A new City Hall for Gresham

Group A2

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Project 2

Group A2

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City Attorneys Office
Internal Adjacency Diagram

Support Staff
3

City Attorneys
4

Risk Manager
1

Intern
1

Receptionist
1

Partition into 2-3 small rooms

Lobby Reception

Copy Room

Lunch Room

Kitchenette with sink

Large Conference Room

Partition into 2-3 small rooms

Private Storage

Archive

Internal Library
City Attorneys Office
External Adjacency Diagram

City Attorney's Office

- Daycare
- Mayor's Office
- City Manager
- Department of Environmental Services
- City Council
- City Reporter
- City Hall Employees
- City Hall Archives
- Public
- Gym/Yoga Room
<table>
<thead>
<tr>
<th>Values</th>
<th>Goals</th>
<th>Facts</th>
<th>Needs</th>
<th>Ideas</th>
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<td>Deal with confidential documents</td>
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<td></td>
<td>Evening and end security</td>
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<td></td>
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<td></td>
<td>Hire an assistant/receptionist</td>
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Human
- Public Presence
- Entry Procession
- Transparency
- Eating
- Soft Materials

Environmental
- Health and Wellness
- Daylighting
- Operable Indoors
- Skylights
- Open Office Plan
- Atrium
- Art
- Art or

Safety
- Confidentiality
- Partitions
- Staffed Reception
- Private Offices
## City Attorney's Office

<table>
<thead>
<tr>
<th>Common Spaces</th>
<th>Existing</th>
<th>Future</th>
<th>Room Dims</th>
<th>Area</th>
<th>Total Exist.</th>
<th>Total Future</th>
<th>Notes</th>
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<td>120</td>
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<td>120</td>
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</table>
| Reception/Lobby          | 1        | 1      | 10x30     | 300  | 300         | 300         | Library could be part of lobby or multipurpose room.
|                          |          |        |           |      |             |             | Lobby needs to be more open w/ circulation around it. |
| Library                  | 1        | 1      | 10x12     | 120  | 120         | 120         |                                            |
| Intern Cubicle           | 1        | 1      | 8x8       | 64   | 64          | 64          | Temporary                                    |
| Large Conference Room    | 1        | 1      | 20x30     | 600  | 240         | 600         | Large room that can be partitioned into 2-3 smaller spaces. Sink is needed. This space could be a breakroom also. |
| Lunch Rm w/ kitchenette  | 0        | 1      | 10x12     | 120  | 0           | 120         | Currently using empty cubicle(s)            |
| Storage Rm               | 0        | 1      | 10x20     | 200  | 0           | 200         | Currently using empty cubicle(s)            |
| Archive Rm               | 0        | 1      | 10x20     | 200  | 0           | 200         | Currenty using empty cubicle(s)             |
| Copy/Print Rm            | 1        | 1      | 12x20     | 240  | 240         | 240         |                                            |
| **Total**                |          |        |           | 1924 | 2804        |             |                                            |
ATTORNEY'S OFFICE SCALED RELATIONSHIP DIAGRAM

- **Support Staff**: 10'x12', 120sf
- **Risk Manager**: 10'x12', 120sf
- **Receptionists / Lobby**: 10'x30', 300sf
- **Library**: 10'x12', 120sf
- **Conference**: 20'x30', 600sf
- **Lunch Rm**: 120sf
- **Copy/Print**: 12'x20', 240sf
- **Storage**: 10'x20', 200sf
- **Archive**: 10'x20', 200sf
- **Intern Cubicle**: 8'x8', 64sf
- **Conference**: 20x30ft, 600sf
- **Lunch Rm**: 120sf
- **Library**: 10'x12', 120sf
- **Receptionists / Lobby**: 10'x30', 300sf

Legend:
- **Office Space**
- **Support Space**
- **Entry Vestibule**
- **Hard Connection**
- **Soft Connection**
- **Direct Adjacency**
Gresham City Hall Analysis
City Attorney
Improvements for current space

Place library in a more open inviting area
Create a storage room to hold files, books, etc. that are currently being stored in cubicles
Make hallways larger and introduce daylight

City Hall Common Spaces
Create a more utilized public space
Invite public & Gresham community into City Hall
Create easy to access bike storage
Encourage use of public transit, bikes, etc.
Gresham City Hall Analysis
District Attorneys
Good qualities with current space

Maintain large indoor spaces in offices

Ylites add daylight in stair ells

City Hall Common places

Friendly inviting Reception
Gresham Police Department
External Adjacency Diagram

- City Hall
equal services

- Parking
City vehicles
Public ot

- Public
<table>
<thead>
<tr>
<th>Values</th>
<th>Goals</th>
<th>Facts</th>
<th>Needs</th>
<th>Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human</td>
<td>Work Culture</td>
<td>Are on call hours a day</td>
<td>Need a hour staffed reception desk</td>
<td>Reception desk on first floor</td>
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<tr>
<td></td>
<td></td>
<td>operation of private and public restrooms</td>
<td>Have more restrooms within each division</td>
<td>Service booth doubles as security for bldg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Are currently using public restrooms</td>
<td>Need more private restrooms</td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td>Privacy</td>
<td>investigators need private/confidential offices</td>
<td>Need some private offices</td>
<td>Some private offices</td>
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<tr>
<td></td>
<td>Paper or storage</td>
<td>hey do not have enough storage</td>
<td>Need archive space</td>
<td>Large shared archive space</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Need more funding</td>
<td>Need more space in general</td>
<td>Oral storage within departments</td>
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<tr>
<td></td>
<td>Illness</td>
<td>Illness and good health is usually on job</td>
<td>Need one out room</td>
<td>One out room in adjacent loc er rooms</td>
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<td>Cultural Work Culture</td>
<td>interaction non formal</td>
<td>Don’t have lunch or break room</td>
<td>Need break and lunch room</td>
<td>Multi purpose room for informal interaction</td>
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<tr>
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<td>Functional building that supports or culture</td>
<td>Have a lot of equipment and gear</td>
<td>Need storage for equipment</td>
<td>Flexible equipment storage</td>
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<tr>
<td></td>
<td></td>
<td>Don’t have enough funding</td>
<td>Need loc er rooms</td>
<td></td>
</tr>
<tr>
<td>Technological</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Economic</td>
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<td></td>
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<tr>
<td>Aesthetic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>Confidentiality</td>
<td>Deal with confidential information</td>
<td>Need separate building</td>
<td>Some stand alone Police building</td>
</tr>
<tr>
<td></td>
<td>Security of building files &amp; equipment</td>
<td>undergoing investigations</td>
<td>Need private offices</td>
<td>Private offices for investigators</td>
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<td></td>
<td>24/7 on site</td>
<td>Need secure vault for fire arms</td>
<td>Audit in basement</td>
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<td></td>
<td>Hold people overnight</td>
<td>Need more cells</td>
<td>More cells</td>
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<td></td>
<td></td>
<td>interrogate people</td>
<td>Need secure interiv space</td>
<td>More interiv space</td>
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<td>separate Police building</td>
<td>separate Police building is more secure</td>
<td>Need separate Police building</td>
<td>Some stand alone Police building</td>
</tr>
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<td>short response time</td>
<td>Emergency response</td>
<td>Need good vehicular access</td>
<td>Traffic light that trips</td>
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<td></td>
<td>Have emergency vehicles</td>
<td>Need secured car lot</td>
<td>Secured parking lot for police vehicles</td>
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</table>
Gresham Police Department
Design Ideas

**Cultural**
- Non-formal Interaction
- Relaxation
- Bonding
- Event Space
- Community Interaction
- Building and Storage
- Support Work Culture

**Environmental**
- Health and Wellness
- Fitness
- High Ceilings
- Atrium
- Daylighting

**Safety**
- Confidentiality
- Vehicular Access
- Public/Private Entrance
- Public Interface
- Secured Access
- High Windows
- Privacy
<table>
<thead>
<tr>
<th>Gresham Police Department</th>
<th>Existing # of rooms</th>
<th>Future # of rooms</th>
<th>Room Dims Feet</th>
<th>Area SF</th>
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<td>10711</td>
<td>21276</td>
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</table>
Gresham City Hall Analysis

Police

Improvements to current space

- Provide a gym/workout area
- Provide a shooting range
- Provide more storage rooms for the large amounts of paperwork that have to be kept on file
- Introduce more daylight and warmer materials into the spaces
- Avoid using triangular shapes that create dead corners

Possible Additions to Facility

- Incorporate a K-9 Unit on site
- Provide a gym/workout area
- Provide a shooting range
Project 3

Group A2

Jessica Kreitzberg
Ellen Hagen
Mark Schmidt
Sina Meier

Table of Contents:

A: Thesis Statement
B: City Hall Adjacency Diagrams
C: City Hall Scaled Adjacency Diagram
D: Police Department Scaled Adjacency Diagram
E: Fire Department Scaled Adjacency Diagrams
F: City Hall Design Precedents
Thesis Statement

Our proposed Gresham City Hall will be a center for the community and contribute to a vibrant downtown.

Through collaboration with Gresham City Hall employees and staff, the above thesis statement was developed, expressing the needs and goals for a new Gresham City Hall.

Methods of research include:

Department Interviews
Facility Walkthroughs
Quantitative Research
Qualitative Research
Historical City Halls

Ellen Hagen, Sina Meier,
Jessica Kreutzberg, Mark Schmidt
New City Hall Precedents

Ellen Hagen, Sina Meier, Jessica Krellberg, Mark Schmidt

Puyallup, WA City Hall - Mithun Architects

Austin, TX City Hall - Antoine Predock Architects

Seinajoki, Finland City Hall - Alvar Aalto

Seattle, WA City Hall - Bohlin Cywinski Jackson

Redmond, WA City Hall - Mulvaney G2
Project 4/5

Group A2

Jessica Kreitzberg
Ellen Hagen
Mark Schmidt
Sina Meier

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Purpose Statement

Our proposed Gresham City Hall will be a center for the community and contribute to a vibrant downtown.

Through collaboration with Gresham City Hall employees and staff, the above thesis statement was developed, expressing the needs and goals for a new Gresham City Hall.

Location:  NW Eastman Parkway and NW 3rd Street
Program:  City Hall, Police and Fire
Vision:      - Center for the community
            - Safe and attractive environment
            - Strong presence
Design Considerations for Site

- Proposed Site
- Important Buildings:
  - Library
  - Church
  - Apartments
- Zoning Districts:
  - Downtown Commercial Core
  - Downtown Mixed Use
  - Corridor Multi-Family
  - Downtown Transit Mid-Rise
  - Downtown Residential Low-Rise
Design Considerations for Site

- Proposed Site
- Bus Routes
- Max Blue Line
- Roads
- Proposed Roads (Downtown Plan)
- Proposed Parking (Downtown Plan)
- Existing Parking
- NW Eastman Parkway (Major Access Rd)
Existing Conditions

Existing Building and Parking Lot

NW Eastman Parkway

NW 3rd Street

Apartment Buildings West of Site

Housing South of Site
Site Plan

- Proposed Roads (Downtown Plan)
- Existing Parking
- Proposed Parking (Downtown Plan)
- Proposed Library
- Existing Library

Loading Dock and Entry to Basement Storage Below
Floor Plans: Fire Department

1st

- Apparatus Bay
- Administration
- Living
- Sleeping

2nd
Massing Model
Massing Model
Energy Program

The new Gresham City Hall will be an architectural representation of the emerging sustainable city in Oregon. Gresham has been an example of a city trying to turn itself around and create a livable, sustainable city that Oregon would be proud of. The City Hall should represent Gresham and all that it stands for, which means excellence in sustainability and civic pride. Providing the city employees with a work environment they are comfortable in, enjoy working in, and have pride in is important.

Design Considerations

Natural Ventilation:    Open Atrium, Operable Windows for Cross-Ventilation, Shallow Building Widths
Daylighting:           Open Atrium, Shallow Building Widths with Windows on both Sides, Light Shelves, Reflective Interior Surfaces
Orientation:           Shading Devices on South and West Facades

Further Opportunities

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<tr>
<th>Building</th>
<th>Department or Area</th>
<th>Activities</th>
<th>Occupants</th>
<th>Area (SF)</th>
<th>Height</th>
<th>Lighting Req.</th>
<th>Schedule</th>
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<td>68</td>
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</table>
Primary Energy: Annual Heating, Cooling, and Lighting (per average floor area)*

- **RED** Heating energy required per square meter of plan.
- **BLUE** Cooling energy required per square meter of plan.
- **GREEN** Lighting energy required per square meter of plan.

Note that the energy shown on this page reflects Primary Energy Use, which is the amount of energy contained in the raw fuels (coal, natural gas, nuclear fuel, etc.) that are used to generate the electricity or heat used by the building.

**Primary Heating Energy** = Heating Load / Thermal Efficiency  
**Primary Cooling Energy** = Cooling Load / (Electricity Production Efficiency x Chiller Coefficient of Performance)  
**Primary Lighting Energy** = Lighting Load / (Electricity Production Efficiency x Lighting Efficiency)

Assumed Efficiencies:  
- Electricity Production Efficiency = 30%  
- Fuel to Thermal Efficiency = 100%  
- Lighting Efficiency = 13.5%  
- Chiller COP = 3.0

* average floor area is based on the number of floors in the building.

Comfort: Thermal Comfort in a Representative Room

The following figures represent the thermal comfort level within a room as a function of the occupant's distance from the window.

- **Too hot**  
- **Comfort**  
- **Too cold**

**Time of Day:** 9 AM

**Scenario One:** January  
**Scenario Two:** January

Note: This scenario is naturally ventilated. For thermal comfort of naturally ventilated buildings, navigate to the "Natural Ventilation" tab on the left.

**Scenario Three:** June  
**Scenario Four:** June

**Note:** This scenario is naturally ventilated.
Daylighting: 3D Representation of a Typical Room

<table>
<thead>
<tr>
<th>Scenario One</th>
<th>Scenario Two</th>
<th>Scenario Three</th>
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<tr>
<td>Season: Spring</td>
<td>Time of Day: 9 AM</td>
<td>Blind Angle: No Blinds</td>
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<tr>
<td>Season: Spring</td>
<td>Time of Day: 9 AM</td>
<td>Blind Angle: No Blinds</td>
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</tbody>
</table>

Viewpoint
Energy Program: MIT Design Advisor

Natural Ventilation: Indoor Air Temperature Histogram

Life Cycle Figures: Cost of Energy and CO2 Emissions

Indoor Air Temperature

Cost of CO2 Emissions
Energy Program: IES Analysis

Energy and Carbon Results

- Proposed building energy use: 5,627.66MBtu/yr
- Proposed building carbon emissions: 591.7tons CO2/yr

Energy breakdown:
- Heating: 39%
- Cooling: 0%
- Lights: 25%
- Equipment: 37%

The Energy & Carbon results are generated by the IES VE ApacheSim module. ApacheSim is a rigorous building thermal simulation approach that conforms to ANSI/ASHRAE Standard 140.

To find out more go to: www.iesve.com/apachesim

AIA 2030 Challenge - summary

Due to a very schematic Sketch-up model the data generated from this software might not be accurate. Even though not reflected in the above analysis, we are confident that our design will meet the 2030 Design Challenge.

IES Data
According to the Energy Star Analysis Program, the current Gresham City Hall would have to reduce their energy consumption by 70% in order to meet the 2030 Challenge.
A new City Hall for Gresham

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