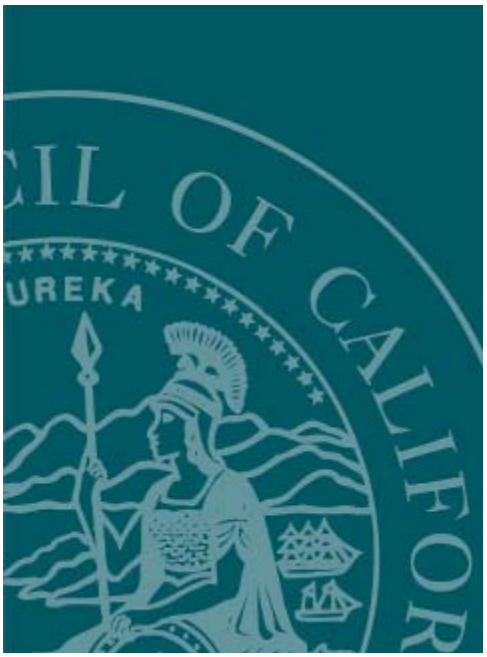

# Superior Court of California

# County of Fresno

# Renovate Fresno County Courthouse

## PROJECT FEASIBILITY REPORT

JANUARY 15, 2010

ADMINISTRATIVE OFFICE OF THE COURTS

OFFICE OF COURT CONSTRUCTION AND MANAGEMENT

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# 1. EXECUTIVE SUMMARY

## 1.1. Introduction

This Project Feasibility Report for the proposed renovation of the Fresno County Courthouse for the Superior Court of California, County of Fresno has been prepared as a supplement to the *Judicial Branch AB 1473 Five-Year Infrastructure Plan* Fiscal *Year 2010-2011*. This report documents the need for the proposed renovation of the existing 28-courtroom facility, describes alternative ways to meet the underlying need, and describes the recommended project.

## 1.2. Statement of Project Need

The proposed renovation of the Fresno County Courthouse will improve its primary functional problems including reorganizing space to be vacated in the building to enable the state to safely operate this courthouse as the Fresno Superior Court's main criminal courthouse. The project will accomplish the following needed improvements to the superior court and enhance its ability to serve the public:

- Improve court security by:
  - increasing capacity for in-custody holding in appropriately-sized space;
  - improved secure circulation for court staff and visitors; and
  - providing a single point of public entry into the building with expanded security screening.
- Complete tenant improvements to space now occupied by the County Probation Department and family law court functions moving to the B.F. Sisk Courthouse for use by court administration, and felony and misdemeanor clerks' offices, expanding the court occupied area in the existing building to 88 percent and relieve the over-crowded criminal court support spaces. This space expansion will improve court services and operational efficiencies by: allowing for the reorganization of administrative and support spaces; consolidating one leased space currently occupied by the facilities department, training, and probate; and providing appropriately-sized spaces that functionally meet the needs of the court.
- Improve the safety of the building by providing a seismic retrofit.
- Provide on-going efficiencies in maintaining the building by upgrading the mechanical, electrical, plumbing, and fire and life safety systems.
- Improve public access to services and staff accessibility by providing ADA accessibility upgrades.

The Superior Court of California, County of Fresno currently provides criminal and family law services from the existing Fresno County Courthouse. When the renovation of the B.F. Sisk Courthouse is completed in 2010, the family court functions will move from the Fresno County Courthouse and other leased facilities into the Sisk Courthouse, with criminal court operations to remain in the Fresno County Courthouse.

The Fresno County Courthouse has 28 courtrooms and has various deficiencies relative to security, in-custody holding, circulation, and courtroom operations, which create impediments to the administration of justice in Fresno County. These conditions significantly hinder the superior court's ability to provide accessible and efficient court proceedings to its court users. Due to the relocation of family law to the B.F. Sisk Courthouse and the reconfiguration of space within the Fresno County Courthouse, the renovation is expected to reduce the number of courtrooms from 28 to 25.

The recommended project—renovation of the existing Fresno County Courthouse—will correct the primary functional and physical deficiencies. The project will:

- increase the capacity of central holding;
- increase capacity of courtroom holding to the extent possible, along with secure paths of travel, dependent upon final design;
- reconfigure the 8th floor for administrative functions;
- reconfigure the 4th floor for felony criminal and misdemeanor clerks offices;
- reconfigure the lower level for one large multipurpose arraignment courtroom and associated support space;
- increase the size and functionality of the public lobby;
- increase the size and functionality of the jury assembly room; and
- provide necessary upgrades for accessibility, fire protection, and seismic safety.

This renovation project will provide the benefits of enhanced functionality and security in the existing building, making it more functionally-appropriate for superior court operations and for all court users.

This project—ranked in the Immediate Need priority group of the Trial Court Capital-Outlay Plan—is one of the highest priority trial court capital-outlay projects for the judicial branch, and was selected by the Judicial Council in October 2008 as one of 41 projects to be funded by Senate Bill (SB) 1407 revenues.

## 1.3. Options Analysis

The Administrative Office of the Courts (AOC) and the court examined two facility development options at the Fresno County Courthouse.

- Project Option 1: Renovate the Existing Fresno County Courthouse
- Project Option 2: No Project, Status Quo Maintained

Project Option 1—Renovate the Existing Courthouse—is the recommended alternative for meeting the needs of the Fresno Superior Court.

## 1.4. Recommended Option

The recommended project is to renovate the existing Fresno County Courthouse. This option is recommended as the most cost-effective solution for meeting current, mid-term,

and long-term needs of the court. The proposed improvements provide substantial benefit to the existing facility and court operations in comparison to Option 2 (Maintaining Status Quo) which indefinitely delays needed upgrades. Based on the analysis of the proposed renovation scope, the building can be renovated without the need for costly swing space, related moving costs, or significant disruption to court operations and service to the public. There will be no buyout costs for equity of the county-occupied space in the building because the transfer agreement between the County of Fresno and the state provides the space now occupied by the County Probation Department to the state. The scope of the renovation project, which has been created in collaboration with the court, outlines the needed alterations to improve the functional operations of the court.

The estimated project cost to construct the project is $111.361 million, without financing. These costs are based on the renovation scope developed for this project. The design of the building's renovation will be determined in the preliminary plan phase of the project.

A preliminary project schedule has been developed based upon approval processes by the Department of Finance and the Joint Legislative Budget Committee to be implemented as a result of Senate Bill 1407 (Ch. 311, Statutes of 2008), and Senate Bill No. 12, Special Session (SBX2 12, Ch. 10, Statutes of 2009). Construction costs are escalated to the start and midpoint of construction based on five percent annual escalation. In the current schedule, the design phase will begin during the summer, 2010. Construction is then scheduled to begin in the fall, 2012 and be completed in the fall, 2015.

# 2. STATEMENT OF PROJECT NEED

## 2.1. Introduction

The existing Fresno County Courthouse is in need of alteration. Its renovation will provide the benefits of enhanced functionality and security, making it a more functionally-appropriate building for the superior court and for all court users.

## 2.2. Transfer Status

Under the Trial Court Facilities Act, negotiations for transfer of responsibility of all trial court facilities from the counties to the state began July 1, 2004. Assembly Bill (AB) 1491 (Ch. 9 Statutes of 2008) (Jones) was enacted and extended the deadline for completing transfers to December 31, 2009. Transfer status for the Fresno County Courthouse is provided in the following table.

TABLE 2.2.a
Existing Facilities Transfer Status

| Facility | Location | Owned or Leased | Type of Transfer | Transfer Status |
|---|---|---|---|---|
| Fresno County Courthouse | 1100 Van Ness Avenue | Owned | TOR/DTOT | Completed |

*Note: Only facilities directly affected by the project are listed.*

## 2.3. Project Ranking

Since 1998, the AOC has been engaged in a process of planning for capital improvements to California's court facilities. The planning initiatives began with a statewide overview, moved to county-level master planning, and then to project-specific planning studies.

On October 24, 2008, the Judicial Council adopted an update to the Prioritization Methodology for Trial Court Capital-Outlay Projects (the methodology) based on the enactment of SB 1407. SB 1407 provides enhanced revenues to finance up to $5 billion in lease-revenue bonds for trial court facility construction for both Immediate and Critical Need projects. In accordance with SB 1407, trial court capital-outlay projects with viable economic opportunities are given priority when submitting detailed funding requests to the executive and legislative branches.

In October 2008, the Council also adopted an updated trial court capital-outlay plan (the plan) based on the application of the methodology. The plan identifies five project priority groups to which 153 projects are assigned based on their project score (determined by existing security, physical conditions, overcrowding, and access to court services).

This project—ranked in the Immediate Need priority group in the Trial Court Capital-Outlay Plan adopted by the Judicial Council in October 2008—is one of the highest priority trial court capital-outlay projects for the judicial branch, and was selected as one of 41 projects to be funded by SB 1407 revenues by the Judicial Council in October 2008.

## 2.4. Summary of Economic Opportunities

In accordance with Chapter 311, Statutes of 2008, Government Code section 70371.5 (e), in recommending a project for funding, the Judicial Council shall consider economic opportunities for the project. "Economic opportunity" includes, but is not limited to, free or reduced costs of land for new construction, viable financing partnerships with, or fund contributions by, other government entities or private parties that result in lower project delivery costs, cost savings resulting from adaptive reuse of existing facilities, operational efficiencies from consolidation of court calendars and operations, operational savings from sharing of facilities by more than one court, and building operational cost savings from consolidation of facilities.

Potential economic opportunities for this project are as follows:

2.4.1. Free or Reduced Costs of Land.

The project is a renovation of the existing Fresno County Courthouse, so acquisition of land is not applicable.

2.4.2. Viable Financing Partnerships.

No viable financing partnerships that would reduce project delivery costs have been identified for this project.

2.4.3. Adaptive Reuse of Existing Facilities.

The project is an adaptive reuse of the existing courthouse.

2.4.4. Consolidation of Court Calendars and Operations.

The project provides for the consolidation of one leased space currently occupied by the facilities department, training, and probate.

2.4.5. Sharing of Facilities.

This project will not be shared by more than one court.

## 2.5. Current Court Operations

The Superior Court of California, County of Fresno, currently operates fourteen courthouse facilities countywide. The following describes current court operations in these facilities.

FIGURE 2.5.a
Map of Fresno County


The Fresno County Courthouse is located in downtown Fresno and contains approximately 200,000 gross square feet and 28 courtrooms. The building is shared with the County of Fresno and the court occupies approximately 77 percent of the total building square footage. Court functions within the building include court administration, criminal division, traffic division, family law, jury services, and a self-help center.

County functions within the building include the Probation Department and the County Law Library. The Probation Department will be moving out of the building by early 2012 and, pursuant to the Transfer Agreement, the court will be able to utilize the vacated space. Upon completion of the renovation project, the County Law Library will be the only county function in the building.

In 2003, the Federal Government conveyed title of the B.F. Sisk Courthouse to the State for use by the Fresno Superior Court. The 192,000 square foot facility was originally constructed in 1967 and is currently undergoing a complete renovation funded by SB 1732 revenues. When complete in the later part of 2010, the building will accommodate 16 courtrooms for civil and family support functions currently housed in various facilities in Fresno, including the Fresno County Courthouse.

## 2.6. Existing Facility – Fresno County Courthouse

The Fresno County Courthouse contains a total of 28 courtrooms is the only facility directly affected by this project as shown in the table below. This facility is shared with county agencies.

TABLE 2.6.a
Existing Facilities

| Facility | Location | Number of Existing Courtrooms Affected by this Project | Departmental Square Footage Occupied by the Court | Court Space as a Percentage of Total Building Square Footage |
|---|---|---|---|---|
| Fresno County Courthouse | 1100 Van Ness Ave. Fresno, CA 93721 | 28 | 153,887 | 77% |
| **Total Existing Courtrooms and DGSF** | | **28** | **153,887** | |

The court occupies 153,887 Departmental Gross Square Feet (DGSF), or 77 percent of the building's total square footage.

When the County Probation Department vacates the building in accordance with the transfer agreement, and the family law functions move to the renovated B. F. Sisk Courthouse, 26,610 DGSF of space will be available for use by the criminal departments and the court will occupy 167,032 DGSF or 88% percent of the building's total square footage. The only remaining County function in the building will be the County Law Library.

The existing facility contains a number of deficiencies relative to access, efficiency, security, and courtroom operations, which create impediments to the superior court's administration of justice. These specific deficiencies—which will be addressed by the proposed renovation project—are summarized as follows:

### 2.6.1. Security Deficiencies

- The facility does not have separate and secure corridors for movement of in-custody defendants. In-custody defendants are escorted through private and public corridors floors which are shared by judges, staff, and in some cases,

the public. Only 4 out of the total 28 courtrooms within the building are adjacent to secure courtroom holding.

- The in-custody elevator is located directly adjacent to the elevator used by judges and staff. The movement of in-custody defendants into and out of the secured elevator must be carefully orchestrated to avoid contact by judges and staff.

FIGURE 2.6.a
Secured Prisoner Elevator is Located Adjacent to
Elevator Used by Judges and Staff


- The Jury Assembly Room is directly accessible from the outside and does not have security screening.

2.6.2. Inadequate Court Holding Facilities

- On average, this facility typically receives about 136 in-custody defendants on a standard weekday. Central holding is located in the basement and can accommodate 78 in-custody defendants at any given time. Separation cells are very limited which decreases the capacity to segregate various classes of in-custody defendants. All holding cells experience overcrowded conditions which result in unsafe conditions for the in-custody defendants and court security personnel.

FIGURE 2.6.b
Overcrowded Conditions in Central Holding



- Holding cells adjacent to courtrooms are extremely limited. The building has 13 courtroom holding cells. Of these, only 10 holding cells have direct, secured access into 4 of the 28 courtrooms in the building.
- The facility provides only two secured attorney/client interview rooms. Due to demand, attorneys frequently meet and confer with their clients in the courtroom.

2.6.3. Substandard Courtrooms

- The existing courtrooms range in size between approximately 870 square feet to 1370 square feet. Current Judicial Council standards call for 1,600 square feet to 2,400 square feet per courtroom. Based on the final design, reconfiguration of space will result in more functional courtrooms.

FIGURE 2.6.c
Severely Undersized Courtroom

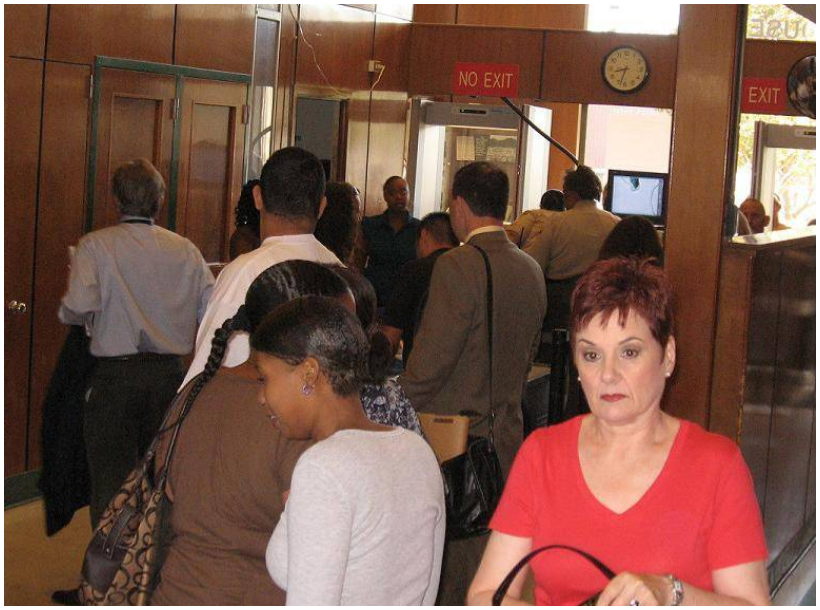
2.6.4. Overcrowded Jury Assembly Area

- The current jury assembly room has a maximum occupancy level of 186 people and is inadequate to handle the daily average of 254 jurors reporting for service.

2.6.5. Overcrowded Public Areas

- Approximately 3,000 people per day enter the Fresno County Courthouse. The size of the existing lobby is inadequate to functionally and safely support this number of people.
- The building has one entrance lobby with minimal queuing area. The building is only capable of supporting one x-ray machine and two magnetometers. On a typical morning, it takes an average of 15 - 20 minutes for a single person to clear security screening.

FIGURE 2.6.d
Undersized and Inadequate Security Screening and Public Lobby





2.6.6. Non-Compliant ADA Issues

- The major public walkway on the west side of the building leading to the main courthouse entrance is not ADA accessible.
- The courtrooms lack ADA accessibility to the judge's bench, witness stand, jury box, and clerk's workstation.
- The only ADA accessible restroom is located on the 7th floor of the 10-story building.
- Many public counters are not ADA compliant.

# 3. OPTIONS ANALYSIS

## 3.1. Introduction

The purpose of this section is to compare potential options to meet the needs of the Superior Court.

## 3.2. Project Options

The AOC and the court examined two project options for the Fresno County Courthouse:

- Project Option 1: Renovate the Existing Fresno County Courthouse
- Project Option 2: No Project, Status Quo Maintained

Project Option 1 was developed and evaluated based on its ability to provide the space and improvements required at good economic value to the state and to improve court operations in the existing facility.

### 3.2.1. Project Option 1: Renovate the Existing Fresno County Courthouse.

In Option 1, the existing Fresno County Courthouse will be renovated. The courthouse will continue to operate during its renovation.

#### 3.2.1.1. *Pros*

- This option consolidates the facilities department, training, and probate into the Fresno County Courthouse thereby eliminating the need for leased space.
- The overall cost of this option provides substantial benefit to the existing facility and court operations in comparison to Option 2 (Maintaining Status Quo).
- This option provides long term value to the largest existing courthouse in Fresno County—the primary criminal courthouse in the county—improving access to justice for county residents. This option involves no buyout costs for equity of the space in the building that is occupied by the county due to 1) the executed transfer agreement which requires the County Probation Department to vacate the building within one year plus 90 days of completion of the B.F. Sisk Courthouse, and 2) due to F functions moving to the B.F. Sisk Courthouse when its renovation is completed.
- The building can be renovated without securing costly swing space, allowing the court to conduct normal daily operations with no break in service to the public.
- This option achieves the immediately-needed improvements to the superior court and enhances its ability to serve the public:
  - increase the capacity of central holding;

- increase capacity of courtroom holding to the extent possible, along with secure paths of travel, dependent upon final design;
- reconfigure the 8th floor for administrative functions;
- reconfigure the 4th floor for felony criminal and misdemeanor clerks offices;
- reconfigure the lower level for one large multipurpose arraignment courtroom and associated support space;
- increase the size and functionality of the public lobby;
- increase the size and functionality of the jury assembly room; and
- provide necessary upgrades for accessibility, fire protection, and seismic safety.

3.2.1.2. *Cons*

- Renovation of the building while it is being occupied may create temporary hardships on staff and visitors. Estimated project costs include increased cost for work performed in off-hours and multiple sequencing of work.

3.2.2. Project Option 2: No Project, Status Quo Maintained.

In this option, the existing Fresno County Courthouse would not be renovated, and no project would occur. Consequently, this option results in the status quo, which is the court remaining in existing deficient facilities.

3.2.2.1. *Pros*

- The state would not expend SB 1407 revenues for this project.

3.2.2.2. *Cons*

- The court would continue to incur costs for the leased space currently occupied by the facilities department, training, and probate.
- The space vacated by the County Probation Department and the Family Law functions moving to the B. F. Sisk Courthouse would not be modified to maximize use by the court, and potentially left vacant. The State would continue to incur costs for operations and maintenance of vacant space.
- Capacity of central holding would not be increased. The ability to provide required separation of in-custody defendants would continue to be compromised. Overcrowded holding cells would continue to result in unsafe conditions for the in-custody defendants and court security personnel.

- Capacity of courtroom holding would not be increased and secure paths of travel would not be provided. Judicial officers, staff, and the public would continue to be at risk in certain areas of the courthouse.
- Backfill of vacated space would not occur and the court would continue to operate in functionally deficient spaces. Inefficiencies in court operations would continue to the detriment of providing appropriate access to justice.
- Upgrades to ADA accessibility, and fire and life safety, would not occur and the State would continue to assume potential liability.
- Seismic upgrades would not occur and the court would continue to occupy an unsafe building.

### 3.3. Recommended Project Option

The recommended option is Option 1: Renovate the Existing Fresno County Courthouse. The option provides the best solution for meeting the needs of the Superior Court of California, County of Fresno.

The project will accomplish the following immediately-needed improvements to the superior court and enhance its ability to serve the public:

- increase the capacity of central holding;
- increase capacity of courtroom holding to the extent possible, along with secure paths of travel, dependent upon final design;
- reconfigure the 8th floor for administrative functions;
- reconfigure the 4th floor for felony criminal and misdemeanor clerks offices;
- reconfigure the lower level into one large multipurpose arraignment courtroom and associated support space;
- increase the size and functionality of the public lobby;
- increase the size and functionality of the jury assembly room; and
- provide necessary upgrades for accessibility, fire protection, and seismic safety.

## 4. RECOMMENDED PROJECT

### 4.1. Introduction

The recommended solution to meet the needs of the Superior Court of California, County of Fresno is to renovate the existing Fresno County Courthouse. The following section outlines the components of the recommended project, including project description, design criteria, and estimated project cost and schedule.

## 4.2. Project Description

The proposed project includes the renovation of the existing Fresno County Courthouse for the Superior Court of California, County of Fresno. The scope of the renovation involves the following:

- increase the capacity of central holding;
- increase capacity of courtroom holding to the extent possible, along with secure paths of travel, dependent upon final design;
- reconfigure the 8th floor for administrative functions;
- reconfigure the 4th floor for felony criminal and misdemeanor clerks offices;
- reconfigure the lower level into one large multipurpose arraignment courtroom and associated support space;
- increase the size and functionality of the public lobby;
- increase the size and functionality of the jury assembly room; and
- provide necessary upgrades for accessibility, fire protection, and seismic safety.

## 4.3. Design Criteria

According to the standards, California court facilities shall be designed to provide long-term value by balancing initial construction costs with projected life cycle operational costs. To maximize value and limit ownership costs, the standards require architects, engineers, and designers to develop building components and assemblies that function effectively for the target lifetime. These criteria provide the basis for planning and design solutions. For exact criteria, refer to the standards approved by the Judicial Council on April 21, 2006.

## 4.4. Estimated Project Cost

The estimated project cost for the recommended renovation project is $111.361 million, without financing costs. This is based on a project involving improvements and upgrades to existing spaces within the existing courthouse and adjacent site. Costs include increased cost for work performed in off-hours and multiple sequencing of work. No relocation costs for owners or tenants have been included in the budget, as the project does not require the court to vacate the existing courthouse during construction. The design of the building's renovation will be determined in the preliminary plan phase of the project.

Construction costs for the project include allowances for furniture, fixtures, and equipment (FF&E) and data, communications, and security. Construction costs are escalated to the start and midpoint of construction based on five percent annual escalation.

Project costs are added to the construction costs and include fees for architectural and engineering design services, inspection, special consultants, project management, CEQA

due diligence, legal services, utility connections, and plan check fees for the state fire marshal and access compliance.

Cost criteria include the following:

- The total project cost—without financing costs—is $111.361 million.[1]
- The actual costs could change, depending on the economic environment and when the actual solution is implemented. The estimates were created by applying current cost rates and using a best estimate of projected cost increases.
- The cost estimate is based on the assumption that the renovation project shall be designed for sustainability to the extent applicable.
- The estimate is based on the conditions within the actual building; the existing Fresno County Courthouse.
- The estimate does not include support costs, such as utilities and facilities maintenance.

## 4.5. Project Schedule

A preliminary project schedule has been developed based upon approval processes by the Department of Finance and the Joint Legislative Budget Committee to be implemented as a result of Senate Bill 1407 (Ch. 311, Statutes of 2008), and Senate Bill No. 12, Special Session (SBX2 12, Ch. 10, Statutes of 2009). In the current schedule, the design phase will begin during the summer, 2010. Construction is then scheduled to begin in the fall, 2012 and be completed in the fall, 2015.

The project schedule is provided in the following figure.

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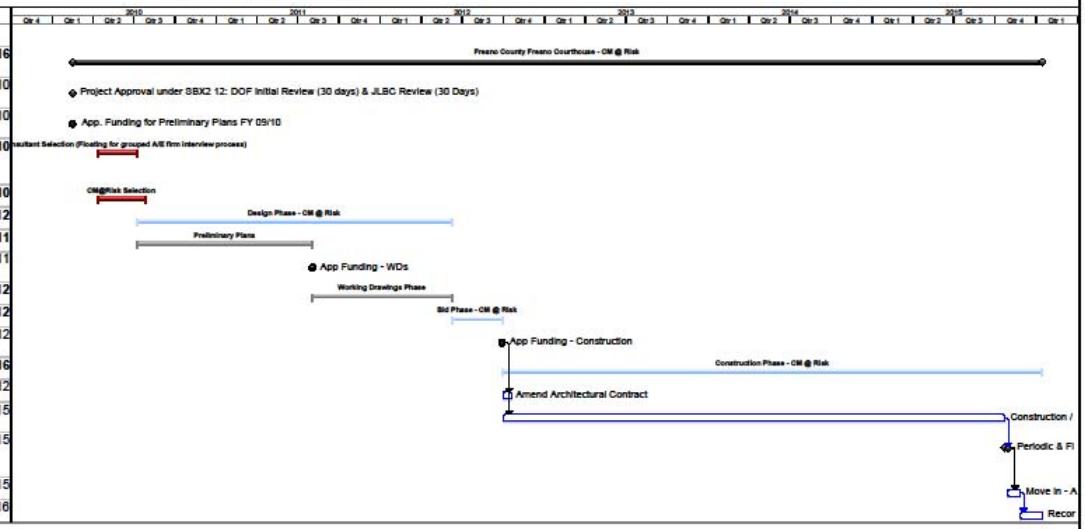
[1] The total project cost is based on construction cost estimates provided by the Cumming Corporation, which have been escalated to the mid-point of construction and are based on the project schedule provided in Section 4.5 of this report.

FIGURE 4.5a
Project Schedule

Administrative Office of the Courts

Office of Court Construction and Management
SB1407 & SB12 Project Schedule - Fresno County New Fresno Courthouse
Project Delivery System: CM @ RISK

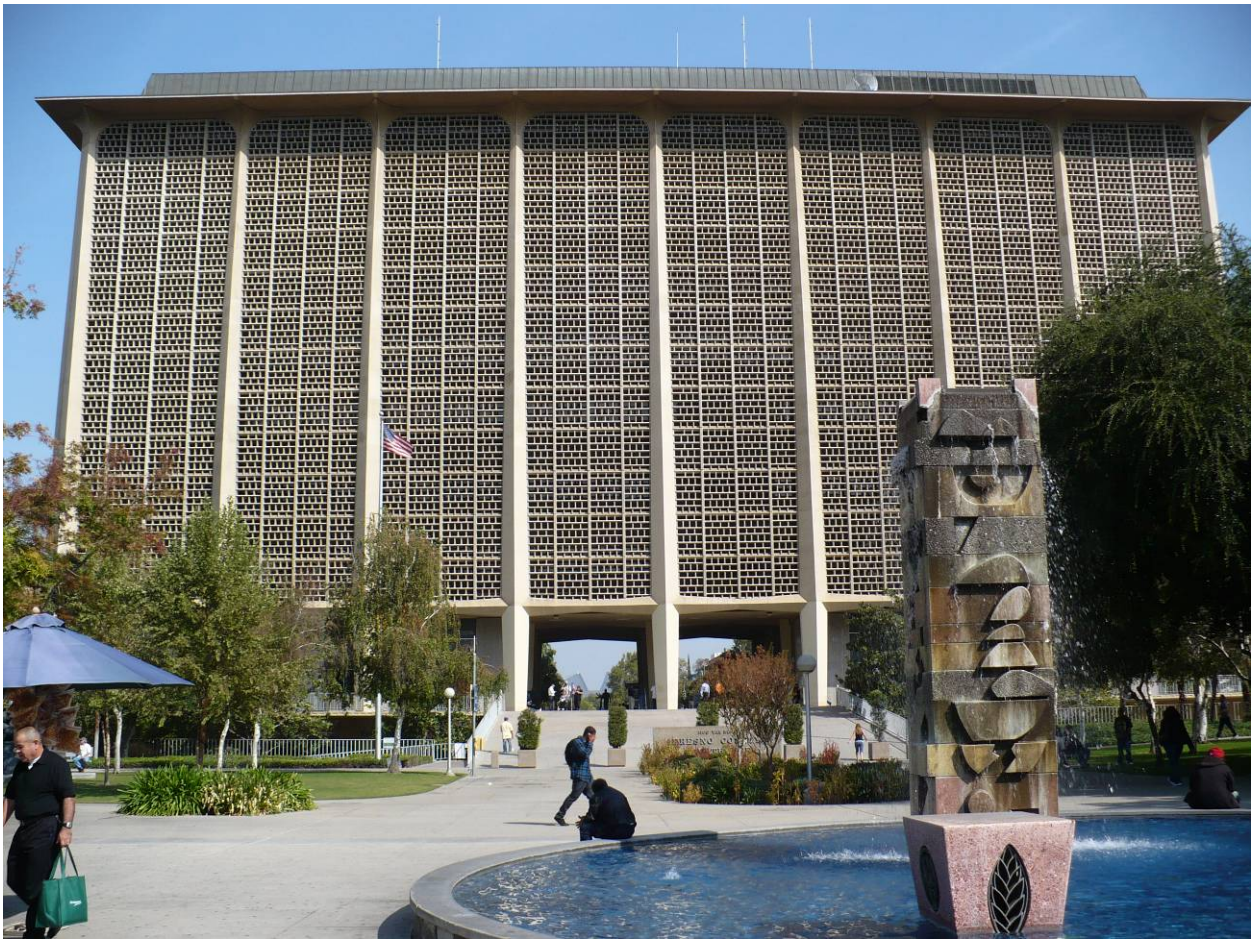
| ID | Task Name | Dur in Working Days | Start | Finish |
|---|---|---|---|---|
| 1 | | | | |
| 2 | **Fresno County Fresno Courthouse - CM @ Risk** | **1545 days** | **Mon 2/15/10** | **Thu 1/14/16** |
| 3 | Project Approval under SBX2 12: DOF Initial Review (30 days) & JLBC Review | 0 days | Mon 2/15/10 | Mon 2/15/10 |
| 4 | App. Funding for Preliminary Plans FY 09/10 | 0 days | Mon 2/15/10 | Mon 2/15/10 |
| 5 | **A/E Consultant Selection (Floating for grouped A/E firm interview process)** | **64 days** | **Mon 4/12/10** | **Thu 7/8/10** |
| 13 | **CM@Risk Selection** | **76 days** | **Tue 4/13/10** | **Tue 7/27/10** |
| 19 | **Design Phase - CM @ Risk** | **501 days** | **Fri 7/9/10** | **Fri 6/8/12** |
| 20 | **Preliminary Plans** | **279 days** | **Fri 7/9/10** | **Wed 8/3/11** |
| 32 | App. Funding for Working Dwgs FY 10-11 | 0 days | Wed 8/3/11 | Wed 8/3/11 |
| 33 | **Working Drawings Phase** | **222 days** | **Thu 8/4/11** | **Fri 6/8/12** |
| 37 | **Bid Phase - CM @ Risk** | **80 days** | **Mon 6/11/12** | **Fri 9/28/12** |
| 50 | App. Funding for Construction FY 11-12 | 0 days | Fri 9/28/12 | Fri 9/28/12 |
| 51 | **Construction Phase - CM @ Risk** | **860 days** | **Mon 10/1/12** | **Thu 1/14/16** |
| 52 | Amend Architectural Contract | 15 days | Mon 10/1/12 | Fri 10/19/12 |
| 53 | Construction / FF&E - Multiple Phases | 800 days | Mon 10/1/12 | Thu 10/22/15 |
| 54 | Periodic & Final Inspections During Construction (Fire Marshal, Local authority, OCCM, CSA (if app)) | 5 days | Fri 10/23/15 | Thu 10/29/15 |
| 55 | Move in - Acceptance | 20 days | Fri 10/30/15 | Thu 11/26/15 |
| 56 | Records Close-out | 35 days | Fri 11/27/15 | Thu 1/14/16 |




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

Page 1 of 1 Fri 12/4/09

Appendix A – Consultant Report Prepared by SmithGroup (October 2009)



# Fresno County Courthouse

## Introduction

In July 2009, the SmithGroup was hired by the Administrative Office of the Courts (AOC), Office of Court Construction and Management (OCCM), to provide an assessment of the Fresno County Courthouse, including an analysis of current building conditions and associated mechanical, electrical, and plumbing systems. In parallel with this study, the OCCM conducted separate consultant studies with respect to structural systems and seismic retrofit options, and hazardous materials. These studies appear in the Appendix of this report.

This report provides the basis for recommendations to renovate the Fresno County Courthouse and how best to adapt existing spaces for reuse by the superior court.

## Fresno County Courthouse Facility Description

The Fresno County Courthouse was opened for use in 1965. The building is located at 1100 Van Ness Avenue in downtown Fresno. The building is approximately 200,000 gross square feet

(GSF) in size with eight floors above principal ground elevation, two basement level floors, and a mechanical penthouse. The building also includes two mezzanine levels occupied by court staff. There is a central breezeway located on the first level, which splits the Mezzanine Level 1 into North and South areas. The area to the North is Jury Assembly. The area to the South is the public lobby which contains the secure public entrance. The first level basement is fully above ground and surrounded by an exterior plaza known as the "moat". The building's property line is located at the center of the retaining walls which surround and form the "moat". The first level basement is approximately eight to fourteen feet below the surrounding grade which varies around the building. The first floor level at the main entrance to the building is approximately two to eight feet above the surrounding grade.

The building is surrounded by a public park owned by the County of Fresno. There is a nonconforming access ramp from the grade at the public park/plaza to the West side entry. The main entry to the building is from both West and East directions. Adjacent to the East is an underground parking structure owned by the County. Selected staff enters the building from the underground parking to level B2. The detainees are brought from the adjacent jail through a tunnel to a central holding area located on level B2.

The Courthouse building is a classic modernist era civic building that was well-planned within the design standards of the time period. The building is rectangular in plan and organized around an off-center elevator core. The building is classically composed with a defined base, middle and top, but has an austere exterior that is composed of concrete sunscreen panels over an aluminum window wall system.

The exterior concrete panels have minimal detail and emphasize the vertical expression of the structural tapering columns. The building has a steel roof deck and is mansard shaped. The roof construction is not engineered to carry any additional live loads.

Courtrooms are located at the interior of the building with easy access from the elevators. Offices are placed around the perimeter for access to daylight and for secured circulation between the judge's chambers and the courtroom bench. There is no separation of staff and detainee secured circulation. The following lists general uses on each floor level:

Level B2 – 2 courtrooms, chambers, central holding, cafeteria, mechanical rooms

Level B1 – 4 courtrooms, chambers, traffic division, staff support

Level 1 – Entrance lobby, jury assembly and jury services, child waiting, security center

Level M1 - General administrative support and research attorneys

Level 2 – 4 courtrooms, chambers, judicial support, jury rooms, clerks' offices

Level 3 – 5 courtrooms, chambers, judicial support, jury rooms

Level 4 – Criminal division, family law, probate, clerks offices, court administration

Level 5 – 5 courtrooms, chambers, judicial support, clerks offices, jury rooms

Level 6 – 3 courtrooms, chambers, judicial support, jury rooms, County Law Library

Level M6 – County Law Library

Level 7 – 5 courtrooms, chambers, judicial support, jury rooms

Level 8 – County Probation Department

## Functional Analysis Summary

The Courthouse currently houses 28 courtrooms, related court support functions and various offices. The current building interior has been modified over the years in a variety of ways, but the general layout of each courtroom floor is similar to original design. The condition of the interior spaces varies greatly due to the range of age and use. The main public areas of the building typically date to the original construction. The lobbies, corridors, stairs, elevators and toilet room facilities have been well maintained, but these spaces are dated in appearance and do not meet current accessibility and exiting requirements.

The existing courtrooms are very small in comparison to current standards set forth in the California Trial Court Facilities Standards adopted by the Judicial Council in April, 2006. The average size of courtrooms is 1,300 square feet. Level 3 courtrooms have added holding cells which further reduce the size to approximately 900 SF. All of the courtrooms are dated in appearance. The existing courtrooms do not conform to current accessibility laws.

The basic mechanical, electrical, and plumbing core elements of the building have a clear value, but significant upgrades are recommended for the continued use of the building. Renovating the core elements of the building while the building is being occupied will provide significant challenges.

The following summarizes existing mechanical, electrical, plumbing, and fire protection systems within the building:

### Existing Electrical System

1. Normal Power System

    a. The electric service is from a utility company-owned, high voltage, pad mounted service transformer, located east of the building, alongside of M Street. Transformer secondary voltage is 2.4KV, 3-phase.

    b. The utility company transformer feeds a 1200 Amp, 2,400V, 3-phase switchboard, located in a vault located adjacent to and beneath the utility company transformer. In addition to the courts building, this switchboard provides service to the hall of justice, jail, and schools. From this switchboard, a 2.4KV feeder provides service to two unit substations rated 1,000KVA, 2.4 KV-277/480V, 3-phase, 4-wire and 2,000KVA, 2.4 KV-277/480V, 3-phase, 4-wire, respectively, and a 2.4 KV load interrupter switch located in B2 Level of the courts building. The 1,000 KVA unit substation serves two chillers, the

2,000KVA unit substation serves the building, and the 2.4KV load interrupter switch, which is not in use.

c. From the 2,000KVA unit substation, power is distributed at 277/480V, 3-phase to all floors, penthouse, elevators, mechanical equipment, and two motor control centers located on B2 Level.

d. The existing electrical distribution system per floor consists of a 3-phase, 277/480V lighting panel, which also feeds step-down transformer(s), and 120/208V, 3-phase receptacle panels.

2. Emergency Power System

a. A natural gas powered engine-generator unit rated 140 KW/175KVA, 277/480V, 3-phase, 4-wire and located at B2 Level provides power to an emergency power panel via a 200 Amp automatic transfer switch.

b. The emergency power panel provides power to elevators 4 and 5, sump pumps, stair and corridor lights, B2 level and Level 7 courtroom lighting and fire alarm systems.

3. Fire Alarm System

a. The building has a fire alarm and smoke detection system with voice evacuation consisting of main control panels on 1st floor, terminal cabinets, power supply units, audio and visual devices, manual pull stations throughout the building, and smoke detection the in elevator lobbies, corridors, and file rooms.

**Existing Mechanical Systems**

1. Chilled Water System

a. There are two 300 ton electric centrifugal chillers at the B2 level. The original 300 ton chillers were shown to be series piped on the original design drawings. They we replaced with 300 ton chillers (R-22 refrigerant) in the early 1990s and we re-piped for parallel operation. We are informed that the chillers are in poor operating condition and are scheduled to be replaced again in the near future with two 400 ton chillers. The cooling load scheduled on the original drawings totals to 530 tons (including extrapolation of inclusion of floors not originally built out). However, due to the age of the system and the probable excessive delivery of outside air, the actual load is likely higher. This theory is supported by our understanding of the facility operators' explanation that, at times, they need to operate the two existing 300 ton chillers simultaneously at full capacity (600 tons total).

b. The chillers are presently arranged to operate in parallel with dedicated pumps. The pumping system is constant volume and pumps the chilled water through the chillers to the various air handler cooling coils throughout the building. The air handler cooling coils utilize 3-way control valves. The cooling coil performance specification on the original drawings indicates that they are designed for a 10

degree F chilled water temperature rise. There does not appear to be a chiller operation optimization sequence of operation as two chillers were observed to be operating simultaneously in a part load condition during our site visit.

c. There are two condenser water pumps that pump the condenser water to cooling towers located at the penthouse level.

d. The original design drawings show that there were three cooling towers installed within the penthouse. These cooling towers have been replaced (not known when replaced) and there are presently two cooling towers in the penthouse. There is space for one more tower and the roof opening for it is presently closed and drained. The operating characteristic of these cooling towers is presently not known. It is anticipated that the design approach temperature is approximately 10-12 degrees F.

e. Cooling tower water chemistry control uses conventional chemical treatment systems.

f. Modern chilled water systems design would use chillers with low ozone depletion potential and low global warming potential effect refrigerants, a 15-20 degree F chilled water temperature rise to reduce total pumping rate and resulting pumping energy, use either variable primary flow or constant primary / variable secondary flow and 2-way control valves to reduce pumping energy, utilize variable frequency driven chillers to capitalize on low condenser water temperatures to save chiller input energy, utilize low-approach cooling towers to further reduce chiller input energy, and utilize chemical-free water cooling tower water treatment.

g. The chillers presently share the same space with the boilers and the electrical gear, a code violation. The chillers need to be in a 1-hour fire-rated dedicated Machinery Room.

2. Heating Hot Water System

a. Two gas-fired heating hot water boilers located at the B2 Level have been removed.

b. There is a steam-to-water heat exchanger installed adjacent to the boilers that utilizes steam delivered from the county cogeneration system to produce heating hot water in place of the non-functioning boilers. (We are told that the conversion took place in the 1980s.) A steam condensate pump pumps the condensate back to the cogeneration plant. We are told that the steam supply is manually terminated during warm weather conditions.

c. A modern heating hot water system design would use high-efficiency boilers (85-95% efficiency) to reduce boiler input energy, use a 35-40 degree F heating hot water temperature drop to reduce total pumping rate and resulting pumping energy, and use variable flow pumping with 2-way valves to reduce pumping energy.

d. The AOC is in the process of replacing the chillers.

3. Air Handling

a. The building is served with high-velocity dual-duct constant volume air handling systems. The original design drawings indicate that the 3rd floor was not built out, the 4th floor was partially built out, and the 8th floor was not built out. These floors were subsequently built out, but there are no drawings available of the designs.

- Air handler AHU-B2A in B217 serves the B2 level (20,190 cfm)
- Air handler AHU-B2B in B217 serves B1 level north, 1st floor north, and M1 north (23,750 cfm).
- Air handler AHU B2C in B218 serves B1 level south, 1st floor south, and M1 south (26,070 cfm).
- Air handler AHU-2 in 250 serves the 2nd floor (23,230 cfm).
- Air handler AHU-3 in 3xx serves the 3rd floor (size unknown).
- Air handler AHU-4A in 434 serves the 4th floor south (13,520 cfm).
- Air handler AHU-4B in 4xx serves the 4th floor north (size unknown)
- Air handler AHU-5 in 575 serves the 5th floor (22,370 cfm).
- Air handler AHU-6 in 661 serves the 6th floor (24,980 cfm).
- Air handler AHU-7 in 790 serves the 7th floor (21,200 cfm).
- Air handler AHU-8 in the Penthouse serves the 8th floor (size unknown).

Air distribution of supply air is primarily through ceiling light troffers and the return air utilizes the ceiling space as a plenum return.

The leakage rate of the existing ductwork is not known, but is suspected to be high based on experience with other building of similar vintage. (The Sisk Courthouse ductwork was documented at over 50% leakage.)

b. The Building Automation System (BAS) is largely pneumatic, as originally installed.

c. Modern air handling systems would utilize a low velocity (low pressure) approach, and could be either dual duct variable volume or single duct terminal reheat variable volume systems. Supply air distribution would be through a variety of ceiling air diffusers and return air would utilize the ceiling space as a return air plenum. Outside air flow usage would be monitored. Ductwork would be fully sealed and tested. The BAS would be microprocessor based electronic / electric.

4. High-Rise Life-Safety

    a. There are no provisions that comply with the current high-rise life-safety code requirements as such codes were not in effect at the time of the design and construction of the building.

    b. At a minimum, stair pressurization fan/duct systems are required at the required exit stairs.

**Existing Plumbing and Fire Protection Systems**

1. Domestic Cold Water System

    a. Domestic cold water is provided from a county-owned tank and pump system, located at the B1 garage, to the Courthouse and to the Hall of Records.

    b. The incoming low pressure cold water serves level B2 and feeds water booster system that consists of three pumps and a pneumatic bladder tank that serves the building. A pressure reducing valve station separates low pressure water for level B2 through level 2, and high pressure for levels 3 through 9.

    c. The original design also shows a Drinking Water system that serves all drinking fountains. The chiller is located at level 9. Drinking Water supply is circulated by a pump, which is located on Basement B2 level.

2. Domestic Hot Water System

    a. There is one heat exchanger to make hot water for the building. Hot water is generated by a steam-to-water heat exchanger that is in a large volume tank, and it is supplied with boosted water pressure supply.

    b. Hot water supply main from the heat exchanger has a pressure reducing valve to separate the main supply into low pressure and high pressure hot water systems, same as that for cold water. Temperature in hot water mains is maintained by circulated loops, and there are both low pressure and high pressure hot water returns. The returns are circulated back into the heat exchanger tank.

    c. There is a kitchen in level B2. The high temperature required for scullery is supplied by an electric booster hot water heater, located within the kitchen. Hot water main is circulated back to this water heater. Hot water for the remaining kitchen sinks is supplied from the building's low pressure hot water system. Note: The kitchen is presently not in use.

3. Sanitary Sewer System

    a. The B2 and B1 levels of the building drain by gravity to a duplex sump pump on level B2. The effluent from the sump pump is pumped up to a gravity sanitary sewer main. The sump pump discharge is 4" size, and it rises and crosses the moat at the north end (presumably under the bridge).

b. Levels 1 through 9 are drained by gravity. North and south ends of the building have their own gravity building sewer, 8” and 5” sizes, respectively. The gravity drainage lines cross the moat at below level 1 (presumably under the bridge).

c. The kitchen drains to the duplex sump pump system on Basement B2.

4. Storm Drainage System

a. The sloped roof sheds water onto the perimeter roof (same elevation as level 9). There are 22 roof drains located all around the flat roof. The roof drains are collected and conveyed down through the building and exits the building by gravity at both north and south ends. The roof drains do not have a companion overflow drain.

b. Storm Drain exits the building at both west and east ends. The lateral is 6” size at both exit points.

5. Natural Gas System

a. There is a 4” gas supply that comes in from M Street. Low pressure natural gas is supplied to the generator.

6. Plumbing Fixtures

a. Existing plumbing fixtures (where original) do not comply with current ADA clearances, or water conservation requirements.

b. Existing restroom fixture arrangements (where original) do not comply with current ADA clearances.

7. Fire Sprinkler System

a. The water pressure for the fire sprinkler system is provided by a county-owned central fire pump system, located in the B1 garage, that serves the Courthouse and the Hall of Records.

8. Dry Standpipe System

a. The building currently has a Class I Dry Standpipe system. The piping system serves hose gate valves from level B1 up to level 9. At the level 9, each of the DSP risers terminates with roof fire **department** inlet connection. The DSP risers are interconnected at bottom in level B1.

9. Wet Standpipe System

a. None

10. Fire Hose Cabinets

    a. There are fire hose cabinets located from level B2 level up to 9th floor. The fire hose cabinets have had their hoses removed and are used to store fire extinguishers. It is not known if the fire hose cabinets still have their original domestic water service or not.

11. High-Rise Life Safety

    a. There are no provisions that comply with current high-rise life safety code such as Combination Standpipe and hose gate valves on both sides of horizontal exits.

## Attachments

1. Seismic Analysis, Rutherford & Chekene
2. Hazardous Materials, Sensible Environmental Solutions, Inc.

## Attachment 1 to Appendix A - Seismic Analysis, Rutherford & Chekene

RUTHERFORD & CHEKENE

**Memorandum**

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**To:** Denny Jones - AOC

**From:** Afshar Jalalian

**Date:** September 15, 2009

**Project:** Fresno County Courthouse (10-A1) **Job #:** 20030408S1
Task #: 20.24

**Subject:** Seismic Strengthening Recommendations

Following is our proposed conceptual seismic strengthening recommendations for Fresno County Courthouse. The strengthening measures are intended to improve the seismic performance of the subject building to a Life Safety level (SRL – IV rating). Please refer to the attached conceptual strengthening drawings for the locations and extent of proposed retrofit work (the strengthening measures are indexed to the numbers below using symbol ⬡)

1- Add 10 inch concrete wall (shotcrete) to face of existing wall from foundation through 9th floor.

2- Add 10-inch concrete wall (shotcrete) to face of existing wall from foundation through 8th floor. Use 14-inch concrete wall between 5th and 6th floors to accommodate transition of existing wall thickness from 12-inch below 5th floor to 8-inch above 5th floor.

3- Add 4-inch thick wall (shotcrete) to face of existing concrete wall from 5th floor through 9th floor. The existing concrete wall south of the existing stair changes thickness from 12-inch below 5th floor to 8-inch above 5th floor. The new shotcrete wall will bring the face of existing wall above 5th floor aligned with wall face below 5th floor. This added wall is expected to have minor to no impact to the stair dimensions (this assumption should be verified).

4- Strengthen the existing wide flange steel column by welding steel plates between the flanges to create a box column. Strengthen columns between basement and 8th floor (3 columns per floor).

5- Strengthen connection between the steel beams and columns at 3rd floor through 8th floor (6 locations at each floor).

6- Add steel braced flame between 8th and 9th floors (one bay frame).

7- Add steel bracing (WT sections) to the 9th floor framing.

RUTHERFORD & CHEKENE

Denny Jones September 15, 2009
Office of Court Construction and Management Page 2

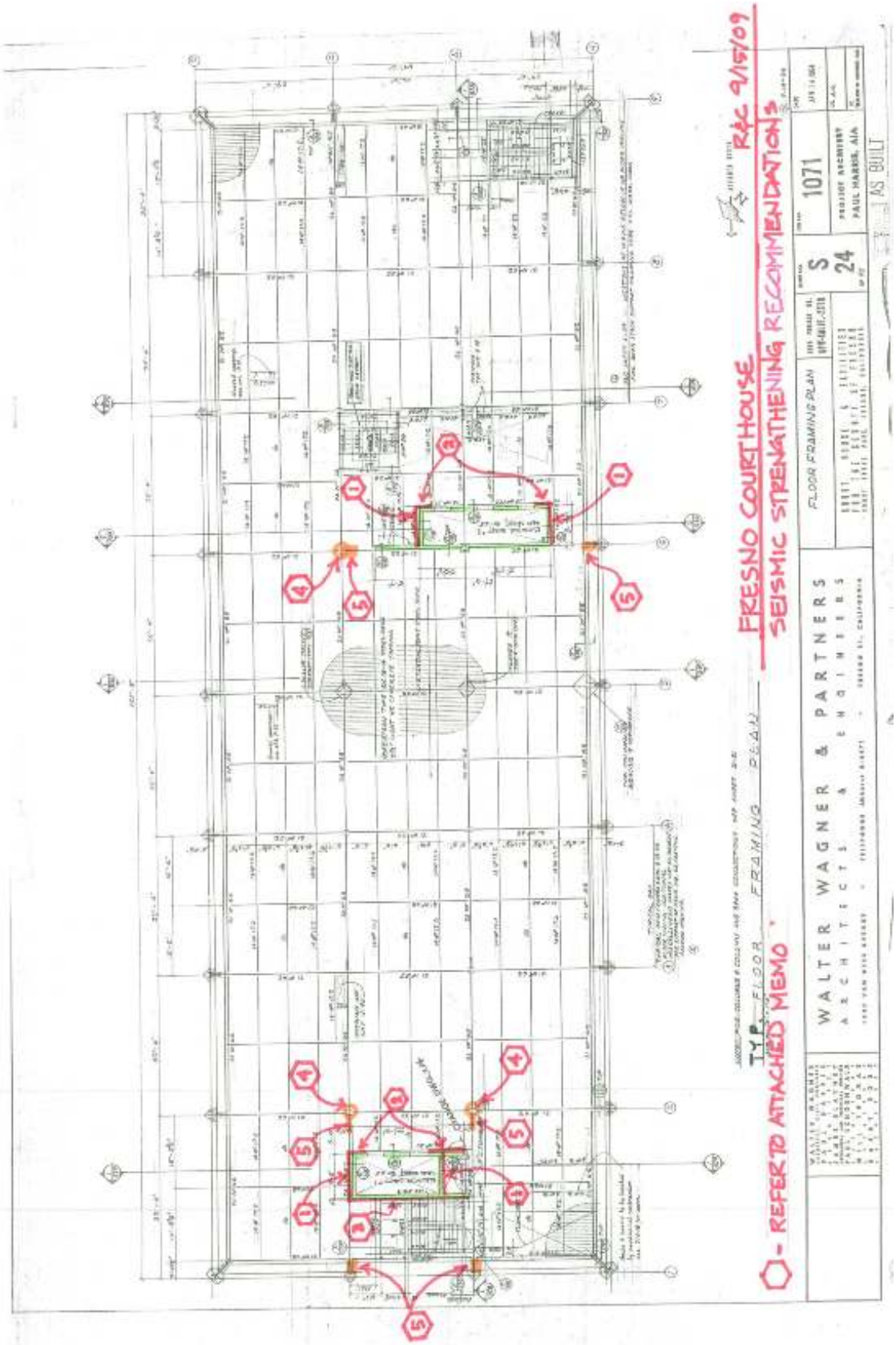
8- Strengthen connection between existing floor framing and concrete wall at 9th floor (8 locations).

9- Strengthen floor beam connections at 9th floor (22 locations).

The retrofit measures stated above is to mitigate seismic deficiencies identified by the evaluation of structure using linear dynamic procedures of ASCE-41. The scope of seismic strengthening may be reduced if more advanced analysis (such as non-linear analysis) is utilized which is not in the scope of this study.

This study excludes the evaluation of exterior façade. The evaluation of the exterior precast concrete façade will be included once the drawings are made available for our review.

Attachments Conceptual strengthening drawings (Typical floor plan)
Conceptual strengthening drawings (9th floor plan)


FRESNO COURTHOUSE
SEISMIC STRENGTHENING RECOMMENDATIONS
R&C 9/15/09
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ARCHITECTS & ENGINEERS
FLOOR FRAMING PLAN
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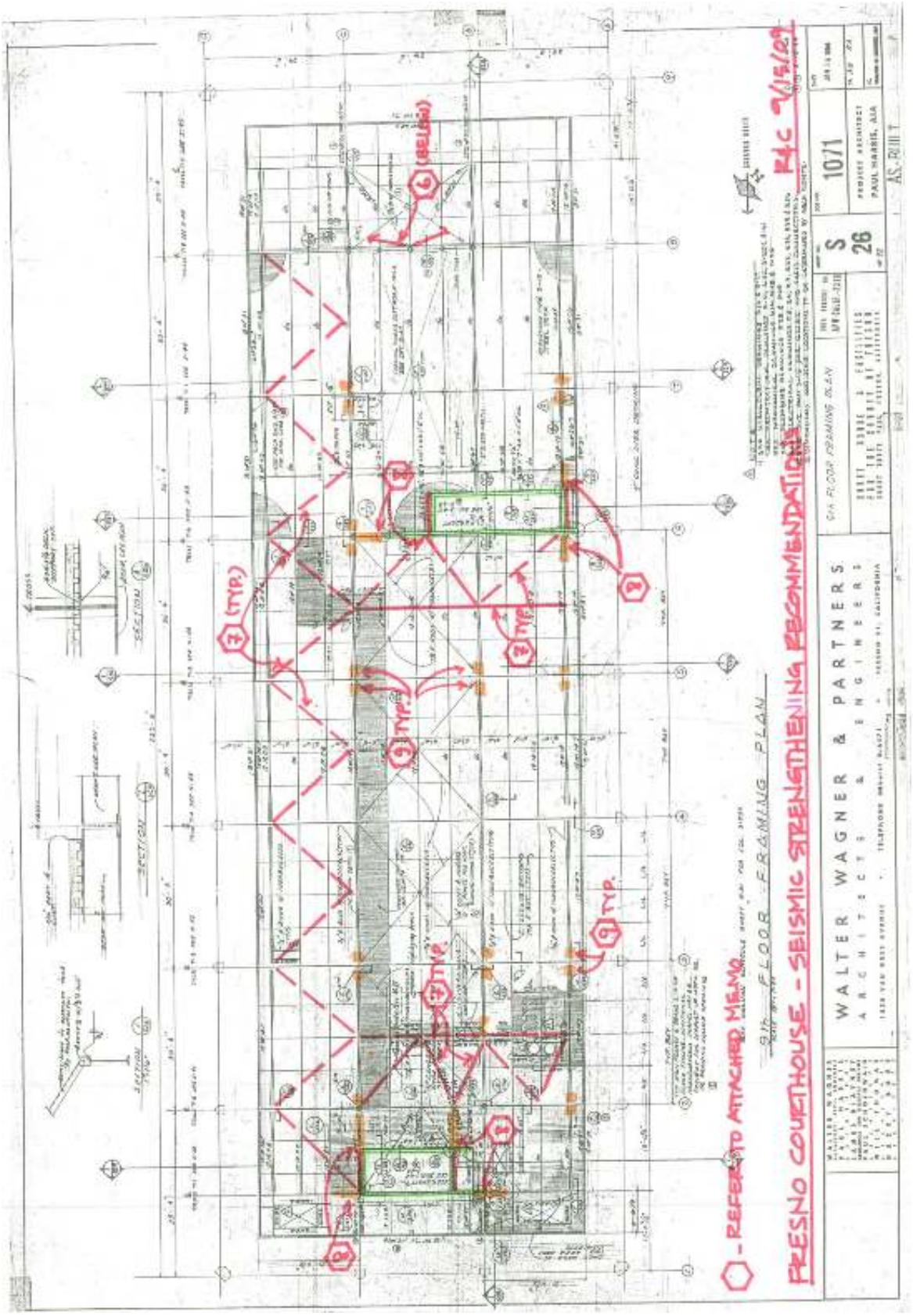
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PAUL HARRIS, AIA
AS-BUILT
(TYP.)
(BELOW)

RUTHERFORD & CHEKENE

**Memorandum**

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**To:** Denny Jones - AOC

**From:** Afshar Jalalian

**Date:** October 27, 2009

**Project:** Fresno County Courthouse (10-A1) **Job #:** 2003040S1
Task #: 20.24

**Subject:** Additional Seismic Strengthening Recommendations

On October 22, 2009, I visited the Fresno County Courthouse to make general observations of the existing structure and also to find information related to the existing exterior precast concrete façade (due to lack of available drawings related to precast panels). Following is our findings and additional conceptual seismic strengthening recommendations for the building.

1- During the site visit I was able to find critical information related to precast panel details (sheet A85) to perform a preliminary seismic evaluation of the precast building façade. Our evaluation indicates that in a major seismic event (Design Basis Earthquake), the building drift can impose stresses on the out-of-plane panel connections (as shown in detail 1-S58) that can result in precast connection failure. The panels are constrained by the columns, so they cannot fall away from the building; however they can fall in (toward the building). Therefore, we propose a plate to be provided at the top of each panel at each side (2 per panel- 528 total) as shown in the attached drawing to contain the panels from falling toward the building. The restraint plates are added on the interior face of the panels therefore not visible from outside. There is a gap between the precast panels and exterior envelope of the building that would allow access to the panels without the need to go through the exterior wall of the building. (Please see the attached interior photo of the exterior façade).

2- Additionally, we recommend allowance for additional bracing for the library mezzanine level above 6$^{th}$ floor be included in the cost estimate.

The retrofit measures stated above is to mitigate seismic deficiencies identified by the evaluation of structure using linear dynamic procedures of ASCE-41 to Life-Safety Performance Level. The above strengthening measures are in addition to those stated in our memo dated 09/15/09.

Attachments – Exterior Photo of the Building
Interior Photo of the Exterior Façade
Conceptual strengthening drawings for the exterior façade

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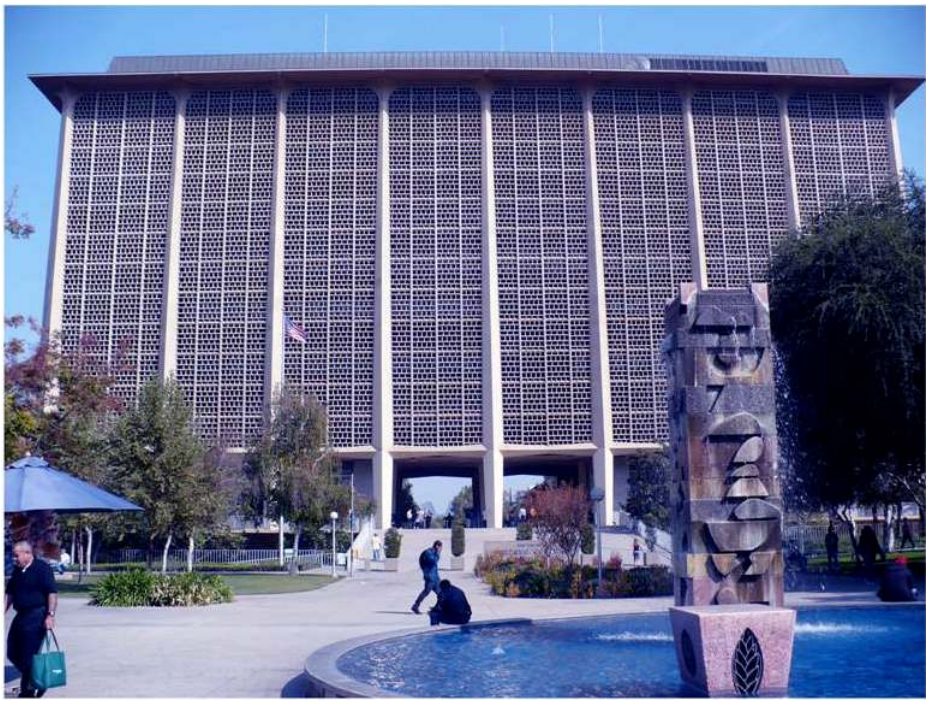

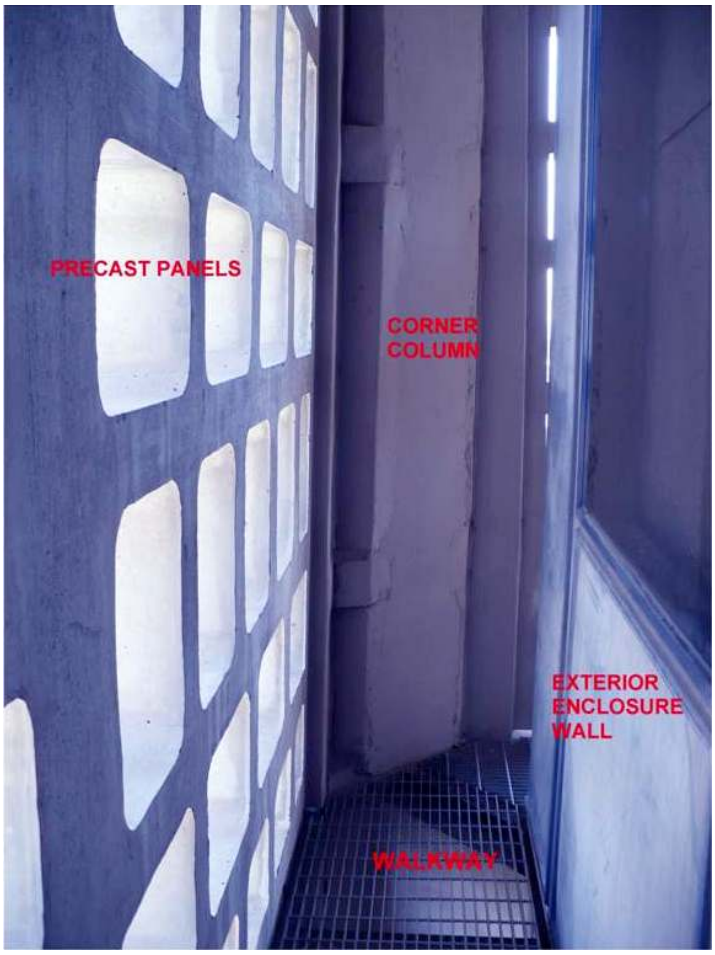
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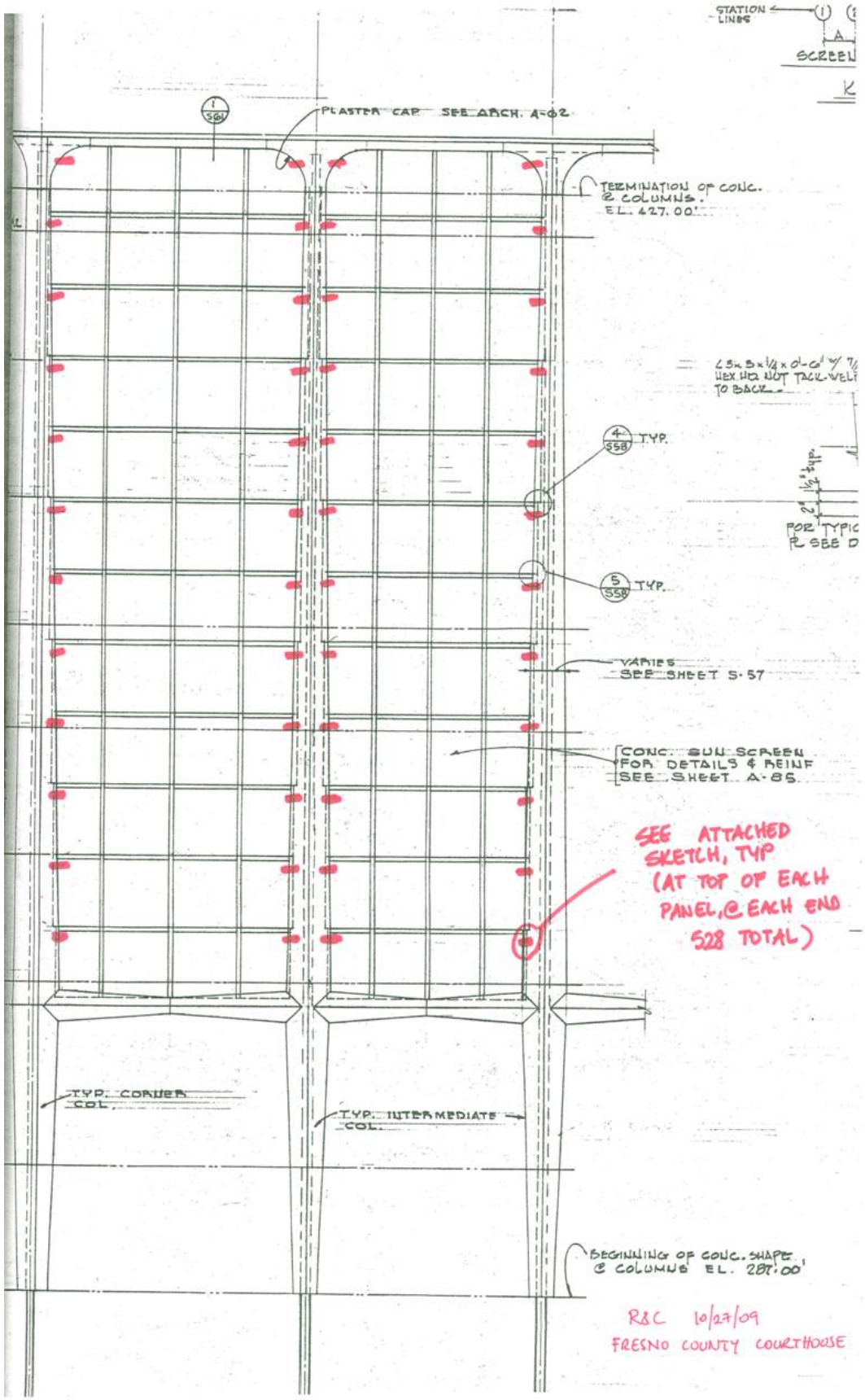
STATION LINES
SCREEN
PLASTER CAP SEE ARCH. A-62
TERMINATION OF CONC. @ COLUMNS. EL. 427.00'
TYP.
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VARIES SEE SHEET S-57
CONC. SUN SCREEN FOR DETAILS & REINF SEE SHEET A-85
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TYP. CORNER COL.
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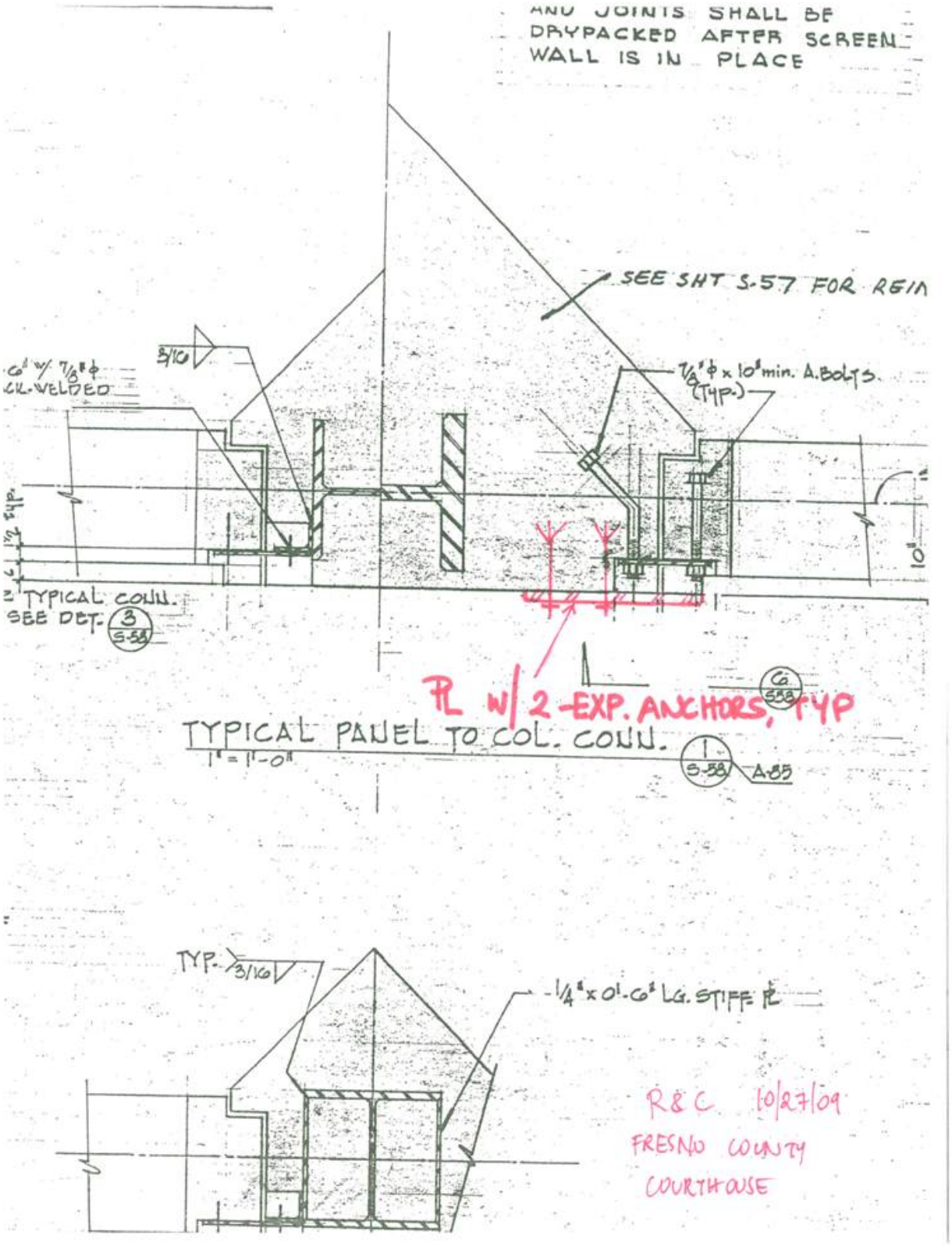
BEGINNING OF CONC. SHAPE @ COLUMNS EL. 287.00'
R&C 10/27/09
FRESNO COUNTY COURTHOUSE


AND JOINTS SHALL BE DRYPACKED AFTER SCREEN WALL IS IN PLACE
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3/16
6" w/ 7/8"ϕ CK-WELDED
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TYPICAL CONN. SEE DET. 3 S-58
PL w/ 2-EXP. ANCHORS, TYP
6 S-58
TYPICAL PANEL TO COL. CONN.
1" = 1'-0"
1 S-58
A-85
TYP. 3/16
-1/4" x 0'-6" LG. STIFF PL
R&C 10/27/09
FRESNO COUNTY COURTHOUSE

## Attachment 2 to Appendix A - Hazardous Materials, Sensible Environmental Solutions, Inc.

FRESNO SUPERIOR COURT-COUNTY COURTHOUSE– Hazardous Materials
October 15, 2009
***SENSIBLE ENVIRONMENTAL SOLUTIONS INC.***

**EXISTING HAZARDOUS MATERIALS CONDITIONS**
This section provides a list of known and assumed hazardous materials that may be impacted during Future Renovation Activities. The hazardous materials information has been provided through existing surveys and assumptions provided by the Administrative Office of the Courts.

1) Asbestos Hazards:

a. Asbestos has been identified or assumed to contain asbestos at concentrations greater than one percent (>1%) in the following materials:

1) All asbestos-containing (AC) spray applied fire proofing insulation at the ceiling deck and I-beams. The AC fire proofing is located at Levels B2, B1, 1, 1M, 2, 3, 4, 5, 6, 6M and 8.

2) All AC floor tiles and mastics. The AC floor tiles and mastics are located at Levels B2, B1, 1, 1M, 2, 3, 4, 5, 6, 6M and 8.

3) All AC acoustical ceiling plaster. The AC acoustical ceiling plaster is located at Levels B2, B1, 1, 1M, 2, 3, 4, 5, 6, 6M and 8.

4) All assumed AC smooth plaster at walls, columns, elevator shafts and ceilings. The assumed AC smooth plaster at walls, columns and elevator shafts is located throughout at Levels B2, B1, 1, 1M, 2, 3, 4, 5, 6, 6M and 8. The assumed AC ceiling plaster is assumed to be located at Toilets, Storage Closets and Janitor Closets.

5) All AC pipe insulation at pipe elbows, tees and hangers. The AC pipe insulation is located throughout at ceiling plenums and wall cavities at Levels B2, B1, 1, 1M, 2, 3, 4, 5, 6, 6M and 8.

2) Lead-based Paint / Lead Glazings:

a. Lead is assumed to be detected in glazings at ceramic wall and base tile at all Toilets and Janitor Closets at Levels B2, B1, 1, 1M, 2, 3, 4, 5, 6, 6M, 7 and 8 at concentrations greater than 5,000 parts per million (ppm) lead or 1.0 milligram of lead per square centimeter ($mg/cm_2$).

1) Universal Wastes (i.e. PCB Ballasts, Mercury Light Tubes, Switches, Thermostats):

a. This site is assumed to contain polychlorinated biphenyl (PCB)-containing fluorescent lighting ballasts. The assumed PCB containing ballasts are located at Levels B2, B1, 1, 1M, 2, 3, 4, 5, 6, 6M, 7, 8 and the Penthouse.

b. Metallic Mercury and mercury compounds are assumed to be present at this site in fluorescent lighting tubes, mercury switches and mercury thermostats. Mercury containing fluorescent lighting tubes, switches and thermostats are located at Levels B2, B1, 1, 1M, 2, 3, 4, 5, 6, 6M, 7, 8 and the Penthouse.

3) Areas and/or Spaces where asbestos abatement was assumed to be conducted include:

a. All AC floor tile and mastic and AC fire proofing were removed from Level 7.