Town of Los Gatos, California

Existing Conditions Analysis

Last Updated December 23, 2002

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Table of Contents

Executive Summary

Executive Summary

This Existing Conditions Analysis has been prepared in conjunction with the Los Gatos Civic Center Master Planning Process. The intent of this report is to establish an overview analysis of existing Civic Facilities located on two main sites. Analysis was made by engineers in the following disciplines: building structure, building systems, (mechanical, electrical, and plumbing) and site infrastructure (civil engineering). Information was gathered by review of existing documentation on the facility, (when available) and visual observations during a walkthrough of each structure.

The following analysis includes a description and overview of each facility followed by the observational analysis by discipline. Through the course of this analysis, a number of key issues were identified which will need to be addressed in the Master Planning Process. In some cases, a greater depth of analysis will be required to determine cost and feasibility of different approaches to facility reconfiguration, adaptive reuse or expansion.

Key Issues:

1. In all cases, the structures do not appear to meet current seismic code requirements. In some cases, seismic upgrades to meet current life safety standards would be prudent for continued long term use of facilities, with expansion or changes in use requiring upgrades to meet current code requirements.
2. In many cases, building mechanical systems are reaching the end of their anticipated life span. Replacement of these aging systems with new energy efficient equipment may significantly impact the existing building operations.
3. In general, none of the facilities meets current accessibility requirements. Although remedial efforts have been undertaken to provide access to facilities, they do not meet the current legislated goal of providing equal levels of access to all members of the public.
4. None of the major facilities has the flexibility to readily accept new technology infrastructure or easily adapt to new use configurations.
5. All of the facilities in the current Civic Center area seem to suffer from a functional parking shortfall during peak usage times. A traffic analysis would be required to provide specific data.

It is recommended that further study of the Civic Center structure be undertaken to understand the cost and feasibility of continued use and/or expansion of this facility.

Observations

Existing Conditions Summary

Information for the existing conditions analysis was gathered by a review of the existing facilities comprised of one site visit, non-destructive visual observations of key features, and preparation of a narrative description of existing conditions. The facilities were also evaluated by a team of engineering consultants who evaluated site infrastructure, building structure and mechanical, electrical and plumbing systems There full reports are included as support material to the summary information contained below.

The Los Gatos Existing Conditions Walk-through occurred on Monday, September 9th from 9:00 - 1:00 with Bruce Smith, a Facilities Coordinator with the Parks and Public Works Department, who toured the team through the facilities and provided input. A site walk-through with the Landscape Architect, Parks and Forestry Superintendent, Tim Boyer, and Bruce Smith took place on Tuesday November 26th.

The facilities examined were located on two sites within the Town of Los Gatos. These included the Civic Center Complex, to include the Neighborhood Center and the leased Recreation Building on East Main Street, as well as the R. J. Bryant Service Center located on Miles Avenue.

Civic Center Site

Architectural Observations

1. The Civic Center is located on East Main Street, to the East of Santa Cruz Avenue, near Los Gatos High School. The complex is located to the rear of the site, with a park and dense landscaping separating it from the street. The Complex has mature trees located on the site and has a main parking lot located to the East and a smaller parking area located to the West. Pedestrian access is from East Main Street, through the landscaped area or from the side parking areas.
2. The Civic Center Complex was designed by Stickney A. Hull, AIA, constructed in 1965 and received recognition as an award winning design.
3. The Civic Center Complex contains three buildings: City Administration, the Police Station and the Library. All three buildings have been constructed around a central raised courtyard plaza with a fountain at the center. The Town Council Chambers are located below this plaza, with stairs and ramps leading down from the surrounding walkways and parking.
4. The Civic Center is constructed of reinforced concrete and is

Observations

Civic Center Site

interconnected with corridors below grade in the basement level. The first floor elevation and public entrances of the three buildings are slightly below the courtyard level. The roof construction of all three buildings is reinforced concrete. It includes an interior partial raised roof, approximately six feet above the main roof with clerestory windows around its perimeter.

5. Building construction type by current 1997, California Building Code would be Type B & B-2 Type III non-rated. The buildings are currently not sprinklered nor do they have fire alarm systems.
6. The buildings were upgraded for accessibility in 1996.
7. General Observations:
    a. There have been significant changes to seismic and structural requirements from the time the building was constructed. Changes include the amount of seismic force that the building must resist, the details of the column and beam connections, and openings. Significant renovation or expansion of the facility could require significant upgrades to the building structure.
    b. Installation of fire sprinklers and fire alarm systems may be required based on the scope of new work proposed for the facility.
    c. The existing building infrastructure is generally functioning, but in many cases is reaching the end of its anticipated life expectancy. The existing mechanical systems do not meet current energy requirements.
    d. The existing concrete construction does not allow upgrades or retrofits for heating, ventilation, plumbing, electrical, data communications, systems, except at a high cost.
    e. Way finding and orientation is difficult within the facility due to the large number of entrance points and difficult sightlines.
    f. There are ongoing problems with leaks at the roof decks and plaza level.
    g. The Police facility is currently being modified to reduce the number of holding cells from two to one to conform to current holding cell requirements.
    h. General and specific storage for the Library is currently located in a house across the parking lot from the Civic Center.

Structural Observations

The subject complex contains three buildings, which include the administration building, the police station, and the library. All three buildings have been constructed so that they surround a central raised

Observations

Civic Center Site

courtyard plaza with a fountain at the center. The civic center was constructed in 1965 and the three buildings are constructed of reinforced concrete. All three buildings contain below grade concrete basements. Foundations consist of spread and continuous footings and the basement and plaza courtyard is a reinforced concrete slab-on-grade. The first floor elevation of the three buildings is approximately at the courtyard level. The roof construction of all three buildings is also reinforced concrete. It includes an inner partial raised roof, approximately six feet above the main roof, and contains clerestory windows at its perimeter. This upper roof slab is square in shape and is supported by a concrete column at each of its corners (a total of four columns).

Structural Site Visit

The complex is generally in a good state of repair, with few defects of note. However, the team was unable to observe large areas of the building structure because of the architectural finishes. The following items were observed:

1. The structural concrete slab above the basement (first floor level) exhibited a minor amount of cracking. The majority of the cracking occurs at the police station and library buildings accompanied by signs of water penetration. The cracks are typically hairline in width.
2. At the raised concrete roof with the clerestory windows in the police station building, it was noted that there is a crack with signs of efflorescence at the column to beam interface at the low roof level. This crack was apparently caused by movement during past seismic events and should be more thoroughly investigated.
3. In the mechanical room at the basement level adjacent to the building department, mechanical equipment is hanging from the main floor concrete slab. The equipment has no diagonal bracing as required to resist earthquake forces. Additionally, a pipe from a mechanical unit is supported by a 4" diameter column and the column base plate is not bolted to the concrete slab.

Structural Document Review

In general, the buildings were well designed and seem to meet the requirements of the 1961 Uniform Building Code. The seismic systems are fairly defined, with load paths to the resisting elements. However important changes in the building codes subsequent to when the buildings were designed have occurred. One important change is the requirement for providing ductile connection design and detailing for the special moment resisting concrete frames. This requirement would pertain to the raised roof described in the "Site Visit" section, item no. 2.

Observations

Civic Center Site

Structural Discussion

As previously mentioned, important changes to the Uniform Building Code have occurred since the design of these buildings. The special moment resisting frame has been mentioned. Other important changes include:

1. An increase in the seismic design base shear coefficient of approximately 139%. This increase would affect the overall design of the building's seismic resisting system.
2. Detailing requirements for collector beams to account for earthquake forces.
3. Diaphragms are now required to be detailed to transfer shear forces at openings, corners, and changes in elevations.

HVAC

The civic center site is currently served by multiple multi-zone air handling units located throughout the site. Each air handling system consists of a central air handler with supply air fan and cooling coil. Each temperature control zone is served with a dedicated constant volume supply duct and hot water reheat coil. The cooling and heating sources are provided by a central 150 ton chilled water system and 2,200 MBH heating water plant with a remote cooling tower. The temperature control system is standard pneumatic type. A pad mounted packaged air conditioning unit is serving part of the police building. Several small-dedicated split-dx type systems have been added to serve the police dispatch and various server rooms on site.

The systems appear to be adequate for the existing application. The systems are original and are reaching the end of their expected life. The existing system is not energy efficient and does not meet current Title 24 energy efficiency requirements. Title 24 does not allow constant volume reheat systems.

The existing systems include large quantities of dedicated ductwork located in tight spaces. It would be difficult and costly to incorporate significant modifications to the existing systems. If significant expansion or remodel of the existing civic center were undertaken, one would expect to have to replace the majority of the existing HVAC systems. Once future use options are defined, additional intensive field investigation will be required to define the actual HVAC requirements.

Plumbing

The buildings are currently served by a 2-1/2” domestic water and 4” sanitary waste line. A central gas fired water heater serves the entire site.

Observations

Civic Center Site

The existing systems appear to be in good working order. The systems likely can be modified as necessary to accommodate expansion or revisions to the existing buildings depending on the actual scope. The existing concrete construction of the buildings will add difficulty to making modifications.

Electrical

The existing facility is serviced by PG&E via pad-mounted transformer. The main service switchboard is at 2000 ampere, 208 volt, 3-phase, 4-wire, located in the basement of Town Hall building. Power to the Police department and Library buildings originate from this switchboard. Distribution panel boards and branch circuit panel boards provide power to mechanical equipment and all devices and equipment requiring power. An existing 60 KW diesel engine emergency generator provides emergency power for selected loads and areas throughout the facility. The existing lighting is generally provided by fluorescent light fixtures, lighting control is provided by local light switches in some areas and occupancy sensors in other areas. There are no exit lights in some areas and minimum exit lights in other areas. Additional exit lights and emergency lights should be added in the path of exit. The mounting height of some of existing devices does not meet ADA requirements. The buildings presently do not have any fire alarm system. Modification and addition of devices to the facility is very difficult because of the building construction. Most additions have been provided by surface mounted raceway system. The electric service capacity is sufficient for operation of the existing facility and minor future modifications. However, any major future additions or modifications may require the service to be upgraded. Based on the information gathered, the electrical equipment is presently in good working condition however; they are reaching their life expectancy.

Storm Drainage

The Civic Center and adjacent developments drain to a bubbler system in East Main Street. A local system collects drainage from adjacent roads and the landscaped areas prior to entering the East Main system. A new pump was recently installed for the depressed area to the rear of the police facility, and is reportedly functioning well.

The possibility of minor water intrusion to the behind the walls of the lower part of the building was discussed. If this was the case and the building was to remain, then new foundation sub drains could be installed and tied to the local storm drain system.

Observations

Civic Center Site

Sanitary Sewer System

The Civic Center sewer flows to the 10” main in East Main Street. No problems were reported for this site. Any required upgrades to the system would depend on future building occupancy.

Water System and Fire Protection Water Systems

The Civic Center is fed from an 8” main in East Main Street, as shown on the San Jose Water Company system map. No water supply problems were reported for this site.

Site Landscape Observations

The age of the Civic Center is an advantage to the prevalent tree growth. There are a number of specimen trees that should require protection during any new construction. In general the landscape is very well maintained and the plants are healthy and attractive.

The front lawn area is very inviting, creating a park like setting. The exposed aggregate sidewalk is in good shape. Algerian ivy is used as a ground cover on planting beds along the redwood walk. The ivy can harbor rodents and is very aggressive towards other plants. The parking area is screened from East Main Street with a 4 ‘ hedgerow that is well trimmed and very effective in screening cars from Main Street views. The parking islands are typically planted with Star Jasmine, which seems to work. Some areas are thinned by either pedestrian traffic or shade from mature trees. The Villa Avenue/Fiesta Way planting corner at the parking lot is bare, probably due to the Eucalyptus trees.

The entrance to the Civic Center from the parking lot is awkward with the planting strip/tree wells between the parking and the sidewalk. Pavers have been installed between trees but have settled or were installed below top of curb. The current situation may pose a tripping hazard.

The globe-style lighting throughout the site maintains the complex’s connections to the early days, however they are not energy efficient, have limited effectiveness and are breakable.

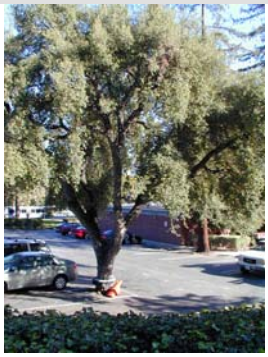
There is a rose garden along the pathway to the center and some roses in the terraced planters up to the brick plaza. Roses in a public landscape can be problematic with the thorns (safety) and their winter appearance.

The brick plaza is expansive and warm due to the sun it receives. Some planter pots have been located in the plaza area. The brick paving is experiencing efflorescence.

The dirt area exiting the brick plaza to the West was apparently a by-

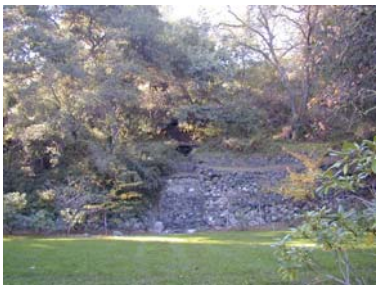
Observations

Civic Center Site



product of an Oak that was removed from this area in the recent past and paving has not been reinstalled. The current dirt surface in this area is also contributing to drainage problems at an area drain located near the plaza entry. The redwoods in this area are smaller and less full than on the north side of the Library. It is understood that the ivy had been choking them prior to its recent removal.

A specimen Cork Oak resides in the West lot completely surrounded by paving with a makeshift bumper guard protecting it. This tree is unique to this area and appears to be in good condition.



Pageant Park is located immediately to the South of the civic center, across the police vehicular drive. Currently, its location and entrance is difficult to distinguish, the access is steep and it appears to be under utilized. A screened enclosure for mechanical equipment is located adjacent to the entrance. The park is surrounded by mature trees and includes a large terraced rock wall and waterfall constructed by Town residents. There are informal trails traversing the slope above the park.

The slope behind the Villa house lots and Pageant Park has been left in a natural (wild) state. This makes the most sense due to the steep areas and difficulty in any kind of maintenance approach. Remnant walls from an old winery are built into the steep slope located behind the western residential structure and adjacent parking area on Villa. The residential structures on Fiesta Way have a cottage type landscape and are quite nicely kept.

The dumpsters for the Civic complex are exposed and are sitting on the pavement at the end of Villa Avenue on the east side of the Administration Building.

The following is a general list of the tree species on the Civic Center site. This is not intended to be complete. There are several unique species or significant specimens, which deserve special consideration in future planning and have been noted with an asterisk.

Magnolias*
Sweet Gums
Crepe Myrtle
Coast Redwood*(the stand located to the south of the library has been impacted by the ivy growth)
Giant or Sierra Redwood (one)*
Ginkos

Observations

Civic Center Site

Walnut (one at Main Street looks old, sidewalk damage)
Blue Cedars*
Live Oak (The two located in the planter on West side of Police Station are relatively small and could be relocated.)*
Cork Oak*
Eucalyptus

The irrigation system at the Civic Center has reached the end of its expected life span and will require replacement in the future. The lawn is irrigated with small, old, brass heads that are common in residential systems. There are also galvanized rises sticking up in the planter areas, which are tripping hazards. The backflow preventer at the Civic Center along Villa is enclosed in an old makeshift enclosure.

Site Issues

1. There are a large number of mature trees on the site, which could affect the potential development options.
2. Site infrastructure is adequate for the current uses; significant changes in use would likely require upgrading of theses systems.
3. Site accessibility is limited due to the number and location of steps and grade changes. Access ramps have been constructed, but do not always provide direct paths of travel from parking to building entrances.
4. Increased use of the site would require an analysis to determine the number of parking spaces for the intended use, modifications to provide accessibility parking for all primary entrances and availability and accessibility of off-site parking.
5. Recently purchased houses adjacent to the Civic Center are currently being rented out or used for storage and were not included in our evaluation.

Neighborhood Center

Architectural Observation

1. This is a two-story concrete block building with a wood roof of approximately 12,000 square feet. The structure currently houses offices, meeting rooms and multi-purpose spaces
2. The building has a small frontage on Main Street with the long side facing the civic center. The building configuration orients the main entrance toward the civic center, but has limited frontage on East Main Street.
3. This building has its own parking but it also shares parking with the civic center complex across Fiesta Way.
4. General Observations:
    a. The existing building structure does not meet current seismic

Observations

Neighborhood Center

codes although it was upgraded in 1993. Upgrades to the building structure could be required depending on the extent of remodeling or additions proposed.

b. Current building systems are adequate and could be reused in a remodel scenario. Electrical service may need to be upgraded if more than minor modifications are proposed.

Structural Building Description

The subject building is a partial two-story structure of approximately 12,000 square feet. The walls of the structure are concrete block and the roof is wood construction with plywood sheathing. The foundations consist of spread and continuous footings. The first floor slab is a 4" concrete slab-on-grade reinforced with #4 at 24" o.c. each way. The second floor is wood construction with plywood sheathing. Our review of this building consisted of a walk-through observation of the building on September 9, 2002, a review of the original drawings prepared by William W. Hedley Architects dated July 1978 and a review of the seismic upgrade drawings by the Town of Los Gatos dated April 1993. Original calculations, a soils report and specifications were not available for our use.

Structural Site Visit

The building is generally in a good state of repair. However, the team was unable to observe large areas of the building because of architectural finishes. There were no items of note observed during the site visit.

Structural Document Review

In general, the building was well designed and seems to meet the requirements of the 1976 Uniform Building Code. The seismic systems are fairly defined with load paths provided for resisting lateral forces. However, several important changes in the building codes subsequent to when this building was designed have occurred. Primary of these are the requirements for providing anchorage of the concrete block walls to the roof structure and providing a method for distributing these anchorage forces into the roof diaphragm. The Town of Los Gatos upgraded the building in 1993 as indicated in the seismic upgrade drawings to take care of these conditions. However, in the 1997 Uniform Building Code anchorage forces again increased and it is likely that the work done in 1993 does not meet these requirements.

Another item of concern is the presence of vertical irregularity of the second floor shear walls in relation to the first floor shear walls, and the lack of shear transfer of the lower roof elements to the abutting higher shear walls extending to the upper roof. Another concern is the lack of shear transfer blocking below wood shear walls that bear on the second floor joists. Another item of concern is the lack of diaphragm ties at the

Observations

Neighborhood Center

re-entrant corners of the structure.

Structural Discussion

Several changes to the Uniform Building Code have occurred since the design of this building. The requirements for wall anchorage have already been discussed. Other important changes include:

1. An increase in the seismic design base shear coefficient of approximately 70%. This increase would affect the overall design of the building's seismic resisting system.
2. An increase of approximately 100% for the out-of-plane seismic design of the concrete block walls and floor/roof to wall anchorage.
3. Detailing requirements for concrete block wall reinforcing to take into account larger shear and bending forces.
4. Diaphragms are now required to be detailed to transfer shear forces at openings, corners, and changes in elevation.

HVAC

The building is currently served by two constant volume fan-coil units and ductwork serving the multi-purpose rooms, and ductless wall mounted fan-coils in the remaining spaces. The cooling and heating is provided by a central 30-ton air-cooled chiller and gas fired heating water boiler.

The systems appear to be adequate for the existing application and are in good operating condition. The existing central chilled and heating water systems may be re-used if the building is remodeled. If the building is expanded, the existing chilled and heating water systems could be expanded to accommodate the increased loads and the existing fan-coil and duct systems will likely need to be replaced. Once future use options are defined, additional intensive field investigation will be required to define the actual HVAC requirements.

Plumbing

The building is currently served by 2-1/2” domestic water and 4” sanitary waste lines. A 1,000-gallon grease interceptor is installed for the kitchen waste. A gas fired water heater serves the building. The existing systems appear to be in good working order. The systems likely can be modified as necessary to accommodate expansion or revisions to the existing building.

Electrical

Building is served by PG&E via a pad-mounted transformer located at the southwest corner of the building. The main service switchboard is

Observations

Neighborhood Center

800 ampere, 208 volt, 3-phase, and 4-wire. Distribution panel boards and branch circuit panel boards provide power to mechanical equipment and all devices and equipment requiring power. An existing receptacle at the exterior of the building is setup for connection to a temporary portable generator to provide backup power for selected loads in the building. The existing lighting is generally provided by fluorescent light fixtures. Local light switches provide lighting control. There is no automatic shut-off system for lights in the building. There is an existing lighting control panel in auditorium that provides lighting control and dimming for the space. There are exit lights and emergency lights throughout the building. The building does not have any fire alarm system. The electric service capacity is sufficient for operation of the existing facility and minor future modifications. However, any major future additions or modifications may require the service to be upgraded. Based on the information gathered, the electrical equipment is presently in good working condition however; they are reaching their life expectancy.

Site Landscape Observations

The landscape at this site is holding up well, with the exception of the planting strip along the Fiesta sidewalk. The planting strip is similar to some of the problems at the Civic Center site with pedestrian traffic flows in conflict with the landscape. Again, finish grade may need to be adjusted to reduce tripping hazards. The landscape along the west (parking lot side) against the building is particularly dense and could benefit from some thinning out of the plant materials, especially the trees. The trash enclosure structure is in an awkward location and in need of repair.

Recreation Building

Architectural Observation

1. This is a one-story hollow block construction structure of approximately 5,500 square feet of offices and classrooms located on East Main Street across from the Civic Center. This facility is leased to the Los Gatos Saratoga Community Education Recreation for their construction and administration actives
2. General Observations:
    a. The building structure may be deficient in a number of areas related to the masonry walls and the roof connections. Significant structural work would be required to upgrade this structure to meet current design standards. Further investigation would be required to determine if the masonry walls are hollow and unreinforced or solid with reinforcing.
    b. Significant remodeling or expansion of this facility would

Observations

Recreation Building

likely require replacement or upgrades to most building systems.

c. The parking at this location is inadequate at peak usage events.

Structural Building Description

The subject building is a one-story structure of approximately 5,500 square feet. The walls of the structure seem to be concrete block construction. It is unknown at this time whether the walls are solid grouted, partially grouted, or ungrouted and unreinforced. The roof is wood construction. Drawings, calculations, soils report and specifications were not available for our use since the building is very old and original documentation apparently does not exist.

Structural Site Visit

The building is generally in a good state of repair. However, the team was unable to observe large areas of the building because of architectural finishes. There were no items of note observed during the site visit.

Structural Discussion

Assuming the building is unreinforced and is hollow block construction, the design criteria for unreinforced masonry buildings as outlined in the Uniform Code for Building Conservation is used. The critical requirements of this code are as follows:

1. The masonry walls must be anchored to the roof diaphragm.
2. The masonry walls are required to meet certain height to wall thickness ratios. If this requirement is not met, then bracing elements connected to the roof and wall may be introduced to reduce the unsupported wall height.
3. Secondary vertical members may have to be introduced to provide temporary support for the roof-framing members after a major seismic event.
4. Parapets may have to be supported with bracing members if they exceed the height limit described in the UCBC.
5. The masonry walls are required to be analyzed to make sure they can resist the applied lateral loads described in the UCBC.

If the building walls are reinforced and either partially grouted or fully grouted, the building still may have a number of deficiencies related to design of the masonry walls and connection of those walls to the roof diaphragm.

HVAC

The building is currently served by multiple rooftop packaged air

Observations

Recreation Building	
	conditioning units. The units were not observed in our walk-thru and as-built drawings are not available, therefore the condition of the equipment is unknown. One would expect minor modifications to the building could be accommodated with the existing equipment. Significant remodel or expansion of the building will most likely require new HVAC systems. Once future use options are defined, additional intensive field investigation will be required to define the actual HVAC requirements.
Plumbing	The existing plumbing utilities are not observable and no as-built drawings are available, therefore the capacity and condition of the existing services cannot be assessed.
Electrical	The existing building electrical system is old and obsolete. The systems were not observed in our walk-through and as-built drawings are not available, therefore the condition of the equipment is unknown. One would expect minor modifications to the building could be accommodated with the existing equipment. Significant remodel or expansion of the building will most likely require new systems. Once future use options are defined, additional intensive field investigation will be required to define the actual electrical requirements.
Site Landscape Observations 	The landscape more at this facility is dominated by the adjacent parking lot. The parking lot also serves as a traffic route for other facilities in the area. The site configuration of the building and driveway result in limited landscaping to screen the parking area. The dumpsters are un-enclosed; sitting at the end of the accessible parking space, also open to views from Main Street. The front landscape is clean and simple. It is dominated by a large Camphor tree that shades the western end of the facility. The rear landscape is bare. The street trees at the rear of the site are specimen Melaleuca linariifolia, or Flaxleaf Paperbark. The sidewalks are narrow on this side, and do not meet ADA clearance standards with the trees at the back of the curb.
Service Center	
Architectural Observations	1. The Service Center is located on Miles Avenue, to the West of Highway 17 and to the East of Santa Cruz Avenue. The Service Center contains the Administrative Offices, and Shop and Equipment Buildings. 2. The Service Center Administrative Offices are located in a historic building, which was moved to its present location. The building has

Observations

Service Center

been upgraded to serve as administrative offices for the Service Center while maintaining its historic image.

a. General Observations:
   i. Some upgrades to the building structure may be required to meet current requirements
   ii. The number and location of interior bearing walls limits the flexibility of the interior spaces.
   iii. Significant remodeling or expansion of this facility would likely require replacement or upgrades to some building systems.

3. Shop and Equipment Buildings. These buildings are one-story concrete block structures of approximately 4,700 square feet. They are currently being used for shop equipment functions and building engineering functions.
   a. General Observations:
      i. Some upgrades to the building structure would be required to meet current requirements
      ii. Significant remodeling or expansion of this facility would likely require replacement or upgrades to some building systems.
4. Site Issues:
   a. Significant expansion of uses on this site would require upgrades to the site utility infrastructure.

Structural Building Description

Service Center Office Building
The subject building is a two story wood framed structure. It was pointed out to us that the structure is historic and was moved to the present site from another location. The foundation was constructed at the present site to receive the structure and consists of spread and continuous footings.

Shop and Equipment Building
The subject building is a one-story structure of approximately 4,700 square feet. The walls are of concrete block wall construction. The roof consists of a wood panelized roof system with plywood roof sheathing. The floor is a concrete slab-on-grade. Original calculations, soils report, structural drawings and specifications were not available for our use.

Structural Site Visit

Service Center Office Building
The building is generally in a good state of repair. However, the team was unable to observe large areas of the building because of architectural finishes. There were no items of note observed during the site visit.

Observations

Service Center

Structural Discussion

Shop and Equipment Building
The building is generally in a good state of repair. However, the team unable to observe large areas of the building because of architectural finishes. There were no items of note observed during the site visit.

Service Center Office Building
As previously mentioned, several changes to the Uniform Building Code have occurred since this building was constructed. The more important changes include:

1. An increase in the seismic design base shear.
2. Holdown requirements attaching the shear wall panels to the foundation.
3. Collectors and chords transferring shear forces.
4. More stringent allowable height to length shear wall ratios.

Shop and Equipment Building
Several changes to the Uniform Building Code have occurred since the design of the building. Remodeling of this building was performed in 1977; therefore, the construction of the building seems to have been constructed in the early 70's. The requirements of wall anchorage have been previously discussed. Other important changes include:

1. An increase in the seismic design base shear, coefficient of approximately 18% for this structure. This increase would affect the overall design of the building's seismic resisting system.
2. An increase of approximately 100% for the out-of-plane seismic design of the concrete block walls and roof to wall anchorage.

HVAC

The historic administrative building is currently served by multiple packaged air conditioning units. The systems are relatively new and in good operating condition. Parts of the existing shop buildings are air-conditioned with packaged air conditioning units. The remainder of the spaces are provided with various unit heaters and ventilation systems. Remodel or expansion of the spaces will require new HVAC systems.

Plumbing

The as-built drawings for the yard are minimal and the capacity of the existing utilities is not known. If future work is anticipated, intensive investigation of the existing systems will be necessary.

Electrical

The facility is serviced by PG&E via pole-mounted service transformers located on site.

Observations

Service Center

The main service switchboard is 600 ampere, 240 volt, 3-phase, and 4-wire. Distribution panel boards and branch circuit panel boards provide power to mechanical equipment and all devices and equipment requiring power. The existing lighting in the shop and maintenance is generally provided by fluorescent light fixtures. Lighting in the historic building is combination of ceiling mounted fluorescent and incandescent light fixtures. Table lamps have been used throughout the building. Lighting control is provided by local light switches. There is no automatic shut-off system for lights in any of the buildings. The facility does not have any fire alarm system. The electric service capacity is sufficient for operation of the existing facility and some future modifications. However, any major future additions or modifications may require the service to be upgraded. The electrical equipment is generally in good working condition.

Water System

The Service Center is fed from a 3" main, as shown on the San Jose Water Company system map. No water supply problems were reported for this site. An expansion of facilities on the Service Center site might require an upgrade to the size of that service in order to provide adequate fire protection.

Sanitary Sewer System

It is not clear from the system maps exactly to where the Service Center sewer flows. However, no problems were reported for this site. Any required upgrades to the system would depend on future building occupancy.

Site Landscape Observations

The old farmhouse and water tower been successfully incorporated into the service center corporation yard landscape which is crisp and well maintained. The corporation yard is effectively screened from the street with the slated chain link fence and planted trees. The Public Works or Engineering offices are not very noticeable, except for the signage. The landscape is new, but will be effective for that building with what little room was available. There is a pedestrian connection to the Los Gatos Creek Trail through the adjacent Balzer Field.

Parking along Miles Avenue is dominated by a tree service company that occupies the PG&E substation property. It is not clear at this time what if any problems occur with that use.

The irrigation system at the Service Center appears to be a fairly recent installation with Toro pop-up spray heads and is in good condition

Structural Observations

Limitations of Structural Review

1. The information given in this report was based on a walk through of the sites and a review of the drawings, which were supplied, to our office. The site walk through was brief and was not intended to be a comprehensive site investigation of the structure. In most locations, architectural finishes were not removed to allow our office to view the structure. The drawings of the structures were sometimes incomplete or nonexistent.
2. Biggs Cardosa Associates make no warranty either expressed or implied, as to the findings, recommendations, or professional opinions stated in this report.
3. Biggs Cardosa Associates take no responsibility for the conformance of the as-constructed structure with the intent of the design documents.
4. No reliance on this report shall be made by anyone other than the client whose name appears above.
5. Biggs Cardosa Associates has made reasonable efforts to assure that this report is accurate; however, BCA cannot assume liability for damages, which may result from its use, or any conditions which this report might fail to disclose.