

Architecture In Law Enforcement

Syris Jenson - North Dakota State University - ALA Masters Program





ARCHITECTURE IN LAW ENFORCEMENT

A Design Thesis Submitted to the
Department of Architecture
North Dakota State University

By
Syris Jenson

In Partial Fulfillment of the Requirements for the Degree
of
Master of Architecture


North Dakota State University Libraries Addendum

To protect the privacy of individuals associated with the document, signatures have been removed from the digital version of this document.

May 2022

TABLE OF CONTENTS

Project Title and Signature Page	2-4
List of Tables and Figures	6
Thesis Abstract	10
Narrative of the Theoretical Aspect of the Thesis	11
Project Typology	12
Case Studies	
Brenham Police Headquarters	14-16
Pittsburg Police & Court Facility	17-20
Tourcoing Police Hotel	21-24
Windsor Police Department	25-28
Project Elements	30
User / Client Description	31
The Site	32-35
Project Emphasis	36
Project Goals	37
Plan For Proceeding	38-41
Theoretical Premise Research	42-51
Literature Reviews	52-59
Historical	60-61
Qualitative	62-63
Correlational	64-65
Project Justification	66
Historical, Social and Cultural Context	67
Site and Context Analysis	68-73
Performance Criteria	74-75



Process Documentation	76-78
Project Solution Documentation	79-85
Response to the Site or Context	86-88
Response to the Typological or Precedent Research	89-91
Response to Goals and Project Emphasis	92-95
Critique of applied research methods used in the thesis project.	96
Digital Presentation	97-105
Project Installation	106-107
Appendix / Reference List	108-109
Previous Studio Experience	110

LIST OF FIGURES & PAGES

Figure 1		2	Figure 26		27	Figure 51		58
Figure 2		10	Figure 27		27	Figure 52		61
Figure 3		11	Figure 28		27	Figure 53		63
Figure 4		12	Figure 29		28	Figure 54		65
Figure 5		14	Figure 30		28	Figure 55		67
Figure 6		15	Figure 31		28	Figure 56		68
Figure 7		16	Figure 32		34	Figure 57		69
Figure 8		16	Figure 33		34	Figure 58		70
Figure 9		16	Figure 34		35	Figure 59		71
Figure 10		16	Figure 35		35	Figure 60		72
Figure 11		17	Figure 36		36	Figure 61		72
Figure 12		18	Figure 37		37	Figure 62		72
Figure 13		19	Figure 38		37	Figure 63		72
Figure 14		19	Figure 39		39	Figure 64		73
Figure 15		19	Figure 40		42	Figure 65		73
Figure 16		19	Figure 41		43	Figure 66		74
Figure 17		20	Figure 42		44	Figure 67		75
Figure 18		21	Figure 43		45	Figure 68		76
Figure 19		22	Figure 44		47	Figure 69		76
Figure 20		22	Figure 45		49	Figure 70		76
Figure 21		22	Figure 46		51	Figure 71		77
Figure 22		23	Figure 47		52	Figure 72		77
Figure 23		23	Figure 48		54	Figure 73		77
Figure 24		25	Figure 49		55	Figure 74		77
Figure 25		27	Figure 50		56	Figure 75		78

Figure 76		78	Figure 101		99
Figure 77		78	Figure 102		99
Figure 78		79	Figure 103		100
Figure 79		80	Figure 104		100
Figure 80		81	Figure 105		101
Figure 81		81	Figure 106		101
Figure 82		82	Figure 107		102
Figure 83		82	Figure 108		102
Figure 84		83	Figure 109		103
Figure 85		83	Figure 110		103
Figure 86		84	Figure 111		104
Figure 87		84	Figure 112		104
Figure 88		85	Figure 113		105
Figure 89		86	Figure 114		106
Figure 90		87	Figure 115		107
Figure 91		88			
Figure 92		89			
Figure 93		90			
Figure 94		92			
Figure 95		93			
Figure 96		94			
Figure 97		95			
Figure 98		97			
Figure 99		98			
Figure 100		98			

THESIS ABSTRACT

The benefits of design and architecture in workspace has shown to increase productivity and allow everyone to move around fluidly without feeling like being micromanaged. Proper design in a busy building can organize workspace and optimize workers performance while also give enough privacy to complete confidential work. How does architecture and design better the lives of the employees and people than make the criminal justice system work? To redesign and improve the function and purpose of the police station for safety, efficiency, and a symbol for the community that it serves. To improve the quality of life for the everyday citizens.

Title: Architecture in Law Enforcment
Typology: Police Station and City Symbol
Site: Minneapolis, Minnesota



Figure 2

NARRATIVE

CONTEXT

I want to explore the ideas of law enforcement, criminology, public safety and how architecture can make an impact. Learn how design can play a role in crime prevention and how architecture communicates the justice system and values of Americans. Explore ideas in better ways to design jail, prisons, hospitals, police departments, federal buildings to work better with the criminal justice system.

Minneapolis, Minnesota is presented with a unique set of problems. This city is very densely populated and continues to grow every day. This means the city limits grow, this means the resources that are set in place to protect and serve the community need to grow as well. From officer's I have spoken to them say the city is in crisis. The departments are under funded and lack proper staffing and resources to do their jobs.



Figure 3

PROJECT TYPOLOGY

The typology of this thesis will be the repurposing and redesign of the police station in metropolitan areas. It will include more services to increase the efficiency and productivity of the criminal justice system while also standing for a symbol of the community that it serves. It will introduce new methods in serving the community, new technologies, and will be a place people will respect.

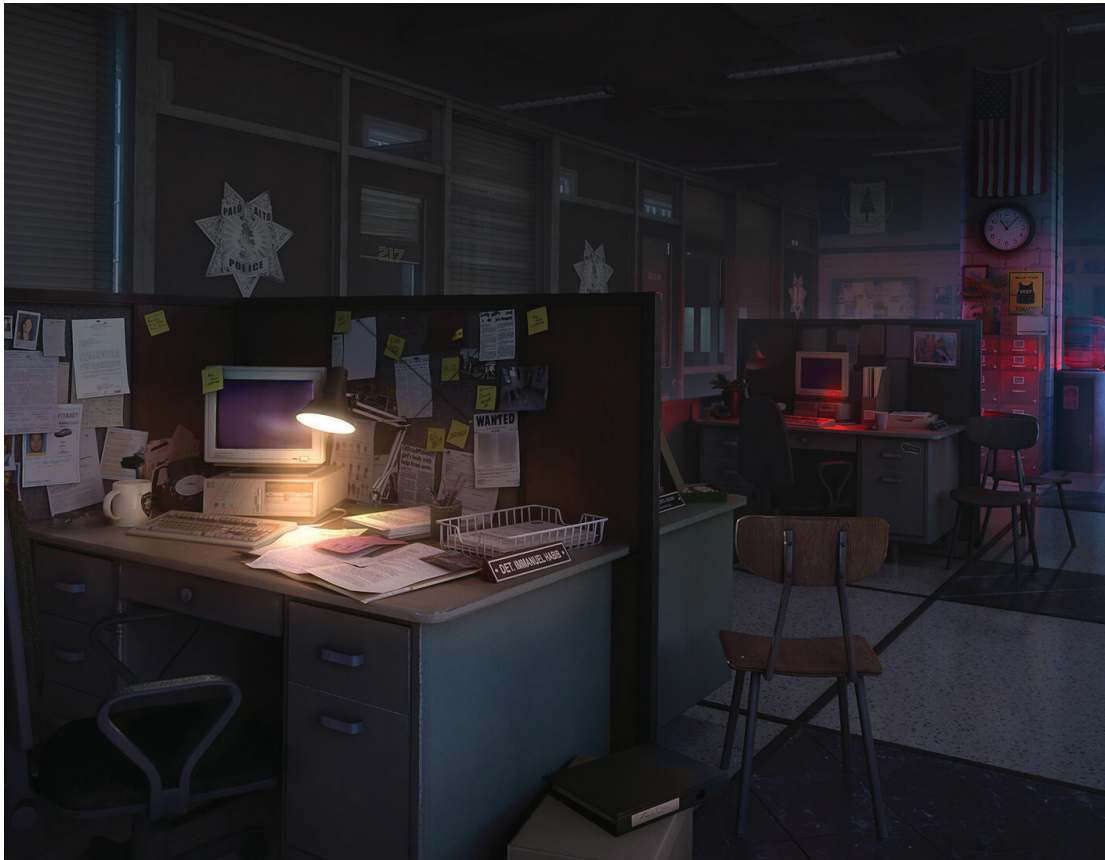


Figure 4

TYOLOGY RESEARCH

FACTORS CONSIDERED

TYPOLOGY: Defenseable Architecture, Mixed Use, City Building

CONTEXT: Metropolitan areas, S / M / L / XL / Cities

IMPACT: Symbol for the city, Increase productivity and sense of belonging

INNOVATION: Explore new functions and form, challenge old ideas

CHOSEN PRESEDENTS

- 1) Brenham Police Headquarters
- 2) Pittsburg Police & Court Facility
- 3) Tourcoing Police Hotel
- 4) Windsor Police Department

Brenham, Texas
Pittsburg, Kansas
Tourcoing, France
Windsor, Colorado

CASE STUDY 1



Figure 5 | Brenham Police Department, photo credit | policearchitects.com

INTRODUCTION

With the Brenham Police Department having outgrown their previous facility, a new two-story 24,000 SF facility was designed by Police Facility Design Group to meet both their current and future operational needs. So that the facility would fit comfortably within the context of the surrounding community, the facility is designed with a traditional feel but with contemporary lines. Exterior covered storage for police tactical vehicles is included and the entire site is master planned to accommodate a future fire station. The new lobby areas provide convenient public access to records, investigations, administration, a multi-purpose training room, and a community room. The design provides Brenham with security features lacking in their previous facility, including a full-featured access control and surveillance system. The project was constructed by Teal Construction and completed in 2009.

LOCATION: Brenham, Texas

TYOLOGY: Law Enforcement

ARCHITECT: Police Facility Design Group

STATUS: Completed in 2009



Figure 6 | Brenham Police Department, photo credit | policearchitects.com



Figure 7 | Brenham Police Department, photo credit | policearchitects.com

PROJECT FEATURES

- **Police Facility**
- **Municipal Court**
- **Training Facility**
- **Emergency Operations Center**



Figure 8 | Brenham Police Department, photo credit | policearchitects.com



Figure 9 | Brenham Police Department, photo credit | policearchitects.com



Figure 10 | Brenham Police Department, photo credit | policearchitects.com

CASE STUDY 2



Figure 11 | Pittsburg Police & Court Facility, photo credit | policearchitects.com

INTRODUCTION

This award-winning 31,000 SF police and courts building planned and designed by Police Facility Design Group was funded under a public safety bond referendum that also included a fire station. It sits immediately adjacent to City Hall and also serves as Council Chambers. Integration of the new facility into the historic fabric of downtown Pittsburg was critical to the success of the project. Proximity to the historic central library and a planned miner's memorial park were all important considerations in the site planning and design aesthetics selected for the project. A significant portion of the building is hardened to support dispatch staff working through extreme weather conditions. The court room is also included within a hardened zone of the building and can provide for emergency operations center functionality and for general staff shelter.

LOCATION: Pittsburg Kansas

TYOLOGY: Court Facility

ARCHITECT: Police Facility Design Group

STATUS: Completed in 2008



Figure 12 | Pittsburg Police & Court Facility, photo credit | policearchitects.com



Figure 13 | Pittsburg Police & Court Facility, photo credit | policearchitects.com

PROJECT FEATURES

- **Police Facility**
- **Municipal Court**
- **Training Facility**
- **Emergency Operations Center**
- **Communications**
- **Municipal Jail**
- **City Council Chambers**



Figure 14 | Pittsburg Police & Court Facility, photo credit | policearchitects.com



Figure 15 | Pittsburg Police & Court Facility, photo credit | policearchitects.com



Figure 16 | Pittsburg Police & Court Facility, photo credit | policearchitects.com



Figure 17 | Pittsburg Police & Court Facility, photo credit | policearchitects.com

CASE STUDY 3



Figure 18 | Tourcoing Police Hotel, photo credit | www.archdaily.com

INTRODUCTION

A corner building and an architectural sign, the new Tourcoing Police Headquarters is turned towards the city. Carefully composed of simple and modular geometrical forms, it is perceived as a sculpted, homogeneous, and refined building. Its unitary materiality and its sober volumetry constitute, with the factory chimney preserved, a real urban landmark legible and attractive. Its coherence and image clearly express its status as an institutional building, while renewing the image of the Police station. It affirms the importance of its status as a museum or cultural facility.

LOCATION: Tourcoing, France

TYOLOGY: Police Station

ARCHITECT: Ameller Dubois

STATUS: Completed in 2019



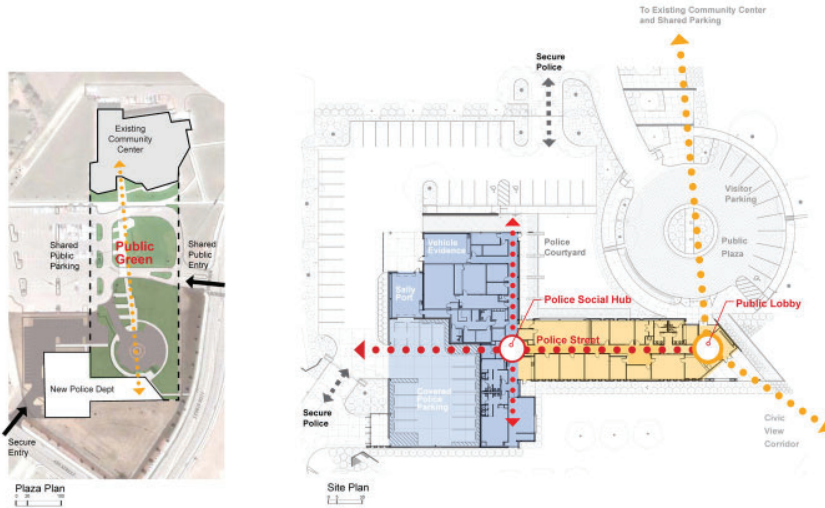
Figure 19 | Tourcoing Police Hotel, photo credit | www.archdaily.com



Figure 20 | Tourcoing Police Hotel, photo credit | www.archdaily.com



Figure 21 | Tourcoing Police Hotel, photo credit | www.archdaily.com



Windsor Police Station, Windsor, CO

Figure 22 | Tourcoing Police Hotel, photo credit | www.archdaily.com

Program

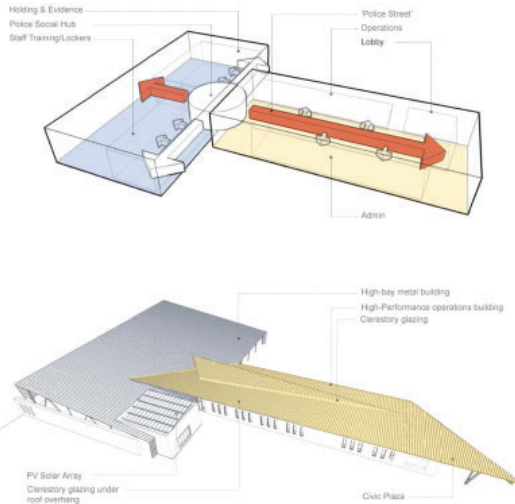
- Spaces are organized about an interior Police Street and an intersecting secondary corridor.
- 'Police Street' activates the station's operational functions and encourages interaction among sworn personnel, staff, and administrators.
- The secondary corridor services support spaces.
- The intersection of the two corridors is the police social hub, providing direct access to the covered parking, break room, locker rooms and report-writing room.

Efficiency

- The station recognizes two major efficiency efforts:
- Energy Efficiency is targeted through the use of active solar panels, geothermal HVAC systems and passive systems such as natural ventilation, natural daylighting is enhanced with clerestory glazing and a continuous roof dormer and rainwater collection and distributions.

Form

- The station is separated into two connected forms:
- The storage, support and garage functions are contained within a high bay metal building which speaks to the agrarian and rural site vernaculars.
- Admin, operations and public spaces, etc are located in the higher-performance wing of the building, where clerestory windows, a sloping roof and a continuous dormer activate the occupied spaces and major circulation.



Windsor Police Station, Windsor, CO

Figure 23 | Tourcoing Police Hotel, photo credit | www.archdaily.com

The project consists of a square figure aligned on the public roads and closed on the service courtyard. The hall naturally fits into the corner of the ground floor in the extension of the raised forecourt, facing the Parc Clémenceau. Wrapped on all sides in white metal cladding made up of modular panels punctuated by thin slats, the building rests on a brick base that manages the difference in height of the plot and echoes the culture of Northern France. A compact and unitary figure, the new Tourcoing Police Hotel strives to combine three inseparable challenges: to translate the republican idea and represent authority, to secure and reassure a sometimes fragile public, and to offer comfortable and safe working conditions to police officers.

CASE STUDY 4



Figure 24 | Windsor Police Department, photo credit | www.archdaily.com

INTRODUCTION

The Windsor Police Department is a facility located within a small community of just 20,000 people. The new building by Roth Sheppard Architects satisfies the community's needs for a new police station, and optimizes the space, taking advantage of available context to be an even broader asset to the local community.

The police department had previously been located in the basement of Windsor's Town Hall. Unfortunately, the original, though cramped, quarters were destroyed when a tornado touched down in Windsor and devastated the historic building. To take advantage of a somber situation, Roth Sheppard Architects was commissioned to design a free-standing building to be the new headquarters of the police department.

The new site was proposed by Roth Sheppard Architects to encourage the formation of a future civic campus for the small town, and visually establish the police department's presence in town. The Windsor Police Department shares a site, vehicular entry, parking and meeting room space with the Community Recreation Center. Roth Sheppard Architects chose this placement to take advantage of its central location, as well as existing amenities.

LOCATION: Windsor, Colorado

TYOLOGY: Police Station

ARCHITECT: Roth Sheppard Architects

STATUS: Completed in 2010



Figure 25 | Windsor Police Department, photo credit | www.archdaily.com



Figure 26 | Windsor Police Department, photo credit | www.archdaily.com



Figure 27 | Windsor Police Department, photo credit | www.archdaily.com

Program

- Spaces are organized about an interior Police Street and an intersecting secondary corridor.
- 'Police Street' activates the station's operational functions and encourages interaction among sworn personnel, staff, and administrators.
- The secondary corridor services support spaces.
- The intersection of the two corridors is the police social hub, providing direct access to the covered parking, break room, locker rooms and report-writing room.

Efficiency

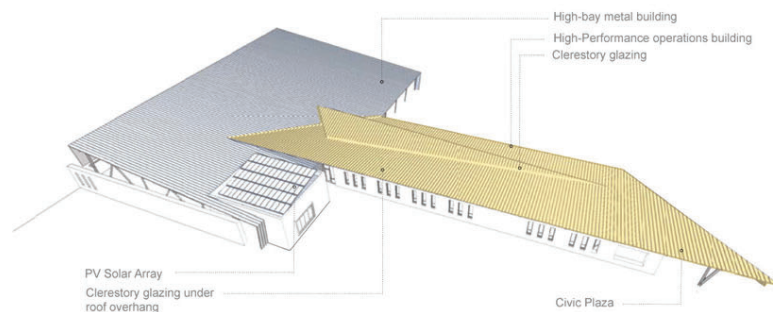
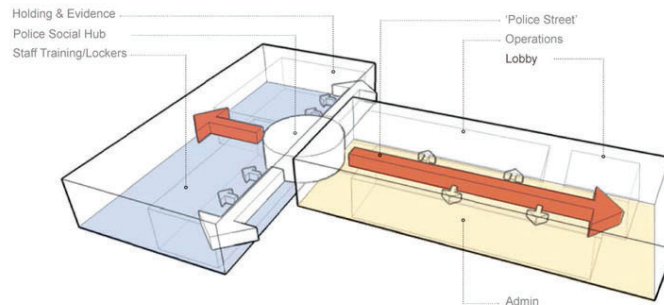
The station recognizes two major efficiency efforts:

- Energy Efficiency is targeted through the use of active solar panels, geothermal HVAC systems and passive systems such as natural ventilation, natural daylighting is enhanced with clerestory glazing and a continuous roof dormer and rainwater collection and distributions.

Form

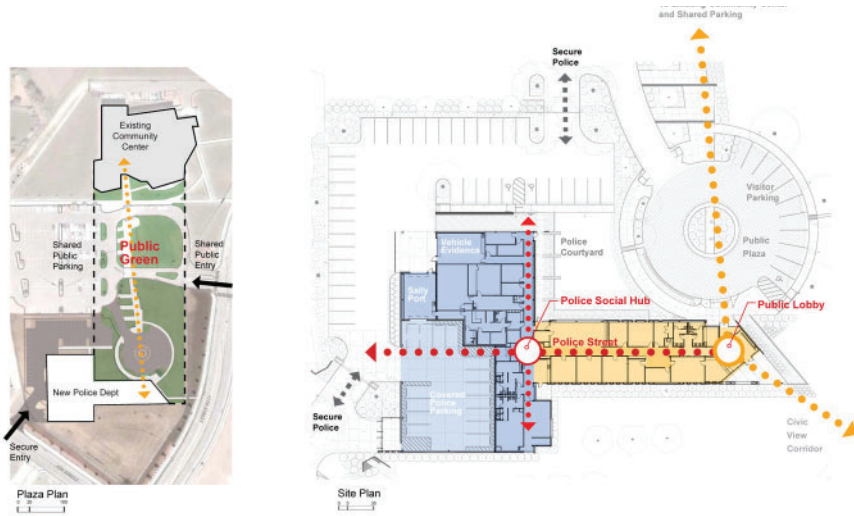
The station is separated into two connected forms:

- The storage, support and garage functions are contained within a high bay metal building which speaks to the agrarian and rural site vernaculars.
- Admin, operations and public spaces, etc are located in the higher-performance wing of the building, where clerestory windows, a sloping roof and a continuous dormer activate the occupied spaces and major circulation.



Windsor Police Station; Windsor, CO

Figure 28 | Windsor Police Department, photo credit | www.archdaily.com



Windsor Police Station, Windsor, CO

Figure 29 | Windsor Police Department, photo credit | www.archdaily.com



Windsor Police Station, Windsor, CO

Figure 30 | Windsor Police Department, photo credit | www.archdaily.com

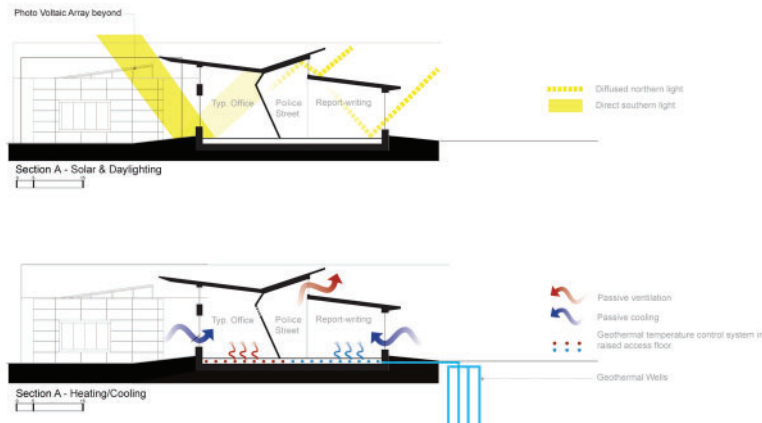


Figure 31 | Windsor Police Department, photo credit | www.archdaily.com

Windsor Police Station, Windsor, CO

TYPOLOGICAL SUMMARY

There was a total of four precedent researched, case study one through four. all of te projects inquired because the all had some insight, something that we could learn from it. Contains design typology, context, and the site impact. two of the four projects were designed by the Police Facility Design Group. They have a great approach to creating law enforcement centers. They say” As a specialist in public safety facilities, we do not believe that there is only one way to plan and design an appropriate public safety facility and we will never force “our way” on a client. However, we do believe that the best way to meet a client’s needs and goals is by possessing a thorough understanding of the job they perform. We strive to develop facilities that stand the test of time; in part, by designing public safety buildings that follow industry standards, adapted to the unique needs of the specific client. We are also leaders in facility innovations that meet the evolving needs of the public safety industry and that assist agencies in delivering the most effective services to their communities. With an overriding sense of service to our clients, we relish in each relationship built and the projects that result from the collaboration between planner and public safety agency.”

Secondly the history on how they got to were that are today. The design firm was once Wilson Police Architects before growing and changing to Police Facility Design group it more clearly communicate who we are and what we do. Police Facility Design Group was founded in 1978 as “Polson Architects, Law Enforcement Specialists”, following the completion of participation in a four-year federal study to understand the limitations deficient facilities have on the delivery of police services. The firm, originally located in Champaign, Illinois, moved to Kansas City in 1986. Architect James Estes joined the firm that year, succeeding Polson in 1998. The firm’s focus continued to be exclusively dedicated to. public safety facility planning and design. To further this goal, and after many years of providing facility planning assistance and instruction through the IACP, the firm founded the Police Facility Planning Institute (PFPI). PFPI serves as a means to disseminate information on sound facility planning practices to communities across the country, and conducts our popular “Successful Facility Planning” seminars each spring and fall. Initiated in 1992, these are the longest running independent training seminars in the country for police and public safety facility planning. The firm continues to carry on these traditions, focusing on the development of this one unique building type. This summary and the value of experience the design firm hold is why two of the four projects i choice were by the Police Facility Design Group.

MAJOR PROJECT ELEMENTS

TRAINING

I imagine creating a space for the police department to train or conduct scenarios for real missions.

EDUCATION

All officers need continuing education to keep up with new laws and to maintain their licenses. Have a space to do so is very important.

INTERVIEW

Interview rooms are designed small for good reason but is important for solving crime.

EQUIPMENT

An equipment room for technologies, parts, clothing, and gear will make sure the rest of the building stays looking professional.

COMMUNITY

A community room for promotions, awards, and other community events is important to the public.

GARAGE

Space to park police vehicles during Minnesota winter is a must.

GYM

Physical fitness is a factor when selling yourself for the job and remains an important part in every law enforcement officer.

OFFICES

Offices are a must in a law enforcement center but should be designed in a way that promotes transparency.

BREAK

Everyone deserves a break, it's actually a law in employment. There is no reason that it can't be a major project element when the work conducted in these centers never stops.

USER / CLIENT DESCRIPTIONS

Directed to the state and the city government that funds public buildings. The project is for the public and people that serve the Minneapolis Minnesota area. I imagine the community being connected once again and allowing the new building mend the gap in the divide that has been created.

CONTEXT

This new building will be one of many that stand tall in the Minneapolis city limits. They all look different and are in different parts of the city but have common mission. The job of the police are to aid the public and can do so by improving public services in a building that will be open to all.

PEOPLE

Police Officers
Communication Specialists
Public
Local Government Officials
Other Law Enforcement Professionals
Local, State, and Federal Employees

THE SITE

The site is located at 3000 Minnehaha Ave, Minneapolis, MN 55406. This is on the south west coner where Minnehaha Ave meets E Lake Street. The site is trangle in shape and measures approximatily 300 feet on the north boundy, 200 feet on the west. The most eastern part of the site is where the building is located, leaving the larger more open area of the site on the west open to parking.

Currently the building and the 3rd Precinct staff includes Patrol Officers and Investigations. This precinct also has a Community Response team and Crime Prevention unit.





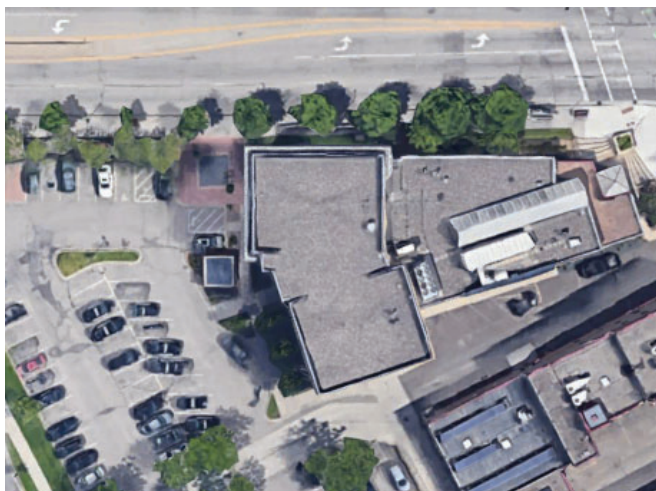


Figure 32 and 33

3000 Minnehaha Ave, Minneapolis, MN 55406

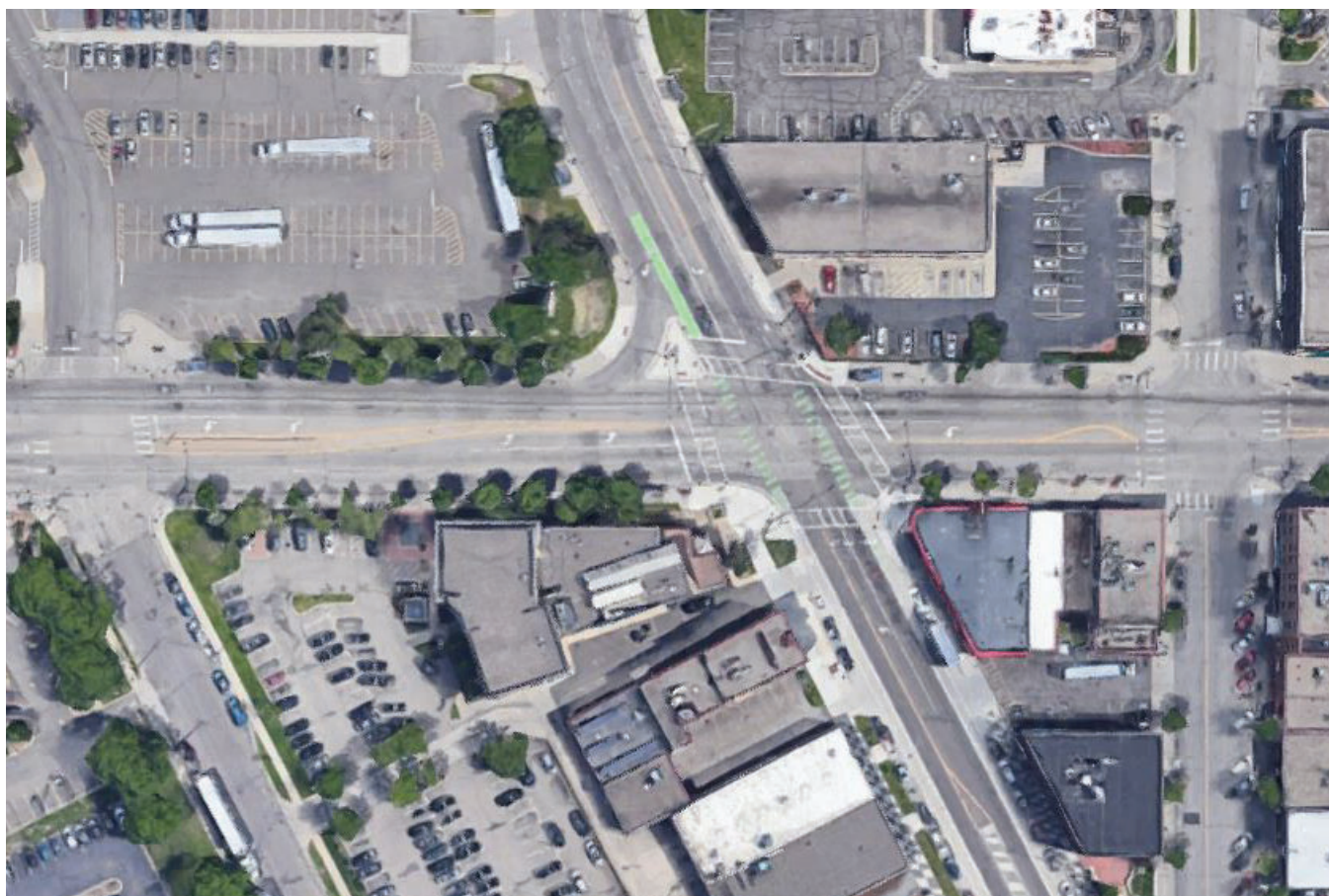
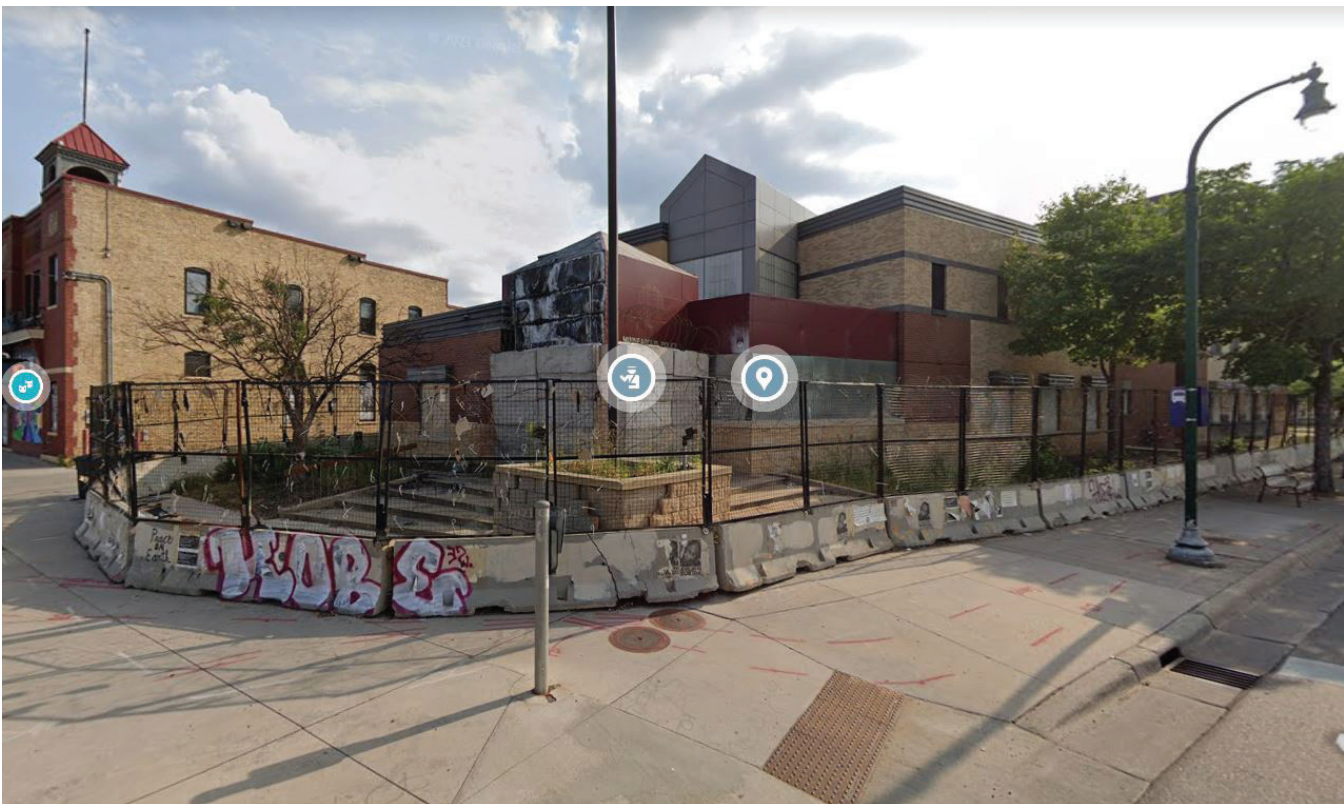




Figure 34 and 35



THE PROJECT EMPHASIS

Create and design space to improve productive and have a good sense of belonging and community involvement. Have the building stand as a symbol of the community.

Achieve a well intergrated project to the surrounding enviroment. includes good mobility ADA standards, and that will promote health and wellness to the surrounding space. Being that the site is on the corner of two roads it gives a good



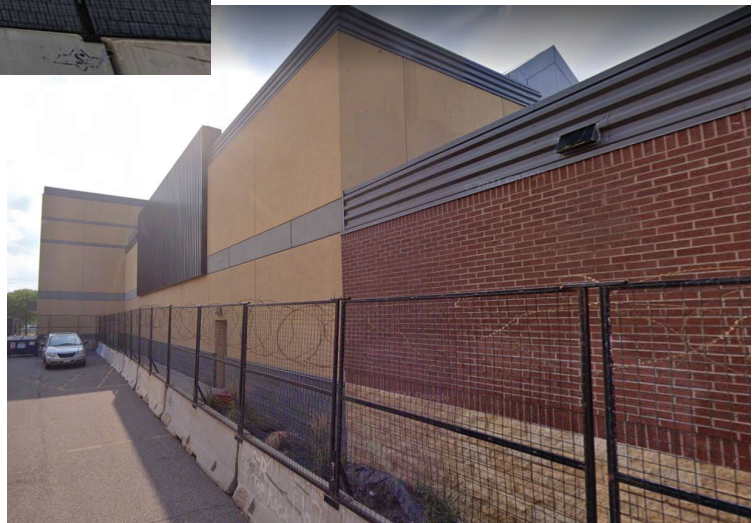
Figure 36

PROJECT GOALS

1. Improve the criminal justice systems environment
2. Integrate new ideas, innovative design, and educate the public
3. Create a warm and inviting place that is designed for the place
4. Create an effective and well designed center
5. Finish the project and be proud of it



Figure 37 and 38



PLAN FOR PROCEEDING

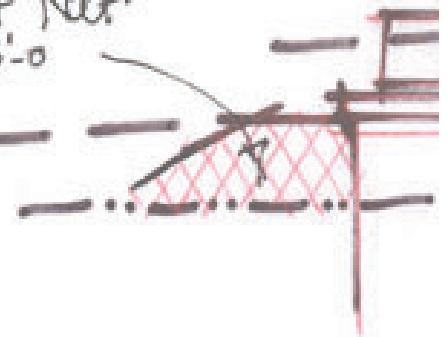
The Unifying Idea and results from the research, The typological and Precedent research. Writing out the project justification and performance criteria. Going to detail further in the project typology with a plan for documenting the design process. Lastly doing a detail literature review on Edward T. Halls book The Hidden Dimension.

DESIGN METHODOLOGY

Methods taken for research

1. The Theoretical Premise
2. Figuring out if the design solutions work by testing
3. Finding a design opinions that is tested and is proven to work better
4. Research on the topic and the surrounding buildings that are similar to help answer and test design solutions.

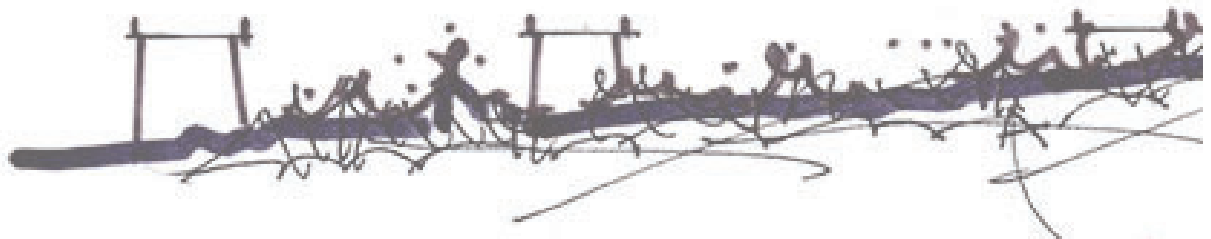
PORTION OF ROOF
ABV. 25'-0"



DOCUMENTATION OF THE DESIGN PROCESS

I will be documenting by hand, investigation through software design, and digital media.

I plan to present through the use of slides and presentation boards showing my final design. Lastly a create a 3d model. out of wood.



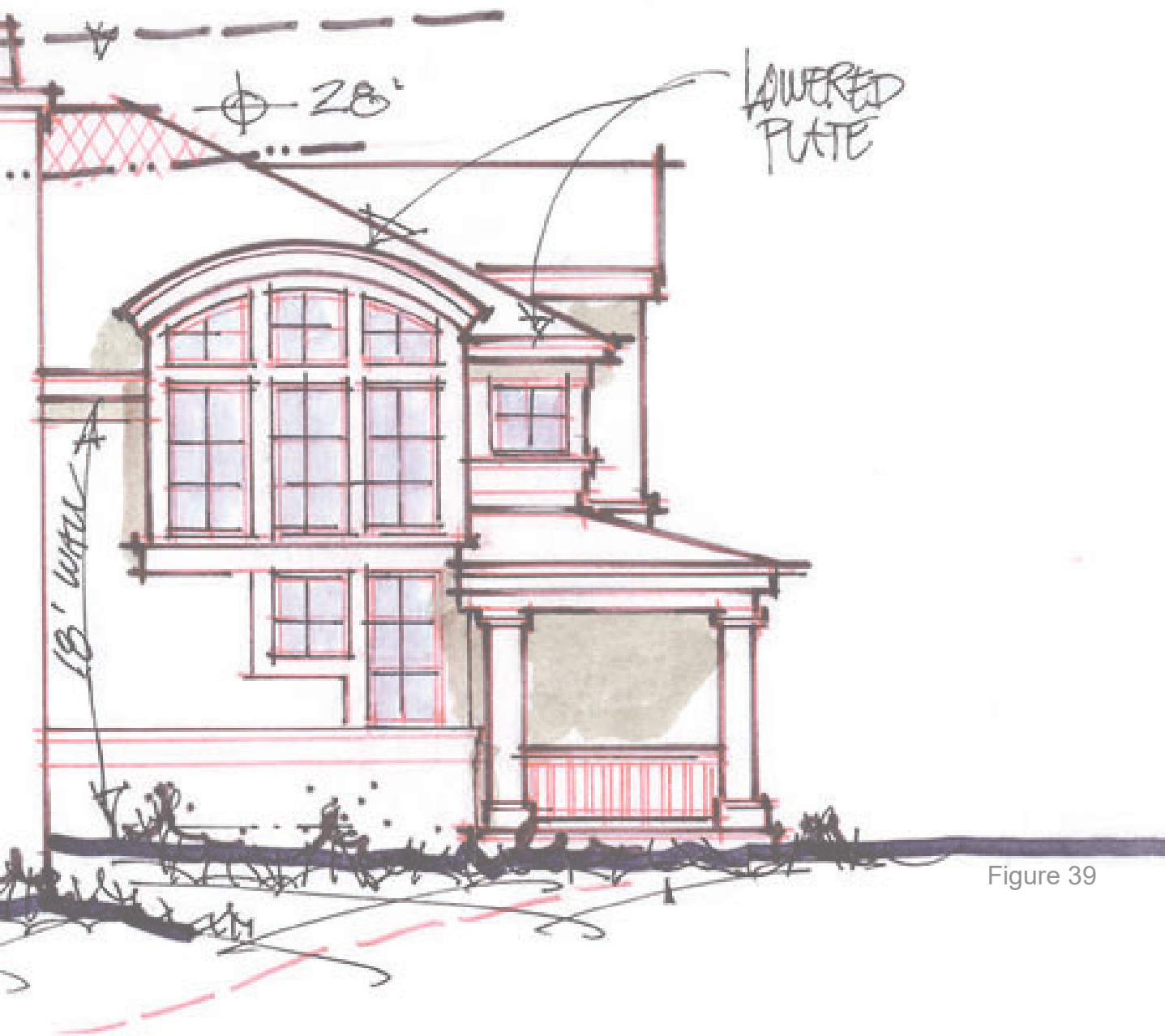
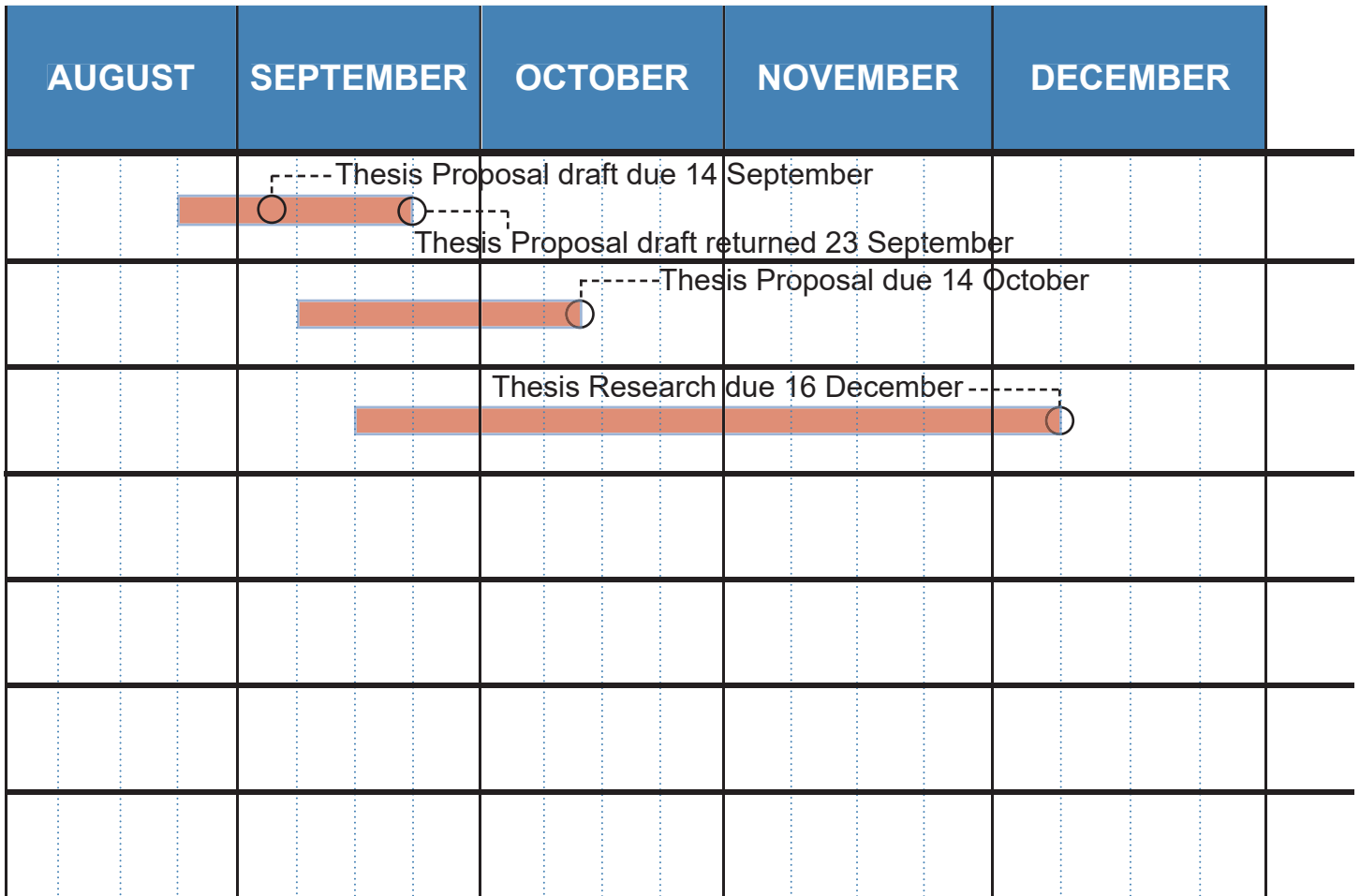


Figure 39

PLAN FOR PROCEEDING

A SPECIFIC SCHEDULE FOR THE PROJECT

FALL SEMESTER 2021



SPRING SEMESTER 2022

JANUARY	FEBRUARY	MARCH	APRIL	MAY
Thesis Research				
Final edited copy due 11 March				
Mid-Term Thesis				
Reviews 7-11 March				
Digital copy of thesis exhibit due 22 April at 5 p.m.				
All physical exhibit due 25 April at 9 a.m.				
Annual thesis exhibit 5th floor Ren Hall 26-28 April				
Final thesis review 2 - 5 May				
Thesis Book due 13 May				
Digital copy of complete Thesis Book due to Instructors 9 May				

THESIS RESEARCH



Figure 40

PREMISE RESEARCH TOPIC 1

Introduction

Brenham Police Department - Brenham, Texas serves a population of approximately 14,000 people. There are 26 officers that work out of the new police station. Since 2017, Texas has experienced a population growth of more than 379,000 people, making it one of the fastest-growing states in the country. Despite the popular claim that everyone moving to Texas is from the so-called “California exodus,” there are many other states people are moving out of to experience a new life in the Lone Star State.

Building

Your building’s design and flow should cater to your processes and procedures, making operations easier and more efficient. While there is a place for aesthetically pleasing design in a police station, function is the first priority. Design should never impede the job that needs to be done.



Figure 41

Analysis

There is no template or formula for a successful police station design. Many stations have similar components or core functions, but personnel use them in different ways and need them to perform to different standards.

For example, it's safe to say every police department needs an evidence room. Based on their operations and case load, however, their needs will vary. One department may need an 800 sq. ft. room, while another needs 3,000 sq. ft. for evidence storage.

A department's needs, wants, and vision for the future—as well as the future of the community they serve—all inform their building's design. So where do you start? There are a few important things to consider early when planning for a new law enforcement facility.

Conclusion

The design of a police station only addresses a portion of the important issues impacting police and community relationships. But as the physical embodiment of neighborhood safety, it can certainly set the tone. But a number of architects are re-examining how these buildings can impact community relations, advancing new concepts for police stations that create better spaces for law enforcement and locals.



Figure 42

PREMISE RESEARCH TOPIC 2

Introduction

Law enforcement facilities are unique because of their dramatically different user groups. This can include officers, detectives, administrative staff, public safety communications/dispatch personnel, individuals in police custody, and the general public.

This means you must consider a wide variety of uses for your building—both current and future—as well as what type of space (and how much of it) those uses require to be effective.



Figure 43

Analysis

Location of a new police headquarters or station is key to its ability to serve the community. Oftentimes, citizens want to feel close to the station or want it to be a visible and accessible part of the neighborhood or city—not an unapproachable place at the edge of town. This makes them feel safer and more connected to the force.

If you are looking for a new site, it's also important to consider your call volume and where your force is most active. What possible obstacles exist for a particular spot? Are there active train tracks nearby? A busy school? While officers spend most of their time in their vehicles, consider the ease with which they can access the station for roll call, training, and other functions, as well as accessibility to those you serve.

The physical plot of land is also important. If you currently own a site that you want to rebuild on, is it large enough to accommodate the way your department operates today, compared to when it was purchased? Is there room for an addition or larger building footprint? Will there be space for expansion in the future if necessary?

Also think about other properties your department owns, such as storage facilities or ancillary training facilities. Are these things that could be consolidated onto a new site to centralize your operations and save money?

Some police headquarters are located in a municipal complex with other city functions, such as clerk, mayor, or even school administration offices. This can be a viable option to save on cost. However, if you are considering this approach, make sure it is appropriate for your department's operations, growth potential, and future space needs. It can be much harder to expand down the road when sharing a site with other offices.

Conclusion

These types of redesigns and new stations address a central issue of police station design, namely that many such structures in big cities still reflect the shift toward patrolling by car, not foot. More mobile patrols do help cops cover more ground, but they also require larger buildings with garages and parking, which can decrease the potential for meaningful connections between officers and the community.

PREMISE RESEARCH TOPIC 3

Introduction

A compact and unitary figure, the new Tourcoing Police Hotel strives to combine three inseparable challenges: to translate the republican idea and represent authority, to secure and reassure a sometimes fragile public, and to offer comfortable and safe working conditions to police officers.



Figure 44

Analysis

A crucial component of an effective police station is technology system design. The devices, software, and systems that police departments use are evolving. From dispatch to patrol to forensics, consider all of the systems you need in place and operational as soon as you move in. Also consider how these tools—or how you use them—can change. Do you have plans to update or phase out equipment you are currently using? What does this look like if the force grows? Work with your technology and design team to accurately estimate what kind of space you need for storage, charging, and maintenance today and in the future. Be sure to think about how you are collecting and using the output from your equipment. What network capabilities do you need for transferring and storing data, such as from vehicle and body cameras? When designing conference and workspaces, consider the tools your team needs to do their job every day. Make decisions about video conferencing, virtual reality training equipment, and other technology tools during the design phase.

Conclusion

In conclusion the choice of materials to the component and technology everything will effect it. making a highly effective police station can be difficult and since every police department has different need you can not always reuse previous designs.

PREMISE RESEARCH TOPIC 4

Introduction

Strong relationships among officers and the community members they serve has never been more important. Police stations are now expected to welcome community members with open arms and reflect the best of their community's values and hopes. No longer glorified bunkers, public safety facilities must instead be beacons of safety that symbolically and physically act as the center of a community. They need to appear transparent, consider the cultural and historical context of their location and have the ability to be safe havens in crises.



Figure 45

Analysis

Police station design is no longer just about building a secure, operational building. More than ever before, integration and relationship building with the community is a significant component of effective law enforcement. Consider how you can connect your new space with the community surrounding it, while maintaining the necessary level of security.

Are there shared spaces you can create to increase your reach into the neighborhood? This might include a gym for use by all municipal employees, a parking garage open to the public, or a green space or a basketball court accessible to passersby.

The more you can provide benefits for and connectivity with citizens, the more buy in and support you will have for your construction project. This can also earn more support for your department as a whole by increasing opportunities for interaction with those you protect and serve.

Conclusion

A high-performance facility offers one of the best ways to make the most of precious resources. High-performance design focuses on conserving energy, water and funds. It features right-sized buildings, efficiently laid out spaces, durable low-maintenance materials and adequate daylighting. Many of these characteristics directly relate to sustainability; all relate to resilient design and maintenance costs, through good times and bad — and all factored into the decision to incorporate renewable energy and pursue LEED Platinum certification



Figure 46

LITERATURE REVIEW

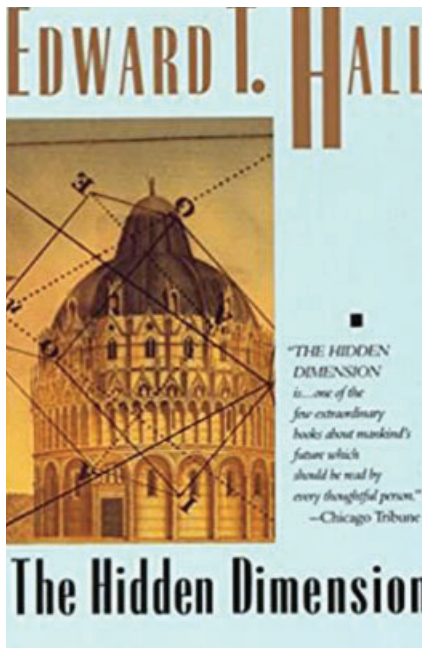


Figure 47

Architects traditionally are preoccupied with the visual patterns of structures—what one sees. They are almost totally unaware of the fact that people carry around with them internalizations of fixed-feature space learned early in life. It isn't only the Arab who feels depressed unless he has enough space but many Americans as well. As one of my subjects said: "I can put up with almost anything as long as I have large rooms and high ceilings. You see, I was raised in an old house in Brooklyn and I have never been able to accustom myself to anything different." Fortunately, there are a few architects who take the time to discover the internalized fixed-feature needs of their clients. However, the individual client is not my primary concern. The problem facing us today in designing and rebuilding our cities is understanding the needs of large numbers of people. We are building huge apartment houses and mammoth office buildings with no understanding of the needs of the occupants. The important point about fixed-feature space is that it is the mold into which a great deal of behavior is

It was this feature of space that the late Sir Winston Churchill referred to when he said: "We shape our buildings and they shape us." During the debate on restoring the House of Commons after the war, Churchill feared that departure from the intimate spatial pattern of the House, where opponents face each other across a narrow aisle, would seriously alter the patterns of government. He may not have been the first to put his finger on the influence of fixed-feature space, but its effects have never been so succinctly stated.

In couple of the chapters it states that we are devoted to the senses, the physiological base shared by all human beings, to which culture gives structure and meaning. It is this precultural sensory base to which the scientist must inevitably refer in comparing the proxemic patterns of Culture A with those of Culture B. Thus, we have already considered two proxemic manifestations. One, the in/racultural, is behavioral and is rooted in man's biological past. The second, precultural, is physiological and very much in the present. The third, the microcultural level, is the one on which most proxemic observations are made. Proxemics as a manifestation of microculture has three aspects: fixed-feature, semifixed-feature, and informal.

Fixed-feature space is one of the basic ways of organising the activities of individuals and groups. It includes material manifestations as well as the hidden, internalized designs that govern behavior as man moves about on this earth. Buildings are one expression of fixed-feature patterns, but buildings are also grouped together in characteristic ways as well as being divided internally according to culturally determined designs. The layout of villages, towns, cities, and the intervening countryside is not haphazard but follows a plan which changes with time and culture. Even the inside of the Western house is organized spatially. Not only are there special rooms for special functions—food preparation, eating, entertaining and socializing, rest, recuperation, and procreation—but for sanitation as well. Sometimes happens, either the artifacts or the activities associated with one space are transferred to another space, this fact is immediately apparent. People who “live in a mess” or a “constant state of confusion” are those who fail to classify activities and artifacts according to a uniform, consistent, or predictable spatial plan. At the opposite end of the scale is the assembly line, a precise organization of objects in time and space.

The relationship of fixed-feature space to personality as well as to culture is nowhere more apparent than in the kitchen. When micropatterns interfere as they do in the kitchen, it is more than just annoying to the women I interviewed. My wife, who has struggled for years with kitchens of all types, comments on male design in this way: “If any of the men who designed this kitchen had ever worked in it, they wouldn’t have done it this way.” The lack of congruence between the design elements, female stature and body build (women are not usually tall enough to reach things), and the activities to be performed, while not obvious at first, is often beyond belief. The size, the shape, the arrangement, and the placing in the house all communicate to the women of the house how much or how little the architect and designer knew about fixed-feature details

LITERATURE REVIEW

One of the major criticisms of Hall's work is the fact that the distances for each zone are not universal, but extremely sensitive to cultural differences. He acknowledges in his writing that his distances are based off interpersonal interaction of people in the Northeastern Seaboard of the United States, and should not be taken as globally applicable. He in turn dedicates chapters eleven and twelve to expanding on this point by comparing European, Arab and Japanese dynamics in relation to proxemics. These applications tie in with sensory perception and often times are discussed using a person's sense of smell, which is not vital to combat profiling.

One final positive note, though, is the degree to which Hall discusses territoriality, which has a number of applications to combat profiling. This is what guides the way in which a person reacts when his intimate zone has been breached as well as how we discuss anchor points in the geographics domain. He defines territoriality as what happens when a person lays claim to an area and defends it from others. This is one factor that lets us predict human behavior.

Again, if you are just beginning to learn about profiling, I would not recommend that you buy this book, as there are a number of others that have greater overall application to our material. If you are at the point in your learning that you want to understand where the concepts originally developed, this can be a resource, but I wouldn't expect too much additional insight.

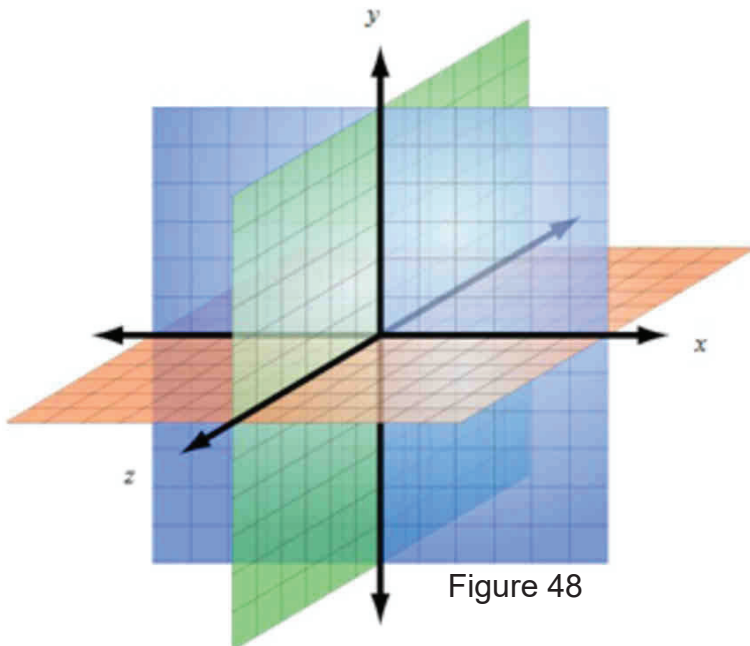


Figure 48

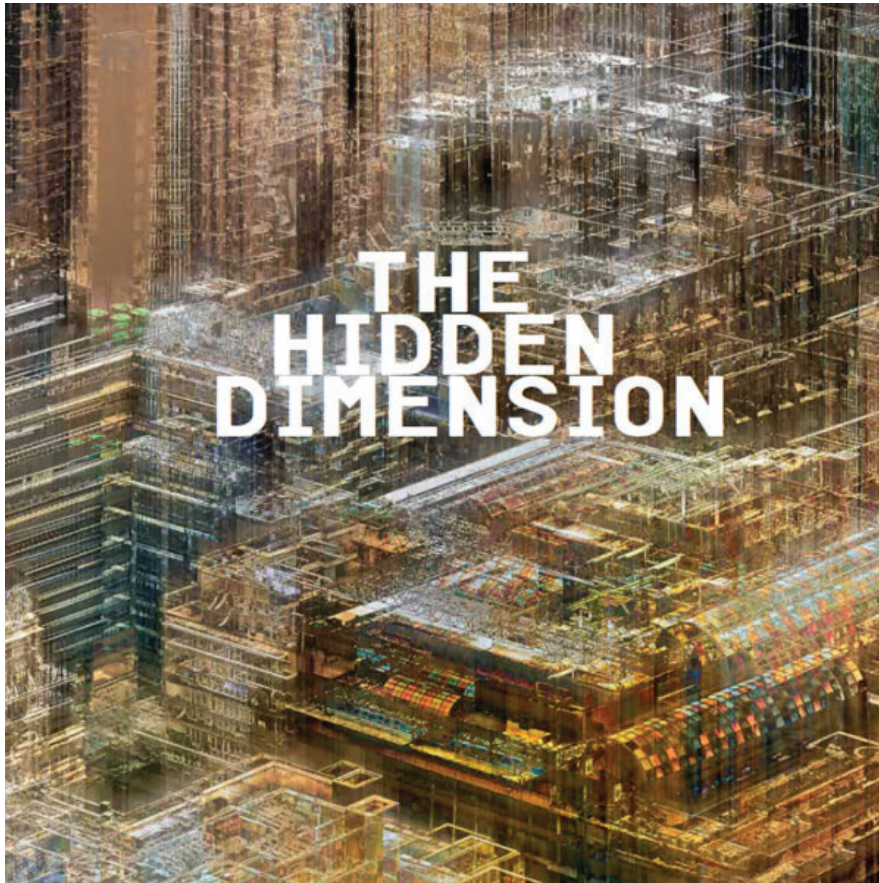


Figure 49

LITERATURE REVIEW

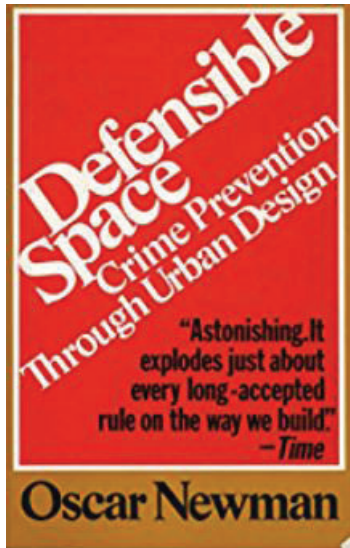


Figure 50

In Newman's book *Defensible Space*, defensible space is "a residential environment whose physical characteristics building layout and site plan function to allow inhabitants themselves to become key agents in ensuring their security." He goes on to explain that a housing development is only defensible if residents intend to adopt this role, which is defined by good design. Both society and physical elements are parts of a successful defensible space.

Defensible Space relies on self-help rather than on government intervention, and so it is not vulnerable to government's withdrawal of support. It depends on resident involvement to reduce crime and remove the presence of criminals. It has the ability to bring people of different incomes and race together in a mutually beneficial union. For low-income people, Defensible Space can provide an introduction to the benefits of mainstream life and an opportunity to see how their own actions can better the world around them and lead to upward mobility. Over the past 25 years, our institute has been using Defensible Space technology to enable residents to take control of their neighborhoods, to reduce crime, and to stimulate private reinvestment. We have been able to do this while maintaining racial and economic integration. The process has also produced inexpensive ways to create housing for the poor, often without government assistance. In this chapter, I will briefly explain the origins and principles of Defensible Space and introduce the reader to the results of our various research projects.

A frequent complaint from residents of communities surrounding large public housing projects is that the teenage criminals living in the projects make use of the large, anonymous environment of the housing project as a place to retreat and hide. For example, there is a particularly notorious project in Jersey City that is located adjacent to U.S. Highway 1 entering New York City. A traffic light at an intersection that borders the project forces truckers to stop there on their way into New York. Teenage project residents have developed a pattern of hijacking trucks at the stoplight, by throwing the driver out and driving the truck into the project. The truck is then emptied in a matter of minutes and the look hidden in vacant apartments.

The relationship between the socioeconomic characteristics of residents and a project's crime rate had long been suspected. The most fascinating finding to come out of the data analysis presented in *Defensible Space* (1972) was, therefore, the influence of building height and number of units per entry in predicting crime rate. Regardless of the social characteristics of inhabitants, the physical form of housing was shown to play an important role in reducing crime and in assisting residents in controlling behavior in their housing environments.

In addition to the fact that buildings with a large number of families sharing an entry experience higher crime rates than those with few families per entry, they are also vulnerable to additional types of criminal activity. Most of the crime experienced by residents of single-family buildings is burglary, committed when members of the family are either away from home or asleep. By contrast the residents of large, multifamily dwellings experience both burglaries and robberies. The higher crime rate experienced by residents in large multifamily dwellings is mostly attributable to the occurrence of robberies in the interior common-circulation areas of multifamily buildings: lobbies, hallways, stairs, and elevators. These are also the areas where criminals wait to approach their victims and force them into apartments for the purpose of robbing them.

Of a total of 8,611 felonies reported in all New York City Housing Authority projects in 1969 (excluding intrahousehold incidents), 3,786, or 44 percent, were committed in the interior public areas of buildings. Of the crimes 25 3-4 Floor 6-7 Floor 12-30 Floor Walkups Medium rises Highrises Creating Defensible Space committed in interior public areas, 3,165, or 84 percent, were robberies. The breakdown by location of the felonies taking place in interior public areas was: elevators, 41 percent; hallways, 22 percent; lobbies, 18 percent; stairways, 9 percent; roof landings, 2 percent; and other, 8 percent.

LITERATURE REVIEW

In implementing our designs, the city decided to simplify my gate design, eliminating the pedestrian gate on either side of the road and the fence extension from the pedestrian gate onto the adjacent property. The city also eliminated the lights we proposed for the tops of the pillars. These were intended to illuminate the gates at night. The city used large reflectors instead, saving money by not having to provide lights, Gates as actually installed. replacement bulbs, or wiring from the nearest electric utility pole. The result is not too elegant and detracts from the stylishness of the gate.

The basic reason for the city changing the gate design was cost. Only 70 percent of the residents wanted the mini-neighborhood design implemented, and in order to placate the others, the city manager promised that a survey would be taken at the end of the first year. If the majority of residents wanted the gates removed, the city would remove them. This policy dictated that the gate design be simple to minimize costs both for implementation and removal. Although there is still another reason why the pedestrian gates were eliminated: The city wanted it made clear that the gates were intended to restrict automobile traffic only, and that pedestrians would continue to have unlimited access to every street. It should be remembered that children would still have to walk through various mini-neighborhoods to get to and from school.



Figure 51

Coordinate police activities with target areas. Once the gates were installed, police, in a concerted effort, came in and flushed out the drug dealers, pimps, and prostitutes. They had done this before in Five Oaks, but the criminals had come back a week or 2 later. However, when the criminals were removed after the gates were installed, they did not return. I believe that this police component is very important to the success of the entire program. Continual police liaison with the community and their participation in community planning meetings is also essential to giving the community the reassurance it needs. The effect of creating mini-neighborhoods in other communities where I have worked as been to personalize community/police relations. Creating minineighborhoods has produced a genuine appreciation of the police for the work they do and has resulted in a focused program by the police to eliminate the real problems threatening the community. Police officers come to be recognized and known by their first names. The police, in turn, now know many community residents by name. When a problem arises, they usually know exactly where to go to address it. A year after the modifications, police say it takes a much smaller expenditure of force on their part to keep Five Oaks free of crime.

One of the benefits of street closure and the creation of mini-neighborhoods is that it brings neighbors together in unified action to address their joint problems. It also focuses their attention on removing criminal activity from their communities. Rather than having one or two hesitant neighbors acting in isolation to bring criminal activity to the attention of the police, an entire street, or a mini-neighborhood, now acts in concert to alert the police and provide them with support in their anticrime efforts. A united community can more readily document criminal activity and photograph and identify criminals. Immediately after the street closings, police will be called upon by the community more frequently. These calls for service will diminish rapidly as the word about the street closures spreads to criminals and their clients. Police will find themselves working with a community that has a clearer sense of its own values and how they want the police to assist them. It should prove easier for the police to make arrests and to discourage further criminal activity within the community.

Historical Research

It would be easy to think that the police officer is a figure who has existed since the beginning of civilization. That's the idea on display in the proclamation from President John F. Kennedy on the dedication of the week of May 15 as "National Police Week," in which he noted that law-enforcement officers had been protecting Americans since the nation's birth.

In fact, the U.S. police force is a relatively modern invention, sparked by changing notions of public order, driven in turn by economics and politics, according to Gary Potter, a crime historian at Eastern Kentucky University.

Policing in Colonial America had been very informal, based on a for-profit, privately funded system that employed people part-time. Towns also commonly relied on a "night watch" in which volunteers signed up for a certain day and time, mostly to look out for fellow colonists engaging in prostitution or gambling. (Boston started one in 1636, New York followed in 1658 and Philadelphia created one in 1700.) But that system wasn't very efficient because the watchmen often slept and drank while on duty, and there were people who were put on watch duty as a form of punishment.

Night-watch officers were supervised by constables, but that wasn't exactly a highly sought-after job, either. Early policemen "didn't want to wear badges because these guys had bad reputations to begin with, and they didn't want to be identified as people that other people didn't like," says Potter. When localities tried compulsory service, "if you were rich enough, you paid someone to do it for you — ironically, a criminal or a community thug."

In cities, increasing urbanization rendered the night-watch system completely useless as communities got too big. The first publicly funded, organized police force with officers on duty full-time was created in Boston in 1838. Boston was a large shipping commercial center, and businesses had been hiring people to protect their property and safeguard the transport of goods from the port of Boston to other places, says Potter. These merchants came up with a way to save money by transferring to the cost of maintaining a police force to citizens by arguing that it was for the "collective good."

In the South, however, the economics that drove the creation of police forces were centered not on the protection of shipping interests but on the preservation of the slavery system. Some of the primary policing institutions there were the slave patrols tasked with chasing down runaways and preventing slave revolts, Potter says; the first formal slave patrol had been created in the Carolina colonies in 1704. During the Civil War, the military became the primary form of law enforcement in the South, but during Reconstruction, many local sheriffs functioned in a way analogous to the earlier slave patrols, enforcing segregation and the disenfranchisement of freed slaves.

In general, throughout the 19th century and beyond, the definition of public order — that which the police officer was charged with maintaining — depended whom was asked.

For example, businessmen in the late 19th century had both connections to politicians and an image of the kinds of people most likely to go on strike and disrupt their workforce. So it's no coincidence that by the late 1880s, all major U.S. cities had police forces. Fears of labor-union organizers and of large waves of Catholic, Irish, Italian, German, and Eastern European immigrants, who looked and acted differently from the people who had dominated cities before, drove the call for the preservation of law and order, or at least the version of it promoted by dominant interests. For example, people who drank at taverns rather than at home were seen as “dangerous” people by others, but they might have pointed out other factors such as how living in a smaller home makes drinking in a tavern more appealing.



Figure 52 | New York Police Department in late 1800s, photo credit | www.insider.com

Qualitative Research

Most police activity occurs in private, away from the public's view. This creates a situation that allows police officers discretion in the way they think about what they see and how they handle those with whom they come in contact. There has been an effort by the research community to examine issues concerning how police act and respond in general and what police do specifically when they interact with citizens. A conspicuous void in the research effort has been the lack of attention paid to the process by which police officers form suspicion about a suspect whether or not a formal intervention such as a stop was made. Officers in Savannah, Georgia were observed and debriefed after they became suspicious about an individual or vehicle. Observers accompanied officers on 132, 8-hour shifts, during which time, the officers formed suspicion 174 times. A forming suspicion occurred any time an officer became doubting, distrustful or otherwise troubled or concerned about an individual. In most of the cases, it was the behavior of the suspect(s) that concerned the officer. This concern did not always result in a stop of an individual or vehicle. In some cases, the officers realized that their initial suspicion was unsupported. In fact, 103 stops resulted from the suspicions that were formed by the officers during the times they were observed. Several factors were significantly associated with the likelihood that an officer would make a stop based on suspicion. Interestingly, none of the characteristics of the suspect was important. In other words, officers were equally likely to stop individuals whether they were male or female, African-American or white, low or high socioeconomic status. This document is a research report submitted to the U.S. Department of Justice. This report has not been published by the Department. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice. The encounters were assessed by the interactions between the officers and suspects. Although most encounters went smoothly, some changed character based on the actions and attitudes of one or both of the actors.



Figure 53

Correlational Research

The field of criminology studies the dynamics of crime. Most of these studies use correlational data; that is, they attempt to identify various factors associated with specific categories of criminal behavior. Such correlational studies led to hypotheses about the causes of these crimes. It is important to rigorously evaluate policing practices to identify those that are effective and to facilitate the exchange of data and research between the policing community and academia. Data, when analyzed and translated into knowledge and insights, can drive better, more informed decision-making. Research evidence is very important to the development of criminal justice decision-making. Through well-designed and implemented research, we can better explore the impact of policies, programs, and daily practices; we can “see if they work,” for example if they reduce crime.

The research question and goal of the present study was to understand to what extent if any, does a relationship exist between leadership within the police department and the morale of law enforcement officers and the overall workplace morale. This study examined two subquestions regarding: (a) the relationship between leadership and law enforcement officer’s morale in regards to retention rates within law enforcement departments; and (b) the relationship between leadership and law enforcement officer’s morale in regards to turnover rates within law enforcement departments. All participants in the study included only law enforcement agencies and their officers. Throughout the study, the internal validity of leadership was related to morale, retention, and turnover rates. Additionally, the external validity in the study was strong as the participants (law enforcement officers) were good representations of the population under study. Overall, this study answered the research questions through strategically employing and administering a quantitative correlational survey research design through conducting a Likert-type survey in Qualtrics. Qualtrics allowed the researcher to organize and analyze all data based on survey question responses. Once all data was collected, the data was organized in SPSS. SPSS allowed the researcher to run statistical analysis for the Spearman rho correlations. Spearman rho 65 correlational analysis allowed the researcher to examine whether a relationship existed between leadership and morale, morale and retention rates, and morale and turnover rates. Based on the review of literatures, conceptual-theoretical framework, and quantitative survey design, there was sufficient reason for administering an investigation examining the relationship between leadership and morale, especially in regard to retention rates, and turnover rates.



Figure 54

Project Justification

Why is the project that you have defined important to you as a person?

My project is important to me because I am pursuing law enforcement and architecture. I want to find the similarities and how they can benefit each other.

How is the project going to add to your knowledge base?

This project will help me in my architecture career as well as my law enforcement job. It will add a better understanding in why we do, what we do in construction and in law enforcement buildings. It will strengthen both perspectives from the architecture standpoint and the police view.

Is the technology to be used in your project justified considering all its aspects?

Yes, the technology in law enforcement centers is a must. For safety, security, and to properly fulfill the jobs requirements.

Why is the project important to be implemented in its social context?

The police and criminal justice system are what makes our social context, rules, and norms happen while also enforcing them. Keeping the architecture and technology up to date is critical for our cities and the people that live there.

How is the project justified in its chosen site location?

The project is justified because Minneapolis is struggling with the amount of crime and support from their city government. Creating a new law enforcement center will help the officers and the surrounding community.

Historical, Social and Cultural Context

Before a formal police system was put in place, colonies and cities were protected by a night watch dating all the way back to 1630s. The night watch was made up of men who volunteered for a night's worth of work. Sometimes people were put on the watch as a form of punishment for committing a crime. These watchmen, however, were known to sleep and drink while on duty. During this time period, the wealthiest in the colonies also hired people for protection. Those hired for protection were mostly criminals. The first form of policing in the South was known as slave patrol, which began in the colonies of Carolina in 1704. The patrol was usually made up of three to six men riding horseback and carrying whips, ropes, and even guns.

During the 1960s, African Americans began to challenge the way police were treating their communities. To protest the treatment and racial profiling, riots, boycotts, and peaceful protests broke out in the US, mainly in the South. In response, the police used harsh tactics to keep order, including tear gas, high-pressure water hoses, and attack dogs. Some of these events were televised nationally



Figure 55

Site and Context Analysis

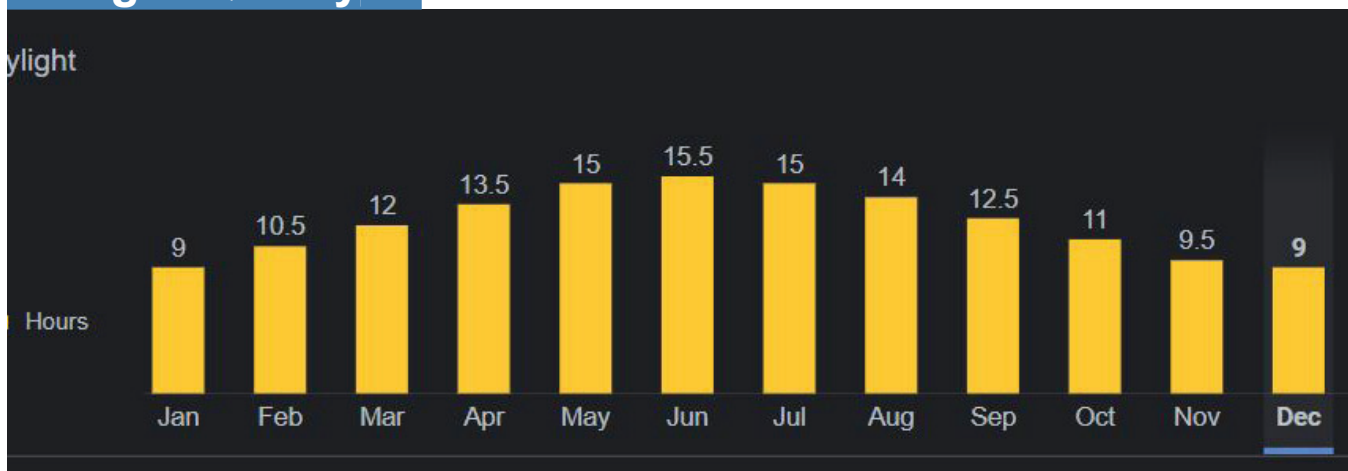
Qualitative Aspects

Skyline

The Stone Arch Bridge has a great view of Minneapolis from the North side. Overlooking the Mississippi River, you can get some great shots both on top of the bridge and below it. While there are pathways under the bridge, don't risk ruining your camera gear to get the perfect shot. Located right on the Mississippi Riverfront, this park features lots of a wide open space and a miniature lighthouse. Combine your love of baseball with a perfect view of the Minneapolis Skyline. This stunning park was built to showcase the existing urban beauty of the city, but the best views are from the stands on the third base line. Pull off on Franklin Avenue and walk over to the 24th street bridge. Overlooking 35W, when it comes to shooting the skyline - this is the money shot. Although it's tough taping through the walkway fence, if you have a tripod you can get a beautiful shot. Keep the camera rolling on the tripod for 15 minutes and speed it up while editing. You'll get a nice time-lapse shot of traffic coming in and out of the city.

Light Quality

Figure 56



Vegetation

The state's original vegetation may be divided into three general categories: needleleaf forest, hardwood forest, and tallgrass prairie. The needleleaf forest occupied the northeastern third of the state and included pine, spruce, and fir, with tamarack in the bog areas.

Water

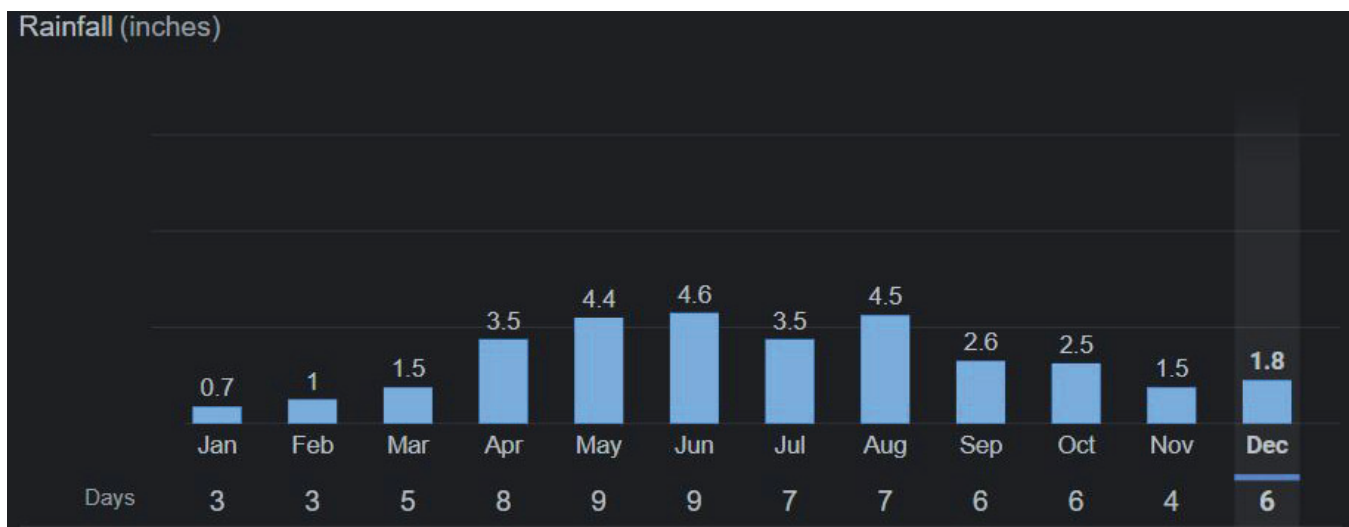


Figure 57

Wind

The average hourly wind speed in Minneapolis experiences significant seasonal variation over the course of the year. The windier part of the year lasts for 8.0 months, from September 27 to May 26, with average wind speeds of more than 9.3 miles per hour. The windiest month of the year in Minneapolis is March, with an average hourly wind speed of 11.1 miles per hour. The calmer time of year lasts for 4.0 months, from May 26 to September 27. The calmest month of the year in Minneapolis is August, with an average hourly wind speed of 7.6 miles per hour

Site and Context Analysis

Quantitative Aspects

Traffic

Thousands of traffic counts are collected on Minnesota roadways each year. This information is used to produce volume, classification, speed and weight data as well as traffic forecasts, vehicle miles traveled (VMT) figures, reports, maps and analysis. Traffic data products are used in safety evaluation, pavement design, funding decisions, forecasting, modeling, and much more.

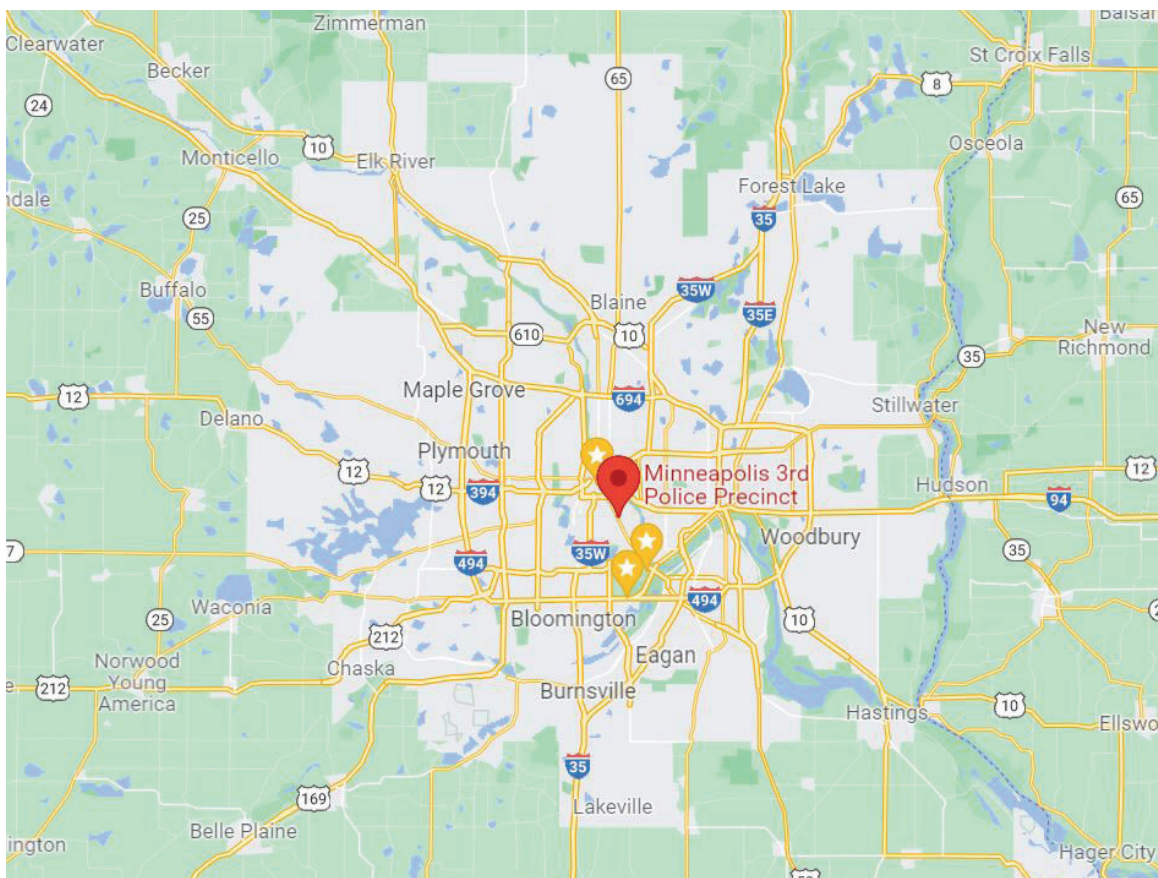


Figure 58

Survey

The topography within 2 miles of Minneapolis contains only modest variations in elevation, with a maximum elevation change of 200 feet and an average elevation above sea level of 833 feet. Within 10 miles also contains only modest variations in elevation (407 feet). Within 50 miles contains only modest variations in elevation (709 feet).

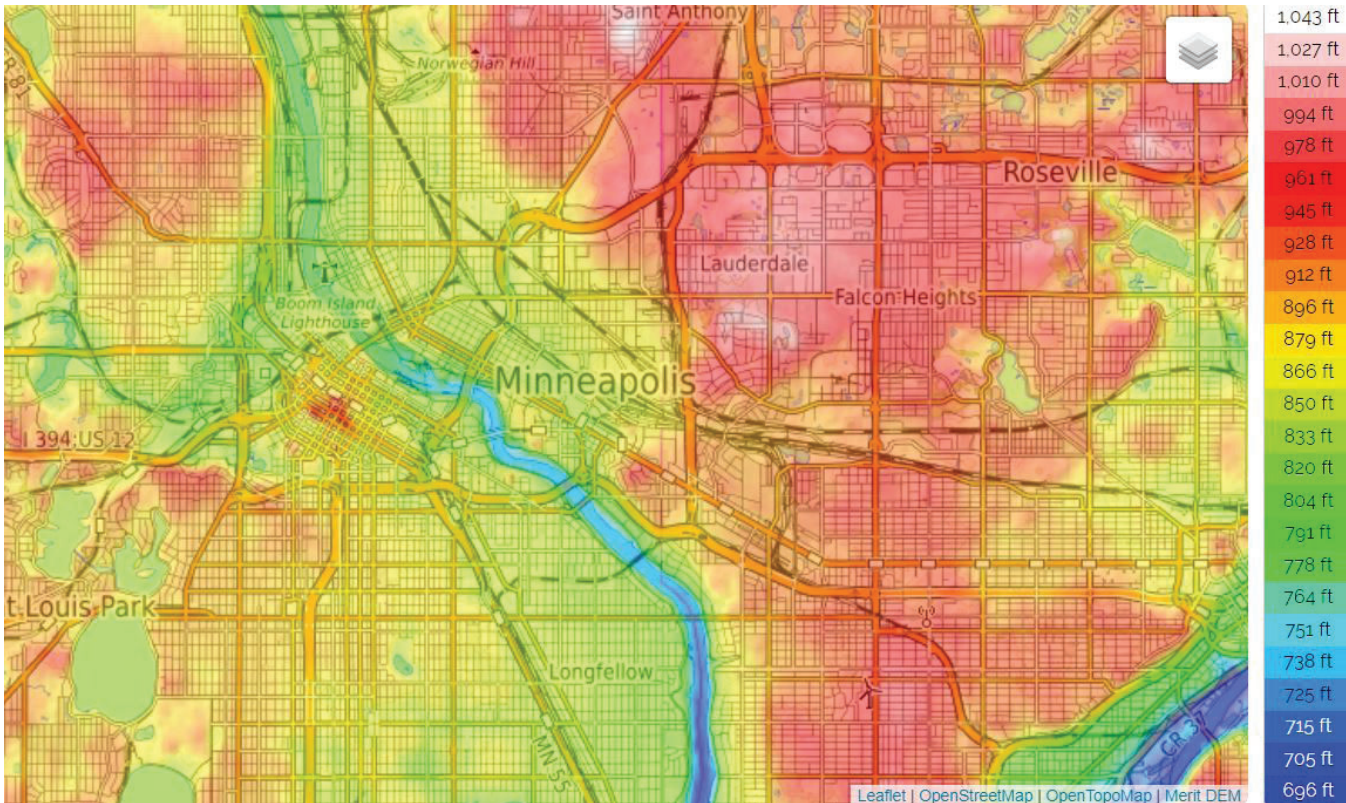


Figure 59

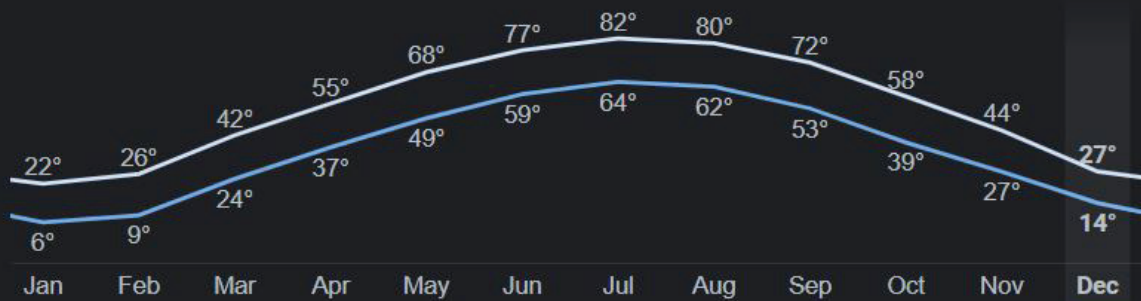
In Minneapolis, the average percentage of the sky covered by clouds experiences significant seasonal variation over the course of the year. The clearer part of the year in Minneapolis begins around June 10 and lasts for 4.2 months, ending around October 17. The clearest month of the year in Minneapolis is July, during which on average the sky is clear, mostly clear, or partly cloudy 70% of the time. The cloudier part of the year begins around October 17 and lasts for 7.8 months, ending around June 10. The cloudiest month of the year in Minneapolis is January, during which on average the sky is overcast or mostly cloudy 59% of the time.

Site and Context Analysis

Climate

Temperatures (°F)

- Highs
- Lows



Rainfall (inches)

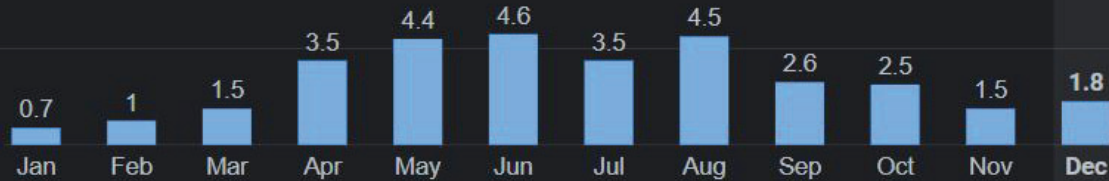
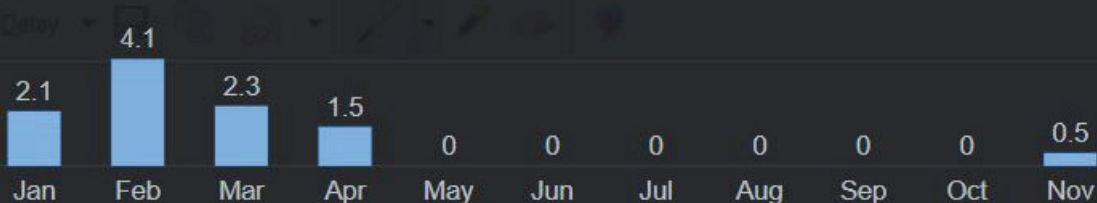


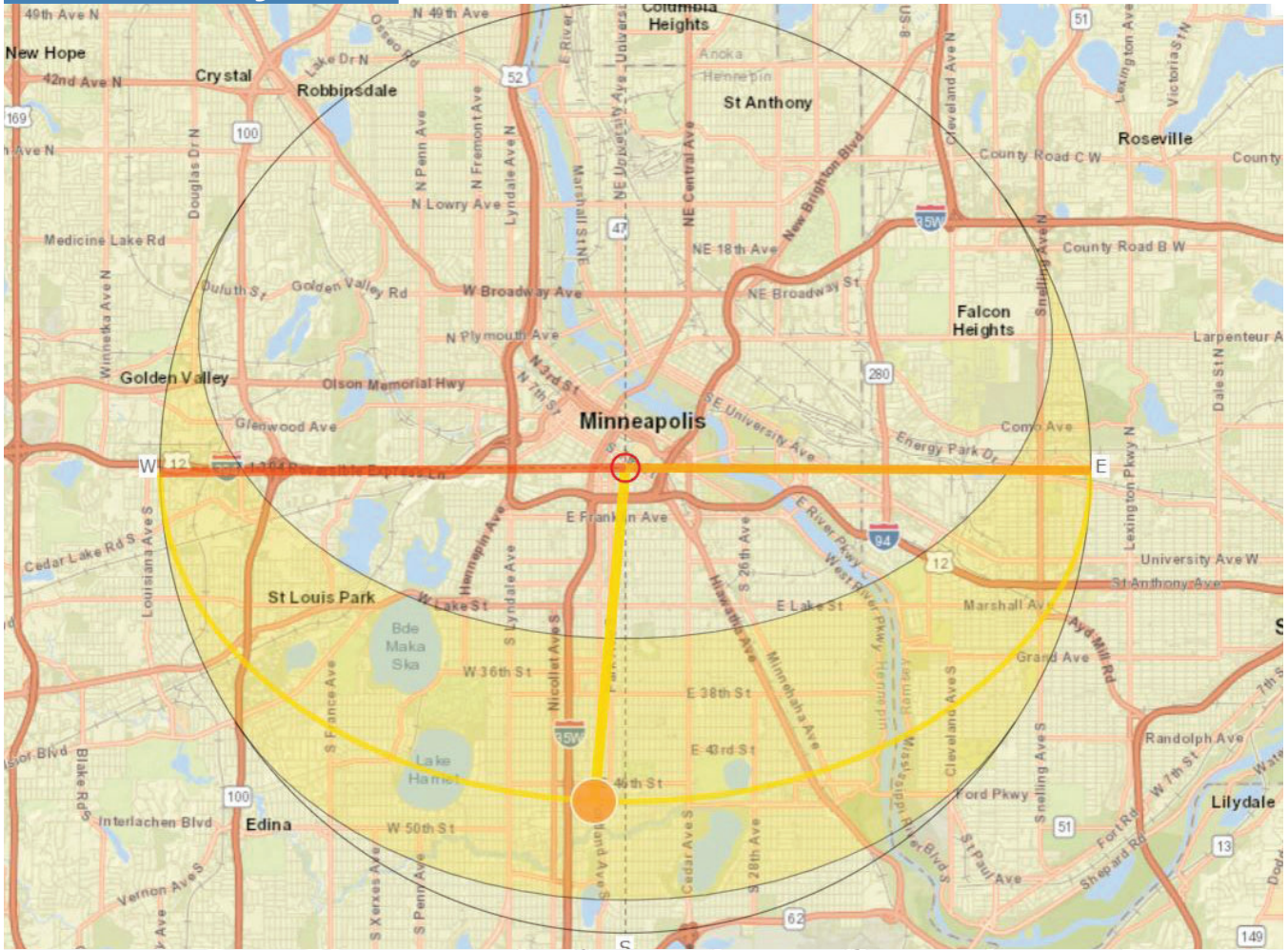
Figure 60 - 63

Snowfall (inches)



Site Analysis

Figure 64 and 65



Performance Criteria

Performance Measure: The Law Enforcement Center's design will be measured in energy use and number of citizens help relating to the number of calls for service. Lastly the city and the designs will take in consideration of the overall community feedback.

Performance Measure Source: The amount of energy used will be obtain through the power service provider but also with the building's own meters. The number of citizens help relating to the number of calls for service will be provide the annual reports that the city officials do and then filtered through what calls were directly related to the new law enforcement center.

Performance Analysis: The kind of analysis that will be done will be created in graphs and drawings. Tools and resources will be generated from online statistics and reports.

Performance Judgement: I will be able to judge the performance that the building meets by taking other police stations and law enforcement centers around the city and averaging the numbers to first clericity that the performance is in the appropriate range of use. Then we will be able to measure the use of the new technologies and alternative energy sources to measure the impact and the difference that the new law enforcement center will create.

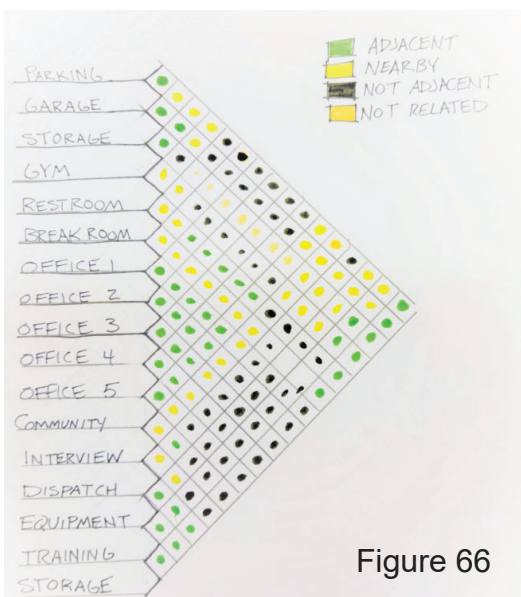


Figure 66

Space Allocation: The amount of space will be based on the number of employees and visitors that will be estimated and expected.

Energy Consumption: The amount of energy that will be measured will be done by the service provider and the buildings own meters.

Environmental Performance: The environmental performance will be measured by the performance indicators. The overall emissions and greenhouse gases, the amount of water consumption from the appliances including the total average use per day. Waste production and gross value that the building generates. Lastly the population of that the law enforcement center will aid.

Behavioral Performance: Varies by job, duties, and resources.

Psychological Impact: The overall sensory experiences and building atmosphere will be inviting, caring, and universally accepted.

Environmental Impact: Varies by materials, services, and economy.

Code Compliance: Will meet all code, guidelines, and requirements for a city building. It will also apply code compliance for safety, security and technology use.

Cost: Varies by material, builders, economy, and time of construction.

	Small		Average		Large	
Outside Parking	1000	30%	2000	30%	4000	30%
Garage	400	17%	800	17%	1600	17%
Storage	100	5%	200	5%	400	5%
Gym	150	8%	300	8%	600	8%
Restroom	80	4%	160	4%	400	4%
Breakroom	125	6%	250	6%	500	6%
Office 1	96	4%	192	4%	400	4%
Office 2	120	6%	240	6%	500	6%
Office 3	96	4%	192	4%	400	4%
Office 4	120	6%	240	6%	600	6%
Office 5	96	4%	192	4%	400	4%
Community Room	150	8%	300	8%	600	8%
Interview Room	64	4%	128	4%	300	4%
Dispatch	125	6%	250	6%	500	6%
Equipment	100	5%	200	5%	400	5%
Training	150	8%	300	8%	600	8%
Storage	100	5%	200	5%	400	5%
TOTAL	2072	100%	4144	100%	8600	100%

Figure 67

Process Documentation

Mass modeling and draft design ideas in the process of final design

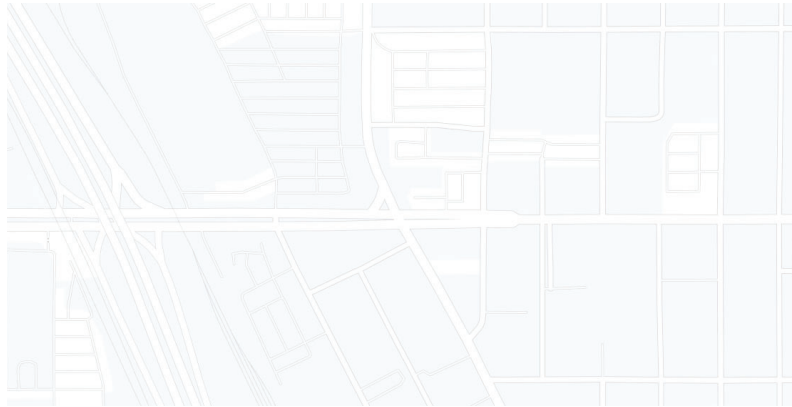


Figure 68

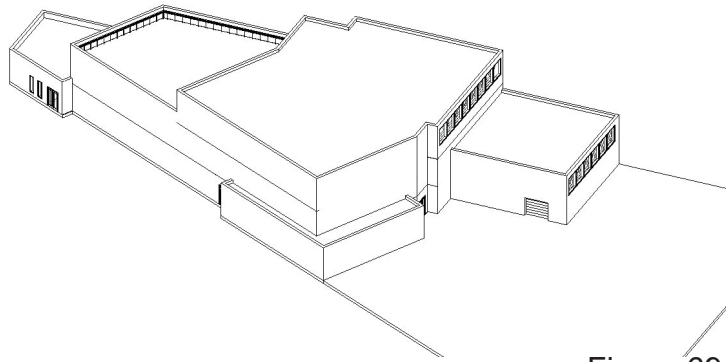


Figure 69

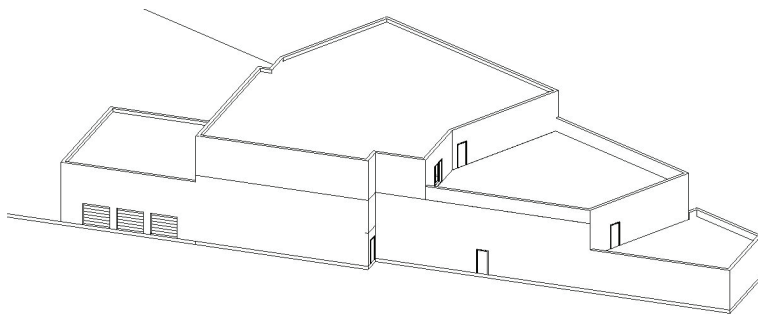


Figure 70

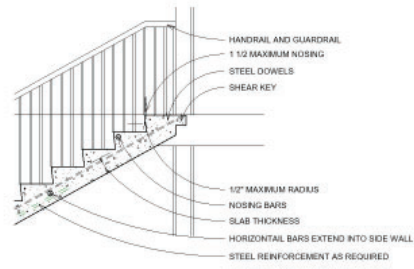
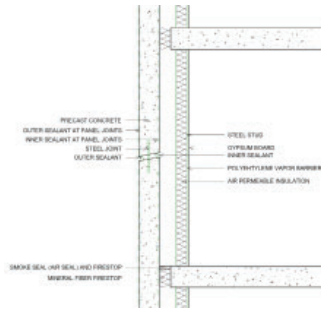


Figure 71 & 72

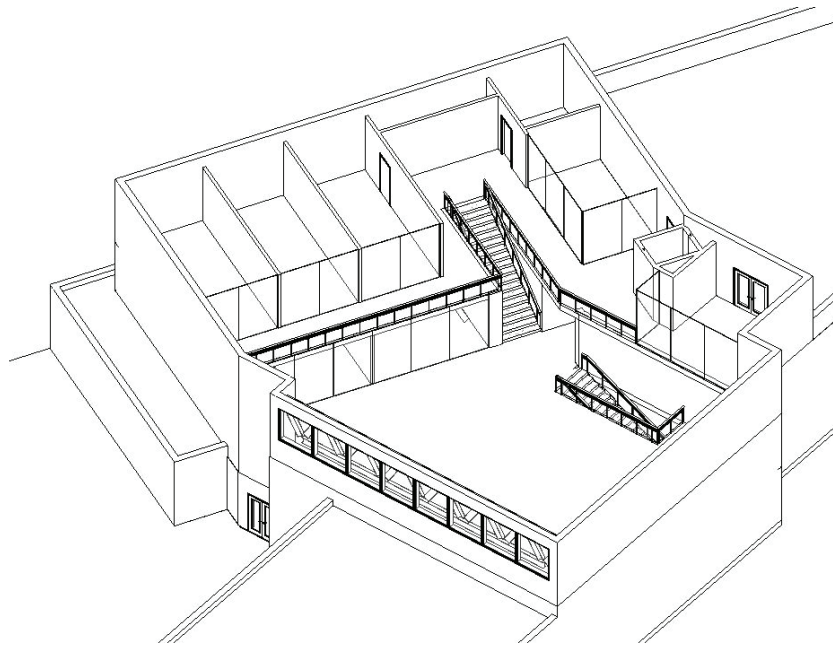


Figure 73

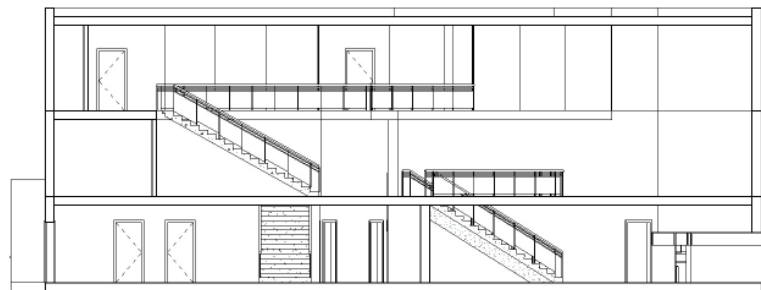


Figure 74

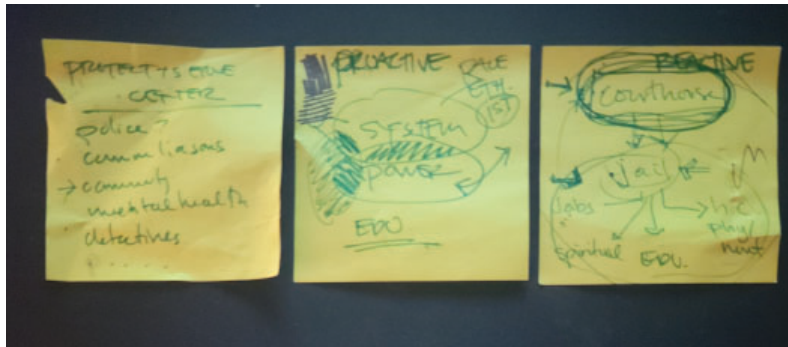


Figure 75

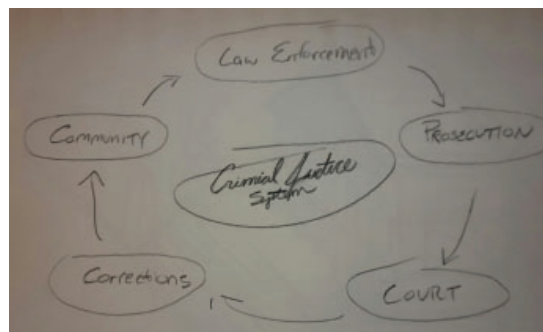
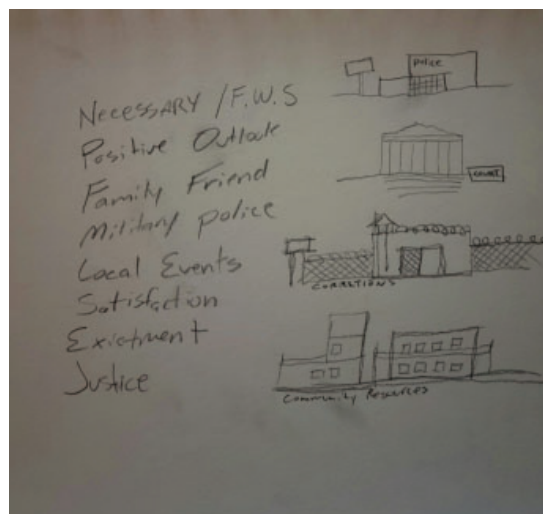


Figure 76 & 77



Project Solution Documentation

Criminal Justice System



Police Stations
Law Offices
Court House
Jails
Prisons
Community Center
Community Support
Social Services

Proactive vs Reactive

Figure 78

Research & Inspiration

Police Station

Case Studies
Literature Reviews
Interviews
History
Site Studies
Preformance
Personal Experience



Figure 79



#1 Improve the criminal justice systems environment



Figure 80

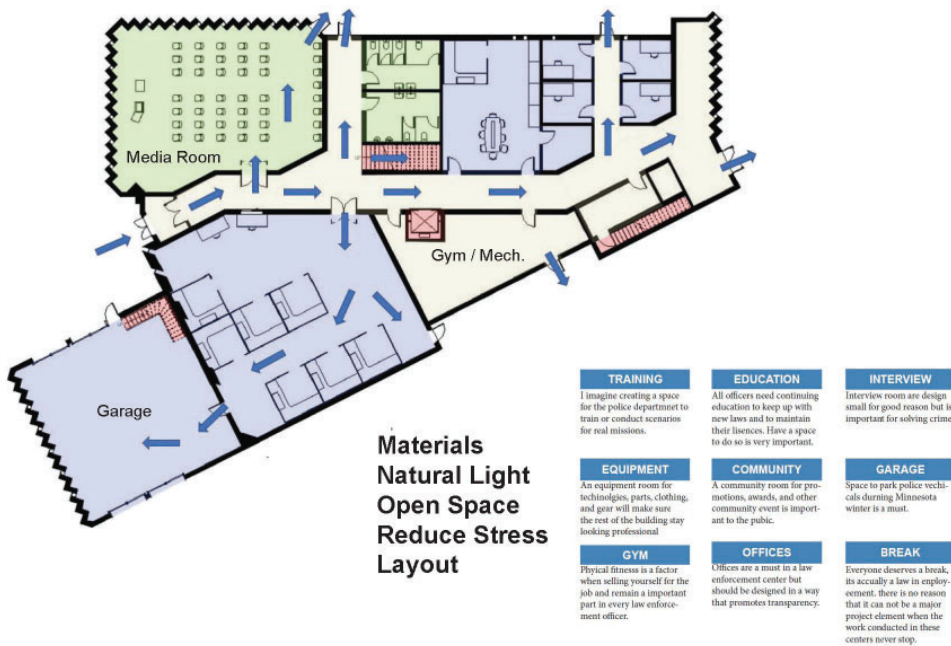


Figure 81

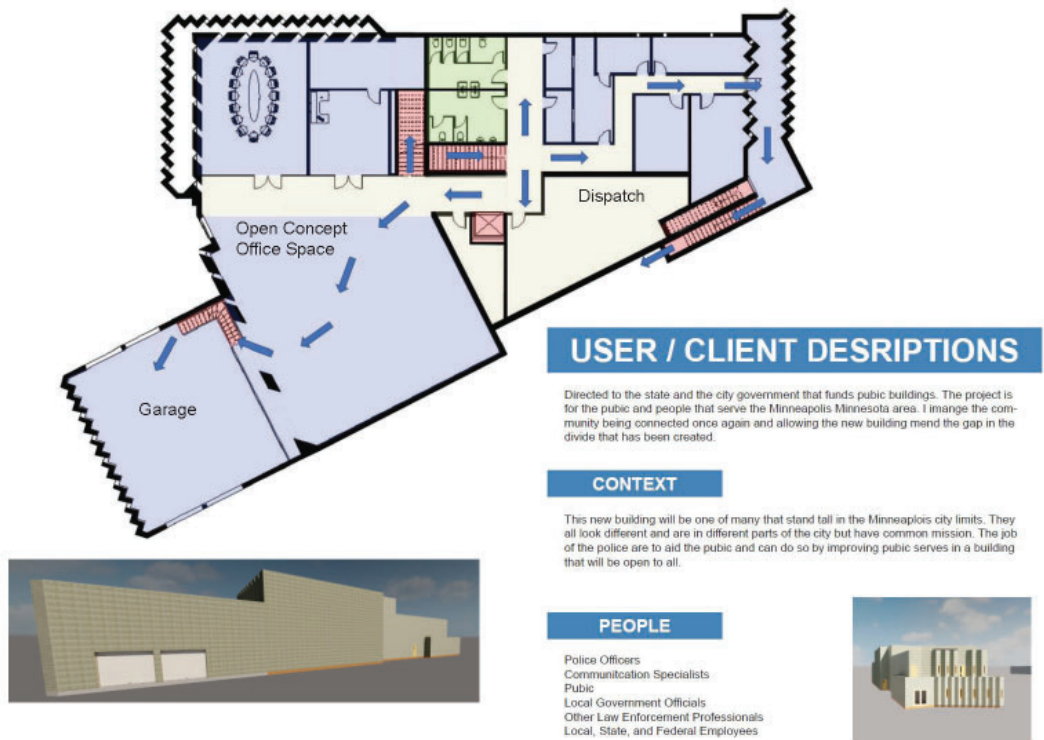


Figure 82

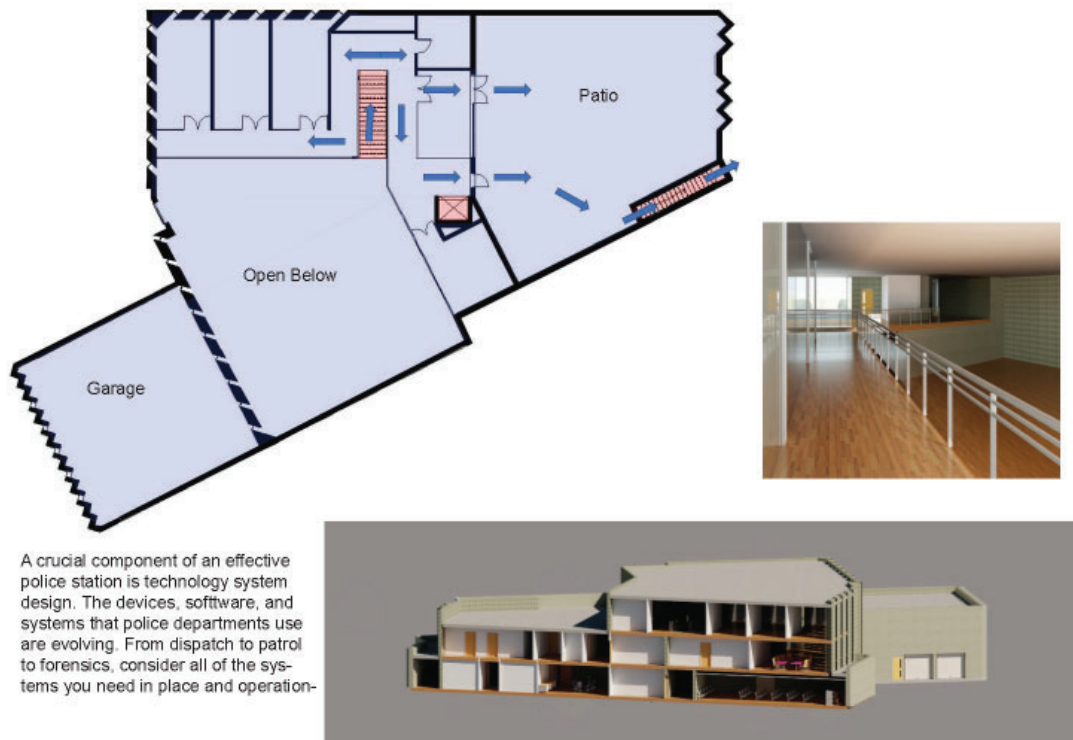


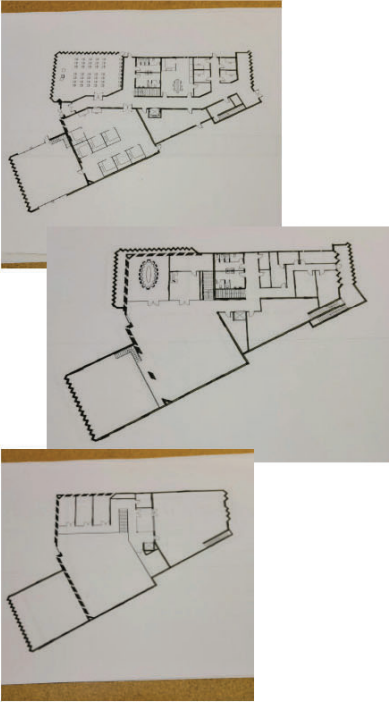
Figure 83



#2 Integrate new ideas, innovative design, and edcate



Figure 84



Program

- 1. Spaces are organized base on efficiency and intersecting second-ary corridors
- 2. Activates conducted in the station's operational functions and inter-actions are encouraged among law enforcement personnel, staff, and administrators.
- 3. The secondary corridor services support spaces.

Energy Efficiency

Is targeted through the use of active solar panels, geothermal HVAC systems and passive systems like natural ventilation, natural daylighting is enhanced with glazing and the tall continuous precast concrete walls that allow large strips of light in.

Form

The station is seeparated into five connected forms. The garage functions, the storage, support, admin, operations and pubic spaces.

#3 Create a warm and inviting place



Figure 85

Performance Measure: The Law Enforcement Center's design will be measured in energy use and number of citizens help relating to the number of calls for service. Lastly the city and the designs will take in consideration of the overall community feedback.

Performance Measure Source: The amount of energy used will be obtain through the power service provider but also with the building's own meters. The number of citizens help relating to the number of calls for service will be provide the annual reports that the city offi cials do and then fi ltered through what calls were directly related to the new law enforcement center.

Performance Analysis: The kind of analysis that will be done will be created in graphs and drawings. Tools and resources will be generated from online statistics and reports.

Performance Judgement: I will be able to judge the performance that the building meets by taking other police stations and law enforcement centers around the city and averaging the numbers to fi rst clericity that the performance is in the appropriate range of use. Then we will be able to measure the use of the new technologies and alternative energy sources to measure the impact and the diff erence that the new law enforcement center will create.



Figure 86



#4 Create an effective and well designed center

The design of a police station only addresses a portion of the important issues impacting police and community relationships. But as the physical embodiment of neighborhood safety will set the tone.

Material & Windows

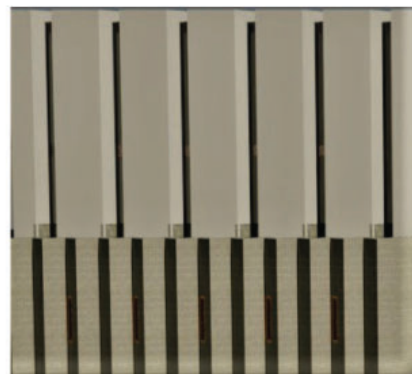


Figure 87



Figure 88

There is no template or formula for a successful police station design. Many stations have similar components or core functions, but personnel use them in different ways and need them to perform to different standards. For example, it's safe to say every police department needs an evidence room. Based on their operations and case load, however, their needs will vary. One department may need an 800 sq. ft. room, while another needs 3,000 sq. ft. for evidence storage. A department's needs, wants, and vision for the future—as well as the future of the community they serve—all inform their building's design.

Response to the Site or Context

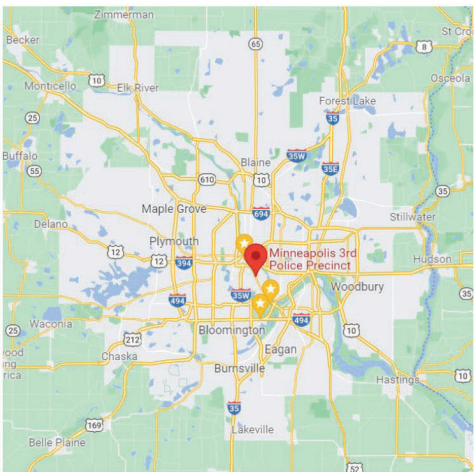


Figure 89

The response to the site had an understanding from the beginning. Have choice to do a remodel or update on a specific building that was burnt down left a template to the site. Having explored other options in place and parking I found that the current location and use of the site was the most effective.



Figure 90



Site

The site is located at 3000 Minnehaha Ave, Minneapolis, MN 55406. This is on the south west coner where Minnehaha Ave meets E Lake Street. The site is trangle in shape and measures approximately 300 feet on the north boundy, 200 feet on the west. The most eastern part of the site is where the building is located, leaving the larger more open area of the site on the west open to parking.

Currently the building and the 3rd Precinct staff includes Patrol Officers and Investigations. This precinct also has a Community Response team and Crime Prevention unit.

Current Site

Location of a new police headquarters or station is key to its ability to serve the community. Oftentimes, citizens want to feel close to the station or want it to be a visible and accessible part of the neighborhood or city—not an unapproachable place at the edge of town. This makes them feel safer and more connected to the force.

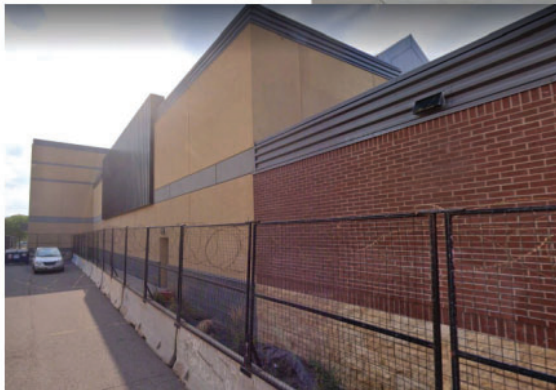


Figure 91

Response to the Typological or Precedent Research



Figure 92

The history of policing and the history of the site was a lot to look into to know what worked and didn't work in the past is important for all new projects that will come to the present. Back in the cities, increasing urbanization rendered the night-watch system completely useless as communities got too big. The first publicly funded, organized police force with officers on duty full-time was created in Boston in 1838. Boston was a large shipping commercial center, and businesses had been hiring people to protect their property and safeguard the transport of goods from the port of Boston to other places, says Potter. These merchants came up with a way to save money by transferring the cost of maintaining a police force to citizens by arguing that it was for the "collective good."

Creating a location for police to work is important because most police activity occurs in private, away from the public's view. This creates a situation that allows police officers discretion in the way they think about what they see and how they handle those with whom they come in contact. There has been an effort by the research community to examine issues concerning how police act and respond in general and what police do specifically when they interact with citizens. A conspicuous void in the research effort has been the lack of attention paid to the process by which police officers form suspicion about a suspect whether or not a formal intervention such as a stop was made.



Figure 93

The Typological Response

In the case studies one through four, all of the projects inquired because they all had some insight, something that we could learn from it. Contains design typology, context, and the site impact. Two of the four projects were designed by the Police Facility Design Group. They have a great approach to creating law enforcement centers. They say, "As a specialist in public safety facilities, we do not believe that there is only one way to plan and design an appropriate public safety facility and we will never force 'our way' on a client. However, we do believe that the best way to meet a client's needs and goals is by possessing a thorough understanding of the job they perform. We strive to develop facilities that stand the test of time; in part, by designing public safety buildings that follow industry standards, adapted to the unique needs of the specific client. We are also leaders in facility innovations that meet the evolving needs of the public safety industry and that assist agencies in delivering the most effective services to their communities."

After doing studies of other police facilities and looking at my design and comparing how they work and respond to the everyday life, I believe it is very successful in the effectiveness and productivity that it will serve. It addresses all the issues while also leaving room for expansions and growth as the city grows.

Response to Goals & Project Emphasis

Project Emphasis & Goals

1. Improve the criminal justice systems environment
2. Integrate new ideas, innovative design, and educate the public
3. Create a warm and inviting place that is designed for the place
4. Create an effective and well designed center



Figure 94

Goals & Emphasis of the project

Improving the everyday environment for employees that work inside the criminal justice system was my first goal. The solution to this was creating a well-lighted opened space for people to work in with hardwood floors and a soft tone in the walls and glass. It was also done by have different areas through out the building that could accommodate work offices and single rooms. Number two was to use new ideas and design to educate the public. This was done by addressing the windows with gaps between the precast concrete that created the long strips of lighting while addressing the security issue of the site, and police station. Creating a warm and inviting place that employees can enjoy when they come to work was very important to me because if you can't enjoy and feel safe in your workspace it will be hard to focus and be productive. Lastly creating a design that is safe and addresses the security concerns while also having a floorplan layout to maximum the efficiency was a major design goal. This was completed by placing the public spaces closer to the front of the building to avoid people walking around without reason. Using secure doors and badged access was thought of while designing the spaces and entries to each space.



Figure 95

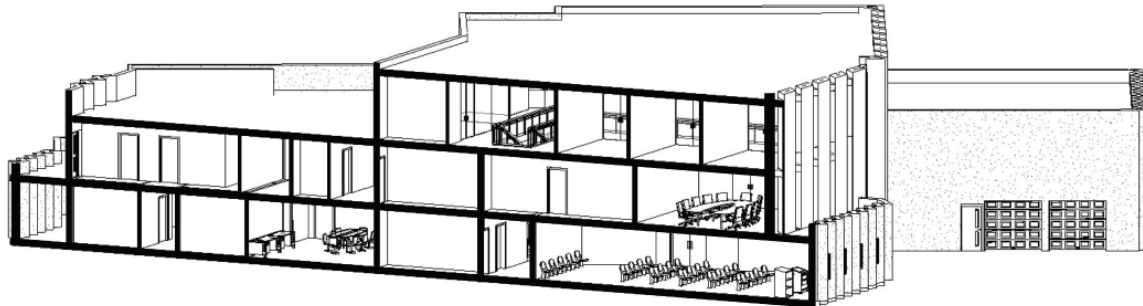


Figure 96

MAJOR PROJECT ELEMENTS

TRAINING

I imagine creating a space for the police department to train or conduct scenarios for real missions.

EDUCATION

All officers need continuing education to keep up with new laws and to maintain their licenses. Have a space to do so is very important.

INTERVIEW

Interview rooms are designed small for good reason but are important for solving crime.

EQUIPMENT

An equipment room for technologies, parts, clothing, and gear will make sure the rest of the building stays looking professional.

COMMUNITY

A community room for promotions, awards, and other community events is important to the public.

GARAGE

Space to park police vehicles during Minnesota winter is a must.

GYM

Physical fitness is a factor when selling yourself for the job and remains an important part in every law enforcement officer's life.

OFFICES

Offices are a must in a law enforcement center but should be designed in a way that promotes transparency.

BREAK

Everyone deserves a break, it's actually a law in employment. There is no reason that it can't be a major project element when the work conducted in these centers never stops.



Figure 97

Critique of Applied Research

Critiques Applied to Research

There was a lot of feed back in many areas of the thesis project. From the start of the research after selecting my topic. When deciding to do case studies some feed back that was very help was doing a variety of building studies that were not only in the United States but in other countries that build for the same use. In the design having a historic site that is now nationally recognized was a challenge. Learning how to maximize the space and placement of the major project elements and orientation was crucial. Picking out materials and structure types were reflected on in picking out the most cost-effective option. Lastly other miscellaneous feed back consisted of spell corrections, software choices, and appropriate use of space and time in specific topics.

Digital Presentation

Architecture In Law Enforcement



Figure 98

Criminal Justice System



Police Stations
Law Offices
Court House
Jails
Prisons
Community Center
Community Support
Social Services

Proactive vs Reactive
Figure 99



Figure 100

Minneapolis, MN

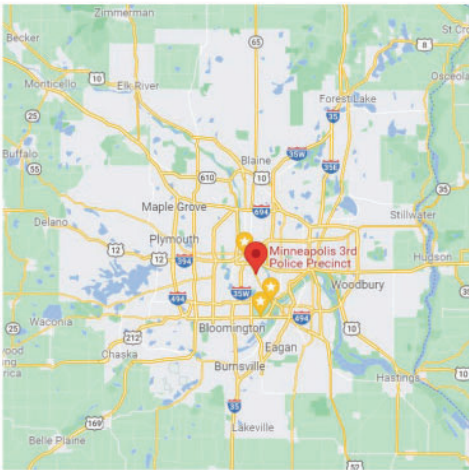
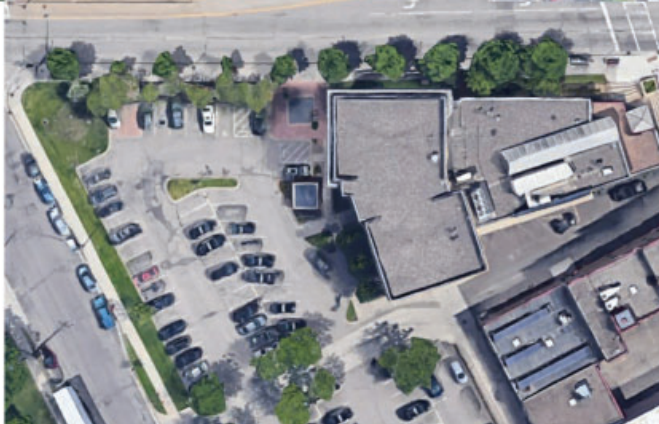


Figure 101



Site

The site is located at 3000 Minnehaha Ave, Minneapolis, MN 55406. This is on the south west corner where Minnehaha Ave meets E Lake Street. The site is triangle in shape and measures approximately 300 feet on the north boundary, 200 feet on the west. The most eastern part of the site is where the building is located, leaving the larger more open area of the site on the west open to parking.

Currently the building and the 3rd Precinct staff includes Patrol Officers and Investigations. This precinct also has a Community Response team and Crime Prevention unit.

Figure 102

Current Site

Location of a new police headquarters or station is key to its ability to serve the community. Oftentimes, citizens want to feel close to the station or want it to be a visible and accessible part of the neighborhood or city—not an unapproachable place at the edge of town. This makes them feel safer and more connected to the force.



Figure 103

Project Emphasis & Goals

1. Improve the criminal justice systems environment
2. Integrate new ideas, innovative design, and educate the public
3. Create a warm and inviting place that is designed for the place
4. Create an effective and well designed center



Figure 104



#1 Improve the criminal justice systems environment

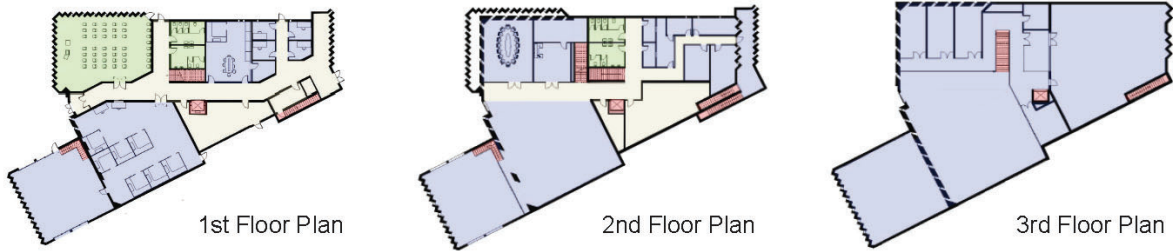


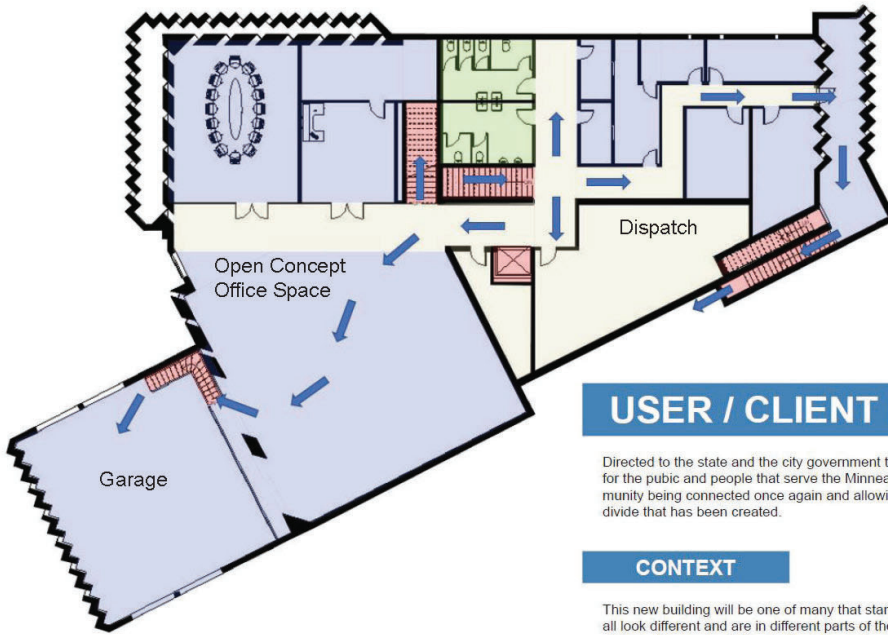
Figure 105



**Materials
Natural Light
Open Space
Reduce Stress
Layout**

- | | | |
|--|--|---|
| <p>TRAINING
I imagine creating a space for the police department to train or conduct scenarios for real missions.</p> | <p>EDUCATION
All officers need continuing education to keep up with new laws and to maintain their licenses. Have a space to do so is very important.</p> | <p>INTERVIEW
Interview rooms are design small for good reason but is important for solving crime.</p> |
| <p>EQUIPMENT
An equipment room for technologies, parts, clothing, and gear will make sure the rest of the building stay looking professional.</p> | <p>COMMUNITY
A community room for promotions, awards, and other community event is important to the public.</p> | <p>GARAGE
Space to park police vehicles during Minnesota winter is a must.</p> |
| <p>GYM
Physical fitness is a factor when selling yourself for the job and remain a important part in every law enforcement officer.</p> | <p>OFFICES
Offices are a must in a law enforcement center but should be designed in a way that promotes transparency.</p> | <p>BREAK
Everyone deserves a break, its actually a law in employment, there is no reason that it can not be a major project element when the work conducted in these centers never stop.</p> |

Figure 106



USER / CLIENT DESCRIPTIONS

Directed to the state and the city government that funds public buildings. The project is for the public and people that serve the Minneapolis Minnesota area. I imagine the community being connected once again and allowing the new building mend the gap in the divide that has been created.

CONTEXT

This new building will be one of many that stand tall in the Minneapolis city limits. They all look different and are in different parts of the city but have common mission. The job of the police are to aid the public and can do so by improving public serves in a building that will be open to all.

PEOPLE

- Police Officers
- Communication Specialists
- Public
- Local Government Officials
- Other Law Enforcement Professionals
- Local, State, and Federal Employees

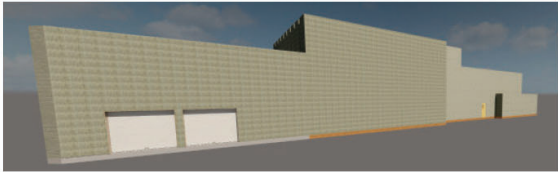


Figure 107



A crucial component of an effective police station is technology system design. The devices, software, and systems that police departments use are evolving. From dispatch to patrol to forensics, consider all of the systems you need in place and operation-



Figure 108



#2 Integrate new ideas, innovative design, and educate



Figure 109

Program

1. Spaces are organized base on efficiency and intersecting secondary corridors
2. Activates conducted in the station's operational functions and interactions are encouraged among law enforcement personnel, staff, and administrators.
3. The secondary corridor services support spaces.

Energy Efficiency

Is targeted through the use of active solar panels, geothermal HVAC systems and passive systems like natural ventilation, natural daylighting is enhanced with glazing and the tall continuous precast concrete walls that allow large strips of light in.

Form

The station is seeparated into five connected forms. The garage functions, the storage, support, admin, operations and pubic spaces.

#3 Create a warm and inviting place

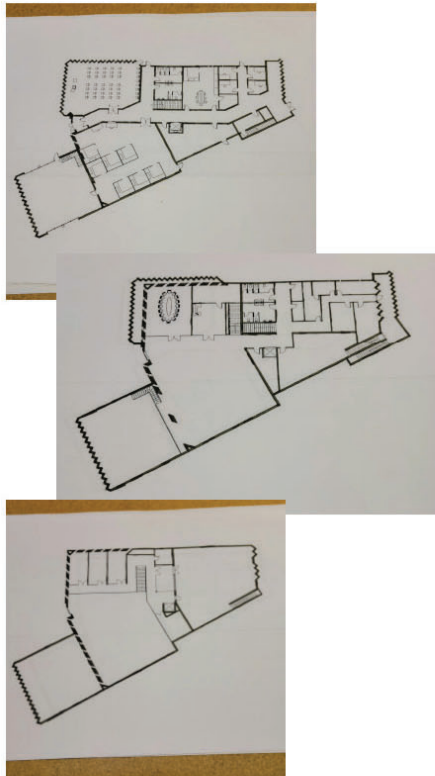
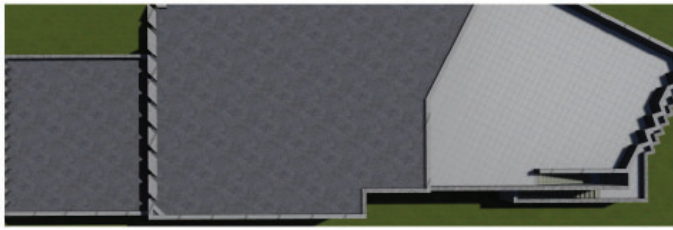


Figure 110



#4 Create an effective and well designed center

The design of a police station only addresses a portion of the important issues impacting police and community relationships. But as the physical embodiment of neighborhood safety will set the tone.

Material & Windows



Figure 111

Performance Measure: The Law Enforcement Center's design will be measured in energy use and number of citizens help relating to the number of calls for service. Lastly the city and the designs will take in consideration of the overall community feedback.

Performance Measure Source: The amount of energy used will be obtain through the power service provider but also with the building's own meters. The number of citizens help relating to the number of calls for service will be provide the annual reports that the city offi cials do and then fi ltered through what calls were directly related to the new law enforcement center.

Performance Analysis: The kind of analysis that will be done will be created in graphs and drawings. Tools and resources will be generated from online statistics and reports.

Performance Judgement: I will be able to judge the performance that the building meets by taking other police stations and law enforcement centers around the city and averaging the numbers to fi rst clerlicity that the performance is in the appropriate range of use. Then we will be able to measure the use of the new technologies and alternative energy sources to measure the impact and the diff erence that the new law enforcement center will create.



Figure 112



Figure 113

There is no template or formula for a successful police station design. Many stations have similar components or core functions, but personnel use them in different ways and need them to perform to different standards. For example, it's safe to say every police department needs an evidence room. Based on their operations and case load, however, their needs will vary. One department may need an 800 sq. ft. room, while another needs 3,000 sq. ft. for evidence storage. A department's needs, wants, and vision for the future—as well as the future of the community they serve—all inform their building's design.

Project Installation



Figure 114



There are buildings that exist among us that are required in the survival of our beautiful nation. Exploring the ideas of law enforcement, criminology, public safety and how architecture can make an impact in our everyday lives is causal for our future. While learning how design can play a role in crime prevention and how architecture communicates the justice system and values of Americans. I have explored ideas in better ways to design jails, prisons, hospitals, police departments, federal buildings to work better with the criminal justice system.

The benefits of design and architecture in the workspace has shown to increase productivity and allow everyone to move around fluidly without feeling like being micromanaged. Proper design in a busy building can organize workspace and optimize workers performance while also give enough privacy to complete confidential work. How does architecture and design better the lives of the employees and people that make the criminal justice system work? To redesign and improve the function and purpose of the police station for safety, efficiency, and a symbol for the community that it serves. To improve the quality of life for everyday citizens.

Figure 115

APPENDIX

REFERENCE LIST

“History-of-Police-in-the-Us-Photos-2020-6.” <https://www.insider.com>, <https://www.insider.com/history-of-police-in-the-us-photos-2020-6>.

Laeger, Brittany. “Minneapolis Skyline: 8 Scenic Places to Capture Photos and Videos.” Beautiful Era Photography, Beautiful Era Photography, 11 Dec. 2018, <https://www.beautifuleraphotography.com/blog/minneapolis-skyline>.

“SunCalc Sun Position- Und Sun Phases Calculator.” SunCalc, <https://www.suncalc.org/>.

“Weatherspark.com.” Minneapolis Climate, Weather By Month, Average Temperature (Minnesota, United States) - Weather Spark, <https://weatherspark.com/y/10405/Average-Weather-in-Minneapolis-Minnesota-United-States-Year-Round>.

“Traffic Forecasting & Analysis.” Traffic Forecasting & Analysis Home - TDA, MnDOT, <https://www.dot.state.mn.us/traffic/data/>.

Sisson, Patrick. “Can Architects Design Better Police Stations?” Curbed, Curbed, 18 May 2017, <https://archive.curbed.com/2017/5/18/15660878/architect-police-station-community-design>.

Brutout, Brad. "4 Things to Consider When Designing a Police Station: Schmidt Assoc." Schmidt Associates, Brad Brutout /Wp-Content/Uploads/2016/06/Schmidt_WebLogo3.Png, 1 Feb. 2021, <https://schmidt-arch.com/4-things-to-consider-when-designing-a-police-station/>.

<https://www.naiop.org/Research-and-Publications/Magazine/2016/Spring-2016/Development-Ownership/The-Police-Station-of-the-Future>

Newman, Oscar. *Defensible Space: Crime Prevention through Urban Design*. Collier, 1978.

Hall, Edward T. "The Hidden Dimension (1969 Edition)." Open Library, Anchor Books, 1 Jan. 1969, https://openlibrary.org/books/OL24934965M/The_hidden_dimension.

PREVIOUS STUDIO EXPERIENCE

Second Year

Fall 2018

Birdhouse
Dwelling Project

Spring 2019

Mixed Use

Third Year

Fall 2019

Bismark Capal Project

Spring 2020

Project going underground

Forth Year

Fall 2020

Highrises Project

Spring 2021

Marvin Windows Proejct

Fifth Year

Fall 2021

Thesis Research in the
Criminal Justice System

Spring 2022

Design Thesis in the
Criminal Justice System
Police Station

