

NOTICE TO GENERAL CONTRACTORS

- 1.- Sheets #1 to #12 inclusive make up a complete set of drawings and specifications covering the General Construction of a Storage Garage and Repair Shop Building for Ramsey County, Minnesota. It is the intention to complete this General Construction during the summer of the Year 1943.
- 2.- A General Contract is already in force under which construction is now proceeding. This General contract covers construction of the following items only:
  - (A) The four (4) surrounding walls and roof of the Front Portion, 160'-0" wide by 100'-0" deep,
  - (B) The outside walls, interior partitions, roof, chimney, concrete floors, entrance ramps and steps of the portion occupied by the Well and Pump space, the Boiler Room, the Blacksmith Shop and the corridor adjacent to the Blacksmith Shop.

This Contract covers no floor slab or any interior partitions in the Front Portion, 160'-0" wide by 100'-0" deep.
- 3.- For the reasons outlined in Par. 2 above, bids now to be recieved will cover the construction remaining to be done after the work noted in Par. 2 above is eliminated.

MICROFILMED  
RAMSEY CO. ENGR.

Top Sheet  
T-86

NOTICE TO PLUMBING AND HEATING CONTRACTORS

- 1.- Sheet #13 covers a complete Drawing together with Specifications outlining the complete installation of Plumbing, Heating, Drainage and Compressed Air Supply for a Storage Garage and Repair Shop for Ramsey County, Minnesota.
- 2.- A Contract is already in force covering installation of the following items only:
  - (A) - Three (3) Unit Heaters on the Center Line of the Front Portion 160'-0" wide by 100'-0" deep.
  - (B) - The one (1) Unit Heater in the Blacksmith Shop.
  - (C) - The four (4) Front Downspouts and Drainage Piping from them to the Two (2) Front Cess Pools.
  - (D) - Hanger Supports for the Four (4) Unit Heaters noted in (A) and (B) above.
  - (E) - The Well and Pump.
  - (F) - Installation of One (1) of the Two (2) Boilers shown on Sheet #13, together with one (1) Oil Burner.
  - (G) - Installation of One (1) of the Two (2) 5500 Gal. Fuel Oil Tanks shown on Sheet #13.
  - (H) - Installation of Piping from One (1) Boiler to the Unit Heaters noted in (A) and (B) above.
  - (I) - Installation of Piping from One (1) 5500 Gal. Fuel Oil Tank to One (1) Oil Burner.
  - (J) - Condensation Pump and Tank in Boiler Room, with piping thereto from Four (4) Unit Heaters.

This contract does not include any unit heaters except the four (4) mentioned in (A) and (B) above, any air lines or any Plumbing work whatsoever.
- 3.- For the reasons noted in Par (2) above, bids now to be recieved will cover the remaining plumbing, heating, air lines and drainage shown on Sheet #13, after the work noted in Par (2) above has been eliminated.

MICROFILMED  
RAMSEY CO. ENGR.

Top Sheet  
T-86

# Notes re Heating

**Boilers:** These will be 2 Pacific #4091 or equal, High Fire Box Type for Oil Firing. Cover Boilers with 2" Magnesia Block, wired and sealed over with 1/2" ground Magnesia and Portland Cement applied to warm boilers. Finish with heavy canvas jacket.

**Oil Burners:** Two (2) burners equal to Pettaw's 15 Gall/Hour Gun Type, burning #5 Fuel Oil. They will be installed in accordance with all governing codes and Underwriters requirements. Oil burner wiring will be installed by Oil Burner installer under direction of Plumbing and Heating Contractor, but Electrical Contractor will bring power wiring to burner location.

**Unit Heaters:** Down Flo Equal to Trane Model P Projection Type.

- A Units - 15P-1125 R.P.M.
- B Units - 15P-1140 R.P.M.
- C Units - 12P-1725 R.P.M.
- D Units - 10P-1500 R.P.M.
- E Units - 10P-1500 R.P.M.
- F Units - 12P-1140 R.P.M.
- G Units - 18P-1140 R.P.M.
- H Units - 22P-1140 R.P.M.

Note: Heating Contractor will provide and erect supports for Unit Heaters. Note Rooms which have Sheet Rock or No Wood Ceiling Construction. Piping to Unit Heaters (supply/return) to be Standard Black Steel of sizes shown. Air piping to be Standard Black Steel of sizes shown. H.W. and C.W. piping to be Standard Galvanized Steel of sizes shown.

# Notes re Plumbing

All underground Soil Pipe to be XH Cast Iron. 4" Front Interior Downspouts to be XH Cast Iron.

All Waste and Vent Pipe above ground to be Galvanized Iron XH.

All Floor Drains Equal to Blake L-885 Heavy Duty Industrial type. No traps. To be 6" in diameter with Removable Tops.

Lavatories to be American Standard Sanitary or Equal, P-3867 with 18" Lip.

Drain and B-1050 Self Closing Faucets except Lavatory in Shop Toilet which will be a 36" Bradley Precast Stone Wash Fountain.

Chutes to be Afton No F2205 1/5 Elongated with Tank and Open Front Spouts.

Relief Pump: Drill a well with a 6" casing at location shown. Furnish and install a Standard Turbine Pump with motor of ample H.P. to deliver at least 40 Gallons of water per minute at an 80 foot setting. Furnish and install as accessory thereto, one (1) 500 Gallon pressure tank constructed in accordance with A.S.M.E. Standards. Water to be delivered free from sand with a draw down not to exceed eight feet. (8'-0")

Air Piping: Furnish and install oil air lines shown on Sheet #13.

Lubricating Oil Tanks: See Sheet #8.

Melin Cess Pools: Plumbing Contractor will install all Melin Cess Pools.

Water Supply: Provide Hot and Cold Water Supply Lines as shown, running from well pressure tanks. Provide in Boiler Room, one (1) 1/2" Bock #120 E 50 Gal. Oil burning Hot Water Heater with 265 Gal. Fuel Oil Tank. Connect Heater to H.W. Piping.

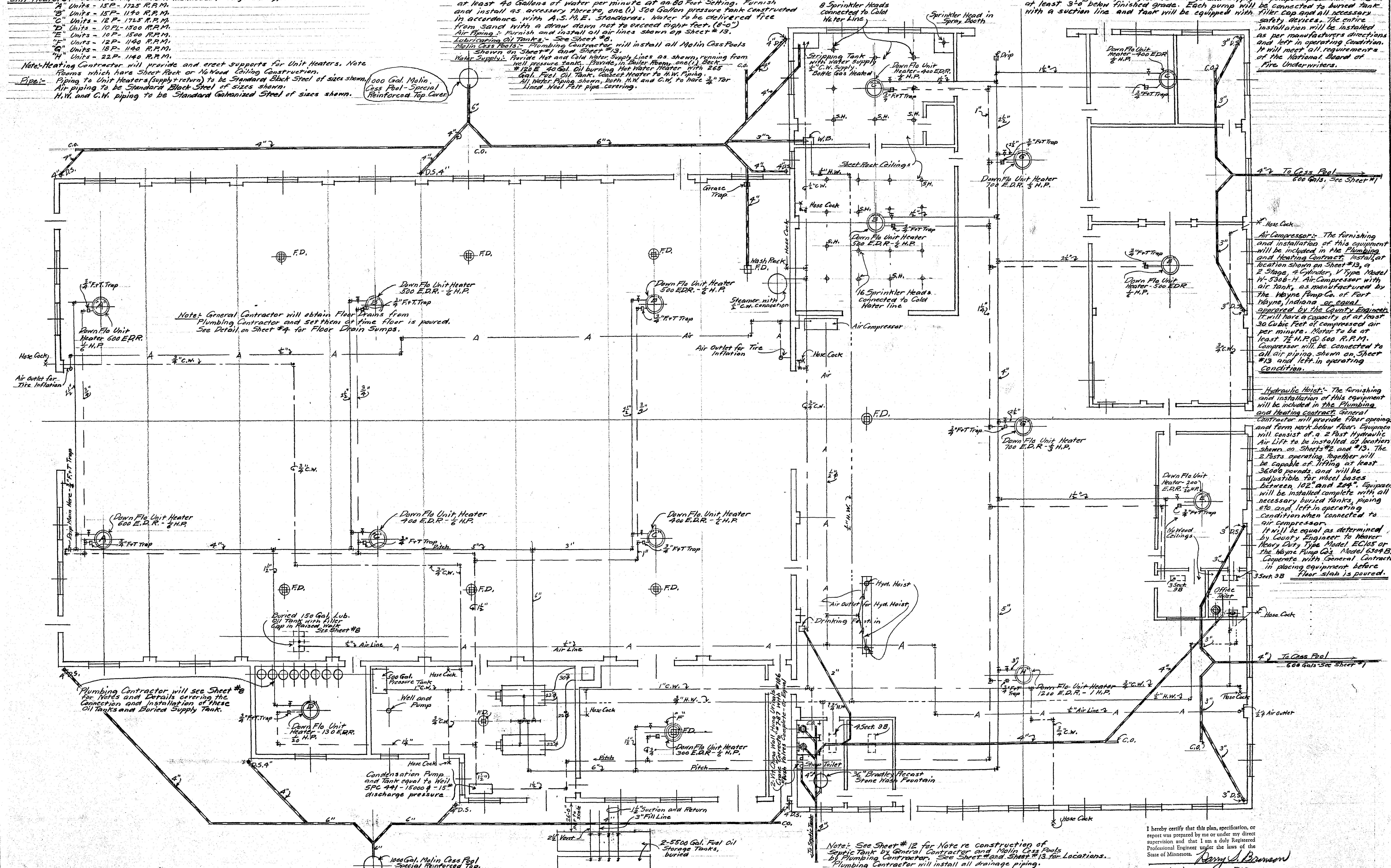
All Water Piping shown, both H.W. and C.W. to have 3/4" Tar Lined Wool Felt pipe covering.

Note: All Material will be new and no second hand material will be allowed.

**Gasoline Pumps and Tanks:** The furnishing and installation of this equipment will be included in the Plumbing and Heating contract. General Contractor will build the concrete pump island. Install, at location shown on Sheet #1, 2 metered gasoline pumps, Model 577R as manufactured by the Wayne Pump Co. of Fort Wayne, Indiana, or equal approved by the County Engineer. They will each have a pumping capacity of at least 25 gallons per minute and have 1/2" H.P. explosion proof electric motors. Adjacent to pump island install a buried gasoline tank with a capacity of at least 3015 gallons for gasoline storage and supply to pumps. Tank to be at least 3'-0" below finished grade. Each pump will be connected to buried tank with a suction line and tank will be equipped with filter devices. The entire installation will be installed as per manufacturers directions and left in operating condition. It will meet all requirements of the National Board of Fire Underwriters.

**Air Compressor:** The furnishing and installation of this equipment will be included in the Plumbing and Heating contract. Install at location shown on Sheet #13, a 2 Stage, 4 Cylinder, V Type Model W-5308-H Air Compressor with oil tanks, as manufactured by the Wayne Pump Co. of Fort Wayne, Indiana, or equal approved by the County Engineer. It will have a capacity of at least 30 Cubic Feet of compressed air per minute. Motor to be at least 7 1/2 H.P. @ 600 R.P.M. Compressor will be connected to all air piping shown on Sheet #13 and left in operating condition.

**Hydraulic Hoist:** The furnishing and installation of this equipment will be included in the Plumbing and Heating contract. General Contractor will provide floor openings and form work below floor. Equipment will consist of a 2 Post Hydraulic Air Lift to be installed at location shown on Sheets #2 and #13. The 2 Posts operating together will be capable of lifting at least 36000 pounds, and will be adjustable for wheel bases between 102" and 204". Equipment will be installed complete with all necessary buried tanks, piping etc. and left in operating condition when connected to air compressor. It will be equal as determined by County Engineer to Heaver Heavy Duty Type Model EC108 of the Wayne Pump Co. Model 5308-B. Coordinate with General Contractor in placing equipment before floor slab is poured.

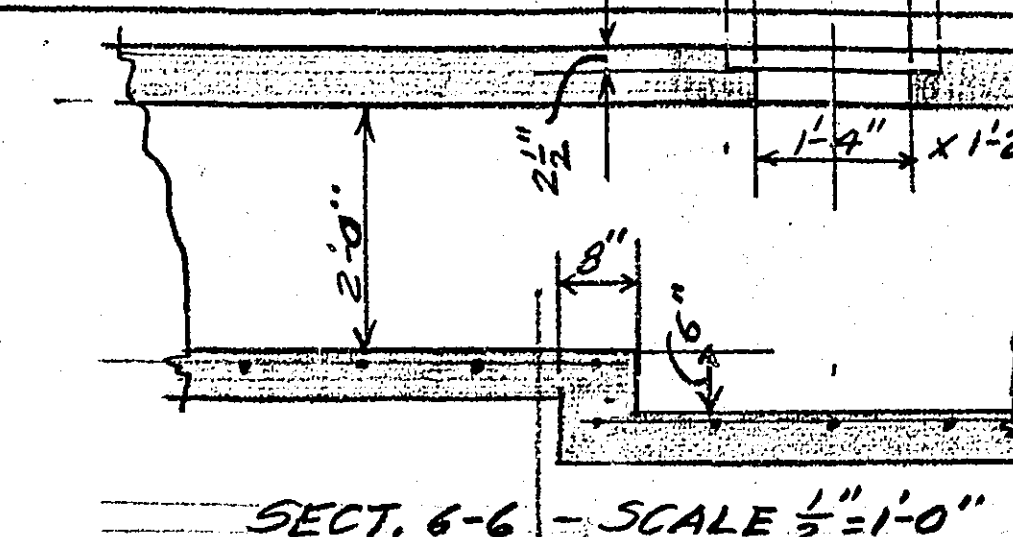
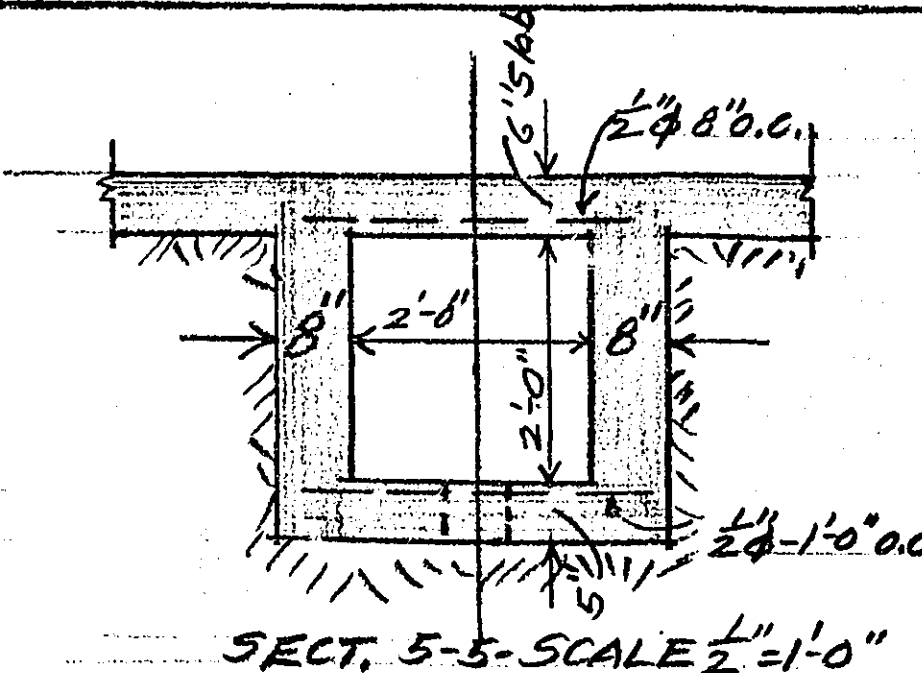
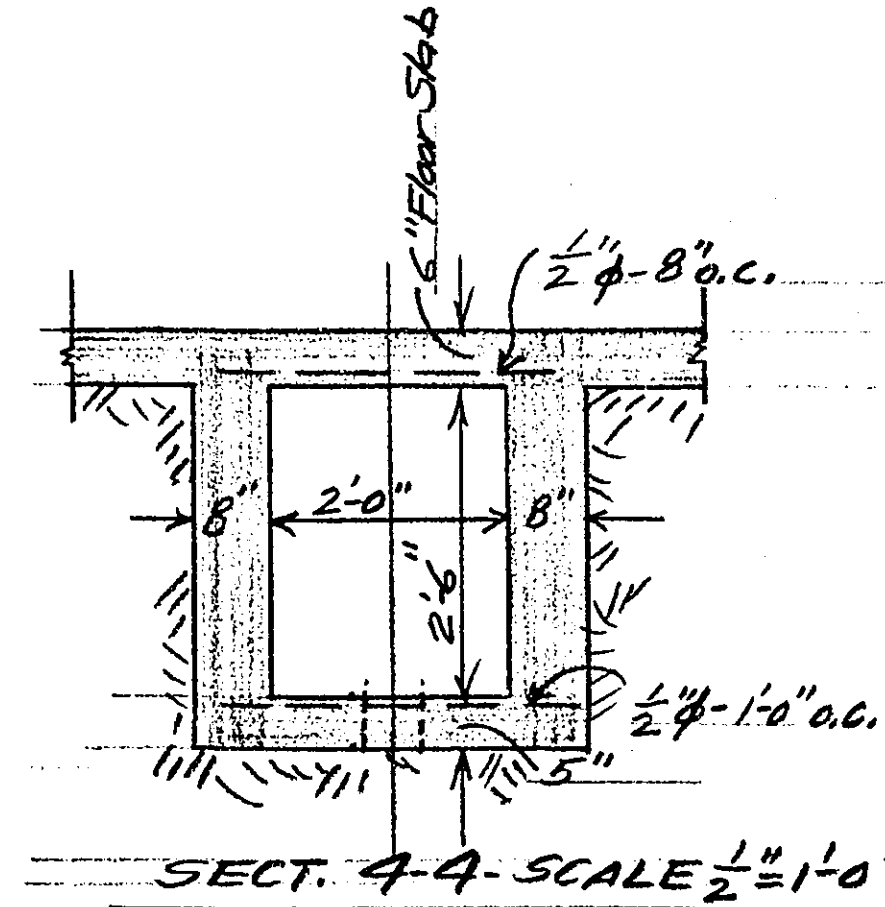
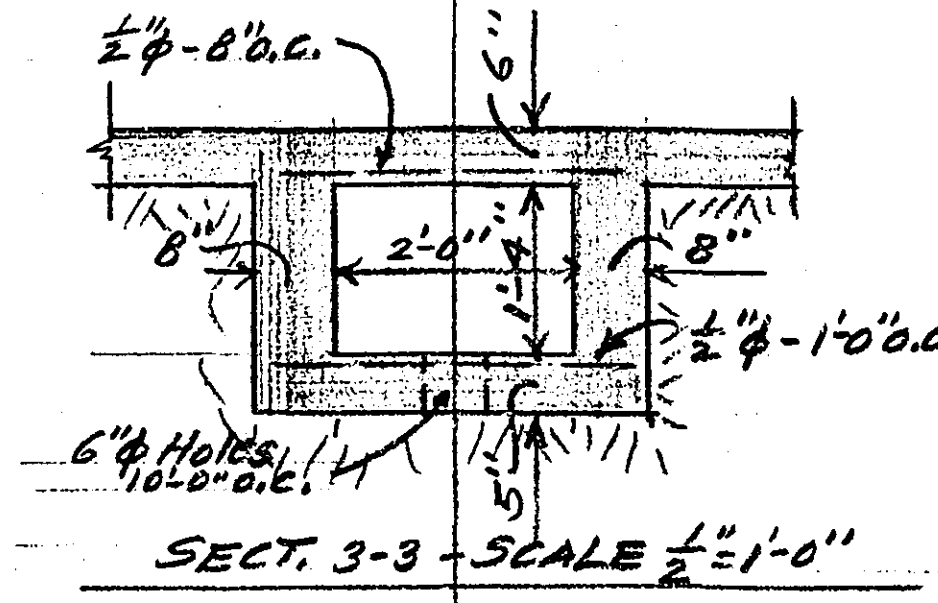
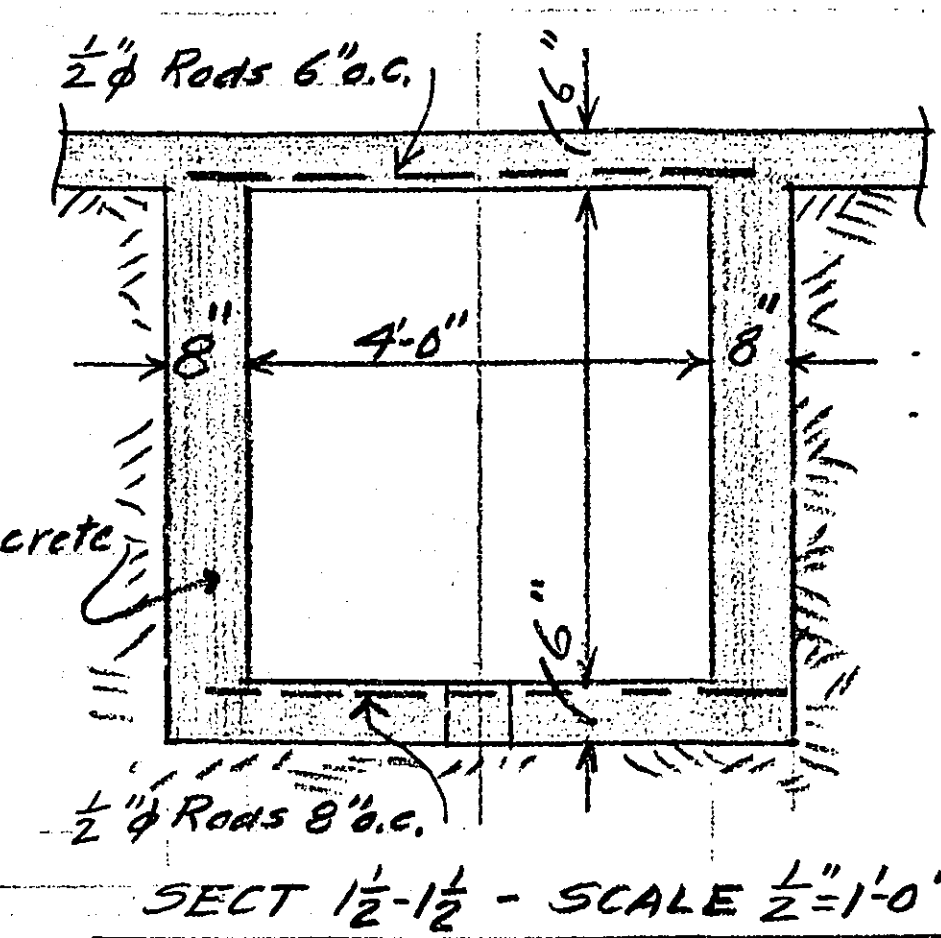
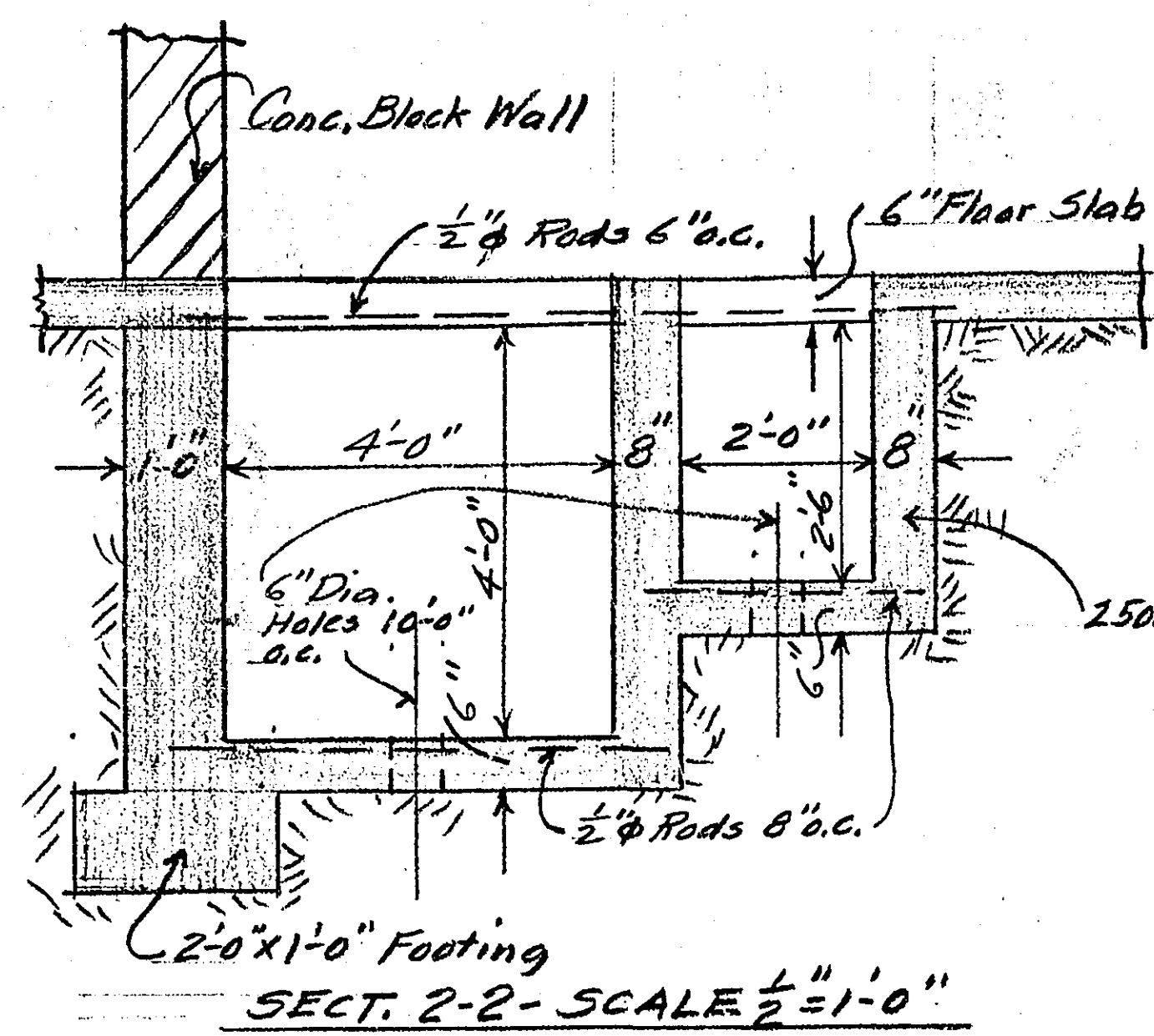
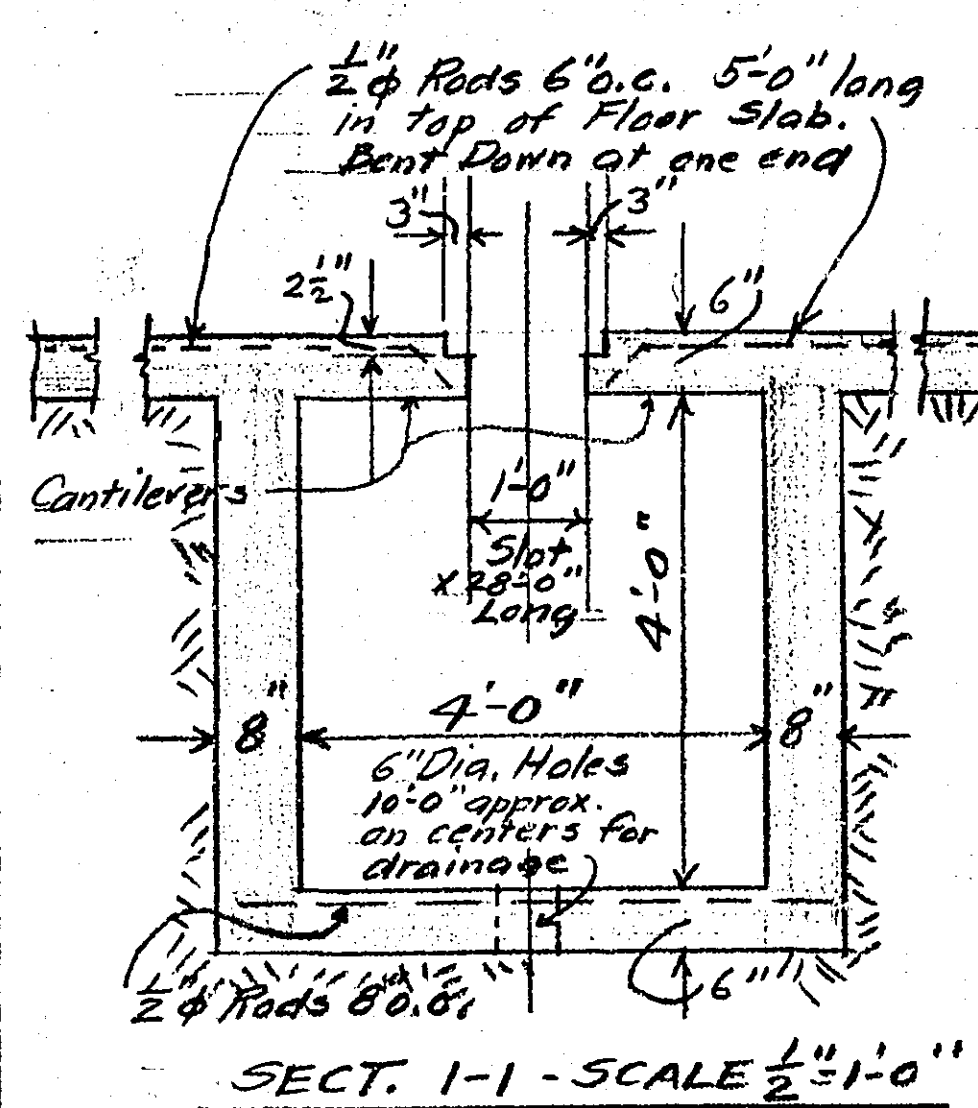


PLUMBING, HEATING AND DRAINAGE PLAN- SCALE 1/8"=1'-0"

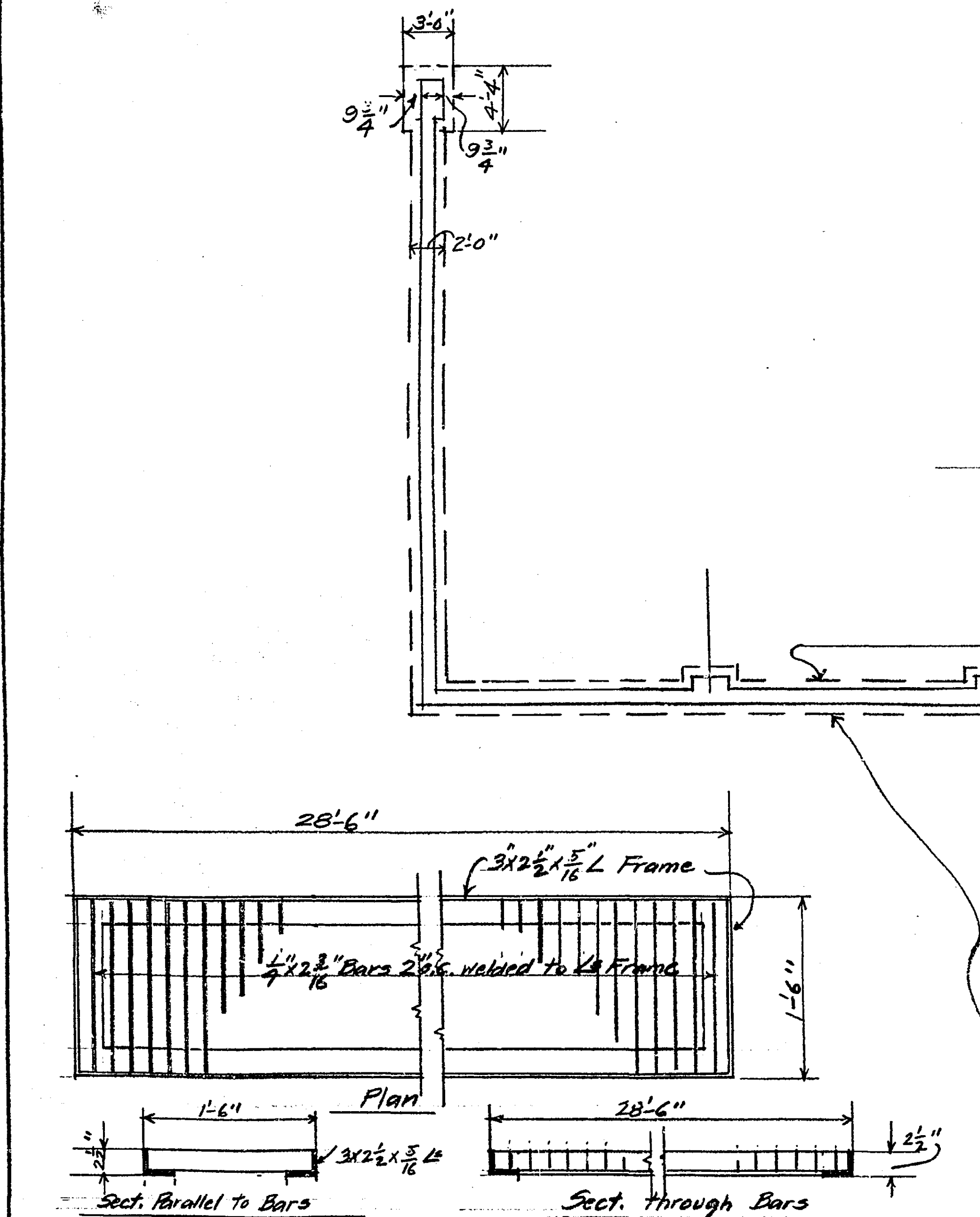
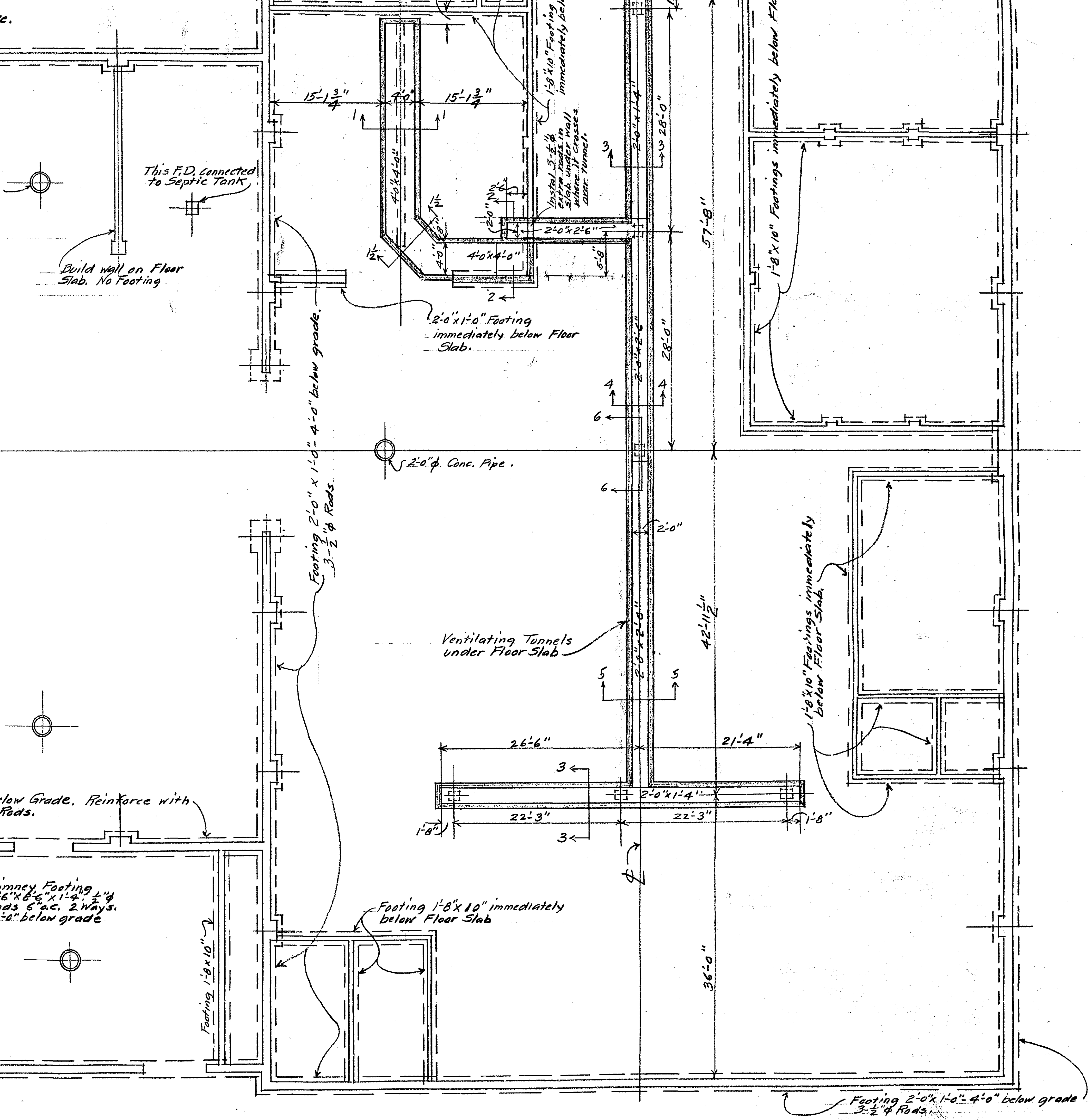
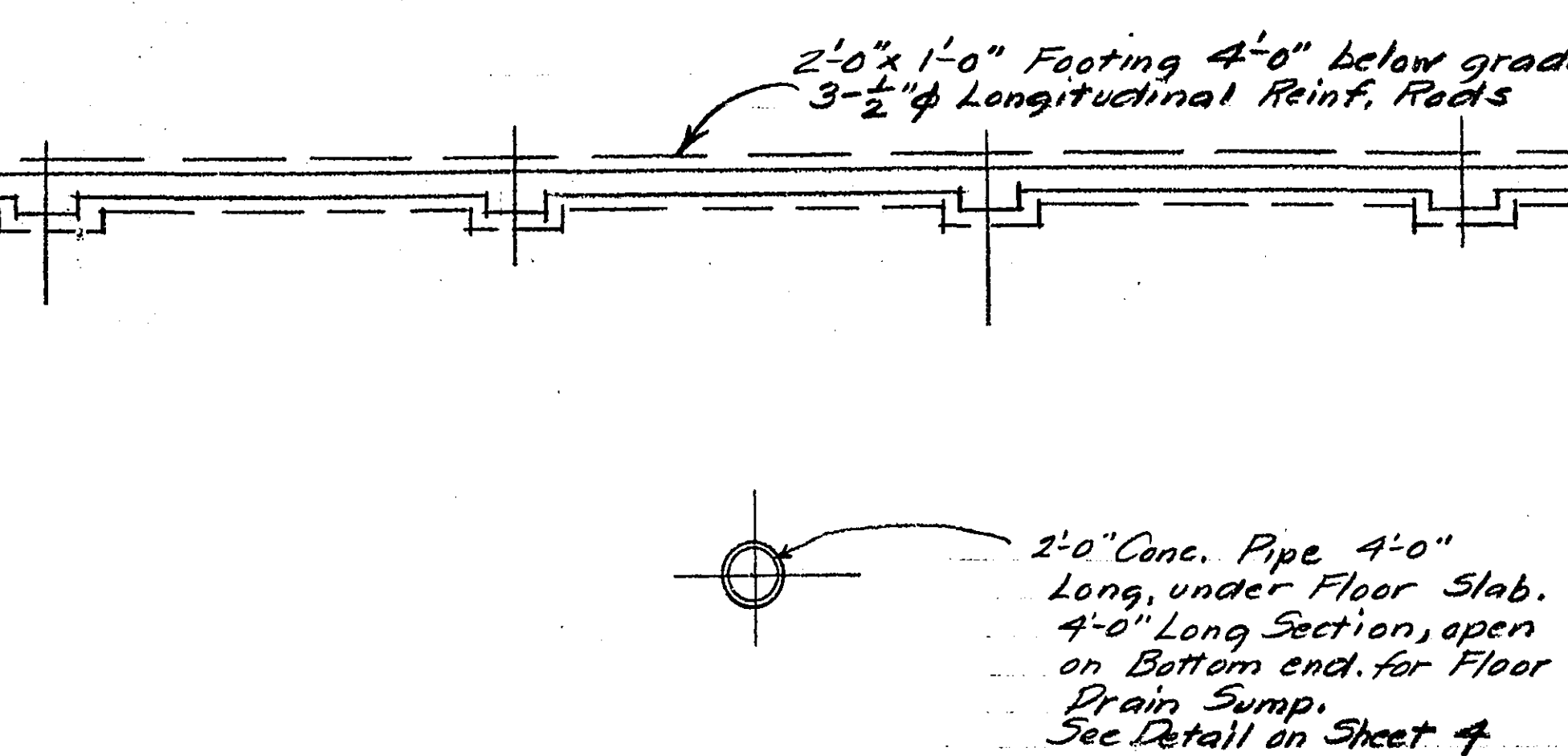
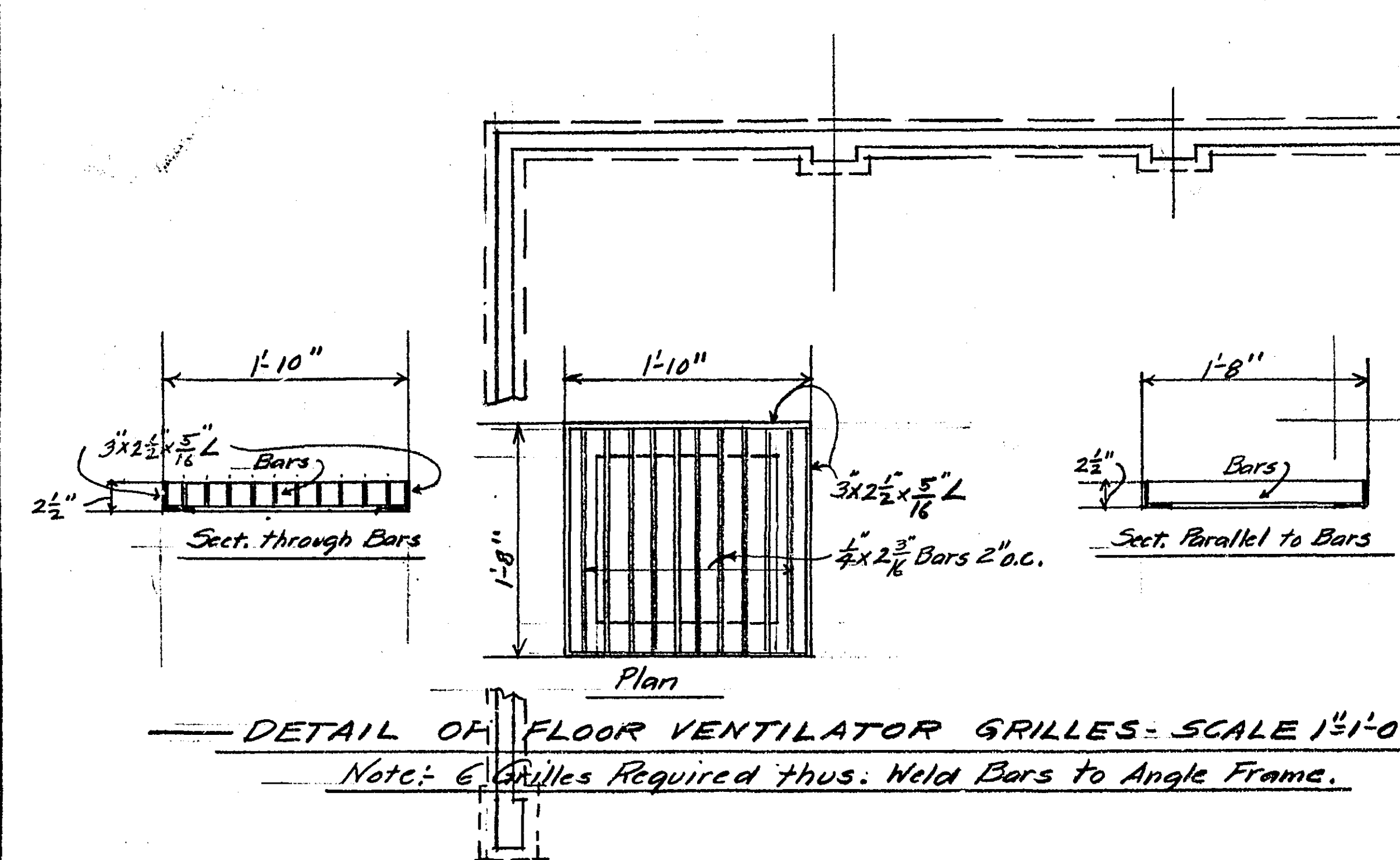
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

*Darryl J. Brown*

Date: 11/2/49 Reg. No. 818



Note: Sect. 6-6 shows method of building bottom slab of tunnels where change in depth occurs. There are 3 changes, all similar. Sect. 6-6 also shows openings in top of Tunnel to receive metal grilles for vent openings. Steel Contractor will see details of grilles on this sheet.

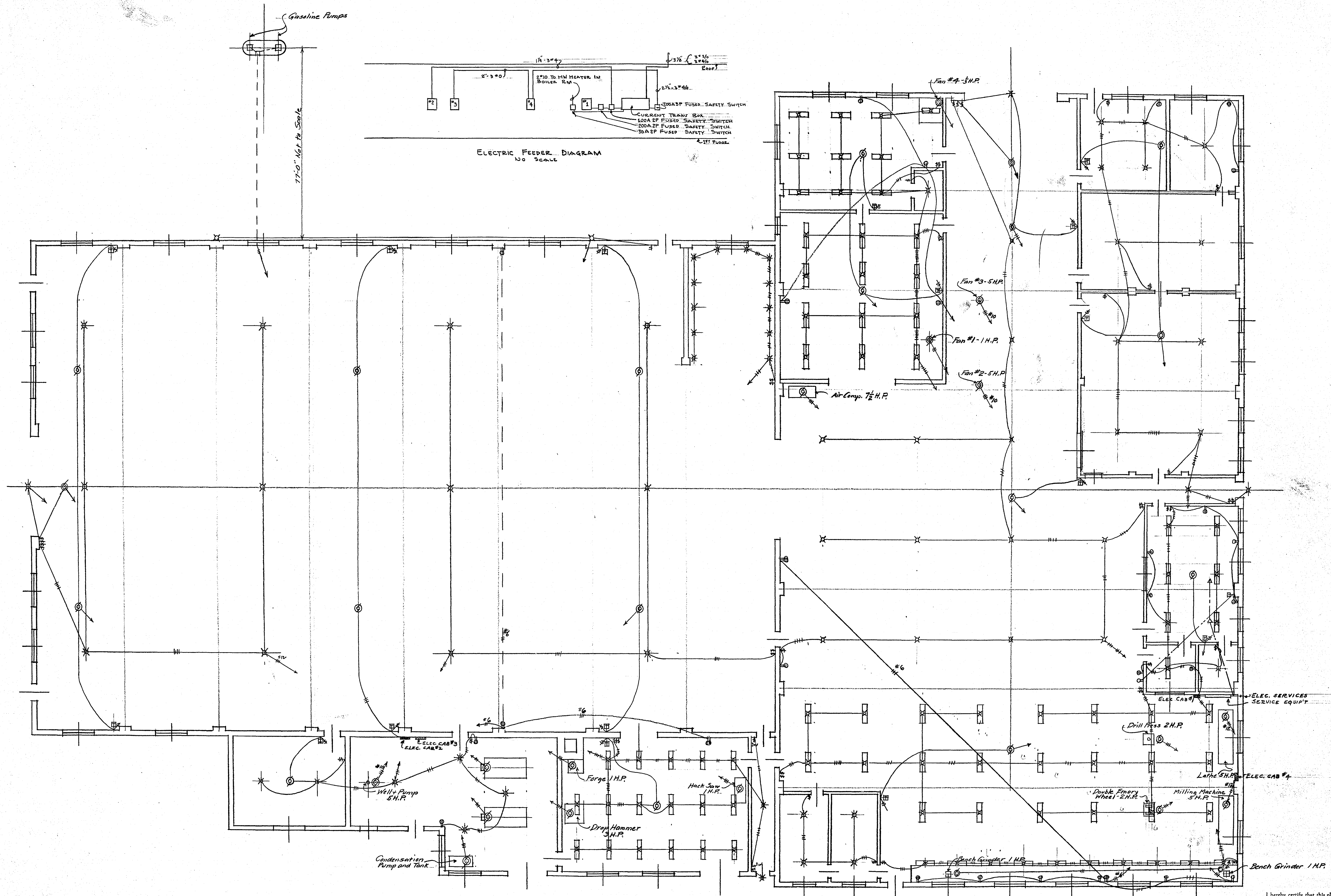


I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.  
 Date: 1/14/49  
 R. No. 818

FOUNDATION AND FOOTING PLAN PLUS DETAILS OF VENTILATION TUNNELS AND METAL GRILLES  
 SCALE OF FOUNDATION AND FOOTING PLAN 1/2"=1'-0". OTHER SCALES NOTED

plugs

Flood Lights



ELECTRIC PLAN FOR POWER AND LIGHTING INCLUDING FIXTURES SCALE 1/8"=1'-0"  
 - GAUSMAN AND MOORE - PROFESSIONAL ENGINEERS -

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.  
 Date 12/14/48 Reg. No. 1789

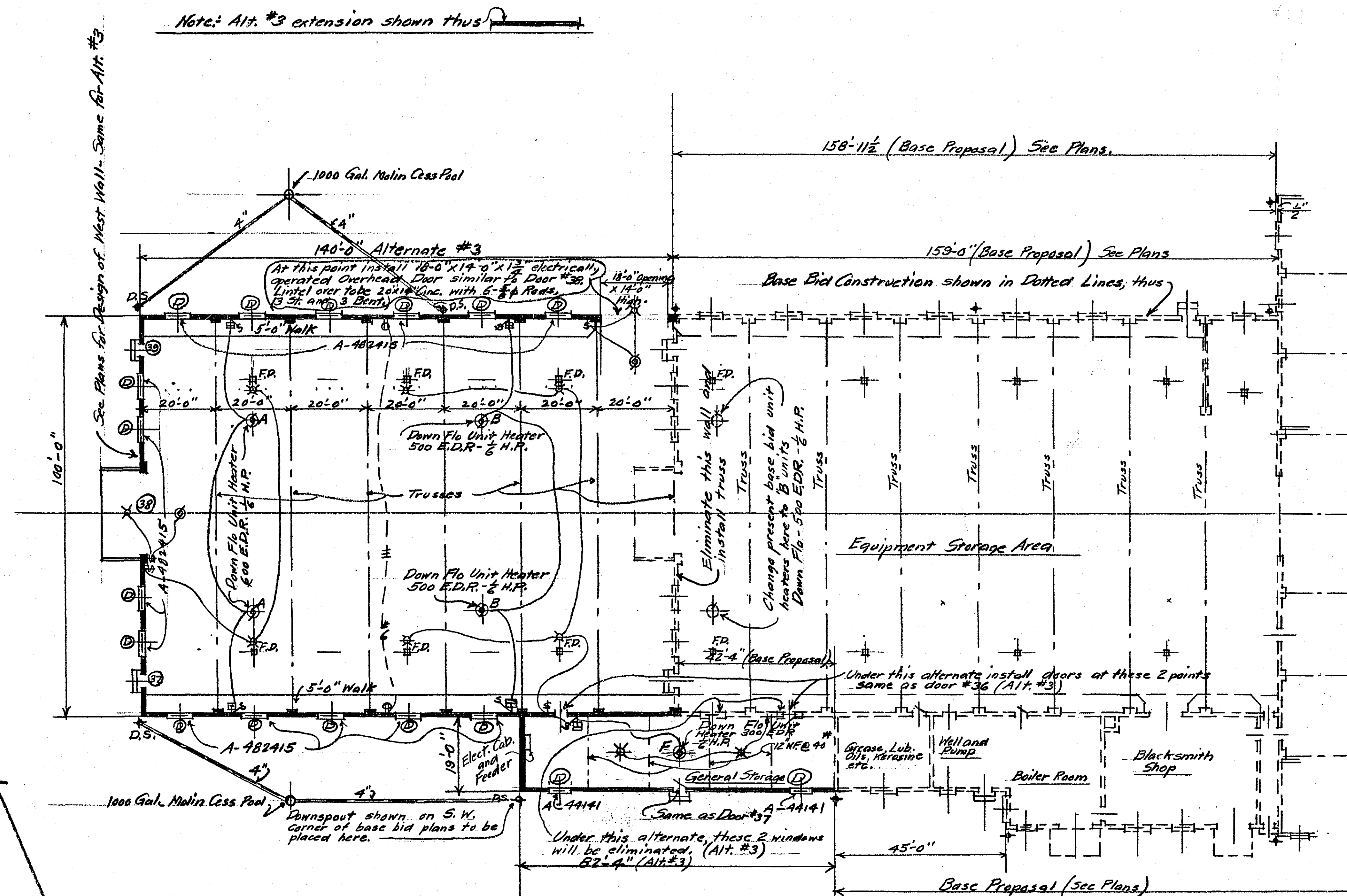


ILLUSTRATION OF ALTERNATE NO. 3 (GENERAL CONSTRUCTION) - SCALE 1"=20'-0"

ILLUSTRATION OF ALTERNATE NO.2 (PLUMBING AND HEATING)

## ILLUSTRATION OF ALTERNATE NO.2 (ELECTRICAL WORK)

General Construction Alternate No.3:-

General Contractor will quote additional cost to Ramsey County in his bid, based on an extension of the Equipment Storage Area westward a distance of 7-20'-0" bays or 140'-0". This will produce a total length of Equipment Storage Area equal to 239'-0" instead of the 159'-0" shown on base bid plans.

Under this alternate, there will also be included a room to be known as "General Storage" which will be continued westward from the Grease, Lub. Oils, Kerosene etc. room. Footings, Foundation Walls, Additional Trusses, Floor Slab, Roof Construction, Roofing, Gutters, Downspouts etc. will all be same as shown on base bid plans, and specified.

Included in Alt. No 3 will be an 18'-0" x 14'-0" x 12'-0" electrically operated vertical lift door with supporting framework to be erected by General Contractor, similar to Door No. 38. See Specs. of Sheet #6 of plans.

All walls to be of 12" Concrete blocks as specified on Sheet #6. Provide pilasters under truss ends, as detailed in Base Bid plans.

Use method shown on Sheet #2 for Expansion Joints in Floor Slab and for pitching floor slab to Floor Drains.

All Specifications on Sheets #6 and #7 of Base Bid plans will apply to this Alternate.

Construction of "General Storage" Room will be same as shown, detailed and specified in Base Bid plans for Grease, Lub. Oils, Kerosene etc. Room.

See this sheet for location of additional downspouts required under Alternate #3.

Do not include Alternate No. 1. or Alternate No. 2 in this Alternate.

Plumbing and Heating Alternate No. 2:-

Plumbing and Heating Contractor will quote additional cost to Ramsey County in his bid based on an extension and addition to the building as shown on this sheet and described above under "General Construction Alternate No. 3". This will entail additional work over and above work to be done under base bid as follows:

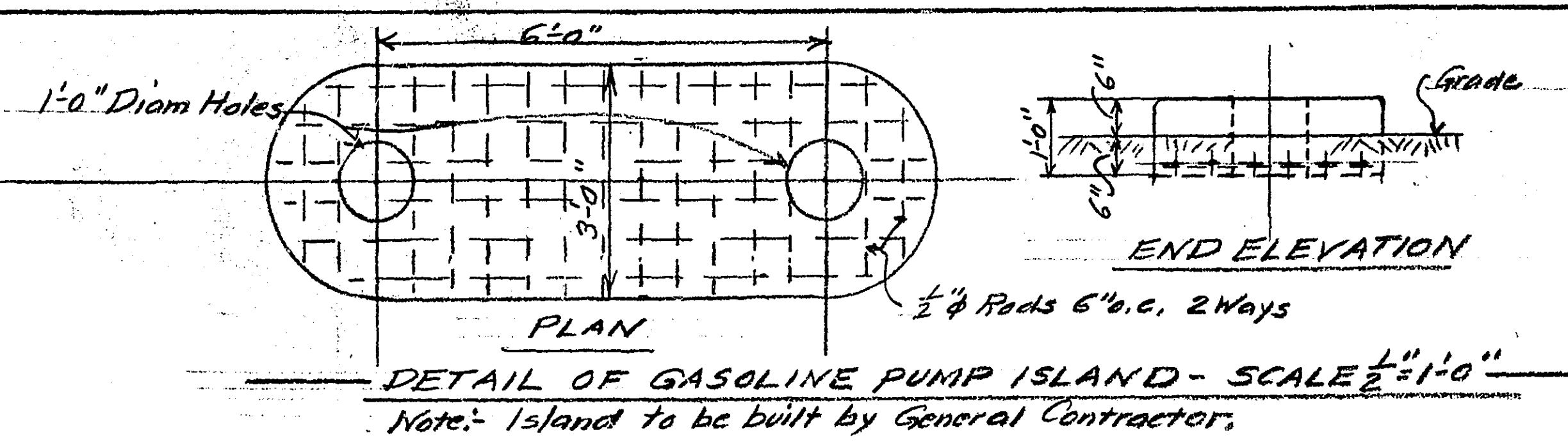
- Furnish and install five (5) additional unit heaters as shown on plan on this sheet.
- Change two (2) present base bid unit heaters to sizes and types shown on this sheet.
- Extend all piping shown on base bid plans to above mentioned heaters, pipe sizes to be such as will develop full capacities of heaters.
- Provide floor Cock and Air outlet at door #38 and also at new 18" x 14" x 12" north entrance door. All to be properly connected to source of supply.

All specifications on Sheet #13 of base bid plans will apply to this Alternate. Note also that two (2) additional 1000 Gallon Main Cess Pools will be required with drain pipe from downspouts as shown on this sheet. These Cess Pools to have special reinforced tops.

Do not include Alternate No. 1 in this Alternate.

Electrical Work Alternate No. 2:-

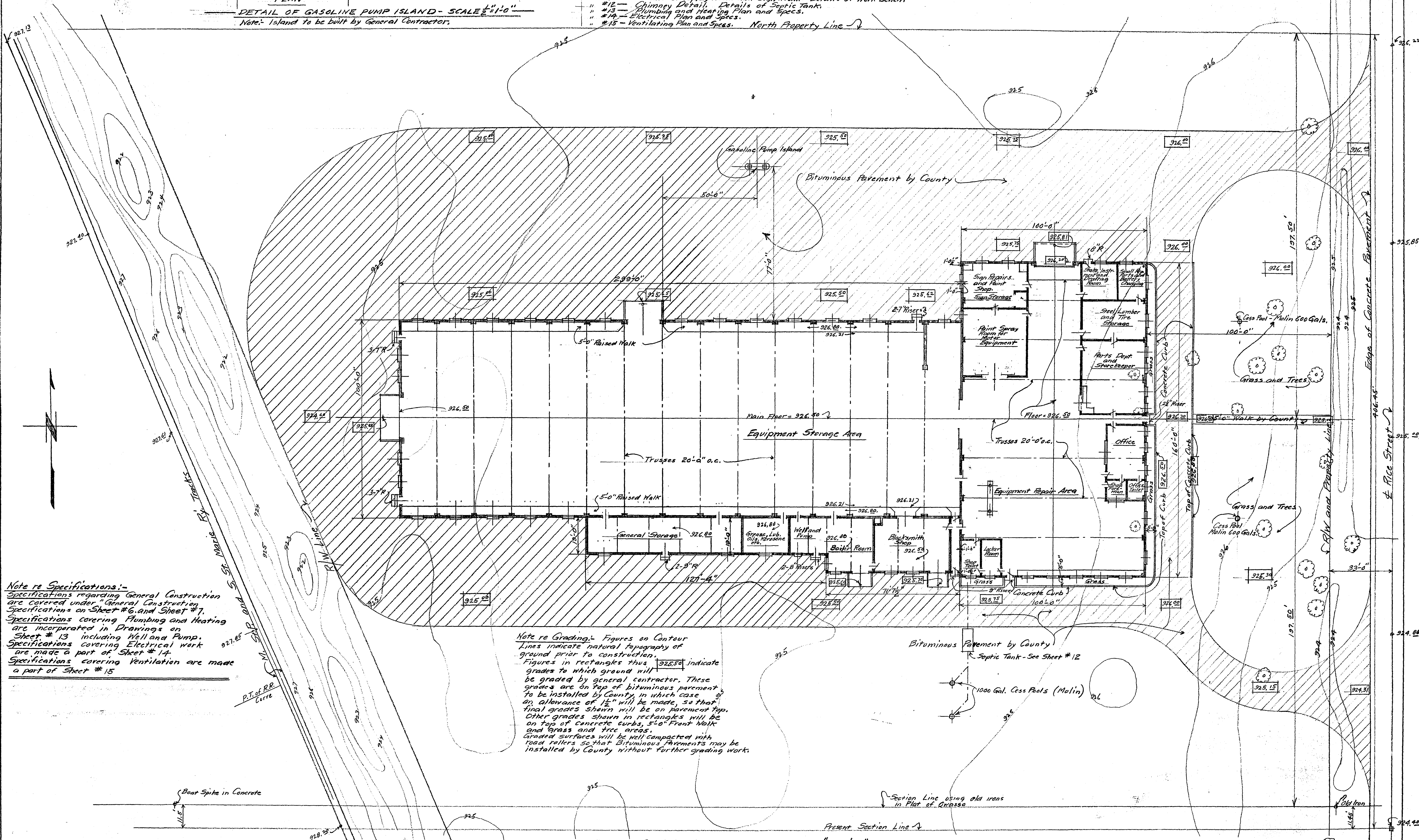
Electrical Contractor will quote additional cost to Ramsey County in his bid based on an extension and addition to the building as shown on this sheet and described above under "General Construction Alternate No.3". See plan on this sheet for additional lights, power plugs and motor wiring necessary under this alternate. All Specifications covering base bid which apply to Sheet #14 will apply to this Alternate. Contractor will supply and erect an additional cabinet and feeder of proper size where shown in General Storage Room. Do not include Alternate No.1 in this Alternate.



INDEX OF DRAWINGS

|          |                                                                |
|----------|----------------------------------------------------------------|
| Sheet #1 | Plat Plan, Pump Island and Grading Plan.                       |
| " #2     | Floor Plan.                                                    |
| " #3     | Foundation and Footing Plan, Grille Details.                   |
| " #4     | Roof Plan and Detail of Floor Drain Sumps.                     |
| " #5     | Elevations.                                                    |
| " #6     | Cross Section, Details and General Specifications.             |
| " #7     | Structural Steel Details, General Specifications.              |
| " #8     | Details of Lubricating Oil Tanks and Steel Framework therefor. |
| " #9     | Wall Sections, Door Schedules, Lintel Schedules.               |
| " #10    | Interior Room Details.                                         |
| " #11    | Details of Spray Room and Sign Room - Details of Work Bench.   |
| " #12    | Chimney Detail, Details of Septic Tank.                        |
| " #13    | Plumbing and Heating Plan and Specs.                           |
| " #14    | Electrical Plan and Specs.                                     |
| " #15    | Ventilating Plan and Specs.                                    |

North Property Line



Note re Specifications:-  
Specifications regarding General Construction are covered under "General Construction" Specifications on Sheet #6 and Sheet #7.  
Specifications covering Plumbing and Heating are incorporated in Drawings on Sheet #13 including Well and Pump.  
Specifications covering Electrical work are made a part of Sheet #14.  
Specifications covering Ventilation are made a part of Sheet #15.

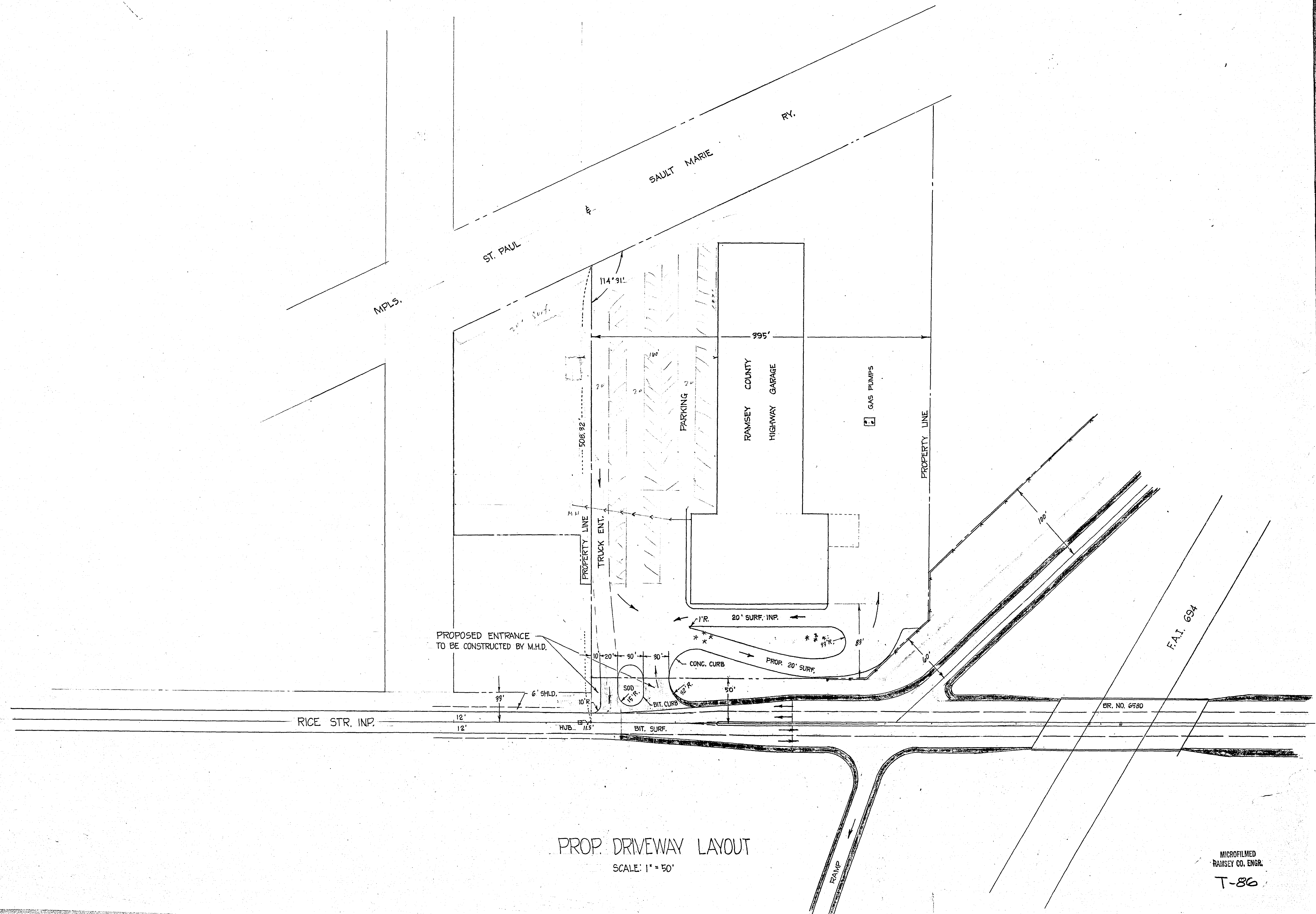
Note re Grading:- Figures on Contour Lines indicate natural topography of ground prior to construction.  
Figures in rectangles thus 925.50 indicate grades to which ground will be graded by general contractor. These grades are on top of bituminous pavement to be installed by County, in which case an allowance of 1 1/2" will be made, so that final grades shown will be on pavement top. Other grades shown in rectangles will be on top of concrete curbs, 5'-0" Frank Walk and grass and tree areas.  
Graded surfaces will be well compacted with road rollers so that Bituminous Pavements may be installed by County without further grading work.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.  
Date: 1/12/49 No. 818

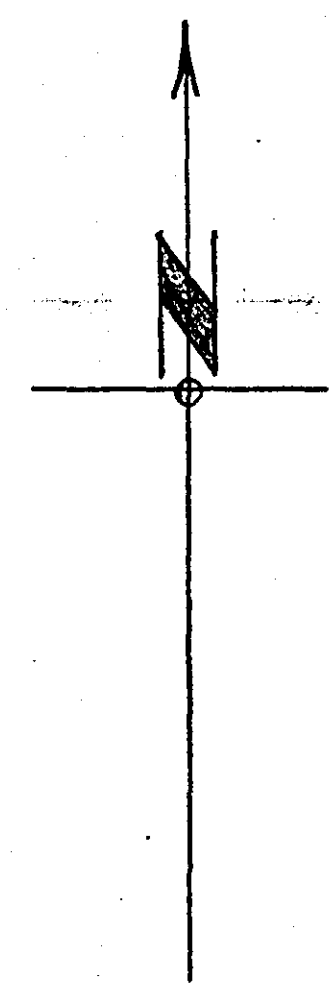
PLAT LAYOUT - SCALE 1" = 20'-0"  
RAMSEY COUNTY HIGHWAY GARAGE  
FOR  
RAMSEY COUNTY, MINNESOTA  
SCALE NOTED - AUGUST 1948  
DRAWN BY H.S. BRONSON, REG. STRUCTURAL ENGINEER #818

1 1/2 Story Frame House

T-86  
Sheet #1  
MICROFILMED  
RAMSEY CO. ENGR.

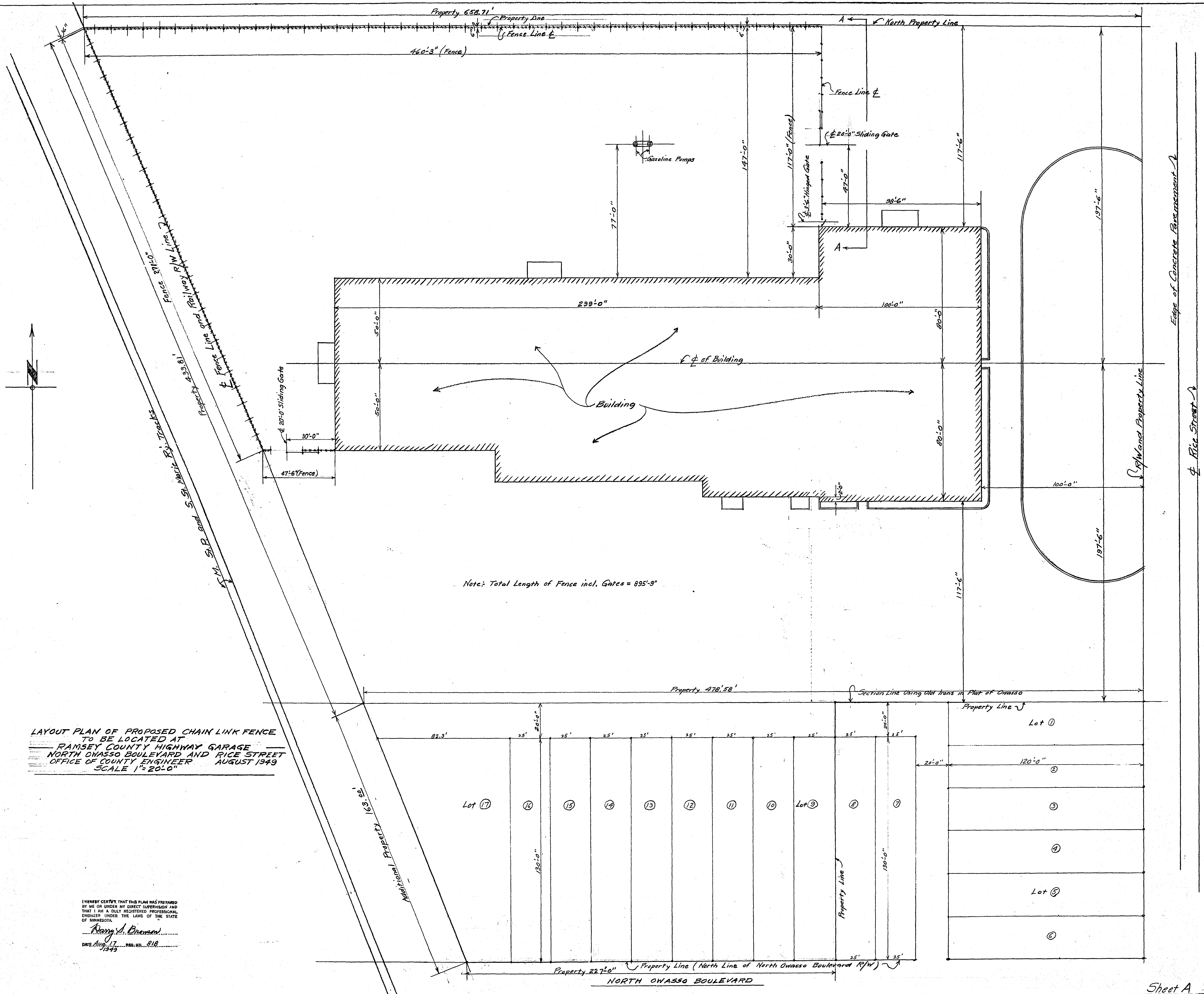


PROP. DRIVEWAY LAYOUT  
SCALE: 1" = 50'



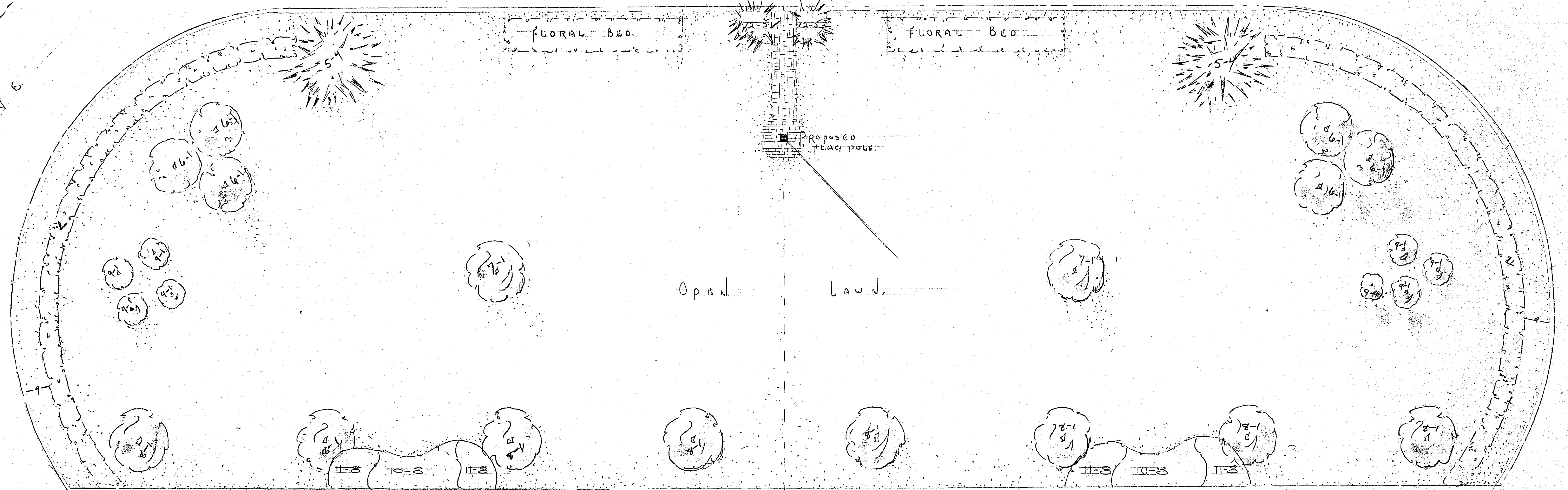
LAYOUT PLAN OF PROPOSED CHAIN LINK FENCE  
TO BE LOCATED AT  
RAMSEY COUNTY HIGHWAY GARAGE  
NORTH OWASSO BOULEVARD AND RICE STREET  
OFFICE OF COUNTY ENGINEER AUGUST 1949  
SCALE 1"=20'-0"

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED  
BY ME OR UNDER MY DIRECT SUPERVISION AND  
THAT I AM A DULY REGISTERED PROFESSIONAL  
ENGINEER UNDER THE LAWS OF THE STATE  
OF MINNESOTA.  
*Ramsey J. Driscoll*  
DATE Aug. 17, 1949 REG. NO. 218



| INDEX | COMMON NAME       | BOTANICAL NAME    | SIZE  | QUANT. |
|-------|-------------------|-------------------|-------|--------|
| 1     | SYRINGA VIRGINICA | PHIL. VIRGINALIS  | 3-4'  | 10     |
| 2     | ALPINE CURRANT    | TRIBES ALPINUM    | 2'    | 216    |
| 3     | BRIDAL WREATH     | SPIREA VAN MOULTI | 3-4'  | 8      |
| 4     | GOLDEN SYRINGA    | PHIL. AUREUS      | 2-3'  | 10     |
| 5     | GREEN SPRUCE      | PICEA PUNGENS     | 5'    | 8      |
| 6     | BASSWOOD          | FRAX. AMERICANA   | 8-10' | 6      |
| 7     | NORWAY MAPLE      | ACER PLATANOIDES  | 8-10' | 2      |
| 8     | AMERICAN ELM      | AMERICANUS ULMUS  | 8-10' | 2      |
| 9     | TATARIAN MAPLE    | ACER TAT. GINNATA | 4-5'  | 2      |
| 10    | RED TWIG DOGWOOD  | CORNUS SIBERICA   | 3-4'  | 16     |
| 11    | GOLDEN ELDER      | SAMBUCUS AUREA    | 3-4'  | 32     |
| 12    | PEITZER JUNIPER   | JUNIPERUS PEITZ.  | 3-4'  | 10     |

DRIVE



EDGE OF PAVEMENT

Rt. 57

# PLANTING PLAN

RAMSEY COUNTY GARAGE

Scale 1/8" = 1 foot

W. H. MONTGOMERY Landscape Archt.

— 1949 —

RAMSEY COUNTY HIGHWAY GARAGE

— BOARD OF COUNTY COMMISSIONERS —

EDWARD K. DELANEY, CHAIRMAN

OTTO W. ROHLAND, JR., VICE CHAIRMAN

TONY SCHMIDT, VICE CHAIRMAN

GEORGE H. MOELLER

RICHARD JANSEN

JAMES E. FINLEY

JOHN EDMUND BURKE

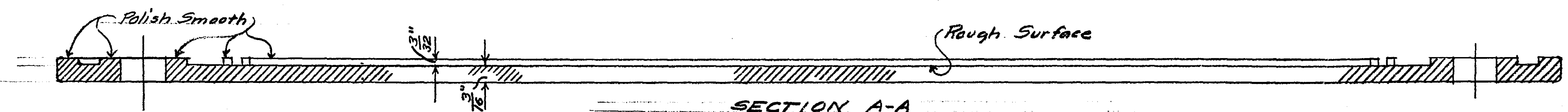
— HARRY S. BRONSON, DESIGNING ENGINEER —

1'-3 1/2"

Holes for 1/2" Expansion Bolts

1'-6"

PLAN

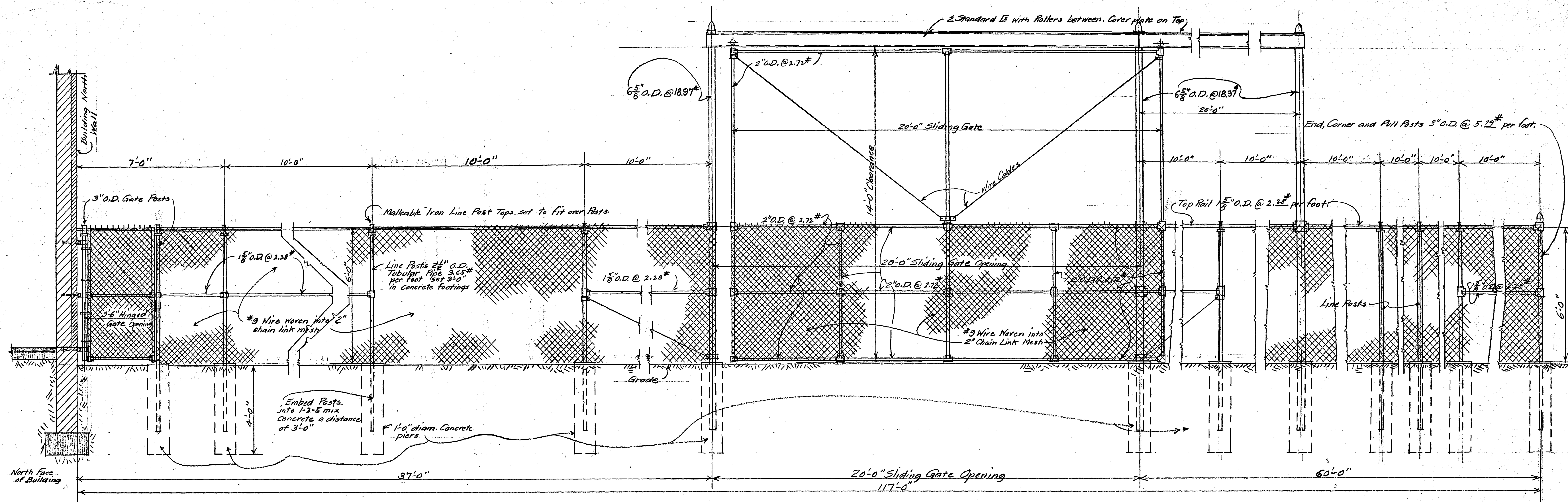


SECTION A-A

Note: Make plate from Cast Bronze. Plate to be 3/8" thick with letters, bars and border raised 3/8". Surface of plate to be rough, but surfaces of letters, bars and border will be polished smooth.

DETAIL OF BRONZE PLATE FOR RAMSEY COUNTY HIGHWAY GARAGE  
SCALE FULL SIZE





—ELEVATION A-A (See Sheet A) - SCALE  $\frac{1}{2}''=1'-0''$ —  
 Note: Remainder of Fence to be Similar.

- Materials: All Steel, Fabric, Pipe, Posts and fittings to be first quality, full weight, Hot Dip Galvanized, sepper-bearing.
- Fabric: #9 Wire woven into 2" Chain-link mesh. Top and bottom selvages to be barbed. Hot Dip Galvanized after fabrication.
- Line Posts: 2 1/2" O.D. Tubular Pipe @ 3.65' per foot. Set 3'-0" into Concrete Footings.
- Footings: These to be 1:3:5 mix concrete, 1'-0" in diameter with bottoms 4'-0" below grade.
- Line Post Tops: Heavy malleable iron to fit over Post Tops.
- Top Rail: 1 1/2" O.D. Tubular Pipe @ 2.28' provided with 7" inside and outside sleeve couplings.
- Fabric Ties: These to be aluminum #6 Gauge round. Furnish 6 to each 10'-0" of rail and 1 per foot of Line Post height.
- Terminal Posts: 3" O.D. @ 5.79'.
- Sliding Gate Posts: 6 5/8" O.D. @ 18.97'. Sliding Gate Posts: 3" O.D. @ 5.79'.
- Terminal Post Tops: Bullet Type heavy malleable on end, corner and gate posts.
- Brace Assembly: All end and gate posts to be braced horizontally with 1 1/2" O.D. pipe @ 2.28' and trussed with adjustable truss fittings. Corner Posts to have 2 Brace Assemblies thus.
- Tension Bands: Provide as necessary, 1 to each foot of fabric height. Beveled edge, slotted for lock pin.
- Sliding Gates: 2" O.D. Tubular Pipe @ 2.72'. Electrically welded corners. Offset Pin Type hinges. Provide latches, (1 thus required). Provide locking devices and 3 keys for all gates.

Note: Fence Construction to conform to Specifications covering Continental Chain-link Fence as produced by the Continental Steel Corporation, of Kokomo, Indiana or equal approved by the Ramsey County Engineer.

Note: Total length of fence required including gates = 895'-9"

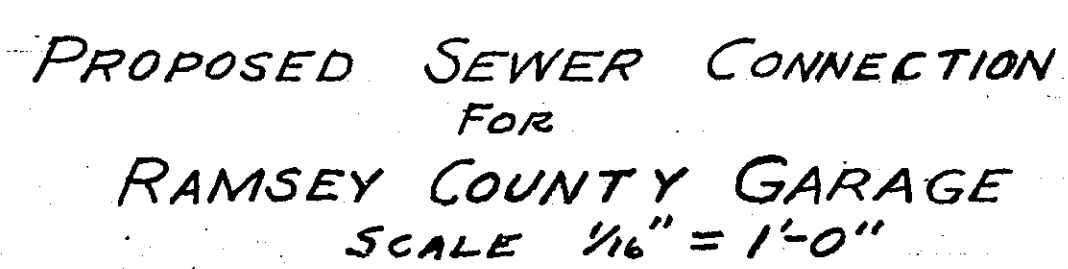
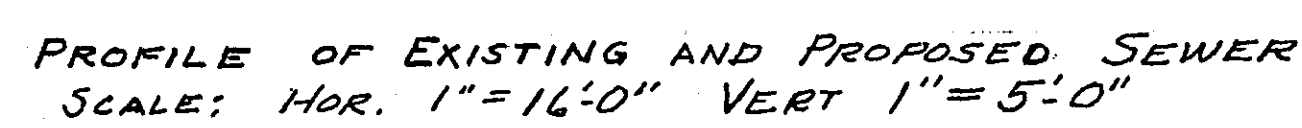
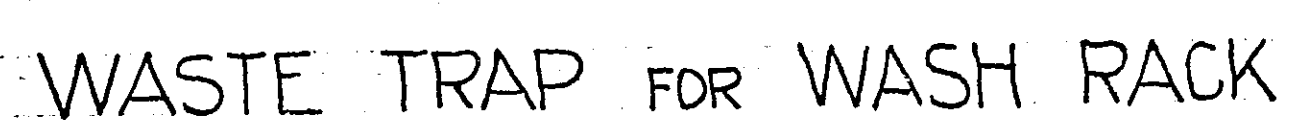
Note: See Sheet A for fence layout.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

*Ramsey A. Brannan*

DATE: Aug. 17, 1949 REG. NO. 918





TABULATION OF BIDS RECIEVED BY BOARD OF COUNTY  
COMMISSIONERS ON FEB 21, 1948 COVERING WORK TO  
TO BE DONE INCIDENT TO COMPLETION OF CONSTRUCTION OF  
RAMSEY COUNTY HIGHWAY GARAGE

| Type of Work            | Contractor                 | Base Bid               | Alt. #1<br>(2 Addl. Bays) | Alt. #2<br>(Wood End Wall) | Alt. #3<br>(7 Addl. Bays) | 100% Certified<br>Check                | Base Bid Plus Alt. #3                                                     | Low<br>Bid |
|-------------------------|----------------------------|------------------------|---------------------------|----------------------------|---------------------------|----------------------------------------|---------------------------------------------------------------------------|------------|
| GENERAL<br>CONSTRUCTION | Lovering Const. Co. ✓      | 74500. <sup>00</sup> ✓ | 9650. <sup>00</sup> ✓     | - 950. <sup>00</sup> ✓     | 38000. <sup>00</sup> ✓    | OK.                                    | 112500. <sup>00</sup> ✓                                                   |            |
|                         | Lindstrom & Anderson ✓     | 83477. <sup>00</sup> ✓ | 11214. <sup>00</sup> ✓    | - 611. <sup>00</sup> ✓     | 48464. <sup>00</sup> ✓    | (Not Sufficient)                       | 131941. <sup>00</sup> ✓                                                   |            |
|                         | Geo. J. Grant Const. Co. ✓ | 69990. <sup>00</sup> ✓ | 10400. <sup>00</sup> ✓    | - 696. <sup>00</sup> ✓     | 41275. <sup>00</sup> ✓    | OK.                                    | 111265. <sup>00</sup> ✓ (2nd Low)                                         |            |
|                         | Harold Purtell ✓           | 99770. <sup>00</sup> ✓ | 17640. <sup>00</sup> ✓    | - 1800. <sup>00</sup> ✓    | 61730. <sup>00</sup> ✓    | OK.                                    | 161500. <sup>00</sup> ✓                                                   |            |
|                         | Steenberg Const. Co. ✓     | 67145. <sup>00</sup> ✓ | 9274. <sup>00</sup> ✓     | - 41. <sup>00</sup> ✓      | 47501. <sup>00</sup> ✓    | \$6800. <sup>00</sup> (Not sufficient) | 114646. <sup>00</sup> minus 6000. <sup>00</sup> = 108646. <sup>00</sup> X |            |
|                         |                            |                        |                           |                            |                           |                                        |                                                                           |            |
|                         |                            |                        |                           |                            |                           |                                        |                                                                           |            |
|                         |                            |                        |                           |                            |                           |                                        |                                                                           |            |
|                         |                            |                        |                           |                            |                           |                                        |                                                                           |            |
|                         |                            |                        |                           |                            |                           |                                        |                                                                           |            |

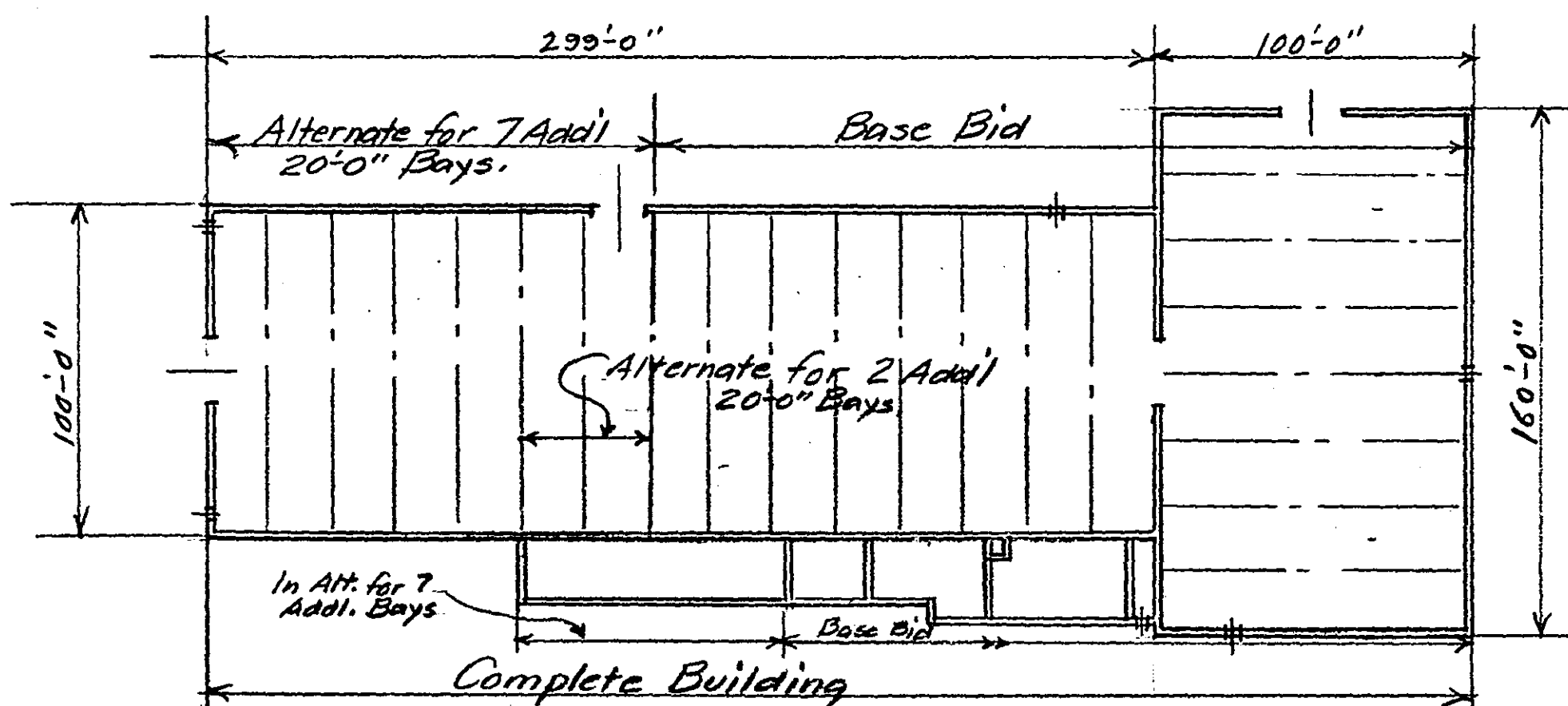
| Type of Work               | Contractor                     | Base Bid               | Alt. #1<br>(2 Addl. Bays)                    | Alt. #2<br>(7 Addl. Bays)                    | 100% Certified<br>Check   | Base Bid plus Alt. #2            | Low<br>Bid |
|----------------------------|--------------------------------|------------------------|----------------------------------------------|----------------------------------------------|---------------------------|----------------------------------|------------|
| PLUMBING<br>AND<br>HEATING | Pierre Aircon, Inc. ✓          | 24512. <sup>00</sup> ✓ | 25600. <sup>00</sup> ✓ (1088 <sup>00</sup> ) | (2660 <sup>00</sup> ) 27172. <sup>00</sup> ✓ | OK.                       | 27172. <sup>00</sup> ✓           |            |
|                            | E.R. Johnson P & H. Co. ✓      | 24949. <sup>00</sup> ✓ | 819. <sup>00</sup> ✓                         | 5051. <sup>00</sup> ✓                        | OK.                       | 30000. <sup>00</sup> ✓           |            |
|                            | Charles Harris Plumbing Co. ✓  | 26121. <sup>00</sup> ✓ | 656. <sup>00</sup> ✓                         | 3540. <sup>00</sup> ✓                        | OK.                       | 29661. <sup>00</sup> ✓           |            |
|                            | A.V. Winterer & Sons, Inc. ✓   | 20820. <sup>00</sup> ✓ | 516. <sup>00</sup> ✓                         | 3337. <sup>00</sup> ✓                        | OK.                       | 24157. <sup>00</sup> ✓ (2nd Low) |            |
|                            | Axel Newman H & P. Co., Inc. ✓ | 18949. <sup>00</sup> ✓ | 500. <sup>00</sup> ✓                         | 2540. <sup>00</sup> ✓                        | OK. (2700 <sup>00</sup> ) | 21489. <sup>00</sup>             | X          |
|                            | H.R. Nichols ✓                 | 25700. <sup>00</sup> ✓ | 560. <sup>00</sup> ✓                         | 3105. <sup>00</sup> ✓                        | OK.                       | 28805. <sup>00</sup> ✓           |            |
|                            |                                |                        |                                              |                                              |                           |                                  |            |
|                            |                                |                        |                                              |                                              |                           |                                  |            |
|                            |                                |                        |                                              |                                              |                           |                                  |            |
|                            |                                |                        |                                              |                                              |                           |                                  |            |
|                            |                                |                        |                                              |                                              |                           |                                  |            |

| Type of Work | Contractor                            | Base Bid              | 100% Certified<br>Check  | Base Bid                        | Low<br>Bid |
|--------------|---------------------------------------|-----------------------|--------------------------|---------------------------------|------------|
| VENTILATION  | Roofings, Inc. ✓                      | 5300. <sup>00</sup> ✓ | OK.                      | 5300. <sup>00</sup> ✓           |            |
|              | Pierre Aircon Co. ✓                   | 6590. <sup>00</sup> ✓ | OK.                      | 6590. <sup>00</sup> ✓           |            |
|              | Theo. G. Helle & Co. ✓                | 5797. <sup>00</sup> ✓ | OK.                      | 5797. <sup>00</sup> ✓           |            |
|              | Charles Harris Plumbing Co. ✓         | 6396. <sup>00</sup> ✓ | OK.                      | 6396. <sup>00</sup> ✓           |            |
|              | Yale Engineers, Inc. ✓                | 5947. <sup>00</sup> ✓ | OK.                      | 5947. <sup>00</sup> ✓           |            |
|              | Acme Htg, Sheet Metal & Roofing Co. ✓ | 5241. <sup>00</sup> ✓ | OK.                      | ✓ 5241. <sup>00</sup> (2nd Low) |            |
|              | A.G. Ettel & Co. ✓                    | 4670. <sup>00</sup> ✓ | OK. (467 <sup>00</sup> ) | 4670. <sup>00</sup> ✓           | X          |
|              | Midler, Inc. ✓                        | 5939. <sup>00</sup> ✓ | OK.                      | 5939. <sup>00</sup> ✓           |            |
|              |                                       |                       |                          |                                 |            |
|              |                                       |                       |                          |                                 |            |
|              |                                       |                       |                          |                                 |            |
|              |                                       |                       |                          |                                 |            |

| Type of Work | Contractor                             | Base Bid               | Alt. #1<br>(2 Addl. Bays) | Alt. #2<br>(7 Addl. Bays) | 100% Certified<br>Check                           | Base Bid plus Alt. #2           | Low<br>Bid |
|--------------|----------------------------------------|------------------------|---------------------------|---------------------------|---------------------------------------------------|---------------------------------|------------|
| ELECTRICAL   | Electric Repair & Const. Co. ✓         | 12718. <sup>00</sup> ✓ | 350. <sup>00</sup> ✓      | 1147. <sup>00</sup> ✓     | OK. (Bid not on County Form)                      | 13865. <sup>00</sup> ✓          |            |
|              | Commonwealth Electric Co. ✓            | 7760. <sup>00</sup> ✓  | 175. <sup>00</sup> ✓      | 880. <sup>00</sup> ✓      | (900 <sup>00</sup> ) OK. (Bid not on County Form) | 8640. <sup>00</sup> ✓           | X          |
|              | Christensen Electric Co. ✓             | 11676. <sup>00</sup> ✓ | 74. <sup>00</sup> ✓       | 831. <sup>00</sup> ✓      | Short (1200 <sup>00</sup> )                       | 12508. <sup>00</sup> ✓          |            |
|              | Kehne Electric Co. ✓                   | 9563. <sup>00</sup> ✓  | 123. <sup>00</sup> ✓      | 1053. <sup>00</sup> ✓     | OK.                                               | 10616. <sup>00</sup> ✓          |            |
|              | Hoffman Lighting Electric Const. Co. ✓ | 8774. <sup>00</sup> ✓  | 75. <sup>00</sup> ✓       | 300. <sup>00</sup> ✓      | OK.                                               | 9074. <sup>00</sup> ✓ (2nd Low) |            |
|              | Pioneer Electric Co. ✓                 | 10213. <sup>00</sup> ✓ | 78. <sup>00</sup> ✓       | 924. <sup>00</sup> ✓      | OK.                                               | 11137. <sup>00</sup> ✓          |            |
|              | Tieso & Hostka Electric Co., Inc. ✓    | 8647. <sup>00</sup> ✓  | 125. <sup>00</sup> ✓      | 525. <sup>00</sup> ✓      | OK.                                               | 9172. <sup>00</sup> ✓           |            |
|              |                                        |                        |                           |                           |                                                   |                                 |            |
|              |                                        |                        |                           |                           |                                                   |                                 |            |
|              |                                        |                        |                           |                           |                                                   |                                 |            |
|              |                                        |                        |                           |                           |                                                   |                                 |            |
|              |                                        |                        |                           |                           |                                                   |                                 |            |

Note:- Low Bidders on each type of work, based on Base Bid plus Alternate calling for seven (7) additional bays thereby producing a complete building are as follows:-  
 General Construction - Steenberg Construction Co. @ → 108646.<sup>00</sup>  
 Plumbing & Heating - Axel Newman Heating & Plumbing Co., Inc. @ → 21489.<sup>00</sup>  
 Ventilation - A.G. Ettel & Co. @ → 4670.<sup>00</sup>  
 Electrical Work - Commonwealth Electric Co. @ → 8640.<sup>00</sup>

Total Cost to County = \$143445.<sup>00</sup>  
 Road and Bridge Appropriation is \$170000.<sup>00</sup> in 1949 Budget.  
 Note Re Low Bid of Steenberg Const. Co. - Base Bid plus Alternate #3 totals to \$114646.<sup>00</sup> but, in the bid, the statement is made that if Alternate #3 is accepted, thus producing a complete job, a deduction of \$6000.<sup>00</sup> will be made. This makes the low bid on General Construction @ \$108646.<sup>00</sup>  
 Note Re Low Bid of Commonwealth Electric Co. - Base Bid plus Alternate calling for 7 Additional Bays @ \$8640.<sup>00</sup> is a bona fide low bid. However it was not submitted on the County Form as provided in the specifications. The County Attorney should rule on this. If Commonwealth's bid is ruled out, the bid of the Hoffman Lighting Electric Const. Co. becomes low @ \$9074.<sup>00</sup> making an additional cost to the County of \$434.<sup>00</sup>



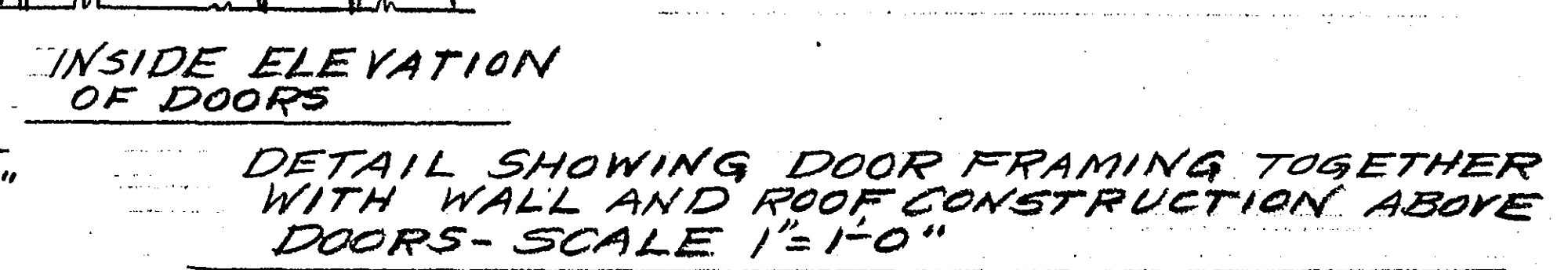
PLAN SHOWING COMPLETE BUILDING AND  
EXEMPLIFICATION OF ALTERNATE BIDS.  
SCALE 1"=60'-0"

Additional Note re Steenberg's Bid:- On the basis of a complete building, his bid is \$108646.<sup>00</sup>. This calls for a certified check of \$10865.<sup>00</sup> whereas the check submitted is only \$6800.<sup>00</sup>. Steenberg says the girl in the County Auditor's Office told him to submit a check based on the base bid only, which he did. If Steenberg's bid is thrown out on this account, the Geo. J. Grant Const. Co. becomes low at an additional cost to the County of \$2619.<sup>00</sup>.

2 Lines x Budgeting



SECTION THROUGH DOOR HEAD



Wheeling Tri-Rib Metal Deck

Roofing

1/2" Insulite

Truss

6'-2 1/2" +

6"

6"

6"

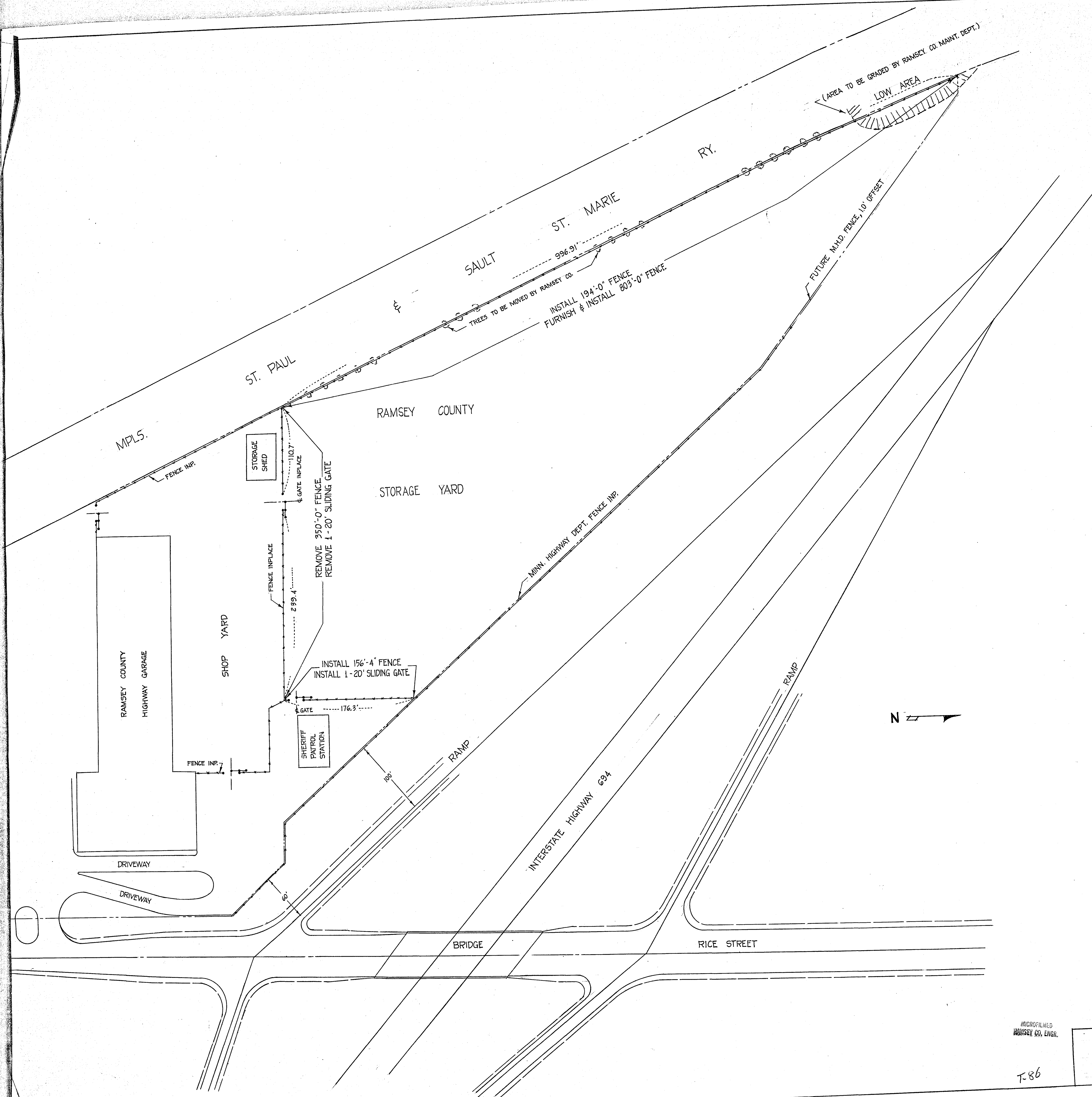
8" Plaster 1-4" Wide

Concrete Blocks

NORTH ELEVATION

Note: All Concrete Footings to be reinforced with  $3-\frac{1}{2}" \phi$  rods.  
See Section A-A.

PROPOSED STORAGE BUILDING  
FOR  
RAMSEY COUNTY, MINN.  
TO BE ERRECTED ON PROPERTY OCCUPIED  
BY THE RAMSEY COUNTY HIGHWAY GARAGE  
AT #2777 MO. RICE AVE.  
RAMSEY COUNTY,  
JAN. 1950 - SCALE 1"=10' EXCEPT AS NOTED.  
H.S. BRONSON - REG. STRUCTURAL ENG. #218

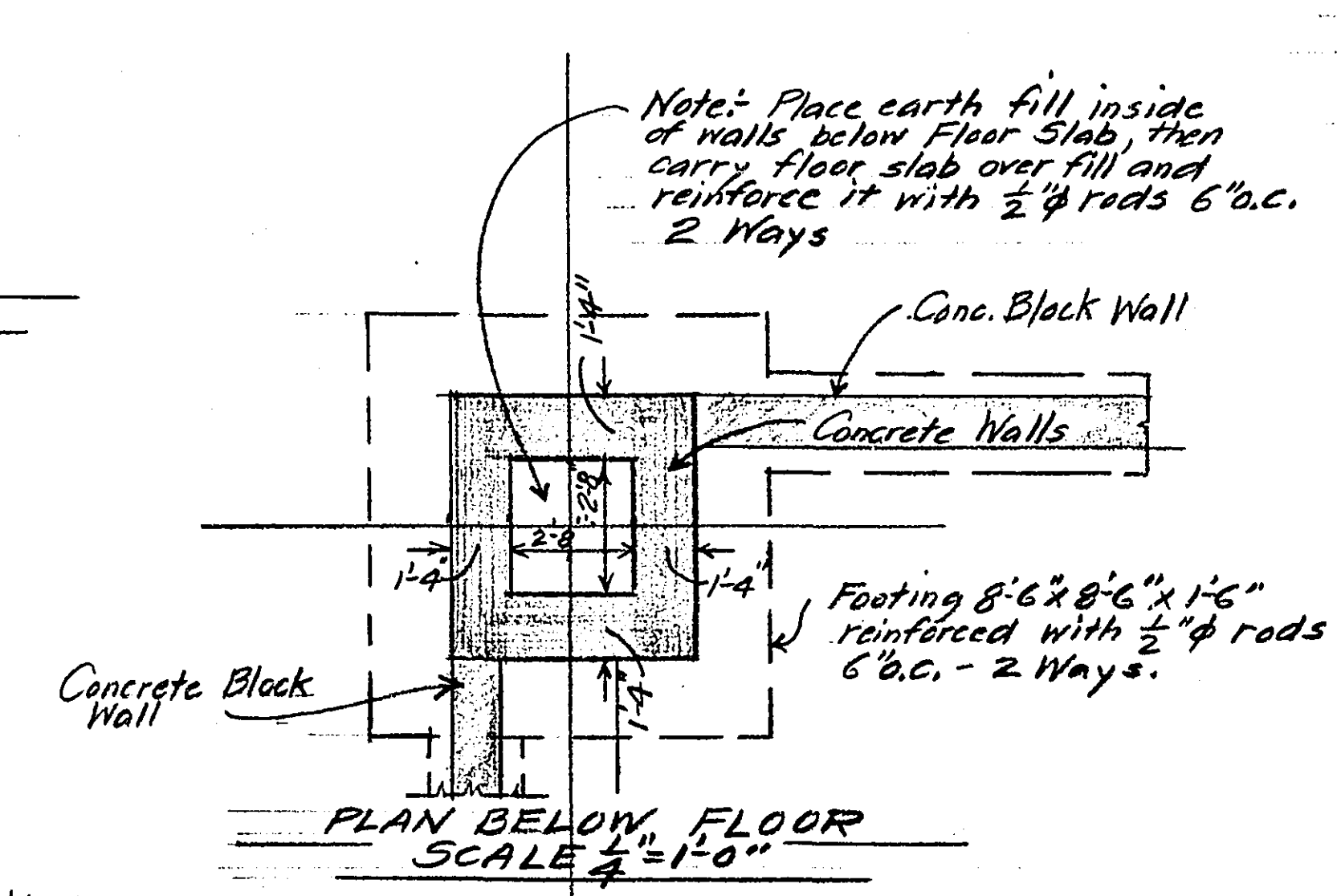
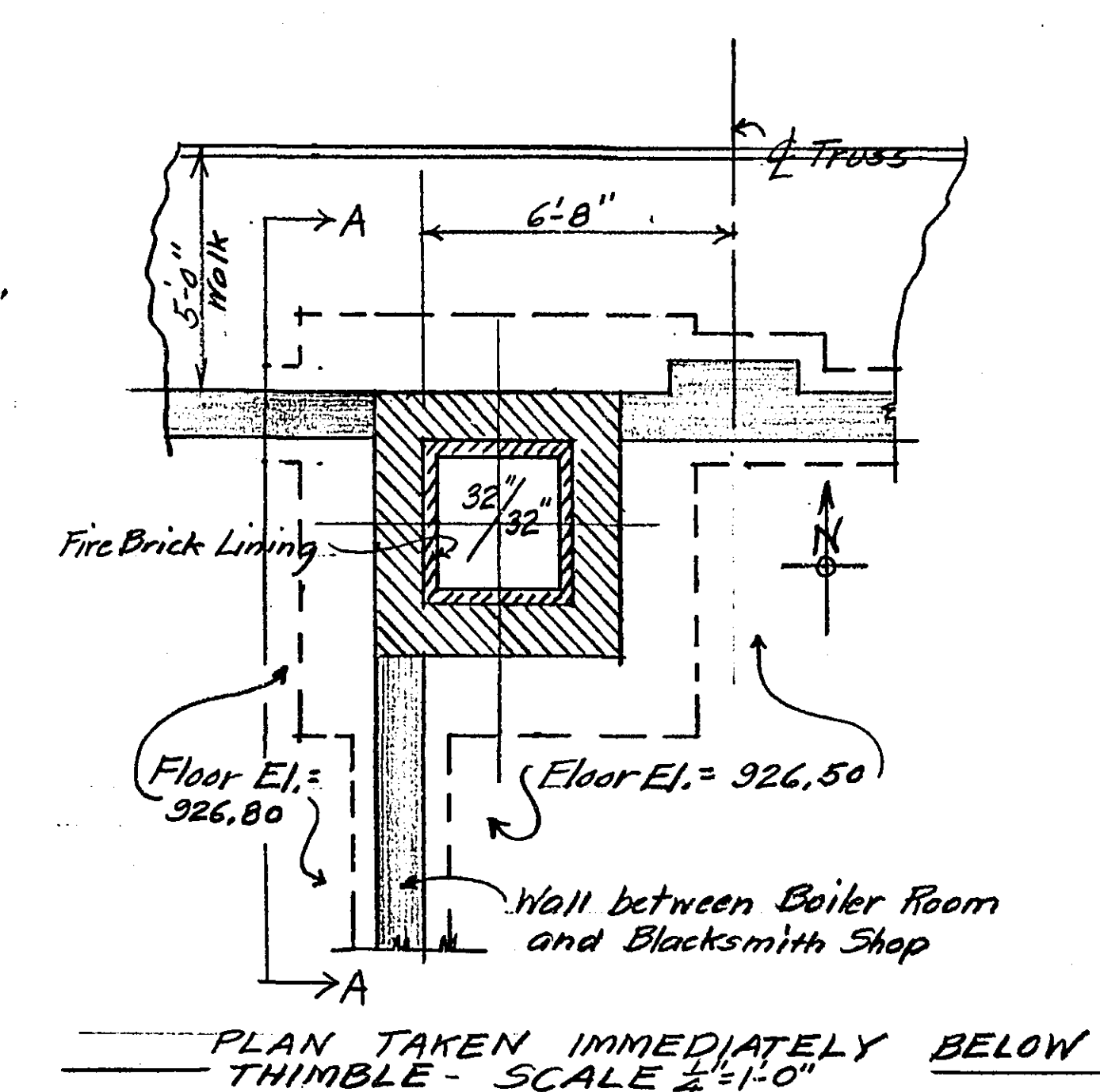
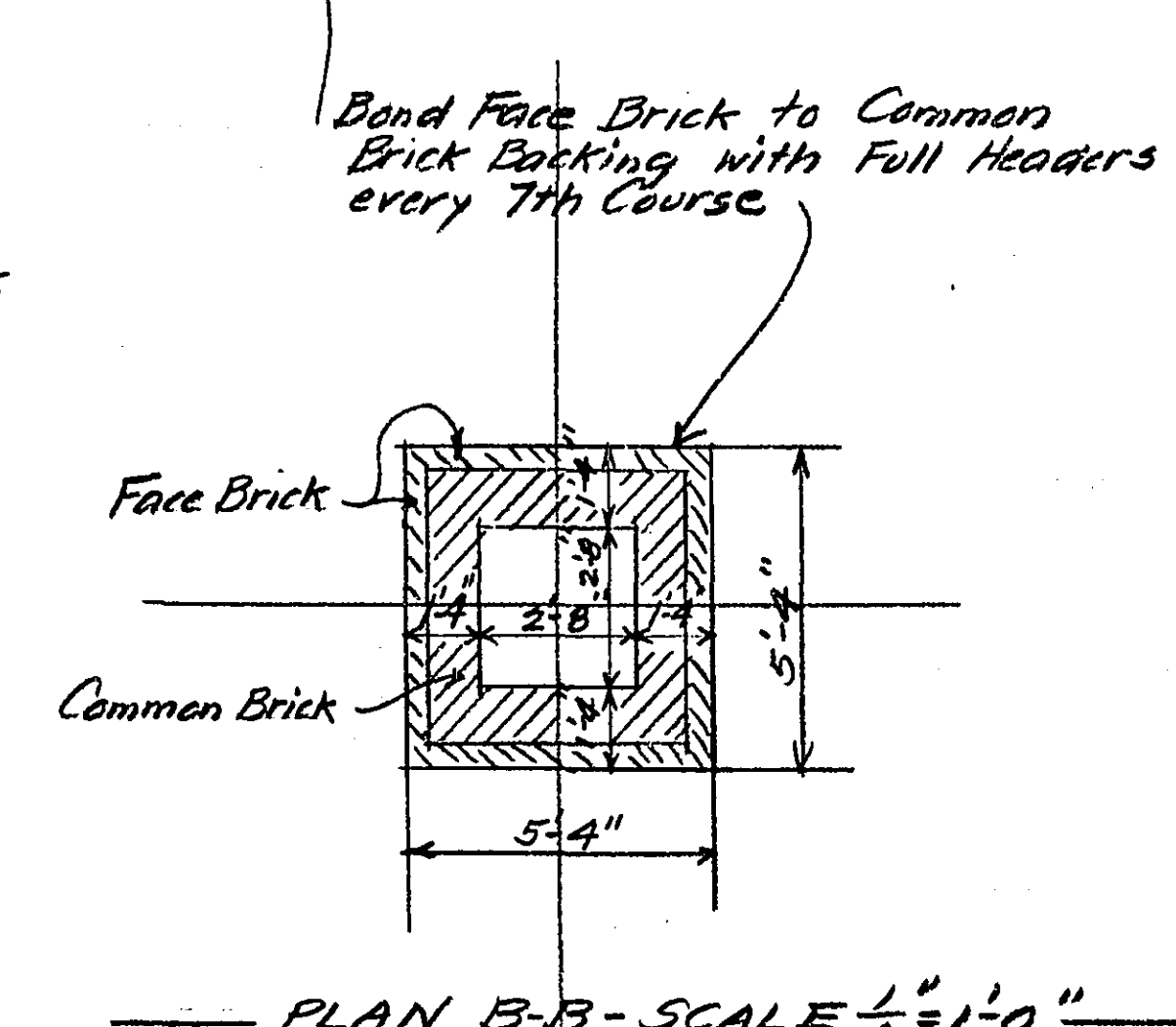
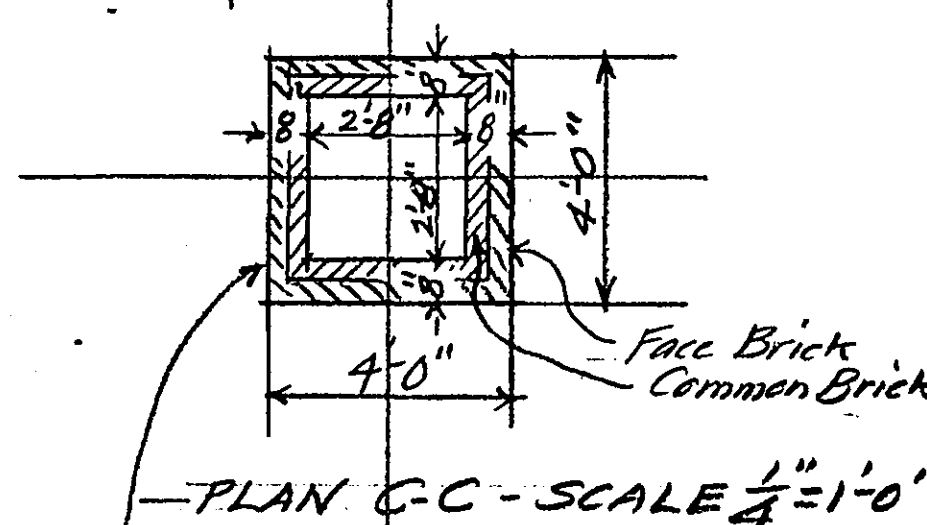
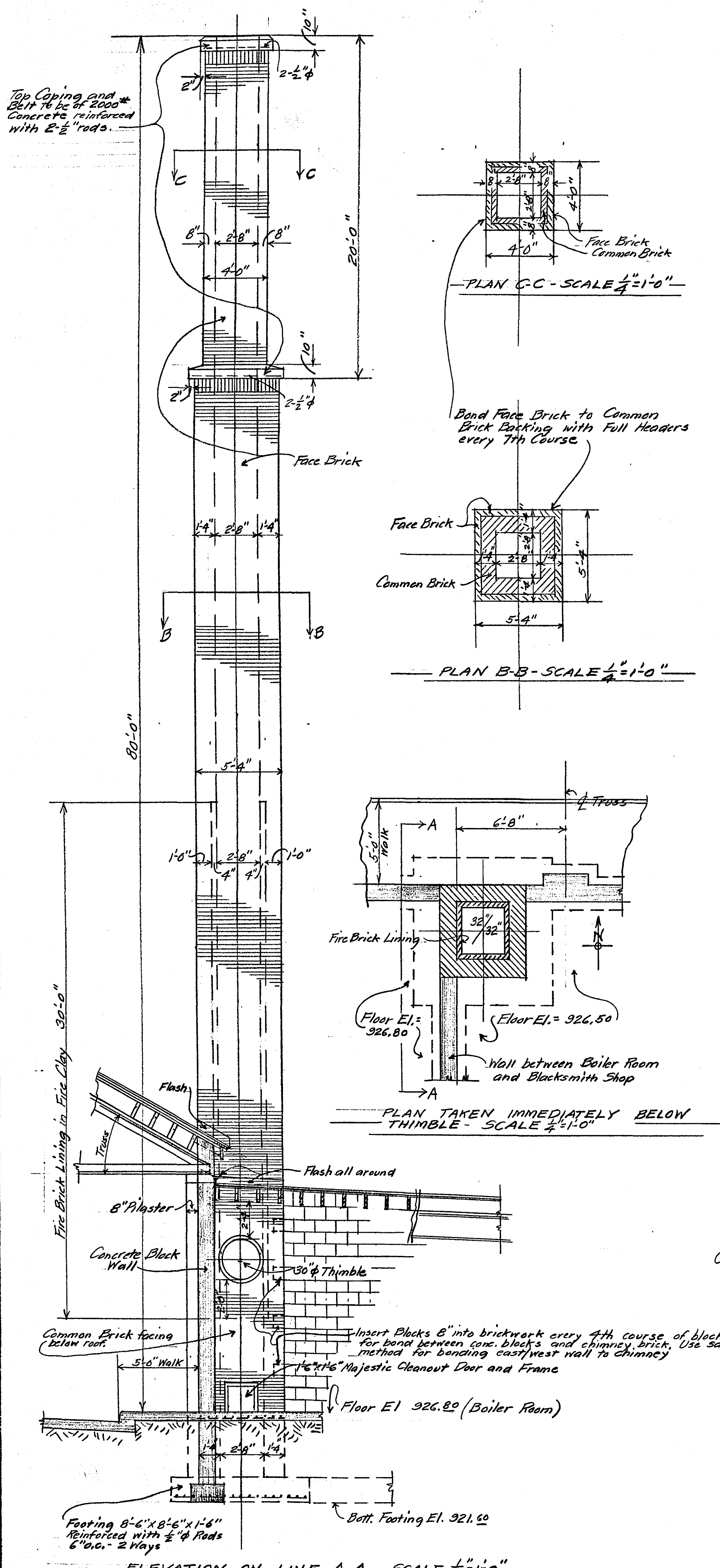


MICROFILMED  
RAMSEY CO. ENGR.

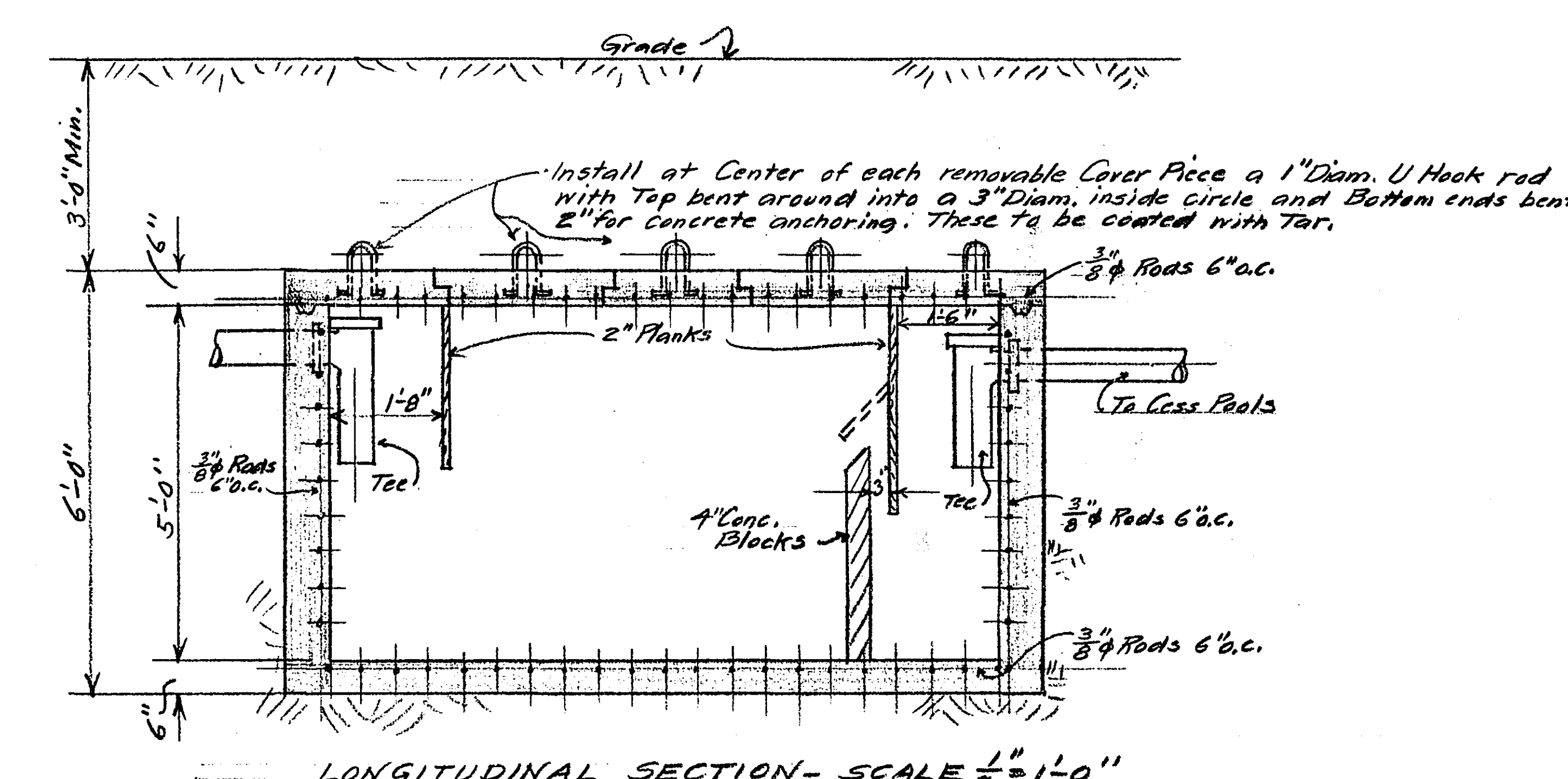
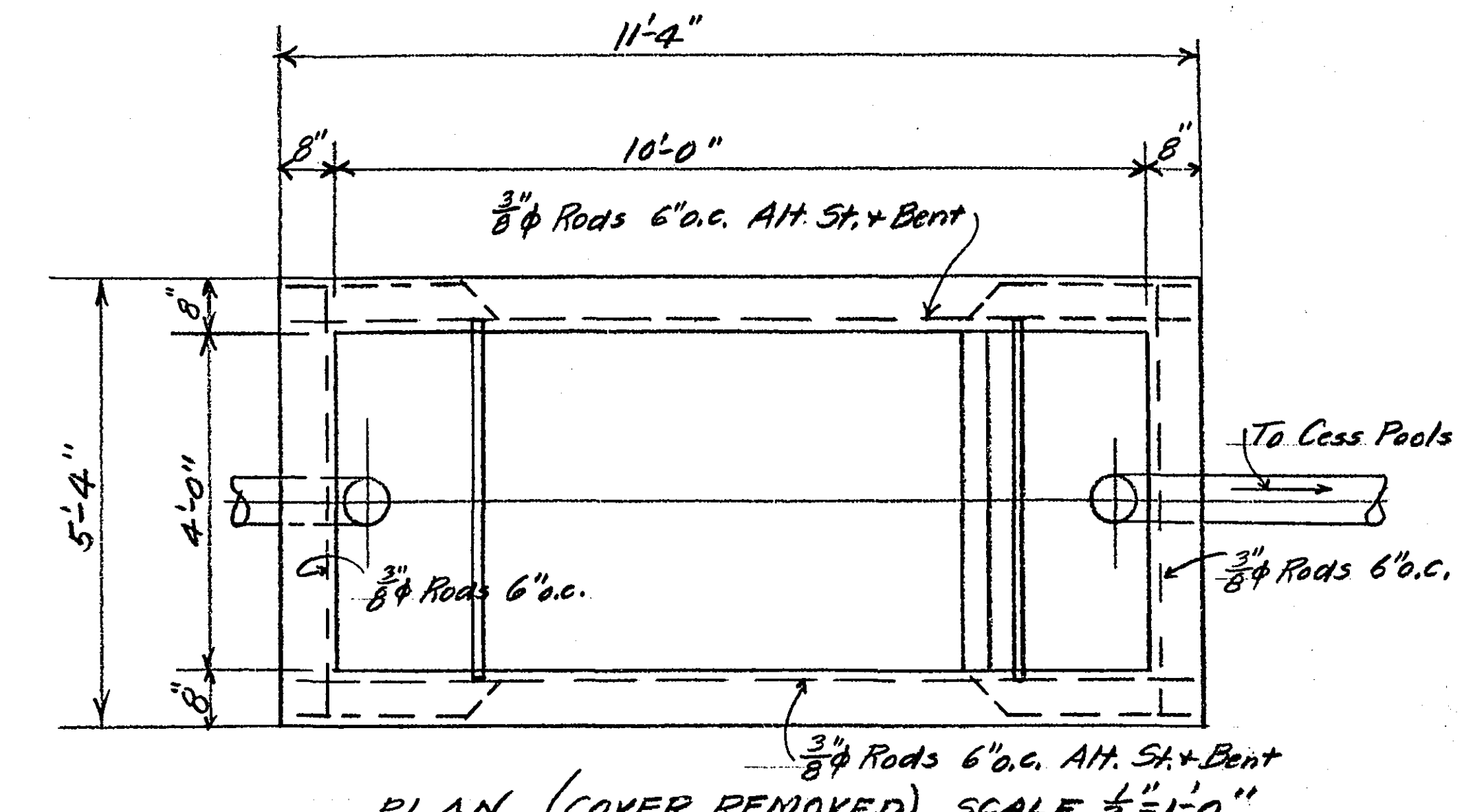
T-86

Sheet A

PROPOSED FENCE  
FOR  
RAMSEY COUNTY HIGHWAY DEPT. YARD  
BY M.D.K. 10-31-61 SCALE 1"=50'



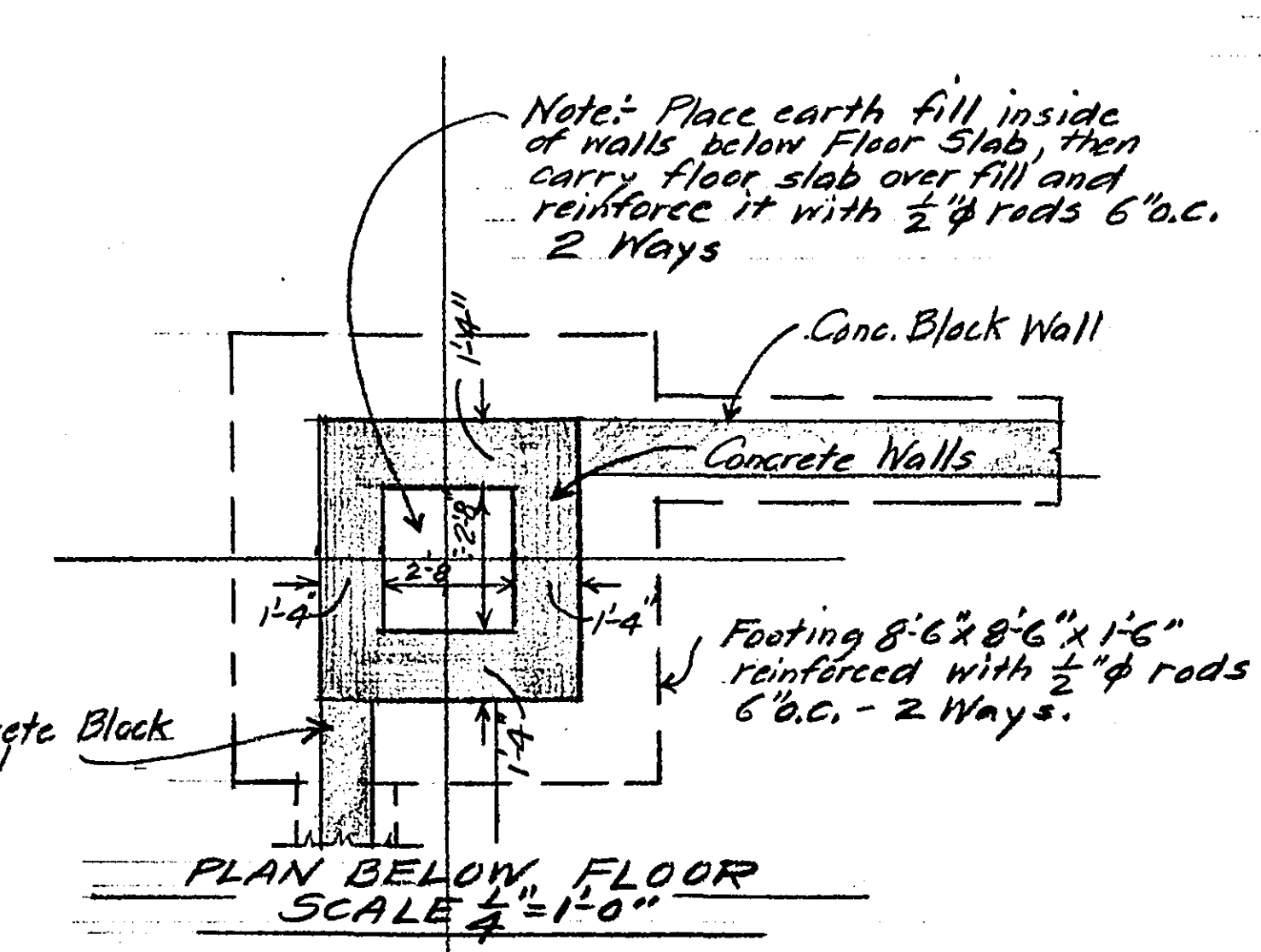
DETAILS OF CHIMNEY - SCALE NOTED

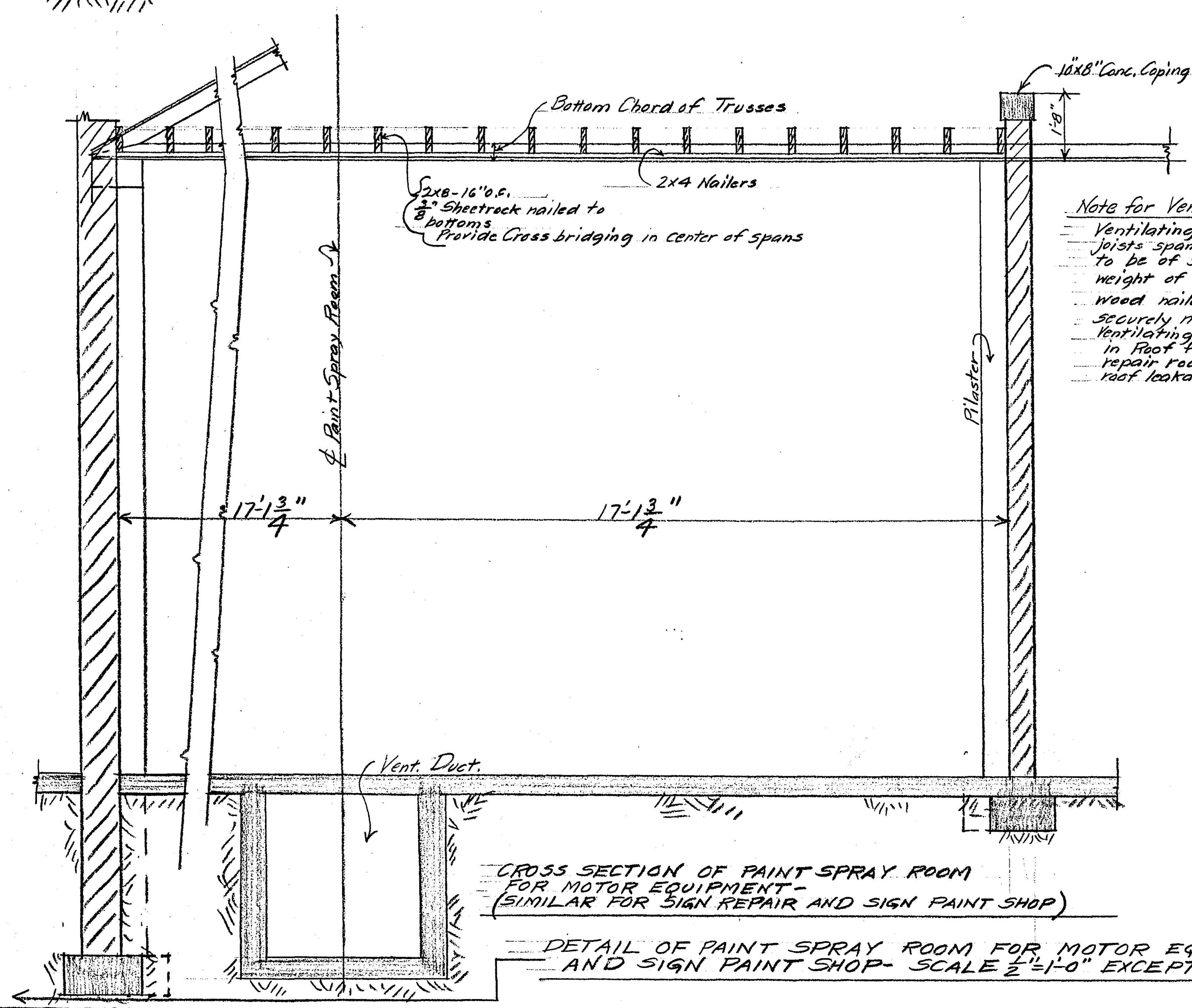
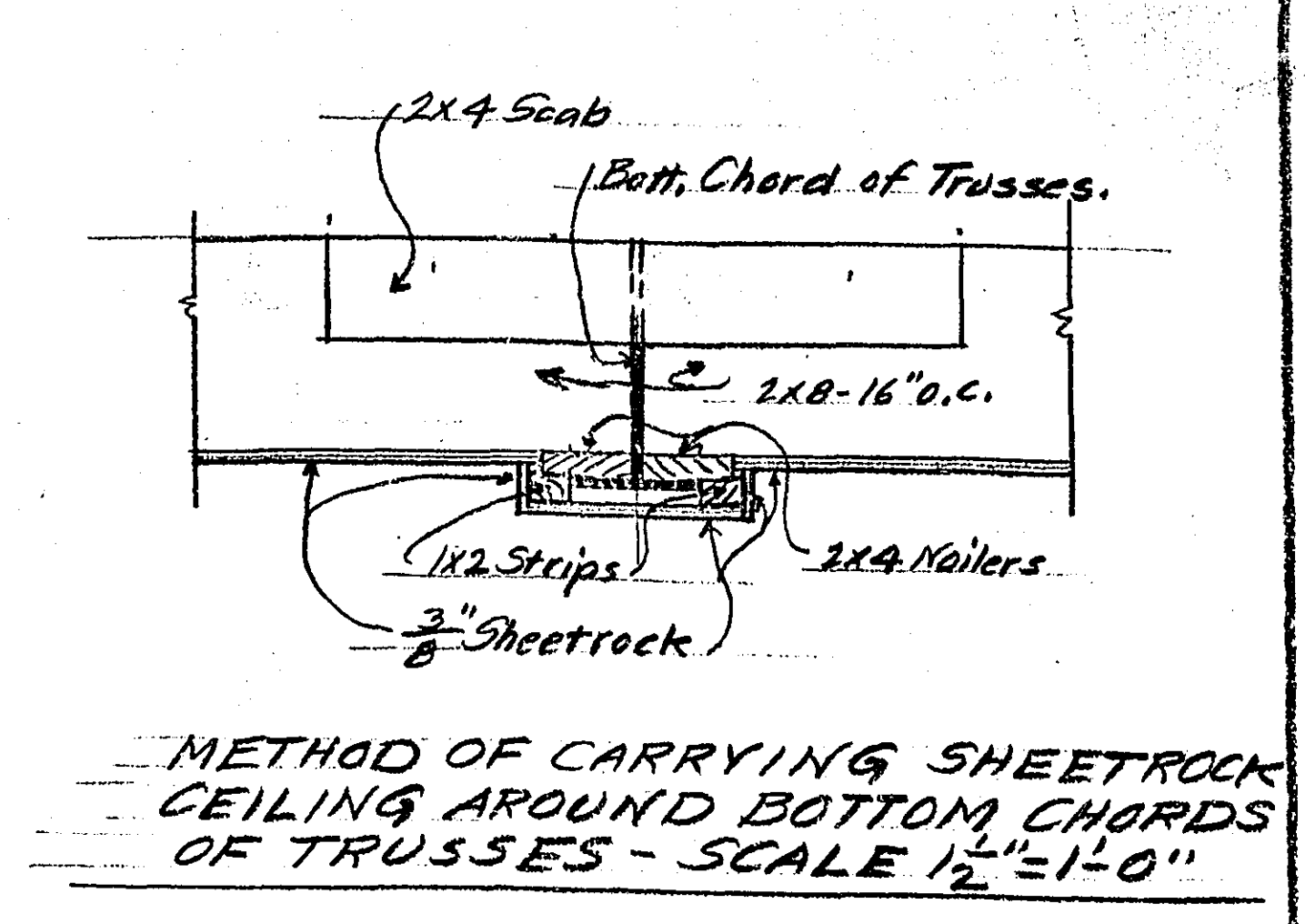
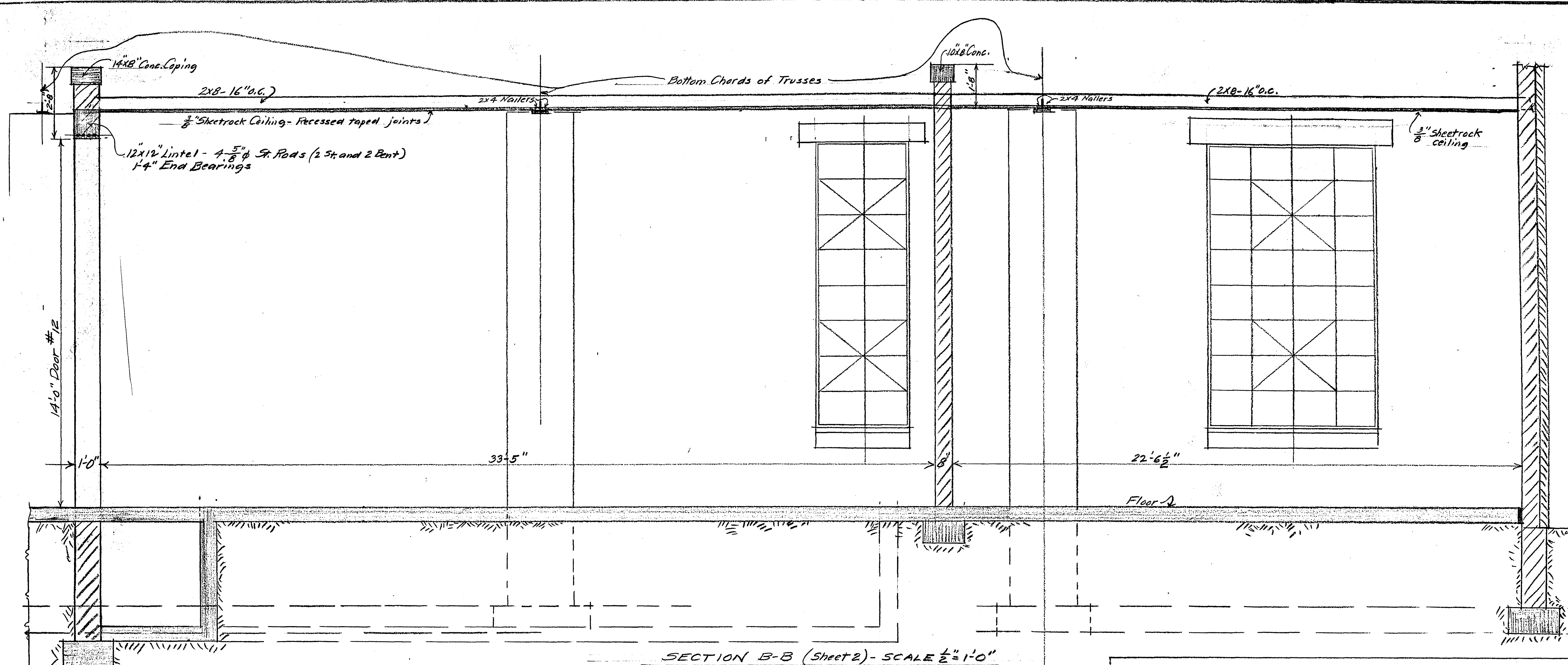


DETAIL OF SEPTIC TANK - SCALES NOTED

Note: Use 2500\* Concrete. Provide 1/2" Temperature Rods 1'-0" o.c. perpendicular to Main Reinforcement. See Sheet #1 for Location of Septic Tank.

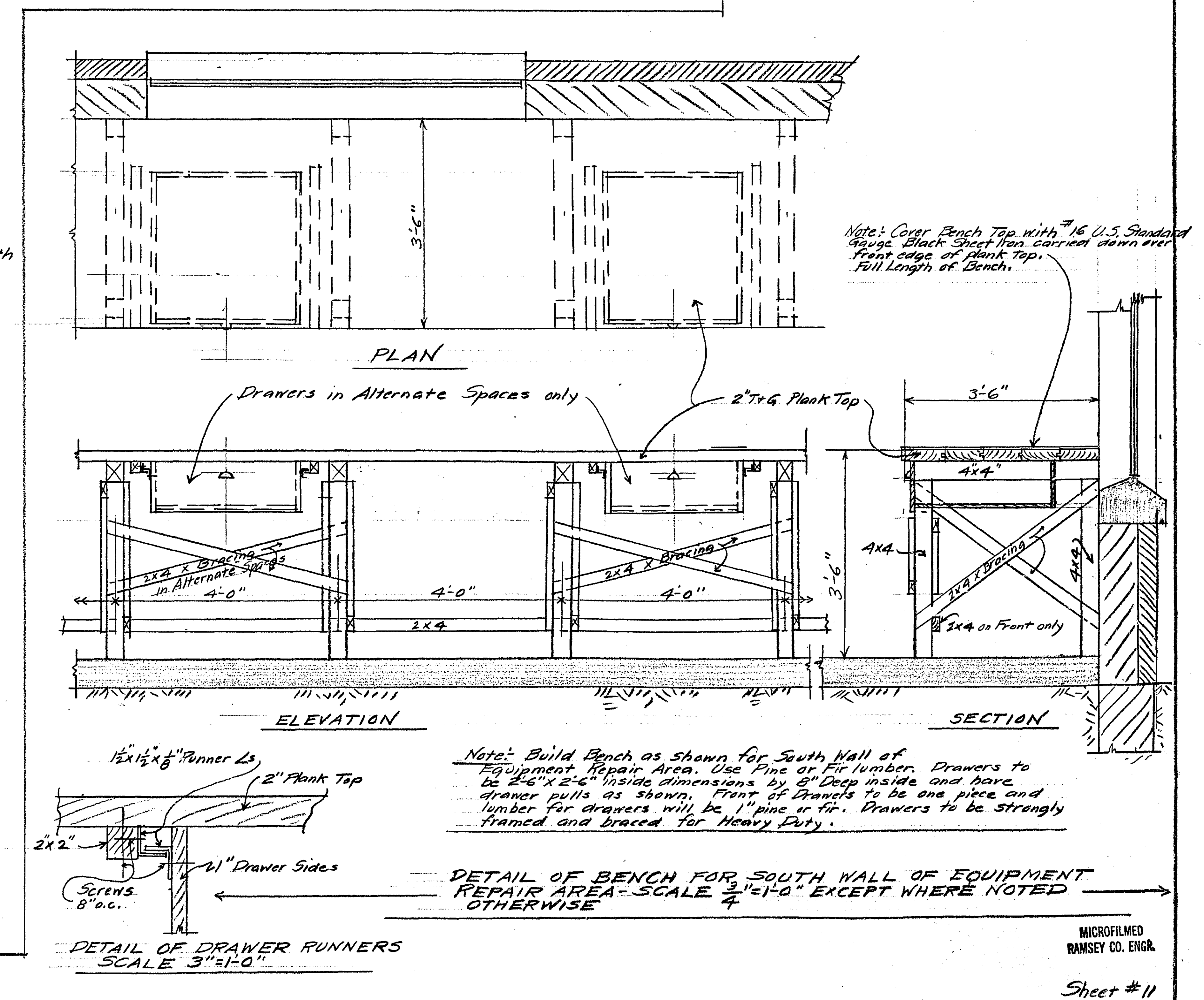
Note Re Cess Pools: Provide, where shown on Sheet #1, Standard Concrete House Cess Pools as produced by the Malin Concrete Products Co. of St. Paul, Minn. Use starting ring and rings of interlocking blocks with 4 piece concrete cover. Inside diameter 3'-8". Capacities shown on Sheet #1. All Malin Cess Pools will be installed by Plumbing Contractor. Note Re Septic Tank: General Contractor will build Septic Tank. See Detail on Sheet #12.



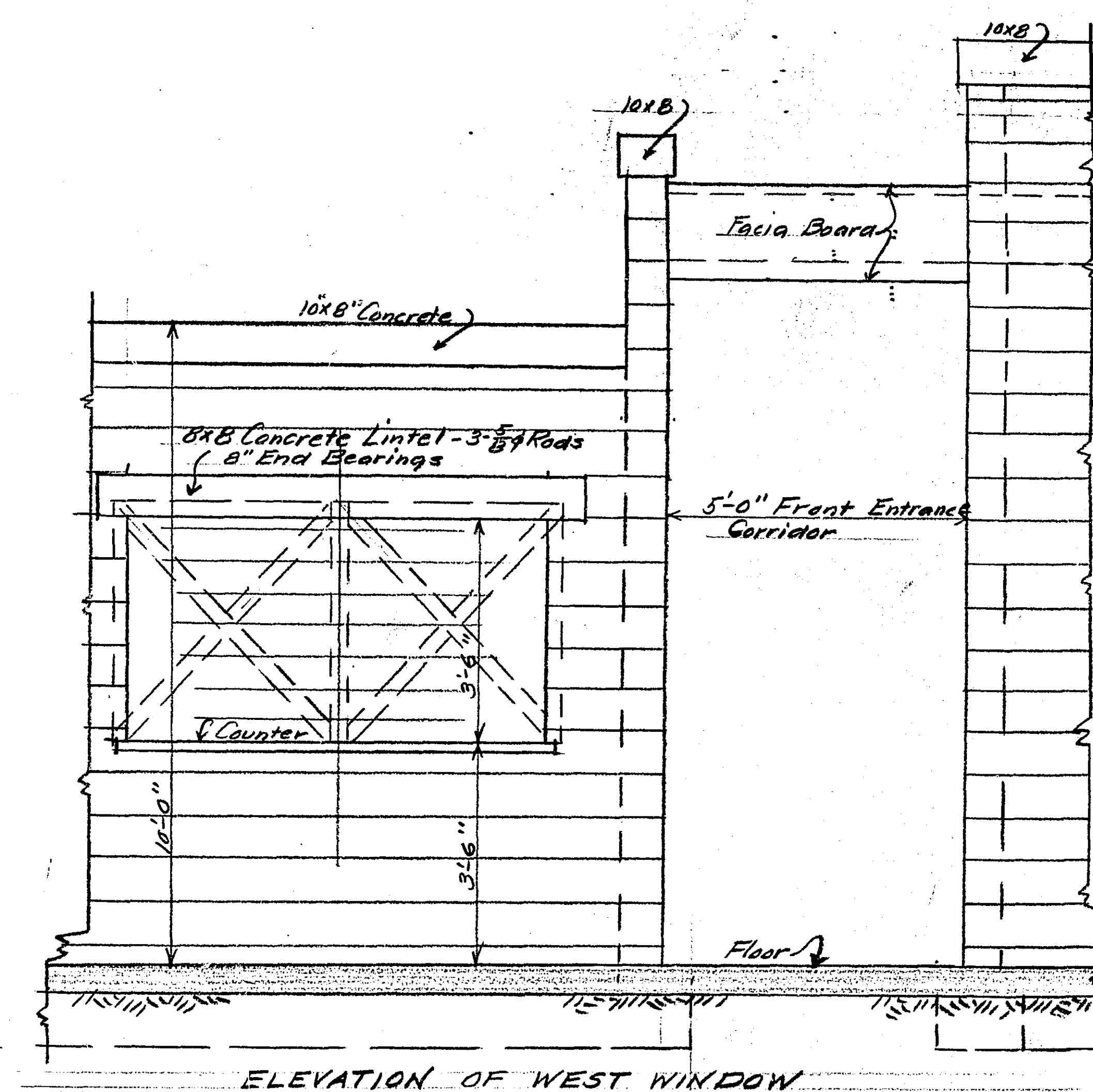
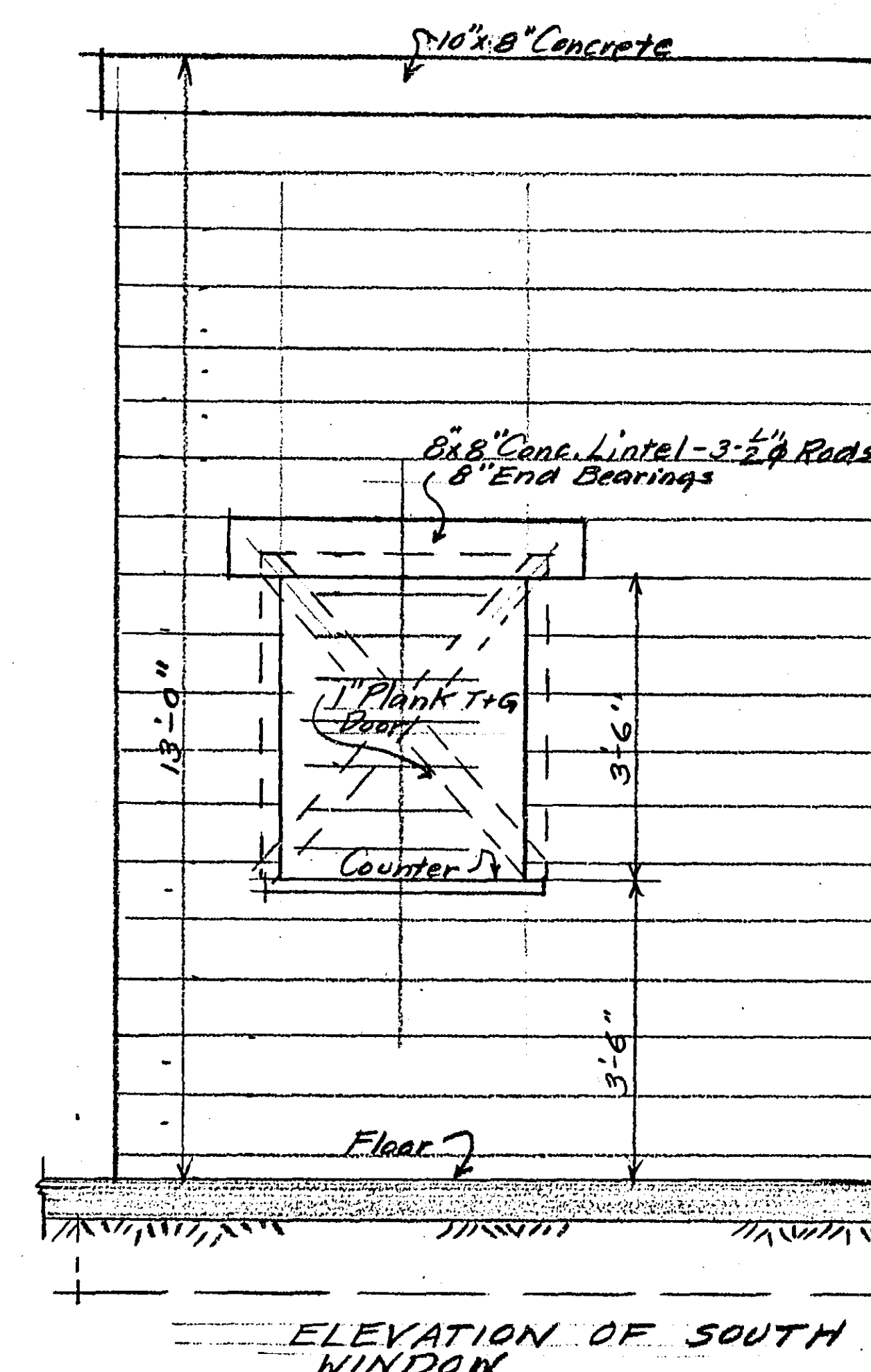
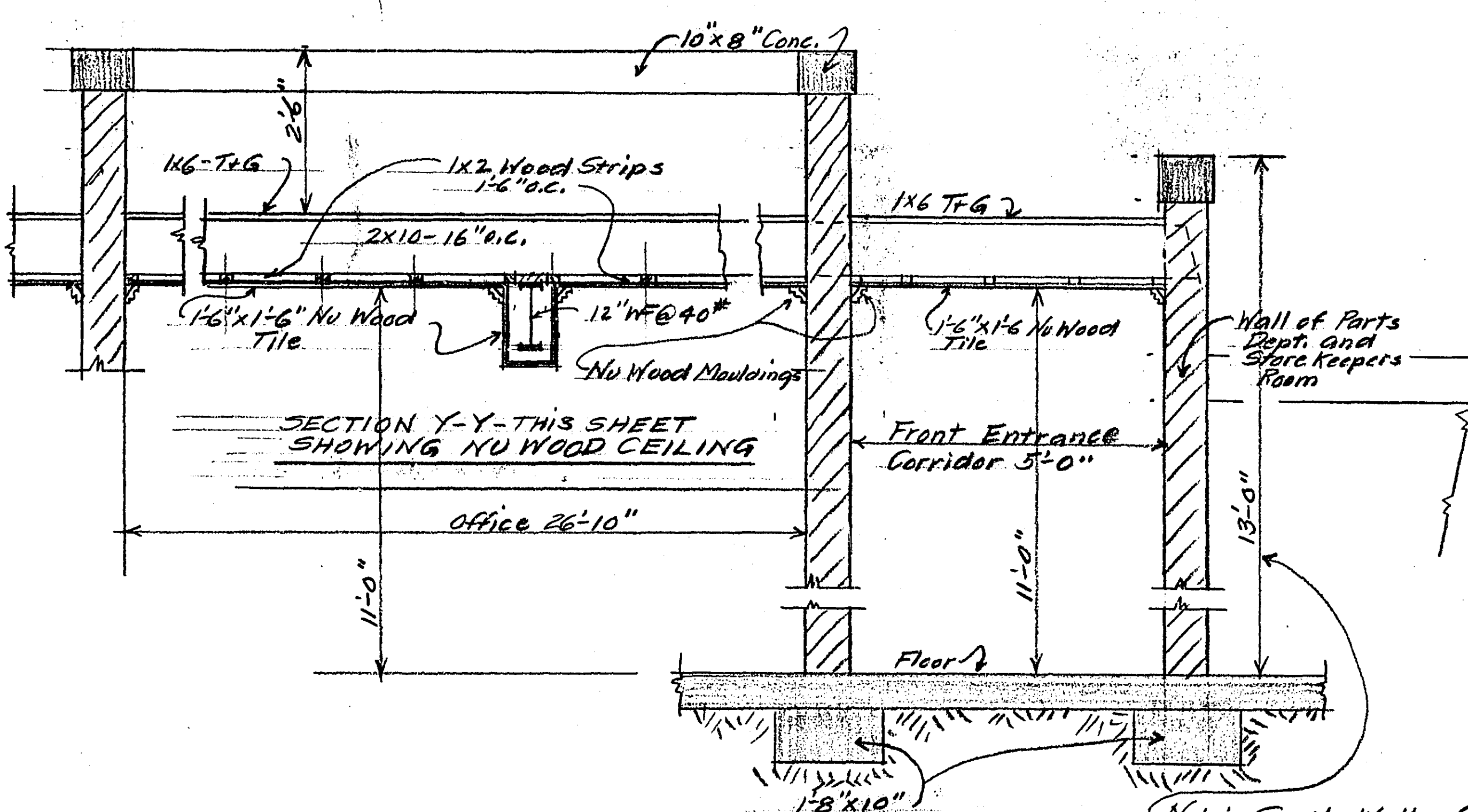
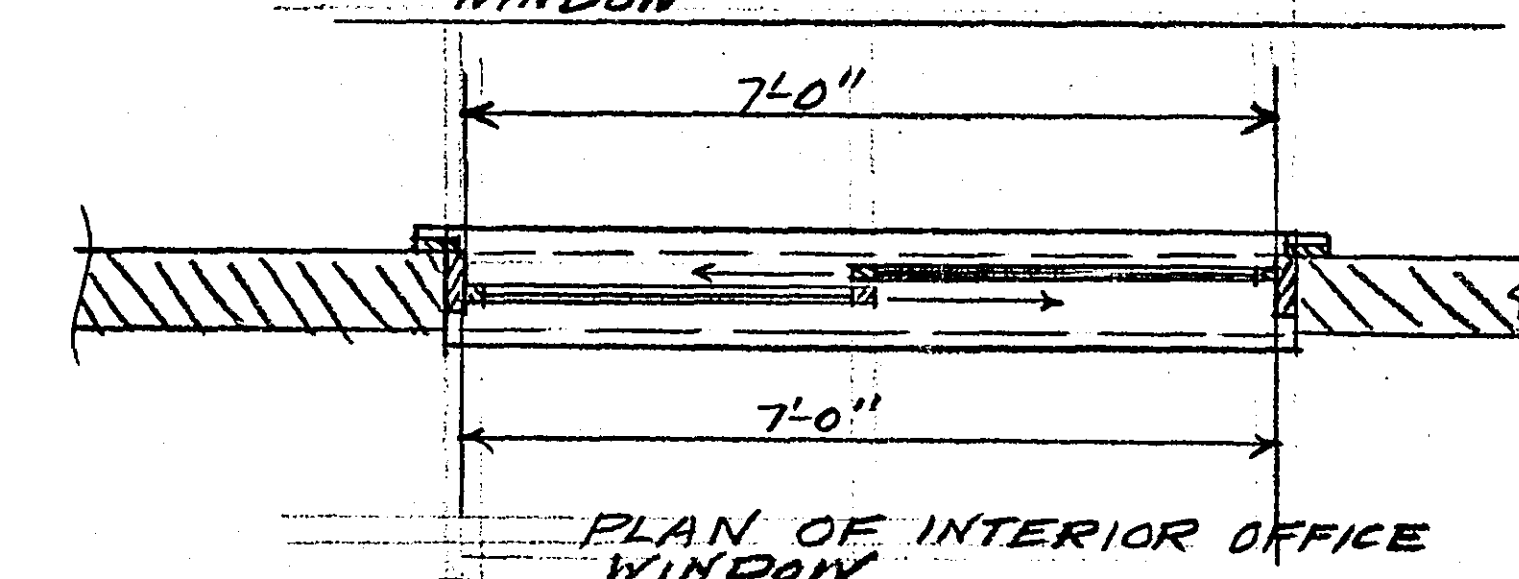
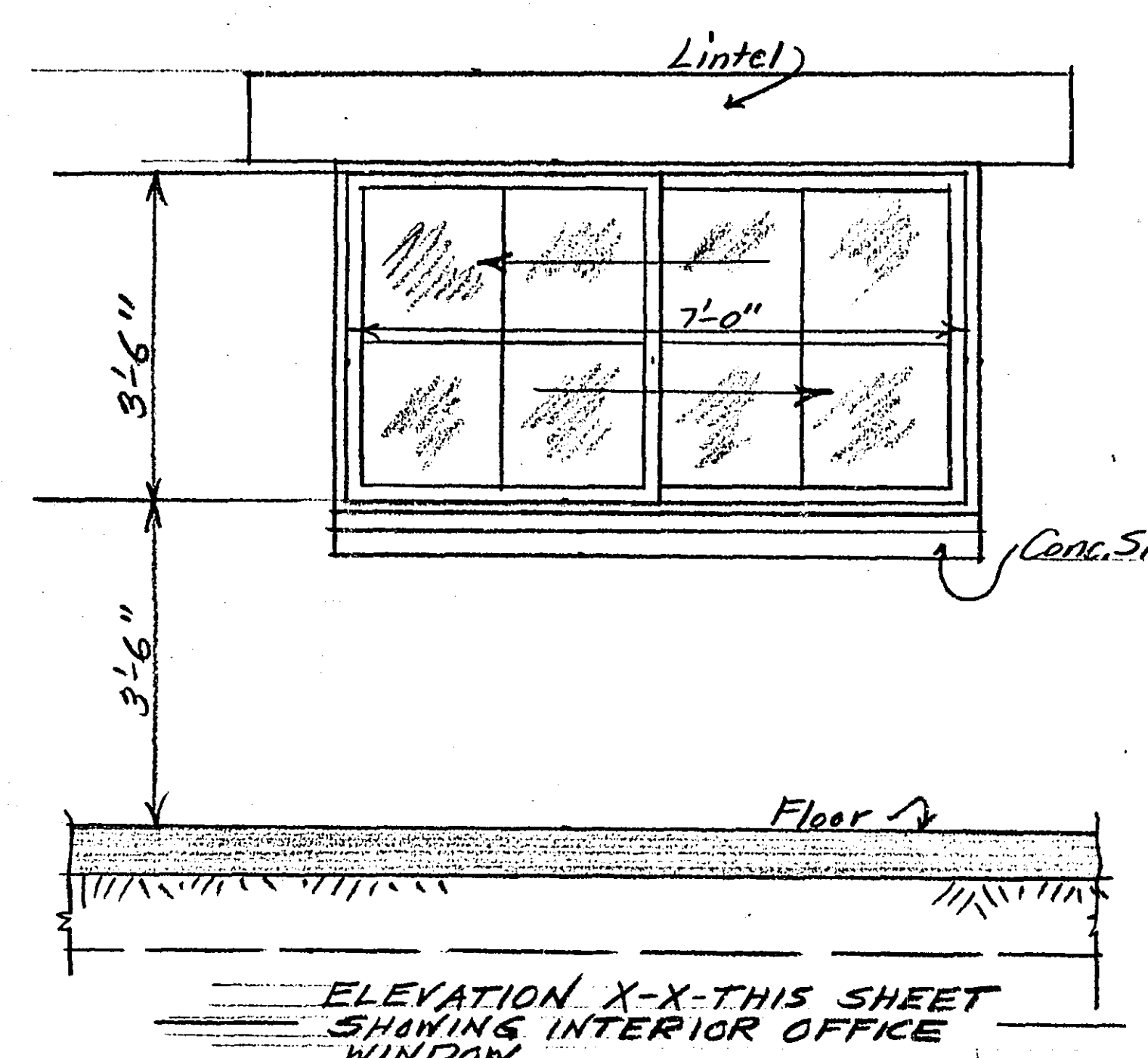
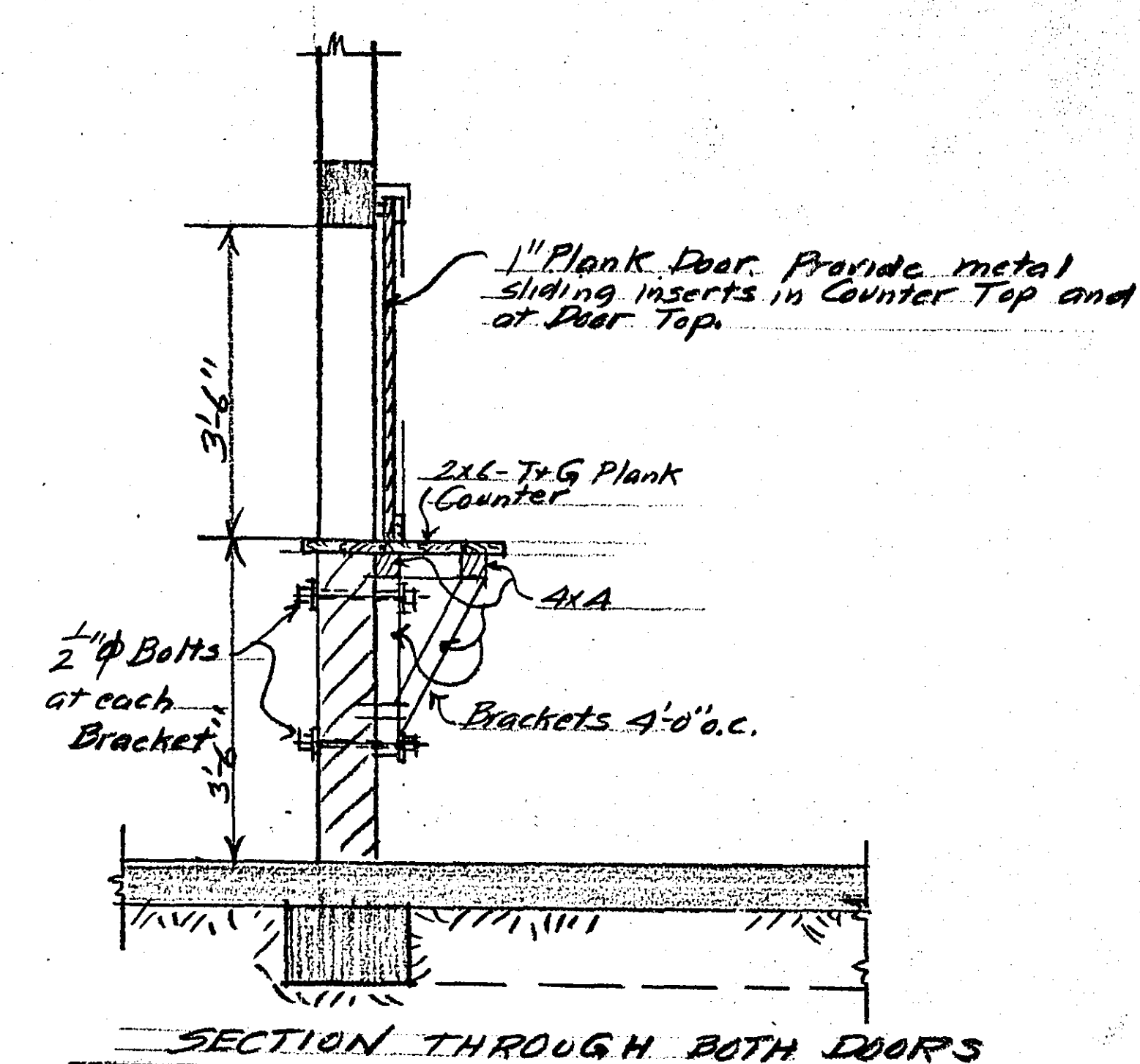
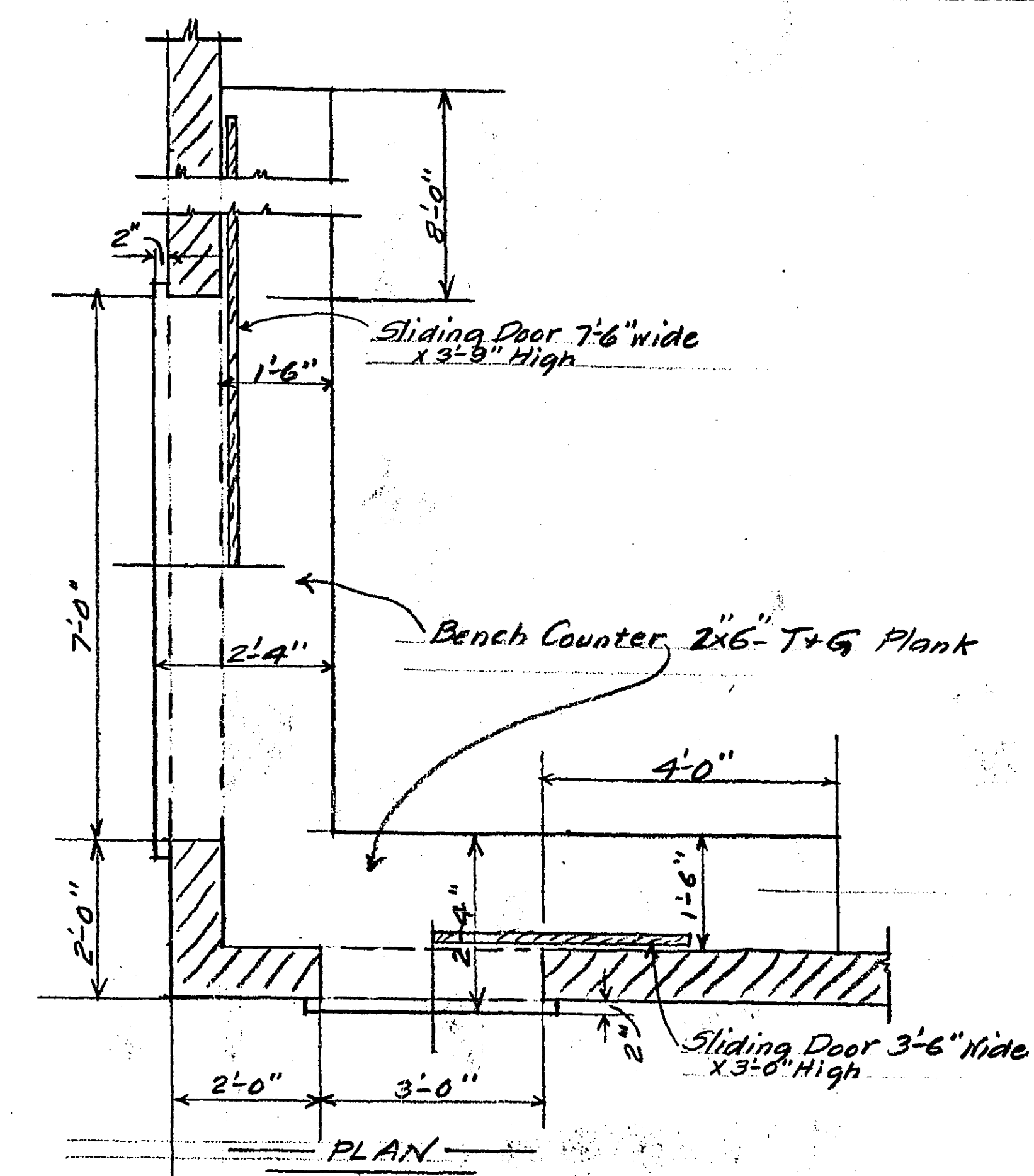
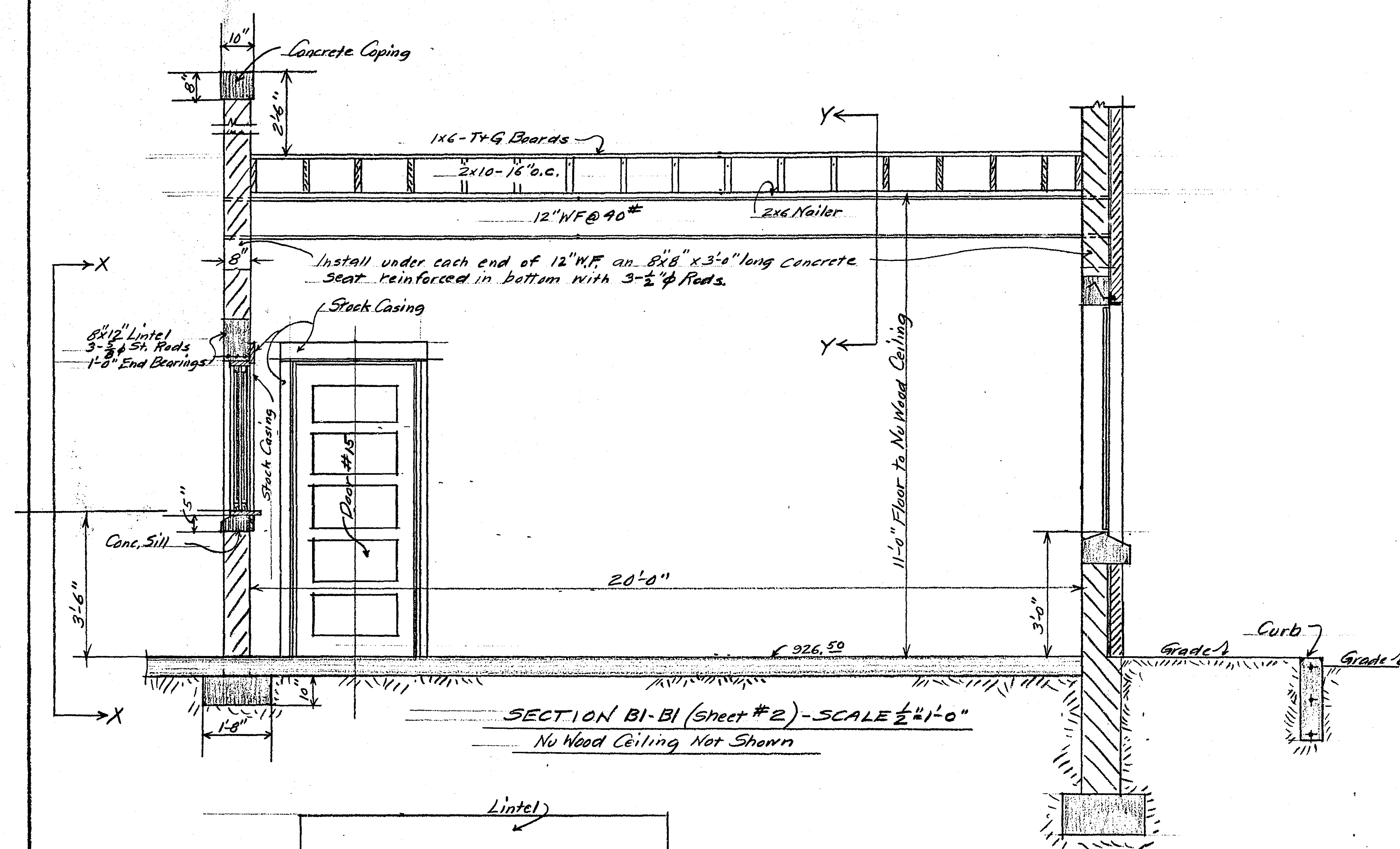


**Note for Ventilating Contractor:-**  
 Ventilating Contractor will erect platform for fan support with joists spanning between bottom chords. Joists to be of sufficient size and spacing to support weight of all fans and to be supported on 2x4 wood nailers. Platform floor to be 1x6 T&G boards securely nailed to top of joists.  
 Ventilating Contractor will also cut necessary openings in Roof for Roof Ventilators from fans, and replace and repair roof for approval of County Engineer against roof leakage around ducts going through Roof.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.  
 Harry J. Brown  
 Date 4/12/49 Reg. No. 818



**Note:-** Build Bench as shown for South Wall of Equipment Repair Area. Use Pine or Fir lumber. Drawers to be 2'-6" x 2'-6" inside dimensions by 8" deep inside and have drawer pulls as shown. Front of Drawers to be one piece and lumber for drawers will be 1" pine or fir. Drawers to be strongly framed and braced for Heavy Duty.



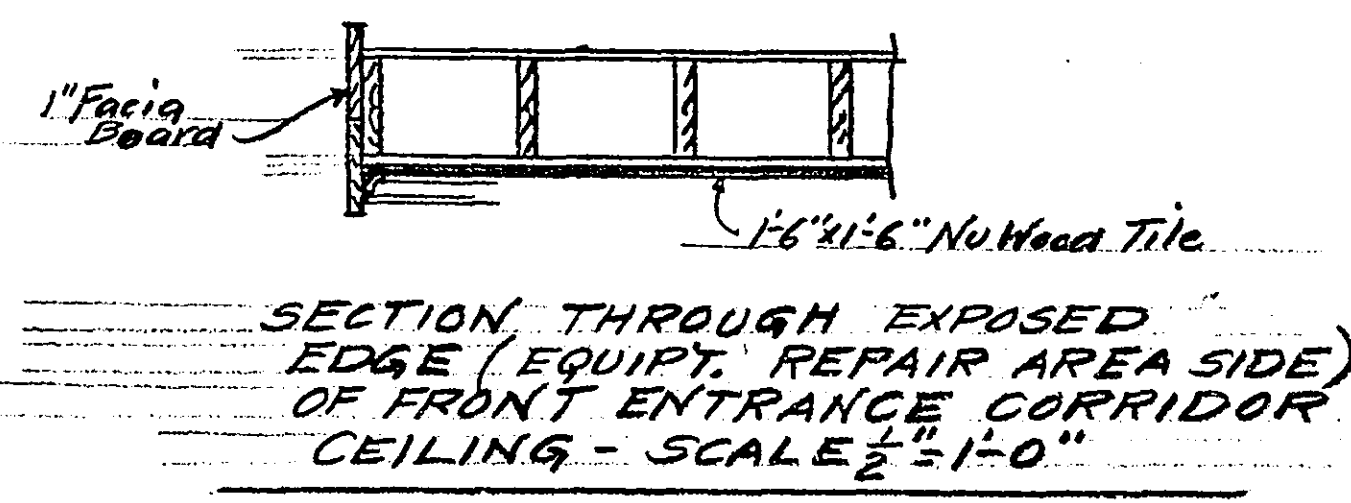
DETAIL OF CONSTRUCTION AT SW. CORNER OF PARTS DEPT. AND STOREKEEPER ROOM - SCALE 1/2"=1'-0"

DETAILS OF SHOP OFFICE - SCALE 1/2"=1'-0"

Note: Use same construction for Office Toilet and Shop Foreman's Office, as well as Shop Toilet and Locker Room. Interior Window in Shop Foreman's Office will be same as interior window in Shop Office except that opening between plank frames will be 6'-6" wide instead of 7'-0". Windows will slide past each other. Furnish detail for approval.

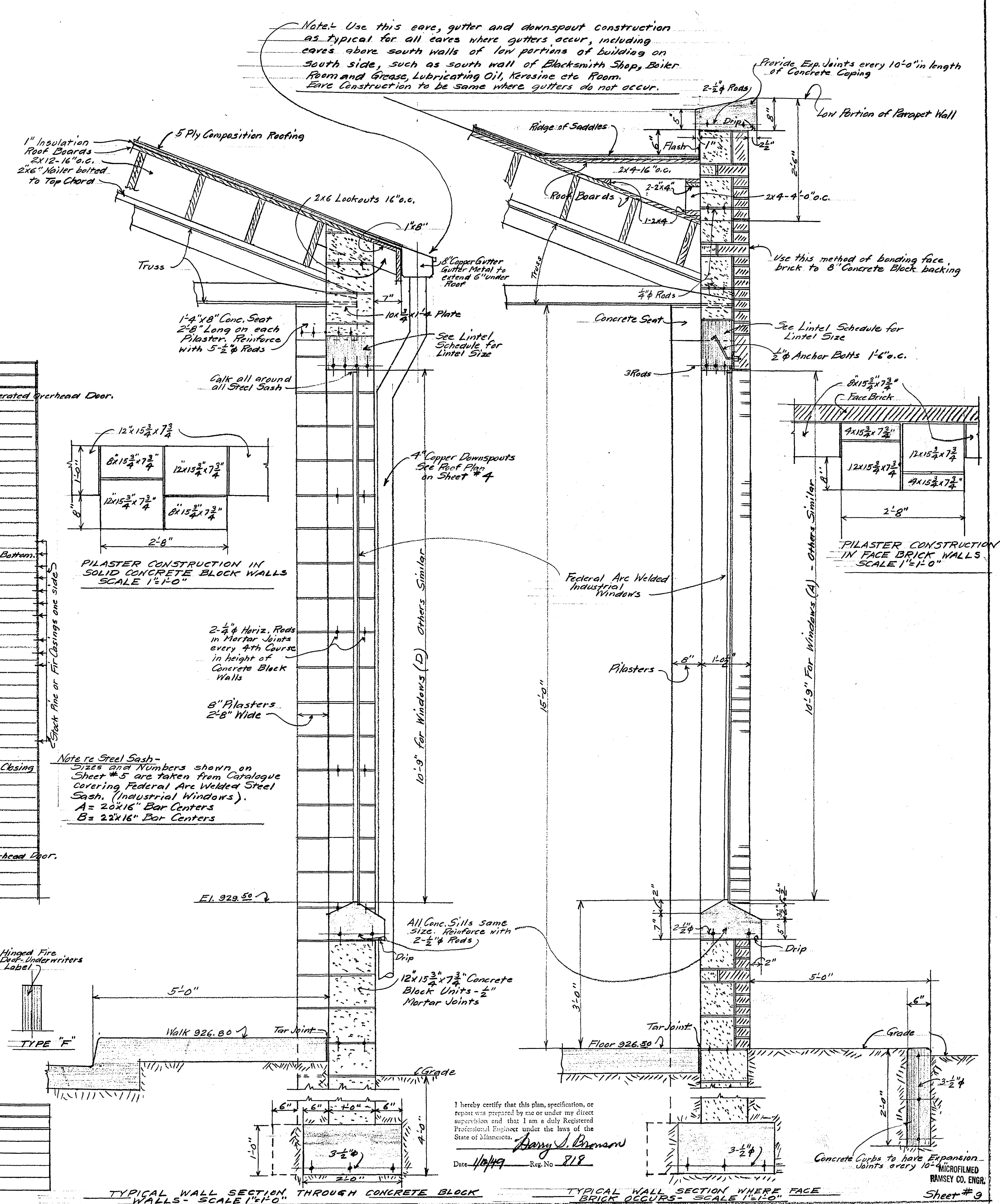
Note: Ceilings in Shop Office, Shop Toilet and Shop Foreman's Office will be 18" x 18" No Wood Tile (Gralite) fastened with No Wood Clips to 12" wood strips nailed to ceiling joists. Install No Wood Mouldings at juncture of ceilings and wall. This ceiling construction will be carried over Front Entrance Corridor. See Plan Sheet #2.

Note: South Wall of Parts Dept and Storekeepers Room to be 13'-0" high. Enclosing walls of remaining portions of Parts Dept. and Storekeepers Room as well as Shop, Instrument and Drafting Room, and Small Repair Parts and Battery Charging Room will be free standing walls 10'-0" high.



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Date 1/12/49 Reg. No. 818



**TYPE "A"**  
Glass  
Glass  
Glass  
Glass  
Panels  
Panels  
Panels

**TYPE "B"**  
Slide

**TYPE "C"**  
Plank Frame

**TYPE "D"**  
Automatic Closing Underwriters  
Label Fire Doors  
Slide

**TYPE "E"**  
Slide  
Hinged Fire Door Underwriters  
Label

**TYPE "F"**  
Hinged Fire Door Underwriters  
Label

**DOOR TYPES**

**TYPE "G"**  
5 Cross Panels  
Masonry Opening 3'4"  
Plank Frame

**TYPE "H"**  
Glass  
Glass  
Glass  
Panels  
Panels  
Plank Frame

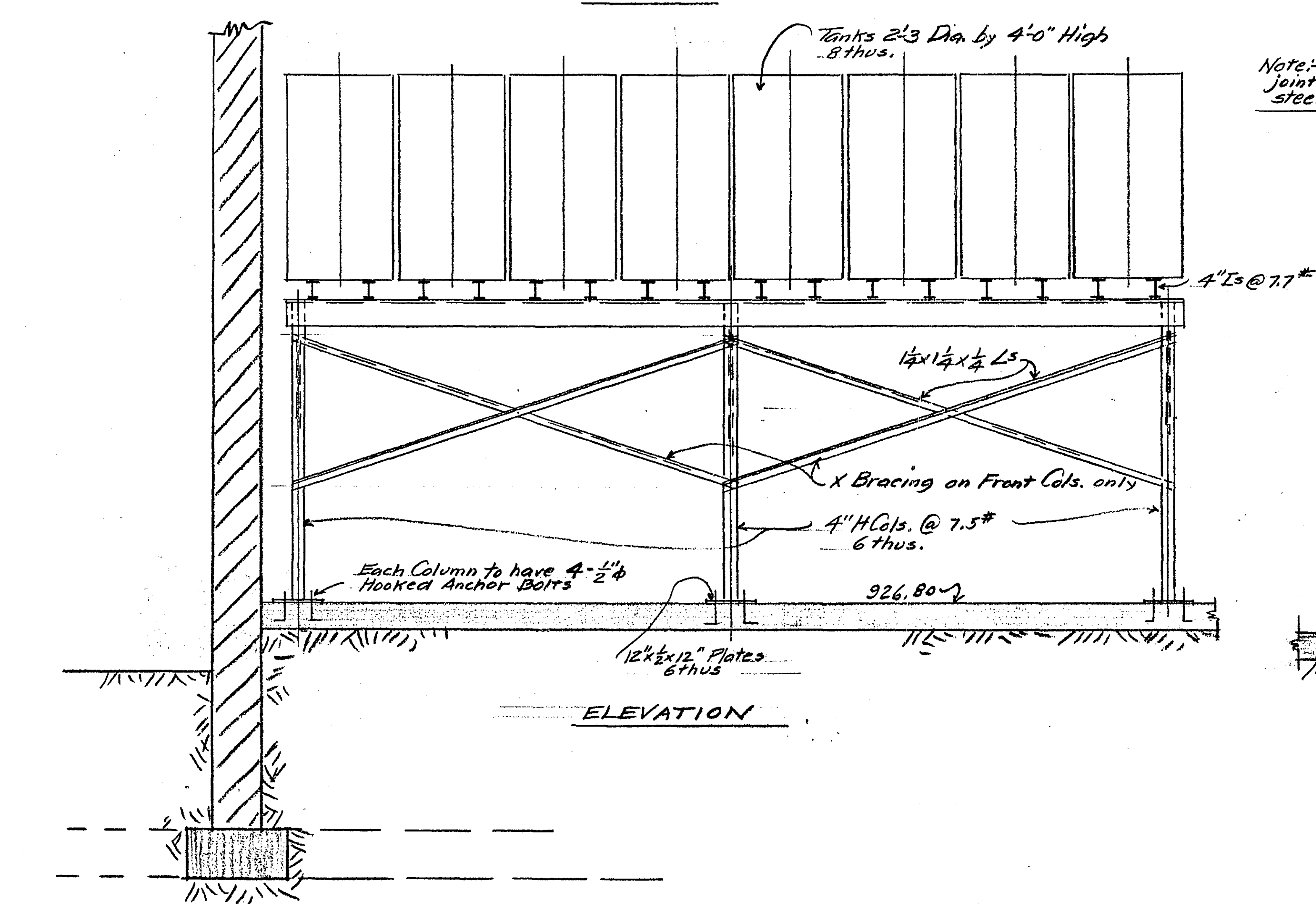
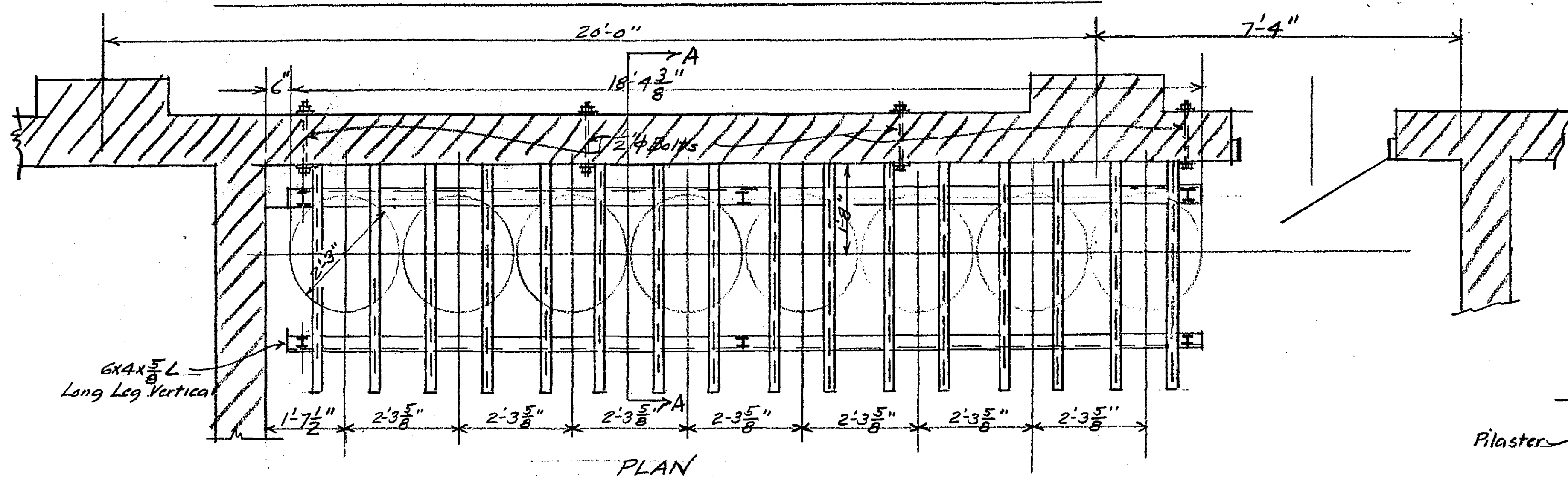
| LINTELS OVER WINDOW OPENINGS |                                                                                                                               |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Window                       | Lintel                                                                                                                        |
| A                            | 8"x12" Concrete - 3- $\frac{5}{8}$ " St. Rods - $\frac{3}{4}$ " x $\frac{3}{4}$ " x $\frac{5}{8}$ " Shelf L - 8" End Bearings |
| B                            | 12"x8" Concrete - 4- $\frac{1}{2}$ " St. Rods - 8" End Bearings                                                               |
| C                            | 8"x8" Concrete - 3- $\frac{1}{2}$ " St. Rods - $\frac{3}{4}$ " x $\frac{3}{4}$ " x $\frac{5}{8}$ " Shelf L - 8" End Bearings  |
| D                            | 12"x8" Concrete - 4- $\frac{1}{2}$ " St. Rods - 8" End Bearings                                                               |
| E                            | Same as B above                                                                                                               |

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Darryl S. Branson

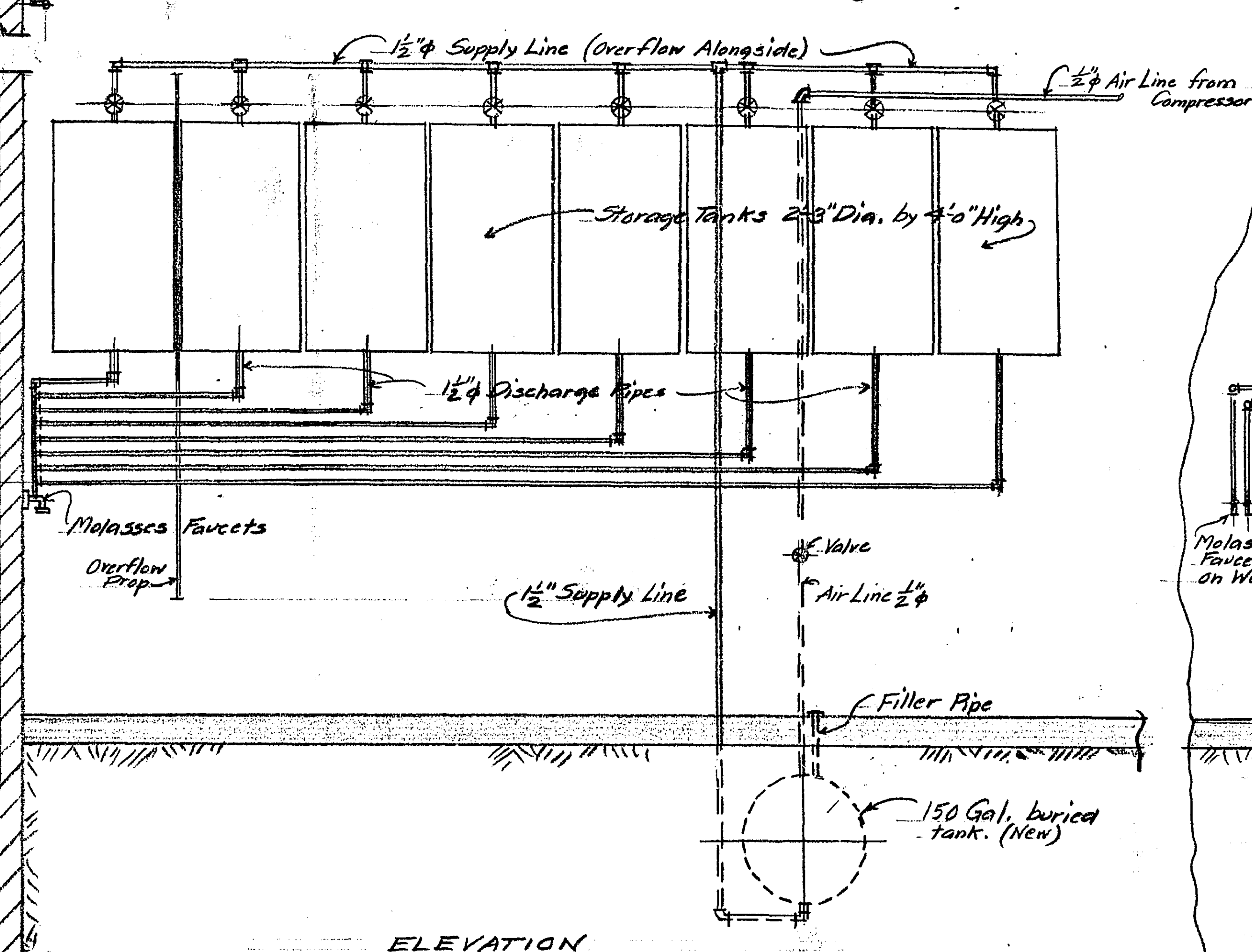
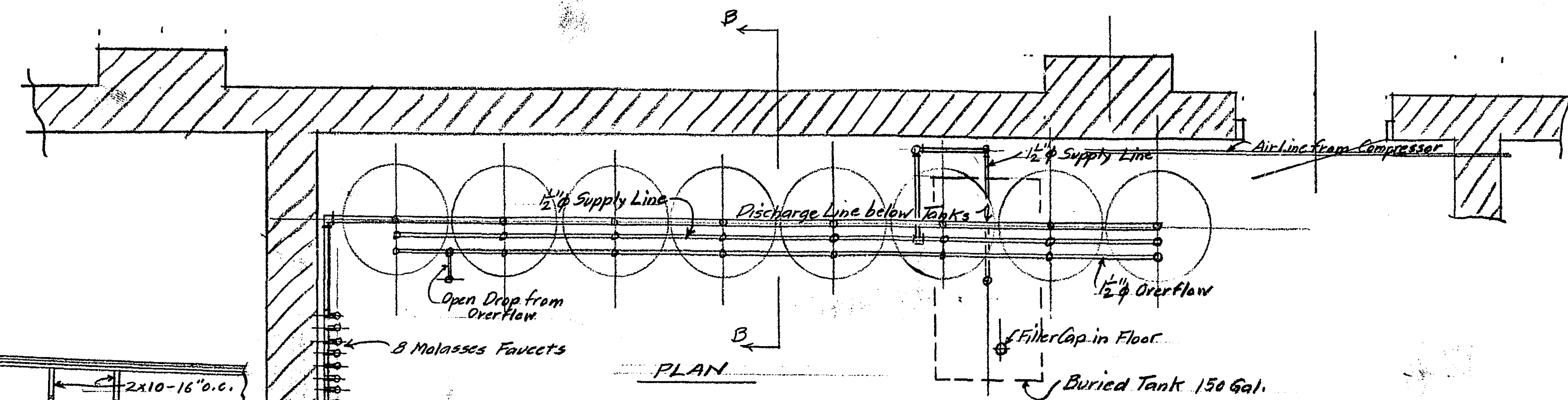
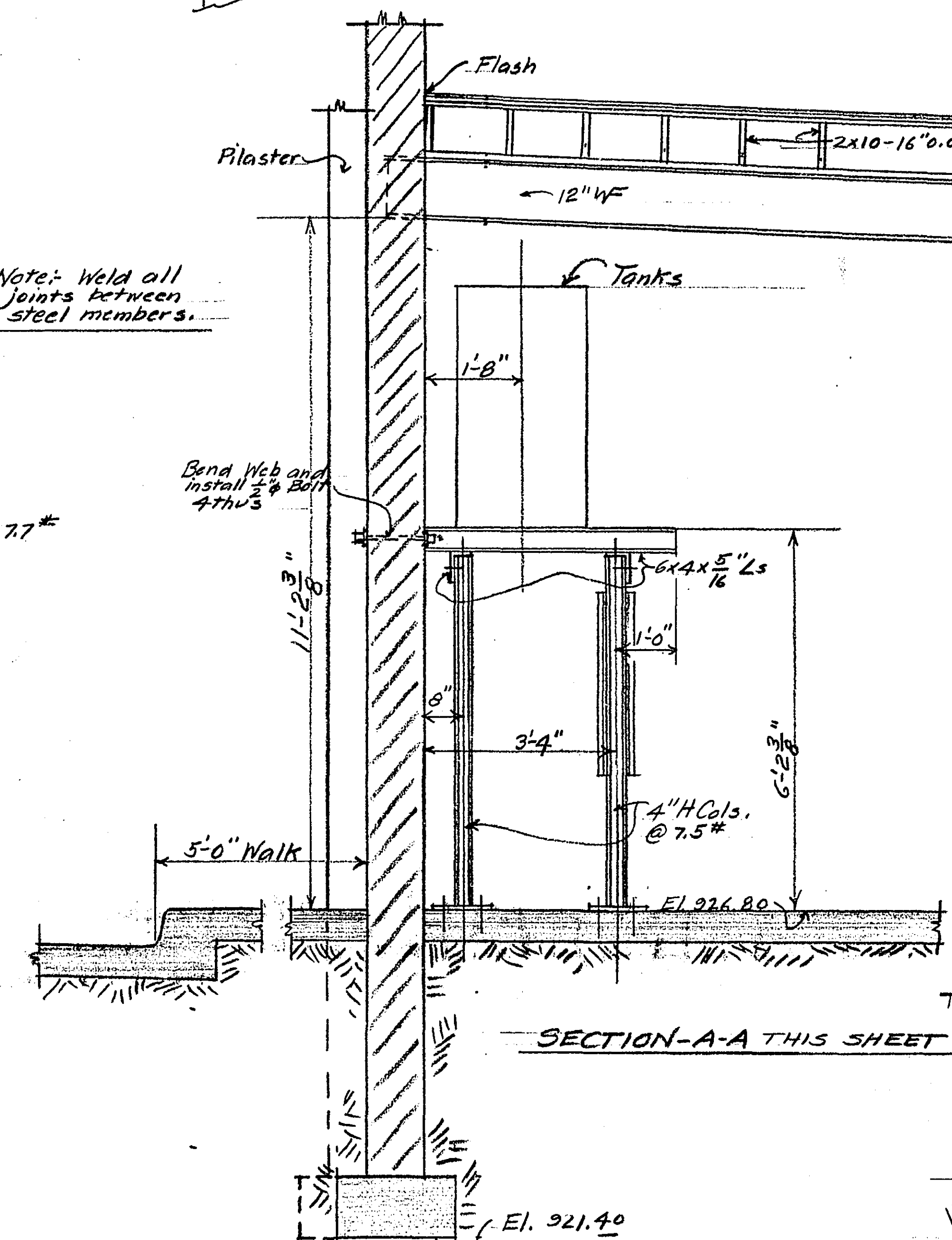
Date 1/10/49 Reg. No. 818

Note: At 4 points only extend 4" I Cross Beams to Wall and remove flanges. Then bend webs against masonry and install  $\frac{1}{2}$ " bolts shown.

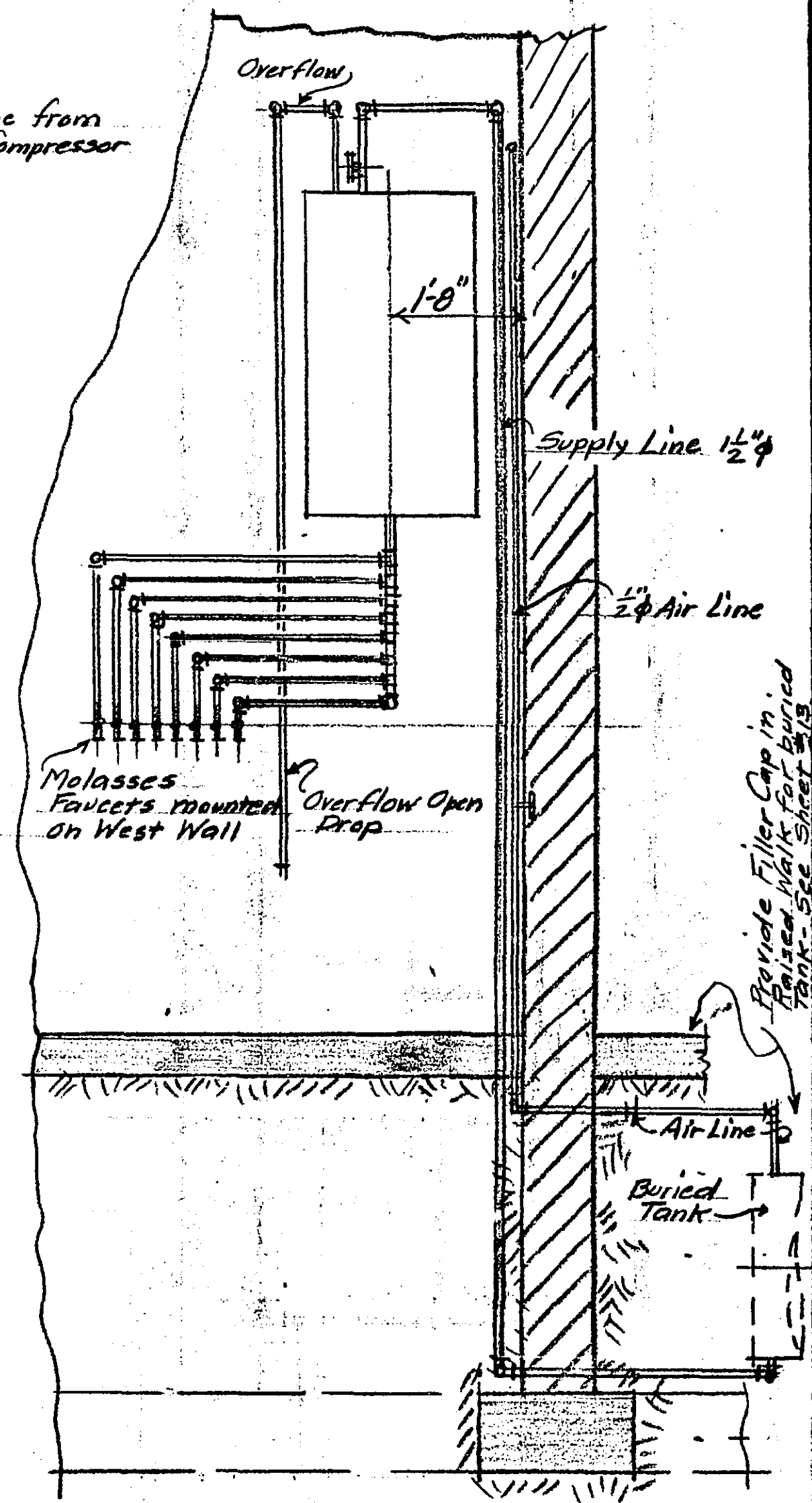


DETAIL OF STRUCTURAL STEEL FRAMEWORK FOR SUPPORT OF LUBRICATING OIL TANKS IN GREASE, LUBRICATING OILS, KEROSENE ETC. ROOM.  
SCALE  $\frac{1}{2}$ " = 1'-0"

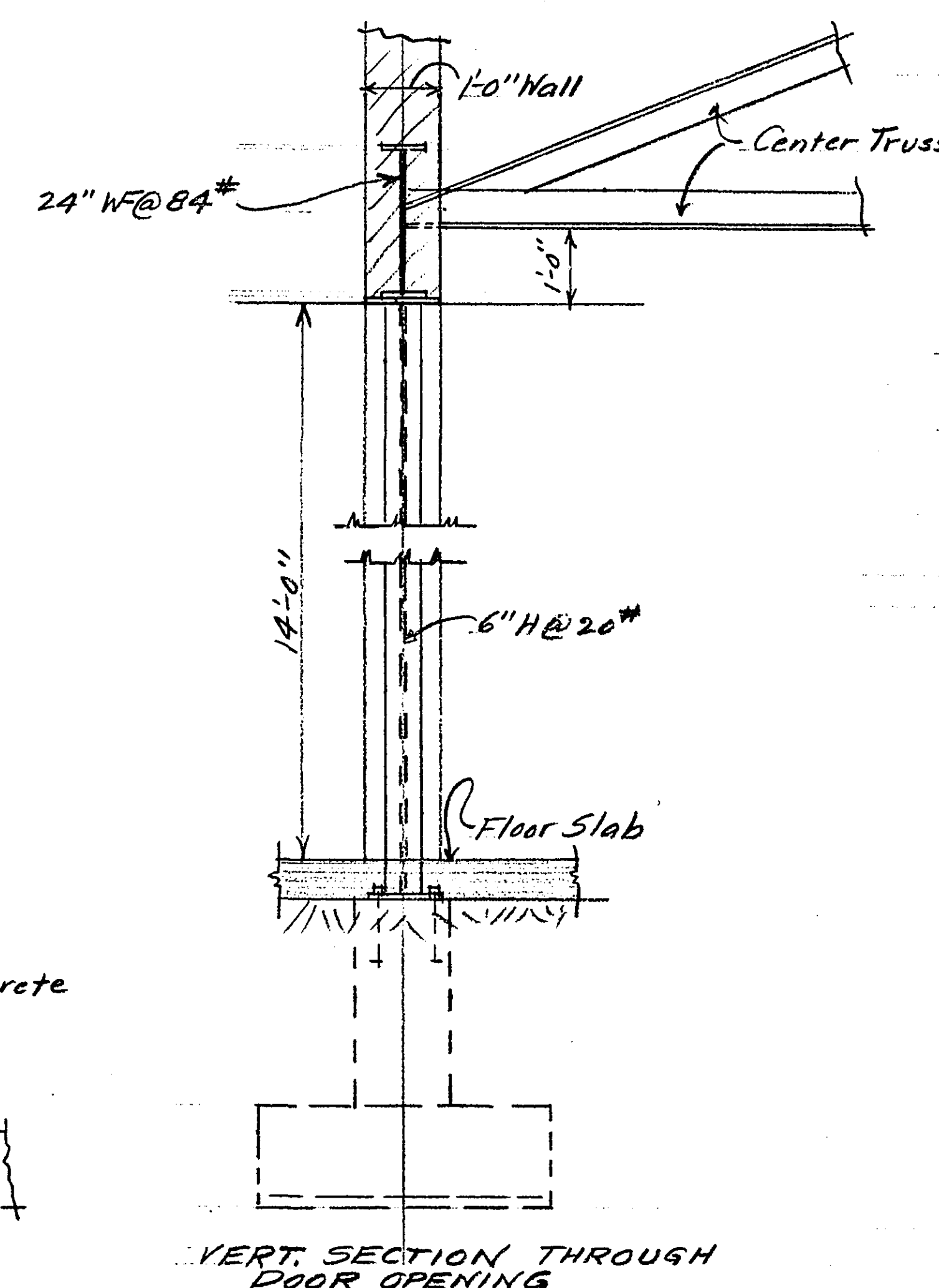
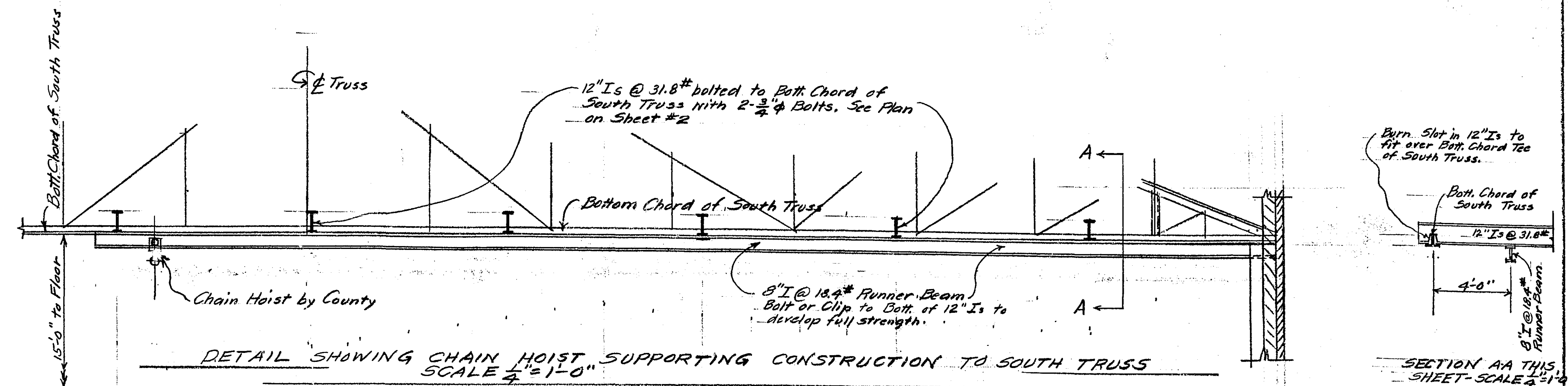
Note: Weld all joints between steel members.



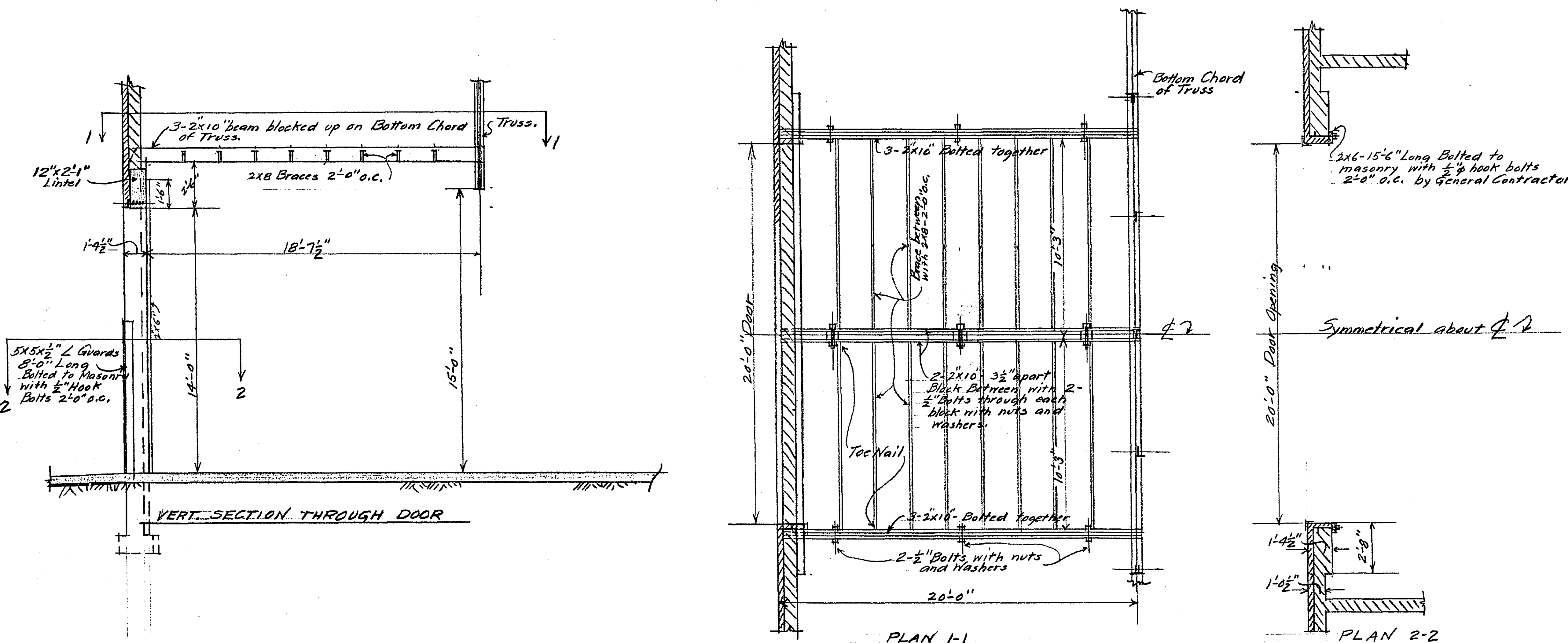
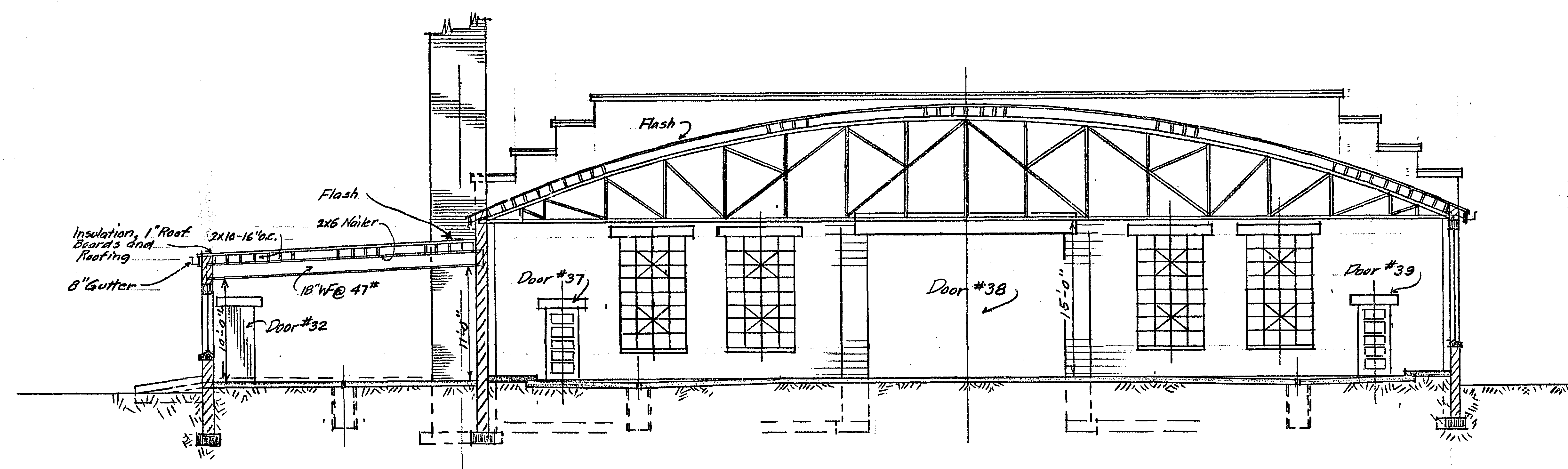
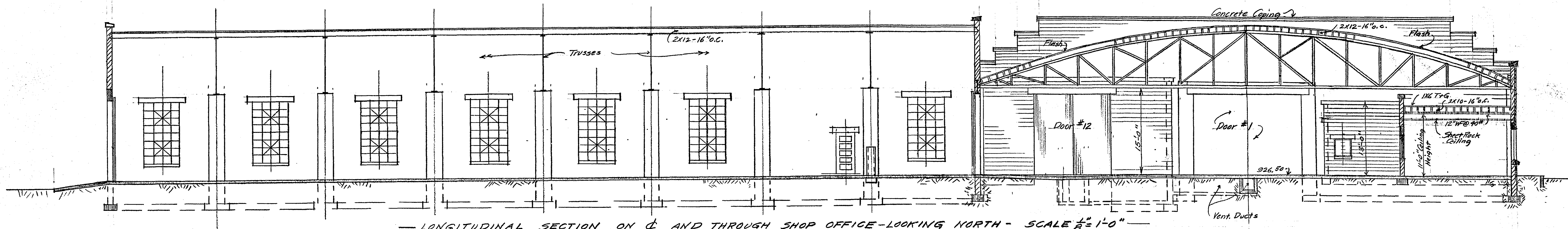
DETAIL SHOWING PIPING FOR LUBRICATING OIL TANKS IN GREASE, LUBRICATING OILS, KEROSENE ETC. ROOM - SCALE  $\frac{1}{2}$ " = 1'-0"



Note: These tanks and framework are at present located in building at 1441 Rice St. General Contractor will move present tanks, piping and structural steel framework to new location and store tanks and piping for use of Plumbing Contractor. General Contractor will cut off present Columns to length shown here and will erect structural steel framework.  
Plumbing Contractor will erect tanks on structural steel framework and install all piping both old and new. He will also install and connect up 1-150 Gal. Buried Tank as shown on this sheet.



GENERAL CONSTRUCTION SPECIFICATIONS (Continued from Sheet #6)  
Sign Repair and Sign Paint Shop and Paint Spray Room for Water Equipment: See Details on Sheet #11. Ceiling Joists to be supported on Bottom Chords of Trusses and on walls as shown. Ceiling to be 3" Sheetrock nailed to bottoms of Ceiling Joists, and framed around bottom chords of trusses as shown. Sheetrock to have recessed joints, filled and taped.  
Work Bench: Build heavy duty work bench on south wall of Equipment Repair Area as shown on Sheet #7 and detailed on Sheet #11.  
Painting: Structural steel will come to job with one (1) coat red lead and oil paint. All doors, casings and trim including metal doors and overhead and sliding garage doors and all interior window sash to be primed and receive two (2) coats of lead and oil paint. Office floor, Office Toilet Floor and Shop Foreman's Office Floor to receive two (2) coats of rubber base paint. All colors to be selected by County Engineer. Office Walls, Office Toilet Walls, Foreman's Office, Shop Toilet Walls and Locker Room Walls to have 2 Coats of "Borden".  
Grading: See Sheet #1 for Note on grading of areas around building, such grading to be done by General Contractor.  
Hardware: See Sheets #2 and #9. On interior hinged wood doors provide and install 1 1/2 pairs of 4x4 butts with bit key inside lock sets, Russell-Erwin or equal. Black finish. On exterior hinged wood doors provide and install 1 1/2 pairs of 4x4 butts with cylinder knob sets. Dead black finish. Russell-Erwin or equal. These to be Master keyed with 5 master keys furnished. Three leaf hinged garage doors to be equipped with Richards Wilcox # 1035 Garage sets with Crane on both. Night latches on each opening. Master keyed.  
Gasoline Pump Island: See detail on Sheet #1. Together with location. The pumps and tank will be supplied and installed under a separate contract but general contractor will excavate for a 3515 Gal. buried tank and backfill after tank is installed.  
Oil Tank Structure in Grease, Lubricating Oil, Kerosene etc Room: See Details and Note on Sheet #8.  
Sepic Tank: To be built by General Contractor. See Detail on Sheet #12.  
Men's Cess Pools: To be built by Plumbing Contractor.  
Air Lift: See location on Sheet #2 and Detail on Sheet #7. Contractor will place 2 wood forms shown and leave 2 1/2" Holes in slab for insertion of Pumps by Wayne Pump Co.  
Floor Drains: These will be furnished by Plumbing Contractor and installed by General Contractor at the time floor slab is poured. Note that Floor Drain in Wash Rack is the only one requiring pipe connection to Cess Pool. All the others empty into sumps below floor slab as per detail on Sheet #7.  
Water Closet Partitions and Doors: Build these partitions and doors of beaded ceiling. Provide 4x4 wood posts at corners and sides of Doors. Partitions to be 7'-0" high and closed from floor to top. Leave open space below doors 1'-6" high from floor to bottom of door and install 2 hinges on each door.  
Paint 2 Coats lead and oil paint after priming.  
Note: Where specific types of material is mentioned, this does not mean that other types may be substituted when of equal quality as approved by County Engineer.  
Note: Plumbing, Heating, Ventilation, Well and Pump, Electrical Work and Electric Fixtures, Wayne Hydraulic Air Lift, Wayne Pump Co's Gasoline Pump Installation including Tank etc. will all be handled under separate contracts. Same will be true of Air Pump but Plumbing Contractor will install air piping thereto as shown on Sheet #13.

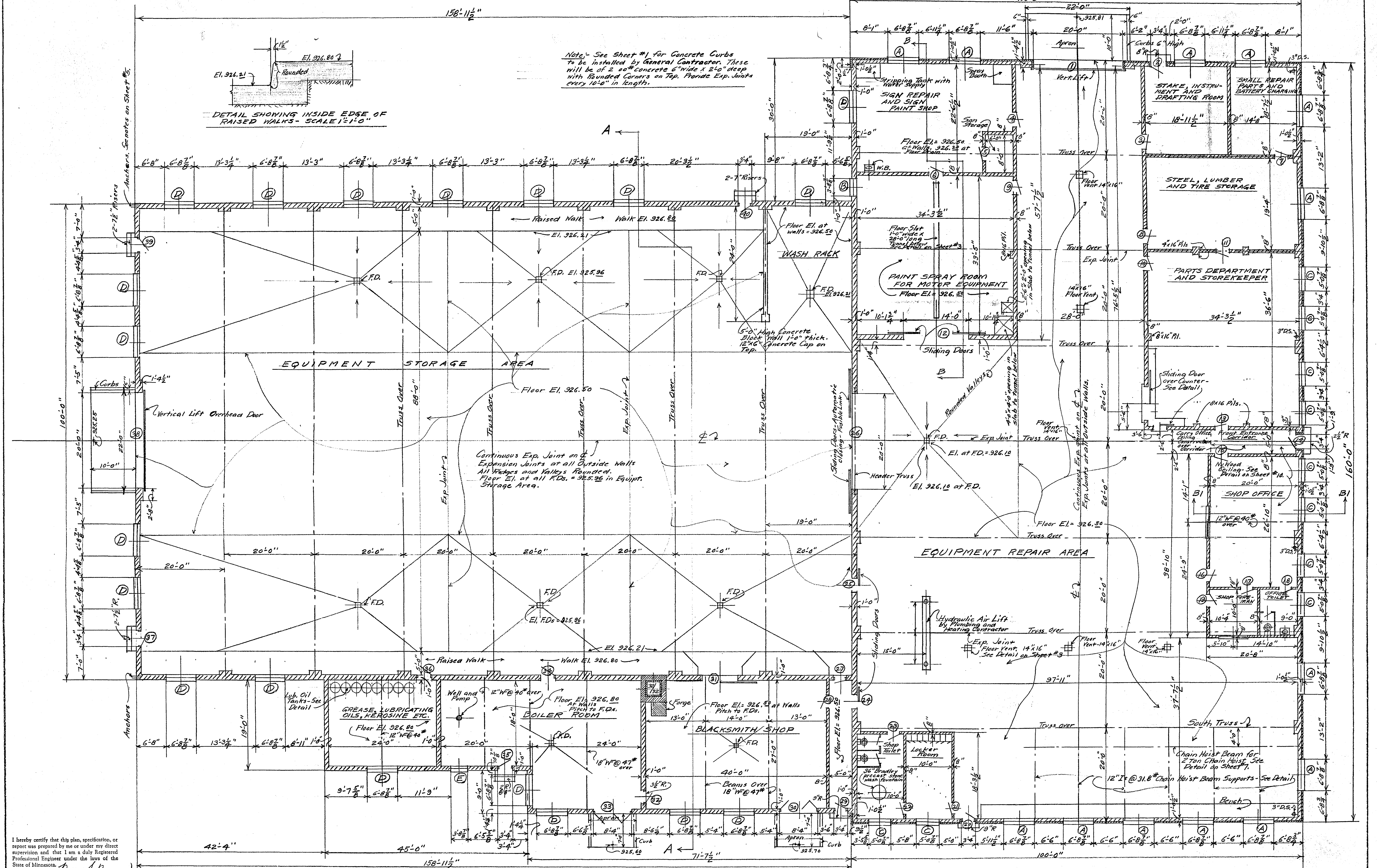


Note: General Contractor will erect all lumber shown, including 2"x6" vertical pieces 15'-6" long and 5"x5 1/2" L Guards.  
 Note: Same Construction Required for Door #38. See Lintel details on Sheet #9

# GENERAL CONSTRUCTION SPECIFICATIONS

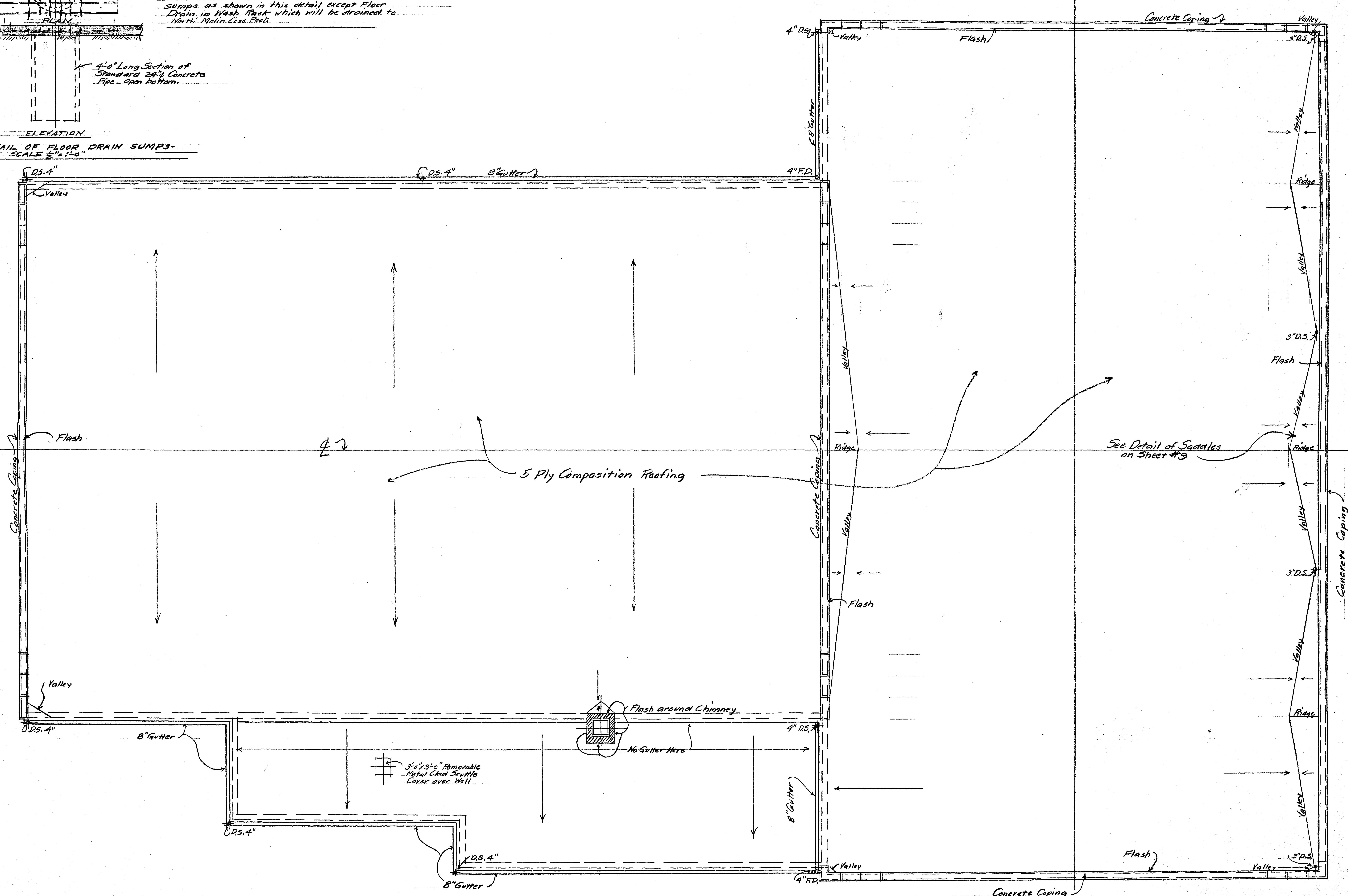
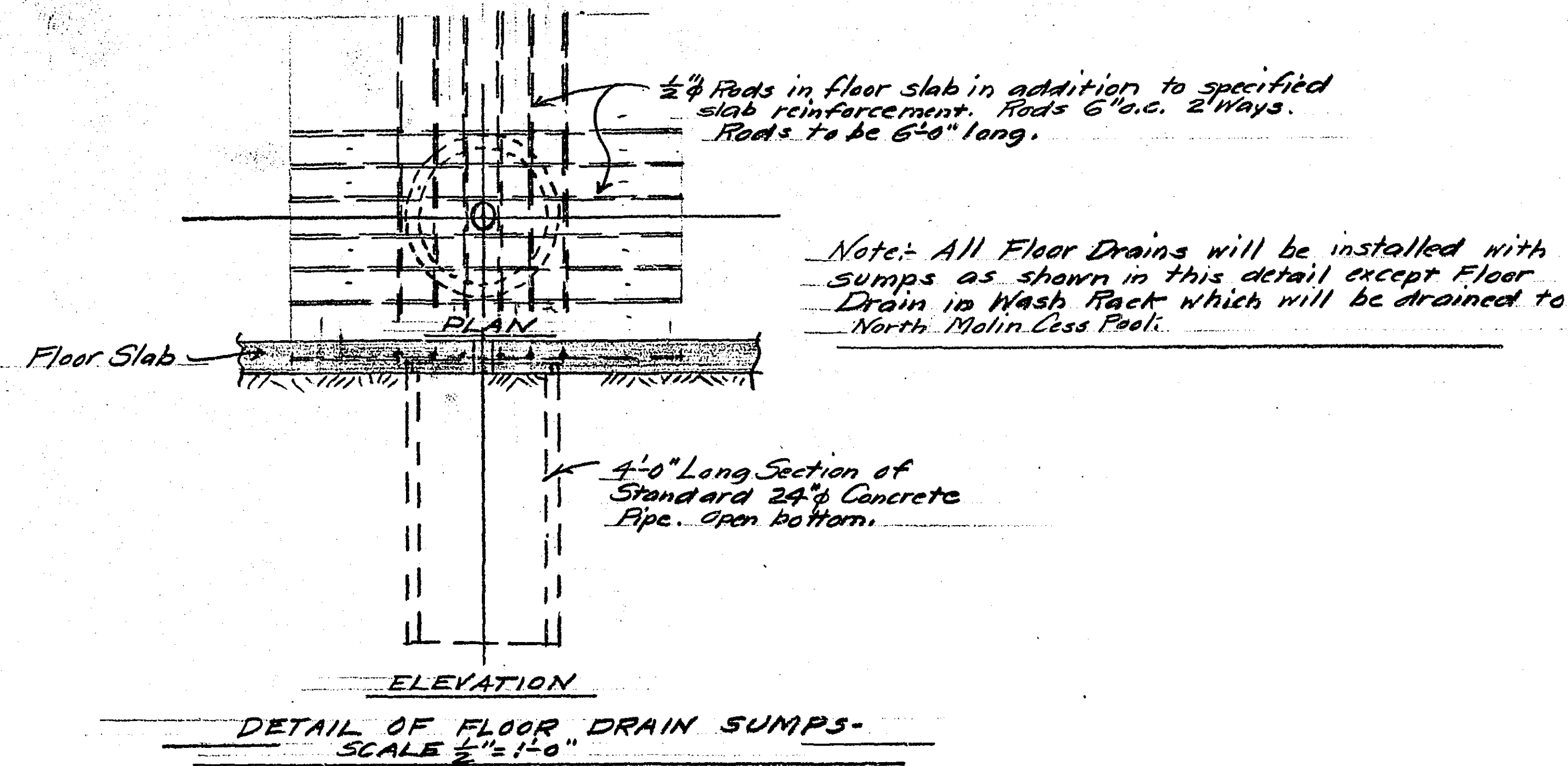
Work to be Done by General Contractor: Do all work shown on Plans included in Sheets #1 to #12 inclusive and specified hereafter. Cooperate with Plumbing and Heating Contractor, Electrical Contractor and Ventilating Contractor.  
 Work to be Done by County Forces: County Forces will do all Bituminous Taring shown on Sheet #1 after grading has been completed by General Contractor.  
 Excavation: Excavate to depths shown for Bottom of Footings. Footings of all outside walls, Footings of dividing wall between Equipment Repair Area and Equipment Storage Area, Entire surrounding walls of Equipment Storage Area and Wall between Well and Pump Space and Grease, Lubricating Oils, Kerosene etc Room will have bottoms at least 4'-0" below grade. Footings of interior partition walls, except those noted above, will have their tops at the bottom surfaces of adjacent 6" floor slab.  
 Back Fill: As soon as footings have thoroughly cured and walls have been built thereon up to grade and mortar has set, back fill on each side to grade.  
 Footings: These shall be ready mixed 2000# concrete. All footings, except those under interior walls and partitions, will be reinforced with 3-2# longitudinal rebar. Interior wall and partition footings with bottoms 4'-0" below grade will be similarly reinforced. In general, the footings under interior walls and partitions will be formed by a thickening of the floor slab to sizes shown on Sheet #3. See Detail Sheet #9. Slab at space to be occupied by Boilers will be thickened to a thickness of 1'-0". See Detail of Chimney Footing on Sheet #12.  
 Floor Slab: Slab will be 6" thick of 2500# ready mixed concrete. It will be poured with expansion joints as shown and will also have joints at outside walls. It will have no cement finish as such but surface will be troweled before final set. After it has hardened and dried out, surface will be hardened with Morsie's Hardener or equal approved, applied as per manufacturer's directions. Pitch floor to drains where shown. Reinforce floor slab with C.E. 66 Pittsburgh Welded Wire Reinforcement (6"x6" Mesh) or equal approved. Before depositing floor slab concrete, lay one (1) layer of Sisalcraft paper on top of graded ground surface, then pour slab concrete thereon.  
 Concrete Tunnel Walls and Floor Slab: These to be built as shown on Sheet #3. Use 2000# concrete for floor slab and walls. Leave drainage openings as shown in floor slab for any accumulated water to seep into ground. Leave openings in Main Floor Slab as shown for iron grilles. See Details on Sheet #3 and especially Sect. 1-1 on Sheet #3.  
 Walls and Partitions: Lay up as shown, noted and detailed. Outside walls of front part where shown to be face brick with concrete block backing and all other walls and partitions to be concrete blocks. Concrete blocks will meet requirements of the St. Paul Building Code. Vertical and Horizontal joints between brick and concrete blocks to be 1/2" pooled joints. See detail showing bonding between face brick and concrete blocks and also detail showing plaster construction. Mortar in joints below grade shall be mixed in the proportion of one (1) volume of portland cement to not more than one (1) volume of lime putty or hydrated lime to six (6) parts of damp, loose mortar sand. Use Mason's Cement Mortar in all joints above grade. Use full bedding in all horizontal joints and completely fill all vertical joints. Reinforce horizontal joints where shown with 2# reinforcing rebar laid in horizontal mortar joints. Face brick will be selected by County Engineer and Contractor will allow \$45.00 per thousand for face brick in his bid. Window sills and Wall Copings will be of sizes shown and of 2000# concrete, reinforced as shown, detailed and noted. Concrete lintels will be of sizes shown, detailed and noted, with slots in bottoms for admission of steel sash. Build curbs where shown of size noted and detailed with longitudinal reinforcing rebar placed horizontally. Curbs and Copings to have expansion joints at least every 10'-0" in length. Curbs to be of 2000# concrete. Place concrete coping caps on top of inside partition walls of sizes shown, unreinforced. Note detail showing concrete seats under ends of steel trusses. Provide similar concrete seats under ends of steel beams resting on masonry walls, these to be of width of concrete blocks x 8" high x 3'-0" long and reinforced with 3-2# rods in bottoms. See detail on Sheet #6 showing steel angle guards on outside corners of Doors #1 and #38.  
 Chimney: See Sheet #12. Chimney to be built as shown with face brick, common brick and fire brick. See detail of concrete footing. Fire Brick to be of height shown and laid up in fire clay. Provide standard breeching thimble and Majestic Clean out Door. Concrete Coping and Belt to be 2000# concrete reinforced with 3-2# rods.  
 Forge: Build Forge for Blacksmith Shop of same size as the one now in place at Ramsey County Tool House at #1441 Rice St. including new blower fan of same size as present fan all ready for electrical connections. Electrical Contractor will furnish and install meter. Forge construction will also include grates, etc.  
 Structural Steel: This will cover trusses, lintel beam over door #26, shelf angles for concrete door and window lintels, wide flange beams for roof support of Blacksmith Shop, Boiler Room, Grease Room and Shop Office and steel beams required for Chain Hoist Beam Supports. It will also cover Chain Hoist runner beam detailed on Sheet #7. See truss details on Sheet #7. Trusses designed for a total live+dead roof load of 50# per square foot and will have 2 lines of Cross Bracing. Furnish shop details for approval of County Engineer.  
 Roof Construction: Roof wood joists to be of sizes and spaces shown and of #1 Fir. Provide #1 Fir rafter on top of truss top chords as shown. Also provide #1 Fir nailers on top of all wide flange beams supporting wood roof joists. Install row of 1x2 Cross Bracing on center lines of all joist spans. Roof Boards to be 1x6" T&G, #1 Fir boards well end matched. Fasia boards at eaves to be #1 Pine or Redwood. On top of wood roof boards apply one (1) layer of 1" thick Insulite well nailed to roof boards with large headed coated nails. Roofing will be placed on this Insulite insulation.  
 Reinforcing Steel: This to comply with provisions of the St. Paul Building Code.  
 Doors: These to be of sizes and types shown on Sheet #3. All wood doors to be of Pine complying with specifications of the National Door Manufacturers Association. Provide wood plank frames. Provide stock pine or fir casings on doors 14, 15, 16, 17, 18, 19 and 20 only, on sides where doors swing. Metal covered doors, both sliding and swinging, will carry labels of National Board of Fire Underwriters. Garage Doors to be of sizes and types shown meeting requirements of the M'Kee Door Co. or the Hinner Mfg. Co. for overhead doors and sliding doors. See Sheet #6 for wood framework required at Doors #1 and #38; this framework to be erected by General Contractor. Calk around plank frames with Horn Co's. "Vulcatex" Caulking "Vulcatex" in frames in outside walls.  
 Glass and Glazing: All glass to be D.S.A. well bedded in putty. Use frosted glass in toilet windows.  
 Steel Sash: These to be Federal Arc Welded Industrial Windows of types shown and to include all operating devices. Calk all sash tightly with Horn Co's. "Vulcatex" Elastic Caulking Compound.  
 Roofing and Sheet Metal: To top of Roof Insulation apply a 5 Ply Composition Roof with a 10 Year Guarantee. Use one (1) layer of well lapped 30# felt and 3 layers of well lapped 15# felt. All to be solid matted and upper edges of 15# felt will, in addition, be nailed down with 12# Simplex Roofing Nails 2'-0" o.c. Where roof butts against masonry walls, parapet walls or chimney, install 16oz. copper flashing at least 6" high and upper edge inserted into masonry joints at least 2" with lower edge bent at least 4" under composition roofing. Gutters to be 8" box gutters of 18oz. copper. Gutter to downspouts and provide an adequate number of expansion joints. Downspouts will be located as shown on Sheet #4 and will be 4" 16oz. copper pipes, except for the four (4) interior downspouts adjacent to front (east) parapet wall, which will be 3" iron pipes installed by Plumbing Contractor. All 4" copper downspouts will have lower ends inserted in iron pipes running to cesspools, such iron pipes and cesspools being installed by Plumbing Contractor, including the two (2) front cesspools and the iron pipes running thereto from the four (4) front downspouts. Brace all copper downspouts to adjacent walls with metal bands.  
 Shop Office, Office, Toilet, Foreman's Office, Shop Toilet and Locker Room: Ceiling construction of these rooms to be similar. See Details on Sheet #10. No Wood Ceilings on 1x2 Strips nailed to ceiling joists.  
 Wood Window Interior Sash: These occur in S.W. Corner of Parts Dept. and Storekeepers Room and in west wall of Shop Office and in South Wall of Shop Foreman's Office. There is also a counter in connection with Window in Parts Dept. and Storekeepers Room and all will be built by General Contractor. See Details on Sheet #10.  
 (Continued on Sheet #7)





I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.  
Date 1/12/49 Reg. No. 818

— FLOOR PLAN OF BUILDING — SCALE 1/8" = 1'-0" —  
Total Length of Building 258'-11 1/2"  
Note: All Plasters under truss ends to be 2'-8" wide by 8" inward projection unless otherwise noted or detailed.



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

*Rory A. Brown*

Date 1/12/49 Reg. No. 818