This section compiles the evidence used to assign Modified Mercalli Intensities (MMI) at each site. Sites are provided in alphabetical order (which is the order they are given in the spreadsheet). The bracket at the end of each entry gives the assigned MMI and NEHRP Soil Class for each site. NIA stands for No Intensity Assigned.

Alameda

"At Alameda the chimneys were generally thrown down and a part of the front of the brick building was also thrown down. A few people there were afraid to go into their houses, and have camped out." (*Oakland Daily Transcript*, Oct. 22, 1868)

"Shock very severe. Scarcely a house escaped uninjured." (*Alta California*, Oct. 23, 1868; Lawson, 1908)

"The Insane Asylum building was badly damaged, and the contents of the stores were tumbled together, occasioning considerable loss." (Halley, 1876, p. 262)

[MMI 7-8, C, 1]

Alamo

"At Walnut Creek, Alamo, Danville and San Ramon the shock was particularly severe. The upper front and rear walls of the two story brick building at Alamo, owned by the Masonic Lodge, were thrown down and the building otherwise damaged." (*Contra Costa Gazette*, Oct. 24, 1868)

The Garcia-Jones adobe, located NE of the junction between Danville Boulevard and the Stone Valley Road "was razed because of injuries sustained in the earthquake of 1868." The Peralta-Garcia adobe, 0.6 mi east of Alamo, apparently survived both the 1868 and 1906 earthquakes, and was razed in 1936. (Hendry and Bowman, 1945, p. 527-529)

The small hilltop cemetery 1.3 mi south of Alamo shows moderate damage to both pre-1868 (65%) and 1868-1906 (44%) headstones and monuments. There is no apparent vandalism.

[MMI 7-8, C, 2]

Alcatraz Island

"A rumbling sound accompanied the shock, and the island vibrated with a jerking motion. (Dr. L. Hubbard, *San Francisco Times*, Oct. 22, 1868)

[MMI 6, C, 3]

<u>Alvarado (Union City)</u>

"At Alvarado, the brick house of A.J. Lattin was entirely destroyed, and the store of J.J. Sacks damaged, with great loss of goods. No lives lost at either place." (*San Francisco Morning Call*, Oct. 22, 1868)

"Nearly every one in this vicinity was more or less injured, but the person who suffered most was Mr. H.T. Lattin, a wheelwright in this place, who carried on business in the old brick warehouse built years ago by A.E. Crane, Esq. Mr. Lattin, fortunately was late that morning in going to work, as he usually gets to work at 8.30 a.m., but as it was if he had

been but five minutes later it would have caught him. He suffered, besides the total loss of his building, nearly all his carriage work, a considerable of which he had already completed. Mr. Stokes sustained a considerable loss, as the shelves on one side of his store fell to the middle of the store. T.F. Meyers' Hotel went off its foundation and was wrenched out of shape considerably. The plastering was more or less damaged in every house in town, excepting those of Eli Emley and Mr. James Gregg. Capt. E. Dyer, A. M. Church, Captain E. Farley, and others, lost their chimneys which broke off even with the roofs of their houses. The old bridge is now impassable, resembling the roof of a house, and a new one will have to be built. The Alameda Creek has become a great deal narrower, the road along the creek in Captain Farley's orchard having sunk several feet, and, as a consequence, left large apertures in the earth; it, also, is impassable. The old house built by Mr. Henry C. Smith and now owned by Mr. Webber, (the old orchard place) was almost wrecked." (*Letter from Alvarado*, *Alameda Democrat*, Oct. 28, 1868)

"Shocks in Alvarado were violent; the ground opened in several places and water issued ... Several buildings destroyed." (*Alta California*, Oct. 22, 1868)

"... the earthquake of 1868 ruined a large wagon and blacksmith shop, and the town for several years was quiet and despondent." (S.J. Clarke, <u>Past and Present of Alameda County, California</u>)

"In Union City the water tank belonging to the mill fell down and the mill was so damaged that it will cost a great deal to rebuild it; Captain Davis' warehouse was about ruined and the grain (for it was nearly full) is lying around and resembles somewhat Edmonson's warehouse in Haywards. Some of Captain Benson's warehouses were also more or less injured, as they went off their foundations. E.H. Dyer sustained but little loss; he estimates, I understand, possibly two or three hundred dollars." (*Letter From Alvarado*, *Alameda Democrat*, Oct. 28, 1868)

"John M. Horner erected the grist-mill [described above], that was, after being conducted for some time by C.J. Stevens, subsequently removed to Livermore, ..." (Wood, 1883) [MMI 8, B, 4]

Alviso

The Valencia adobe, located between the Guadalupe River and the Alviso-Milpitas Road, survived the 1868 earthquake, but was razed ~1900. One of two unnamed adobes located between the Guadalupe River and the Alviso-San Jose Road survived until 1917. (Hendry and Bowman, 1945, p. 865-866)

[NIA, 5]

<u>Antioch</u>

"Part of a chimney knocked down; milk spilled from half-filled pans. (*Daily Evening Bulletin*, Oct. 22, 1868)

"Severe shock from southwest to northeast for 30 seconds. Several fissures formed in the ground." (*Sacramento Daily Union*, Oct. 23, 1868)

"With the exception of Antioch, all portions of the county that we hear from experienced the full force of the shock; but at Antioch it must have been light, as no chimneys or walls were either cracked or thrown down." (*Contra Costa Gazette*, Oct. 24, 1868)

[MMI 6-7, C, 6]

<u>Auburn</u>

"Felt by some." (*Placer Herald*, Oct. 24, 1868) [MMI 3, C, 7]

Belmont

"No chimneys overthrown." (Holden, 1898) [MMI 6, C, 8]

Benicia

- "... A telegram from Benicia says that every brick building in that place was more or less damaged..." (*Solano Sentinel*, Oct. 22, 1868)
- "... yet all our [Vallejo] buildings, including one, -two, and three story bricks, are entirely unharmed; while in Suisun, Petaluma, Benicia, Martinez, and Pacheco, buildings were cracked from top to bottom; ..." (Solano Advertiser, Oct. 22, 1868)

The Tustin adobe, the first house built in Benicia, was still standing in the early 1880's, and Cooper's two-story adobe hotel survived into the mid-1900's. (Hendry and Bowman, 1945, p. 415-416)

"At the repairing works of the Pacific Mail Steamship Company, an iron shaft of one of the side-wheel steamers was lying on the ground in a north-south direction. The earth moved from under it 9 inches, lengthwise, but in what direction is not recorded." (George Davidson; Lawson, 1908)

"Heavy shaft moved one foot; flagpole broken off." (*Morning Chronicle*, Oct. 24, 1868) [MMI 6-7, B, 9]

Berkeley

"The State Institution for the Deaf, Dumb, and Blind lost 11 chimneys and 2 gables, and rear walls were cracked in several places." (*Oakland News*, Oct. 21, 1868)

"The new structure in course of construction for the use of the deaf and dumb, situated at the foot-hills near the Telegraph Road, four and a half miles from Oakland, was greatly damaged. About one-third of the front wall was shaken down, and also the greater portion of one of the side walls. The chimneys were all shaken down, and the building was badly strained. What remains of the two walls mention, with have to be taken down and rebuilt. The building was constructed of stone, and was claimed to be one of the strongest and best built houses in the State. It is estimated that it will cost fully \$20,000 to repair the damage." (*San Francisco Morning Call*, Oct. 22, 1868) [MMI 7-8, C, 10]

"A workman on the roof of the new school said the massive stone structure 'swayed back and forth not less than four feet...it seemed to be tossing like a ship on a wild sea.' The quake dumped cargoes on Jacobs's wharf into the bay [MMI 7, C, 11] and damaged Jose Domingo Peralta's original adobe. But overall damage in Berkeley was light, in part because there was so little to be damaged. (C. Wollenberg, <u>A City in History</u>)

"The [Peralta] adobe was cracked by the earthquake of 1856 and was so badly injured by that of 1868 that it was razed soon thereafter." (Peter Murillo; Bowman, 1951) [MMI 7, C, 12]

Victor Castro's two-story adobe in El Cerrito was not reported to be damaged, nor were any of the nearby adobe and wood-frame buildings.

Bolinas

"Stoves overturned; nearly all the chimneys thrown down or cracked; persons clung to fences for support." (*Stockton Daily Gazette*, Oct. 28, 1868)

[MMI 7-8, C, 13]

Briones Valley

The Felipe Briones adobe, 1 mi east of the Briones Valley School, was razed in 1878 (Hendry and Bowman, 1945, p. 460), suggesting that it was damaged by the 1868 earth-quake. The valley was inundated by the Briones Dam in 1964.

[NIA, C, 14]

Brooklyn (southeast Oakland)

"The ground was opened in places for a distance of fifty yards, and a part of Schimmelphenig's new two-story brick was thrown to the ground. The fire-wall of the Oakland Cotton Mill was thrown down, and the large chimney broken and moved three inches from its proper place. The storeroom of the Clinton Flour Mills was thrown down and the contents scattered on the ground: Remilard's brick kilns were partially destroyed. The damage done to private dwellings is immense, nearly all the walls of the brick houses in town are badly broken, most of the chimneys were twisted off the frame buildings, and the crockery and furniture inside was destroyed." (*Oakland Daily Transcript*, Oct. 22, 1868)

[MMI 7-8, B, 15]

Calaveras Valley

"Only one or two chimneys were dislocated." (J. Patton; Lawson, 1908) [MMI 6-7, CD, 16]

Carson City/Gold Hill

"At Gold Hill and Carson, shock perceptible to people awake, and a few people awakened." (*Territorial Enterprise*, Oct. 22, 1868) [MMI 2, C, 17]

"In Virginia and Gold Hill the tremblings were felt and great anxiety experienced." (Halley, 1876, p. 258) [MMI 3, C, 18]

Castro Valley

On the Atherton tract (now rented by Jos. Troman) there were many places where the earth cracked open three or four feet. ... The horses and cattle in the hills were equally as badly frightened as the people, and the stock that had not been known to come near the house for two or three years came rushing pell mell towards home. One horse of Dan Proctor's rushed blindly towards the fence and split open his head. Jos. Tromans that morning was taking his mother over to her home in San Joaquin County, and the shock struck them just as they were passing through Castro Valley. Looking ahead, the earth appeared to be rolling like the waves of the ocean, and the horses were unable to move and he was forced to turn back. (*Hayward Journal*, March 12, 1887)

[NIA, CD, 19]

Centerville (Fremont)

"The store of C.J. Stones was utterly destroyed to-day, and goods badly damaged. Store of J. Salez badly shaken and goods damaged very much. Dr. Selfridge's house partly destroyed and child injured. Banker's [Bambers?] Hotel settled about two feet and badly damaged." (*San Francisco Morning Call*, Oct. 22, 1868)

"A store entirely destroyed; other buildings partly destroyed... A dwelling-house was partly destroyed and 2 stores were wrecked. Hotel settled 2 feet." (*Alta California*, Oct. 22 1868)

"At Centreville, Alameda county, several stores were badly shaken, the hotel settled about two feet and is badly damaged, the church and many buildings at the Mission San Jose are in ruins." (*Sonoma Democrat*, Oct. 24, 1868)

"On October 21, 1868, the great earthquake so injured the brick walls of the Centreville church that it was closed for a year, and the congregation soon shipped in the Methodist church. In the fall of 1869 the brick walls were removed, and wood substituted." (Wood, 1883).

The Centerville Pioneer Cemetery has a large number of pre-1868 graves. Many of these headstones and monuments appear to have suffered significant damage (86%), but the 1868-1906 markers also show significant damage (61%). The cemetery is relatively accessible and may have been vandalized (see "Inferring Shaking Intensities at Cemeteries that have Suffered Multiple Earthquakes").

[MMI 8-9, C, 20]

Chico

"A perceptible moving of the earth. Lamps and dishes rattled." (*Chico Courant*, Oct. 23, 1868)

[MMI 3-4, C, 21]

Clayton/Somersville/Nortonville

"At Somersville [MMI 6-7, C, 22], Nortonville [MMI 6-7, C, 23], and Clayton [MMI 7, C, 24], the chimneys were thrown, and household goods much damaged." (*Contra Costa Gazette*, Oct. 24, 1868)

Colma

"I was then 16 years of age and lived in San Mateo County, a mile or so south of the present town of Colma. With my father I was digging and sacking potatoes in a field. I was sewing up a sack, when my father said: 'Look at that mountain. What is the matter with it?' We felt no earthquake, but the mountain seemed to be bobbing up and down. A freight train was going north along the S.P. track. Shortly after we had observed the mountain apparently moving, the earthquake reached the railroad track and the freight train appeared to gyrate like a snake. The next instant we felt it. The shock was very severe, throwing us to the ground and knocking over sacks of potatoes. A band of loose horses, including a lot of young stock, in an adjoining field, ran around the field at great speed, utterly panic-stricken. The house we lived in was in a flat some 0.5 mile from where we were at work. When we reached it, we found that milk pans in the pantry had been entirely emptied of their contents. Some panes of glass were broken and some crockery and glassware were thrown down and destroyed; but the house, a light frame building, was not injured. There were 48 shocks between the first one and midnight that night. I do not now recall any serious damage done in San Mateo County. There were some landslides occasioned along precipitous hills and creek banks, but the buildings in that section were all frame, and none of them were destroyed to my knowledge." (J.A. Graves; Lawson, 1908)

[MMI 6-7, C, 25]

Colusa

"Slight shock. Not over a dozen people noticed it." (Weekly Colusa Sun, Oct. 24 1868) [MMI 2-3, C, 26]

Danville

"At Walnut Creek, Alamo, Danville and San Ramon the shock was particularly severe ... The one-story brick store belonging to Mr. Peel, at Danville also lost a part of its front wall." (*Contra Costa Gazette*, Oct. 24, 1868)

[MMI 7, C, 27]

[from Woodside Farm in Sycamore Valley] "Mother said the branches of the old oak swept the earth with its force; the stone milk-house was wrecked; plastering ripped from the wall and ceiling of the residence; chimneys turned half way around. The quake came evidently from east to west, skimming the milk in the milk-house which housed the milk of the then large dairy. (Wood, 1951)

[MMI 7, C, 28]

Decoto (Union City)

"Opposite Decoto a crack appeared about one-third of the way up the slope. It opened 10 or 12 inches at the surface and faulted about as much on the plains side. The level lands waved like the ocean, and the waves seemed to approach from the south." (Mr. Decoto; Lawson, 1908)

[NIA, 29]

Dixon Landing

"The warehouse and wharf on the slough fell, also Dixon's house. Cracks in the vicinity of Milpitas flowed artesian for 48 hours after the shock." (Mr. Durkee; Lawson, 1908)

"M.W. Dixon built Dixon's Landing to the south near the county line. The earthquake of 1868 destroyed one of the warehouses and 5,000 sacks of grain sank into the slough." (*Argus*, Oct. 25, 1868)

[MMI 7-8, C, 30]

Downieville

"A slight earthquake was felt." (*Mountain Messenger*, Oct. 24, 1868) [MMI 2-3, C, 31]

Dublin

"A team of mules descending a hill 9 miles east of Haywards [2 miles west of Dublin], were thrown to their knees." (Various old residents of San Leandro; Lawson, 1908) [MMI 7-8, C, 32]

"He (Jose Maria Amador) was traveling in the valley that bears his name during the occurrence of the memorable earthquake of 1868. It was his last time to visit his old Alameda Home [in Dublin]. The center of the terrible shaking of that year, which was this county. The trees seemed to bend to the ground and he saved himself from falling by clinging to a tree." (*Oakland Daily Evening Tribune*, June 10, 1875)

Jose Maria Amador's 2-story adobe was damaged and partially collapsed by the 1861? earthquake and presumably razed. Hendry and Bowman (1945, p. 613) do not mention damage from the 1868 earthquake and give no date for when the building was razed.

[MMI 7-8, C, 33]

Eagle Glen (northwest of Boulder Creek)

"At Eagle Glen a slide 50 feet wide carried rocks and trees 1,000 feet." (T.G. Phelps; Holden, 1898; Lawson, 1908)

[NIA, C, 34]

Fitchburg (Melrose)

"The chimneys of all the houses between Brooklyn and San Leandro were thrown down. The octagon house, on an eminence to the left of the road, was partially destroyed. People passing along the road could see through it, and the furniture had been moved outside of it." (*Oakland Daily Transcript*, Oct. 22, 1868)

"On the San Leandro Road the concrete dwelling house of Mr. Creighton was damaged, one of the walls being demolished." (Halley, 1876, p. 262)

Octagonal houses were an architectural fad of the mid-century. They were usually made of cement. The <u>Cavagnaro House</u> in San Francisco was similarly damaged by the 1906 earthquake. Two photographs at the California Historical Society locate the house on High Street east of East 14th Street.

[MMI 7-8, C, 35]

Folsom

"A slight shock. Clocks stopt; some ran from a tunnel." (*Folsom Telegraph*, Oct. 24, 1868)

[MMI 4, C, 36]

Frenchtown

"The shock was apparently not felt in ... Yuba County, ..." (Lawson, 1908)

We located this intensity in Frenchtown because it conflicts with the "very slight" felt report from Marysville, the County seat.

[MMI 1, C, 37]

Gilroy

"A severe shock of earthquake occurred here at 7:45 A.M., tumbling chimneys and sending everybody into the streets. No material damage done." (*San Francisco Morning Call*, Oct. 22, 1868)

"The building shook and rocked till the occupants became seasick. The oscillation seemed to be southwest and northeast, and lasted about 30 seconds. No damage was done beyond some broken bottles in the drug store." (*Gilroy Advocate*, Oct. 24, 1868)

"Rumble preceding the shock came from the north. Chimneys fell north and south. It was fully as heavy as the shock of 1906, but not so long. The old adobe buildings were much damaged." (W.D. Dexter; Lawson, 1908)

"The shock was not so severe as in 1906." (Messrs. Rice, C. Wantz, Bryant, Gilman; Lawson, 1908)

[MMI 6-7, B, 38]

Grass Valley

"Quite a severe shock of earthquake was felt here this morning about eight o'clock, causing lamps to vibrate and occupants of second stories to vacate briskly. About five minutes later, there was another very slight shock." (*San Francisco Morning Call*, Oct. 22, 1868)

[MMI 4, C, 39]

Guerneville

"The earthquake was of great severity. It frightened my horse and he started to run away; but a large tree which had been cut nearly thru by choppers, and which they felled a few moments after the shock, was not overthrown by the shock." (I.E. Thayer; Lawson, 1908) [MMI 5-6, C, 40]

Hayward

The first shock came along between seven and eight in the morning, followed by a low, rumbling noise, just like a team passing over a bridge, and immediately afterwards the earth twisted first one way and then another, this double-jointed action was enough to wreck the strongest built house. From Wm. Pearce, who kept a diary of passing events, we learn that about the 8th of October heavy fogs settled over the valley, followed by hot sultry weather, which continued (sic) up to the 21st of that month, when about eight o'clock in the morning the first shock was felt. Shocks continued daily (sometimes three or four times a day) until the 25th inst. The direction of the earthquake was in a line from the New Almaden mines and from Haywards it turned towards the north, but touching San Leandro, ... back of Brown's old store the mud and hot water was forced to the surface and the earth cracked open, the crack extending along the foothills to Niles. Col. Hayward's board fence, passing across his lot, towards his hotel, near Pierce street, was an object of curiosity. Some unknown agency had forced the top rail into a curve, and it looked as though the posts had been forced together. Shocks followed one another – shocks that made the earth tremble, and the panic-stricken people deserted their homes and slept in tents. The experience of that time is still fresh in our mind. When you feel mother earth rolling around as though she had the stomach ache, and boiling underneath, you being to feel that you are soon to be swallowed up and dropped down into that place where the Devil is chief magistrate. Anderson's Hotel, then conducted by Tony Oakes, who "could not read his own sign," was knocked off its underpinning and seated fairly on the ground. It was a fall of about four feet, and the shock made a general wreck of everything in the house. Tony went down with the crash, and when the excitement was over for the time being, he was found still alive, but as mad as a March hare. The rest of the family and the boarders had skipped at the first alarm, and many narrow escapes occurred in dodging falling bricks from chimneys. The old adobe house, occupied by C. J. Ward, fell an easy victim, and was soon a mass of rubbish, though the thick walls stood the strain, the family having a narrow escape with their lives. The creeks about this time were unusually dry, but inside of half an hour, they were filled with a rushing torrent of muddy water. The fright of the animals was one of the strange sights. The horses refused to move and trembled like a leaf. They were as badly scared as mankind, and it was a long time before they recovered from the shock. The house of Wm. Pearce was another wreck and was then owned by H. Lockwood. One corner dropped into the cellar and Lockwood's wife lost her reason from the scare. Another building that suffered from the shock was what is now Oakes' Hotel. Lee & Ryland then towned it, and the workmen were nearly through enlarging the house, making it two stories, when it slid off its underpinning and dropped to the ground, a distance of four feet. The hard [fall] naturally wrecked everything of a breakable nature in the hotel, and very little plaster was left on the walls. The accident to the late Mrs. Geo. Brown in the steps leading to the second story giving way, produced a very long and painful illness that she never recovered from.

Very few chimneys were left standing, and all the houses were badly damaged inside, in the shaking down of plaster, breaking of furniture, etc. While the male tribe were not as hysterical as the women, they were badly scared as a rule, and gladly seconded Rev. Mr. Seymour's proposition to hold services in Dr. Kimball's grove. Old sinners who had not been inside of a church for years, poker sharps, etc., in fact, everybody went to the grove to hear Mr. Seymour preach, for it really looked as though this section would disappear, and the bay rush in and drown us all. Consequently everyone wanted to get as much religious information as possible, so as to be able to answer a few questions when interviewed on landing "on the other side of the river." Mr. Seymour never preached a better sermon, and was never more intensely listened to. There are a great many here today who will remember those "revival" meetings for years to come. (*Hayward Journal*, March 12, 1887)

"The crack past diagonally up the Haywards Hill and crost 3 feet from the south corner of the old hotel; past just east of the Odd Fellows' Building, through the Castro lot, tearing off a corner of [Guillermo Castro's] adobe house which stood where the jail now is, on through Walpert's Hill toward Decoto. By the hotel the crack first opened 18 to 20 inches, but soon closed to 5 or 6. It was of unknown depth; several balls of twine, tied together, with an iron sinker, failed to find bottom. There was no water in the fissure, for the iron came up dry. From the corner of B and First Streets another crack past nearly eastward toward the hills, and faded out by the sulfur spring about 1.5 miles distant." (Mrs. Wm. Hayward; Lawson, 1908)

"In a general way, the crack from Haywards to beyond Decoto past from 100 to 300 feet above the base of the hills. Practically not a house was left on its foundations in Haywards. At one place south of town the fault showed a throw of some 3 feet." (W.H. Weilbye; Lawson, 1908)

"Since October 5, 1862, I have lived in Haywards, Alameda County, and I well remember the earthquake of October, 1868. Being lame and having used a cane from childhood, I had never walked without it until that morning. I was working in my shop at the time. On feeling the terrible shock, and on the impulse of the moment, I managed to get out of the building and into the street, some 18 feet distant, but on recovering from my fright I found I had left my cane in the shop. I managed to get back into the building, got my cane, and started for my house only a few yards away. The house had been thrown from its foundations, the chimney had been torn from the roof, and the porch had been wrencht away. Dishes were broken and everything was in confusion. I discovered that most of the houses were in the same condition as my own—thrown from their foundations, with chimneys down, porches knocked sideways, etc. All the while the ground was shaking and continued to shake for days and even weeks; but each shock was lighter than the last. On a certain piece of ground near the Haywards Hotel there was a common board fence, the boards abutting on the post. After the quake the boards lapt one over the other about 5 inches, the ground seeming to have been prest together that much. On going down the county road toward Oakland, we came to Mr. A. L. Rockwood's house, which had been thrown from its foundation and one end thrown into the cellar. The house was badly wrecked. In the south part of the town there was a flour mill on a foundation about 4 feet high. This building was thrown to the ground and wrecked. On the ground which is now the plaza stood a new brick warehouse filled with grain from the season's crop. The building was completely torn to pieces; grain was spilt from the sacks, and everything was in a mess. The building was 300 feet long by about 60 feet wide. A wooden

warehouse about the same size shared the same fate as the brick. On B Street the ground opened about 2 inches, and water and sand were forced from the opening. Some springs were closed, while others were opened or made to flow more freely. Many wells were affected in the same manner. Mr. Charles Herman, who was in the baking business, was driving back to Haywards after delivering bread. Looking up the road, he saw the ground coming toward him in waves, and when the motion struck his horse, she went down on her knees. Mr. Herman thought the world had come to an end. As he neared the San Lorenzo Creek, he noticed that the water had been thrown out of the bed of the creek on to the road...The earthquake was the direct cause of the death of 2 persons in Haywards." (George A. Goodell; Lawson, 1908)

[MMI 9, B, 41]

"The crack past thru a gravel quarry practically on the summit of the first range of hills." (O. Hill; Lawson, 1908)

"The crack below Haywards Hotel was 12 inches wide. It ejected water and white sand. A fence which traversed a hill from north to south was crost by the crack, and had the ends of the boards loosened from the posts. Gradually these boards lapt over one another, until within a couple of weeks they overlapt several inches, the progress of the overlapping being noted from time to time by a pencil mark. The "cap" board of the fence was also archt up in consequence of this movement. Large waves were set up in the soil. The house was moved southward, while a neighbor's was tipt northward." (D.S. Malley; Lawson, 1908)

"The rumbling preceding the shock came very distinctly from the bay, and the plain in that direction rolled like huge waves of the sea coming toward Haywards." (F. Allen; Lawson, 1908)

"The crack opened parallel to Castro Street, 35 to 50 feet below Haywards Hotel. The fence passing diagonally up the hill was shortened 6 inches." (P. McKeever; Lawson, 1908)

"A stove in the house was thrown north." (J. Wolput; Lawson, 1908)

"A crack 3 to 4 inches wide started from the Powell place and struck across toward the county bridge next to Nettleton's, passing west of it; crost the creek, demolisht a fence completely, and past on toward the Strowbridge residence, where the house was badly shattered." (Mrs. Hamer; Lawson, 1908)

"The shock was from southwest to northeast. The ground opened from 6 inches to 2 feet, and water with sand was ejected to a height of from 1 to 3 feet. North of the village a ridge of ground 3 feet wide was raised 2 feet. By the time the shock was over, nearly the whole place was in ruins. Near Hayward's Hotel the hill shifted a good deal, and a crack opened for several hundred feet. On the hills there were several new springs. In the first 12 hours after the main shock there were 36 after-shocks. Between Haywards and Mission San Jose there were numerous cracks, so that it was difficult to drive a stage between the two towns." (*Alta California*, Oct. 22-25, 1868)

The Castro adobe barn, SE of the Castro adobe house, was badly damaged in the 1868 earthquake. The Soto adobe, was located on the Hayward-Niles Road, 0.35 mi south of the junction with the Hayward-Mount Eden Road. It was shown in the surveys of 1858 and 1863, but it was empty or in ruins by 1874. (Hendry and Bowman, 1945, p. 507)

"In the 1869 earthquake, then called "The Great One," a fissure opened in the land and salt water flowed into Coyote Creek. This poisoned many of the area's wells. The earthquake also leveled many of the buildings in what was then called 'Haywards.'" (My Castro Valley History)

"Some buildings thrown down." (Alta California, Oct. 23, 1868)

"On the hills there are several new springs, in places where water never flowed before." (*Oakland Daily Transcript*, Oct. 24, 1868)

[Hills Back of Mount Eden and Hayward] "Trees thrown down; some farm houses destroyed." (*Alta California*, Oct. 22, 1868)

[MMI 8-9, B, 42]

Healdsburg

"A good shaking. Heaviest shock ever felt." (Democratic Standard, Oct. 24, 1868)

"Lasted about 10 seconds. Vibrations north and south. Clocks stopt." (*Alta California*, Oct. 22, 1868)

"One of the severest shocks of earthquake ever felt in this place occurred here this morning at about eight o'clock, lasting about ten seconds, the vibrations appearing to run from north to south, stopping clocks and shaking things up lively. No damage done of any note." (Sacramento Daily Union, Oct. 22, 1868)

"People ran into the streets." (*Democratic Standard*, Oct. 24, 1868)

[MMI 5, C, 43]

Hollister

"At Gilroy, Hollister, and San Juan, according to reports, the intensity was sufficient to throw down a few chimneys and to crack some brick and adobe buildings." (Lawson, 1908)

[MMI 6, C, 44]

<u>Irvington (Fremont)</u>

"Thru the north side of town a crack split the hillside, opening 7 or 8 inches and showing a fault of 8 or 10 inches. It crost the country road 500 feet north of the Southern Pacific Railway depot. Its trend was N.45 degrees to W. 50 degrees. From these low hills the crack seemed to pass over into the tule ponds of town. The Tyson Lagoon dried up after the quake. The rumbling preceding the shock came from the north." (R.B. Crowell; Lawson, 1908)

"The railroad tracks north of the station were badly twisted for several hundred yards." (M.Torry; Lawson, 1908)

"In one place the crack on the hillside divided, and formed a narrow island, 8 or 10 feet across, which dropt below the general level of the sod 8 or 10 inches. Springs were opened up on Mission Peak." (H. Crowell; Lawson, 1908)

"The crack which past thru the town continued southward down the hillside about 0.5 mile northeast of the railway track. It opened 5 to 8 inches, not faulting." (J. McD. Preston; Lawson, 1908)

"I was then about 15 years of age. My home was near Irvington. When the shock came, I was alone in the house with my baby brother. My mother was in the milk house, about 10 steps from the kitchen door. She called to me to get the baby. Tho I was thrown the length of the dining-room, I managed to get the child over my arm, face down, and a pillow on top. Then, falling and crawling, I worked my way back to the open kitchen door. My mother was on the ground. Every time she tried to get up, she was thrown again, and the milk in the buckets was spilt over her. My two brothers, my step-father, and the hired man were also down and were trying to get to the house by crawling and falling. As I sat there, I could see the ground in waves like the ocean. After the main shock, I think we had 100 shocks during the first 24 hours. The ground opened; we traced a crack thru town, and the ground settled several inches in one place. Not a house was left with a chimney on it. Our safe broke thru the floor, and the piano was out in the room nearly to the opposite side." (J. McD. Preston; Lawson, 1908)

[MMI 8, B, 45]

Jacinto

"Not felt." (*The Daily Bee*, Oct. 22, 1868) [MMI 1, C, 46]

Jackson

"Earthquake perceptible to a number of people." (*Amador Dispatch*, Oct. 24, 1868) [MMI 3-4, C, 47]

Jarvis Landing (west of Newark)

The Agustin Alviso adobe, 2 mi NE of Jarvis Landing, was probably "wrecked by the 1868 earthquake." The nearby Tomas Pacheco adobe is "shown on the 1860 Survey, but not on the 1874 Allard Map," suggesting that it was damaged by the 1868 earthquake and razed. (Hendry and Bowman, 1945, p. 641-642)

[MMI 8, C, 48]

Knights Landing

"...While the shock was not unusually severe, it did some damage. The gable end of the mill warehouse was thrown down, not by the vibration of the quake, but by a pile of wheat being thrown down against it and forcing the end of the building out. I was out in a pasture at the time, pumping water for stock, and noting the water sloshing from one end of the trough to the other, I wondered as to the cause, as I had not felt the shock on account of the motion of my body in working the pump. On looking up I noticed the trees swaying back and forth, with no wind, and I knew it must be an earthquake. There was some little loss in the town in the way of broken crockery, chimneys, etc. The heaviest shock was along the edge of the valley near the Coast Ranges." (E.H. Eastham; Lawson, 1908)

Laddsville/Livermore

"The shock in Amadore and Livermore Valleys was not so severe." (*Alta California*, Oct. 24, 1868)

Laddsville was first settled in 1864, seven years before W. Mendenhall founded Livermore. It was located at the intersection of the Dublin Road and the Stockton Road. Alphonse Ladd, the founder, died of natural causes a week after the 1868 earthquake. There was no report of damage from the 1868 earthquake. (<u>Livermore History</u>)

Robert Livermore died in 1858, but his widow continued to live in their house, a wooden "round the horn" structure. Livermore's original house, a 1-story abode structure, was torn down in 1875. (<u>Livermore Heritage Guild</u>)

"About 1875, when the original drawing was made, the main (adobe) building was in fair condition and in use with a rock fireplace in the south end, but part of the kitchen had fallen." (Hendry and Bowman, 1945, p. 620)

These somewhat discrepant reports both suggest that Livermore's original adobe house was damaged by the 1868 earthquake. In contrast, the adobe house of his son, Robert Livermore, is cited as standing intact in 1886. (Hendry and Bowman, 1945, p. 621) [MMI 7, C, 50]

Lafayette

"The Widow Bernal's adobe, a one and a half story structure measuring 50 x 18 feet, was located half a mile up Happy Valley Road. Surrounded by a porch on all sides, the building stood until 1906 when it was razed after being severely damaged in the San Francisco earthquake." (Lafayette: A Pictorial History)

"After Juan Bernal's widow and her family moved out ..., the deteriorating structure was used as a stable." (Kimball, 1987, p. 156)

The Encarnation Bernal adobe was probably cracked and weakened by the 1868 earth-quake (which may have caused it to appear "deteriorating"): the shaking in Lafayette in 1906 appears to have slightly exceeded the shaking in 1868.

The small hilltop cemetery 1.1 mi east of Lafayette center shows moderate damage to both pre-1868 (60%) and 1868-1906 (43%) headstones and monuments. There is no apparent vandalism (see "Inferring Shaking Intensities at Cemeteries that have Suffered Multiple Earthquakes").

[MMI 7-8, C, 51]

Lakeport

"Felt." (*Clear Lake Courier*, Oct. 24, 1868) [MMI 2-3, C, 52]

Latrobe

"Not felt." (*The Daily Bee*, Oct. 22, 1868) [MMI 1, C, 53]

Lincoln

"...the crockery and hardware danced considerably in the stores, hotels, etc." (*Placer Herald*, Oct. 24, 1868)

[MMI 4, C, 54]

Linden

"...the men at work in the flour mills found their way into the open air very speedily..." (*Stockton Daily Independent*, Oct. 22, 1868)

[MMI 4-5, C, 55]

Livermore Valley

"Wednesday morning, October 21, 1868, at 8 o'clock, occurred the heaviest earthquake I ever experienced, with the exception of the one of April 18, 1906. I was out in the back yard, where the watering trough, filled with water, rocked from side to side like a cradle." (Smith, 1995)

[MMI 6, C, 56]

Lower Lake

"Felt." (*Clear Lake Courier*, Oct. 24, 1868) [MMI 2-3, C, 57]

Mariposa

"Rattled crockery." (*Mariposa Weekly Gazette*, Oct. 30, 1868) [MMI 4, C, 58]

Markleeville

"The shock was apparently not felt in ... Alpine County, ..." (Lawson, 1908) [MMI 1, C, 59]

Marsh House

"The heavy tower of the Marsh stone house was partly destroyed, breaking down the portico in its fall; and all the chimneys were also thrown down, doing more or less damage in falling." (*The Contra Costa Gazette*, Oct. 24, 1868)

"The most Eastern point from which we have any report of severe effect of the convulsion, is the Marsh Ranch, where the tower of the well constructed stone mansion was

thrown down, and one of the top stones, weighting nearly 200 lbs, struct the ground 40 measured feet from the base of the tower." (*The Contra Costa Gazette*, Oct. 31, 1868)

An 1861 adobe house at the Upper Vasco Ranch, 3 mi south of the Marsh house, was still occupied in 1889 and probably not damaged by the 1868 earthquake. (Hendry and Bowman, 1945, p. 541)

[MMI 7, C, 60]

Martinez

"The noted earthquake shock, of Wednesday morning last, was here, as elsewhere, decidedly heavy and moveable. The East end of the Court House, at the roof, fell out to a slight extent, a low brick dwelling house of Mr. Fish, was badly smashed by the falling of the walls, and the new and handsome sandstone building, nearly completed for Mr. Sturgis, of the Alhambra Hotel, was greatly damaged, by the falling of the stone in front and rear. Other and minor damages occurred, of course, such as cracking walls, breaking crockery, etc."

"Our neighboring town of Pacheco was roughly handled, as well as Martinez, and concrete buildings and brick structures were largely affected. The waters in front of our town, were set to dancing to new tunes and measures, and W. Clark, of the ferry boat, informs us he noticed immense numbers of fish close up to the surface, as though scared or demented." (*California Express*, Oct. 24, 1868)

"At Martinez, many chimneys were thrown down. Two of the walls of the new stone building at the Alhambra Hotel were partially thrown down. Blum's, Lazar's, Coleman's, and the Fish Brothers' brick buildings were also much cracked by the shake; but the most serious damage there, is that suffered by the Court House, a portion of the top of the front and rear walls of which were thrown down and the structure otherwise much injured. A special meeting of the Board of Supervisors was called for to-day (Friday) to determine what measures shall be taken to repair the damage and render the building secure." (*Contra Costa Gazette*, Oct. 24, 1868)

The 2-story Jose Berreyesea adobe at the corner of Alhambra and Escobar Streets, "was somewhat injured by the earthquake of 1868 and very much injured by that of 1906." (Hendry and Bowman, 1945, p. 426)

The Vicente Martinez adobe, 2 mi south of the town of Martinez, was not reported as damaged, although it may have been cracked by the 1868 and/or 1898 earthquakes, as it was damaged by the 1906 earthquake. (Hendry and Bowman, 1945, p. 428)

[MMI 7, B, 61]

Marysville

"The shock here was very light, being noticed only by a few." (*San Francisco Morning Call*, Oct. 22, 1868)

"Stopped a few clocks." (*Marysville Daily Appeal*, Oct. 29, 1868) [MMI 2, C, 62]

Michigan Bar (west of Rancho Murieta)

"Sensibly felt." (Folsom Weekly Telegraph, Oct. 24, 1868) [MMI 4, C, 63]

Milpitas

"Messrs. J.W. Hines and C. Valpey, and Miss Bennett, of San Jose; Mr. H. B. Valpey, of Santa Clara; Messrs. P. Anderson and C. B. Mendor and Mrs. W. Smith, of Berryessa, all of whom were intimately acquainted with this section of the country in 1868, report that there was no crack south of the county line." (Lawson, 1908)

Jose Maria Alviso's two-story adobe at Piedmont and Calaveras Road was not damaged. The Valentin Higuera adobe, 150' east of Calera Creek, survived both the 1868 and 1906 earthquakes. Three adobes on the south side of Calaveras Road, 1.5 mi west of Piedmont Road, were damaged in the 1906 earthquake and razed. (Hendry and Bowman, 1945, p. 409)

[MMI 7, C, 64]

"Along Coyote Creek the ground was cracked from Boot's ranch to the San Francisco Bay, the cracks being on the bay side and following the winding of the creek. As in 1906 much water was ejected from the cracks, and Coyote Creek rose." (W. Bellou; Lawson, 1908)

[MMI 7, C, 65]

Mission San Jose

"...suddenly there came a swaying of the house. This lasted only a short time; then the house began to shake in earnest...the pump in the yard was pumping as if some one had hold of it; and small rocks on the hill in front of the house were rolling down into the creek. The milk pans had been resting on shelves of slats; some pans slipt entirely out, some only halfway. The milk and cream were on the floor...the water spurted up in the streets of San Jose, and out in the road between Milpitas and San Jose, to the height of several feet. The old Mission church, which was of adobe, was shaken down, as were several other buildings at the same place. On the mountain above the old Mission, just above a place called Peacock Springs, a great crack in the earth appeared, which lookt as if the lower part of the mountain had parted and slipt down. Many times I have crost the bridge which was built over the crack, and stopt and thrown rocks down to see if I could tell how deep it was." (Mrs. N. Ainsworth; Lawson, 1908)

"Along the hills back of the town and southward, passing thru the present Sinclair and Stanford ranches, the crack opened. Generally it was 10 or 12 inches wide, and faulted some 18 inches on the valley side." (A. Kell; Lawson, 1908)

"The shock was preceded by a rumble passing to the northwest. Adobe building [Jose de Jesus Vallejo residence?] was not seriously injured. Crack at Irvington and on the side of Mission Peak confirmed." (J. Sunderer; Lawson, 1908)

"Brick store was cracked. Confirms cracks at Irvington." (S. Ehrman; Lawson, 1908)

"The mission church collapsed because Father Federy [the parish priest of the Mission after 1858] had removed the buttresses on the north wall that were necessary for its

stability. He had found them esthetically unpleasing." (Abaloe, 1979) This suggestion corresponds with the damage state shown in the drawing from the Jan Kozacs Collection.

Hendry and Bowman (1945, p. 470-475) report that there was extensive damage to the Tienda, to the Priests' Quarters, and to the Mission from the 1868 earthquake, but little damage (although probably extensive cracking) to the Jose de Jesus Vallejo adobe.

The small churchyard on the north side of the church shows strong damage to pre-1868 (67%) headstones but only moderate damage to 1868-1906 (34%) headstones and monuments. Some pre-1868 headstones could have been damaged by the failure and demolition of the adobe church (see "Inferring Shaking Intensities at Cemeteries that have Suffered Multiple Earthquakes").

[MMI 8, C, 66]

Mohawk Valley

"Severe." (*Quincy Union*, Oct. 24, 1868) [MMI 4, C, 67]

Monterey

"Very heavy." (Monterey Democrat, Oct. 24, 1868)

"A smart little earthquake, traveling from north to south. No particular damage." (*Monterey Gazette*, Oct. 22, 1868)

[MMI 5-6, C, 68]

Mount Eden

"All the shelving on south side of the 2 stores of the town was thrown down; heavy piano moved three feet." (*Alta California*, Oct. 22, 1868)

[MMI 8, C, 69]

Mountain View

"'...tossed wares around considerable.' Two warehouses damaged to a considerable extent, one had to be propped up, the other was knocked from its underpinnings and one end broke out." (*Alta California*, Oct. 23, 1868)

[MMI 8, C, 70]

Mowry's Landing

Mr. Pearce [of Hayward] informs us that the shock was felt the heaviest at More's [Mowry's] old landing, below the Mission. (*Hayward Journal*, March 12, 1887) [NIA, E, 71]

Napa

- "Violent shock in northeast direction for 30 seconds, accompanied by low rumbling sound. Some slight damage." (*Alta California*, Oct. 22, 1868)
- "Most severe shock ever felt. Lasted 40 seconds. No serious damage to buildings. Five miles west of Napa a number of trees were overthrown." (*Napa Reporter*)
- "...a few broken chimneys, broken plastering and cracked walls." (*Napa County Reporter*, Oct. 24, 1868)
- "Nearly all clocks stopped; rang all the door bells, six chimneys thrown down; many brick buildings cracked; large amounts of plaster knocked off." (*The Napa Register*, Oct. 24, 1868)

[Carneros Creek] "...a number of trees were thrown down..." (*Napa County Reporter*, Oct. 24, 1868)

[MMI 6-7, B, 72]

Natoma Vineyard (Folsom Lake)

"Wash basin broken." (Folsom Weekly Telegraph, Oct. 24, 1868)

[MMI 4-5, C, 73]

Nevada City/You Bet/Chalk Bluff

"Scarcely felt on the street; very sensibly felt in buildings." (*Nevada Daily Gazette*, Oct. 22, 1868)

[MMI 3-4, C, 74]

"Three distinct shocks felt. Also felt at You Bet." (Nevada Daily Transcript, Oct. 22, 1868)

[MMI 3-4, C, 75]

In Chalk Bluff, "Some people rushed from their houses." (*Nevada Daily Transcript*, Oct. 23, 1868)

[MMI 3-4, C, 76]

Niles

- "A crack past thru the Shinn and Tyson places" (C. Bonner; Lawson, 1908). The Shinn cottage was reportedly damaged by the earthquake fault, which had a 30 cm vertical offset there.
- "The water from the tank slopt nearly east. Rumblings preceded the aftershocks. These were more severe than in April, 1906." (C. Overacher; Lawson, 1908)

The 1841 flourmill built by Jose de Jesus Vallejo, located at the mouth of Niles Canyon, was a 2-story adobe structure. It can be seen at the back of the <u>Bancroft Library photograph</u> of the 1856 flourmill. An 1880 photograph at the California Historical Society shows the same 2-story adobe wall to be smooth and intact, although it may have been resurfaced after the earthquake.

The 1856 flourmill was a substantial 2½-story wood-frame building. The mill works were probably damaged by the 1868 earthquake. "This is one of the old landmarks of Alameda County and for some time has been in a semi-dilapidated condition – running only spasmodically." (*Oakland Tribune*, Sept. 5, 1874). Vallejo sold the mill in 1874 to C. Hadsell & Company, who replaced everything but the wood-frame building (*Oakland Tribune*, Sept. 7, 1874).

The 1-story <u>Vallejo adobe house</u> at the entrance to the nursery was built in 1842 by Jose de Jesus Vallejo for his vaqueros. The 36" thick walls are reinforced by buttresses. It was not damaged by either the 1868 or 1906 earthquake.

The Vallejo-Rankin adobe stood on the south side of Alameda Creek. "The building was not razed until after the building of the Western Pacific tracks." (Hendry and Bowman, 1945, p. 627) The Niles Canyon railway was built in 1866, so it is likely that this adobe was damaged by the 1868 earthquake and subsequently razed.

Jose de Jesus Vallejo built and maintained a number of adobe buildings and an adobe brick-yard at Vallejo Mills. 1868 earthquake damage to these buildings is difficult to ascertain, but judging from the lack of damage to his residence near Mission San Jose and to the 1-story house at the nursery, these adobe buildings were well built and relatively earthquake resistant.

[MMI 7-8, C, 77]

Niles Canyon

"The stage from Pleasanton to Alameda rocks tumbled down the hill." (*San Francisco Chronicle*, Oct. 22, 1868)

"The track passes around a point of loose rock. Here watchmen are kept night and day. Now and then a bowlder tumbles down, and, unless got out of the way in time, all trains are brought to a stand-still. At the tip of the hill, and extending entirely over it, is a large crack 19 feet deep, made by the great earthquake of 1868. An immense slide is expected during the first heavy winter or shake. To secure safety, the point must be tunneled through or the track moved." (*Oakland Daily News*, Apr. 4, 1870)

[MMI 7-8, C, 78]

Oakland

"Part of a wharf caved in; walls badly cracked; many chimneys down; two partly built walls thrown down." (*Oakland Transcript*, Oct. 22, 1868)

"The damages caused in Oakland by the earthquake of October 21, 1868, were light as compared with those of other towns in Alameda county. Dwelling houses received trifling injuries; in many houses crockery and glassware were broken, and great numbers of chimneys were thrown down or otherwise damaged. The city front suffered most. A portion of the wharf extending east from Broadway gave way, and several tons of coal were precipitated into the creek. At the lumber wharf of Taylor & Co., a trestle-work pier on which were 150,000 feet of lumber, was thrown into the creek." (S.J. Clarke, Alameda County History) [MMI 7-8, C, 79]

Twenty-five years after the earthquake, a man named Zutano wrote this description of the earthquake on Broadway: "Suddenly, the walls of a building 'bulged out, the roof seemed to sink, the building moved slightly and recovered perpendicular... The earth rocked beneath me, it rocked with such violence that I could hardly stand... [There was] an avalanche of bricks and mortar from falling chimneys and fire-walls." (C. Wollenberg, 1993)

"Shock preceded by a rumbling sound. Pans of milk and tubs of water emptied almost in a moment; trees whipt about like straws; many houses twisted 5 or 6 inches out of square, particularly those on brick foundations. The crashing of falling brick at the Deaf, Dumb, and Blind Institute was heard a few blocks to the south before the shock was felt. Chimneys very generally down, particularly those on south and east sides; in some parts all chimneys thrown. Many chimneys twisted, if not thrown. Many brick buildings were shattered, and several wharves went down with loads of brick, coal, hay, etc. In Brooklyn, as in Oakland, many chimneys were broken off at the roofs." (*Alta California*, Oct. 22, 1868)

"The <u>drawbridge of the San Francisco and Oakland Railway</u> was thrown out of place about 8 inches." (*Halley*, 1878, p. 266) [MMI 7, C, 80]

"Thruout the city chimneys and walls fell south." (Oakland News)

"Of two houses next each other the older one stood on posts 4 feet above the ground, while the other was supposed to be earthquake proof. The basement walls were solid and of good workmanship. The old house was badly shaken, but not injured; the earthquake-proof house had the basement walls cracked, all the ceilings thrown down, and the marble mantel in each of the rooms thrown upon the floor." (Geo. Davidson; Lawson, 1908)

"Our Oakland correspondent says: 'The chimneys of a very large number of frame dwellings were thrown down, broken off above the roof. The firewalls of one or two brick buildings were thrown down. The rear wall of Shattuck's building corner of Broadway and Eighth streets, was so badly cracked that during the forenoon it was deemed unsafe to enter the Council-room or the Police Court. Holmes' building on the opposite side of Eighth street, was badly damaged. [MMI 7-8, C, 81] A low brick building, corner of Broadway and Fourth street, was badly shattered perhaps ruined. Many show windows were destroyed. At Rachiffe's grocery, one of the largest in the city, the shelves and goods were tumbled together in one mass, and very large damages must have been sustained. Wilcox's building, the only three-story edifice in the city, sustained scarcely any damage, the walls appearing to be perfectly sound. It is reported that the elegant private residence of Mr. Wedderspoon was very badly damaged. At the time of the earthquake the locomotive and nearly all the cars of S.F. & O.R.R. were at San Antonio. The drawbridge between Oakland and that place was so damaged as to be impassable, and all communication with San Francisco had been by way of the creek route. The water of the bay was perfectly smooth at the time of the shock, and no perceptible disturbance of the surface took place. Even at the edge where the ground was almost level and the water consequently shallow for a considerable distance, the ripple was hardly noticeable. I was informed, however, that the shock was felt on steamers very distinctly, and that the engines were stopped, the officers supposing that some accident had occurred to the machinery. The tall chimney of the workshop of the Alameda Railroad vibrated more than a foot from a perpendicular line, but was not thrown down." (Evening News, April 21, 1906)

"Broadway is our principal street and the one on which the principal part of our business is transacted, and as a natural result it is the street where the most damage was done. We will give our account of the damage on this street by beginning at the water front. It was rather a singular circumstance that there was not near as many buildings injured on the east side of the street as there was on the west side. It may also be remarked that in some places buildings were damaged, while those immediately adjoining them received none. A part of the warf at the foot of Broadway, caved in, thereby submerging about 70 tons of coal, heaped on top of it, under water. Some of the wood and lumber piled on the warf was also thrown into the creek. About 200,000 feet of lumber piled on Taylor & Co's warf, tumbled into the waters of the creek, but nearly all of it will be recovered. Nearly all the chimneys of the houses on the lower part of Broadway, were shaken down. The walls of the brick building, occupied as a sash and door depot by H. W. Barnes, between First and Second streets, were opened considerably, and those living in the second story of the building had to move out of it. The plaster on the walls of the County Hospital, between Second and Third Street was shaken off, and some of it fell on two of the patients who were unable to move, but they received no injury. The south wall of the brick building occupied as a grocery by Mr. Hurl, at the southwest corner of Third street and Broadway, was badly cracked, and was only kept up by being propped with timbers. The brick building occupied as a drug store by Dr. Verhave, between Third and Fourth streets, was badly cracked, and himself and family were compelled to move out of it. The building at the North corner of Fourth street and Broadway, occupied as a meat market, was somewhat cracked. The buildings between Fifth and Seventh streets, on Broadway, did not seem much injured, although many large panes of glass were broken, and some goods were thrown off the shelves in the stores. The walls of Shattuck's building, on Eight Street and Broadway, where many of the city officers have their offices, and in which the meetings of the City Council are held, were torn open considerably. The goods in Racliffe's grocery, at the Southeast corner of Eighth Street and Broadway, were all thrown off the shelves and the store presented a scene of great confusion. At Wilcox's block, between Eighth and Ninth streets, consists of three-story brick buildings, it was expected that it would be in more danger than any other building in the city, but it stood admirably. It is well braced with iron. Sessions and Bigelow's Broadway Block also stood well. The fire wall and cornices of Coardman's new brick building on Twelfth street, near Broadway fell down, breaking the verandah as they fell." (Oakland Daily Transcript, Oct. 22, 1868)

"The magnificent wooden building being put up by Dr. R.E. Cole, on Adeline Street, was badly damaged by the earthquake. We understand that things inside of Major Kirkham's residence, on Oak Street, were rudely shaken, and that the building itself, sustained some damage. The new building of Mr. Alden, on the Telegraph road [at 43rd Street], was also somewhat injured." (*Oakland Daily Transcript*, Oct. 23, 1868) [MMI 7-8, C, 82]

Within the block now bounded by Telegraph Avenue, 55th Street, and Vicente Way, Vicente Peralta built one adobe structure in 1836, and a second large adobe in 1847 or 1848, to which he added separate wings and a chapel in the 1850s. This second building was burned in 1866. "The earthquake of 1868 completed the devastation of the burned adobe." The first adobe appears to survived the earthquake. (Bowman, 1951)

"The walls of an unfinished house which Mr. Emory was building, near the San Pablow (sic) road, was also thrown down. After his experience yesterday, he will build wooden houses hereafter." (*Oakland Daily Transcript*, Oct. 22, 1868) [MMI 7, C, 83]

"The residence of Colonel John C. Hays, among the hills about six miles to the north of Oakland, was badly damaged by the earthquake. The Colonel says that the earthquake was more severe in the hills in the neighborhood of his ranch than it was in Oakland." (*Oakland Daily Transcript*, Oct. 24, 1868) [MMI 8-9, C, 84]

[Mountain View Cemetery] Section 1 of the Mountain View Cemetery in Piedmont shows strong damage to pre-1868 (71%) headstones and moderate damage to 1868-1906 (49%) headstones and monuments. There is no apparent vandalism (see "Inferring Shaking Intensities at Cemeteries that have Suffered Multiple Earthquakes"). [MMI 8, C, 85]

Oakville

"Tree thrown to ground." (*Napa County Reporter*, Oct. 24, 1868) [NIA, C, 86]

Orinda

The <u>Jose Joaquin Moraga adobe</u> was not reported as damaged. This adobe house was the focal point of H. Carpentier's efforts to evict the Moraga family, which started in the 1860's and continued into the 1880's: there was no report of damage or cracking to the adobe (Kimball, 1987, p. 166-168). The proximity of this adobe to the Hayward fault allows us to use the MMI 7-8 limit as an intensity estimate.

[MMI 7-8, C, 87]

Oroville

"Felt by several." (Weekly Butte Record, Oct. 24, 1868) [MMI 2, C, 88]

Pacheco (west of Concord)

"Every brick house in town was ruined." (Alta California, Oct. 22, 1868)

"So far as we have any record or tradition, the earthquake of Wednesday morning last, was altogether the most violent and alarming that has occurred here since this portion of our coast has been known to civilized men. The serious damage in this place is confined to the brick and concrete structures, though most of the frame buildings lost the chimneys above the roofs, and there was some overthrown and crash of glass and crockery ware in stores and dwellings, but most houses escaped any loss of this character. The rear wall of Elijah Hook's two story brick building, was shattered from the top to the level of the upper floor, and the upper angles of the front are also shaken badly. The building was immediately stayed with heavy iron rods through and through, and the shattered portions of the walls will be at once taken down and rebuilt. The concrete building belonging to Dr. Carothers was badly shattered and much of the lower story front was shaken out so that it stands with a menace of falling at any moment. The two story brick building owned and partly occupied by J.H. Troy, the upper story being used as a lodge room by the Odd Fellows, is badly cracked in various parts and will require extensive repairs to make it secure. The front and rear walls of Morgan's two story brick and concrete

building, are entirely broken from the side walls, from top to bottom, but they still stand in place although wide fissures are open the whole height, at the ends of the side walls. Hook's concrete warehouse was cracked open in many places, but no portion of the walls fell. The only injury of person, was an ankle sprain received by one of our office boys, who leaped down from the top of the stairs, on the alarm of one of the later minor shocks that came while we were moving material from our late quarters." (*Contra Costa Gazette*, Oct. 24, 1868)

[MMI 7-8, B, 89]

Pacheco Ridge (south of Novato)

"Persons kept their feet only with difficulty." (*Stockton Daily Gazette*, 28 Oct. 1868) [NIA, 90]

<u>Pescadero</u>

"Near Pescadero limbs fell from the redwoods and large pieces of rock rolled down the mountains." (*Grass Valley Union*, Oct. 29, 1868)

[NIA, 91]

Petaluma

"At precisely eight o'clock this morning, a tremendous shock of earthquake occurred here, of about ten seconds in duration. The vibrations were apparently from north to south. The damage was considerable. A great many chimneys in different parts of the city were broken off at the roof, and many entirely destroyed. One large stone residence had the entire front thrown down. There were three families in this building, but providentially no one was injured. The southeast corner of the American Hotel, a large brick building, was cracked so that it will have to be taken down. All of the brick buildings in the city were more or less cracked and injured. All the glassware in the grocery and drug stores was more or less broken and injured. Maynard's drug store was injured in this way more than \$300. Nothing to be compared with it has ever before occurred in this place." (San Francisco Morning Call, Oct. 22, 1868)

[MMI 7, C, 92]

Pine Grove

"Felt by few." (*Amador Weekly Ledger*, Oct. 24, 1868) [MMI 2, C, 93]

Placerville

"Shock plainly felt." (*Mountain Democrat*, Oct. 24, 1868) [MMI 3, C, 94]

Pleasanton

"The shock in Amadore and Livermore Valleys was not so severe." (*Alta California*, Oct. 24, 1868)

The <u>Kottinger adobe house</u> and stable were not reported as damaged. Agustin Bernal's and Francisco Solano Alviso's adobes were reported as damaged by the 1861 earthquake and presumably weakened, but were not reported as damaged by the 1868 earthquake. [MMI 7, C, 95]

Pope Valley

[Misprinted as Grope Valley] "Slight." (*Sonoma Democrat*, Oct. 24, 1868) [MMI 3, C, 96]

Purisima (south of Half Moon Bay)

"Chimneys down or twisted, along the coast between Half Moon Bay and Pescadero." (T.G. Phelps; Holden, 1898)

[MMI 6-7, C, 97]

Red Dog

"Not felt." (Nevada Daily Transcript, Oct. 23, 1868) [MMI 1, BC, 98]

Redwood

"The court-house was wrecked and other buildings were damaged. The shock seemed to come from the southeast and lasted 30 seconds." (*Redwood Gazette*, Oct. 24, 1868)

"The American Hotel is very much shaken. The Court House is standing, but unsafe. The Public School is damaged so much that the school is dismissed. Many chimneys are shaken down. A fire-wall on Merrill's Block was shaken down. No one was killed or injured. [MMI 7, C, 99] The chimneys on Thos. Selby's home, about two miles below were thrown down, and some slight damage of this sort done to homes in that vicinity." [MMI 7, C, 100] (*San Francisco Morning Call*, Oct. 22, 1868)

Redwood Canyon (east of Mills College)

In its northern course it was particularly severe in the region of Redwood Canyon, and old settlers still remember the monster boulders that were hurled from the mountainside, some weighing many tons, and thrown headlong into the valley below. [MMI 8-9, C, 101] ... A hunter named Humphrey from San Francisco, was out that morning after quail and was standing on the edge of Redwood creek. The bed of the creek was dry as a bone. Humphrey was nearly thrown down by the shock, and on looking down into the creek, he saw the earth open and volumes of water shoot forth, and in a few minutes there was four and five feet of rushing muddy water. In describing the scene to the people, he said it was a grand sight. (*Hayward Journal*, March 12, 1887)

Reno

"Not felt." (*Territorial Enterprise*, Oct. 22, 1868) [MMI 1, C, 102]

Roberts' Landing (west of Bayfair)

"Our house broke in three pieces, each part falling outward. A boiler of hot water was on the stove, and with the first deafening jolt, the hot water came my way, giving me a bath I have never forgotten. Horses fell to the ground and men clung to some quince trees near." (R.C. Vose; Lawson, 1908)

[MMI 8, C, 103]

Sacramento

"Rang nearly every door bell in the city; many articles thrown from shelf or table; clocks stopped; walls cracked; 'Many people walking on the streets staggered about like drunken men..." (*Daily Bee*, Oct. 21, 1868)

"The water in the Sacramento River receded to such an extent that it left the hulk *Globe* nearly surrounded by dry land. It soon returned in a wave about two feet high, setting the vessels at the levee rocking violently. Some walls in the city were cracked, plastering fell and crockery was broken." (Halley, 1876, p. 257)

[MMI 6, C, 104]

San Antonio (Fruitvale)

Antonio Maria Peralta built two adobes at the present corner of Paxton and 34th Streets. The first adobe house was built in 1821 and the second, larger, house was built in 1840. The 1840 adobe was badly damaged by the earthquake and subsequently razed. The family then moved to the nearby 1821 adobe, which survived the earthquake, until a frame house was built in 1870. (Bowman, 1951)

"The rangers on the old Peralta rancho said the crack past through the foot-hills on to Oakland." (Various old residents; Lawson, 1908)

[MMI 7-8, C, 105]

San Francisco

"Off of made land-some plaster knocked off; some walls cracked. On made land-numerous walls cracked; some partly or wholly knocked down." (*Alta California*, Oct. 22, 1868)

"In San Francisco the earthquakes—for there were several, heavy and light—have done a great amount of damage to life and property. The number of lives lost is not yet known. Property to the value of between \$300, 000 and \$400,000 was destroyed. Buildings were thrown down, walls were cracked, land slides occurred, fissures were made in the earth from which hot steam or water escaped, men, women and children were frantic with fright, horses ran away. The scene was almost indescribable." (*Sonoma Democrat*, Oct. 24, 1868)

"At San Francisco and nearby points the earthquake lasted for about 42 seconds. It was in general north and south. A second shock followed the first at 9^{hr} 23^{min} A.M., and lasted for 5 seconds, with the same direction as the first. Until about 12^{hr} 15^{min} P.M., light shocks continued to be felt about every 30 minutes; and inside of the 24 hours immediately following the initial shock, 12 minor shocks were felt. The first indication of the approach of the earthquake was a slight rumbling sound, coming apparently from the direction of the ocean. The sound was heard very distinctly in the lower part of the city, but the residents on the hills do not appear to have heard it." (*San Francisco Times*, Oct. 21, 1868)

"The shock commenced in the form of slow, horizontal movements. The oscillations continued from 10 to 15 seconds, growing more rapid and more violent for 6 or 7 seconds, then partially ceasing for 3 or 4 seconds, then increasing in force and rapidity for 4 or 5 seconds, then suddenly ceasing." (*Alta California*, Oct. 22, 1868.)

"There were no abnormal barometrical changes at the time of the earthquake. No chronometer in Mr. Tennent's office was disturbed or showed any change of rate. The pendulum clock in his office was not stopt. A transit instrument erected on Russian Hill, belonging to him, was not disturbed in the slightest degree. Two magnets, one in his office and one in charge of a friend, showed no loss of magnetic power. One was loaded to its full extent, and the slightest loss of power would have permitted the weight to fall." (San Francisco Bulletin, Oct. 22, 1868.)

"The portion of the city which suffered most was that part of the business district, embracing about 200 acres, built on "made ground"; that is, the ground made by filling in the cove of Yerba Buena. [MMI 8, B, 106] The bottom of this cove was a soft mud varying from 10 to 80 feet in depth, and the material used to fill it was largely "dump" refuse, much of which is organic and hence perishable. Many of the buildings of that period were built flat on this filled mud, without piling, and before the land had had time to become firm. On this made land there was a very evident belt of maximum damage several hundred feet wide and running about northwest and southeast, commencing near the custom-house and ending at the Folsom Street wharf. One account of this belt goes so far as to trace 8 or 10 distinct lines of maximum disturbance, practically every building on these lines being more or less damaged, while none outside of these lines was seriously injured." [MMI 7-8, C, 107] (Lawson, 1908)

"In many places the made land settled. At the junction of Market and Front Streets, the ground sank for a foot or two, and there was evidence that the tide had risen in the adjoining lot at the same time, for a pond of water collected and remained until low tide. On Pine Street, near Battery, the cobbles on the south side of the street sank away from the curbstones to the depth of 1 foot in some places; and the asphalt sidewalk on the north side was twisted and torn out of all shape, and its connection with the curb-stone severed." (*Alta California*, Oct. 22, 1868.)

"At the corner of First and Market Streets, the ground opened in a fissure several inches wide. At other places the ground opened and water was forced above the surface." (*San Francisco Bulletin*, Oct. 21, 1868.)

"At Fremont and Mission Streets the ground opened in many places." (*Alta California*, Oct. 22, 1868.)

"The general course of damage in the city was along the irregular line of the "made land," or low alluvial soil, where it met the hard or rocky base beneath it. Along the line of the old shore of Yerba Buena Cove, we found the damage to brick buildings much the largest." (George Davidson; Lawson, 1908)

"The custom-house, at the corner of Sansome and Clay Streets, was hurled south, by what seemed to be an undulating motion, and plaster fell." (*San Francisco Bulletin*, Oct. 22, 1868.)

"The outstanding portico on the east side of the custom-house was so badly shattered that it had to be removed; the main building stood fairly well, but one of the chimneys was broken across at the roof-line and turned thru an angle of over 45°." (George Davidson; Lawson, 1908.)

"The ground floor and the foundation of the old Merchants' Exchange appeared to have taken a different motion from the upper portion. The arch over-the main corridor appeared to have been crusht. Just underneath the center, the matting was raised 2 inches. The corresponding arch at the south end of the corridor was also damaged, and there was a similar protuberance under the matting beneath it. Smaller arches at right angles to the main arches described were crusht in similar fashion. The north and south walls of the building, at the second floor, over the main arches, opened in large cracks.

A 3-story brick structure on the corner of Market and Battery Streets, in an unfinished condition, was completely thrown down. Several different reports state, however, that it was very poorly constructed. In the Union Foundry, on First Street at the corner of Market Street, most of the machinery was displaced. [MMI 7-8, C, 108]

The floor of the Pacific foundry was raised about 2 feet in places. The center of Mission Street (opposite Fremont Street) exposed an opening from 8 to 10 inches wide; and openings of the ground were also plainly to be seen on Fremont Street, in the same vicinity." (*San Francisco Bulletin*, Oct. 21, 1868.)

"At No. 138 Natoma street, Charles Mereypenny's brick boarding house was made a total wreck. The most of it was thrown down. At No. 144, same street, John Farmer's house was badly injured, and most of his furniture destroyed." (*Stockton Weekly Independent*, Oct. 24, 1868) [MMI 7-8, C, 109]

"Outside of the immediate district described above, damage to the rest of the city was very meager. It will be noticed in the following notes, and by a consultation of the map of San Francisco, plate 146, that the region of greatest agitation was confined to the low portions of the city, or the vicinity of some old creek bed or swamp.

The flat between Howard Street and Mission Bay was more severely shaken than Russian and Telegraph Hills; but the damage, save to chimneys and plaster, was slight. [MMI 6-7, C, 110] The only serious injury on Kearney Street was done to a building on the east side of the street. The building was an old one. At the corner of Fifth and Market Streets a fire-wall was thrown down. At the corner of Fourth and Bryant Streets, walls were cracked and damaged; Fourth Street near Bryant opened in place and at the crossing of Harrison and Fourth the railroad track settled about 8 inches, the planks between the rails rising about 10 inches. [MMI 7, C, 111] The Lincoln School-house (east side of Fifth Street near Market Street) was badly damaged, most of the chimneys being broken but none thrown down. The large statue of Lincoln in front of the building was ruined, but

- was not thrown off its pedestal." [MMI 7, C, 112] (San Francisco Bulletin, Oct. 21, 1868.)
- "The large chimney of the sugar refinery on Eighth Street fell in, crushing thru the ceilings." (*Letter to New York Times*, Oct. 21, 1868.)
- "A drug store at the corner of Fifth and Folsom Streets had its entire stock destroyed by falling. The chimneys of the Mission Street public school (west side of Mission Street between 15th and 16th Streets) toppled off some bricks." (*Alta California*, Oct. 21, 1868) [MMI 6-7, C, 113]
- "A part of the brick walls of the new Calvary Church (Geary and Powell Streets) fell. [MMI 6-7, C, 114] A small crevice opened, as in 1865, on Howard Street beyond Sixth Street. No damage was sustained by the dry-dock at Hunter's Point. On the beach at the foot of Webster Street, below high-water mark, a fissure opened, extending lengthwise with the water. The stream of a sewer running from the Laguna to the foot of Webster Street into the bay, hitherto clear, immediately turned inky black." (*Alta California*, Oct. 22, 1868.)
- "The sugar refinery at North Point, a 7-story brick structure, surmounted by a tall brick chimney, was injured to the extent of losing 6 or 7 feet of its 100-foot chimney. [MMI 6-7, C, 115] A large fissure was made in the high bank near Fort Point and the shock was felt severely at the Fort." [MMI 6, C, 116] (*San Francisco Times*, Oct. 22, 1868.)
- "At the Cliff House nothing unusual took place, with the exception of a decided commotion in the ocean and an impetus given to the every-day wave which sent it well inland, say 15 or 20 feet above the usual mark. The shock, however, did no damage, not even upsetting any of the glassware in the bar." (*Alta California*, Oct. 22, 1868.) [MMI 5, C, 117]
- "Upon Russian and Telegraph Hills the shock was not very damaging. In some houses on the latter ornaments were not displaced not displaced from the mantel and the inmates did not come to the doors. In others, books and ornaments fell down and marble mantels were started from their places. [MMI 5-6, C, 118] The oscillations on Russian Hill were more severely felt. There was a pretty general stopping of clocks, some cracking of plaster, and throwing down of light articles." [MMI 6, C, 119] (San Francisco Bulletin, Oct. 21, 1868.)
- "A pail of water, two-thirds full, on the ground at the summit of Russian Hill, slopt over both sides." (*Alta California*, Oct. 22, 1868.)
- "The colored Masonic Hall, Stockton Street between Pacific and Broadway, a 2-story brick structure, was badly wrecked." (*San Francisco Times*, Oct. 22, 1868.) [MMI 7-8, C, 120]
- "From the meagerness of reports it is certain that no great loss was occasioned by the parting of water mains. The Bulletin for October 21 reports that the water at the Mission was shut off by the pipe being disconnected. In several parts of the city the water-pipes broke underground and caused some loss of water, but the water company soon had all repairs made. No fires are reported in the upper Mission district (hiring the 24 hours following the earthquake. At Laguna Honda (a natural reservoir and the chief source of water supply, 2.5 miles west of Valencia and Market Streets) the water was violently agitated and the waves met in the center, throwing up a large jet several feet into the air." (*Alta California*, Oct. 22, 1868.)

"The first alarm of fire was given shortly after 8 o'clock from Box No. 26 (northeast corner of Clay and Battery Streets). The fire was in Wellman and Peck's grocery (Front and Clay Streets) and was caused by matches. The chief damage was caused by water.

During the night following the earthquake, three fires occurred in the wholesale district, but there was no lack of water and all were quickly extinguished.

In the Fire Commissioner's report in the Municipal Records of San Francisco for 1868-1869, the following losses by fire are recorded: September, 1868, \$24,229; October, 1868, \$133,564.46; November, 1868, \$19,920; December, 1868, \$82,019." (Lawson, 1908)

"The force of the shock was distinctly felt on the bay and as far as 15 miles west of the heads, but no great agitation of the water is reported. The tide-gage at one of the Government stations indicated no unusual rising of the tide." (*San Francisco Times*, Oct. 22, 1868.)

"There was no tidal wave accompanying the earthquake. The passengers on a ferry steamer off Angel Island felt the shock and supposed for the time that they were aground. Many other boats reported the same experience. Two boatmen in a White-hall boat off Fort Point report a heavy rumbling sound coming from the water. Their boat was shaken and whirled rapidly around (before the rollers reached them) and shortly they met 3 heavy rollers coming from the northwest on a calm sea." (*Alta California*, Oct. 22, 1868.)

"The shock of the earthquake was distinctly felt at sea near San Francisco. Captain Tobey, of the ship Pactolus, reported being at anchor in deep water about 15 miles west of the Heads when the shock took place. At first it seemed as if the vessel were passing over a coral shoal and striking quite heavily. The noise and motion made it seem as if the ship were dragging, with her chains also slipping out." (*San Francisco Bulletin*, Oct. 22, 1868.)

"The ship Cesarewitz felt the shock nearly out at the Farallones; the brig Orient, bound in, 8 miles out, experienced the shock heavily. Pilot Murphy, on a transport bound out, reported that the bark seemed to have struck hot-torn, her progress being impeded; and the ship, especially the yards and masts, trembled violently." (*San Francisco Times*, Oct. 22, 1868.)

"The total loss of property was variously stated from \$300,000 to \$5,000,000. However, a careful estimate of damages made a day or two after the disaster, placed it at about \$350,000." (San *Francisco Bulletin*, Oct. 23, 1868.)"

The <u>San Francisco Morning Call</u> article, presented in its entirety on the Virtual Museum of the City of San Francisco website, provides more information than contained above, particularly regarding the location and damage state of many downtown buildings.

San Jose

"The most terrible earth shock ever experienced in this section since the settlement of this country by Americans, occurred yesterday morning at 8 o'clock. A dense fog hung over the city at the time, when, with scarcely a premonitory tremor, the shock was upon us in all its force. Buildings and trees seemed to pitch about like ships in a storm at sea. Fire walls and chimneys were thrown down in all parts of the city. The heavy brick cornice of Murphy's building at the corner of Market and Eldorado Streets fell to the ground. The

Presbyterian Church has sustained an immense damage. The brick turrets are all down, and large portions of the steeple were precipitated thru the roof to the floor, crushing the organ and causing great damage to the gallery and fixtures below. The walls of the steeple are almost a total wreck and will have to be taken down. \$5,000 would not make good the damage done to the church. The large water-tank on the roof of Moody's flour mill fell thru the roof, carrying destruction in its course. Their wooden store-house, 100 feet in length, filled with grain, is a total wreck and the grain badly mixed. Two huge chimneys of the San Jose Institute were thrown down, one of them crushing thru into the rooms below. A portion of the rear wall of Welch's livery stable fell. Otter's unfinished block at the corner of First and St. John Streets, sustained a very serious damage. There is not a brick building in the city that is not more or less injured. Brick walls are everywhere wrenched and cracked and many of them are ready to fall. Another such shock would precipitate many of our brick buildings to the ground. The brick cornice of the Masonic Hall Building will have to be taken down, and the entire building, in its present condition. is decidedly unsafe for occupancy. A large quantity of crockery and glassware was broken. The destruction of plate-glass windows is very great, and much havoc is done to plastering generally. The new court-house stood the shock admirably. Some little crumbling of plaster decoration is all the damage it sustained. The lesson of the earth shock is: Erect no more high church steeples, and build no more brick buildings above 2 stories in height, and those only in the most substantial manner. A second but much lighter shock was experienced at about 10 h 30 m of the same day, and shortly thereafter a third shock of like character." (San Jose Mercury, Oct. 22, 1868)

"San Jose suffered greatly in this earthquake." (I.L. Mylar, California as I Saw It)

"At four minutes to eight o'clock this morning, the heaviest earthquake we have ever experienced took place, causing great consternation, a total suspension of business for hours, and doing great damage to many buildings. The Court House shows no sign of injury. The Presbyterian Church was damaged to the extent of perhaps a thousand dollars. Moody's Mill was badly injured. A great many chimneys were thrown down, and the ceilings ruined. No injury to the Convent or other Public Schools. The Baptist Church, Masonic Hall, Lyon's store, and many other buildings are badly twisted up. A second light shock was felt at about half-past ten o'clock, doing no damage, but causing an immense excitement." (*San Francisco Morning Call*, Oct. 22, 1868)

[MMI 7-8, C, 121]

Hendry and Bowman (1945, p. 750-815) locate more than 90 adobe buildings in the Pueblo of San Jose from surveys in 1840 and 1850, but they provide no further information for 56 of these buildings. The only adobe building reported as damaged by the 1868 earthquake was St. Joseph's Church. However, the Hoover adobe was razed in 1868, the Washington Hotel was razed in 1875, and the Columbet adobe had "disappeared by 1875" so these three buildings may have been damaged as well. In contrast, 15 adobe buildings are reported as occupied into the 1880's and later. The large number (56) of unreported adobe buildings argues against lowering the intensity to MMI 7.

"A chimney in the house once owned by Frank Stock, near Pfister's mill, but now the property of a gentleman whose name we cannot recall, and whose family reside in it, was thrown down by the earthquake shock on the 21st last. The chimney passed directly through the roof and through the floor above, into the dining room and through the floor into the cellar." (*San Jose Patriot*, Oct. 23, 1868)

"Two severe shocks of earthquake were felt here this morning at 8 o'clock, apparently passing from southeast to northwest, lasting about half a minute. About nine o'clock had a slight shock. The first one was very perceptible, causing buildings to shake and had a sickening effect on some of the citizens, and we learn that one lady is very ill from the effects of the shock. No damage to property." (Sacramento Daily Union, Oct. 22, 1868)

"Where the Milpitas road crosses Coyote River, the banks were shaken together and the river-bed filled up." (*San Jose Argus*, Oct. 24, 1868)

[Schallenberger's Residence] "...the earth opened to the width of three feet in places and on closing again one part was observed to be sunk lower than the other part." (San Jose Patriot, Oct. 23, 1868)

"...the earth opened and from the aperture a large volume of water shot up to the height of 50 feet, and continued to flow for some time..." (*San Jose Patriot*, Oct. 23, 1868)

[MMI 7-8, C, 122]

San Juan Bautista

- "The shock was the heaviest since 1865. Lasted 30 seconds." (*Alta California*, Oct. 22, 1868)
- "No chimneys fell; 2 brick walls were cracked." (C. Bigley; Lawson, 1908)
- "...San Juan escaped with comparatively little damage, in fact, that great earthquake—for it was the greatest earthquake that had hitherto been experienced by the Yankees who were rapidly settling up California, was not nearly as severe to the Mission San Juan as was the quake of 1880 [probably the 1890 Pajaro Gap earthquake] which leveled to the ground the brick end of the sisters' orphanage at the old mission, exposing both floors of the building at the end. Near where the brick wall fell out could be seen the dormitories of the little orphans with the neat small cots therein." (I.L. Mylar, California as I Saw It)
- "Earthquake at 7:55 A.M. The shock was of at least thirty seconds duration, and the heaviest since that of October, 1865." (*San Francisco Morning Call*, Oct. 22, 1868) [MMI 6, C, 123]

San Leandro

"The earthquake was much more severe than in Oakland or Alameda. Not a building escaped some injury. Chimneys fell north and south. The court-house was in ruins. A tank 10 feet wide and 6 feet deep was entirely emptied of water. The bed of San Leandro Creek, which had been dry for several months, became filled with a stream of water 6 feet wide and a foot deep. (Various old residents; Lawson, 1908)

"Courthouse collapsed in part; only one chimney standing in town." (*Alta California*, Oct. 23, 1868)

"Looking at the wreck of ruin in every direction, it appears miraculous that no more accidents to persons have occurred. The first we note is the entire demolition of the Court House. This was a large two-story brick. The entire second story is gone, and the lower or first story is so crushed and wrecked as to render it perfectly useless. The damage to the building will probably not fall short of \$35,000. The new jail and Recorder's office in course of erection, of which the foundation was completed, is almost destroyed. We

suppose \$5,000 will not more than cover the damages to the building. Messrs. Hawkett & Chapman, the contractors for the mason work, we fear will suffer severely.

The Beatty Block, now owned by Mrs. Webber—a two-story brick—is almost a total ruin. The south end of this building fell out with tremendous crash, and the entire walls are so cracked and damaged as to render this building almost useless. Mrs. Webber will probably sustain damages to the amount of \$5,000. The beautiful brick residence of Mrs. Juana Estudillo, immediately in the rear of the Court House Square, is very much damaged. The north side and west end are down, and the other walls are so damaged as to render them useless. The damage to the building we estimate at \$4,000.

[MMI 8-9, B, 124]

The concrete residence of Dr. Cogswell is also in ruins. Damages probably \$2,000.

Besides these, every building in town is more or less damaged. The Estudillo House is damaged very severely, probably to the extent of \$1,000 or \$1,500—independent of the loss of crockery and glassware.

There is but one chimney standing in the town.

It is impossible to estimate the damages throughout the county. Our merchants have all suffered severely. In this town we have been furnished the following list: Collins & Bryant, grocers, \$2,000; E. Hesser, grocery and provision store, \$1,500; P. Meyers, general merchandise, \$500; R. McMillan, general merchandise, \$500.

Every saloon, and every place where a piece of crockery or glassware was kept, has suffered more or less. Our own losses are comparatively light. The first side of the DEMOCRAT, which was in type and nearly ready for press, was thrown into the completest pi immaginable, The press appeared was though it intended emigrating. It was thrown from its foundation, and presented an appearance totally at variance with all laws of order.

We are continually receiving accounts of casualties to persons; none, however, very serious. The residence of W. H. Davis is totally demolished, and the escape of his family seems providential. No one was injured except a Chinaman in his employ as cook, who had his arm broken.

The San Leandro creek, which has heretofore been only a wet weather stream, and had been dry for months, is now a fine running stream, the water being some twelve or eighteen inches deep and from ten to twelve feet wide. Some half an hour after the shock the water came rushing down the bed of the creek as turbid as though a violent rain storm had been raging in the mountains east of us. Evidently numerous springs have burst out in the mountains." (*Alameda Democrat*, Oct. 24, 1868)

"A Mr. Davis, who resides on a farm near San Leandro, informs the *Bulletin* that the workmen on his farm at the time of the shock occurred, observed that the ground was disturbed and thrown about with a rapid and violent rotary motion, which continued several seconds. A creek running through the farm, and which was nearly dry, rose instantly to the depth of about three feet, and several deep gulches were formed in the plain. His house was literally twisted in pieces and prostrated to the ground, but the family escaped as if by a miracle. Mrs. Davis was caught in the ruins. She was badly but not dangerously wounded about the head and face, and is recovering from her injuries." (Halley, 1876, p. 267)

The note above describes a different incident than the damage to the adobe residence of W.H. Davis, which was razed in 1878 (Hendry and Bowman, 1945, p. 597-598). The 1878 Thompson and West Atlas shows a 12-acre property owned by J. Davis on the north side of San Leandro Creek that corresponds with Halley's description.

[Hills SE of San Leandro] "Many houses razed; trees knocked down." (*The Daily Bee*, Oct. 22, 1868)

[MMI 9, C, 125]

Ignacio Peralta built his first adobe house in 1835 along San Leandro Creek near present 105th Avenue. He left this house to his son, Francisco. He built a second, larger, adobe house in 1842 about 400 yards east. Both of these structures were badly wrecked by the 1868 earthquake, and subsequently razed. (Bowman, 1951)

[MMI 8, C, 126]

San Lorenzo (Bayfair)

"San Lorenzo was also badly shaken up. We are informed that the residence of Mr. Crane was badly damaged, and that Mr. Lwelling lost considerable fruit put up in glass jars." (*Alameda County Gazette*, Oct. 24, 1868)

"The limbs of a sycamore tree, 24 feet high, struck the ground." (G. Hyde; Lawson, 1908)

"Flat irons and a kettle were jerked off the stove southward." (Mrs. Adams; Lawson, 1908)

"House and barn were both prostrated." (Mrs. E. H. Gansberger; Lawson, 1908)

"A house was thrown off its foundations. Chimneys were thrown northward." (E. Llewellyn; Lawson, 1908)

"Captain Petersen, of the steamer San Lorenzo, who is now deceased, was walking along the road to Roberts' Landing when he heard a great rumble off across the fields toward San Leandro. He lookt quickly in that direction, and over a mile away could see the great wave rapidly approaching. He rushed to the side of the road and had caught hold of the fence by the time the shock broke. Near him on the road a 6-mule team was drawing a load of grain, and all the mules fell flat and could not regain their feet until the great jolt was over." (R.C. Vose; Lawson, 1908)

"At San Lorenzo, four miles beyond San Leandro, the shock was of such violence that it shook down two wooden houses. Large cracks, a hundred yards in length, were opened in the earth, out of which water spouted. The cracks afterwards closed." (*Oakland Transcript*, Oct. 22, 1868)

The reports from San Lorenzo that can be located (the Gansberger's Residence and Captain Petersen's narrative) lie between San Lorenzo and Roberts Landing. We locate the San Lorenzo intensity at the Gansberger Residence, next to the Crane residence.

All 16 pre-1868 graves at the San Lorenzo Pioneer Cemetery are damaged (100%). The 1868-1906 markers also show significant damage (65%): most of the headstones and smaller monuments are damaged. Although the cemetery is now protected by a tall iron fence, it appears to have been heavily vandalized in the 20th century (see "Inferring Shaking Intensities at Cemeteries that have Suffered Multiple Earthquakes").

San Luis Obispo

"Not felt." (Lawson, 1908) [MMI 1, C, 128]

San Mateo

- "A good many walls cracked." (Los Angeles Star, 7 Nov 1868)
- "Vibrations from the north for 15 seconds." (Alta California)
- "There was an earthquake shock at eight A.M. today, the severest one lasting fifteen seconds. The barometer was 29 92-100 inches, and the thermometer 48. The vibration was from the north. The damage to property is not less than \$5,000." (*San Francisco Morning Call*, Oct. 22, 1868)

"Under the American regime, on one side of the adobe [mission] grew up the Howard mansion, on the other St. Matthew's Episcopal Church, and across the creek the new town of San Mateo. The end of our building's history is easier to determine than its beginning. Americans were mildly curious about it, mentioned it sometimes as a landmark, and used it, if at all, for storing hay. Then came another earthquake. In 1868 the adobe was so badly damaged by the disastrous shock of that year that it had to be demolished for safety's sake. The site was cleared of all debris." (California Historical Society, Vol. XXIII, "The Hospice" or "Mission San Mateo" p. 255)

We presume the San Mateo Mission to have been damaged and weakened by the 1838 earthquake, but it is uncertain when it was abandoned. It is marked as "in ruins" on the 1838 diseño (Hendry and Bowman, 1945, p. 620). A squatter from New York, De Peyster, was using it as a roadhouse at the time of the 1868 earthquake.

[MMI 6-7, C, 129]

San Pablo

"The earthquake had the effect of making the San Pablo Creek rise above its usual height. The water was so muddy during Wednesday and part of yesterday, that cattle refused to drink it." (*Oakland Daily Transcript*, Oct. 23, 1868)

At the time of the 1868 earthquake, San Pablo was a substantial town. The Juan Bautista Alvarado 1½-story adobe was at the town center, the St. Paul Catholic Church was built in 1865, there was a wood-frame Baptist Church and school, and a number of hotels and saloons. Hendry and Bowman (1945, p. 534) locate and describe five other adobe houses, mostly owned by Alvarado's relatives. There is no report of damage to any of these structures. The most reasonable interpretation of the newspaper report is that a landslide or extensive bank failure occurred in San Pablo Canyon, but there was no damage to wood-frames, adobes, or chimneys in San Pablo.

[MMI 6-7, C, 130]

San Rafael

"A terrible shock of earthquake occurred here this morning, at five minutes to eight o'clock. It was more severe and continued longer, than the shock of October, 1865. The vibrations seemed to be from the southeast to the northwest, and lasted fully one minute. Great consternation prevailed among the inhabitants of this place. A portion of the chimney of the Court House was thrown down. We have felt eight distinct shocks today." (<u>San Francisco Morning Call</u>, Oct. 22, 1868) [MMI 6-7]

[MMI 6-7, C, 131]

San Ramon

"Particularly severe." (*Contra Costa Gazette*, Oct. 24, 1868) [MMI 7, C, 132]

Santa Clara

"Bricks displaced; chimneys thrown down; some walls cracked." (*Santa Clara News*, Oct. 24, 1868)

"Many chimneys shaken down." (Daily Bee, Oct.23, 1868) [MMI 7]

"During the smallpox epidemic in 1868 I was attending Santa Clara College. It was in October of that year, just before I came home at the end of the school year, that the great earthquake occurred. Previously there had been slight earthquakes throughout California, but no extensive damage was done until this 'quake in October, 1868.

In common with the rest of the scholars (at Santa Clara University) I had to follow the usual custom of attending chapel services, and that morning I attended the services in the college chapel. A few minutes after I came out of the chapel an earthquake occurred.

It was a peculiar temblor in this: That the earth seemed to roll in waves. You could see trees swaying to and fro and the violence of the shock threw me to the ground. However, connected with the 'quake was a circumstance which tends to make one believe in fatalism—that is, when your time comes to cross the divide there is no use of endeavoring to escape the decree.

Overhanging the seat that I always occupied in the chapel was an immense glass chandelier. This chandelier weighed fully two hundred pounds. It was composed of myriads of gas jets and was adorned with hundreds upon hundreds of beautiful glass pendants hanging down, which, when the chandelier was lit, presented a darling effect. This chandelier was shook from its fastenings and crashed down, smashing to pieces on the very seat that I always occupied at morning services. I often looked back on this happening, and wondered what strange providence was watching over me." (I.L. Mylar, California as I Saw It)

"In Santa Clara some damage was done to the brick buildings, but nothing serious." (*The Sonoma Democrat*, Oct. 24, 1868)

"At four minutes before eight this morning, severe shock of an earthquake. Motion, from the northeast to southwest. No lives lost. Some damage to the brick buildings, but nothing serious; all will easily be repaired. Plenty of chimneys shaken down. This is by far the heaviest shock ever experienced here." (*San Francisco Morning Call*, Oct. 22, 1868)

Santa Cruz

"Had a severe shock of earthquake here, at five minutes before eight this morning. The oscillations appeared to be from East to West. It was preceded by a loud, rumbling noise. The shock continued about fifteen seconds. Several brick buildings were badly cracked." (*San Francisco Morning Call*, Oct. 22, 1868)

"Second only to the earthquake of 1865. Vibration from northeast to southwest for 30 to 40 seconds." (T.G. Phelps; Holden, 1898)

[MMI 6, C, 134]

Santa Rosa/Windsor/Sebastopol/Bodega Corners

"The severest shock of earthquake ever felt in this place occurred here about eight o'clock this morning, continuing about ten seconds. Nearly all the brick buildings in town are more or less injured. Many chimneys were town down-the Court House sustaining the most damage of any building." (*San Francisco Morning Call*, Oct. 22, 1868)

"On Wednesday morning last, at a quarter to eight o'clock, Sonoma county was visited by a violent and somewhat protracted shock of earthquake, which caused the buildings to shake, and their occupants to make violent strides for the outside world. Even the "oldest inhabitants" were startled, and made to acknowledge that they had never felt the like before. The vibrations of the earth appeared to be at first from West to East, but suddenly changed from South to North, and continued for about one minute. The damage done to property is considerable, but not so great as we were at first disposed to believe it would be. In Santa Rosa the shock was not so strong as at Peraluma, but still some injury was done. The front wall of the Court-House was cracked, and the plastering overhead in the Court-room in many places, fell down. Mat. Roney's new brick was slightly cracked. The brick buildings belonging to Thos. Hood and E.T. Farmer & Co., with their walls joining, were separated at the top three or four inches, and there is yet about one inch of space between them. [MMI 6-7, B, 135] Iron shutters were thrown open by the force of the shock, and we learn that the iron doors of the store of E.T. Farmer & Co. could not be closed in the evening. In the Post Office, bottles containing medicines were destroyed to the value of \$10. Sacry & Hays had their show case broken by some bottles falling on it from the shelves above. J.S. Maxwell had some bottles thrown from his shelves and broken, and other parties met with slight losses. Our citizens were somewhat frightened, and rushed out into the streets for safety, and also to see for themselves what all the fuss was about. At Windsor [MMI 5-6, C, 136] it was lighter than in Santa Rosa, and the further North it went the lighter it got. No damage that we can hear of occurred above here. At Sonoma, Sebastopol [MMI 5, C, 137], Bodega Corners [MMI 5, C, 138], and elsewhere the shock was severe, but little damage was done." (Sonoma Democrat, Oct. 24, 1868)

Shingle Springs

"Not felt." (*Daily Bee*, Oct. 22, 1868) [MMI 1, C, 139]

Silver Mountain (Alpine County)

"No heavy shock." (*Alpine Chronicle*, Oct. 24, 1868) [MMI 2-3, C, 140]

Snelling

"Hard shock. No damage." (*Merced Herald*, Oct. 24, 1868) [MMI 4, C, 141]

Solano/Fairfield/Suisun

[Suisun] "Severe shock, north and south. Slight damage. A few brick buildings cracked." (*Solano Sentinel*, Oct. 22, 1868)

"People found it difficult to stand; a few articles thrown from shelves; wall of a building slightly cracked." (Weekly Solano Herald, Oct. 24, 1868)

"At 8 o'clock on last Wednesday morning a severe earthquake was experienced in Suisun and another two hours later. No damage of any consequence was done in this locality, except that many persons were considerably frightened." (*Solano Press*, Oct. 28, 1868)

"About eight o'clock yesterday morning a severe shock of an earthquake was experienced in this place. The vibration was nearly north and south. A general rush was made from the houses. But slight damage was done here. The Masonic building was cracked from top to bottom."

[MMI 6, C, 142]

"At Fairfield the court house was slightly damaged." (*Solano Sentinel*, Oct. 22, 1868) [Solano, associated with the County Seat, Fairfield] "Severest shock ever felt. Sudden upheaval, attended and followed for nearly a minute by a swaying in a north and south direction. No damage except cracks in walls." (*Sacramento Daily Union*, Oct. 24, 1868) [MMI 6, C, 143]

Sonoma

"At 8 o'clock this morning the people of Sonoma were aroused from their usual quietness by one of the most severe shocks of earthquake ever felt in this part of the country. The vibration was from southeast to northwest, and there was only one shock." (*Sacramento Daily Union*, Oct. 22, 1868)

[MMI 5-6, C, 144]

Sonora

"A slight shock." (Alta California, Oct. 22, 1868)

"A slight earthquake shock was felt here at four minutes past eight this morning." (<u>San Francisco Morning Call</u>, Oct. 22, 1868)

[MMI 2-3, C, 145]

Soquel

"In Soquel a few chimneys were dislocated." (T.G. Phelps; Holden, 1898) [MMI 6, C, 146]

Stockton

"I was then 13 years old. With a younger brother and a third boy I had, on the morning of October 21, 1868, gone to the edge of the tule marsh about 2 miles southwest of Stockton, to shoot ducks. The morning flight of birds was over, and we were returning home. My brother had his gun at the shoulder and was aiming at a meadow-lark when the earth movement commenced. The lark flew up without apparent cause, the gun moved up and down slightly, and I at once had a feeling that something unusual was happening. Within a few seconds the water-fowl, hidden from us by the tule but in countless numbers, rose with a noise like rolling thunder and took flight toward the west; while 0.5 mile to the east a small band of cattle, with heads down and tails in the air, were racing across the country. By this time the earthquake was probably at its maximum, and, looking east, I could distinctly see the ground's surface in wave-motion, the waves apparently moving across the line of vision. During the time this motion continued, it was not perceptible as a vibration to the sense of feeling. All three of us admitted, however, that the earth felt insecure under foot. We could detect no effect on the water surface of the swamp. Stockton escaped with only here and there a cracked brick wall." (C.E. Grunsky; Lawson, 1908)

"Severe shock this morning; several buildings badly shaken; any amount of chimneys destroyed." (*Sacramento Daily Union*, Oct. 22, 1868)

In a slough water was thrown into ebullition to a height of 2 feet for a few minutes." (*Stockton Gazette*)

"All ran out; clocks stopped; crockery thrown from shelves." (*Stockton Daily Gazette*, Oct. 21, 1868)

"Some plaster fell; water spilled from buckets; bells rang; some windows broken; some chimneys thrown down." (*Daily Evening Herald*, Oct. 21, 1868)

[MMI 6, C, 147]

"The shock at R. C. Sargent's farm was 'as severe as Stockton." (*Stockton Daily Independent*, Oct. 22, 1868)

[MMI 6, C, 148]

"Most severe shock ever felt. Vibration from northwest to southeast. West of Lodi and Woodbridge, shock was as severe as in Stockton." (Stockton Daily Independent)

[MMI 5-6, C, 149]

Sunol

The Suñol adobe is marked on the U.S. surveys of 1860 and 1862. "C. Hadsell acquired this part of the grant from Suñol in 1856 and for years lived in the house; and his ownership of this land was recognized in the partition of 1871. The building was razed when the water company took over the property." The timing suggests that it may have been damaged in the 1868 earthquake. The nearby adobe blacksmith shop was razed sometime

between 1885-1890, suggesting that it remained in use after the 1868 earthquake. Two other adobe houses, 1 and 4 mi south of Sunol, are marked on the U.S. surveys of 1862 and 1863, but are not marked on later surveys (Hendry and Bowman, 1945, p. 636-639). In sum, three of four adobe buildings in Sunol Valley might have been damaged by the 1868 earthquake, but there are no direct reports of damage. We note that Toppozada et al. (2001) locate M~6 earthquakes in the Sunol Valley in March and May of 1864.

[NIA, C, 150]

Suscol Creek (south of Napa)

Three adobes located on the south bank of Suscol Creek, 100' west of the Vallejo-Napa road, were "razed in 1869 by Governor Morris, the owner of the land at that time." (Hendry and Bowman, 1945, p. 409)

[NIA, C, 151]

Tuolumne

"Shock lasted 10 to 15 seconds. Severe." (*Tuolumne City News*, Oct. 23, 1868) [MMI 4, C, 152]

Ukiah

"The shock was apparently not felt in Ukiah..." (*Territorial Enterprise*, Oct. 22, 1868) [MMI 1, C, 153]

Vallejo/Mare Island

"Earthquake severe. Many chimneys down." (Alta California, Oct. 22, 1868)

"One chimney thrown down; considerable crockery broken." (*Solano Press*, Oct. 28, 1868)

"Having been up quite late the night before, working in the office, I was in bed at the time in the third story of the Metropolitan Hotel. I jumped out onto the floor but could only maintain my balance by holding on to the footboard of the bed. The building seemed to sway fully two feet with each oscillation, and I fully expected at each swing that the next would whip the top of the building off into the street. I stood near a window where I could look down on the street where I expected to land, and there in the middle of the roadway was a lady school teacher who boarded at the hotel. She was on her knees with hands clasped in the attitude of prayer. The impious thought crossed my mind that if I were in her place I would make a different use of my time. There were a number of shakes of much less violence during the day, but as no material damage had been inflicted, the community went on with its business and other affairs as if nothing had happened, beyond a little manifestation of nervousness on the part of some people when the succeeding shocks came." (F.A. Leach; California as I Saw It)

"The heaviest shock, or series of shocks of an earthquake ever felt in this city, was experienced on Wednesday morning last, some ten minutes before eight o'clock. The shock or shocks lasted several seconds, and were sufficiently severe to cause our citizens,

generally, to beat a precipitated retreat from their creaking and demoralized dwellings, and seek refuge in the open streets. Never were times more lively in this lively place, and never were houses more speedily vacated; never were our citizens so negligent of their toilet before appearing upon the streets, and never were our most staid, solid, and timehonored houses, great and small, known to be so much inclined to intoxication and tripping the light fantastic toe, as on that lively morning. The weather was not mirth inspiring in the least, for we never say a calmer, foggier and more unsentimental morning, or one less calculated to incite vigorous matutinal exercise. But, after all, our people were more scared than hurt, unless it may be that some, by reason of early rising and unwonted vigorous exercise in the damp air should prove too much for their feeble constitutions; but we have heard of no serious illness, there from, as yet. The only loss or damage sustained may be briefly summed up, thus: One chimney thrown down, some plastering displaced, some clocks, mirrors, lamps, pictures, and bottles, thrown down, and some crockery broken. Therefore, when we read the sad accounts of the loss of life and property in San Francisco, and other places around the bay, we are ready to congratulate our citizens at their lucky escape from the devastating effects of the great earthquake of 1868, and the most disastrous one ever experienced in the United States. At the Navy Yard, it is reported that one man had his leg broken by being jammed between the Island tug boat and the wharf, caused by the tidal wave succeeding the earthquake; but we suspect that the tidal wave was caused by the steam ferry boat "Lizzie," which was crossing the straits at the time. At all events, the bay was perfectly smooth and unruffled, so far as we could discover from our standpoint, less than one block distant. Some truly laughable and ludicrous scenes were enacted by some of our people on that occasion, but we have not space, today, for their recital. Several other shocks were felt during the forenoon, but caused little alarm and less damage." (Vallejo Semi-Weekly Recorder, Oct. 23, 1868)

"At seven minutes before eight o'clock on Wednesday morning, 21st last, the heaviest earthquake experienced in California since 1812, visited the central and most thickly settled portions of the State. We get a faint idea of the fearful shaking some localities were subjected to, from the fact that in Vallejo we felt the ground moving beneath our feet in the street, heard a building creak and groan, heard bottles fall from shelving, saw the wares suspended in a tin store vibrating many minutes after the shock, hear that water slopped from buckets and pitchers, clocks stopped, trees swayed as in a gale of wind, houses careened until strong nerved men thought they must surely fall; yet all our buildings, including one, two, and three story bricks, are entirely unharmed; while in Suisun, Petaluma, Benicia, Martinez, and Pacheco, buildings were cracked from top to bottom; ..." (Solano Advertiser, Oct. 22, 1868)

[MMI 6, B, 154]

"Mare Island Navy Yard experienced two severe shocks of earthquake this morning. Several chimneys were thrown down, and some of the buildings considerably shaken, but no serious damage was done, and no persons injured. Captain Mitchel, of the Navy informs the *Bulletin* that the ground shook so violently as almost to throw him off his feet, the shock being accompanied by a frightful rumbling sound. Several people took to the water, considering the stream much more safe than *terra firma*-which was *terra firma* no longer." (*San Francisco Morning Call*, Oct. 22, 1868)

[MMI 6-7, C, 155]

Virginia City

"The shock was apparently not felt in...Virginia City." (Lawson, 1908) [MMI 1, C, 156]

Visalia

"Shock felt by few persons." (*Delta*, Oct. 28, 1868) [MMI 2, C, 157]

Volcano

"The earthquake was distinctly felt at...Volcano." (*Alta California*, Oct. 25, 1868) [MMI 3, C, 158]

Walnut Creek

"Particularly severe." (Contra Costa Gazette, Oct. 24, 1868)

[misprinted as Walnut Springs] "... the chimneys are level with the roofs of the buildings..." (*Alta California*, Oct. 24, 1868)

The Pacheco adobe, ~1 mile east of Walnut Creek, was "razed in the latter part of the 1870's" suggesting that it was damaged by the 1868 earthquake. The Welch adobe, ~1 mile northwest of Walnut Creek, was razed after the 1906 earthquake, as the result of "injuries received in the earthquake..." (Hendry and Bowman, 1945, p. 478, 471) [MMI 7, C, 159]

Warm Springs/Warm Springs Landing

"The crack past along the foot-hills at an elevation of 350 to 450 feet from Niles southward, back of Mission San Jose, disappearing near the county line. In some places the fissure showed a fault of 10 to 12 inches." (H. Curtner; Lawson, 1908)

"At the Warm Springs and the Old Mission, it was very heavy; ..." (*Contra Costa Gazette*, Oct. 31, 1868)

1930 photographs and annotations indicate that the <u>Fulgenio Higuera 2-story adobe</u> was damaged by the earthquake, while the <u>Jose Higuera 1-story adobe</u> and the <u>Abelardo Higuera 2-story adobe</u> were not damaged. Hendry and Bowman (1945, p. 651-654) report that the Jabiel Higuera adobe was "wrecked by the 1868 earthquake and torn down." In addition, they report that by the 1900's, the nearby Gallindo adobe was neglected and badly cracked, but provide no further historical information.

[We note that there is some naming confusion among the various Higuera adobes, but depend upon the exhaustive Hendry and Bowman (1945) to conclude that two adobes in Warm Springs were not heavily damaged by the 1868 earthquake.]

The Warm Springs Hotel, which slipped on its foundation in the 1906 earthquake but was easily reset (F.E. Matthes; Lawson, 1908), was not damaged by the 1868 earthquake.

[MMI 7-8, C, 160]

A "warehouse slid into the bay" at Warm Springs Landing. (*Daily Bee*, Oct. 23, 1868) [MMI 7-8, C, 161]

Watsonville

"Chimneys and plastering suffered but little." (Santa Cruz Sentinel, Oct. 24, 1868) [MMI 6, C, 162]

Weaverville

"The shock was apparently not felt in ... Trinity County, or Oregon." (Lawson, 1908) [MMI 1, C, 163]

Wolfskill (south of Winters)

"In this county it was heaviest at Winters, where it demolisht John Wolfskill's house, a stone building, and did considerable other damage." (E.H. Eastham; Lawson, 1908) [NIA, 164]

Woodbridge

"At about 8 o'clock Wednesday morning a pretty severe earthquake shock was felt in this place. The vibration was apparently from north to south, and continued about twenty or thirty seconds. The first indication of its approach was a slight rumbling sound, as of something rolling along the sidewalk, apparently coming from the west. Nothing to be compared with it has occurred here. We are happy to be able to say, however, that no damage was done to any of the builings in this village." (*Woodbridge Messenger*, Oct. 24, 1868)

In Woodbridge, "... the occupants of all the houses ran outdoors. Many experienced a sudden sickness." (*Stockton Daily Independent*, Oct. 22, 1868)

[MMI 5-6, C, 165]

Woodland

"Two severe shocks, from southeast to northwest, lasting a minute." (*Alta California*, Oct. 22, 1868)

[MMI 4, C, 166]

Yreka

"Not felt." (*Territorial Enterprise*, Oct. 22, 1868) [MMI 1, C, 167]

1 Alameda

- 2 Alamo
- 3 Alacatraz Island
- 4 Alvarado
- 5 Alviso
- 6 Antioch
- 7 Auburn
- 8 Belmont
- 9 Benicia
- 10 Berkeley, Deaf and Dumb Asylum
- 11 Berkeley, Jacobs Wharf
- 12 Berkeley, Domingo Peralta Adobe
- 13 Bolinas
- 14 Briones Valley
- 15 Brooklyn
- 16 Calaveras Valley
- 17 Carson City
- 18 Carson City, Gold Hill
- 19 Castro Valley
- 20 Centerville
- 21 Chico
- 22 Clayton, Somersville
- 23 Clayton, Nortonville
- 24 Clayton
- 25 Colma
- 26 Colusa
- 27 Danville
- 28 Danville, Woodside Ranch
- 29 Decoto
- 30 Dixon Landing
- 31 Downieville
- 32 Dublin Canyon
- 33 Dublin, Jose Amador adobe
- 34 Eagle Glen
- 35 Fitchburg
- 36 Folsom
- 37 Frenchtown
- 38 Gilroy
- 39 Grass Valley
- 40 Guerneville
- 41 Hayward
- 42 Hills behind Hayward
- 43 Healdsburg
- 44 Hollister
- 45 Irvington
- 46 Jacinto
- 47 Jackson

- 48 Jarvis Landing
- 49 Knight's Landing
- 50 Laddsville
- 51 Lafayette
- 52 Lakeport
- 53 Latrobe
- 54 Lincoln
- 55 Linden
- 56 Livermore Valley
- 57 Lower Lake
- 58 Mariposa
- 59 Markleeville
- 60 Marsh House
- 61 Martinez
- 62 Marysville
- 63 Michigan Bar
- 64 Milpitas
- 65 Milpitas, Boots' Ranch
- 66 Mission San Jose
- 67 Mohawk Valley
- 68 Monterey
- 69 Mount Eden
- 70 Mountain View
- 71 Mowry's Landing
- 72 Napa
- 73 Natoma Vineyard
- 74 Nevada City
- 75 You Bet
- 76 Chalk Bluff
- 77 Niles
- 78 Niles Canyon
- 79 Oakland, Taylor Wharf
- 80 Oakland, Railway Drawbridge
- 81 Oakland, Broadway and 8th
- 82 Oakland, Alden Residence
- 83 Oakland, Emery Residence
- 84 Oakland, Hays Residence
- 85 Oakland, Mountain View Cemetery
- 86 Oakville
- 87 Orinda, Moraga Adobe
- 88 Oroville
- 89 Pacheco
- 90 Novato, Pacheco Ridge
- 91 Pescadero
- 92 Petaluma
- 93 Pine Grove

- 94 Placerville
- 95 Pleasanton
- 96 Pope Valley
- 97 Purisima
- 98 Red Dog
- 99 Redwood
- 100 Fair Oaks, Selby Residence
- 101 Redwood Canyon
- 102 Reno
- 103 Roberts Landing
- 104 Sacramento
- 105 San Antonio
- 106 San Francisco, Business District on Made Land
- 107 San Francisco, Folsom Street Wharf
- 108 San Francisco, Market and Battery
- 109 San Francisco, Natoma and New Montgomery
- 110 San Francisco, Howard Street to Mission Bay
- 111 San Francisco, Fourth and Bryant
- 112 San Francisco, Lincoln School
- 113 San Francisco, Mission Street Public School
- 114 San Francisco, Union Square
- 115 San Francisco, Fort Point
- 116 San Francisco, North Point
- 117 San Francisco, Cliff House
- 118 San Francisco, Telegraph Hill
- 119 San Francisco, Russian Hill
- 120 San Francisco, Stockton and Pacific
- 121 San Jose
- 122 San Jose, Schallenberger's and Murphy's Residences
- 123 San Juan Bautista
- 124 San Leandro
- 125 Hills SE of San Leandro
- 126 San Leandro, Ignacio Peralta's Adobes
- 127 San Lorenzo, Gansberger Residence
- 128 San Luis Obispo
- 129 San Mateo
- 130 San Pablo
- 131 San Rafael
- 132 San Ramon
- 133 Santa Clara
- 134 Santa Cruz
- 135 Santa Rosa
- 106 G
- 136 Santa Rosa, Windsor
- 137 Santa Rosa, Sebastopol
- 138 Santa Rosa, Bodega Corners
- 139 Shingle Springs

- 140 Silver Mountain
- 141 Snelling
- 142 Suisun
- 143 Fairfield
- 144 Sonoma
- 145 Sonora
- 146 Soquel
- 147 Stockton
- 148 Stockton, R.C. Sargent's Farm
- 149 Stockton, West of Lodi and Woodbridge
- 150 Sunol
- 151 Suscol Creek
- 152 Toulumne
- 153 Ukiah
- 154 Vallejo
- 155 Mare Island
- 156 Virginia City
- 157 Visalia
- 158 Volcano
- 159 Walnut Creek
- 160 Warm Springs
- 161 Warm Springs Landing
- 162 Watsonville
- 163 Weaverville
- 164 Wolfskill
- 165 Woodbridge
- 166 Woodland
- 167 Yreka