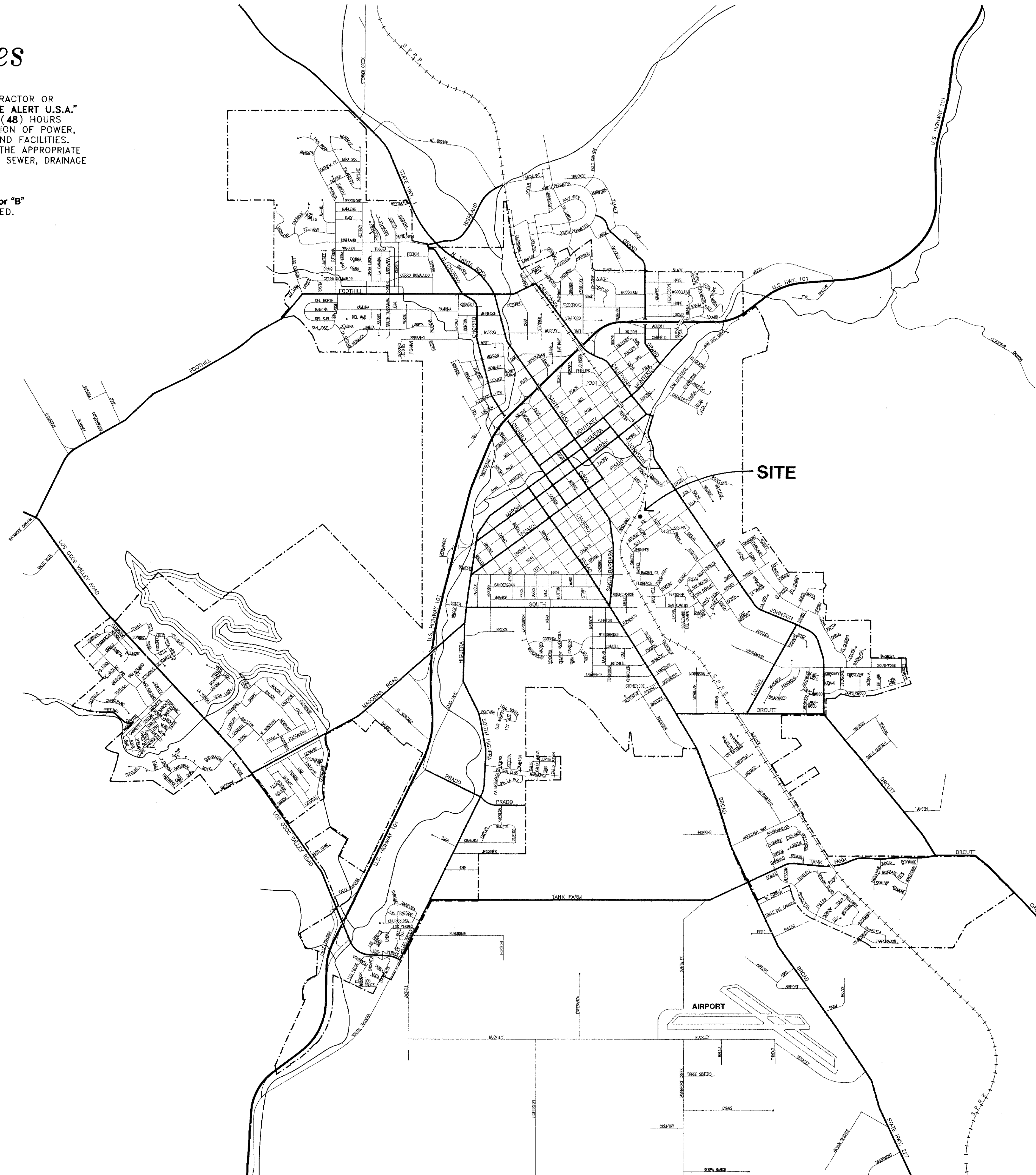


# general notes

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR OR PERMITTEE TO CONTACT "UNDERGROUND SERVICE ALERT U.S.A." TOLL FREE AT 1-800-642-2444 FORTY-EIGHT (48) HOURS PRIOR TO START OF CONSTRUCTION, FOR LOCATION OF POWER, TELEPHONE, OIL AND NATURAL GAS UNDERGROUND FACILITIES. CONTRACTOR OR PERMITEE SHALL ALSO CONTACT THE APPROPRIATE AGENCY FOR THE LOCATION OF CABLE T.V., WATER, SEWER, DRAINAGE OR UNDERGROUND FACILITIES.
2. THE CONTRACTOR SHALL POSSESS A CLASS "A" or "B" LICENSE AT THE TIME THE CONTRACT IS AWARDED.



# index to plans

- SHEET 1 ..... COVER
- SHEET 2 ..... SITE PLAN  
TANK/TOWER ELEVATION  
CONSTRUCTION NOTES
- SHEET 3 ..... TOWER FRAMES  
ROOF FRAMING PLAN  
ROOF SECTION
- SHEET 4 ..... DETAILS



**RECORD DRAWINGS**

**RAILROAD WATER TOWER RESTORATION**  
1011 RAILROAD AVE.  
SAN LUIS OBISPO, CALIFORNIA

CITY PLAN NO. **91-00**      05-SLO-0-SLO  
STPL-5016(008)

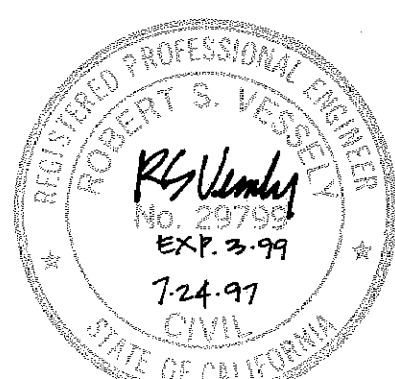
APPROVED BY

*Wayne A. Peterson* 9-16-97  
Wayne A. Peterson, City Engineer  
No. 18566

DATE 7/20/90

FILE NO./LOCATION  
0045 B

SHEET  
**1** OF 4



**ROBERT S. VESSELY**  
CIVIL & STRUCTURAL  
ENGINEERING

743 Pacific St., Suite B  
San Luis Obispo, CA 93401  
805/541-2003

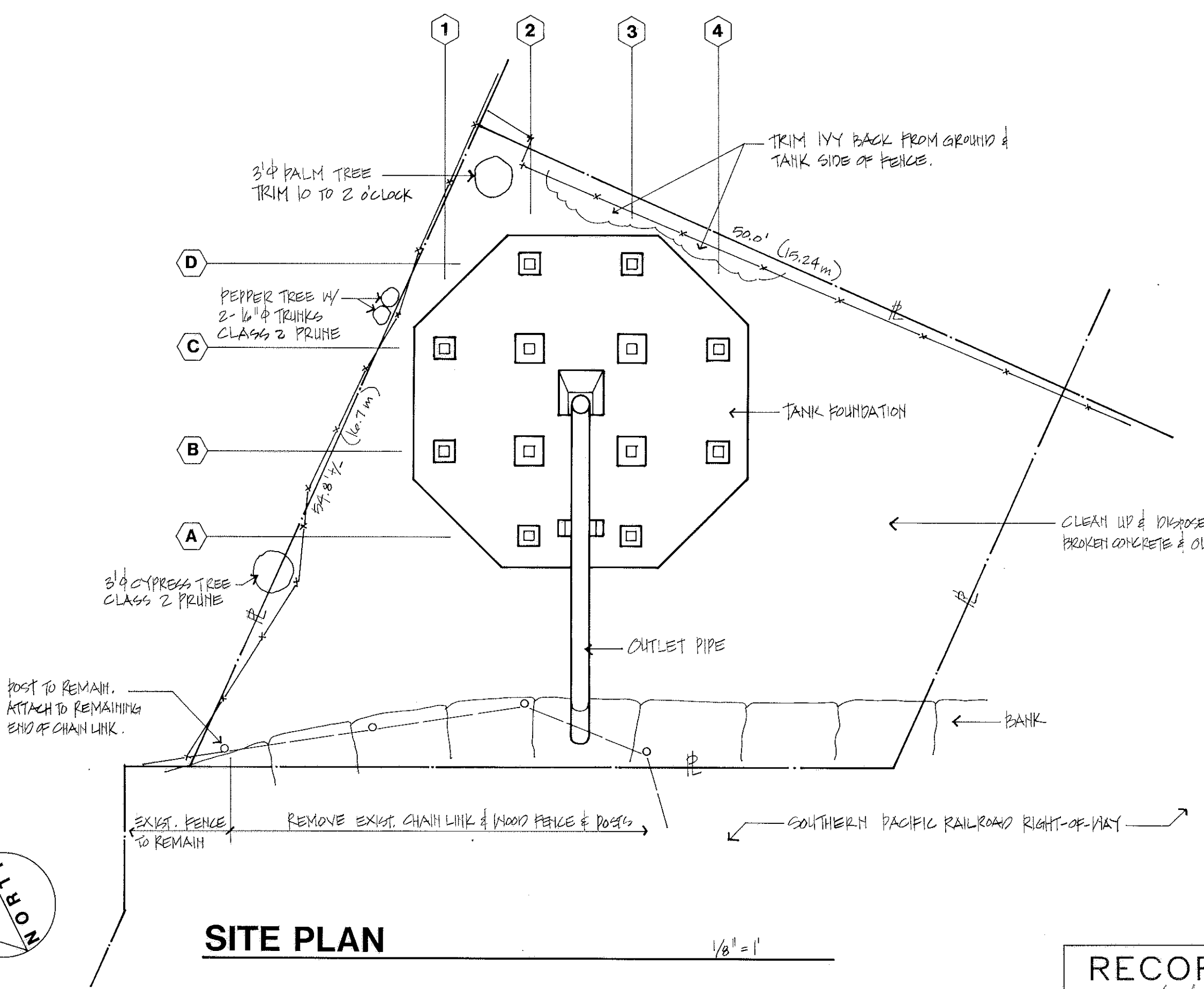
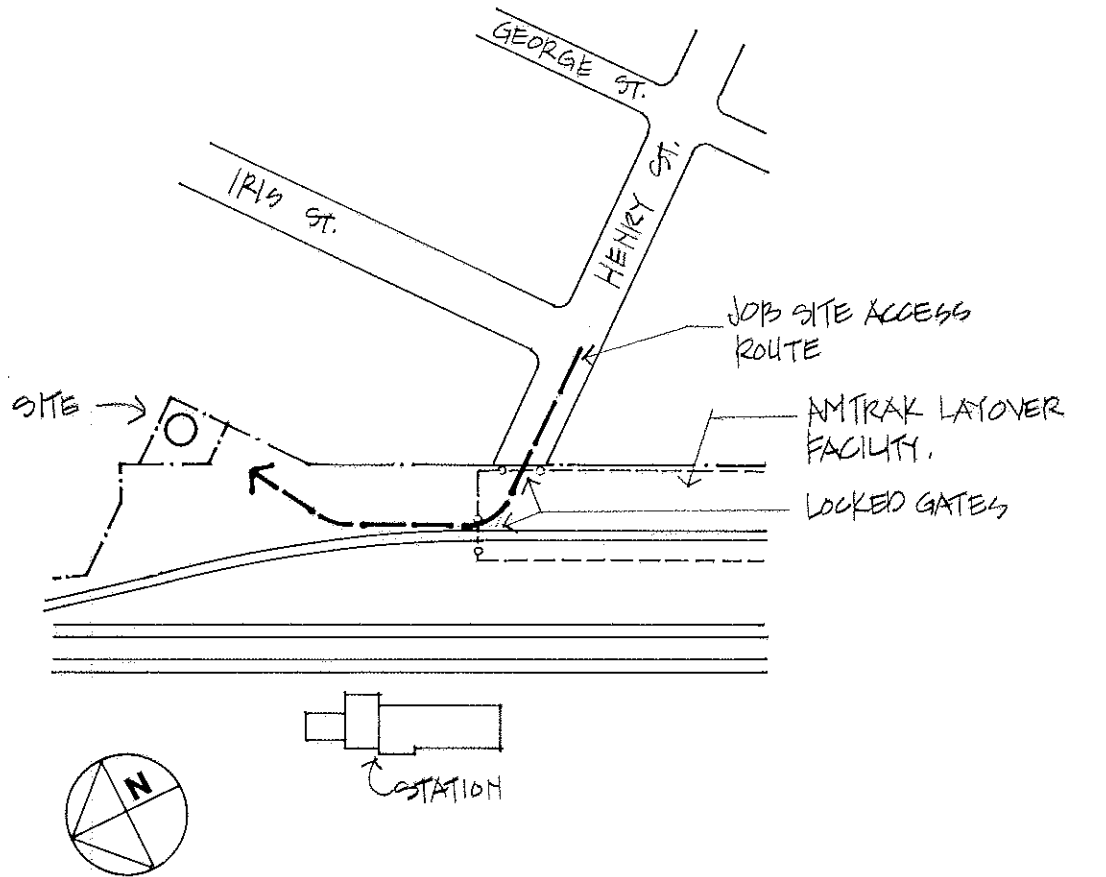
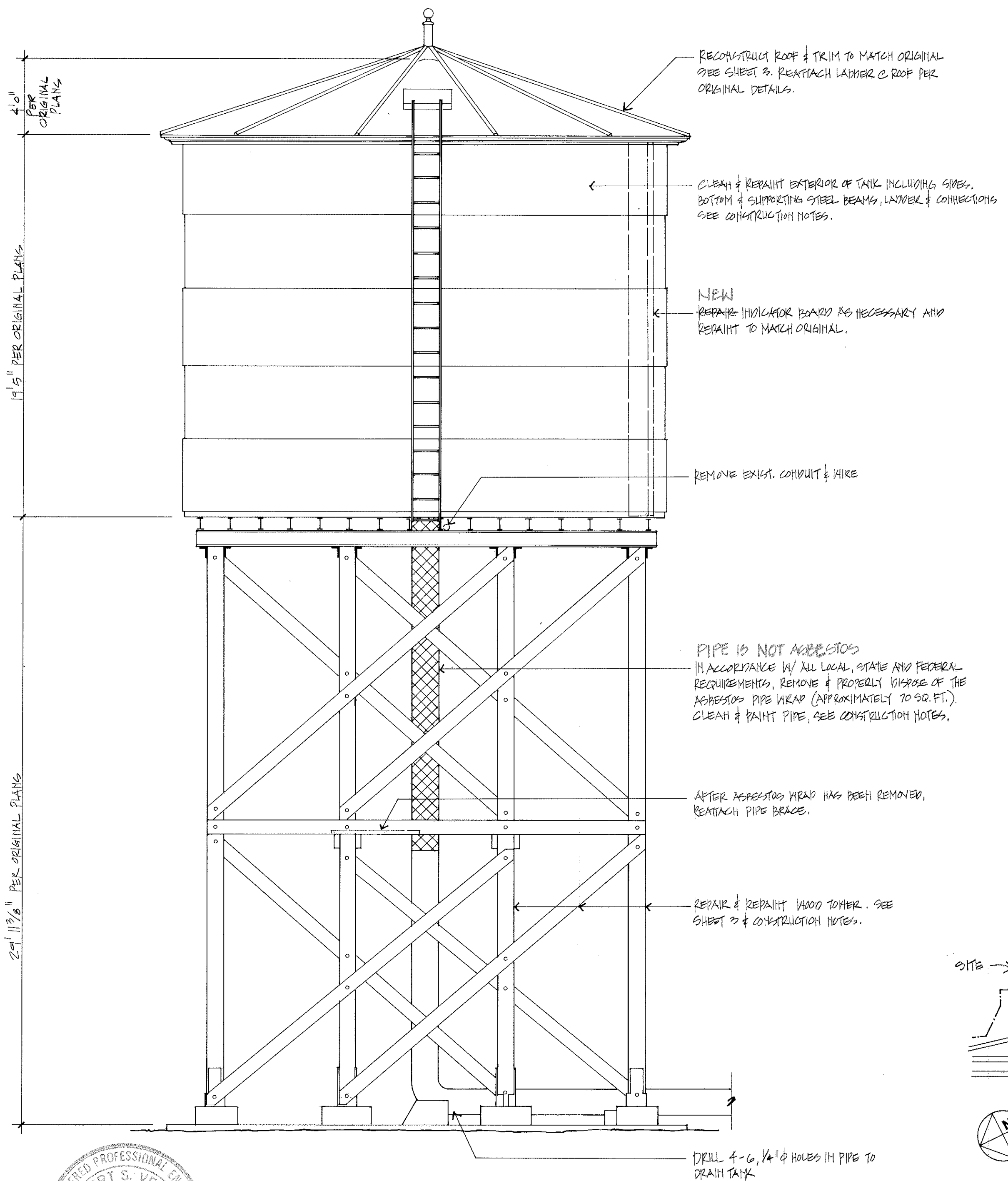
### CONSTRUCTION NOTES

1. **Site Work**
  - 1.1. Under the direction of the City's Arborist, trim the trees around the tank. The pepper and cypress trees are to receive a Class 2 pruning and the palm tree is to be pruned from 10 o'clock to 2 o'clock. The purpose of this is to make room for the work and to protect the tank and tower.
  - 1.2. Remove and dispose of the ivy that is growing on the property from the lot to the east.
  - 1.3. Mow or otherwise cut and remove all weeds from the site.
  - 1.4. Remove and dispose of the chain link fence and wood posts at the west side of the property. If arrangements are made with the neighboring property owner to access the tank site from the adjacent property, remove and store whatever fencing is in the way for replacement after the project is completed.
  - 1.5. Clean up and dispose of all trash, trimmings, scrap wood, broken concrete and old fencing from the site.
2. **Asbestos removal**
  - 2.1. The upper portion of the drain pipe under the tank is wrapped with a suspected asbestos containing insulation. The area covered is approximately 70 square feet. A contractor who is specifically trained and certified to do so shall remove, package and dispose of the insulation in accordance with all applicable local, State and Federal regulations. Prior to removal, a permit is to be obtained from the County Air Pollution Control District.
3. **Tower Repair.**
  - 3.1. As shown in the Tower Elevations on Sheet 3, several of the tower posts are to be repaired by the installation of Stitch Plates and bolts and some of the diagonal braces are to be replaced. The Stitch Plates and bolts are to be installed as follows:

- 3.1.1. Clean off the surface of the post in the area to be strengthened with a wire brush and clean out any splits or holes with a brush and compressed air.
  - 3.1.2. Drill the post and loosely place the stitch plates and/or bolts.
  - 3.1.3. With a brush or squirt bottle, apply an epoxy consolidant such as ConServ 100 or Arbitron LiquidWood into the splits and holes in the post. Before the consolidant has completely hardened, apply an epoxy adhesive putty such as ConServ 500 or Arbitron WoodEpoxy working the putty as deep into the cracks as possible. Immediately tighten all bolts starting from those at the center of the repair and working outward. Remove any excess putty from the surface of the post.
- 3.2. Remove and replace the diagonal braces as shown on Sheet 3. Do not remove all the braces along any frame line at one time in order to avoid instability of the tower. Cut the slots for the split rings and bore the holes for the bolts accurately and fit the new braces according to the details. Note that the ends of the new braces will extend beyond the posts where as the existing braces do not. After fabrication of the new braces, prime all cut surfaces with the oil based stain described below.
  - 3.3. Carefully inspect all bolts in the tower by attempting to tighten them. (Note, some of the bolts near the bottom of the posts were badly deteriorated even though the head and nut appeared to be intact). Remove and replace any bolts that are damaged.
  - 3.4. There are approximately nine bolts missing from the angles that connect the post tops to the base of the tank. Replace each with a bolt and nut to match the original. Check all the other similar bolts and tighten or replace them as necessary.

4. **Roof Replacement.**
  - 4.1. Carefully remove the remains of the existing roof taking note of the existing details such as the attachment of the rafters to the edge of the tank, the attachment of the finial and the arrangement of the trim pieces at the eaves. Save the bolts and nuts that attach the rafters to the tank for reuse.
  - 4.2. Reconstruct the roof framing, roof covering and trim in accordance with the plan at Sheet 3 and Details at Sheet 4. All lumber, with the exception of the rafters and purlins is to be primed at all sides and ends with an oil based primer such as White Line #1920, Exterior Oil Base Primer (Note, to each gallon of this product, add a quart of Penetrol and a pint of mineral spirits).
  - 4.3. If the existing finial is sound, even if it is weathered, it should be reused. If necessary it is to be treated with an epoxy consolidant such as ConServ 100 or Arbitron LiquidWood. If, in the opinion of the engineer, it is too badly deteriorated to be reused, it shall be duplicated in clear heart redwood and primed as noted above for the other lumber.
  - 4.4. All flashing used on the roof is to be fabricated of galvanized sheet steel, at least 24 gage, and shall be primed with an appropriate primer.
5. **Paint and Finish.**
  - 5.1. The roof and trim are to be painted with 2 coats an acrylic latex exterior paint such as Pratt and Lambert Aqua Royal exterior house paint. The color shall be black or dark gray, satin finish and shall be approved by the engineer prior to application.
  - 5.2. The "Indicator Board" along the west side of the tank is to be cleaned, repaired as necessary and repainted to match its original appearance. The depth lines and numbers are faded but still visible for reference. The Board may be removed for restoration and replaced at the discretion of the contractor.  
NEW INDICATOR BOARD.

- 5.3. The paint on the steel portions of the tank and tower may contain lead. All work involving removal and disposal of this paint shall be carried out in strict accordance with all applicable local, State and Federal regulations, guidelines and the specifications for this job. The exterior of the tank including the sides, bottom, supporting steel beams, the ladder, all steel connectors and the upper portion of the drain pipe shall be "Hand Tool Cleaned". All scrapings shall be collected and properly disposed of.
- 5.4. All of the exposed steel is to be prepared and recoated with an epoxy or polyurethane system in strict accordance with the manufacturers recommendations. The color shall be black or dark gray, satin finish and shall be approved by the engineer prior to application.
- 5.5. The inside of the tank is to be cleaned of silt and debris and then lightly pressure washed. Four to six, 1/4 inch diameter holes are to be drilled into the drain pipe near its base to allow drainage and to prevent water from collecting in the tank in the future. When thoroughly dry, coat the interior of the tank with a rust-converting primer and two coats of an oil based paint. The color is to be black or dark gray.
- 5.6. The wood portions of the structure are to be cleaned by high pressure water blasting and then scraped and sanded as necessary to achieve a sound surface. After the wood has thoroughly dried, two coats of an oil based, solid color stain are to be applied. The color shall be black or dark gray and shall be approved by the engineer prior to application.
- 5.7. Extreme care shall be taken to avoid dripping paint or stain on the concrete piers of slab. If such drips do occur, they shall be removed and the concrete left clean and unstained.



REGISTERED PROFESSIONAL ENGINEER  
**ROBERT S. VESSELY**  
 No. 297  
 EXP. 3-99  
 7-24-97  
 CIVIL  
 STATE OF CALIFORNIA

743 Pacific St., Suite B  
 San Luis Obispo, CA 93401  
 805/541-2000

### TANK & TOWER ELEVATION

### ACCESS PLAN

### SITE PLAN

RECORD DRAWING  
 DATE: 11/2/2000 BY: SR



**RAILROAD WATER TOWER RESTORATION**  
 RAILROAD AVE.  
 SAN LUIS OBISPO, CALIFORNIA

CITY PLAN #91-00

APPROVED BY  
 Wayne A. Peterson  
 City Engineer  
 No. 18598

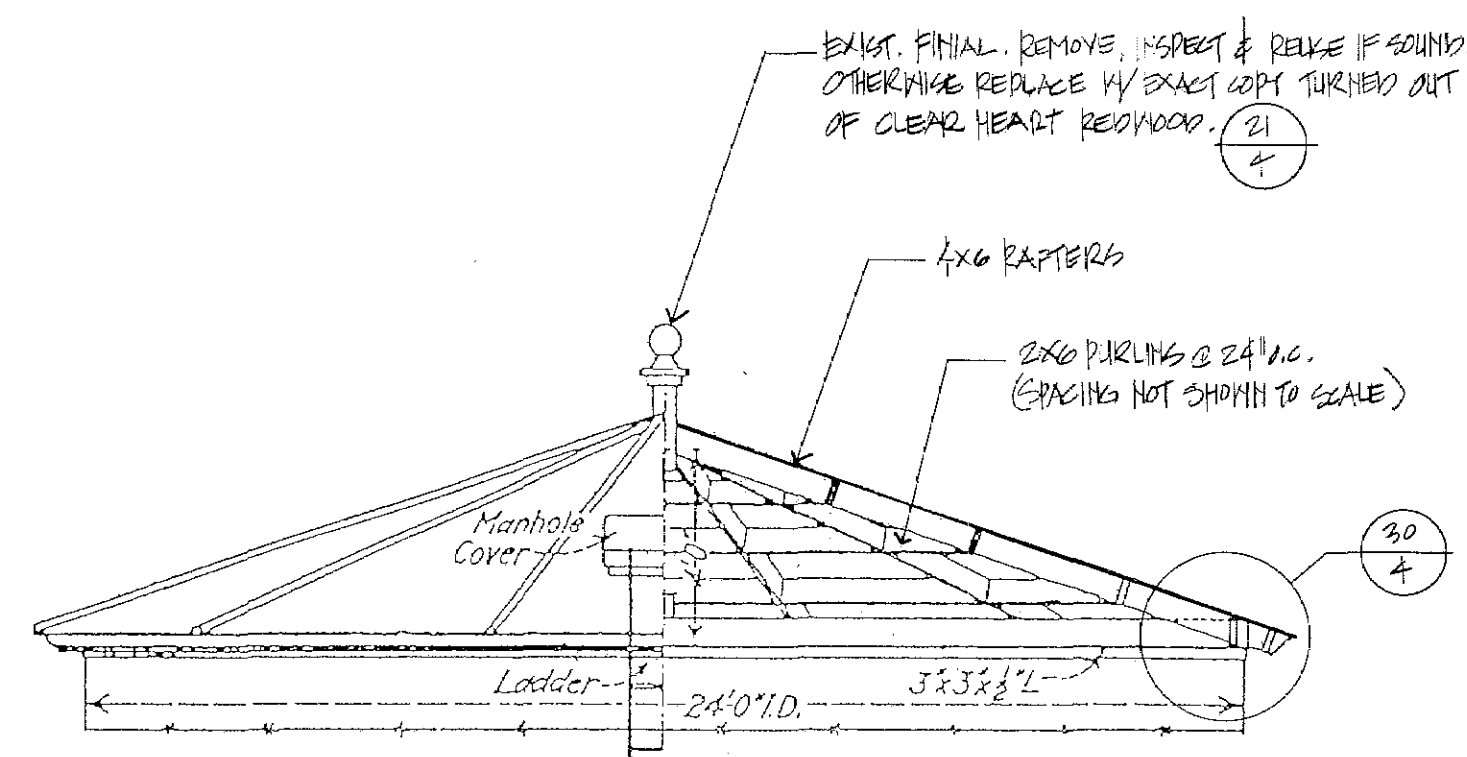
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 DESIGNED BY: RSN  
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 CHECKED BY:  
 APPROVED BY:

**SITE PLAN**  
**TANK/TOWER ELEVATION**  
**CONSTRUCTION NOTES**

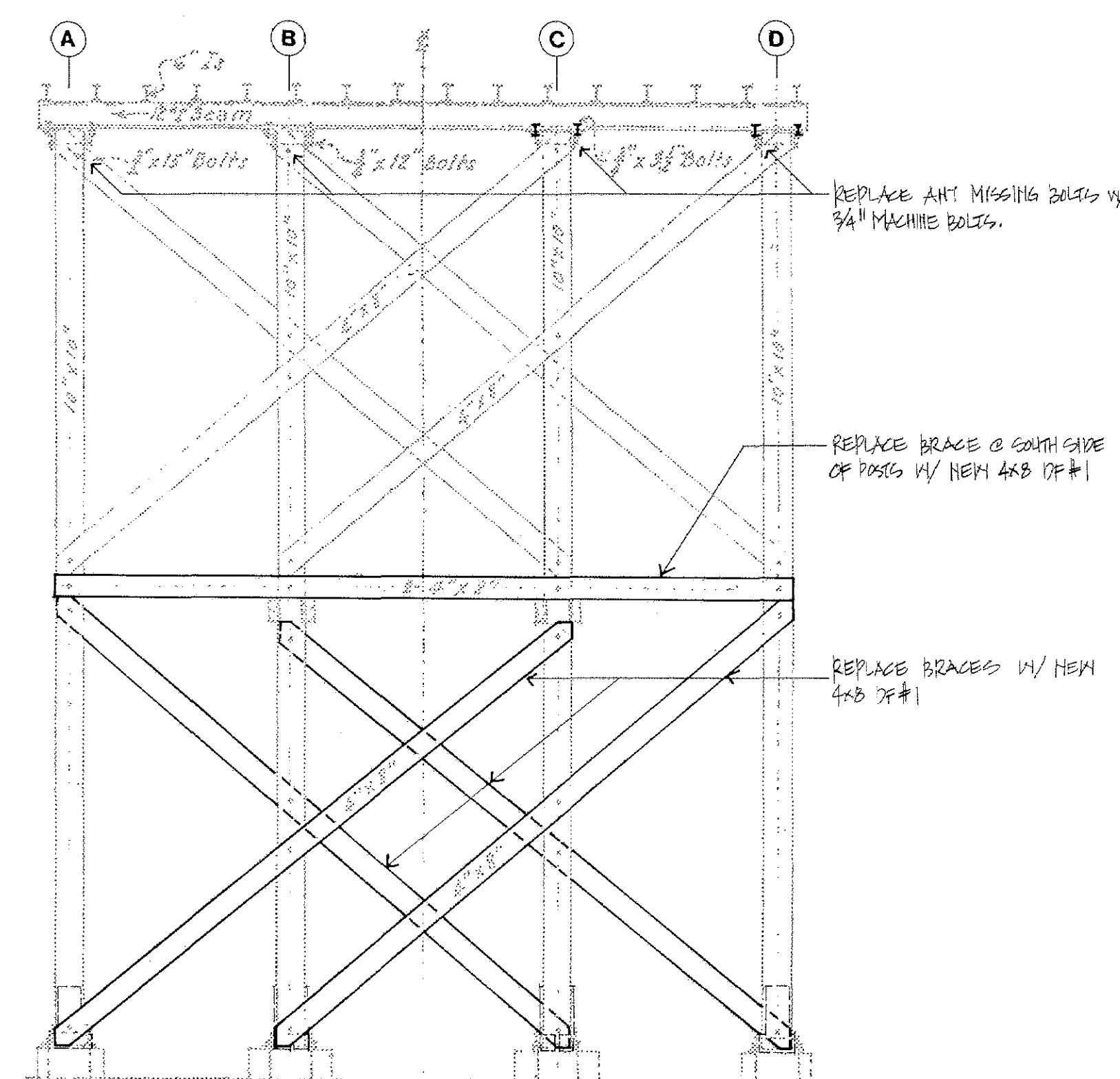
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**91-00**

FILE NO./LOCATION  
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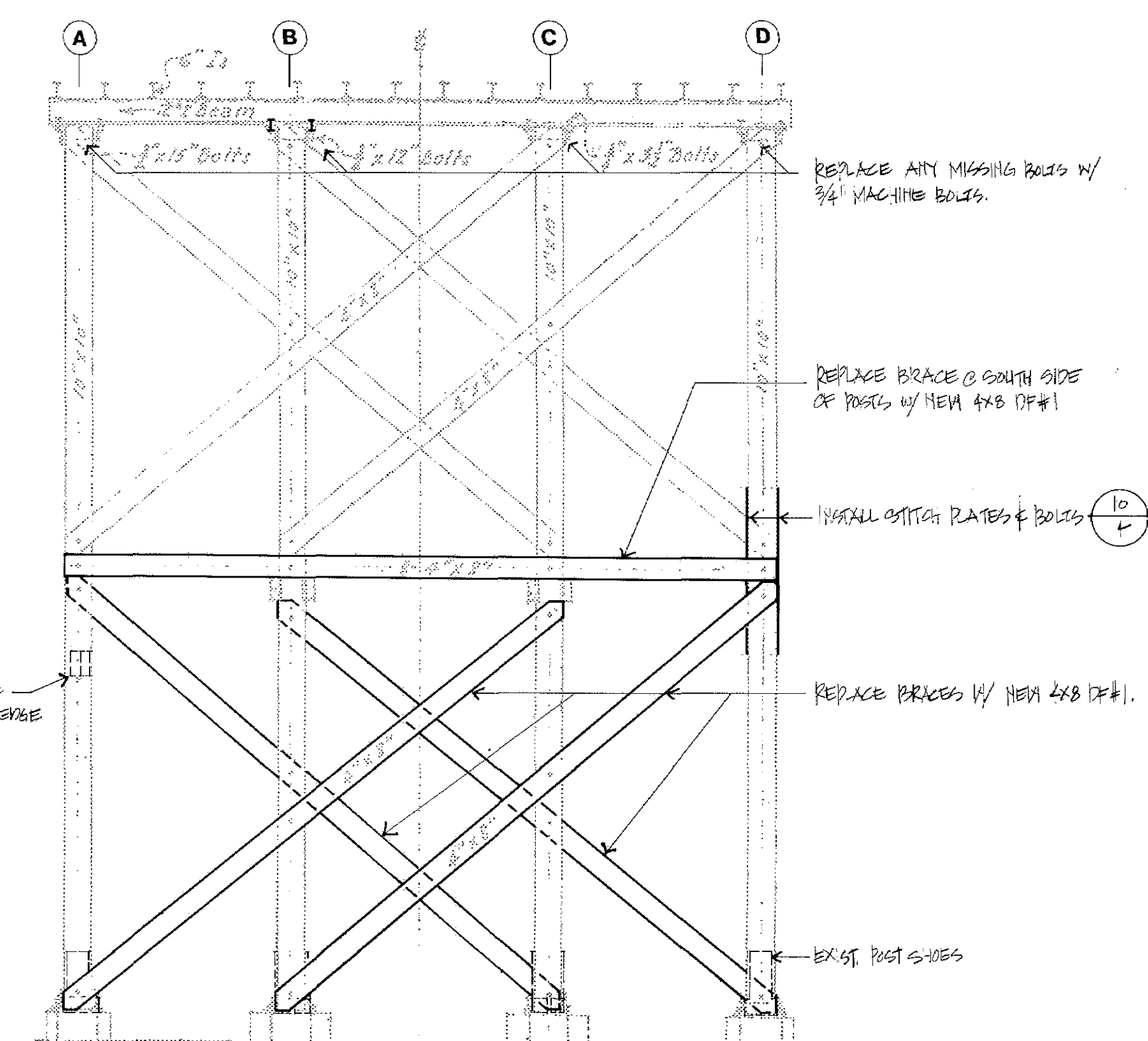
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**2 OF 4**



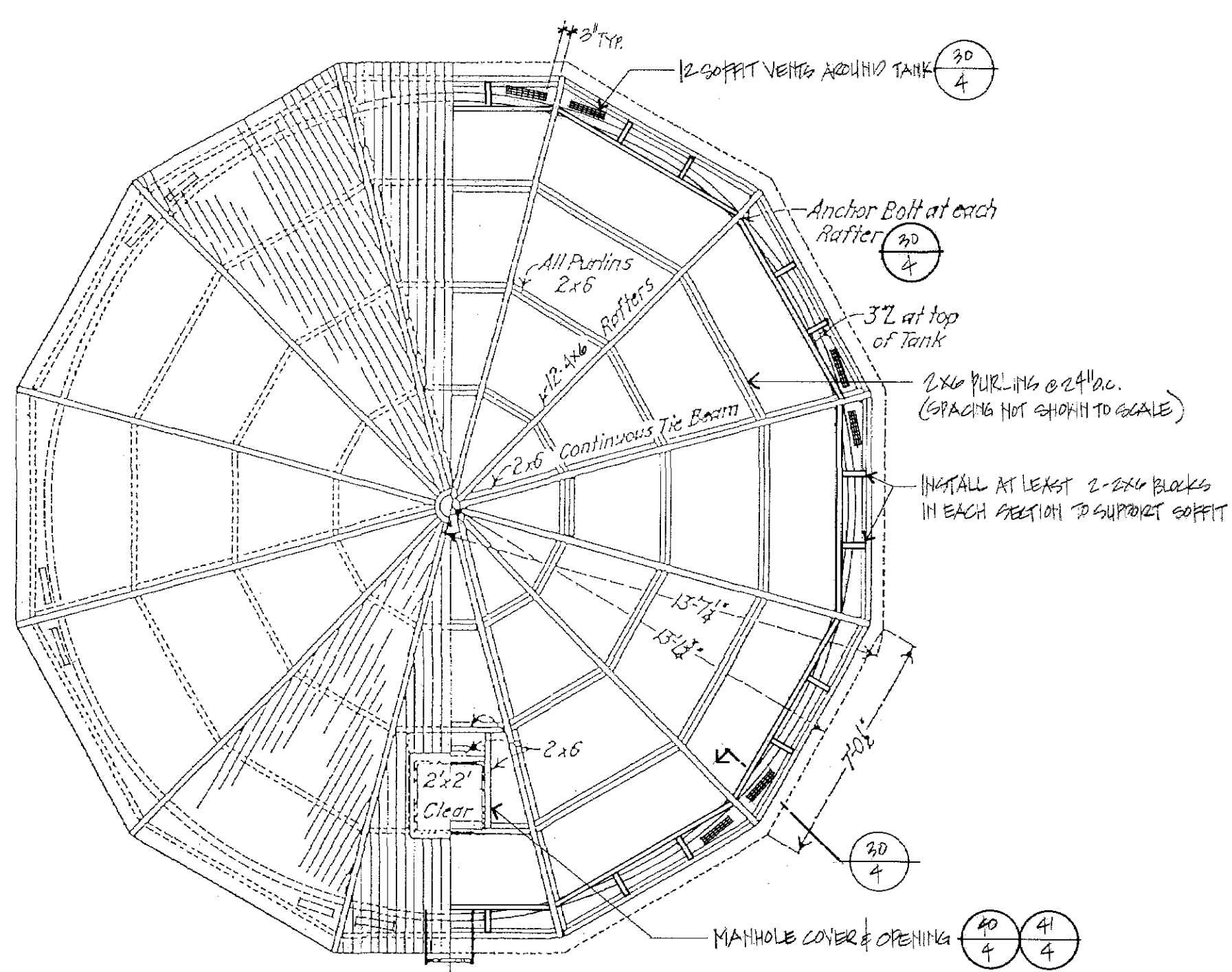
**ROOF ELEVATION/SECTION** 1/4"=1'  
FROM ORIGINAL PLANS



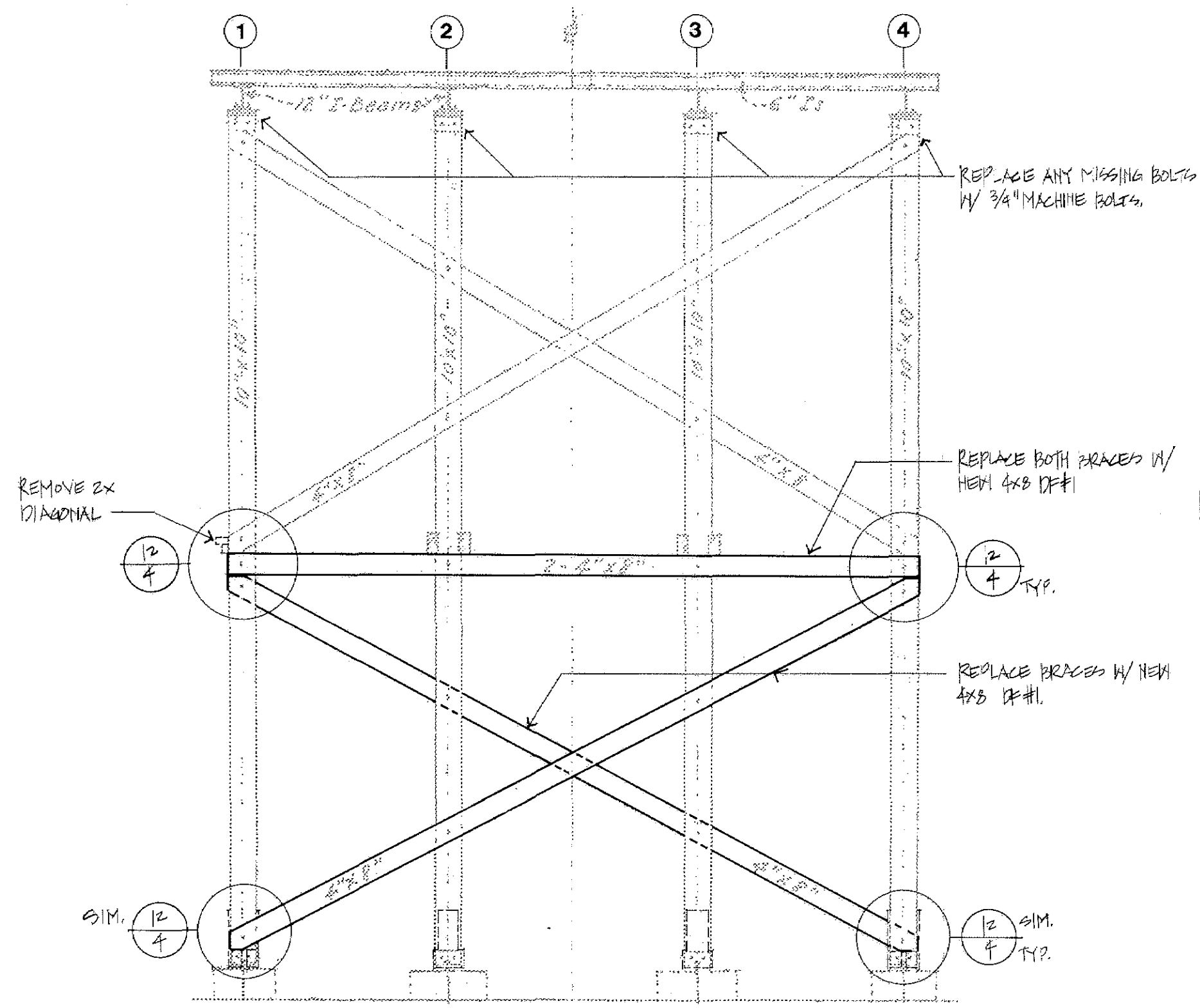
**FRAME "2" (AS SEEN FROM SOUTH)** 1/4"=1'  
FROM ORIGINAL PLANS



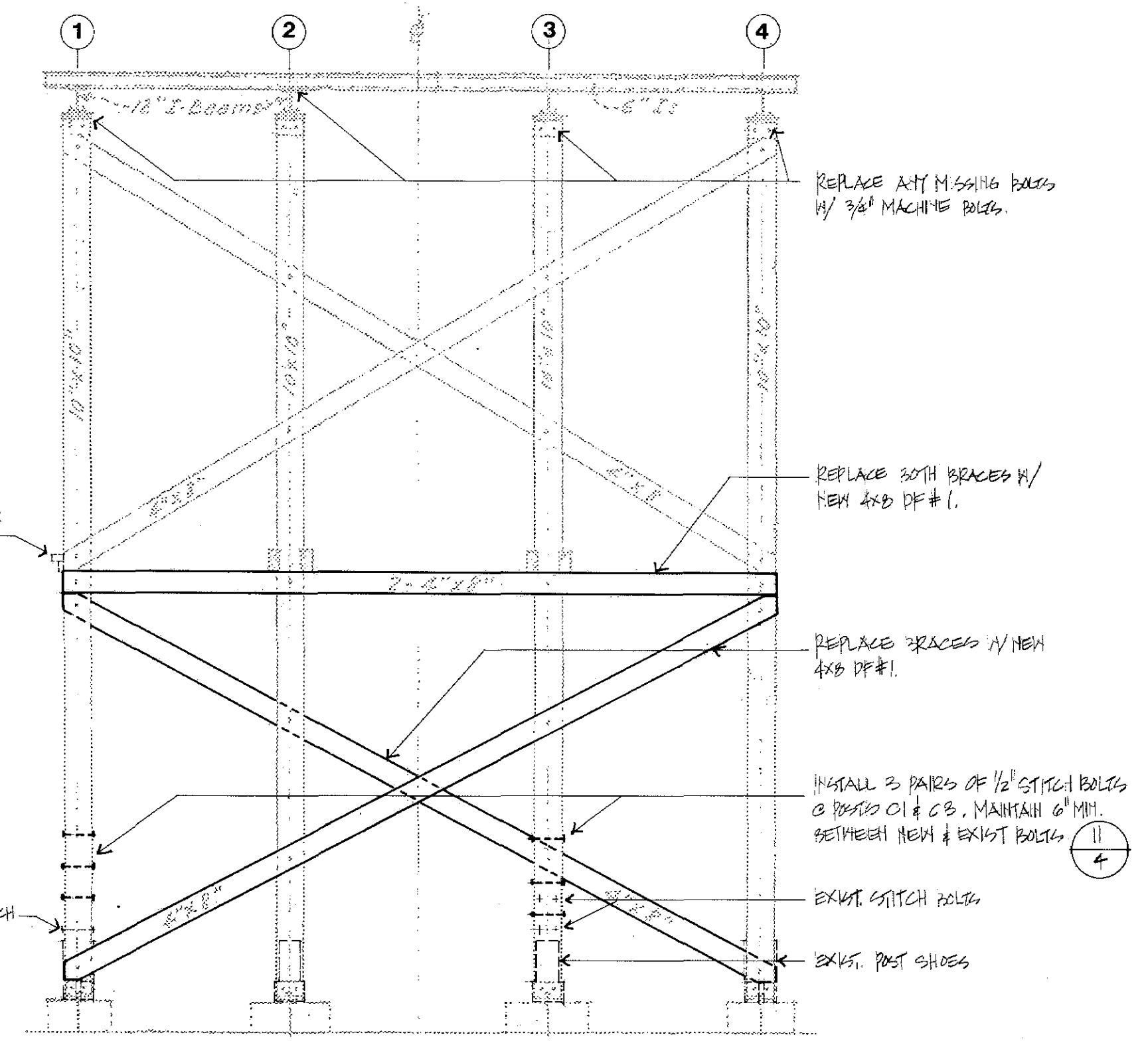
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FROM ORIGINAL PLANS



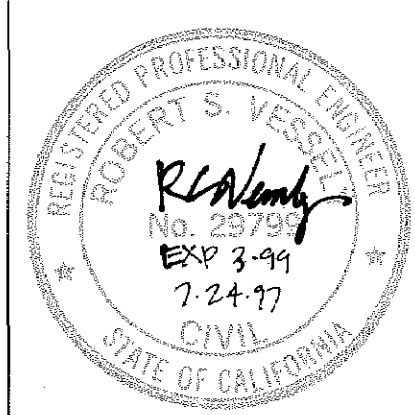
**ROOF PLAN/FRAMING PLAN** 1/8"=1'  
FROM ORIGINAL PLANS



**FRAME "B" (AS SEEN FROM WEST)** 1/4"=1'  
FROM ORIGINAL PLANS



**FRAME "C" (AS SEEN FROM WEST)** 1/4"=1'  
FROM ORIGINAL PLANS



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**city of san luis obispo**

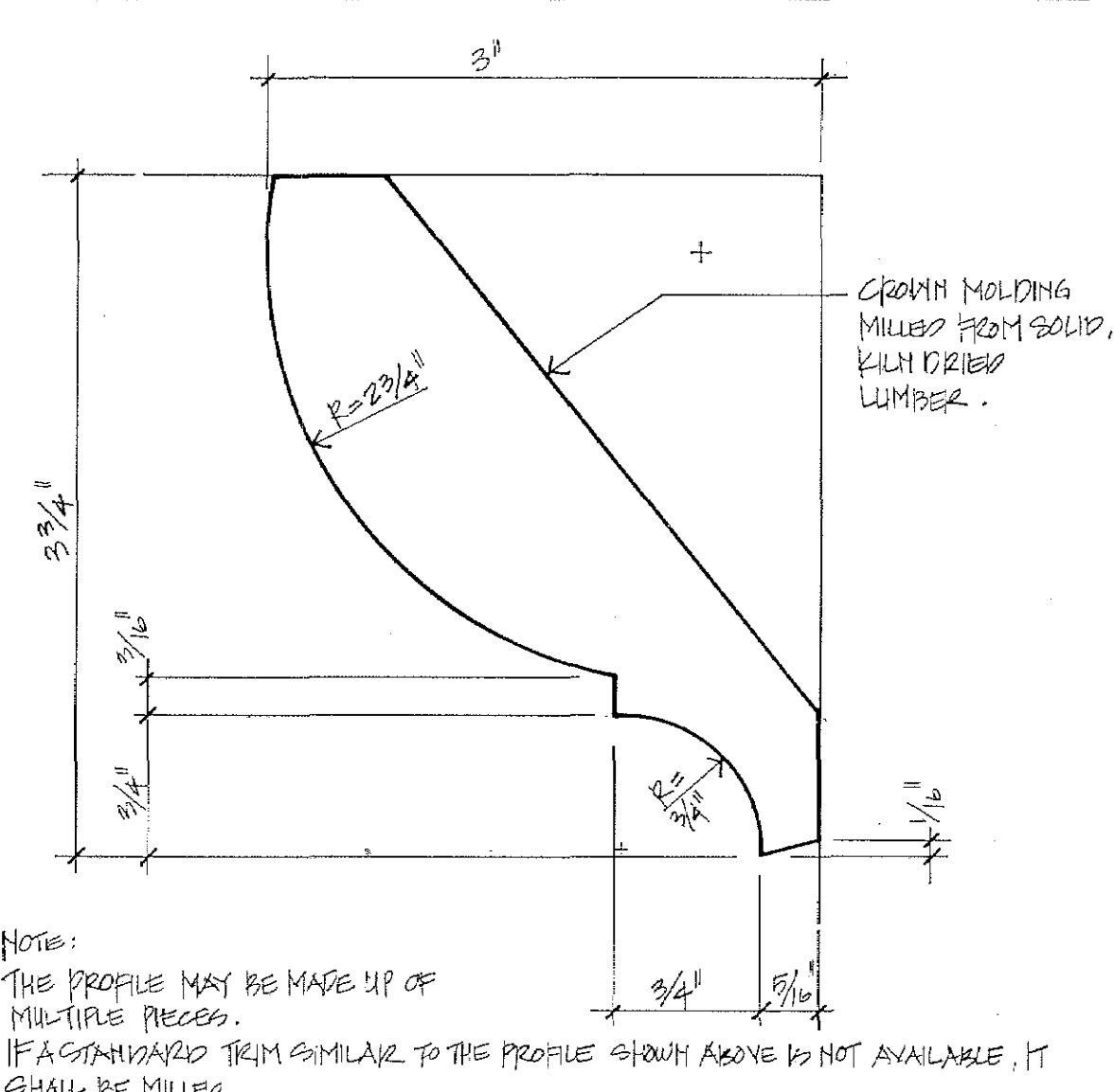
**RAILROAD WATER TOWER RESTORATION**  
RAILROAD AVE.  
SAN LUIS OBISPO, CALIFORNIA  
CITY PLAN #91-00

APPROVED BY  
Wayne A. Peterson  
City Engineer  
No. 18598

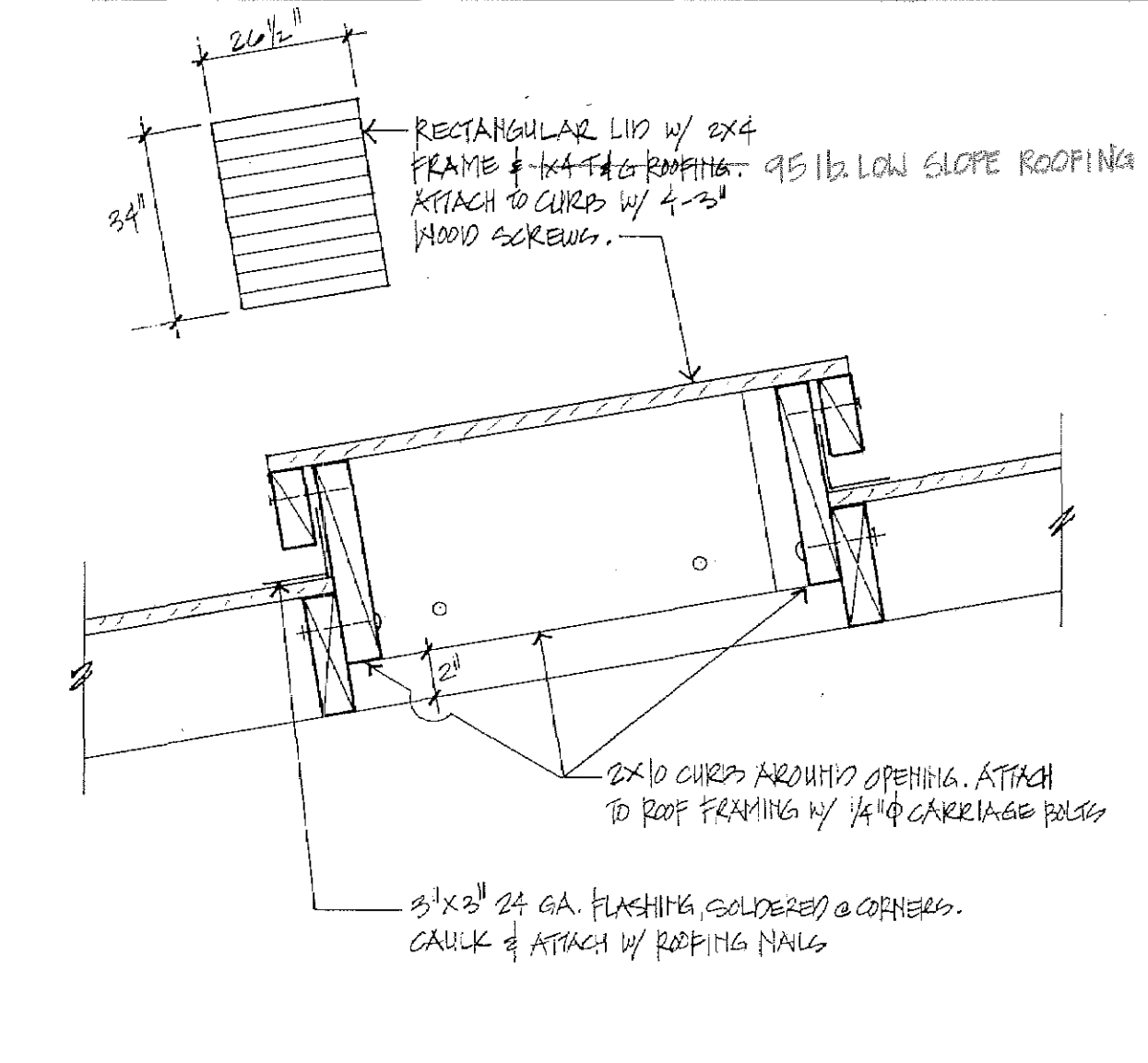
DATE 9-26-96, 7-29-97  
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DESIGNED BY BSN  
DRAWN BY BSN  
CHECKED BY  
APPROVED BY

**TOWER FRAMES**  
**ROOF FRAMING PLAN**  
**ROOF SECTION**

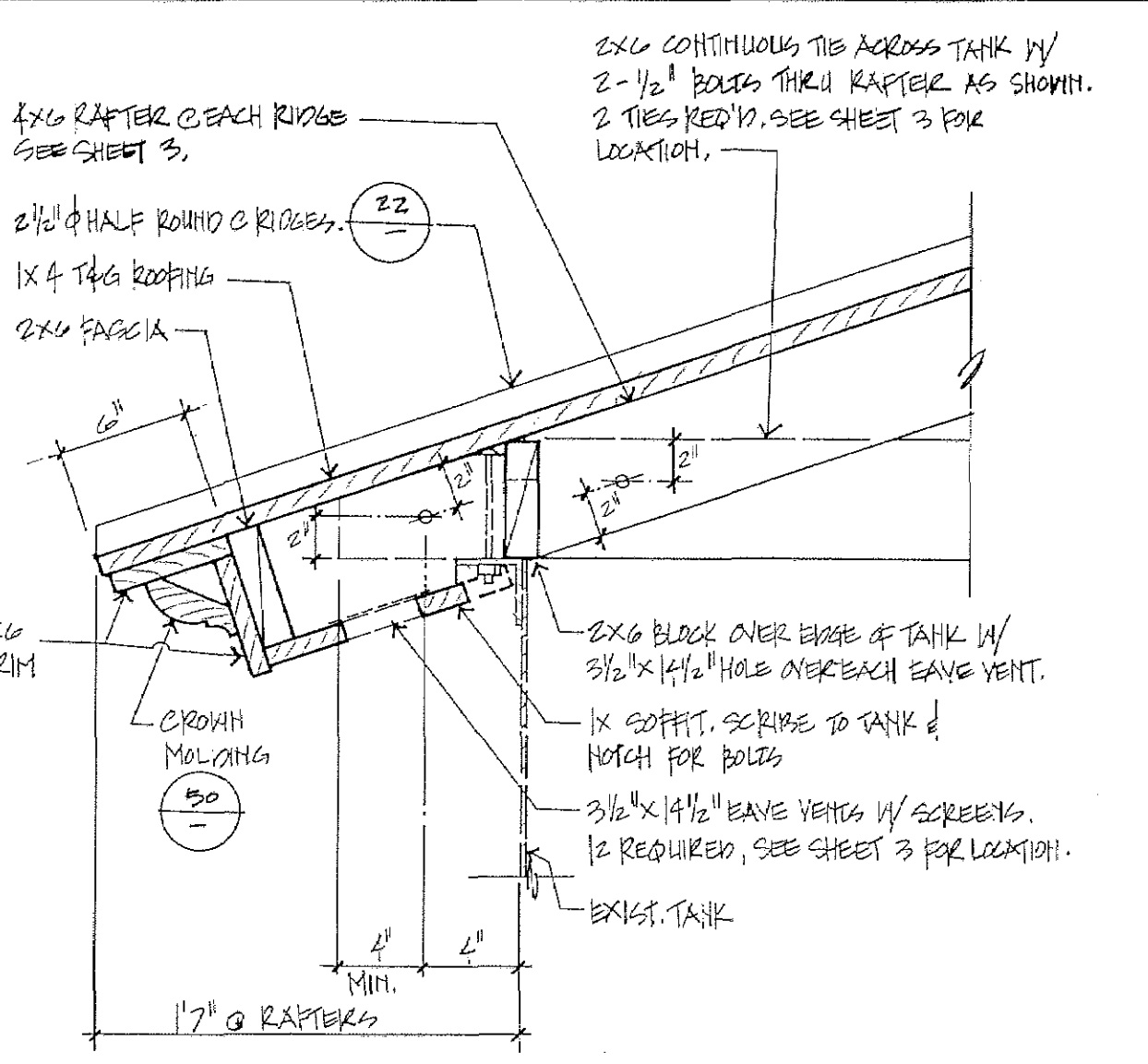
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FILE NO./LOCATION 0045 B  
SHEET 3 OF 4



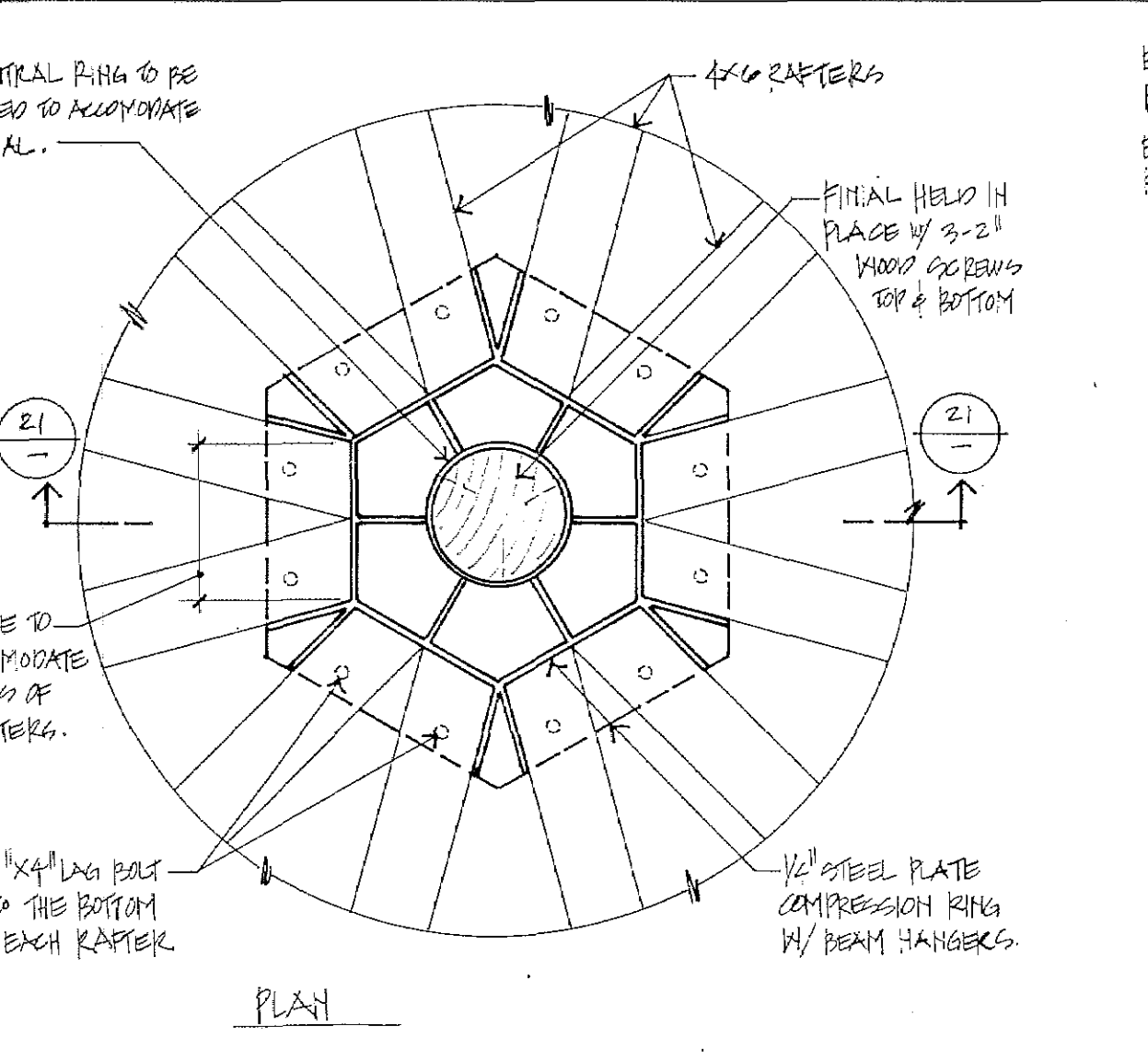
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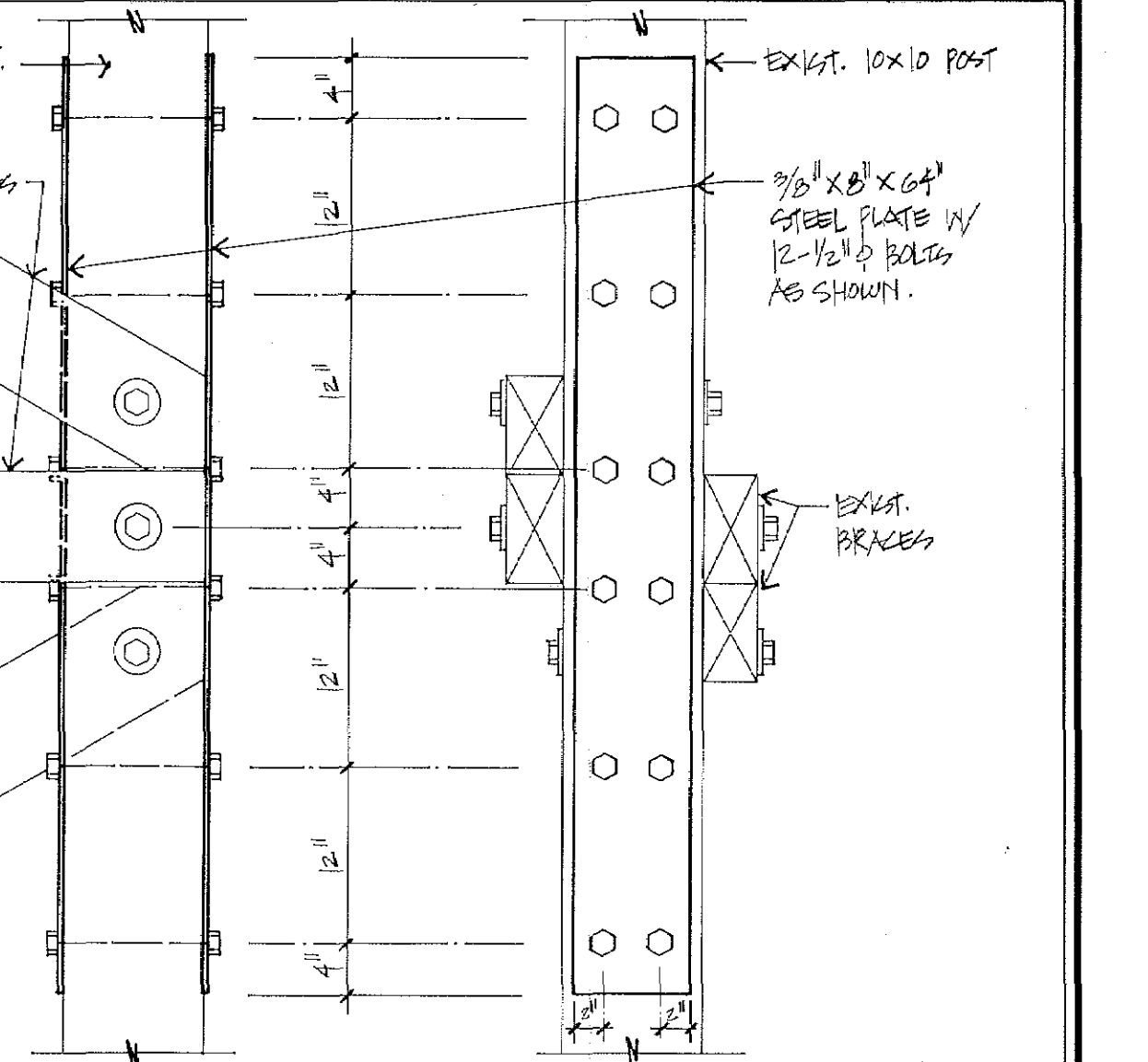
**40 ACCESS HATCH**  
1/2" = 1"



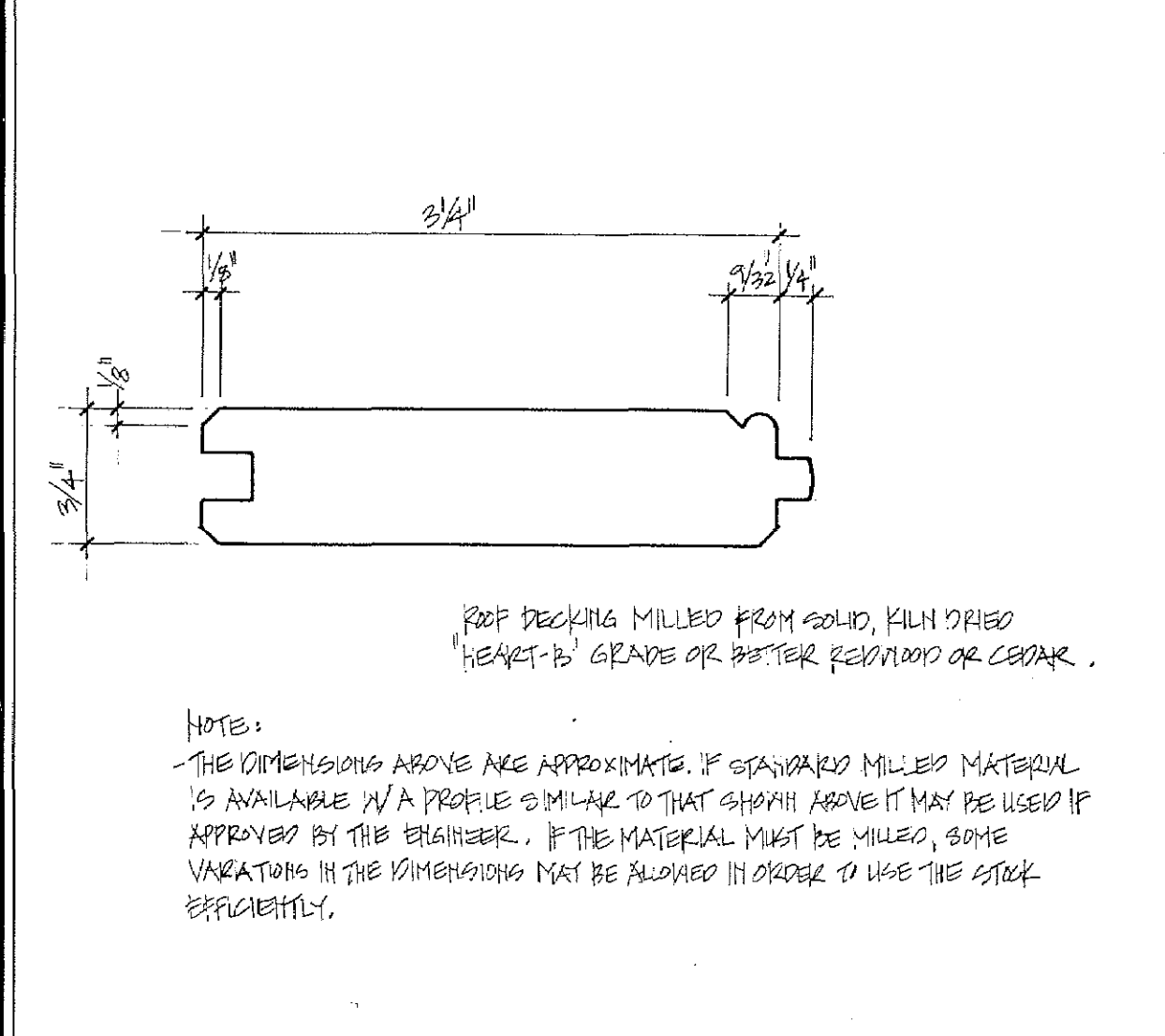
**30 RAFTER CONNECTION AT EAVE**  
1/2" = 1"



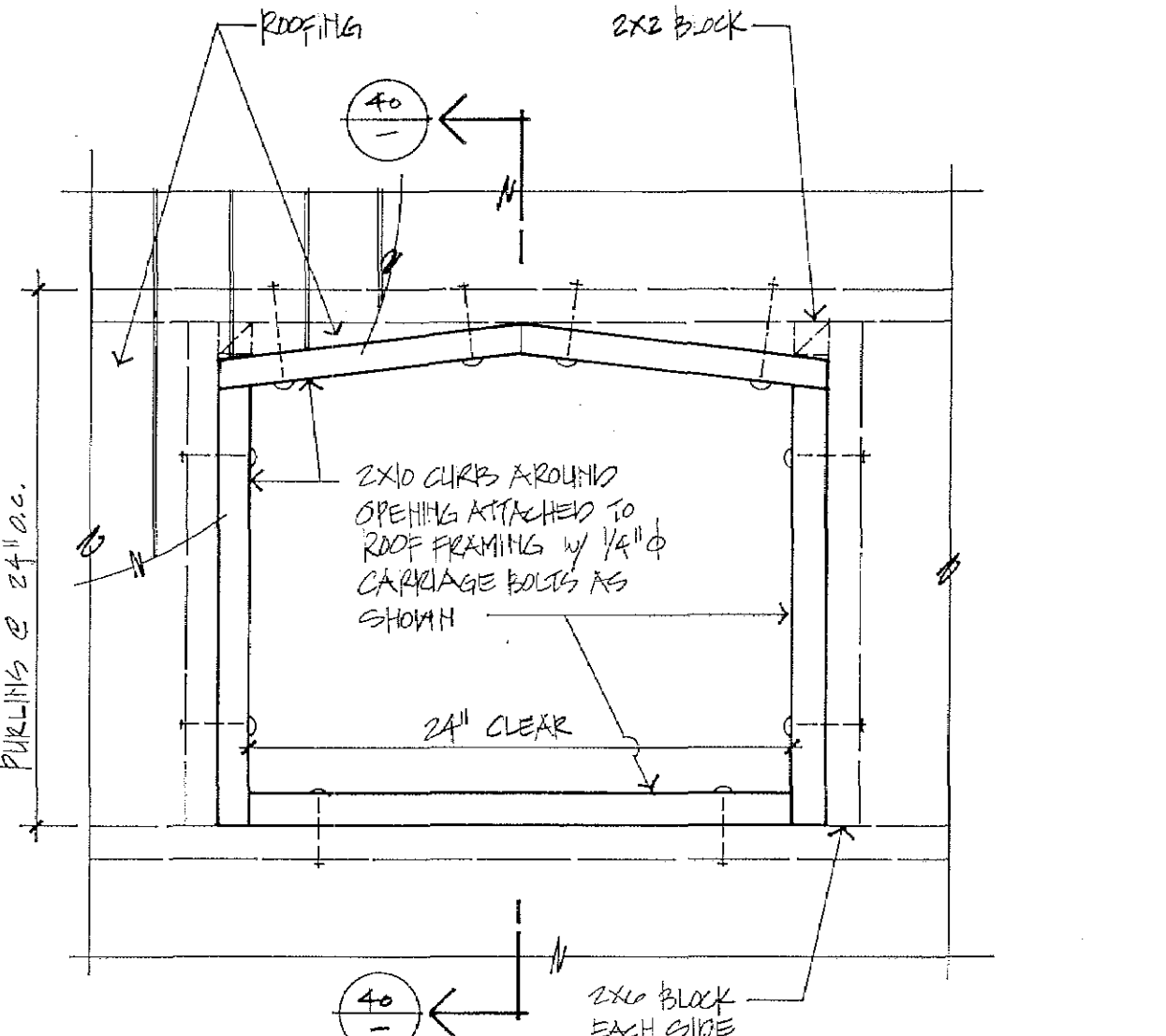
**20 RAFTER CONNECTION AT FINAL**  
1/2" = 1"



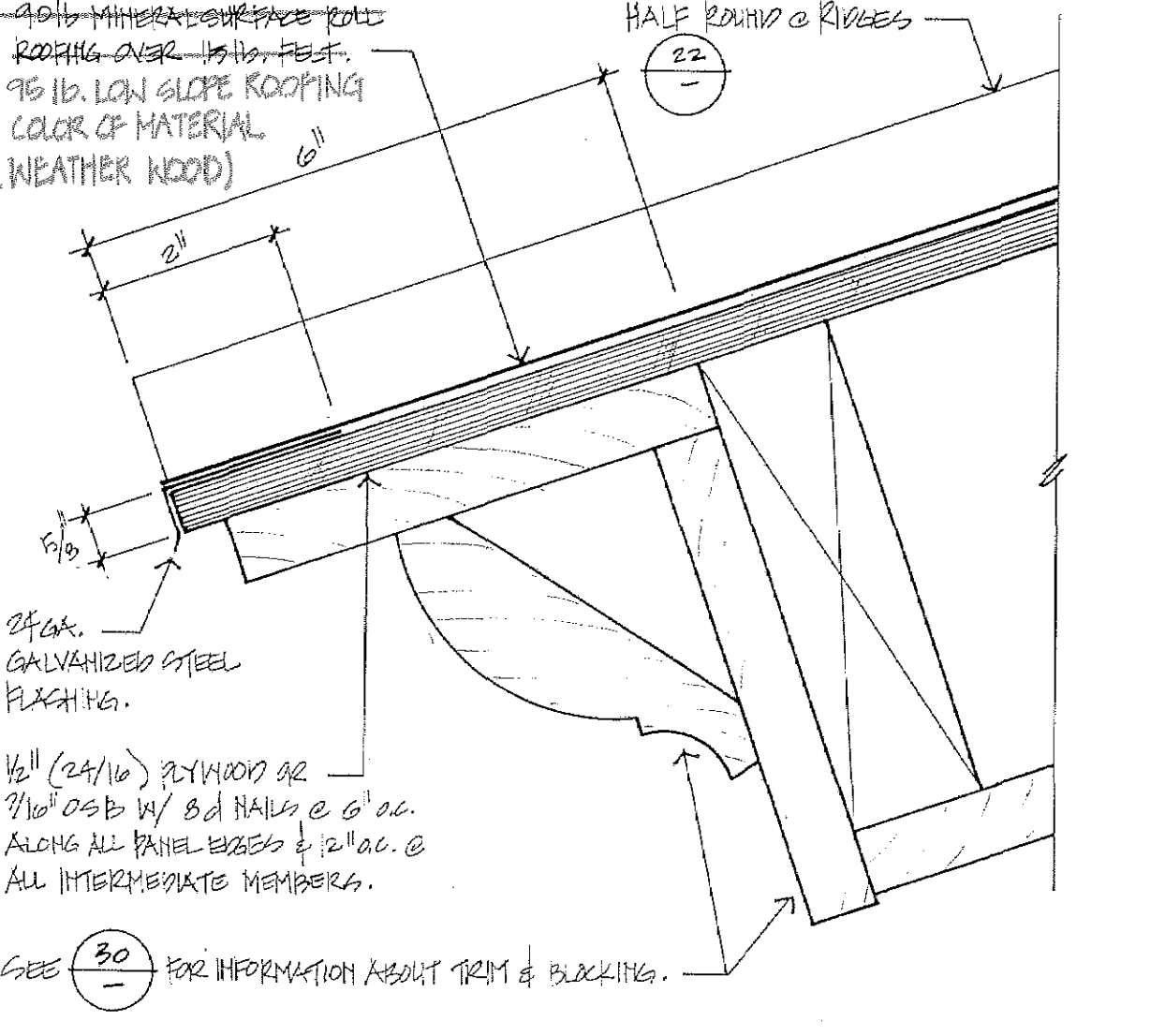
**10 STITCH PLATES**  
1" = 1"



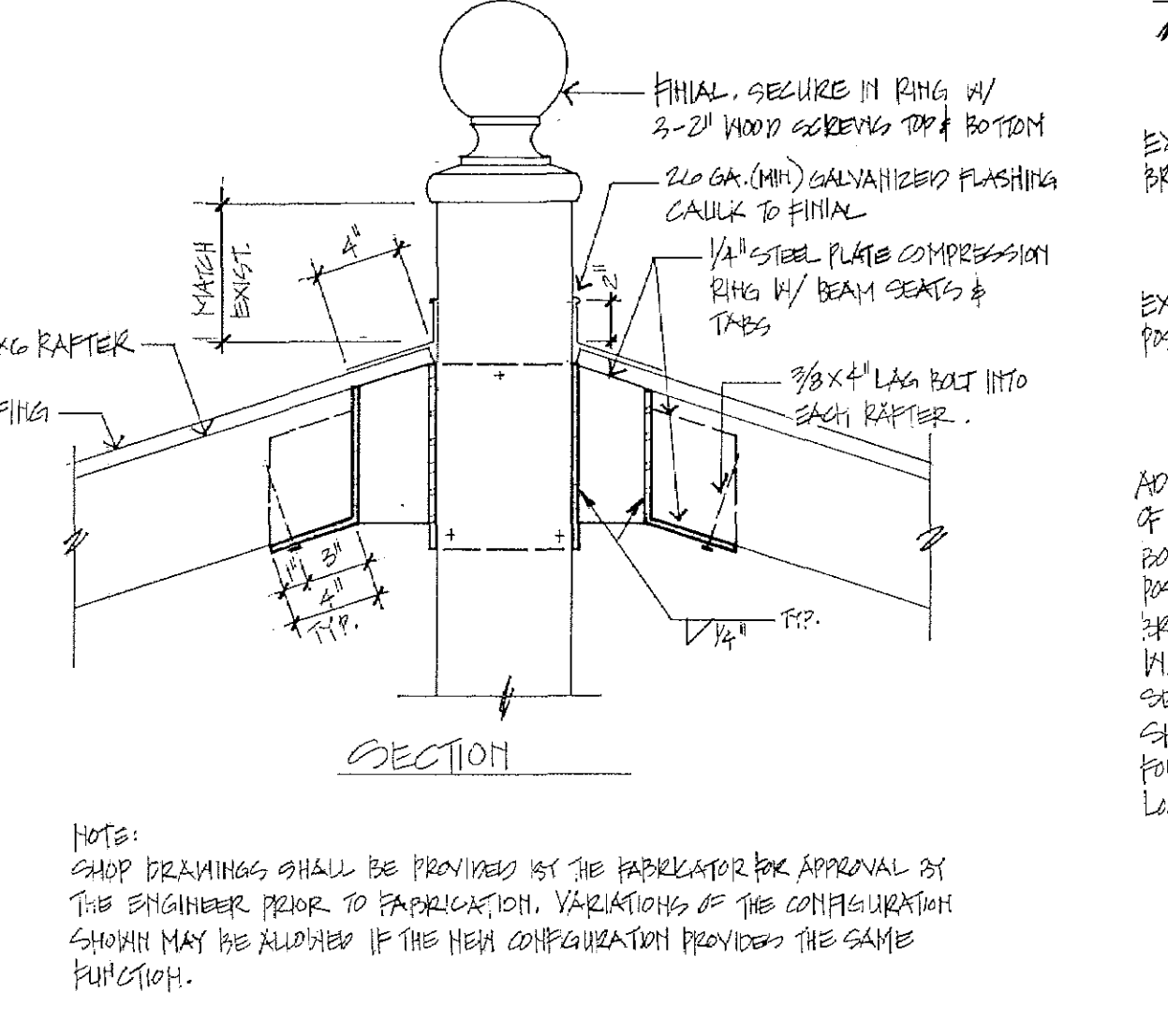
**51 ROOF DECKING**  
FULL SIZE



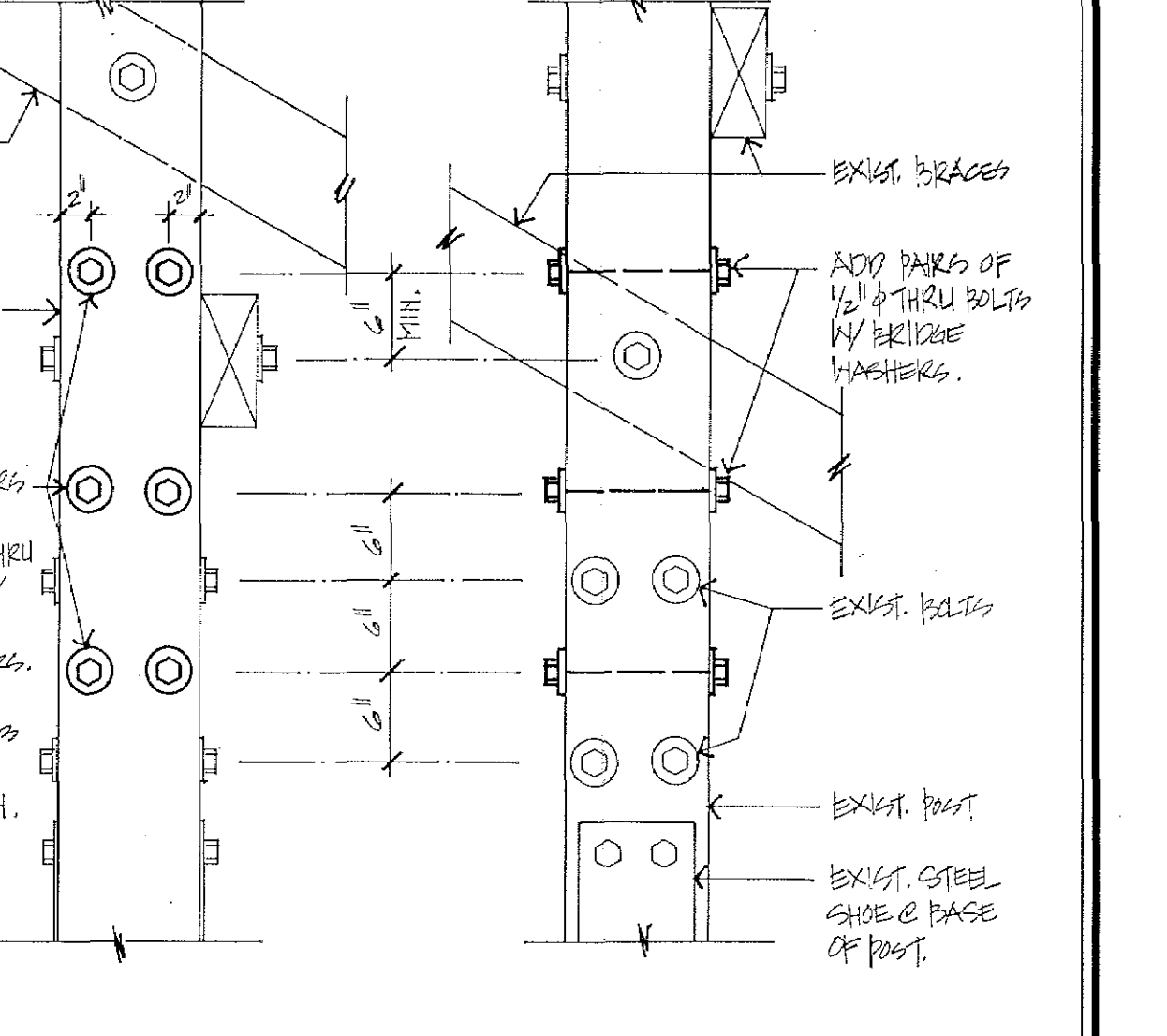
**41 ACCESS HATCH**  
1/2" = 1"



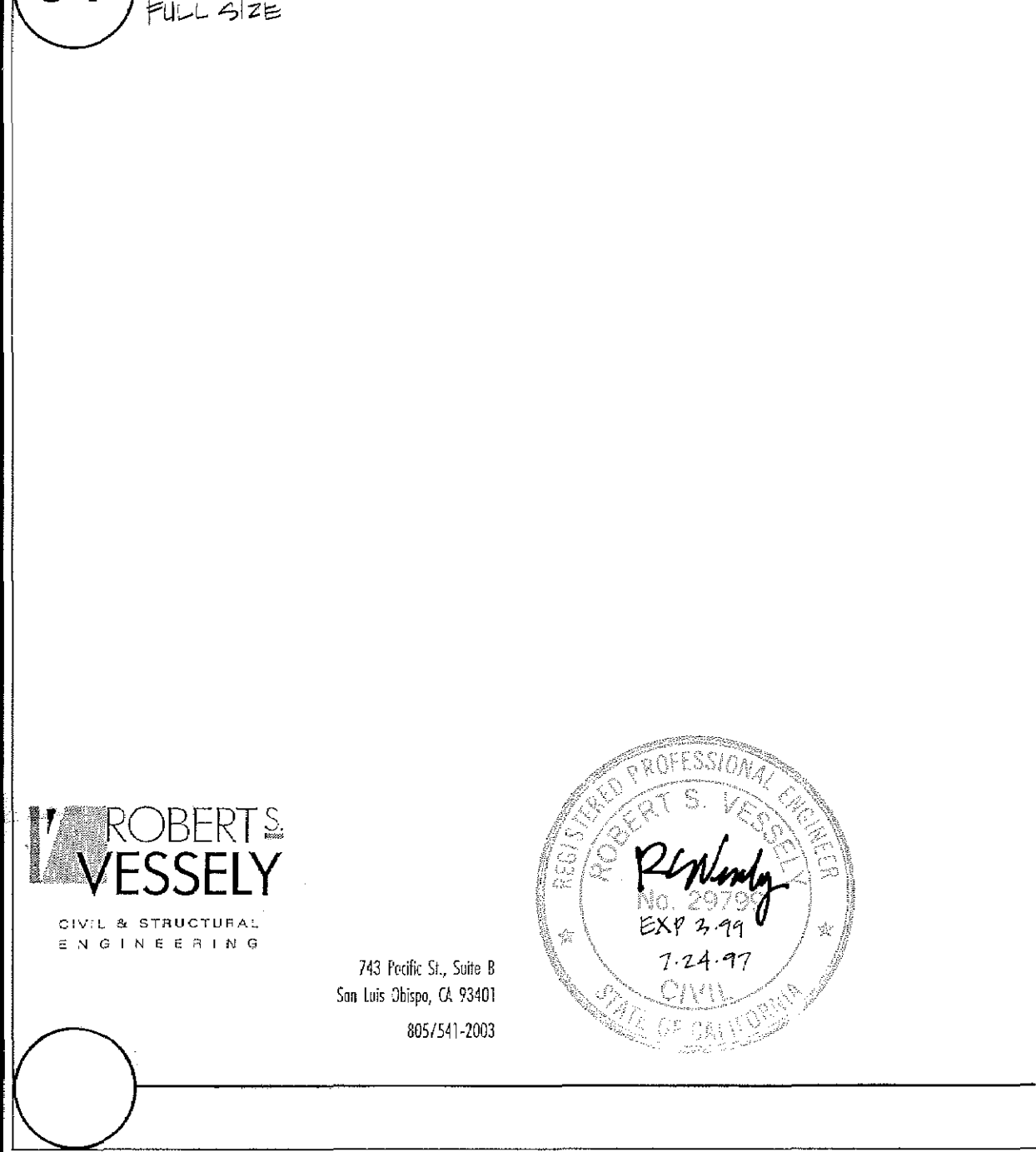
**31 ALTERNATE EAVE DETAIL**  
HALF SCALE



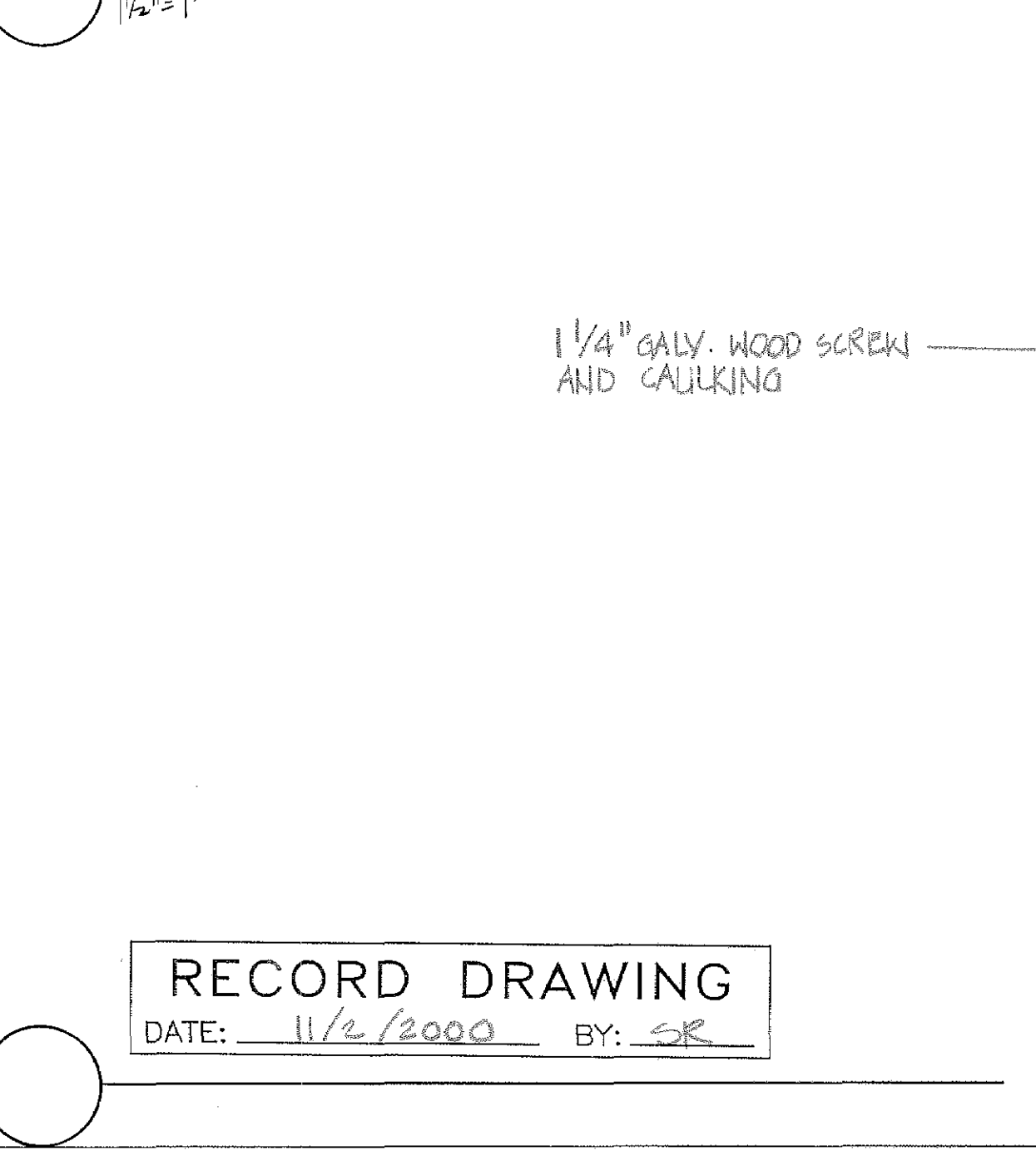
**21 RAFTER CONNECTION AT FINAL**  
1/2" = 1"



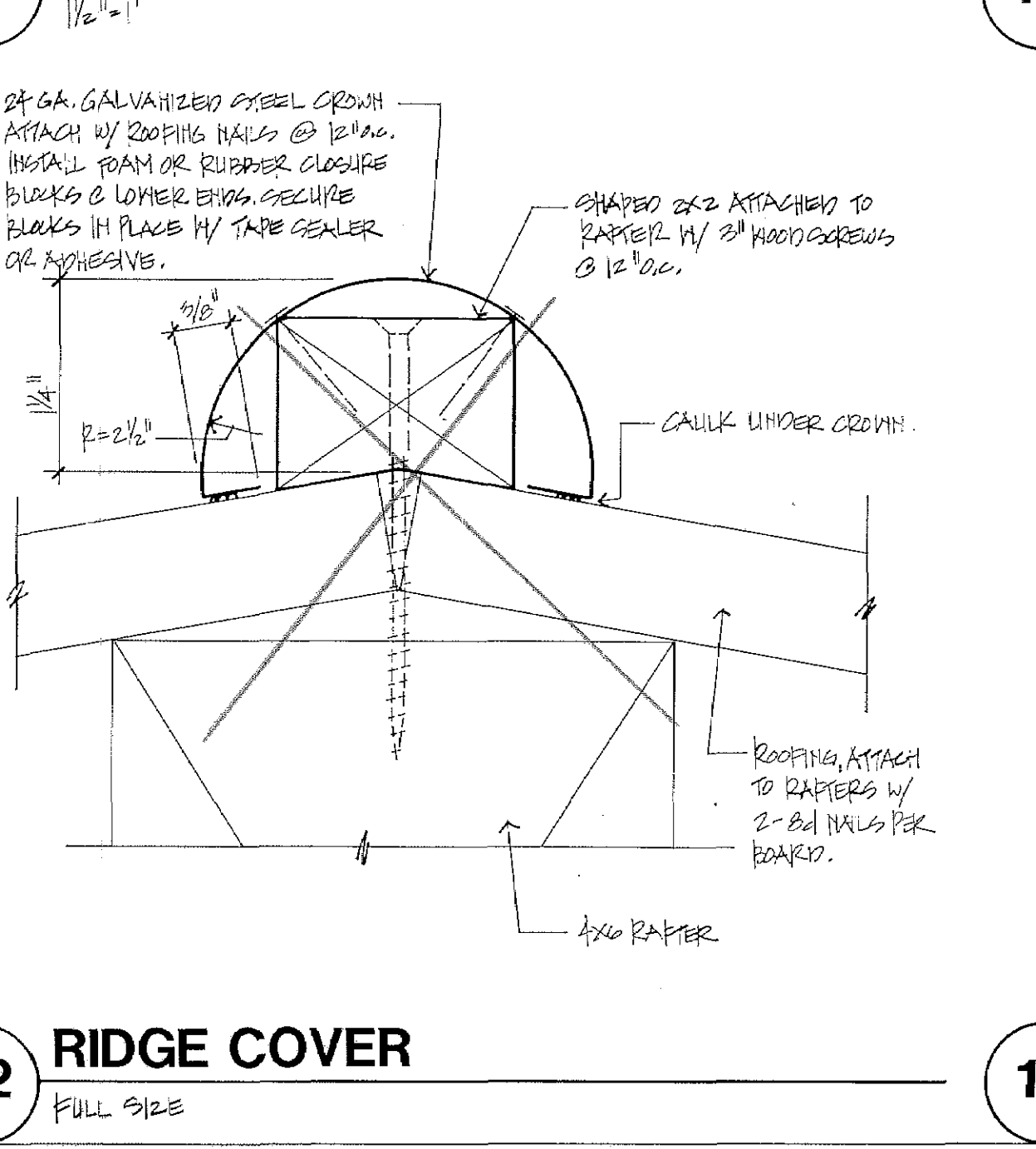
**11 STITCH BOLTS**  
1" = 1"



**22 RIDGE COVER**  
FULL SIZE



**22 RIDGE COVER**  
FULL SIZE



**12 BRACE CONNECTIONS**  
1" = 1"

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RECORD DRAWING  
DATE: 11/2/2000 BY: SR