City of Cupertino - Service Center

New Administration Building and Emergency Operations Center (EOC) Feasibility Study

Spring 2017 Version

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Introduction

In the autumn of 2016, the City of Cupertino asked Bartos Architecture to assist in developing a feasibility study for a new administration building at the Service Center located at 10555 Mary Avenue. The initial goal of this process was to determine the condition of the existing building and to develop potential facility improvement strategies, including the potential to locate an Emergency Operations Center (EOC) at this location. Although the project was originally focused on the administration building, it became necessary to look at the entire Service Center holistically.

Two factors in the decision making process are :

- Develop a long range vision to ensure that the various elements that comprise the Service Center are optimally located
- Future improvements to the site fit within a master plan that is consistent and supports the City's long term goals

This report includes a summary of the needs and goals identified by the key stakeholders for the Services Center, along with potential plans, order of magnitude costs, and potential phasing plan.

If the City determines that it makes sense to move forward with improvements, more detailed work will be required including potential CEQA requirements, close collaboration with Planning. Geotechnical, Civil, Landscape, Structural, Electrical, Mechanical issues are not considered here.

Components

This Master Plan consists of the following components:

- Existing Conditions Summary
- Summary of City Goals as developed in stakeholders meetings

Scope *Master Site Plan development*

- Area and adjacency requirements of buildings
- Overall Site Plans indicating planning options
- New building floor plan options

Potential Phasing

Order of Magnitude Costs

Appendix

- Meeting Notes
- Key pages from EOC program
- Recycle/ Truck info city

Sources

Sources Consulted:

- Original Corporation yard Drawings – 1977
- Driveway Installation – 1979
- Parking Lot Resurfacing – 1982
- Fuel Tank Replacement – 1999
- Solar Panels Installation – 2014
- Parking Lot Modification - 2016
- Emergency Operation Center Committee Program
- Historical Photos

Executive Summary

The existing facilities are an aggregation of buildings/ facilities/components that have been incrementally constructed, over the past 50 years, in order to meet city services needs over time. Although the facilities in general could serve adequately, they do not serve in the most efficient manner possible and they are approaching the end of their useful life. Furthermore, many of the structures, are at a point where renovations or ad hoc modifications are no longer represent the most practical and cost effective solution, and a larger more comprehensive solution is warranted.

The initial City goal as described was to replace the existing Administration Building with a new facility including an Emergency Operation Center (EOC) and new shed structure for materials. As the meetings, discussions and research progressed, the goals shifted as follows:

- Validate, the current proposed location of the replacement Materials Storage Shed
- Replace Existing Administration Building, with a new single story building.
- Modernization of the existing Shop Building was deemed impractical and that the best solution would be to replace them and consolidated the various shops under one roof. With the exception of the Mechanic Shop Building, which had different access requirements.

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Process

The overall process was led by Katy Jensen and Alex Acenas, and facilitated by Bartos Architecture. The team reviewed the existing site conditions with Chris Mertens. Chris Mertens and Chris Orr played key roles in providing site walks and explanations of how the staff and facilities currently function. Subsequent to our tours of the site, the team of key stakeholders met five times reviewing drawings/ sketches to brainstorm ideas/concepts. All stakeholder input was considered, gathered and recorded in meeting notes. During the meetings concepts were discussed as to best options for site improvements. The meetings were very collaborative and constructive. The team was very supportive and considered the issues from all potential points of view. All participants were cognizant and considerate of each member's goals, desires and technical input.

This process resulted in diagrammatic concepts, "bubble" / adjacency diagrams, potential phasing concepts, and related rough order of magnitude costs. The design teams intention is to provide the City with an outline of ideas for discussion in order to assist with determining the best way to proceed with upgrades to this forty year old facility.

In addition to stakeholder meetings, separate research was done with the City Planning and Building Departments in order to gain general understanding and consensus as to likely acceptable approaches.

Participants

City of Cupertino - Public Works Department

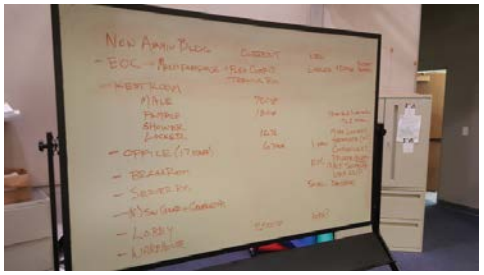
- Timm Borden, Director
- Roger Lee, Assistant Director
- Chris Mertens, Superintendent, (retired)
- Katy Jensen, CIP Manager
- Brad Alexander, Public Works Supervisor
- Jonathan Ferrante, Public Works Supervisor
- Brian Gathers, Public Works Supervisor
- Chris Orr, Public Works Supervisor
- Cheri Donnelly, Environmental Programs Manager
- Alex Acenas, Public Works Project Manager

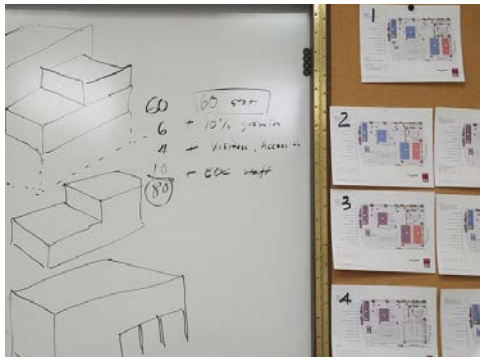
Facilitator: Bartos Architecture

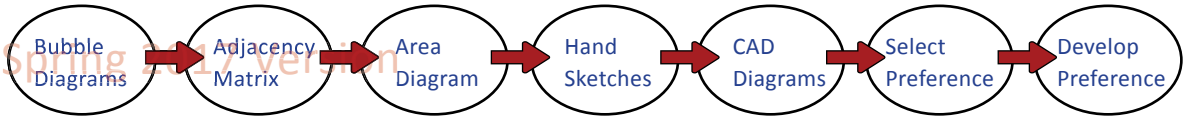
- Mark Bartos, Architect
- Laszlo Petrik, Project Manager
- Neal Sellers, Project Manager

Stakeholder Meetings

- Meeting 01: 12 December 2016
- Meeting 02: 10 January 2017
- Meeting 03: 25 January 2017
- Meeting 04: 02 March 2017
- Meeting 05: 30 March 2017







The Existing Facilities

Admin Building

- The current Administration Building (1977) is inadequate for meeting current staffing levels. Its size is not adequate and functional spaces are tight. The building in general does not meet current California Building Code, including Accessibility requirements.

Shops Buildings

- Existing shops buildings at the center of the site are metal structures that have been constructed in various configurations over time. Safety is an issue.

Existing Wash Station

- The wash station is relatively new and is expected to stay in place.

Existing Fueling Station

- The fueling Station is relatively new and is expected to stay in place at its current location.

Existing Materials Shed

- Material shed is beyond its useful life and in need of replacement. Preliminary designs have been developed (refer to appendix).

Boom Truck Garage

- Recently Constructed. There will be an aerial lift storage space added.

Storage Building

- Recently constructed at South end and is expected to remain.

Building	Purpose	Area (SF)	Year Built	Notes
Administration Building	Office support	7,100	1977	
Shops	"Fix It" shops	8,250	Before 1977	
Welding Shop	Provide vehicle modifications and fabrication of other metal fabrication	3,085	Before 1977	Includes storage containers
Storage	Sign storage, cones, barricades, landscaping materials, tools and equipment	4,210	Unknown	Includes storage containers
Fuel Island	Fueling Station for vehicle fleet	1,530	1977, Updated in 1999	
Hazmat	Handling of hazadous material	350	Unknown	
Streets	Storage for all street marking equipment, tools, and materials	1,560	Unknown	
Material Storage	Storage/transfer location of landfill from parks, recyclables, compostible material and landscaping material (i.e. sand, and soil)	2,850	Unkown	
Aerial Truck Storage	Storage for aerial (lift) vehicles	1,950	Unkown	
	Total	30,885		

Existing Site Plan and Context

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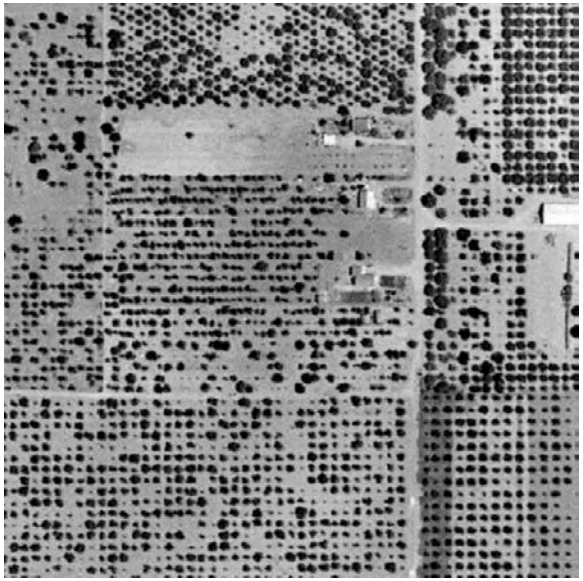

1956

1968

1980

1987

1998

2009

Historic Aerials

Provided by Netronline

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Existing Site

- Materials Shed (A)
- Nursery (B)
- Hazmat Storage (C)
- Boom Truck Garage (D)
- Storage (E)
- Solar Stuctures (F)
- Administration Building (G)
- Fuel Island (H)
- Shop Building (J)
- Welding Garage (K)

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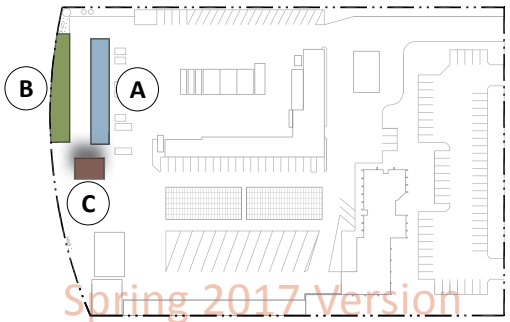
Images of Existing Structures

Materials Shed (A)

Nursery (B)

Hazmat Storage (C)

Key Plan



Material Shed to be demolished and replaced (A)

Car Washing Station to remain (A)

Propane Tank to remain (A)

Nursery looking South
Enlarge and provide dirt area (B)

Nursery looking North (B)

Nursery looking North (B)

Hazmat Storage looking West towards Highway 280 (C)

Hazmat Storage looking Southwest towards Highway 280 (C)

Hazmat Storage 2.
Near Welding garage (C)

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Images of Existing Structures

Boom Truck Garage
To remain (D)

Storage Building
To remain (E)

Solar Structures
To remain (F)

Boom Truck storage looking North. (D)
Add one bay at North end

Boom Truck garage approach. (D)
Looking East from Admin Building

Boom Truck garage. (D)
Looking South

Storage looking Southeast (E)

Storage Building (E)

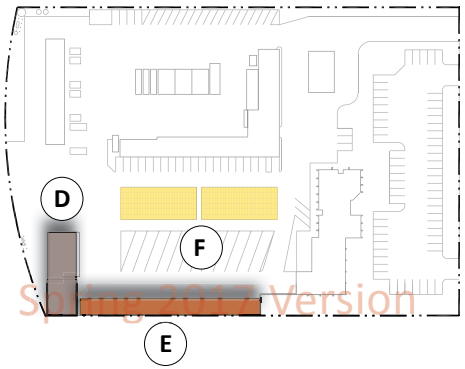
Adjacent to building, (E)
looking South

Solar Structure to remain. (F)
Looking Northwest

Solar Structures to remain. (F)
Looking Northeast

Solar Structures to remain. (F)
Looking Easat

Key Plan



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Images of Existing Structures

Administration Building
To be demolished (G)

Fuel Island
To remain (H)

Shop Building
To be demolished (J)

Administration Building. (G)
Looking Northwest

Administration Building. (G)
Looking South from Fuel Island

Administration Building. (G)
Looking Southeast

Fuel Island. Looking Northeast (H)

Fuel Island. (H)
Looking Southeast

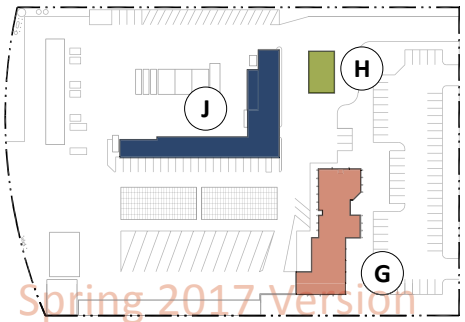
Fuel Island. (H)
Drive Entry from Mary Ave

Shop Building. (J)
Looking South

Shop Building. (J)
Looking Southeast

Shop Building. (J)
Looking Northwest

Key Plan



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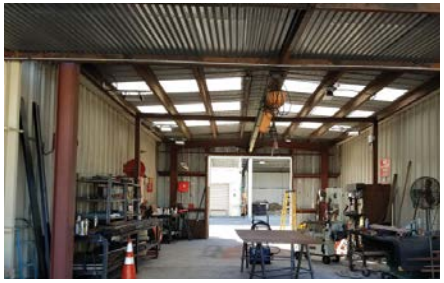
Images of Existing Structures

Welding Garage
To be demolished (K)

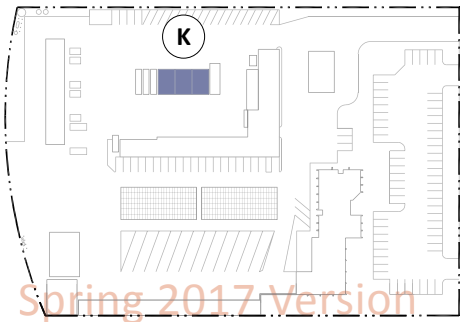
Welding Garage. (K)
Looking Southwest

Welding Garage. (K)
Looking Southeast



Welding Garage. (K)
Inside

Key Plan



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Goals

Identified Goals

Please refer to meeting notes, summaries and additional information included in the appendix.

The general goals that the City has identified for the Service Center includes:

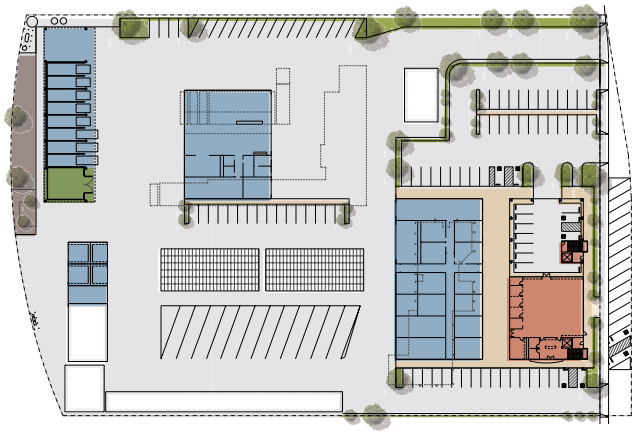
- Consider consolidation of some service center oprations such as offices and workspaces into a new administrative building – including and Emergency Operations Center (EOC)
- Consider additional office space for potential growth in administration building
- Determine likely size (area) of a replacement Administrative Building
- Determine optimal location for the Admininstration Building
- Ensuring that the current proposed location of the replacement Materials Storage Shed is appropriate
- Better overall site organization

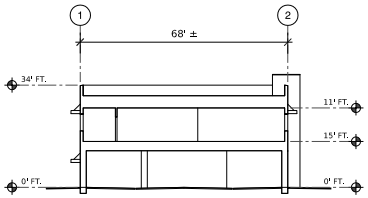
Various issues identified by City staff are identified and described in the following pages. Concepts for potential improvements or modifications that address the needs and goals are shown.

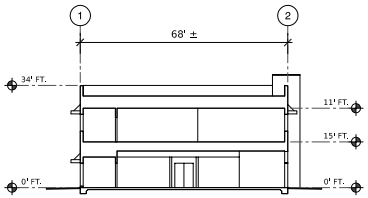
Scope

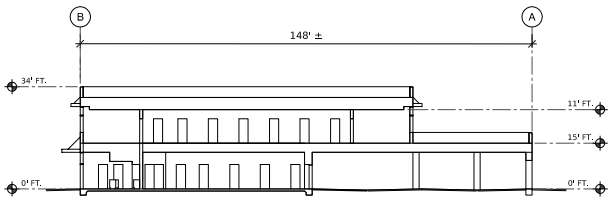
The overarching goal of this report is to provide the City with a long-term vision for the Service Center, while validating the configuration and location of the Materials Storage Shed. Determining the feasibility of building a new Administration Building which includes an EOC, and examines the possibility of consolidating the various shop functions under one roof. This process considers and includes city and stakeholder visionary options to seek out the most appropriate and/ or consensus driven design.

Based on our discussions the following buildings/ structures to remain: storage building, fuel station, truck lift storage, solar panel canopies, and car washing station.









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Summary of Meetings

Please refer to appendix for all meeting notes.

Meeting 01: 12 December 2016

Stakeholders considered the following:

- Probable size, location and spaces required in a new administration building
- Incorporation of an Emergency Operation Center in to the Admin Building
- Probable/General Adjacency requirements
- The components of an EOC.
- Potential for a Separate EOC or having the EOC be part of Admin (Preferred option)

Emergency Operation Center Component
Currently, the City of Cupertino does not provide a centrally located fire or police stations. Therefore, it would like to explore the opportunity to include an Emergency Operations Center (EOC) in this newly designed building. An EOC would be required to be an "Essential Services Facility". An essential services building is designed and constructed to be capable of providing essential services to the public after a disaster.
The potential for a new essential service building will require special building requirements including separate protected utilities and more stringent building code requirements. Ancillary buildings and facilities that are essential to the function of the new essential services facility are not exempt from the same regulations. Essential services facilities are under the jurisdiction local authorities and must be reviewed for approval under the Essential Services Seismic Safety Act of 1986. Due to the nature of occupancy, essential service centers require designing to the highest category risk factor. Separately from this group, and previous to this process, the Cupertino Disaster Council formed a subcommittee from members of the assembly (select individuals from the Emergency Response Operations Team, and city, the County, citizen volunteers, and private business) to create a guideline that could be used for the planning and design of an ideal EOC for the City of Cupertino. The consensus is that the City will need to incorporate an effective, resilient, and flexible EOC that conforms to the California Building Code standards for essential services facility. Based on further review and discussion, it is recommended that any building(s) designed are considered essential service buildings.
The Disaster Council committee report dated Feb 11, 2016 will be incorporated by reference into this document.

Meeting 02: 10 January 2017

Stakeholders considered the following:

- Need for greater efficiency and better overall use of the site
- Maximize free area on the site, minimize building footprint
- The replacement of more than the Administration Building and Material Storage Shed
- Project phasing to accomplish overall goals
- Potential need to provide temporary facilities/ housing during construction (not desired)
- Incorporate a single facility to serve as an essential services building for the community

Upon reviewing potential options for the site and buildings, the stakeholders identified more issues related to the existing conditions and need for greater efficiency and better overall use of the site. The site is bound on all areas, thus a desire to maximize free area on the site, and minimize building footprint was raised by the group as a major goal. Thus potential for replacing more than the Admin Building and Materials shed entered the discussion in order to maximize efficiency and increase open area on the site.
Also discussed was likely project phasing in order to accomplish the overall goals. In order to replace the Administration Building at its exact current location, special temporary facilities would have to be provided during construction. Although technically feasible, the cost of temporary facilities is not a desired expenditure if it can be avoided. Thus options to build a new Administration building, while the current facility is under use were considered.
The incorporation of EOC into the new administration building as an essential services facility will require the entire building to be designed accordingly. Stakeholders agree that this should be incorporated into the master plan document as a single facility that will serve as an essential services building for the community.

(Meeting Summary Continued)

Meeting 03: 25 January 2017

Stakeholders considered the following:

- The entire Administration Building and Service Facility should be an essential service facility
- More open office area (bullpen style) to maximize current staff (15 offices/cubicle space required)
- Space programming was discussed:
  - Single occupancy public toilet rooms
  - Breakroom and toilet rooms should be included in service building
  - Lobby should have a secure desk to control public entry
  - Warehouse facility to handle mutliple types of deliveries and storage
  - Single occupancy public toilet rooms
  - 4,000 square feet is an ample size Mechanic's Shop

It was in general agreement that the entire administrative and service facility should be an essential service facility as all services will need to be operation at the time of a crisis. An initial estimate of 20% cost increase was given to design and build to the current code requirements for essential service buildings. An option for a single two story building was discussed but was in general agreement that it was not preferred by the current staff. Noise and equipment will be an issue and mitigation is not needed if facilities are kept separately. From the previous discussions, it was agreed that more "bullpen" (open office) area and offices are needed to accommodate current staffing. At least 15 offices and cubicles should be incorporated into administration building for supervisors and current staff. The IT room and key room are very important to be incorporated correctly into the building design. Public restrooms are not a priority and should be provided at a minimum with one single occupancy room if adequate. A break room and toilet rooms should be included in service building and a centralized location for showers will provide safety and easy access.

The lobby entry should have a secure desk and check out station to control public entry. The existing front public parking lot contains approximately 46 spaces and is currently adequate. Only 4-5 spaces for public are needed. Employee parking can be considered in rear of yard (as City of Palo Alto) however some employees will continue to park on the street.

The warehouse facility should be used for multiple types of deliveries and storage. It can be shared by the service center and administration building. It should contain a separate area for a fork lift to use for truck deliveries. The fleet shop should contain all interior work areas and should maximize covered exterior space. High bay cranes for welding and mower lifts are needed to service all equipment currently used. Truck repair and service is a major operation at the service facility. Fuel access upon entry of the yard is essential and access to both high and low bay drive thrus for truck maintenance is key. Ample facility would be approximately 4000 sf and contain aerial lifts and pit. Tandem parking inside the new bays will allow for waiting trucks to not intrude on driveway space. In new shop and storage spaces, mezzanine spaces are preferred for storage and potential expansion. If phasing is needed to relocate service center into new building it was agreed that the existing warehouse could serve as a temporary mechanics shop.

Meeting 04: 02 March 2017

Stakeholders considered the following:

- Provide efficient use of service center yard and maximize open space
- A separate Service Building should be considered due to noise and debris
- Consider the option to separate the Mechanic's Shop from the Service Building
- Consider acquiring a portion of Mary Avenue to include off-street parking as part of property
- Employee parking should not be located inside the Service Center yard
- Minimize the number of columns on Material's Storage Shed to avoid collision and repairs

It was in general agreement that reorganization of the site to provide more efficient use of the service center yard and provide the most open, flexible useable space should be considered for all future projects. A separate building should be provided for Service Center Maintenance operations due to noise and debris generated by the everyday activities. While a two story building allows for more useable site area, it is not preferred by the stakeholders. After some discussion the attendees agreed that also separating the vehicle maintenance shops from other maintenance operations would be functional and provide potential phasing solutions for new construction. Should temporary housing be needed, a solution to utilize unoccupied private property off site or near the service

(Meeting Summary Continued Next Page)

center was considered. In an interim discussion between meetings, the city asked that Bartos Architecture study the additional option including space for additional admin staff. Occupancy of the new spaces was discussed expanding the size of the new office spaces could potentially house more employees and alleviate any existing crowding. This will allow for future growth of staff and expansions from other with the expansion of the building sizes, efficiency of the existing site area is still very important for the Service Center. Acquiring current street parking and landscape area outside of existing site boundary could be utilized to expand site area. The master plan site options have been narrowed down to potentially two site plan options. Both options have separate buildings for maintenance and administration. To transition from existing buildings into the new structures, site phasing diagrams will be included in the master planning document. The use of temporary buildings should be considered to be able to provide a more efficient future site. Noise generating activities should be concentrated towards the wall at the freeway towards the West edge of the site and should be moved away from the South edge facing the apartment complex. Employee parking should not be moved inside the corporation yard but should be located near the new office spaces. Public parking should be kept to a minimum. Research and calculations should be provided to verify that adequate parking for staff is provided given that the new building areas will be increasing. Access for fire department should also be verified and provided. An open, flexible yard is the most preferred use of space gained in the reorganization of the service center yard. For emergency situations where public parking is needed, off-site street parking can be used. Material shed design options were discussed. It was preferred that fewer structural columns be used to avoid collisions and future maintenance. Providing solar panels at new shed was discussed and decided that they were not needed as current utility cost are already offset by current solar system.

Interim Discussion

In the interim between meeting 4 and 5 the City asked Bartos Architecture to study the option of including additional space for administrave staff.

Meeting 05: 30 March 2017

Stakeholders considered the following:

- A two story Administration Building with grade parking below to provide the necessary parking requirement
- Employee/Public parking will be increased to 122 stalls worse case, down to 97 stalls best case
- Approximately 80 parking stalls would be adequate based on stakeholders input
- The Service and Mechanic's shops can be constructed of prefabricated metal buildings
- Construction delivery method design-bid-build.
- Staff requested a 3-D model of the proposed two story Administration Buildign with podium parking below

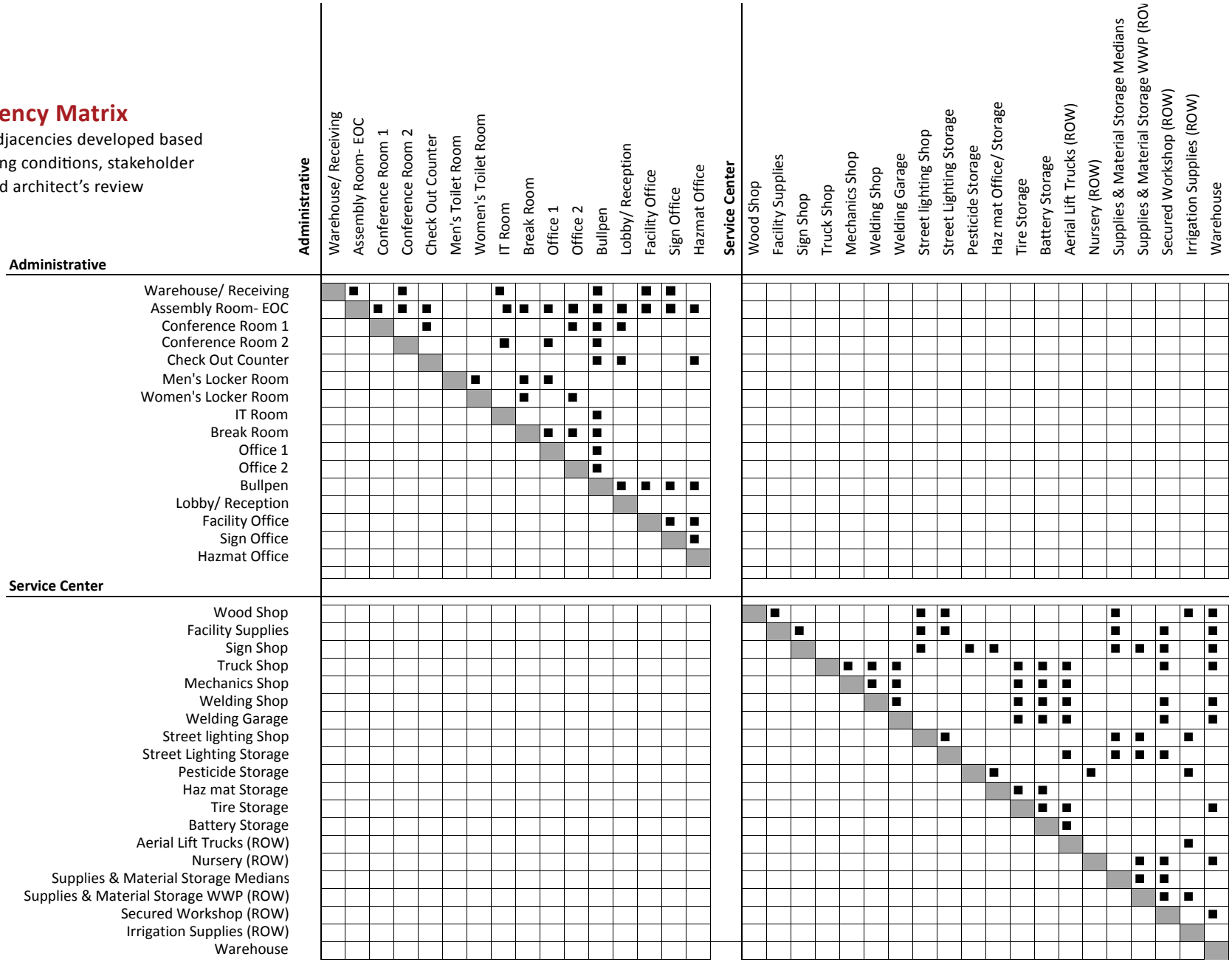
In this meeting, four options were discussed for site development and placement of the new buildings for the service center and administration buildings. It was in general agreement that a two story administration building with at grade parking below should be built to allow for efficient adequate parking on the site. A cost analysis will be provided for additional of second story and podium parking. Due to the signification cost of underground parking, the options including it were not favored. Based on occupancy and parking analysis, it was determined that with increase in building sizes to accommodate growth and potential relocated city hall staff, parking would need to be increased. At the meeting it was determined that City owned properties would have flexibility for required parking counts and that a reasonable number of stalls could be determined. It was agreed that approximately 80 stalls would be adequate. It was also clarified that the parking on Mary Ave was included in parking counts and land gained from property acquisition at Mary does not remove street parking.

An urgency to expand or modify City hall was discussed by staff. By increasing the size of the Service Center administration building and relocating City Hall staff, some of the crowding and pressure is relieved until future projects can be addressed. The anticipated capacity was calculated at the meeting including 60 current staff, 10% growth, 10 additional city hall employees, and 4 visitors totaling approximately 80 people.

The standard and preference for Emergency Operation center is at ground level in the administration building. The daily use for the EOC space will be meeting, multipurpose or break room. Modular construction was discussed as a cost saving alternative but typical prefabricated construction will not meet the stringent code design standards needed for Essential Services facilities. These could potentially The service center shop buildings and mechanics garage construction type should be a "butler" style metal building with high ceilings. The construction delivery method for future projects was discussed including pre-qualified contractors and using a conventional design-bid-build approach. At this meeting Bartos Architecture provided the penultimate draft of the master planning document. In addition to the plan site diagrams that are being developed, the staff requested that a 3D diagram of the proposed two story building with podium parking be provided in the final document and presentation.

Adjacency Matrix

Room Adjacencies developed based on existing conditions, stakeholder input and architect's review



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Building Area Analysis

Existing and proposed areas:

Administrative	Existing Area (SF)	Proposed Area (SF)
Warehouse/ Receiving	1,610	1,600
Assembly Room/ EOC	504	1,500
Conference Room 1	111	300
Conference Room 2		300
Checkout Counter	172	200
Men's Toilet Room	722	800
Women's Toilet Room	184	400
IT	160	250
Break Room	230	250
Office 1	660	150
Office 2		150
Bullpen	590	1,200
Lobby	370	300
Facility Office	360	360
Sign Office	360	360
Hazmat Office	360	360
Support/ Utility	150	
Corridors	270	
General Office	571	
Total	7,384	8,480

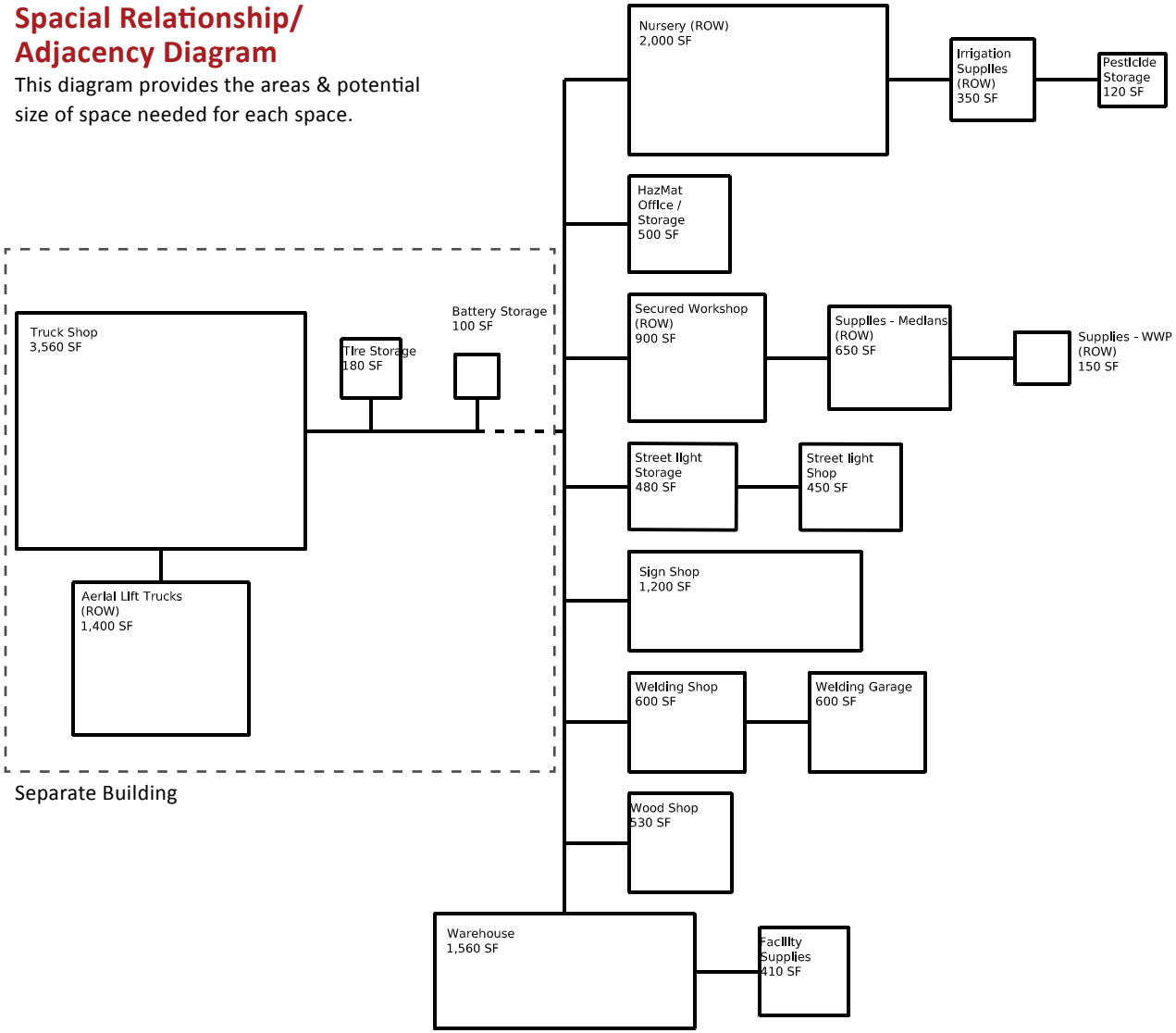
Service Center		
Wood Shop	530	530
Facility Office	360	
Facility Supplies	410	410
Sign Office	360	
Sign Shop	1,200	1,200
Truck Shop	1,300	1,300
Mechanics Shop	1,560	1,560
Welding Shop	600	600
Welding Garage	600	600
Street lighting Shop	450	450
Street Lighting Storage	480	480
Pesticide Storage	120	120
Hazmat Office	360	
Haz mat Office/ Storage	500	500
Tire Storage	180	180
Battery Storage	100	100
Aerial Lift Trucks (ROW)	1,200	1,400
Nursery (ROW)	1,600	2,000
Supplies and Mtl's Storage Medians (ROW)	650	650
Supplies and Mtl's Storage WWP (ROW)	350	150
Secured Workshop (ROW)	600	900
Irrigation Supplies (ROW)	350	350
Total	13,860	13,480

Mechanic Shops		
Vehicle Center	1,300	4,800
Welding Shop	600	660
Metals Storage		1,080
Unisex Toilet Room		100
Unisex Toilet Room		100
Vehicle Office		200
Tire Storage	180	160
Battery Storage	100	160
Mower Shop (Lift)	320	560
Total	2,500	7,820

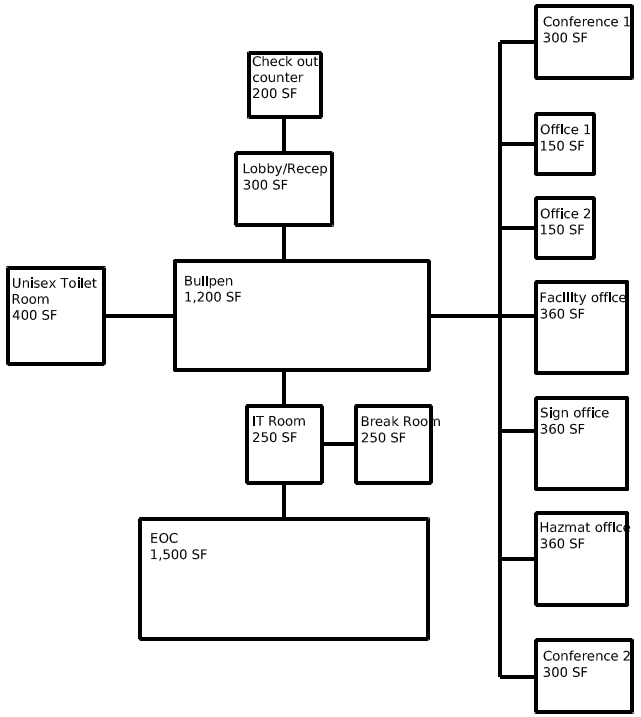
Area analysis providing a square footage comparison of the existing and proposed spaces to be incorporated into the facilities based on stakeholder input and architect's review

Spacial Relationship/ Adjacency Diagram

This diagram provides the areas & potential size of space needed for each space.



Service Center



Administration Building

These diagrams were developed in conversation and collaboration with stakeholders

Spring 2017 Version

Site Plan Options

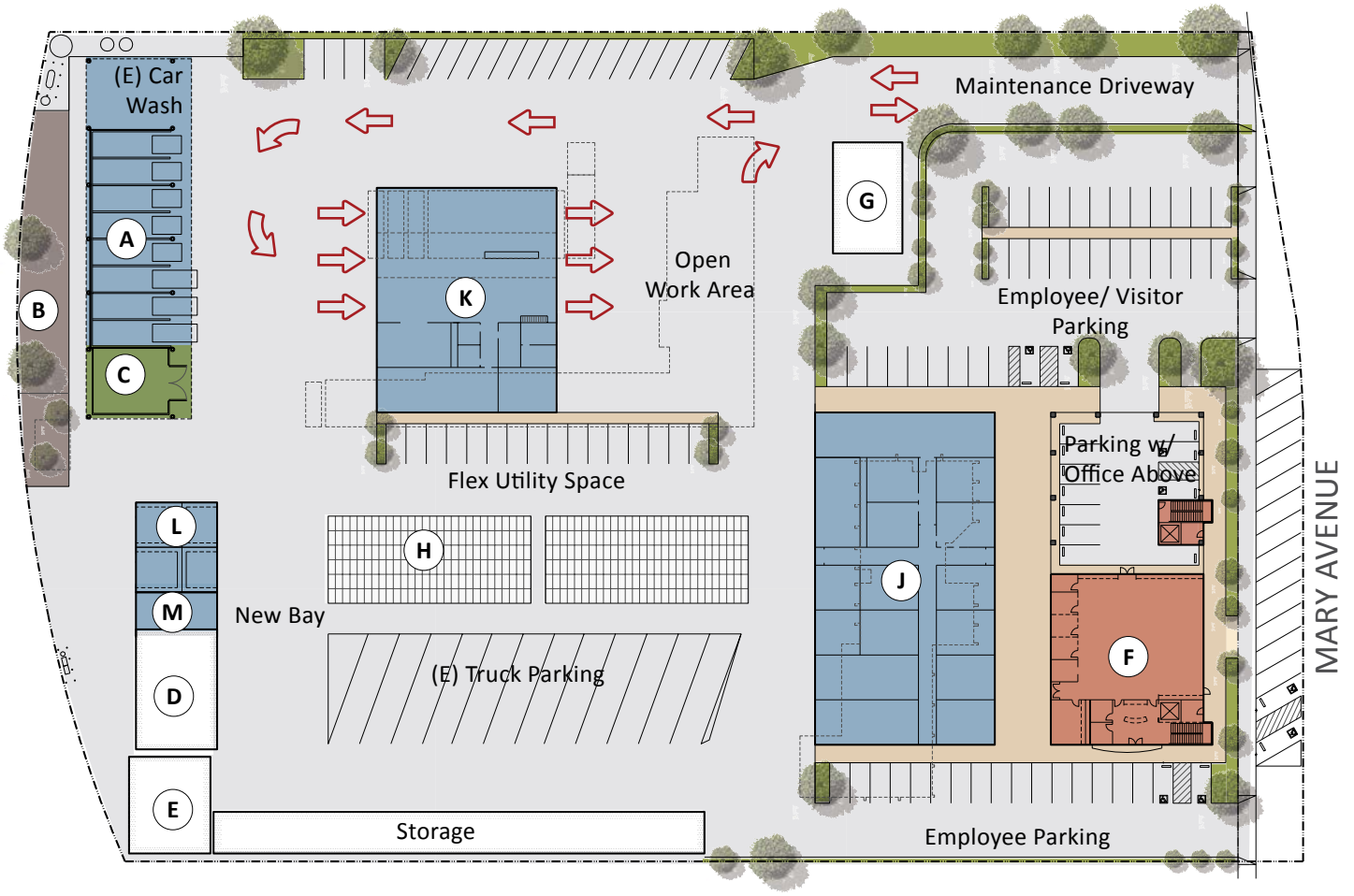
Spring 2017 Version

Option 1 Showing 1st Floor Plan

Replace both Adminstration and Service Buildings in current locations with office space above portion of parking. Separate Mechanic's Shop Building

- Materials Shed (A)
- Nursery (B)
- Nursery/ Pesticide Storage (C)
- Boom Truck Garage (D)
- Storage (E)
- New Administration Building (F)
- Fuel Island (G)
- Solar Structures (H)
- New Service Center (J)
- Mechanics Shop (K)
- Pesticides / Irrigation Storage (L)
- Hazmat Storage (M)

Comment:



Parking Analysis

Non Accessible	72
Accessible	8
(Van Accessible- 4)	

N 25 50 100

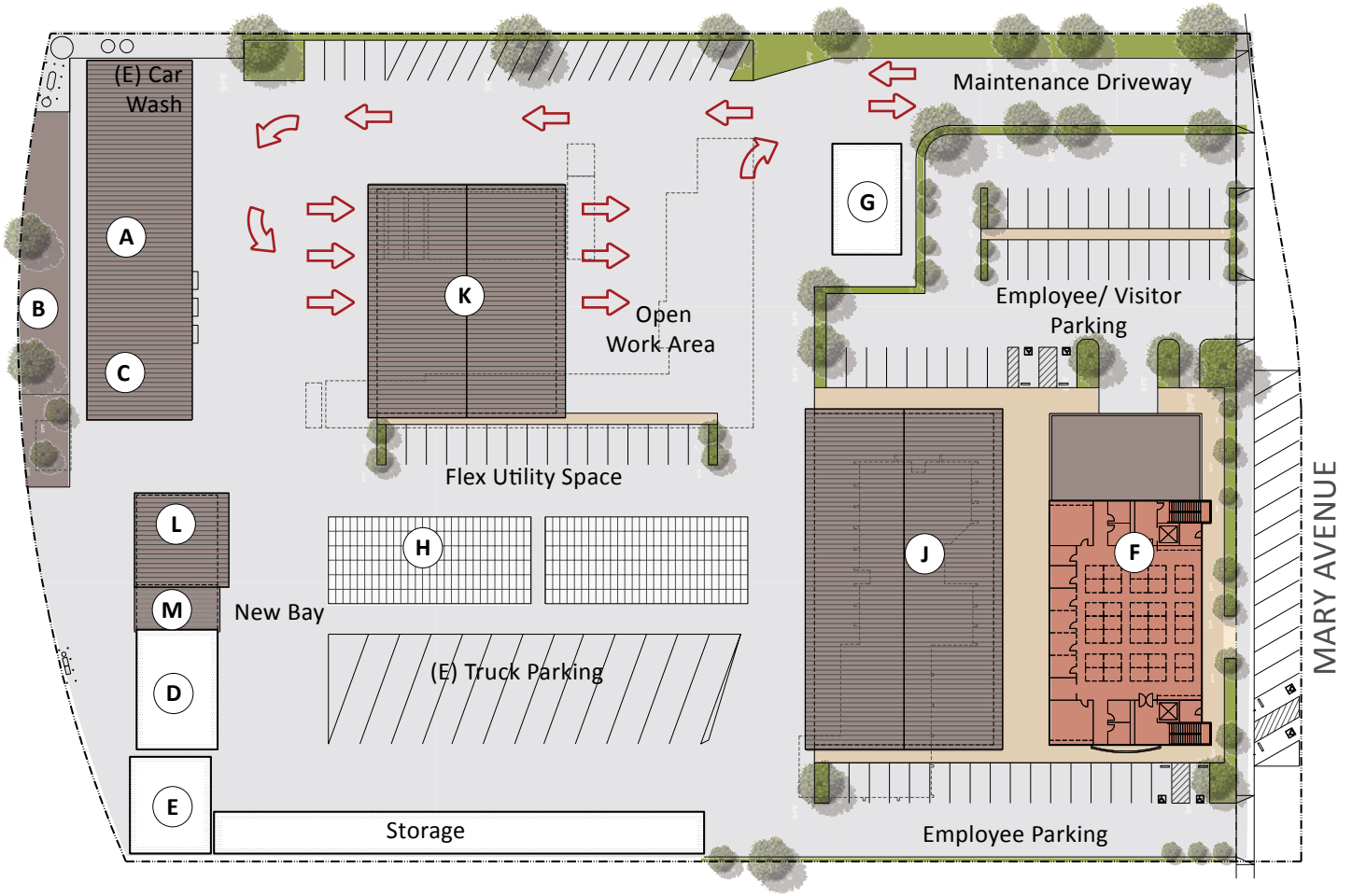
Spring 2017 Version

Option 1 Showing 2nd Floor Plan

Replace both Adminstration and Service Buildings in current locations with parking below portion of office space. Separate Mechanic's Shop Building

- Materials Shed (A)
- Nursery (B)
- Nursery/ Pesticide Storage (C)
- Boom Truck Garage (D)
- Storage (E)
- New Administration Building (F)
- Fuel Island (G)
- Solar Structures (H)
- New Service Center (J)
- Mechanics Shop (K)
- Pesticides / Irrigation Storage (L)
- Hazmat Storage (M)

Comment:



N 25 50 100

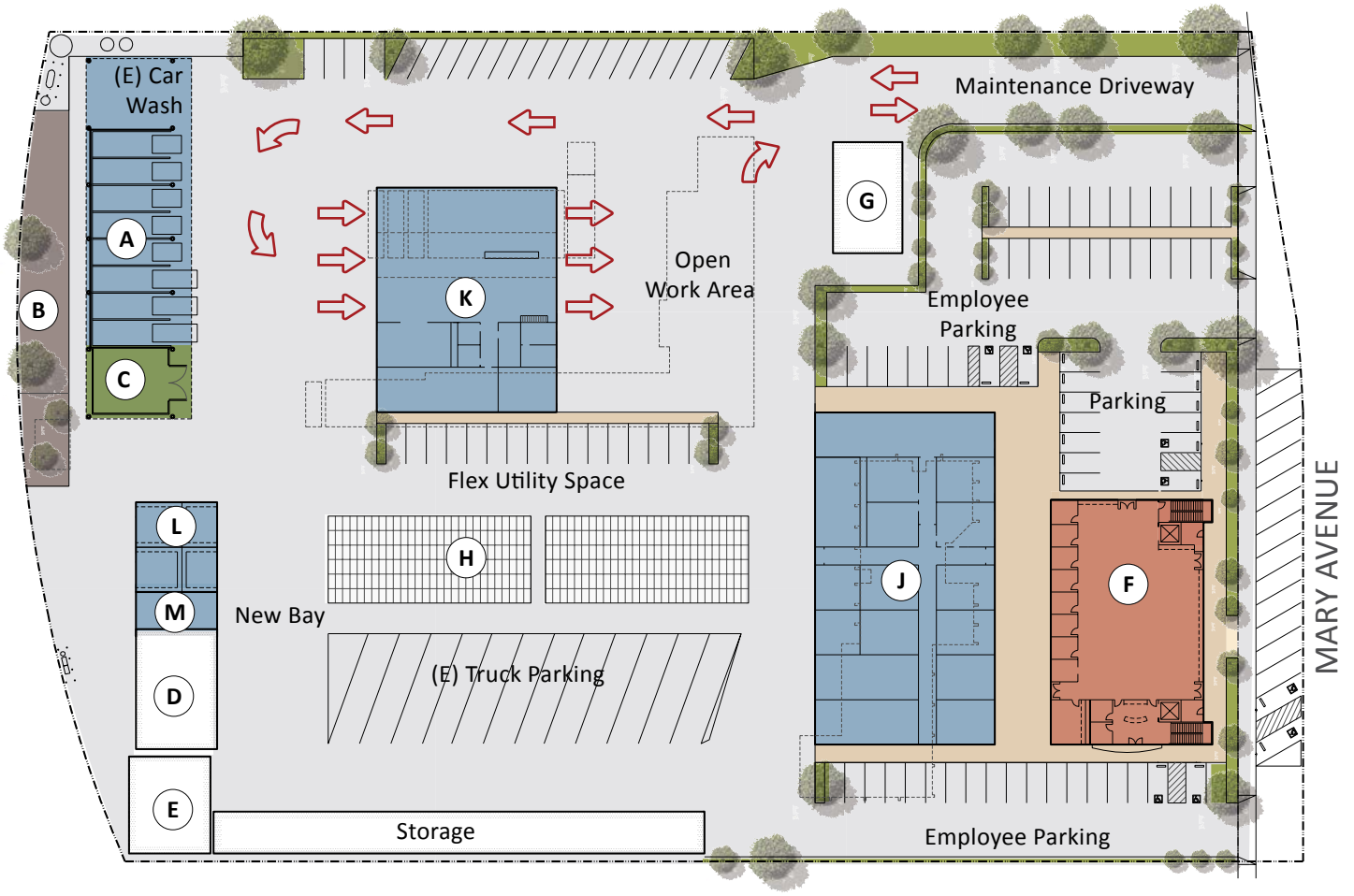
Spring 2017 Version

Option 2 Showing 1st Floor Plan

Replace both Adminstration and Service Buildings in current locations with parking on the north end of the Administration Building. Separate Mechanic's Shop Building

- Materials Shed (A)
- Nursery (B)
- Nursery/ Pesticide Storage (C)
- Boom Truck Garage (D)
- Storage (E)
- New Administration Building (F)
- Fuel Island (G)
- Solar Structures (H)
- New Service Center (J)
- Mechanics Shop (K)
- Pesticides / Irrigation Storage (L)
- Hazmat Storage (M)

Comment:



Parking Analysis

Non Accessible	72
Accessible	8
(Van Accessible- 4)	

N 25 50 100

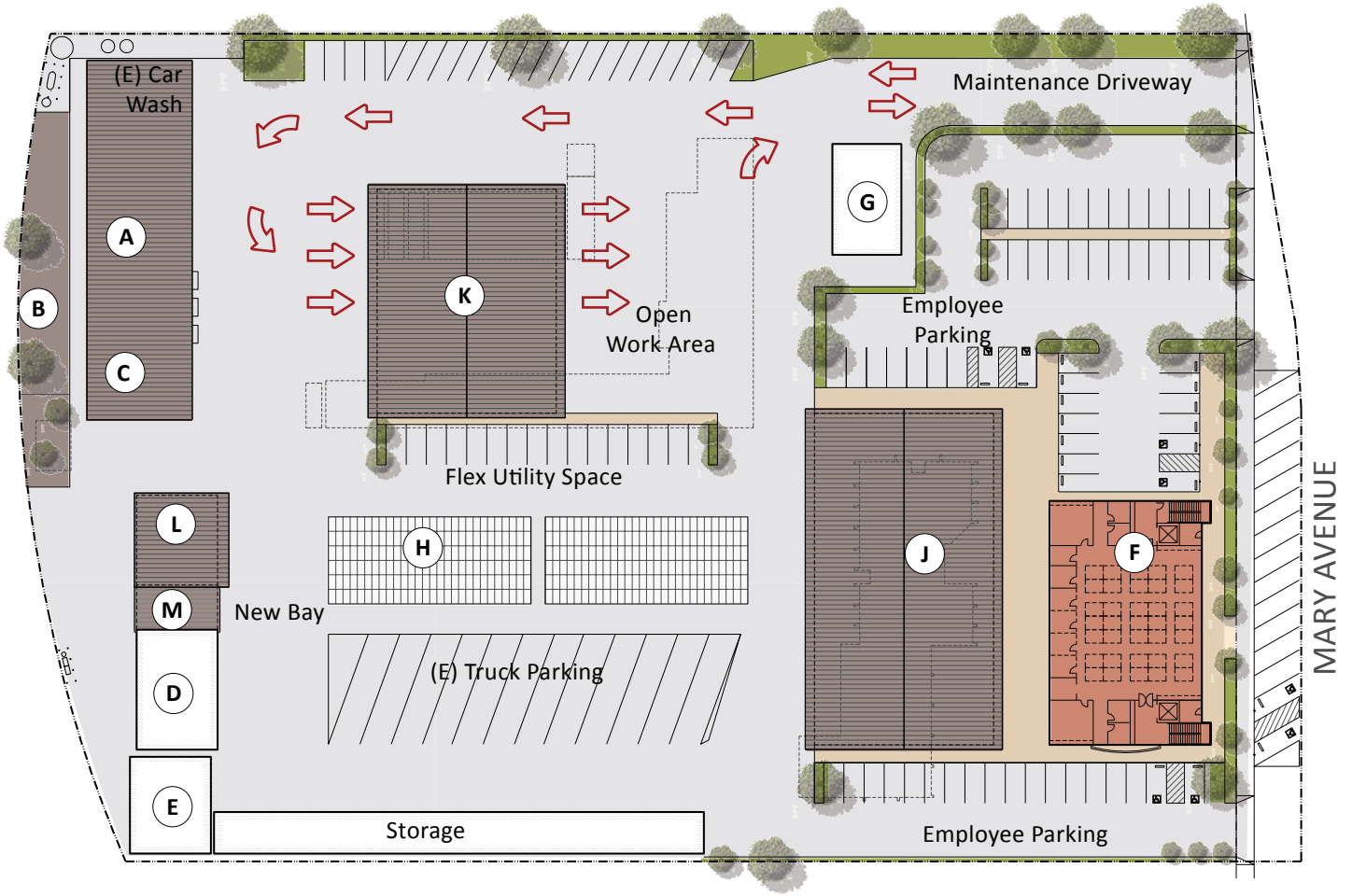
Spring 2017 Version

Option 2 Showing 2nd Floor Plan

Replace both Adminstration and Service Buildings in current locations with parking on the north end of the Administration Building. Separate Mechanic's Shop Building

- Materials Shed (A)
- Nursery (B)
- Nursery/ Pesticide Storage (C)
- Boom Truck Garage (D)
- Storage (E)
- New Administration Building (F)
- Fuel Island (G)
- Solar Structures (H)
- New Service Center (J)
- Mechanics Shop (K)
- Pesticides / Irrigation Storage (L)
- Hazmat Storage (M)

Comment:



N 25 50 100

Spring 2017 Version

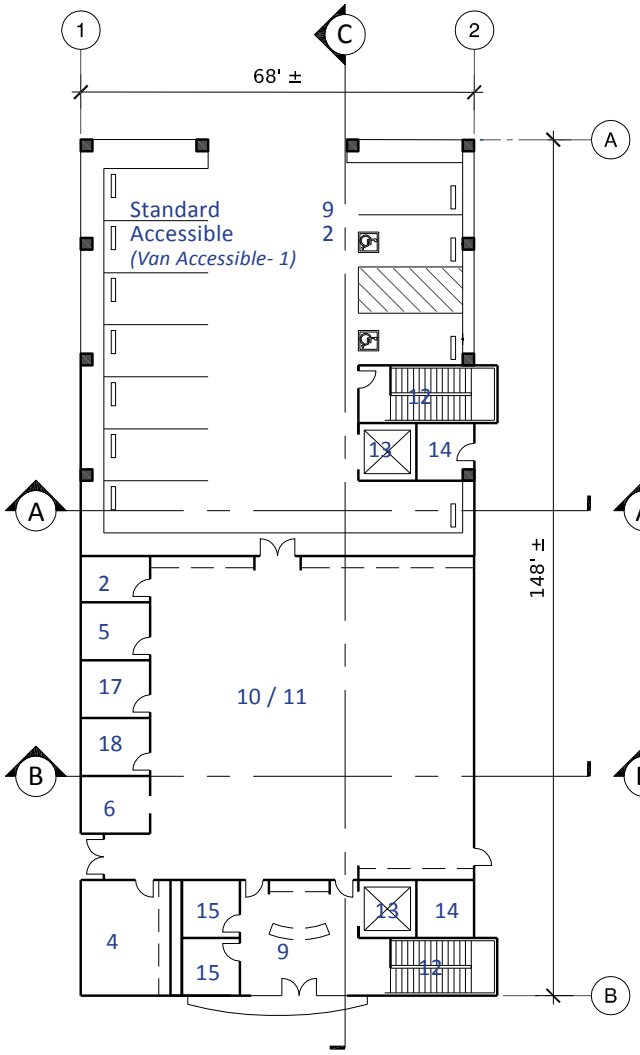
Conceptual Floor Plans & Building Sections

Spring 2017 Version

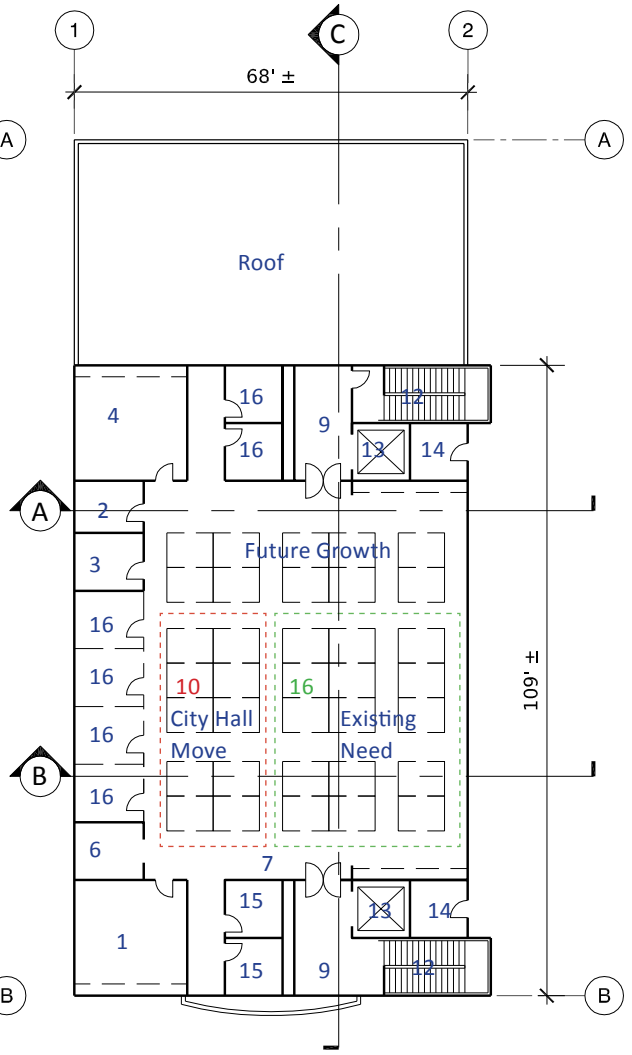
Administration Building

Floor Plans - Option 1

Break Room	1
Storage/ Mechanical	2
IT Room/ Electrical	3
Conference Room	4
Key Storage/ IT Room	5
Copyroom	6
Bullpen	7
Public Unisex Toilet	8
Lobby	9
Emergency Operation Center	10
Multipurpose Room	11
Stairs	12
Elevator	13
Elevator Mechanical	14
Unisex Toilet	15
Flex Office	16
Work Program Supply	17
Emergency Operations Center Off.	18



First Floor
5,650 SF



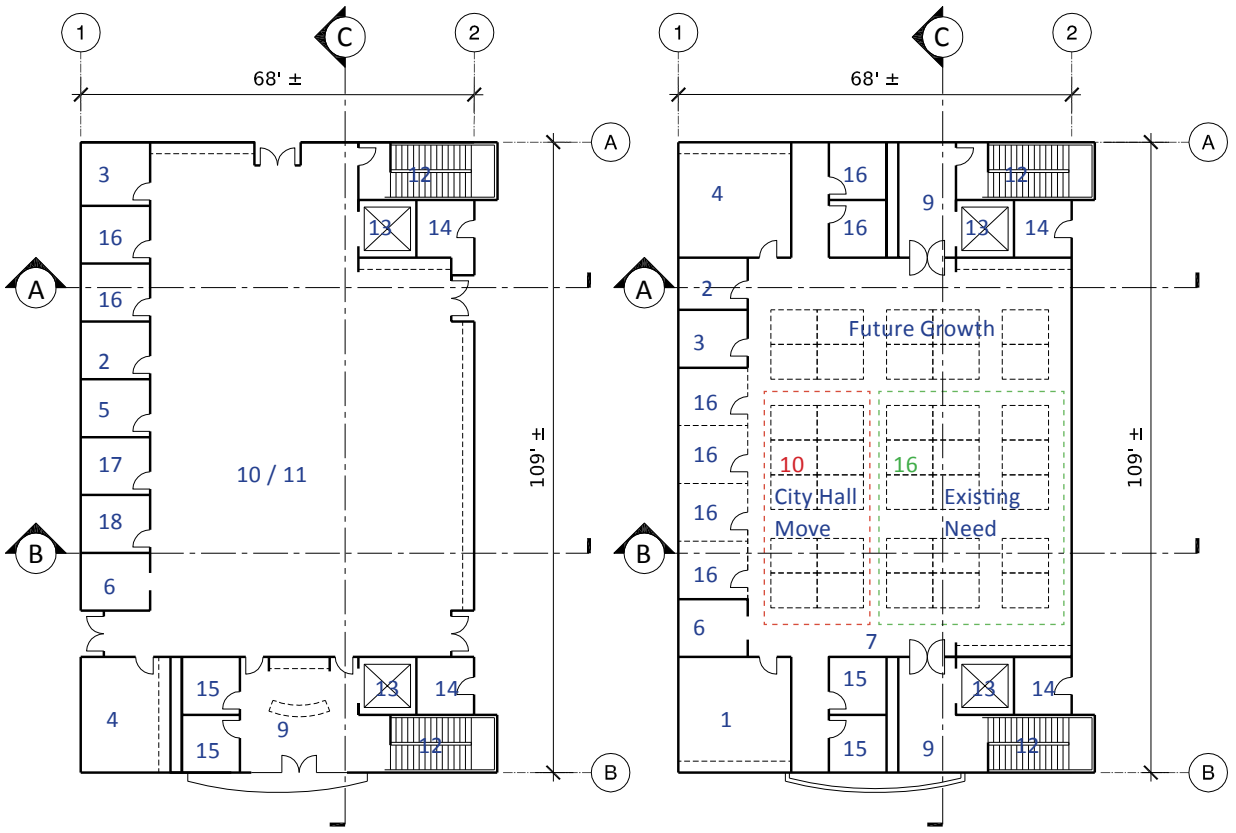
Second Floor
7,500 SF

Spring 2017 Version

Administration Building

Floor Plans - Option 2

Break Room	1
Storage/ Mechanical	2
IT Room/ Electrical	3
Conference Room	4
Key Storage/ IT Room	5
Copyroom	6
Bullpen	7
Public Unisex Toilet	8
Lobby	9
Emergency Operation Center	10
Multipurpose Room	11
Stairs	12
Elevator	13
Elevator Mechanical	14
Unisex Toilet	15
Flex Office	16
Work Program Supply	17
Emergency Operations Center Off.	18



First Floor
7,500 SF

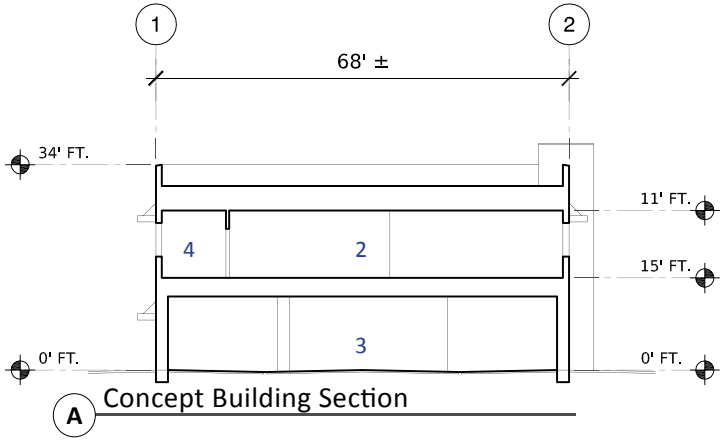
Second Floor
7,500 SF

Spring 2017 Version

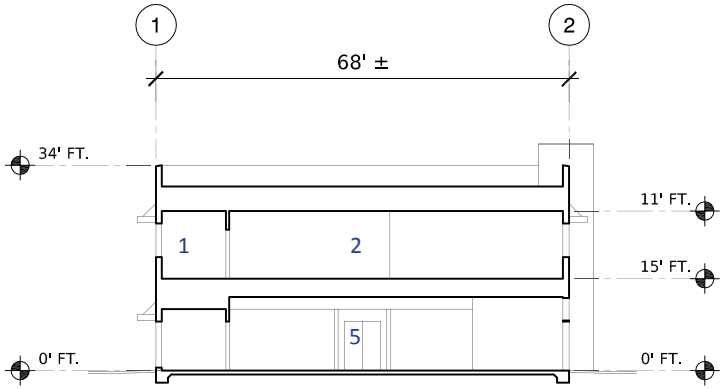
Administration Building

Conceptual Sections- Option 1

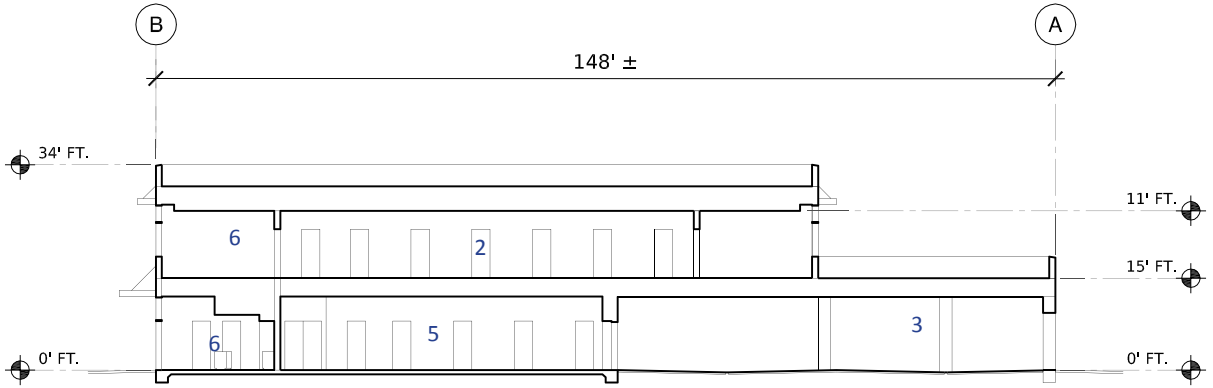
Flex Office	1
BullPen	2
Podium Parking	3
Copy Room	4
Emergency Operation Center	5
Lobby	6



A Concept Building Section



B Concept Building Section



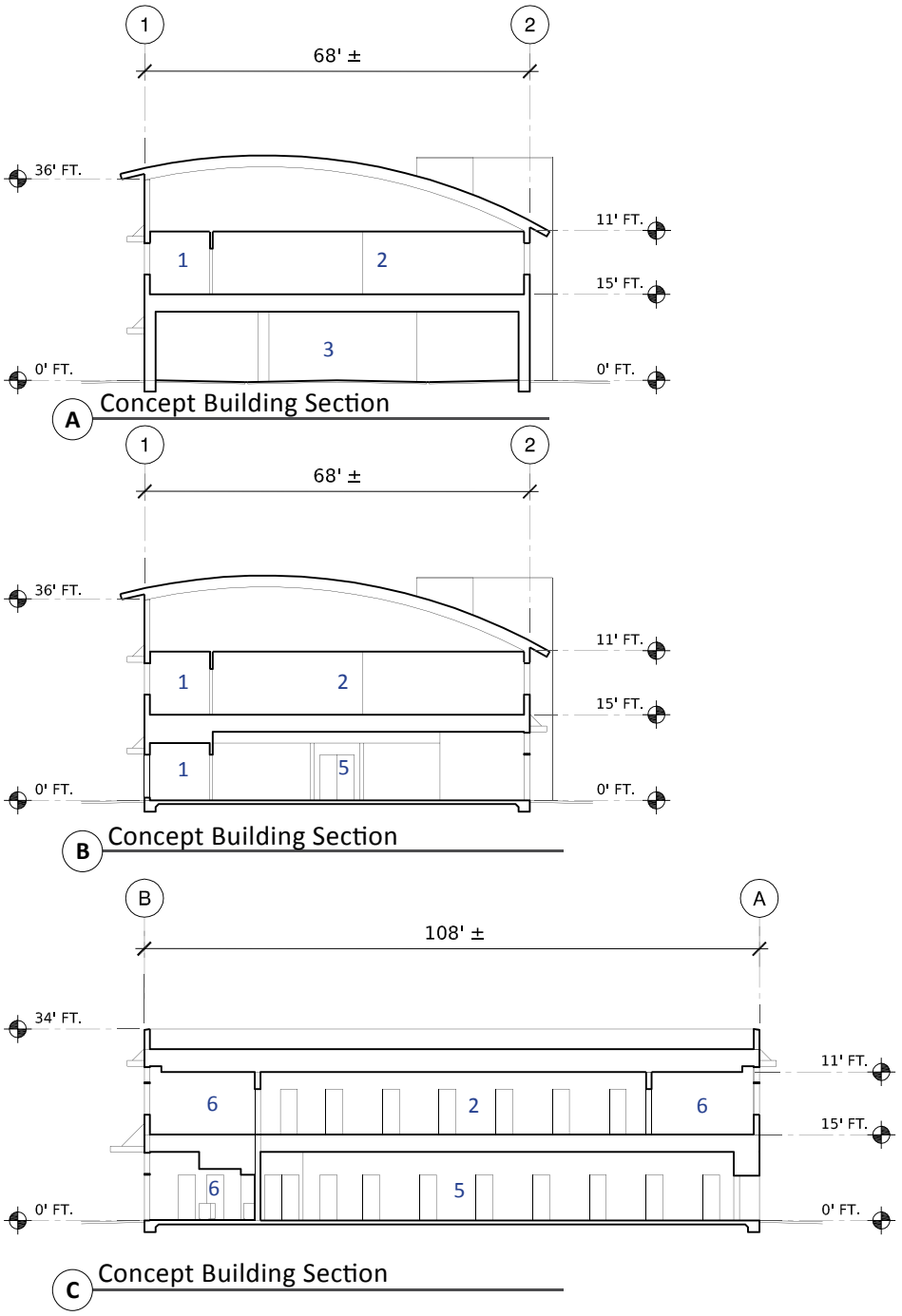
C Concept Building Section

Spring 2017 Version

Administration Building

Conceptual Sections- Option 2

Flex Office	1
BullPen	2
Podium Parking	3
Copy Room	4
Emergency Operation Center	5
Lobby	6

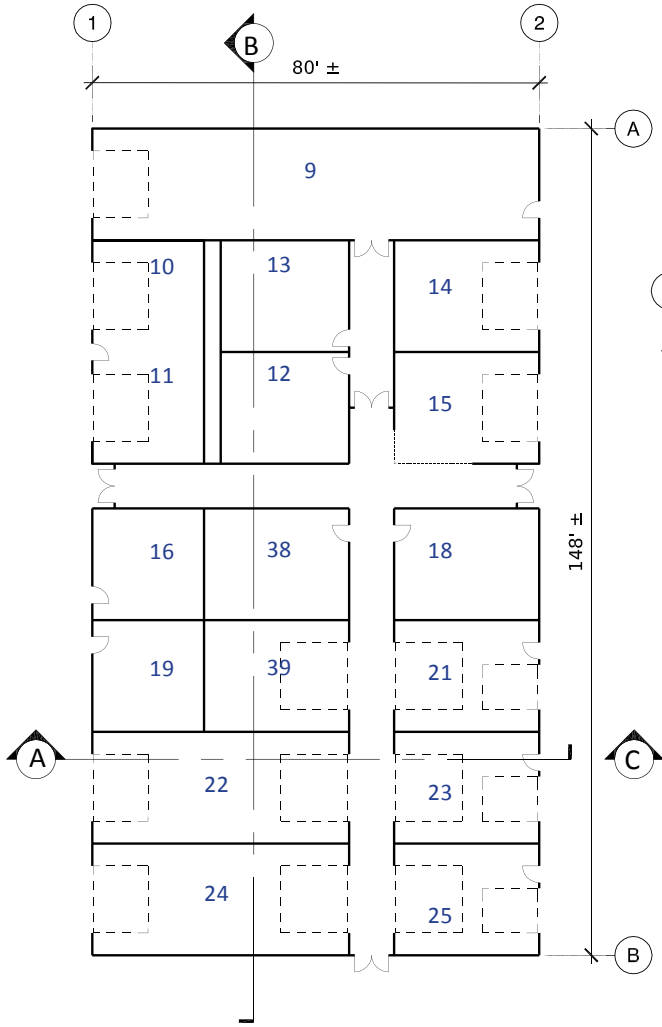


Spring 2017 Version

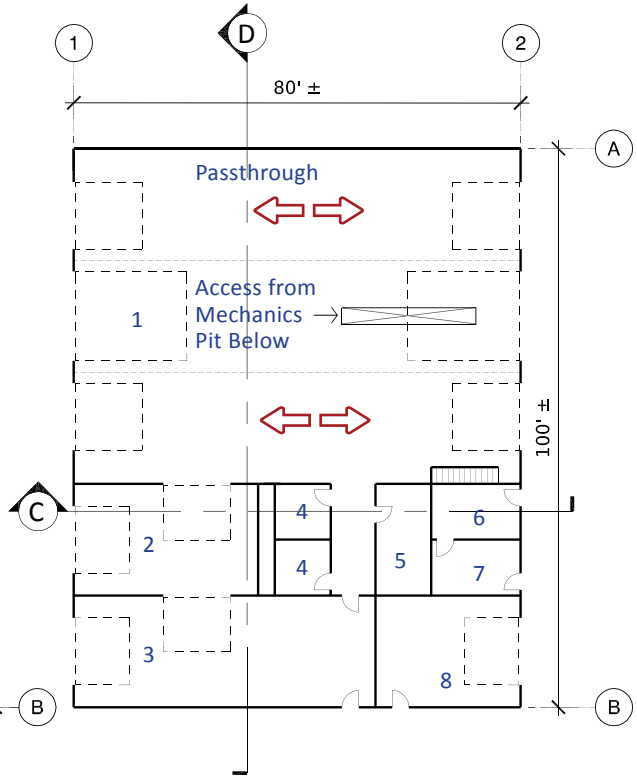
Service Building & Mechanic Shop

Floor Plans

Vehicle Center	1
Welding Shop	2
Metal Storage	3
Unisex Toilet	4
Vehicle Office	5
Tire Storage	6
Battery Storage	7
Mower Lift	8
Warehouse	9
Wood Storage	10
Wood Shop	11
Women's Toilet/ Locker Room	12
Men's Toilet/ Locker Room	13
Hazmat Storage	14
Breakroom	15
Electrical Room	16
Plotter/ Copy Room	17
Conference Room	18
Mechanical Room	19
Sign Storage	20
Shign Shop	21
Street Light Storage	22
Street Light Shop	23
ROW Storage	24
ROW Shop	25



Service Building
11,800 SF



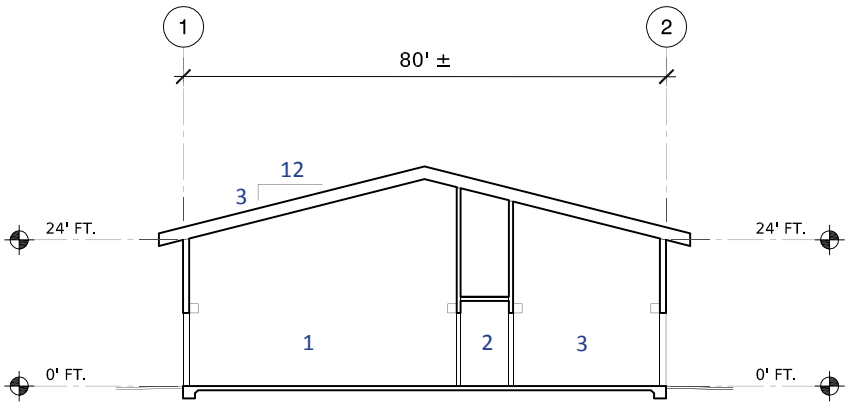
Mechanics Garage
8,000 Sf

Spring 2017 Version

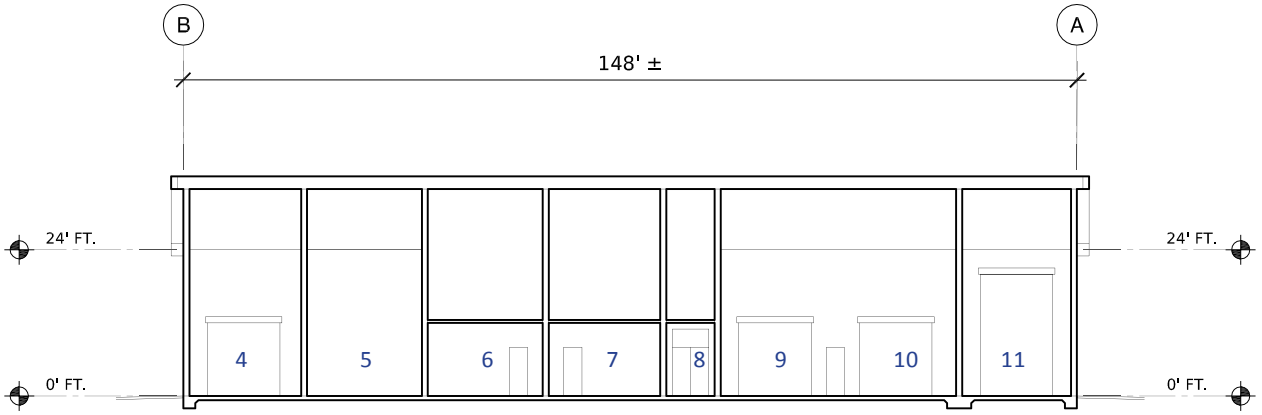
Service Building

Conceptual Sections- Option 1

Street Light Storage	1
Corridor	2
Street Light Shop	3
ROW Storage	4
Street Light Storage	5
Mechanics Room	6
Electrical Room	7
Corridor	8
Wood Shop	9
Wood Storage	10
Warehouse	11



A Concept Building Section



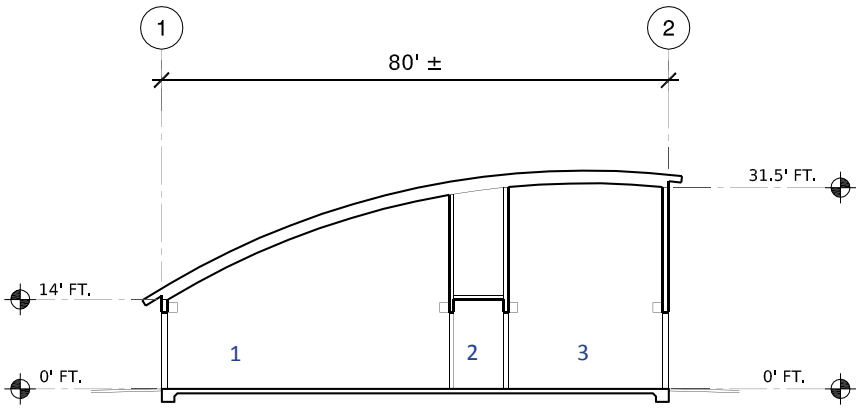
B Concept Building Section

Spring 2017 Version

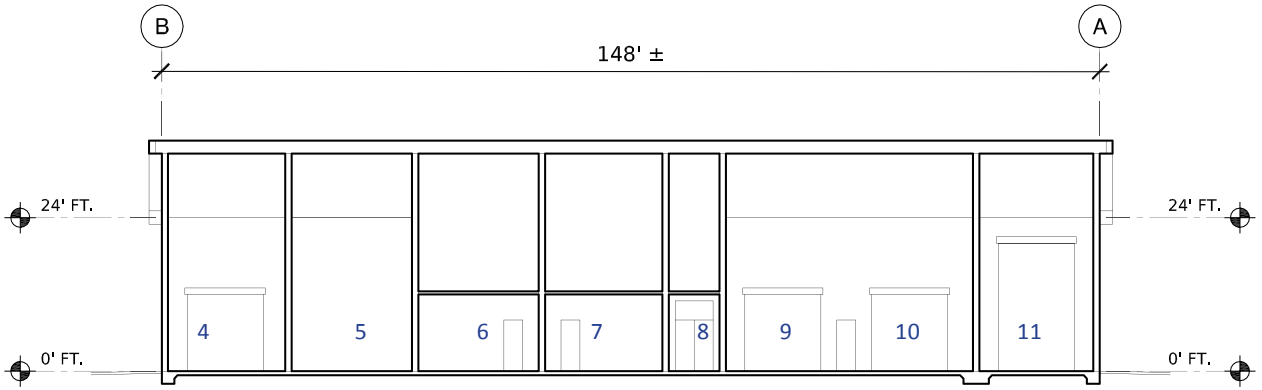
Service Building

Conceptual Sections- Option 2

Street Light Storage	1
Corridor	2
Street Light Shop	3
ROW Storage	4
Street Light Storage	5
Mechanics Room	6
Electrical Room	7
Corridor	8
Wood Shop	9
Wood Storage	10
Warehouse	11



A Concept Building Section



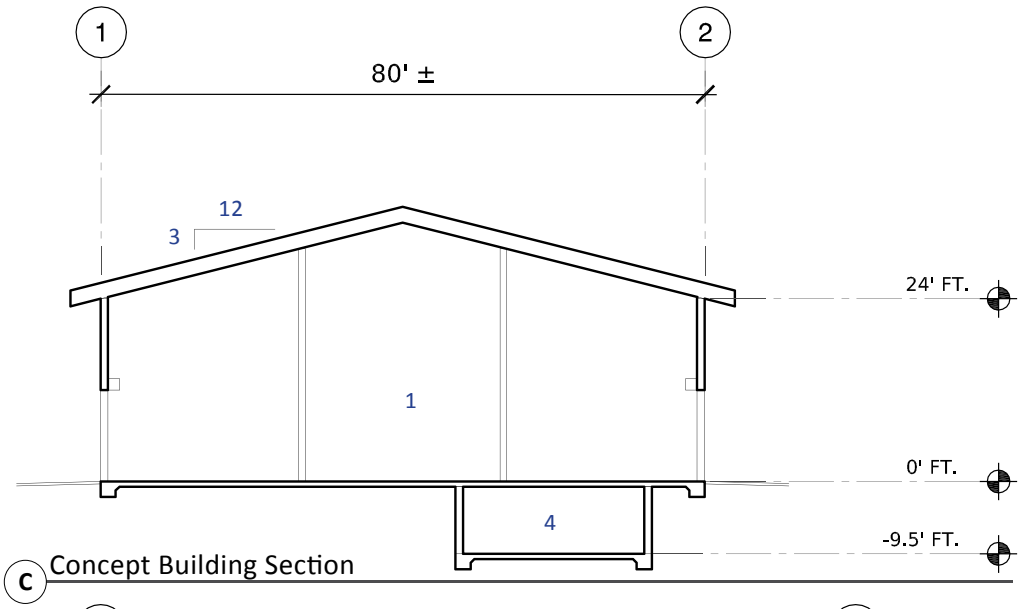
B Concept Building Section

Spring 2017 Version

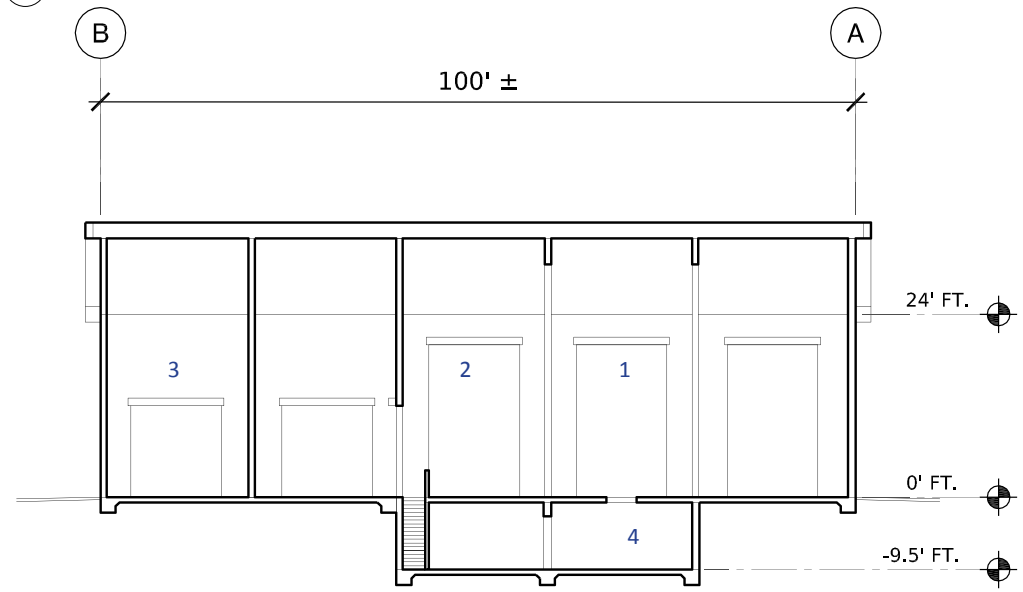
Mechanic Shop

Conceptual Sections

Vehicle Center	1
Welding Shop	2
Metal Storage	3
Mechanics Pit	4



C Concept Building Section



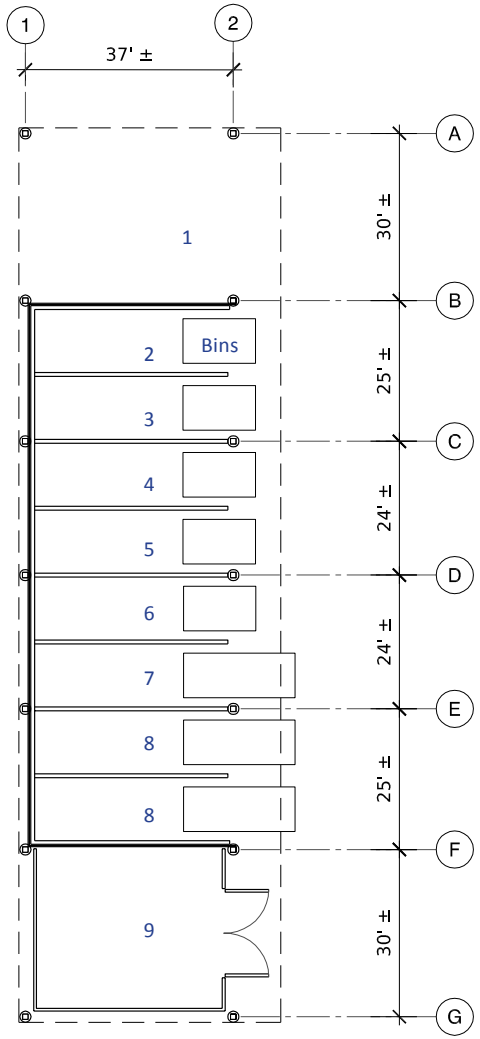
D Concept Building Section

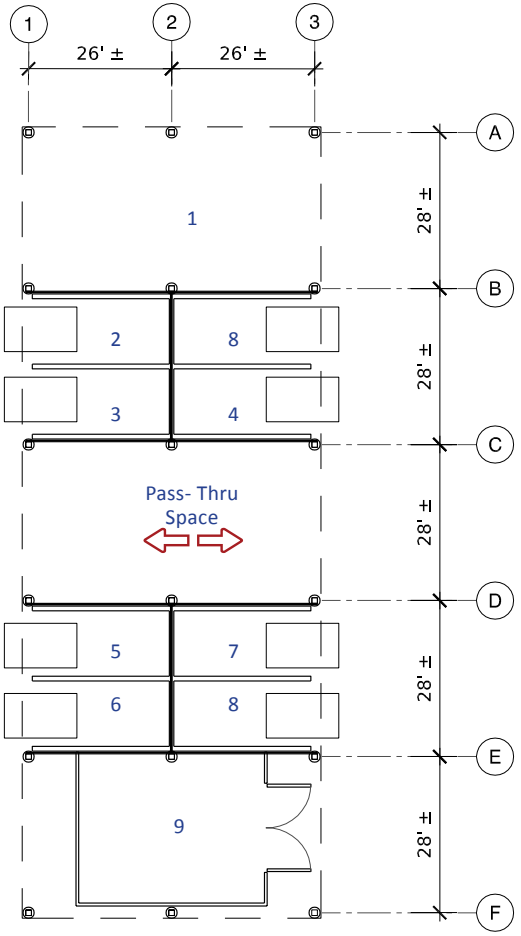
Spring 2017 Version

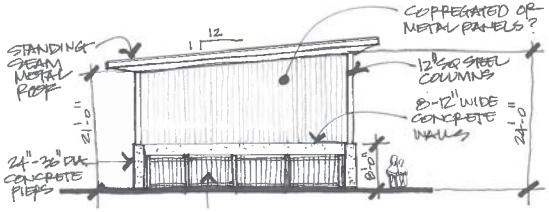
Materials Storage Shed

Floor Plan and Exterior
Elevation Options

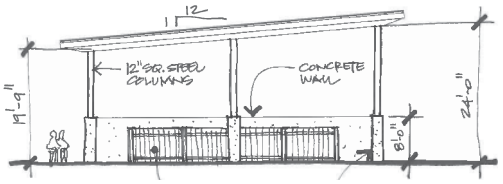
Existing Car Wash	1
Dirt/ Soil	2
Sand	3
Trash	4
Compostables	5
Wood Chips	6
Mixed Recyclables	7
Flex	8
Covered Nursery	9







Option 1:
No Drive Thru (Preferred)



Option 2:
Drive Thru

Spring 2017 Version

Potential Phasing Diagrams

With existing buildings used for temporary facilities

Spring 2017 Version

Phase 1

Build New Materials Storage Shed

Demolish existing shed 1

Preserve Existing Carwash 2

Build a New Materials Shed 3

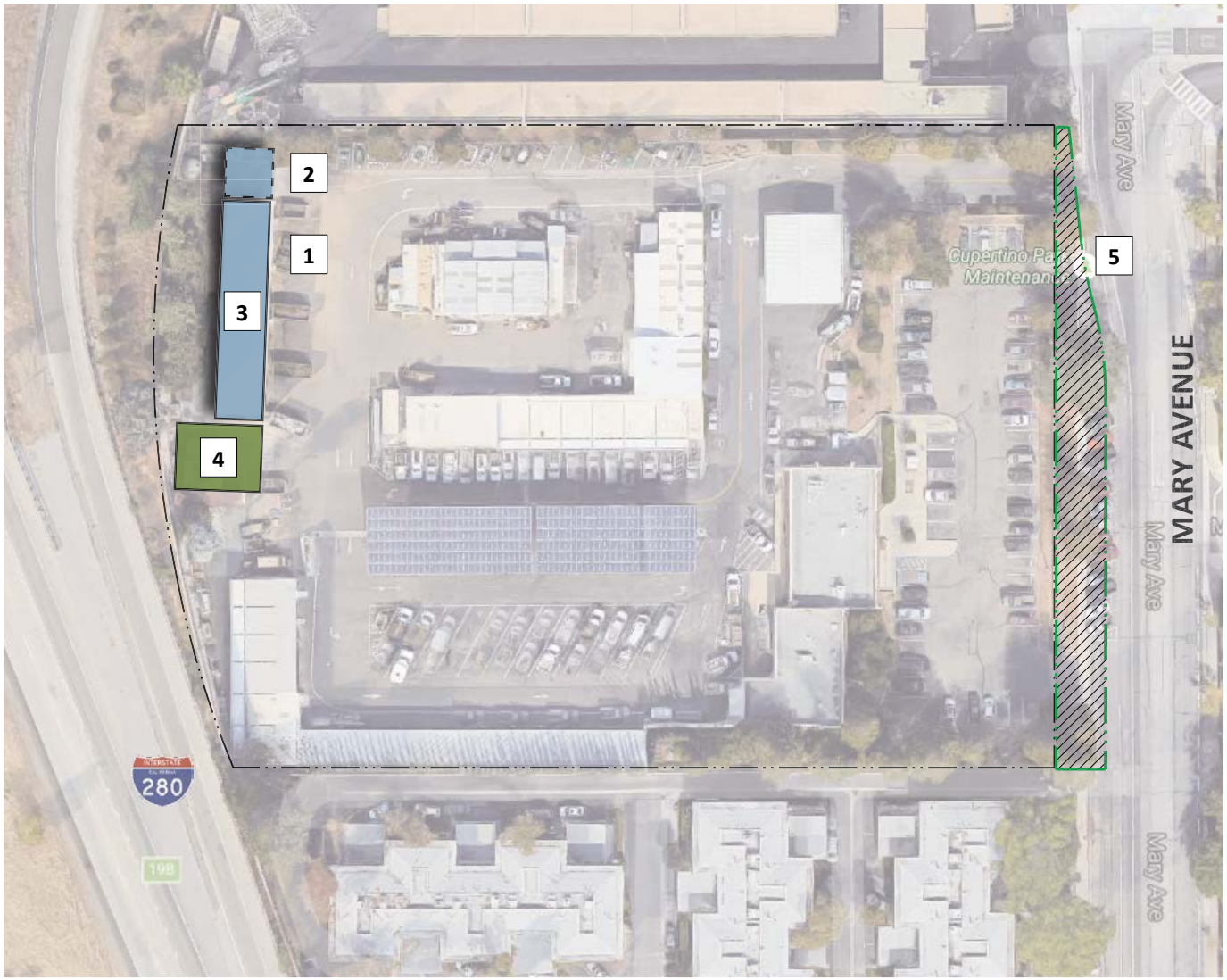
- Metal structure
- 8’-0” high concrete walls
- Concrete pad
- Double sided bays
- Access on both sides of shed
- Drainage

Relocate Nursery 4

- New lighting and receptacles
- New plant storage area
- Possible covered structure

Possibly extend site boundary 5

- Acquire parking on Mary Ave



Spring 2017 Version

BARTOS ARCHITECTURE
COLLABORATION
ADVOCACY
RESEARCH
EDUCATION

Phase 2

Build New Administration Building

Existing administration building 1

- Remains and is functional during construction

Build New administration building 2

- Accessible toilet rooms
- Open office area (16 cubicles)
- Administrative offices
- Copy Room
- Electrical/ mechanical room
- Key storage
- conference rooms

Emergency Operations Center (EOC)/ Cafeteria

- Raised flooring
- Marker boards
- Flexible space
- Moveable furniture
- Accousitcal panel walls
- Breakout room
- Map displays
- Open ceiling
- Supply room
- Robust CAC system
- Flexible network and electrical systems
- Emergency generator

Spring 2017 Version

Phase 3

Demolish Existing Administration Building

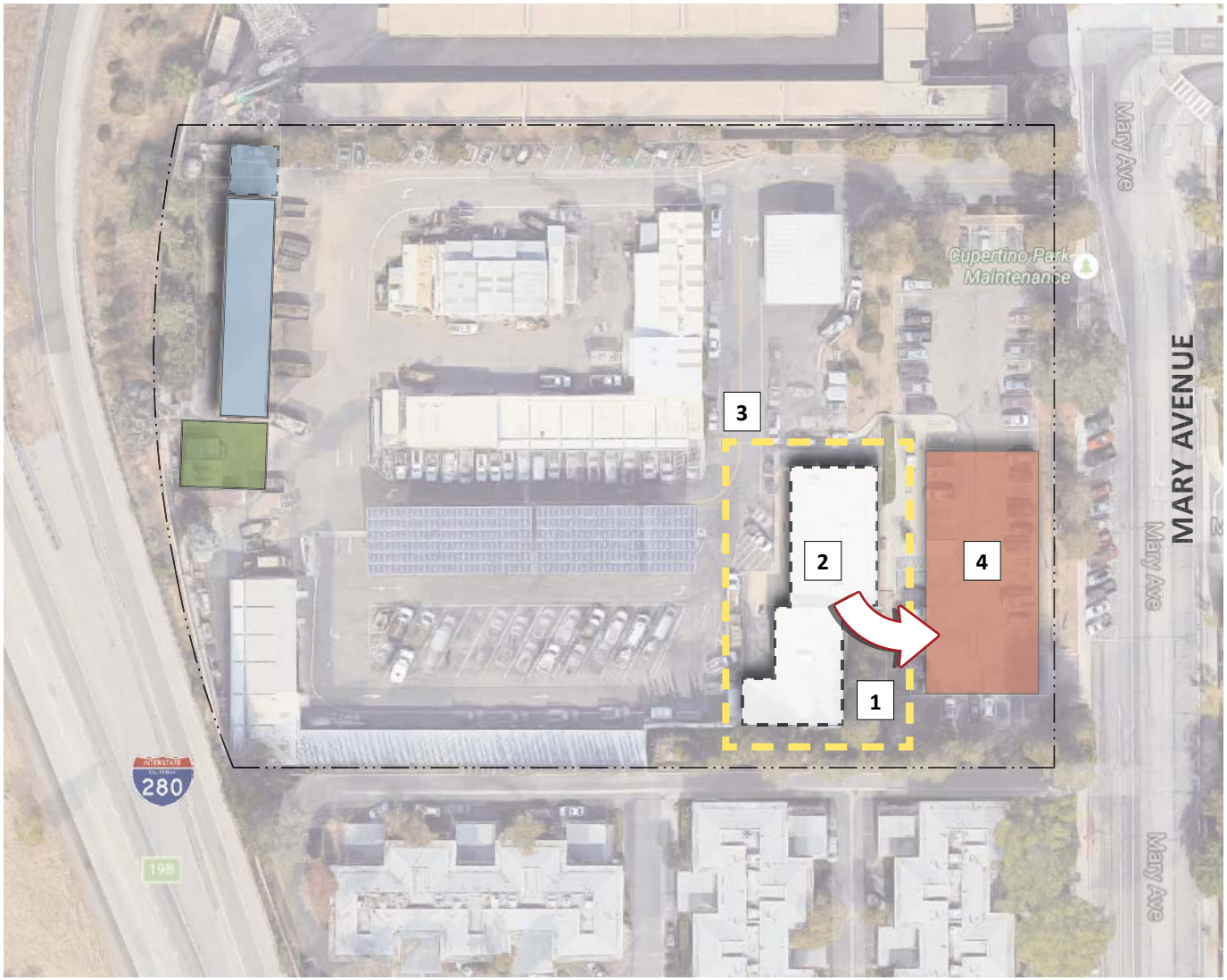
Move into new Administration Building 1

Demolish existing Building 2

Protect New building in place 3

- Construction fencing
- sound and dust control

Demolish existing Building 4



Spring 2017 Version

Phase 4

Build New Service Building

Existing shops and welding garage to remain functional during construction 1

Protect Surrounding Buildings from New Construction 2

- Construction fencing
- Sound and debris control

New service building 3

- Break Room
- Woodshop and storage
- Sign shop and storage
- ROW Shop and storage
- Street light shop and storage
- Warehouse
- Mens/ Womens locker rooms and toilets

Add Bay to existing boom truck garage 4

- demolish existing generator

N 25 50 100

Spring 2017 Version

BARTOS ARCHITECTURE
COLLABORATION ADVOCACY RESEARCH EDUCATION

Phase 5

Partially Demolish Existing Shops Building and Welding Garage

Move shops and welding garage into new services building 1

Move Welding Garage into Mechanics shops 2

Demolish existing welding garage structures 3

Provide new temporary roll up doors 4

Protect surounding areas 5
- Construction Fencing
- Sound and debris control

Extend site boundary 6
- Acquire parking on Mary Ave

Pave new parking lot 7

Install new landscaping and pedestrian walkways 8

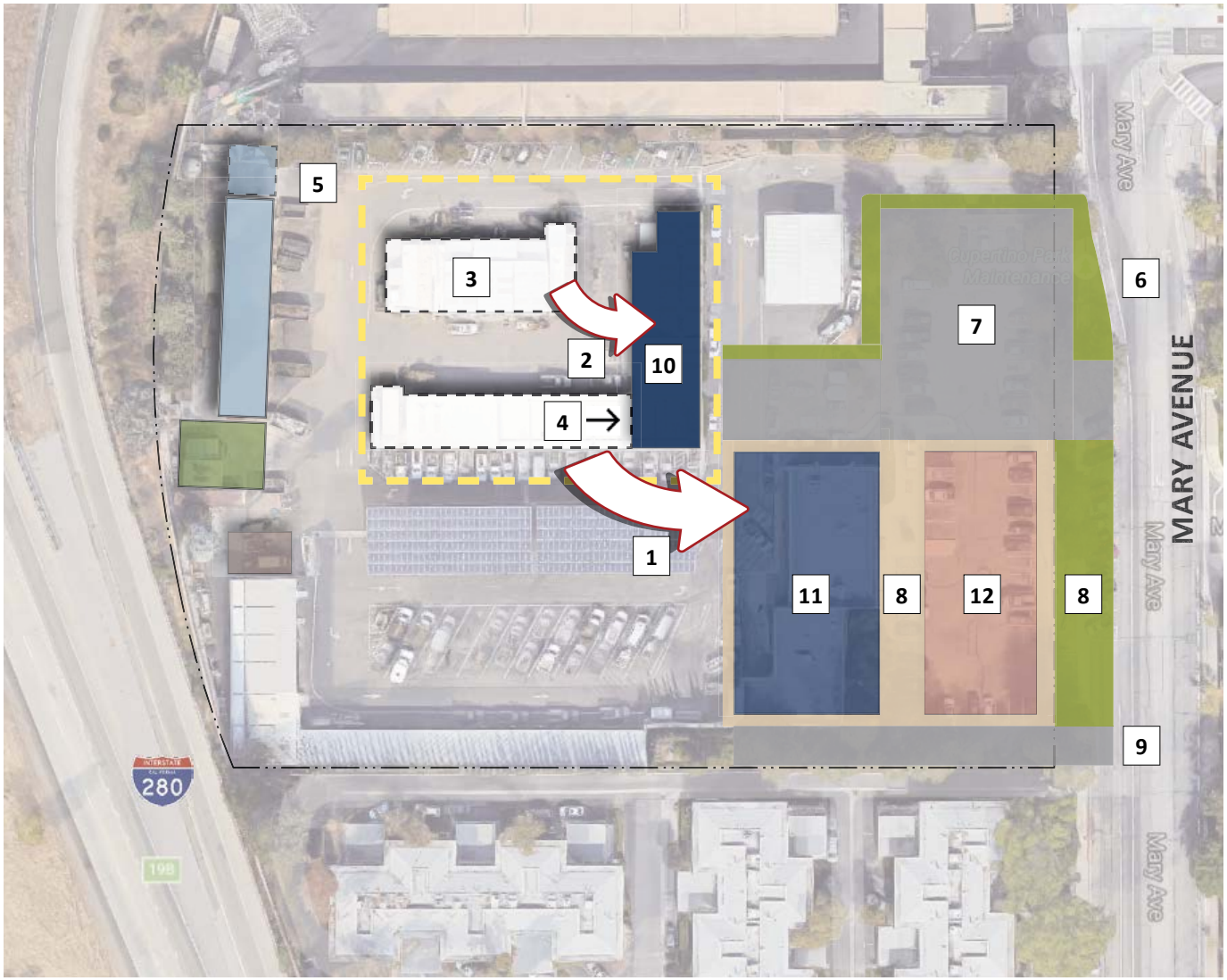
New drive from Mary 9
- access along south end of new administration building

Existing Mechanics Shop 10

New Service Center 11

New Administrative Building 12

Spring 2017 Version



BARTOS ARCHITECTURE
COLLABORATION ADVOCACY RESEARCH EDUCATION

Phase 6

Build New Staff/Public Parking

New mechanics garage **1**

- Mechanic's shop with tandem vehicle garage
- Vehicle lifts
- Mechanic's pit
- Battery storage
- Tire storage
- Mower storage with lift
- Toilet Rooms

Protect surrounding buildings during construction **2**

- Construction Fencing
- Sound and debris control

Maintain operational Shop building during construction **3**

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Spring 2017 Version

BARTOS ARCHITECTURE
COLLABORATION ADVOCACY RESEARCH EDUCATION

Phase 7

Demolish Existing Mechanics Shop

Move into New Building 1

Demolish Existing Building 2

Protect New building in place 3

- Construction Fencing
- Sound and debris control

N 25 50 100

Spring 2017 Version

BARTOS ARCHITECTURE
COLLABORATION
ADVOCACY
RESEARCH
EDUCATION

Phase 8

Pave/Stripe Flex Utility Space & Open Work Area

New Asphalt Yard 1

- Open work area
- Existing Designated parking

New Flex Utility Space 2

- Striping
- Concrete walkway
- Landscaping

Spring 2017 Version

Completion

- Materials Shed (A)
- Nursery (B)
- (C)
- Boom Truck Garage (D)
- Storage (E)
- New Administration Building (F)
- Fuel Island (G)
- Solar Structures (H)
- New Service center (J)
- New Mechanics Shop (K)

Spring 2017 Version

BARTOS ARCHITECTURE
COLLABORATION ADVOCACY RESEARCH EDUCATION

Massing Study

- New Materials Shed (A)
- New Nursery (B)
- New Pesticides / Hazmat (C)
- Existing Boom Truck Garage (D)
- Existing Storage (E)
- New Administration Building (F)
- Existing Fuel Island (G)
- Existing Solar Structures (H)
- New Service Center (J)
- New Mechanics Shop (K)

Spring 2017 Version

BARTOS ARCHITECTURE
COLLABORATION
ADVOCACY
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EDUCATION

Preliminary Rough Order of Magnitude (Cost Estimates)

Spring 2017 Version

City of Cupertino Service Center

Version **26-Apr-17**

New Administration Building and Emergency Operations Center Feasibility Study

Summary of Identified Potential Need

Phase		Description	Direct	Indirect	Total	ROM (Round-up) entered - not caclulated	Comments
Initial	001	Materials Storage Shed	751,146	150,229	901,375	1,000,000	*2017*
Admin	002	Administration Building - Option 1	11,179,410	2,235,882	13,415,292	13,500,000	*2018-2019*
Maint	003	Service Building	5,229,180	1,319,208	7,915,248	8,000,000	*2019-2020*
Maint	004	Mechanic Shop	5,229,180	1,045,836	6,275,016	6,300,000	*2020-2021*
Site	005	Site Improvements	1,755,600	351,120	2,106,720	2,200,000	*2020-2021*
		Site Identified Need	**24,144,516**	**5,102,275**	**30,613,651**	**31,000,000**	

Spring 2017 Version

City of Cupertino Service Center

Version **26-Apr-17**

001 **Materials Storage Shed** Area 15,000

Direct Construction Costs	Quantity	Unit Cost	Unit	Extended	Division total	Source/Remarks
All Divisions						
Shed Superstructure	1	260,000	sf	260,000		One way access bays with 2 rows of columns
Shed Foundations	400	300	cy	120,000		Saylor - 03.3101 025 and 03.3101 011
wing walls	140	300	cy	42,000		Saylor - 03.3101 025 and 03.3101 011
electrical/lighting	5,700	10	sf	57,000		use $5 per sf
Paving (Asphalt)	20,000	5	sf	100,000		Per previous project
Drainage	1	10,000	ea	10,000		allow $10,000
Demolition of existing	3,000	40	sf	10,000		Based on previous project
				Sub Total	599,000	
Adjustments To Base Construction Estimate						
Escalation	599,000	2%		11,980		*Possible increase in escalation over the next 4 yrs.*
Market	599,000	2%		11,980		
Design Contingency	599,000	10%		59,900		
				Sub Total	**83,860**	
				Total Direct Estimate with Adjustments	**682,860**	
Construction Contingency	682,860	10%			68,286	standard recommendation
				Total Direct Construction Cost	**751,146**	
Indirect Construction Costs						
initial assumption	751,146	20%			150,229	consultants, agency, etc..
				Total Project Pre-initiation Magnitude	**901,375**	

Spring 2017 Version

City of Cupertino Service Center

Version **26-Apr-17**

002 **Administration Building - Option 1** Area 10,000

Direct Construction Costs	Quantity	Unit Cost	Unit	Extended	Division total	Source/Remarks
All Divisions						
First Floor	5,650	600	sf	3,390,000		
Second Floor	7,500	600	sf	4,500,000		Two Story Complex with Podium Parking
Total	13,200					
Sitework	4,500	70	sf	315,000		average of Site Work from previous Callander Est.
Parking/paving	10,000	10	sf	100,000		
Utility upgrades	1	250,000	ea	250,000		
Demolition of existing	9,000	40	sf	360,000		Based on previous project / Get quote
				Sub Total	8,915,000	
Adjustments To Base Construction Estimate						
Escalation	8,915,000	2%		178,300		*Possible increase in escalation over the next 4 yrs.*
Market	8,915,000	2%		178,300		
Design Contingency	8,915,000	10%		891,500		
				Sub Total	**1,248,100**	
				Total Direct Estimate with Adjustments	**10,163,100**	
Construction Contingency	10,163,100	10%			1,016,310	standard recommendation
				Total Direct Construction Cost	**11,179,410**	
Indirect Construction Costs						
initial assumption	11,179,410	20%			2,235,882	consultants, agency, etc..
				Total Project Pre-initiation Magnitude	**13,415,292**	

Spring 2017 Version

City of Cupertino Service Center

Version **26-Apr-17**

003 **Service Building** Area 20,000

Direct Construction Costs	Quantity	Unit Cost	Unit	Extended	Division total	Source/Remarks
All Divisions						
Service Center Building	11,800	350	sf	4,130,000		
Sitework	4,000	70	sf	280,000		Callander-based on previous estimate (average)
Paving	12,000	10	ea	120,000		Callander-based on previous estimate (average)
Utility upgrades	1	250,000	ea	250,000		lighting, drainage, hydrants
Demolition	12,000	40	sf	480,000		
				Sub Total	5,260,000	
Adjustments To Base Construction Estimate						
Escalation	5,260,000	2%		105,200		*Possible increase in escalation over the next 4 yrs.*
Market	5,260,000	2%		105,200		
Design Contingency	5,260,000	10%		526,000		
				Sub Total	**736,400**	
				Total Direct Estimate with Adjustments	**5,996,400**	
Construction Contingency	5,996,400	10%			599,640	standard recommendation
				Total Direct Construction Cost	**6,596,040**	
Indirect Construction Costs						
initial assumption	6,596,040	20%			1,319,208	consultants, agency, etc..
				Total Project Pre-initiation Magnitude	**7,915,248**	

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City of Cupertino Service Center

Version **26-Apr-17**

004 **Mechanic Shop** Area 8,000

Direct Construction Costs	Quantity	Unit Cost	Unit	Extended	Division total	Source/Remarks
All Divisions						
Mechanics Garage	8,000	400	sf	3,200,000		
Sitework	2,000	70	sf	140,000		Callander-based on previous estimate (average)
Paving	10,000	10	ea	100,000		Callander-based on previous estimate (average)
Utility upgrades	1	250,000	ea	250,000		lighting, drainage, hydrants
Demolition	12,000	40	sf	480,000		
				Sub Total	4,170,000	
Adjustments To Base Construction Estimate						
Escalation	4,170,000	2%		83,400		*Possible increase in escalation over the next 4 yrs.*
Market	4,170,000	2%		83,400		
Design Contingency	4,170,000	10%		417,000		
				Sub Total	**583,800**	
				Total Direct Estimate with Adjustments	**4,753,800**	
Construction Contingency	4,753,800	10%			475,380	standard recommendation
				Total Direct Construction Cost	**5,229,180**	
Indirect Construction Costs						
initial assumption	5,229,180	20%			1,045,836	consultants, agency, etc..
				Total Project Pre-initiation Magnitude	**6,275,016**	

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Version **26-Apr-17**

005 **Site Improvements** Area 15,000

Direct Construction Costs	Quantity	Unit Cost	Unit	Extended	Division total	Source/Remarks
All Divisions						
Sitework	15,000	50	ea	750,000		
Parking/paving	15,000	10	sf	150,000		
Utility upgrades	1	500,000	ea	500,000		lighting, drainage, hydrants
Demolition	0	0	sf	0		
				Sub Total	1,400,000	
Adjustments To Base Construction Estimate						
Escalation	1,400,000	2%		28,000		*Possible increase in escalation over the next 4 yrs.*
Market	1,400,000	2%		28,000		
Design Contingency	1,400,000	10%		140,000		
				Sub Total	**196,000**	
				Total Direct Estimate with Adjustments	**1,596,000**	
Construction Contingency	1,596,000	10%			159,600	standard recommendation
				Total Direct Construction Cost	**1,755,600**	
Indirect Construction Costs						
initial assumption	1,755,600	20%			351,120	consultants, agency, etc..
				Total Project Pre-initiation Magnitude	**2,106,720**	

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Appendix:

- Diagrams (Based on Stakeholder Discussions)
  - Bubble Diagrams
  - Collaboration Team Sketches
  - Initial Study Sketches
  - “Also Studied”
  - Potential Phasing: Option 2
  - Meeting Notes & Program Matrix
- Report on Desirable Design Elements for a Cupertino EOC

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Diagrams

Based on stakeholder discussions

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City of Cupertino Service Center

10555 Mary Ave - Cupertino, CA

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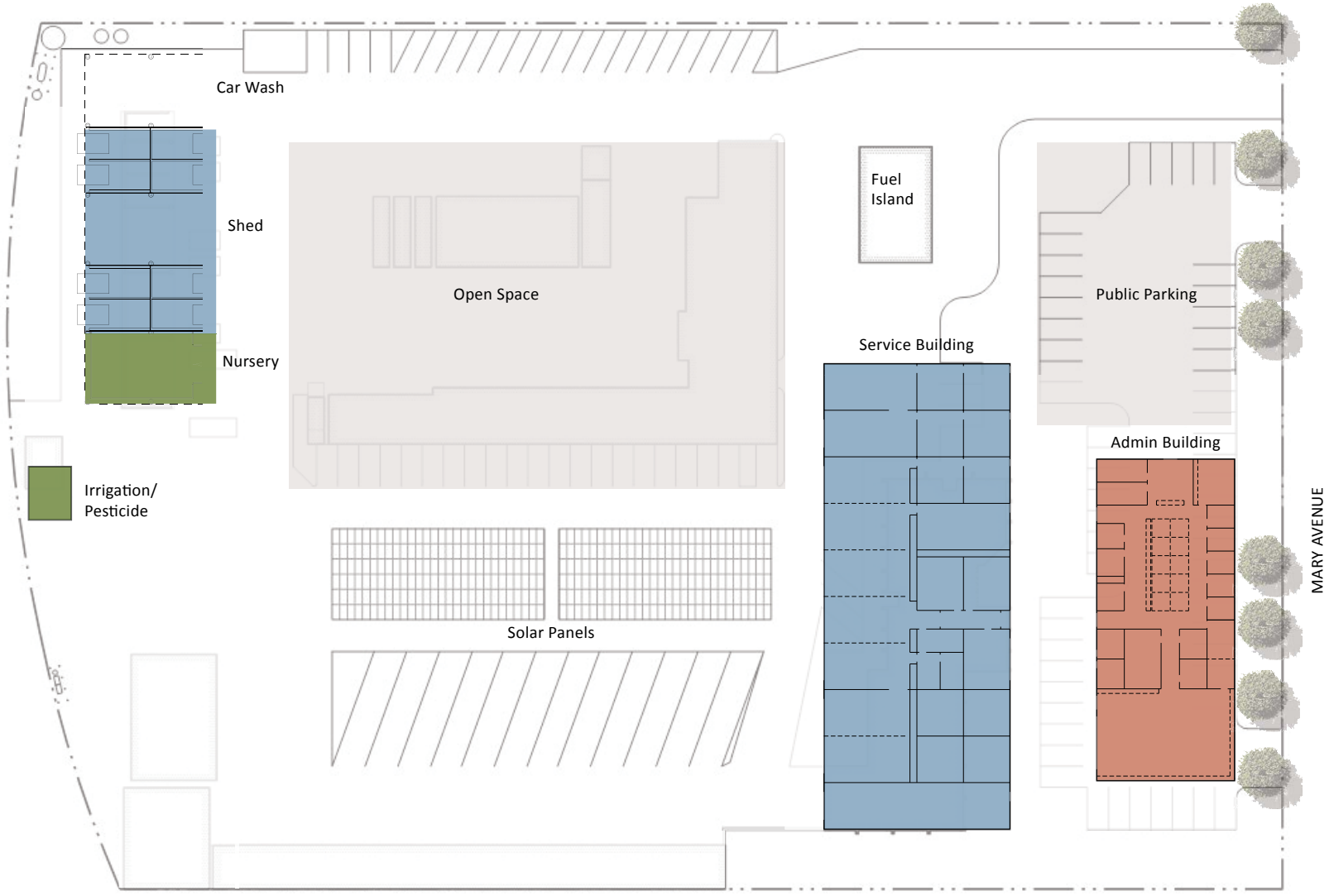

Option with offset admin building and all inclusive service building

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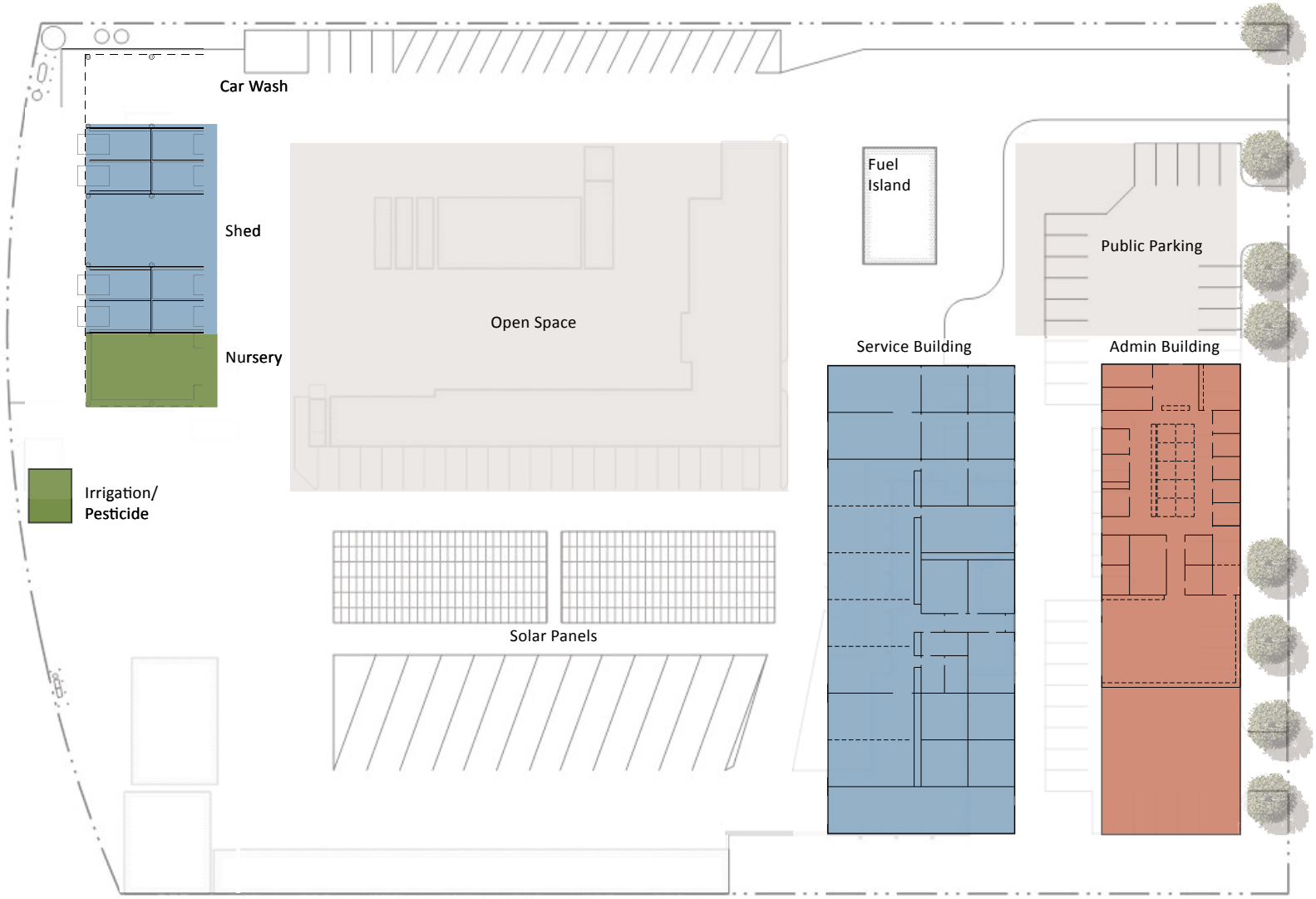

Option with administration building aligning with service building. Provides large open work area

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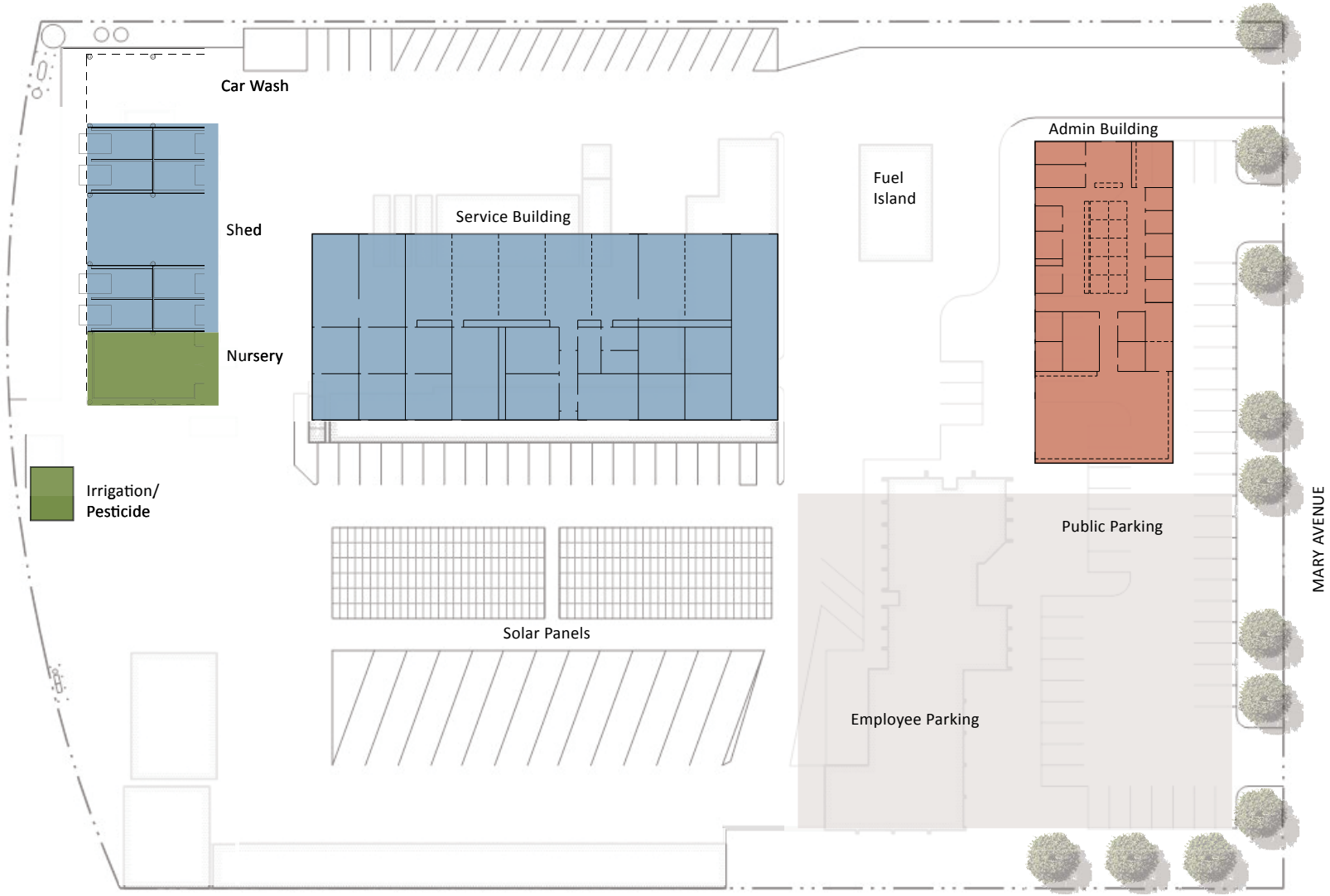

Option with service building perpendicular to admin building.
Admin building located at Northeast corner of existing parking lot

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Option with service building perpendicular to admin building.
Admin building located in southeast existing parking lot

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Bubble Diagrams

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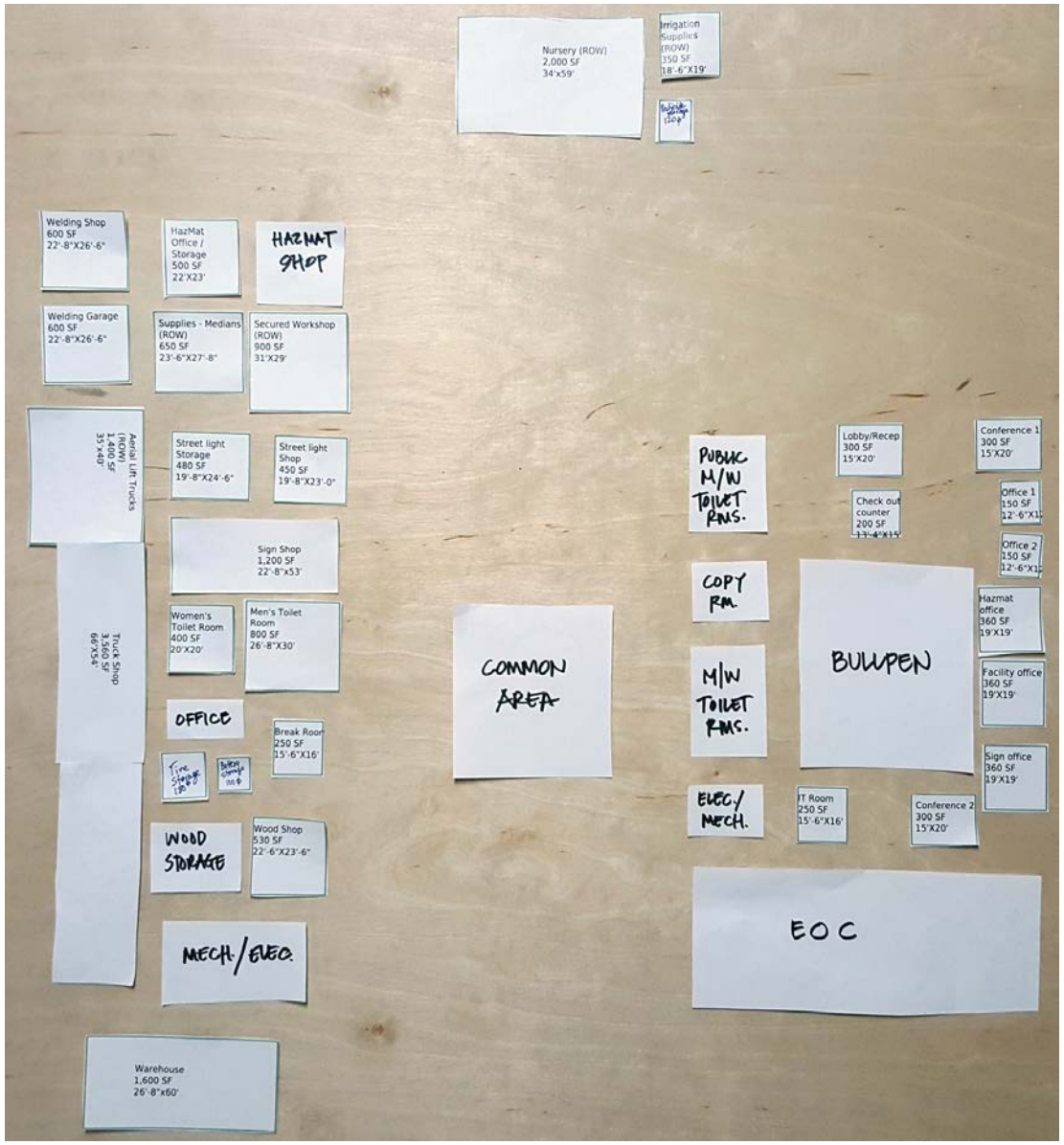

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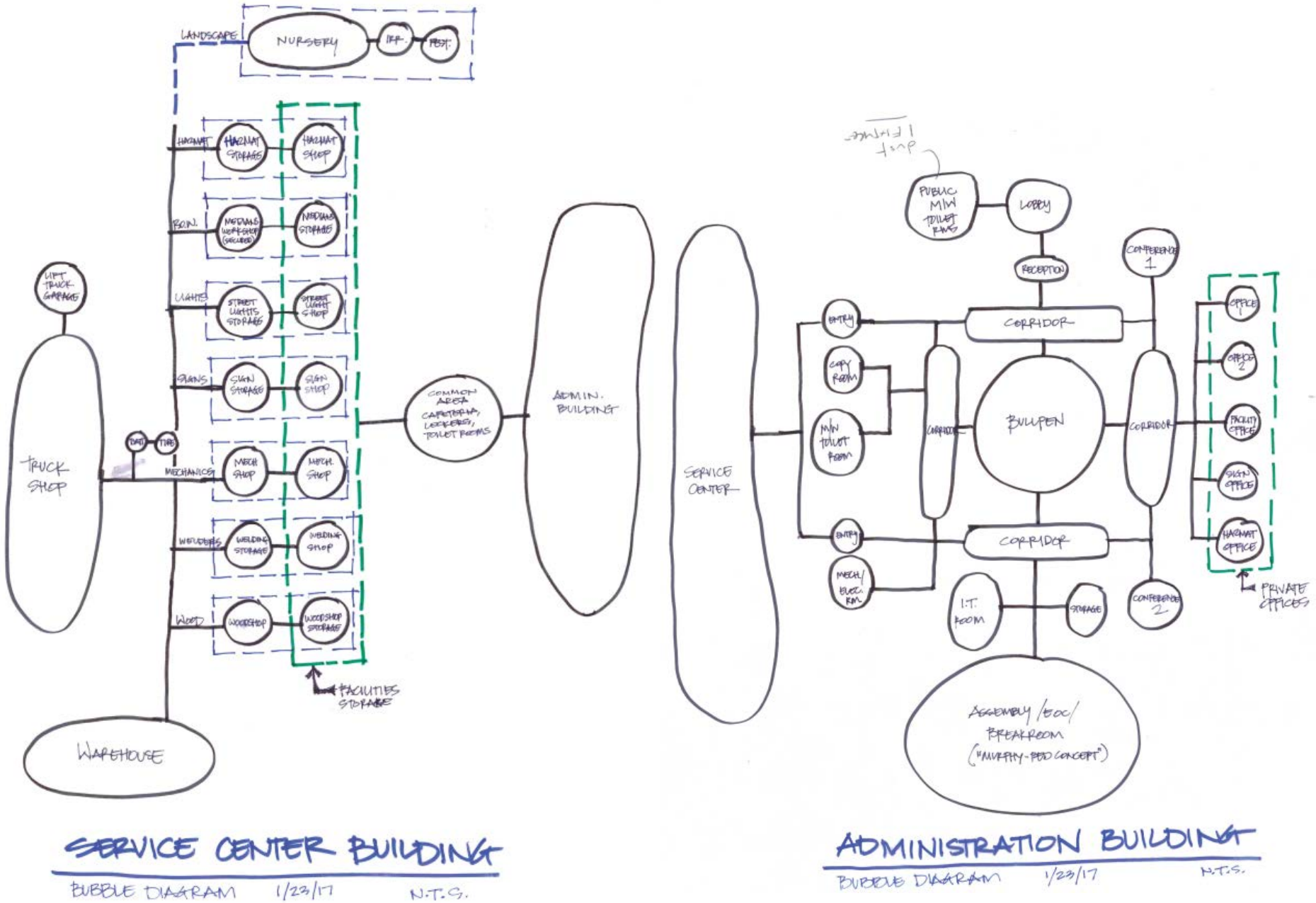

SERVICE CENTER BUILDING

BUBBLE DIAGRAM 1/23/17 N.T.S.

ADMINISTRATION BUILDING

BUBBLE DIAGRAM 1/23/17 N.T.S.

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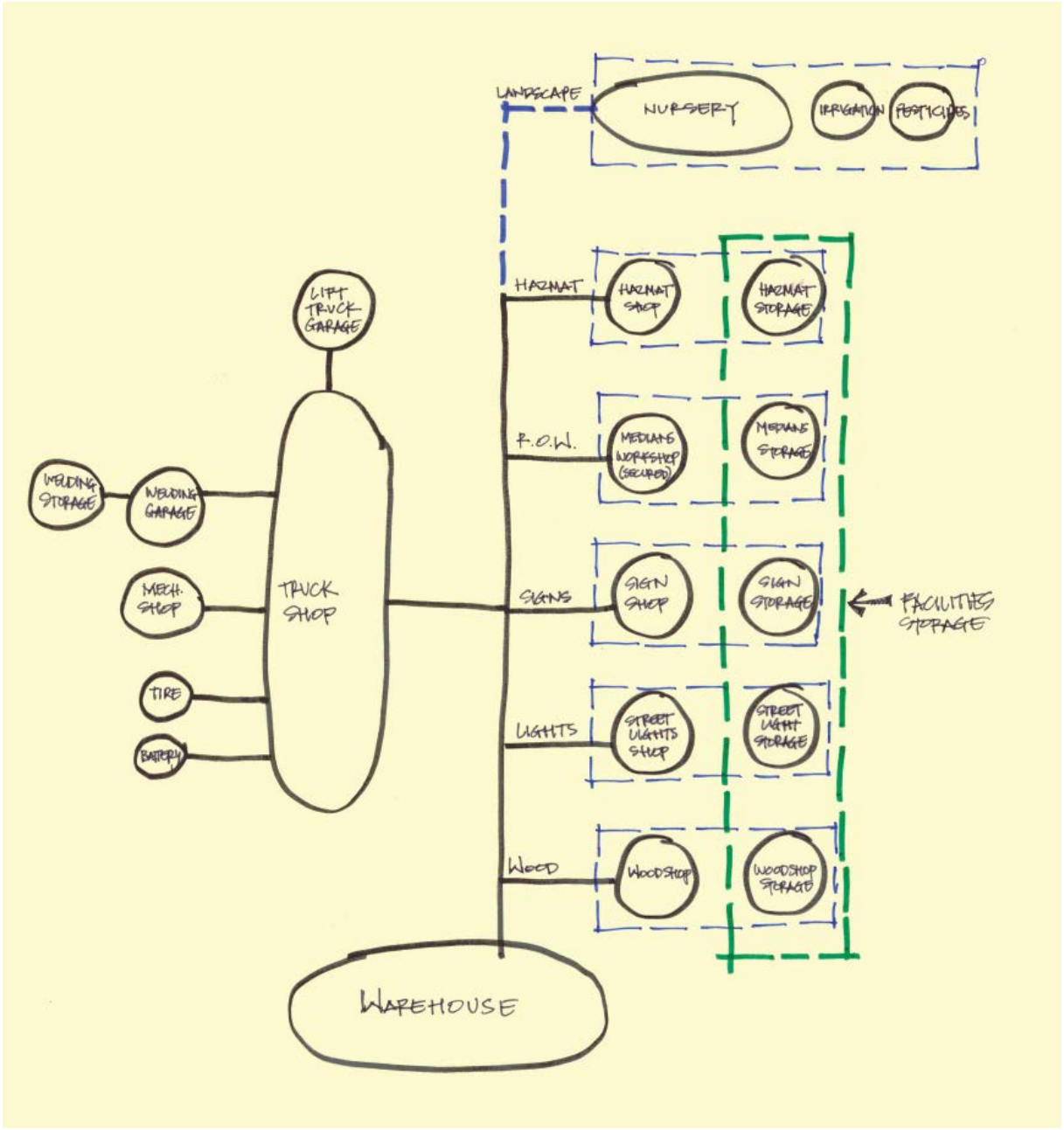

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Collaboration Team Sketches

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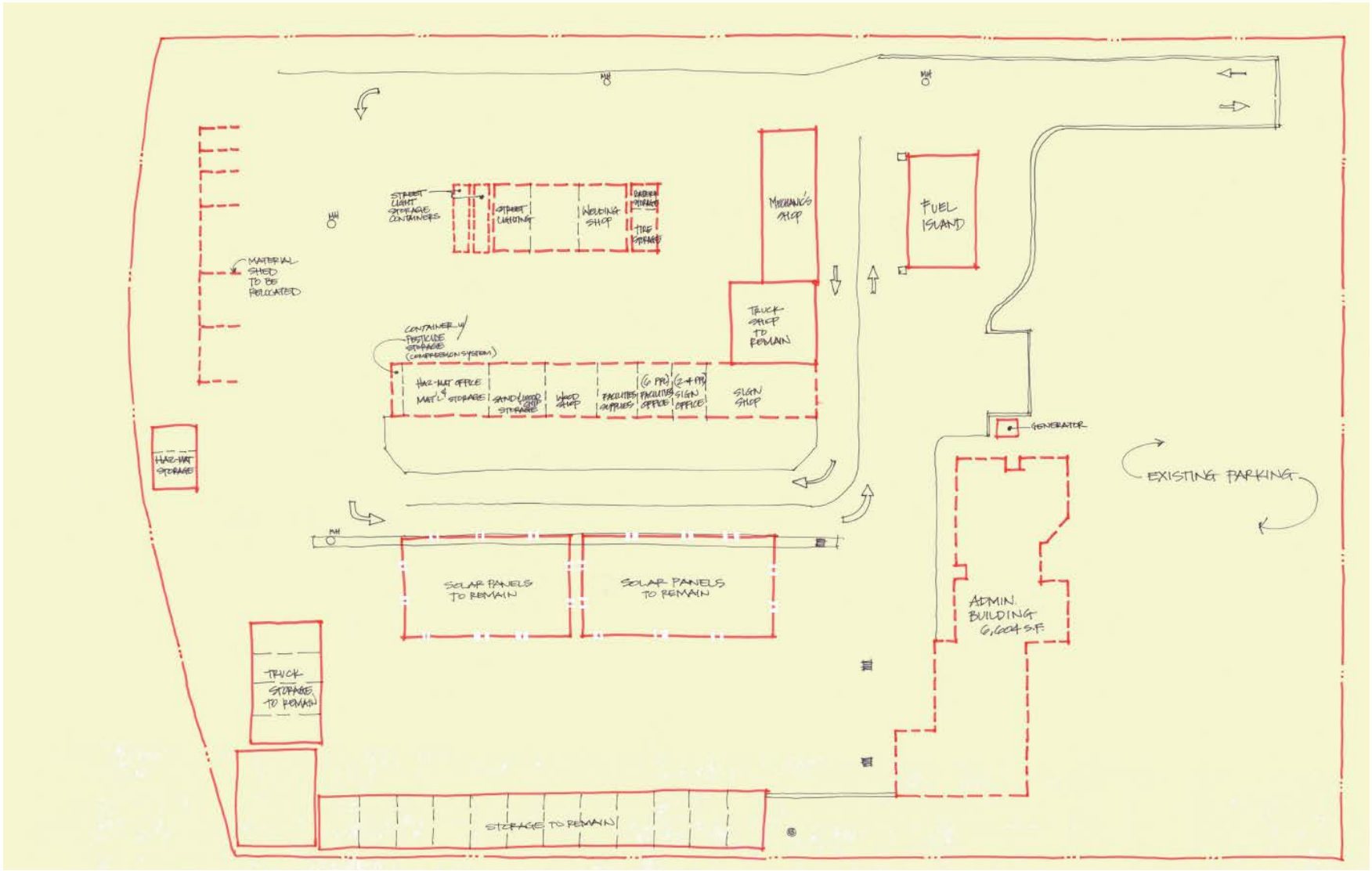

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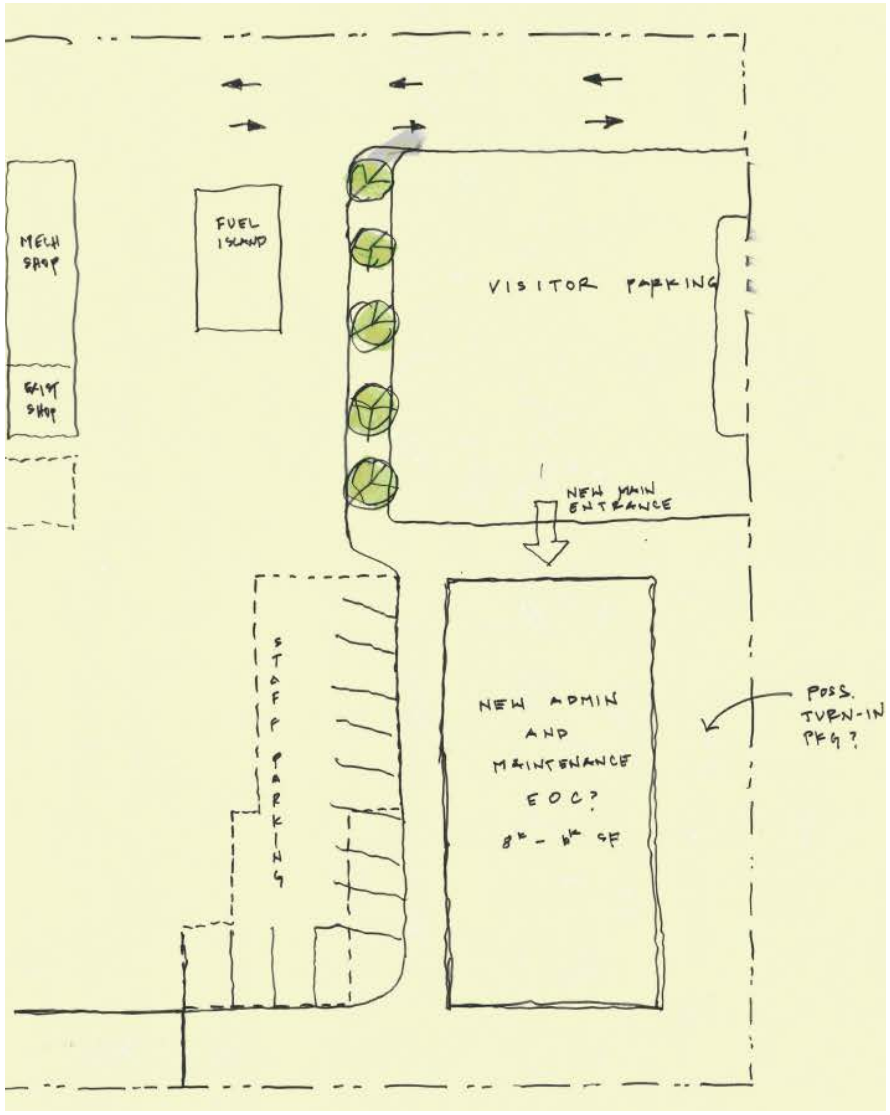

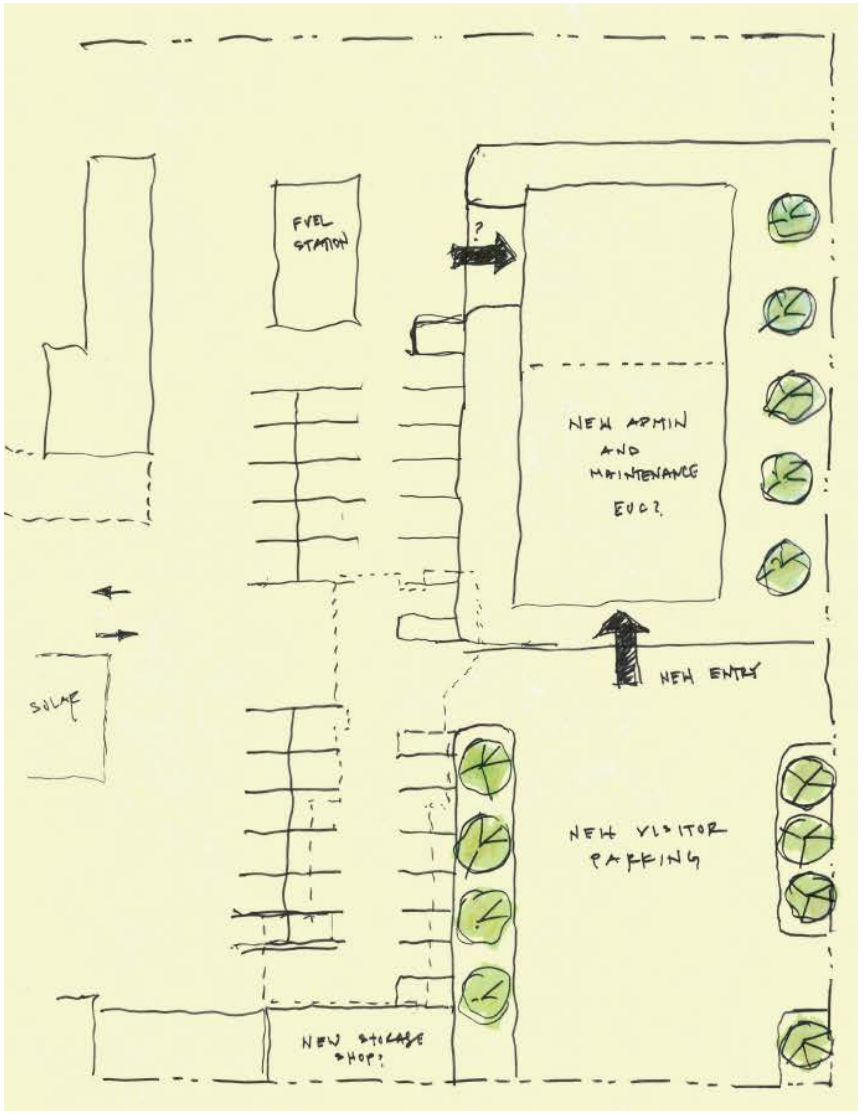

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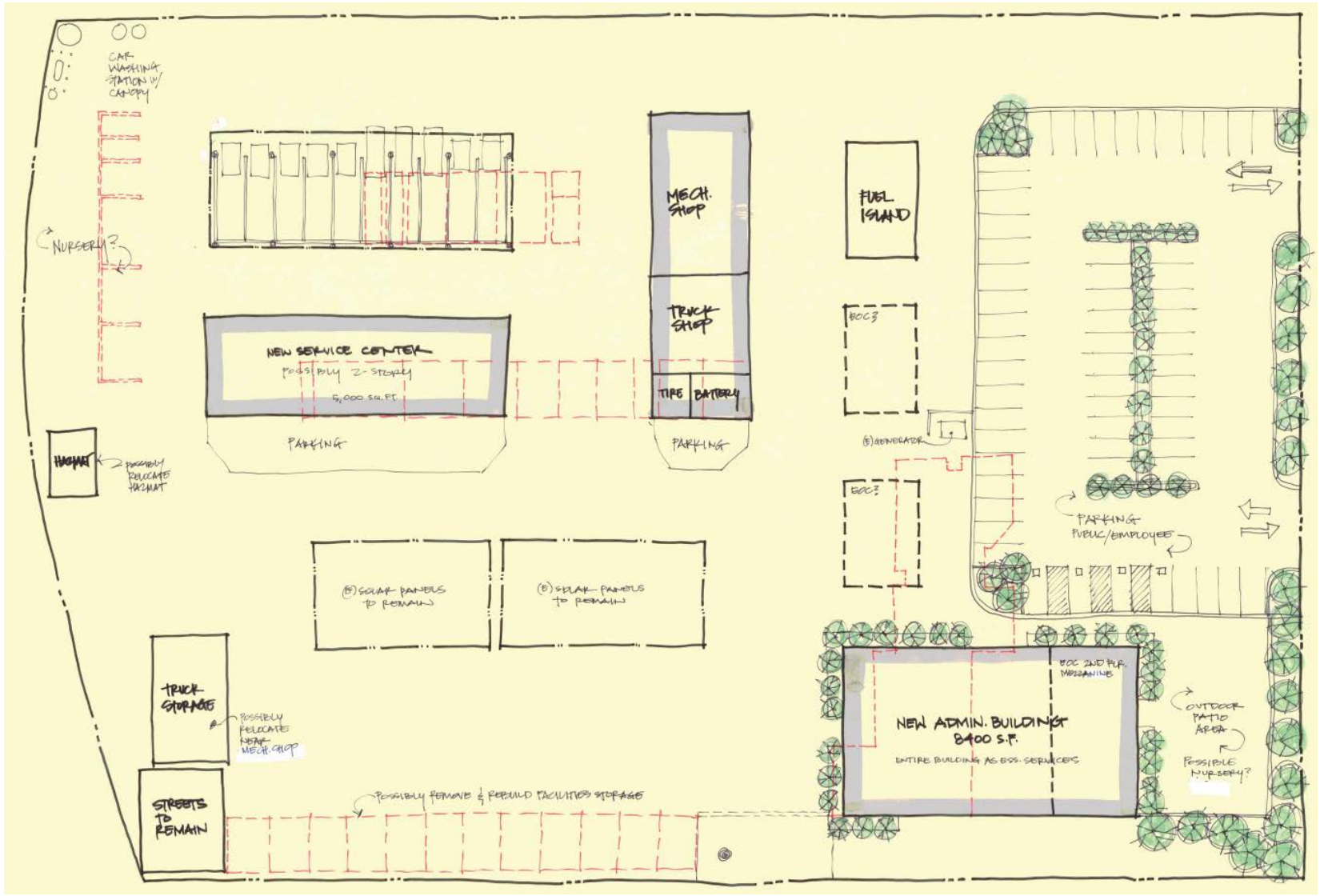

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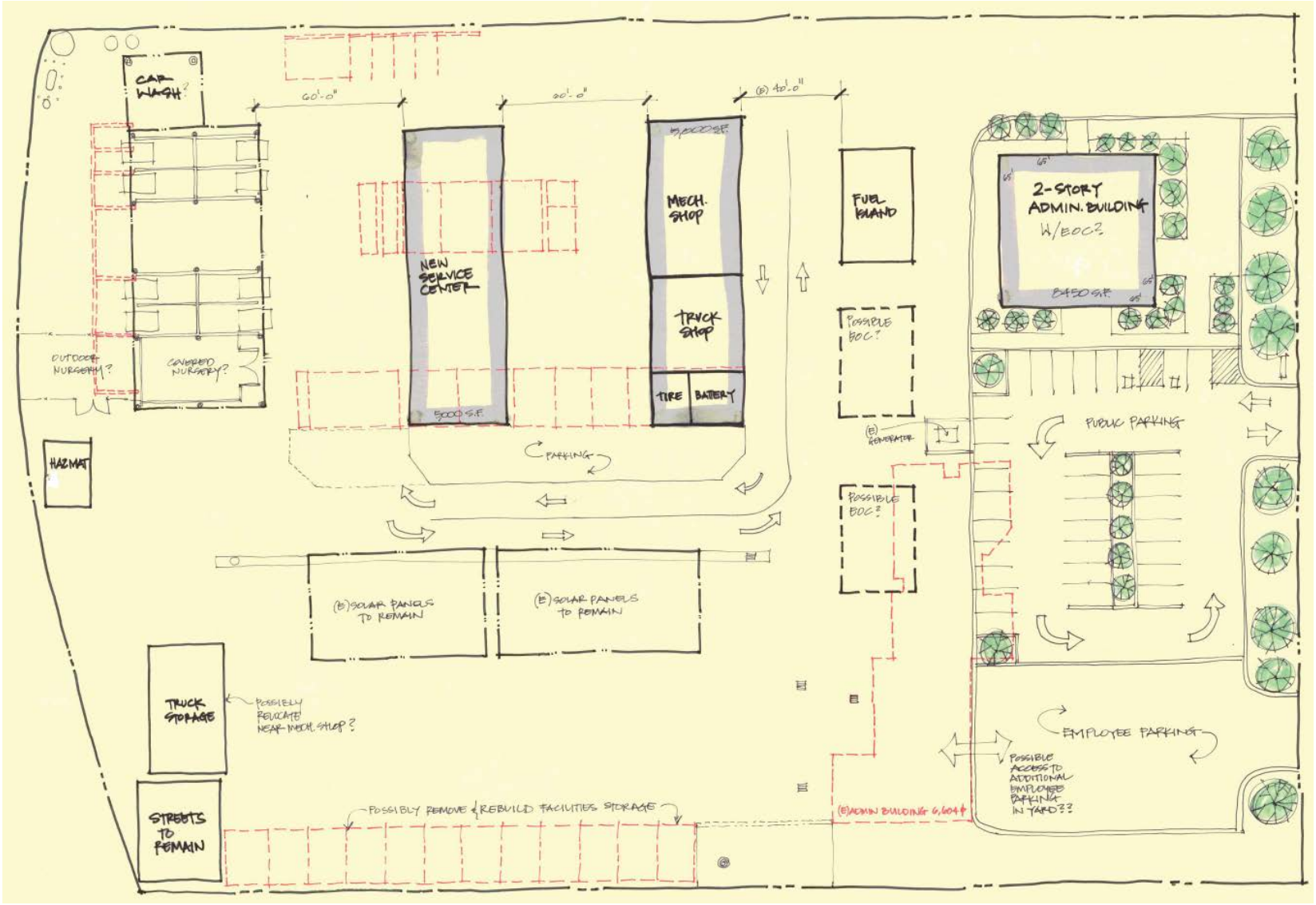

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Initial Study Sketches

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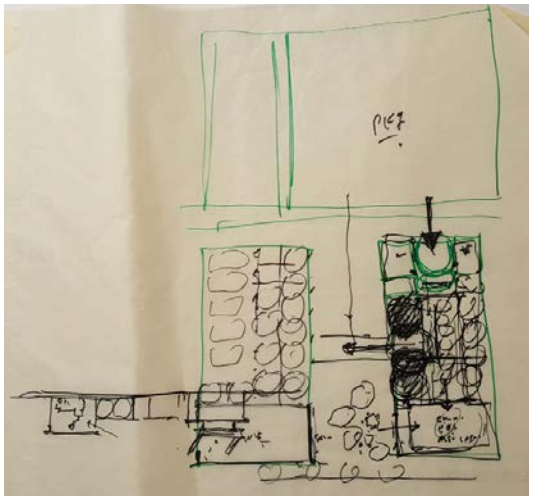

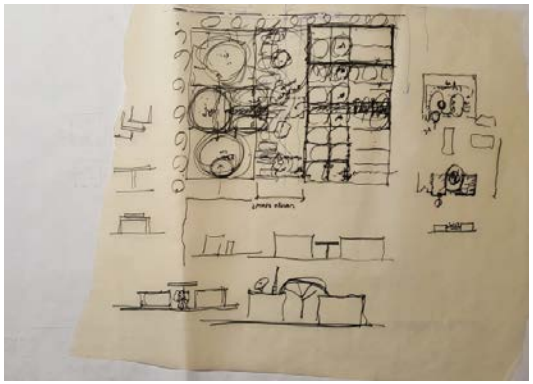

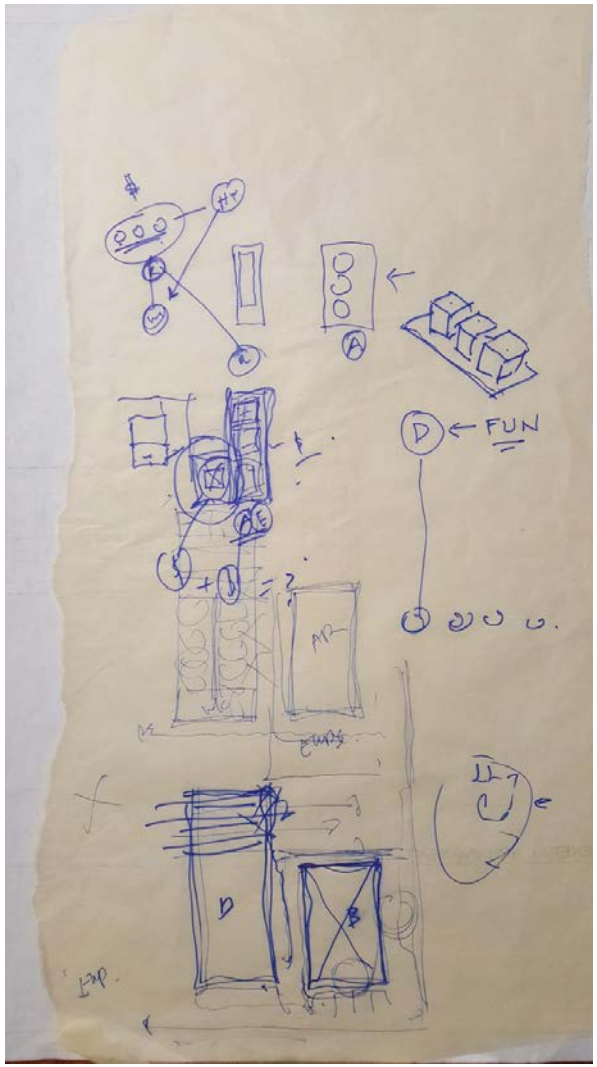

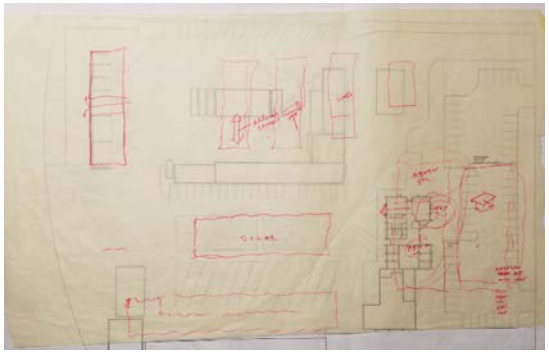

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Also Studied

The following options were chosen for further refinement and study.
However the teams preferred option is indicated previously.

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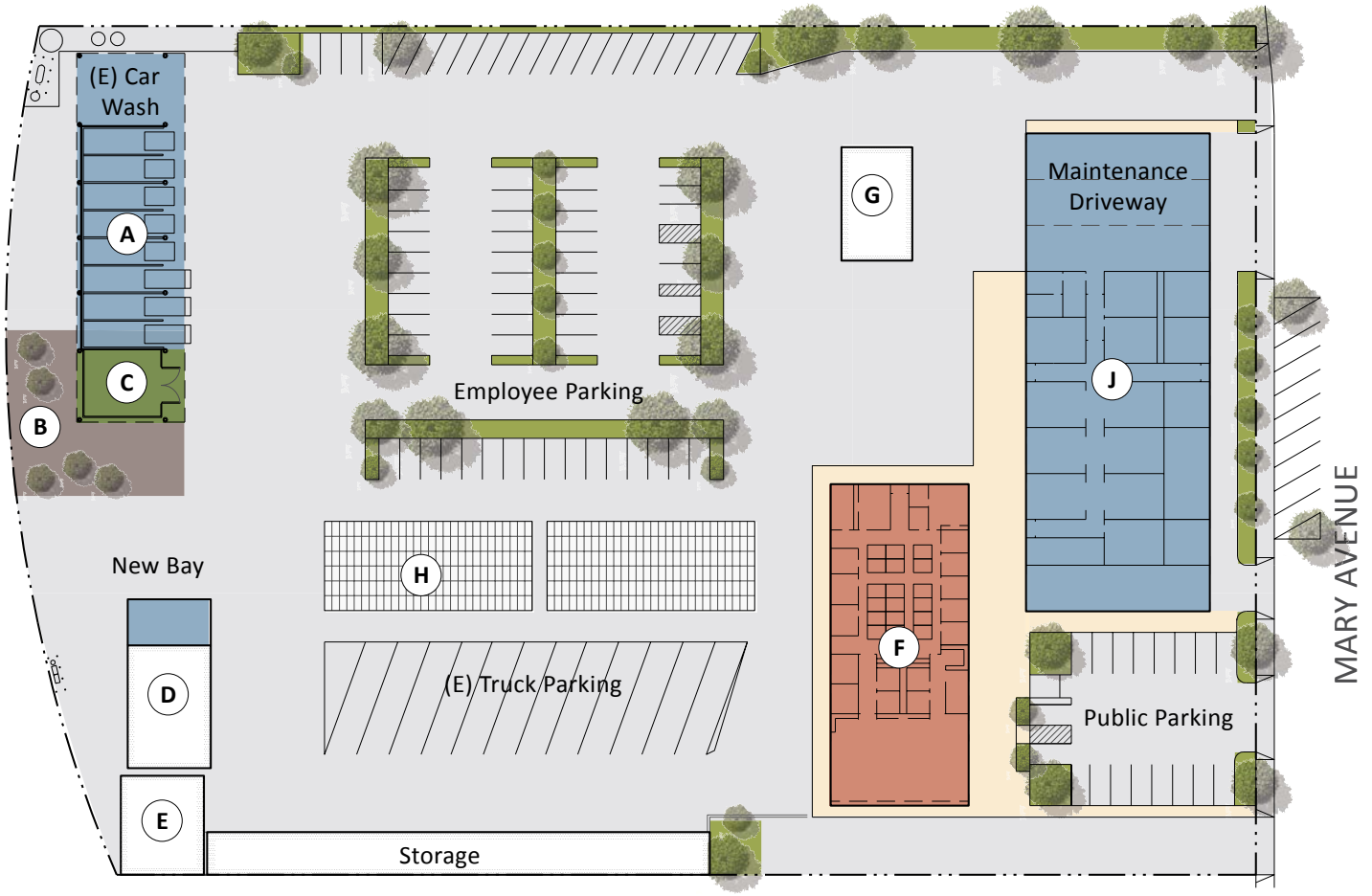
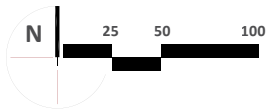
Service Building on Mary Avenue

Offset Administration Building & Maintenace Center

- A — Materials Shed
- B — Nursery
- C — Nursery/ Pesticide Storage
- D — Boom Truck Garage
- E — Storage
- F — New Administration Building
- G — Fuel Island
- H — Solar Structures
- J — New Service center

Comment:
Shown for information only-
Not Recommended





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Option 5

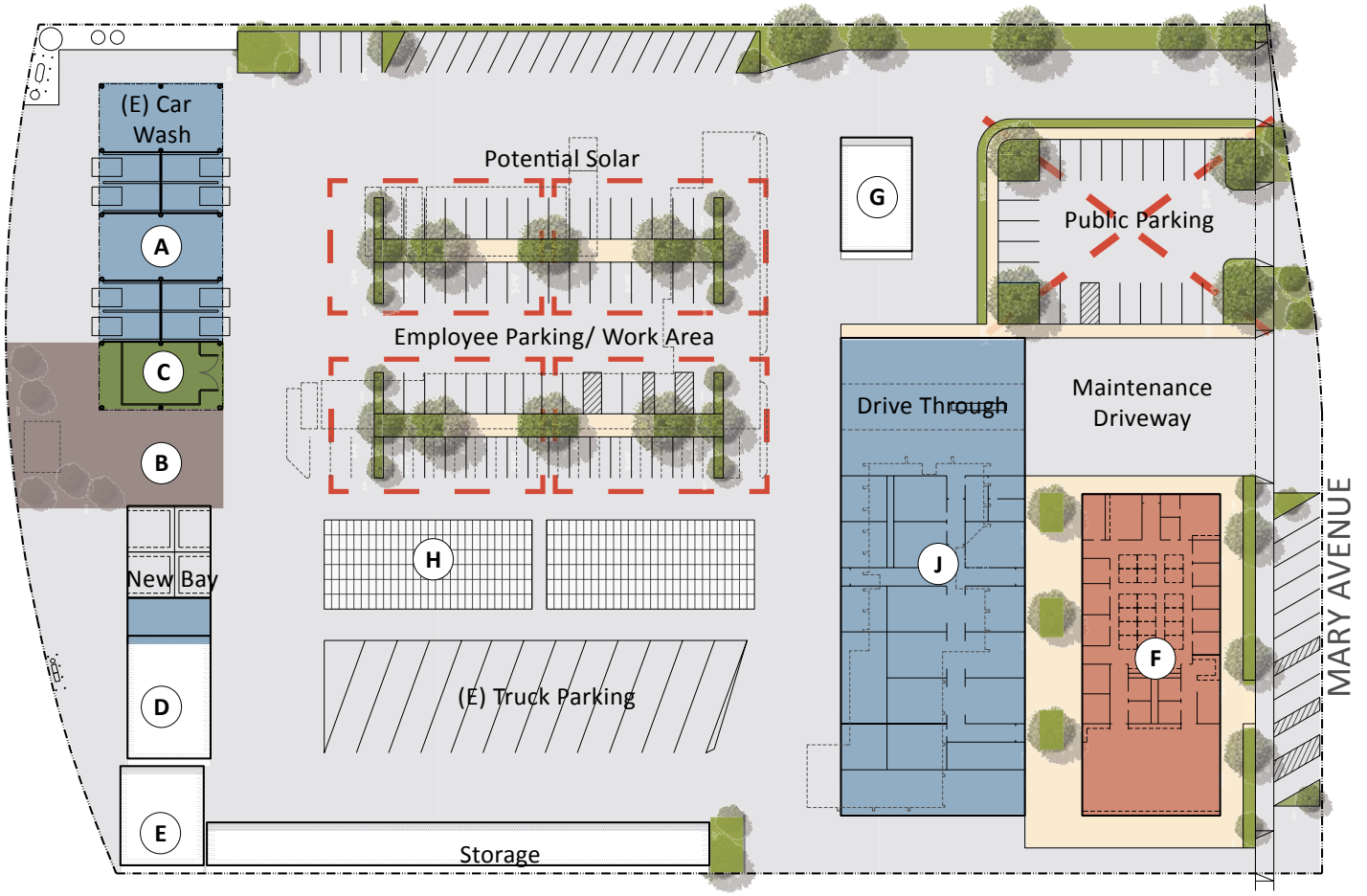
Service Center with drivethrough

- Materials Shed (A)
- Nursery (B)
- Nursery/ Pesticide Storage (C)
- Boom Truck Garage (D)
- Storage (E)
- New Administration Building (F)
- Fuel Island (G)
- Solar Structures (H)
- New Service center (J)

Comments:
This option allows construction of Administration Building while existing facility is occupied.

Service Center and Administration are adjacent for efficiency of function.

Site area id freed up for other uses



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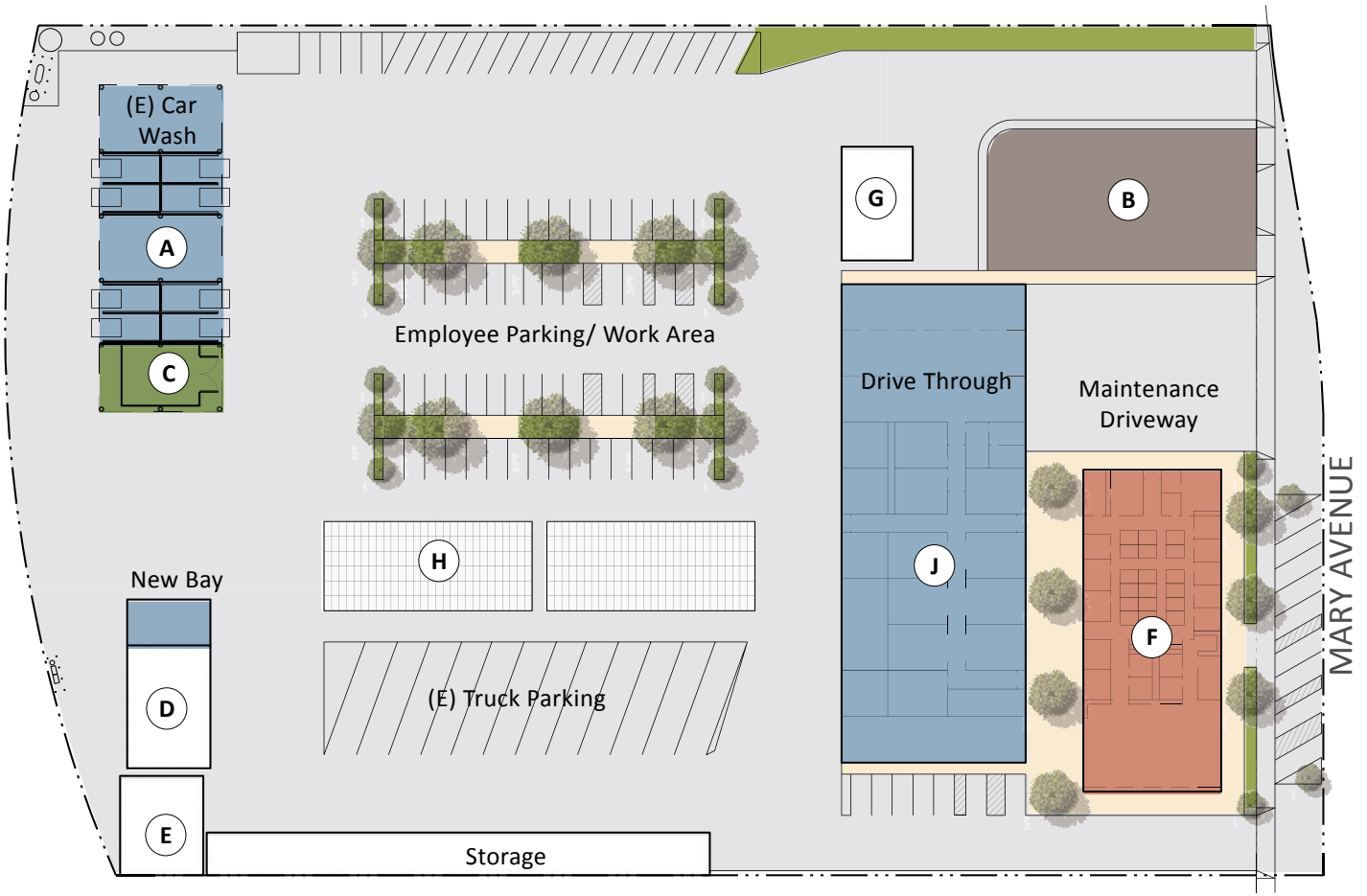
Option 5a

Sercive Center with drivethrough & nursery at front

- Materials Shed (A)
- Nursery (B)
- Nursery/ Pesticide Storage (C)
- Boom Truck Garage (D)
- Storage (E)
- New Administration Building (F)
- Fuel Island (G)
- Solar Structures (H)
- New Service Center (J)

Comments:
This option adjusts location of garage so that vehicles can easily drive through.

Smaller public parking provided on south side.



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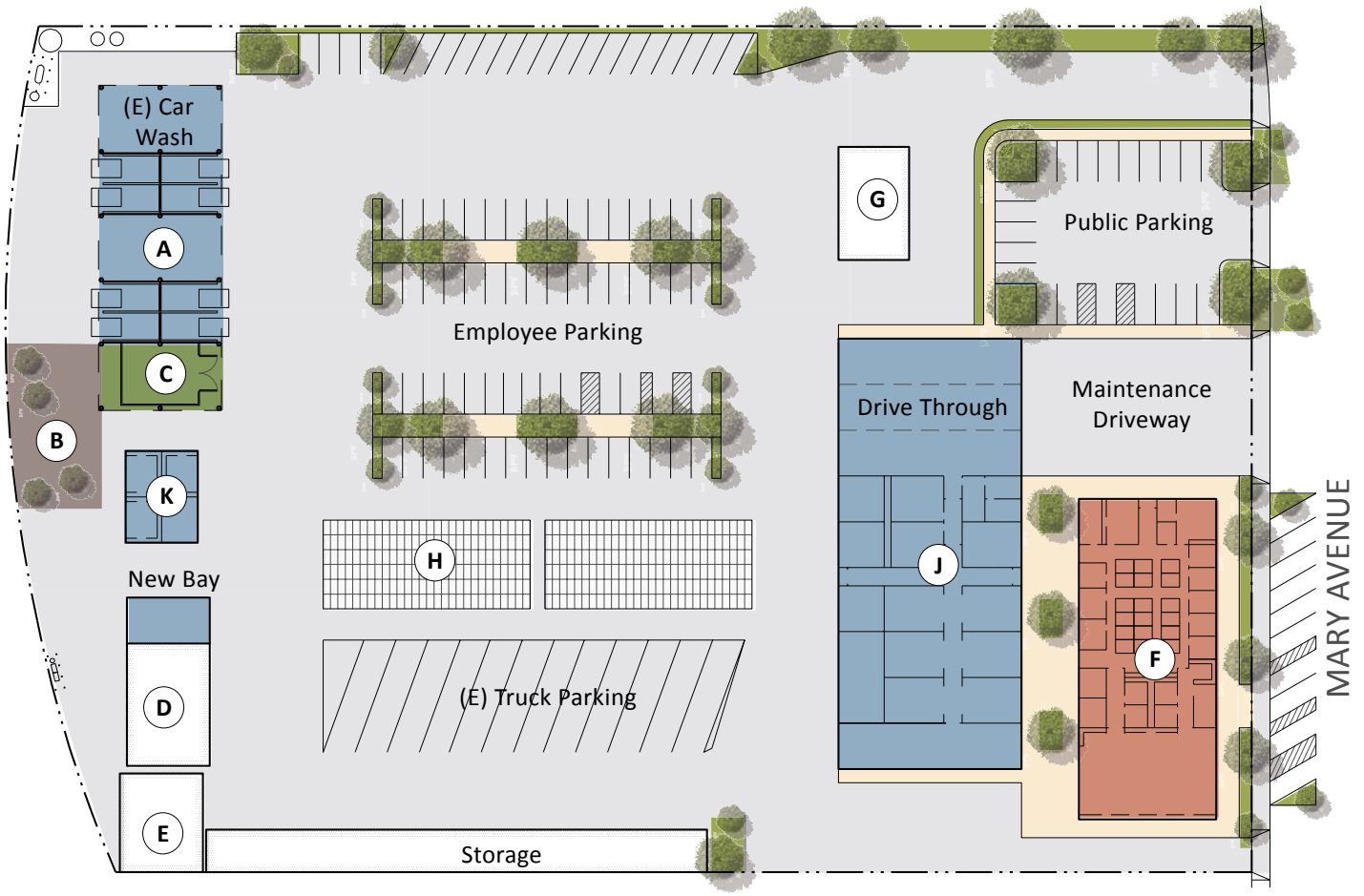
Option 5b

Service Center with drivethrough plus hazmat storage

- Materials Shed (A)
- Nursery (B)
- Nursery/ Pesticide Storage (C)
- Boom Truck Garage (D)
- Storage (E)
- New Administration Building (F)
- Fuel Island (G)
- Solar Structures (H)
- New Service center (J)
- Hazmat Storage (K)

Comment:
This option adjusts location of garage so that vehicles can easily drive through.



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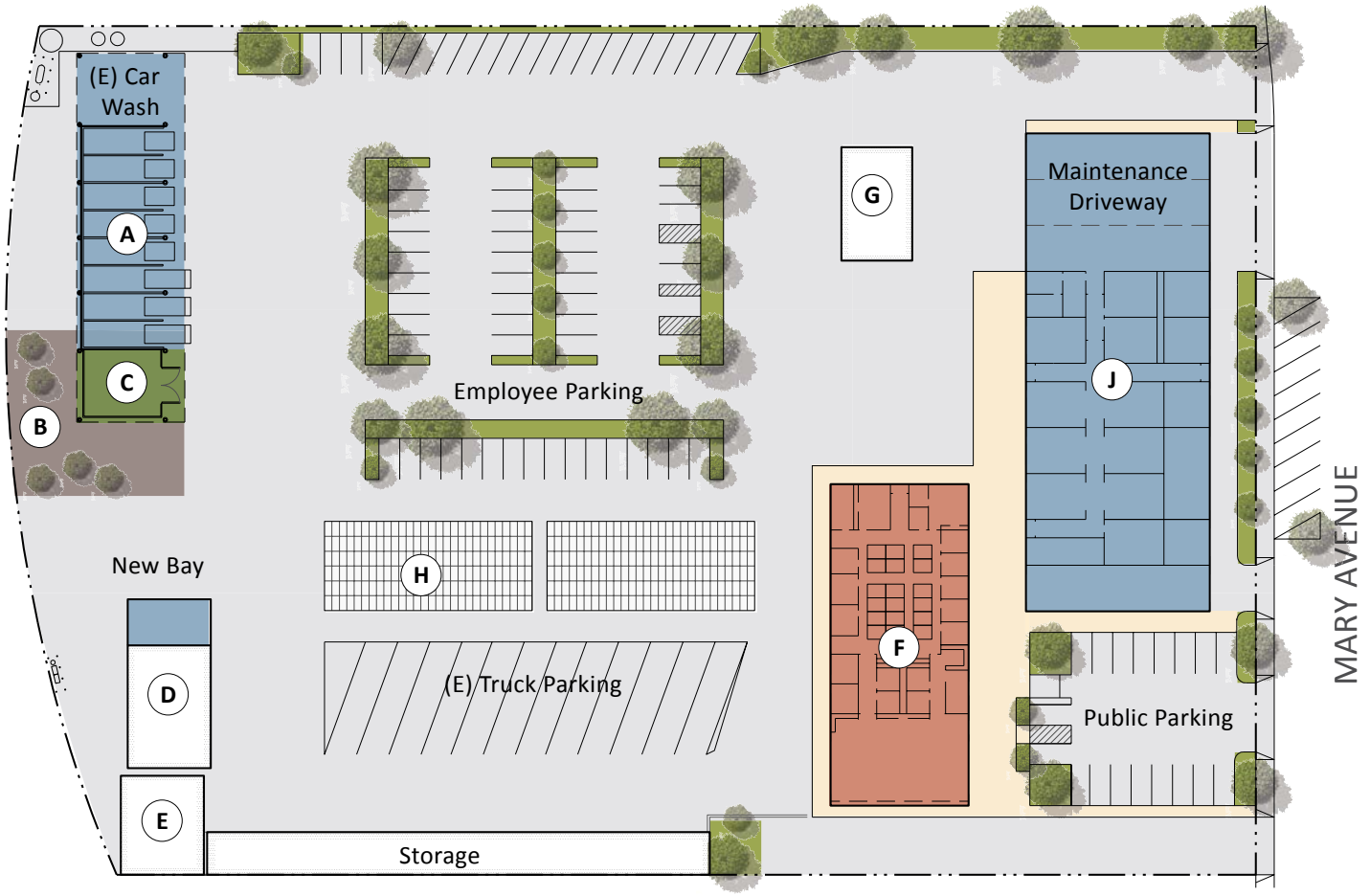
Option 6

Offset Administration Building & Maintenace Center

- Materials Shed (A)
- Nursery (B)
- Nursery/ Pesticide Storage (C)
- Boom Truck Garage (D)
- Storage (E)
- New Administration Building (F)
- Fuel Island (G)
- Solar Structures (H)
- New Service center (J)

Comment:
Shown for information only-
Not Recommended



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Combined Admin & Service Building

A — Materials Shed

B — Nursery

C — Nursery/ Pesticide Storage

D — Boom Truck Garage

E — Storage

F — New Administration Building (Second Floor)

G — Fuel Island

H — Solar Structures

J — New Service center (First Floor)

Comments:
This option was considered

Integrating Service & Administration will complicate overall daily functional use: Noise, etc...

This story consisted of 2 stories, however, it minimaizes the possibility of growth for administion offices and workers.

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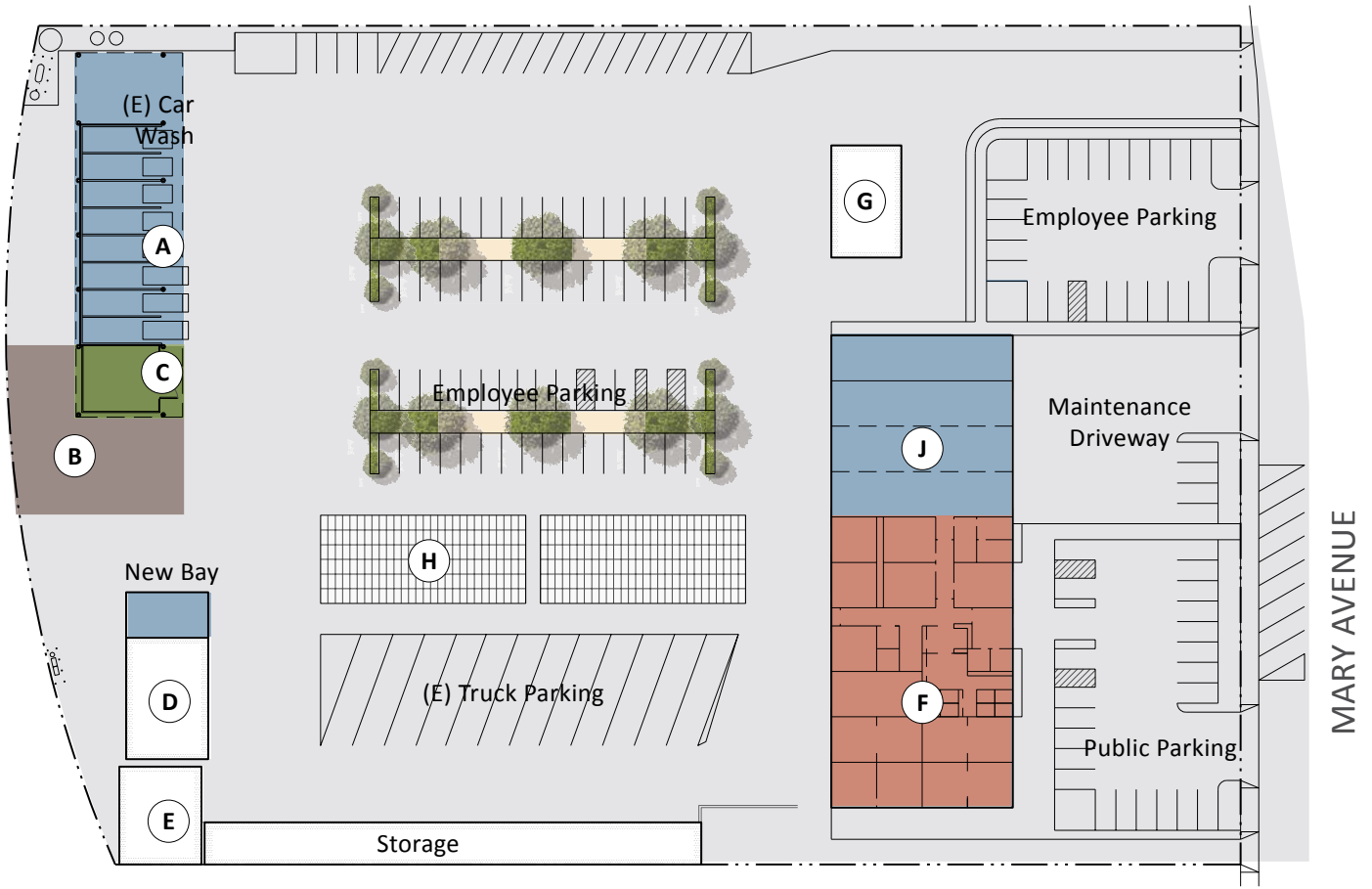

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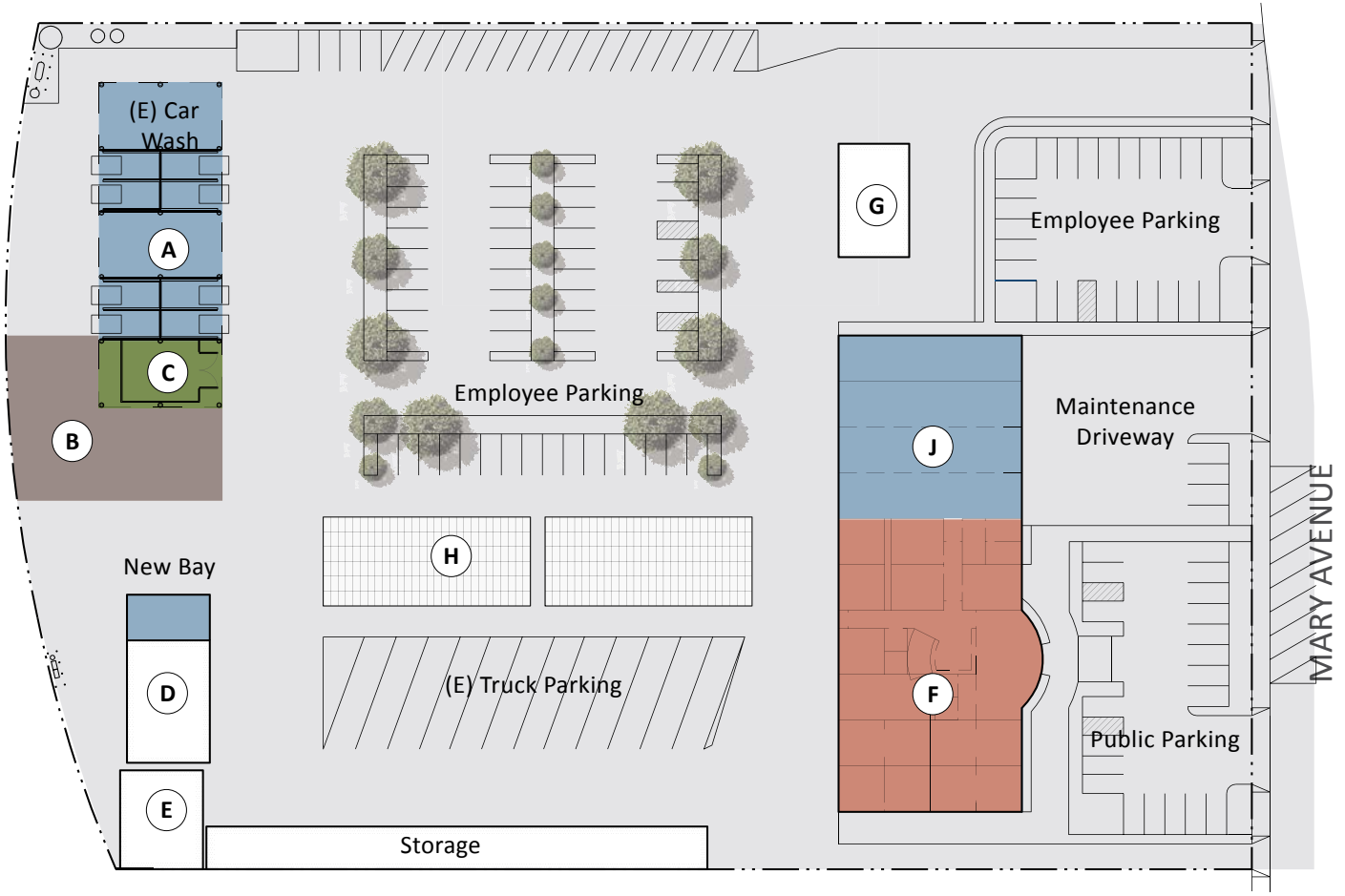
Combined Admin & Service Building Variation

- Materials Shed (A)
- Nursery (B)
- Nursery/ Pesticide Storage (C)
- Boom Truck Garage (D)
- Storage (E)
- New Administration Building (F)
- Fuel Island (G)
- Solar Structures (H)
- New Service center (J)



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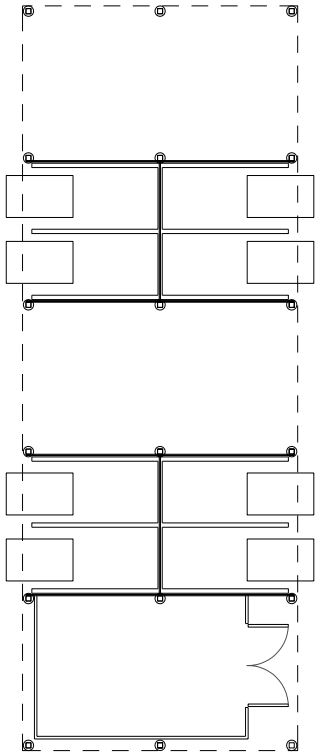
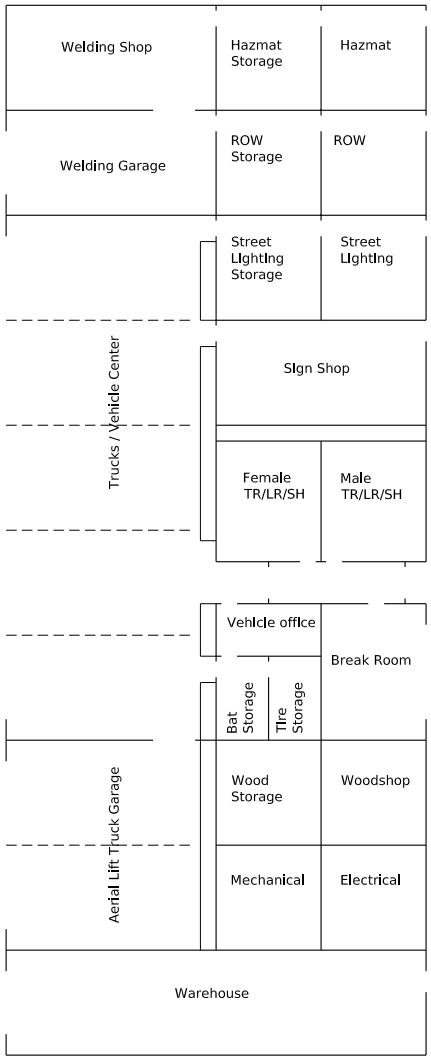
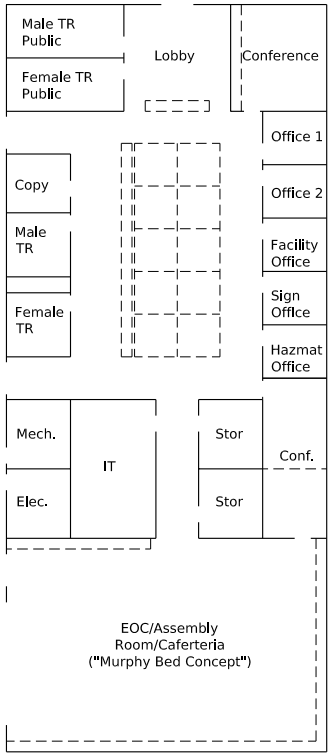


Materials Shed



Service Center



Admin Building

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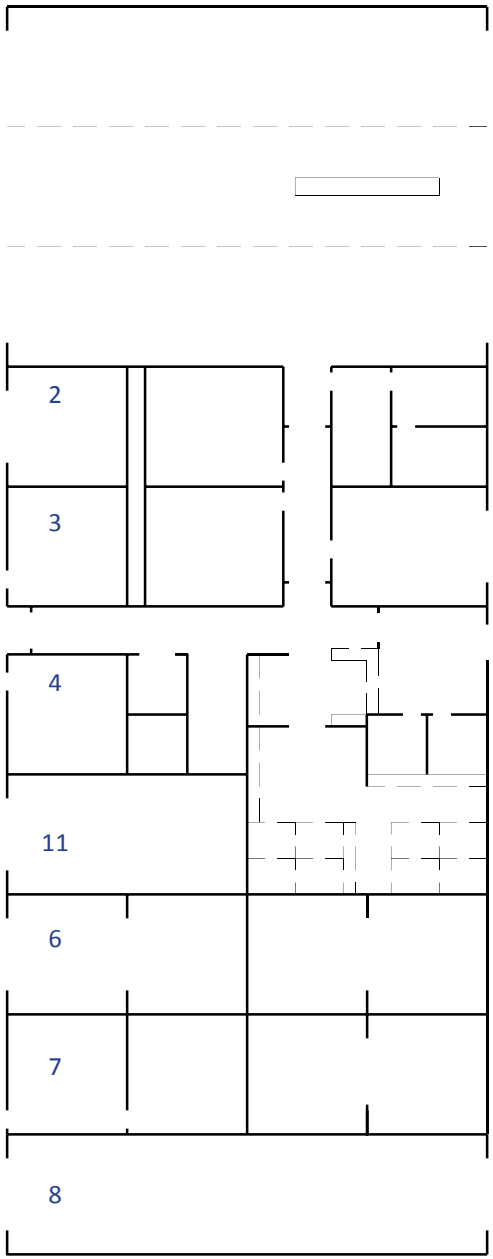
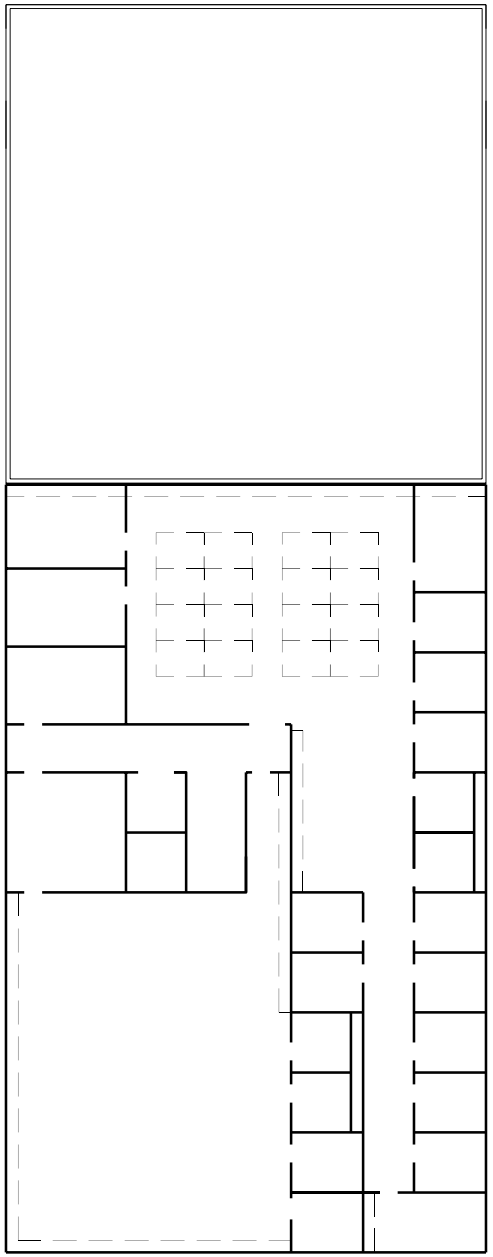
Service Center
Floor Plan: Option C

Vehicle Center	1
Mower Lift	2
Mechanical	3
Electrical	4
Wood Storage	5
Wood Shop	6
Hazmat Storage	7
Warehouse	8
Hazmat Office	9
Street Light Storage	10
Sign Storage	11
ROW Storage	12
Female Toilet/ Locker Rooms	13
Men Toilet/ Locker Rooms	14
Vehicle Office	15
Batery Storage	16
Tire Storage	17
Break Room	18
ROW Office	19
Sign Office	20
Streetlight Office	21
Storage	22
IT Room	23
Conference Room	24
Key Storage	25
Office	26
Copyroom	27
Bullpen	28
Public Unisex Toilet	29
Lobby	30
Emergency Operation Center	31
Cafeteria	32
Stairs	33
Elevator	34
Elevator Mechanical	35
Unisex Toilet	36
Flex Office	37
Work Program Supply	38
Emergency Operations Center Off.	39



First Floor



Second Floor

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Potential Phasing Diagrams: Option 2

With temporary facility on site

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Phase 1

Build New Materials Shed

Demolish existing shed 1

Preserve Existing Carwash 2

Build a New Materials Shed 3

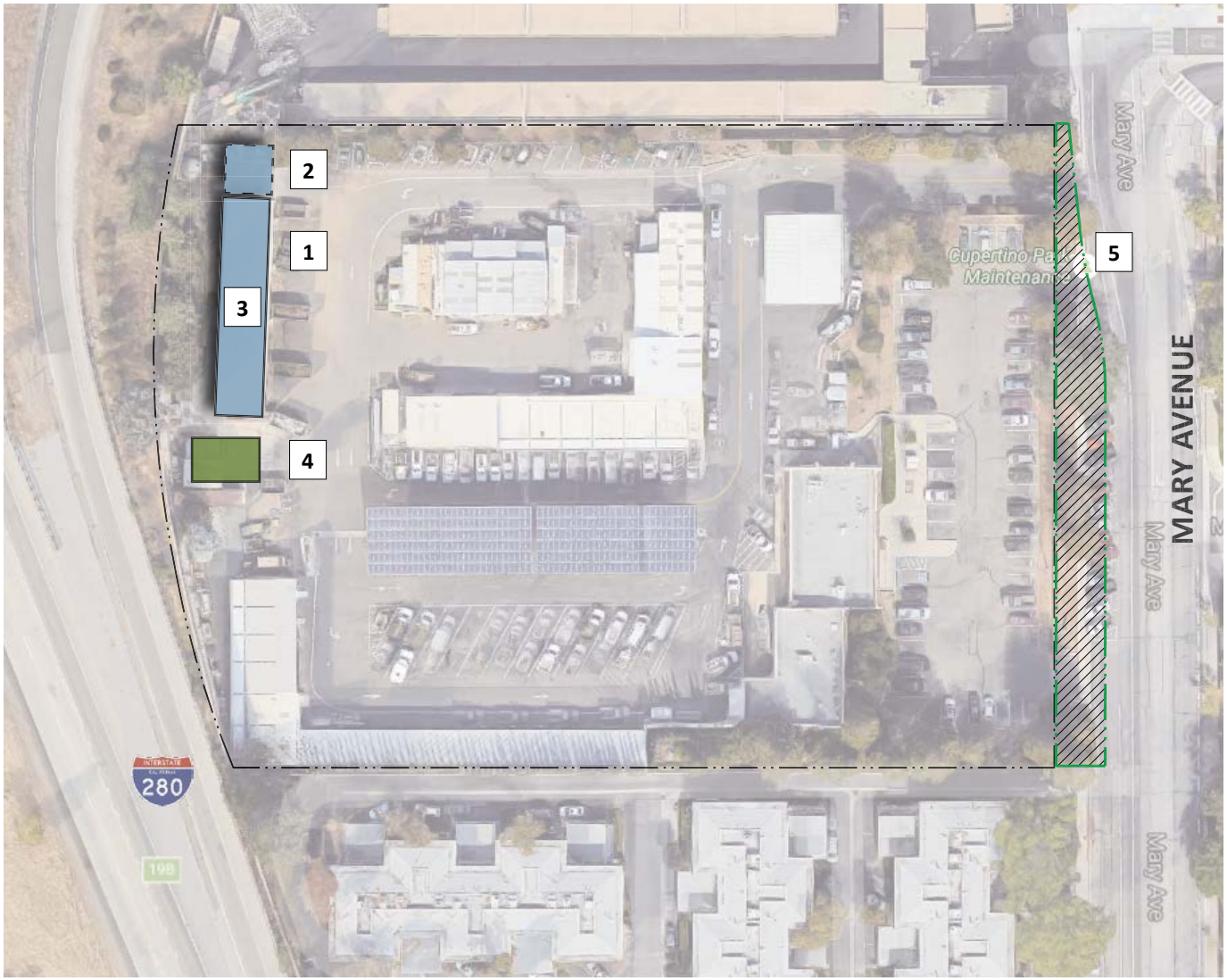
- Metal structure
- 8’-0” high concrete walls
- Concrete pad
- Double sided bays
- Access on both sides of shed
- Drainage

Build new Irrigation & Pesticides Building 4

- Possible alternate location. See Phase 8 diagram

Possibly extend site boundary 5

- Acquire parking on Mary Ave



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Phase 2

Demolish Existing Building

Install Temporary Portable Buildings (6) 1

Move into Temporary Portable Buildings 2

- Potentially share warehouse space with Service center

Demolish existing Building 3

Contain demolition area 4

- Construction fencing
- sound and dust control

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Phase 3

New Administration Building

Build New administration building 1

- Accessible toilet rooms
- Open office area (16 cubicles)
- Administrative offices
- Copy Room
- Electrical/ mechanical room
- Key storage
- conference rooms
- Emergency Operations Center (EOC)/ Cafeteria

Protect Area of Work 2

- Construction fencing
- Sound and Debris Control

New Parking Lot 3

- New paving and driveway
- New Landscaping
- New hardscape and lighting

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Phase 4

Demolish Welding Garage

Move into new admin building 1

Move service center shops and offices to portable buildings 2

Move Welding Garage into Shop offices 3

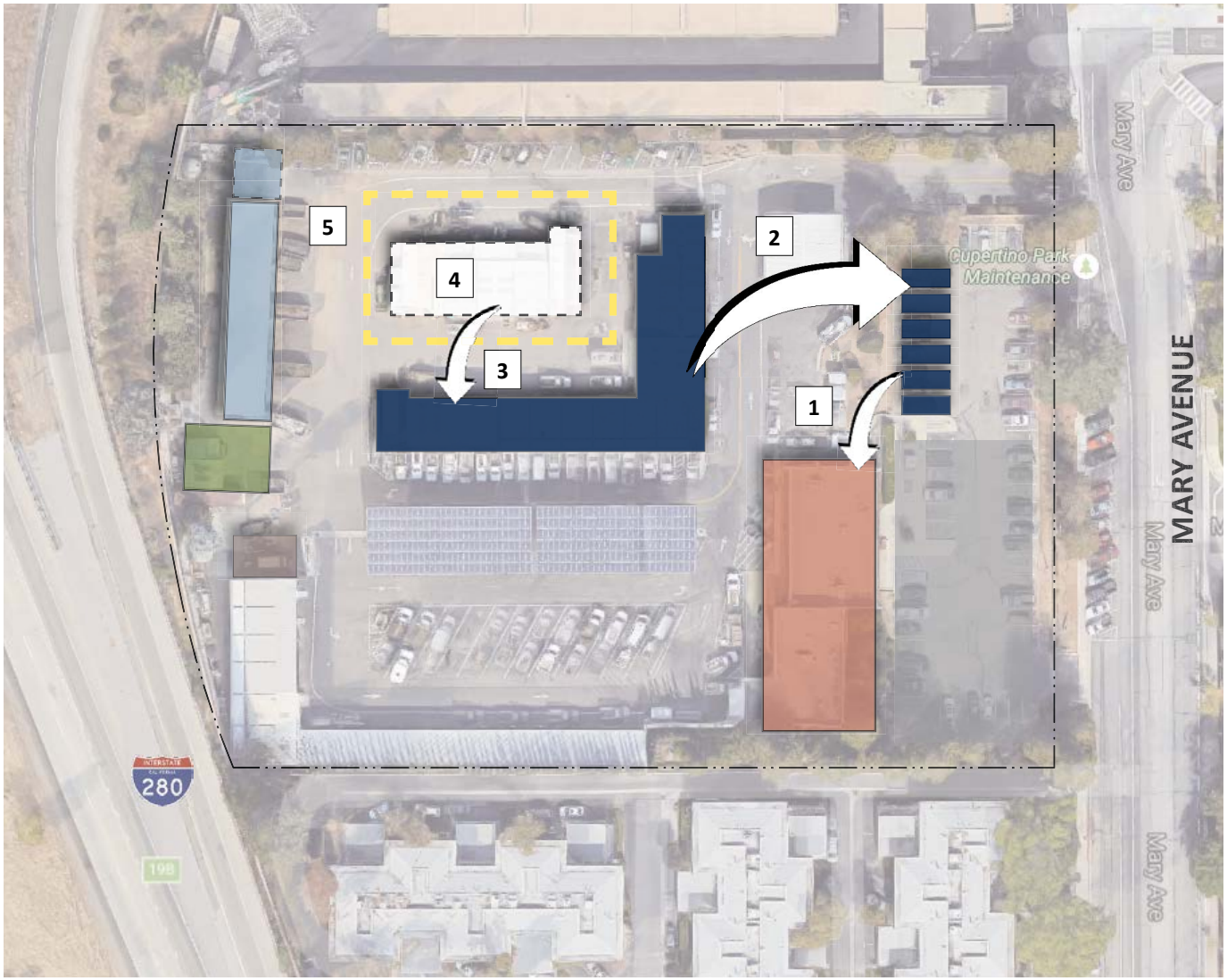
Demolish existing welding garage structures 4

Protect surounding areas and shop building 5

- Construction Fencing
- Sound and debris control

Existing Shops Building 6

- Protect in place
- To remain operational



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Phase 5

Demolish Existing Mechanics Garage & Build Partial New Shop Building

Move Mechanics Shops into Sign Shop 1

Protect adjacent shop building during construction and demolition 2

- Construction Fencing
- Sound and debris control

Build Shops and Offices portion of new service center building 3

- Mower lift
- Toilet / Shower rooms
- Mechanical / Electrical
- Vehicle office
- Breakrooms
- Shops and Offices

Existing Shop Building 4

- Remain functional during construction
- Provide doors and wall for temporary mechanics shop

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Phase 6

Build Remainder of Service Center (Mechanics Shops)

Move Shops from Existing building into new building 1

Protect New shop building during construction and demolition 2

- Construction Fencing
- Sound and debris control 3

Demolish existing Shops Building 4

Build Remainder of Service Center Building (Mechanics Garages) 5

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Phase 7

Completion of New Service Center Building and Yard

Move from portable building into new Service Center building 1

Control new yard construction 2

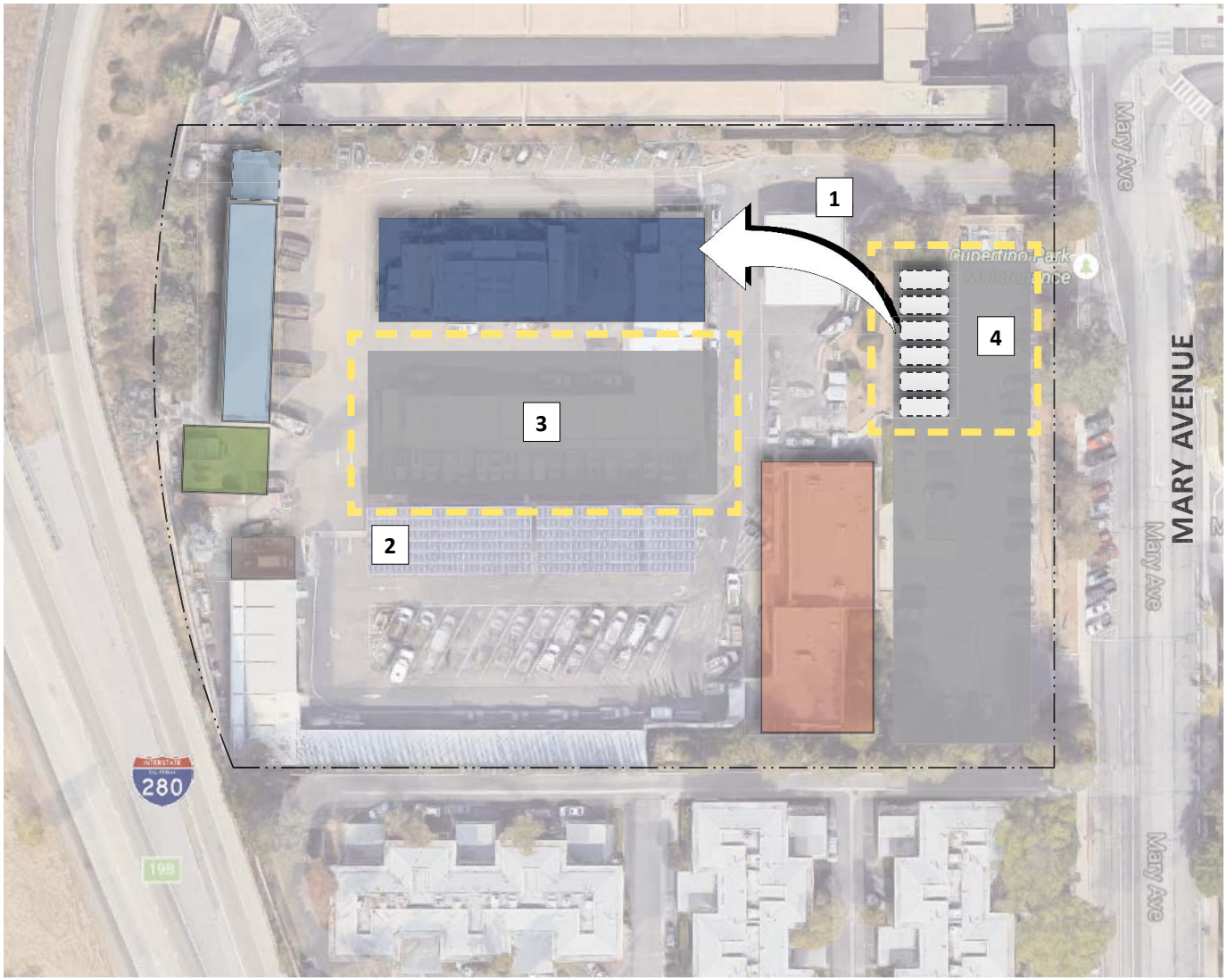
- Construction Fencing
- Sound and debris control
- Protect new service center building
- Protect existing solar structures

Pave and ladscape new yard area 3

- Provide adequade parking facility

Remove Portable Buildings 4

- New employee parking with landscaping
- Optional Nursery location



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Completion

- Materials Shed (A)
- Nursery (B)
- (C)
- Boom Truck Garage (D)
- Storage (E)
- New Administration Building (F)
- Fuel Island (G)
- Solar Structures (H)
- New Service center (J)
- Irrigation/ Pesticide Storage (K)

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Spring 2017 Version

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ADVOCACY
RESEARCH
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Meeting Notes & Program Matrix

Spring 2017 Version

BARTOS ARCHITECTURE
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ADVOCACY
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EDUCATION
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Suite 225, San Mateo
California 94402
www.bartosarchitecture.com

PROGRAMMING MATRIX

PROJECT	**Service Center – Master Plan and Feasibility Study**	DATE REVISED	30 March 2017
OWNER	City of Cupertino	PROJECT NUMBER	16-013

Project Scope Summary

The project scope will result in an overall master plan, including feasibility and order of magnitude cost estimates. This will include project phasing, initial project programs and conceptual building layouts. The development of the Service center will incorporate better overall organization, options for a new administration building- ~~likely~~ possibly (1/22/2017) two stories, a new Emergency Operations Center (EOC) and consolidation of some exterior outbuilding elements. The goal of this process will consider and include City and stakeholder visionary options to seek out the most appropriate and/ or consensus driven design.

Program Development History

This document is the result of the following collaboration meeting between the Architect and City Representatives

13 DECEMBER 2016 Meeting held at City Hall Assembly Room at 10300 Torre Ave- Cupertino, CA

Attendees: Bartos Architecture- Mark Bartos, Laszlo Petrik, Neal Sellers

City of Cupertino Public Works- Katy Jensen, Alex Acenas, Chris Mertens, Ty Bloomquist, Roger Lee, Timm Borden

Discussions and input about a new Administrative and Service center facility determined three initial potential building options. A large single building incorporating all facilities, two separate buildings- one housing administrative offices and one housing service center operations or three building buildings with the third being a detached separate EOC which could be used as an essential services facility. An essential services building as designed and constructed shall be capable of providing essential services to the public after a disaster.

The potential for a new essential service building will require special building requirements including separate protected utilities and more stringent building code requirements. Ancillary buildings and facilities that are essential to the function of the new essential services facility are not exempt from the same regulations. Essential services facilities are under the jurisdiction local authorities and must be reviewed for approval under the Essential Services Seismic Safety Act of 1986. Due to the nature of occupancy, essential service centers require designing to the highest category risk factor.

Buildings and other structures designated as essential services facilities including but not limited to:

- Fire, rescue, ambulance and police stations and emergency vehicle garages
- Designated earthquake, hurricane or other emergency shelters
- Designated emergency preparedness, communications and operations centers and other facilities required for emergency response
- Power generating stations and other public utility facilities required as emergency backup for risk category IV structures

Disaster Council EOC committee report dated Feb 11, 2016 will be incorporated by reference into this document.

10 JANUARY 2017 Meeting held at City of Cupertino Service Center 10555 Mary Ave- Cupertino, CA

Attendees: Bartos Architecture- Mark Bartos, Laszlo Petrik, Neal Sellers

City of Cupertino Public Works- Katy Jensen, Alex Acenas, Chris Mertens, Chris Orr, Roger Lee, Timm Borden, Jonathan Ferrante, Brian Gathers, Brad Alexander

After considering the options for new buildings that were presented, the biggest concerns for redeveloping the site are about efficiency and use of the existing site. The potential for land expansion is not realistic so minimizing building footprints and utilizing building heights for storage and potential future expansion is important. This can be accomplished through the use of shared spaces in both administrative and service areas. On site utilities allow for flexible placement of the new buildings and location other than where the existing buildings are located. Maximizing site circulation space with vehicular traffic and deliveries is critical.

Using temporary facilities to relocate from the existing to new building should be considered as this will be a large added cost for the project. Potentially six standard (24' x 40'- 960sf) portable buildings will need to be rented and brought on and off site to accommodate the staff should the new building location involve the demolition of existing structures before new facilities are constructed. Phasing options will be incorporated in the Master planning documents outlining relocation for different building and site configurations as well as considering transition costs.

The incorporation of EOC into the new admin building as an essential services facility will require the entire building to be designed accordingly. Attendees agree that this should be incorporated into the master plan document as a single facility that will serve as an essential services building for the community as there are no centrally located fire or police stations in Cupertino.

25 JANUARY 2017 Meeting held at City of Cupertino Service Center 10555 Mary Ave- Cupertino, CA

Attendees: Bartos Architecture- Mark Bartos, Laszlo Petrik, Neal Sellers

City of Cupertino Public Works- Katy Jensen, Alex Acenas, Chris Mertens, Chris Orr, Roger Lee, Timm Borden, Jonathan Ferrante, Brian Gathers, Brad Alexander

It was in general agreement that the entire administrative and service facility should be an essential service facility as all services will need to be operation at the time of a crisis. An initial estimate of 20% cost increase was given to design and build to the current code requirements for essential service buildings. An option for a single two story building was discussed but was in general agreement that it was not preferred by the current staff. Noise and equipment will be an issue and mitigation is not needed if facilities are kept separately. From the previous discussions, it was agreed that more bullpen area and offices are needed to accommodate current staffing. At least 15 offices and cubicles should be incorporated into administration building for supervisors and current staff. The IT room and key room are very important to be incorporated correctly into the building design.

Public restrooms are not a priority and should be provided at a minimum with one single occupancy room if adequate. A break room and toilet rooms should be included in service building and a centralized location for showers will provide safety and easy access. The lobby entry should have a secure desk and check out station to control public entry. The existing front public parking lot contains approximately 46 spaces and is currently adequate. Employee parking can be considered in rear of yard (as City of Palo Alto) however some employees will continue to park on the street.

The ware house facility should be used for multiple types of deliveries and storage. It can be shared by the service center and administration building. It should contain a separate are for a fork lift to use for truck deliveries. The fleet shop should contain all interior work areas and should maximize covered exterior space. High bay cranes for welding and mower lifts are needed to service all equipment currently used. Coordination with Caltrans will be needed if any buildings will be near the Highway 280 sound wall. Existing propane tank has been approved by Caltrans but required setbacks should be researched at existing wall. It is a possibility that as part of the "complete streets" program an extension of the property boundaries could be utilized into Mary Avenue

The Nursery facility should not cause drainage issues for the site. Permeable surfaces should be used to allow tree and plant watering drainage. An extra bay should be added to the boom truck garage and abandoned generator should be removed. The new bay can be used as a small engine shop. Truck repair and service is a major operation at the service facility. Fuel access upon entry of the yard is essential and access to both high and low bay drive thrus for truck maintenance is key. Ample facility would be approximately 4000 sf and contain aerial lifts and pit. Tandem parking inside the new bays will allow for waiting trucks to not intrude on driveway space. In new shop and storage spaces, mezzanine spaces are preferred for storage and potential expansion. If phasing is needed to relocate service center into new building it was agreed that the existing warehouse could serve as a temporary mechanics shop.

2 MARCH 2017

Meeting held at City of Cupertino Service Center 10555 Mary Ave- Cupertino, CA

Attendees: Bartos Architecture- Mark Bartos, Laszlo Petrik, Neal Sellers

City of Cupertino Public Works- Katy Jensen, Alex Acenas, Chris Orr, Roger Lee, Timm Borden, Jonathan Ferrante, Brian Gathers

It was in general agreement that reorganization of the site to provide more efficient use of the service center yard and provide the most open, flexible useable space should be considered for all future projects. A separate building should be provided for Service Center Maintenance operations due to noise and debris generated by the everyday activities. While a two story building allows for more useable site area, it is not preferred by the stakeholders. After some discussion the attendees agreed that also separating the vehicle maintenance shops from other maintenance operations would be functional and provide potential phasing solutions for new construction. Should temporary housing be needed, a solution to utilize unoccupied private property off site or near the service center was considered. In an interim discussion between meetings, the city asked that Bartos Architecture study the additional option including space for additional admin staff.

Occupancy of the new spaces was discussed expanding the size of the new office spaces could potentially house more employees and alleviate any existing crowding. This will allow for future growth of staff and expansions from other with the expansion of the building sizes, efficiency of the existing site area is still very important for the Service Center. Acquiring current street parking and landscape area outside of existing site boundary could be utilized to expand site area.

The master plan site options have been narrowed down to potentially two site plan options. Both options have separate buildings for maintenance and administration. To transition from existing buildings into the new structures, site phasing diagrams will be included in the master planning document. The use of temporary buildings should be considered to be able to provide a more efficient future site. Noise generating activities should be concentrated towards the wall at the freeway towards the West edge of the site and should be moved away from the South edge facing the apartment complex.

Employee parking should not be moved inside the corporation yard but should be located near the new office spaces. Public parking should be kept to a minimum. Research and calculations should be provided to verify that adequate parking for staff is provided given that the new building areas will be increasing. Access for fire department should also be verified and provided. An open, flexible yard is the most preferred use of space gained in the reorganization of the service center yard. For emergency situations where public parking is needed, off-site street parking can be used.

Material shed design options were discussed. It was preferred that fewer structural columns be used to avoid collisions and future maintenance. Providing solar panels at new shed was discussed and decided that they were not needed as current utility cost are already offset by current solar system.

30 MARCH 2017

Meeting held at City of Cupertino Service Center 10555 Mary Ave- Cupertino, CA

Attendees: Bartos Architecture- Mark Bartos, Laszlo Petrik, Neal Sellers

City of Cupertino Public Works-

In this meeting, four options were discussed for site development and placement of the new buildings for the service center and administration buildings. It was in general agreement that a two story administration building with at grade parking below should be built to allow for efficient adequate parking on the site. A cost analysis will be provided for additional of second story and podium parking. Due to the signification cost of underground parking, the options including it were not favored.

Based on occupancy and parking analysis, it was determined that with increase in building sizes to accommodate growth and potential relocated city hall staff, parking would need to be increased. At the meeting it was determined that City owned properties would have flexibility for required parking counts and that a reasonable number of stalls could be determined. It was agreed that approximately 80 stalls would be adequate. It was also clarified that the parking on Mary Ave was included in parking counts and land gained from property acquisition at Mary does not remove street parking.

An urgency to expand or modify City hall was discussed by staff. By increasing the size of the Service Center administration building and relocating City Hall staff, some of the crowding and pressure is relieved until future projects can be addressed. The anticipated capacity was calculated at the meeting including 60 current staff, 10% growth, 10 additional city hall employees, and 4 visitors totaling approximately 80 people.

The standard and preference for Emergency Operation center is at ground level in the administration building. The daily use for the EOC space will be meeting, multipurpose or break room. Modular construction was discussed as a cost saving alternative but typical prefabricated construction will not

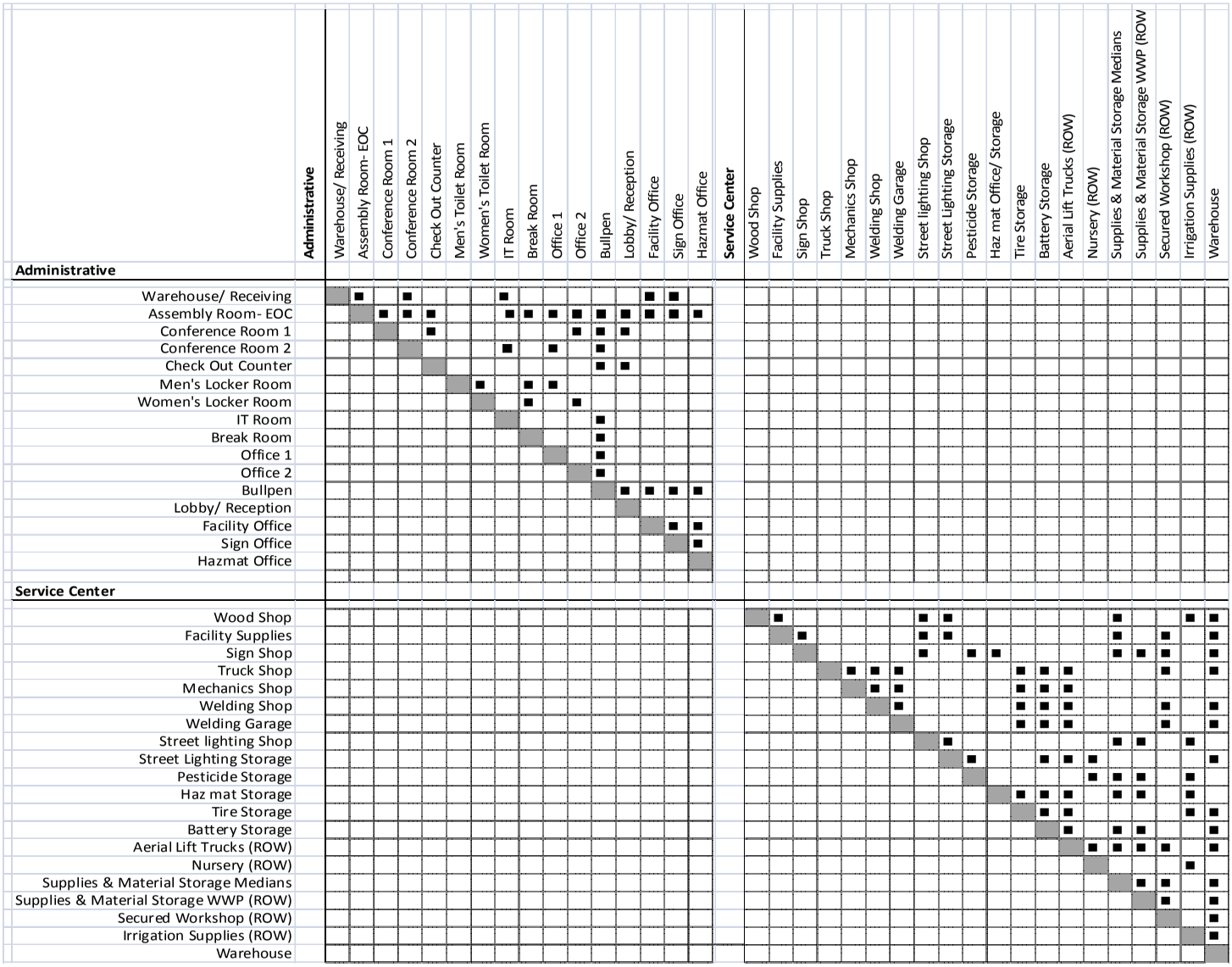
meet the stringent code design standards needed for Essential Services facilities. These could potentially The service center shop buildings and mechanics garage construction type should be a “butler” style metal building with high ceilings. The construction delivery method for future projects was discussed including pre-qualified contractors and using a conventional design-bid-build approach.

At this meeting Bartos Architecture provided the penultimate draft of the master planning document. In addition to the plan site diagrams that are being developed, the staff requested that a 3D diagram of the proposed two story building with podium parking be provided in the final document and presentation.

Facility Inventory & Potential Facility

Administrative	Existing Area (SF)		Proposed Area (SF)
Warehouse/ Receiving	1,610		1,600
Assembly Room/ EOC	504		1,500
Conference Room 1	111		300
Conference Room 2			300
Checkout Counter	172		200
Men's Toilet Room (with showers)	722		800
Women's Toilet Room (with showers)	184		400
IT	160		250
Break Room	230		250
Office 1	660		150
Office 2			150
Bullpen (open office area)	590		1,200
Lobby	370		300
Facility Office	360		360
Sign Office	360		360
Hazmat Office	360		360
Support/ Utility	150		
Corridors	270		
General Office	571		
Total	7,384		8,480
Service Center			
Wood Shop	530		530
Facility Office	360		
Facility Supplies	410		410
Sign Office	360		
Sign Shop	1,200		1,200
Truck Shop	1,300		3,560
Mechanics Shop	1,560		1,560
Welding Shop	600		600
Welding Garage	600		600
Street lighting Shop	450		450
Street Lighting Storage	480		480
Pesticide Storage	120		120
Hazmat Office	360		
Haz mat Office/ Storage	500		500
Tire Storage	180		180
Battery Storage	100		100
Aerial Lift Trucks (ROW)	1,200		1,400
Nursery (ROW)	1,600		2,000
Supplies and Mtl's Storage Medians (ROW)	650		650
Supplies and Mtl's Storage WWP (ROW)	350		150
Secured Workshop (ROW)	600		900
Irrigation Supplies (ROW)	350		350
Total	13,860		15,740

Adjacency Matrix



New Administrative Spaces

The following are to be determined during detailed program development.

Assembly- Multipurpose Room / Emergency Operations Center (EOC)

EOC should conform to the "Murphy Bed" Concept incorporating moveable multipurpose furniture to allow flexibility of spaces. This will potentially be an essential services center.

AREA/SIZE	~1,500 sf (20-25sf per person)
ADJACENCIES	

LIGHTING	Emergency lighting, indirect general lighting
IT	
ELECTRICAL	Alternate power source, generator
CASEWORK	
FINISHES	
CEILING	No ceiling tiles, high ceilings, enable hanging of section signs
FURNITURE	Space between seating to facilitate flow, wide aisles, no pinch points, armless chairs with wheels and five legs, movable filing cabinets, avoid stadium style seating,
ACOUSITC	Sound dampening panels
DOOR/ WINDOW	Access through controlled door, high security, no windows or impact glazing, no public facing entries
FLOOR	Possible raised floor for network flexibility
SPECIALTIES	Large city map including parcels on wall behind safety glass, wall mounted binder clips for maps, numerous whiteboards- magnetic, matte surface, large television mounted above eye level, Smart boards

Warehouse / Receiving

Existing facility area is adequate. Possible that more storage is needed. New facility to be larger

AREA/SIZE	~1,600 sf
ADJACENCIES	

Conference Room 1

AREA/SIZE	~300 sf
ADJACENCIES	Bullpen

Conference Room 2

AREA/SIZE	~300 sf
ADJACENCIES	Bullpen

Check-Out Counter

AREA/SIZE	~200 SF
ADJACENCIES	

Men's Toilet / Locker Room

Needs to be larger than existing facility. More lockers are needed. Approx 2 toilets, 1 urinal and 2 lavatories required

AREA/SIZE	~800 sf
ADJACENCIES	Lobby/ Women's Locker

Women's Toilet / Locker Room

Needs to be larger than existing facility. More lockers are needed. Approx 4 toilets and 2 lavatories required

AREA/SIZE	~400 sf
ADJACENCIES	Lobby/ Men's Locker

IT Room

AREA/SIZE	~250 sf
ADJACENCIES	

Break Room/ Training Room

AREA/SIZE	~250 sf
ADJACENCIES	

Office 1

Office space to be shared by department supervisors and staff. 15 total

AREA/SIZE	~150 sf
ADJACENCIES	Bullpen

Office 2

Office space to be shared by department supervisors and staff. 15 total

AREA/SIZE	~150 sf
ADJACENCIES	Bullpen

Bullpen

Contain work spaces and cubicles. Shared by entire staff for collaboration

AREA/SIZE	~1200 sf
ADJACENCIES	Office 1 and 2, Conf Rm 1 and 2

Lobby/ Reception

Small area for telephones and seating and reception. Possible that Lobby area will not be needed

AREA/SIZE	~300 sf
ADJACENCIES	

Facility Office

Relocate from existing building to new admin building. Dedicated to facility supervisors

AREA/SIZE	~360 sf
ADJACENCIES	

Sign Office

Relocate from existing building to new admin building. Dedicated to sign supervisors

AREA/SIZE	~360 sf
ADJACENCIES	

Hazmat Office

Relocate from existing building to new admin building. Dedicated to hazmat supervisors. No hazardous materials will be handled or stored in the new admin building

AREA/SIZE	~360 sf
ADJACENCIES	

Existing Service Center Spaces

Wood Shop

AREA/SIZE ~530 sf

ADJACENCIES

Facility Supplies

AREA/SIZE ~410 sf

ADJACENCIES

Sign Shop

AREA/SIZE ~1200 sf

ADJACENCIES

Truck Shop

AREA/SIZE ~1300 sf

ADJACENCIES

Mechanic Shop

AREA/SIZE ~1560 sf

ADJACENCIES

Welding Shop

AREA/SIZE ~600 sf

ADJACENCIES Welding Garage

Welding Garage

AREA/SIZE ~600 sf

ADJACENCIES Welding Shop

Street Lighting Shop

AREA/SIZE ~450 sf

ADJACENCIES Street Lighting Storage

Street Lighting Storage

AREA/SIZE ~480 sf

ADJACENCIES Street Lighting Shop

Pesticide Storage

AREA/SIZE ~120 sf

ADJACENCIES

Hazmat Storage

AREA/SIZE ~500 sf

ADJACENCIES

Tire Storage Battery Storage

AREA/SIZE ~180 sf

Report

Desirable Design Elements for a Cupertino EOC

Spring 2017 Version

City of Cupertino Service Center
10555 Mary Ave - Cupertino, CA

BARTOS ARCHITECTURE
COLLABORATION
ADVOCACY
RESEARCH
EDUCATION

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PUBLIC WORKS DEPARTMENT

February 11, 2016

Subject: Report on Desirable Design Elements for a Cupertino EOC

The Cupertino Disaster Council requested that members of the assembly form a subcommittee to create a guideline that could be used for the planning and design of an ideal Emergency Operations Center (EOC) for the City of Cupertino. The subcommittee was formed of individuals from various areas of an emergency response operations team, including the members from the City, the County, Citizen Volunteers and Private Business.

The subcommittee visited other EOC facilities in and around the Bay Area, including Gilroy, Sunnyvale, Mountain View and the County of Santa Clara, to acquire information on the various design elements of these facilities. The subcommittee further collected the opinions of the facility operators on what aspects of their EOCs worked best and what they felt they would have changed. Additionally, the subcommittee reviewed and modeled much of its report on "ASTM Designation E2668-10: Standard Guide for Emergency Operations Center (EOC) Development".

The exercise was focused on creating recommendations that would be presented to a qualified EOC design consultant to use to plan, layout, furnish and equip an emergency operations center. Additionally, coordination meetings should be initiated between the EOC design consultant and the subcommittee to ensure the intent of the report and key factors are being incorporated into the final design.

The focus of the subcommittee was to provide recommendations for a new EOC that would be constructed integrally with a new City Hall, and consequently the EOC would conform to the latest California Building Code standards for essential facilities (Risk Category IV per table 1604A.5 of the California Building Code). Therefore, this report does not strictly address these compliance issues. The subcommittee reaffirms that an effective and resilient EOC facility is a necessity for the City, and that even though the new City Hall project has been placed on hold indefinitely, the City should strive to establish an EOC that conforms to the California Building Code standards for essential facilities.

Further, even though the report states it in numerous instances, the subcommittee feels it is essential to reiterate that the EOC have ability to be flexible. This flexibility includes the capacity to be modified in layout and to easily incorporate additional or new technologies. This will allow for the EOC to be more easily configured for any scenario, as well as allow for the EOC to remain up to date and effective.

Finally, the subcommittee would like to thank the Cupertino Disaster Council for giving us the opportunity to provide our input towards this endeavor. We hope our efforts aid in the creation of an Emergency Operations Center which will provide resiliency and effective service and support during a disaster.

Sincerely,

Chad Mosley
City of Cupertino
Public Works Department

Disaster Council

EOC Design Committee: Ideal EOC

Report on Desirable Design Elements for a Cupertino EOC

February 11, 2016

Table of Contents

Process Steps for establishing the "Ideal" EOC

- **Research & define criteria for the "ideal"**
- Identify sites within Cupertino – (City Hall, Mary Avenue Service Center)
- Assess for structural requirements, etc.
- Obtain approval for EOC location
- Establish, construct and equip new EOC

Team Members			
City	**County**	**Industry**	**Volunteers: CARES & CERT**
Timm Borden	Ken Foot	Tracey Scott, Apple	Jim Oberhofer
Chad Mosley	Louay Toma		Bob Cascone
Ken Ericksen			Steve Hill

Desirable / recommended EOC design elements

Space and layout

Furniture in the EOC needs to have space between it to facilitate the flow of people between workstations and sections.

The layout of workstations and sections should be based upon linking in the same vicinity people and groups who coordinate most with each other. This is called an adjacency analysis. Aisles should be wide enough to facilitate roaming and face-to-face conversations. There should not be pinch points between workstations.

Logistics tends to be a noisy work area because of so many telephone calls.

Operations requires the largest amount of real estate in the room.

Do not underestimate the space required for each position. People need enough room to work with paper next to their keyboards and should not be located so close together that they interfere with each other. Workstations need room for paper and writing in addition to a keyboard, laptop and a second monitor.

Do not use chairs with arms. Arms require additional space and can inhibit a person sitting at the station. Chairs should have wheels and five legs, as required by OSHA.

The Gilroy workstations or sections each have a 'roll around', a three-drawer filing cabinet on wheels. Two drawers contain materials needed for that position such as JIT binders, pens etc. The third drawer is used to hold and file paperwork during an incident, keeping the workstation clear.

i. Range of options
   1. Minimum EOC: paper, pencils, phones, radios
   2. Ideal: single space, isolated mounts, dedicated to the EOC Purpose
ii. Cupertino's existing "EOC" space does not have sufficient space; there no breakout rooms (for management & other sections).
iii. Santa Clara County EOC:
   1. Considering moving some people out of the EOC to DOCs located somewhere else (drive space considerations)
   2. County is looking at different display capabilities, not projectors.
   3. Video display wall, multiple monitors (50" monitors).
   4. "Can never have too many whiteboards."
   5. For the Sierra LaMar event: would have reconfigured the EOC to support it, but could not. Took logistics section and turned into the "TIP" line. Doing a multi-purpose room supports flexibility.
iv. Cupertino Considerations:
   1. Provide for Fire Department presence: for a Cupertino only event, we *may* get a Battalion Chief
   2. Design as a multi-function room
   3. Need raised floor to support flexibility for network cables, power supply and telecom cables
   4. People will be there 12 hrs. and more; space needs to be comfortable; lighting is important (indirect lighting is recommended)
   5. Sound: EOCs get loud; minimize hard surfaces
   6. Space for press conferences that is located away from the EOC; Community Hall?
v. Stadium style layout did not work out for Alameda County.

The team that manages sheltering needs work stations/chairs for affiliated agencies such as the Salvation Army and Red Cross.

EOC workers should be encouraged to talk face-to-face instead of via telephone.

A large map of Cupertino should be placed on the wall and overlaid by Plexiglas. The map should be large enough to display individual parcels. The Plexiglas enables the team to write over the map during an incident.

Plan for a lot of space to display information for the team. Televisions should be no smaller than 60 inches, and there should be numerous whiteboards. Mount large 'binder' type clips to the walls that could hold large maps that also serve as a backup if teams need to revert to paper.

Wall-mounted white boards should be magnetic and have a matte surface.

- Using strong magnets, large paper maps can be placed atop the whiteboards.
- The matte finish enables whiteboards to be used as a screen for a projector without the attendant glare.

It would be desirable to ring the room with whiteboards.
The EOC should have a portable, dual-sided whiteboard on wheels that can be flipped. It should be magnetic so that maps or other charts can be attached to it.

The EOC should have an appropriate amount of fire extinguishers.

The EOC room should not have ceiling tiles which could fall on people during a shake or aftershock.

The EOC ceiling should be higher than a normal room. A very large television screen should be able to be mounted on the wall of the EOC such that the bottom of the television is about 1 to 2 feet higher than a person stands.

TV wall mounts should not be flexible or extendable. This ensures that the TV will not flung around during a shack or aftershock.

There should be a break room with food and coffee. It is important that people be fed and watered during the incident and not get so wrapped up in their jobs they forget to eat and take fluids (this happened during the cable cut).

There should be a supply room or cabinet with pens, paper etc.

There should be a separate mapping room with a plotter and a map table. The table should be large enough to display an E-size drawing and have people stand around the table discussing what is depicts. Large maps can be attached to a wall using strong magnets and whiteboards or clips.

A robust air-conditioning system is required to take away the heat load from a large number of people and IT hardware.

The EOC should have emergency lighting that would turn on if the power goes off.

Enable the hanging of section signs from the ceiling, similar to Sunnyvale.

Include a station for a Business Liaison. The city should have a dedicated point of contact for businesses, especially Apple.

Setup a separate room for the DOC.

Monitors display:

Live television stations (2)
Twitter feeds (tweetdeck)
Other social media sites pertaining to Cupertino
Traffic (County congestion map, https://www.sccgov.org/sites/scc/Pages/SCC-Congestion-Map.aspx)

The DOC should have a parallel set of wrap-around electrical and network panels. About 2 feet above the floor, one panel has two electrical sockets and one network jack about every 4 feet. The upper wrap-around is about 2 feet from the ceiling and has a pair of electrical sockets spaced about every 5 feet. These panels give a high degree of flexibility in room layout and minimize loose cords that might be a tripping hazard on the floor.

Technology

i. Communications
   1. EOC to EOC radio;
   2. County and field radio support; “radio rooms are never big enough”
   3. T1 lines into the EOC, one T1 is equivalent to 24 telephone conversations
   4. Some POTS, fax machines on plain copper back to the Central Office
   5. Ideal EOC: split telephone connections; need a couple of alternate routes. Need redundancy.
   6. County ECOM: microwave system to connect PSAPs. Adding VoIP.

7. Cupertino does not have the PSAP link (no dispatch here)
8. Investigate getting an ECOM drop.
9. Hand held radios for sheriff and fire communication

ii. County has Internet survivability; has HughesNet satellite.
iii. Conduits to the roof for coax needs to be sized bigger than needed for future flexibility.
iv. Sunnyvale: has a Police DOC with TV display technology.

Wireless printing should be enabled on all laptops, and all laptops should be configured to print on any printer and display on any monitor/projector.

For backup purposes, the EOC needs to have analog telephones and VoIP phones (for internal calls). Have backup projection systems or display technology

Breakout rooms should have printers, telephones, Ethernet cables, Wi-Fi, whiteboards and television screens.

Two roof-mounted ham radio antennas should be Yagis with rotators. This enables the radio team to aim them in specific directions to get better line-of-sight communication.

Television screens should be mounted to the walls with a tilt mount only so that they can be tilted down to face people. They should not be mounted with extendable mounts because during a shake the screen could extend from the wall and be shaken violently.

The Wi-Fi system needs the ability to accommodate numerous laptops. It is critical that the Wi-Fi system have the ability to handle more laptops and devices than one might think.

Bring in video feeds from the City cameras (including traffic signal cameras) to the EOC. Another idea for a video feed is ham cameras on a MESH network placed remotely to watch something such as a rising creek.

Do not use desktop computers – they are space hogs and are not portable. The Gilroy EOC had dedicated laptops for each position.

Connect telephone lines via ceiling drop downs.

Install a wall clock that connects wirelessly to the atomic clock in Denver. Ensure it is visible throughout the room. A clock with both 1 through 12 and 1 through 24 numerals would assist staff working with the 24 hour time system.

Include a plotter for printing large maps and signs.

Traffic Operations

i. Provide access to the City's traffic cameras in the EOC.
ii. Provide access from the EOC to the Traffic Operations Center's servers for real time access and traffic signal management.
iii. Consider drone technology to aid in real time traffic data collection, as well as for other real time field observation capabilities.

Food and Water

I. Need to support immediate food and water supplies; close to a break room and kitchen

The EOC needs to have a large amount of cash in small bills. During the cable cut, ATMs were down as well as gas stations and many retail stores. Cash was the only medium that could be used to buy food for the volunteers and the EOC. It would be helpful to have an MOU for food supplies from local restaurants and grocery stores.

Power

I. Alternate power source

The EOC generator should be tested monthly and run for at least an hour. It should have the ability to power whatever equipment it would support during a power outage, plus 25% for incidentals.

Security

Security is critical for an EOC. Keep non-authorized people out. Access to the EOC should be via a controlled door. People not part of the team should not be allowed to simply roam into the room.

Establish a viable backup to the main EOC. The backup should have ham radio masts and generating capacity.

Excerpts from the ASTM Standard Guide for Emergency Operations Center (EOC) Development

6.2.1 Hazard / threat identification and assessment

Team assembled the list of published risks per the Cupertino EOP. These are:

- Geological / Earthquake (> 5)
- Fire, Wild land
- Fire (High Density, Urban)
- Hazardous materials
- Flood hazards – Dam, heavy rain events
- Terrorism
- Public Health Emergency
- Aviation Disaster
- Civil Disturbance (Crime, Police action)
- Extreme Weather / Storm, heat wave
- Gas / Electricity, Utility Emergency
- Transportation – Highway

The probability (unlikely, likely, very likely) and seriousness (Low, Medium, High) of each was recorded using a combination of the ASTM document and the EOP.
Additionally, each hazard was assessed against the Emergency Support Functions:

- ESF1 Transportation
- ESF2 Communications
- ESF3 Public Works and Engineering
- ESF4 Firefighting
- ESF5 Emergency Management
- ESF6 Mass Care, Housing, and Human Services
- ESF7 Resources Support
- ESF8 Public Health and Medical Services
- ESF9 Urban Search and Rescue
- ESF10 Oil and Hazardous Materials Response
- ESF11 Agriculture and Natural Resources
- ESF12 Energy
- ESF13 Public Safety and Security
- ESF14 Long-term Community Recovery and Mitigation
- ESF15 External Affairs

Table 1 on page 23 is expected to be fine-tuned over time.

6.2.2.1 Vulnerability Assessment for the EOC

A first pass was made at looking at the vulnerability of the physical EOC.

- Earthquake: Power - structural integrity; designed to the current EOC codes - waste water storage - Communications are vulnerable
- Fire, Wildland: Embers on the roof, fire risk - power
- Hazardous Materials: if downwind of a plume - ventilation implications.
- Extreme Weather / Storm, heat wave: Power - Regnart Creek is sized for the 100 year flood. (Implication: generator and fuel should not be located in the basement)

6.2.3.2 EOC Capability Assessment

A capability assessment reviews the ability of a government, individual or company to address identified hazards. **ESF** means Emergency Support Function.

1. **ESF1 Transportation Support**
    a. Clarify, report on open routes of travel
    b. Road closures, directions
    c. Clear city roads
    d. Directing traffic
    e. Manage/control the flow of traffic
    f. Provide capability to observe traffic cams
    g. Coordination with CalTrans, County on their road activities

2. **ESF2 Communications**
    a. Internal (within the City)
        i. Trunk Radio system to manage the field response of city employees
        ii. Breakout rooms for information sharing
        iii. Need runners to help push paperwork, pass requests within the EOC
        iv. Amateur Radio communications with CCC (voice, packet, ARKnet)
        v. EOC Intranet, networking, access; webpages, file shares.
        REQUIREMENT: accommodation for Guests, access to the outside world
        vi. NEED:
            1. investigate number of Trunk Radio frequency pairs (we only have one pair)
            2. telephone system duplication.
            RECOMMENDATION: VoIP primarily
    b. External
        i. City with Citizens
            1. PIO – (Rick Kitson)
                a. Social Media (Twitter, Facebook)
                b. City Website
                c. City TV
                d. Radio Cupertino (1670)
                e. CAS
                f. Media relations (and where to put them)
            2. AlertSCC – SO
            3. NEED: Outside Public Notice board
            4. CCC ARKs

ii. City with agencies
    1. POTS lines
    2. Radio
        a. Amateur Radio with County, others (voice, packet)
        b. EOC to EOC
        c. IntraLink (SCEWN)
    3. Liaison in the EOCs
        a. SO
        b. SCCFD
        c. Apple
        d. Business
        e. De Anza College
        f. School Districts

3. ESF3 Public Works and Engineering
- a. See Transportation
- b. Logistics, resources, material movement
- c. City facility inspections
- d. Manpower/resource pool

4. ESF4 Firefighting / Rescue / Paramedic
- a. SCCFD provides these services
- b. Liaison to EOC

5. ESF5 Emergency Management
- a. EOC Facility, plus a viable backup EOC
- b. City Staff for the EOC
- c. Liaisons from different agencies
- d. Link to County EOC
- e. Alerts thru CAS

6. ESF6 Mass Care, Housing, and Human Services
- a. Provide Facilities
    - i. Quinlan Center as Shelter
    - ii. Cooling Stations (Library, Senior Center, Quinlan Center)
- b. Initial Shelter setup
- c. NEED: tents for the parks as a backup / MOUs for Sanitation

7. ESF7 Logistics Management and Resources Support
- a. See above, plus:
- b. NEED: MOUs with vendors for tools, supplies, services

8. ESF8 Public Health and Medical Services
- a. See County EMS

9. ESF9 Urban Search and Rescue
- a. See SCCFD
- b. Engage CCC as necessary

10. **ESF10 Oil and Hazardous Materials Response**
    a. See SCCFD
    b. See DPW

11. **ESF11 Agriculture and Natural Resources**
    a. Not Applicable to Cupertino

12. **ESF12 Energy**
    a. Coordinate, monitor

13. **ESF13 Public Safety and Security**
    a. See SCCSO

14. **ESF14 Long-term Community Recovery and Mitigation**
    a. Coordination to get things up and running
    b. NEED:
        i. Finance knowledge for financial recovery (someone who understands FEMA reporting requirements)
        ii. Knowledge of FEMA rules
        iii. Relationship with FEMA reps to assist with the paperwork

15. **ESF15 External Affairs**
    a. See Communications

6.2.3.4 Vision

1. Ready, relevant, resilient, and responsible

6.2.3.5 Mission (themes)

1. OES mission: Provide comprehensive and integrated emergency management that coordinates resources to protect lives, property, and the environment through mitigation, preparedness, response and recovery from all natural and manmade hazards that we face.
2. Minimizes the loss of life and property for all-hazard events
3. Respond, coordinate (resource), and recover
4. Differentiate between OES and the EOC

6.2.3.6 Facility Occupancy

1. Due to space requirements, a shared facility/multi-use room
2. The ability to initiate a 'Cold Start'
3. Some dedicated infrastructure installed (tables, chairs, networking, file systems, etc.)
4. Radio room
5. Breakout rooms, includes Management, PIO, Policy room (city council), media room, Situational Status (monitor sit stat, social media, distill it down, vet the info, and pass to the EOC), general conferences
6. Kitchen, break area, food & water storage
7. Rest rooms, shower facilities, lockers
8. Map printer, printer room
9. Bunk room

6.2.3.7 Facility Use

1. If there is a disaster, City Hall would become the EOC

6.2.3.8 Facility Functionality

1. Wi-Fi (internal, public network), network access
2. White boards
3. Monitors
    a. Telecom (phones, radio)
    b. Sound dampening (minimize the hard surfaces)
    c. See the Gilroy visit list for more
    d. HVAC
    e. Others?

6.4 Design

6.4.1 Refined Vision

6.4.2 Continuity of Government

6.4.3 Identify services to be performed at the EOC

What exactly will be done at the EOC?

1. Coordination of Logistics; supports…
    a. the staff in the EOC; office supplies, food, water, environment,
    b. the responders in the field (paid and volunteer)
        i. purchasing
        ii. transportation
        iii. facilities
        iv. personnel
    c. providing the communications technologies & equipment, not its operations
2. Coordination of External Communications / Public Information (PIO)
    a. Physical or virtual county JIC support
    b. Develop media messages, briefings to the press, press releases, 'social media' content release
    c. Perform media monitoring, includes social media
    d. Rumor Control
3. Coordination of Infrastructure
4. Coordination of Emergency Services
5. Largest Event anticipated: M 7.9
    a. Ref: https://www.sccgov.org/sites/oes/PlansPublications/Documents/Mass_Transportation.pdf
6. Coordination of Planning & Intel
    a. Develop the Situational awareness / display the Situational awareness/ common operating picture
    b. Documentation and information storage (for re-imbursement and others)
    c. Advance Planning
    d. Resource Tracking

7. Coordination of Operations
    a. Support the field response (contact with the field)
    b. Bring intelligence back from the field
    c. Outbound information flow to the field
8. Policy and prioritization
    a. City Council

6.4.4 Align Hazard Threat Identification and Assessment

1. The site location is given
2. Earthquake construction standards
3. City Hall is located near Regnart Creek - need to account for flooding
    a. READ: don't put the generator in the basement

6.4.5 Align Risk Analysis

1. Which hazards and threats are likely to occur and will potentially need to be managed at the EOC?
    a. Likely to Occur
        i. Geological / Earthquake (> 5)
        ii. Fire, Wild land
        iii. Hazardous materials (only if it gets into mass sheltering)
        iv. Extreme Weather / Storm, heat wave
    b. Less likely to Occur
        i. Fire (High Density/Urban; must be spectacular… only if it gets into mass sheltering)
        ii. Flood hazards – Dam, heavy Rain Events
        iii. Terrorism
        iv. Public Health Emergency
        v. Aviation Disaster
        vi. Civil Disturbance (Crime, Police action)
        vii. Gas / Electricity, Utility Emergency
        viii. Transportation – Highway

6.4.6 Space Requirements

1. Square footing per person… 20 to 25 SF per person.
2. Who do we anticipate in the EOC
    a. Will be there
        i. City Staff
            a. Management
            b. P&I
            c. Logistics
            d. Operations
            e. Finance
        ii. CCC DOC
        iii. Allied Agencies (seats for show-ups)
        iv. Sheriff's Office Position (depends on the scope of the event, SO Rep or City Staff)
        v. County Fire Position (depends on the scope of the event, SCCFD Rep or City Staff)

    b. Will <u>not</u> be there
        i. PG&E
        ii. SJ Water, Cal Water
        iii. CuSD, Sunnyvale Sanitary District
        iv. Red Cross (depends on the magnitude, and locality)
        v. EMS, Public Health
        vi. Environmental Health
        vii. Telecom Companies

6.4.6.1 – Space for External and non-Jurisdictional entities

1. In the EOC; need extra seating to accommodate any number of the following:
    a. Apple, Inc.
    b. American Red Cross
    c. FUHSD
    d. CUSD
    e. De Anza College
    f. Chamber of Commerce Rep

6.4.6.2 – Space for Public Information Office / Joint Information Center (PIO/JIC)

1. In the EOC: PIO or designate (1 seat)
2. Separate PIO Work Room (social media, message development, rest of the team, 5-6 seats total)
3. Separate Briefing Room or Area (such as Community Hall)
4. JIC: Non-dedicated meeting room

6.4.6.3 – Space for working a virtual EOC System

1. Web EOC

6.4.6.4 – Efficient Use of Space

1. The approach is to have a non-dedicated EOC. Non-emergency use of this space could be used for city-staff meetings, training, general purpose use.
2. Floor space can be easily reconfigured to the EOC. Requires sufficient tables, chairs, white boards, overhead displays that are either fixed or easily deployed, phone-line, network drops, etc.
3. Close proximity store space must be allocated for EOC documentation, equipment, supplies, material, etc., that can be easily deployed.

6.4.6.5 – Space for Meetings

1. Non-dedicated meeting space needed for:
    a. Management Operational Room (4 permanent seats, includes telephones, white boards, on-wall monitors)
    b. Management meeting room (10-12 seats during meetings)
    c. PIO (referenced above)
    d. City Council / policy room
    e. Two (2) general purpose break-out rooms, (6-8 seats)

6.4.6.6 – Space required for Equipment

1. Needs of the EOC need to be considered in Data Center and Video Distribution planning
2. Remote data center at the EOC or spare IT rack space in City Hall Data Center for TBD EOC equipment (servers, display controllers)
3. Need spare network or A/V rack space in EOC for TBD EOC equipment (See City Channel team for details)

6.4.6.7 – Space Optimization

1. Lighting, indirect (eye comfort)
2. Sound dampening
3. Ample power outlets: wall, floor
4. Furniture
    a. Minimum 20 to 25 sq. ft. per person
    b. Desk space: 3'x4' per person
    c. Need room for people movement and flow
    d. Tables, chairs – on rollers
    e. Chairs no arms
    f. Higher ceiling, no tiles (shaking hazard)
    g. Minimize swivel mounts for display technology

6.4.6.8 – Break Area and Recreational Space

1. Separate break room from the EOC, multi-use, doubles as the break room for the City Hall, sized to handle the city staff
2. Vending Machines

6.4.6.9 – Space requirements for Survivability and Operability

1. Buffer space (secured access) between the public space and the EOC.
2. Look at underground parking restrictions / constraints (policy decision?).
3. Locate the generator and fuel systems at or above ground level. Secured enclosure.
4. Fuel system with multiple sourced fuels (i.e.: natural gas and/or propane).

6.4.6.10 – Americans with Disabilities Act (ADA).

1. Covered in existing building codes.

6.4.6.11 – HVAC and Utility Systems.

1. Provisions to shut down HVAC in the event of Hazmat incidents (or filtering for hazards).
2. Oversize the HVAC for the EOC (extended heat load by people, PCs, etc., during an activation)
3. HVAC filtering for chemical, biological, radiological hazard
4. All air intakes on the roof (avoids walk-by tampering)
5. Redundant Power (PG&E and local generator, or external power connection)
6. Add external Power connection for mobile generator(s)
7. Water coolers with water bottle vendor

6.4.6.12 – Utility Design

1. Electrical
    a. PG&E, primary
    b. Generator, backup (size to building load plus 25%) with dual fuel source: natural gas and stored propane.
    c. Solar with stand-alone grid tie (hybrid inverter; meaning: if the grid "goes down," solar disconnects from the grid and the power is available internally).
    d. Battery storage for solar reserves.
2. Water
    a. San Jose Water connection, primary
    b. Cal Water connection, Secondary
    c. On-site water storage tank, backup
    d. Bottled water or some other source of on-site water
3. Sewer
    a. Cupertino Sanitary District, primary
    b. Local sewage storage capacity
    c. Storage for emergency sanitary supplies (buckets, wag bags, etc.)

6.4.6.13 – Shared Facility Functional Areas

1. N/A

6.4.6.14 – Security Systems and Security Personnel

1. Secured access through internal spaces, no public facing doors.
2. Separation of public space in the building from secured office space, includes the EOC.
3. Add a small lobby or an alcove with work space to screen people prior to entering the EOC.

6.4.6.15 – Potential Medical Needs

1. First Aid Kit, AED in the EOC.
2. Consider a shared space (small conference rooms) for privacy, recovery, or medical evaluation.

6.4.6.16 – Personal Hygiene Areas (Showers, Laundry, Basic Supplies)

1. Include shower space within the City Hall (as it exists today)

6.4.6.17 – Sleep Areas

1. No named space identified within the City Hall.
2. Designated storage space within the Civic Center area for cots (not necessarily City Hall).

6.4.6.18 – Supplies adequate for Continual Operation for up to 30 days

1. Reset for 14 days continuous operation
2. Storage space for MREs (not freeze dried). Need budget to fund and replenish.
3. Storage space and use of water cooler bottles. Need budget for the service (water takes up a bit of space).
4. Storage is adjacent to the break room.
5. Storage closet for office supplies (pens, pencils, paper, plotter, ink).

6.4.6.19 – Amateur Radio Considerations

1. Dedicated Radio space
2. Space required for 3 workstations plus a supervisor.
3. Qty 8, 4" conduit runs from the radio room to the roof, as direct as possible, no bends.
4. Video Feed city channel with amateur radio video content.
5. Roof-top mast or antenna mounting structure.
6. ECOM, need mast on the roof or relay via some tall commercial building (Lease options may be negotiated).
7. Consider a mast if the roof is going solar or 'green'.

6.4.6.20 – Other Trained Volunteers (ARC, CERT, SAR, SEER, MRC)

1. Position already allocated for the CCC DOC (CERT, MRC, CARES) and ARC)

6.4.6.21 – Partners such as Corporations aiding logistics

1. Private Sector Representative (MOUs to be determined with suppliers for logistics)

6.4.6.22 – Records Retention

1. Designate local storage space in or near the EOC as the incident unfolds (as simple as banker boxes or file holders)
2. Long term records retention to be rolled into the City's general records storage policy and procedures.
    a. Follow state and federal guidelines for records retention for economic liability.
3. No shredder in the EOC.

6.4.6.23 – Facility Logistics

1. Janitorial, office, and kitchen supplies need to be sized to ensure 2 weeks of supply self-sufficiency (not just in time supplies).

6.4.6.24 – Laws, Ordinances, Standards, and Operating Procedures Required for Facility

1. Follow laws, ordinances, and standards (building code).
2. Building ordinance augmentation regarding technological and infrastructure enhancement.

6.4.7 Technology

6.4.7.1 – Communications Analysis

1. Specific RF Communications requirements
    a. Part 97 VHF, UHF, voice and packet
    b. Part 90 City Trunk Radio, City simplex, EOC-to-EOC
    c. ECOM / VoIP system (new from SCC)
    d. School District radios
    e. Additional space for Scanner in the Radio Room
    f. Multi-channel digital recorder for radio traffic
2. Specific Network Communications requirements
    a. Internet Access by City Channel; assumes it is accessible by the EOC
        i. AT&T drops (internal LAN, main, Fiber)
        ii. Business Class Comcast (Wi-Fi network, guest)
        iii. Exede (old Wild Blue) Satellite Internet Service, (Backup internet, 12Mb down, 3Mb up, gateway is in Riverside CA)
        iv. Infralink (SCEWN, 7Mb down)
        v. Verizon LTE for Cell… Need details
    b. Wired (CAT-6e or current spec) Network
    c. Wireless Access Points
    d. Servers for event data management (coordinate directly with IT)
        i. Share drives for OES, events, record management, event recovery, training, etc.
3. Specific Telephony Communications requirements
    a. Digital PBX for internal use, must be in the building
    b. Analog phone access (limited, in case VoIP has problems)
        i. One for backup/failsafe
        ii. Fax access (if not digital)
    c. Wired phone access
    d. Sat Phone, antenna on the roof
    e. Dedicated Cell Phone for certain positions, with GETS
4. Specific Broadcast Communications requirements (coordinate directly with City Channel)
    a. Radio Cupertino (1670)
    b. City Channel
    c. Over-the-air television
    d. AM broadcast (e.g., KLIV, KCBS, KGO)
    e. National Weather Service broadcast
5. Specific Social Media Communications requirements
    a. Space, power, and equipment (computer, monitors, servers, racks, switch-boxes, controllers, etc.) in SitStat for social media monitoring and response

6.4.7.2 – Technology Decision Tree Review

1. Voice communications (in priority, inside the City)
    a. Telephone
    b. City Trunk Radio
    c. Amateur Radio
2. Voice communications (in priority, outside the City)
    a. Telephone
    b. ECOM / VoIP system
    The ECOM/VoIP system exists, but Cupertino has yet to acquire it (this can be a requestable item to add to the list).
    c. Sat Phone
    d. EOC-to-EOC
    e. Amateur Radio
3. Digital (data) communications (in priority, inside the City)
    a. Email
    b. Amateur Radio Packet
4. Digital (data) communications (in priority, outside the City)
    a. Email
    b. WebEOC
    c. Fax
    d. ECOM / VoIP system? Does this exist?
    e. Amateur Radio

6.4.7.3 – Computer and Software Checklist

1. This topic requires coordination with City IT Department prior to implementation of equipment
2. ~30 Laptops (and or tablets)
3. Standard office productivity software (email, spreadsheets, documents, drawings)
4. Variety of browsers installed
5. Different emergency management and situational awareness software
6. Networked printers in the EOC
7. Networked scanners
8. Networked plotter, access to plotters managed by IT / GIS and Public Works
9. Video conferencing
10. City is moving to virtual desktop client (VDI) computing, not laptops.
    a. **ACTION: what is the end user computing strategy for the city, specifically for the EOC?... IT or OES discussion.**
    b. **Cloud computing? Need data redundancy to ensure you can operate locally if the cloud is lost… Local Server**
11. City should consider having backup EOC desktops/laptops in the event the VCC server is down.
12. It is understood that this will be a multi-use room so laptops to take in and out of drawers will be much more assistive & space conscious. However some software requires a great deal more visual real estate and a laptop monitor won't suffice. So perhaps additional monitors in the EOC for the laptops to be plugged into, or specific sections who have use of desktops.

6.4.7.4 – Communications Oversight/control

1. Defer

6.4.7.5 – Information Exchange

1. This requires an OES Policy Discussion.

6.4.7.6 – Remote Operations

1. City-Hall -wide networking
2. Video conferencing
3. Distributed access to ECOM / VoIP phone network
4. VPN / Virtual Desktop (remote access to personal, EOC position desktop)

6.4.7.7 – Interoperable and Integrated Communications

1. See 6.4.7.2.

6.4.7.8 – Transportable Communications Capability

1. If this EOC goes down, need to operate from a different location (alternative EOC) as if we were still at the EOC.
2. Virtual Desktop Client that exists today supports this. However, this requires a hardening and redundancy of the VDC servers. VDC Servers store apps and data for the clients.
3. For telephone redirection: Today there is an analog hard-wired phone system in the EOC. Switching is unlikely. For the future, need a digital/VoIP phone system that offers phone number mobility.

6.4.7.9 – Laws, Ordinances, Standards, and Operating Procedures for Required Technology

1. Public records management and access; record retention.
2. SEMS standards call out communications requirements for information exchanges with the County EOC. SEMS guidelines: Section A. General System – Subsection 6. Overview of SEMS Response does state: “larger incidents may necessitate activation of the EOC. Local government will notify the operational area if the EOC is activated.”
3. Need review of the LOSOP for communications.
4. Coordinate with IT and PIO for their requirements.

6.4.7.10 – Internal/External Warning Systems

1. CAS – Cupertino Alert System (Everbridge system)
    a. Everbridge will do "Reverse 9-1-1" calls to phones that have not opted in to the registration. It does this through a separate database.
    b. Citizens enrolled in multiple alert systems may be a cause for potentially receiving multiple messages. Emergency managers have told Bob it is at best inconvenient when they receive a notification and, while listening to it, they receive another notification from a different database.
2. AlertSCC – Accessible by SO and SCCFD
3. On the subject of air raid sirens, the consensus of the people spoken with is that air raid sirens, although helpful and beneficial, could be counterintuitive if a community does not know what the siren is warning for.

6.4.7.11 – Intentionally Left Blank

1. …

6.4.7.12 – Additional Equipment

1. Building will be set to standards for AEDs
2. Radiological monitoring, weather station
3. All-inclusive office environment: printers, fax, copiers, stationary supplies, battery chargers, white boards, easels w/ flip charts + dry erase markers, roll-able/adjustable furniture, filing cabinets, PC projectors, public address system, indirect lighting.
4. Others as necessary

Table 1. Emergency Support Functions Required for Handling Hazards Faced by Cupertino

Hazard	Probability	Seriousness (EOP)	ESF1 Transportation (safety, restoration, etc.)	ESF2 Communications	ESF3 Public Works and Engineering	ESF4 Firefighting	ESF5 Emergency Management	ESF6 Mass Care, Housing, and Human Services	ESF7 Resources Support (volunteers, logistics mgmt. and support)	ESF8 Public Health and Medical Services	ESF9 Search and Rescue (life-saving assistance)	ESF10 Oil and Hazardous Materials Response	ESF11 Agriculture and Natural Resources	ESF12 Energy	ESF13 Public Safety and Security (Police, etc.)	ESF14 Long-term Community Recovery and Mitigation	ESF15 External Affairs
Hazard	**Probability**	**Seriousness (EOP)**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Geological / Earthquake (> 5)	Likely	M-H	x	x	x	SCCFD	x	CUP+ARC	x	SCC EMS	SCCFD	SCCFD	none	Coordinate	SCCSO	x	x
Fire, Wild land	Likely	Medium	x	x	x	SCCFD	x	CUP+ARC	x	SCC EMS	none	none	none	Coordinate	SCCSO	x	x
Fire (High Density, Urban)	Less Likely	L-M	none	x	x	SCCFD	x	CUP+ARC	x	SCC EMS	none	SCCFD	none	none	SCCSO	x	x
Hazardous materials	Likely	Medium	none	x	x	SCCFD	x	none	x	SCC EMS	none	SCCFD	none	none	SCCSO	none	x
Flood hazards – Dam, heavy Rain Events	Less Likely	L-M-H	x	x	x	x	x	CUP+ARC	x	SCC EMS	SCCFD	none	none	Coordinate	SCCSO	x	x
Terrorism	Less Likely	L-M-H	x	x	x	SCCFD	x	x	x	SCC EMS	SCCFD	SCCFD	none	Coordinate	SCCSO	x	x
Public Health Emergency	Less Likely	L-M-H	none	x	x	none	x	none	x	SCC PubH	none	none	none	none	SCCSO	none	x
Aviation Disaster	Less Likely	L-M	x	x	x	SCCFD	x	none	x	SCC EMS	none	SCCFD	none	none	SCCSO	x	x
Civil Disturbance (Crime, Police action)	Less Likely	Low	none	x	x	none	x	none	none	SCC EMS	none	none	none	none	SCCSO	x	x
Extreme Weather / Storm, heat wave	Likely	L-M	none	x	x	none	x	x	x	SCC EMS	none	none	none	Coordinate	SCCSO	x	x
Gas / Electricity, Utility Emergency	Less Likely	L-M-H	none	x	x	none	x	CUP+ARC	x	none	none	none	none	Coordinate	SCCSO	none	x
Transportation – Highway	Less Likely	L-M-H	x	x	x	none	x	none	x	none	none	none	none	none	none	x	x

Figure 1. Emergency Operations Center Organizational Chart

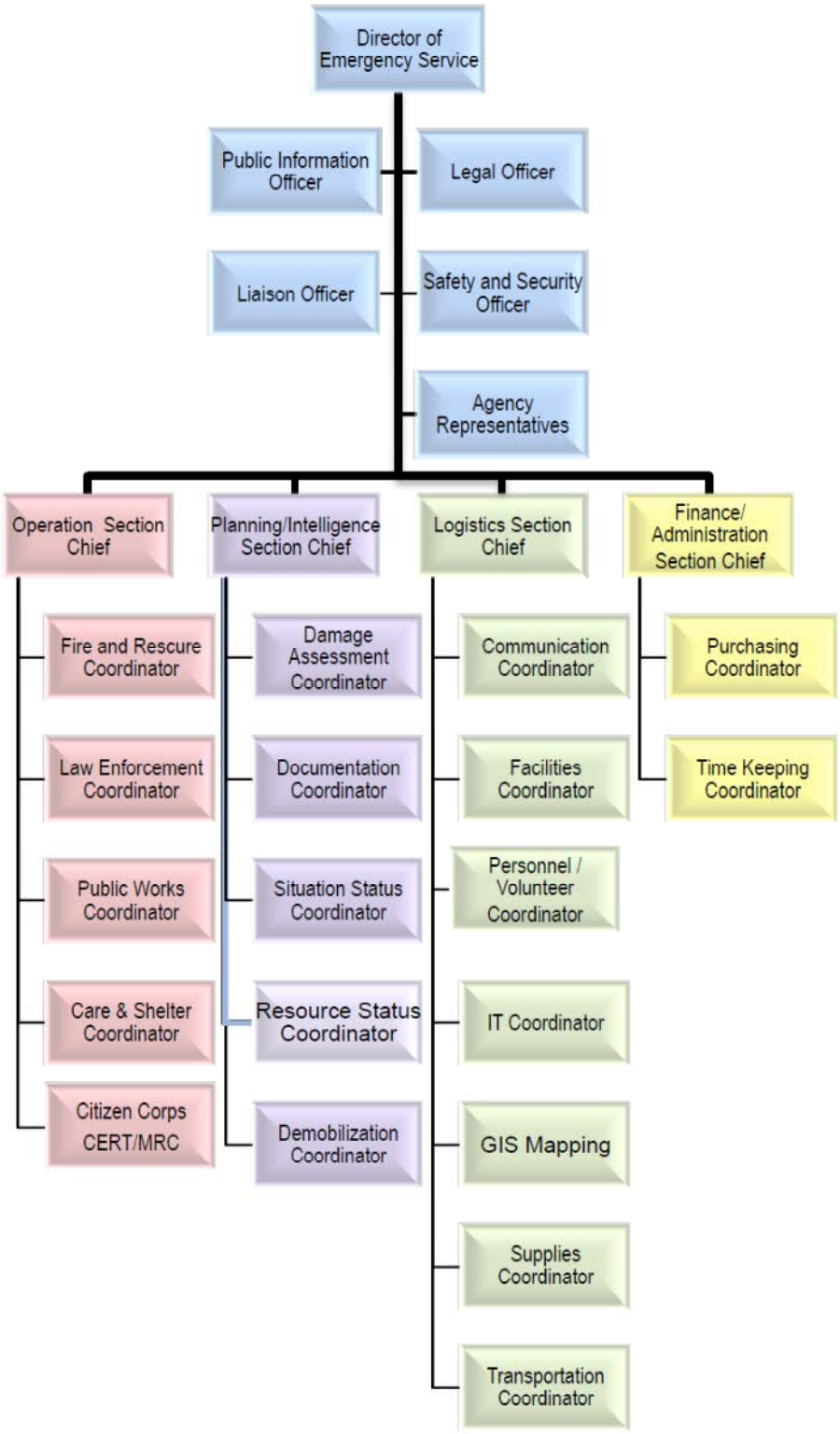

Figure 2. EOC Staffing Positions

(February 2016)

Management			
Position	**Primary**	**Secondary**	**Third**
EOC Director	David Brandt	Timm Borden	Carol Atwood
Legal Officer	Colleen Winchester	Randolph Hom	Cheryl Mannix-Smith
Liaison Officer	Karen Guerin	Colleen Lettire	Lauren Sapudar
Public Information Officer	Rick Kitson	Grace Schmidt	Kirsten Squarcia
Safety & Security Officer	Jeff Trybus	Gulu Sakhrani	OPEN
Agency Representatives • American Red Cross • Fremont Union High School District • Cupertino Union School District • De Anza College • Apple, Inc. • Other	TBA		TBA

Operations			
Position	**Primary**	**Secondary**	**Third**
Operations Section Chief	Roger Lee	Katy Jensen	Chad Mosley
Fire & Rescue Branch Coordinator	Santa Clara County Fire Department		
Law Enforcement Branch	Santa Clara County Sheriff's Office		
Public Works Coordinator	Chad Mosley	David Stillman	Ryan Roman
Care & Shelter Coordinator	Kelsey Hayes	Tom Walters	David Jahns
Citizen Corps CERT/MRC	Ken Ericksen	Bob Cascone	Gerd Goette

Planning / Intelligence			
Position	**Primary**	**Secondary**	**Third**
Planning Section Chief	Aarti Shrivastava	Benjamin Fu	Piu Ghosh
Damage Assessment Branch Coordinator	Albert Salvador	Mike Wayne	Gary Stream
Documentation Branch Coordinator	Erick Serano	Kaitie Groeneweg	Melissa Names
Situation Status Branch Coordinator	Gian Martire	Piu Ghosh	Jeff Greef
Resource Status Branch Coordinator	Julia Kinst	Beth Ebben	Melissa Names
Demobilization Coordinator	OPEN	OPEN	OPEN

Logistics			
Position	**Primary**	**Secondary**	**Third**
Logistics Section Chief	Chris Mertens	Brad Alexander	Jonathan Ferrante
Communications Branch Coordinator	City Channel / CARES	CARES	CARES
Facilities Branch Coordinator	Chris Orr	Ty Bloomquist	Rudy Lomas
IT Branch Coordinator	Mariyah Serratos	Quinton Adams	Larry Sacks
GIS Mapping Branch Coordinator	Teri Gerhardt	Adam Araza	Joanne Johnson
Personnel / Volunteer Branch Coordinator	May Sui	Maria Jimenez	Laura Miyakawa
Supplies Branch Coordinator	Brad Alexander	Brian Gathers	Jason Fauth
Transportation Branch Coordinator	David Stillman	OPEN	OPEN

Finance/Administration			
Position	**Primary**	**Secondary**	**Third**
Finance Section Chief	Kristina Alfaro	Lisa Taitano	Karen Guerin
Purchasing Branch Coordinator	Richard Wong	Tina Mao	May Sui
Time Keeping Branch Coordinator	Yulia Rumalean	Jacqueline Guzman	Chylene Osborne