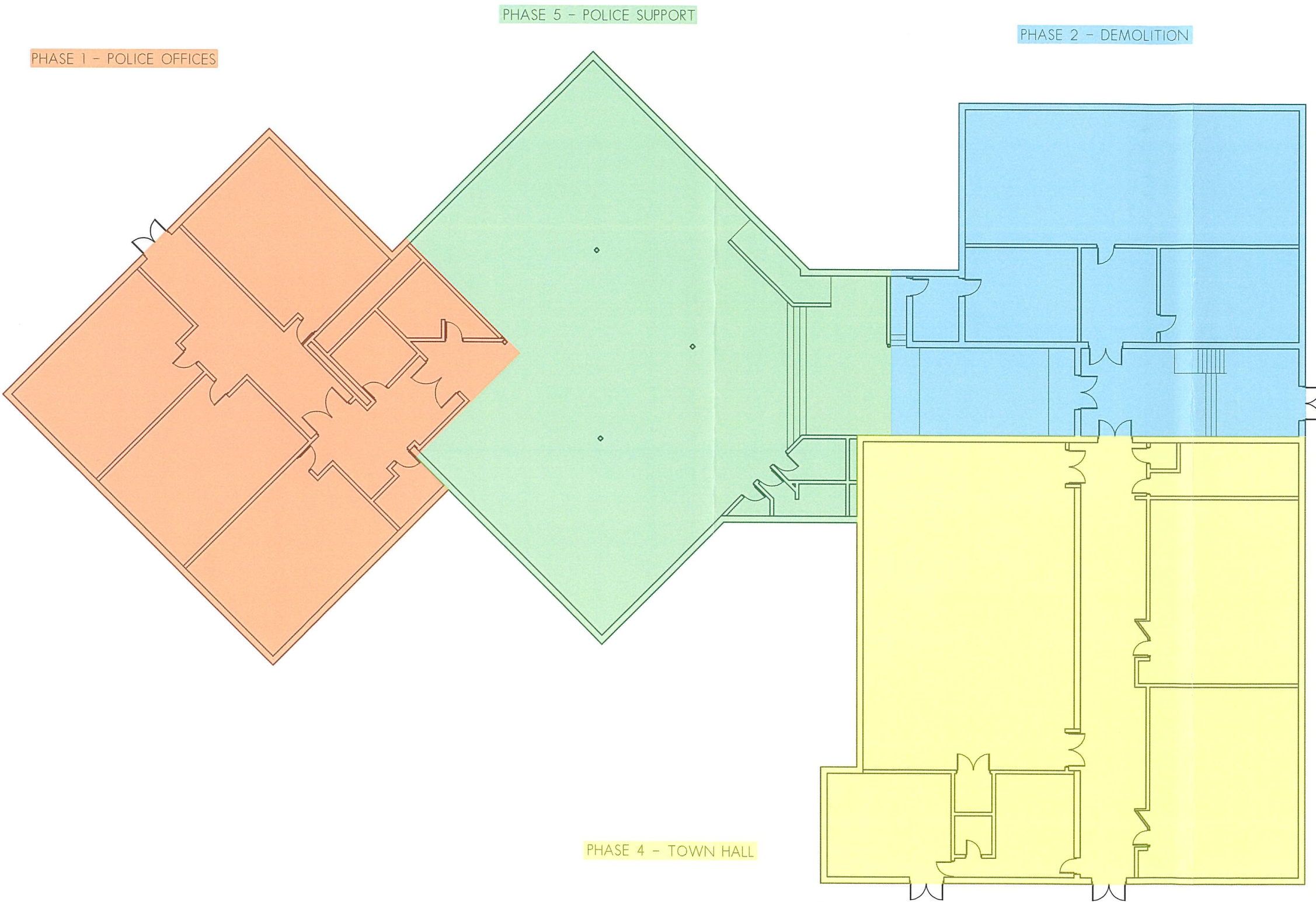


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PHASE 5 - ROUGH ORDER OF MAGNITUDE
Opinion of Probable Project Costs

		RSMeans data from GORDIAN
Project Type:	Interior renovation	
Location:	Cortland, IL	Costs are derived from a building model with basic components. Scope differences and market conditions can cause costs to vary significantly.
Project Area (S.F.):	7300 (Phase 5 - PD Support Spaces)	
Labor Type:	STD	
Data Release:	Year 2023 Quarter 1	

Division of Work	Cost Per S.F.	Cost
1 General Requirements		\$14,000
2 Existing Conditions		\$101,100
7 Thermal and Moisture Protection		\$292,000
8 Openings		\$126,000
9 Finishes		\$407,000
33 Utilities		\$425,000
SubTotal	\$187.00	\$1,365,100
Contractor Fees (General Conditions, Overhead, Profit)		\$341,275
Anticipated Construction Costs	\$233.75	\$1,706,375
Design Contingency (20% at Schematic phase)		\$341,275
Furniture, Fixtures, and Equipment		\$221,829
Inflation (7%)		\$119,446
Recommended Construction Budget	\$327.25	\$2,388,925



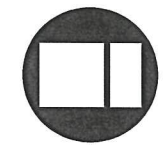
CORTLAND PUBLIC SAFETY BUILDING PHASES

DATE:	PROJECT NUMBER
	2023-001
	SHEET NUMBER
	APPENDIX A

ISSUED FOR:	DATE
DRN	CHK'D
	APPRVD

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PUBLIC SAFETY BUILDING PLANNING REPORT
TOWN OF CORTLAND
CORTLAND, ILLINOIS



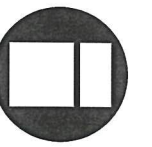
Larson & Darby Group
Architecture Engineering Interiors
Bedford Office - 1049 Harrison Ave., Suite 300, Bedford, L. 03208 Tel (603) 484-0739 Fax (603) 229-9837

PHASE 1 – POLICE OFFICES

This floor plan, titled 'PHASE 1 – POLICE OFFICES', illustrates a complex arrangement of rooms and corridors. The layout is oriented diagonally on the page. It features several large rectangular spaces, likely for administrative or operational use, interspersed with smaller, more compact rooms that could serve as individual offices or specialized work areas. A network of corridors connects these various spaces, facilitating movement throughout the facility. The plan is rendered in a simple line-drawing style, focusing on the spatial configuration and room divisions.

The floor plan of the second floor shows a symmetrical layout. On the left side, there is a large rectangular room at the top, followed by a smaller room, and then a larger room at the bottom. A central corridor runs vertically through the middle of the floor, connecting the rooms. On the right side, there is a large rectangular room at the top, followed by a smaller room, and then a larger room at the bottom. The layout is mirrored across the central corridor. The rooms are labeled with numbers 1 through 10, indicating their sequence or importance. The overall design is functional and organized, with clear pathways and distinct spaces for different activities.

CORTLAND PUBLIC SAFETY BUILDING PRELIMINARY FLOOR PLAN



Larson & Darby Group
Architecture Engineering Interiors

Redford Office - 4949 Harrison Ave., Suite 300, Redford, IL 61068 Tel (815) 484-0739 Fax (815) 222-9657

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