SCITUATE PUBLIC SAFETY

Scituate, Massachusetts

FEASIBILITY STUDY

FINAL REPORT

May 22, 2014

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ARCHITECTS, INC.

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ACKNOWLEDGEMENTS

Dore & Whittier Architects, Inc. would like to acknowledge the following individuals for their dedication to the Town of Scituate and for their assistance to the Design Team.

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INTRODUCTION AND BACKGROUND

INTRODUCTION

In January 2014, the Town of Scituate commissioned Dore & Whittier Architects, Inc. to conduct a "Feasibility Study and Assessment for a Public Safety Complex" to evaluate what is required to provide adequate facilities for the Scituate Police Headquarters and Fire Station #3. This included a site analysis for a combined Police and Fire Facility to serve the Town of Scituate.

For various reasons, the facilities, both the police station and satellite fire station, have reached the limit of their program and in instances, useful space to accommodate the needs of the departments they currently house. The facilities have become outdated, unsafe, non-code compliant, not energy efficient, undersized and require repairs. This report outlines the present condition of the current facilities, the suitability for the intended purpose, the ability to accommodate the current program requirements, and a design option intended to guide decision making for the future facility development.

As stated in the Project Proposal dated October 10, 2013 our focus was on the evaluation of the programmatic needs of each department as well as an investigation of the expanding the facility either by virtue of a renovation/addition or a new addition or to identify deficiencies and prioritize for future upgrades and provide a design layout for the Town of Scituate.

Town of Scituate, MassachusettsBrief History

Scituate, Massachusetts is a seacoast town in Plymouth County, located on the South Shore, midway between Boston and Plymouth. People of Plymouth settled in Scituate in 1627. Many immigrants from Kent, England made up the population at that time. Scituate is derived from *satuit*, a term for the cold brook that runs through the inner harbor. Scituate contains five beaches, four rivers, and a large sheltered harbor.

- County: Plymouth
- Area: Total area 31.8 square miles (17.6 square miles
- of land and 14.2 square miles of water)
- Population: 18,133 per 2010 US Census
- Households: 6,694 - per 2010 US Census
- Median Age: 41per 2010 US Census
- Median Household Income: $108,138per 2010 US Census

DOCUMENTATION

This report is based on information gathered by Dore & Whittier Architects, Inc. and its consultants through visual observations of the buildings and sites, discussions with Town of Scituate in the winter of 2013 and spring of 2014.

During the study, a general review of current codes was performed per Federal Handicap Accessibility Guidelines – ADAAG (ADA), Mechanical Code CSI, and International Building Code (IBC).

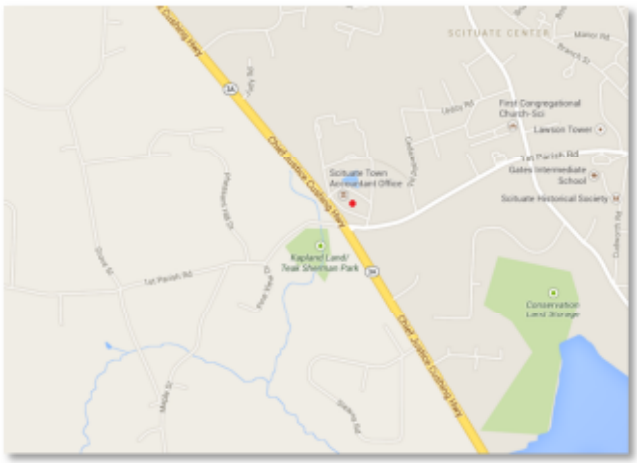
EXECUTIVE SUMMARY

OVERVIEW

The Scituate Public Safety Complex consists of three buildings, the Police Headquarters, Fire Station #3, and the Town Hall. The existing Scituate Police Headquarters was originally constructed in 1958, and the Scituate Fire Station #3 dates back to 1958.

Today, Chief Michael Stewart presides over the force consisting of Patrol, Traffic, Detective Unit, Prosecution, Animal Control, Harbormaster, and K-9. Stewart's staff includes25 patrol officers, 3 detectives, 1 Prosecutor and the Records Clerk, 1 Certified Animal Control Officer, and 3 staff within the Harbormaster's Office. Chief Richard Judge presides over the Scituate Fire Department which consists of 40 fire fighters, 4 Lieutenants, 4 Captains, 1 Deputy Chief, and 1 Chief. Chief Judge is also the Emergency Management Director.

The existing Town Offices, Police Station, and Fire Station are located off Route 3A, Chief Justice Cushing Hwy and 1st Parish Rd. The Scituate Police Station is located north-west of the neighboring Town Offices. The existing Fire Station #3 is located south-east of the Town Offices. The structures are set back approximately 200 feet from Chief Justice Cushing Hwy. Off street parking is located west, north and east of the existing buildings



Location Map – Town of Scituate, Massachusetts

Site Aerial Map – Existing Scituate Public Town Offices

This feasibility study is to evaluate the existing Scituate Police Headquarters and Scituate Fire Station #3 and provide an independent study of each buildings condition, review long-term program requirements for the departments and anticipate future needs.

During December 2013our team of Architects, Engineers and Consultants visited the facility and conducted a site and building assessment that will provide valuable information for future development.

A space needs analysis/ programming was developed through numerous meetings with the Police and Fire Departments. Schematic design plans and elevations were developed for the Town with threeproposed site options as summarized below. Each site option location looked at access, parking capacity, views and sight lines, access, frontage, zoning, grading and soils, local traffic patterns and reponse times for officers and crew.

Space Needs/ Programming Summary

Two story structure, 27,691 sf, including items such as locker rooms, briefing rooms, dorms, storage, administration, armories, holding cells, and apparatus bay

First Floor Area – 20,669 SF

Second Floor Area – 7,022 SF

Site Option 1 Proposed Complexon the parcel at the Ellis Estate on the corner of Route 3A and Mann Lot Road

Site Option 2 Existing location at 600 Chief Justice Cushing Highway

Site Option 3 Hatherly Field (Purple Dinosaur Park) 620 Country Way

It is the Design Team's recommendation that all the options would meet the necessary requirements for the user. After multiple meetings the Committee felt Option 1 is the preferred solution due to the fact that it:

- meets the stated programming needs
- works well on the preferred site
- provides excellent response times throughout the Town of Scituate
- building design fits well with the rest of the Town's aesthetic

The preferred option site plan, floor Plans, rendering and Project Cost Estimate are on the following pages.

PREFERRED OPTION AT ELLIS SITE

SCHEMATIC DESIGN ON ELLIS SITE

SCITUATE PUBLIC SAFETY

D&W PROJECT # 13-671

SCITUATE, MA 02066

OWNER

TOWN OF SCITUATE
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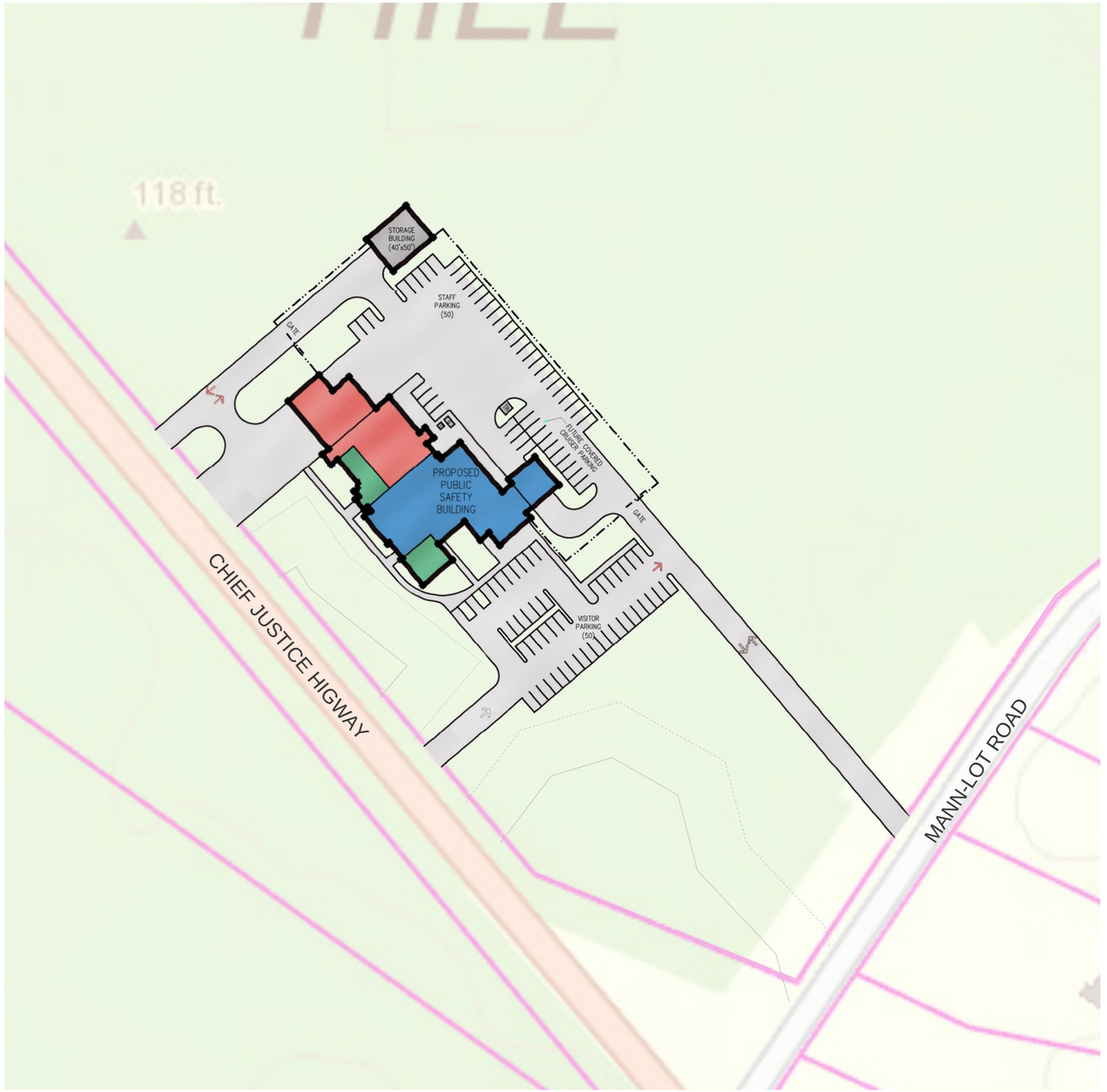
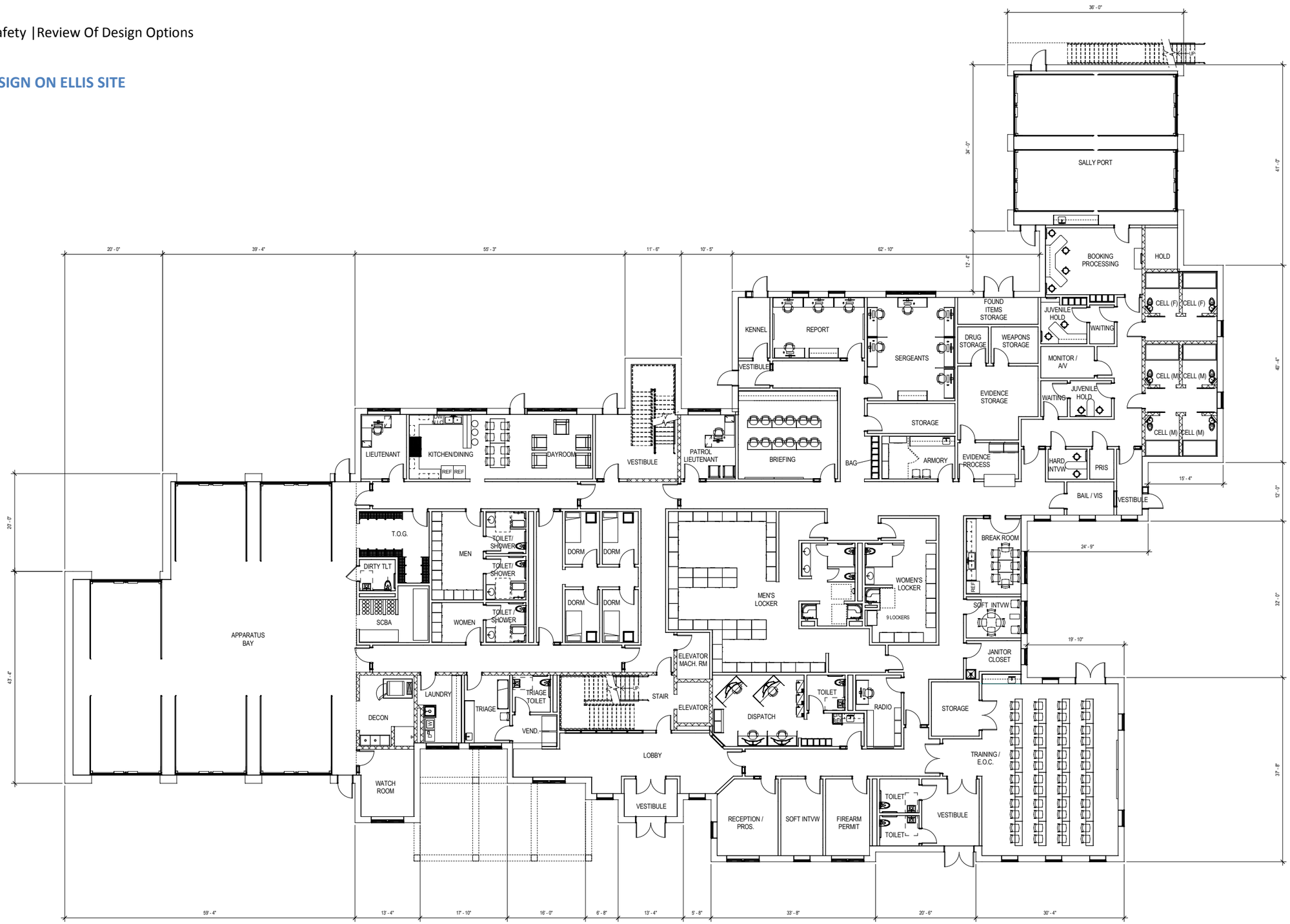
CIVIL
C1.10 - SITE PLAN

ARCHITECTURAL
A1.10 - FIRST FLOOR PLAN
A1.20 - SECOND FLOOR PLAN
A3.10 - ROOF PLAN
A4.10 - EXTERIOR ELEVATIONS
A4.20 - EXTERIOR ELEVATIONS

SCHEMATIC DESIGN ON ELLIS SITE

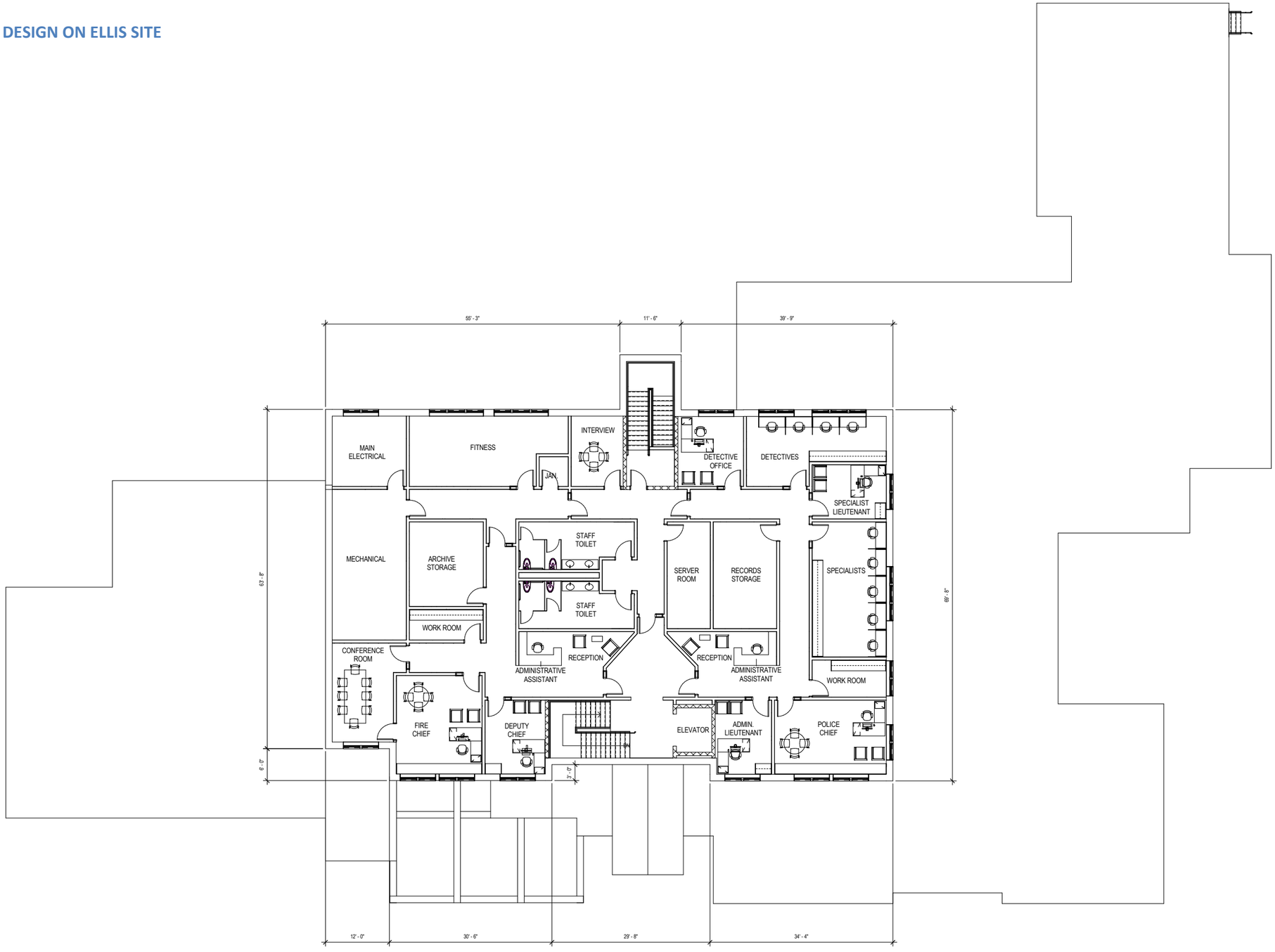


SCHEMATIC DESIGN ON ELLIS SITE



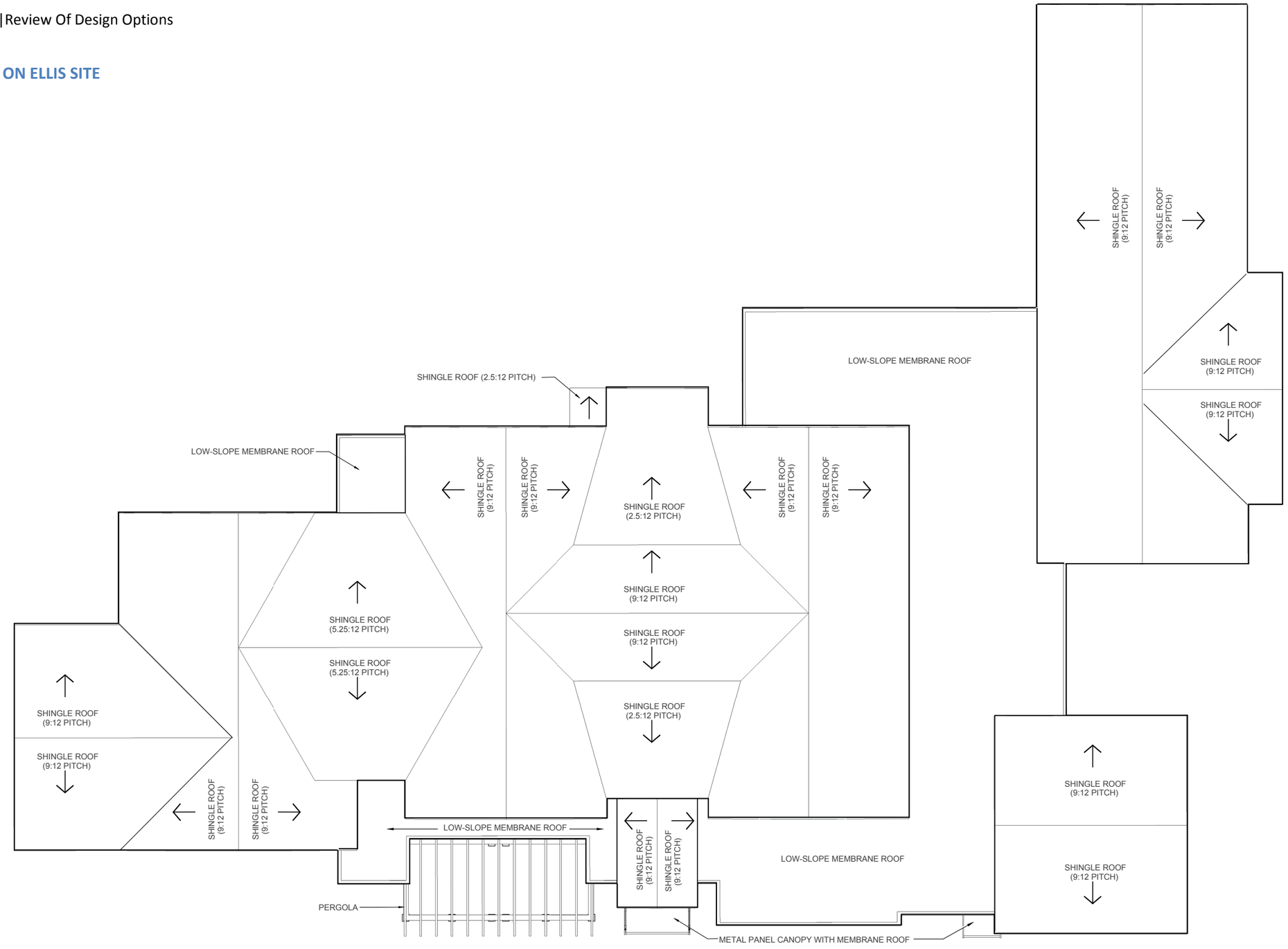
A12 FIRST FLOOR
1/8" = 1'-0"

SCHEMATIC DESIGN ON ELLIS SITE



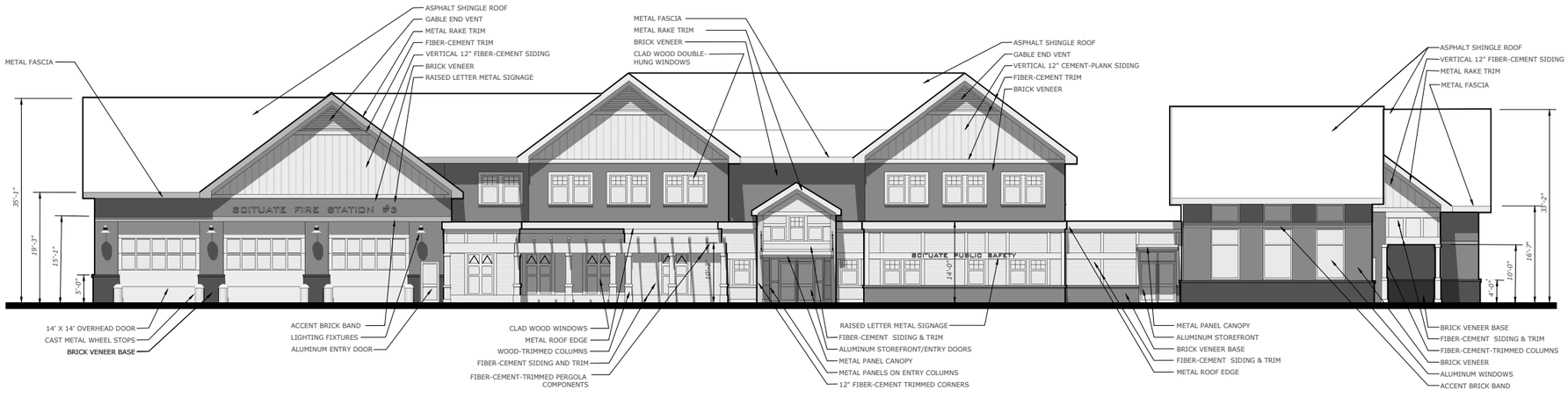
A12 SECOND FLOOR
1/8" = 1'-0"

SCHEMATIC DESIGN ON ELLIS SITE

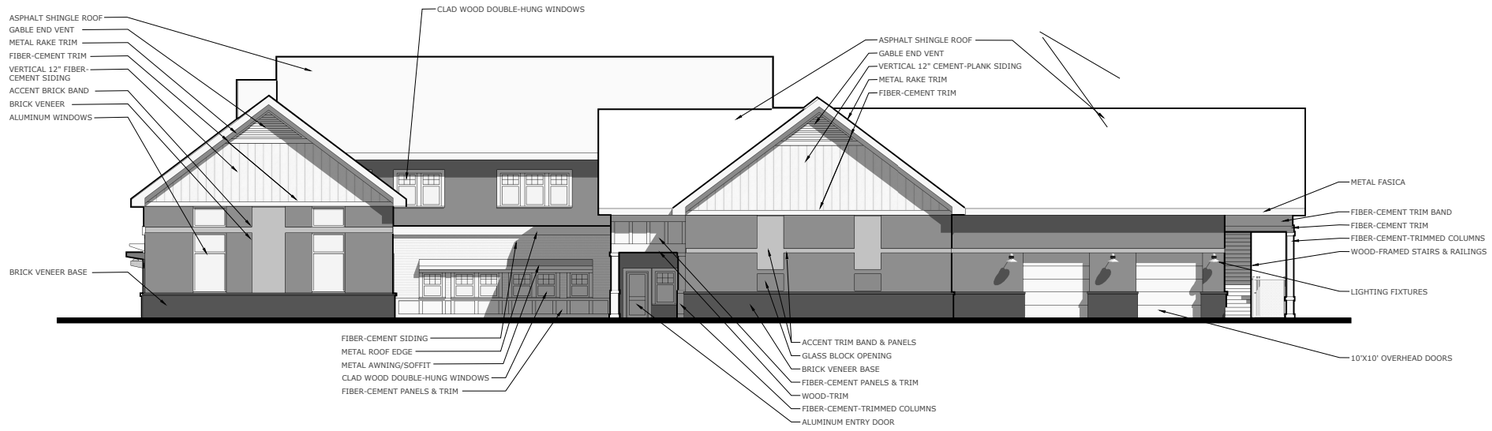


A12 ROOF PLAN
1/8" = 1'-0"

SCHEMATIC DESIGN ON ELLIS SITE

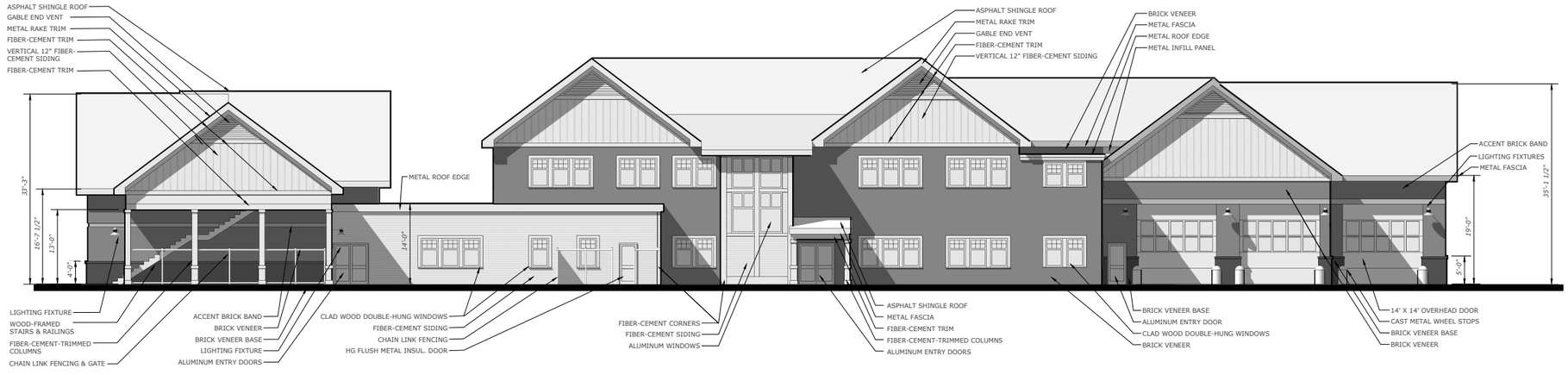


F12 SOUTHWEST ELEVATION
1/8" = 1'-0"

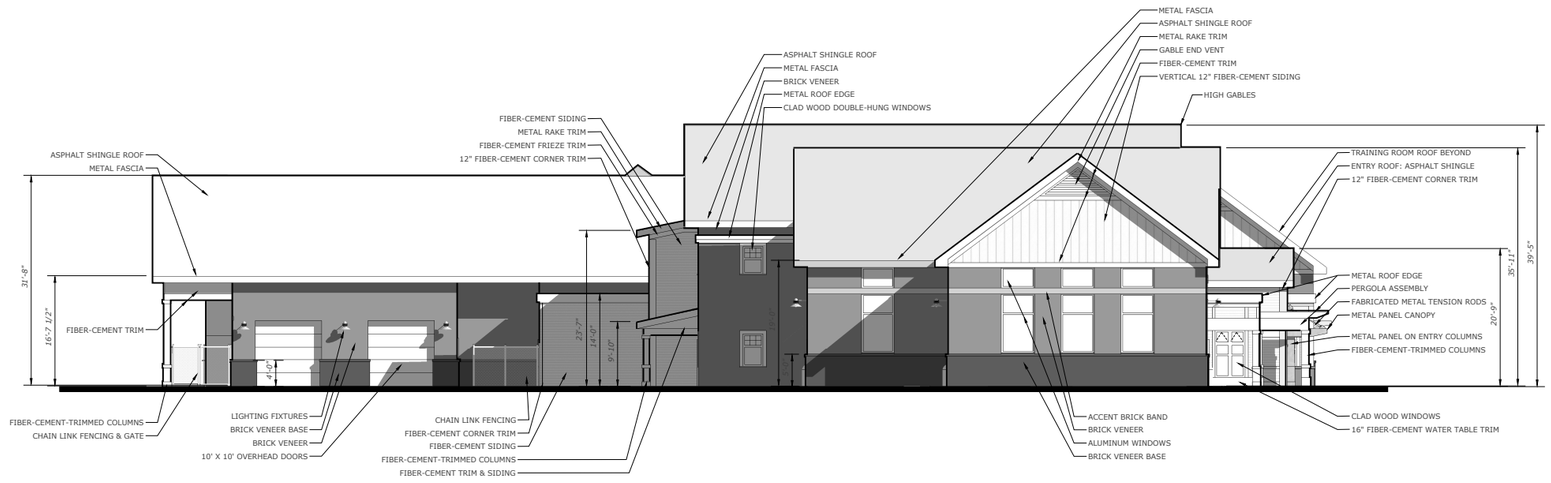


A12 SOUTHEAST ELEVATION
1/8" = 1'-0"

SCHEMATIC DESIGN ON ELLIS SITE



F12 NORTHEAST ELEVATION
1/8" = 1'-0"



A12 NORTHWEST ELEVATION
1/8" = 1'-0"

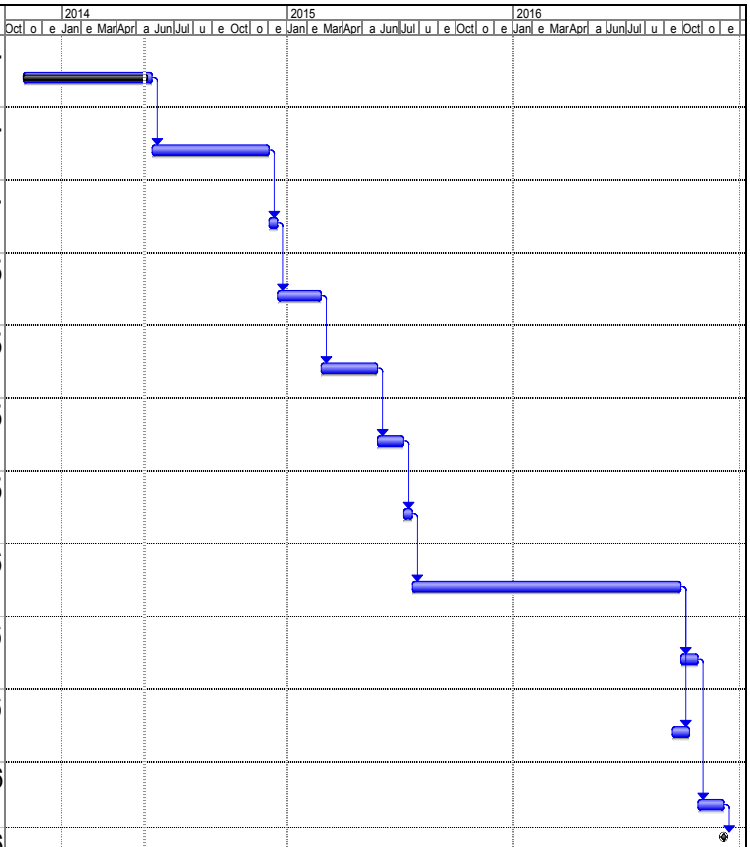
PREFERRED OPTION PROJECT COST ESTIMATE

Scituate Public Safety
Ellis Property *27,691SF*
Date: *May 15th, 2014*

			Estimate	Current Budget	Vendor	Amt. Paid to Date	Projected Expenditure to Completion	Projected Total Expenditure
Direct Construction:								
New Construction Base Amount (May 2014 SD estimate.			$ 13,000,000	$ -		$ -	$ -	$ -
Assumes Fall 2015 Construction Start)								
Permit Fees			Excluded					
Total Construction			**$ 13,000,000**	**$ -**		**$ -**	**$ -**	**$ -**
Architecture and Soft Costs:								
Feasibility Study/Schmatic Design			$ 60,000	$ -		$ -	$ -	$ -
Basic Services			$ 1,240,000	$ -		$ -	$ -	$ -
Additional Services/Reimbursable			$ 65,000	$ -		$ -	$ -	$ -
Architecture and Soft Cost TOTAL			**$ 1,365,000**	**$ -**		**$ -**	**$ -**	**$ -**
Furniture Fixtures and Equipment:								
Furnishings			$ 300,000	$ -		$ -	$ -	$ -
Phones and Computers			$ 150,000	$ -		$ -	$ -	$ -
Specialist Public Safety Equipment			Excluded					
Dispatch Equipment and Radio Tower			Excluded					
Misc Cost, Moving etc			$ 35,000	$ -		$ -	$ -	$ -
FF&E TOTAL			**$ 485,000**	**$ -**		**$ -**	**$ -**	**$ -**
Other Services								
Legal Fees			Excluded					
Finance and Bonding Costs			Excluded					
Construction Inspections Testing			$ 40,000	$ -		$ -	$ -	$ -
Drawing Review			$ 20,000	$ -		$ -	$ -	$ -
Geotech Engineering			$ 20,000	$ -		$ -	$ -	$ -
MEP Commissioning			$ 25,000	$ -		$ -	$ -	$ -
Envelope Consulting & Commissioning			$ 25,000	$ -			$ -	$ -
Other Services TOTAL			**$ 130,000**	**$ -**		**$ -**	**$ -**	**-**
								-
General Development:								
Utilities Upgrades and Connections			Excluded	$ -				-
Printing, Advertising and Administration Expenses			$ 35,000	$ -		$ -	$ -	$ -
Owner's Project Manager			$ 360,000	$ -		$ -	$ -	$ -
General Development TOTAL			**$ 395,000**	**$ -**		**$ -**	**$ -**	**$ -**
							-	-
Contingency:								
Project and Soft Cost Contingency			$ 200,000	$ -		$ -	$ -	$ -
Construction Contingency			$ 625,000	$ -		$ -	$ -	$ -
Contingency TOTAL			**$ 825,000**	**$ -**		**$ -**	$ -	$ -
Total Project Budget:			**$ 16,200,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

PROJECT SCHEDULE

ID	Task Name	Duration	Start	Finish
1	Schematic Study	148 days	11/1/13	5/27/14
2	Town review and discussion	135 days	5/28/14	12/2/14
3	Town Vote to approve funding	10 days	12/3/14	2/16/14
4	Design Development	50 days	12/17/14	2/24/15
5	Construction Documents	65 days	2/25/15	5/26/15
6	Bid/Award	30 days	5/27/15	7/7/15
7	Review bids	10 days	7/8/15	7/21/15
8	Construction	310 days	7/22/15	9/27/16
9	Punch list	20 days	9/28/16	0/25/16
10	Commissioning	20 days	9/14/16	0/11/16
11	Fit out and moving	30 days	10/26/16	12/6/16
12	Occupancy!	0 days	12/6/16	12/6/16



Project: Scituate Public Safety Project
Date: 5/14/14

Task | Summary | Rolled Up Progress | Project Summary
Progress | Rolled Up Task | Split | Group By Summary
Milestone | Rolled Up Milestone | External Tasks | Deadline

Page 1

ARCHITECTURAL ASSESSMENT OF THE POLICE STATION

The original Scituate Public Safety Building was constructed in 1958 with an Addition constructed in the 1990's. The 13,336 SF building consists of a two story structural steel and masonry structure with brick veneer and flat membrane roof. The current building users include 36 sworn officers and 8 civilians.

EXTERIOR ENVELOPE

Walls:

Thermal Envelope:

Most of the interior walls are painted concrete masonry units with brick veneer. We were unable to find existing drawings and will have to assume due to the age of the building and user reports that there is very little insulation in the wall cavity. The Addition was constructed later with most likely studs and has gypsum wallboard on the interior. These walls may have up to 3 ½ inches of insulation, for a R value of R 5.36 +/-.

Brick Veneer:

Efflorescence at Window Sills

- There are some areas where brick is showing efflorescence which indicates moisture in the walls. Re-pointing is required especially above the Garage Doors
- Instances of stained precast window sills due to moisture
- Instances of rusted steel lintels

Recommendations

- If possible, increase insulation at exterior walls to improve thermal envelope to insulation values of between R11.5 and R13 continuous insulation. This is very difficult with this type of construction
- Repair and re-point brick veneer at locations indicated
- Determine if moisture is seeping into precast sills and make necessary corrections
- Wire brush, clean and paint steel lintels where rusting occurs

Doors:

Typical Exterior Doors

- The Public Entrance is single pane glazing with wood doors. This area is not energy efficient
- The doorway, stairs and ramp railings are not ADA compliant
- The Public Entrance is not a secure entrance and lacks bullet proofing
- Other doors appear to be non-insulated hollow metal doors. They function properly but are not energy efficient
- Doors are not ADA compliant
- The second story fire escape coming from the Detention area is unsafe.

Recommendations

- Replace public entrance doors with energy efficient, ADA compliant security doors and sidelights.
- Replace all other doors with insulated energy compliant doors
- Review the use of proximity or keypad type locks for access into the building
- Provide safety rails at fire escape

Windows:

- Water infiltration has been reported through the aluminum storefront window panel system
- The spandrel storefront window system is not energy efficient. We suspect the spandrel panels have a low insulation value

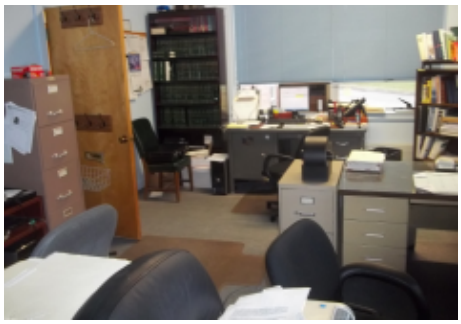
Recommendations:

- Replace window spandrel panel system with more energy efficient system
- Replace window spandrel panel system using energy efficient insulated glazing with low "E" and argon gas filled air space and solid infill insulated walls instead of spandrel panels.

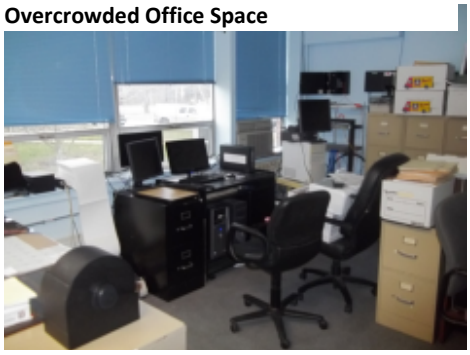
Roof:

- The Roof is a membrane roof; age unknown. It is reported to be in decent shape. It is unknown when the roof warranties expire
- The metal roof edge appears to be in good condition.

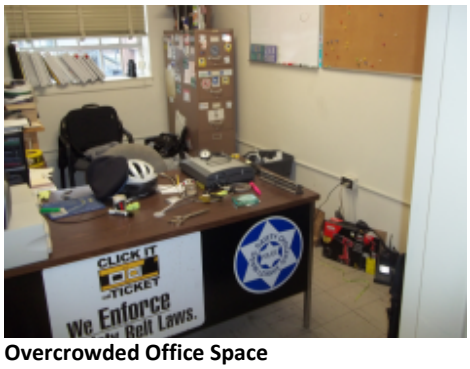
Typical Exterior Wall with Storefront



Overcrowded Office Space



Overcrowded Office Space



Overcrowded Office Space

INTERIOR – GENERAL COMMENTS

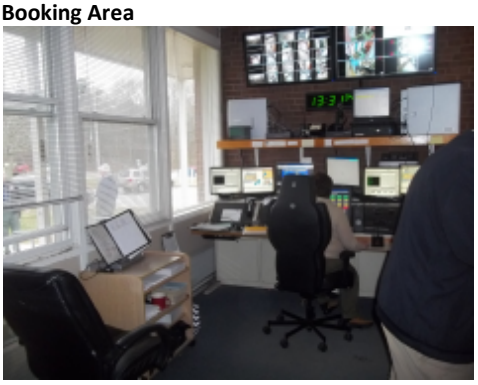
Interior

- Majority of Offices are cramped and inadequate
- Storage rooms are overflowing with items
- Some doors have lever hardware. Levers occur mostly in the new addition
- Toilet rooms are not ADA compliant except on the Officer's Locker Room.
- Rooms with VCT flooring are in decent condition. Floors require waxing and/or re-finishing
- Rooms, with what appears to be 9x9 vinyl asbestos tile (VAT) floors, are in poor condition.
- The Break room is currently being used an a Office and is inadequate
- Juvenile Cell VAT floor in poor condition. It does not contain a penal style suicide prevention toilet.

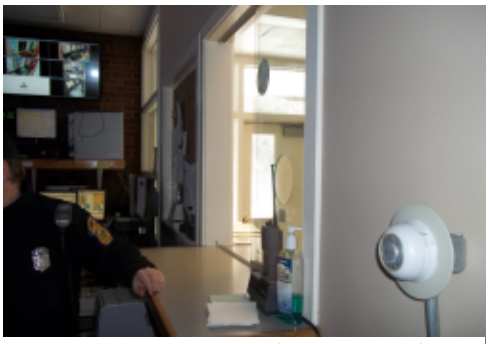
- Locker Room Shower area is partially blocked by lockers; these should be moved.
- Leaks in the roof have been reported by the Department, occurring mostly at the older portion of the Building. Age of roof is unknown.
- Most windows at the old portion of the building are single pane glazing without insulation
- Booking and Holding Cells
    - Cramped area at desks
    - Sink area is being used for storage
    - Inadequate storage
    - All painted floors are peeling and require re-coating
    - There are no ADA compliant toilets
    - Steps should be removed at booking area to reduce accidents
    - Cuff rails are inadequate and limit the number of users
    - Ramps up to Booking appear too steep (non-ADA)
    - Railings are not ADA Compliant
- Dispatch
    - Very cramped
    - Dispatch also serves as receptionist which could distract the dispatcher at certain critical times
    - Ceiling at Dispatch requires repair
    - Carpet is worn out
    - Reception window and lobby wall are not secure, nor bullet proof
    - Lighting appears inadequate and is not easily controlled
- Corridors are reduced in width due to copiers and printers and hinder means of egress.
- Lower Level Garage
    - Access ramp is not ADA compliant
    - Railings are not code compliant
    - Area is cramped with various items
- Stairway down to the basement is in poor condition and requires re-finishing and repairs. Railing is not code compliant
- Doors at Lower level are rusting and required painting and repairs. They are not ADA compliant

Non ADA Compliant Toilet

Booking Area

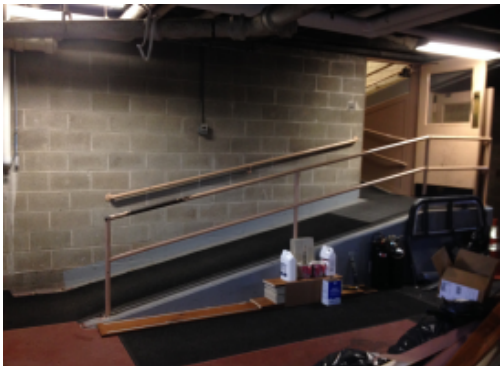


Dispatch

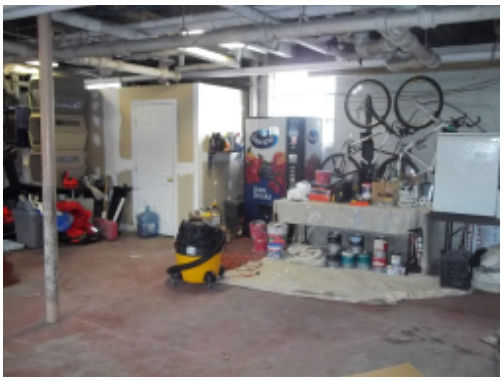


Non-secure Reception Window at Dispatch

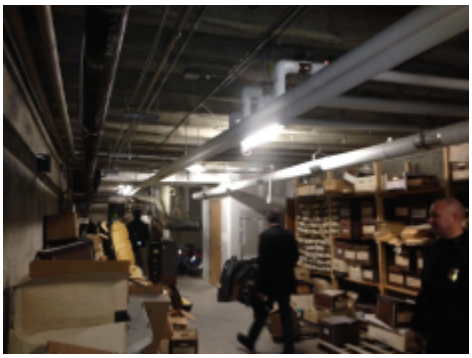
- Lower Level Personnel Locker Room
  - Old smaller style lockers
  - Electrical Distribution and telephone panels should not be located in this area
- Fitness Room
  - Poor Ventilation
  - There is minimal natural light; window opens onto an areaway
  - Lighting is inadequate
  - Carpet is in poor condition and should be replaced
- Archive Storage – not enough room for proper storage of existing files
- The Firing Range was not seen; Space reported to be used for storage not firing range



Steep ramp from Sallyport to Booking



Storage in Vehicle Processing/Sallyport



Archive Storage

Personnel Lockers in Electrical Room

911 Telecomm Rack in non-ventilated Storage Room

Fitness Room in Basement

ARCHITECTURAL ASSESSMENT OF THE FIRE STATION

The original Scituate satellite Fire Station was constructed in 1958, similar to the Public Safety Facility and Town Hall. The 3,585 SF building consists of a two story structural steel and masonry structure with brick veneer and flat membrane roof.

The current building users include two to five per shift.

Exterior Brick Veneer and Windows

EXTERIOR ENVELOPE

Walls:

Thermal Envelope:

Most of the interior walls are painted concrete masonry units with brick veneer. We were unable to find existing drawings and will have to assume due to the age of the building and user reports that there is minimal insulation in the wall cavity.

Brick Veneer:

- There are areas with visible efflorescence which indicate moisture in the walls. Re-pointing is required at certain areas
- Precast window sills are stained due to moisture
- Steel lintels showed signs of rust

Recommendations

- If possible, increase insulation at exterior walls to improve thermal envelope to insulation values of between R11.5 and R13 continuous insulation. This is very difficult with this type of construction
- Repair and re-point brick veneer at locations indicated
- Determine if moisture is seeping into precast sills and make necessary corrections
- Wire brush, clean and paint steel lintels where rusting

Entrance into Day Room

Apparatus Bays - Overhead Doors

Doors:

- Exterior doors appear to be non-insulated hollow metal doors. They seem to function properly but are not energy efficient.
- The Keypad lock into the station does not appear to function well
- Doors are not ADA compliant
- Overhead doors appear to be in good condition

Main Entrance

Recommendations

- Replace all other doors with insulated energy compliant doors
- Replace keypad type locks for access into the building

Windows:

- Water infiltration has been reported through the aluminum storefront window panel system
- The aluminum storefront window system is not energy efficient.

Recommendations:

- Replace window system with more energy efficient system
- Consider replacing window spandrel panel system using energy efficient insulated glazing with low "E" and argon gas filled air space and solid infill insulated walls instead of spandrel panels.

SCBA Equipment in App Bays

Personnel Lockers in App Bays

Roof:

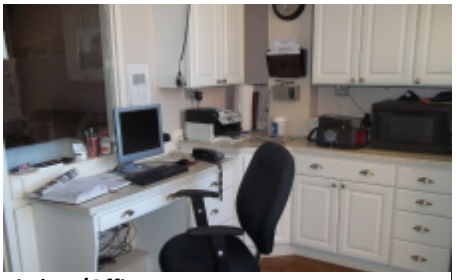
- The Roof is a membrane roof, age unknown. It is reported to be in okay condition. Date of warranties expiration unknown
- The metal roof edge appears to be in good condition.

Kitchen

INTERIOR – GENERAL COMMENTS

Interior

- Most spaces are cramped and inadequate
- Storage rooms are overflowing with items
- Some doors have lever hardware, but not all.
- Toilet and shower rooms are not ADA compliant.
- Apparatus Bays are cramped with equipment including Turn Out Gear and SCBA and Fitness equipment. These items should not be located there.
- Apparatus Bays do not have adequate space along the exterior walls mostly due to personnel lockers which should not be located in the Bays.
- Turn Out Gear should not be stored in Apparatus Bays due to increased deterioration from ultra violet light and soot and smoke from the trucks.
- The Kitchen is also used as the station's office. The Kitchen is overly cramped.
- The office area is inadequate.
- The Sleeping Quarters are overcrowded and does not have adequate space for storage of personnel items.



Kitchen/Office

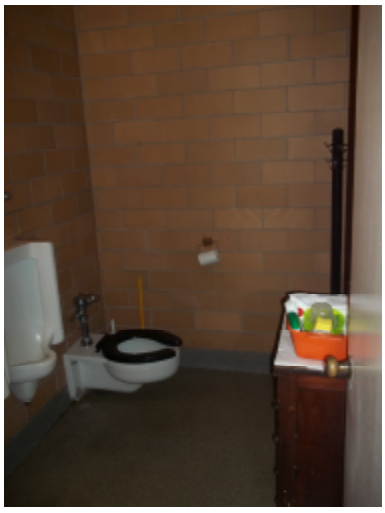
- The Day room does not provide adequate room for the number of fire fighters on the shift.
- There is a step between the Apparatus Bays and the rest of the facility. This can be a potential tripping hazard especially when there is a call.

Dirty Restroom

Dorm Room

Day Room

Step between App Bays and Living Quarters



Toilet Shower

CIVIL ASSESSMENT

Nitsch Engineering has performed research of the existing site conditions and anticipated site permitting requirements for the Public Safety Building located on the Chief Justice Cushing Highway in Scituate, Massachusetts. Nitsch Engineering's research included conversations with Bob Rowland, Wastewater Department Supervisor, and Sean McCarthy, Town Engineer; as well as information gathered during site visits conducted by Caroline McManus, EIT of Nitsch Engineering on December 12, 2013 and January 24, 2014. Information included in this report is also based on compiled record drawings, MassGIS data, and other documentation gathered by Nitsch Engineering. The record drawings include a plan entitled, "Site Plan, Scituate Municipal Center," dated October 1, 1958, and "Heating & Ventilating: Underground Piping & Oil Tank Details Plot Plan," dated January 23, 1958 by Korslund Lenormand & Quann Inc. A summary of our observations and findings is described below.

GENERAL SITE DESCRIPTION

The existing Public Safety Building is located at 600 Chief Justice Cushing Highway in Scituate, Massachusetts. The site is approximately 5 acres including the existing Police Station, Town Hall, Fire Station, parking areas, open space, and associated walkways. The site is bounded by the High School to the north, First Parish Road to the east, and Chief Justice Cushing Highway to the south and west. The north portion of the site on the far end of the parking area slopes north to an open water wetland. The building site and south portion of the site slopes gently to the south and southwest toward the Cushing Highway and First Parish Road. Record drawings indicate the ground floor elevations of the Police Station, Town Hall, and Fire Station are 75.75, 77.33, and 71.42, respectively.

EXISTING SITE UTILITIES

Storm Drainage

Stormwater from the site appears to be collected by three separate drainage systems.

Record drawings indicate a drywell south of the Police Station collecting drainage from the garage wing. It appears there is no overflow connection to the closed drainage system.

Site and roof drainage from the north parking lot, south parking lot, Police Station, and Town Hall is collected in a closed drainage system that flows south through a 12-inch concrete main extending into the intersection of the Cushing Highway and First Parish Road.

Site and roof drainage from the Fire Station and a portion of the east driveway is collected in a second closed drainage system that also flows south through a 10-inch concrete main extending into First Parish Road. Drawings reviewed at the Engineering Department indicate these drain lines may outfall into a wetland located across the Cushing Highway to the southwest.

Other than the drywell, there are no known stormwater quality measures implemented on the site. Conversations with Sean McCarthy indicate there are no known issues with drainage onsite.

An existing pond located north of the site is identified as a wetland by the Massachusetts Department of Environmental Protection (DEP). The pond is located on a plot of town land located between the public safety site and the High School site. Record drawings indicate the pond used to be a loam stockpile area. The pond collects runoff from a sports field to the north and the surrounding landscape. Conversations with Sean McCarthy and information gathered from record drawings indicate there are no stormwater structures draining to the pond. Mr. McCarthy examined a catch basin in the north parking lot of the public safety site and observed a pipe that appeared to be entering the structure from the direction of the pond. Based on preliminary investigations, it is possible this is used as an overflow device. Due to heavy vegetation along the perimeter of the pond, it is unclear where this pipe is located and if other structures exist.

Although the Natural Heritage and Endangered Species Program (NHESP) does not identify the wetland as a vernal pool, conversations with the Scituate Conservation Commission indicate past studies completed for the town may have concluded the existence of species consistent with vernal pool classifications. The Conservation Commission is currently reviewing studies and any available information to determine the appropriate classification of this area.

Sewer

The sewer system is maintained by the Wastewater Treatment Division of the Department of Public Works. Sewage is treated at the Scituate Wastewater Treatment Plant at 161 Driftway Avenue. Discussions with representatives at the plant indicate on average the plant treats between 400,000 and 600,000 gallons per day (gpd); however during storm events has treated upwards of 2 million gallons per day (mgd). The treatment plant is capable of treating approximately 4 mgd and appears to have adequate capacity.

Record drawings indicate the three buildings are serviced by individual 6-inch vitrified clay pipes and meet at a manhole south of the Town Hall building. Record drawings indicate sewer flows to a septic tank, distribution box, and disposal bed across the driveway south of the Town Hall; however discussions with Bob Rowland and Sean McCarthy indicate sewer from the site flows east to a pump station at the corner of First Parish Road.

There are no known issues with sewer onsite.

Water

Water for the Town of Scituate is obtained from multiple sources: six wells, the Old Oaken Bucket pond, the Tack Factory Pond Reservoir System, and the Town of Marshfield. The water is treated at the Scituate Water Treatment Plant. The water system is maintained by the Water Division of the Department of Public Works.

Record drawings indicate water to the site is serviced from a 10-inch cast iron cement lined water main in First Parish Road. A 6-inch transit water line extends north onsite and services a hydrant, located between the Town Hall and Fire Department buildings. A water line connecting to the 6-inch line services the Fire Station at the northwest face, and a second water line extends to the west and services the Town Hall at the nort face, and the Police Station at the southeast face.

There are no known issues with water onsite.

Oil and Natural Gas

Record drawings from 1958 indicate a gasoline trap located south of the Fire Station building. A sewer line from the gasoline trap is shown connecting to the sewer system onsite. Drawings indicate an underground oil tank located along the northwest perimeter of the Town Hall building. The oil tank appears to service a boiler located in the Town Hall, and ultimately provides hot water to the Police Station, Fire Station, and Town Hall.

A propane tank was observed north of the Police Station within a fenced area consisting of a cellular tower and electrical and generator equipment.

Paint observed in a walkway south of the Police Station and in a driveway north of the Town Hall indicates gas service is provided to the buildings. Gas meters were observed along the south face of the Police Station and the north face of the Town Hall.

Figures 1 & 2: Paint within driveway north of Town Hall and walkway south of Police Station indicating gas services

There are no known issues with gas or oil onsite.

Electrical

Overhead wires extending from the west entrance service light poles along the perimeter of the north parking lot and driveway. Light poles along the perimeter of the south parking lot and driveway are serviced by underground wires.

An overhead wire extends from a utility pole north of the Police Station and connects to the building at the north corner. Overhead wires were observed connecting the Police Station to the Town Hall, and connecting the Town Hall to the Fire Station. Conversations with Sean McCarthy indicate a single generator north of the Town Hall services the three buildings in the event of a power failure.

A cellular tower was observed just north of the Police Station. Sean McCarthy noted there are police and fire communications mounted to the cell tower. Electrical and generator equipment were also observed in this location.

Figure 3: Cell tower and electrical and generator equipment north of the Police station

There are no known issues with the electrical system onsite.

SITE CONDITIONS AND OPERATIONS

Soils

Based on the Natural Resources Conservation Service (NRCS) Plymouth County Soil Survey, Issued December 2013, the site of the Public Safety Building is classified as Udorthents gravelly. Udorthents is described as well drained, while having no frequency of flooding or ponding, and a depth to water table of more than 80 inches.

The NRCS classifies Udorthents as Hydrological Soil Group (HSG) B.

HSG B is described as soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Pavement

The asphalt pavement in parking lots, service drives, and walkways adjacent to the site were observed to be in fair to poor condition. Pavement within the north parking lot was observed to be in poor condition with severe cracking and degradation. Pavement within the south parking lot was observed to be in fair to poor condition with cracking throughout. Due to a recent storm, some walkways were covered with snow, thereby making it difficult to determine the condition of pavement.

Curbing on the site is a mixture of bituminous and concrete. Most curbing remained covered in snow; however some exposed curbing appeared to be in fair condition.

Figures 4 & 5: Cracked and degraded pavement in north parking lot and cracked pavement in south parking lot.

Vehicle Access

The site currently has two vehicular access points. The site is accessed from First Parish Road to the east and the Cushing Highway to the west. One-way access is provided in the driveway and parking lot south of the existing buildings and allows travel in the east to west direction. This driveway is accessed from First Parish Road. The driveway and parking lot north of the building can be accessed from both the Cushing Highway and First Parish Road. Both access points are also used by faculty, students, parents and buses to reach the Scituate High School.

Police parking is located north of the buildings. The parking lot can be accessed from the Cushing Highway and First Parish Road. Employee and visitor parking are located to the south of the existing buildings. Parking in the south lot is accessed from First Parish Road, or by driving through the north lot around to the east driveway.

Emergency access to the site is available from both access points.

Pedestrian Access

Pedestrian walkways were observed along the south side of the Cushing Highway and the north side of First Parish Road. A single crosswalk was observed crossing the highway; however there is no sidewalk at the other end to safely access the site. There is no crosswalk or sidewalk off First Parish Road to provide access to the site.

All three buildings provide handicap accessibility. The walkways generally appear to meet slope requirements for accessibility. Pedestrian ramps generally appear to meet ADA requirements for configuration (slope of transition sections, level landing area, etc.), but further investigation will be required to confirm ADA compliancy. No crosswalks or pedestrian ramp tactile strips were observed onsite.

Trash Collection

Trash appears to be stored in dumpsters north of the Town Hall building. Vehicles can access the dumpsters from either the First Parish Road or Cushing Highway entrance.

PRELIMINARY PERMITTING CONSIDERATIONS

Wetlands Protection Act (310 CMR 10.00)

The Wetlands Protection Act ensures the protection of Massachusetts' inland and coastal wetlands, tidelands, great ponds, rivers, and floodplains. It regulates activities in coastal and wetlands areas, and contributes to the protection of ground and surface water quality, the prevention of flooding, and storm damage and the protection of wildlife and aquatic habitat.

A review of the Massachusetts Department of Environmental Protection (DEP) wetland layers available on the Oliver Map provided by Massachusetts Geographic Information System (MassGIS) indicates that the site has wetlands located just north of the site. A large depression with standing water is located north of the north parking lot and is considered a wetland.

Surface Water Supply Protection (310 CMR 22.20)

The Massachusetts DEP ensures the protection of surface waters used as sources of drinking water supply from contamination by regulating land use and activities within critical areas of surface water sources and tributaries and associated surface water bodies to these surface water sources.

A review of the Massachusetts DEP resource layers available on the MassGIS, appear to indicate the site is located within Surface Water Supply Protection Zone C, and within close proximity to Zone A to the west of the site. The site is also located within an Outstanding Resource Water protection area and a Zone II wellhead protection area.

The Town of Scituate Zoning District Map indicates the site is located within the Scituate Water Resource Protection District.

Natural Heritage & Endangered Species Program

A review of Natural Heritage and Endangered Species Program (NHESP) data, dated October 1, 2008, published in the 13th Edition of the Massachusetts Natural Heritage Atlas and available on the Oliver Map provided by MassGIS Online, indicates that the Public Safety site is NOT a Priority Habitat of Rare Species or an Estimated Habitat of Rare Wildlife. No such areas appear within close proximity to the site.

The Oliver Map provided by MassGIS Online indicates the site is not located in an area of Protected Open Space. Protected Open Space is not located within close proximity to the site.

Flood Plain

Based on the Flood Insurance Rate Map (FIRM), Community Panel Number 25023C0109J, dated July 17, 2012, the site is located within Zone X (Areas determined to be outside the 0.2% annual chance floodplain).

USEPA NPDES

Construction activities that disturb more than one acre are regulated under the United States Environmental Protection Agency's (EPA) National Pollution Discharge Elimination System (NPDES) Program. In Massachusetts, the USEPA issues NPDES permits to operators of regulated construction

sites. Regulated projects are required to develop and implement stormwater pollution prevention plans in order to obtain permit coverage.

Sewer Connection Permit (314 CMR 7.00)

New connections to sanitary sewers, increases in flow to existing sanitary sewers, and discharges from businesses that are not considered to be "industrial wastewater" are subject to state requirements based on their expected discharge volume:

- Discharges ≤ 15,000 gpd will need only local approvals (no approvals by MassDEP)
- Discharges >15,000 gpd but ≤ 50,000 gpd must file a one-time certification statement with MassDEP within 60 days after the connection starts to be used
- Discharges of > 50,000 gpd must obtain a MassDEP permit before construction

According to the Code of Massachusetts Regulations Division of Water Pollution Control 314 CMR 7.15, projected sewer flows from Public Safety buildings and administration buildings are estimated as follows:

- Office Building = 75 gpd per 1,000 square feet (sf)

There are no new connections to sanitary sewers or increases in flow to existing sanitary sewers currently proposed for the building site.

Zoning

The site of the Public Safety building is located within the R-1 Neighborhood Residential District. Under the Town of Scituate Zoning By-Laws, public safety buildings and town administration buildings are permitted in all zoning districts.

Modifications to the building are expected to require Site Plan Review through the Scituate Planning Board. Per Section 770 of the Zoning By-Law, new land uses or additions to existing uses are subject to a site plan approval special permit from the Planning Board.

The following is a list of requirements under Zoning By-Law Section 600:

Maximum Building Height: 3 stories or 35 feet

Maximum Lot Coverage: None noted for commercial buildings.

Minimum Frontage: 100 feet

Minimum Lot Area: (R1) 40,000 square feet

Minimum Front Yard: 30 feet

Minimum Side Yard: 15 feet and 100 feet from the exterior lines of the Chief Justice Cushing Highway (or if lesser, nearer to those lines than fifty percent of lot depth)

Minimum Rear Yard: 8 feet for one story detached accessory buildings, 30 feet for all other buildings

Parking: One (1) space for every 200 square feet of gross floor area

Minimum Green Space: The site is located within the Water Resource Protection district. Per Section 520.4 (F) of the Zoning By-Law:

> *No more than fifteen [percent] (15%) of the area or two thousand five hundred [square feet] (2,500[sf]), whichever is greater, of any lot shall be rendered impervious unless a stormwater management and artificial recharge of precipitation is developed which is designed to:*
>
> *a. prevent untreated discharges to wetland and surface water;*
>
> *b. preserve hydraulic conditions that closely resemble pre-development conditions;*
>
> *c. reduce or prevent flooding by managing peak discharges and volumes of runoff;*
>
> *d. minimize erosion and sedimentation;*
>
> *e. avoid significant degradation of groundwater;*
>
> *f. reduce suspended solids and other pollutants to improve water quality; and*
>
> *g. provide increased protection of sensitive natural resources.*

STRUCTURAL ASSESSMENT

PURPOSE

The purpose of this report is to describe, in broad terms, the structure of the existing building; to comment on the condition of the existing building; and on the feasibility of renovation and expansion of the school.

SCOPE

1. Description of existing structure.
2. Comments on the existing condition.
3. Comments on the feasibility of renovation and expansion.

BASIS OF THE REPORT

This report is based on our visual observations during our site visit on December 6, 2013 and the review of the architectural drawings of the original construction prepared by Korslund, Lenormand and Qaunn Inc, Arch dated January 23, 1958. No structural drawings of the original structures or the later addition to the police station were available at the time this report was written.

During our site visit, we did not remove any finishes or take measurements, so our understanding of the structure is limited to the available drawings and observations of the exposed structure and the exterior facade.

BUILDING DESCRIPTION

The facility is located on Chief Justice Cushing Highway in Scituate, Massachusetts and was constructed in 1958. The facility consists of two rectangular structures which house the police and fire stations both constructed in 1958. One significant addition to the police station was constructed in the 1990's, but no drawings are available at this time. No major renovations or additions have been added to the fire station since the original construction.

The original police station is a rectangular two-story structure consisting of a mix of different building materials and construction types. The first floor is partially below grade and consists of a concrete slab-on-grade. As no drawings were available and no finishes were removed no definitive statements regarding the foundation construction can be made, but based on time period of this construction we can assume the foundation consists of cast-in-place concrete walls. The second floor is supported by masonry bearing walls which support a cast-in-place concrete slab above the garage. The roof is constructed out of gypsum planks supported by bulb-tees spanning between bar joists which are supported by steel columns starting on the second floor. The addition to the police station constructed in the 1990's is also a rectangular two-story structure. The first floor is a concrete slab-on-grade and is partially below grade. The foundation walls were observed to be cast-in-place concrete and extended to approximately half the height of the first floor. The second floor of the new addition is a cast-in-place concrete slab supported by metal deck spanning between steel bar joists and supported by wide flange steel columns. The roof structure consists of metal deck spanning between steel bar joists supported by wide flange steel columns.

The fire station is a rectangular one-story structure consisting of masonry bearing walls which support steel bar joists. The roof is constructed out of gypsum planks supported by bulb-tees spanning between steel bar joists.

EXISTING CONDITIONS

Based on our observations, both of the structures are functioning adequately. We observed signs of water leaks in a few locations in both buildings. Minor cracking on the façade and in some of the cast-in-place concrete walls was observed as well. No observed cracks or leaks in either building appeared to be a structural concern.

The leaking was fairly extensive in the police station, but was only apparent because water stains were observed on the dropped ceiling at a few locations. We were unable to determine whether the water leaks are a structural concern at this time. It was brought to our attention that standing water was observed in the basement during an extreme water event in the past. Personnel from the facility observed standing water in the basement during this event, but have not seen any flooding since. Minor cracking in the exterior façade was observed, but did not appear to be a major concern. Some minor shrinkage cracks were observed in the exposed foundation walls, but did not appear to be a major concern. The exterior entrance canopy, constructed out of wood posts and beams appears to be deteriorating and was repaired at some point in the past.

The leaks in the fire station were very minor and do not appear to be a concern. Some minor damage to the façade was observed adjacent to the bay doors used to house the fire trucks. There also appeared to be some minor cracking in the drywall on some of the non-structural partition walls, but does not appear to be a structural concern.

FEASIBILITY OF RENOVATION AND EXPANSION OF THE STRUCTURE

Depending on the scope of the renovations to the facility, it may be feasible to make modifications to the existing structure without requiring full compliance with the code requirements for new construction. We would recommend that any additions, if planned, be separated from the existing structure by way of expansion joints.

PRIMARY STRUCTURAL CODE ISSUES RELATED TO THE EXISTING STRUCTURE

If any repairs, renovations, additions or change of occupancy or use are made to the existing structures, a check for compliance with 780 CMR, Chapter 34 “Existing Structures” (Massachusetts Amendments to The International Existing Building Code 2009) of the Massachusetts Amendments to the International Building Code 2009 (IBC 2009) and reference code “International Existing Building Code 2009” (IEBC 2009) is required. The intent of the IEBC and the related Massachusetts Amendments to IEBC is to provide alternative approaches to alterations, repairs, additions and/or a change of occupancy or use without requiring full compliance with the code requirements for new construction.

The IEBC provides three compliance methods for the repair, alteration, change of use or additions to an existing structure. Compliance is required with only one of the three compliance alternatives. Once the compliance alternative is selected, the project will have to comply with all requirements of that particular method. The requirements from the three compliance alternatives cannot be applied in combination with each other.

The three compliance methods are as follows:

1. Prescription Compliance Method.
2. Work Area Compliance Method.
3. Performance Compliance Method.

Comment

The approach is to evaluate the compliance requirements for each of the three methods and select the method that would yield the most cost effective solution for the structural scope of the project. The selection of the compliance method may have to be re-evaluated after the impact of the selected method is understood and after analyzing the compliance requirements of the other disciplines, Architectural, Mechanical, Fire Protection, Electrical and Plumbing.

Since the existing buildings are un-reinforced masonry wall structures, the analysis and reinforcement of the existing structures would be governed by the requirements of Appendix A1 "Seismic Strengthening Provisions for Un-reinforced Masonry Bearing Wall Buildings" in the IEBC.

Prescriptive Compliance Method

In this method, compliance with Chapter 3 of the IEBC is required. As part of the scope of this report, the extent of the compliance requirements identified are limited to the structural requirements of this chapter.

Additions

Based on the project scope, the following structural issues have to be addressed:

- All additions should comply with the code requirements for new construction in the IBC.
- For additions that are not structurally independent of an existing structure, the existing structure and its addition, acting as a single structure, shall meet the requirements of the code for new construction for resisting lateral loads, except for the existing lateral load carrying structural elements whose demand-capacity ratio is not increased by more than 10 percent, these elements can remain unaltered.
- Any existing gravity, load-carrying structural element for which an addition or its related alterations causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.

Alterations

- Any existing gravity, load-carrying structural element for which an addition or its related alterations causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For alterations that would increase the design lateral loads or cause a structural irregularity or decrease the capacity of any lateral load carrying structural element, the structure of the altered building shall meet the requirements of the code for new construction, except for the existing lateral load carrying structural elements whose demand-capacity ratio is not increased by more than 10 percent, these elements can remain unaltered.

Work Area Compliance Method

In this method, compliance with Chapter 4 through 12 of the IEBC is required. As part of the scope of this report, the extent of the compliance requirements identified are limited to the structural requirements of these chapters.

In this method, the extent of alterations has to be classified into LEVELS OF WORK based on the scope and extent of the alterations to the existing structure. The LEVEL OF WORK can be classified into LEVEL 1, LEVEL 2 or LEVEL 3 Alterations. In addition, there are requirements that have to be satisfied for additions to the existing structure.

The extent of the renovations (includes Architectural, FP and MEP renovations) for this project will exceed 50 percent of the aggregate area of each of the buildings, thus the LEVEL OF WORK for this project would be classified as LEVEL 3 Alterations. This would require compliance with provision of Chapter 6, 7 and 8 of the IEBC. If the scope of the project includes new additions to the existing structure; this would trigger compliance with provisions in Chapter 10 of the IEBC.

Level 3 Alterations

- Any existing gravity, load-carrying structural element for which an alteration causes an increase in the design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For alterations where more than 30 percent of the total floor area and roof areas of a building or structure have been or proposed to be involved in structural alterations within a 12 month period, the evaluation and analysis shall demonstrate that the altered building complies with the full design wind loads as per the code requirements for new construction and with reduced IBC level seismic forces.
- For alterations where not more than 30 percent of the total floor and roof areas of a building are involved in structural alterations within a 12 month period, the evaluation and analysis shall demonstrate that the altered building or structure complies with the loads at the time of the original construction or the most recent substantial alteration (more than 30 percent of total floor and roof area). If these alterations increase the seismic demand-capacity ratio on any structural element by more than 10 percent, that particular structural element shall comply with reduced IBC level seismic forces.
- For alterations that involve structural alterations to more than 30 percent of the total floor and roof area of a building within a 12 month period, the evaluation and analysis shall demonstrate that the altered building structure complies with IBC for wind loading and with reduced IBC level seismic forces.
- For alterations where more than 25 percent of the roof is replaced for buildings assigned to seismic design category B, C, D, E or F, all un-reinforced masonry walls shall be anchored to the roof structure and un-reinforced masonry parapets shall be braced to the roof structure.

Additions

- All additions shall comply with the requirements for the code for new construction in the IBC.
- Any existing gravity, load-carrying structural element for which an addition or its related alterations cause an increase in design gravity load of more than 5 percent shall be strengthened, supplemented or replaced.
- For additions that are not structurally independent of any existing structures, the existing structure and its additions, acting as a single structure, shall meet the requirements of the code for new construction in the IBC for resisting wind loads and IBC Level Seismic Forces (may be

lower than loads from the Code for New Construction in the IBC), except for small additions that would not increase the lateral force story shear in any story by more than 10 percent cumulative. In this case, the existing lateral load resisting system can remain unaltered.

Performance Compliance Method

Following the requirements of this method for the alterations and additions may be onerous on the project because this method requires that the altered existing structure and the additions meet the requirements for the code for new construction in the IBC.

PARTICULAR REQUIREMENTS OF COMPLIANCE METHODS

For our project, in order to meet compliance with one of the two compliance methods "Prescriptive Compliance Method" or the "Work Area Compliance Method", we have to address the following:

Prescriptive Compliance Method

Additions

The proposed additions would be designed structurally independent of the existing structures, thus, would not impart any additional lateral loads on the existing structure.

If the proposed alterations are such that the alterations increase the design lateral loads on the existing building or cause any structural irregularity of decrease the lateral load carrying capacity of the building, the structure of the altered building shall meet the requirements of the Code for New Construction in the IBC.

If the proposed additions increase the design gravity load on portions of the existing roof members, these members would have to be reinforced and this incidental structural alteration of the existing structures would have to be accounted for in the scope of the alterations to the existing structures and would trigger requirements for alterations.

Alterations

Alterations that would increase the design gravity loads by more than 5 percent on any structural members would have to be reinforced.

If the proposed alterations of the structures increase the effective seismic weight on the existing structures due to the greater snow loads from the drifted snow against any proposed additions, or, by addition of equipment on the roof, the increase of the effective seismic weight from the drifted snow and the equipment would require that the existing lateral load resisting system comply with the requirements of the code for new construction in the IBC and it would increase the demand-capacity ratio on certain structural elements of the existing lateral load resisting system.

Work Area Compliance Method

Level 3 Alterations

If the proposed structural alterations of an existing structure are less than 30 percent of the total floor and roof areas of the existing structure, we have to demonstrate that the altered structure complies with the loads applicable at the time of the original construction and that the seismic demand-capacity ratio is not increased by more than 10 percent on any existing structural element.

Those structural elements whose seismic demand-capacity ratio is increased by more than 10 percent shall comply with reduced IBC level seismic forces. The percentage increase in seismic demand-capacity ratio on any particular structural element from the added snowdrift load against the proposed addition would be fairly low, thus, this would not have any major impact on the existing lateral load resisting system, though we would have to verify that the increase in seismic demand-capacity ratio on any of those particular structural elements is not greater than 10 percent.

If the proposed structural alterations of an existing structure exceed 30 percent of the total floor and roof areas of an existing structure, we have to demonstrate that the altered structure complies with the IBC for wind loading and with reduced IBC level seismic forces.

The seismic design category (SDC) of the existing structures is 'B'; thus, the replacement of the existing roofs would trigger anchorage of un-reinforced masonry walls to the roof structures and bracing of un-reinforced masonry parapets to the roof structures. All un-reinforced masonry walls in the existing schools will have to be identified. These un-reinforced masonry walls are required to be anchored to the roof structures. Since there are no existing un-reinforced masonry parapets, this requirement does not have any impact on the structural scope of the project.

Additions

The proposed additions would be designed structurally independent of the existing structures, thus, they would not impart any additional lateral loads on the existing structures.

Comment

The compliance requirements of the two methods, in most respects, are very similar. The Work Area Compliance Method would trigger anchorage of un-reinforced masonry walls, if re-roofing of the existing structures is included as part of the scope for this project. The Prescriptive Compliance Method would require that the existing lateral load resisting systems meet the requirements of the code for new construction of the IBC, even for small increases of design lateral loads. We are required to comply with requirements of Appendix A1 of IEBC for either method, which requires anchorage of all existing masonry walls. Based on this, we would recommend the Work Area Compliance Method for the project.

SUMMARY

The existing structures appear to be performing adequately. The majority of the structural components that are visible appear to be in sound condition.

We would recommend following the requirements of the work area compliance method for the project. Any proposed renovations and additions would likely require that the structure be updated to meet the requirements for code for new construction. This may require addition of some shear walls, connecting the floor and roof diaphragms to the existing masonry walls, clipping of non-structural masonry walls to the structure. All of the existing masonry walls would have to be adequately connected to the roof and floor structure.

HVAC ASSESSMENT – POLICE STATION

HVAC DISTRIBUTION SYSTEM:

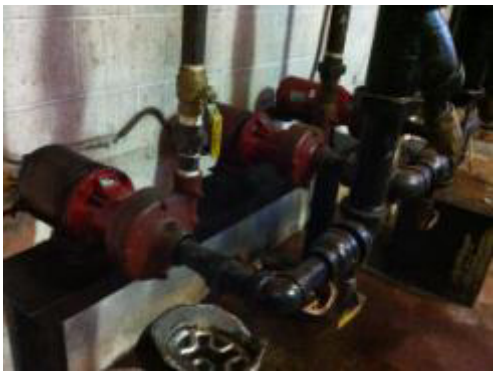
The central boiler plant which supplies heating hot water to the Police Station, Fire Station and Town Hall resides in the lower level of the Town Hall. The central plant is comprised of two gas fired Lochinvar Power Fin boiler, three base mounted pumps, breaching, combustion air, and accessories.

Each boiler is paired with a dedicated boiler pump. Each boiler has a rated input of 750 MBH with an estimated output of 660 MBH.

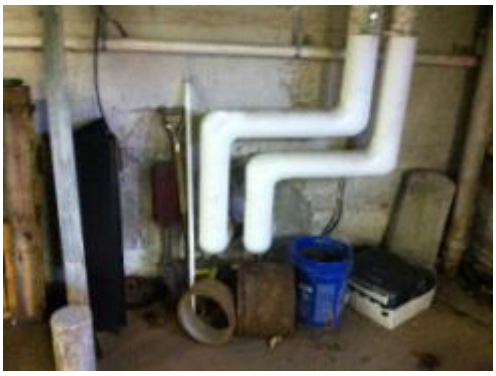
Gas Fired Boilers

Expansion Tanks

Each building is served by a single dedicated base mounted pump located in the Town Hall boiler room. The pumping system did not appear to have backup or redundancy. If a pump fails the building serviced by the pump will lose it heating hot water. Heating hot water is pumped to the Police Station and Fire Station via buried pumping. The condition of the underground piping is unknown.



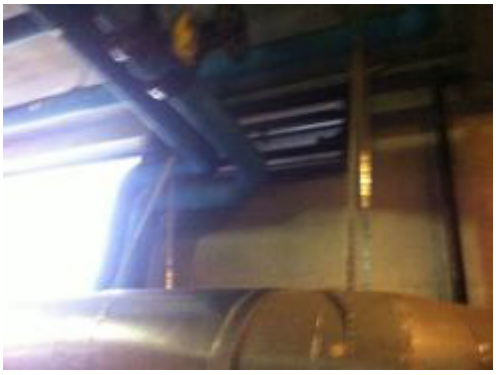
Base Mounted Pumps



Piping Runs to Police Station

Flue gas is discharged to the outside via un-insulated sheet metal breeching into a brick masonry chimney. Combustion air is provided by high wall louvers without dampers. The breeching does not meet code required high and low combustion air openings.

Breeching



Combustion Air

The police station is heated and cooled by a variety of systems. The original portion of the police station is heated by the central boiler plant located in the town hall. The heating hot water is pumped to the police station via a base mounted pump located in the town hall. The heating hot water is pumped through insulated copper piping terminating with fin tube radiation. The fin tube radiation appears to be updated and in good condition. The original portion of the police station is cooled by window AC units which have to be removed and installed at the change of seasons. Ventilation air is through the use of operable windows.

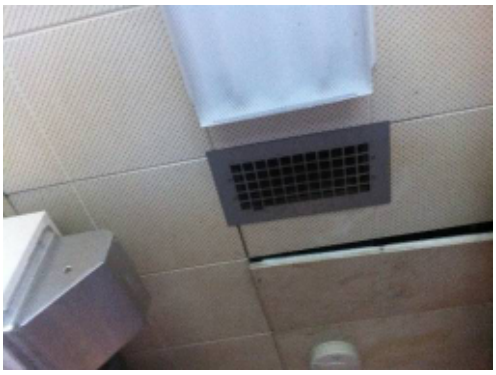
Fin Tube Radiation

Window AC Unit

The addition is heated, cooled and ventilated by a roof mounted gas fired DX unit. The RTU provids conditioned air to the upper level spaces, locker rooms, some offices and the conference room. The RTU distributes the conditioned air via galvanized sheet metal ductwork and terminates with ceiling diffusers.


Overhead Distribution

The holding cells are heated by the central heating hot water system. The cells are exhausted by a central roof mounted exhaust fan.

Cell Transfers and Ceiling General Exhaust

The lower level of the addition consists of the gym and storage rooms. The gym is heated by electric baseboard which is damaged. The gym is not cooled and only means of ventilation is through the use of operable windows. The gym does not have a means to exhaust the space. The storage area is heated by ceiling mounted unit heaters.


Electric Baseboard

The 3-bay sally port is heated by hot water unit heat mounted at the ceiling. The sally port is not equipped with an exhaust system or means to detect vehicle combustion.

Hot Water Unit Heater

The building HVAC systems and heating plant are controlled by a pneumatic automatic temperature control system as well as standalone programmable thermostats. The existing ATC system is generally antiquated in comparison to direct digital control (DDC) systems available today.

Pneumatic and Programmable Thermostats

RECOMMENDATIONS:

Upgrade boiler system to high efficiency condensing boilers. If system remains as a central plant provide additional boiler for redundancy backup in event of boiler failure.

Update combustion air intake, provide high and low openings with automatic dampers.

Provide additional back-up pump for redundancy.

Provide Central AC system for original portion of the building to eliminate the need to install and remove window AC units. Permanently installing an AC unit provides a direct means of infiltration to enter the building through the unit.

Provide emergency exhaust system for the sally port including vehicle combustion detection system.

Provide updated ATC controls for improved energy management.

Provide ventilation system for gym.

Provide AC system for gym for summer use.

The fire station is heated by the central boiler plant located in the town hall. Heating hot water is pumped via base mounted pump, located in the town hall, through insulated copper piping to fin tube radiation in the living areas and ceiling mounted unit heaters in the apparatus bays.

The living areas are ventilated through the use of operable windows and AC through the use of window AC units.

The apparatus bay is equipped with a vehicle emission capture system. The apparatus bay does not appear to have an emergency vehicle combustion exhaust system or detection system.

HVAC ASSESSMENT – FIRE STATION

HVAC DISTRIBUTION SYSTEM:

The central boiler plant which supplies heating hot water to the Police Station, Fire Station and Town Hall resides in the lower level of the Town Hall. The central plant is comprised of two gas fired Lochinvar Power Fin boiler, three base mounted pumps, breaching, combustion air, and accessories.

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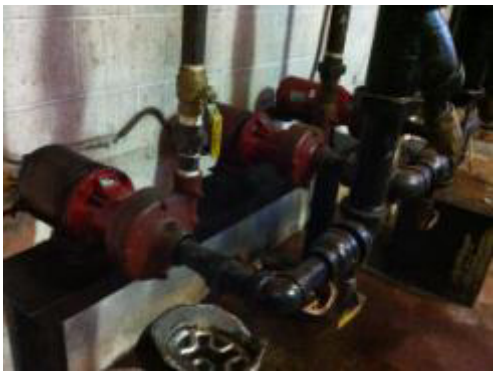
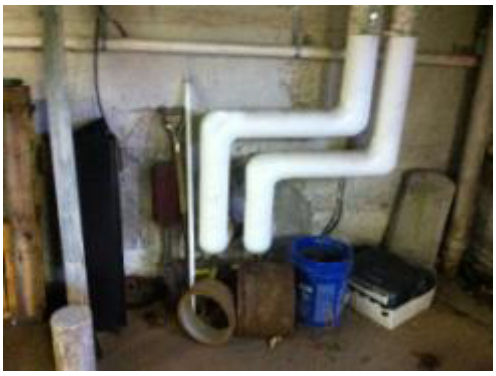
Gas Fired Boilers

Expansion Tanks

Each building is served by a single dedicated base mounted pump located in the Town Hall boiler room. The pumping system did not appear to have backup or redundancy. If a pump fails the building serviced by the pump will lose heating hot water. Heating hot water is pumped to the Police Station and Fire Station via buried piping. The condition of the underground piping is unknown.



Base Mounted Pumps



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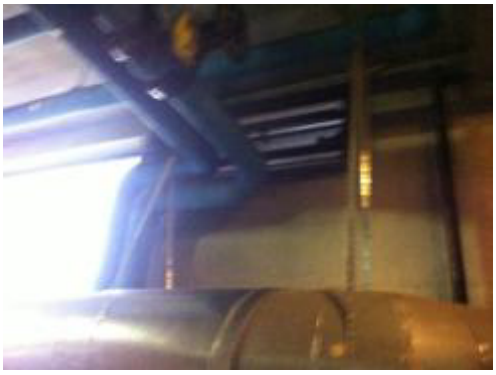
Breeching



Combustion Air

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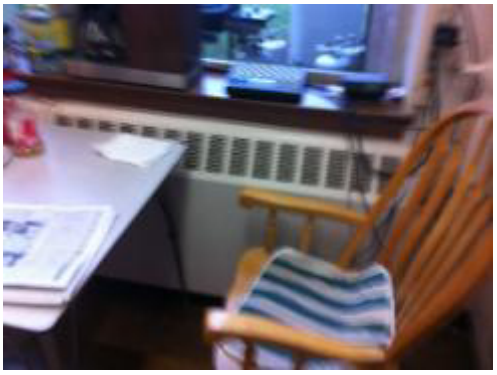


Fin Tube Baseboard

Ceiling Unit Heaters

The living areas are ventilated through the use of operable windows and AC through the use of window AC units.

AC unit

The apparatus bay is equipped with a vehicle emission capture system. The apparatus bay does not appear to have an emergency vehicle combustion exhaust system or detection system.


Vehicle Emission Capture System

The building HVAC system and heating plant are controlled by a pneumatic automatic temperature control system. The existing ATC system is generally antiquated in comparison to direct digital control (DDC) systems available today.


Pneumatic Thermostat and Pneumatic Control Valve

RECOMMENDATIONS:

Upgrade boiler system to high efficiency condensing boilers. If system remains as a central plant provide additional boiler for redundancy backup in event of boiler failure.

Update combustion air intake, provide high and low openings with automatic dampers.

Provide additional back-up pump for redundancy.

Provide Central AC system for original portion of the building to eliminate the need to install and remove window AC units. Permanently installing an AC unit into a wall or window provides a direct means of infiltration to enter the building through the unit.

Provide emergency exhaust system for the apparatus bay include vehicle combustion detection system.

Provide updated ATC controls for improved energy management.

PLUMBING ASSESSMENT

Presently, the Plumbing Systems serving the building are cold water, hot water, sanitary waste and vent system, and natural gas. The original building was constructed in 1958, with a building addition constructed in 2000.

In general, the fixtures in the building are in fair condition. Fixtures in the original building do not meet current codes for accessibility. Cell fixtures do not meet current State code standards. In terms of the water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require the fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures need to be water-conserving type fixtures.

In general, the drainage piping can be reused where buried underground and where adequately sized for the intended new use. Video inspection of any existing piping to be re-used is recommended.

PLUMBING FIXTURES:

Original building water closets are floor mounted vitreous china, with exposed manual flush valves. Water closets in building addition are floor mounted vitreous china tank type.

Urinals are wall hung vitreous china, with exposed manual flush valves.

Original building lavatories are wall hung vitreous china handle faucets. Lavatories in the addition are counter mounted china with single lever faucets.

Showers have tile walls and pressure balanced shower valves.

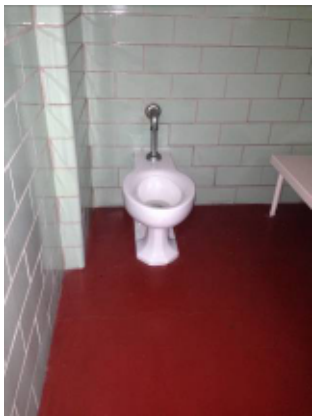
Janitor's sinks are cast enamel trap standard with back mounted faucets.

Cell fixtures are vitreous china floor mounted. Fixture are not anti-suicide, and are not accessible.

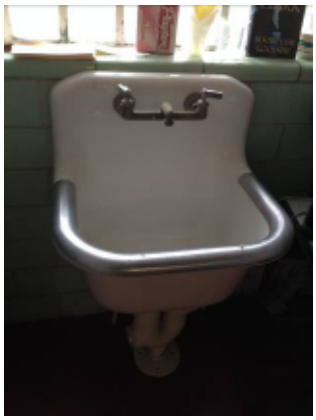
Hose bibb is provided in the Garage area.

Floor Mounted Water Closet

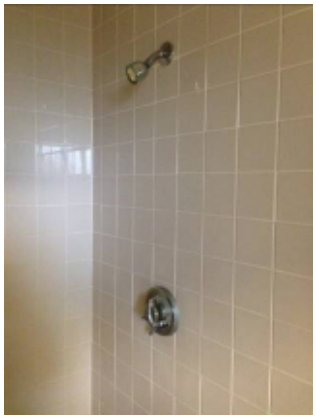
Typical Urinals



Cell fixture



Service Sink



Shower

DOMESTIC WATER SYSTEM:

The water service enters the Basement. Water service is 2" in size and includes a water meter.

Water piping is copper tubing with sweat joints. Piping is in fair condition. Majority of piping is insulated.

The hot water is generated through a standard efficiency, natural gas fired, tank type water heater, with an input of 40,000 BTUH and 50 gallons of water storage. Water heater was manufactured in 2005 and appears in good condition. The system does not have a mixing valve and there is no expansion tank.

Domestic Water Service & Meter

Domestic Water Heater

DRAINAGE SYSTEMS:

Sanitary, waste and vent piping is generally cast iron bell and spigot in the original building and no-hub cast iron in the addition. No-hub piping has 2-band couplings at all joints and fittings. Where exposed piping appears to be in good condition.

Garage has no floor drains.

There is an open sump pit in the basement with a single pump. Sump appears to collect a sub-soil drainage system. Pump discharges to the storm drainage system.

Building has flat roof with interior roof drains. Rain leader piping is cast iron. Horizontal runs of piping are insulated.

Original Bldg Drainage Piping

Sump Pit

Addition Drainage Piping

GAS SYSTEM:

Natural gas is provided to the building. Gas meter is located on the exterior. Gas supplies the heating boiler and water heater.

In general piping is schedule 40 black steel with threaded fittings.

Gas Meter

RECOMMENDATIONS:

Provide new high efficiency water conserving plumbing fixtures. All new fixtures are to be water conservation type.

Provide new detention plumbing fixtures.

In general, existing cast iron drainage piping can be re-used if sized appropriately. We recommend video inspection of existing drains to confirm integrity.

Provide new high-efficiency gas-fired domestic water heater with thermostatic mixing valve.

Provide new sump pit with cover and proper vent.

PLUMBING ASSESSMENT - FIRE STATION

Presently, the Plumbing Systems serving the building are cold water, hot water, and sanitary waste and vent system.

In general, the fixtures in the building are in poor condition. Fixtures do not meet current codes for accessibility. Current Access Code requires accessible fixtures wherever plumbing is provided. In terms of the water conservation fixtures, their use is governed by the provisions of the Plumbing and Building Code. Essentially, the code does not require the fixtures to be upgraded, but where new fixtures are installed, as may be required by other codes or concerns, the new fixtures need to be water-conserving type fixtures.

In general, the drainage piping can be reused where buried underground and where adequately sized for the intended new use. Video inspection of any existing piping to be re-used is recommended.

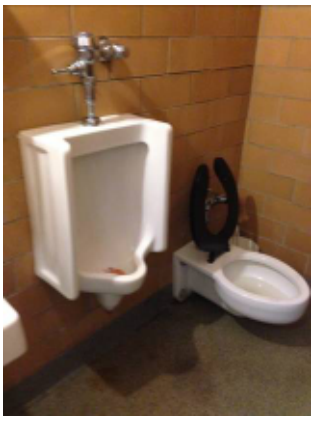
PLUMBING FIXTURES:

There are two bathrooms in the facility. One has a floor mounted vitreous china water closet, with exposed manual flush valve and a wall hung lavatory with widespread faucet. The other has a wall hung vitreous china water closet with manual flush valve, wall hung vitreous china urinal with exposed manual flush valve, and a wall hung lavatory with widespread faucet.

Shower has a terazzo base and block walls with a pressure balanced shower valve.

Kitchen sink is single bowl counter mounted stainless steel with deck mounted faucet, no vegetable spray.

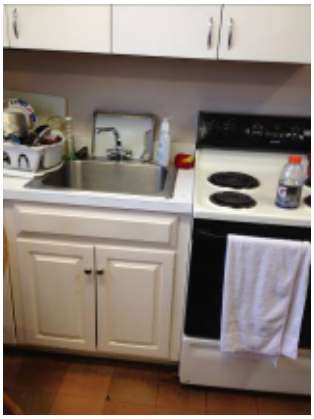
Janitor's sinks are cast enamel trap standard with back mounted faucet with no vacuum breaker.



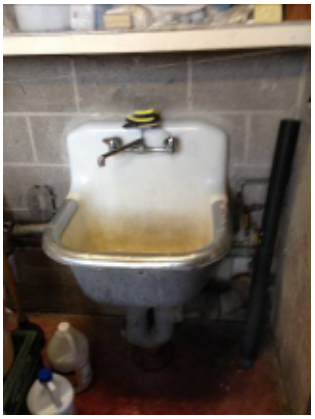
Wall Hung Water Closet & Urinal

Floor Mt'd. Water Closet & Lavatory

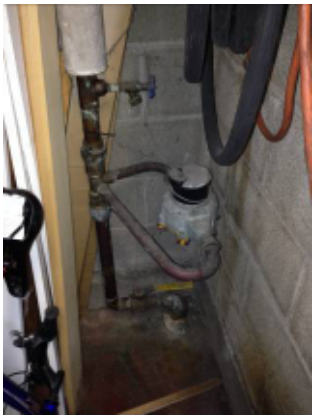
Shower



Kitchen Sink



Service Sink



Water Service

DOMESTIC WATER SYSTEM:

The water service enters the Apparatus Garage. Water service appears to be 1-1/2" in size and includes a water meter.

Water piping is copper tubing with sweat joints. Piping is in fair condition. Majority of piping is insulated.

Hot water is generated through a tank type electric water heater, with a 4.5 kW upper and lower heating element and 50 gallons of water storage. The system does not have a mixing valve and there is no expansion tank.

SANITARY DRAINAGE SYSTEM:

Sanitary, waste and vent piping is generally cast iron bell and spigot. Piping appears to be in good condition.

Apparatus Garage floor drains have been plugged with lead. Currently there are no functional drains in the Apparatus Garage.

ROOF DRAINAGE SYSTEM:

Building has flat roof with interior roof drains. There is evidence of leaks at the roof drains in the Apparatus Garage. Storm drainage piping is generally cast iron bell and spigot.

GAS SYSTEM:

No natural gas service to the building.

Roof Drain

RECOMMENDATIONS:

Provide new high efficiency water conserving plumbing fixtures. All new fixtures are to be water conservation type.

In general existing cast iron drainage piping can be re-used if sized appropriately. We recommend video inspection of existing drains to confirm integrity.

Provide new floor drains in the Apparatus Garage. Garage drains to be discharged to an exterior oil/gas separator then connected to the municipal sewer.

Provide natural gas service to the building. Provide new high-efficiency gas-fired domestic water heater.

FIRE PROTECTION ASSESSMENT - POLICE STATION

The Building does not contain an automatic sprinkler system.

In general, Massachusetts General Law M.G.L. c.148, s.26G requires that any existing building over 7,500 square feet, that undergoes major alterations or modifications or a building addition that results in a gross floor area over 7,500 square feet, must be contain sprinklers.

If the proposed work includes a major renovation or building addition, then an automatic sprinkler system is required for the entire existing building and any additions.

A hydrant flow test will be required to determine adequate Municipal water supply.

FIRE PROTECTION ASSESSMENT - FIRE STATION

The Building does not contain an automatic sprinkler system.

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If the proposed work includes a building addition that exceeds the above thresholds, then an automatic sprinkler system is required for the entire existing building and any additions.

A hydrant flow test will be required to determine adequate Municipal water supply.

ELECTRICAL ASSESSMENT – POLICE STATION

ELECTRICAL DISTRIBUTION SYSTEM

Three phase primary service runs overhead on Cushing Highway. Secondary service originates on Pole #110 with three pole-mounted transformers. Service runs underground directly to an exterior 400 ampere, 120/208v, 3 phase, 4w meter located at the front of the building. The same pole-mounted transformers feed the Police Station and Town Hall with two separate services, each in one 4" conduit originating at the same pole.

Pole-Mounted Transformers

A 400 ampere main circuit breaker distribution panel is located in the basement. The panel appears to have been installed during construction of the addition and feeds one 100 A/3P for Panel "PB" in fitness area and one 200A/3P for the automatic transfer switch. Other remote panels exist throughout the facility including panels of original vintage, some of which are fusible. The service does not have a critical operations power system "COPS" or emergency power system.

Electric Meter

Main Distribution Panel

Original Fusible Panel

The switchgear installed during construction of the addition is approximately 15-years-old and is in good condition. It was manufactured by General Electric.

The original building switchgear is in poor condition.

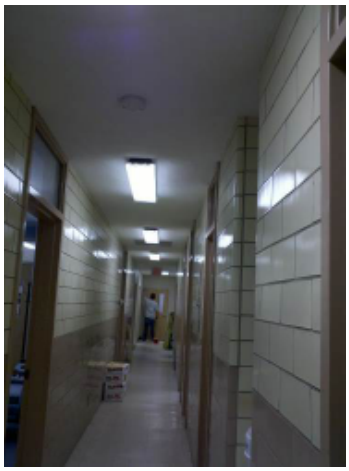
Sewer pipes exit the basement in the same corner as the electric panels, and along with water pipes over and under the panels, violates the required panel working space.

Electrical Panels & Sewer Lines

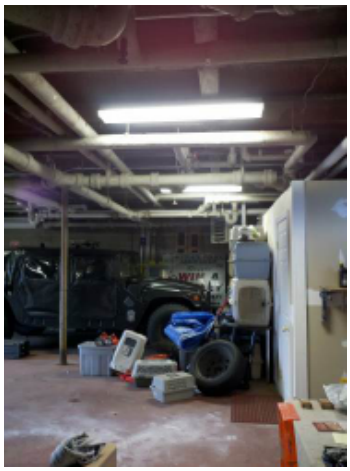
The adjacent cell tower has its own dedicated electric service.

INTERIOR LIGHTING

Corridor lighting consists of surface wraparound fixtures with T8 lamps in the original building and 2 x 4 recessed troffers in the building addition.



1st FL Corridor Lighting



Basement Garage Lighting

Fitness area and garage have industrial strips with wire guards and two T8 lamps.

Detention hallways have surface wraparound fixtures. Cell fixtures consist of 12" square corner-mounted security fixtures with incandescent bulbs. Cell fixtures provide inadequate light output to

monitor the cell. Booking lights consist of surface ceiling wraparound fixtures and portable plug-in RLM residential grade flood lights.

The dispatch area has surface 2 x 4 fixtures but none are dimmable.

Detention Hall Lights

Cell Light

Booking/Mug Shot Lights

EXTERIOR LIGHTING

Exterior lighting consists of HID wall packs at the rear of the building. The front canopy has halogen par lamps surface mounted to the underside of the canopy as well as recessed lensed down lights. Roadways and parking areas lack adequate lighting. Existing fixtures are not dark sky compliant.

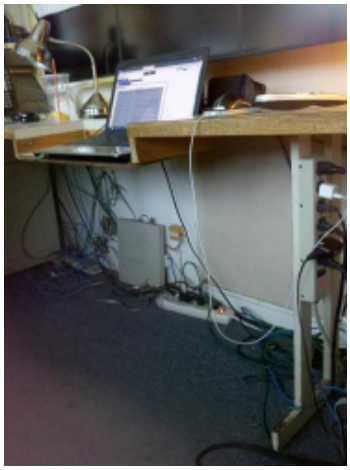
Building Wall Packs

Front Canopy Lights

BRANCH CIRCUITS

In general the condition and density of branch circuits and receptacles is inadequate. Extension cord usage due to lack of receptacles appears to be prevalent. The use of extension cords as a substitute for permanent wiring is a code violation. The facility does not have computer grade panelboards with surge protective devices and double neutrals.

Plug-In Extension Cords



Wire Management Below Counter

NORMAL/EMERGNECY STANDBY SYSTEM

The police station shares the same generator with the adjacent Town Hall and Fire Station. The exterior generator is located at the Town Hall and is rated at 100 kW, 120/208V, 3 phase, 4 wire. The generator is natural gas fired and was manufactured by Kohler. It was installed in 1998. The generator has a steel weatherproof enclosure but is not sound attenuated. The unit is in poor condition and failed to start during the last major snow storm/blizzard. Portable small generator sets were brought in to run the E911 dispatch and other essential systems during the blizzard.

Generator at Town Hall

Transfer Switches at Town Hall

The police station has one 200 ampere, 120/208V, 3 phase, 4w ASCO automatic transfer switch and panel located in a dedicated closet in the basement. The transfer switch and panel are in good condition.

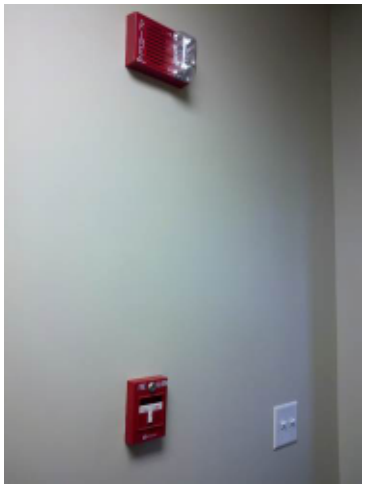
The facility's emergency lighting and exit sign system is not compliant with current code which requires a separate transfer switch and emergency panel in a fire-rated closet, fed with fire-rated feeders.

Automatic Transfer Switch & Panel

FIRE ALARM SYSTEM

The fire alarm system consists of a Simplex 4005 addressable control panel located in the basement. The horn/strobes are ADA compliant but only cover part of the facility's new addition.

Fire Alarm Panel



Horn/Strobe & Pull Station

The original building has an occasional 120 volt combination smoke/carbon monoxide detector but is not system-connected. Detention hallways have 120 volt interconnected smoke/CO detectors but are not system-supervised. The Communications/Motorola Room does not have a smoke detector. Smoke detectors exist in the new addition only. There are no strobes in the toilet rooms.

The existing fire alarm system only offers partial coverage, and therefore, is not code compliant. Additional devices should be added or the entire system replaced with a current code compliant system with full coverage.

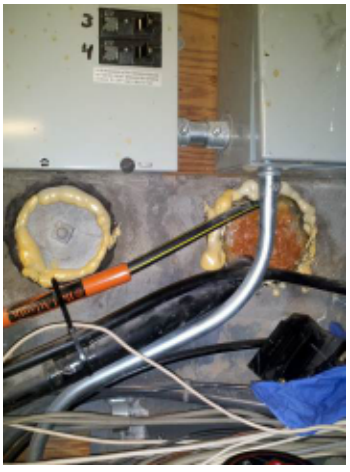
INTERIOR PAGING SYSTEM

The facility does not have a paging system. Paging is performed through the telephones. The cell block does not have a functional audio threshold system to communicate between cells and dispatch. The existing cell light fixture has an integral speaker housing but the speaker does not function.

Cell Light with Speaker Housing

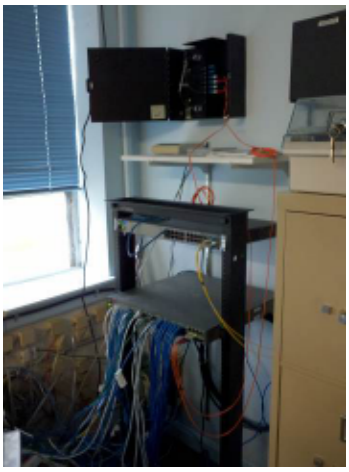
COMMUNICATIONS SYSTEM

The telephone, cable TV and fiber run in one 4" underground conduit plus one 4" spare between utility poles and electric room. CAT 5 tel/data cabling are generally improperly supported from other trade's utility pipes.



Incoming Fiber & Telephone

The E911 UPS system and communication rack are located in the basement adjacent to the sump pump. Heating water pipes run over the emergency communications rack.



Communications Rack

Tel/Data Wiring Bundle

The Records Office has two fiber drops, one to the town hall and one to the schools.

The facility has two dedicated E911 lines but only one position exists in dispatch.

Emergency Communications Rack

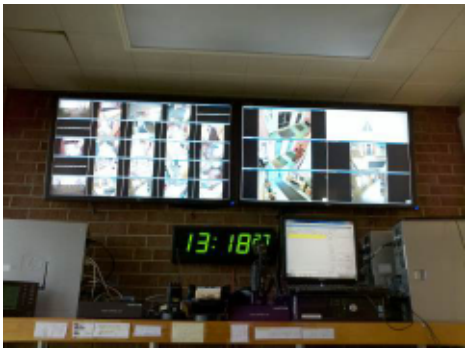
E911 UPS

SECURITY/CARD ACCESS/CCTV SYSTEM:

The facility does not have a card access control system. There are no cell check system or duress panic alarm stations in detention hallways.

There are no cameras in each cell or in detention hallways to monitor guests. The facility does not have interior or exterior cameras.

Two LED monitors exist in dispatch area to view school cameras, approximately 80 in total, via fiber.



Monitors for School Cameras

MISCELLANEOUS

The facility does not have a lightning protection system.

RECOMMENDATIONS

The original building switchgear should be replaced. New panelboards should be provided and existing circuits reconnected.

Violations should be corrected by rerouting foreign piping that runs over electrical equipment or the equipment should be relocated. Drain pans should be provided over equipment located below water and/or heating pipes.

A new service should be provided and subdivided into three branches: optional standby, critical operations power system (required by code when the facility is used as a "PSAP" Primary Safety Answering Point), and emergency power.

Cellblock lighting fixtures should be replaced with fluorescent security rated fixtures. Light fixtures within cells to have extended speaker housing.

Dimmable fixtures should be added to dispatch.

Occupancy sensors should be added to individual spaces to conserve energy.

Exterior wall sconces should be replaced with LED sconces. Pole-mounted LED fixtures should be provided for parking areas. All fixtures should be dark sky compliant.

Additional receptacle connections should be provided to eliminate the use of extension cords and plug strips.

A new generator should be provided to back up the entire facility. The existing transfer switch and panel could be reused. A new transfer switch should be added for critical operations power, COPS.

A new transfer switch and life safety panel should be provided for emergency lighting and exit signs. The existing battery units should be removed.

New fire alarm devices should be provided to bring the building into compliance with full coverage.

A central paging system should be provided for the entire building.

An audio threshold system should be provided for the cell block.

A second position should be added to dispatch.

A new integrated electronic security system should be provided consisting of card access, closed circuit TV and intrusion. A cell check system should be provided as well as panic stations in the cell block.

A lightning protection system should be provided.

A dedicated MDF Room for communications equipment should be provided.

A central UPS system should be provided for communications and security systems.

ELECTRICAL ASSESSMENT – FIRE STATION

ELECTRICAL DISTRIBUTION SYSTEM

The electrical distribution system consists of a flush-mounted 200 ampere, 120/208v, 3 phase, 4w fusible panel located in the kitchen area corridor. The panel service feeder is fed underground from the Town Hall's normal/emergency distribution panel.

Flush Main Panel

The panel is full and is in poor condition. A 40A/2P NEMA 1 breaker has been tapped from the panel for the plymovent system. An adjacent 100 ampere, 20 pole, breaker type flush panel also exists and is also full.

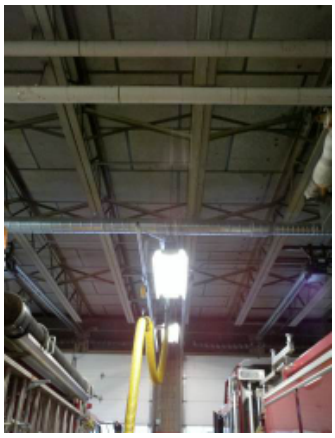
The panelboards, manufactured by GE, are original to the building. They are in poor condition and have no room for expansion.

INTERIOR LIGHTING

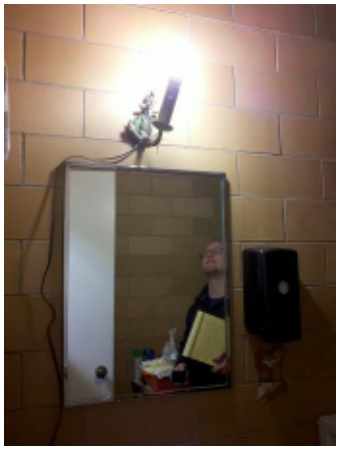
The apparatus bay lighting consists of industrial strips with 2 T8 lamps centered between the bays.

Kitchen lights are suspended wraparound fixtures with T8 lamps.

Toilet rooms have a loosely supported wall sconce with a plug-in cord located over the vanity.



Apparatus Bay Lights



Light Over Vanity

EXTERIOR LIGHTING

Exterior lighting consists of utility company pole-mounted cobra heads with high-pressure sodium lamps.

BRANCH CIRCUITRY

Receptacles in apparatus bay are not GFI protected. Receptacles are sparsely located. Apparatus vehicle charging stations consist of extension cords plugged into wall outlets.

Bunk dorm receptacles are not arc fault protected. Plug-in strips and extension cords are used due to lack of wall outlets.

Bunk Outlets

FIRE ALARM SYSTEM

The fire station does not have a fire alarm system. No smoke detectors or CO detectors were noted.

EMERGNECY POWER SYSTEM

The facility's electrical 200 ampere service is fed from the Town Hall generator. The generator is rated at 100 kW, is natural gas fueled and services the Fire Station, Town Hall, and Police Station. There are no battery units or exit signs.

SECURITY/CARD ACCESS/CCTV SYSTEM

The facility does not have security intrusion, card access or closed circuit TV systems.

COMMUNICATIONS

The communications wiring runs overhead between the Town Hall and Fire Station. One horn speaker is located in the apparatus bay for incoming radio calls. A radio wall-mounted bell is located in the living space. The amplifier is located over the cabinets in the kitchen.

Radio Bell

Amplifier over Kitchen Cabinets

RECOMMENDATIONS

A new electric service should be provided directly from the utility company. The existing panels should be replaced.

New light fixtures should be provided. Occupancy sensors should be added.

Exterior LED lights should be provided on the building perimeter. Parking area should be provided with pole-mounted LED fixtures. All exterior lights should be dark sky compliant.

Apparatus bay receptacles should be changed to GFI type. Additional receptacles should be provided. Cord reels should be added for vehicle charging outlets.

Bunk room receptacles should be added and existing protected with arc fault breakers.

A fire alarm system should be added with full coverage. System type carbon monoxide detectors should be added and tied to the fire alarm system.

A new generator should be provided to back up the entire facility.

New emergency battery units and LED exit signs should be added.

A security intrusion system should be added and integrated with security intrusion.

A central paging system should be provided for the entire facility.

TRAFFIC ASSESSMENT

INTRODUCTION

Nitsch Engineering has been retained by Dore & Whittier Architects, Inc. to assess the existing and proposed traffic conditions pertaining to the proposed Public Safety Building to be located on the Ellis Estate Site at the northeast corner of the intersection of Chief Justice Cushing Highway (Route 3A) and Mann Lot Road in Scituate, Massachusetts.

Nitsch Engineering conducted a site visit on Thursday, March 6, 2014 to observe the adjacent roadways and intersections for any existing and potential safety deficiencies pertaining to the proposed development.

EXISTING ROADWAY CONDITIONS

The existing roadway network and proposed site are shown in Figure 1.

Chief Justice Cushing Highway (Route 3A)

Chief Justice Cushing Highway (Route 3A) is classified as an urban principal arterial and runs in a north-south direction adjacent to the proposed project site. The Route 3A designation is present from its southern terminus at Route 3 in Plymouth to its northern terminus at Interstate 93 in Quincy. The roadway is primarily commercial use or open space and is under the jurisdiction of the Massachusetts Department of Transportation (MassDOT), which oversees its maintenance.

Mann Lot Road

Mann Lot Road is classified as a local roadway and generally runs in a north-south direction, however it is oriented in an east-west direction proximate to the intersection with Chief Justice Cushing Highway. Mann Lot Road is primarily residential or open space and under the jurisdiction of the Town of Scituate, which oversees its maintenance.

Chief Justice Cushing Highway (Route 3A) at Mann Lot Road Intersection

Chief Justice Cushing Highway (Route 3A) and Mann Lot Road intersect to the southwest of the parcel that contains the proposed Public Safety Building to be located on the Ellis Estate. The intersection operates under two-way stop-control (TWSC), with Mann Lot Road operating with “STOP” control and Chief Justice Cushing Highway (Route 3A) operating freely with no control.

From the south, Chief Justice Cushing Highway (Route 3A) is 34 feet wide and supports bi-directional travel with one (1) 12-foot wide travel lane and a 4-foot wide shoulder in the northbound direction and a 6-foot shoulder in the southbound direction. Vehicular passing is permitted in the southbound direction only. Asphalt berm provides roadway edging. A curb cut to an existing gas station is located on the west side of the roadway, just south of Mann Lot Road.

The posted speed limit along Chief Justice Cushing Highway in this direction is 50 mph.

From the north, Chief Justice Cushing Highway (Route 3A) is 33 feet wide and supports bi-directional travel with one (1) 12-foot wide travel lane and a 4-foot wide shoulder in the northbound direction and a 6-foot shoulder in the southbound direction. Asphalt berm provides roadway edging. Vehicular passing is permitted in the northbound direction only. A semicircular driveway is located on the west side of the roadway that provides access to the Scituate Town Forest. The posted speed limit along Chief Justice Cushing Highway in this direction is 50 mph.

The 4-foot or greater width shoulder along the northbound and southbound directions along Chief Justice Cushing Highway (Route 3A), is sufficient for bicycle accommodation.

From the west, Mann Lot Road is 22 feet wide and supports bi-directional travel with one (1) 11-foot wide travel lane in each direction and no marked shoulders. No roadway edging is present. The posted speed limit of the roadway is 25 mph. A second curb cut to the existing gas station located at the southwest corner of the intersection is located on the south side of Mann Lot Road. An existing Route 3A directional sign is inhibited by existing tree limbs.

From the east, Mann Lot Road is 22 feet wide and supports bi-directional travel with one (1) 11-foot wide travel lane and no marked shoulders. No roadway edging is present. The posted speed limit of the roadway is 30 mph. A small unpaved parking area is located on the north side of the roadway, approximately 400 feet east of the intersection with Chief Justice Cushing Highway, which provides access to the Elm Heights and Seaview Loop Trail.

Looking left from Mann Lot Road

Looking right from Mann Lot Road

Looking north from Chief Justice Cushing Highway (Route 3A)

Looking east down Mann Lot Road, east of intersection with Chief Justice Cushing Highway

Nitsch Engineering evaluated the intersection and stopping sight distance at the intersection of Chief Justice Cushing Highway (Route 3A) and Mann Lot Road using criteria set forth in the American Association of State Highway and Transportation Officials (AASHTO) publication *A Policy on Geometric Design of Highways and Streets*. Table 2 depicts the criteria given the existing conditions. Table 3 depicts the existing field-measured sight distance and evaluates if the criteria set forth in Table 2 is met.

TABLE 2 - SPEED & SIGHT DISTANCE INFORMATION

SPEED CRITERIA	SPEED (MPH)	STOPPING SIGHT DISTANCE CRITERIA (FEET)[1]	INTERSECTION SIGHT DISTANCE FOR PASSENGER CARS (FEET)[2]
Posted Speed Limit:			
Mann Lot Road (west) of Route 3A)	25	155	280
Mann Lot Road (east of Route 3A)	30	200	335
Chief Justice Cushing Highway (Route 3A)	50	425	555

[1] *A Policy on Geometric Design of Highways and Streets*, AASHTO, Washington DC (2011), Table 3-1

[2] Ibid, Table 9-6

TABLE 3 - SIGHT DISTANCE EVALUATION

INTERSECTION	FIELD-MEASURED (FEET)	BASED ON POSTED SPEED SIGHT DISTANCE MET?[1]
Chief Justice Cushing Highway (Route 3A) at Mann Lot Road		
Stopping Sight Distance:		
Chief Justice Cushing Highway northbound	2,000+	YES
Chief Justice Cushing Highway southbound	1,000+	YES
Intersection Sight Distance:		
Looking to the left from Mann Lot Road	2,000+	YES
Looking to the right from Mann Lot Road	1,000+	YES

[1] From Table 2

From Table 3, the stopping sight distance along Chief Justice Cushing Highway (Route 3A) approaching Mann Lot Road is met based the posted speed limit. The intersection site distance from Mann Lot Road looking both left and right is sufficient based the posted speed limit.

CRASH DATA

Nitsch Engineering reviewed the crash data available from MassDOT for the three (3) most recent years available – 2009 to 2011 – for the intersection of Chief Justice Cushing Highway (Route 3A) at Mann Lot Road. The total crashes, severity, manner of collision, and percentage that occurred during peak hours or wet/icy weather conditions for each intersection are presented in Table 4.

TABLE 4 - CRASH SUMMARY

Location	Number of Crashes			Severity				Manner of Collision					Percent During	
	Year	Total Crashes	Average	PD[a]	PI[b]	NR[c]	F[d]	A[e]	RE[f]	HO[g]	Ped-Bike[h]	Other[j]	Peak Hours[k]	Wet/Icy Conditions
Chief Justice Cushing Highway (Route 3A) at Mann Lot Road	2009	5	2.33	2	3	0	0	4	1	0	0	0	40%	0%
	2010	0		0	0	0	0	0	0	0	0	0	0%	0%
	2011	2		0	2	0	0	1	1	0	0	0	0%	0%
Total	**ALL**	**7**	**2.33**	**2**	**5**	**0**	**0**	**5**	**2**	**0**	**0**	**0**	**29%**	**0%**

[a]Property Damage Only; [b]Personal Injury; [c]Not reported or unknown in term of severity; [d]Fatality; [e]Angle; [f]Rear end; [g]Head on; [h]Pedestrian or Cyclist; [j]Includes sideswipe, opposite direction; sideswipe, same direction; single vehicle crash; rear-to-rear; not reported; unknown; etc.; [k]Peak Hours include 7-9am and 4-6pm

A total of seven (7) crashes were reported at this two-way stop-controlled (TWSC) intersection from 2009 to 2011. Based on a review of the specific crash data, five (5) of the crashes were angle collisions while the remaining two (2) were rear-end collisions. Five (5) of the seven (7) crashes caused personal injury, though there were no fatalities. None of the crashes occurred during wet or icy conditions. The cause of the crashes can most likely be attributed to driver error.

PROPOSED CONDITIONS

Dore & Whittier Architects, Inc. provided Nitsch Engineering with the proposed site plan entitled "Ellis Estate Site" and dated February 24, 2014. We reviewed the site plan for any potential deficiencies given the existing conditions of the surrounding roadways and intersections.

Nitsch Engineering queried the MassDOT website to establish if there are any planned improvements at in the vicinity of the proposed site. MassDOT indicated that a project including patching and micro-resurfacing, including reconstruction of eroded shoulders at the roadway edge, the adjusting or rebuilding of existing drainage structures, and other related work is proposed along Route 3A in Marshfield and Scituate. Construction is scheduled to begin in winter 2014/2015.

The proposed site plan contains three (3) curb cuts on the east side of Chief Justice Cushing Highway (Route 3A) and one (1) curb cut on the north side of Mann Lot Road. Of the curb cuts along the east side of Chief Justice Cushing Highway, the northernmost is approximately 550 feet north of the intersection with Mann Lot Road and 24 feet wide to contain two-way dual access and egress. The second curb cut is located approximately 100 feet south of the northernmost curb cut, and is approximately 50 feet wide to accommodate extra width for two-way dual access and egress of emergency vehicles. The third proposed curb cut is entry-only and located halfway between the intersection with Mann Lot Road and the proposed 50-foot wide curb cut. The proposed curb cut on the

north side of Mann Lot Road is approximately 325 feet east of Chief Justice Cushing Highway (Route 3A) and is approximately 24 feet wide to accommodate two-way dual access and egress.

As with the existing conditions, Nitsch Engineering evaluated intersection and stopping sight distance at the location of the northernmost egress point on Chief Justice Cushing Highway (Route 3A) and at the proposed egress point along Mann Lot Road. The northernmost egress point along Chief Justice Cushing Highway was chosen for analysis because it is the most critical given its proximity to the existing roadway horizontal curve located north of the site. The sight distance evaluations were performed based on the information contained in the AASHTO publication *A Policy on Geometric Design of Highways and Streets*. Table 5 depicts the field-measured sight distance and evaluates if the criteria set forth in Table 2 is met.

TABLE 5 - SIGHT DISTANCE EVALUATION - PROPOSED CONDITIONS

INTERSECTION	FIELD-MEASURED (FEET)	BASED ON POSTED SPEED SIGHT DISTANCE MET?[1]
Proposed Northernmost Site Egress (approximately 550 north of Mann Lot Road) at Chief Justice Cushing Highway (Route 3A)		
Stopping Sight Distance:		
Chief Justice Cushing Highway northbound	2,000+	YES
Chief Justice Cushing Highway southbound	625	YES
Intersection Sight Distance:		
Looking to the left from proposed site	2,000+	YES
Looking to the right from proposed site	600	YES
Proposed Egress at Mann Lot Road		
Stopping Sight Distance:		
Mann Lot Road eastbound	325	YES*
Mann Lot Road westbound	355	YES
Intersection Sight Distance:		
Looking to the left from proposed site	370	YES
Looking to the right from proposed site	325	YES

[1] From Table 2

* Though the value is not higher than what it presented in Table 2, drivers can see to and from Chief Justice Cushing Highway. Vehicles traveling eastbound will have an average speed less than the 30 mph speed limit due to having just traversed the intersection of Chief Justice Cushing Highway at Mann Lot Road.

From Table 5, the stopping sight distance and intersection sight distance criteria is met based on the measurements taken during the site visit for the proposed site. In order to ensure the criteria remains met, the project proponent should maintain clear sight triangles at each driveway to maximize visibility for vehicles exiting the site.

RECOMMENDATIONS

Based on the site visit conducted on Thursday, March 6, 2014 and the proposed site plan obtained from Dore & Whittier Architects, Inc, Nitsch Engineering offers the following recommendations:

- We recommend a 'STOP AHEAD' sign be added to Mann Lot Road eastbound approach to the intersection with Chief Justice Cushing Highway (Route 3A). The roadway contains a horizontal curve just prior to the intersection and we believe the sign would be beneficial.
- The Route 3A directional sign at the Mann Lot Road eastbound approach to Chief Justice Cushing Highway (Route 3A) should be repositioned such that it is not inhibited by existing tree limbs, or the tree limbs should be trimmed such that the sign is clearly visible.
- We recommend a 'Four Way Intersection Ahead' sign be added to Chief Justice Cushing Highway (Route 3A) northbound approach to Mann Lot Road. The sign is present for the southbound approach and we believe it would be beneficial for the northbound approach.
- The site should be designed to accommodate connections to nearby bicycle and pedestrian facilities.
- While both the stopping and intersection sight distances are sufficient at the proposed locations of the two (2) proposed driveways at the time of the site visit, we recommend that the proponent maintain clear sight triangles at each driveway to maximize visibility for vehicles exiting the site.
- Advanced warning signage displaying the potential entering and exiting of emergency vehicles to/from the site should be added to both approaches along Chief Justice Cushing Highway (Route 3A) and Mann Lot Road.
- The proponent should attempt to minimize the quantity of curb cuts located along Chief Justice Cushing Highway (Route 3A), since an Application for Permit to Access State Highway will need to be submitted to MassDOT. Generally, MassDOT will encourage a minimal quantity of curb cuts to minimize vehicle conflict points and work to be done within the State Highway Layout.
- Should the proponent desire increased visibility of the proposed site entrance and exit along Chief Justice Cushing Highway (Route 3A) along with protected egress from the proposed site, a study to measure the feasibility of installing a traffic signal system should be prepared.

HAZARDOUS MATERIALS REPORT

REPORT FOR HAZARDOUS MATERIALS DETERMINATION SURVEY

AT THE SCITUATE POLICE AND FIRE STATION

SCITUATE, MASSACHUSETTS

PROJECT NO: 214 032.00

Survey Date: January 20, 2014

SURVEY CONDUCTED BY: UNIVERSAL ENVIRONMENTAL CONSULTANTS

12 BREWSTER ROAD

FRAMINGHAM, MA 01702

INTRODUCTION

UEC has been providing comprehensive asbestos services since 2001 and has completed projects throughout New England. We have completed projects for a variety of clients including commercial, industrial, municipal, and public and private schools. We maintain appropriate asbestos licenses and staff with a minimum of twenty years of experience.

As part of the proposed renovation and demolition project, UEC was contracted by Dore & Whittier Architects to conduct the following services at the Scituate Police and Fire Station, Scituate, MA:

- Asbestos Containing Materials (ACM);
- Polychlorinated Biphenyls (PCB's)-Electrical Equipment and Light Fixtures;

It is required that once a detailed scope of work is identified, a comprehensive Environmental Protection Agency (EPA) NESHAP inspection and testing for other hazardous materials including Polychlorinated Biphenyls (PCB's) should be performed, which would provide a more accurate hazardous materials abatement scope. Various areas at the Police Station were locked and could not inspect.

The scope of work included the inspection of accessible ACM, collection of bulk samples from materials suspected to contain asbestos, determination of types of ACM found and cost estimates for remediation. Bulk samples analyses for asbestos were performed using the standard Polarized Light Microscopy (PLM) in accordance with EPA standard.

Bulk samples were collected by a Massachusetts licensed asbestos inspector Mr. Leonard J. Busa (AI-030673) and analyzed by a Massachusetts licensed laboratory Asbestos Identification Laboratory, Woburn, MA.

Refer to samples results.

FINDINGS

The regulations for asbestos inspection are based on representative sampling. It would be impractical and costly to sample all materials in all areas. Therefore, representative samples of each homogenous area were collected and analyzed or assumed.

All suspect materials were grouped into homogenous areas. By definition a homogenous area is one in which the materials are evenly mixed and similar in appearance and texture throughout. A homogeneous area shall be determined to contain asbestos based on findings that the results of at least one sample collected from that area shows that asbestos is present in an amount greater than 1 percent in accordance with EPA regulations. However, all suspect materials that contain any amount of asbestos must be considered asbestos if it is scheduled to be removed per the Department of Environmental Protection (DEP) regulations.

Number of Samples Collected

Police Station:

Forty (40) bulk samples were collected from the following materials suspected of containing asbestos:

Type and Location of Material

1. 9”x 9” Vinyl floor tile at female detection
2. Mastic for 9”x 9” vinyl floor tile at female detection
3. 9”x 9” Vinyl floor tile at interrogation
4. Mastic for 9”x 9” vinyl floor tile at interrogation
5. Brown 12”x 12” vinyl floor tile at rear exit
6. Brown 12”x 12” vinyl floor tile at dispatch
7. Mastic for brown 12”x 12” vinyl floor tile at dispatch
8. Carpet glue on brown 12”x 12” vinyl floor tile at dispatch
9. Brown 12”x 12” vinyl floor tile at women’s room
10. Mastic for brown 12”x 12” vinyl floor tile at women’s room
11. Rough ceiling plaster at paper storage room
12. Rough ceiling plaster at snack room
13. Rough ceiling plaster at hallway to meeting room
14. Fireproofing on metal deck at hallway to meeting room
15. Fireproofing on metal deck at basement workout room
16. Fireproofing on metal deck at basement workout room
17. Wall joint compound at first floor men’s locker room
18. Wall joint compound at hallway to meeting room
19. Hard wall plaster at snack room
20. Cementitious wall at first floor closet
21. Glue daub for 1’x 1’ acoustical tile at basement
22. Glazing caulking in interior window type I
23. Cement concrete floor at garage
24. Carpet glue at first floor
25. Pipe insulation at garage
26. Hard joint insulation off fiberglass insulated pipe at basement lockers
27. Exterior window framing caulking at original building
28. Exterior window framing caulking at addition
29. Exterior horizontal sealant in window system at original building
30. Exterior window framing caulking at addition
31. Exterior sealant in panel under window system at addition
32. Glazing caulking in interior window type II
33. Glazing caulking in interior window type III

34. Damp-proofing on Styrofoam on foundation at addition
35. Flashing protruding in foundation at addition
36. Flashing protruding under newer window
37. Damp-proofing patch on foundation of original building
38. Damp-proofing patch on foundation of addition
39. Black glue in jacketing of fiberglass insulated pipe at basement
40. Exterior glazing caulking for push-out window at addition

Samples Results

Type and Location of Material	Sample Result
1. 9”x 9” Vinyl floor tile at female detection	3% Asbestos
2. Mastic for 9”x 9” vinyl floor tile at female detection	No Asbestos Detected
3. 9”x 9” Vinyl floor tile at interrogation	3% Asbestos
4. Mastic for 9”x 9” vinyl floor tile at interrogation	No Asbestos Detected
5. Brown 12”x 12” vinyl floor tile at rear exit	No Asbestos Detected
6. Brown 12”x 12” vinyl floor tile at dispatch	No Asbestos Detected
7. Mastic for brown 12”x 12” vinyl floor tile at dispatch	5% Asbestos
8. Carpet glue on brown 12”x 12” vinyl floor tile at dispatch	No Asbestos Detected
9. Brown 12”x 12” vinyl floor tile at women’s room	No Asbestos Detected
10. Mastic for brown 12”x 12” vinyl floor tile at women’s room	No Asbestos Detected
11. Rough ceiling plaster at paper storage room	No Asbestos Detected
12. Rough ceiling plaster at snack room	No Asbestos Detected
13. Rough ceiling plaster at hallway to meeting room	No Asbestos Detected
14. Fireproofing on metal deck at hallway to meeting room	No Asbestos Detected
15. Fireproofing on metal deck at basement workout room	No Asbestos Detected
16. Fireproofing on metal deck at basement workout room	No Asbestos Detected
17. Wall joint compound at first floor men’s locker room	No Asbestos Detected
18. Wall joint compound at hallway to meeting room	No Asbestos Detected
19. Hard wall plaster at snack room	No Asbestos Detected
20. Cementitious wall at first floor closet	No Asbestos Detected
21. Glue daub for 1’x 1’ acoustical tile at basement	No Asbestos Detected
22. Glazing caulking in interior window type I	2% Asbestos
23. Cement concrete floor at garage	No Asbestos Detected
24. Carpet glue at first floor	No Asbestos Detected
25. Pipe insulation at garage	30% Asbestos
26. Hard joint insulation off fiberglass insulated pipe at basement lockers	60% Asbestos
27. Exterior window framing caulking at original building	No Asbestos Detected
28. Exterior window framing caulking at addition	No Asbestos Detected
29. Exterior horizontal sealant in window system at original building	No Asbestos Detected
30. Exterior window framing caulking at addition	No Asbestos Detected
31. Exterior sealant in panel under window system at addition	No Asbestos Detected
32. Glazing caulking in interior window type II	2% Asbestos
33. Glazing caulking in interior window type III	2% Asbestos
34. Damp-proofing on Styrofoam on foundation at addition	No Asbestos Detected
35. Flashing protruding in foundation at addition	No Asbestos Detected
36. Flashing protruding under newer window	No Asbestos Detected
37. Damp-proofing patch on foundation of original building	No Asbestos Detected
38. Damp-proofing patch on foundation of addition	No Asbestos Detected
39. Black glue in jacketing of fiberglass insulated pipe at basement	No Asbestos Detected
40. Exterior glazing caulking for push-out window at addition	No Asbestos Detected

Fire Station:

Seventeen (17) bulk samples were collected from the following materials suspected of containing asbestos:

Type and Location of Material

1. Rough ceiling plaster at bathroom
2. Rough ceiling plaster at kitchen
3. Rough ceiling plaster at hallway
4. Hard wall plaster at kitchen
5. Glue daub for 1'x 1' acoustical tiles at engine bay bathroom
6. 9"x 9" Vinyl floor tile at kitchen
7. Mastic for 9"x 9" vinyl floor tile at kitchen
8. Glazing caulking for window in metal door at engine bay
9. Pipe insulation at engine bay
10. Hard joint insulation off fiberglass insulated pipe at engine bay
11. Exterior window glazing caulking
12. Exterior window glazing caulking
13. Exterior window framing caulking
14. Exterior window framing caulking
15. Interior framing caulking for exterior window
16. Door framing caulking
17. Hard wall plaster at hallway by sleep area

Samples Results

Type and Location of Material	Sample Result
1. Rough ceiling plaster at bathroom	No Asbestos Detected
2. Rough ceiling plaster at kitchen	No Asbestos Detected
3. Rough ceiling plaster at hallway	No Asbestos Detected
4. Hard wall plaster at kitchen	No Asbestos Detected
5. Glue daub for 1'x 1' acoustical tiles at engine bay bathroom	No Asbestos Detected
6. 9"x 9" Vinyl floor tile at kitchen	3% Asbestos
7. Mastic for 9"x 9" vinyl floor tile at kitchen	10% Asbestos
8. Glazing caulking for window in metal door at engine bay	No Asbestos Detected
9. Pipe insulation at engine bay	30% Asbestos
10. Hard joint insulation off fiberglass insulated pipe at engine bay	10% Asbestos
11. Exterior window glazing caulking	2% Asbestos
12. Exterior window glazing caulking	No Asbestos Detected
13. Exterior window framing caulking	No Asbestos Detected
14. Exterior window framing caulking	No Asbestos Detected
15. Interior framing caulking for exterior window	No Asbestos Detected
16. Door framing caulking	No Asbestos Detected
17. Hard wall plaster at hallway by sleep area	No Asbestos Detected

OBSERVATIONS AND COST ESTIMATES

Observations:

All ACM must be removed by a Massachusetts licensed asbestos abatement contractor under the supervision of a Massachusetts licensed project monitor prior to any renovation or demolition activities that might disturb the ACM.

1. 9”x 9” Vinyl floor tiles were found to contain asbestos. The ACM was found at the Police Station. The ACM was also found under carpet and plywood.
2. Mastic for 12”x 12” vinyl floor tiles and mastic were found to contain asbestos. The ACM was found at the Police Station.
3. 9”x 9” Vinyl floor tiles and mastic were found to contain asbestos. The ACM was found at the Fire Stations.
4. Glazing caulking in interior windows was found to contain asbestos. The ACM was found at the Police Station.
5. Pipe and hard joint insulation was found to contain asbestos. The ACM was found at the Police and Fire Stations.
6. Exterior window glazing caulking was found to contain asbestos. The ACM was found at the Fire Station.
7. All remaining suspect materials were found not to contain asbestos.
8. Roofing material was assumed to contain asbestos. Roofing material does not have to be removed by a licensed asbestos contractor. However, the General Contractor must comply with OSHA regulation during demolition and with state regulations for proper disposal.
9. Underground sewer pipe was assumed to contain asbestos.
10. Damp-proofing on foundation walls was assumed to contain asbestos. The demolition contractor will have to segregate the ACM from non-ACM building surfaces for proper disposal in an EPA approved landfill that does not recycle.
11. Painted surfaces were assumed to be LBP. A police/fire station is not considered a regulated facility therefore the Massachusetts Lead Law does not apply. All LBP activities performed, including waste disposal, should be in accordance with applicable Federal, State, or local laws, ordinances, codes or regulations governing evaluation and hazard reduction. In the event of discrepancies, the most protective requirements prevail. These requirements can be found in OSHA 29 CFR 1926-Construction Industry Standards, 29 CFR 1926.62-Construction Industry Lead Standards, 29 CFR 1910.1200-Hazards Communication, 40 CFR 261-EPA Regulations. According to OSHA, any amount of LBP triggers compliance.
12. Visual inspection of various equipment, such as light fixtures, thermostats, exit signs and switches was performed for the presence of PCB’s and mercury. Ballasts in light fixtures were assumed to contain PCB’s since there were no labels indicating “No PCB’s”. Tubes, thermostats, exit signs and switches were assumed to contain mercury. It would be very costly to test those equipments and dismantling would be required to access. Therefore, the above mentioned equipments should be disposed in an EPA approved landfill as part of the demolition project.
13. Caulking materials were assumed to contain PCB’s.

Cost Estimates:

The cost includes removal and disposal of all accessible ACM and an allowance for removal of inaccessible or hidden ACM that may be found during the demolition or renovation project.

Location ($)	Material	Approximate Quantity	Cost Estimate
Police Station	Vinyl Floor tiles and Mastic	3,100 SF	12,400.00
	Carpet	1,100 SF	2,200.00
	Plywood of Floor Tiles	200 SF	1,000.00
	Pipe and Hard Joint Insulation	700 LF	14,000.00
	Interior Windows	15 Total	1,500.00
	Hidden Pipe and Hard Joint Insulation	Unknown	6,000.00
	Ceiling/Walls Demolition to Access ACM	2,500 SF	2,500.00
	Light Fixtures	Unknown	1,500.00
	Miscellaneous Hazardous Materials	Unknown	2,500.00
Fire Station	Vinyl Floor tiles and Mastic	700 SF	3,500.00
	Pipe and Hard Joint Insulation	500 LF	10,000.00
	Hidden Pipe and Hard Joint Insulation	Unknown	3,000.00
	Ceiling/Walls Demolition to Access ACM	2,500 SF	2,500.00
	Light Fixtures	Unknown	1,500.00
	Miscellaneous Hazardous Materials	Unknown	2,500.00
	Exterior Windows	20 Total	6,000.00
Exterior of Complex	Transite Sewer Pipes	Unknown [1]	15,000.00
	Damp-proofing on Exterior/Foundation Walls	Unknown [1]	50,000.00
PCB's Remediation[2]			17,000.00
Estimated costs for ACM Inspection and Testing Services			6,500.00
Estimated costs for PCB's Testing and Abatement Plans Services[2]			9,500.00
Estimated costs for Design, Construction Monitoring and Air Sampling Services			19,400.00
		TOTAL:	***190,000.00***

[1]: Part of total demolition.

[2]: Should results exceed EPA limit.

DESCRIPTION OF SURVEY METHODS AND LABORATORY ANALYSES:

Asbestos samples were collected using a method that prevents fiber release. Homogeneous sample areas were determined by criteria outlined in EPA document 560/5-85-030a.

Bulk material samples were analyzed using PLM and dispersion staining techniques with EPA method 600/M4-82-020.

Inspected By:

_____

Leonard J. Busa

Asbestos Inspector

LIMITATIONS AND CONDITIONS:

This report has been completed based on visual and physical observations made and information available at the time of the site visits, as well as an interview with the Owner's representatives. This report is intended to be used as a summary of available information on existing conditions with conclusions based on a reasonable and knowledgeable review of evidence found in accordance with normally accepted industry standards, state and federal protocols, and within the scope and budget established by the client. Any additional data obtained by further review must be reviewed by UEC and the conclusions presented herein may be modified accordingly.

This report and attachments, prepared for the exclusive use of Owner for use in an environmental evaluation of the subject site, are an integral part of the inspections and opinions should not be formulated without reading the report in its entirety. No part of this report may be altered, used, copied or relied upon without prior written permission from UEC, except that this report may be conveyed in its entirety to parties associated with Owner for this subject study.

GEOTECHNICAL REPORT

INTRODUCTION

HML Associates evaluated the following three sites for relocating the Scituate Police Department and Fire Station No. 2: the existing police and fire station adjacent to town hall, a undeveloped 6 acre parcel at the northwest corner of Route 3A and Mann Lot Road which is part of the Ellis Estates, and the Hatherly Playground (also known as "Purple Dinosaur Park") located off Country Way. The location of these three sites is shown on the attached map.

The evaluation of the impacts of subsurface conditions on foundation design and construction included a review of historical topographic maps and photographs to determine if past uses may have disturbed, softened or loosened naturally occurring soils or resulted in placement of non-engineered fill soils, a review of USDA soil maps and the results of subsurface investigation in the immediate vicinity, and visual inspection for evidence of excessive building settlement which may suggest the presence of compressible soils below the sites as well as depressions or sinkholes which may indicate unsuitable subsurface conditions such as buried stumps, loose fill, etc.

EXISTING POLICE AND FIRE STATION SITE

This site sits at the intersection of Route 3A and First Parish Road. USGS topographic maps from 1893, 1915, 1940, 1947, 1961, 1974, 1984 and 1985 were reviewed. The site is shown as open space with no buildings in the immediate area in the 1893, 1915, 1940 and 1947 maps. The 1915 and 1947 maps which are in color depict the site in green indicating that it is covered the trees and other vegetation. No pond is shown. The 1961 map shows the high school, police and fire stations, town hall and the pond. Later maps show the police and fire stations and town hall in their current configuration, but the pond appears to be larger. There are no streams shown coming into or leaving the pond. Aerial photographs going back to 1995 show no changes to the police station, town hall and fire station building configurations.

USDA Soil Conservation Services maps were also reviewed. The area occupied by the police station, fire station and town hall is classified as Udorthents. Most areas classified as Udorthents are used for parks, recreation fields, and buildings. The properties of these soils vary greatly with depth; however, they are generally well suited to use as building sites. Restrictive layers and buried objects generally obstruct deep excavations. These soils are fairly suited to lawns, landscaping, and vegetable gardens. In urban areas vegetable gardens generally can be planted if soil tests are made to identify possibly contaminated soil, as with heavy metals. These soils differ greatly from place to place: consequently, onsite investigation is needed to assess the suitability of the soils for specific land uses.

To the east, the soils map suggests glacial till to the east and sand and gravel to the south. Test borings located in the grass area on the south side of the high school encountered sand and gravel underlain by glacial till. The depth at which the till was encountered increased to the east and west. The subsurface

conditions encountered in the test borings are consistent with the soils maps and suggest that we could expect to encountered sand and gravel underlain by till at the site with the till being closer to the ground surface in the vicinity of the existing fire station and deeper at the police station. Groundwater was encountered between 10 and 14 feet below grade in the borings at the high school.

We visually inspected the fire and police stations and town hall for evidence of excessive settling which might indicate adverse subsurface condition and none were observed. No depressions or sinkholes which may indicate unsuitable subsurface conditions such as buried stumps, loose fill, etc. were observed. We did not observe any bedrock outcroppings.

Geotechnical Assessment

Based on the USDA soil maps and test borings on adjoining high school site, we believe that the site is underlain by sand and gravel. The absence of bedrock outcrops indicates that bedrock is most likely greater than 10 feet below the ground surface. Groundwater is most likely within 10 feet of the ground surface. Based on these observations, the proposed building can be supported on shallow foundation of spread and strip footings with a slab on grade. Footing should be design based on an allowable bearing capacity of 4000 psf. Unless the building has a basement level, groundwater should not be a concern. We did not observe any evidence of unsuitable fills; however, it has been our experience that past construction practices (no longer followed) have included burying topsoil, subsoil, stumps and construction debris on-site rather than disposing off-site, and it is possible that such material may be encountered in the area.

Scituate Police Station

Scituate Police Station

HATHERLY PLAYGROUND SITE

The playground site is located on the north side of Country Way and just to the east of Hollett Street. The southern half of the site is occupied by a parking lot, playground and grassed area and the northern half which is about 6 to 10 feet lower in elevation by a baseball field.

USGS topographic maps from 1893, 1915, 1947, 1961, 1974, 1984 and 1985 were reviewed to establish historical site uses. No buildings appear on the playground site except possibly in the 1947 map abutting Country Way. The elevation across the site varies from about el. 35 feet at Country Way to el 20 feet at the north end of the site based on the topographic maps with no noticeable changes over time.

USDA Soil Conservation Services maps were also reviewed. The map classifies the soil at the site as Merrimac sandy loam except for the part of the site closest to Country Way where the soil is classified as Woodbridge fine loamy sand. Merrimac soil forms on glacial outwash and terraces and the parent material is coarse-loamy eolian (wind-blown) deposit over glaciofluvial deposits of sand and gravel. Groundwater is typically found over 6 feet below grade. Woodbridge soil forms on till plains and the parent material is coarse-loamy eolian (wind-blown) deposits over coarse-loamy lodgment till. Lodgement till is very compact.

The Scituate Board of Health maintains of test pit logs associated for new construction as well as the replacement of failed septic systems. Test pit logs from 624 and 628 Country Way which abut the playground and 621 which is directly across the street encountered sand and gravel. Groundwater was reported at 8.5 feet below grade at 624 Country Way.

HML conducted a visual inspection of the site. No bedrock outcroppings were observed. No evidence of any recent filling or excavation was noted. No depressions or sinkholes which may indicate unsuitable subsurface conditions such as buried stumps, loose fill, etc. were observed .

Geotechnical Assessment

The location of the public safety building at this location has not been established

Based on the USDA soil maps and test pits on adjoining lots, we believe that the site is underlain by sand and gravel. The absence of bedrock outcrops indicates that bedrock is most likely greater than 10 feet below the ground surface. Groundwater is most likely within 10 feet of the ground surface. Based on these observations, the proposed building can be supported on shallow foundation of spread and strip footings with a slab on grade. Footing should be design based on an allowable bearing capacity of 4000 psf. Unless the building has a basement level, groundwater should not be a concern. Because it appears that there may have been a house on the playground site, areas of the site may have been disturbed and/or backfilled with demolition debris.

Hatherly Playground

Hatherly Baseball Field

ELLIS ESTATES SITE

This proposed location covers about 6 acres and is located in the northeast quadrant of the intersection of Mann Lot Road and Route 3A. The site is undeveloped and forested. There is small wetland in the southwest corner of the site at the Route 3A and Mann Lot Road intersection.

USGS topographic maps from 1895, 1915, 1940, 1947, 1961, 1974, 1984 and 1985 were reviewed to establish historical site uses. Ellis Estates is shown as undeveloped in the 1893 and 1915 map. In the 1940 and 1947 maps, there are two buildings along Mann Lot Road and a gravel road leading to a house at the top of Booth Hill. In the 1961, 1974, 1984 and 1985, there is only one building shown along Mann Lot Road. Otherwise, conditions are the same as earlier maps.

USDA Soil Conservation Services maps were also reviewed. The map classifies the soil at the site as Woodbridge fine sandy loam. Woodbridge soil forms on till plains and the parent material is coarse-loamy eolian (wind-blown) deposits over coarse-loamy lodgment till.

HML Associates inspected the area for bedrock outcroppings. While we observed surficial boulders and stone walls which are typical of glacial terrain, we did not observe any outcrops. During our site inspection, we observed that the tree roots are very close to the ground surface (shallow) and tree trucks are moss covered. This may indicate a shallow or perched water table as well as poorly drained soil. There was no evidence of any of the former buildings, recent excavations or filling of the area. Access to the site is limited by stone walls and dense vegetation.

On February 10, 2014, HML Associate excavated four test pits to depth of between 8 and 9 feet below grade within the Ellis Estates property to assess soil condition as part of its assessment of the site not only for the public safety complex but also for a new middle school. The test pits encountered glacial till (gravelly silty sand) overlain by topsoil and subsoil. Groundwater was encountered within 3 feet of the ground surface. Bedrock was not encountered in the test pits.

Geotechnical Assessment

There is no evidence of any former buildings along Mann Lot Road. There is no indication of any earth disturbing activities. The site is covered by a mature forest and is underlain by compact glacial till. Bedrock was not encountered in test pits or observed at the ground surface. Groundwater was encountered within 3 feet of the ground surface.

Based on these observations, the proposed building can be supported on a shallow foundation of spread and strip footings with a slab on grade. Footing should be design based on an allowable bearing capacity of 5000 psf. As is typical with most till sites, cobbles and boulders may be encountered in the excavation and till may be difficult to reuse as fill because of its high silt and clay content. The presence of a shallow water table is a concern because dewatering may be necessary during construction and because the till is susceptible to softening and loosening when wet and subjected to construction traffic. This can result in the generation of spoils which cannot be reused on site because it is too wet and may require off-site disposal. By timing the foundation construction and major earthwork activities to summer and fall when the water table is typically at its lowest elevation, the impact of the shallow water table can be minimized or avoided.

Ellis Estates Location Along Mann Lot Road

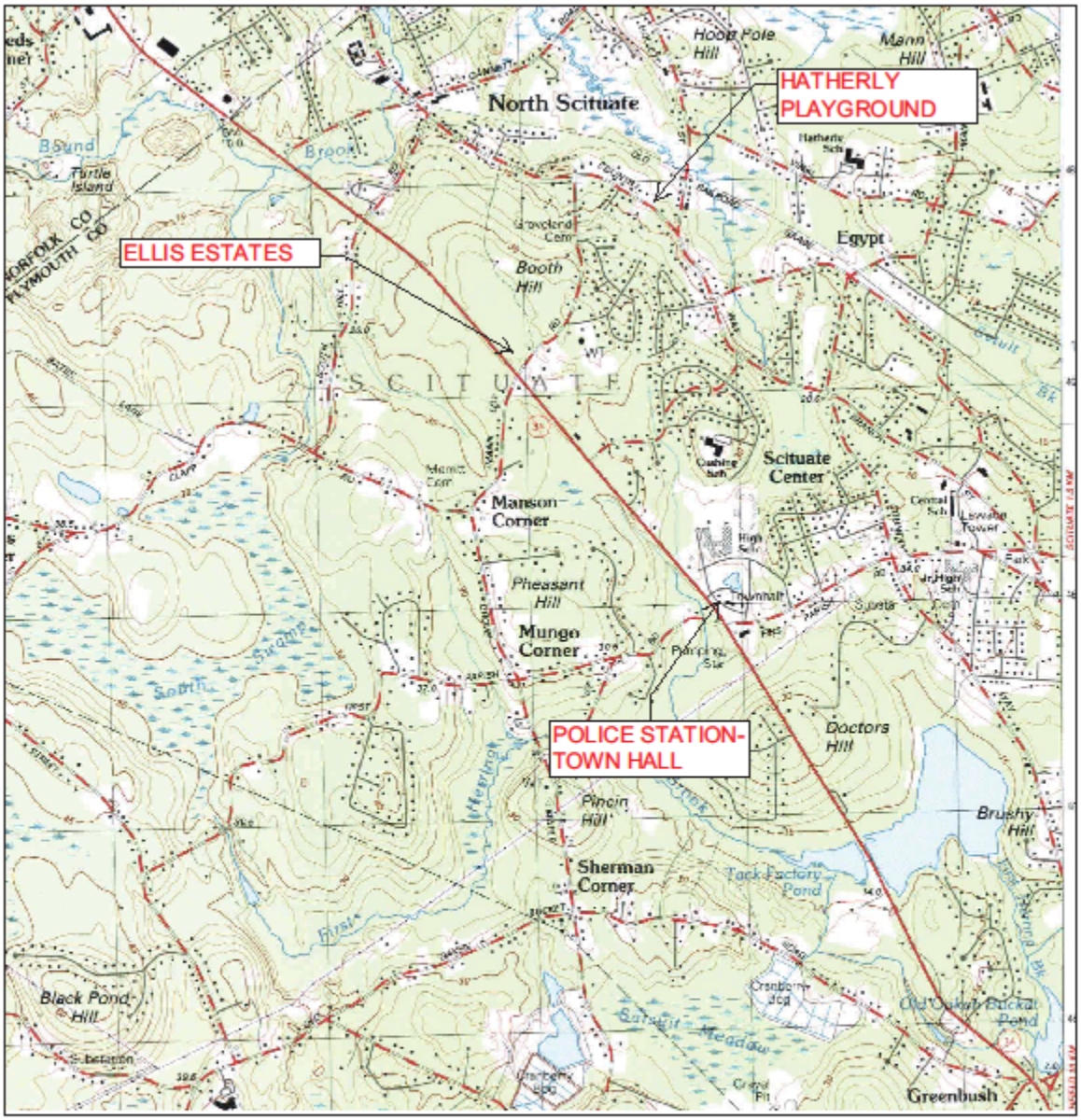
Looking into Ellis Estates Site From Mann Lot Road

COMPARATIVE GEOTECHNICAL SITE EVALUATION

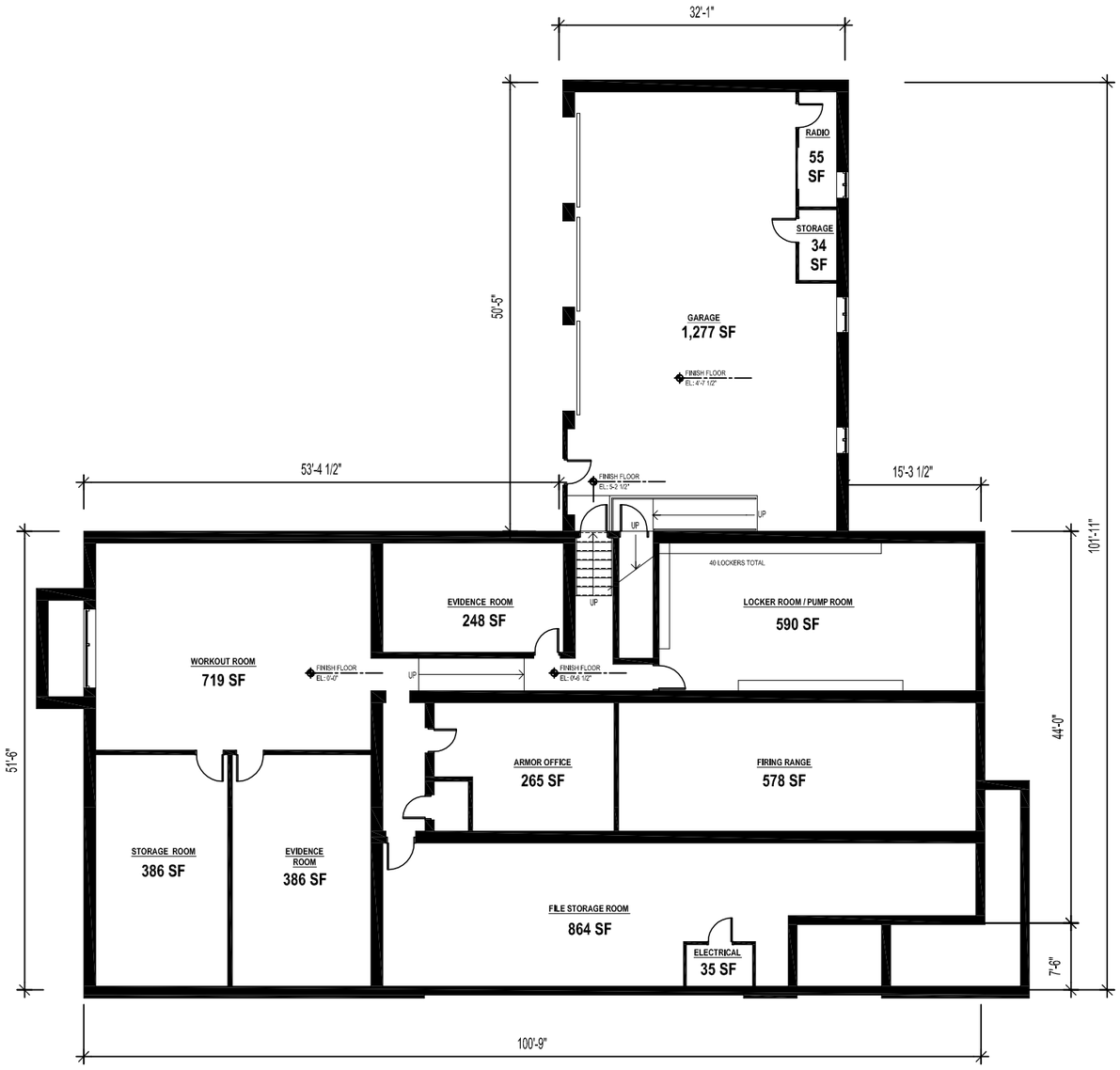
All three locations are underlain by soils suitable for supporting the proposed building on a shallow foundation with slab on grade. The Ellis site has the disadvantage of a shallow water table as discussed above, but that can be addressed by scheduling construction during the drier months of the year, typically June through October. None of the sites exhibits characteristics of shallow bedrock.

The Ellis site has the advantage of site specific subsurface information and being "virgin" ground. The subsurface conditions at the other two sites were inferred based on existing information and as previously developed properties, there may be areas used to dispose of topsoil, subsoil and construction debris. Subsurface investigations would be needed to confirm subsurface conditions. The police/fire station site has the disadvantage of needing to managing construction activities so that they do not interfere with the operations of the town hall, high school, etc. and not disturb existing foundations.

Geotechnically, all three sites have similar subsurface conditions, and we would not characterize any site as most advantageous. We would give the Ellis Estates site a slight advantage because subsurface conditions are known, the site has not been previously been developed and there are no existing operations to coordinate with or maintain during construction.



N	**TARGET QUAD** NAME: WEYMOUTH MAP YEAR: 1984 SERIES: 7.5 SCALE: 1:25000	LOCUS MAP SCITUATE PUBLIC SAFETY FEASIBILITY STUDY HML ASSOCIATES



LOWER LEVEL AND GARAGE

6,668 SF

MAIN FLOOR LEVEL

6,668 SF

SCITUATE POLICE STATION

EXISTING CONDITIONS

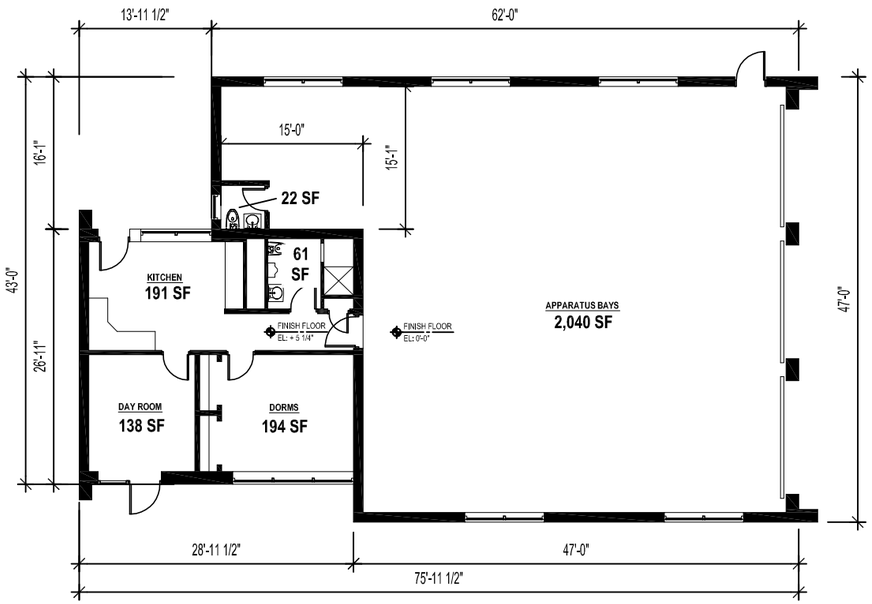
January 30, 2014

0 8' 16' 32'

SCALE:1/16"=1'-0"

N

DORE & WHITTIER ARCHITECTS, INC.



FLOOR PLAN

3,585 SF

SCITUATE FIRE STATION

EXISTING CONDITIONS

January 30, 2014

0 8' 16' 32'

SCALE:1/16"=1'-0"

N

DORE & WHITTIER ARCHITECTS, INC.

Scituate Public Safety Complex

March 14, 2014

PROGRAMMED SPACE	SUGGESTED NEEDS	PRIORITY H	M	L	Existing SF	REMARKS
Shared Spaces						
PUBLIC AREAS						
Entry Vestibule	80	75				
Reception (Records Clerk + Prosecutor)	160	198			124	Attached to Prosecuters Office and Archive Storage
Lobby / Waiting Room	192	450			137	20-30 visitors per day
Public Toilet (1 set of 2 rooms)	290	240				
Training Room / EOC	1,400	1,150				chairs
EOC Breakout Room	528		528			Adjacent to EOC / Training Room
Hospitality Room	126	75	126			Adjacent to EOC / Training Room, Poss comibine in EOC
Training Room Storage	187	125				Tables, chairs, & training equip.
Vending & Ice Machine	100	45				Possibly combine wth Hospitality
SUBTOTAL	**3,063**	**2,358**	**654**	**0**	**261**	
SHARED SPACES						
Dispatch	678	530			177	(2) Full time, (2) Part time consoles, breakroom, restroom, (12) lockers
Fitness Room	600	500			719	capacity for (4-6)
IT Server Room	208	160				
Radio Room	180	75	80		55	Possibly combine with Radio Room
Janitor's Closet	60	45			6	2 total - 1 per floor
Generator						Outdoor; Natural Gas
Staff Toilet (1 set of 2 rooms)	290	356			91	
Shared Conference Room		134				
SUBTOTAL	**2,016**	**1,800**	**80**	**0**	**1,048**	
Net Total Shared Spaces	**5,079**	**4,158**	**734**	**0**	**1,309**	

Scituate Public Safety Complex

March 14, 2014

PROGRAMMED SPACE	SUGGESTED NEEDS	PRIORITY H	PRIORITY M	PRIORITY L	Existing SF	REMARKS
Police Department						
ADMINISTRATION						
Police Chief Suite	500	300			240	Suite with Chief's Office, Admin Assistant, & Conference Rm
Chief's Conference Room						
Reception		97				
Administrative Assistant		83				
Records Storage	184	209			1322	
Assistant Chief	180			180		
Admin Lieutenant	150	146				
Specialist Lieutenant	150	150				
Patrol Lieutenant	150	150			162	
Training Officer	160		160			FUTURE; training material storage in office; Adjacent to EOC / Training Room
Specialst Open Office	484	423			85	(5) desks
Dectives Open Office	396	318	96		155	(3) desks high priority, (1) desk @ medium priorty
Detective Supervisor	150	152				(1) Private office; adjacent to open office
Firearms Permit	96	90			15	Near lobby
Kitchenette	64			64		
Work Room - Office Equipment / Copy	80	107				
SUBTOTAL	**2,744**	**2,225**	**256**	**244**	**1,979**	
OPERATIONS						
Patrol Area - Report Room	372	280			74	(4) shared workstations; open shelving for storage
Patrol Area - Briefing Room	483	412	83		327	capacity for (12) people
Sergeants	660	485	180			(6) individual workstations
Police Patrol and Duty Bag Storage	27	24				
Break Room	248	240	48		106	capacity for (6-8)
Toilet / Shower / Locker Room (Male)	1,495	1,000	295		1054	(50) lockers-72"Hx42"Wx24"D w/ power access in each; (2) showers. (40) lockers high priority/ (10) medium
Toilet / Shower / Locker Room (Female)	533	471			147	(8) lockers-72"Hx42"Wx24"D w/ power access in each; (1) Shower
Evidence Storage	360	368			634	Pass-thru refrigerator; evidence drying area; shelves
Evidence Processing		122				
Found Items Storage	256	380	-124			256 SF = 16'x16' chain link fenced area at rear of building
Armory + Weapons Office	160	196			331	
Armory Area - Simunition Training	3,200			3200		double as emergency shelter; tied to range vent system
Armory Area - Firing Range	1,480		1480		578	75', (3) lanes
Sally Port / Vehicle Evidence Bay	1,260	1,100			1311	(2) vehicle capacity, large enough for ambulance; Evidence processing in Sallyport
Booking / Processing	238	240			396	capacity to process 2 at a time
Booking / Processing - Juvenile	140		140			capacity to process 1 at a time
Shared Processing	50	40	10			Access from Adult + Juvenile Booking
Soft Interview Room	240	200	20			(1) @ 120 SF and (1) @ 100 sf; Near Lobby
Hard Interview Room	180	60			101	(2) @ 90 SF; audio / video recorded
Interview Room AV Surveillance	80	76				
Detainee Shower	104		104			(1) Adult; (1) Juvenile
Detention Cell - Male	280	234	140		368	(4) cells @ 70 SF; 24-hrs./some weekends high
Detention Cell - Female	280	135	70		184	(2) cells @ 70 SF; 24-hrs./some weekends high
Detention Cell - Juvenile	140	190			118	(2) cells @ 70 SF; 24-hrs./some weekends; separated (sight/sound) from adult
Kennel	100	60				Door to exterior dog run; dog bed; floor drain; mop sink
Bail/ Visitation		50				
Prisoner Visitation		40				
Holding Cell		64				
Waiting		40				
Prisoner Release Vestibule		57				
SUBTOTAL	**12,366**	**6,564**	**2,446**	**3,200**	**5,729**	
Net Total Police Department	**15,110**	**8,789**	**2,702**	**3,444**	**7,708**	

Scituate Public Safety Complex

March 14, 2014

PROGRAMMED SPACE	SUGGESTED NEEDS	PRIORITY H	M	L	Existing SF	REMARKS
Fire Department						
PUBLIC AREAS						
Dispatch / Radio Room / Reports	0					See Shared Spaces
Waiting Area	0					See Shared Spaces
Triage Room	120	121				
SUBTOTAL	**120**	**121**	**0**	**0**	**0**	
ADMINISTRATION						
Chief's Suite	500	270				Shared Admin Assistant and Conference Room
Administrative Assistant		85				
Reception		105				
Conference Room		240				
Deputy Chief's Office	180	153				
Lieutenant's Office	150	180				(1) workstation shared among (4) shift Lieutenants
Archival Document Storage	184	270				Adjacent to front reception, shared entry w/ Police
Work Room - Office Equipment / Copy / Supplies	80	111	40			Alcove off of LT's office or corridor
General Storage	234	337				
SUBTOTAL	**1,328**	**1,751**	**40**	**0**	**0**	
LIVING SPACES						
Dorm Rooms	300	297			194	(4) separate rooms @ 75 sf; Hot Sheet operations
Locker Room	168	309				(16) 24W"x24D" lockers
Toilet / Shower Rooms	252	174	52		61	(2) Individual rooms @ 100 SF; (1) shower and (1) toilet
Day Room	216	187			138	2-4 Occupants; Open to general circulation, dining
Kitchen/Dining	364	300			191	Access to exterior gas grill
Domestic Laundry	85	81	21			
SUBTOTAL	**1,385**	**1,348**	**73**	**0**	**584**	
OPERATIONS						
Apparatus Bays	4,880	2,966	1,914		2040	(1) 20'Wx60'D; (1) 18'W x 60'D; (1) 20'Wx40'D
SUBTOTAL	**4,880**	**2,966**	**1,914**	**0**	**2,040**	
OPERATIONS SUPPORT						
Hose Storage	65		65			Hose Rack 4'Wx12'L, inc. in alcove
Turnout Gear Storage	144	180				(16) Lockers
Decontamination	154	104				
Dirty Restroom	65	45			22	
SCBA Fill Room	238	100	138			
Radio Charging Station	33		33			Inc in alcove
Foam Storage	63		63			(10) 5gal. Buckets, inc. in alcove
Compressor Room	48		48			Inc in alcove
Boat Gear Drive Storage	100		100			Combine with Compressor Room
Watch Room	210	120	90			
SUBTOTAL	**1,120**	**549**	**537**	**0**	**22**	
Net Total Fire Department	**8,833**	**6,735**	**2,564**	**0**	**2,646**	

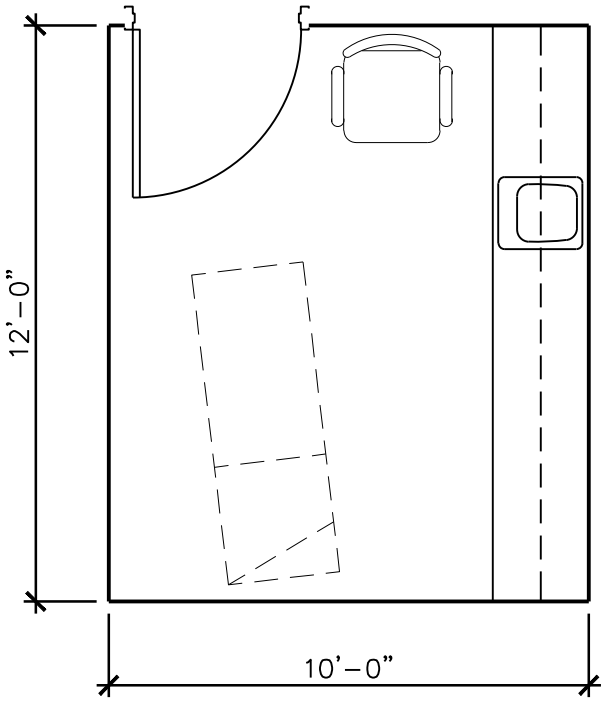
Scituate Public Safety Complex

March 14, 2014

PROGRAMMED SPACE	SUGGESTED NEEDS	PRIORITY H	PRIORITY M	PRIORITY L	Existing SF	REMARKS
BUILDING SYSTEMS + VERTICAL CIRCULATION						
Stairs	1,080	932				2 @ 180 SF/Flr x 2 Flrs
Elevator	160	142				2 Flrs @ 53 SF/FLR
Elevator Machine Room	80					
Mechanical/Electrical	500	416				
SUBTOTAL	**1,820**	**1,490**	**0**	**0**		
SUMMARY						
Shared Spaces	5,079	4,158	734	0	1,309	
Infrastructure @ 15%	762	624	110	0	196	
Building Circulation @ 12.5%	635	520	92	0	164	
SUBTOTAL SF	**6,476**	**5,301**	**936**	**0**	**1,669**	
Police Department	15,110	8,789	2,702	3,444	7,708	
Infrastructure @ 15%	2,267	1,318	405	517	1,156	
Building Circulation @ 20%	3,022	1,758	540	689	1,542	
SUBTOTAL SF	**20,399**	**11,865**	**3,648**	**4,649**	**10,406**	
Fire Department	8,833	6,735	2,564	0	2,646	
Infrastructure @ 12.5%	1,104	1,010	321	0	331	
Building Circulation @ 12.5%	1,104	842	321	0	331	
SUBTOTAL SF	**11,041**	**8,587**	**3,205**	**0**	**3,308**	
Building Systems + Vertical Circulation	1,820	1,490	0	0		
Infrastructure @ 12.5%	228	186	0	0		
SUBTOTAL SF	**2,048**	**1,676**	**0**	**0**	**1,539**	

		PRIORITY H	PRIORITY M	PRIORITY L	Existing SF	
GRAND TOTAL SF	**39,963**	**27,430**	**7,789**	**4,649**	**16,921**	
	99.8%	68.6%	19.5%	11.6%		

FIRE DEPARTMENT
PUBLIC SPACES



120 SF

TRIAGE ROOM

SCALE: 1/4"=1'-0"

CR architecture + design

800.469.4949
www.cr-architects.com

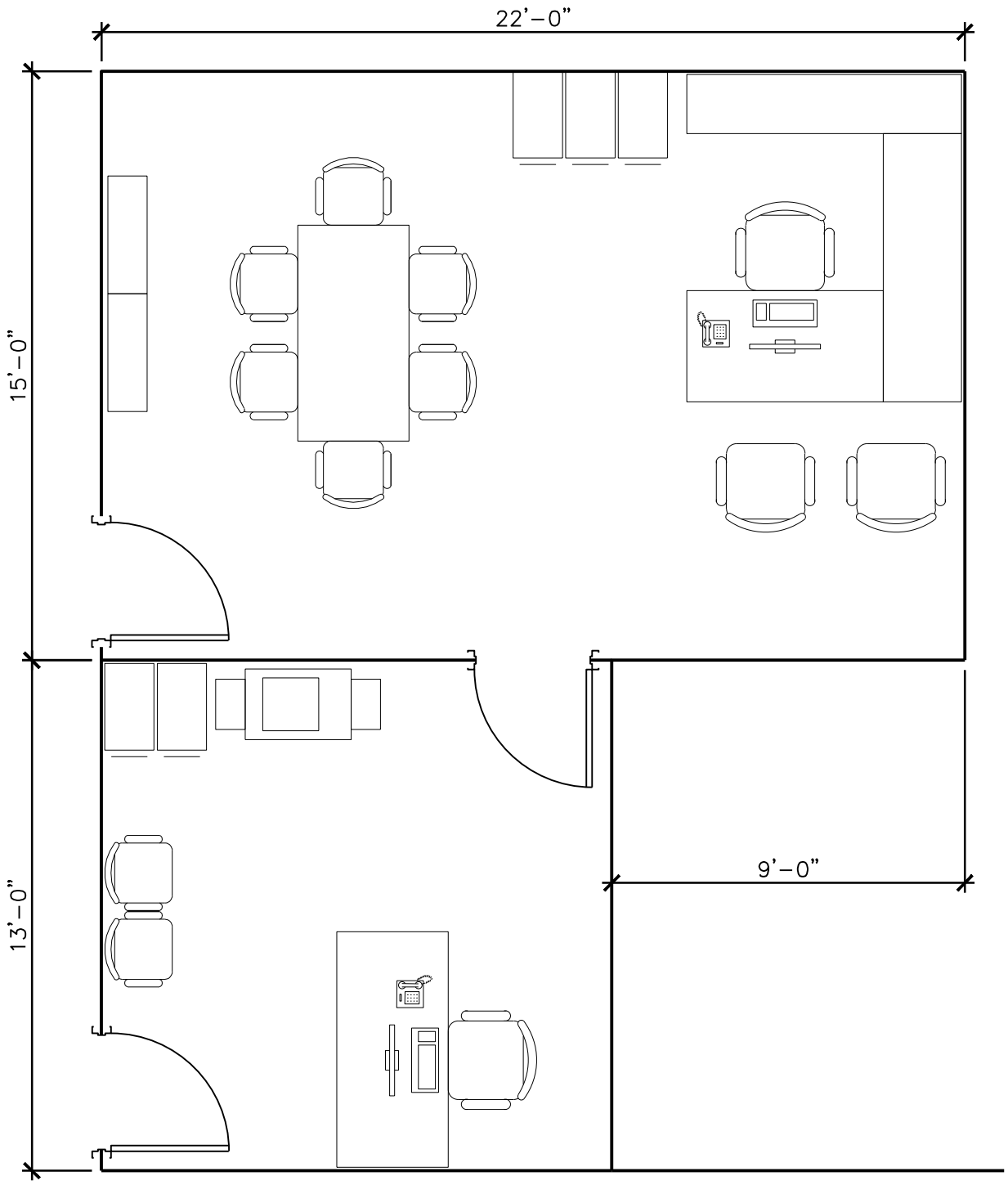
CINCINNATI 600 Vine Street suite 2210 Cincinnati, OH 45202
DENVER 1810 Platte Street Denver, CO 80202

PROJECT TITLE
SCITUATE PUBLIC SAFETY COMPLEX

COMMISSION NO.
900414.02

DATE
DECEMBER 24, 2013

FIRE DEPARTMENT ADMINISTRATION



500 SF

CHIEF'S SUITE

SCALE: 1/4"=1'–0"

CR architecture + design

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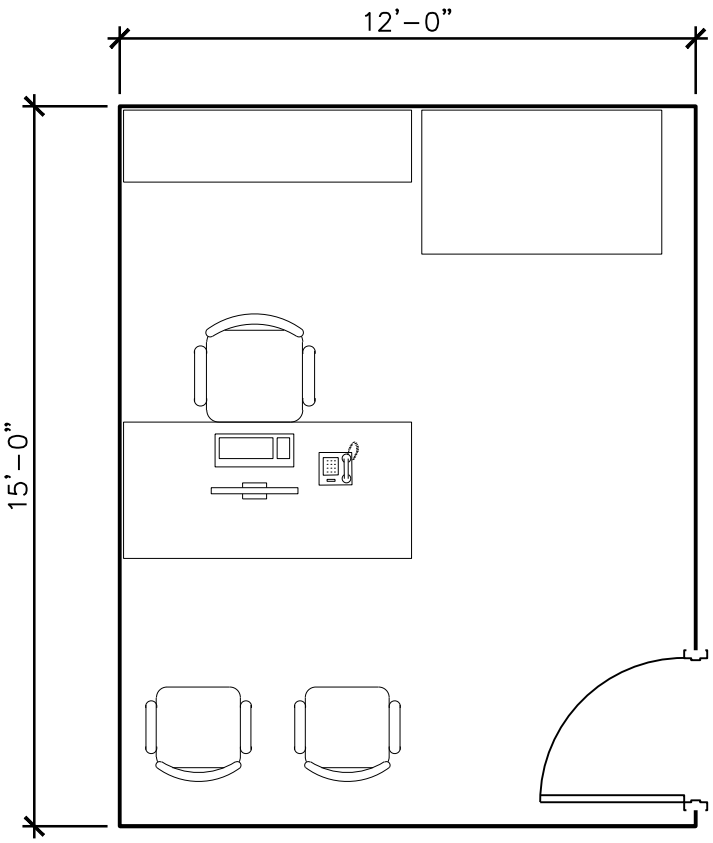

180 SF

DEPUTY CHIEF'S OFFICE

SCALE: 1/4"=1'–0"

CR architecture + design

800.469.4949
www.cr-architects.com

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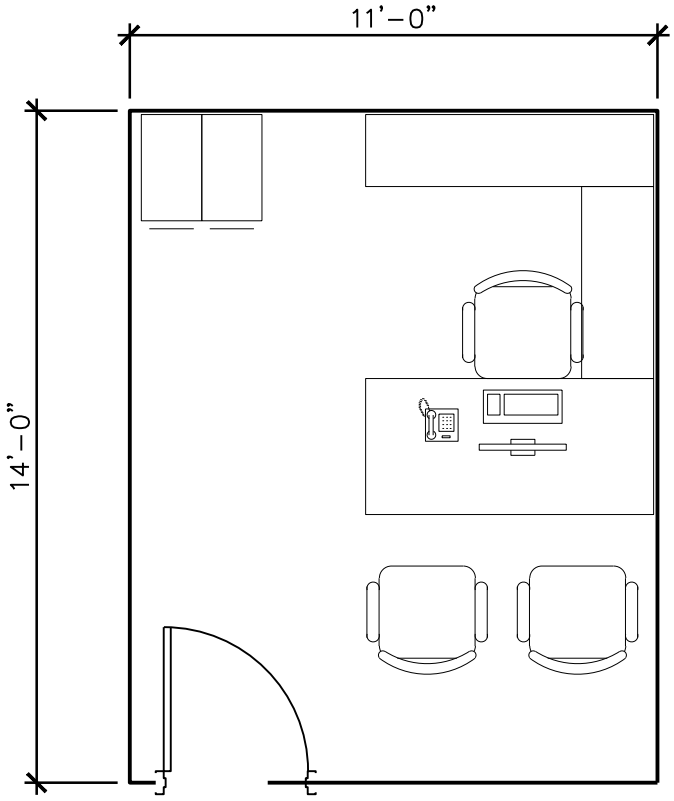

150 SF

LIEUTENANT'S OFFICE

SCALE: 1/4"=1'–0"

800.469.4949
www.cr-architects.com

architecture + design

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DENVER 1810 Platte Street Denver, CO 80202

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SCITUATE PUBLIC SAFETY COMPLEX

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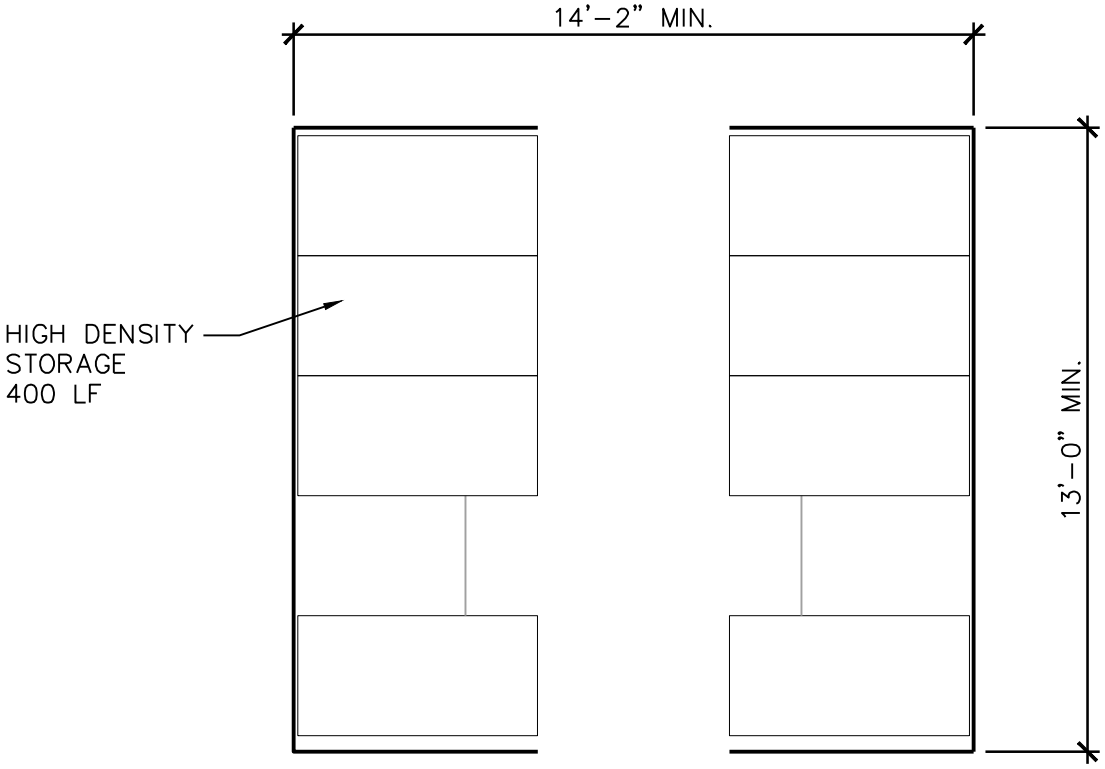
DATE
DECEMBER 24, 2013



184 SF

ARCHIVAL DOCUMENT STORAGE

SCALE: 1/4"=1'-0"

CR architecture + design

800.469.4949
www.cr-architects.com

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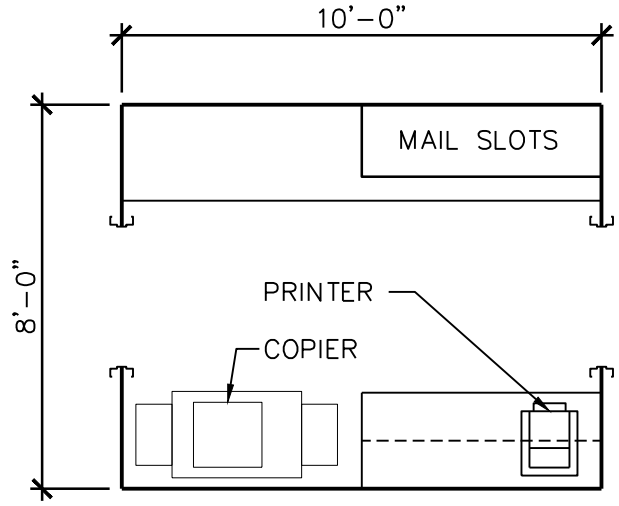
PROJECT TITLE
SCITUATE PUBLIC SAFETY COMPLEX

COMMISSION NO.
900414.02

DATE
DECEMBER 24, 2013



80 SF

WORK ROOM

SCALE: 1/4"=1'-0"

CR architecture + design

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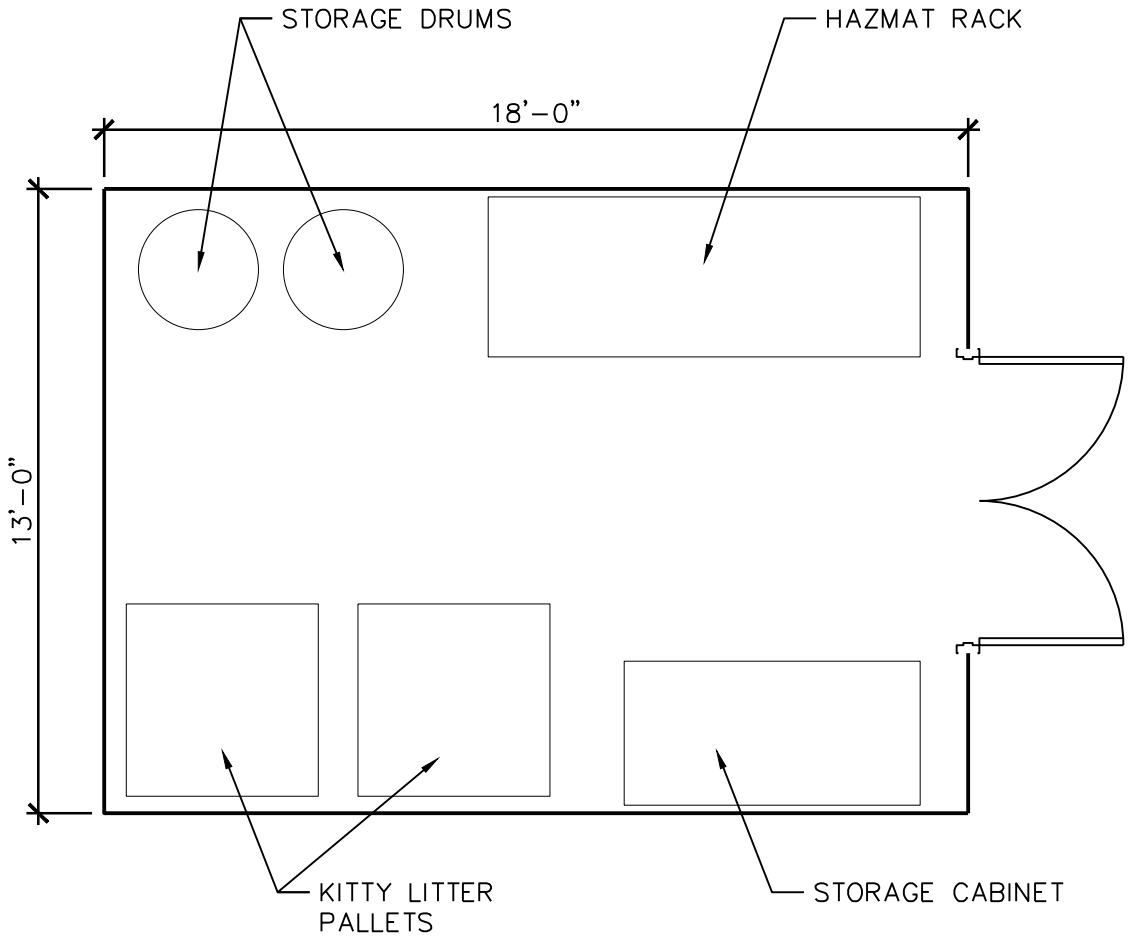

234 SF

GENERAL STORAGE

SCALE: 1/4"=1'-0"

architecture + design

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DATE
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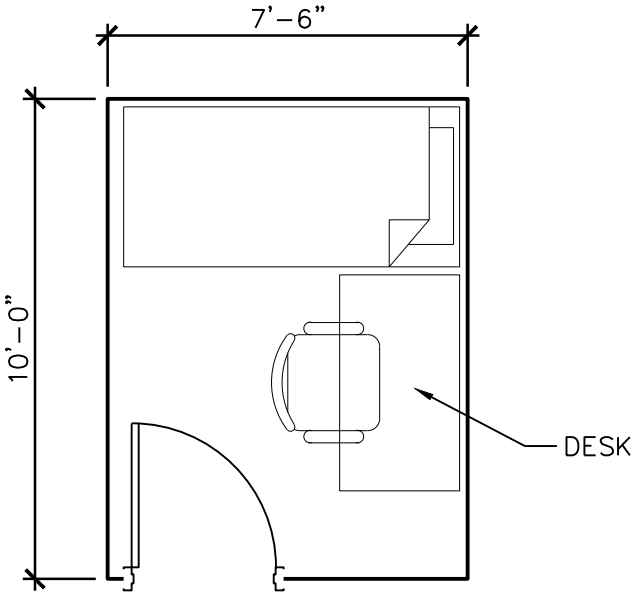
FIRE DEPARTMENT
LIVING SPACES



104 SF

DORM ROOM

SCALE: 1/4"=1'-0"

CR architecture + design

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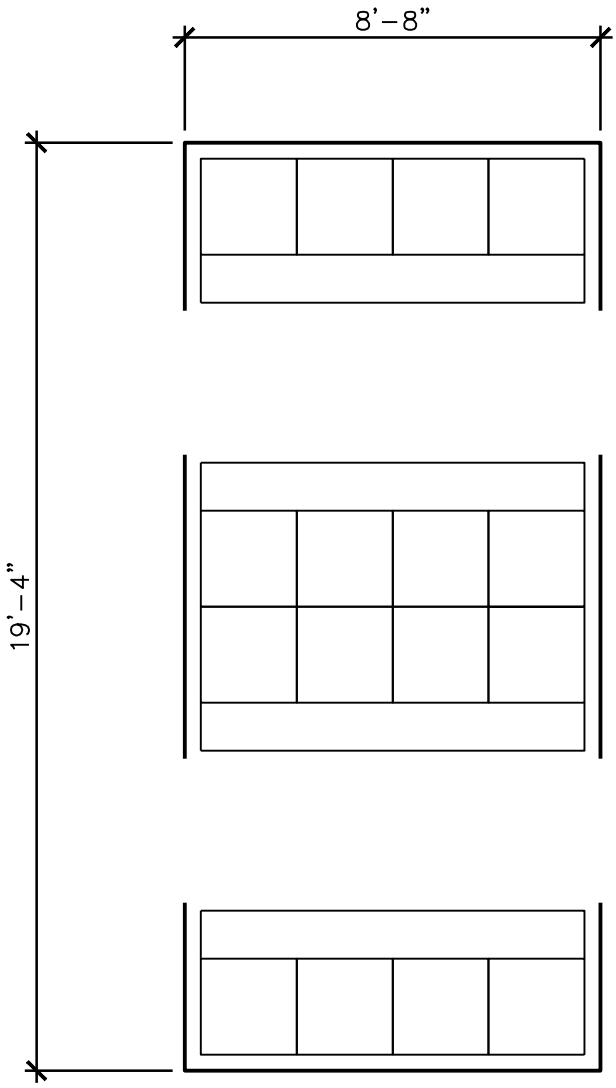

168 SF

LOCKER AREA

SCALE: 1/4"=1'-0"

CR architecture + design

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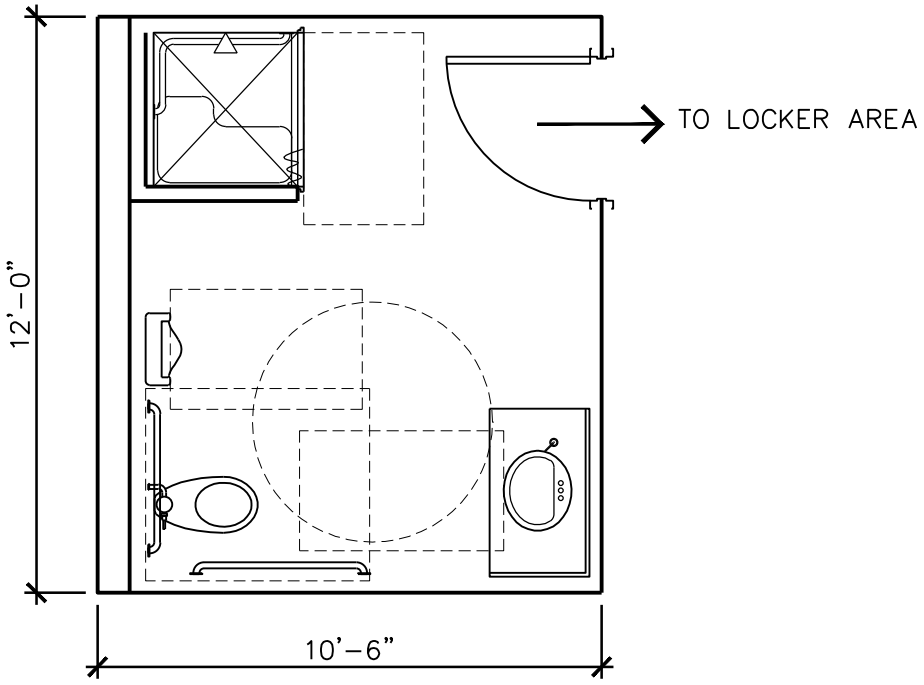

126 SF

TOILET / SHOWER ROOMS

SCALE: 1/4"=1'-0"

CR architecture + design

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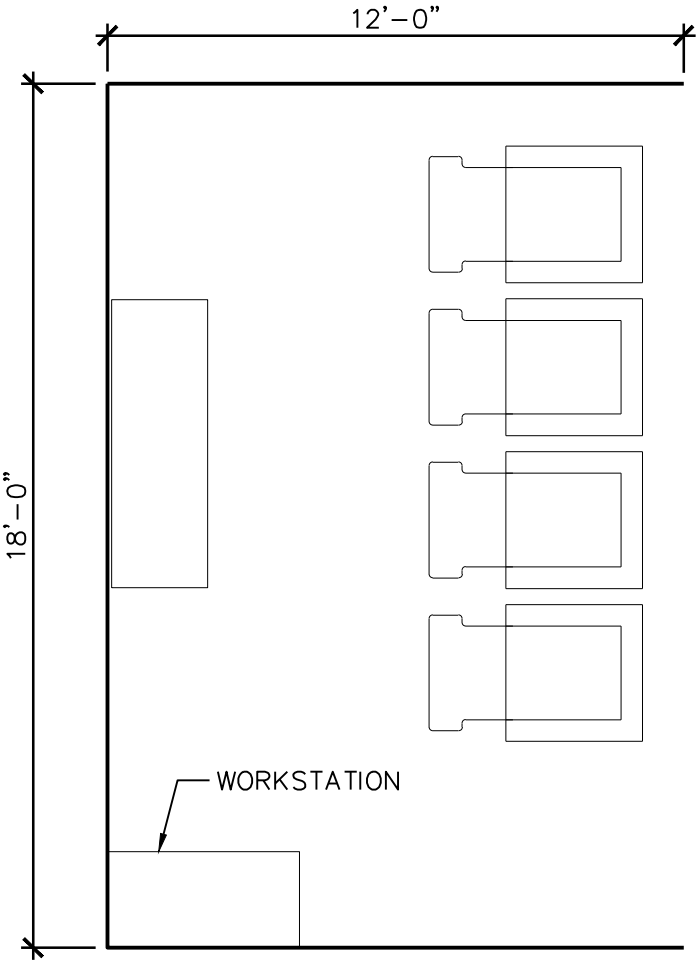

216 SF

DAY ROOM

SCALE: 1/4"=1'-0"

CR architecture + design

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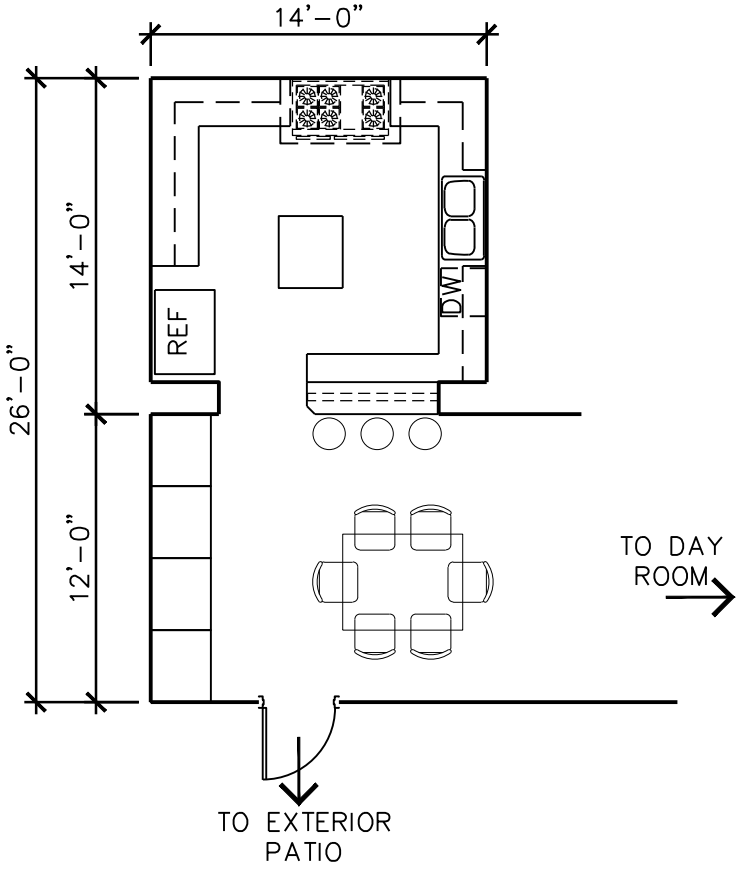

364 SF - 4-6 CREW

KITCHEN / DINING

SCALE: 1/8"=1'-0"

architecture + design

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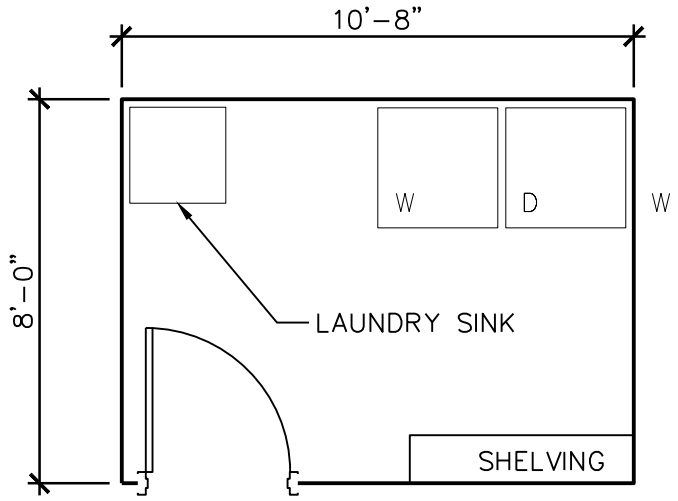

85 SF

DOMESTIC LAUNDRY

SCALE: 1/4"=1'-0"

architecture + design

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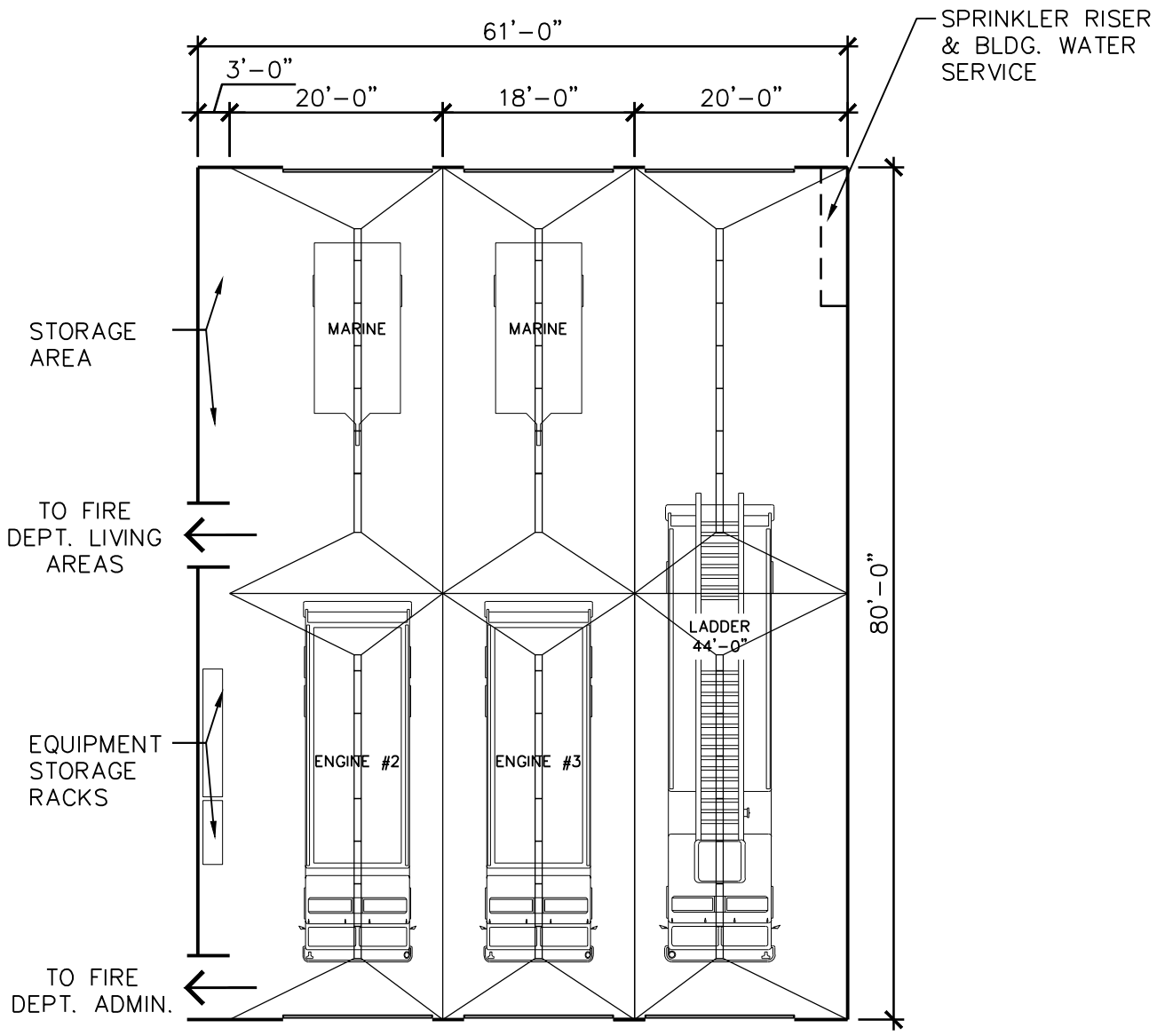
FIRE DEPARTMENT OPERATIONS



3 BAYS - 4880 SF

APPARATUS BAYS

SCALE: 1/16"=1'-0"

CR architecture + design

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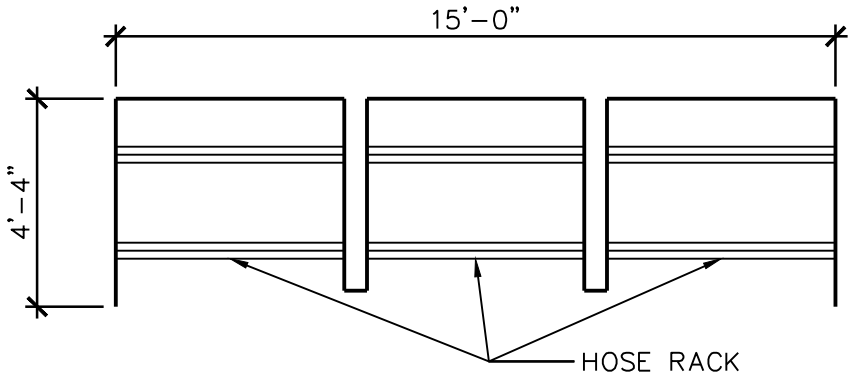
FIRE DEPARTMENT
OPERATIONS SUPPORT



65 SF

HOSE STORAGE

SCALE: 1/4"=1'-0"

CR architecture + design

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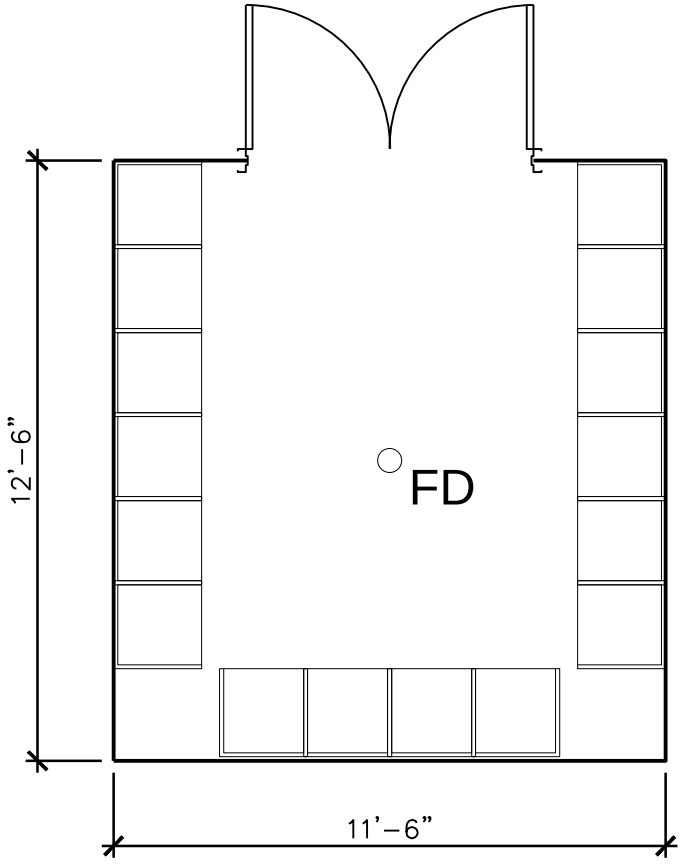

144 SF (16 LOCKERS)

TURN OUT GEAR

SCALE: 1/4"=1'-0"

CR architecture + design

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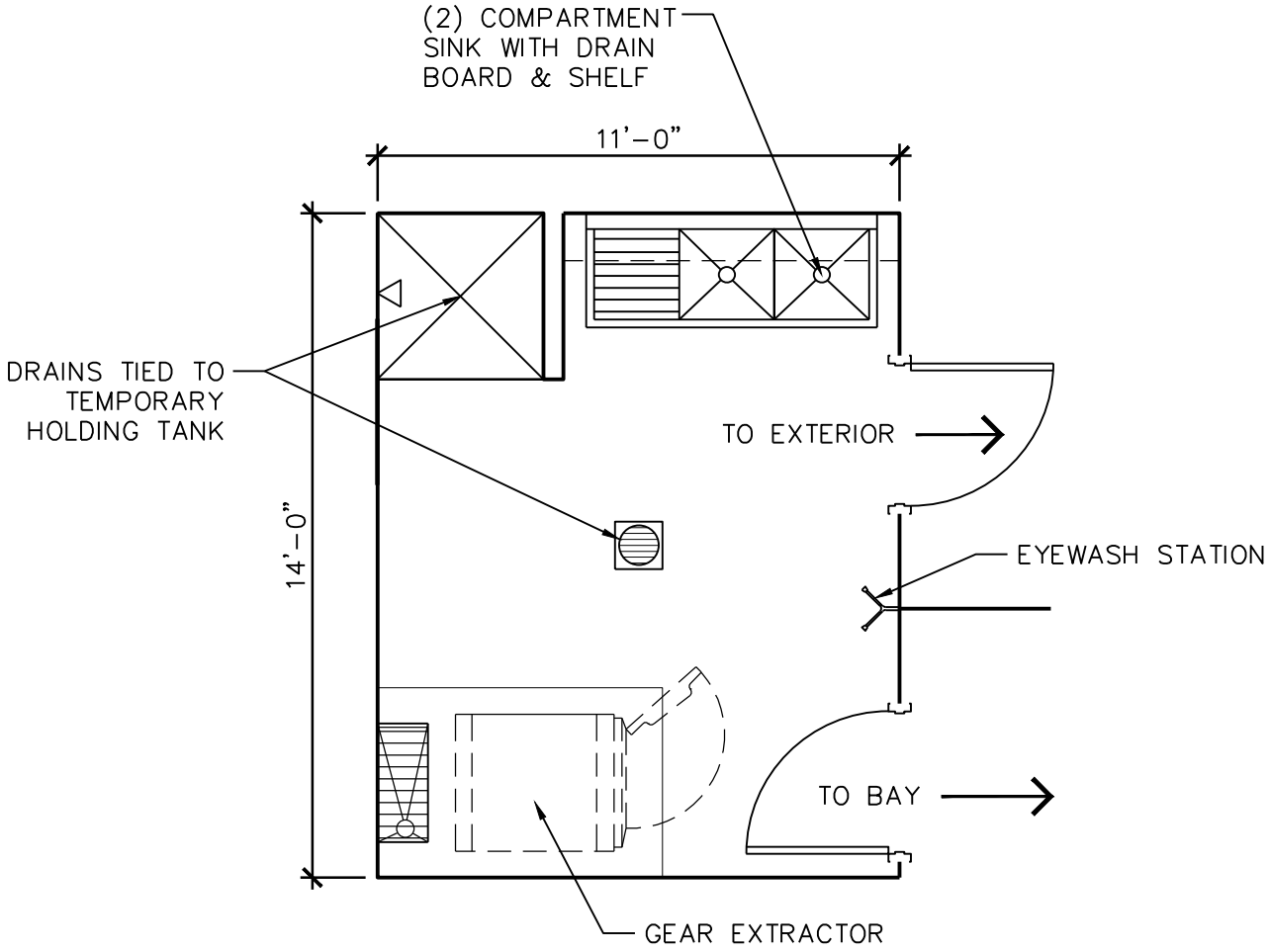

154 SF

DECONTAMINATION

SCALE: 1/4"=1'-0"

architecture + design

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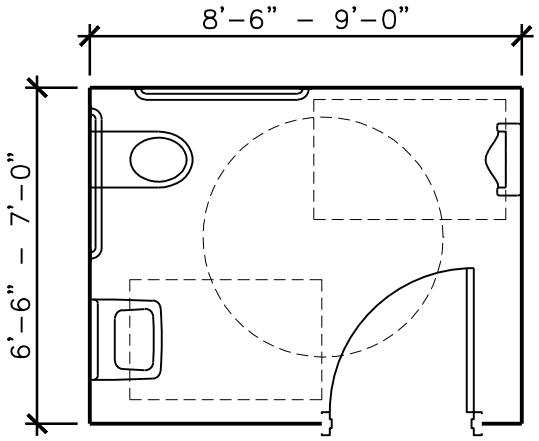

55 - 63 SF

DIRTY RESTROOM

SCALE: 1/4"=1'-0"

CR architecture + design

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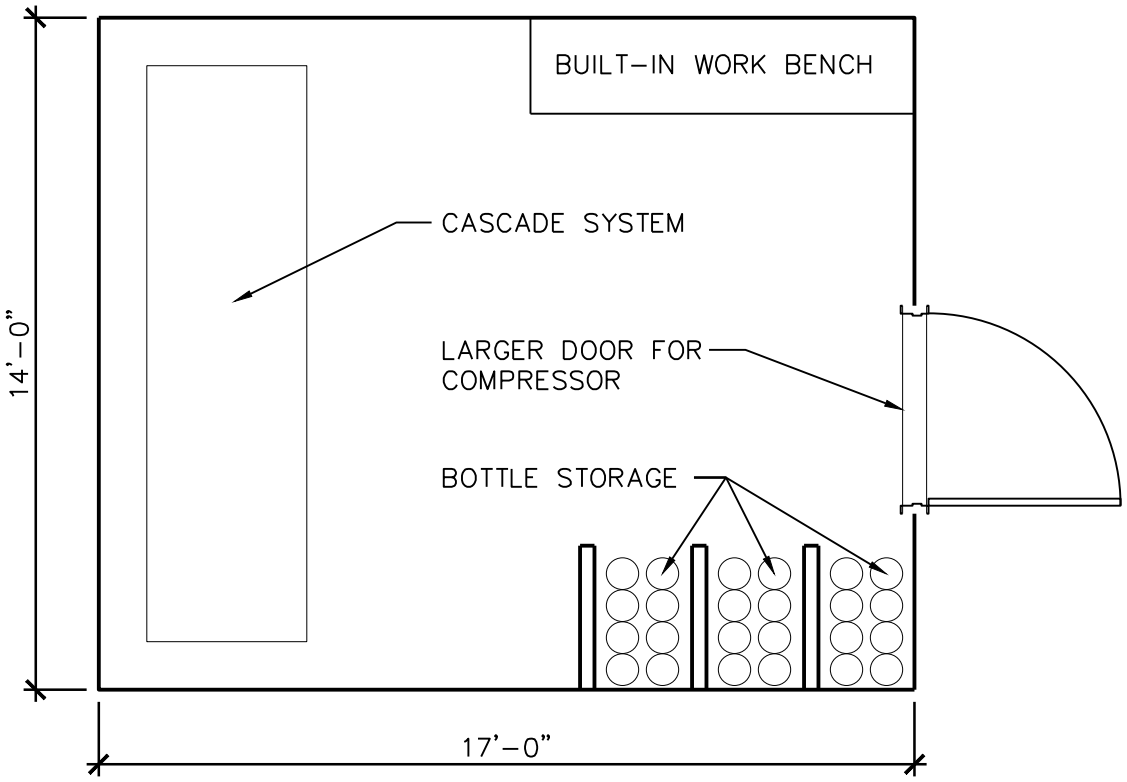

238 SF

SCBA ROOM

SCALE: 1/4"=1'-0"

architecture + design

800.469.4949
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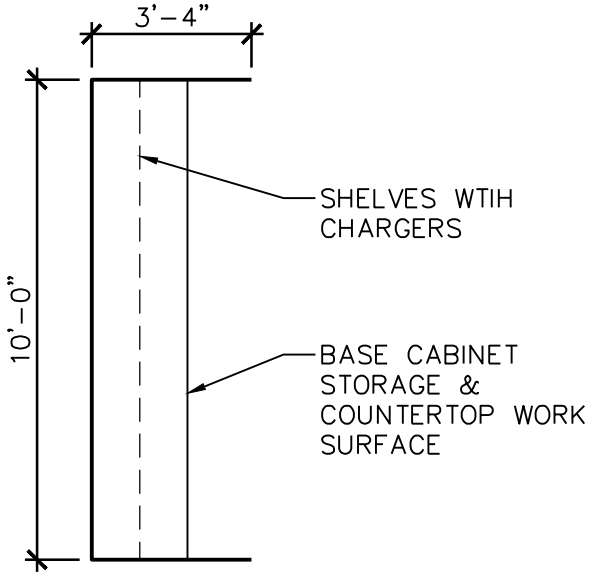

33 SF

RADIO CHARGING STATION

SCALE: 1/4"=1'-0"

CR architecture + design

800.469.4949
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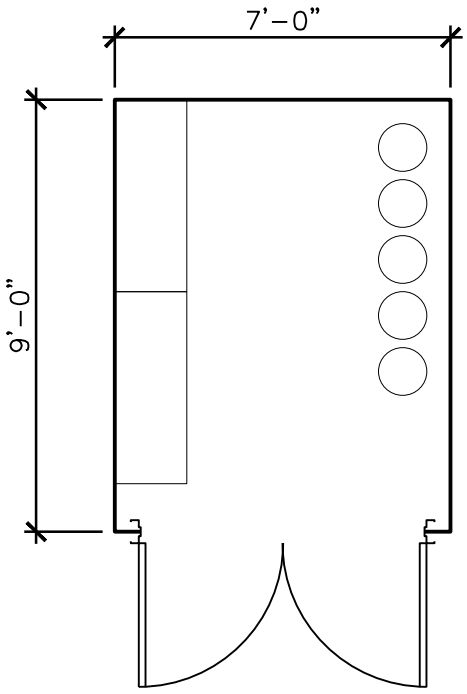

63 SF

FOAM STORAGE

SCALE: 1/4"=1'-0"

CR architecture + design

800.469.4949
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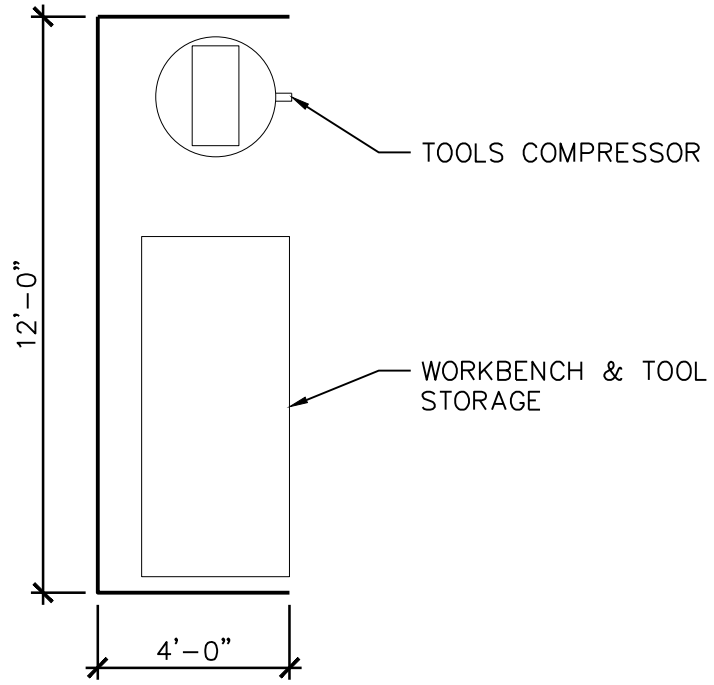

48 SF

COMPRESSOR ROOM

SCALE: 1/4"=1'-0"

CR architecture + design

800.469.4949
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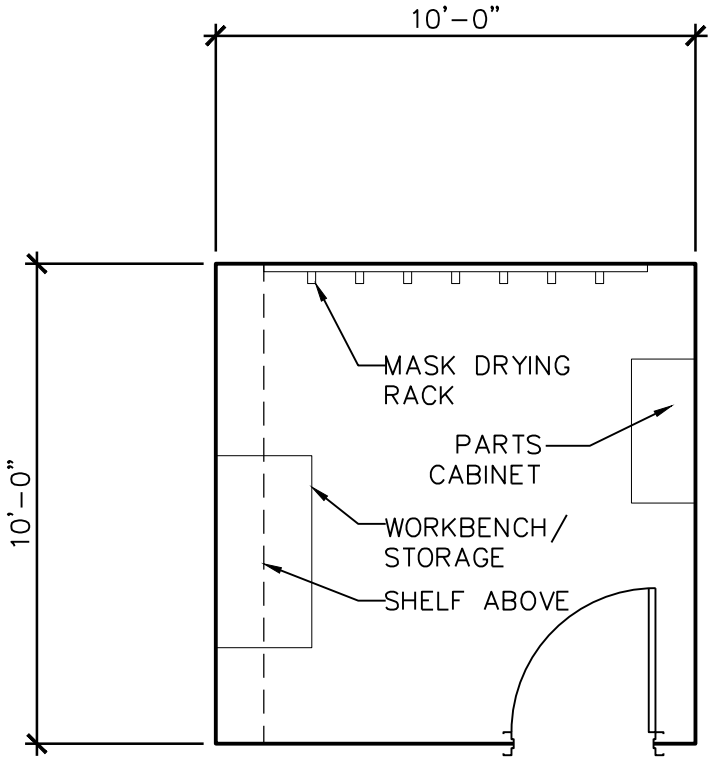

100 SF

BOAT GEAR DIVE STORAGE

SCALE: 1/4"=1'-0"

architecture + design

800.469.4949
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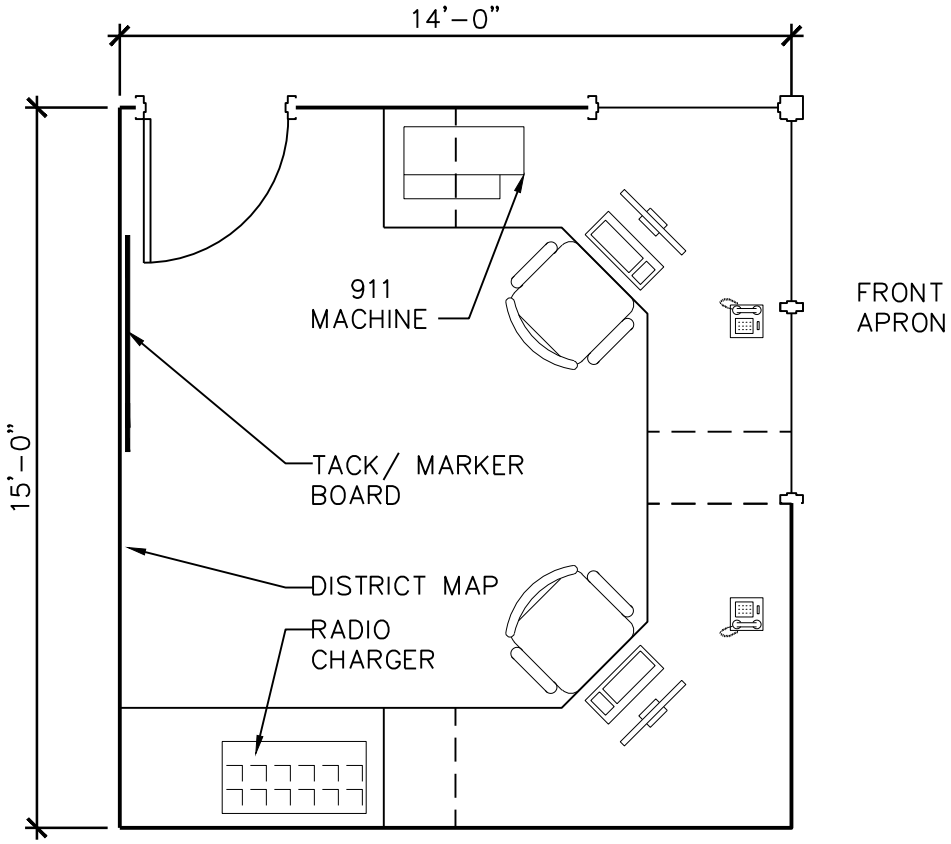

210 SF

WATCH ROOM

SCALE: 1/4"=1'-0"

architecture + design

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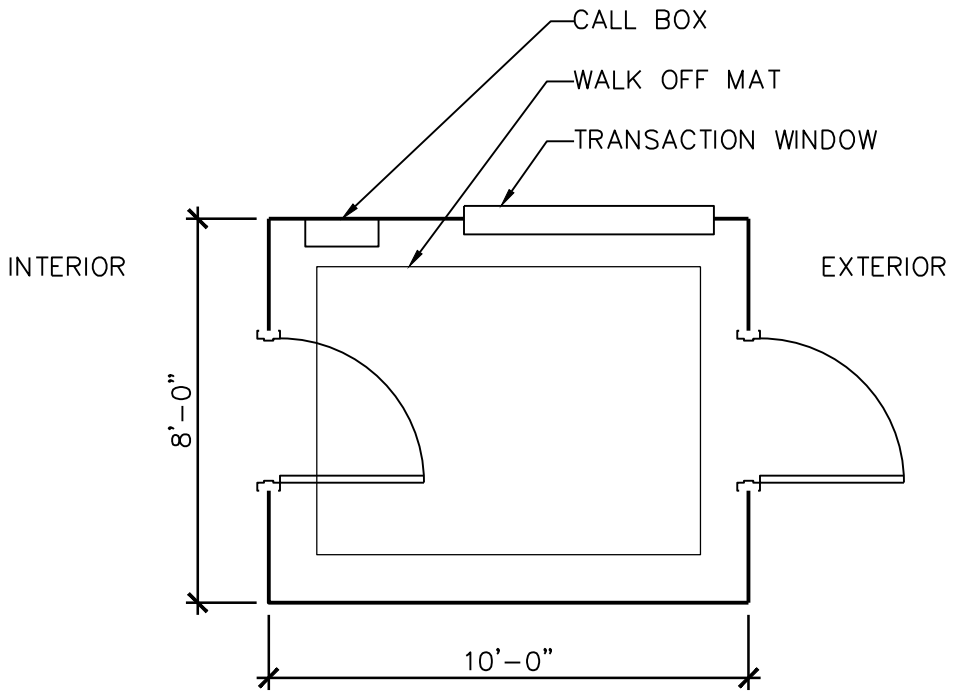
SHARED SPACES
PUBLIC SPACES



80 SF

VESTIBULE

SCALE: 1/4"=1'-0"

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architecture + design

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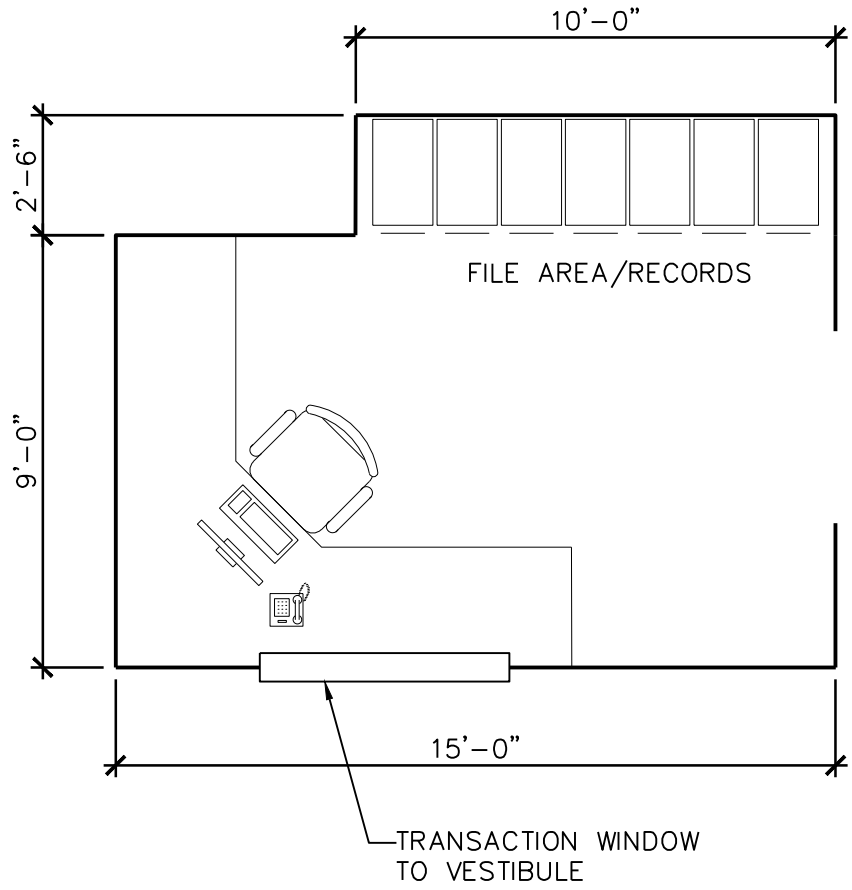

160 SF

RECEPTION

SCALE: 1/4"=1'-0"

architecture + design

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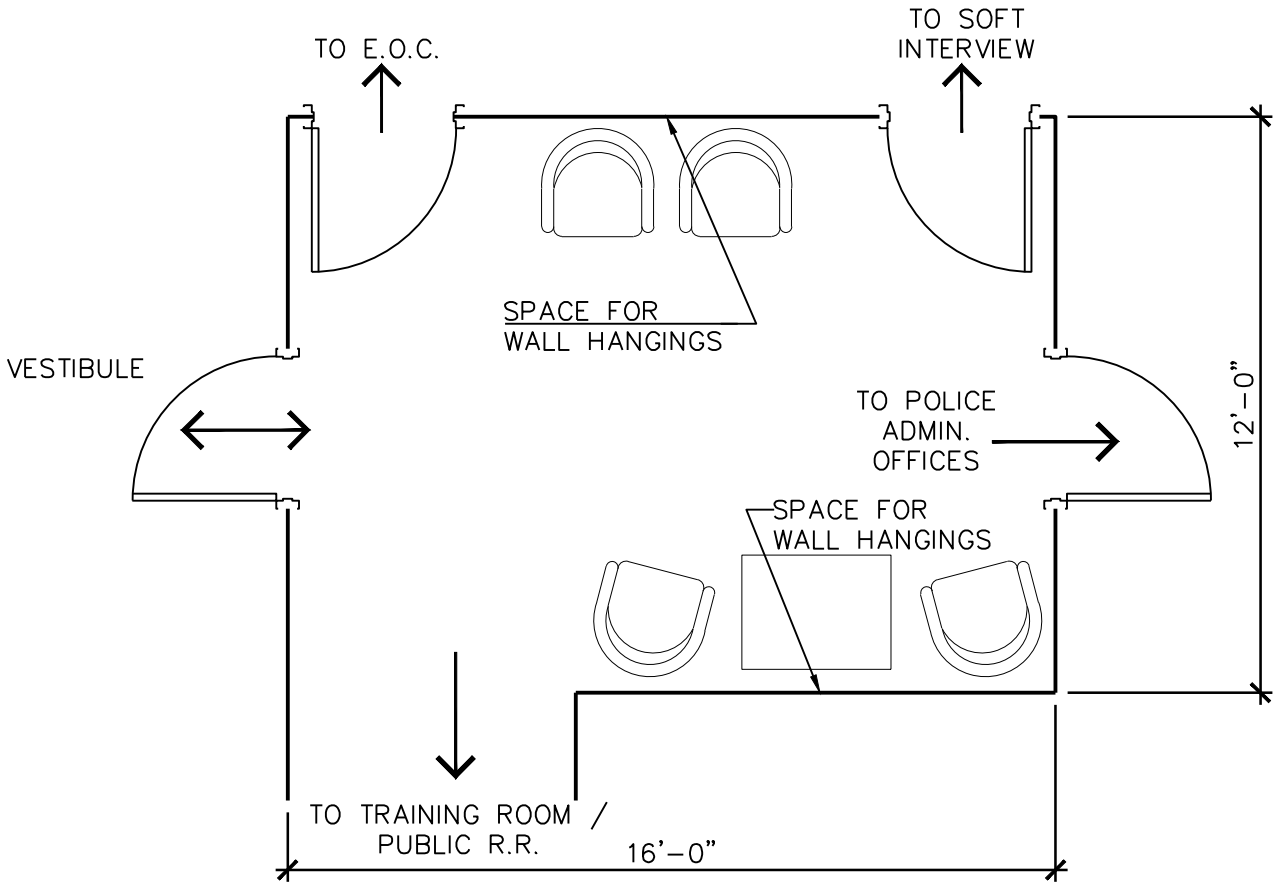

192 SF

LOBBY / WAITING ROOM

SCALE: 1/4"=1'-0"

CR architecture + design

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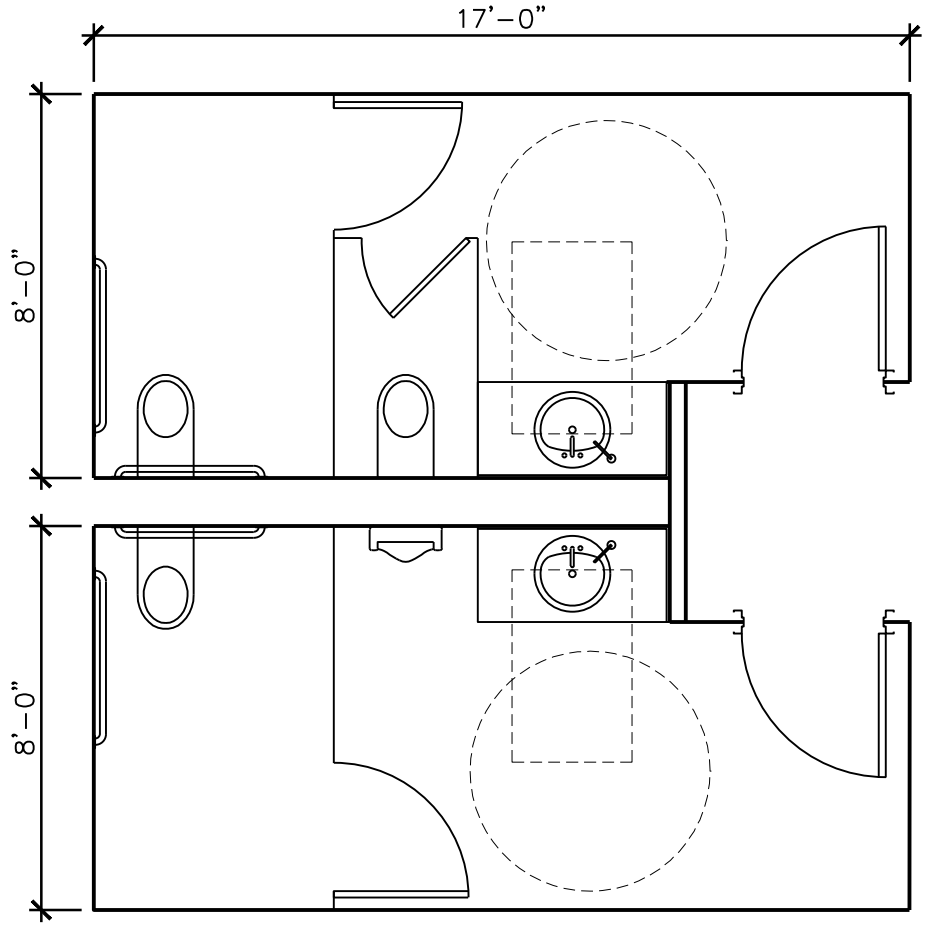

290 SF

RESTROOMS

SCALE: 1/4"=1'-0"

CR architecture + design

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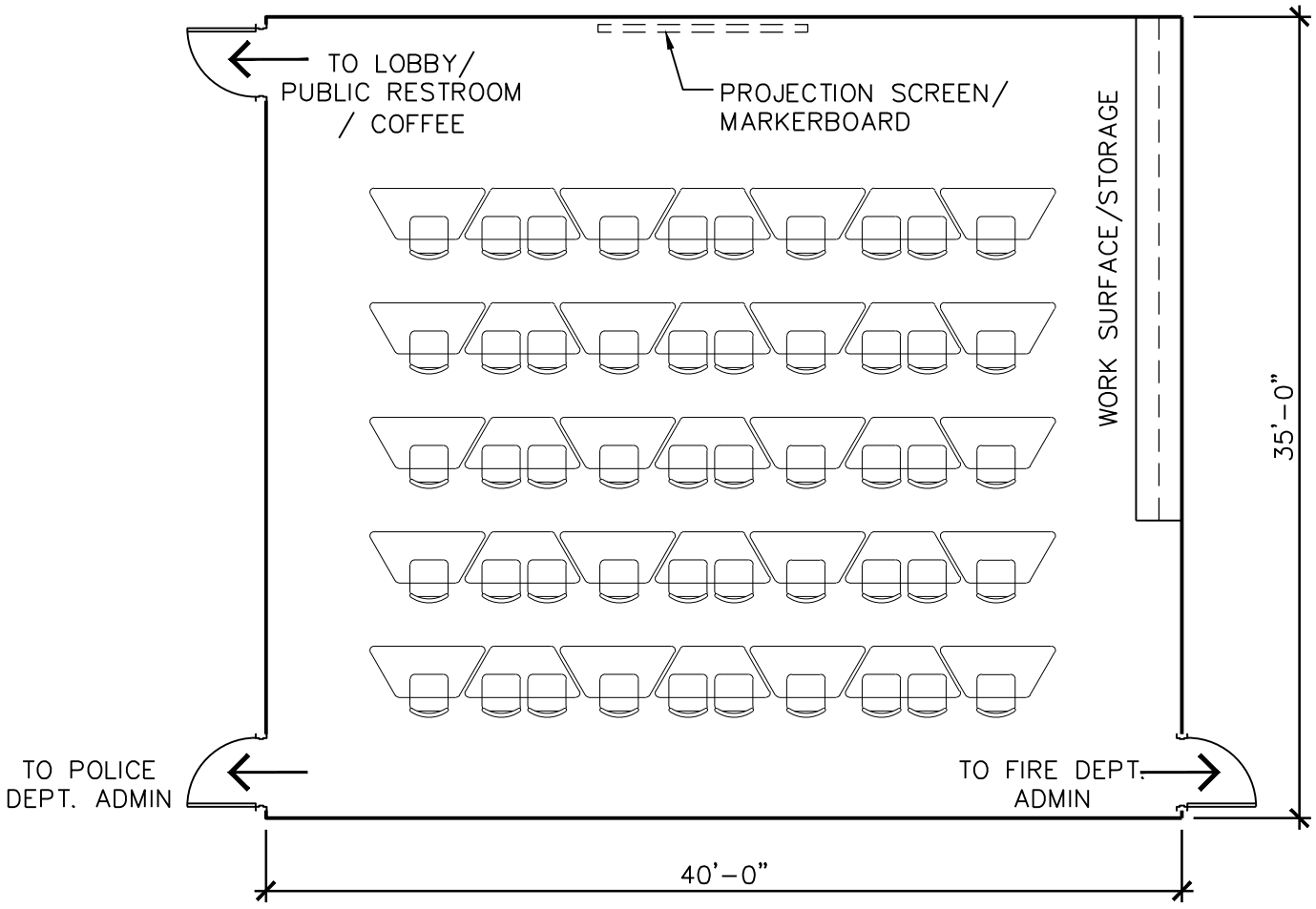

(50) AT 18"X 60" TABLES
(100) AT CHAIRS

1400 SF

TRAINING ROOM/ EOC

SCALE: 1/8"=1'-0"

architecture + design

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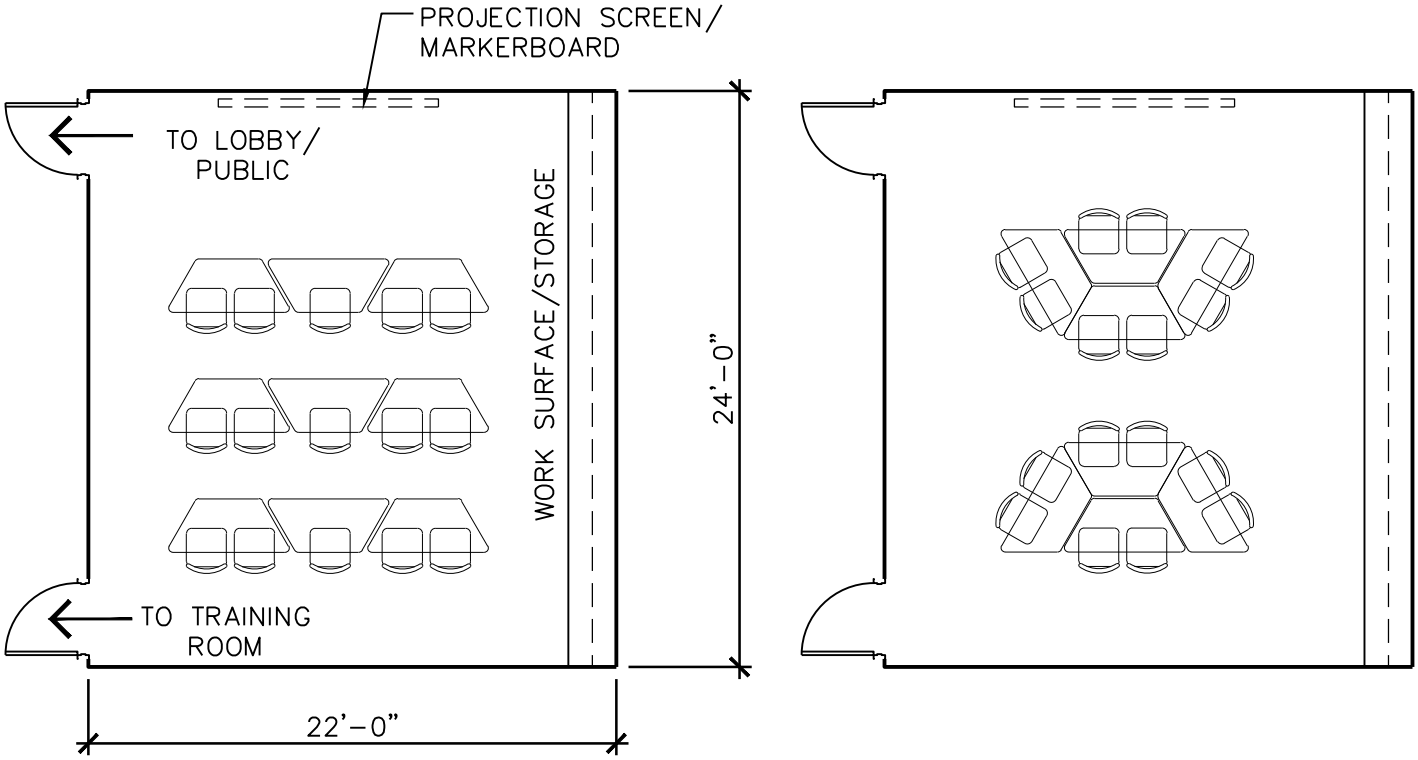

(15) AT 26" TABLES

528 SF

EOC BREAK-OUT ROOM

SCALE: 1/8"=1'-0"

architecture + design

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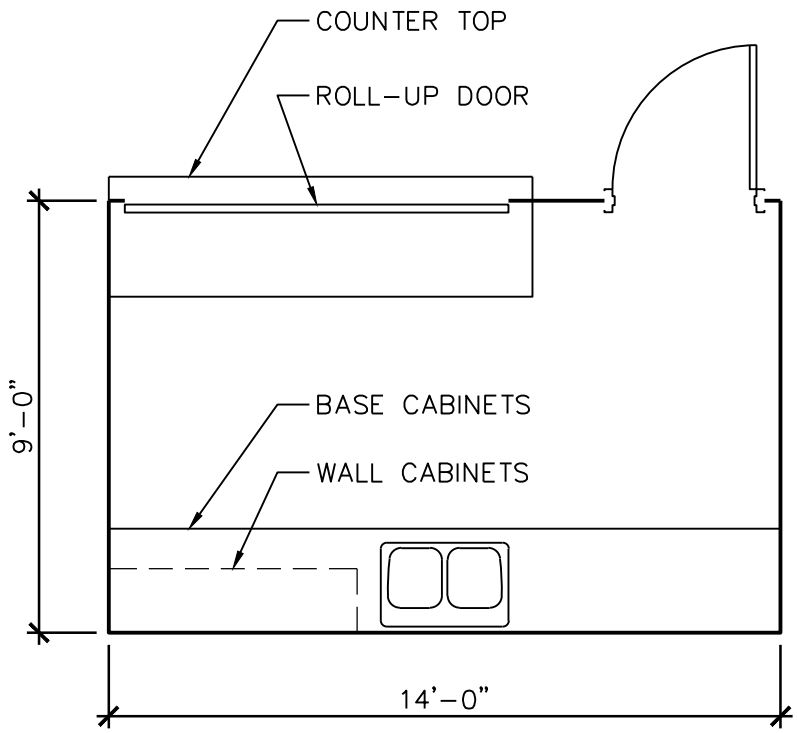

126 SF

HOSPITALITY

SCALE: 1/4"=1'-0"

800.469.4949
www.cr-architects.com

architecture + design

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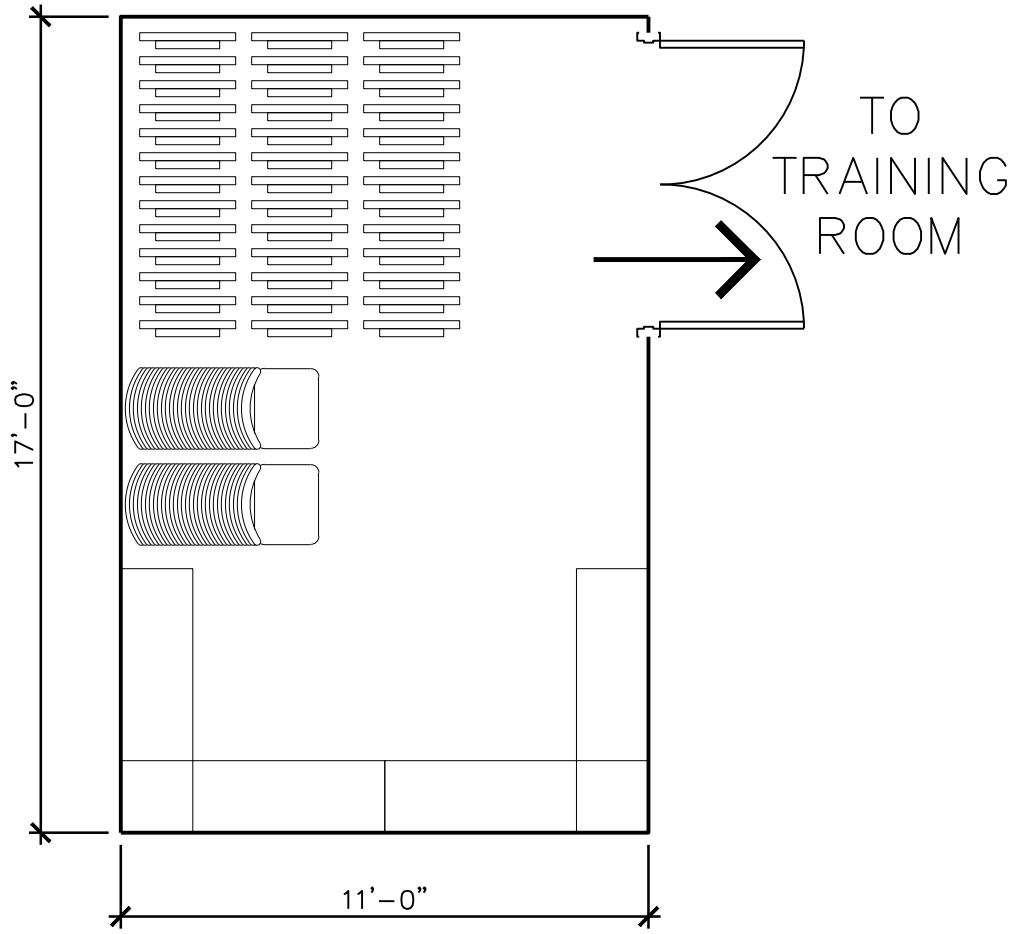

187 SF

TRAINING STORAGE

SCALE: 1/4"=1'-0"

CR architecture + design

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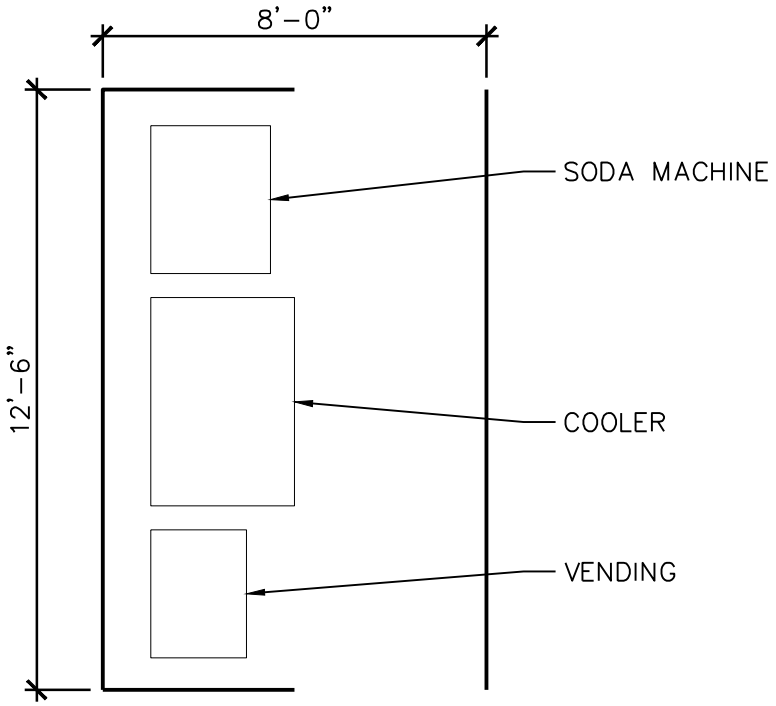

100 SF

VENDING / ICE MACHINE

SCALE: 1/4"=1'-0"

CR architecture + design

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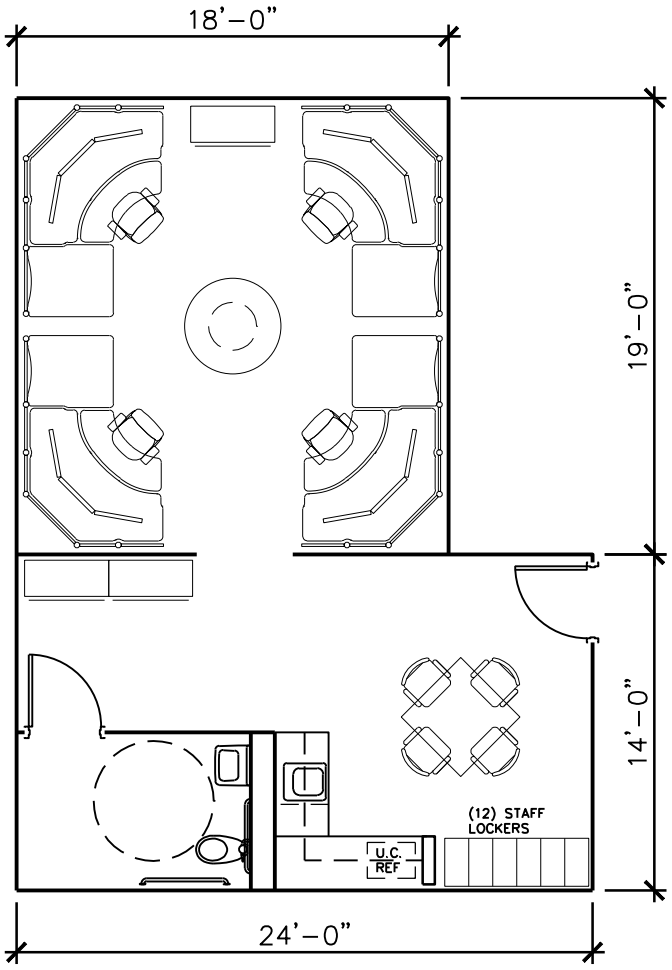
SHARED SPACES
SHARED FUNCTIONS



678 SF

DISPATCH

SCALE: 1/8"=1'–0"

CR architecture + design

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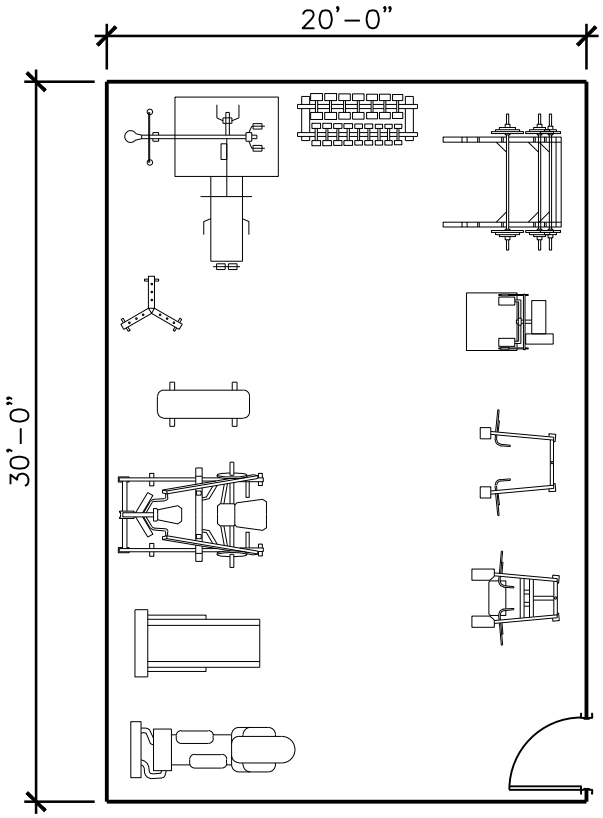

600 SF

FITNESS ROOM

SCALE: 1/8"=1'–0"

CR architecture + design

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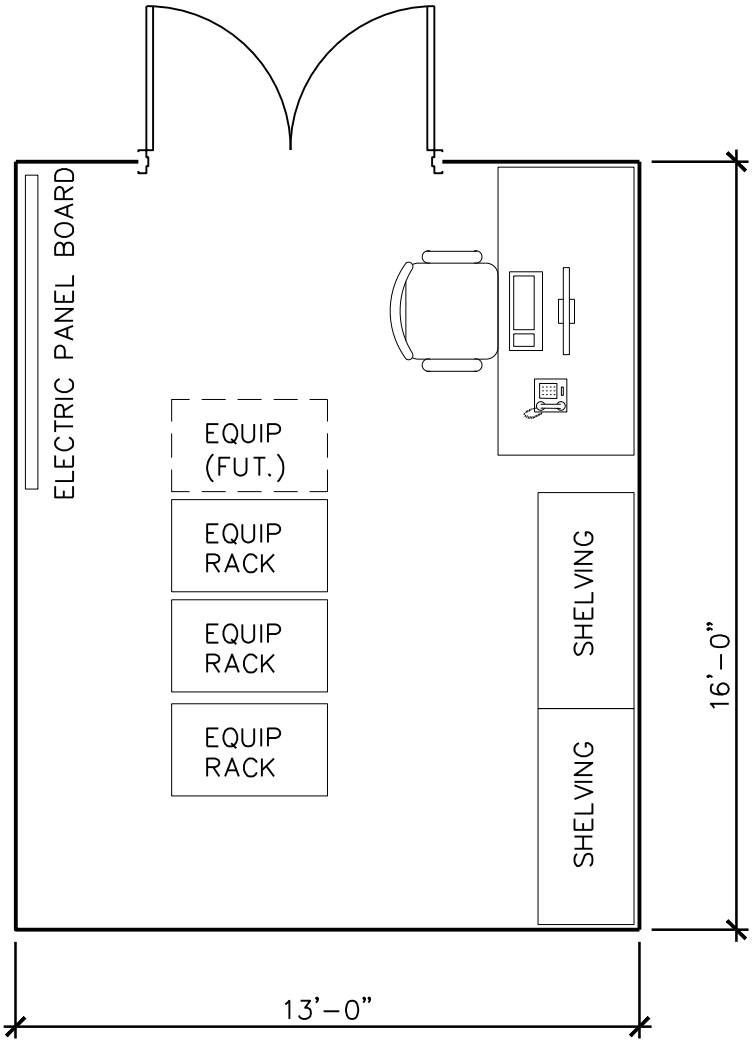

208 SF

SERVER ROOM

SCALE: 1/4"=1'-0"

800.469.4949
www.cr-architects.com

architecture + design

CINCINNATI 600 Vine Street suite 2210 Cincinnati, OH 45202
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PROJECT TITLE
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900414.02

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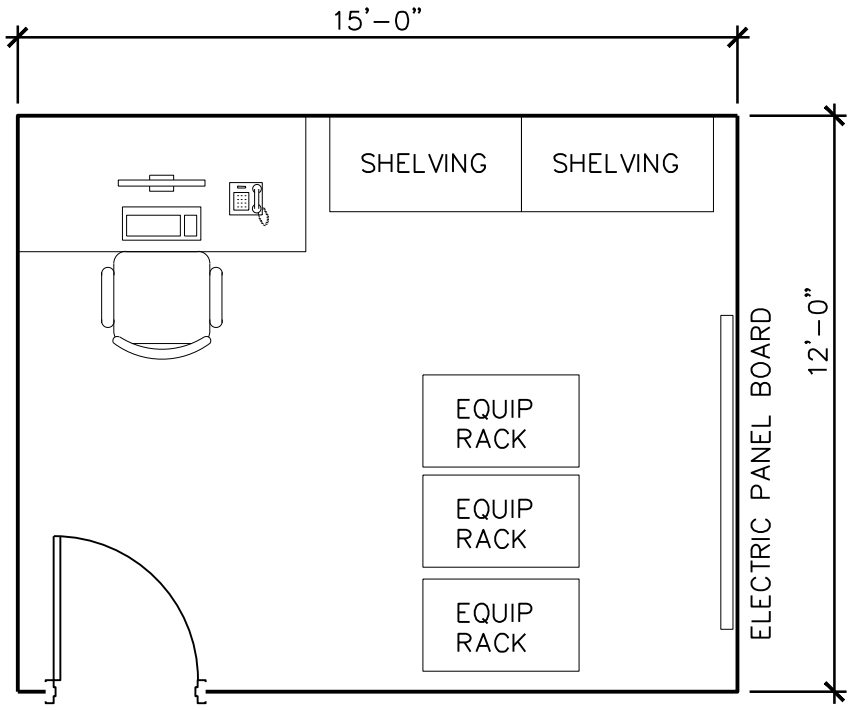

- CLOSE PROXIMITY TO DISPATCH

180 SF

RADIO ROOM

SCALE: 1/4"=1'-0"

architecture + design

800.469.4949
www.cr-architects.com

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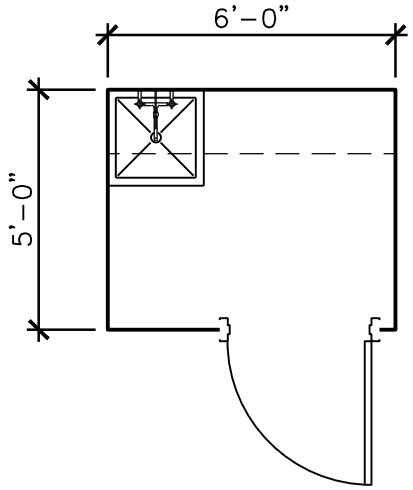

30 SF

JANITOR CLOSET

SCALE: 1/4"=1'-0"

CR architecture + design

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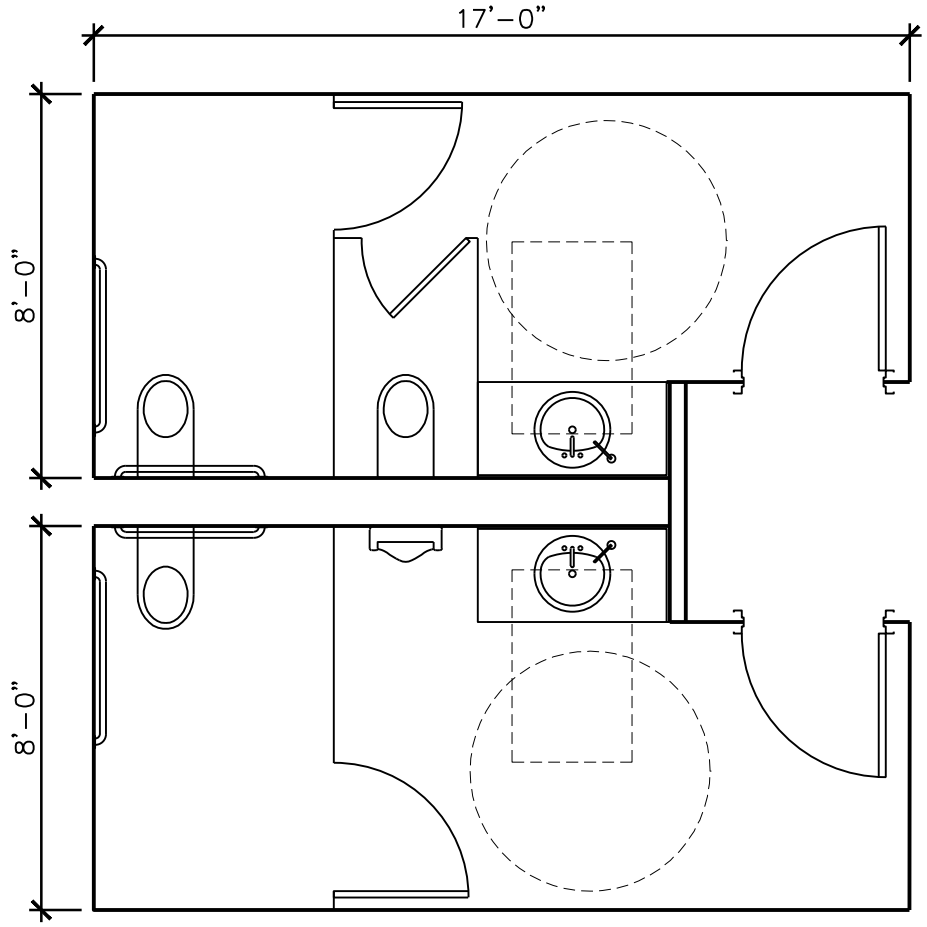

290 SF

RESTROOMS

SCALE: 1/4"=1'-0"

CR architecture + design

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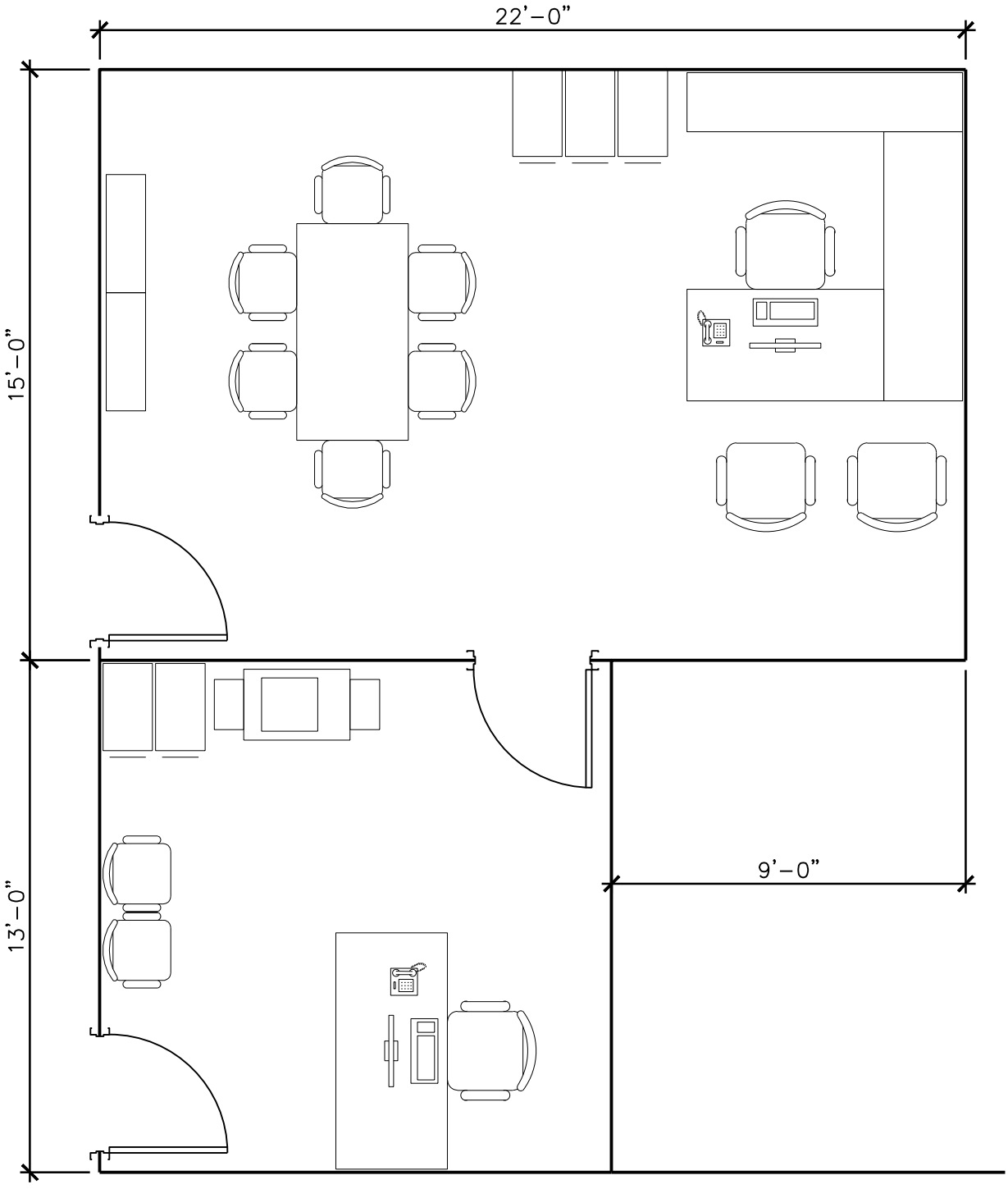
POLICE
ADMINISTRATION SPACES



500 SF

CHIEF'S SUITE

SCALE: 1/4"=1'–0"

CR architecture + design

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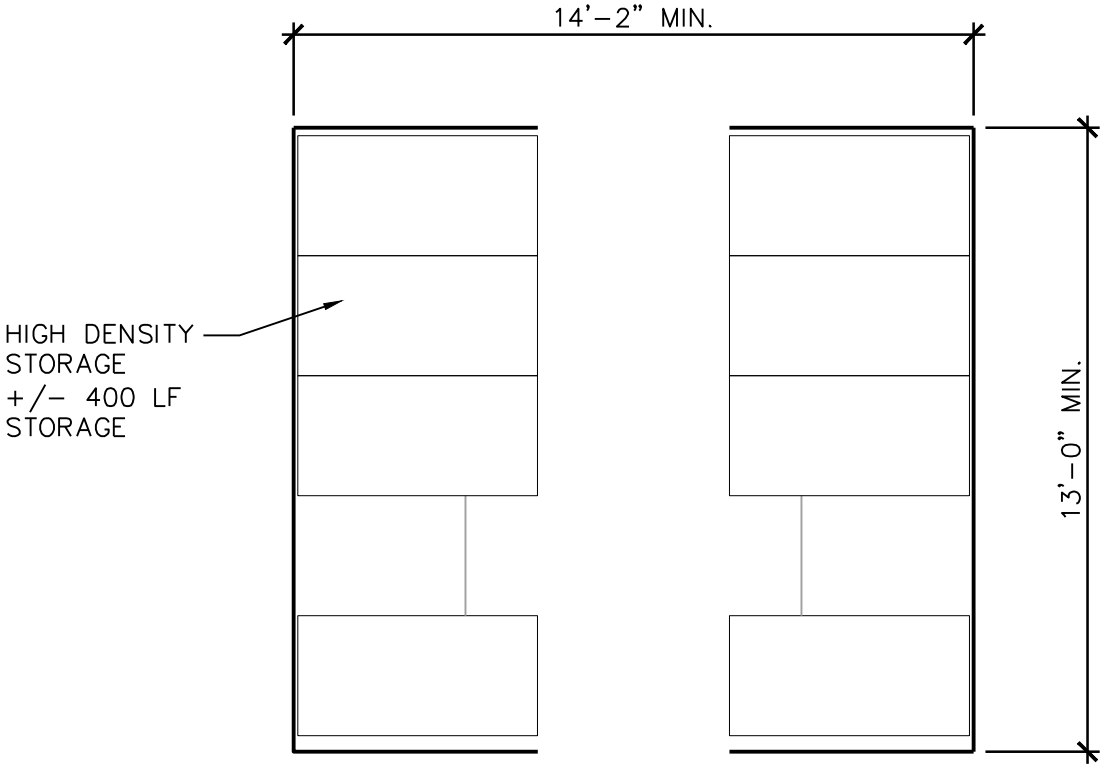

184 SF

RECORDS STORAGE

SCALE: 1/4"=1'-0"

architecture + design

800.469.4949
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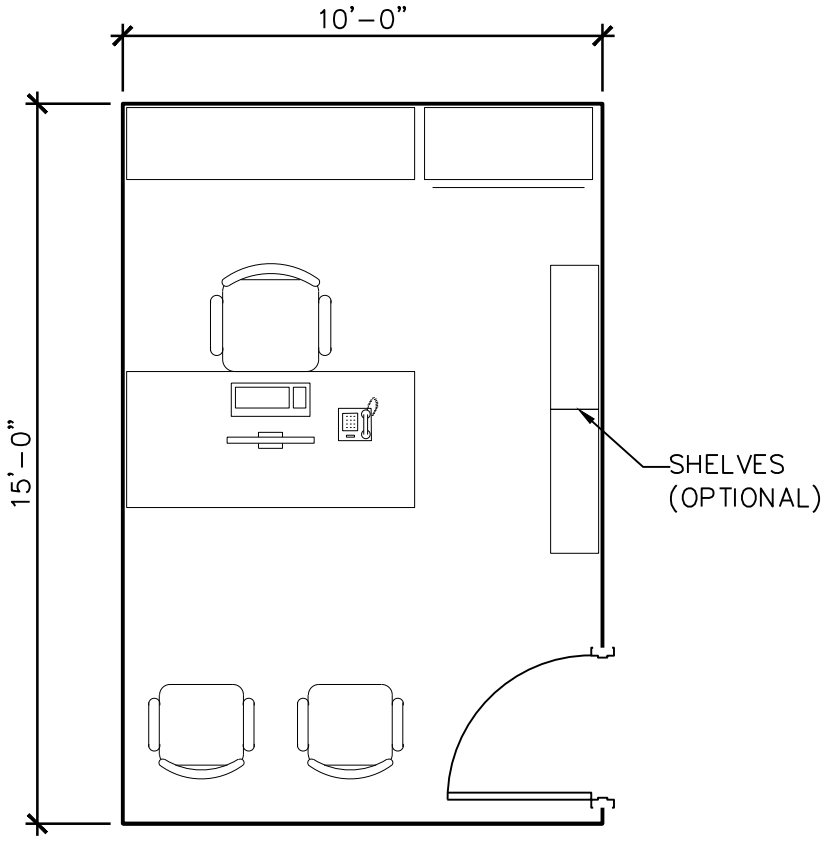

- PATROL LT. (NR. PATROL ROOM)
- SPECIALIST LT. (NR. SPECIALISTS)
- ADMIN LT. (NR. CHIEF'S OFFICE)

150 SF

LIEUTENANT'S OFFICE

SCALE: 1/4"=1'–0"

CR architecture + design

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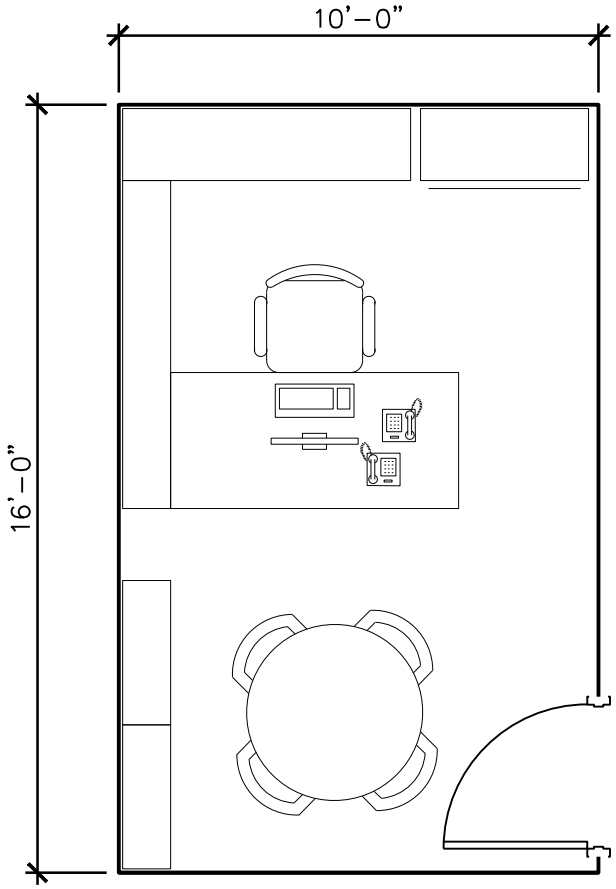

160 SF

TRAINING OFFICER

SCALE: 1/4"=1'-0"

CR architecture + design

800.469.4949
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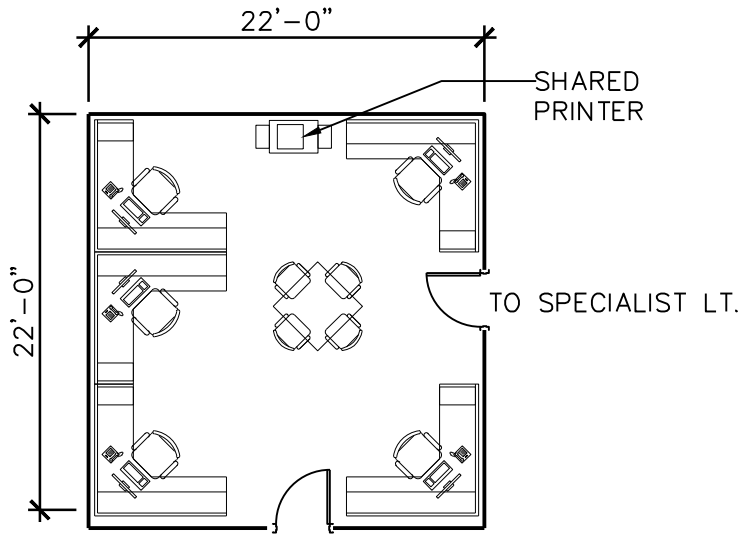

484 SF

SPECIALIST OPEN OFFICE

SCALE: 3/32"=1'-0"

CR architecture + design

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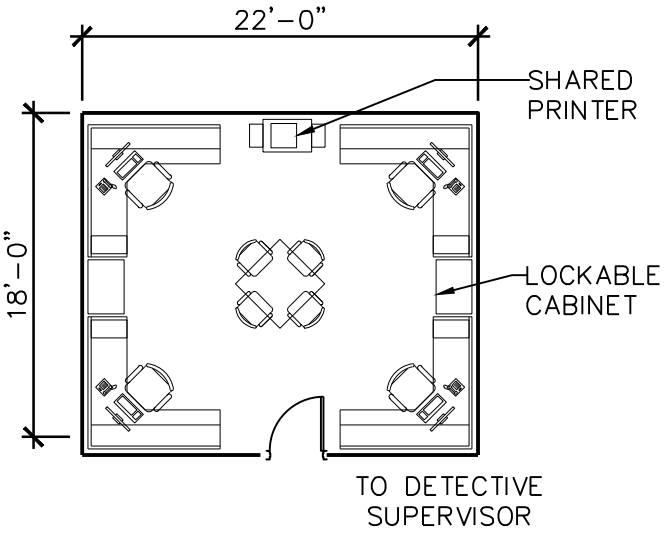

396 SF

DETECTIVES OPEN OFFICE

SCALE: 3/32"=1'-0"

architecture + design

800.469.4949
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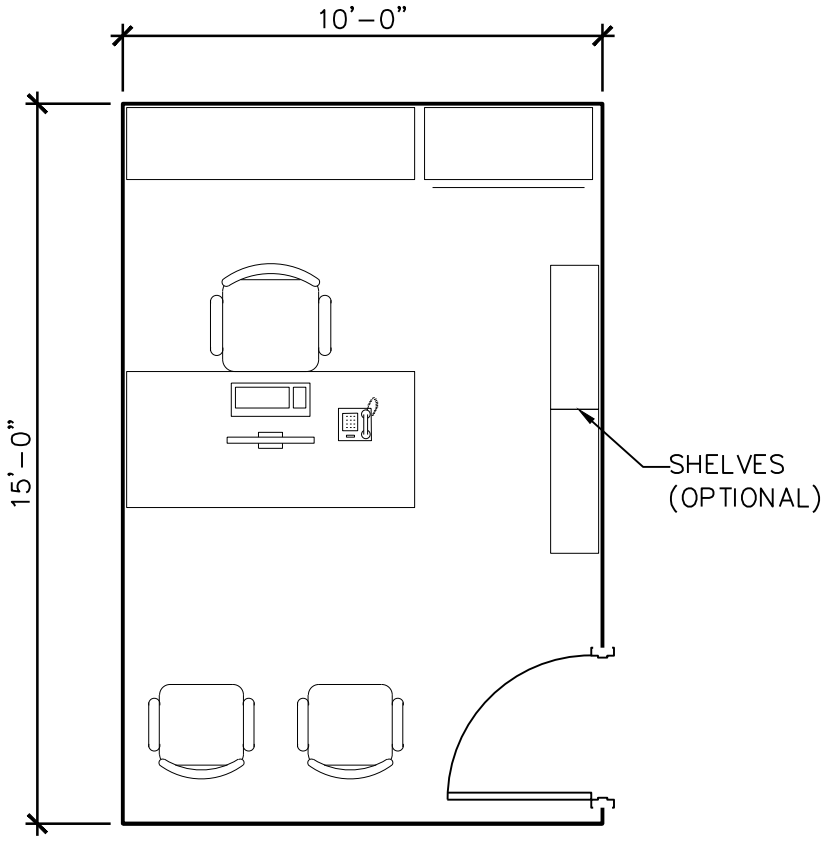

150 SF

DETECTIVE SUPERVISOR

SCALE: 1/4"=1'-0"

CR architecture + design

800.469.4949
www.cr-architects.com

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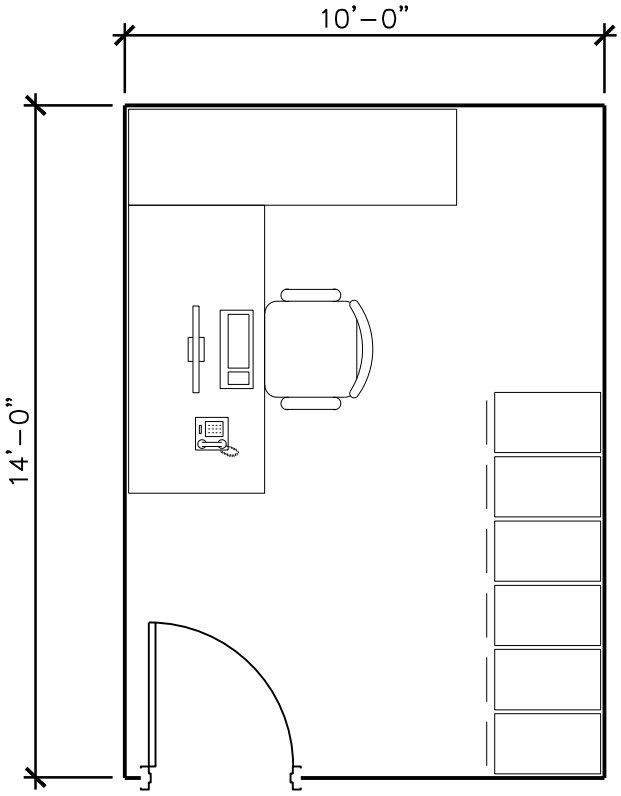

PROSECUTOR – NR. ADMIN.
RECORDS – NR. LOBBY

140 SF

PROSECUTOR + RECORDS

SCALE: 1/4"=1'–0"

CR architecture + design

800.469.4949
www.cr-architects.com

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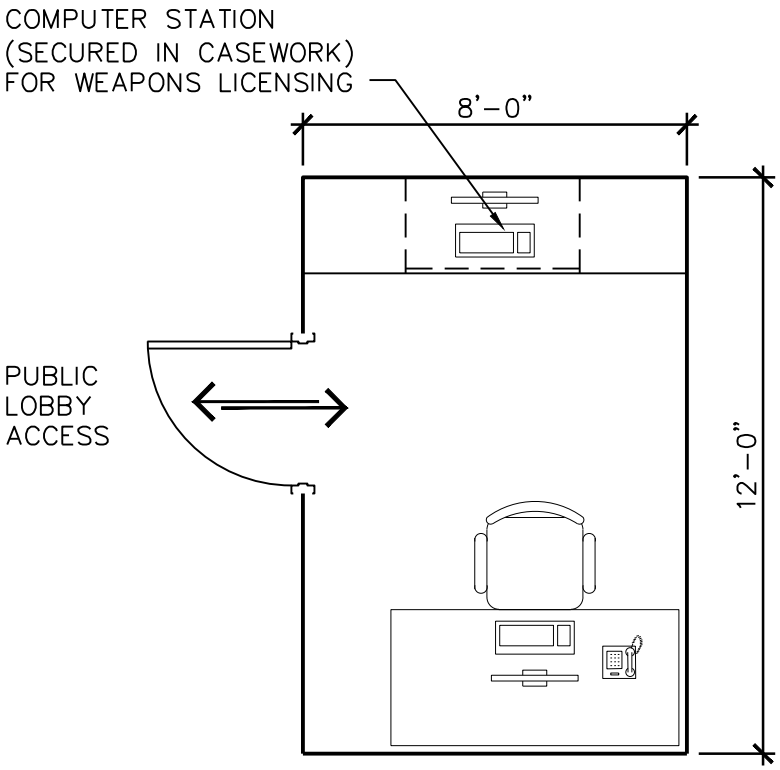

96 SF

FIREARMS PERMIT

SCALE: 1/4"=1'-0"

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architecture + design

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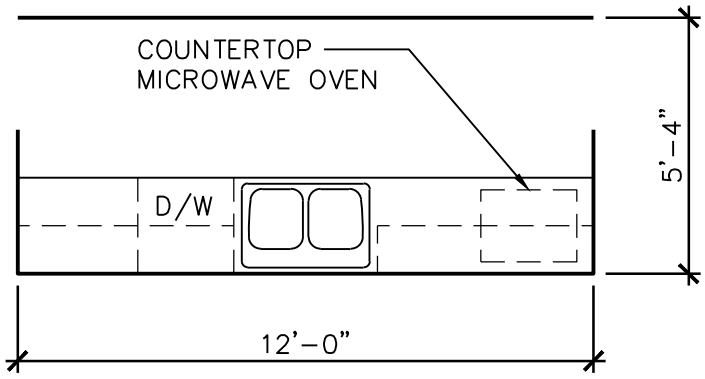

64 SF

KITCHENETTE

SCALE: 1/4"=1'-0"

CR architecture + design

800.469.4949
www.cr-architects.com

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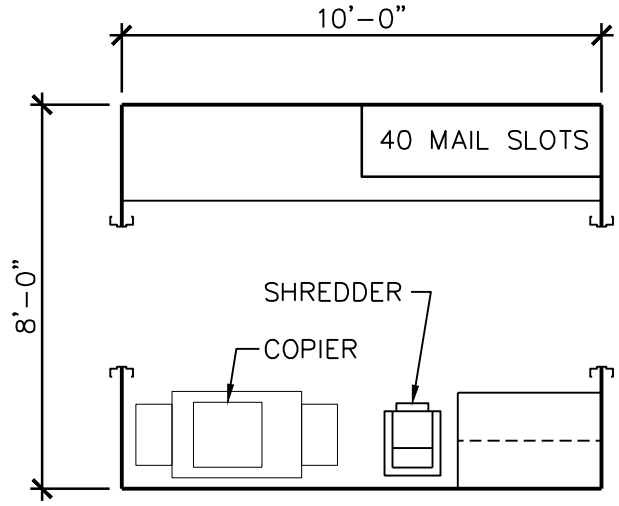

80 SF

WORK ROOM

SCALE: 1/4"=1'-0"

architecture + design

800.469.4949
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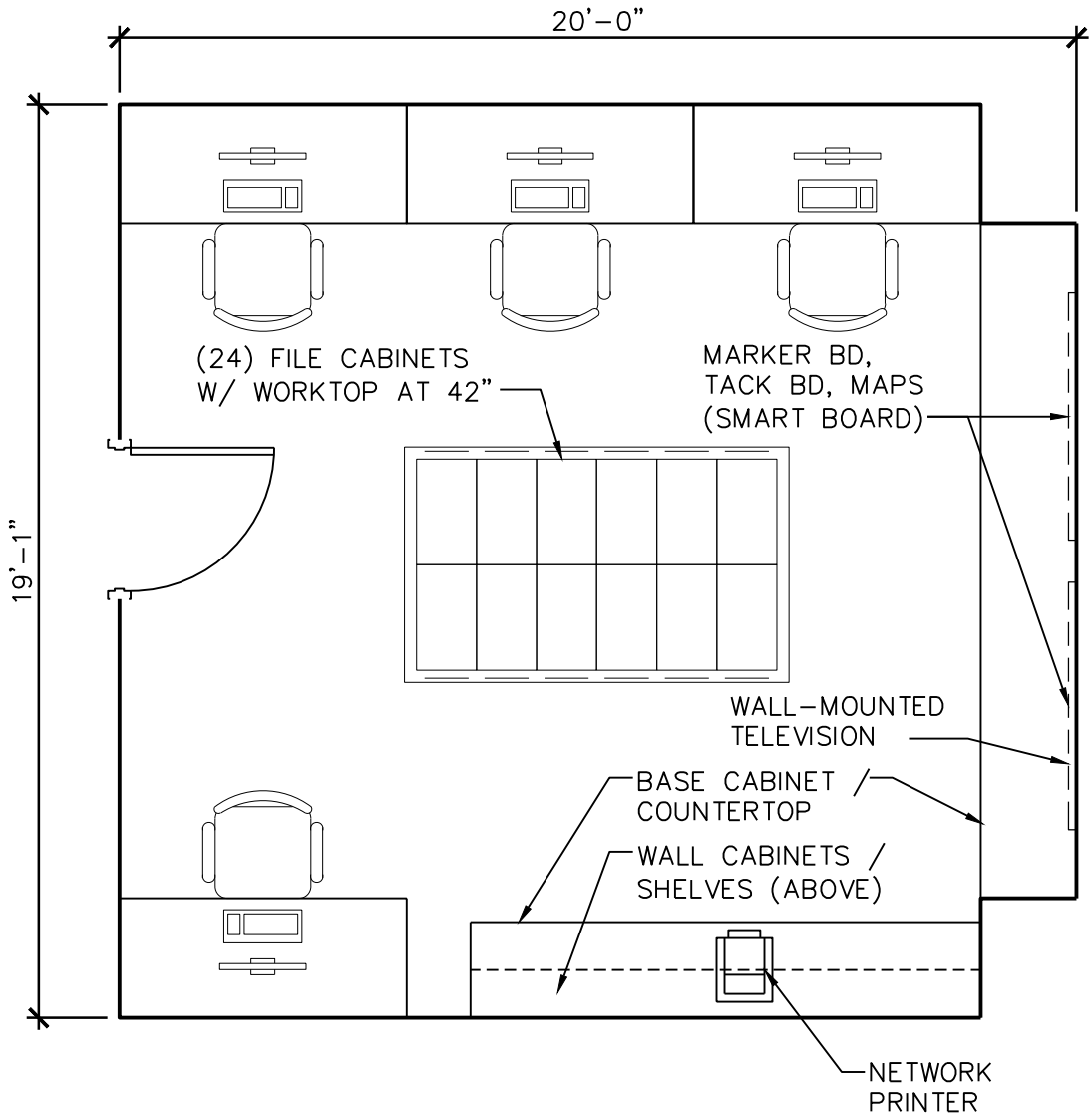
POLICE OPERATIONS



- ADJACENT TO BREAK ROOM
- (4) WORKSTATIONS FOR REPORTS

372 SF

PATROL AREA - REPORT ROOM

SCALE: 1/4"=1'–0"

CR architecture + design

800.469.4949
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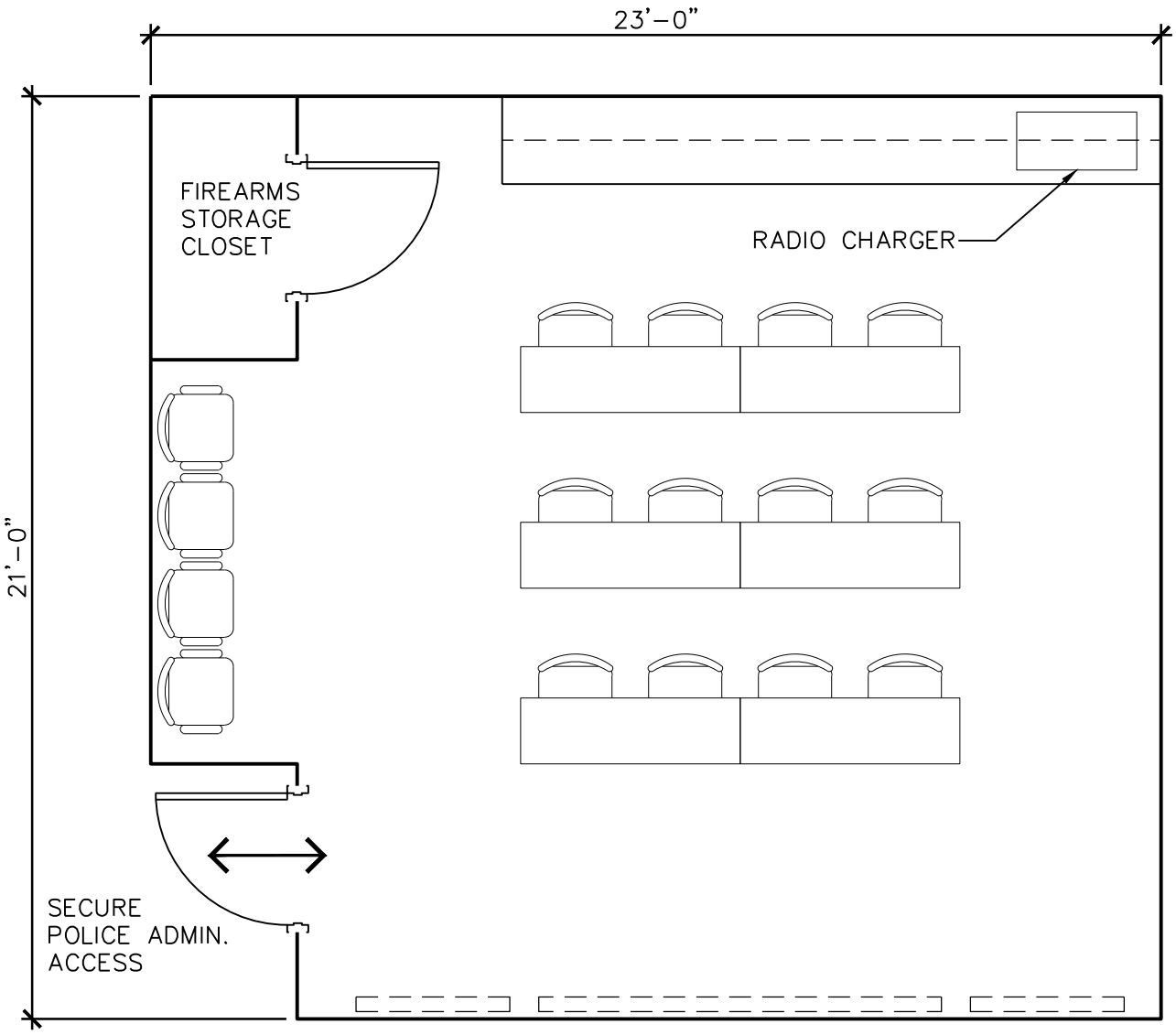

483 SF

PATROL AREA - BRIEFING ROOM

SCALE: 1/4"=1'-0"

CR architecture + design

800.469.4949
www.cr-architects.com

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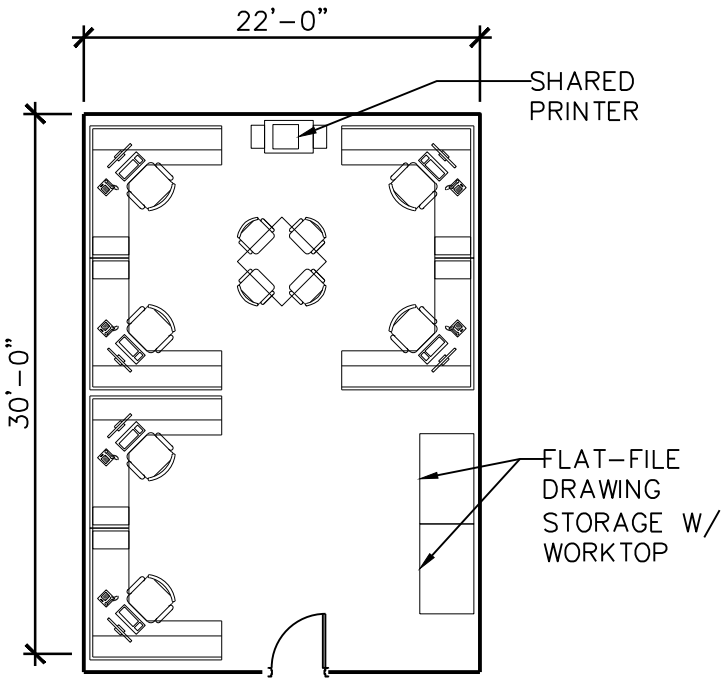

660 SF

SEARGANT'S OPEN OFFICE

SCALE: 3/32"=1'-0"

architecture + design

800.469.4949
www.cr-architects.com

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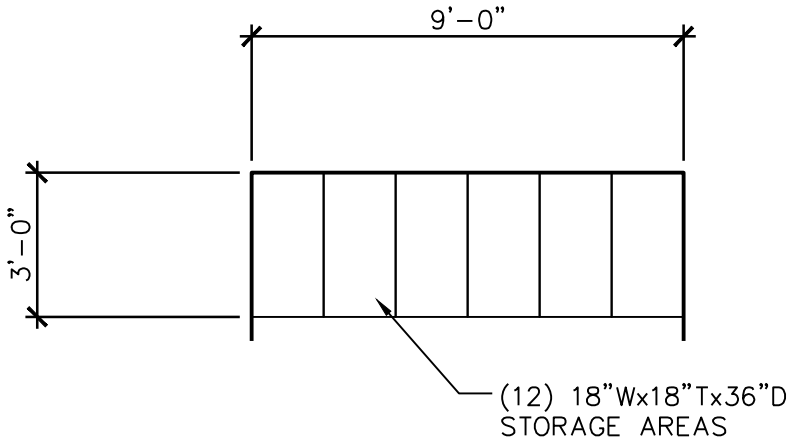

27 SF

PATROL AND DUTY BAG STORAGE

SCALE: 1/4"=1'-0"

800.469.4949
www.cr-architects.com

architecture + design

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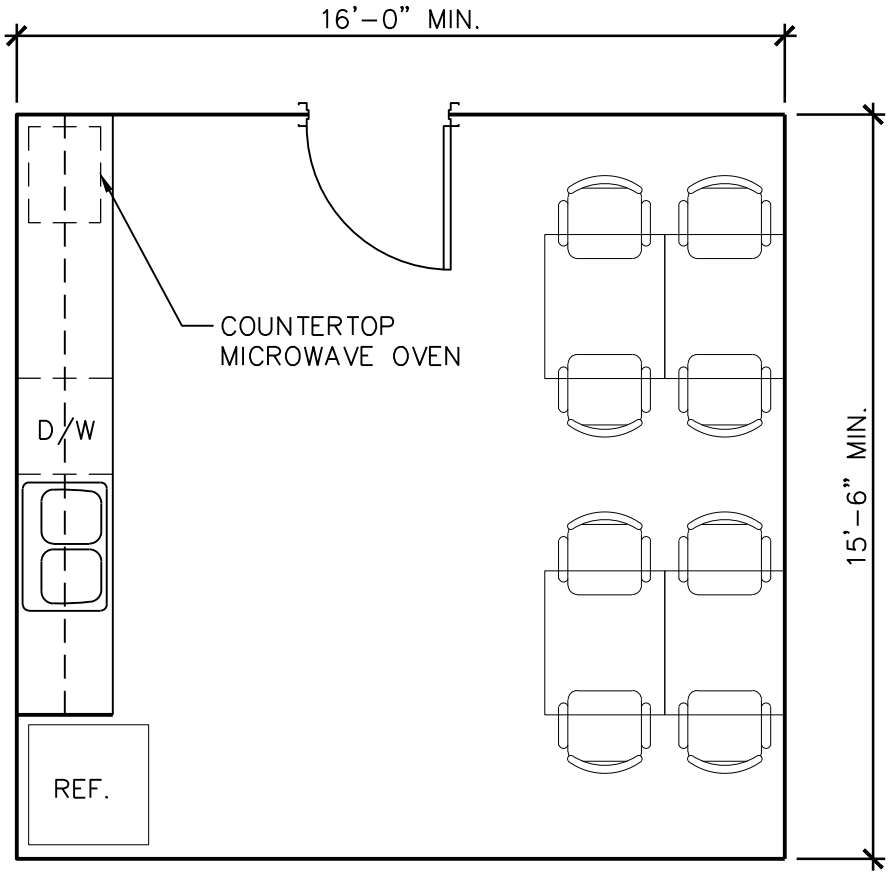

248 SF

BREAK ROOM

SCALE: 1/4"=1'-0"

CR architecture + design

800.469.4949
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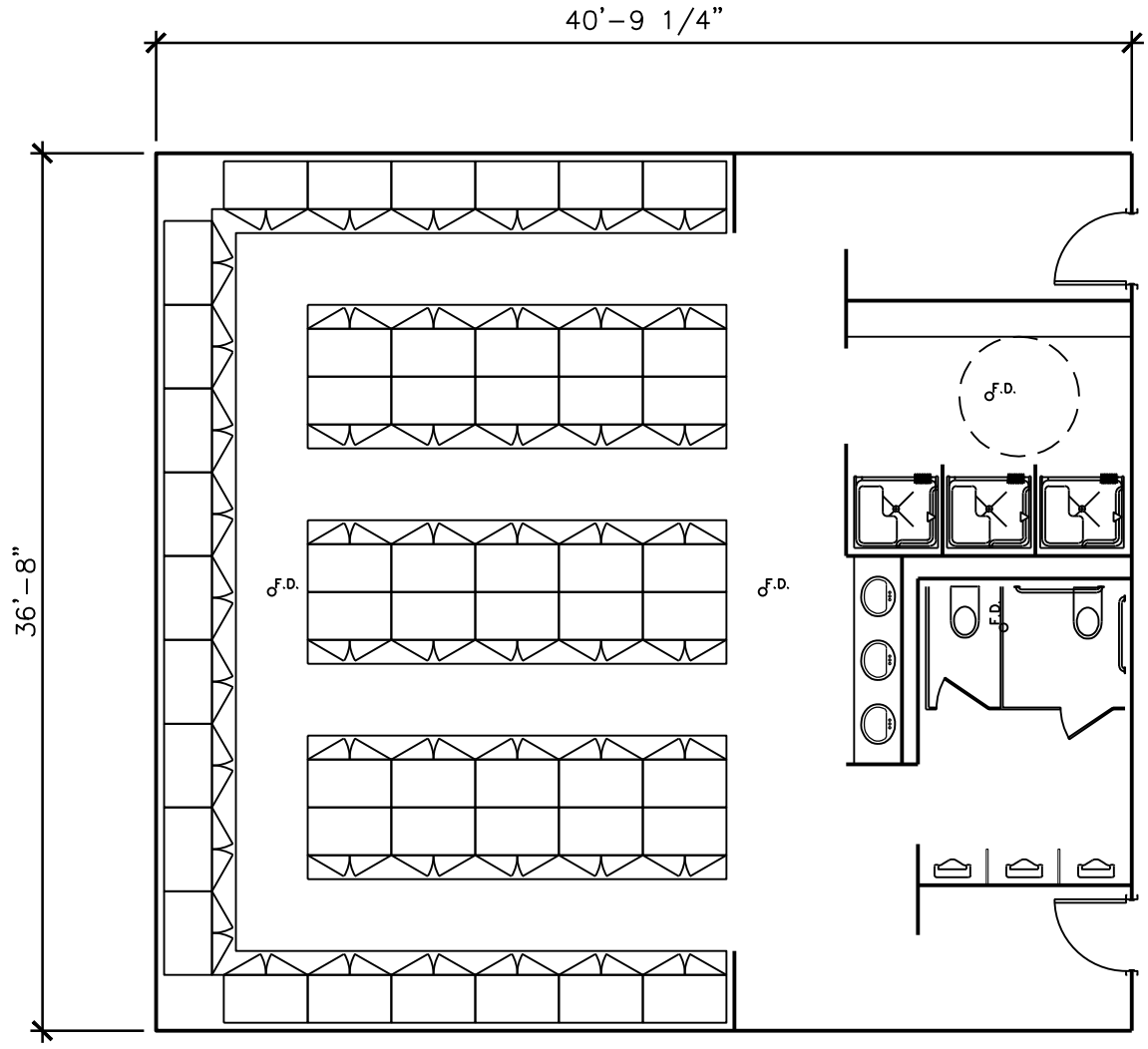

1495 SF

MEN'S LOCKER ROOM

SCALE: 1/8"=1'-0"

architecture + design

800.469.4949
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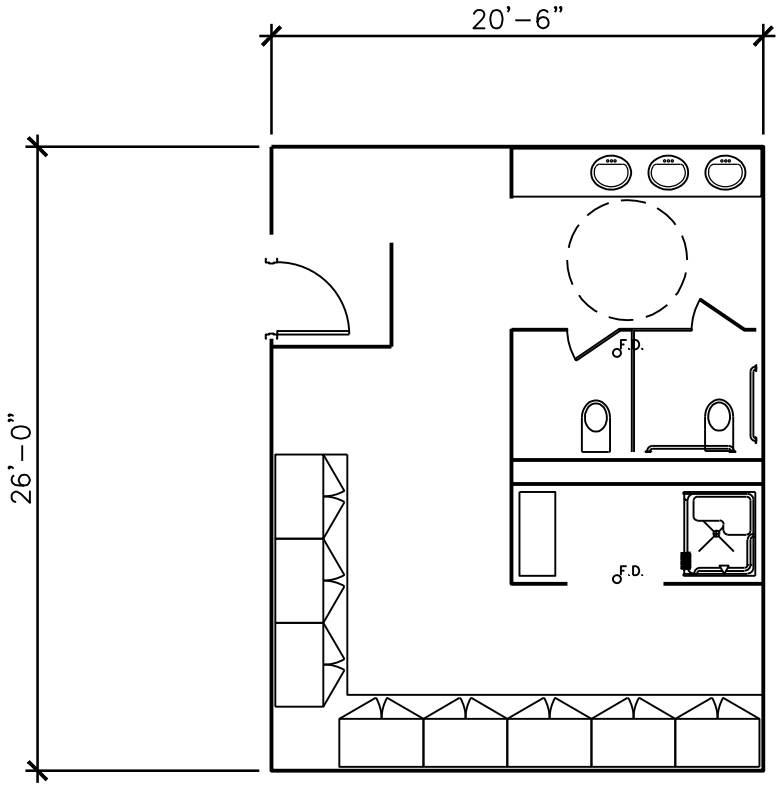

533 SF

WOMEN'S LOCKER / SHOWER

SCALE: 1/8"=1'-0"

CR architecture + design

800.469.4949
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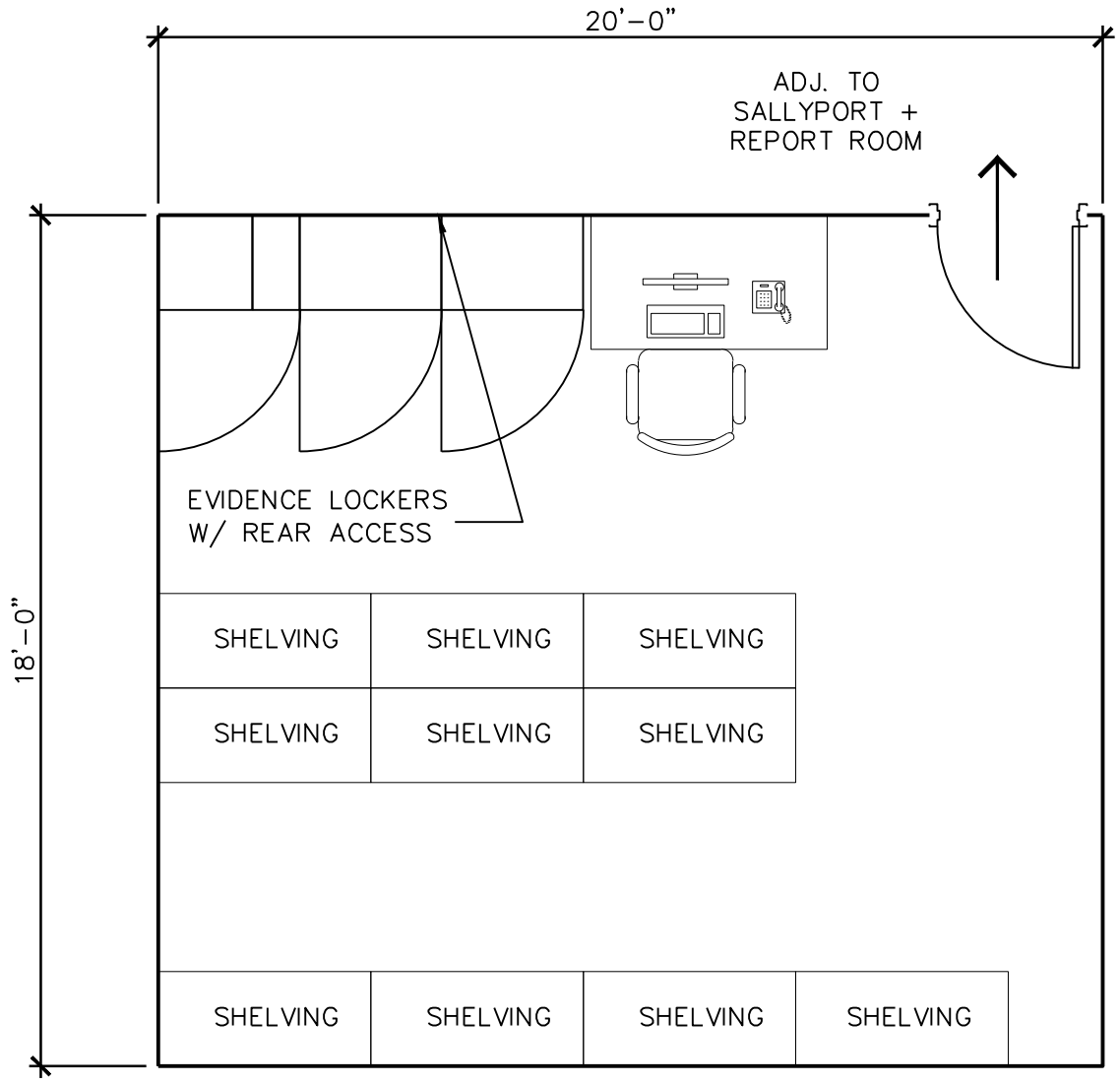

360 SF

EVIDENCE STORAGE

SCALE: 1/4"=1'-0"

architecture + design

800.469.4949
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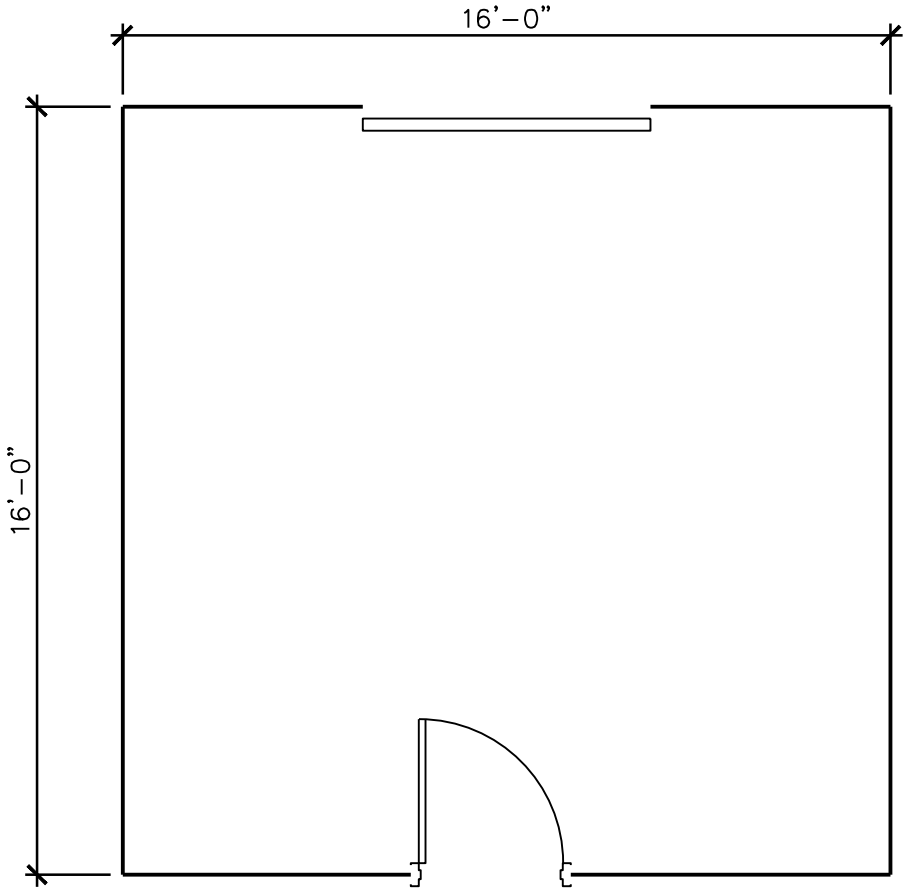

256 SF

FOUND ITEMS STORAGE

SCALE: 1/4"=1'–0"

CR architecture + design

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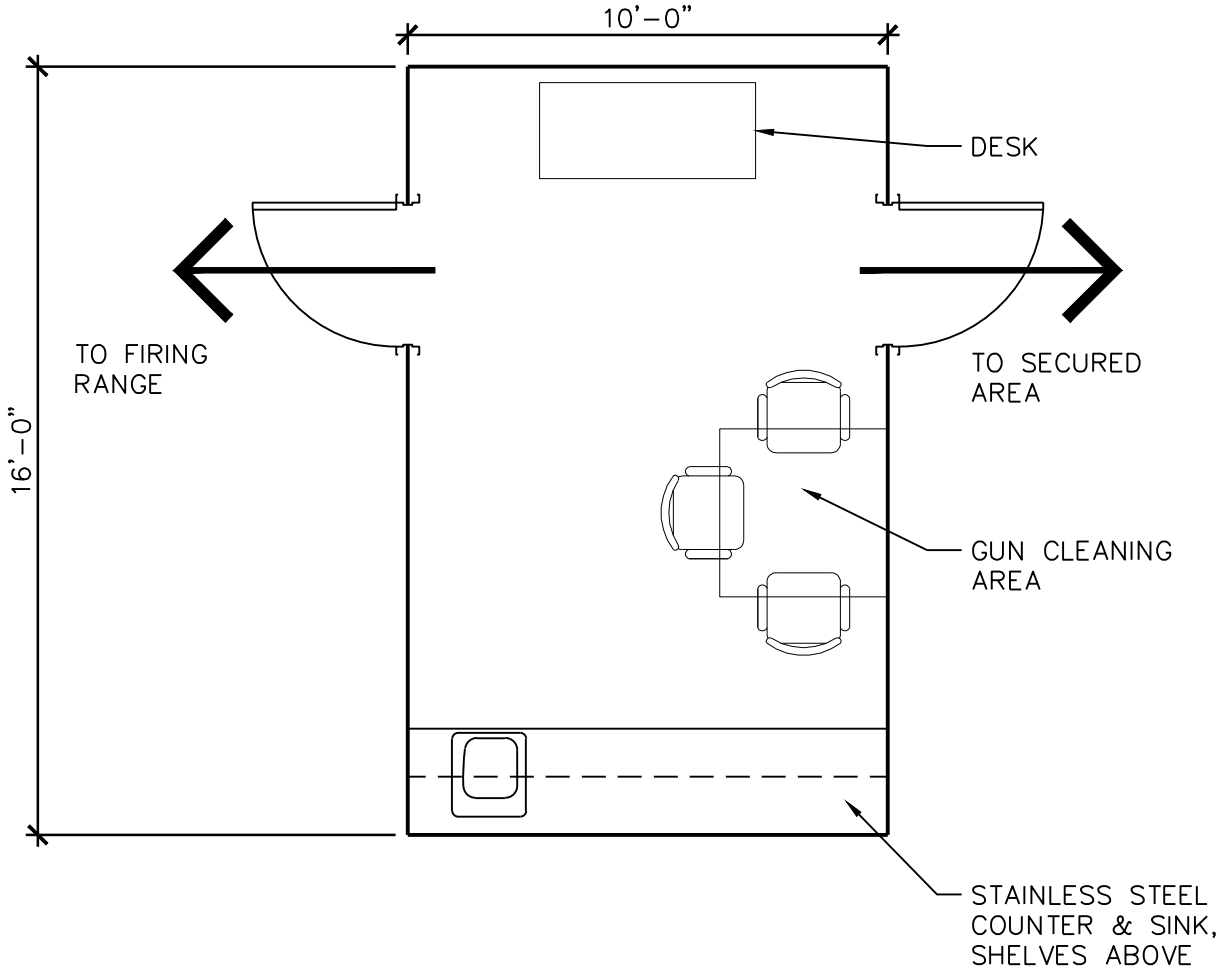

160 SF

ARMORY + WEAPONS OFFICE

SCALE: 1/4"=1'-0"

architecture + design

800.469.4949
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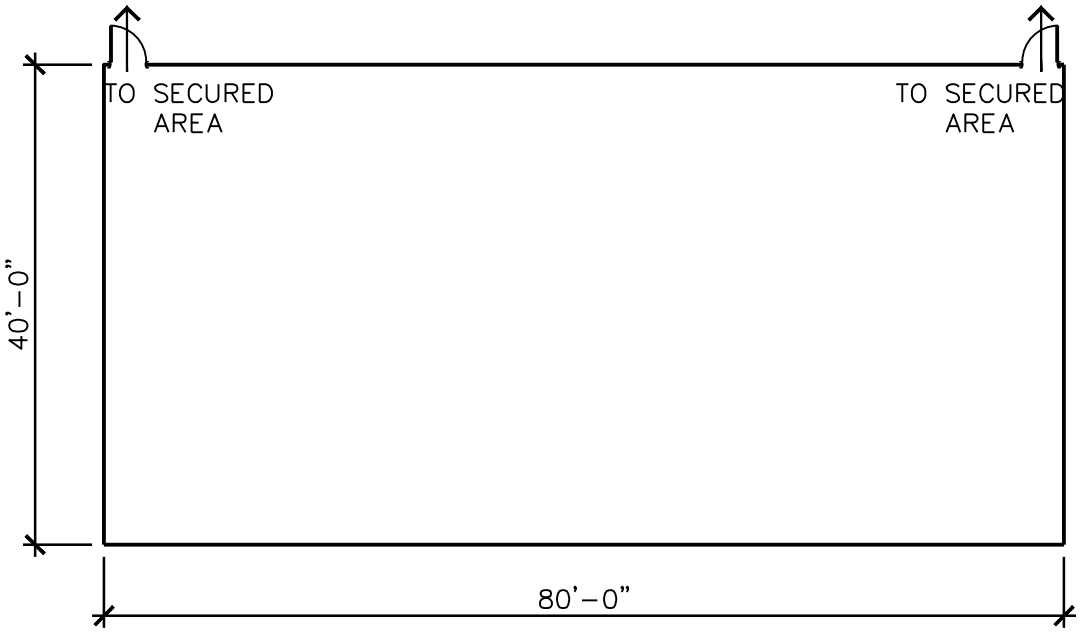

3200 SF

SIMUNITION TRAINING / EMERGENCY SHELTER

SCALE: 1/16"=1'-0"

CR architecture + design

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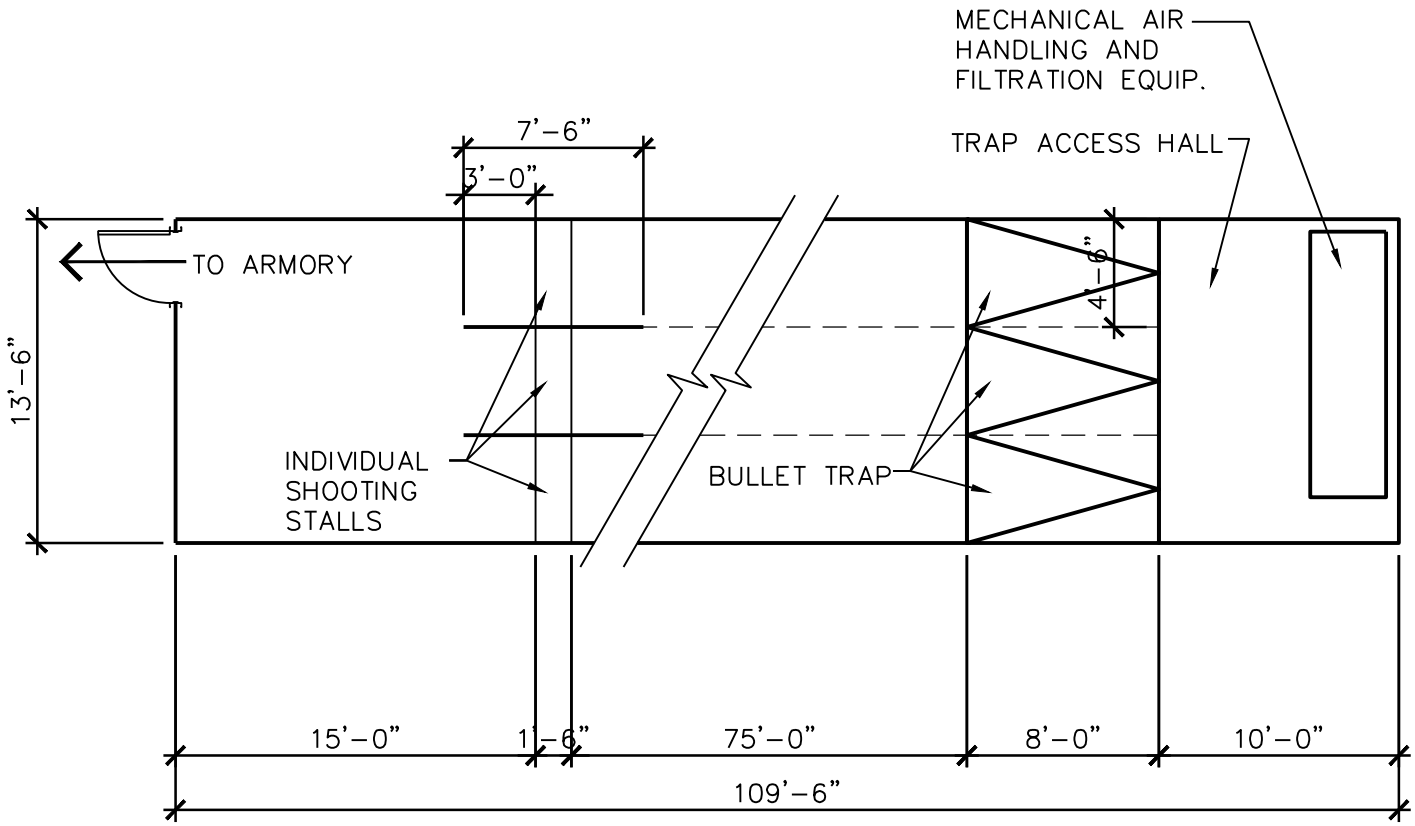

1480 SF

INDOOR FIRING RANGE

SCALE: 1/8"=1'-0"

CR architecture + design

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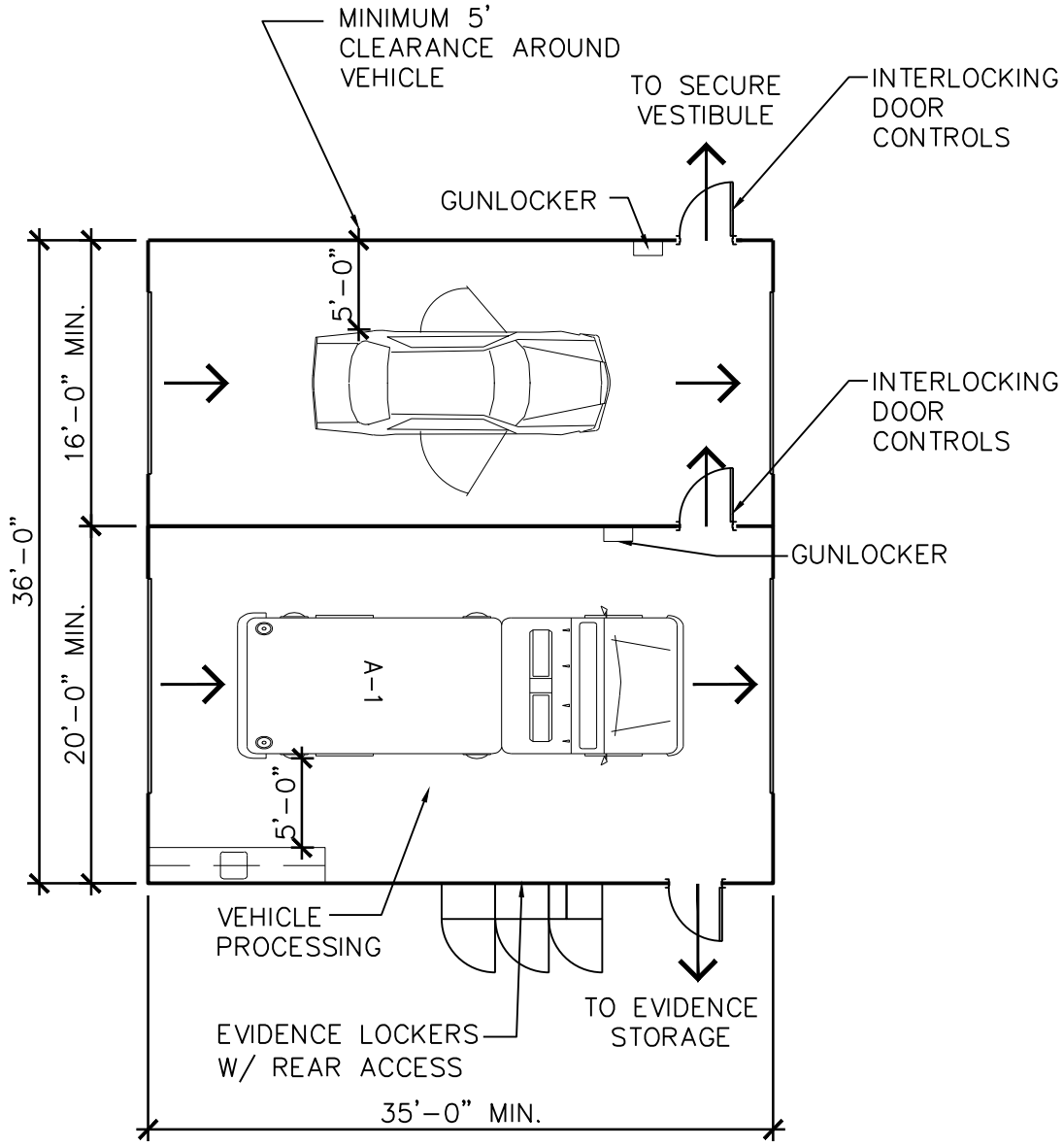

1260 SF

SALLY PORT (VEHICLE-SIDE BY SIDE, PULL THROUGH)

SCALE: 3/32"=1'-0"

architecture + design

800.469.4949
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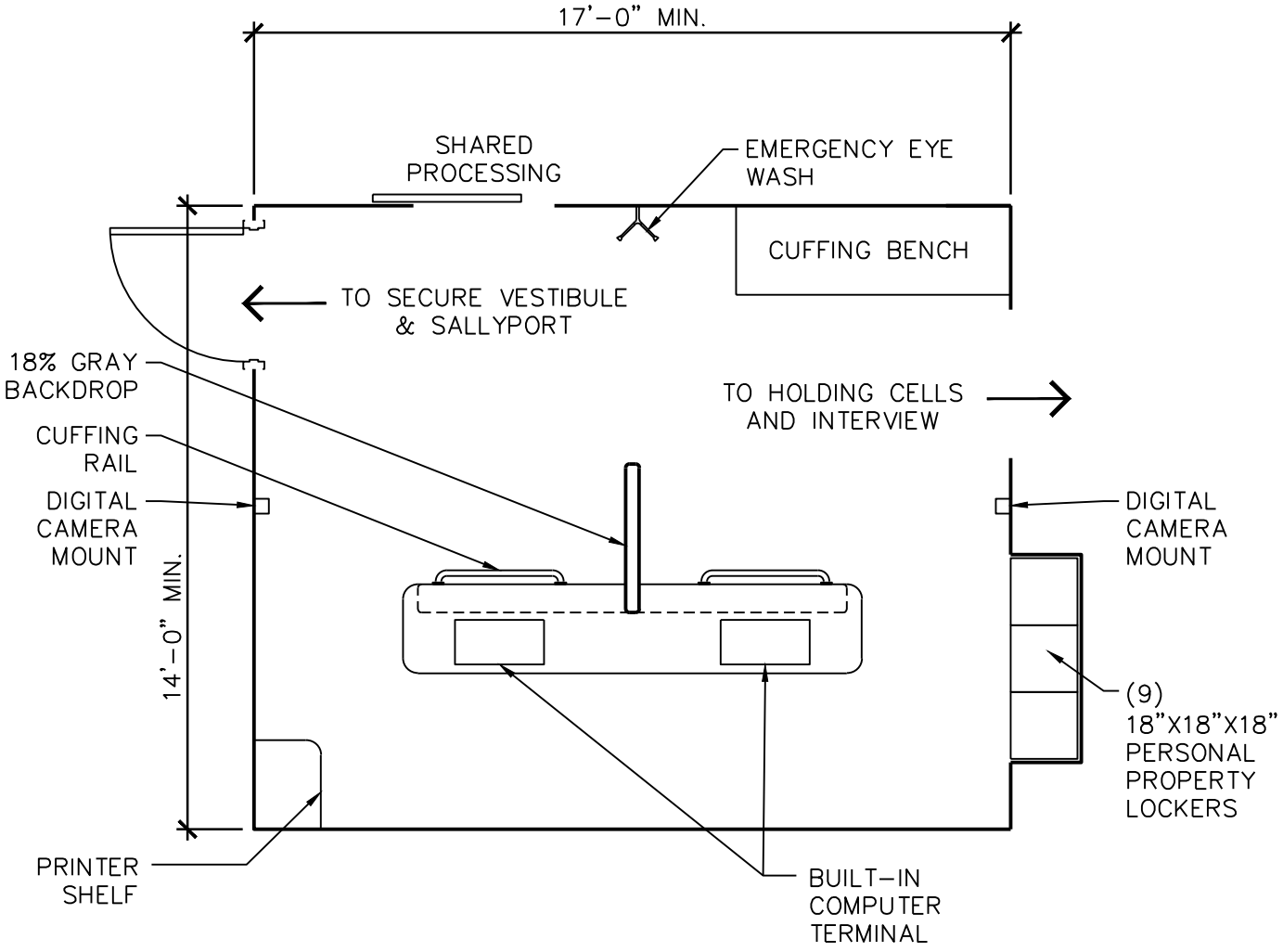

238 SF

BOOKING + PROCESSING

SCALE: 1/4"=1'-0"

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architecture + design

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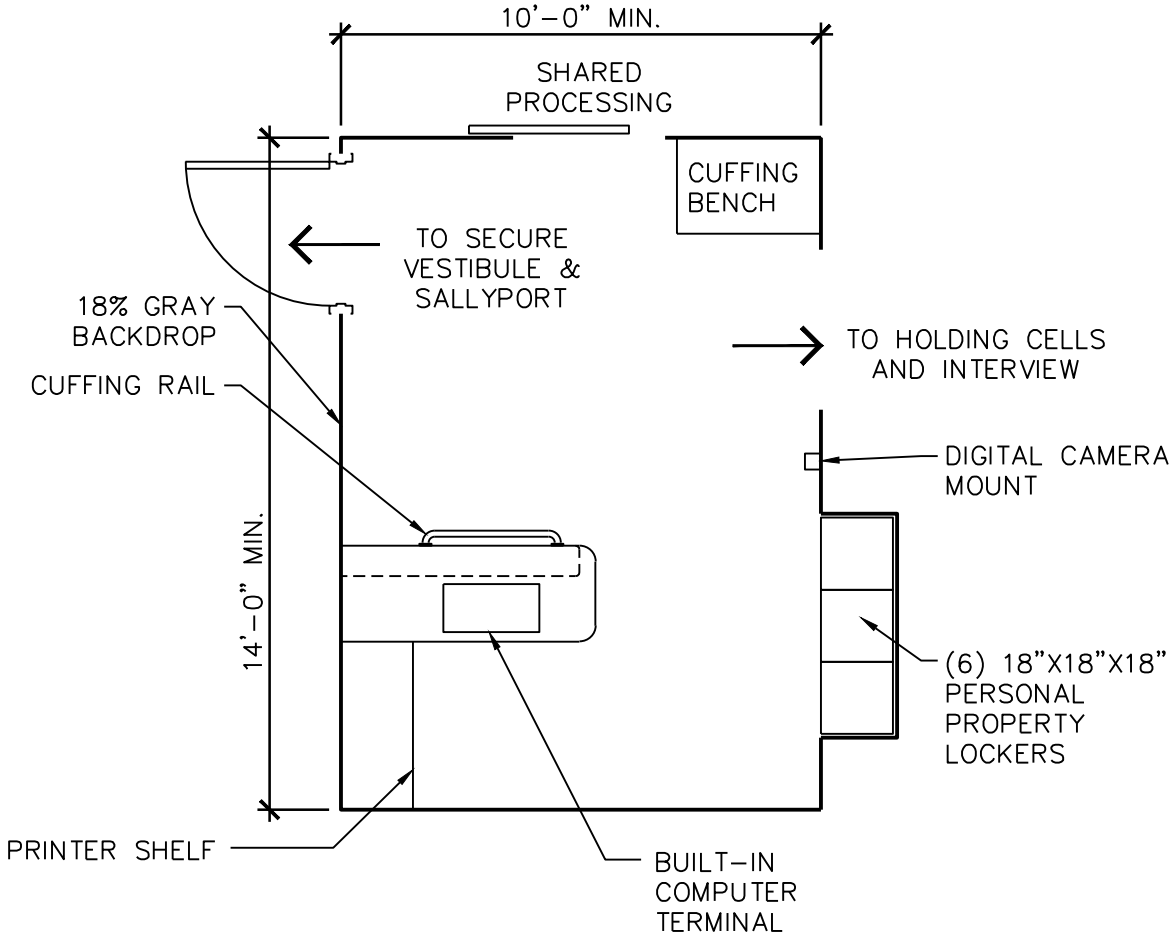

140 SF

JUVENILE BOOKING + PROCESSING

SCALE: 1/4"=1'-0"

architecture + design

800.469.4949
www.cr-architects.com

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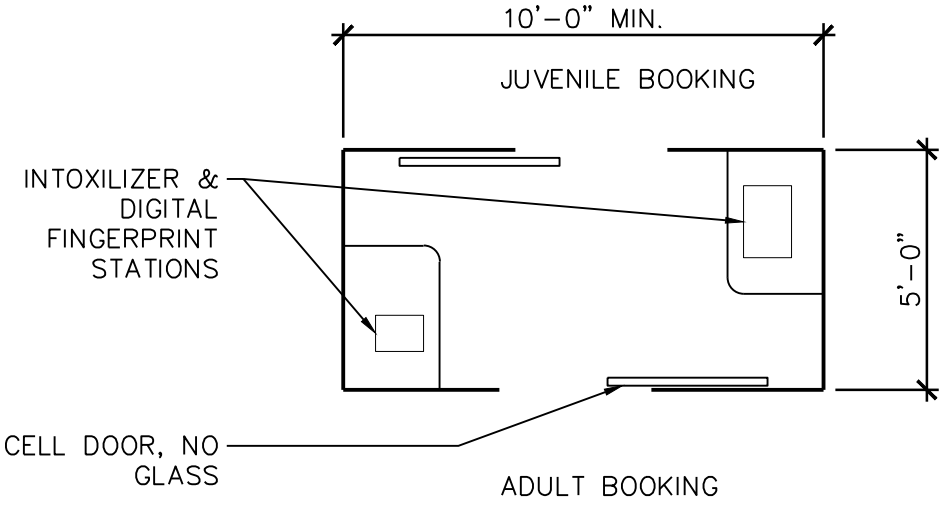

50 SF

SHARED PROCESSING

SCALE: 1/4"=1'-0"

architecture + design

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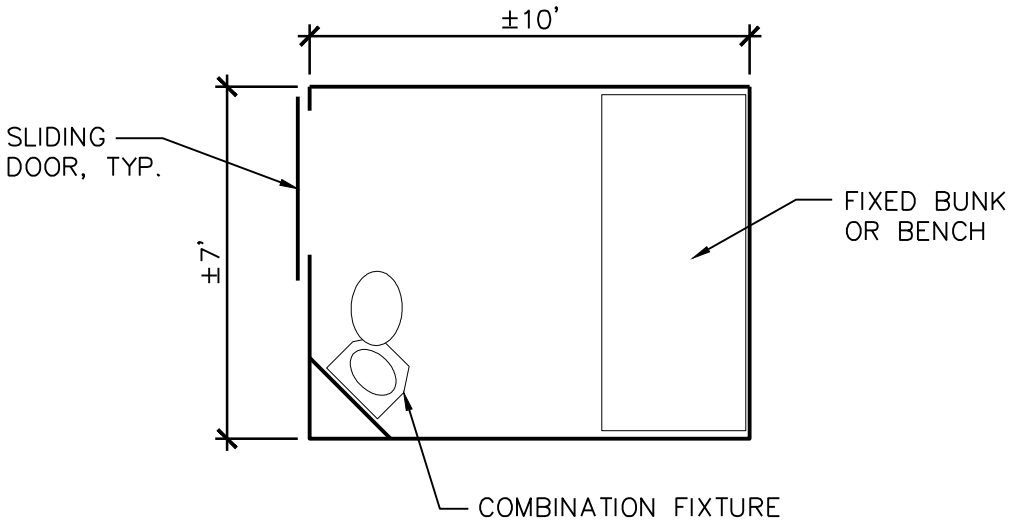
DATE
DECEMBER 24, 2013



70 SF

PRISONER HOLDING

SCALE: 1/4"=1'-0"

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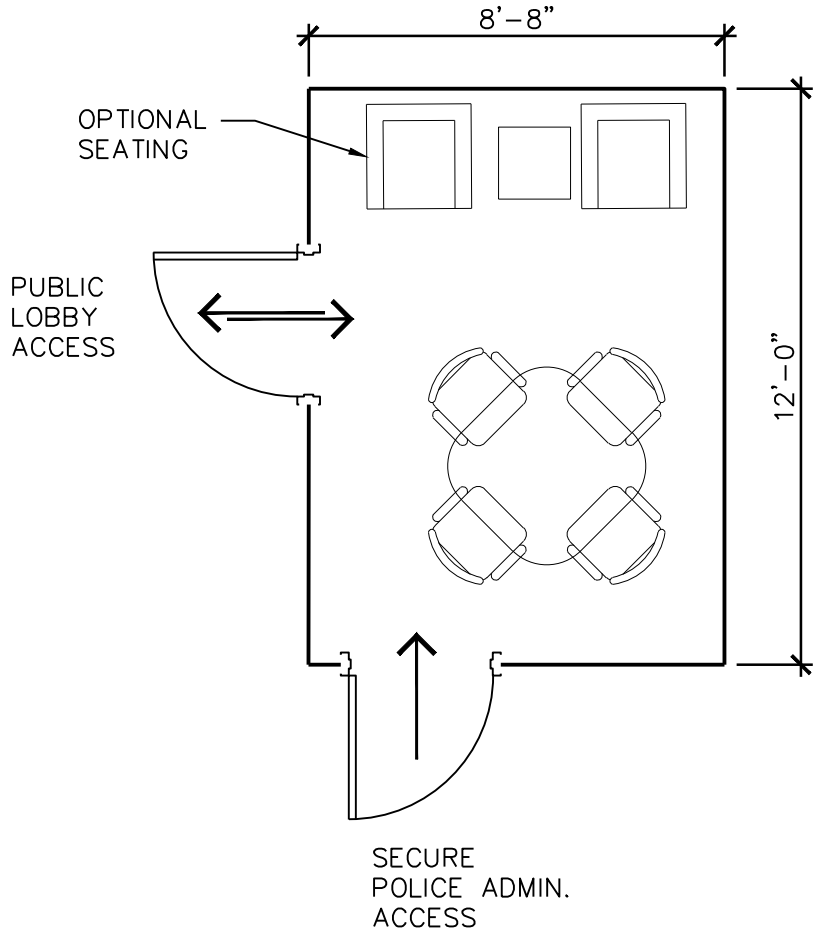
architecture + design

CINCINNATI 600 Vine Street suite 2210 Cincinnati, OH 45202
DENVER 1810 Platte Street Denver, CO 80202

PROJECT TITLE
SCITUATE PUBLIC SAFETY COMPLEX

COMMISSION NO.
900414.02

DATE
DECEMBER 24, 2013



104 SF

SOFT INTERVIEW / COMPLAINT

SCALE: 1/4"=1'-0"

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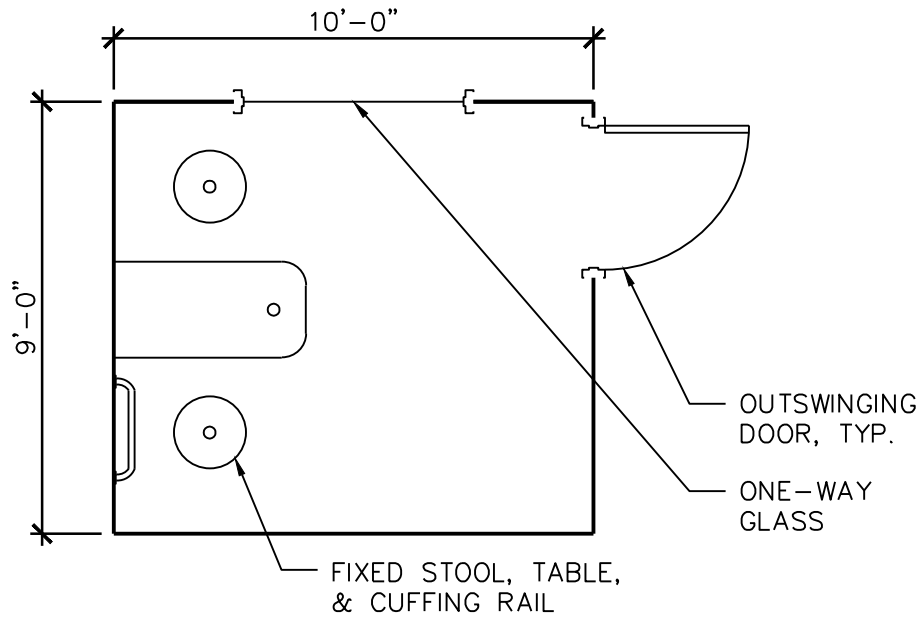

90 SF

HARD INTERVIEW

SCALE: 1/4"=1'-0"

CR architecture + design

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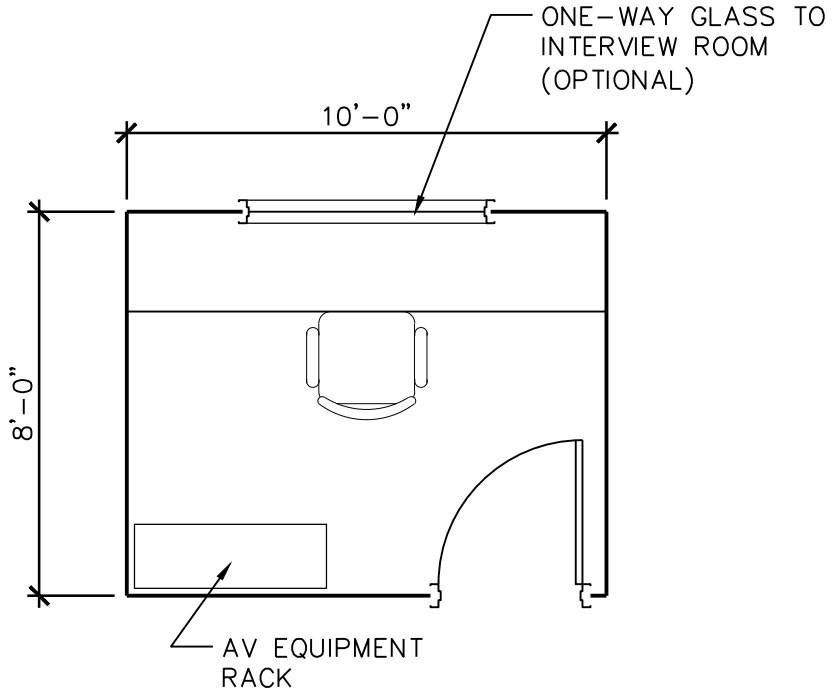
PROJECT TITLE
SCITUATE PUBLIC SAFETY COMPLEX

COMMISSION NO.
900414.02

DATE
DECEMBER 24, 2013



80 SF

INTERVIEW ROOM - AV SURVEILLANCE

SCALE: 1/4"=1'-0"

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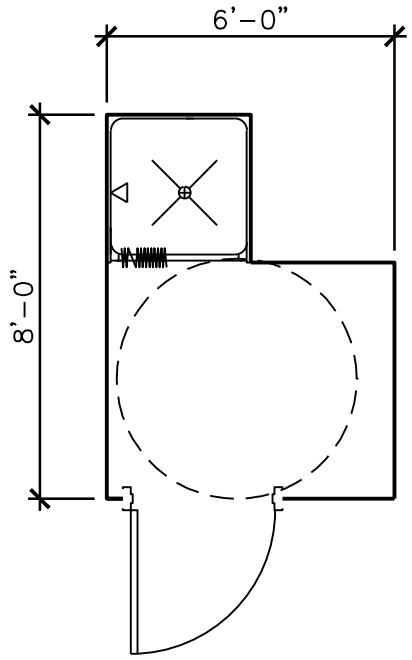

50 SF

DETAINEE SHOWER

SCALE: 1/4"=1'-0"

CR architecture + design

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PROJECT TITLE
SCITUATE PUBLIC SAFETY COMPLEX

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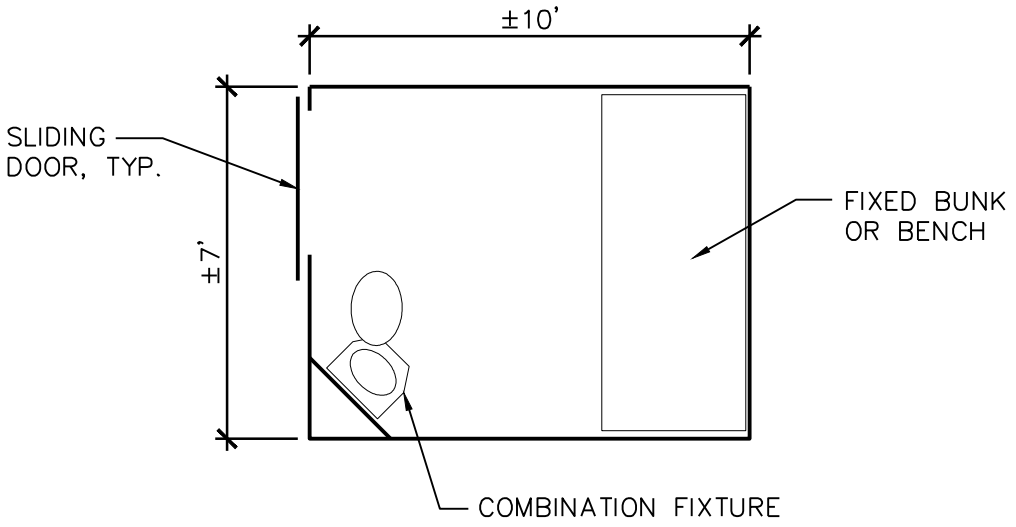

70 SF

DETENTION CELL

SCALE: 1/4"=1'-0"

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architecture + design

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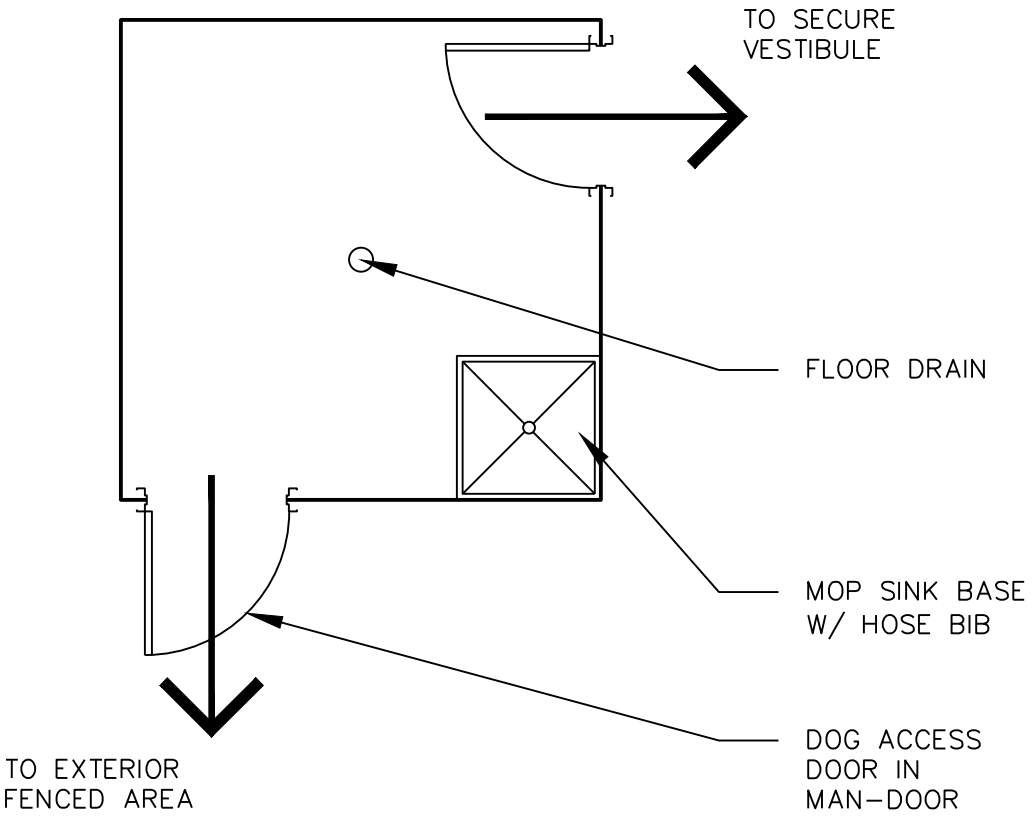
DATE
DECEMBER 24, 2013



100 SF
KENNEL
SCALE: 1/4"=1'-0"

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architecture + design

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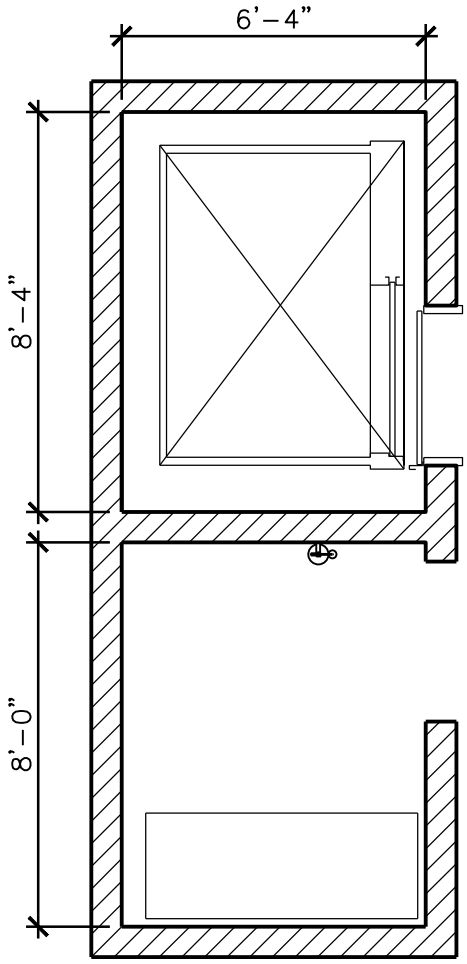
PROJECT TITLE
SCITUATE PUBLIC SAFETY COMPLEX

COMMISSION NO.
900414.02

DATE
DECEMBER 24, 2013

BUILDING SYSTEMS + CIRCULATION



70 SF / LEVEL

ELEVATOR

SCALE: 1/4"=1'–0"

architecture + design

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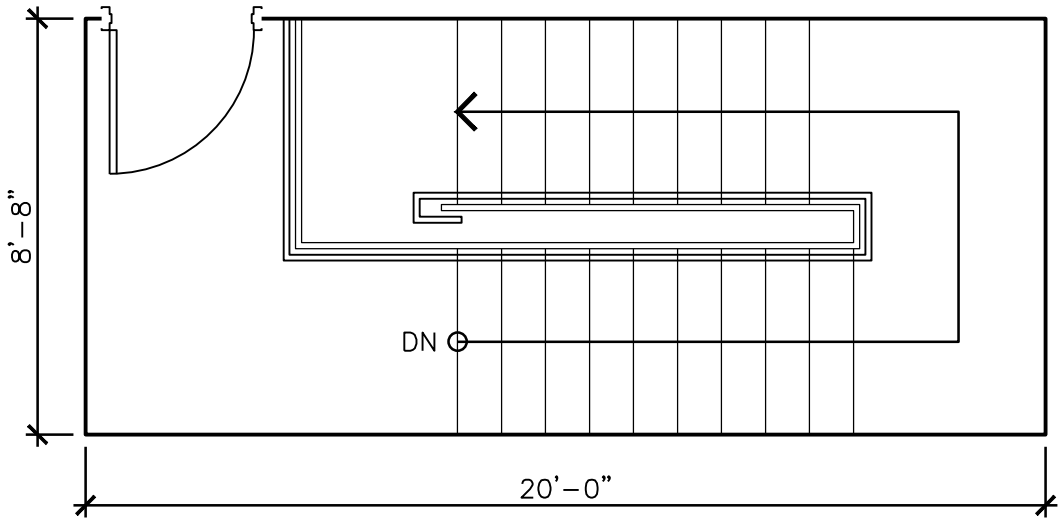

174 SF / LEVEL

STAIR

SCALE: 1/4"=1'-0"

CR architecture + design

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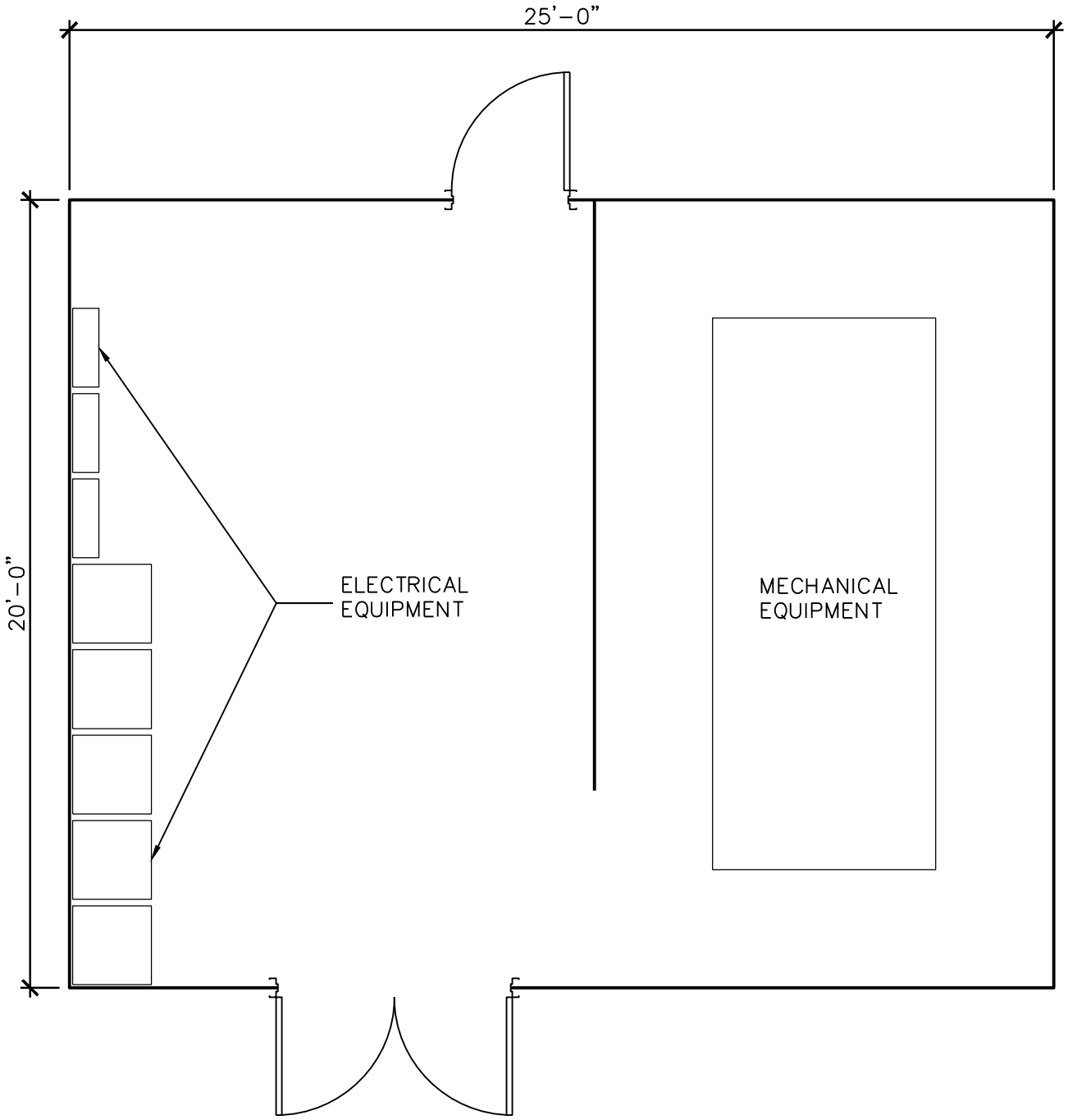

[X] SF

MECHANICAL ROOM

SCALE: 1/4"=1'-0"

architecture + design

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SCITUATE PUBLIC SAFETY COMPLEX

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900414.02

DATE
DECEMBER 24, 2013

REVIEW OF DESIGN OPTIONS

OPTIONS OVERVIEW

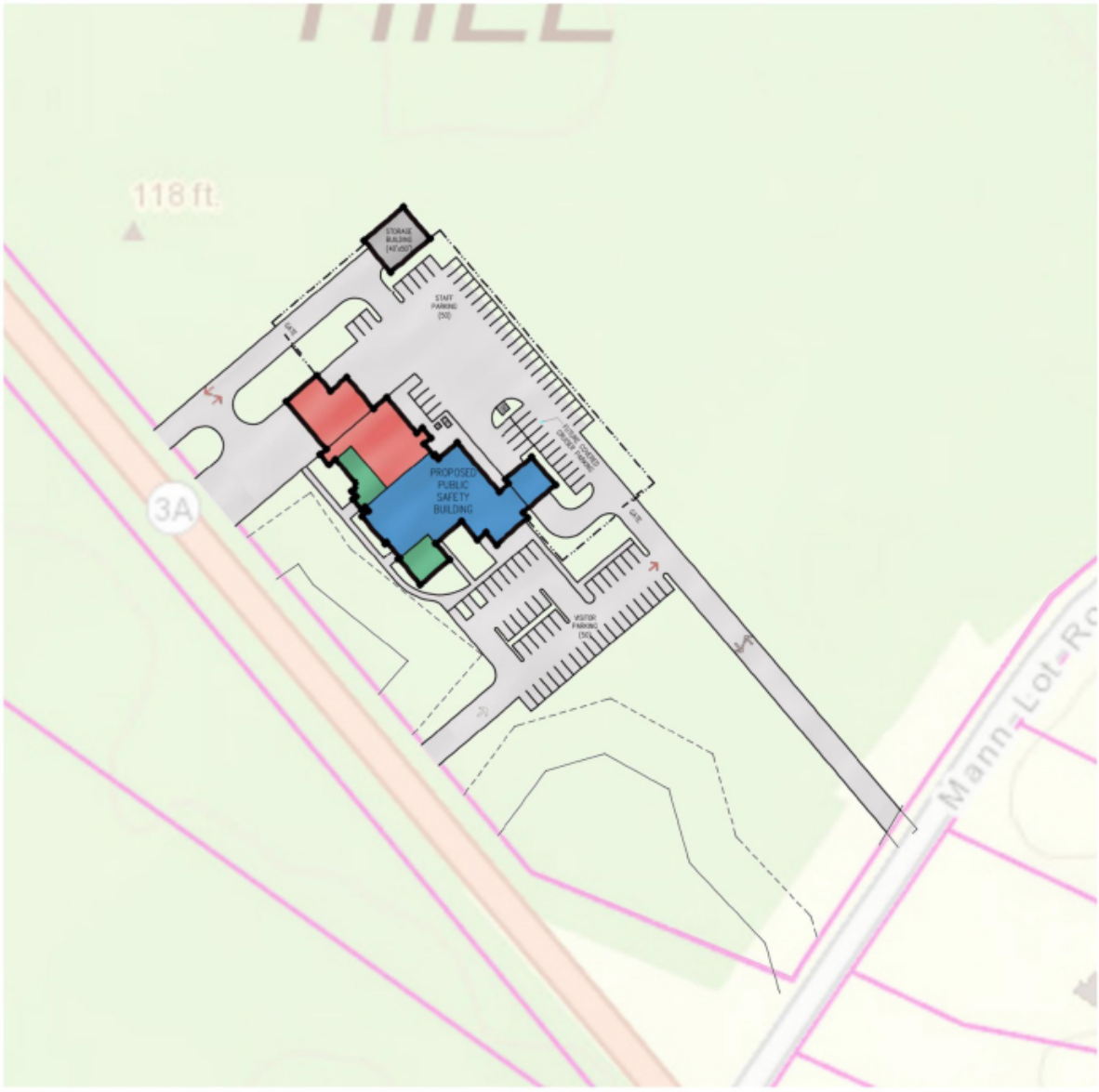
The Design Team gathered information from the Police and Fire Departments, and looked into numerous factors, such as the current condition of the building, limitations of the existing sites, the differing program needs, and future growth of the end user. A Space Needs Analysis was developed for programming purposes and Room Diagrams for the user to interact with and to better understand the spaces they will occupy. The design team developed conceptual designs with three site location options identified and owned by the Town. Comparison matrixes and conceptual cost estimates were also developed to assist with identifying the preferred site.

It was agreed that all three options would meet the necessary requirements for the user. All options include site modifications and code upgrades. However, the Building Committee agreed the Ellis Site was the preferred site.

The Schematic design was then prepared and further developed on the Ellis Site. This included floor plan, site plan and perspectives

SITE OPTION 1

Option 1 is to locate the Proposed Complex on the parcel at the Ellis Estate on the corner of Route 3A and Mann Lot Road.



concept
SITE PLAN

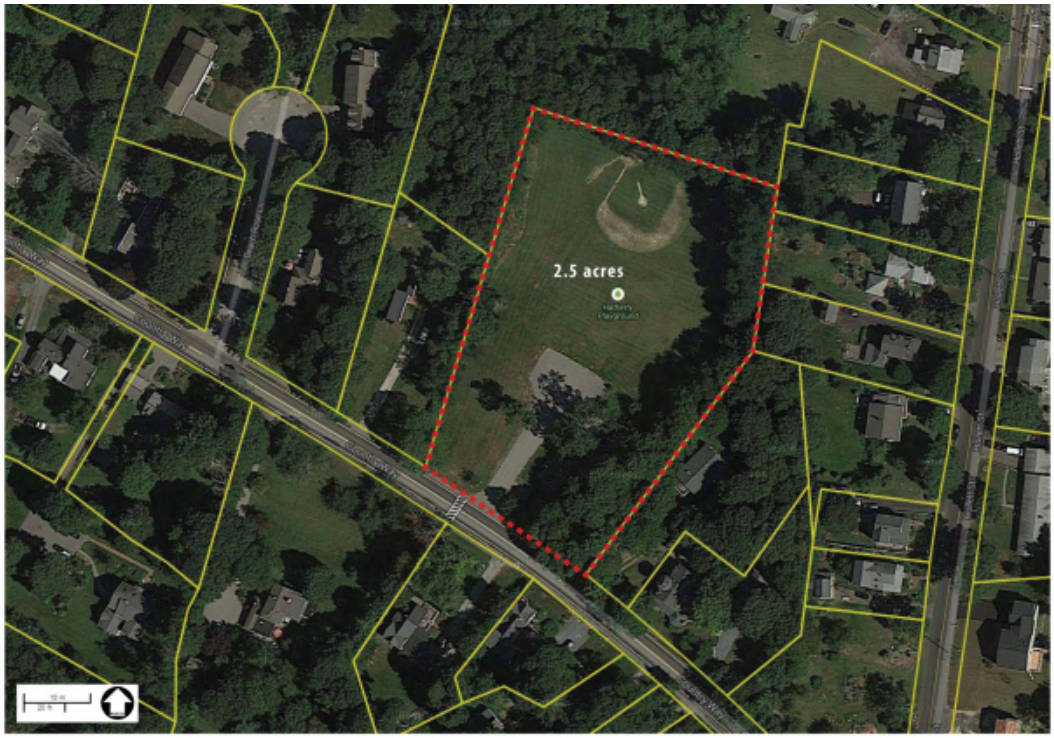
SITE OPTION 2

Option 2 is to locate the Proposed Complex at the same location as the existing; 600 Chief Justice Cushing Highway.

concept
FIRST FLOOR PLAN

SITE OPTION 3

Option 3 is to locate the Proposed Complex on the parcel at Hatherly Field (Purple Dinosaur Park) 620 Country Way.



SCITUATE, MA | Potential Sites | 620 Country Way

concept
SECOND FLOOR PLAN

concept
LOWER LEVEL PLAN

concept
FIRST FLOOR PLAN

SITE OPTIONS COMPARISON

Scituate Public Safety Complex
SITE REVIEW COMPARISON
February 13, 2014

	Ellis Property	600 Chief Justice Cushing Highway	620 Country Way
MAP BLOCK PARCEL	19 1 15	37 5 4	43 1 10
CRITERIA			
Lot Size (SF)	261,360 (6Ac)	217,800 (5 Ac)	108,900 (2.5 Ac)
Lot Shape (Description)	Rectangular	Rectangular	Pentagon
Frontage	1,500' (Chief Justice Cushing Highway) 860' (Mann Lot Road)	920' (Chief Justice Cushing Highway) 400' (First Parish Road)	420' Country Way
Zoning	40,000 s.f. upland - 100' frontage 175' lot width Water resource protection district Wireless communication overlay district	40,000 s.f. upland - 100' frontage 175' lot width Water resource protection district Wireless communication overlay district	20,000 s.f. upland - 100' frontage 125' lot width
Setbacks required	R1 (30'F-15'S-30'R)	R1 (30'F-15'S-30'R)	R2 (30'F-15'S-30'R)
Existing Site Conditions	Undeveloped wooded Area	Existing buildings, limited parking, and lawn area	Childrens' gated play area (Purple Dinosaur Park), sled riding hill, youth baseball field and limited parking
Slopes	1%	0 to 3.5 percent	30% to 35%
Soils	Woodbridge fine sandy loam Scituate gravelly sandy loam Norwell mucky fine sandy loam	Udorthents, gravelly	Merrimac sandy loam Woodbridge fine sandy loam
Available Municipal Utilities			
-Water	Yes (12" Main in Cushing Highway, 10" main in Mann Lot Road	Yes (12" Main in Cushing Highway)	Yes (10" main in Country Way)
-Drainage	Yes (intersection of Cushing Highway and Mann Lot Road	Yes (Cushing Highway)	NO
-Sewer	NO	YES	NO
Floodplain			
-A (100-Year Floodplain)	NO	NO	NO
-AE (100-Year Floodplain w/ Elev.)	NO	NO	NO
-Wetland Resources	NO**	NO**	NO
Public Water Supply Zones			
-Zone I, B, A, II	YES	YES	NO
-IWPA	NO	NO	NO
DEP Tier 1 Classified 21E Site			
- Tier 1A, 1B, 1C. 1D	NO	NO	NO
- Tier II	NO	NO	NO
Generator of Hazardous Waste			
- MA Regulated Major Facility of Large Quantities	NO	NO	NO
NEHSP			
- Natural Communities	NO	NO	NO
- Priority Habitat of Rare Species	NO	NO	NO
- Potential Vernal Pools	NO	NO	NO
- Estimated Habitat of Rare Wildlife	NO	NO	NO
- Certified Vernal Pools	NO	NO	NO
Neighborhood Character	Wooded, undeveloped site. Surrounded by large tracts of undeveloped land. Sparsely populated with a few cluster of residences. Access to major roadway	Shared site with existing high school. Surrounded by single homes and undeveloped wooded sites. Located at a busy intersection with access to major roadway.	Medium density single home neighborhood. Access to busy roadway
Site access sight lines - public	YES	YES	YES
Site access sight lines - emergency vehicles	YES	YES	LIMITED
Average response time to North Scituate	2-1/2 Minutes	4-1/2 Minutes	2 Minutes
Average response time to Minot	4 to 6 Minutes	6 to 8 Minutes	2-1/2 to 4-1/2 Minutes
Average response time to West End	4 to 6 Minutes	6 to 8 Minutes	5-1/2 to 7-1/2" Minutes
Posted street speed limits on apparatus egress	Route 3A 50 Miles / Marmlot Road 30 Miles	Route 3A 45 Miles - 200 yards away turns to 50 miles / 1st Parish Road 35 Miles	30 Miles
Parking count capacity (80-90 total)	YES	LIMITED	NO
Lot layout corresponds with design	YES	NO	NO
Future expansion capabilities	YES	NO	NO
Relative site development costs	Clearing of green site. Septic system required	Phasing and demolition of existing structures	Grade infill at rear of site 12 ft +/-

**The site is located near wetlands but there are no wetlands on site.

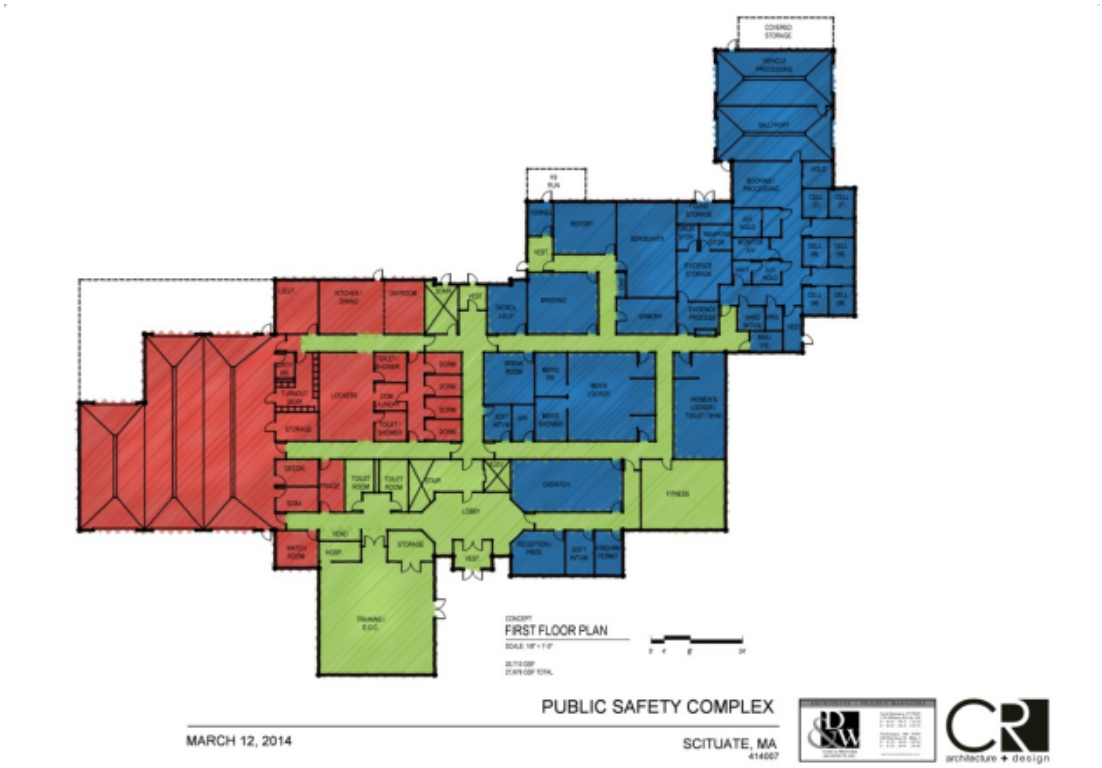
Scituate Public Safety Complex

SITE REVIEW COMPARISON
February 13, 2014

	Ellis Property	600 Chief Justice Cushing Highway	620 Country Way
MAP BLOCK PARCEL	19 1 15	37 5 4	43 1 10
CRITERIA			
Lot Size (SF)	5	3	1
Lot Shape (Description)	5	3	1
Frontage	5	4	1
Zoning	5	5	5
Setbacks required	5	5	5
Existing Site Conditions	5	2	1
Slopes	5	5	1
Soils	2	4	4
Available Municipal Utilities			
-Water	5	5	5
-Drainage	5	5	1
-Sewer	1	5	1
Floodplain			
-A (100-Year Floodplain)	5	5	5
-AE (100-Year Floodplain w / Elev.)	5	5	5
-Wetland Resources	5	5	5
Public Water Supply Zones			
-Zone L, B, A, II	3	3	5
-IWPA	3	3	3
DEP Tier 1 Classified 21E Site			
-Tier 1A, 1B, 1C. 1D	5	5	5
-Tier II	5	5	5
Generator of Hazardous Waste			
-MA Regulated Major Facility of Large Quantities	5	5	5
NEHSP			
-Natural Communities	5	5	5
-Priority Habitat of Rare Species	5	5	5
-Potential Vernal Pools	5	5	5
-Estimated Habitat of Rare Wildlife	5	5	5
-Certified Vernal Pools	5	3	5
Neighborhood Character	5	4	1
Site access sight lines - public	5	5	4
Site access sight lines - emergency vehicles	5	5	2
Average response time to North Scituate	4	3	5
Average response time to Minot	4	3	5
Average response time to West End	5	3	4
Posted street speed limits on apparatus egress	5	5	5
Parking count capacity (80-90 total)	5	3	1
Lot layout corresponds with design	5	2	1
Future expansion capabilities	5	1	1
Relative site development costs	4	2	1
SUBTOTAL	**161**	**141**	**119**

Each Site Rated per Criteria using 5=preferred, 1=Not Preferred

CONCEPTUAL BUILDING DESIGN ON ELLIS SITE



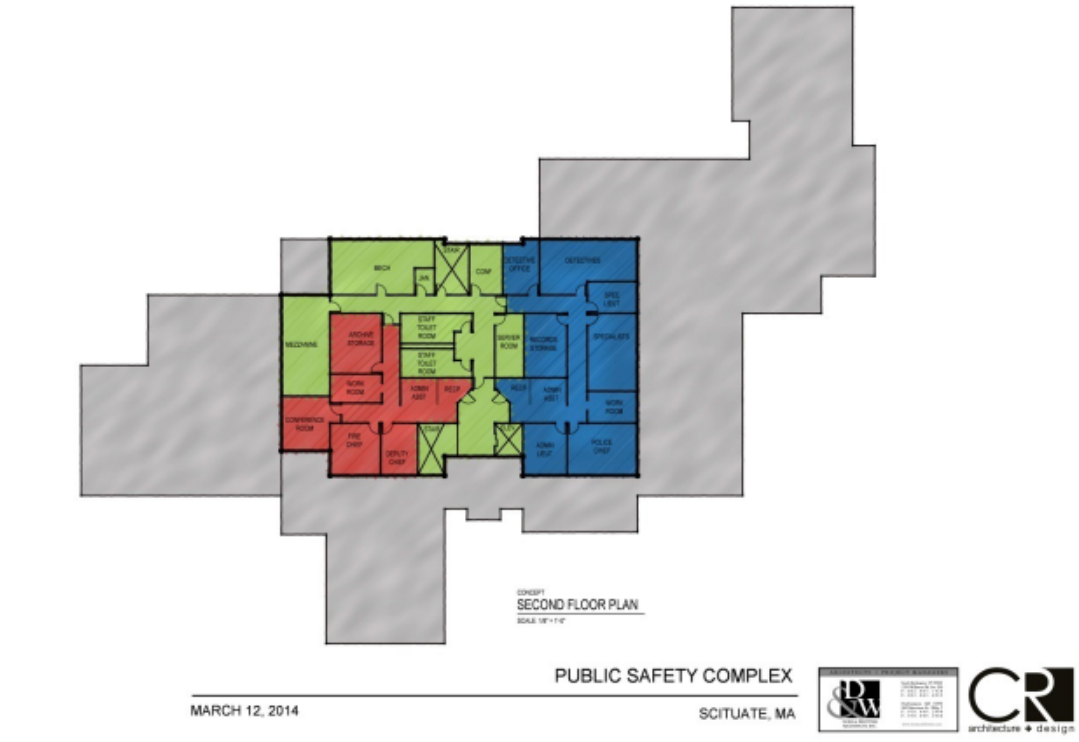
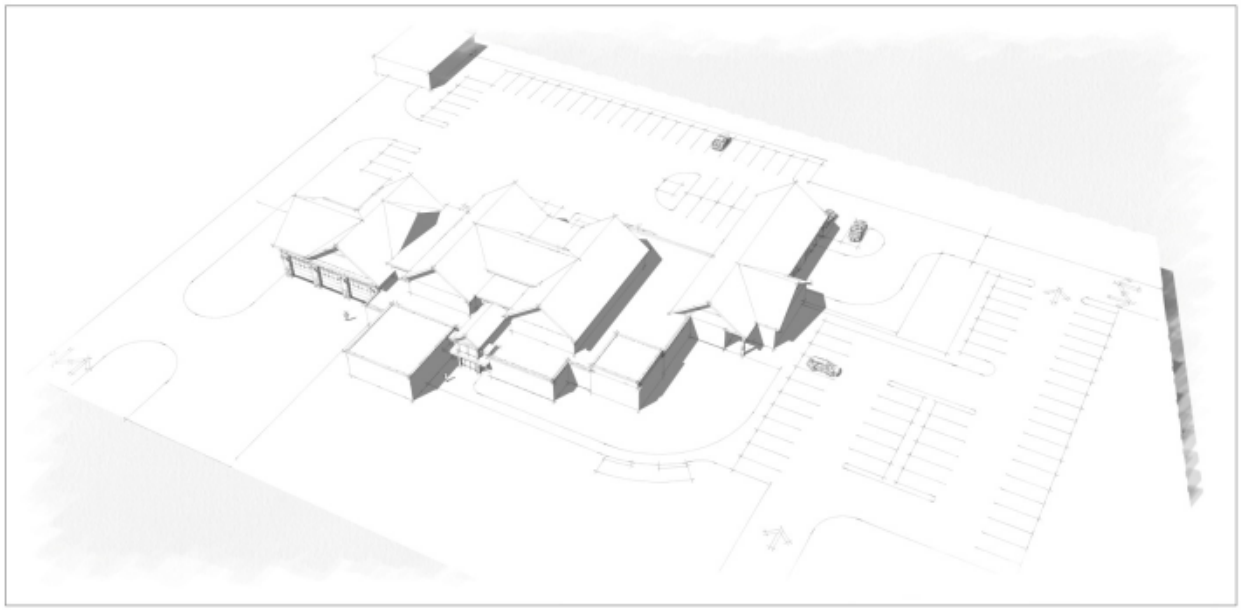


IMAGE PRESENTATION
MARCH 03, 2014
SCITUATE PUBLIC SAFTEY PROJECT

IMAGE PRESENTATION
MARCH 03, 2014
SCITUATE PUBLIC SAFTEY PROJECT



VIEW FROM RT 3A - NORTH

PUBLIC SAFETY COMPLEX

MARCH 12, 2014

SCITUATE, MA

Estimated Project Costs						3/4/2014	
Scituate Public Safety Study							
Scituate, Massachusetts							
The following is a summary of Estimated Project Costs developed for the Scituate Public Safety Study.							
The options developed are conceptual in nature and therefore the estimated project							
costs are intended to provide a preliminary order of magnitude view at the potential project costs.							
Project costs consist of estimated site and building construction costs, design and construction							
contingencies, phasing, soft costs to cover the values of the design team, owner's project manager,							
investigative services, etc and fixtures, furniture and technology costs. The project costs							
presented are in current 2014 dollars and may need to be adjusted for inflation depending on							
future construction timeframes.							
Options:				**Estimated Costs**	**Comments**		
Ellis Estate Site				**$ 16,475,000**	Cost increase for site development		
Option 1							
Existing Site				**$ 16,175,000**	Cost increase for existing buildings abatement		
Option 2					and demolition		
Country Way Site				**$ 15,406,000**	Steep slope places much of police operations		
Option 3					below grade		

Estimated Project Costs							4-Mar-14	
Scituate Public Safety Study								
Scituate, Massachusetts								
Ellis Estate Site								
Option 1						**Estmated Cost:**		
				Sq Footage:		**(2014 dollars)**	**Comments:**	
				27740				
Construction Costs:								
	Construction Phasing				$	-		
	Site Development				$	1,605,297		
	Existing Building Demolition				$	-		
	Hazardous Materials Removal				$	-		
	New Building Construction:				$	7,999,387		
	Construction Subtotal:				$	9,604,684		
	General Conditions			7%	$	672,328		
	Bonds and Insurance			2%	$	192,094		
	Permit			By Owner	$	-		
	Fee			3%	$	288,141		
	Design and Estimating Contingenc			10%	$	1,075,725		
Total Estimated Construction Cost:					**$**	**11,832,972**		
Project Contingency:	(Construction 5% + Owner 5%)				**$**	**1,183,297**		
Soft Costs:								
	Owner's Project Manager,							
	Arch/engineering, Owner direct,							
	Survey, Geotechnical, Hazardous							
	Materials, Printing, Legal, etc.							
			Subtotal		**$**	**2,958,243**	25% of construction	
FF&E/Technology								
			Subtotal		**$**	**500,000**	Budget	
Project Cost Summary:								
	Construction Costs				**$**	**11,832,972**	$ 427	per sf
	Project Contingency				**$**	**1,183,297**		
	Soft Costs				**$**	**2,958,243**		
	FF&E/Technology Costs				**$**	**500,000**		
	Estimated Total Project Costs				**$**	**16,475,000**	594	per sf
Potential Add Alternates:								
	Training Field				$	477,335		
	40'x50' Storage Building				$	98,560		

Estimated Project Costs							4-Mar-14	
Scituate Public Safety Study								
Scituate, Massachusetts								
Existing Site								
Option 2						**Estmated Cost:**		
				Sq Footage:		**(2014 dollars)**	**Comments:**	
				27740				
Construction Costs:								
	Construction Phasing				$	-		
	Site Development				$	1,065,929		
	Existing Building Demolition			16921	$	169,210		
	Hazardous Materials Removal				$	190,000		
	New Building Construction:				$	7,999,387		
	Construction Subtotal:				$	9,424,526		
	General Conditions			7%	$	659,717		
	Bonds and Insurance			2%	$	188,491		
	Permit			By Owner	$	-		
	Fee			3%	$	282,736		
	Design and Estimating Contingenc			10%	$	1,055,547		
Total Estimated Construction Cost:					**$**	**11,611,017**		
Project Contingency:	(Construction 5% + Owner 5%)				**$**	**1,161,102**		
Soft Costs:								
	Owner's Project Manager,							
	Arch/engineering, Owner direct,							
	Survey, Geotechnical, Hazardous							
	Materials, Printing, Legal, etc.							
			Subtotal		**$**	**2,902,754**	25% of construction	
FF&E/Technology								
			Subtotal		**$**	**500,000**	Budget	
Project Cost Summary:								
	Construction Costs				**$**	**11,611,017**	$ 419	per sf
	Project Contingency				**$**	**1,161,102**		
	Soft Costs				**$**	**2,902,754**		
	FF&E/Technology Costs				**$**	**500,000**		
	Estimated Total Project Costs				**$**	**16,175,000**	583	per sf

Estimated Project Costs							4-Mar-14	
Scituate Public Safety Study								
Scituate, Massachusetts								
Country Way Site								
Option 3						**Estmated Cost:**		
				Sq Footage:		**(2014 dollars)**	**Comments:**	
				27740				
Construction Costs:								
	Construction Phasing				$	-		
	Site Development				$	1,103,066		
	Existing Building Demolition				$	-		
	Hazardous Materials Removal				$	-		
	New Building Construction:				$	7,859,387		
	Construction Subtotal:				$	8,962,453		
	General Conditions			7%	$	627,372		
	Bonds and Insurance			2%	$	179,249		
	Permit			By Owner	$	-		
	Fee			3%	$	268,874		
	Design and Estimating Contingenc			10%	$	1,003,795		
Total Estimated Construction Cost:					**$**	**11,041,743**		
Project Contingency:	(Construction 5% + Owner 5%)				**$**	**1,104,174**		
Soft Costs:								
	Owner's Project Manager,							
	Arch/engineering, Owner direct,							
	Survey, Geotechnical, Hazardous							
	Materials, Printing, Legal, etc.							
			Subtotal		**$**	**2,760,436**	25% of construction	
FF&E/Technology								
			Subtotal		**$**	**500,000**	Budget	
Project Cost Summary:								
	Construction Costs				**$**	**11,041,743**	$ 398	per sf
	Project Contingency				**$**	**1,104,174**		
	Soft Costs				**$**	**2,760,436**		
	FF&E/Technology Costs				**$**	**500,000**		
	Estimated Total Project Costs				**$**	**15,406,000**	$ 555	per sf

Schematic Design Cost Estimate

Town of Scituate
New Public Safety Building

Scituate, Ma

Prepared for:

Dore & Whittier

May 9, 2014

PM&C

Town of Scituate
New Public Safety Building
Scituate, Ma

09-May-14

Schematic Design Cost Estimate

MAIN CONSTRUCTION COST SUMMARY

	Construction Start	Gross Floor Area	$/sf	Estimated Cost
NEW BUILDING ON ELLIS ESTATE SITE				
TRADE COSTS				
NEW PUBLIC SAFETY BUILDING	Jun-15	27,691	$314.06	$8,696,589
SITEWORK	Jun-15			$1,366,820
SUBTOTAL TRADE COSTS	Jun-15	27,691	$363.42	$10,063,409
General Conditions		7%		$704,439
Bonds and Insurances		2%		$201,268
Permit				By Owner
Fee		3%		$301,902
Design and Estimating Contingency		10.0%		$1,127,102
TOTAL FY 2014 COSTS		27,691	$447.73	**$12,398,120**
Escalation to Start - Fall 2015		5%		**$619,906**
TOTAL CONSTRUCTION ESCALATED TO START OF CONSTRUCTION		27,691	$470.12	**$13,018,026**

ALTERNATES (Including Markups)

1. Future Training Field paving and roadway	ADD	**$477,335**
2. Outdoor Storage Building	ADD	**$98,560**

PM&C

Town of Scituate
New Public Safety Building
Scituate, Ma

09-May-14

Schematic Design Cost Estimate

This Schematic Design cost estimate was produced from drawings, outline specifications and other documentation prepared by Dore and Whittier Architects and their design team dated April 29th, 2014. Design and engineering changes occurring subsequent to the issue of these documents have not been incorporated in this estimate.

This estimate includes all direct construction costs, general contractor's overhead and profit and design contingency. Cost escalation assumes start dates indicated above.

Bidding conditions are expected to be public bidding to qualified general contractors, open bidding for sub-contractors, open specifications for materials and manufactures.

The estimate is based on prevailing wage rates for construction in this market and represents a reasonable opinion of cost. It is not a prediction of the successful bid from a contractor as bids will vary due to fluctuating market conditions, errors and omissions, proprietary specifications, lack or surplus of bidders, perception of risk, etc. Consequently the estimate is expected to fall within the range of bids from a number of competitive contractors or subcontractors, however we do not warrant that bids or negotiated prices will not vary from the final construction cost estimate.

ITEMS NOT INCLUDED IN THIS ESTIMATE

Items not included in this estimate are:

- Rainwater recapture system
- All professional fees and insurance
- Site or existing conditions surveys investigations costs, including to determine subsoil conditions
- Items identified in the design as Not In Contract (NIC)
- Items identified in the design as by others
- Owner supplied and/or installed items (e.g. technology, furniture and equipment, etc.)
- Rock excavation; special foundations (unless indicated by design engineers)
- Utility company back charges, including work required off-site
- Work to City streets and sidewalks, (except as noted in this estimate)

PM&C

09-May-14

Town of Scituate
New Public Safety Building
Scituate, Ma

GFA 27,691

Schematic Design Cost Estimate

CONSTRUCTION COST SUMMARY IN CSI FORMAT

NEW PUBLIC SAFETY BUILDING

	Subtotal	*Total*	*Cost/SF*
NEW PUBLIC SAFETY BUILDING			
DIV. 1 GENERAL CONDITIONS		**$0**	**$0.00**
011100 General conditions	$0		
DIV. 2 EXISTING CONDITIONS		**$0**	**$0.00**
DIV. 3 CONCRETE		**$555,818**	**$20.07**
033000 Cast-in-Place Concrete	$555,818		$20.07
DIV. 4 MASONRY		**$628,225**	**$22.69**
042000 Unit Masonry	$628,225		$22.69
047000 Cast Stone	$0		$0.00
DIV. 5 METALS		**$1,088,363**	**$39.30**
050001 Miscellaneous Metals	$75,363		$2.72
051200 Structural Metals	$722,525		$26.09
053100 Metal Fabrications	$159,144		$5.75
054000 Light Gauge Framing	$84,481		$3.05
055100 Metal Stairs and Railings	$46,850		$1.69
DIV. 6 WOODS & PLASTICS		**$98,547**	**$3.56**
061000 Rough Carpentry	$69,304		$2.50
061600 Sheathing	$29,243		$1.06
064020 Finish Carpentry			
DIV. 7 THERMAL & MOISTURE PROTECTION		**$925,289**	**$33.41**
070001 Waterproofing/Dampproofing/Caulking	$131,722		$4.76
070002 Roofing/Flashing	$423,520		$15.29
072100 Thermal Insulation	$111,523		$4.03
074000 Roofing and Siding Materials	$168,688		$6.09
076200 Sheet Metal Flashing and Trim	$56,882		$2.05
078410 Firestopping	$2,769		$0.10
079200 Joint Sealants	$30,185		$1.09
DIV. 8 DOORS & WINDOWS		**$545,085**	**$19.68**
080002 Glass and Glazing	$77,520		$2.80
081110 Hollow Metal Doors and Frames	$77,900		$2.81
081400 Flush Wood Doors	$137,500		$4.97
083050 Overhead Doors	$90,560		$3.27
083110 Access Doors and Frames	$4,500		$0.16
084110 Aluminum-Framed Entrances and Storefronts	$74,180		$2.68

PM&C

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Town of Scituate
New Public Safety Building
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Schematic Design Cost Estimate

CONSTRUCTION COST SUMMARY IN CSI FORMAT

NEW PUBLIC SAFETY BUILDING

	Subtotal	*Total*	*Cost/SF*
NEW PUBLIC SAFETY BUILDING			
085113 Aluminum Windows	$76,425		$2.76
087100 Finish Hardware	$0		$0.00
089000 Louvers and Vents	$6,500		$0.23
DIV. 9 FINISHES		**$925,050**	**$33.41**
090002 Tile	$141,478		$5.11
090003 Acoustical Tile	$68,297		$2.47
090005 Resilient Flooring	$73,682		$2.66
092110 Gypsum Board Assemblies	$496,606		$17.93
096466 Athletic Flooring	$4,428		$0.16
096810 Tile Carpeting	$25,788		$0.93
099000 Painting and Coating	$114,771		$4.14
DIV 10 SPECIALTIES		**$189,844**	**$6.86**
10100 Visual Display Surfaces	$17,760		$0.64
101400 Signage	$23,834		$0.86
10160 Toilet and Shower Partitions	$20,400		$0.74
102800 Toilet & Bathroom Accessories	$35,400		$1.28
103000 Lockers	$92,450		$3.34
DIV. 11 EQUIPMENT		**$102,800**	**$3.71**
114000 Miscellaneous Equipment	$97,800		$3.53
115210 Projection Screens	$5,000		$0.18
DIV. 12 FURNISHINGS		**$285,443**	**$10.31**
122400 Window Shades	$13,083		$0.47
124810 Entrance Mats	$4,500		$0.16
126000 Furnishings	$267,860		$9.67
DIV. 13 SPECIAL CONSTRUCTION		**$0**	**$0.00**
No Items in This Division			
DIV. 14 CONVEYING SYSTEMS		**$90,000**	**$3.25**
14200 Elevators	$90,000		$3.25
DIV. 21 FIRE		**$117,687**	**$4.25**
210000 Fire Protection	$117,687		$4.25

PM&C

09-May-14

Town of Scituate
New Public Safety Building
Scituate, Ma

GFA 27,691

Schematic Design Cost Estimate

CONSTRUCTION COST SUMMARY IN CSI FORMAT

NEW PUBLIC SAFETY BUILDING

	Subtotal	*Total*	*Cost/SF*
NEW PUBLIC SAFETY BUILDING			
DIV. 22 PLUMBING		**$456,902**	**$16.50**
220000 Plumbing	$456,902		$16.50
DIV. 23 HVAC		**$1,246,095**	**$45.00**
230000 HVAC	$1,246,095		$45.00
DIV. 26 ELECTRICAL		**$1,273,786**	**$46.00**
260000 Electrical	$1,273,786		$46.00
DIV. 31 EARTHWORK		**$167,655**	**$6.05**
312000 Earthwork	$167,655		$6.05
SUBTOTAL DIRECT (TRADE) COST		**$8,696,589**	**$314.06**

Schematic Design Cost Estimate GFA 27,691

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
NEW PUBLIC SAFETY BUILDING							
	GROSS FLOOR AREA CALCULATION						
	First Floor			20,669			
	Second Floor			7,022			
	TOTAL GROSS FLOOR AREA (GFA)				**27,691**	***sf***	
31	**EARTHWORK**						
312000	**Earthwork**						
	Strip footings to exterior walls - 2'-4" x 1'-0"						
312000	Excavation	**860**	cy	10.00	8,600		
312000	Remove off site	**860**	cy	14.00	12,040		
312000	Backfill with gravel	**618**	cy	28.00	17,304		
312000	Spread Footings to single story; 6ft x 6ft x 18" deep; 33 ea						
312000	Excavation	**313**	cy	16.00	5,008		
312000	Remove off site	**313**	cy	14.00	4,382		
312000	Backfill with gravel	**247**	cy	28.00	6,916		
312000	Spread Footings at two story; 8ft x 8ft x 2ft deep; 26 ea						
312000	Excavation	**385**	cy	16.00	6,160		
312000	Remove off site	**385**	cy	14.00	5,390		
312000	Backfill with gravel	**262**	cy	28.00	7,336		
312000	Spread Footings : 7ft x 7ft x 2ft deep; 15 ea						
312000	Excavation	**180**	cy	16.00	2,880		
312000	Remove off site	**180**	cy	14.00	2,520		
312000	Backfill with gravel	**126**	cy	28.00	3,528		
312000	Spread Footings to pergola; 6ft x 6ft x 18" deep; 4 ea						
312000	Excavation	**38**	cy	16.00	608		
312000	Remove off site	**38**	cy	14.00	532		
312000	Backfill with gravel	**30**	cy	28.00	840		
312000	Allowance for strip footings to interior CMU walls -slab thickenings						
312000	Excavation	**29**	cy	9.00	261		
312000	Remove off site	**29**	cy	14.00	406		
312000	Backfill with gravel	**23**	cy	28.00	644		
312000	Slab on Grade, 8" thick at Sally Port						
312000	Excavation	**90**	cy	9.00	810		
312000	Remove off site	**90**	cy	14.00	1,260		
312000	Compacted Granular fill- 8"	**30**	cy	32.00	960		
312000	Compacted Structural fill, 8"	**30**	cy	32.00	960		
312000	Slab on Grade 8" at Apparatus Bay						
312000	Excavation	**248**	cy	9.00	2,232		
312000	Remove off site	**248**	cy	14.00	3,472		
312000	Compacted Granular fill- 8"	**83**	cy	32.00	2,656		
312000	Compacted Structural fill, 8"	**83**	cy	32.00	2,656		
312000	Slab on Grade 5"						
312000	Excavation	**1,038**	cy	9.00	9,342		
312000	Remove off site	**1,038**	cy	14.00	14,532		
312000	Compacted Granular fill- 8"	**398**	cy	32.00	12,736		
312000	Compacted Structural fill, 8"	**398**	cy	32.00	12,736		
312000	Elevator pit						
312000	Excavation for elevator pit	**84**	cy	18.00	1,512		
312000	Remove off site	**84**	cy	14.00	1,176		
312000	Backfill with gravel	**21**	cy	28.00	588		
312000	Perimeter drain	**917**	lf	16.00	14,672		
	SUBTOTAL					167,655	

	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		NEW PUBLIC SAFETY BUILDING						
57		***TOTAL, DIVISION 31 - Earthwork***						**$167,655**
58								
59		***03 CONCRETE***						
60								
61		**033000 Cast-In-Place Concrete**						
62		Strip footings to exterior walls - 2'-4" x 1'-0"						
63	33000	Formwork	**1,834**	sf	10.00	18,340		
64	33000	Re-bar	**4,980**	lbs	1.10	5,478		
65	33000	Concrete material; 4,000 psi	**83**	cy	120.00	9,960		
66	33000	Placing concrete	**83**	cy	55.00	4,565		
67	33000	Foundation walls at exterior - 14" thick						
68	33000	Formwork	**7,336**	sf	12.00	88,032		
69	33000	Re-bar	**14,672**	lbs	1.10	16,139		
70	33000	Concrete material; 4,000 psi	**159**	cy	120.00	19,080		
71	33000	Placing concrete	**159**	cy	55.00	8,745		
72	33000	Spread Footings to single story; 6ft x 6ft x 18" deep; 33 ea						
73	33000	Formwork	**1,188**	sf	10.00	11,880		
74	33000	Re-bar	**5,940**	lbs	1.10	6,534		
75	33000	Concrete material; 4,000 psi	**66**	cy	120.00	7,920		
76	33000	Placing concrete	**66**	cy	55.00	3,630		
77	33000	Spread Footings at two story; 8ft x 8ft x 2ft deep; 26 ea						
78	33000	Formwork	**1,664**	sf	10.00	16,640		
79	33000	Re-bar	**11,070**	lbs	1.10	12,177		
80	33000	Concrete material; 4,000 psi	**123**	cy	120.00	14,760		
81	33000	Placing concrete	**123**	cy	55.00	6,765		
82	33000	Spread Footings ; 7ft x 7ft x 2ft deep; 15 ea						
83	33000	Formwork	**840**	sf	10.00	8,400		
84	33000	Re-bar	**4,860**	lbs	1.10	5,346		
85	33000	Concrete material; 4,000 psi	**54**	cy	120.00	6,480		
86	33000	Placing concrete	**54**	cy	55.00	2,970		
87	33000	Spread Footings to pergola; 6ft x 6ft x 18" deep; 4 ea						
88	33000	Formwork	**144**	sf	10.00	1,440		
89	33000	Re-bar	**720**	lbs	1.10	792		
90	33000	Concrete material; 4,000 psi	**8**	cy	120.00	960		
91	33000	Placing concrete	**8**	cy	55.00	440		
92	33000	Allowance for strip footings to interior CMU walls -						
93	33000	Formwork	**151**	sf	10.00	1,510		
94	33000	Re-bar	**360**	lbs	1.10	396		
95	33000	Concrete material; 3,000 psi	**6**	cy	115.00	690		
96	33000	Placing concrete	**6**	cy	45.00	270		
97	33000	Slab on Grade, 8" thick at Sally Port						
98	33000	WWF reinforcement --15% lap- 6 x 6 2# layers	**2,424**	sf	0.85	2,060		
99	33000	Rebar-allow 1.5lbs/sf	**1,818**	lbs	1.10	2,000		
100	33000	Concrete - 8" thick; 4,000 psi	**31**	cy	120.00	3,720		
101	33000	Placing concrete	**31**	cy	65.00	2,015		
102	33000	Finishing and curing concrete	**1,212**	sf	2.00	2,424		
103	33000	Control joints - saw cut	**1,212**	sf	1.00	1,212		
104	33000	Slip resistant waterproof coating	**1,212**	sf	5.50	NIC		
105	33000	Slab on Grade, 8" thick at Apparatus						
106	33000	WWF reinforcement --15% lap- 6 x 6 2# layers	**6,698**	sf	0.85	5,693		
107	33000	Rebar-allow 1.5lbs/sf	**5,024**	lbs	1.10	5,526		
108	33000	Concrete - 8" thick; 4,000 psi	**87**	cy	120.00	10,440		
109	33000	Placing concrete	**87**	cy	65.00	5,655		
110	33000	Finishing and curing concrete	**3,349**	sf	2.00	6,698		
111	33000	Control joints - saw cut	**3,349**	sf	1.00	3,349		

Schematic Design Cost Estimate GFA 27,691

	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
	NEW PUBLIC SAFETY BUILDING							
112	33000	Slip resistant waterproof coating	**3,349**	sf	5.50	NIC		
113	33000	Slab on Grade, 5" thick						
114	33000	Mesh reinforcing 15% lap	**18,423**	sf	0.75	13,817		
115	33000	Concrete - 5" thick; 4,000 psi	**262**	cy	120.00	31,440		
116	33000	Placing concrete	**262**	cy	65.00	17,030		
117	33000	Finishing and curing concrete	**16,020**	sf	1.50	24,030		
118	33000	Allowance for slab depressions	**200**	lf	15.00	3,000		
119	33000	Control joints - saw cut	**16,020**	sf	1.00	16,020		
120	33000	Elevator pit						
121	33000	Formwork	**480**	sf	12.00	5,760		
122	33000	Reinforcement	**1,350**	lbs	1.10	1,485		
123	33000	Concrete Material	**9**	cy	120.00	1,080		
124	33000	Placing Concrete	**9**	cy	55.00	495		
125	33000	Slab						
126	33000	Formwork	**60**	sf	12.00	720		
127	33000	Reinforcement	**900**	lbs	1.10	990		
128	33000	Concrete Material	**6**	cy	120.00	720		
129	33000	Placing Concrete	**6**	cy	55.00	330		
130	33000	Elevator Sump Pit	**1**	ea	750.00	750		
131	33000	Floor construction						
132	33000	WWF reinforcement	**8,075**	sf	0.90	7,268		
133	33000	Concrete Fill to metal deck; 4-1/2" thick	**102**	cy	120.00	12,240		
134	33000	Place and finish concrete	**7,022**	sf	2.00	14,044		
135	33000	Concrete material in stair pan infill	**2**	flt	3,000.00	6,000		
136	33000	Moisture control						
137	33000	Barrier I at all slabs	**24,254**	sf	1.25	30,318		
138	33000	Concrete exterior frost pads at exterior doors; 5ft x 5ft	**375**	sf	10.00	3,750		
139	33000	Concrete housekeeping pads	**1**	ls	5,000.00	5,000		
140	33000	Trench drains	**120**	lf	120.00	14,400		
141	33000	Concrete filled bollards at entry	**20**	lf	700.00	14,000		
142		SUBTOTAL					555,818	
143								
144		***TOTAL, DIVISION 3 - CONCRETE***						**$555,818**
145								
146		***04 MASONRY***						
147								
148		**042000 Unit Masonry**						
149	042000	CMU to exterior wall; 8" thick, reinforced at sally port and apparatus bays	**6,047**	sf	20.00	120,940		
150	042000	Brick veneer base @ exterior; Morin Brick	**1,752**	sf	32.00	56,064		
151	042000	Brick veneer @ exterior; Morin Brick	**9,618**	sf	32.00	307,776		
152	042000	Brick veneer allowance for ornamentation	**11,370**	sf	2.00	22,740		
153	042000	8" CMU Partitions , reinforced, grouted solid	**3,024**	sf	20.00	60,480		
154	042000	4" CMU Partitions , reinforced, grouted solid in cells	**1,834**	sf	16.00	29,344		
155	042000	Staging to exterior wall	**20,587**	sf	1.50	30,881		
156		SUBTOTAL					628,225	
157								
158		**047200 Unit Cast Stone**						
159	047200	No items in this section						
160		SUBTOTAL					-	
161								
162		***TOTAL, DIVISION 4 - MASONRY***						**$628,225**
163								
164		***05 METALS***						
165								

	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		NEW PUBLIC SAFETY BUILDING						
166		**050001 Miscellaneous Metals**						
167	050001	Shear studs	**1,404**	ea	4.50	6,318		
168	050001	Allowance for miscellaneous steel beam/ lintels/ supports throughout	**27,691**	sf	0.25	6,923		
169	050001	Miscellaneous support at toilet partitions	**7**	loc	150.00	1,050		
170	050001	Steel beam/lintels at sectional doors	**180**	lf	75.00	13,500		
171	050001	Miscellaneous metals at CMU/brick veneer walls	**20,523**	sf	1.25	25,654		
172	050001	Miscellaneous metals generally	**27,691**	sf	0.75	20,768		
173		SUBTOTAL					74,213	
174								
175		**051200 Structural Metals**						
176		Floor construction	*218*	*tns*		-		
177	051200	Steel beams & columns (13 lbs/sf per Engineer)	**46**	tns	3,300.00	151,800		
178		Façade Steel						
179	051200	Façade steel allowance (as per narrative)				see misc metals		
180	051200	Roof construction						
181	051200	Steel framing to typical roof (17 lbs/sf per Engineer)	**149**	tns	3,300.00	491,700		
182	051200	Steel framing to apparatus bay roof (15 lbs/sf per Engineer)	**23**	tns	3,300.00	75,900		
183	051200	Steel support system allowance at canopy	**125**	sf	25.00	3,125		
184		SUBTOTAL					722,525	
185								
186		**053100 Steel Decking**						
187	053100	2" metal deck, 20 ga	**7,022**	sf	3.50	24,577		
188	053100	1 1/2" Type B metal roof deck, 20 ga	**26,836**	sf	3.72	99,830		
189	053100	3" thick type N acoustic cellular roof deck at apparatus bay	**3,112**	sf	6.00	18,672		
190	053100	3/16" Steel pan ceiling in Cells	**357**	sf	45.00	16,065		
191		SUBTOTAL					159,144	
192								
193		**054000 Light Gauge Framing**						
194	054000	6" studs at exterior	**12,997**	sf	6.50	84,481		
195		SUBTOTAL					84,481	
196								
197		**055100 Metal Stairs and Railings**						
198		Stair construction						
199	055100	Egress staircase including metal pipe handrails & guardrails	**2**	flt	18,000.00	36,000		
200	055100	Painted metal handrails at stairs	**70**	lf	55.00	3,850		
201	055100	Rails to canopy	**35**	lf	200.00	7,000		
202		SUBTOTAL					46,850	
203								
204		***TOTAL, DIVISION 5 - METALS***						**$1,087,213**
205								
206		***06 WOOD & PLASTICS***						
207								
208		**061000 Rough Carpentry**						
209	061000	Wood blocking at windows openings	**1,157**	lf	4.00	4,628		
210	061000	Wood blocking at door openings	**557**	lf	4.00	2,228		
211	061000	Rough blocking at roof edges	**822**	lf	6.00	4,932		
212	061000	Rough blocking at partitions	**2,527**	lf	2.00	5,054		
213	061000	Backer panels in electrical closets	**1**	ls	500.00	500		
214	061000	Miscellaneous blocking at exterior	**20,587**	sf	0.20	4,117		
215	061000	Exterior Trellis						
216	061000	Allowance for cementitous pergola	**672**	sf	35.00	23,520		

	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		NEW PUBLIC SAFETY BUILDING						
217	061000	Exterior wood stairs-5'-0" wide	**50**	riser	180.00	9,000		
218	061000	Exterior wood stairs-railings	**33**	lf	125.00	4,125		
219	061000	Exterior wood columns-cementitous trim 14'-0" high	**14**	ea	800.00	11,200		
220		SUBTOTAL					69,304	
221								
222		**061600 Sheathing**						
223	61600	Exterior gypsum sheathing	**12,997**	sf	2.25	29,243		
224		SUBTOTAL					29,243	
225								
226								
227		***TOTAL, DIVISION 6 - WOOD & PLASTICS***						**$98,547**
228								
229		***07 THERMAL & MOISTURE PROTECTION***						
230								
231		**070001 Waterproofing, Damproofing and Caulking**						
232		Slab on Grade, 8" and 5"						
233	070001	Vapor barrier	**20,581**	sf	0.65	13,378		
234		Foundation walls at exterior - 12" thick						
235	070001	Dampproofing foundation wall and footing	**5,502**	sf	2.50	NIC		
236		Elevator pit walls						
237	070001	Metal oxide waterproofing to elevator pit	**340**	sf	12.00	4,080		
238		Exterior walls						
239	070001	A/V barrier	**19,044**	sf	6.00	114,264		
240		SUBTOTAL					131,722	
241								
242		**070002 Roofing and Flashing**						
243		Flat roofing						
244	70002	TPO	**4,780**	sf	6.00	28,680		
245	70002	Insulation; R-30	**4,780**	sf	5.50	26,290		
246	70002	1/2" sheathing	**4,780**	sf	1.50	7,170		
247	70002	1/2" dens-deck protection board	**4,780**	sf	1.50	7,170		
248	70002	Reinforced vapor barrier	**4,780**	sf	0.45	2,151		
249		Sloped roofing						
250	70002	Pitched roof; Asphalt shingles	**22,056**	sf	4.50	99,252		
251	70002	Vented Nailbase board with poly insulation	**22,056**	sf	8.00	176,448		
252	70002	Vapor barrier-Ice and water shield	**22,056**	sf	0.45	9,925		
253		Miscellaneous Roofing						
254	70002	Entry Canopies-Roof entry canopy with cable supports	**125**	sf	120.00	15,000		
255	70002	Parapet stop at flat roof	**325**	lf	22.00	7,150		
256	70002	Snow guards	**1**	ls	10,000.00	10,000		
257	70002	Gutters/downspouts	**1**	ls	20,000.00	20,000		
258	70002	Miscellaneous flashings at roof, canopy & carport	**26,961**	sf	0.40	10,784		
259	70002	Elevator vent	**1**	ea	3,500.00	3,500		
260		SUBTOTAL					423,520	
261								
262		**072100 Thermal Insulation**						
263	072100	Rigid insulation under slabs; 2" thick	**20,669**	sf	2.25	46,505		
264		Foundation walls at exterior - 12" thick						
265	072100	Insulation to foundation walls; 2" thick	**3,668**	sf	2.15	7,886		
266		Exterior walls						
267	072100	3" XPS rigid insulation	**19,044**	sf	3.00	57,132		
268		SUBTOTAL					111,523	
269								
270								
271		**074000 Roofing and Siding Panels**						

	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		NEW PUBLIC SAFETY BUILDING						
272		Exterior walls						
273	074000	Fiber cement siding & trims	**4,743**	sf	15.00	71,145		
274	074000	Vertical 12" cement plank siding	**2,931**	sf	15.00	43,965		
275	074000	Vertical 12" cement plank siding	**961**	lf	11.00	10,571		
276	074000	Fiber cement siding-trims at windows	**1,637**	lf	11.00	18,007		
277	074000	Entry soffits-allowance	**500**	sf	35.00	17,500		
278	074000	Metal awnings	**100**	sf	75.00	7,500		
279		SUBTOTAL					168,688	
280								
281	**076200**	**Sheet Metal Flashing and Trim**						
282	076200	Metal/perimeter detail-flat roof	**274**	lf	25.00	6,850		
283	076200	Metal trim-gables	**542**	lf	40.00	21,680		
284	076200	Metal trim-fascia	**400**	lf	40.00	16,000		
285	076200	Miscellaneous flashings at exterior	**20,587**	sf	0.60	12,352		
286		SUBTOTAL					56,882	
287								
288	**078410**	**Fire stopping**						
289	078410	Fire proofing floor construction - Unprotected steel				NIC		
290	078410	Fire stopping floors	**27,691**	sf	0.10	2,769		
291		SUBTOTAL					2,769	
292								
293	**079200**	**Joint Sealants**						
294	079200	Miscellaneous sealants at exterior	**20,587**	sf	0.20	4,117		
295	079200	Backer rod & double sealant at exterior doors	**557**	lf	3.50	1,950		
296	079200	Backer rod & double sealant at windows	**1,157**	lf	3.50	4,050		
297	079200	Sealants & caulking @ interior doors	**122**	ea	51.00	6,222		
298	079200	Miscellaneous sealants throughout building	**27,691**	sf	0.50	13,846		
299		SUBTOTAL					30,185	
300								
301		***TOTAL, DIVISION 7 - THERMAL AND MOISTURE PROTECTION***						**$925,289**
302								
303		***08 DOORS & WINDOWS***						
304								
305	**080002**	**Glass and Glazing**						
306	080002	Interior storefront / glazing at doors frames	**558**	sf	60.00	33,480		
307	080002	Interior storefront / glazing	**54**	sf	60.00	3,240		
308	080002	Interior storefront / glazing at lobby/stair rated	**153**	sf	150.00	22,950		
309	080002	Mirror at fitness & locker rooms	**144**	sf	25.00	3,600		
310	080002	Interior window at Interview rooms; 4'x4'; secure, one-way glazing	**2**	ea	3,000.00	6,000		
311	080002	Interior borrowed lite, full height at evidence process	**6**	lf	400.00	2,400		
312	080002	Glazing to doors	**39**	ea	150.00	5,850		
313		SUBTOTAL					77,520	
314								
315	**081110**	**Hollow Metal Doors and Frames**						
316	081110	Hinged door and frame assembly at Prisoner cells	**6**	ea	7,000.00	42,000		
317	081110	Security hollow metal doors w/ 16 ga steel reinforced face sheets and secure vision panels (remaining Detention area doors)	**2**	ea	3,800.00	7,600		
318	081110	Polyethylene insulated single leaf exterior door, frame and hardware	**5**	ea	1,900.00	9,500		
319	081110	Polyethylene insulated double leaf exterior door, frame and hardware	**2**	pr	3,800.00	7,600		
320	081110	HM single leaf interior door, frame and hardware	**5**	ea	1,600.00	8,000		
321	081110	HM double leaf interior door, frame and hardware	**1**	pr	3,200.00	3,200		

	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		NEW PUBLIC SAFETY BUILDING						
322		SUBTOTAL					77,900	
323								
324		**081400 Flush Wood Doors**						
325	081400	Interior single leaf door, HM frame and hardware	**91**	ea	1,400.00	127,400		
326	081400	Interior double leaf door, frame and hardware	**3**	pr	3,000.00	9,000		
327	081400	Sliding door at tire storage	**1**	ea	1,100.00	1,100		
328		SUBTOTAL					137,500	
329								
330		**083050 Overhead Doors**						
331		Exterior Doors						
332	083050	Overhead Service doors 14' x 14' sectional , electrically operated doors to Vehicle storage; glazed at Fire Apparatus	**6**	ea	11,760.00	70,560		
333	083050	Overhead Service doors 10' x 10' at Sallyport	**4**	ea	5,000.00	20,000		
334		SUBTOTAL					90,560	
335								
336								
337		**083110 Access Doors and Frames**						
338	083110	2'x4' Steel access doors at holding cell plumbing chases	**6**	ea	750.00	4,500		
339		SUBTOTAL					4,500	
340								
341		**084110 Aluminum-Framed Entrances and Storefronts**						
342	084110	Aluminum entrance doors including frame and hardware; double leaf	**3**	pr	7,500.00	22,500		
343	084110	Pre-finished glazed aluminum entrance doors including frame and hardware @ interior	**5**	ea	3,000.00	15,000		
344	084110	Storefront	**524**	sf	70.00	36,680		
345		SUBTOTAL					74,180	
346								
347		**085113 Aluminum Windows**						
348	085113	Clad wood windows	**1,019**	sf	75.00	76,425		
349		SUBTOTAL					76,425	
350								
351		**087100 Door Hardware**						
352	087100	Door Hardware	**122**	ea	700.00	Incl Above		
353		SUBTOTAL					-	
354								
355		**089000 Louvers and Vents**						
356	089000	Louvers - allow	**100**	sf	65.00	6,500		
357		SUBTOTAL					6,500	
358								
359		***TOTAL, DIVISION 8 - DOORS AND WINDOWS***						**$545,085**
360								
361		***09 FINISHES***						
362								
363		**090002 Tile**						
364	090002	Porcelain floor tile	**767**	sf	19.00	14,573		
365	090002	Ceramic floor tile	**3,005**	sf	18.85	56,644		
366	090002	Ceramic tile base	**1,003**	lf	12.00	12,036		
367	090002	Porcelain tile base	**272**	lf	15.00	4,080		
368	090002	Ceramic tile wainscot at bathrooms 7' high	**2,975**	sf	18.20	54,145		
369		SUBTOTAL					141,478	
370								
371		**090003 ACT**						

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	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		NEW PUBLIC SAFETY BUILDING						
372	090003	ACT ceilings; 2 x 2	**15,177**	sf	4.50	68,297		
373		SUBTOTAL					68,297	
374								
375		**090005 Resilient Flooring**						
376	090005	Resilient Flooring-Sheet linoleum	**8,566**	sf	6.50	55,679		
377	090005	Rubber treads/risers to egress stair	**230**	lfr	20.00	4,600		
378	090005	Sheet linoleum to landings	**150**	sf	8.00	1,200		
379	090005	4" Rubber base	**5,676**	lf	2.15	12,203		
380		SUBTOTAL					73,682	
381								
382		**092110 GWB**						
383	092110	Drywall at Backup walls	**12,997**	sf	2.25	29,243		
384	092110	Typical interior partition; 3 5/8" MS w/ 1 lyr GWB ea side, insulation	**16,100**	sf	10.00	161,000		
385	092110	Typical corridor partition; 6" MS w/ 1 lyr GWB ea side, insulation with impact resistant GWB	**19,278**	sf	12.00	231,336		
386	092110	Typical Plumbing walls-double stud ; 6" MS w/ 1 lyr GWB ea side, insulation.	**1,344**	sf	18.00	24,192		
387	092110	GWB ceiling assembly , moisture resistant	**3,005**	sf	11.00	33,055		
388	092110	GWB ceiling assembly at bookings	**278**	sf	10.00	2,780		
389	092110	Bullet resistant GWB	**1**	ls	10,000.00	10,000		
390	092110	Soffit allowance	**1**	ls	5,000.00	5,000		
391		SUBTOTAL					496,606	
392								
393		**096466 Athletic Flooring**						
394	096466	Rubber Athletic floor	**369**	sf	12.00	4,428		
395		SUBTOTAL					4,428	
396								
397		**096810 Tile Carpeting**						
398	096810	Carpet tile	**5,808**	sf	4.44	25,788		
399		SUBTOTAL					25,788	
400								
401		**099000 Painting and Coating**						
402	099000	Paint doors and frames	**122**	ea	90.00	10,980		
403	099000	Exposed concrete	**5,582**	sf	1.75	9,769		
404	099000	Painted lanes in parking bay	**1**	ls	500.00	500		
405	099000	Paint to staircases	**2**	flt	1,700.00	3,400		
406	099000	Paint exposed structure and label piping etc.	**5,582**	sf	2.00	11,164		
407	099000	Paint to GWB	**83,466**	sf	0.75	62,600		
408	099000	Paint to CMU walls	**10,905**	sf	1.50	16,358		
409		SUBTOTAL					114,771	
410								
411		***TOTAL, DIVISION 9 - FINISHES***						**$925,050**
412								
413		***10 SPECIALTIES***						
414								
415		**101100 Visual Display Surfaces**						
416	101100	**Marker Boards and Tack boards**						
417	101100	Typical Offices	**100**	sf	22.00	2,200		
418	101100	Locker room-6'	**30**	sf	22.00	660		
419	101100	Kitchen-4'	**20**	sf	22.00	440		
420	101100	Fitness-8'	**40**	sf	22.00	880		
421	101100	Dining-6'	**30**	sf	22.00	660		
422	101100	Alarm-6'	**30**	sf	22.00	660		
423	101100	Report-6'	**30**	sf	22.00	660		
424	101100	**Tack boards**						

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	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		NEW PUBLIC SAFETY BUILDING						
425	101100	Lobbies/outside each classroom-14# assumed	**420**	sf	20.00	8,400		
426	101100	Administration -4'	**40**	sf	20.00	800		
427	101100	Dining room -6'	**30**	sf	20.00	600		
428	101100	Alarm room -6'	**30**	sf	20.00	600		
429	101100	Report room -6'	**30**	sf	20.00	600		
430	101100	Weights/fitness room -6'	**30**	sf	20.00	600		
431		SUBTOTAL					17,760	
432								
433		**101400 Signage**						
434	101400	Room Signs	**122**	loc	90.00	10,980		
435	101400	Exterior signage	**1**	ls	7,500.00	7,500		
436	101400	Dedication plaque	**1**	ls	1,200.00	1,200		
437	101400	Interior ADA signage	**27,691**	sf	0.15	4,154		
438		SUBTOTAL					23,834	
439								
440		**102110 Toilet Compartments**						
441	102110	ADA	**4**	ea	1,400.00	5,600		
442	102110	Typical	**3**	ea	1,200.00	3,600		
443	102110	Shower enclosures	**8**	ea	1,400.00	11,200		
444		SUBTOTAL					20,400	
445								
446		**102800 Toilet Accessories**						
447	102800	42" Grab bars	**12**	set	350.00	4,200		
448	102800	Toilet paper dispensers	**15**	ea	150.00	2,250		
449	102800	Combination PT & waste	**12**	ea	400.00	4,800		
450	102800	Sanitary napkin vendor-gang female toilets	**2**	ea	600.00	1,200		
451	102800	Electric Hand Dryer	**12**	ea	550.00	6,600		
452	102800	Vanity counter	**36**	lf	250.00	9,000		
453	102800	Soap dispensers	**15**	ea	90.00	1,350		
454	102800	Shower curtains / accessories	**8**	ea	250.00	2,000		
455	102800	Accessories at cells						
456	102800	Allowance at cells	**6**	ea	500.00	3,000		
457	102800	Custodian closet	**2**	rms	500.00	1,000		
458		SUBTOTAL					35,400	
459								
460		**103000 Lockers**						
461		**As per narrative**						
462	103000	Firearm storage lockers	**7**	loc	900.00	6,300		
463	103000	Personal lockers-welded body metal lockers on metal base						
464	103000	Dispatch room-1' x 1-6" x 7'-0"	**6**	ea	500.00	3,000		
465	103000	Booking and Processing room-1'6" x 1'6" x 2'6"	**9**	ea	250.00	2,250		
466	103000	Firemen lockers 2'-0" x 1-6" x 5-0"	**20**	ea	1,200.00	24,000		
467	103000	Police lockers 2'-6" x 2'-0" x 7-0" with integral bench with internal gun storage	**50**	ea	300.00	15,000		
468	103000	Turnout lockers 1'-6" x 1'-6" x 6'-3" high	**18**	ea	250.00	4,500		
469	103000	Evidence lockers-Pass thru lockers for keyless deposit-3'-0" wide units with refrigerated section	**3**	ea	1,800.00	5,400		
470	103000	High Density Shelving						
471	103000	7'-0" high mobile open front units metal shelving units (as per narrative)	**400**	lf	80.00	32,000		
472		SUBTOTAL					92,450	
473								
474		***TOTAL, DIVISION 10 - SPECIALTIES***						**$189,844**
475								
476		***11 EQUIPMENT***						
477								
478		**114000 Equipment**						
479	114000	Food service equipment						

	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
	NEW PUBLIC SAFETY BUILDING							
480	114000	Refrigerators/freezers (Min 26cuft) capacity. Side by side configuration	**4**	ea	4,000.00	16,000		
481	114000	Undercounted refrigerator	**2**	ea	1,500.00	3,000		
482	114000	Commercial grade 6 burner freestanding gas range	**1**	ea	8,000.00	8,000		
483	114000	Range hood	**1**	ea	2,500.00	2,500		
484	114000	Commercial grade dishwasher	**1**	ea	4,500.00	4,500		
485	114000	Side by Side washer dryer sets	**2**	ea	5,000.00	10,000		
486	114000	Specialty						
487	114000	Gear Extractors	**1**	ea	5,000.00	5,000		
488	114000	Commercial icemaker	**1**	ea	3,000.00	3,000		
489								
490	114000	Detention Equipment (as per specification)						
491	114000	Detention cell doors	**6**	loc		with doors		
492	114000	Detention cell doors-allow two at share processing	**2**	loc		with doors		
493	114000	Detention bed-6'-0" long allowance of one per cell	**6**	loc	1,200.00	7,200		
494	114000	Detention bench-3'-0" long allowance of at each booking/processing room	**2**	loc	3,000.00	6,000		
495	114000	Hard review room-provide 2 stools	**2**	loc	600.00	1,200		
496	114000	Adult booking and processing-provide 2 stools	**2**	loc	600.00	1,200		
497	114000	Juvenile processing and booking (provide one stool)	**1**	loc	600.00	600		
498	114000	Detention bar-provide on 2'-0" long bar at each detention bench	**6**	loc	900.00	5,400		
499	114000	Detention table-provide one 10-0" table	**1**	loc	3,500.00	3,500		
500	114000	Detention table-provide one 5-0" table	**1**	loc	1,800.00	1,800		
501	114000	Detention table-provide two 3-0" table	**1**	loc	1,000.00	1,000		
502	114000	Detention table-provide one 4-0" table	**1**	loc	1,400.00	1,400		
503	114000	Fire Safety Equipment (as per specification)						
504	114000	Allowance for rappelling hooks	**3**	loc	2,500.00	7,500		
505	114000	Custom Manhole cover and frame 5'-0 x 5'-0"	**1**	ea	6,000.00	6,000		
506	114000	Stainless steel protection plate 4'0" x 3'-0"	**2**	ea	1,500.00	3,000		
507	114000	Miscellaneous equipment						
508	114000	Decontamination equipment				F,F&E		
509		SUBTOTAL					97,800	
510								
511	**115210**	**Projection Screens**						
512	115210	Projection screens-Training room 8' x 6'	**1**	ea	2,500.00	2,500		
513	115210	Projection screens-Conference Room 8' x 6'	**1**	ea	2,500.00	2,500		
514		SUBTOTAL					5,000	
515								
516		***TOTAL, DIVISION 11 - EQUIPMENT***						**$102,800**
517								
518								
519		***12 FURNISHINGS***						
520								
521	**122400**	**Window Shades**						
522	122400	Window shades-exterior	**1,543**	sf	6.00	9,258		
523	122400	Window shades-interior	**765**	sf	5.00	3,825		
524		SUBTOTAL					13,083	
525								
526	**124810**	**Entrance Mats and Frames**						
527	124810	Entrance mats and grille	**100**	sf	45.00	4,500		
528		SUBTOTAL					4,500	
529								
530	**126000**	**Furnishings**						
531	126000	*Triage*						
532	126000	Base cabinet w/ plam countertops	**12**	lf	340.00	4,080		

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	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		NEW PUBLIC SAFETY BUILDING						
533	126000	Coat rack	**12**	lf	25.00	300		
534	126000	*Dispatch*						
535	126000	Base cabinet w/ plam countertops	**7**	lf	340.00	2,380		
536	126000	Wall cabinets	**7**	lf	200.00	1,400		
537	126000	*Armory / Weapons*						
538	126000	Base cabinet w/ SS countertops	**10**	lf	500.00	5,000		
539	126000	Wall cabinets	**10**	lf	200.00	2,000		
540	126000	Storage cabinets	**3**	ea		FF&E		
541	126000	*Sally port*						
542	126000	Base cabinet w/ SS countertops	**9**	lf	500.00	4,500		
543	126000	Wall cabinets	**9**	lf	250.00	2,250		
544	126000	*Sargent's & reporting*						
545	126000	Base cabinet w/ plam countertops	**12**	lf	340.00	4,080		
546	126000	Wall cabinets	**12**	lf	200.00	2,400		
547	126000	Work Carrels				see allowance below		
548	126000	*Patrol Briefing*						
549	126000	Base cabinet w/ plam countertops	**20**	lf	340.00	6,800		
550	126000	Wall cabinets	**20**	lf	200.00	4,000		
551	126000	*Kitchen*						
552	126000	Storage cabinets-Pantry	**4**	ea	1,100.00	4,400		
553	126000	Base cabinet w/ plam countertops	**30**	lf	400.00	12,000		
554	126000	Wall cabinets	**30**	lf	220.00	6,600		
555	126000	Island counter	**18**	sf	250.00	4,500		
556	126000	Breakfast bar pass-thru counter	**7**	lf	400.00	2,800		
557	126000	*Break room*						
558	126000	Base cabinet w/ plam countertops	**16**	lf	400.00	6,400		
559	126000	Wall cabinets	**16**	lf	220.00	3,520		
560	126000	*Laundry room*						
561	126000	Base cabinet w/ plam countertops	**14**	lf	400.00	5,600		
562	126000	Misc shelving at laundry	**8**	lf	200.00	1,600		
563	126000	Wall cabinets	**14**	lf	220.00	3,080		
564	126000	*Booking/processing*						
565	126000	Desk	**14**	lf	600.00	8,400		
566	126000	Wall cabinets	**7**	lf	220.00	1,540		
567	126000	*Juvenile hold*						
568	126000	Desk	**14**	lf	600.00	8,400		
569	126000	Wall cabinets	**7**	lf	220.00	1,540		
570	126000	*Evidence Process*						
571	126000	Counter at wall	**9**	lf	400.00	3,600		
572	126000	Base cabinet w/ SS countertops	**8**	lf	500.00	4,000		
573	126000	Wall cabinets	**8**	lf	250.00	2,000		
574	126000	*Radio Charging Station*						
575	126000	Base cabinet w/ plam countertops	**8**	lf	340.00	2,720		
576	126000	Tall storage	**3**	ea	1,200.00	3,600		
577	126000	*Training Room*						
578	126000	Base cabinet w/ plam countertops	**20**	lf	340.00	6,800		
579	126000	Wall cabinets	**20**	lf	200.00	4,000		
580	126000	Seating				FF&E		
581	126000	*Janitors*						
582	126000	Janitors accessories	**2**	ls	500.00	1,000		
583	126000	*TOG*						
584	126000	Shelving	**16**	ea	500.00	8,000		

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	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		NEW PUBLIC SAFETY BUILDING						
585	126000	*Decon*						
586	126000	Misc shelving decon				FF&E		
587	126000	*Work room*						
588	126000	Base cabinet w/ plam countertops	**25**	lf	340.00	8,500		
589	126000	Wall cabinets	**25**	lf	200.00	5,000		
590	126000	*Specialists*						
591	126000	Base cabinet w/ plam countertops	**20**	lf	340.00	6,800		
592	126000	Wall cabinets	**20**	lf	200.00	4,000		
593	126000	*Detectives*						
594	126000	Base cabinet w/ plam countertops	**15**	lf	340.00	5,100		
595	126000	Wall cabinets	**15**	lf	200.00	3,000		
596	126000	*Police Chief*						
597	126000	Base cabinet w/ plam countertops	**21**	lf	400.00	8,400		
598	126000	*Admin Lieut*						
599	126000	Base cabinet w/ plam countertops	**5**	lf	340.00	1,700		
600	126000	Wall cabinets	**5**	lf	200.00	1,000		
601	126000	*Reception desk*						
602	126000	Desk	**18**	lf	550.00	9,900		
603	126000	*Spec Lieut*						
604	126000	Base cabinet w/ plam countertops	**5**	lf	340.00	1,700		
605	126000	Wall cabinets	**5**	lf	200.00	1,000		
606	126000	*Fire Chief*						
607	126000	Base cabinet w/ plam countertops	**16**	lf	400.00	6,400		
608	126000	*Deputy Chief*						
609	126000	Base cabinet w/ plam countertops	**3**	lf	400.00	1,200		
610		**Millwork Storage fixtures (narrative)**						
611	126000	*Display cabinets*						
612	126000	Allowance for display cabinets at lobby 8'-0 x 7'-0" high	**1**	ls	8,000.00	8,000		
613	126000	Cubbies-Open front Duty bag cubbies storage units each measuring 3'-0" x 1'-6" x 1'-6"	**48**	ea	180.00	8,640		
614	126000	Work shop bench for small maintenance and repair-2'-0" wide, 8'-0" long	**8**	lf	450.00	3,600		
615	126000	Watch room-provide Plam countertop	**35**	lf	190.00	6,650		
616	126000	Interview room-provide Plam countertop	**10**	lf	190.00	1,900		
617	126000	*Firearms Permit*						
618	126000	Base cabinet w/ plam countertops	**8**	lf	340.00	2,720		
619	126000	Wall cabinets	**8**	lf	200.00	1,600		
620	126000	*Sargent's & reporting*						
621	126000	Base cabinet w/ plam countertops	**24**	lf	340.00	8,160		
622	126000	Wall cabinets	**24**	lf	200.00	4,800		
623	126000	*Offices-shelf and rail*						
624	126000	Shelf and rail at closet (not clearly shown)	**1**	ls	2,500.00	2,500		
625	126000	**Miscellaneous**						
626	126000	Miscellaneous storage shelving at boat gear/dive room	**1**	ls	5,000.00	5,000		
627	126000	Secured evidence storage cabinets	**2**	ea	1,600.00	3,200		
628	126000	Fire extinguisher & recessed cabinets	**6**	ea	350.00	2,100		
629		SUBTOTAL					267,860	
630								
631		***TOTAL, DIVISION 12***						**$285,443**
632								
633								
634		***D10 CONVEYING SYSTEMS***						
635								
636		**D1010 ELEVATOR**						

Schematic Design Cost Estimate GFA 27,691

	CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
		NEW PUBLIC SAFETY BUILDING						
637	14200	Hydraulic elevator, 2 stop; 100fpm	**1**	ea	90,000.00	90,000		
638	050001	Pit ladders	**1**	ea	900.00	900		
639	050001	Sill angles	**10**	lf	25.00	250		
640		SUBTOTAL					91,150	
641								
642								
643		***TOTAL - CONVEYING SYSTEMS***						**$91,150**
644								
645								
646		***D20 PLUMBING***						
647								
648		**D20 PLUMBING, GENERALLY**						
649	220000	Plumbing allowance	**27,691**	gsf	16.50	456,902		
650		SUBTOTAL					456,902	
651								
652		***TOTAL - PLUMBING***						**$456,902**
653								
654								
655		***D30 HVAC***						
656								
657		**D30 HVAC, GENERALLY**						
658	230000	HVAC allowance	**27,691**	gsf	45.00	1,246,095		
659		SUBTOTAL					1,246,095	
660								
661		***TOTAL - HVAC***						**$1,246,095**
662								
663								
664		***D40 FIRE PROTECTION***						
665								
666		**D40 FIRE PROTECTION, GENERALLY**						
667	210000	Fire protection allowance	**27,691**	gsf	4.25	117,687		
668		SUBTOTAL					117,687	
669								
670		***TOTAL - FIRE PROTECTION***						**$117,687**
671								
672								
673		***D50 ELECTRICAL***						
674								
675		**260000 ELECTRICAL SYSTEMS**						
676	260000	Electrical systems; complete	**27,691**	gsf	46.00	1,273,786		
677	260000	SUBTOTAL					1,273,786	
678								
679								
680		***TOTAL - ELECTRICAL***						**$1,273,786**
681								
682								

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Town of Scituate
New Public Safety Building
Scituate, Ma

09-May-14

Schematic Design Cost Estimate

CSI CODE	DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
SITEWORK							
	G SITEWORK						
	G10 SITE PREPARATION & DEMOLITION						
	Site Demolitions and Relocations						
02200	Site construction fence/barricades	**2,147**	lf	10.00	21,470		
02200	Clear and Grub wooded site	**6**	acre	4,500.00	27,000		
02050	Miscellaneous site demolition	**1**	ls	10,000.00	10,000		
	Site Earthwork						
02200	Strip topsoil, store; 12" thick	**3,704**	cy	6.00	22,224		
02200	Cuts and fills	**1**	ls	15,000.00	15,000		
02200	Fine grading	**9,238**	sy	1.00	9,238		
02200	Erosion control fence	**2,147**	lf	9.00	19,323		
02200	Erosion control maintenance and dust control	**1**	ls	5,000.00	5,000		
02200	Construction entrance - allowance	**500**	sf	4.00	2,000		
	SUBTOTAL					131,255	
	G20 SITE IMPROVEMENTS						
	Roadways and Parking Lots-roadways						
02800	Bit. Concrete paving	*27,765*	*sf*				
02800	12" Gravel Borrow MND specs type B	**1,028**	cy	30.00	30,840		
02800	bituminous concrete; 4" thick-MHD specification	**3,085**	sy	26.00	80,210		
02800	Other road markings; crosswalk striping, directional markings, tactile warning strip etc	**1**	ls	2,000.00	2,000		
02800	Vertical granite curbs	**1,594**	lf	32.00	51,008		
	Roadways and Parking Lots-Visitor Parking						
02800	Bit. Concrete paving	*20,218*	*sf*				
02800	12" Gravel Borrow MND specs type B	**749**	cy	30.00	22,470		
02800	bituminous concrete; 4" thick-MHD specification	**2,246**	sy	26.00	58,396		
02800	Single solid lines, 4" thick	**50**	space	25.00	1,250		
02800	Wheelchair Parking	**4**	space	75.00	300		
02800	Other road markings; crosswalk striping, directional markings, tactile warning strip etc	**1**	ls	1,500.00	1,500		
02800	Vertical granite curbs	**1,084**	lf	32.00	34,688		
	Roadways and Parking Lots-Staff Parking						
02800	Bit. Concrete paving	*30,495*	*sf*				
02800	12" Gravel Borrow MND specs type B	**1,129**	cy	30.00	33,870		
02800	bituminous concrete; 4" thick-MHD specification	**3,388**	sy	26.00	88,088		
02800	Single solid lines, 4" thick	**50**	space	25.00	1,250		
02800	Wheelchair Parking	**4**	space	75.00	300		
02800	Other road markings; crosswalk striping, directional markings, tactile warning strip etc	**1**	ls	1,500.00	1,500		
02800	Vertical granite curbs	**983**	lf	32.00	31,456		
	Pedestrian Paving						
	Concrete walkways	*4,668*	*sf*				
02200	gravel base; 8" thick	**116**	cy	30.00	3,480		
03300	4" concrete walkways	**4,668**	sf	6.50	30,342		
03300	Allowance for misc 8" apron at apparatus bay	**160**	sf	10.00	1,600		
03300	Allowance for precast pavers adjacent to building to vis	**1,386**	sf	28.00	38,808		
02800	Signage	**1**	ea.	5,000.00	5,000		
129300	Flag pole 30' high	**3**	loc	3,500.00	10,500		
02800	Outdoor storage building	**2,000**	sf	40.00	NIC		
	Site Furnishings						
02800	Allowance for custom benches (1'-3" high); 2'-0" wide , 8'-0" long	**4**	ea	3,000.00	12,000		
02800	Allowance for manufactured 72" long	**4**	ea	1,200.00	4,800		

PM&C

Town of Scituate
New Public Safety Building
Scituate, Ma

09-May-14

Schematic Design Cost Estimate

	CSI CODE		DESCRIPTION	QTY	UNIT	UNIT COST	EST'D COST	SUB TOTAL	TOTAL COST
	SITEWORK								
53	02800		Trash and recycle receptacles with 45ga rigid plastic liner	**2**	ea	200.00	400		
54	02800		Stainless steel bike racks on concrete base	**10**	ea	500.00	5,000		
55			Site Development						
56	02800		Vinyl coated chain link fence at police parking area	**681**	lf	25.00	17,025		
57	02800		Gates at fence-powered	**2**	ea	2,500.00	5,000		
58	02800		Fence at dumpster enclosure	**44**	lf	90.00	3,960		
59	02800		Chain link fence at stairs	**47**	lf	25.00	1,175		
60									
61			Landscape						
62	02800		Soil mix; 6" thick; reuse amended soil from on-site spoils	**3,704**	cy	16.00	59,264		
63	02800		Seed to remaining lawn areas	**136,000**	sf	0.35	47,600		
64	02800		Planter beds-provide groundcovers	**23,020**	sf	0.50	11,510		
65	02800		Planter beds-provide shrubs	**23,020**	sf	1.00	23,020		
66	02800		Planter beds-mulch	**23,020**	sf	0.25	5,755		
67	02800		Trees (no quantities given in narrative)	**1**	ls	10,000.00	10,000		
68	02800		Steel edge	**1**	lf	5,000.00	5,000		
69	02200		SUBTOTAL					740,365	
70									
71		**G30**	**CIVIL MECHANICAL UTILITIES**						
72			Domestic Water Service						
73	02200		Water main DI	**350**	lf	90.00	31,500		
74	02200		Connect to existing water main	**1**	ea	5,000.00	5,000		
75	331000		New fire hydrant	**1**	loc	2,600.00	2,600		
76	331000		FD connection	**1**	loc	2,000.00	2,000		
77	331000		Gate valves	**6**	loc	750.00	4,500		
78			Sanitary						
79	02200		Septic system with leaching field (6,500 SF field)	**1**	ea	80,000.00	80,000		
80	02200		Sanitary pipe	**500**	lf	50.00	25,000		
81	02200		Connection to existing gravity sewer line	**1**	ea	1,200.00	1,200		
82			Storm						
83	02200		Storm pipe	**600**	lf	65.00	39,000		
84	02200		Drainage manhole	**4**	ea	3,500.00	14,000		
85	02200		Water quality structure	**1**	ea	20,000.00	20,000		
86	02200		Catch basin	**6**	ea	3,200.00	19,200		
87	02200		Connect to existing storm main	**1**	ea	1,200.00	1,200		
88	02200		Underground detention	**1**	ls	150,000.00	150,000		
89			SUBTOTAL					395,200	
90									
91		**G40**	**ELECTRICAL UTILITIES**						
92			Power						
93	16100		Electrical allowance	**1**	ls	100,000.00	100,000		
94			SUBTOTAL					100,000	
95									
96			***TOTAL - SITE DEVELOPMENT***						**$1,366,820**
97									

TELEPHONE LIST
Scituate Public Safety

1795 WILLISTON RD, STE. 200 • S. BURLINGTON, VT 05403
Phone (802) 863-1428 • Fax (802) 863-6955

260 MERRIMAC ST. BUILD #7 •NEWBURYPORT, MA 01950
Phone (978) 499-2999 • Fax (978) 499-2944

Dore and Whittier Project No.: 13-0671 **Revised 4/28/2014**

WORK TYPE	NAME	PHONE	FAX
Owner	**Town of Scituate** **600 Chief Justice Cushing Highway** Scituate, MA. 02066	**617-451-2717**	
	Shane Nolan **Daedalus Projects** snolan@dbp-boston.com	**617-451-2717**	
	Scituate Station #3 594 Chief Justice Cushing Highway	**781-545-8749**	
	Rick Judge, Fire Chief chief@scituatefire.org		
	Scituate Police Headquarters 604 Chief Justice Cushing Hwy Scituate, Massachusetts 02066	**781-545-1212**	
	Michael Stewart, Police Chief	**781-545-1212**	
Architect	**Dore & Whittier Architects, Inc.** 1795 Williston Road Suite 2000 So. Burlington, VT. 05403	**802-863-1428**	802-863-6955
	Donald Walter dwalter@doreandwhittier.com	**617-312-4059 (c)** **978-499-2999**	
	Alan Brown abrown@doreandwhittier.com	**802-863-1428**	
	Bruce Dillon bdillon@doreandwhittier.com	**802-734-7886 (c)**	
	Rick Almeida ralmeida@doreandwhittier.com	**978-499-2999**	
Traffic / Civil / Site	**Nitsch Engineering** 170 Commerce Way, Suite 101 Portsmouth, NH. 03801	**(617) 338-0063**	
	Anthony Donato adonato@nitscheng.com		

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Dore and Whittier Project No.: 13-0671 **Revised 4/28/2014**

WORK TYPE	NAME	PHONE	FAX
Geotechnical	**HML Associates** 19 Rockwood Rd. Hingham, MA 02043 Nicholas Lanney	**(718) 740-9999**	
Public Safety Consultants	**CR Architecture & Design** 600 Vine St. Suite 2210 Cincinnati, OH. 45202 Mark Shoemaker m.shoemaker@cr-architects.com	**(513) 721-8080**	(513) 721-8181
Landscape	**Brown Sardina, Inc.** 129 South Street Boston, MA 02111 Bill Brown bbrown@brownsardina.com	**(617) 482-4703**	(617) 482-4882
Hazardous Materials	**Universal Environmental Consultants** 12 Brewster Rd., Framingham, MA 01702 Ammar Dieb adieb@uec-env.com	**(508) 628-5486**	
Structural	**Engineers Design Group** 350 Main St., Floor 2 Malden, MA 02148 Mehul Dhruv mbhruv@edginc.com	**(781) 396-9007**	(781) 396-9008
HVAC / Fire Protection / Plumbing / Electrical / Lighting / Telecommunications	**Garcia Galuska DeSousa** 370 Faunce Corner Rd. North Dartmouth, MA 02747 Chris Garcia (FP/P) Carlos DeSoursa (E) Dominck Puniello (HVAC) Dom_puniello@g-g-d.com David Pereira (Tele)	**(508) 998-5700**	

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Dore and Whittier Project No.: 13-0671 **Revised 4/28/2014**

WORK TYPE	NAME	PHONE	FAX
Cost Estimating	**Project Management & Cost (PM&C)** 59 South Street Hingham, MA 02043 Peter Bradley peterbradley@pmc.ma.com	**(781) 740-8007**	(781) 740-1012
FF&E	**Tavares Design Associates** 8 Winchester PI, Winchester, MA 01890 Many Tavares	**(781) 729-5541**	
Sustainability Consultant	**The Green Engineer, LLP** 50 Beharrell St, Concord, MA 01742 Chris Schaffner Christ@greenengineer.com	**(978) 369-8978**	

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POLICE & FIRE FACILITY QUESTIONNAIRE

Name of Department _____

Proposed Name of Facility _____

The following questionnaire is being provided as a tool to familiarize you with questions, issues, and data that will be discussed in the beginning stages of your project. To be responsible with our client's time, we have developed this form to allow you to prepare and discuss the following materials prior to our meeting. We have found that our meetings are more productive and efficient as a result of this approach.

If more than one person will be providing input into the completion of this form, please compile all the data into one questionnaire to avoid providing conflicting information.

When you have completed this, please fax it to our office in care of the contact person you are working with or the Government Studio at 513-721-8181.

Please contact us if you have any questions filling out this form.

PROJECT MANAGEMENT
Who will manage the project for the Department?

Daily contact with the design team and contractor

Name W Michael Stewart Title/role Police Chief

Other members of department building committee and their roles involved in the project:

Name Mark Thompson Title/role Sgt Police

Name Rick Judge Title/role Fire Chief

Name John Murphy Title/role Dep Fire Chief

Name _____ Title/role _____

Name _____ Title/role _____

Name _____ Title/role _____

Name _____ Title/role _____

Name _____ Title/role _____

Name _____ Title/role _____

Name _____ Title/role _____

Name _____ Title/role _____

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PROJECT BUDGET

Total Project Cost = Building Hard Cost + Soft Costs

- The term **"Total Project Cost"** refers to the sum total of all expenses required to design, build, furnish, and move into a completed facility. This typically is divided into two categories, **"Building Hard Costs"** and **"Soft Costs".**
- **"Building Hard Cost"** describes only the cost of the Prime contracts for construction at the time of the time of bid opening. This cost does not include any of the "Soft Costs".
- **"Soft Costs"** include all other costs associated with designing, building and moving into a completed facility. This cost does not include any of the "Building Hard Cost".

Check category for each item listed below:

	Hard Cost	Soft Cost	Not Included In Project Cost
Land acquisition?	☐	☐	☒
Off-site utility improvements?	☐	☐	☒
Specialty equipment (Emergency generator, UPS, etc.)	☒	☐	☐
Furnishings, workstations, consoles?	☐	☒	☐
Architectural and Engineering fees?	☒	☐	☐
Permits – Building, Zoning, Utilities including Tap Fees?	☒	☐	☐
Surveys – Boundary and Topographic?	☒	☐	☐
Environmental Surveys – Phase 1 and Phase 2 Environmental	☒	☐	☐
Phone system?	☒	☐	☐
Radio/communication system?	☒	☐	☐
Landscaping?	☒	☐	☐
Signage?	☒	☐	☐
Kitchen / Break room Equipment?	☒	☐	☐
Security/AV Systems?	☒	☐	☐
Temporary facilities?	☐	☐	☒
Moving costs?	☐	☒	☐
Utility Costs?	☐	☒	☐
Insurance Costs?	☐	☒	☐
Construction Contingency?	☒	☐	☐
Inspection and testing fees?	☒	☐	☐
Cost of financing?	☐	☐	☒

What is the expected Total Project Cost? :

Total Project Cost (fixed or give a range) $6 - 7 mil.

X Total Project Cost has not been determined. It will be determined as part of the design process.

What is the anticipated source(s) of funding? Over Ride tax increase

Has funding been secured? No

PROJECT SITE

Is the land acquisition for this project complete?

How many acres are available? (Approximately)

Describe the previous use for the project site. Undeveloped

What other uses are planned for this property other than a Police Station?

- ☑ Combined City/~~Township Hall~~ Public Safety with Fire
- ☐ Community Park / Recreational
- ☐ Public Works / Service / Salt Dome
- ☑ Emergency Operations Center (EOC)
- ☑ Public Safety Access Point (Dispatch) – refer to Dispatch section of this Questionnaire
- ☐ Other: (Describe)

What Utilities are available to the Project Site?

☐	Water	☐	Telephone
☐	Sewer	☐	Cable
☐	Storm Water	☐	Fiber Optics
☐	Electric	☐	Gas

If possible, provide a list of Utility company contact personnel and contact information.

☐	Water	☐	Telephone
☐	Sewer	☐	Cable/Fiber Optics
☐	Electric	☐	Gas

Who, besides assigned personnel, will require access to site?

Public (community room) Limited Access

Maintenance personnel Custodian

Other companies limited

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POLICE OPERATIONAL ISSUES

Operations

Describe your current operations:

Typical service calls and type: E 911 Emergencies / Under Maintenance / Traffic

Service area: 17.6 Sq. Miles Land / 14.2 Water

Do you have a community policing program? Yes

School resource officers, D.A.R.E.? Yes

Does the department provide community training? Would like to

Do you use bike patrols? Yes

If yes, how many? 4

Do you use K-9 units? Yes

If yes, how many? 1

Is community access for filing complaints and picking up records important? Yes

What is the frequency of community visitors to station? 20-30 PER DAY

Describe your investigations division:

Do detectives work cases separately or in teams? Both

Other information that we should know?

Staffing

What are your current staffing levels? 36

Sworn officers 8

Civilian

What are your future staffing levels? 400 + / 4R.

Current calls per officer 18,132

Current population 19,000

Anticipated population – 20 years

Administrative staff? 2

Current 3

Future

Other staff that will use the facility (fire, clinic, etc.)
FIRE, Disaster Relief Volunteers, EMER. Oper. Center personnel

SECURE AREA

Sallyport

Is a sallyport required? Yes

Do you anticipate requiring more than one vehicle access at a time? Yes

If so, how many? 2 (Large enough for Ambulance)

Booking/Processing

Do you anticipate booking/processing more than one prisoner at a time? Yes

If so, how many? 2

Do you anticipate a separate processing area for juveniles? Yes

Prisoner Holding

Do you plan to provide holding facilities? Yes

If yes, are holding cells to be designed as 8-hour, 5 day or other? 24 hrs. / Some weekends

If no, how will you handle temporary detention? i.e. cuffing rail, etc.

Do you anticipate more than 2 holding cells? Yes

If so, how many? 8 male, 4 Female, 2 Juvenile

Do you anticipate more than one cell for detox? Yes

Do you anticipate a separate juvenile holding area? Yes, Sight + Sound segregated from Ad

Evidence Processing/Storage

Is the evidence processing done in the same facility? Evidence storage only

Is a vehicle evidence processing garage required? Yes

Do you require a separate area for contaminated items? ?

Do you anticipate requiring an evidence drying area? Yes

Do you require a pass-thru evidence refrigerator? Yes

What type of storage lockers/shelves is desired for evidence storage? Shelving

What type of storage lockers/shelves/room is desired for property storage? Shelving, Open Space

How do you handle large found property items such as bikes? Want a 16'x16' Chain Link Area to Rear of Bldg.

PUBLIC AREAS

Interview/Complaint

How many and what type of interview rooms do you require:

Soft interview rooms (with comfortable finishes and furniture)? 2 soft off Lobby

Hard interview rooms? 2 Audio/Video Recorded.

Complaint room?

Polygraph room? No

Juvenile interview? ~~No~~ 1 IN Juvenile Processing Area

Do you anticipate interview rooms near:

Lobby Yes

Holding Area Yes

Detectives Yes

All of the above Yes

Records

How are records stored, retrieved and provided to the public? Admin Staff.

How many file cabinets do you require for records? UNKNOWN

How many years are records kept readily available? 5

Do you need any other type of storage? Archives

How many workstations are required at Dispatch? 2 Full Duty + 2 Emergency Duty

What other equipment needs to be incorporated in the Dispatch Area?

LEEPS computer Yes

Security monitors Yes

Cable TV Yes

Traffic link to Artemis NO

Other

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ADMINISTRATION

Emergency Operations Center (EOC)

Will an EOC be provided? NEED NEW EOC

If so, can the EOC be combined with another space (i.e. training room or conference room)? Yes

Training Room

Is a training room required in this station? Yes

What training will occur at this station? Police Classroom training, Community Training, Press Conf.

Is there a full-time training officer assigned to this station? No. Future Part Time planned

Does the training officer require support staff?

- Receptionist: No
- Assistant: No
- Other:

Where will training reference materials be kept?

- Training officer's office: Yes
- Training room:
- Other:

Will the training room be used for public meetings or seminars? Yes

Is a separate public entrance required for the training room? Yes

Maximum number of people to be seated theater style (chairs only) 100

Maximum number of people to be seated classroom style (tables & chairs) 50

What material needs to be stored adjacent to the training room?

- Training material: Yes
- Tables & chairs: Yes
- Audio/visual equipment: Yes
- Training props: Yes

What equipment is required for the training room?

- Projection screen: Yes
- Marker board: Yes
- Cable TV: Yes
- Other:

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OFFICE AREA

Who needs private offices?

		Quantity of offices
Chief	✓	3 Room suite w/ Chief's secretary
Assistant Chief(s)	✓	
Public Ed		
~~Captain(s)~~ Lt's	✓	3
Detective(s)	✓	1 Supervisor office (private) 1 open space 4 Desk A
~~Others~~ Specialists		1 Supervisor " " 1 open space 6 " "
Prosecutor/Records	✓	2
Firearms	✓	1 Close to Lobby

Who can be located in a small group office? List number of individuals in each office and whether they need individual workstations or can they share workstations with opposite shift employees?

Name	Individual Workstation	OR	Shared Workstation (with whom)
Patrol Sgt's	6		No

What staff can be located in an open office area? Indicate whether they need individual workstations or can they share workstations with opposite shift employees?

Name	Individual Workstation	OR	Shared Workstation (with whom)
Patrol Report Room			4

Indicate whether the following administrative functions require dedicated or shared space within other spaces.

	Dedicated	Located in which other office or space
File storage		Records / Chief / Common area
Copy / Fax / Supplies	3	
Work Area		
General Storage		
Library		

Is a conference room required (separate from a training room)? yes chiefs' suite

How many people shall conference room hold?

Will the public have access to the conference room? No

Is access required after 5:00 pm?

PRIVATE AREA

Patrol Room

Do you need individual work areas in the ~~Patrol~~ Report Room? 4 shared

If yes, How many?

Do you need a separate Briefing Room (other than the training room) at the Patrol Area? yes, Roll Call / Office Via. L54

If yes, how many people should it accommodate? 12

How do officers transfer gear (~~briefcases~~, duffels, etc.)?

Size?

Report Room

How many people should the Report Room accommodate? 4

Do you require storage in the Report Room? What type? Open shelves

Armory and Supplies

Describe the type and quantity of armory storage anticipated — Basement Office, 75' 3 person indoor Range
— 40'x 80' Open basement Room for simunition training, hooked up to Range Vent System.
— Double as Emergency shelter.

Will weapons maintenance be performed in the armory? Yes

Exercise Room

How many people are anticipated to workout at the same time? 4

What equipment will be provided? Some

(Provide list of equipment and dimensions to the Architect)

Locker Room

Is a locker room required? Yes

What size lockers are required? 72" H x 42" W x 24" Deep w/ power access in each.

Are separate men's and women's locker areas required? Yes

If yes, approximate quantity of each 50 men and 12 women

Break Room

Is a lunchroom / break room to be provided? Yes

How many people need to be accommodated? 6-8

DISPATCH

Operations

Describe your current operations:

Typical call volume and types of calls, 9-1-1, non-emergency, business: Full service 14,000/yr.

Service area (city, county, region) and population: 18,133

Population projections (if available) 5, 10 & 20 years out:

Is this facility the primary Public Safety Access Point (PSAP)? Secondary PSAP? Primary

Is this facility the Emergency Operations Center (EOC)? Yes

Will this or does this center dispatch units from:

Yes	No		
☑	☑	Police	If yes, what department(s):
☐	☐	Fire	If yes, what department(s):
☐	☐	EMS	If yes, what department(s):
☐	☐	Airport Rescue	If yes, what airport(s):
☐	☐	County sheriff	If yes, what department(s):
☑	☑	Other: Civilian	

If not a PSAP, do you have a county or regional link to a Primary PSAP?

What jurisdiction?

Is there a possibility of providing services to other jurisdictions in the future? Yes

Is there a possibility of this facility serving as a 3-1-1 center in the future?

Does the current operations have a SOP manual?

Systems:

Will this building follow FEMA standards? Yes

Does or will your system include the following services:

- ☑ 800MHz:
  - Are you upgrading to 800MHz?
  - If yes, what is current MHz and has the RF been established?
- ☑ Wireline Enhanced 9-1-1:
- ☐ Wireless 9-1-1, phase 0, phase 1 or phase 2:
- ☑ Computer Aided Dispatch (CAD):
- ☑ Mobile/Portable Data Terminals (M/PDT):
- ☐ Instant Foreign Language Interpretation Services:
- ☐ Community Telephone Notification System (CTNS):
- ☑ NCIC and/ or local Crime Information Center:
- ☑ Emergency Operations/Situations Room or Center:

- ☑ Radio system infrastructure:
- ☑ VHF, UHF:
- ☑ GIS based mapping systems integrated with CAD, 9-1-1, AVL etc.:

☐ AVL (Automatic Vehicle Location) System:

☐ TRU (Telephone Reporting Unit) for filing crime reports:

What is the data storage medium and anticipated volume of data storage, and length of time data is to be stored?

Staffing

What are your current staffing levels? (Full-time and part-time)

Call-takers: → Same 3 Full-time 3 part-Time

Dispatchers: →

Teletype Operators: ——

Systems Specialist: ——

Operational Supervisors:

Supervising Dispatcher ——

Shift Supervisor ——

Other:

What is your future anticipated staffing levels? (Full-time and part-time)

Call-takers: → with combined Police/Fire 8 Ft - 6 Pt

Dispatchers: →

Teletype Operators: ——

Systems Specialist: ——

Operational Supervisors:

Supervising Dispatcher ——

Shift Supervisor ——

Other

What is your administrative staff structure and size?

Technical Systems Manager?

Training Manager?

Center Manager?

Others?

TRAINING

What organizations does your department or staff belong to?

- ☐ Association of Public-safety Communications Officials (APCO)
- ☐ National Emergency Number Association (NENA)
- ☐ National Association of State 911 Administrators (NASMA)
- ☐ Others: _____

What is the current staff-training requirement? 16 hrs Police
_ hrs Fire EMD

Where are staff currently trained? Off-Site

What types of training systems are generally utilized?

- ☑ Remote classroom
- ☐ On-site classroom
- ☐ Internet based
- ☐ Tele-conference
- ☐ Independent study
- ☐ Other

Are staff trained in:

- ☑ Call taking?
- ☑ Emergency Medical Dispatch (EMD)?

- [x] Law Enforcement Dispatch?
- [x] Fire Rescue Dispatch?
- [ ] Pre-arrival Instruction (PAI)?
- [ ] Other specialties?

Is there a staff position devoted to training? No

If yes, does this staff position require support staff?

Training Room

If a training room is to be provided:

Where ~~will training~~ reference materials be kept?

Training Manager's office

~~Training Room~~

Other

Will the training room be used for public meetings or seminars?

Is a separate public entrance required for the training room? Yes

Is a food service area needed? Small Area

Maximum number of people to be seated theater style (chairs only) 100

Maximum number of people to be seated classroom style (tables & chairs) 50

Minimum number of people to be seated before training consoles? 12

What material needs to be stored adjacent to the training room?

Training material ✓

Tables & chairs ✓

Audio/visual equipment ✓

Training props ✓

What equipment is required for the training room?

Projection screen: ✓

Marker board : ✓

Cable TV: ✓

Ceiling or wall mounted TV/VCR/DVD/CD: ✓

Other

Staff Services and Support

What are the anticipated staff support areas?

- ☑ Break room(s), number ____ → Combined w/ Fire
- ☑ Kitchen
- ☐ Quiet Room
- ☐ Trainer/Trainee report
- ☐ Smoking room(s), number ____
- ☑ Exercise facilities Combined w/ Fire
- ☑ Locker rooms
- ☐ Resource library
- ☑ Internet access area Report Room
- ☐ Other ____

What type of furniture systems do you currently use?

- ☐ Consoles
- ☑ Chairs
- ☐ Modular Office systems/Consoles
- ☐ Specialties/storage units
- ☑ Other Desk or Counters

CR architecture + design

What type of furniture systems do you anticipate or prefer for your new facility?

- ☐ Consoles
- ☑ Chairs
- ☑ Modular Office systems/Consoles
- ☐ Specialties/storage units
- ☐ Other _____

Locker Room: (If planned)

What size lockers are required? Full-height, half-height? 12", 15", 18" or 24" wide?

Are separate men's and women's locker areas required? Yes

If yes, approximate quantity of each: 50 Male, 12 Female

Are shower areas to be provided? Yes

If yes, approximate quantity: 2M, 1F

Mechanical Electrical and Systems:

Does the building require redundant HVAC systems?

Including dual fuel for combustion equipment?

Will the facility require complete generator backup? Yes

If so, how many run hours of backup? Indefinite

Type of fuel system anticipated: Natural Gas

Does the building require dual primary electrical feeds?

Does the facility need domestic water storage tank or a well as a backup to city water? No

Some Dispatch/EOC buildings don't have windows. If this is the case for this facility, will there be a special requirement for lighting? No

Will the building have a dispatch tower? Maybe 2nd Floor Front

Will the tower and related emergency power system be on-site? Yes

architecture +

What level of technology will be designed into the base building? ?

Does the building have food storage and preparation requirements? Kitchen

Does the building have sleeping/housing requirements? Fire side

Is the preference for individual workstation control of heat, AC and ventilation? No

PROJECT BUDGET

Total Project Cost = Building Hard Cost + Soft Costs

- The term **"Total Project Cost"** refers to the sum total of all expenses required to design, build, furnish, and move into a completed facility. This typically is divided into two categories, **"Building Hard Costs"** and **"Soft Costs"**.
- **"Building Hard Cost"** describes only the cost of the Prime contracts for construction at the time of the time of bid opening. This cost does not include any of the "Soft Costs".
- **"Soft Costs"** include all other costs associated with designing, building and moving into a completed facility. This cost does not include any of the "Building Hard Cost".

Check category for each item listed below:

	Hard Cost	Soft Cost	Not Included In Project Cost
Land acquisition?	☐	☐	☒
Off-site utility improvements?	☐	☐	☒
Specialty equipment (Emergency generator, UPS, etc.)	☒	☐	☐
Furnishings, workstations, consoles?	☐	☒	☐
Architectural and Engineering fees?	☒	☐	☐
Permits – Building, Zoning, Utilities including Tap Fees?	☒	☐	☐
Surveys – Boundary and Topographic?	☒	☐	☐
Environmental Surveys – Phase 1 and Phase 2 Environmental	☒	☐	☐
Phone system?	☒	☐	☐
Radio/communication system?	☒	☐	☐
Landscaping?	☒	☐	☐
Signage?	☒	☐	☐
Kitchen / Break room Equipment?	☒	☐	☐
Security/AV Systems?	☒	☐	☐
Temporary facilities?	☐	☐	☒
Moving costs?	☐	☒	☐
Utility Costs?	☐	☒	☐
Insurance Costs?	☐	☒	☐
Construction Contingency?	☒	☐	☐
Inspection and testing fees?	☒	☐	☐
Cost of financing?	☐	☐	☒

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Results : (Line Busy)

Fax Number : 7815459659
Name : SCITUATE POLICE DEPT

DEC-02-2013 17:55 MON

Message Confirmation Report

MEETING MINUTES

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ARCHITECTS, INC.

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DATE OF MEETING: 17 December 2013

PROJECT: Scituate Public Safety Study

PROJECT NO.: 13-0671

SUBJECT: **Programming Meeting with Police and Fire Department**

ATTENDING:

Mike Stewart (MS)	Scituate Police Chief
Rick Judge (RJ)	Scituate Fire Chief
Mark Thompson (MT)	Scituate Police Sergeant
John Murphy (JM)	Scituate Deputy Fire Chief
Carl N. Campgna (CC)	Town of Scituate Building Committee
Shane Nolan (SN)	Daedalus Projects Inc.
Zachary Zettler (ZZ)	CR Architecture + Design
Donald Walter (DW)	Dore & Whittier Architects Inc.
Alan Brown (AB)	Dore & Whittier Architects Inc.(part time)
Bruce Dillon (BD)	Dore & Whittier Architects Inc.
Rick Almeida (RA)	Dore & Whittier Architects Inc.

Today's Meeting Goals

1. Introductions
2. Review questionnaires:
    a. Police Station Questionnaire
    b. Fire Station Questionnaire

3. Review Initial Space Need Analysis
    a. Police Station
    b. Fire Station

4. Review Initial Conceptual Room Diagrams
    a. Police Station
    b. Fire Station

5. Determine equipment required by each department
6. Status of Assessments at existing Facilities
7. Status of existing drawings preparation
8. Establish sustainability goals – Future meeting with appropriate individuals
9. Next Steps – Review Study Schedule

Programming Room Plates and Needs Analysis

10. Police:
    a. Share Spaces /Public Spaces
        i. Lobby Area: add door to Training Area
        ii. Training Room/EOC: capacity for 75-100 occupants. Overall space should be around 1000 sf. Provide folding partition divider. Dedicated space for Fire and Police use. Rotate seating arrangement 90 degrees facing work surface. Provide each space with projection screen. EOC can be located on 2nd floor.
        iii. Dispatch: Provide 8ft x 8ft consoles. (4) functional stations, 2 primary stations and 2 back up stations – smaller. Police Department has 3 full time and 3 part time dispatchers. Fire Department has 3 full time, 1 full time (night) and 1 part time dispatcher at night. Provide Adjustable height desks. Allow space for several flat screen monitors. Also provide refrigerator.
        iv. Server Room: Dedicated to the Police and Fire.
        v. Radio Room: Same communication system for both Police and Fire.
        vi. Janitor Closet: (1) per floor.
        vii. Restrooms: (1) Dedicated to Police and (1) to Fire

    b. Administration Spaces
        i. Chief's Suite: Relocate conference room off the Chief's office into open space concept. Add secondary door.
        ii. Archive Records Storage: (ZZ) to provide high density capacity in linear feet to Police Department
        iii. Dedicated Supervisor: Office is duplicated. Need (1) Assistant and (1) Patrol.
        iv. Open Office: provide corridor separation between (4) Detective desk office and Specialist Supervisor office. Cabinets to be lockable in Detective's office
        v. Specialist Supervisor: office not required.
        vi. Prosecutor & Records: Prosecutor office doubles as a Parking Ticket Office. Records moved off lobby area.
        vii. Firearms Closet: Rename to Firearms Office. Used for licensing, photo and fingerprinting
        viii. Administration Kitchenette: Used for administration staff only.
        ix. Work Room: Delete sink and add paper shredder.

    c. Police Operations
        i. Patrol Area – Report Room: (ZZ) to confirm cabinets accommodate 20-25 officers. Delete mail slots.
        ii. Patrol Area – Briefing Room: Delete (1) door and add fire arm storage. Provide (2) TV's along wall. Delete file cabinets and add radio chargers.
        iii. Sergeant's Open Office: Delete cabinets along one wall.
        iv. Patrol and Duty Bag Storage: Storage area is used temporarily.
        v. Women's Locker/Shower: Reduce number of lockers to 8.
        vi. Evidence Storage: Adjacent to Sally port and Report Room. Add 120 sf to space and refrigerator. Provide check in desk and 24" deep open wire shelving.
        vii. Found Items Storage – Outdoor: Provide 6ft roll up door in lieu of single door. Add single door from inside of building.

viii. Found Items Storage – Interior: Eliminate room and add sf to Found Items Storage – Outdoor.
ix. Armory & Weapons Office: Delete separation wall and Ammunition & Gun Cabinets. Provide desk.
x. Simunition Training / Emergency Shelter: Reconfigure walls. Provide ventilation system for paint ball shooting.
xi. Indoor Fire Range. Delete single door to secured area.
xii. Sally port: Provide equal size bay for vehicle.
xiii. Booking & Processing: Reconfigure fingerprint desk to accommodate processing for (2) individuals with gray background divider. Delete sink- Digital fingerprinting. Provide (9) personal lockers and relocate around corner of room. Intox and Livescan to be located in off Booking and Processing.
xiv. Juvenile Booking & Processing: Same as Booking and Processing. Shared with Booking and Processing with separate doors.
xv. Soft Interview /Complaint Option No.2: Computer station moved to Armor's Office.
xvi. Hard Interview: Provide (1) way glass and rectangular table with (2) stools. Increase width of room.

11. Fire:
    a. Public Spaces
        i. Triage Room: Provide stretcher.

    b. Administration
        i. Archival Document Storage: (ZZ) to provide Fire with high density storage capacity in linear feet.
        ii. Plan Room: Delete room. Space to be located in Deputy's Office, 600 sf +/-.

    c. Living Spaces
        i. Toilet /Shower Rooms: Reduce quantity to (2).
        ii. Day Room: Reduce overall size to accommodate 2 occupants.
        iii. Kitchen: Reduce overall size to accommodate 4 occupants. Provide (1) larger size refrigerator in lieu of (2) smaller ones.

    d. Operations:
        i. Apparatus Bays: Add storage space into 80 ft long wall

    e. Operations Support:
        i. Turn Out Gear: (4) per shift.
        ii. Decontamination: Provide holding tank.
        iii. Foam Storage: Combine miscellaneous storage and provide (10) 5 gallons canisters in shelves.
        iv. Compressor: Delete breathing air compressor and provide tool bench
        v. Boat Gear Dive Storage: Room used to store mask, suits. Provide racks and work bench.

12. Miscellaneous:
    a. Overall facility is at 42,156 SF which exceeds the current budget based on a 25,000 SF facility. (ZZ) to provide Police and Fire Departments a priority matrix ranking from high to medium and low for review and to assist in reducing the overall size of facility.

Schedule

13. Next meeting will be in Tuesday December 23, 2014 at 7:00PM. Building Commission meeting. Owner's Project Manager update. Design Team is unable to attend this meeting.

14. Next Working Committee meeting is scheduled for January 7, 2014 at 3:00 pm

The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes. After 10 days, we will accept these minutes as an accurate summary of our discussion and enter them into the permanent record of the project.

Sincerely,
DORE & WHITTIER ARCHITECTS, INC.
Architects ▪ Project Managers

Rick Almeida AIA, LEED AP, NCARB
Assistant Project Manager

Encl. Agenda dated 12-17-13
Space Needs Analysis
Programming Room Diagrams
Programming Room Plates
Project Schedule

c:	Shane Nolan	Daedalus Projects Inc. (for Distribution to Building Committee)
	Vivian Low	Daedalus Projects Inc.
	Mike Stewart	Town of Scituate Police Chief
	Rick Judge	Town of Scituate Fire Chief
	John Murphy	Town of Scituate Fire Chief
	Zach Zettler	CR Architecture + Design
	Donald Walter	Dore & Whittier Architects
	Alan Brown	Dore & Whittier Architects
	Bruce Dillon	Dore & Whittier Architects
	File	

MEETING MINUTES

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DATE OF MEETING: 7 January 2014

PROJECT: Scituate Public Safety Study

PROJECT NO.: 13-0671

SUBJECT: **Programming Meeting with Police and Fire Department**

ATTENDING:

Mike Stewart (MS)	Scituate Police Chief
Rick Judge (RJ)	Scituate Fire Chief
Mark Thompson (MT)	Scituate Police Sergeant
John Murphy (JM)	Scituate Deputy Fire Chief
Carl N. Campgna (CC)	Town of Scituate Building Committee
Shane Nolan (SN)	Daedalus Projects Inc.
Zachary Zettler (ZZ)	CR Architecture + Design
Donald Walter (DW)	Dore & Whittier Architects Inc.
Rick Almeida (RA)	Dore & Whittier Architects Inc.
Alan Brown (AB)	Dore & Whittier Architects Inc.

1. The major goal of this meeting is to start to establish programming priorities of spaces to see if the current Program can be reduced. High Priority = must have, Medium Priority = would like to have, Low Priority = can do without. The Design team compiled the priorities, live during the meeting and will get copies to the committee. A copy is attached to these Meeting Minutes.

2. The revised Space Needs Analysis includes the area of each of the existing spaces (copy attached).

3. The following review comments were made of the revised Room Diagrams and changed in the Space Needs Analysis.

Police

a. Reception – combine records clerk and receptionist
b. Records should be located adjacent to Prosecution
c. Chief to check on filing requirements. Keep at this size for now.
d. Look at combining Server Room and Radio Room
e. Look at reducing the Toilet Rooms in size
f. Relocate the copier from Administrator's office to Work Room
g. Reduce the Patrol Room size to about 20' by 20'
h. Relocate Mail slots to this room
i. Male Locker Room – change to around 40 lockers with 2 showers and 2 sinks

j. Female Locker Room – keep at 8 lockers
k. Sallyport:
    i. Keep wall between bays for now. May be eliminated later.
    ii. Eliminate Evidence lockers off Evidence bay
l. Change number of Detention Cells required to 6 male, 3 females and 2 juvenile

Fire

a. Fire Administration – Keep all spaces as High Priority
b. Work Room:
    a. Reduce in size
    b. Put in Lieutenant's Office or Corridor
c. Gender Neutral Shower Rooms – remove urinals and reduce in size
d. Domestic Laundry - look at stackable washer and dryer and reduce size of the room
e. SCBA – Reduce in size
f. Locate Foam Storage in an alcove off Apparatus Bays
g. Combine Compressor Room with Boat Gear Dive Room
h. Watch Room – reduce in size to about 10' by 14'

4. The Police Chief mentioned that the new building should be designed and located on the site to allow for expansion in the future.

5. The Design Team will prepare a site matrix comparing the proposed sites. Included with items to look at should be fiber and telecommunication access.

6. Conceptual bubble diagrams will also be placed on each of the proposed sites for the next meeting.

7. The existing radio tower will stay where it is. Any site design should allow for placement of a new tower in the future.

8. The updated Space Needs Analysis will be updated and ready for the Public Building Commission meeting on Thursday 1-9-14 at 7:00 pm

9. Next Working Committee will be Tuesday January 21, 2014 at 3:30 pm.

The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes. After 10 days, we will accept these minutes as an accurate summary of our discussion and enter them into the permanent record of the project.

Sincerely,
DORE & WHITTIER ARCHITECTS, INC.
Architects ▪ Project Managers

Alan Brown AIA, NCARB
Project Manager

Encl. Agenda dated 1-7-14
Space Needs Analysis with Priorities date 1-9-14

Programming Room Diagrams

c:	Shane Nolan	Daedalus Projects Inc. (for Distribution to Building Committee)
	Vivian Low	Daedalus Projects Inc.
	Mike Stewart	Town of Scituate Police Chief
	Rick Judge	Town of Scituate Fire Chief
	John Murphy	Town of Scituate Fire Chief
	Zach Zettler	CR Architecture + Design
	Donald Walter	Dore & Whittier Architects
	Alan Brown	Dore & Whittier Architects
	Bruce Dillon	Dore & Whittier Architects
	File	

MEETING MINUTES

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DATE OF MEETING: 21 January 2014

PROJECT: Scituate Public Safety Study

PROJECT NO.: 13-0671

SUBJECT: **Programming Meeting with Police and Fire Department**

ATTENDING:

Mike Stewart (MS)	Scituate Police Chief
Rick Judge (RJ)	Scituate Fire Chief
Mark Thompson (MT)	Scituate Police Sergeant
John Murphy (JM)	Scituate Deputy Fire Chief
Shane Nolan (SN)	Daedalus Projects Inc.
Donald Walter (DW)	Dore & Whittier Architects Inc.
Rick Almeida (RA)	Dore & Whittier Architects Inc.

1. The Chiefs meeting with the Town Administrator was moved to 1/30/14. Ed DiSalvio, PBC chair will accompany the Chiefs.
    a. Chiefs will explain their program needs to justify sq footage request
    b. SN will work on getting comparative communities police station sizes
        i. Communities discussed include; Medfield, Westwood, Hanover, Abington, Whitman, Middleboro, Bellingham, Hingham and Marshfield
    c. SN and DW offered to meet with chiefs and Ed to make sure they have everything they need prior to meeting
2. Site Matrix Document reviewed. Some additions and subtractions discussed:
    a. Remove line that reads "Distance from Town Center"
    b. Add Neighborhood Character (residential, commercial and discuss the density of the development)
    c. Add Lot Layout i.e.: acceptance of building design
    d. Add Parking count requirements
        i. 20 for police and fire staff

ii. 15 for cruisers

iii. 50 for training and visitors

iv. 80-90 total

e. Add Site access and Sight lines when leaving site

f. Add speed limits on streets apparatus are egressing onto

g. Add response times. Ideal times include 4 minutes for 1st responders, 8 minutes for 2nd responders

h. Add relative site development costs

i. Add future expansion capabilities

3. Adjust room names and add some overall dimensions on the existing conditions plans and show them both at the same scale which will give a better sense of the comparative overall sizes

4. Concept Plans:

a. The Reception/Records is the meet and greet on the first floor

b. Fire Operations should be listed as 4880 sf

c. Add parking to meet the numbers above

d. Add a 2000-3000 sf outbuilding (most likely pre-engineered) for equipment storage

e. Country Way site needs to have an option that considers the slope by doing program under.

f. Develop an addition/renovation option. Suggest adding fire substation to existing station and/or add renovations to each.

Schedule

5. Next Working Committee Meeting will be Tuesday February 4th, 2014 at 3:00 PM.

6. Public Building Commission Meeting is scheduled for Thursday February 13th, 2014 at 7:00 pm. Process is not far enough along yet due to overall building size discussion to warrant a Joint Public Meeting as noted in the project schedule.

The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes. After 10 days, we will accept these minutes as an accurate summary of our discussion and enter them into the permanent record of the project.

Sincerely,
DORE & WHITTIER ARCHITECTS, INC.
Architects ▪ Project Managers

Rick Almeida AIA, LEED AP BD+C
Assistant Project Manager

Encl. Agenda dated 1-21-14
Site Matrix Comparison for the (3) Proposed Sites
Conceptual Program Diagrams on Site Plans
Existing Conditions Drawings

c:	Shane Nolan	Daedalus Projects Inc. (for Distribution to Building Committee)
	Vivian Low	Daedalus Projects Inc.
	Mike Stewart	Town of Scituate Police Chief
	Rick Judge	Town of Scituate Fire Chief
	John Murphy	Town of Scituate Fire Chief
	Zach Zettler	CR Architecture + Design
	Donald Walter	Dore & Whittier Architects
	Alan Brown	Dore & Whittier Architects
	Bruce Dillon	Dore & Whittier Architects
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MEETING MINUTES

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DATE OF MEETING: 18 February 2014

PROJECT: Scituate Public Safety Study

PROJECT NO.: 13-0671

SUBJECT: **Programming Meeting with Police and Fire Department**

ATTENDING:

Mike Stewart (MS)	Scituate Police Chief
Rick Judge (RJ)	Scituate Fire Chief
Mark Thompson (MT)	Scituate Police Sergeant
John Murphy (JM)	Scituate Deputy Fire Chief
Carl N. Campagna (CC)	Town of Scituate Public Building Commission
Shane Nolan (SN)	Daedalus Projects Inc
Donald Walter (DW)	Dore & Whittier Architects Inc.
Rick Almeida (RA)	Dore & Whittier Architects Inc.

1. (DW) shared the initial finds of the test pits logs. It appears that no water was encountered. Results indicate that four foot deep foundations with spread footings might work on site. Percolation tests were recommended to be conducted on the Mann Lot across the street.(SN) to coordinate efforts with DPW

2. Review of the conceptual Ellis site plan.

    a. Program moved closer to the intersection of Mann Lot Road and 3A with public vehicular access to Mann Lot Road

    b. (MS) proposed added another row of parking spaces to the visitor parking lot thus expanding the parking capacity beyond 90 spaces.

    c. Design team to provide space for a future 50ft x 40ft storage facility.

    d. (MS) and (RJ) indicated the need to have an outdoor training area preferably paved with a "U" shaped roadway around it. Police Department activities to include: Obstacle course; K-9 dog training; Simunition training. Fire Department activities to include hydrant/hose training.

    e. Visual landscape buffer for training area of 20ft-25ft required along 3A and along the shorter perpendicular property line.

Review of conceptual floor plans:

3. First Floor Changes:
    a. Police
        i. Booking and processing layout is not ideal. Foxboro Station more in line with program adjacencies and flow. Separate secured vestibule to outside. Juvenile detention layout with monitor room and waiting area with windows. Booking layout arrangement with (2) separate desks and respective cuffing benches across desks preferred. Chain link fenced in exterior area serves as a detainee fire alarm evacuation area.
        ii. Flip entire Booking/ and Processing to opposite exterior wall and relocate Sally port accordingly.
        iii. Firearm Permit to have direct access to exterior

    b. Fire
        i. Change 80ft bays depth to (2) 60ft bays and (1) 40ft bays.
        ii. Relocate Decon and Dirty room to outside rear wall.
        iii. Relocate laundry room between toilet/shower and provide thru passage to/from lockers and dorms.
        iv. Eliminate wall between day room and kitchen

4. Second Floor Changes:
    a. Police
        i. Dispatch to move to first floor since Receptionist/Records operations are limited to day only. Current set up on second floor requires dispatch to call officer to meet/greet after hours. Dispatch to have visual connection to main entry vestibule. Sight separation still required from public viewing. Similar to Medfield and Foxboro stations
        ii. Relocate Chief's office to front of building.

    b. Fire
        v. Move Fitness room to first floor centrally located between Police and Fire
        vi. Relocate Lieutenant's office to first floor adjacent or to share space in watch room.
        vii. Mezzanine to be used for both storage and training

    c. (MT) emphasized the major deficiencies in the Foxboro station are lack of storage space throughout.

Schedule

5. (ZZ) to e-mail updated plans to Working Committee by the end of day on February 24th.

6. Next Working Committee Meeting will be Tuesday March 4th, 2014 at 3:00 PM. Design team to present updated plans, building Imagery, outline specifications, conceptual cost estimates.

The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes. After 10 days, we will accept these minutes as an accurate summary of our discussion and enter them into the permanent record of the project.

Sincerely,
DORE & WHITTIER ARCHITECTS, INC.
Architects ▪ Project Managers

Rick Almeida AIA, LEED AP BD+C
Assistant Project Manager

Encl. Agenda dated 1-28-14
Updated Conceptual Floor Plans and Site Plan for Ellis Site
Geotechnical Findings – Ellis Site
Comparable Public Safety Project

c:	Shane Nolan	Daedalus Projects Inc. (for Distribution to Building Committee)
	Vivian Low	Daedalus Projects Inc.
	Mike Stewart	Town of Scituate Police Chief
	Rick Judge	Town of Scituate Fire Chief
	John Murphy	Town of Scituate Fire Chief
	Zach Zettler	CR Architecture + Design
	Donald Walter	Dore & Whittier Architects
	File	

MEETING MINUTES

DORE & WHITTIER
ARCHITECTS, INC.

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DATE OF MEETING:	4 March 2014	
PROJECT:	Scituate Public Safety Study	
PROJECT NO.:	13-0671	
SUBJECT:	**Programming Meeting with Police and Fire Department**	
ATTENDING:	Mike Stewart (MS)	Scituate Police Chief
	Rick Judge (RJ)	Scituate Fire Chief
	Mark Thompson (MT)	Scituate Police Sergeant
	Carl N. Campagna (CC)	Town of Scituate Public Building Commission
	Shane Nolan (SN)	Daedalus Projects Inc
	Zach Zettler (ZZ)	CR Architecture + Design
	Donald Walter (DW)	Dore & Whittier Architects Inc.
	Alan Brown (AB)	Dore & Whittier Architects Inc.
	Rick Almeida (RA)	Dore & Whittier Architects Inc.

1. Review of the conceptual Ellis site plan.

    a. (ZZ) indicated that further research is required to establish the property line at the corner of Mann Lot and possible easement for site access.

    b. (MS) indicated the need to relocate an existing small stone memorial to new site.

    c. (MT) indicated that parking islands creates issues for snowing removal and should be avoided if possible.

    d. (MT) indicated that anti-terrorist site features such are bollards, bullet resistant materials, etc. are critical and should be part of the project.

Review of conceptual floor plans:

2. First Floor Changes:
    a. Police
        i. Relocate Evidence with Armory so that Armory is accessible from corridor.
        ii. Add door nearby elevator to restrict public access to building
        iii. Keep location of Dispatch but perhaps add roof skylights in corridor to provide daylighting to Dispatch

iv. Add second door to Fitness Room for fire access outside of Police area
v. Change name of Hard Interview near Sallyport to Holding

3. Second Floor Changes:
   a. Police
      i. Interview Room to double up as a shared Conference Room to accommodate 8-10 people. Enlarge room by moving exterior wall to align with adjacent exterior wall.
      ii. Open up space in the Receptionist area. Relocate Work Room to Administrative Lieutenant. Chief Administrative Room becomes the Deputy Chief Room.
      iii. Administrative Assistant will function as a Receptionist and work with both the Chief and Deputy Chief.
      iv. Move secondary door leading to Staff Toilet Rooms to restrict public access.

   b. Fire
      i. Open up space in the Receptionist area. Relocate Work Room to Chief Administrative.
      ii. Administrative Assistant will function as a Receptionist and work with both the Chief and Deputy Chief.

4. The first floor footprint is larger than the second floor which will result in some flat roofs. (MS) expressed concerns with minimized as much as possible flat roofs and cited the existing Police flat roof addition with having water penetration issues.

5. (DW) and (ZZ) presented the contextual images of buildings in Scituate for discussion. Durability and maintenance of exterior building material is critical to both departments. Preferable materials of choice were brick and/or cementitious siding and maintenance free materials. (MS) indicated that no wood materials shall be part of the building fenestration.

6. (DW) presented the conceptual project cost estimates for each option and indicated that the estimated costs were based in current 2014 dollar values and may need to be adjusted for inflation depending on construction time frames. The estimated project costs range from $15m - $17m.Order of magnitude for the preliminary projects costs and general comments were as follows: Ellis Site includes green site development with future storage facility and training area; Existing site deals with existing buildings abatement, demolition and phasing; Country Way due to site constraints requires a smaller footprint but steep slopes places much of the police operations below grade level. Relocation of existing communication tower was not included in the cost estimates.

7. (SN) indicated that Daedalus preliminary cost estimate is within $500K of Dore & Whittier's estimate.

8. (RA) to e-mail updated overall schedule and electronic photos of the existing facilities to both Police and Fire Departments.

Schedule

9. Design team to e-mail updated plans and develop building imagery to Working Committee by March 12th for review prior to presenting to the Public Building Commission on March 13th.

10. Annual Town meeting to occur Monday April 14, 2014, 7:00pm. A brochure was suggested for handouts with building imagery and bullet points indicating the reasons for a new facility.

11. Schematic Drawings for the preferred option to be developed by mid-April to allow for an updated cost estimate.

12. A possible meeting/presentation was suggested with the Board of Selectman prior to the Town meeting in April. (SN) to review schedule.

13. Other long term milestones include a potential Special Town Meeting in November and Town Vote in December.

14. Next Working Committee Meeting will be Tuesday March 18th, 2014 at 3:00 PM. Design team to present updated plans, exterior elevations and 3-D modeling.

The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes. After 10 days, we will accept these minutes as an accurate summary of our discussion and enter them into the permanent record of the project.

Sincerely,
DORE & WHITTIER ARCHITECTS, INC.
Architects ▪ Project Managers

Rick Almeida AIA, LEED AP BD+C
Assistant Project Manager

Encl. Agenda dated 3-4-14
Context Images of Scituate
Updated Conceptual Floor Plans and Site Plan for Ellis Site
Conceptual Costs Estimates
Outline Specifications

c:	Shane Nolan	Daedalus Projects Inc. (for Distribution to Building Committee)
	Vivian Low	Daedalus Projects Inc.
	Mike Stewart	Town of Scituate Police Chief
	Rick Judge	Town of Scituate Fire Chief
	John Murphy	Town of Scituate Deputy Fire Chief
	Zach Zettler	CR Architecture + Design
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MEETING MINUTES

DATE OF MEETING:	18 March 2014	
PROJECT:	Scituate Public Safety Study	
PROJECT NO.:	13-0671	
SUBJECT:	**Design Meeting with Police and Fire Department**	
ATTENDING:	Mike Stewart (MS)	Scituate Police Chief
	Rick Judge (RJ)	Scituate Fire Chief
	Mark Thompson (MT)	Scituate Police Sergeant
	Carl N. Campagna (CC)	Town of Scituate Public Building Commission
	Shane Nolan (SN)	Daedalus Projects Inc.
	Donald Walter (DW)	Dore & Whittier Architects Inc.
	Alan Brown (AB)	Dore & Whittier Architects Inc.
	Rick Almeida (RA)	Dore & Whittier Architects Inc.

1. (DW) presented the findings of the traffic assessment conducted at the intersection of 3A and Mann Lot road. It was indicated that this study was not an extensive study but rather a preliminary assessment of the intersection. Sightlines criteria on egress along 3A for the proposed plans were met and acceptable. Among the recommendations were advanced warning signage and the feasibility of installing a traffic signal system at the intersection. It was also indicated that generally MASSDot encourages a minimal quantity of curb cuts and a dialogue between the Town and MASSDot should take place sooner rather than later. Stg. Thompson offered to set up a meeting with DPW.

<u>Review of the preferred conceptual floor plans:</u>
Major changes from last design layout presented to the Building Commission included the relocation of the Training/E.O.C room to the Fitness room. Mechanical room on second floor relocated to a loft space in the apparatus bays and Fitness Room moved to Mechanical room. The Police Women locker room switched places with the break room. Fire Department women locker room is gender dedicated along with toilet/Shower. Overall the building square footage increased in size to 27,722 sf plus and an additional 800 sf of mechanical space although the exact mechanical space requirements have not be determined at this level of design.

2. First Floor Changes:
    a. Police
        i. Radio room preferably adjacent to Dispatch. Police and Fire share Radio room.

b. Fire
    i. Watch room to be reconfigured to take corridor space with current access to both apparatus bays and lobby space.

c. Public Spaces.
    i. (RA) to check if unisex toilet room meets State code requirements. Otherwise, (2) separate male and female facilities will be located in lobby as indicated on previous plans.
    ii. Indicate Machine room adjacent to elevator and electrical rooms throughout the plans

3. Second Floor Changes:
    a. Police
        Conference room to be indicated as part of the Police Department.

    b. Fire
        i. Add communicative door between Fire Chief and Conference room.

    c. Public Spaces.
        i. Mechanical loft to shift to mezzanine/storage for accessibility

Next Steps:

4. (DW) indicated that Schematic Design level plans are targeted to be completed by mid-April. At this design level, plans will be further refined and details such as wall thickness, doors, windows and furniture layout will be indicated.

5. Possible presentation to Selectman on April 1st. (SN) to confirm. Format will be both power point presentation along with handouts. Chiefs will explain the need for a new facility. Dore & Whittier to proposed 2 to 3 photos to Chiefs of existing conditions for each facility. Dore & Whittier to present conceptual site plan, floor plans and building imagery

Schedule

6. Next Working Committee Meeting will be Tuesday April 1st, 2014 at 3:00 PM. Design team to present the following: updated plans, exterior elevations, 3-D modeling, exterior building materials and building systems.

The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes. After 10 days, we will accept these minutes as an accurate summary of our discussion and enter them into the permanent record of the project.

Sincerely,
DORE & WHITTIER ARCHITECTS, INC.
Architects ▪ Project Managers

Rick Almeida AIA, LEED AP BD+C
Assistant Project Manager

Encl. Agenda dated 3-18-14
Intersection Traffic Assessment
Updated Preferred Conceptual Floor Plans and Site Plan for Ellis Site
Building Imagery

c:	Shane Nolan	Daedalus Projects Inc. (for Distribution to Building Commission)
	Mike Stewart	Town of Scituate Police Chief
	Rick Judge	Town of Scituate Fire Chief
	Mark Thompson	Town of Scituate Police Sergeant
	John Murphy	Town of Scituate Deputy Fire Chief
	Zach Zettler	CR Architecture + Design
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MEETING MINUTES

DATE OF MEETING: April 1, 2014

PROJECT: Scituate Public Safety Study

PROJECT NO.: 13-0671

SUBJECT: **Schematic Design Meeting with Police and Fire Department**

ATTENDING:

Mike Stewart (MS)	Scituate Police Chief
Mark Thompson (MT)	Scituate Police Sergeant
John Murphy (JM)	Scituate Deputy Fire Chief
Carl N. Campagna (CC)	Town of Scituate Public Building Commission
Shane Nolan (SN)	Daedalus Projects Inc.
David Pereira (DP)	Garcia Galuska DeSousa
David Hipolito (DH)	Garcia Galuska DeSousa
Donald Walter (DW)	Dore & Whittier Architects Inc.
Alan Brown (AB)	Dore & Whittier Architects Inc.
Rick Almeida (RA)	Dore & Whittier Architects Inc.

Mechanical System Review

1. David Hipolito (DH) provided a brief presentation of the chilled beam induction system. The HVAC system narrative is not included with these minutes due to its length.

2. The HVAC system consists of using a chilled beam induction system with two high efficiency boilers (sized at approximately 65% of the total boiler load), central air handler, air cooled chiller,using four pipes for heat and cooling supply and return.
    a. The chilled beams have hot and chilled water controlled by coils
    b. Air is sent through the coils for hot and cold air into the room through nozzles
    c. All return air goes back through the air handler which has an energy recovery wheel which take the hot and cold and re-uses for the supply air

3. The air handler is a dedicated outside air type of unit. The system uses 100% outside air which results in better air quality.

4. Circulation water uses variable speed drive (VFD) pumps which is very energy efficient.

5. The induction units will include a drain pan and condensate sensors to help prevent excess buildup of condensate.

6. The proposed chilled beam induction system has a higher initial cost but the simple payback period is four (4) years.

7. The proposed chilled beam induction system is quieter, very energy efficient, simpler temperature controls, lower maintenance and better thermal comfort.

8. (DH) stated that life expectancy for the induction system is approximately 25 to 30 years for the total system. Maintenance service requirements will be included in the construction documents. Parts are readily available from specified qualified vendors.

9. (DH) stated that the main heat source for the Apparatus Bays will be a radiant heated floor consisting of closed hot water loop system with ceiling mounted unit heaters. The bays will also be provided with carbon monoxide/carbon dioxide monitoring and control system. In addition a vehicle exhaust capture system will be provided.

Electrical System Review

10. David Pereira (DP) provided a brief presentation of the following systems: power distribution; lighting; fire alarm; security; lighting protection and technology systems.

11. Power distribution will be brought into site via underground low voltage cables. A pad mounted transformer will be located adjacent to the building. The service capacity will be sized for 1200amps at 120/208V, 3phase, and 4 wire.

12. Emergency 200KW Generator will be diesel belly tank design to operate for a period of 72 hours and will automatically be set to test run on a weekly basis. The generator will include (3) service breakers: (1) for life safety equipment; (1) for optional standby equipment and (1) for critical operations center (COPS). The generator will be sized for 100% of all lighting and power loads. Air conditioning will be provided to Server Room, E.O.C and communications dispatch center. The central A/C systems will not be provided on the emergency power.

13. Lighting system design will be 30% - 40% better than code. The design is based on a holistic approach that looks at all of the systems to maximize energy efficiency. Lamps will generally be either T5 or T5HO with electronic ballasts. The entire facility will be controlled with an automatic lighting control system for programming lights on and off. Site lighting will be pole mounted LED luminaries controlled by photocell and will be cut-off type. Manual dimmers will be provided in dispatch. (MT) expressed concerns with lighting levels in booking area for photographing suspects. (DP) stated lighting levels are designed to conform to industry standard best practices based on Illuminating Engineering Society (IES) guidelines to meet code requirements in order to avoid issues such as shadows in the booking area.

14. Fire alarm and detection system will be provided with battery back and will be the addressable type. Speaker/strobes preferred by (JM) in lieu of horn type.

15. Addressable security system will be provided and will be integrated with the card access and close circuit TV system.(MS) and (MT) indicated that the access control system used in schools might be by

the manufacturer BCN using an the (S2) system. Evidence room will have a control system to monitor access to room. (DP) indicated that a more extensive review of the entire security system will be required as the design develops.

16. The technology system design will be designed with CAT 6.The voice wiring will be capable of VOIP. Interface of the new facility with other buildings in town will required a more comprehensive group discussion.

17. GGD will review what is involved in designing all the required disptach equipment. They will need some help on the Dispatch furniture/desks. (MT) will provide name of Wright Line representative who has been working on the current dispatch furniture layout.

Review of the Schematic floor plans:

Overall the building square footage increased in size to 27,965 sf. Mechanical space has moved from attic space above apparatus bay to mezzanine/storage. Main electrical room has been added adjacent to the fitness.

18. First Floor Changes:
    a. Police
        i. Radio racks need to be laid out in Radio Room to determine if current overall room size works.
        ii. Add secondary door in corridor between Radio Room and Storage Room for Police security.
        iii. Move corridor door closer to rear stair so that Patrol Lieutenant Office is no separated from remainder of Police.

    b. Fire
        i. Flip door to swing into Watch Room.
        ii. Add doors to both Men and Women Locker rooms.
        iii. Reduce the size of the Women Locker by moving wall to align with adjacent Toilet/Shower and add lockers to Men Room
    c. Public Spaces.
        i. Unisex toilet room renamed to Triage Toilet Room.

19. Second Floor Changes:

    a. Public Spaces.
        i. Add corridor adjacent to interview room to provided separation between Fire and Police

Next Steps:

20. Presentation to Selectman on April 1st. (RA) to email by April 4th colored site plan, floor plans and renderings to (SN) to be included in the power point presentation.

Schedule

21. Public Building Commission meeting will be Thursday April 10, 2014 at 7:00 PM. Design team to present Schematic Design Drawings.

The above is my summation of our meeting. If you have any additions and/or corrections, please contact me for incorporation into these minutes. After 10 days, we will accept these minutes as an accurate summary of our discussion and enter them into the permanent record of the project.
Sincerely,
DORE & WHITTIER ARCHITECTS, INC.
Architects ▪ Project Managers

Rick Almeida AIA, LEED AP BD+C
Assistant Project Manager

Encl. Agenda dated 4-1-14
HVAC PowerPoint Presentation
Electrical Systems Narrative
Updated Schematic Design Plans
3-D modeling with Proposed Building Materials

c:	Shane Nolan	Daedalus Projects Inc. (for Distribution to Building Commission)
	Mike Stewart	Town of Scituate Police Chief
	Rick Judge	Town of Scituate Fire Chief
	Mark Thompson	Town of Scituate Police Sergeant
	John Murphy	Town of Scituate Deputy Fire Chief
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