



**Report to the Board of
Supervisors:**
*Emergency Operations Center for
the Santa Barbara County
Operational Area*

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– December 2007 –

Executive Summary

The primary purpose of the Emergency Operations Center (EOC) is to serve as a single focal point for the management of information, decision making and resource support/allocation during all phases of a local emergency. The need for an EOC is undisputed. The County, which is the lead agency for the Operational Area (Op. Area), has recognized the need to replace the current Interim EOC and build a permanent structure that will fully meet the needs of the County and the Operational Area.

Staff and the consultant has conducted an analysis of locating the EOC in various areas of the county; have assessed needed infrastructure; have conducted site visits in the Southern California region; have evaluated EOC staffing; and provide the following recommendations:

1. Given the current staffing requirements of the EOC, the availability of existing infrastructures, and the proximity to EOC emergency staff offices and residences, it is recommended that the EOC be constructed in the Santa Barbara area in the area of Cathedral Oaks.
2. It is important that a “back-up” EOC be developed. Specifically, staff should develop two contingency plans:
 - The previously approved Betteravia administration building improvements should incorporate a back-up data center and telephone systems, other communication methods and a configuration that, in case of need, can be used as an alternate EOC; and,
 - Staff should attempt to develop a flexible EOC deployment strategy such as using specialty tents normally used in field combat and command centers.
3. Staff should continue to discuss with all potential partnering jurisdictions their serious interests in co-developing an EOC or an alternate EOC and include them if they prove to be realistic in their commitment of financial and time resources. The construction of the EOC should not be delayed based on any lack of commitment or funding from partnering jurisdictions.



Background

During an emergency or disaster, it is imperative that a community respond in a coordinated and organized manner. As part of the response, local officials must be organized in accordance with State and Federal standards. The three existing response structures required to be used by local governments are the Incident Command System (ICS), the Standardized Emergency Management System (SEMS), and the National Incident Management System (NIMS). These three management structures have been formulated into a cohesive emergency management system and requires local entities, that later submit for federal and state disaster funding, to operate under ICS, SEMS, and NIMS. NIMS provides a consistent nationwide approach for federal, state, local governments, and private and non-governmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity.

While SEMS and NIMS are emergency management systems, they are germane to this discussion because of the need to have infrastructure that support SEMS and NIMS during emergencies or disasters. A critical part of the emergency response infrastructure is the jurisdiction's EOC. The EOC is a control center for those individuals from government, private industry, non-governmental agencies and other emergency response community members to provide coordination and management decisions to the jurisdiction.

The overall objective of emergency management is to ensure the effective management of response forces and resources in preparing for and responding to situations associated with natural disasters, technological incidents and national security emergencies. Specific goals in an emergency are to save lives, protect property and the environment. These goals are usually accomplished by the following emergency management objectives:

- Manage and coordinate overall emergency response and recovery operations;
- Coordinate and liaison with appropriate federal, state, and other local government agencies, as well as applicable segments of private sector entities and volunteer agencies;
- Establish priorities and resolve any conflicting demands for support;



- Prepare and disseminate emergency public information to alert, inform and guide the public;
- Disseminate damage information and other essential data; and
- Plan for the continuation of government.

An EOC provides a location of authority and information, and allows for face-to-face coordination among personnel who must make emergency management decisions. The development of a permanent EOC is critical in providing the building to meet these objectives. The EOC however, is just a building. Without the appropriate staffing, training, maintenance and updating of emergency plans and procedures, the EOC will not provide the support to front-line responders or the communities during times of emergency. The following functions are performed in the EOC:

- ✓ Managing and coordinating emergency operations;
- ✓ Receiving and disseminating warning information;
- ✓ Developing, training and exercising emergency policies and procedures;
- ✓ Collecting intelligence from, and disseminating information to, the various EOC representatives, and, as appropriate, to county and state agencies, military, and federal agencies;
- ✓ Preparing intelligence and information summaries, situation reports, operational reports, and other reports as required;
- ✓ Maintaining general and specific maps, information display boards, and other data pertaining to emergency operations;
- ✓ Continuing analysis and evaluation of all data pertaining to emergency operations;
- ✓ Controlling and coordinating, within established policy, the operational and logistical support of departmental resources committed to the emergency;
- ✓ Maintaining contact and coordination with field units, and other local government, special district, and departmental EOCs; and,
- ✓ Providing emergency information and instructions to the public, making official releases to the news media and scheduling of press conferences as necessary.



Possible Emergency Scenarios

The Santa Barbara County Op. Area EOC may be faced with management and intervention of many and varied disasters and emergencies. The following possible emergency scenarios have been identified:

- Fire
- Flood
- Major Storm
- Hazmat Spill
- Medical
- Tsunami
- Earthquake
- Terrorist Attack
- Major Airline Crash
- Pandemic (such as avian flu)
- Landslide
- Civil Unrest
- Industrial Accident and Explosion
- Dam Failure
- Nuclear Incident (Diablo Canyon or VAFB)
- Rocket and Missile Incident
- Extreme Wind Event
- Extreme High and Low Temperature
- Population Displacement (e.g., from Los Angeles due to Nuclear/Biological/Chemical attack)

It is also noteworthy to reiterate that the Op. Area consists of the County, the eight incorporated cities, and the special districts within the County. As the lead agency for the Op. Area, the County's EOC becomes activated when needed, or when a jurisdiction (a political sub-division) notifies the County Office of Emergency Services that the jurisdiction has activated its own EOC. Therefore, the County's Op. Area EOC has responsibilities in the unincorporated areas of the county, and within the various jurisdictions.



Options Within the Operational Area

The County of Santa Barbara (and the Op. Area) covers approximately 2,700 square miles, eight incorporated cities and a multitude of special districts. Within the county, staff worked with engineers to evaluate options for the EOC location. In addition, staff conducted analysis as to EOC infrastructure needs such as power, communications (including fiber optic), access, security, and other variables. Some locations were not considered due to environmental impacts. County staff visited various EOCs in the region to seek input on their experiences and recommendations.

Building criteria was based upon FEMA established criteria for EOC facilities. The list also contains criteria established from the contracted engineer's experience in designing other EOC projects and critical facilities.

The project will be designed in compliance with California Building Code and governing local codes and ordinances as adapted and amended. It is important that the project provide resilience to various impacts such as weather, fire, flooding and seismic activity. The building should be designed to accommodate at least three day sustainability and 24/7 operations¹.

Modern building standards strive for environmentally sensitive and energy efficient construction designs. Not only does it make sense environmentally, but operationally, the project should allow for lower energy use and be designed in a manner that utilizes the maximum amount of natural light through various technologies. The building is a unique building given the length of some operational periods. The project should be based upon functional needs and be developed in a manner for 24-hour, seven day-per-week operation. Other unique aspects of this project must also be taken into account such as: helipad access; satellite communications; strong redundant systems around information technologies, power, shipping & receiving, security, radio communications and media interactions.

¹ This is regarded as a minimum standard for initial sustainable EOC activation. The EOC was operated multiple times, for prolonged periods, during the almost 60-day Zaca Fire.



Given the input provided to County staff during their site visits, space requirements are necessary to allow for the ability for future 100 percent EOC expansion. Other jurisdictions visited routinely stated that their EOCs were originally designed too small and within a five year period required expansion.

One of the other considerations for the EOC was that of a dual-use facility. Site development and building costs are anticipated to use the funding available for this project. Original concepts that included helicopter hangers and other multi-use proposals are not believed to be financially feasible and were relevant to the Santa Ynez Airport site which is no longer recommended.

Three geographic areas were considered for this project: Santa Maria (Betteravia); the Santa Ynez Valley Airport; and, the Cathedral Oaks area in Santa Barbara.

Santa Barbara County presents unique challenges in determining the location of such critical infrastructure. Considerations include seismic hazards, flooding potentials, fire, security, infrastructure availability, site preparation, space for future expansion, proximity to staffing, air support/landing site, security and other factors are considered to varying criticalities.

There is no one perfect answer for locating an EOC. Staff evaluated the FEMA criteria that may be applicable to this project and provided weighted assessments to the various areas. The criteria was selected, commented on, and provided a score based on weighted amounts.

Santa Maria

Two locations were studied (both being county owned campuses). The Foster Road campus is not viable due to the presence of the Tiger Salamander and obtaining permits from Fish and Wildlife that would take several years and cost thousands of dollars.



Betteravia Campus

Already part of the government center, and owned by the County, the site provides for existing infrastructure. Some IT vulnerabilities were identified as the fiber optic system “dead ends” in Santa Maria. However, other infrastructure positives exist such as sewer, water, access from existing roadways and co-existence with other County buildings; site preparation in a couple of locations at Betteravia can be easily achieved. The Betteravia Center is not in the draft FEMA flood plain. The location would allow for additional meeting or training facilities of County staff, particularly if the EOC were combined with the new Betteravia Annex, allowing use of this facility to provide a media room, and perhaps an additional “break-out” conference room.

Santa Ynez

The Santa Ynez Airport provides a potential location for an Op Area EOC. Originally suggested as a potential site, the airport property, although owned by the County, is under the control of the Santa Ynez Airport Authority (SYAA) and has FAA restrictions. This site would provide ample space for airborne support to an EOC. As mentioned earlier however, current fiscal limitations prohibit an EOC project from also including hanger, dispatch and other multi-use possibilities.

The airport location would require significant infrastructure investments; such as fiber optic connectivity back to the Solvang area. Even then, the site would be not be able to develop redundant connectivity. There is a small portion of land (closed landfill) that is not under control of the SYAA, but costs associated with engineering the site in preparation for building are high due to existing conditions such as the need for “fill dirt” to be removed, replaced and compacted.

South Coast – Cathedral Oaks

The County of Santa Barbara owns property in the south coast area and has locations available. In considering locations, staff focused on the area adjacent to the County Fire Headquarters on Cathedral Oaks Road.



The location is in the vicinity of other agencies often associated with emergencies or disasters, such as: County Fire, the Sheriff's Department; Public Health; Social Services; and Public Works. It is also within approximately five miles of the County Administration Building.

Existing County infrastructures around fiber optics are in the general area and could be "connected" from the Calle Real facilities. The Calle Real fiber optics also runs in two directions providing for greater redundancy. Other basic services such as power, water and sewer are also located in close proximity.

Staffing

An EOC is staffed with individuals who have received orientation and training to provide the support and management needed for emergency and disaster operations. Disaster policy leadership is provided by County executive staff and elected leaders (for example, the Chair of the Disaster Council is the Chair of the Board of Supervisors; members of the Disaster Council are disaster-involved department directors).

The EOC operates under the SEMS which, when fully operational, contains five sections: Management; Planning and Intelligence; Operations; Logistics; and, Finance/Administration. Each of these sections are most often headed by an individual who is usually a senior management or executive-level employee. Positions within the respective sections are again, often program staff with broad and senior leadership experience.

While the County continues to struggle with a workforce that is increasingly living in areas outside the south coast area, an evaluation of the staffing matrix for the EOC found that approximately 75% of the staff for the EOC both live and work in the south coast area. This is a particularly important factor in that the success of any EOC operation is dependent on the availability of trained and capable staffing. As demonstrated recently during the Zaca emergency, briefings and meetings at the EOC require staff from the Santa Barbara area to repeatedly travel to the EOC. Department heads routinely attended briefings as they work relatively close to the current EOC. In addition, staff leaving shifts, sometimes after being held-over, must drive home. Staff



often worked past a 12-hour shift as they were “held over”. After working 15 or 17 hours, only a small number of staff needed to be placed in Santa Barbara area hotels so it was not necessary to place these tired employees on the road. Locating an EOC in an area other than where the vast majority of staff live, may increase costs associated with overnight accommodations and expose staff to unsafe driving conditions.

The geographic and political distribution of the Op. Area makes the site selection an imperfect science. Over time, there are no guarantees that the staff that currently staff the Op Area EOC may not be moving to northern portions of the county or other areas. However, the current staffing of the Op Area EOC for the County, is dependent on staff who work and live, for the most part, in the south coast area.



Costs

This complicated project has numerous variables. Staff, working with a private engineering firm has developed the following rough estimate of costs associated with building an EOC at the studied sites:

ROUGH ORDER of MAGNITUDE COST ESTIMATE			
	Santa Barbara	Santa Ynez	Santa Maria
Building	\$ 4,200,000	\$ 4,200,000	\$ 4,200,000
Standard Site Development (with some “soft” costs)	500,000	500,000	500,000
Offsite and Onsite Special Conditions			
Remove and Replace Loose Fill	400,000	800,000 ²	0
Extended Fiber Optics ³	150,000	150,000	150,000
Sewer/Septic Tank	0	100,000	0
Methane Gas Mitigation from Landfill	0	200,000	0
Propane Tank	0	50,000	0
Seismic Mitigation	100,000	100,000	0
Secondary Access Road	700,000	200,000	0
Sub Total Construction, including contingency:	6,350,000	6,300,000	5,150,000
AE Design Fee at 11%	698,500	693,000	566,500
County Management at 6%	381,000	378,000	309,000
Sub-Total Project:	\$ 7,129,500	\$ 7,071,000	\$ 5,725,500
Optional Helipad	300,000	300,000	300,000
Total Project w/ Optional Helipad:	\$ 7,429,500	\$ 7,371,000	\$ 6,025,000

(Current Budget for EOC is \$7.2 million)

It is important to note that in an effort to make cost meet funds available (\$7.2 million currently, assuming \$2.2 million of this originally earmarked for a Fire/Sheriff hangar at Santa Ynez airport are used for EOC instead), a media room, back-up data center, and some of the remaining square footage have been cut from the project. Aspects of the

² This cost represents the low range of anticipated cost and does not account for unforeseen conditions, which may be reasonably anticipated but which are not known to exist.

³ Cost is for aerial fiber



project can be bid separately such as the helipad and secondary roadway in order to ensure full-funding of the EOC project.

Other Considerations

Opportunities were explored regarding partnering with agencies on the construction of an EOC, and possibly co-locating the EOC with other County projects. While these opportunities provide exciting potentials, they are speculative and lack outside agency financial and time commitments at this time.

For example:

- The National Forest Service (NFS) is discussing sharing the building costs with the County. The NFS has routinely had large fires within the Op. Area. The regional and national administrators of the NFS have approved the local office in developing a building, and have given the local building a high priority. Shared use spaces such as conference rooms, rest rooms, parking, etc, would improve interagency emergency coordination and would reduce cost by shared facility use and economies of scale. Obviously, it also complicates the process and requires a clear understanding of capital as well as future maintenance cost allocations.
- The Sheriff's Department is exploring north county for a new jail facility. Again, building on economies of scale might be achieved. As part of the County's financial obligation, some of the costs associated with building the EOC may be applied (e.g., fiber optics and other infrastructure). Similarly, because the jail would be, for the most part self-sustaining, the EOC may benefit from jail services provided (e.g., food services, laundry, etc.). Various specific locations are being finalized and the project will likely involve the State. Because the project is not funded by the State or County, this may not be completed near term.



Recommendations

1. Given the current staffing requirements of the EOC, the availability of existing infrastructures, and the proximity to EOC emergency staff offices and residences, it is recommended that the EOC be constructed in the Santa Barbara area in the area of Cathedral Oaks.
2. It is important that a “back-up” EOC be developed. Specifically, staff should develop two contingency plans:
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COMPARISON SCORING TABLE												
Criteria (Maximum Points)	HIGH PRIORITIES				MEDIUM PRIORITIES			LOW PRIORITIES				
	EOC Staffing Proximity (100 Pts.)	Expandable Site (90 Pts.)	Communications Pipeline (100 Pts.)	Utilities (90 Pts.)	Security (80 Pts.)	Seismic Stability (60 Pts.)	Vehicle Access (60 Pts.)	Helicopter Access (50 Pts.)	Fire/Smoke Risk (50 Pts.)	Site Safety/Airport Risk (50 Pts.)	Other Considerations ⁴	Total Score
Betteravia Campus	30	90	90	90	60	60	60	30	50	40	50	650
Santa Ynez Airport	50	50	30	30	70	50	30	50	40	20	- 80	340
Cathedral Oaks	100	90	100	90	80	40	60	40	40	50	30	720

⁴ Betteravia Considerations: Co-location; Infrastructure already in place; No or limited EIR or mitigations issues. 50 pts.
Santa Ynez Airport Considerations: Fill Dirt at location – unknown impacts/mitigation; Potential community development issues. – 80 pts.
Cathedral Oaks Considerations: Considerable expansion & partnering interests; Potential community development issues. 30 Pts.

Appendix A



Proposed Cathedral Oaks Site

Appendix A



Conceptual Cathedral Oaks Site

Appendix A



Proposed Santa Maria Site

Appendix A



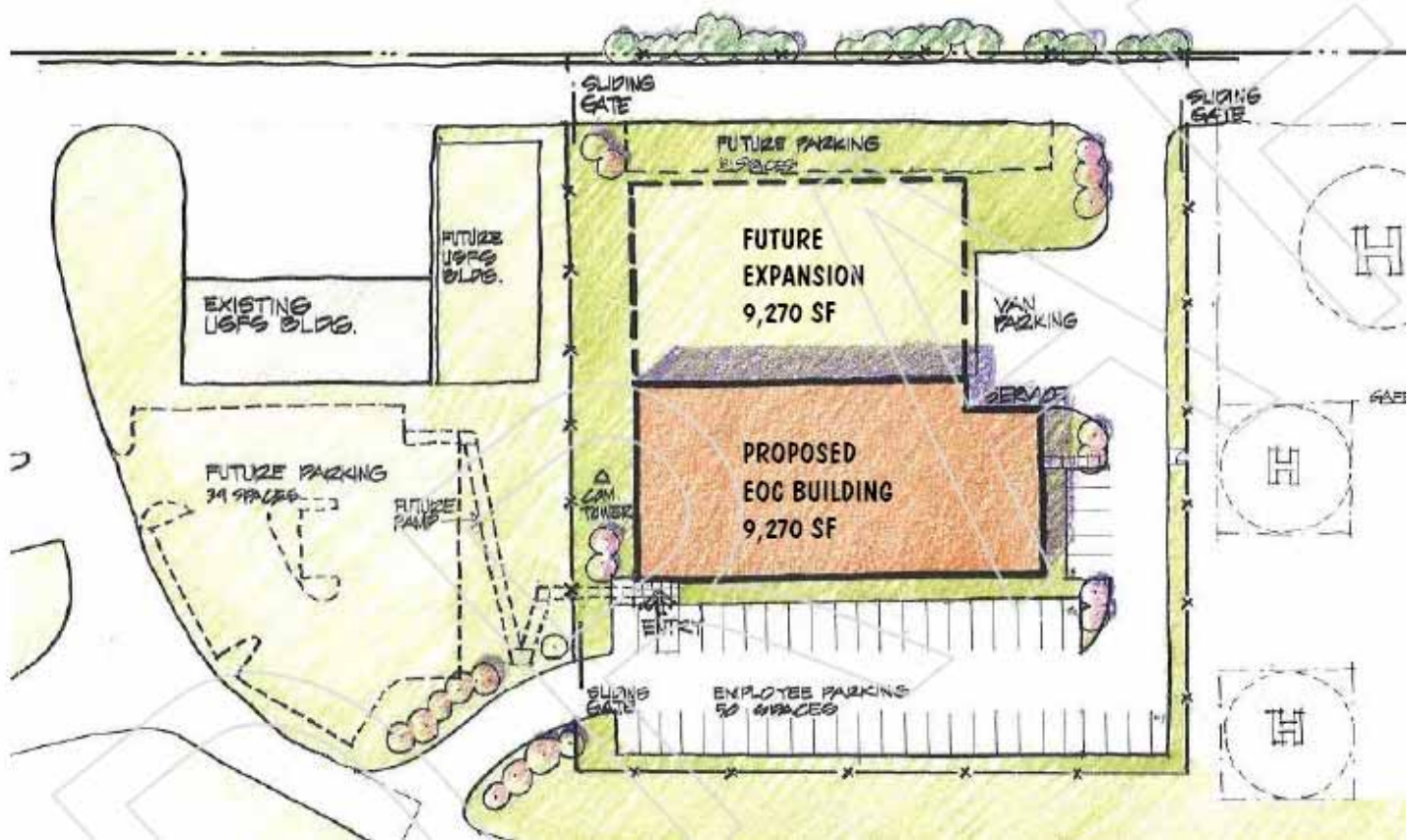
Conceptual Santa Maria Site (South of Current Board Hearing Room)

Appendix A



Proposed Santa Ynez Sites

Appendix A



Proposed Santa Ynez Site (NE of Runways)



Proposed Santa Ynez Site (North of Runways, East of Station 32)

Appendix B

Area Summary Table

EOC size, excluding redundant 911 Dispatch and redundant Data Center, is estimated to be approximately 12,740 square feet (see Table A, Original Total). Due to budgetary restraints, the square footage was reduced from 12,740 square feet to 9,270 square feet. In Austin's opinion, this is considered to be minimum feasible size.

TABLE A - SPACE REQUIREMENTS SUMMARY

Space Description	Activation Staff	Original Sq. Ft.	Reduced Sq. Ft.	Qty.	Original Total	Reduced Total	Remarks	
EOC	24	2,200		1	2,200	2,000		
Management Conference Room	16	800	600	1	800	500	Larger size is like SDC EOC. Smaller size is like OC EOC.	
Joint Information Center (JIC)	12	500		1	500	500		
Break-Out Rooms	0	250		3	750	750		
Radio (ARES) Room	2	250		1	250	250		
Training and Bunk Room	0	500	0	1	500	0	Assume use of break-out room.	
Offices	6	150		6	900	900		
Administration	1	150		1	150	150		
Lobby	0	150		1	150	150		
Media Room	0	600	0	1	600	0	Assume media will use other county facilities.	
Rear Projection Room	0	250	0	1	250	0	Assume front projection.	
Break Room and Kitchen	0	500	225	1	500	225	Assume minimal kitchen.	
Toilet Rooms and Shower	0	350		2	700	700		
Telecom	0	400		1	400	400		
Electrical Room	0	250		1	250	250		
Battery and UPS Room	0	250		1	250	250		
Emergency Generator	0	500	0	1	500	0	Assume generator set outside.	
					Circulation (20%)	1,930	1,405	
Total Staff	61							
				Sub-Total	11,580	8,430		
				Building Support and Circulation	1,160	840	10% building grossing factor	
				Building Gross Sq. Ft.	12,740	9,270		

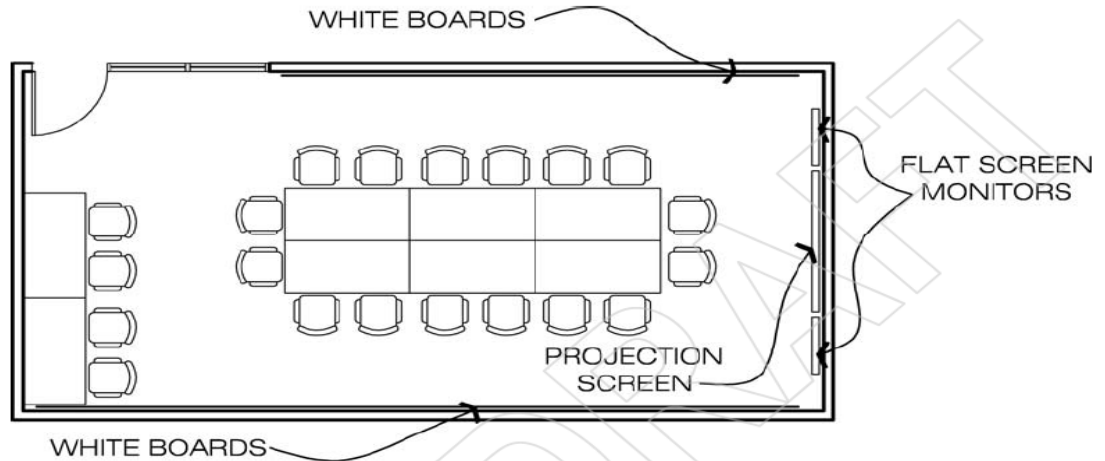
NOTE: 911 Dispatch and Data Center are not included in the EOC because of budgetary constraints.

Based on information gathered, the size of 9,270 square feet should satisfy EOC space requirements for the next 10 to 15 years, depending on the growth of the county. The 10 to 15 year projected life span pertains to the building's ability to satisfy certain growth. This is based on historical information and trends experienced by other EOC facilities. It appears that after 10 to 15 years, Emergency Operations Centers experience a need for additional space and a need to expand. No building system life span upgrades are foreseen within this time frame. However, certain upgrades to telecommunications and information systems may be necessary due to technological advancements.

Appendix C

SITE ILLUSTRATIONS

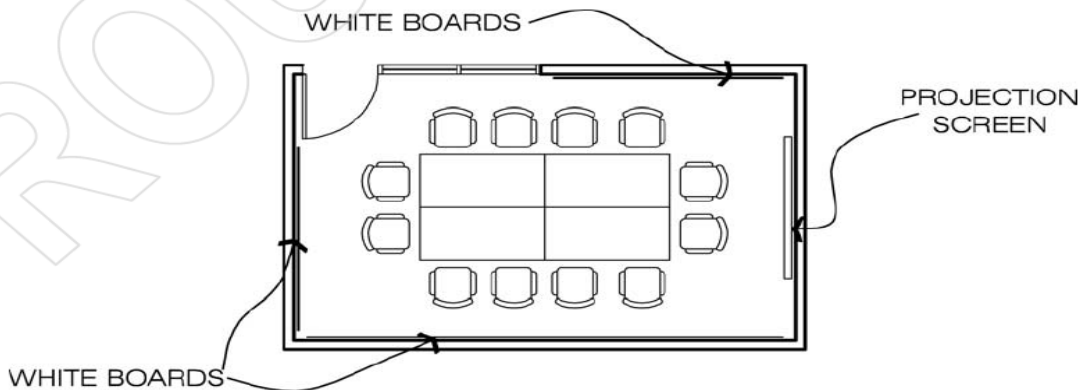
Site Illustrations are conceptual and do not reflect the final proposed design solutions. Once the site is selected, a specific design for the selected site will be developed.



MANAGEMENT CONFERENCE ROOM:

16'X32'
512 S.F.

CONFERENCE TABLE	16 PEOPLE
WORK TABLE	6 PEOPLE
PROJECTION SCREEN	1
FLAT SCREEN MONITORS	2

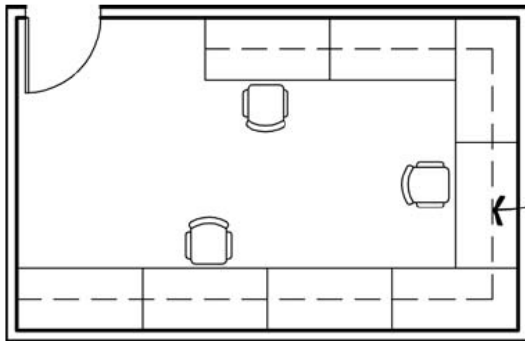


BREAK-OUT ROOMS:

12.5'X20'
250 S.F.

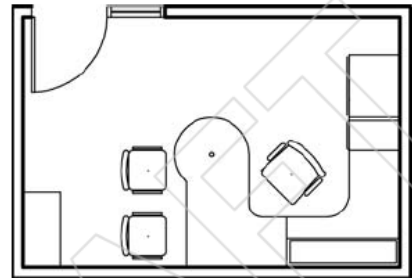
CONFERENCE TABLE	10 PEOPLE
PROJECTION SCREEN	1

Appendix C



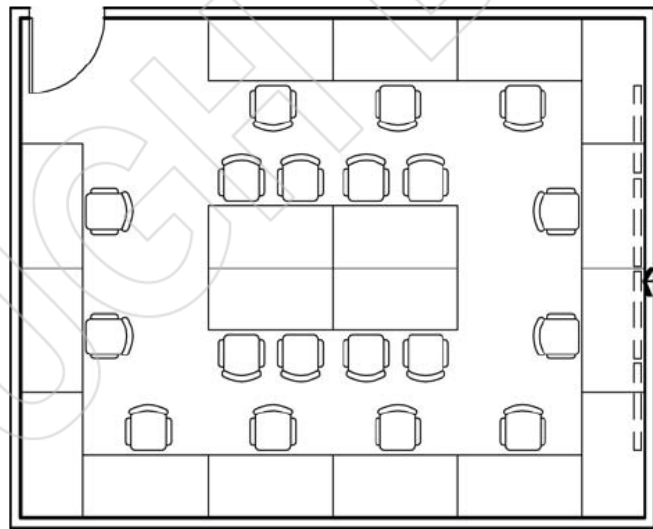
RADIO (ARES) ROOM:
12.5'X20'
250 S.F.

30X60 WORK SURFACES 8



PRIVATE OFFICE:
10'X15'
150 S.F.

CHAIRS 3 PEOPLE
FILE 1

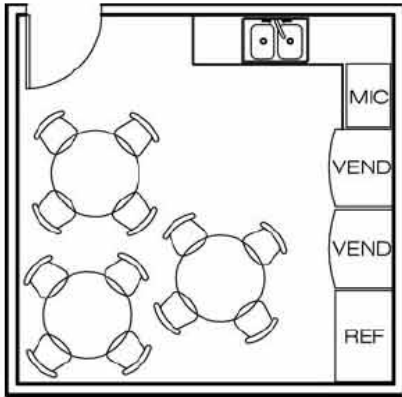


JOINT INFORMATION CENTER (JIC):
20'X25'
500 S.F.

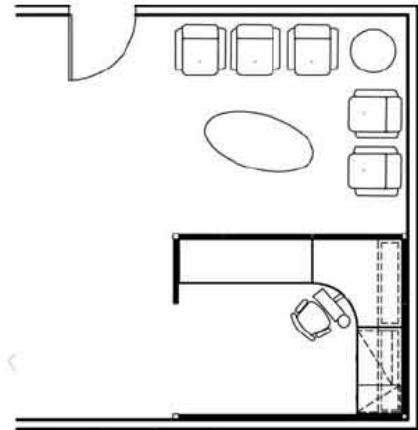
30X460 WORK STATIONS 14
LAYOUT TABLE 1
FLAT SCREEN MONITORS 1

FLAT SCREEN
MONITORS

Appendix C



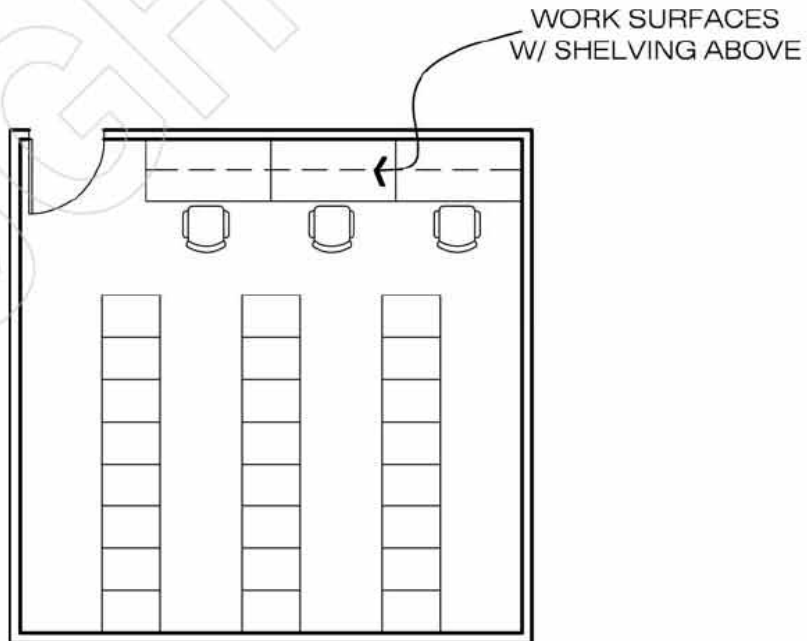
BREAK ROOM / KITCHEN:
20'X20'
400 S.F.



LOBBY/ADMINISTRATION:
15'X20'
300 S.F.

TABLES	12 PEOPLE
VENDING MACHINES	2
FRIDGE	1
MICROWAVE	1
SINK	1

CHAIRS 35



TELCOM ROOM:
20'X20'
400 S.F.

RACKS	24
WORKSURFACES	3