STRUCTURAL DESIGN OF AN OFFICE BUILDING

A Thesis

Comprising the structural plans, details, and specifications for the construction of a reinforced concrete office building

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of
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NOTATIONS AND ABBREVIATIONS

The notations used are standard as defined in the Joint Committee Specifications, and also include:

V_c = shear to be carried by the concrete.

V_s = $V - V_c$ = shear to be carried by web reinforcement.

= pounds

' = feet

" = inches

□ = sq. = square

#/□" = pounds per square inch

c.c. = center to center

J. C. S. = Joint Committee Specifications

Sec. = Section

Par. = paragraph.

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DISCUSSION

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In this design of a reinforced concrete office building, with the structural plans and accompanying specifications, no attempt will be made to supply the necessary information and specifications to bring the building to completion ready for occupancy, but rather to concentrate on the structural phase of the construction, thereby gaining a more detailed and complete study and solution of structural design.

At the outset, conditions were created so that I might imagine myself a practicing engineer to whom an architect has come for the structural design for his building. To this end a complete set of architect's plans were obtained through the courtesy of Mr. Fiske. The plans were drawn by R. H. Hunt Company, Architects, Chattanooga, Tenn., and Dallas, Texas.

From this point, then, design began, and as problems and questions arose, they were met and answered by Professor Snow, with whom frequent consultations were made.

The following discussion is not intended as a treatise on the reinforced concrete structural design, but as a resumé of those problems which seem worthy of note.

Although the Joint Committee Specifications give moments coefficients for wL^2 for use in calculating moments in continuous beams, in general practice these coefficients are not frequently applicable, inasmuch as their use is limited to spans of equal length superimposed with a uniform load throughout. I have used the Hardy Cross method of moment distribution in a rigid frame structure in my design calculations. This method admits of easy solution, and I prefer it to the same solution by the three moment theorem with which I had become acquainted during my connection with a practicing engineering office in Washington, D. C.

In the calculation of moments in the rigid frame, there frequently arises a doubt as to the actual distribution of stresses into the respective members. However, any method that will give moments larger than those that will actually occur is a perfectly satisfactory one to use.[1] The calculations will be on the side of safety, but, of course, without respect to economic considerations.

In the choice of a beam size, it may be noted

1. Suggested by Prof. Snow.

that by using a relatively deep beam as compared to the width, the Σ_o can be reduced so that the steel used will approximate both A_s and Σ_o simultaneously, and thus eliminate, to a great extent, the use of a large excess of steel above that required to meet the A_s needs alone. The latter unbalanced condition is more frequently encountered in practice due to architectural limitations on the depth of the beam.

Another consideration is the using of uniform sized beams as much as possible, although upon close calculations smaller sizes could be safely used. This uniformity admits of greater ease of form building on the job, and reduces not only the cost but also the time of construction.

When stirrups were needed, I generally used specialy anchorage to carry $v = 0.03\ f_c'$, and then permit the stirrups to carry the remainder of the shear. This reduces the number and size of stirrups with only a small increase in the size of the longitudinal steel. In no case did I omit vertical stirrups by assuming or calculating that the bent-up longitudinal reinforcing carried diagonal tension. In the pent house roof framing, beams have been used of sufficient size to give the unit shear a value less than 0.03 f'_c , and thus eliminate entirely the use of stirrups.

Professor Snow has suggested that a maximum of unit shear be limited to $v = 0.06\ f'_c$. In the Joint Committee Specifications a maximum of 0.12 f'_c is permitted with the combination of special anchorage and web reinforcement. The change has been advanced on the belief that 0.12 f'_c is an excessive allowable working stress for the concrete. Another reason is that the J.C.S. require a 33% reduction in stirrup spacing for this higher stress, resulting in too great a number of stirrups.

Professor Snow has also indicated that in using piles in foundations, all the formulae ever devised will be unsatisfactory unless these formulae have been made or calibrated for the particular locality under consideration. The only satisfactory method of determining the capacity of a pile is to drive one until a penetration not exceeding 1/4" is obtained under a stroke of the pile-driver. This test pile is then loaded until slight settlement occurs. The load causing this settlement is the ultimate pile bearing, and is divided by a factor of safety of 3 or 4 for the actual working load.

The original design of the building called for caissons 3'-0" in diameter to be sunk to rock beneath each column. However, for the sake of design, I have assumed firm clay soil beneath the building, and have used 3.5 tons/sq.ft. as the bearing value of the soil. I have also used the concrete, cast-in-place, type of piling with a safe working value of 13.5 tons/pile.

Standard specifications have not been quoted verbatum, but reference to them has been made.

As a general rule, rust that is not in the form of loose scale increases the bond strength of a bar. Any surface coating on a bar that is loose or that would seem likely to slip off, such as mud, grease or loose rust scale, decreases the bond strength. Except for a film of rust, or mill scale, which is not objectionable, it is best to have the bars clean.[2]

2. Johnson, R. W., Correspondence in answer to inquiries concerning factors affecting bond strength.

SAMPLE CALCULATIONS

SAMPLE CALCULATIONS

The following sample calculations are included to illustrate my method of design.

In the tile floor design, the architect required the slab to be a 6" tile with a 2" top covering (A). Figure 1 shows all the figures used in the design of 4S-1.[3] The dead loads were assumed, and a live load of 75#/□' was used[4] (B). First a shear test calculation was made after assuming a tile spacing of 16"c.c. (C), because this requirement usually governs the design. Over the support the shear is carried by the stem between the tile of $b' = 5"$ (D).[5] Using a 1" fireproofing at the top, the effective depth was found to be $d = 7"$. The formulae used for shear were $V = \frac{1}{2} \cdot w \cdot L$, and $v = \frac{V}{b\,j\,d}$ (E). Special anchorage and no web reinforcing must be used.[6]

The moment was found by the formula $M = (1/12) \cdot w \cdot L^2$.

3. The marking of the various structural members on a floor furnishes a means of ready identification in the field. In the floor slab marking, the first figures represent the floor to which the slab belongs, the "S" denotes "slab", and the last figures represent the slab's own number on that floor. Thus, 4S-1 signifies the first slab on the fourth floor.

4. Atlanta Building Code, Sec. 39, p.52.

5. J. C. S., Sec. 124.

6. See footnote 28, p.23.

The figures are shown at (F).[7] The arrangement at (G) of all the values needed for the design was suggested by Professor Snow. It has proved to be a time saver in routine design. The A_s was found by $0.76 \cdot \frac{M}{d}$ =[8]

$\frac{0.76 \cdot 4.86}{7} = 0.53\,\square''$, and the Σ_o was determined by Table # 6.

The total shear per tile row is distributed at the support over a 16" width, and therefore the load per foot of girder will be $1.75 \cdot \frac{12}{16} = 1.3$ kips/ft., the figures being shown at (H). During the design of the girder reference to (H) gives at once the uniform load per foot.

The amount of steel to be carried through the bottom into the supports is 7/12 the area of the positive reinforcement.[9] Referring to Table # 20, which is displayed before me, I select a B-bar[10] of 7/8"ϕ and an A-bar[10] of 5/8"ϕ. The arrangement at (J) gives in an easily accessible form the

7. See Specification, Sec. 107, p.15.
8. See derivation p.21.
9. J. C. S., Sec. 140 (a).
10. The standard bar notation as given here is:
A-bar, a straight bar through the bottom of the beam.
B-bar, a bar bent-up to become negative reinforcement over the support.
C-bar, a straight bar placed in the top.

45-1 Assume 6+2 Tile 16" c.c.

(A) (C)

L.L. = 75 #/□' (B)

Finished fl. = 15 #/□'

Wt. of slab = 65 #/□'

155 #/□'

$155 \cdot \frac{16}{12} = 206$

$b' = 4 + \frac{1}{2}(2) = 5"$ (D)

$V = \frac{1}{2} \cdot 155 \cdot 17 \cdot \frac{16}{12} = 1750\#$

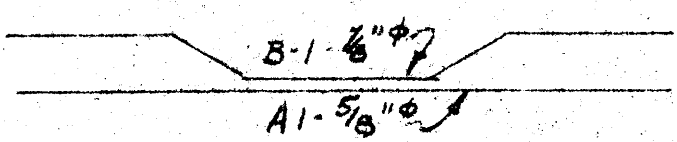
$v = \frac{1750 \cdot 8}{5 \cdot 7 \cdot 7} = 57 \#/□"$ (E)

$\frac{1}{12} \cdot 206 \cdot \overline{17.0}^2 = 4,860'\#$ (F)

(G)

M	4.86		4.86
		4.86	
V	1.75 X		X 1.75
A_s	.53		.53
	.31	.53	.31
Σ_o	2.8		

(1.3 kips/ft.) (H)



(J)

Design computations for T.C.T. slab

Figure # 1.

required steel to be used when drawing the structural plans.

As an example of continuous beam design I am using my computations of B405-6-7,[11] shown in Figure 2.

The line drawing at (A) gives a concise form in which to balance moments by the Hardy Cross method. I write the beam number and clear span length above each span, and use lower case letters to designate those points at which calculations of moments and shears must be made. I did not use three-way distribution of moments into columns as well as into beams. Assuming the stiffnes factor of the center span to be k = 1, the stiffness factor for each other member is then found from the relation

$$k\ (\text{member under consideration}) = \frac{\frac{EI}{L}\ (\text{member under consideration})}{\frac{EI}{L}\ (\text{member for which } k = 1)}.$$

Assuming that the beams will be made the same size throughout the three spans, the EI term cancels out of the equation, and the computations appear at (B).

11. In continuation of Footnote # 3, p. 6, the beams are identified by the notation B405. The "B" signifies "beam". The first digit gives the floor number and the other two digits the respective number of the beam. A modification of this appears in the marking of the roof and pent house roof beams. These beams are designated by RB5 and PRB5, respectively.

B405-6-7

Assume 12"×24"

B5 = 14'-3"   B6 = 21'-0"   B7 = 17'-0"

(A)

a	k = 1.5 (b)	c	d	k = 1 (e)	f	g	k = 1.2 (h)	m
+47.1 / 0		−47.1 / −33.5	+103.0 / −22.4		−103.0 / +25.1	+43.4 / +30.8		−43.4 / 0
−16.8 / 0		0 / −7.6	+12.6 / −5.0		−11.2 / +5.0	0 / +6.2		+15.4 / 0
−3.8 / 0		0 / −1.5	+2.5 / −1.0		−2.5 / +1.1	0 / +1.4		+3.1 / 0
+26.5		−89.7	+89.7		−81.8	+81.8		−24.9

(B)

$k_5 = \frac{1/14.25}{1/21.0} = 1.5$; $k_7 = \frac{1/17.0}{1/21.0} = 1.2$

(C)

$cd = \frac{1}{2.5} = 0.4$; $fg = \frac{1}{2.2} = 0.45$

(D)

$\frac{1}{12} \cdot 2.8 \cdot \overline{14.25}^2 = 47.1$

$\frac{1}{12} \cdot 2.8 \cdot \overline{21}^2 = 103.0$

$\frac{1}{12} \cdot 1.8 \cdot \overline{17}^2 = 43.4$

(E)

$V_a = \frac{2.8}{2} \cdot 14.25 - \frac{63.2}{14.25} = 15.6$ $V_c = 24.4$

$V_d = \frac{2.8}{2} \cdot 21.0 + \frac{7.9}{21.0} = 29.0$ $V_f = 29.8$

$V_g = \frac{1.8}{2} \cdot 17 + \frac{57.9}{17.0} = 18.7$ $V_m = 12.9$

(F)

$M_b = -26.5 + 15.6 \cdot 7.13 - \frac{2.8}{2} \cdot \overline{7.13}^2 = +13.7$

$M_e = -89.7 + 29.0 \cdot 10.5 - \frac{2.8}{2} \cdot \overline{10.5}^2 = +58.3$

$M_h = -81.8 + 18.7 \cdot 8.5 - \frac{1.8}{2} \cdot \overline{8.5}^2 = +12.2$

(H)

$V_s = 24.4 - 15.0 = 9.4$

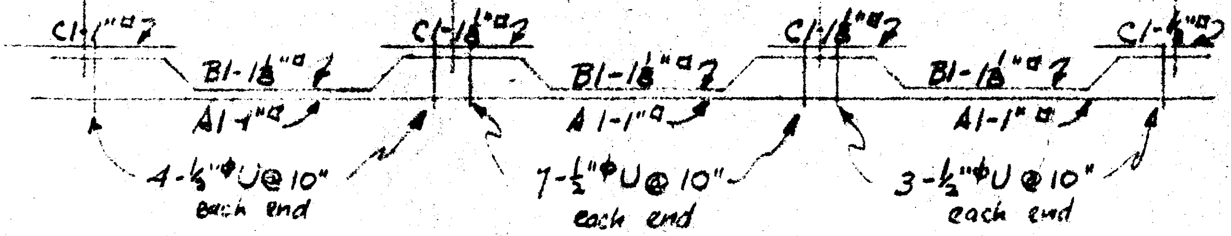
$x'' = 6 \cdot 14.25 \cdot \frac{9.4}{24.4} = 33''$

$V_s = 29.8 - 15.0 = 14.8$

$x'' = 6 \cdot 21.0 \cdot \frac{14.8}{29.8} = 63''$

(G)   12"×26"   (G)

	a	b	c	d	e	f	g	h	m
M	26.5	13.7	89.7		58.3	81.8		12.2	24.9
V	15.6		24.4	29.0		29.8	18.7		12.9
A_s	.85 / .25	.43	2.9 / 1.1		1.86	2.6 / 1.1		.39	.79 / .22
Σ_o	7.5		11.5	13.5		13.8	9.0		6.2



Design computions for typical continous beam system.

Figure #2

The fixed end moments for the three spans have been determined at (D) by[12] $M = (1/12) \cdot w \cdot L^2$. The uniform load includes the weight of the beam as well as the floor reactions and other superimposed loads. These moments are written in (A) with a positive sign at the left end of the span and a negative sign at the right end.[13]

Since the moments to be balanced will be prorated to the members in proportion to their respective stiffness factors, the member for which k = 1 will get the reciprocal of the sum of the factors times the balancing moment. Thus at cd, B406 will receive 1/2.5 = 0.4 of the balancing moment (C). A moment of + 103.0 − 47.1 = + 55.9 is to be balanced. The constant factor from (C) of 0.4 is now used to give the moment going to _d_, so that B406 receives $0.4 \cdot 55.9 = 22.4$ kip-ft. The remainder, 55.9 − 22.4 = 33.5 kip-ft., goes to _c_, and is most satisfactorily found by subtraction. In order to make all

12. This equation should not be confused with that given in Section 107 of the Specifications, p.15. The above equation gives the fixed end moments for a beam carrying a uniformly distributed load for use as the initial moment to be balanced by the Hardy Cross method. See p. vii for the fixed end moment equation for a concentrated load.
13. Hardy Cross notation.

the moments around cd in this bracket balance, the moments just determined must each carry a negative sign.

After completing balances and carry-overs in three brackets,[14] the shears are found by

$$V = \tfrac{1}{2}\cdot w\cdot L + \frac{M_R - M_L}{L},$$

in which the second term on the right corrects for unequal moments at the two ends of the span. It must be carefully noted that the sign of the moment at the left end of the span is positive as determined by Hardy Cross, but is in reality negative as will be seen if the moment diagram is drawn. The correction factor in the above equation has the proper signs only for direct use of the moments from (A).

Next, the moments are found at the center line of each span by means of the general moment equation

$$M_x = -M_A + V_A \cdot x - \frac{w\cdot x^2}{2} - P\cdot y .$$

In this general equation the sign of the first term on the right is for use with the moments as taken directly from the Hardy Cross solution at (A).

The values from (E) and (F) are tabulated at (G). Referring to Table # 3 we find that for our beam the

14. Three balances and successive carry-overs gives resulting moments sufficiently accurate for our design purposes.

shears are in region Y,[15] requiring web reinforcement, calculations for which are given at (H). At $v = 60\ \#/\square''$ the beam carries 15.0 kips,[16] and at f the web reinforcement must carry $V_s = V - V_c$[17] = 29.8 - 15.0 = 14.8 kips. The distance beyond which no web reinforcement is necessary in a uniformly loaded beam is expressed by $x'' = 6 \cdot L \cdot (V_s / V)$.[18] Therefore stirrups are needed for $x'' = \frac{6 \cdot 21.0 \cdot 14.8'}{29.8} =$ 63". From Table # 10 it is found that a $\frac{1}{2}''\phi$ U stirrup spaced 10" c.c. will be satisfactory, so that by placing the first stirrup in the plane of the face of the support 7 are needed. In choosing longitudinal reinforcing the B-bars[19] will be lapped between beams, but C-bars[19] must nevertheless be used to meet the Σ_o requirements.

15. See Footnote 28, p. 23.
16. Refer to Table # 3.
17. See p. vii.
18. See p. vii.
19. See Footnote 10, p. 7.

SPECIFICATIONS

SPECIFICATIONS

The design and construction of the Office Building shall be carried out in accordance with the Standard Specifications for Concrete and Reinforced Concrete as approved by the Joint Committee, August 1924, except for changes as noted.

Section 10. Fine aggregate shall be of such quality that mortar briquettes, cylinders, or prisms, consisting of one part by weight of Portland cement and three parts by weight of fine aggregate, mixed and tested in accordance with the methods described in the "Standard Specifications and Tests for Portland Cement" (Serial Designation: C9-21) of the American Society for Testing Materials, will show a tensile or compressive strength at ages of 7 and 28 days not less than 100 per cent of that of 1:3 standard Ottawa sand mortar of the same plasticity made with the same cement.

Section 14. Coarse aggregate shall range in size from fine to coarse within the following limits, the percentages to be by weight:

Passing 3/4" sieve	not less than 95%
" No. 4 "	not more than 10%
" No. 8 "	not more than 5%

Section 21. The metal reinforcements shall

meet the following requirements:[20]

Reinforcing steel shall be domestic deformed bars of intermediate grade complying with the American Society for Testing Materials specification A15-30 rolled from identified heats of new billets manufactured by the open-hearth process. No re-rolled material will be accepted. Bars shall bear mill identification symbols whereby they can be traced to the mill of origin. The reinforcing bar sub-contractor shall execute an affidavit in proper form certifying to the above facts, stating specifically the mill which manufactured the billets and their numbers and shall accompany such certificate with authenticated copies of the regular mill test reports.

Section 24. Structural steel shapes shall conform to the requirements of the "Standard Specifications for Structural Steel for Buildings" (Serial Designation: A9-24) of the American Society for Testing Materials.

Section 28. The aggregates shall be measured separately by volume. Proper allowances in the measurement of the fine aggregate shall be made to

20. Recommended specification, Concrete Reinforcing Steel Institute, Chicago, 1933.

correct for bulking. It shall be the duty of the Engineer to daily check measurements of the fine aggregate, and to require the necessary changes to secure the specified proportions in each batch.

Section 29. Concrete shall be mixed in the following proportions by volume:

Part of Structure	Cement	Fine Aggregate	Coarse Aggregate	Concrete Comp. Strength 28 days - #/□"
Beams, girders, slabs Columns above 5th floor Footings	1	2	4	2000
Columns below 5th floor Sidewalk slabs	1	1½	3	3000

The surface moisture in the aggregate must be included as part of the mixing water.

Section 30. The quantity of water used shall be the minimum necessary to produce concrete of a workability required by the Engineer, but shall in no case exceed a water-cement ratio of 7 U.S. gallons per sack of cement for 1:2:4 concrete, and 6 U. S. gallons per sack of cement of 1:1½:3 concrete. The maximum slump shall be 6".

Section 60.[21] Metal reinforcement, before being

21. See Par. 3, p. 5.

placed, shall be thoroughly cleaned of mud, grease or loose scale that will destroy or reduce the bond.

Section 63. The minimum spacing for parallel bars shall be 3 diameters center to center. The maximum number of bars that may be placed in a given width shall be determined by the formula

$$\text{Minimum} \quad b = 3\,(N-1)\,D + D + 3.$$

The diameter shall be considered as the nominal size of the bar for both round and square bars.

Section 78. Integral compounds shall not be used for water-proofing, except that slacked lime may be used in a proportion not to exceed 10% by weight of cement.

Section 107.[22] Beams and slabs built to act integrally with beams, girders, or other restraining supports, and beams and slabs continuous for two or more equal spans, carrying uniformly distributed loads, shall be designed for a maximum positive moment at the center of the span and a negative moment over the support, as determined by the equation

$$M = \frac{w \cdot L^2}{12}$$

Section 127.[23] Special anchorage of longitudinal reinforcement shall be provided by hooks of

22. The Designers' Method.
23. Practice of the Truscon Steel Company.

4" for all bars up to and including 7/8" ϕ, and 6" for bars 1" ϕ and over. All bends to be right angle bends.

Section 128.[24] The unit shearing stress as computed by the formula

$$v = \frac{V}{b \cdot j \cdot d}$$

shall not exceed 0.06 f'_c, but the concrete may be assumed to carry 0.03 f'_c when the longitudinal reinforcement is anchored in accordance with Section 127, and web reinforcement may carry the remaining 0.03 f'_c.

The following general specifications shall also be complied with:

Dimensions shall be taken from figured dimensions and shall in no case be scaled. Where there is any discrepancy, the Engineer shall call the attention of the Architect to the same. He shall make the necessary corrections with the approval of the Architect.

The structural steel shall, in general, comprise the two large girders over the banking floor, steel for framing around skylights, all continuous lintels at each floor, I-beams to support the two water tanks in the pent house, channel- and I-beams supporting the elevator machinery, angles for supports at each

24. See Par. 1, p. 4.

floor for the chimney carried up on the exterior of the building, and all miscellaneous steel as shown on the plans. All structural steel shall be given one coat of sublimed blue lead paint, as manufactured by the F. J. Cooledge and Sons Company, before erection.

Complete tests shall be made on the sand, aggregates, and cement in quantities of not more than carload lots. Reports of all tests shall be filed with the Engineer.

The floor system shall consist of 3-cell 12" x 12" terra cotta tile of thickness and spacing as shown on the structural drawings. Tile must be all hard burned and free from imperfections that will impair its strength. All soft or broken tile must be rejected. Tile shall be laid true to line and all ends must butt. The ends of all tile rows are to be plugged to prevent concrete from flowing into them. The tile shall be thoroughly wet down before placing of the concrete.[25]

No load or weight shall be placed on any portion of the construction until the concrete has fully set and centers have been removed.

25. Hunt, R. H., Specifications, p. 21.

The first stirrup shall be placed in the plane of the face of the support.

Forms for concrete members shall be substantial and unyielding, plumb and true, and shall be made as nearly watertight as possible. The minimum time for removing forms shall be: 4 days for columns and sides of beams; 10 days for floor slabs; and 21 days under beams and girders.[26] The Engineer shall have the authority to increase the above specified times.

The building shall be equipped with four gearless traction self-leveling passenger elevators having unit multi-volt signal control, as manufactured by the Otis Elevator Company.[27] The elevators shall travel from the basement to the tenth floor, a distance of 115'-8", each elevator serving 11-stops and 11-openings.

Each elevator shall travel at a speed of 700 feet per minute, with a maximum load of 2500 pounds in addition to the weight of the car. The size of each car shall be approximately 6'-0" x 5'-6".

Steel tee-guides for car and counterweights shall be securely fastened to I-beams at each floor level.

26. Hunt, R. H., Specifications, p. 18-9.
27. Specifications, Otis Elevator Company, This and the 3 following paragraphs are from the same reference.

The concrete slabs shown to be placed over the hatchway shall not be poured except on the approval of the representative of the Otis Elevator Company after the machinery has been hoisted to the pent house.

Exposed steel work to be installed by the Otis Elevator Company shall be coated with one coat of sublimed blue lead paint before erection, and one finish coat of the same base paint.

CHARTS AND TABLES

DESIGN CHARTS AND TABLES

The graphical solution of many of the design formulae furnishes a quick and easy means of design with a minimum use of a slide rule. In certain cases, for example in column design, the use of Tables # 11 and # 12 together admits of rapid determination whether compression exists over the entire section or tension over part of the section.

Several tables reproduced here from handbooks furnish their data in quickly available form and avoids too many cumbersome books on one's desk during design. In this regard Table # 17 is an example. The advantage in its use lies solely in having it easily accessible, otherwise by slide rule computation a double set of the rule could be made more easily than hunting for the table. Also, Table # 20 should be posted in a conspicuous place where it is readily visible.

Table # 1 gives a convenient means of approximating the moment value that can be used to arbitrarily choose a size of beam from Tables # 2 and # 3. Unfortunately, the architectural limitations usually prevent the proportioning of the size of a beam to those given in the latter two tables.

Modifications of Tables # 4 and # 5 are found in various text books on design. I have found that there is almost as much slide rule computation and time involved in their use as in the direct solution of the $A_s = \frac{M}{f_s \cdot j \cdot d}$ formula. However, a simple means for this solution is the use of a constant determined as follows:

$$A_s = \frac{M}{f_s \cdot j \cdot d} = \frac{M \cdot 12 \cdot 8}{18 \cdot 7 \cdot d} = 0.76\left(\frac{M}{d}\right)$$

in which M is expressed in kip-feet, and d in inches. It will be noted that this constant is applicable only for designing on the basis of f_s = 18,000 #/□ ", although other constants may be determined for any desired value of f_s. The use of this constant also permits ready location of the decimal point.

During design, it is more convenient to have the tables used in sheet form, and spread them about on the desk rather than try to thumb through a large bound volume of tables, many of which would be of no service for the particular type of design being carried through.

The following discussions of the tables are designed to be of sufficient scope to render the tables usable and not to derive or prove them.

The tables were drawn on the basis of:

f'_c = 2,000 #/□"

f_s = 18,000 #/□"

u = 100 #/□"

TABLE 1

The determination of moments in inch-pounds is facilitated by this table, when the beam carries uniformly distributed loads.

Assume a 450 #/' uniform load on a 20' span, and the moment coefficient to use in design as $(1/12)\cdot w\cdot L^2$. Enter the diagram with the argument of 20' span at the right, go horizontally to the curve marked 12, and descend vertically to the scale at the bottom, finding the value 400. Using this as a multiplier of our uniform load, we get 400 · 450 = 180,000 "-#.

TABLE 2 & 3

Continuing the same problem as in the foregoing, and using the value of 180,000 "# as an argument to enter on the right hand scale, go horizontally to the curve K = 138.7, and vertically below find the beam size 7" x 14". The weight of the beam has not yet been taken into account, so use the next larger sized beam, whose weight is 131 #/'. This load will give a moment of M = 400 · 130 = 52,000 "#, which added to the moment of the superimposed load gives a total M = 232,000 "#. The moment scale at the right shows that a beam $7\frac{1}{2}$" x 15" will carry a moment of 238,000 "#, so this beam meets the moment requirement.

Next a check for shear is made. Thus, $V = \frac{1}{2} \cdot w \cdot L$. $V = \frac{1}{2} \cdot 580 \cdot 20 = 5,800$ #. Using the scale at the left, enter the diagram with 5.8 kips as an argument, and find that a horizontal from here will intersect the vertical from our beam size in Region X.[28]

The value of <u>d</u> is the effective depth, to which 2" must be added for fireproofing when listing the beam size on the structural plan.

TABLES 4 & 5[29]

To find the steel area by means of these diagrams, divide the total external moment by the width of the

28. In order to distinguish the shear conditions during design, I have used N, X, and Y to designate the three conditions of unit shear respectively:

In Region N, $v < 0.02\ f'_c$, and neither web reinforcement nor special anchorage is necessary.

In Region X, $v > 0.02\ f'_c < 0.03\ f'_c$, requiring special anchorage without web reinforcement.

In Region Y, $v > 0.03\ f'_c < 0.06\ f'_c$, requiring web reinforcement but no special anchorage.

Using $f'_c = 2,000$ #/□ ", the above values become:

$0.02\ f'_c = 40$ #/□ "
$0.03\ f'_c = 60$ #/□ "
$0.06\ f'_c = 120$ #/□ "

These numerical values are recorded on curves on Tables # 2 and # 3.

Refer to Par. 3, p. 3, and also to Par. 1, p. 4.

29. Hool, G. A., Vol. I, Diagram 7, p. 346. My tables are modifications of those given in the reference.

beam. Thus, $\frac{232,000}{7.5} = 30,900$ "#/1" width.

Entering the diagram on the right-hand scale, intersect horizontally with the curve $d = 15"$, and vertically below find A_s (for $b = 1"$) $= 0.131\square"$. Therefore the total A_s for the beam is $7.5 \cdot 0.131 = 0.98 \square"$.

TABLES 6 & 7

The bond requirements is determined from these two tables.[30] Using Table # 7, a horizontal through $V = 5.8$ kips intersects a vertical from $d = 15"$ at $\Sigma_o = 4.4"$ (approximately).

Because of the straight-line variation of the shear in the formula $\Sigma_o = \frac{V}{u \cdot j \cdot d}$, any value for the shear may be easily found by dividing the total shear by a suitable integer, determining the corresponding Σ_o therefrom, and then multiplying the tabular value by the integer to obtain the total Σ_o.

TABLE 8

This diagram corresponds to Tables # 2 and # 3,

30. Care must be exercised in the use of these tables to put all values into thousands of pounds or thousands of inch-pounds before entering the diagram. I found it most convenient to work with the figures with the decimal point three places to the left of its exact position, the figures being much smaller and easier to handle.

and is used for flat slabs with a width b = 12".

TABLE 9

This diagram corresponds to # 4 and # 5, except that in its use the moments are in terms of b = 12", so that in order to enter the diagram no preliminary division is necessary.[31]

TABLE 10[32]

The spacing for vertical stirrups is found by these diagrams. For example, assume a concentrated load of 10,000 # at the center line of our foregoing illustrative example. The shear is then V = 5.8 + ($\frac{1}{2}$ · 10.0) = 10.8 kips. From Table # 2 it is found that when v = 60 #/□",[33] the beam will carry V_c = 6.0 kips. The amount of shear to be carried by the stirrups is V_s[34] = V − V_c = 10.8 − 6.0 = 4.8 kips. Using the diagram for the $\frac{1}{2}$" ⌀ U stirrup, enter at the top with the effective depth of d = 15" as an argument, and drop down to an intersection with a horizontal from V = 4.8, obtaining a spacing of s = 5". We might, however,

31. With reasonable access to this table, it admits of solution as easy if not easier than by the method described in Par. 1, p. 21.

32. Snow, Prof. F. C., This table is a reproduction of Diagram # 3 from the notes for C. E. 155-6, with the addition of the spacing diagram for the $\frac{1}{2}$"⌀U.

33. See Footnote 28, p. 23.

34. See p. vii.

enter the diagram for the 3/8" ϕ U stirrup, and there find that at maximum spacing V_s = 7.7 kips. It probably would be preferable to use this size stirrup and thereby reduce the number of stirrups to be placed on the job.

TABLE 11[35]

This chart gives design data for eccentric columns in which there is compression over the entire section, and is used in conjunction with Table # 12.

For illustration,[36] assume a moment of 600,000 '#, and a load of 1,800,000 #. The eccentricity is

$$x_o = \frac{M}{N} = \frac{600,000 \cdot 12}{1,800,000} = 4".$$

Assume $b = 42"$; $t = 54"$; $f_c' = 2500$ #/□".

The necessary arguments with which to enter the diagram are next calculated.

$$f_c = 0.3 f_c' = 0.3 \cdot 2500 = 750 \text{ \#/□"}$$

$$\frac{f_c \cdot b \cdot t}{N} = \frac{750 \quad 42 \quad 54}{1,800,000} = 0.94$$

$$\frac{x_o}{t} = \frac{4}{54} = 0.074 \text{ ; } \quad \text{and} \quad \frac{d'}{t} = \frac{2}{54} = 0.04.$$

On the diagram marked $d'/t = 0.05$, which has a value nearest to ours, use the two arguments, of 0.94

35. Snow, Prof. F. C., Reproduction of Diagram # 4.
36. Example from class lecture notes.

at the side scale, and of 0.04 on the bottom scale, and the intersection of lines from these two values gives a value of $(n-1)p = 0.38$, from which $p = 0.035$.

If the intersection of a horizontal from a value of $\frac{f_c \cdot b \cdot t}{N}$ and a vertical from a value of $\frac{x_o}{t}$ is below the diagonal limits, the column is too small, and if above the limits, too large. In the latter case the minimum steel of $p = 0.005$ must be used. If the intersection is to the right of the limits, then there is tension over part of the section and Table # 12 is the one to use.[37]

Both Tables # 11 and # 12 can be used for all values of n.

TABLE 12[38]

The use of this table is the same as that of the preceding one as explained in the paragraph immediately above.

TABLE 13[39]

The discussion of the two diagrams of this table follows closely that given for the use of Table # 11. The two diagrams may be used for all values of n.

37. Snow, Prof. F. C., Class notes on the use of this diagram.
38. Ditto, A reproduction of Diagram # 5.
39. Ditto, Reproductions of Diagrams # 6 and # 7, respectively.

TABLE 14[40]

This table gives the sectional areas of reinforcing bars in groups of varying numbers, and the area per foot of slab at various spacings of bars.

TABLE 15

The first tabulation on this Table was compiled by the use of the formula min. $b = 3(N - 1)D + D + 3$. The values tabulated are the maximum number of bars that can be put into a beam of width given at the left. The overlined numbers indicate that that number of bars will fit into a beam ½" narrower than indicated at the left.

The second tabulation is of perimeters of bars in groups of varying numbers.[40]

The next to the lowest line represents the length in inches that a bar must extend beyond the point of maximum tension in order to develop sufficient bond action to make the bar effective. Computations were made from the formula $L = \left(\frac{f_s}{4 \cdot u}\right) \cdot D$.

The lowest line gives the weight of bars in pounds per foot.

40. The compilation of this table was facilitated by reference to a similar table in Prof. Snow's notes.

TABLE 16[41]

The values given are the volumes per linear foot of a beam whose width and depth are given in the scales at the top and left respectively.

For concrete weighing 150 #/cu.ft., to convert a tabular value into #/lin.ft. of beam, add one-half of a value to itself, and move the decimal point two places to the right. For example, for a beam 12" x 18", the table gives the value of 1.50. Thus the weight is 1.50 + ($\frac{1}{2} \cdot$ 1.50) = 225 #/lin.ft.

The small table at the foot of Table # 16 gives similar values for one square foot of slab for a given thickness.

TABLE 17

The upper chart gives the decimals of a foot for inches and fractions of inches.

The remainder of the table gives values for the square of the span,[42] expressed in feet and inches.

TABLE 18

Moments of inertia expressed in inches to the fourth power for rectangles of given widths and depths are given in this table.

41. Hool and Johnson, Vol. I, p.166.
42. See Par. 2, p. 20.

TABLE 19[43]

The lengths given here are for the bending of reinforcing bars. If the angle of bending is 30° then B (the horizontal projection of the diagonal bend) is given in the designated column for values of H (the vertical projection). The diagonal dimension S is then 2H.

And if the angle of bending is 45° , then B = H, and the proper diagonal values are given in the "S" column for corresponding H values.

Lengths are also listed for the 30 diameters of bar for the various sizes of bars.

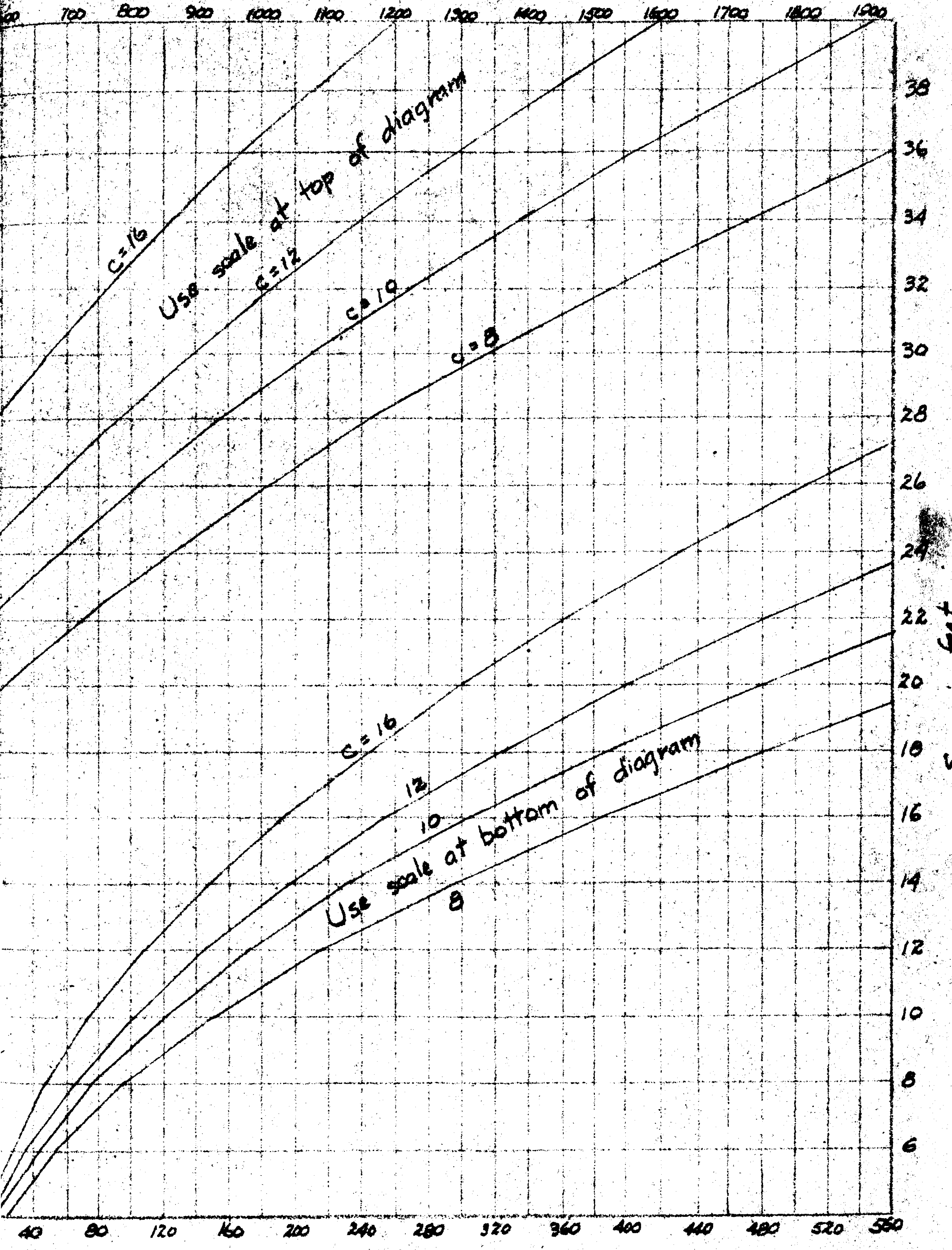
TABLE 20

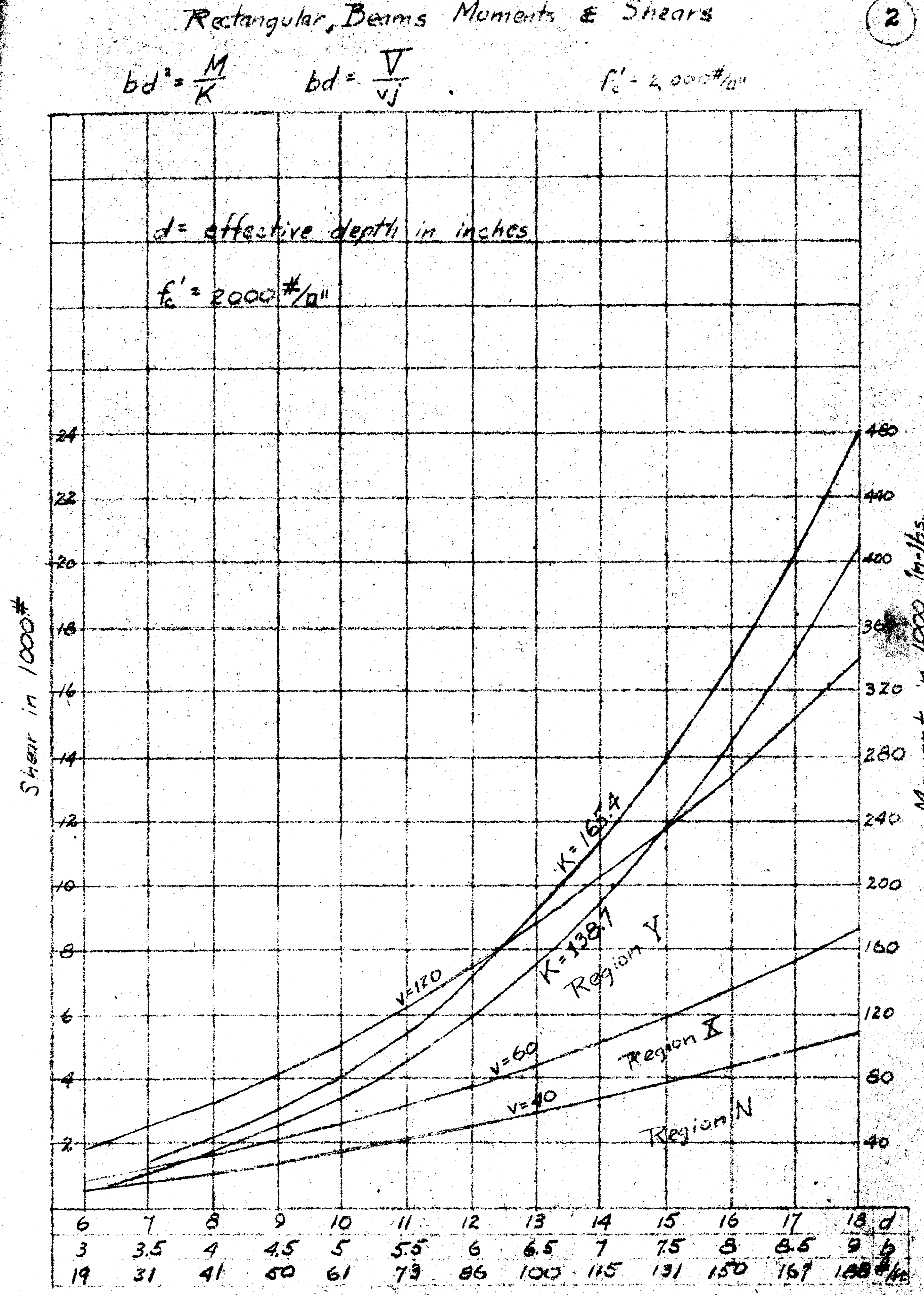
This chart should be posted on the wall where it may be readily visible.

43. Used by the Truscon Steel Company.

Coefficients of w (#/ft) giving moments in inch-pounds.

$M = \frac{1}{c} w l^2$

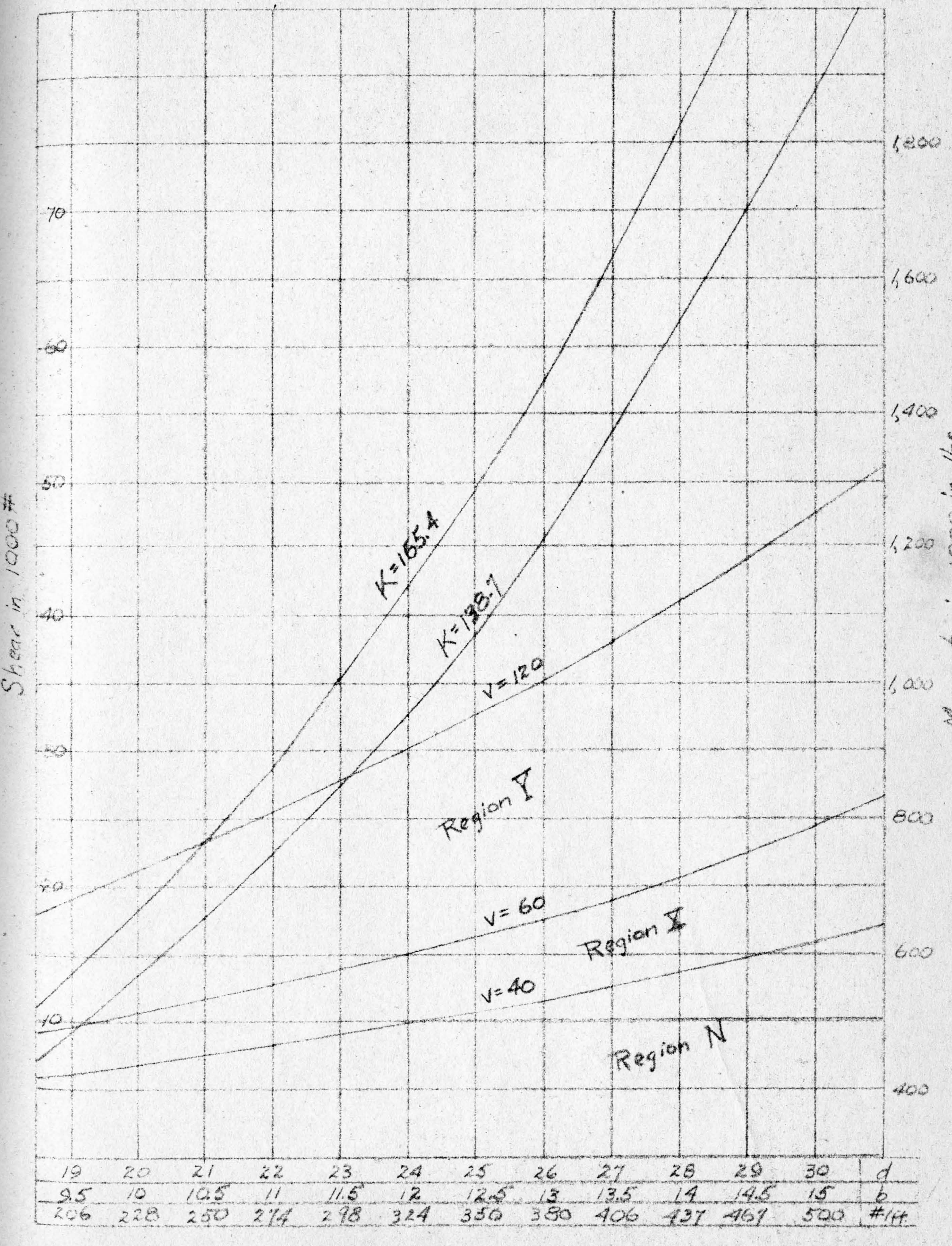




Rectangular Beams Moments & Shears
$bd^2 = \frac{M}{K}$
$bd = \frac{V}{vj}$
$f_c' = 2,000\#/\square''$
d = effective depth in inches
$f_c' = 2000\#/\square''$
Shear in 1000#
Moment in 1000 in-lbs.
24
22
20
18
16
14
12
10
8
6
4
2
480
440
400
360
320
280
240
200
160
120
80
40
K = 165.4
K = 138.1
v = 120
v = 60
v = 40
Region Y
Region X
Region N
6 7 8 9 10 11 12 13 14 15 16 17 18 d
3 3.5 4 4.5 5 5.5 6 6.5 7 7.5 8 8.5 9 b
19 31 41 50 61 73 86 100 115 131 150 167 188 #/ft

Rectangular Beams Moments & Shears

$bd^2 = \frac{M}{K}$ $\qquad bd = \frac{V}{vj}$ $\qquad f_c' = 2{,}000\ \#/\square''$

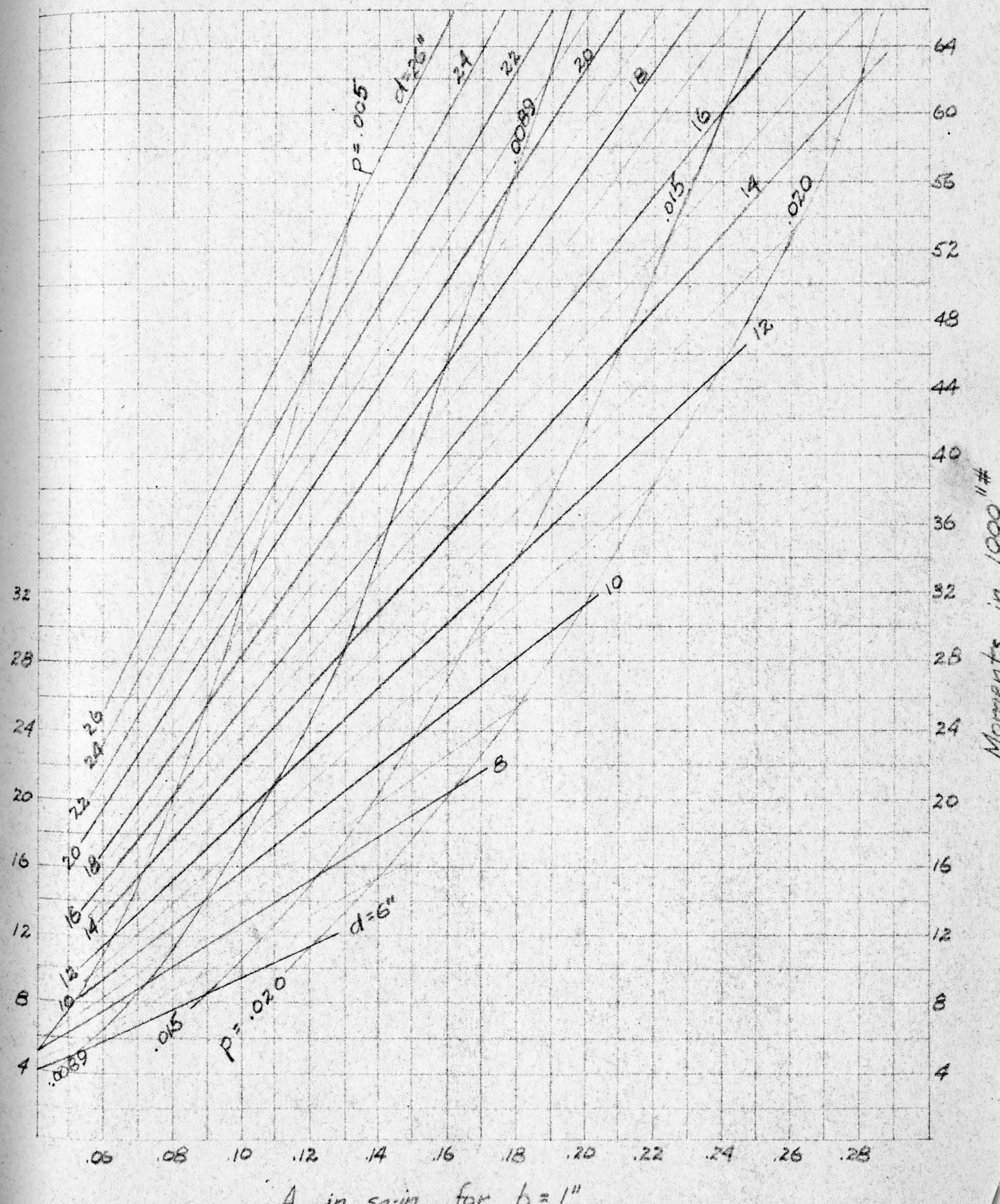


Area of Tension Steel

$$f_s = \frac{M}{p\,j\,bd^2} \qquad pbd = A_s$$

$f_s = 18{,}000$ #/□"
$f_c' = 2{,}000$ #/□"
$n = 15$

$p = .0089$ for balanced design

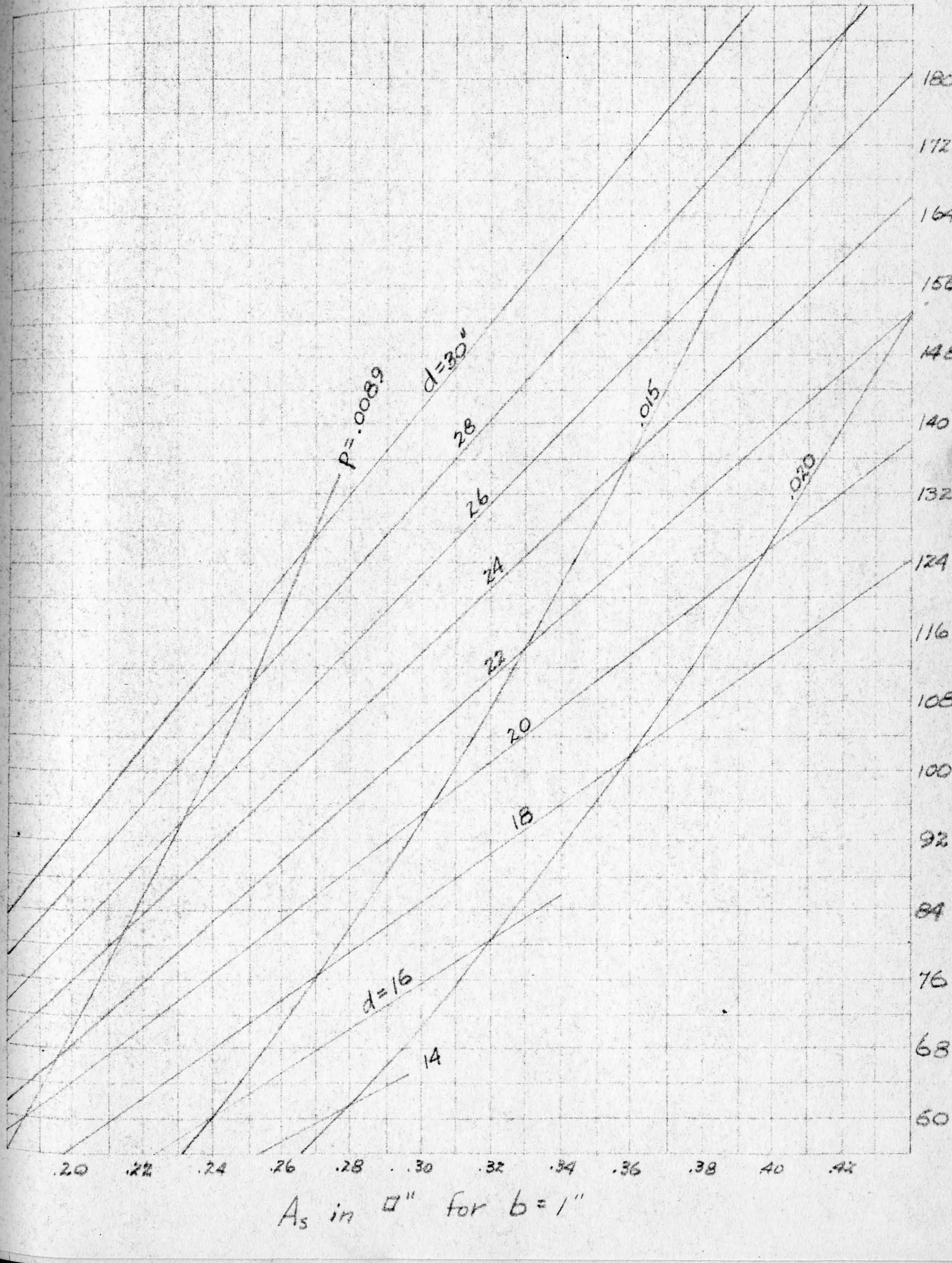


Area of Tension Steel

$f_s = \dfrac{M}{pjbd^2}$ $\qquad pbd = A_s$ $\qquad f_s = 18{,}000\ \#/\square''$

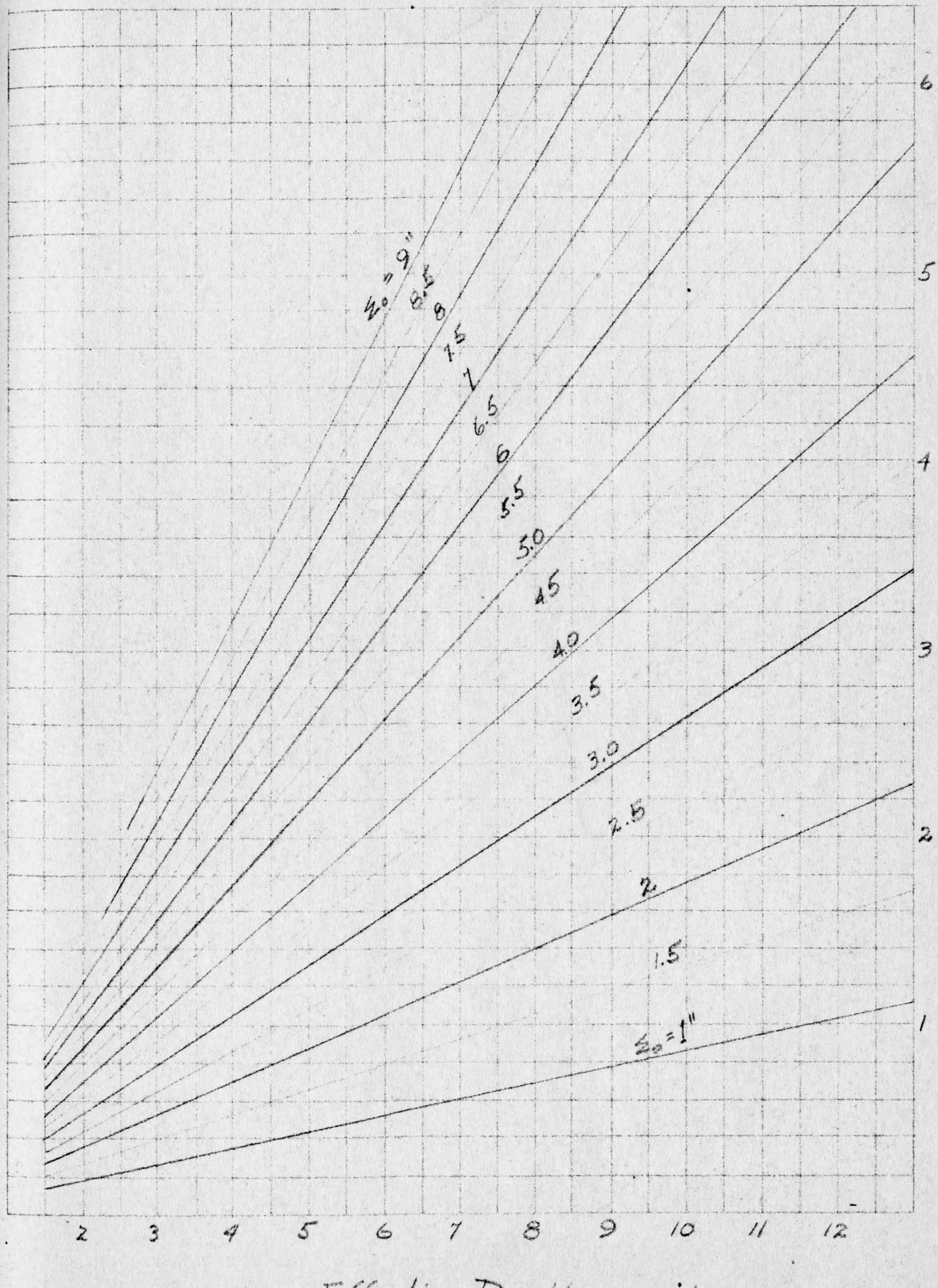
$f_c' = 2{,}000\ \#/\square''$

$p = .0089$ for balanced design $\qquad n = 15$



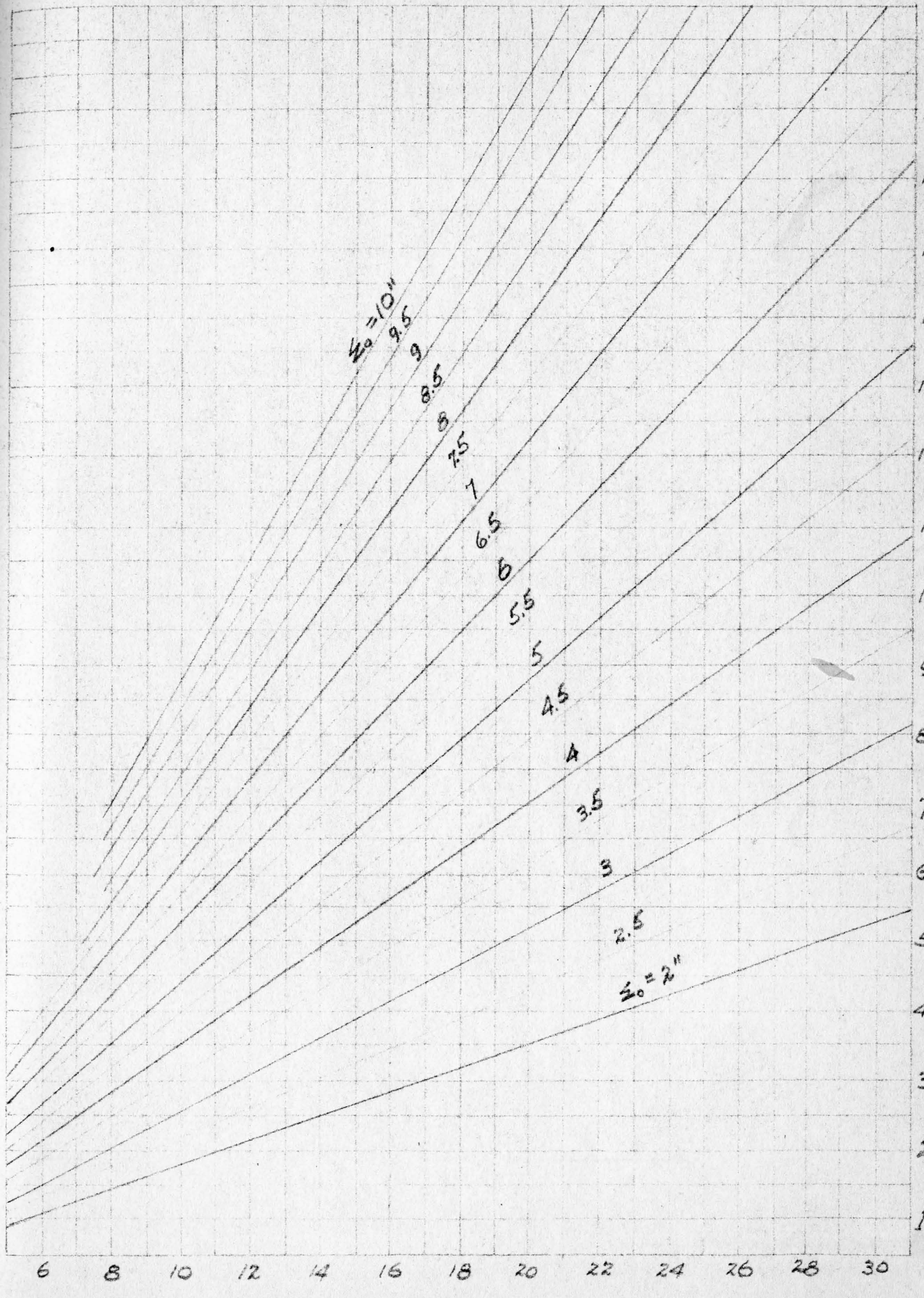
Bond

$$\Sigma_o = \frac{V}{u j d} \qquad u = 100\ \#/\square''\ \text{Deformed Bars}$$



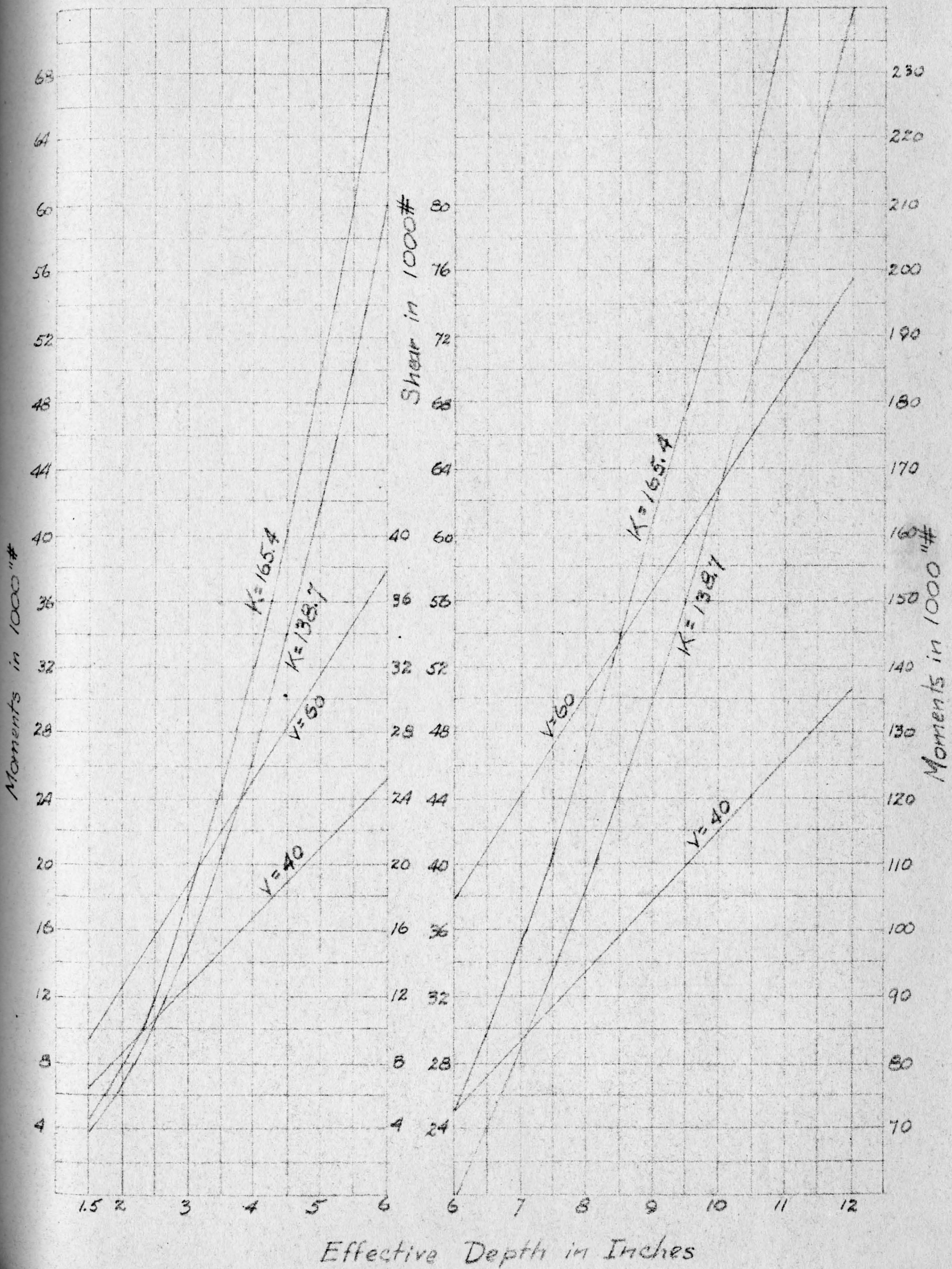
Bond

$\Sigma_0 = \frac{V}{u j d}$ $u = 100$ #/□" Deformed Bars



Flat Slab Moments & Shears

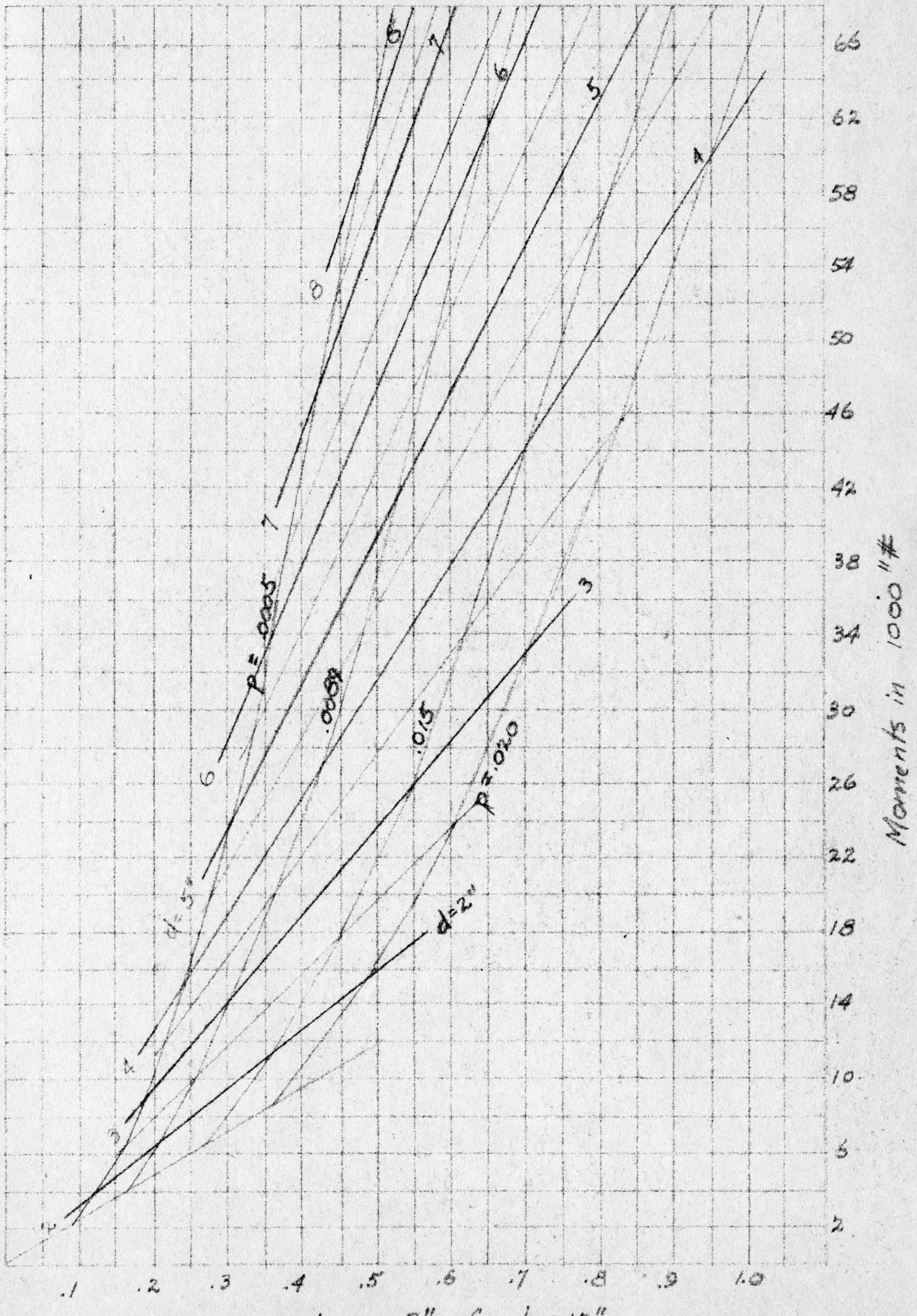
$bd^2 = \frac{M}{K}$ $bd = \frac{V}{vj}$ $f'_c = 2{,}000\ \#/\square''$ $b = 12''$



Area of Steel for Slab

$A_s = pbd$ $\qquad f_s = \dfrac{M}{pjbd^2}$ $\qquad f_s = 18{,}000\ \#/\square''$

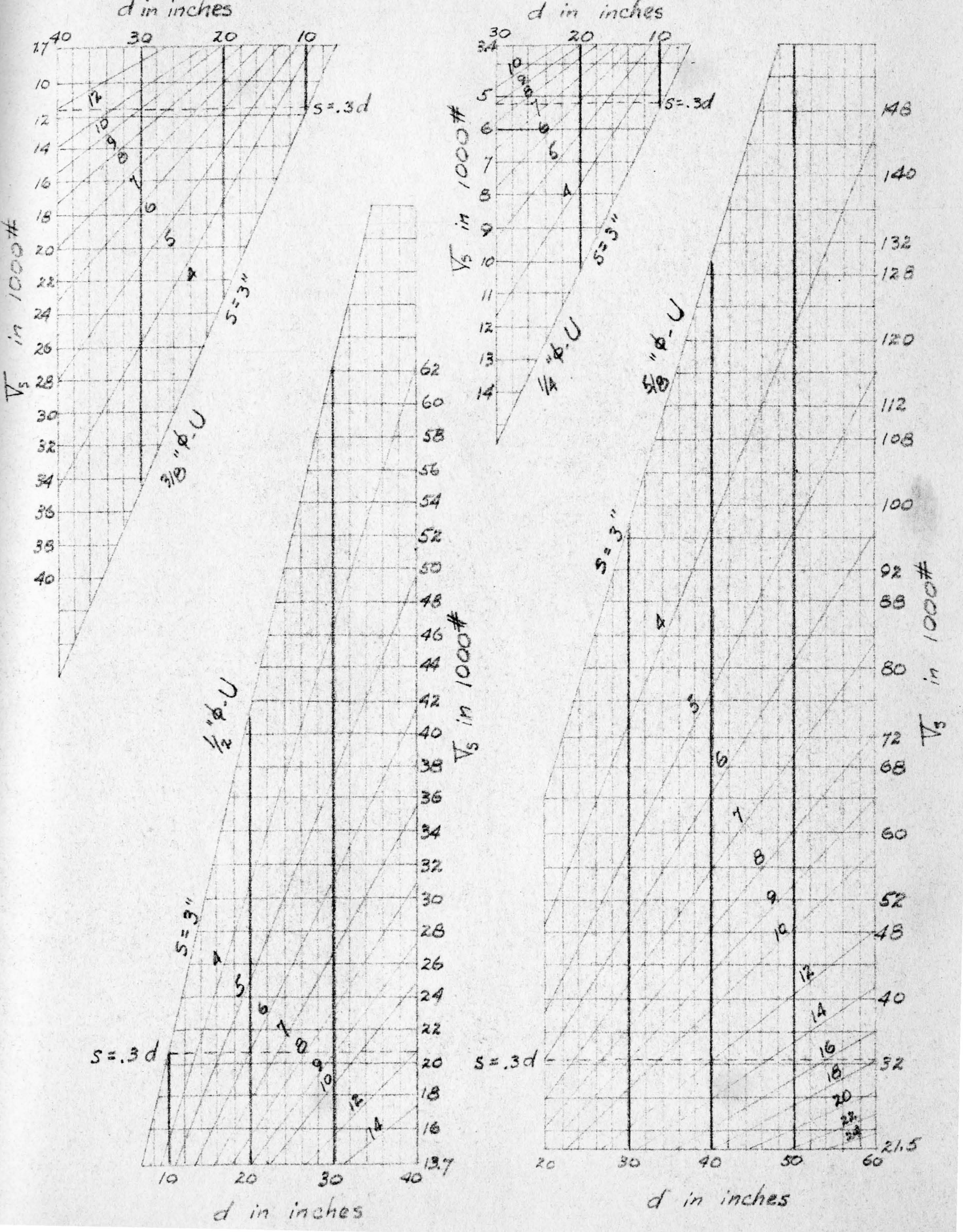
$b = 12''$ $\qquad p = .0089$ for balanced design



Vertical Stirrup Spacing

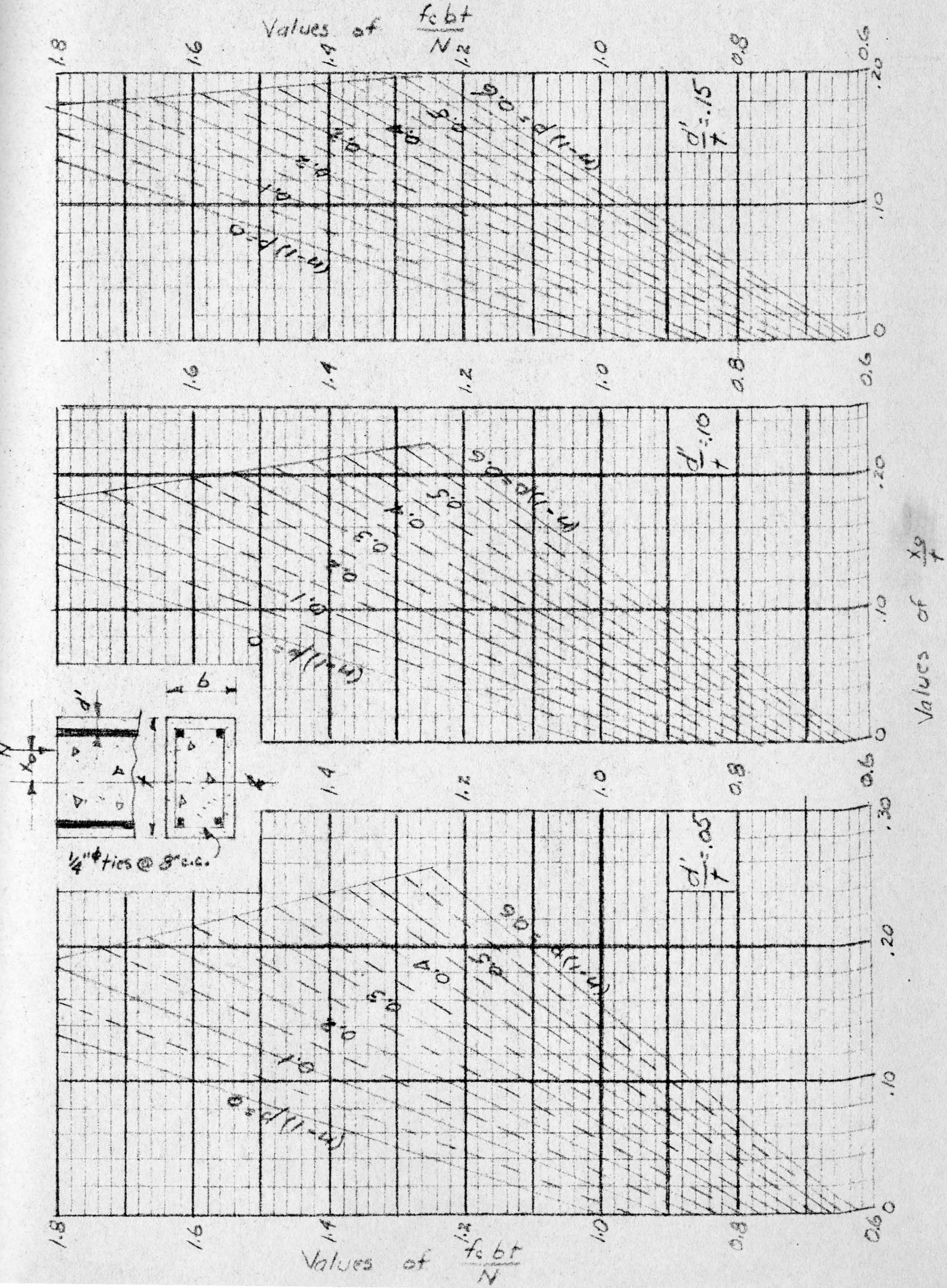
$$s = \frac{A_s f_s j d}{V_s} \qquad s_{max} = .45\, d \qquad f_s = 18{,}000 \#/\square''$$

$$V_s = V - V_c$$



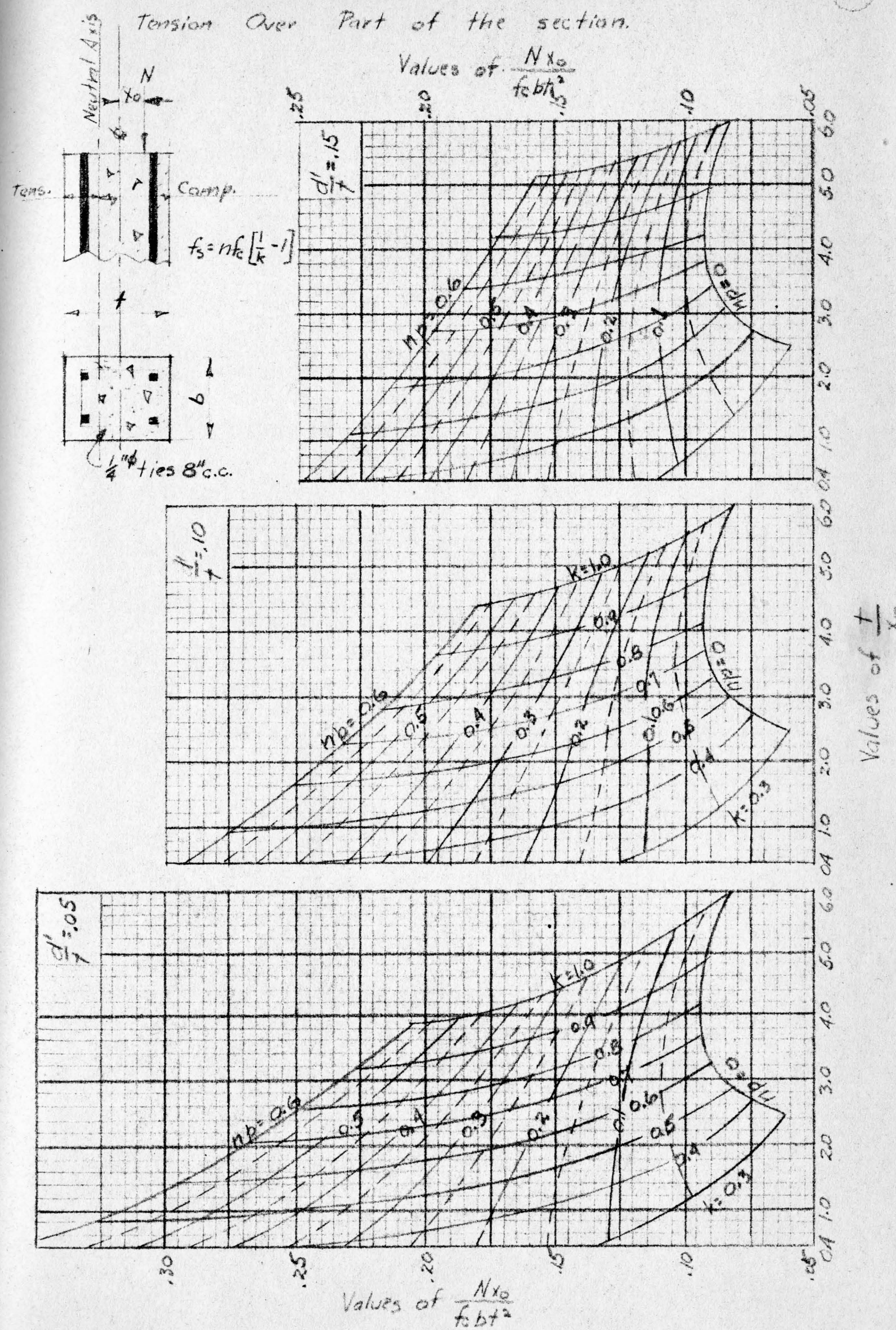
Rectangular Eccentric Columns

Compression Over the Entire Section.

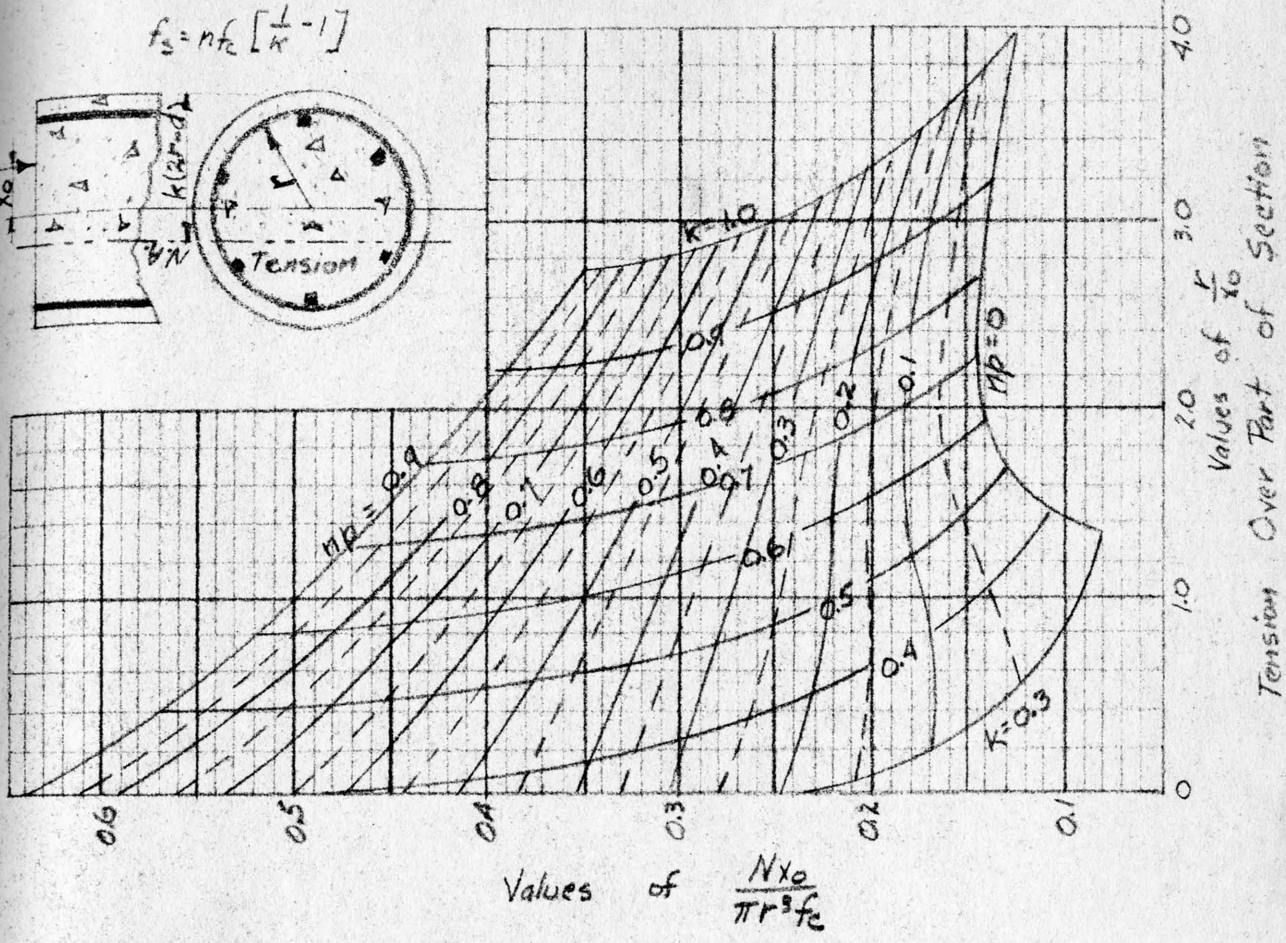


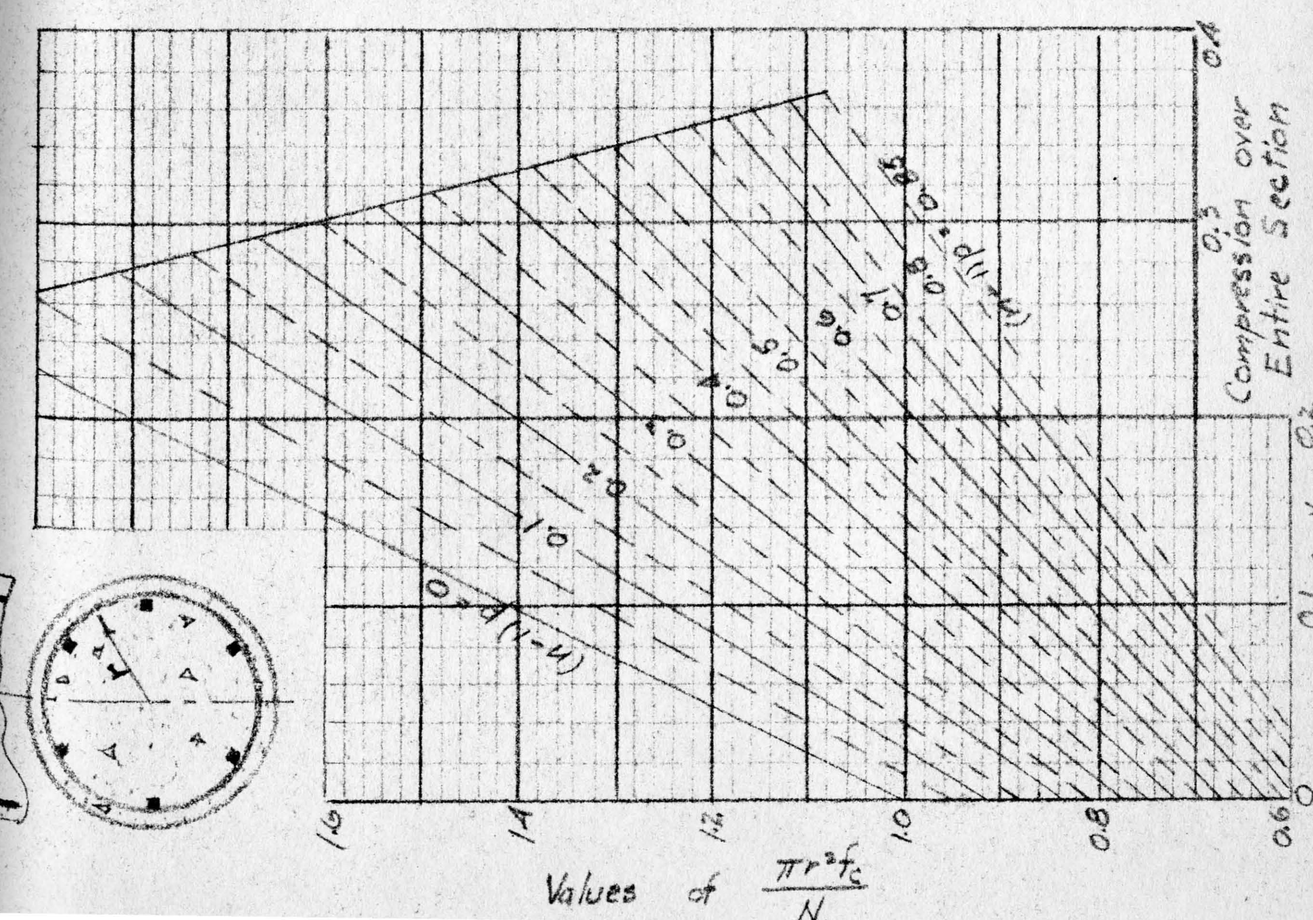
Rectangular Eccentric Columns

Tension Over Part of the section.



Circular Eccentric Columns





Sectional Areas of Bars

Areas

Size	Number of Bars										
	1	2	3	4	5	6	7	8	9	10	11
1/4" ϕ	0.049										
3/8" ϕ	0.110	0.22	0.33	0.44	0.55	0.66	0.77	0.88	0.99	1.10	1.21
1/2" ϕ	0.196	0.39	0.58	0.78	0.98	1.18	1.37	1.57	1.77	1.96	2.16
1/2" □	0.250	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75
5/8" ϕ	0.307	0.61	0.91	1.23	1.53	1.84	2.15	2.45	2.76	3.07	3.37
3/4" ϕ	0.442	0.88	1.32	1.77	2.21	2.65	3.09	3.53	3.98	4.42	4.86
7/8" ϕ	0.601	1.20	1.80	2.41	3.01	3.61	4.21	4.81	5.41	6.01	6.61
1" ϕ	0.785	1.57	2.35	3.14	3.93	4.71	5.57	6.28	7.07	7.85	8.64
1" □	1.000	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.0	11.0
1 1/8" □	1.266	2.53	3.79	5.06	6.33	7.59	8.86				
1 1/4" □	1.563	3.12	4.68	6.25	7.81	9.37					

Area per foot of slab

Spacing inches	Size of bar in inches										
	Round Bars							Square Bars			
	1/4	3/8	1/2	5/8	3/4	7/8	1	1/2	1	1 1/8	1 1/4
3	0.20	0.44	0.78	1.23	1.77	2.40	3.14	1.00	4.00	5.06	6.35
3.5	0.17	0.38	0.67	1.05	1.51	2.06	2.69	0.86	3.43	4.34	5.36
4	0.15	0.33	0.59	0.92	1.32	1.80	2.36	0.75	3.00	3.80	4.37
4.5	0.13	0.29	0.52	0.82	1.10	1.60	2.09	0.67	2.67	3.37	4.17
5	0.12	0.26	0.47	0.74	1.06	1.44	1.88	0.60	2.40	3.04	3.75
5.5	0.11	0.24	0.43	0.67	0.96	1.31	1.71	0.55	2.18	2.76	3.41
6	0.10	0.22	0.39	0.61	0.88	1.20	1.59	0.50	2.00	2.53	3.12
6.5		0.20	0.36	0.57	0.82	1.11	1.45	0.46	1.85	2.34	2.89
7		0.19	0.34	0.53	0.76	1.03	1.35	0.43	1.71	2.17	2.68
7.5		0.18	0.31	0.49	0.71	0.96	1.26	0.40	1.60	2.02	2.50
8		0.17	0.29	0.46	0.66	0.90	1.18	0.37	1.50	1.89	2.34
9		0.15	0.26	0.41	0.59	0.80	1.05	0.33	1.33	1.69	2.08
10		0.13	0.24	0.37	0.53	0.72	0.92	0.30	1.20	1.52	1.67
12		0.11	0.20	0.31	0.44	0.60	0.78	0.25	1.00	1.27	1.56

Bar Spacing

$$\text{Minimum } b = 3(N-1)D + D + 3$$

Maximum Number of Bars for Given Width

b in inches	Round Bars 1/4	3/8	1/2	5/8	3/4	7/8	1	Square Bars 1/2	1	1 1/8	1 1/4
6		3	$\bar{2}$	$\bar{2}$	2	1	1				
7		4	$\bar{3}$			$\bar{2}$	2				
8		5	4	3						$\bar{2}$	2
9		6			$\bar{3}$						
10			$\bar{5}$	$\bar{4}$		$\bar{3}$	3				
11		$\bar{7}$	6		$\bar{4}$					3	
12		$\bar{8}$		$\bar{5}$		4					3
13		$\bar{9}$	$\bar{7}$	6	5		4				
14		$\overline{10}$	8								
15		11		7	6	5				4	
16		12	$\bar{9}$				5				$\bar{4}$
17		13	10	8		6					
18		14			$\bar{7}$						
19			$\overline{11}$	9			6			5	
20		$\overline{15}$	12		$\bar{8}$	7					$\bar{5}$
21		$\overline{16}$		$\overline{10}$							
22		$\overline{17}$	$\overline{13}$		9		7			6	
23		$\overline{18}$	14	$\overline{11}$		$\bar{8}$					6
24		19			10						

Perimeter in inches of Groups of Bars

No. Bars											
1.	0.785	1.178	1.571	1.964	2.356	2.749	3.142	2.000	4.000	4.500	5.000
2	1.57	2.36	3.14	3.93	4.71	5.50	6.28	4.00	8.00	9.00	10.0
3	2.36	3.53	4.71	5.89	7.07	8.25	9.43	6.00	12.0	13.5	15.0
4	3.14	4.71	6.18	7.85	9.42	11.0	12.6	8.00	16.0	18.0	20.0

Length for Bond: $L = [f_s/4u]D$ [Inches]

11.3	16.3	22.5	28.2	33.7	39.4	45.0	22.5	39.4	50.6	56.3

Weight of Bar in Pounds per Foot

0.17	0.38	0.67	1.04	1.50	2.04	2.67	0.85	3.40	4.30	5.31

Volumes

$1\frac{1}{2} \times$ (Tabular value) $\times 100 =$ Weight of 150 #/cu.ft. concrete

Cubic feet in one linear foot of beam when width is:

d	6	7	8	9	10	11	12	13	14	15	16
8	0.33	0.39	0.44	0.50	0.56	0.61	0.67	0.72	0.78	0.83	0.89
9	0.38	0.44	0.50	0.56	0.62	0.69	0.75	0.81	0.88	0.94	1.00
10	0.42	0.49	0.56	0.62	0.69	0.76	0.83	0.90	0.97	1.04	1.11
11	0.46	0.53	0.61	0.69	0.76	0.84	0.92	0.99	1.07	1.15	1.22
12	0.50	0.59	0.67	0.75	0.83	0.92	1.00	1.08	1.17	1.25	1.34
13	0.54	0.63	0.72	0.81	0.90	0.99	1.08	1.17	1.26	1.36	1.45
14	0.58	0.68	0.78	0.88	0.97	1.07	1.17	1.26	1.36	1.46	1.56
15	0.63	0.73	0.83	0.94	1.04	1.15	1.25	1.36	1.46	1.56	1.67
16	0.67	0.78	0.89	1.00	1.11	1.22	1.33	1.45	1.56	1.67	1.78
17	0.71	0.83	0.94	1.06	1.18	1.30	1.42	1.54	1.65	1.77	1.89
18	0.75	0.88	1.00	1.12	1.25	1.38	1.50	1.62	1.75	1.88	2.00
19	0.79	0.92	1.06	1.19	1.32	1.45	1.58	1.72	1.85	1.98	2.11
20	0.83	0.97	1.11	1.25	1.39	1.53	1.67	1.81	1.94	2.08	2.22
21		1.03	1.17	1.31	1.46	1.60	1.75	1.90	2.04	2.19	2.34
22		1.07	1.22	1.37	1.53	1.68	1.83	1.99	2.14	2.29	2.44
23		1.12	1.28	1.44	1.60	1.76	1.92	2.08	2.24	2.40	2.56
24		1.16	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50	2.67
25		1.22	1.39	1.56	1.74	1.91	2.08	2.26	2.43	2.60	2.78
26		1.26	1.44	1.62	1.80	1.99	2.16	2.35	2.53	2.71	2.89
27		1.31	1.50	1.69	1.87	2.06	2.25	2.44	2.62	2.81	3.00
28			1.55	1.75	1.94	2.14	2.33	2.53	2.72	2.92	3.11
29			1.61	1.81	2.01	2.22	2.42	2.62	2.82	3.02	3.22
30			1.67	1.87	2.08	2.29	2.50	2.71	2.92	3.12	3.34
31			1.72	1.94	2.15	2.37	2.58	2.80	3.01	3.23	3.44
32			1.78	2.00	2.22	2.44	2.67	2.89	3.11	3.33	3.56
33			1.84	2.06	2.29	2.52	2.76	2.98	3.21	3.43	3.67

Cubic foot in one square foot of slab when thickness is:

t =	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8
cu. ft. =	.25	.29	.33	.38	.42	.46	.50	.54	.58	.63	.67

Decimals of a Foot

Fractions \ Inches	0	1	2	3	4	5	6	7	8	9	10	11
0		.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167
1/8	.0104	.0938	.1771	.2604	.3438	.4271	.5104	.5938	.6771	.7604	.8438	.9271
1/4	.0208	.1042	.1875	.2708	.3542	.4375	.5208	.6042	.6875	.7708	.8542	.9375
3/8	.0313	.1146	.1979	.2813	.3646	.4479	.5313	.6146	.6979	.7813	.8646	.9479
1/2	.0417	.1250	.2083	.2917	.3750	.4583	.5417	.6250	.7083	.7917	.8750	.9583
5/8	.0521	.1354	.2188	.3021	.3854	.4688	.5521	.6354	.7188	.8021	.8854	.9688
3/4	.0625	.1458	.2292	.3125	.3958	.4792	.5625	.6458	.7292	.8125	.8958	.9792
7/8	.0729	.1563	.2396	.3229	.4063	.4896	.5729	.6563	.7396	.8229	.9063	.9896

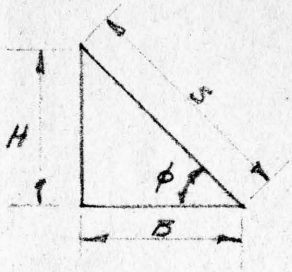
Table of L^2 (feet)

Inches \ Feet	5	6	7	8	9	10	11	12	13	14	15	16
0	25.00	36.00	49.00	64.00	81.00	100.0	121.0	144.0	169.0	196.0	225.0	256.0
2	26.62	38.07	51.41	66.74	84.01	103.4	124.8	148.1	173.4	200.8	230.1	261.4
4	28.41	40.07	53.73	69.39	87.05	106.7	128.2	152.0	177.7	205.3	235.0	267.8
6	30.25	42.25	56.25	72.25	90.25	110.3	132.3	156.3	182.3	210.3	240.3	272.3
8	32.14	44.49	58.83	75.17	93.51	113.8	136.2	160.5	186.9	215.2	245.5	277.8
10	33.99	46.65	61.31	77.97	96.63	117.3	139.9	164.6	191.3	219.9	250.6	283.3

Inches	17	18	19	20	21	22	23	24	25	26	27	28
0	289.0	324.0	361.0	400.0	441.0	484.0	529.0	576.0	625.0	676.0	789.0	784.0
2	294.6	330.0	367.4	406.8	448.0	491.4	536.7	584.0	633.4	684.7	738.0	793.4
4	300.5	336.1	373.8	413.3	455.1	498.8	544.4	592.1	641.8	693.5	747.1	802.8
6	306.3	342.3	380.3	420.3	462.3	506.3	552.3	600.3	650.3	702.3	756.3	812.3
8	322.2	348.4	384.8	427.3	469.5	513.7	560.0	608.4	658.7	711.1	765.4	821.7
10	318.0	354.7	393.3	434.0	476.7	521.1	567.7	616.5	667.2	719.9	774.6	831.2

Inches	29	30	31	32	33	34	35	36	37	38	39	40
0	841.0	902.0	961.0	1024	1089	1156	1225	1296	1369	1444	1521	1600
2	850.7	910.0	971.4	1034	1100	1174	1237	1308	1381	1457	1534	1613
4	860.5	920.1	981.8	1045	1111	1182	1248	1320	1393	1469	1546	1626
6	870.3	930.3	992.3	1056	1122	1190	1260	1332	1406	1482	1560	1640
8	880.1	940.5	1002	1066	1133	1198	1271	1344	1418	1494	1573	1653
10	889.9	950.7	1005	1077	1144	1206	1283	1356	1431	1507	1586	1667

Bar Bending Table



If $\phi = 30°$, $S = 2H$

If $\phi = 45°$, $B = H$

$S(45°) = H \cdot 1.414$

$B(30°) = H \cdot 1.732$

H	S-45°	B-30°
3	4	5
3½	5	6
4	5½	7
4½	6½	7¾
5	7	8½
5½	7½	9½
6	8½	10
6½	9	11
7	9½	1'-0"
7½	10½	1'-1"
8	11	1'-1½"
8½	1'-0"	1'-2½"
9	1'-0½	1'-3½
9½	1'-1"	1'-4"
10	1'-2"	1'-5
10½"	1'-2½"	1'-6"
11	1'-3½"	1'-7"
11½"	1'-4"	1'-7½"
1'-0"	1'-4½"	1'-8½"
1'-1"	1'-6"	1'-10"
1'-2"	1'-7½"	2'-0"
1'-3"	1'-9"	2'-1½"
1'-4"	1'-10½"	2'-3½"
1'-5"	2'-0"	2'-5"
1'-6"	2'-1"	2'-7"
1'-7"	2'-2½"	2'-8½"
1'-8"	2'-4"	2'-10½
1'-9"	2'-5½"	3'-0"

30 dia.

Bar	30D
3/8	0'-11"
1/2"	1'-3"
5/8"	1'-7"
3/4"	1'-11"
7/8"	2'-2"
1"	2'-6"
1 1/8"	2'-10"
1 1/4"	3'-2"

H	S-45°	B-30°
1'-10"	2'-6½"	3'-2"
1'-11"	2'-8"	3'-3½"
2'-0"	2'-9½"	3'-5½"
2'-1"	2'-11	3'-7"
2'-2"	3'-0½"	3'-9"
2'-3"	3'-1½"	3'-10½"
2'-4"	3'-3"	4'-0
2'-5"	3'-4½"	4'-2"
2'-6"	3'-6"	4'-3½"
2'-7"	3'-7½"	4'-5½"
2'-8"	3'-9"	4'-7"
2'-9"	3'-10½"	4'-9"
2'-10"	4'-0"	4'-10½"
2'-11"	4'-1½"	5'-0"
3'-0"	4'-3"	5'-2"
3'-1"	4'-4"	5'-3½"
3'-2"	4'-5½"	5'-5½"
3'-3"	4'-6½"	5'-7"
3'-4"	4'-8"	5'-9"
3'-5"	4'-10"	5'-10½"
3'-6"	4'-11"	6'-0½"
3'-7"	5'-0½"	6'-2"
3'-8"	5'-2"	6'-4"
3'-9"	5'-3½"	6'-5½"
3'-10"	5'-4½"	6'-7"
3'-11"	5'-6"	6'-9"
4'-0"	5'-7½"	6'-11"
4'-1"	5'-9"	7'-0½"

	A_s	Σ_o	Wt.
1/4″ϕ	.049	.785	.17
3/8″ϕ	.110	1.18	.38
1/2″ϕ	.196	1.57	.67
1/2″□	.250	2.00	.85
5/8″ϕ	.307	1.96	1.04
3/4″ϕ	.442	2.36	1.50
7/8″ϕ	.601	2.75	2.04
1″ϕ	.785	3.14	2.67
1″□	1.00	4.00	3.40
1 1/8″□	1.27	4.50	4.30
1 1/4″□	1.56	5.00	5.31

SLAB SCHEDULE FOR 1ST FLOOR

Designation				Bars					Dimension E out-to-out.							~ REMARKS ~
No. Req'd.	Mark	Concrete Size	Concrete Bar MK.	Type	Diam.	Number Per Joist	Number Total	Length	A	B	C	B	D	E	F	All hooks to be 90° bends. Cambers 45° on 1st fl. Cambers 30° all other fl.
6	1S-1	8+2 T.C.T.		st.	5/8"ϕ	1	112	18'-0"								
			0806	bt.	1"ϕ	1	112	22'-1"	2'-10"	11"	10'-0"	11"	6'-5"	8"	6"	Hook "A" end only
10	1S-2	8+2 T.C.T.		st.	5/8"ϕ	1	194	18'-0"								
			503	bt.	5/8"ϕ	1	194	22'-6"	5'-0"	11"	10'-0"	11"	5'-0"	8"		
	1S-3	8+2 T.C.T.		st.	3/8"ϕ	1	35	9'-5"								
			504	bt.	5/8"ϕ	1	35	10'-9"	1'-7"	11"	5'-1"	11"	1'-7"	8"	4"	Hook both ends
	1S-4	8+2 T.C.T.		st.	5/8"ϕ	1	3	11'-3"								
			505	bt.	5/8"ϕ	1	3	12'-4"	1'-10"	11"	6'-2"	11"	1'-10"	8"	4"	Hook both ends
	1S-5	4" solid		st.	3/8"ϕ		5	3'-10"								@12" c.c.
				st.	3/8"ϕ		9	5'-6"								do.
	1S-6	4" solid		st.	3/8"ϕ		6	3'-8"								3 bars each direction
	1S-7	4" solid		st.	3/8"ϕ		3	3'-6"								
2	1S-8	4" solid		st.	1/2"ϕ	1	7	10'-0"								
			506	bt.	5/8"ϕ	1	7	10'-10"	1'-6"	11"	5'-4"	11"	1'-6"	8"	4"	Hook both ends
1	1S-9	8+2 T.C.T.		st.	3/8"ϕ	1	7	4'-6"								In bottom
1	1S-10			st.	5/8"ϕ	1	6	14'-6"								
			604	bt.	3/4"ϕ	1	6	15'-0"	2'-6"	11"	7'-6"	11"	2'-6"	8"	4"	Hook both ends
	1S-11	8+2 T.C.T.		st.	5/8"ϕ	1	3	12'-8"								
			708	bt.	7/8"ϕ	1	3	13'-10"	2'-3"	11"	6'-10"	11"	2'-3"	8"	4"	Hook both ends
	1S-12	6" solid		st.	1/2"□		114	11'-3"								Camber 30° on bent rod 803
			803	bt.	1"□		114	12'-5"	2'-1"	9"	5'-9"	9"	2'-1"	3"	6"	Hook both ends
	1S-14	6" solid		st.	3/4"ϕ		60	14'-1"								
	1S-15	6" solid		st.	3/4"ϕ		103	13'-8"								
1	1S-16	6" solid		st.	3/4"ϕ		30	14'-7"								
	1S-17	6" solid		st.	3/4"ϕ		19	7'-3"								
1	1S-18	6" solid		st.	3/4"ϕ		16	21'-7"								
2	1S-20	8+2 T.C.T.		st.	5/8"ϕ		20	17'-1"								
			0807	bt.	1"ϕ		20	18'-6"	3'-1	11"	9'-6"	11"	3'-1"	8"	6"	

SLAB SCHEDULE FOR 2nd FLOOR

4	2S-1	6+2 T.C.T.		st.	5/8"ϕ	1	91	17'-7"								
			701	bt.	7/8"ϕ	1	91	21'-8"	2'-11"	1'-0"	10'-0"	1'-0"	6'-5"	6"	4"	Hook "A" end only
4	2S-2	6+2 T.C.T.		st.	5/8"ϕ	1	75	18'-0"								
			501	bt.	5/8"ϕ	1	75	23'-0"	5'-6"	1'-0"	10'-0"	1'-0"	5'-6"	6"		
3	2S-3	6+2 T.C.T.		st.	3/4"ϕ	1	27	18'-0"								
			0808	bt.	1"ϕ	1	24	26'-0"	6'-9"	1'-0"	10'-0"	1'-0"	6'-9"	6"		
	2S-4	6+2 T.C.T.		st.	3/4"ϕ	1	16	17'-7"								
			0802	bt.	1"ϕ	1	19	22'-2"	2'-11"	1'-0"	10'-0"	1'-0"	6'-9"	6"	6"	Hook "A" end only
	2S-5	6+2 T.C.T.		st.	3/4"ϕ	1	11	18'-0"								
			0809	bt.	1"ϕ	1	11	18'-8"	2'-10	1'-0"	10'-0"	1'-0"	2'-10"	6"	6"	Hook both ends
	2S-6	6+2 T.C.T.		st.	3/4"ϕ	1	8	15'-6"								
			804	bt.	1"□	1	8	16'-10"	2'-9"	1'-0"	8'-4"	1'-0"	2'-9	6"	6"	Hook both ends
	2S-7	6+2 T.C.T.		st.	1/2"ϕ	1	3	10'-6"								
			605	bt.	3/4"ϕ	1	3	13'-3"	1'-9"	1'-0"	5'-10"	1'-0"	3'-10"	6"	4"	Hook "A" end only
	2S-8	6+2 T.C.T.		st.	1/2"□	1	33	14'-5"								
			0810	bt.	1"ϕ	1	33	15'-4"	2'-4"	1'-0"	7'-8"	1'-0"	2'-4"	6"	6"	Hook both ends
	2S-9	6+2 T.C.T.		st.	5/8"ϕ	1	7	15'-1"								
			709	bt.	7/8"ϕ	1	7	18'-9"	2'-6"	1'-0"	8'-8"	1'-0"	5'-3"	6"	4"	Hook "A" end only
2	2S-10	3" solid		st.	3/8"ϕ		24	4'-0"								@12" c.c.
1	2S-11	6+2 T.C.T.		st.	3/4"ϕ	1	4	11'-2"								
			0811	bt.	1"ϕ	1	4	13'-6"	1'-8"	1'-0"	6'-2"	1'-0"	1'-8"	6"	6"	Hook both ends
2	2S-12	6+2 T.C.T.		st.	3/8"ϕ	1	28	9'-5"								
			606	bt.	3/4"ϕ	1	28	10'-7"	1'-5"	1'-0"	5'-1"	1'-0"	1'-5"	6"	4"	Hook both ends
1	2S-13	3" solid		st.	3/8"ϕ		10	3'-10"								@12" c.c.
1	2S-14	6+2 T.C.T.		st.	1/2"ϕ	1	8	13'-2"								
			710	bt.	7/8"ϕ	1	8	13'-10"	2'-2"	1'-0"	6'-10"	1'-0"	2'-2"	6"	4"	Hook both ends

BANK & OFFICE BLDG

SCHEDULE NO 1.

R. A. JEWETT

SLAB SCHEDULE FOR 3rd FLOOR

Designation				Bars					Dimension E out-to-out							REMARKS
No. Req'd.	Mark	Concrete Size	Bar MK.	Type	Diam.	Number Per Joist	Number Total	Length	A	B	C	B	D	E	F	All Hooks to be 90° bends. Cambers to be 30°
	3S-1	6+2 T.C.T.		st.	5/8"φ	1	110	17'-11"								
			701	bt.	7/8"φ	1	110	21'-8"	2'-11"	1'-0"	10'-0"	1'-0"	6'-5"	6"	4"	Hook "A" end only
	3S-2	6+2 T.C.T.		st.	5/8"φ	1	56	18'-0"								
			501	bt.	5/8"φ	1	56	23'-0"	5'-6"	1'-0"	10'-0"	1'-0"	5'-6"	6"		
	3S-3	6+2 T.C.T.		st.	3/4"φ	1	178	18'-0"								
			601	bt.	3/4"φ	1	178	24'-0"	6'-0"	1'-0"	10'-0"	1'-0"	6'-0"	6"		
	3S-4	6+2 T.C.T.		st.	3/8"φ	1	6	10'-0"								
			401	bt.	1/2"□	1	6	11'-0"	0'-7"	1'-0"	5'-1"	1'-0"	3'-0"	6"	4"	Hook "A" end only
	3S-5	6+2 T.C.T.		st.	3/8"φ	1	5	12'-6"								
			502	bt.	5/8"φ	1	5	15'-0"	3'-8"	1'-0"	6'-11"	1'-0"	2'-1"	6"	4"	Hook "D" end only
	3S-6	6+2 T.C.T.		st.	1/2"□	1	8	16'-9"								
			702	bt.	7/8"φ	1	8	17'-6"	2'-10"	1'-0"	9'-4"	1'-0"	2'-8"	6"	4"	Hook both ends
	3S-7	6+2 T.C.T.		st.	3/8"φ	1	8	11'-0"								
			402	bt.	1/2"□	1	8	11'-10"	1'-7"	1'-0"	6'-0"	1'-0"	1'-7"	6"	4"	Hook both ends
	3S-8	3" solid		st.	3/8"φ		12	4'-0"								@ 12" c.c.
	3S-9	3" solid		st.	1/2"φ		9	5'-6"								do.
	3S-10	6+2 T.C.T.		st.	5/8"φ	1	2	12'-9"								Adjoining flue at col. 43
			602	bt.	3/4"φ	1	2	13'-9"	2'-0"	1'-0"	7'-1"	1'-0"	2'-0"	6"	4"	Hook both ends
	3S-11	6+2 T.C.T.		st.	5/8"φ	1	7	18'-10"								
			0801	bt.	1"φ	1	7	20'-3"	3'-3"	1'-0"	10'-9"	1'-0"	3'-3"	6"	6"	Hook both ends
	3S-12	4" solid		st.	3/8"φ		10	4'-9"								@ 12" c.c.
	3S-13	do.		st.	3/8"φ		10	3'-9"								do.
	3S-14	do.		st.	3/8"φ		4	5'-6"								do. Parallel B342
				st.	3/8"φ		5	4'-5"								do. Parallel B354
	3S-15	do.		st.	3/8"φ		3	2'-6"								do.
	3S-16	do.		st.	3/8"φ		11	3'-10"								do.
	3S-17	do.		st.	3/8"φ		5	2'-0"								do.
	3S-18	6+2 T.C.T.		st.	3/8"φ	1	11	9'-0"								
			0401	bt.	1/2"φ	1	11	10'-5"	1'-3"	1'-0"	5'-3"	1'-0"	1'-3"	6"	4"	Hook both ends
	3S-19	6+2 T.C.T.		st.	5/8"φ	1	12	18'-0"								
			0802	bt.	1"φ	1	12	22'-2"	2'-11"	1'-0"	10'-0"	1'-0"	6'-9"	6"	6"	Hook "A" end only
	3S-20	6+2 T.C.T.		st.	5/8"φ	1	6	18'-0"								
			601	bt.	3/4"φ	1	6	24'-0"	6'-0"	1'-0"	10'-0"	1'-0"	6'-0"	6"		
		4" solid		st.	3/8"φ		2	4'-8"								Roof adjacent B334] one / Roof adjacent col. 32] each
		do.		st.	3/8"φ		2	7'-4"								Roof adjacent B332.

SLAB SCHEDULE FOR 4th FLOOR

No. Req'd.	Mark	Concrete Size	Bar MK.	Type	Diam.	Per Joist	Total	Length	A	B	C	B	D	E	F	Remarks
	4S-1	6+2 T.C.T.		st.	5/8"φ	1	108	17'-9"								
			701	bt.	7/8"φ	1	108	21'-8"	2'-11"	1'-0"	10'-0"	1'-0"	6'-5"	6"	4"	Hook "A" end only
	4S-2	6+2 T.C.T.		st.	5/8"φ	1	56	18'-0"								
			501	bt.	5/8"φ	1	56	23'-0"	5'-6"	1'-0"	10'-0"	1'-0"	5'-6"	6"		
	4S-3	6+2 T.C.T.		st.	3/4"φ	1	178	18'-0"								
			601	bt.	3/4"φ	1	178	24'-0"	6'-0"	1'-0"	10'-0"	1'-0"	6'-0"	6"		
	4S-4	6+2 T.C.T.		st.	3/8"φ	1	6	10'-0"								
			401	bt.	1/2"□	1	6	11'-0"	0'-7"	1'-0"	5'-1"	1'-0"	3'-0"	6"	4"	Hook "A" end only
	4S-5	6+2 T.C.T.		st.	3/8"φ	1	5	12'-6"								
			502	bt.	5/8"φ	1	5	15'-0"	3'-8"	1'-0"	6'-11"	1'-0"	2'-1"	6"	4"	Hook "D" end only
	4S-6	6+2 T.C.T.		st.	1/2"□	1	8	16'-9"								
			702	bt.	7/8"φ	1	8	17'-6"	2'-10"	1'-0"	9'-4"	1'-0"	2'-8"	6"	4"	Hook both ends
	4S-7	6+2 T.C.T.		st.	3/8"φ	1	8	11'-0"								
			402	bt.	1/2"□	1	8	11'-10"	1'-7"	1'-0"	6'-0"	1'-0"	1'-7"	6"	4"	Hook both ends
	4S-8	3" solid		st.	3/8"φ		12	4'-0"								@ 12" c.c.
	4S-9	3" solid		st.	1/2"φ		9	5'-6"								do.
	4S-10	6+2 T.C.T.		st.	5/8"φ	1	2	12'-9"								Adjoining flue at col. 43
			602	bt.	3/4"φ	1	2	13'-9"	2'-0"	1'-0"	7'-1"	1'-0"	2'-0"	6"	4"	Hook both ends
				st.	3/4"φ		2	4'-6"								Adjoining flue at col. 43.
			711	bt.	7/8"φ	1	2	20'-0"	3'-8"	1'-0"	10'-0"	1'-0"	3'-8"	6"	4"	Hook both ends

BANK & OFFICE BLDG.

SCHEDULE No 2

R. A. JEWETT

SLAB SCHEDULE FOR ROOF

Designation				Bars					Dimension E out-to-out							REMARKS
		Concrete				Number										All hooks to be 90° bends Cambers to be 30°
No. Req'd.	Mark	Size	Bar MK.	Type	Diam.	Per Joist	Total	Length	A	B	C	B	D	E	F	
	RS-1	6+2 T.C.T.		st.	7/8"φ	1	108	17'-11"								
			701	bt.	7/8"φ	1	108	21'-8"	2'-11"	1'-0"	10'-0"	1'-0"	6'-5"	6"	4"	Hook "A" end only
	RS-2	6+2 T.C.T.		st.	5/8"φ	1	173	18'-0"								
			501	bt.	5/8"φ	1	173	23'-0"	5'-6"	1'-0"	10'-0"	1'-0"	5'-6"	6"		
	RS-3	4" solid		st.	5/8"φ		38	14'-0"								@ 9" c.c.
	RS-4	do.		st.	3/8"φ		20	4'-7"								@ 12" c.c.
	RS-5	3" solid		st.	3/8"φ		24	3'-4"								do.
	RS-6	do.		st.	3/8"φ		8	3'-6"								do.
	RS-7	6+2 T.C.T.		st.	3/8"φ	1	8	10'-9"								
			0402	bt.	1/2"φ	1	8	12'-0"	1'-8"	1'-0"	6'-0"	1'-0"	1'-8"	6"	4"	Hook both ends
	RS-8	6+2 T.C.T.		st.	1/2"□	1	14	12'-9"								
			712	bt.	7/8"φ	1	14	16'-9"	4'-9"	1'-0"	6'-10"	1'-0"	2'-6"	6"	4"	Hook "A" end only
	RS-9	6+2 T.C.T.		st.	1/2"□	1	8	13'-0"								
			713	bt.	7/8"φ	1	8	14'-6"	2'-6"	1'-0"	6'-10"	1'-0"	2'-6"	6"	4"	Hook both ends
	RS-10	4" solid		st.	3/8"φ		8	5'-6"								@ 12" c.c.
	RS-11	do.		st.	3/4"φ		30	7'-10"								do.
	RS-12	3" solid		st.	3/8"φ		8	4'-3"								
	RS-13	4" solid		st.	5/8"φ		4	6'-0"								@ 9" c.c.
	RS-14	6+2 T.C.T.		st.	5/8"φ	1	2	12'-9"								Adjoining flue at col. 43.
			602	bt.	3/4"φ	1	2	13'-9"	2'-0"	1'-0"	7'-1"	1'-0"	2'-0"	6"	4"	Hook both ends
	RS-15	6+2 T.C.T.		st.	5/8"φ	1	2	19'-0"								
			711	bt.	7/8"φ	1	2	20'-0"	3'-8"	1'-0"	10'-0"	1'-0"	3'-8"	6"	4"	Hook both ends

SLAB SCHEDULE FOR PENT HOUSE ROOF

	PRS-1	8+2 T.C.T.		st.	1/2"φ	1	37	14'-3"								
			607	bt.	3/4"φ	1	37	17'-6"	4'-5"	1'-4"	7'-8"	1'-4"	2'-5"	8"	4"	Hook "D" end only
	PRS-2	6+2 T.C.T.		st.	3/8"φ	1	37	18'-5"								Extends through PRS-3
			0403	bt.	1/2"φ	1	37	21'-7"	2'-0"	1'-0"	6'-0"	1'-0"	11'-3"	6"	4"	do.
																Hook "A" end only

BANK & OFFICE BLDG.

SCHEDULE No. 3

R. A. JEWETT

BEAM SCHEDULE FOR FIRST FLOOR

Bars — bent bar marks same as Beam mark

Designation No. Req'd	Mark	Concrete Size	Concrete Tee	Bars Type	Diam.	Number Per	Number Total	Length	A	B	C	B	D	E	F	Remarks Dimension E out-to-out	Stirrups Number Per	Stirrups Number Total	MK.	Diam	Length	a	b	Spacing	Remarks First stirrup placed in plane of face of support
2	B101	17x30		st.	1"ϕ	1	2	24'-7"									16	32	0432	½"ϕ	6'-2"	2'-2"	1'-2"	6/8/8/8/10/10/12/	
				bt.	1"□	1	2	29'-10"	4'-7"	3'-1"	11'-1"	3'-1"	7'-6"	2'-2"	6"	Hook "A" end only									
				st.	1"□	1	2	5'-6"								In top over cols. 12 & 39									
1	B102	17x30		st.	1"□	1	1	20'-4"								In top									
				st.	1"ϕ	1	1	10'-0"								In bottom									
14	B100	12x16		st.	1"□	2	28	16'-0"									10	140	0428	½"ϕ	3'-9"	1'-0"	1'-1"	6/6/8/8/	
				bt.	1"□	2	28	17'-8"	2'-0"	1'-5"	9'-10"	1'-5"	2'-0"	1'-0"	6"	Hook both ends									
3	B104	12x26		st.	7/8"ϕ	1	3	9'-9"																	
				bt.	1"□	1	3	12'-9"	1'-3"	2'-7"	3'-7"	2'-7"	1'-3"	1'-10"	6"	Hook both ends									
1	B105	14x25		st.	1"□	2	2	16'-0"									12	12	0433	½"ϕ	5'-1"	1'-9"	11"	6/6/8/8/10/	
				bt.	1"□	2	2	23'-11"	2'-2"	2'-6"	7'-6"	2'-6"	8'-9"	1'-9"	6"	Hook "A" end only									
9	B108	12x20		st.	7/8"ϕ	1	9	18'-0"									12	108	0434	½"ϕ	4'-1"	1'-4"	9"	6/6/6/8/8/	
				bt.	1⅛"□	1	9	29'-0"	7'-4"	1'-11"	10'-6"	1'-11"	7'-4"	1'-4"											
				st.	1⅛"□	1	2	8'-3"								In top over cols. 9 & 11 only									
2	B109	16x20		st.	1"ϕ	2	4	15'-0"									14	28	0435	½"ϕ	4'-3"	1'-4"	11"	6/6/6/8/8/10	
				bt.	1"□	2	4	21'-11"	6'-6'	1'-11"	7'-4"	1'-11"	3'-9"	1'-4"	6"	Hook "D" end only									
11	B111	16x30		st.	1¼"□	1	11	16'-0"									10	110	0436	½"ϕ	6'-1"	2'-2"	1'-1"	8/8/8/10/	
				bt.	1"□	2	22	23'-7"	2'-2"	3'-1"	7'-6"	3'-1"	7'-3"	2'-2"	6"	Hook "A" end only									
5	B112	18x36		st.	1¼"	2	10	25'-0"									22	110	0437	½"ϕ	7'-9"	2'-10"	1'-3"	4/6/6/6/8/8/10/10/12	
				bt.	1¼"	2	10	35'-3"	7'-3"	4'-0"	12'-9"	4'-0"	7'-3"	2'-10"											
4	B113	10x24		st.	1"□	1	4	16'-0"																	
				bt.	1¼"□	1	4	18'-8"	2'-3"	2'-10"	7'-6"	2'-10"	2'-3"	2'-0"	6"	Hook both ends									
1	B114	17x30		st.	1⅛"□	2	2	25'-0"									16	16	0432	½"ϕ	6'-2"	2'-2"	1'-2"	6/6/6/8/8/10/10/	
				bt.	1¼"□	2	2	28'-2"	4'-8"	3'-0"	11'-10"	3'-0"	4'-8"	2'-2"	6"	Hook both ends									
				st.	1"□	4	4	9'-0"								In top over cols. 24 & 25									
1	B115	12x20		st.	1"□	1	1	15'-6"									10	10	0438	½"ϕ	4'-1"	1'-4"	9"	6/6/8/8/	
				bt.	1⅛"□	2	2	22'-9"	2'-2"	1'-11"	9'-2"	1'-11"	7'-1"	1'-4"	6"	Hook "A" end only									
1	B116	12x20		st.	1"□	1	1	12'-6"									8	8	0438	½"ϕ	4'-1"	1'-4"	9"	6/8/8/	
				bt.	1⅛"□	2	2	19'-9"	2'-2"	1'-11"	6'-2"	1'-11"	7'-1"	1'-4"	6"	do.									
1	B117	12x24		st.	1¼"□	1	1	20'-0"								In top thru B118	8	8	302	3/8"ϕ	5'-1"	1'-10"	9"	@6"	
1	B118	12x24		st.	5/8"ϕ	1	1	16'-0"								In bottom thru B117									
2	B119	10x20		st.	7/8"ϕ	2	4	7'-10"								Top & bottom									
1	B120	10x20		st.	7/8"ϕ	1	1	11'-4"																	
				bt.	1"□	1	1	13'-6"	1'-8"	1'-11"	5'-4"	1'-11"	1'-8"	1'-4"	6"										
1	B121	6x12		st.	5/8"ϕ	2	2	7'-0"								Top & bottom									
1	B122	6x14		st.	7/8"ϕ	1	3	11'-6"																	
				bt.	1"ϕ	1	3	13'-2"	2'-0"	1'-2"	5'-10"	1'-2"	2'-0"	10"	6"	Hook both ends									
1	B123	6x20		st.	3/4"ϕ	2	2	10'-0"								Top & bottom									
1	B125	8x20		st.	5/8"ϕ	2	2	7'-9"								do.									
1	B126	8x16		st.	7/8"ϕ	2	2	14'-3"								do.									
1	B127	10x24		st.	1"ϕ	1	1	17'-0"									10	10	0439	½"ϕ	4'-7"	1'-8"	7"	@8"	
				bt.	1"□	1	1	23'-5"	2'-7"	2'-4"	9'-4"	2'-4"	6'-4"	1'-8"	6"	Hook "A" end only									
1	B128	10x24		st.	3/4"ϕ	1	1	15'-0"																	
				bt.	1"□	1	1	25'-9"	7'-0"	2'-4"	7'-1"	2'-4"	7'-0"	1'-8"											
1	B129	8x30		st.	1"ϕ	1	1	18'-0"									14	14	0404	½"ϕ	5'-5"	2'-2"	5"	6/6/6/8/8/10/	
				bt.	1"□	1	1	24'-3"	2'-5"	3'-1"	8'-10"	3'-1"	6'-7"	2'-2"	6"	Hook "A" end only									
				st.	1"□	1	1	6'-0"								In top over col. 34.									
1	B130	8x25		st.	7/8"ϕ	1	1	11'-6"									10	10	0440	½"ϕ	4'-7"	1'-9"	5"	6/6/6/8/	
				bt.	1⅛"□	1	1	14'-8"	1'-4"	2'-6"	4'-8"	2'-6"	4'-2"	1'-9"	6"	Hook "A" end only									
1	B131	8x25		st.	7/8"ϕ	1	1	9'-9"																	
				bt.	1"ϕ	1	1	15'-7"	1'-3"	2'-6"	3'-7"	2'-6"	4'-3"	1'-9"	6"	do.									
3	B132	8x36		st.	½"□	1	3	15'-11"									10	30	0432	½"ϕ	4'-9"	1'-10"	5"	6/6/8/10/	
				bt.	1"□	1	3	21'-10"	6'-4"	2'-7"	7'-1"	2'-7"	2'-7"	1'-10"	6"	Hook "D" end only									
1	B133	8x36		st.	½"□	1	1	15'-11"									10	10	0432	½"ϕ	4'-9"	1'-10"	5"	6/6/8/10/	
				bt.	7/8"ϕ	1	1	25'-7"	6'-4"	2'-7"	7'-1"	2'-7"	6'-4"	1'-10"											
1	B134	8x25		st.	3/4"ϕ	1	1	11'-0"									8	8	0440	½"ϕ	4'-7"	1'-9"	5"	@6"	
				bt.	7/8"ϕ	1	1	17'-1"	1'-3"	2'-6"	5'-3"	2'-6"	5'-3"	1'-9"	4"	Hook "A" end only									
2	B135	14x25		st.	3/4"ϕ	1	2	18'-0"																	
				bt.	1"ϕ	1	2	23'-9"	2'-8"	2'-6"	9'-3"	2'-6"	6'-4"	1'-9"	6"	do.									
1	B136	14x25		st.	3/4"ϕ	1	1	18'-0"																	
				bt.	3/4"ϕ	1	1	21'-8"	6'-4"	2'-6"	9'-3"	2'-6"	6'-4"	1'-9"											
1	B137	12x18		st.	1"□	1	1	12'-10"																	
				bt.	1¼"□	1	1	14'-10"	2'-1"	1'-8"	6'-4"	1'-8"	2'-1"	1'-2"	6"	Hook both ends									
1	B138	17x15		st.	3/8"ϕ	2	2	22'-9"								In top									

BANK & OFFICE BLDG.

R. A. JEWETT

SCHEDULE No. 4

BEAM SCHEDULE FOR SECOND FLOOR

Designation			Bars - bent bar marks same as Beam marks													Stirrups								
No. Reqd.	Mark	Concrete Size	Type	Diam	Number Per	Number Total	Length	A	B	C	B	D	E	F	Remarks Dimension E out-to-out	Number Per	Number Total	MK.	Diam.	Length	a	b	Spacing each end	Remarks First stirrup in plane of face of support
2	B201	12x30	st.	1"φ	1	2	23'-2"									12	24	0422	1/2"φ	5'-9"	2'-2"	9"	@9"	
			bt.	1"□	1	2	29'-10"	4'-7"	3'-1"	11'-1"	3'-1"	7'-6"	2'-2"	6"	Hook "A" end only									
			st.	1¼"□	1	2	5'-6"								In top over cols. 12 & 39									
1	B202	12x21	st.	1"□	1	1	10'-9"								In top.									
			st.	1¼"□	1	1	10'-0"								In bottom									
2	B203	15x28	st.	1"φ	2	4	23'-10"									18	36	0405	1/2"φ	5'-8"	2'-0"	1'-0"	8/8/8/8/10/10/10/10/	
			bt.	1¼"□	2	4	29'-4"	4'-7"	2'-10"	11'-1"	2'-10"	7'-6"	2'-0"	6"	Hook "A" end only									
			st.	1"□	2	4	5'-6"								In top over cols. 11 & 40									
1	B204	15x28	st.	1"□	1	1	20'-4"								In top.									
			st.	1/2"φ	2	2	10'-0"								In bottom									
2	B205	12x26	st.	1"□	1	2	15'-10"									8	16	0406	1/2"φ	4'-3"	1'-10"	9"	@10"	
			bt.	1⅛"□	1	2	24'-0"	3'-0"	2'-7"	7'-1"	2'-7"	8'-3"	1'-10"	6"	Hook "A" end only.									
			st.	1"□	1	2	5'-0"								In top over cols. 10 & 41									
2	B206	12x26	st.	1"□	1	2	22'-3"									14	28	0406	1/2"φ	4'-3"	1'-10"	9"	@10"	
			bt.	1⅛"□	1	2	31'-2"	7'-9"	2'-7"	10'-6"	2'-7"	7'-9"	1'-10"											
			st.	1⅛"□	2	2	8'-3"								In top over cols. 15 & 36									
2	B207	12x26	st.	1"□	1	2	19'-0"									6	12	0406	1/2"φ	4'-3"	1'-10"	9"	@10"	
			bt.	1⅛"□	1	2	25'-7"	7'-9"	2'-7"	8'-6"	2'-7"	3'-8"	1'-4"	6"	Hook "D" end only									
			st.	1/2"□	1	2	5'-0"								In top over cols. 41 & 56									
2	B209	14x20	st.	1"φ	1	2	15'-10"									11	22	0417	1/2"φ	4'-3"	1'-4"	11"	6/6/6/6/8/8/8/8/8/8/	
			bt.	1¼"□	1	2	18'-11"	3'-6"	1'-11"	7'-1"	1'-11"	3'-6"	1'-4"	6"	Hook both ends									
1	B210	16x18	st.	1¼"□	2	2	15'-10"									14	14	0423	1/2"φ	4'-1"	1'-2"	1'-1"	6/6/6/8/8/8/	
			bt.	1¼"□	2	2	21'-9"	3'-4"	1'-8"	7'-1"	1'-8"	7'-6"	1'-2"	6"	Hook "A" end only									
			st.	1"□	2	2	5'-0"								In top over col. 6.									
1	B211	16x18	st.	1"□	2	2	25'-6"									6	6	0424	1/2"φ	4'-1"	1'-2"	1'-1"	@6"	
			bt.	1¼"□	2	2	35'-0"	9'-10"	1'-8"	12'-10"	1'-8"	9'-10"	1'-2"											
1	B212	12x24	st.	1¼"□	1	1	20'-0"								In top thru B213	8	8	302	3/8"φ	5'-1"	1'-10"	9"	@6"	
1	B213	12x24	st.	3/8"φ	1	1	16'-0"								In bottom thru B212									
3	B215	16x18	st.	1"□	2	6	16'-6"									14	42	0423	1/2"φ	4'-1"	1'-2"	1'-1"	6/6/6/6/8/8/	
			bt.	1¼"□	2	6	18'-4"	3'-9"	1'-8"	7'-1"	1'-8"	3'-9"	1'-2"	6"	Hook both ends									
			st.	1"□	2	6	16'-6"								In top									
2	B216	16x16	st.	1"□	2	4	15'-10"									14	28	0423	1/2"φ	4'-1"	1'-2"	1'-1"	6/6/6/6/8/8/	
			bt.	1¼"□	2	4	24'-6"	3'-9"	1'-8"	7'-1"	1'-8"	9'-10"	1'-2"	6"	Hook "A" end only									
			st.	1"□	2	4	6'-0"								In top over col. 2 & 43									
1	B217	16x18	st.	1¼"□	2	2	25'-6"									18	18	0424	1/2"φ	4'-1"	1'-2"	1'-1"	6/6/6/6/6/8/8/8/	
			bt.	1¼"□	2	2	35'-0"	9'-10"	1'-8"	12'-10"	1'-8"	9'-10"	1'-2"											
1	B218	5½x19	st.	1"□	1	1	15'-8"																	
			bt.	1¼"□	1	1	17'-8"	3'-1"	1'-9"	7'-0"	1'-9"	3'-1"	1'-3"	6"	Hook both ends									
2	B219	12x16	st.	1"□	1	2	18'-6"									20	40	0425	1/2"φ	3'-9"	1'-0"	1'-1"	6/6/6/6/6/6/8/8/8/	
			bt.	1¼"□	2	4	20'-4"	3'-8"	1'-5"	9'-0"	1'-5"	3'-8"	1'-0"	6"	Hook both ends									
2	B220	12x30	st.	1⅛"□	2	4	21'-0"								Extends along top B221	20	40	0426	1/2"φ	7'-1"	2'-6"	9"	6/6/8/8/8/8/10/10/10/	B220
			st.	3/4"φ	2	4	16'-6"								In top	3	6	0427	1/2"φ	7'-9"	3'-2	9"	9/9/9 fixed end B221	
2	B221	12x44	st.	1¼"□	1	2	10'-3"								In top	4	8	0428	1/2"φ	6'-9"	2'-8	9"	9/9/9/9 free end B221	
1	B222	12x16	st.	1"□	1	1	18'-4"																	
			bt.	1"□	2	2	19'-4"	3'-8"	1'-5"	9'-0"	1'-5"	3'-8"	1'-0"											
2	B223	12x30	st.	3/4"φ	1	2	17'-9"																	
			bt.	1"φ	1	2	24'-11"	2'-6"	3'-1"	8'-6"	3'-1"	2'-6"	2'-2"	6"	Hook both ends									
4	B224	10x16	st.	5/8"φ	1	4	18'-0"																	
			bt.	1"φ	1	4	23'-4"	3'-6"	1'-5"	9'-0"	1'-5"	7'-6"	1'-0"	6"	Hook "A" end only									
4	B225	10x16	st.	5/8"φ	1	4	18'-0"																	
			bt.	3/4"φ	1	4	26'-4"	7'-3"	1'-5"	9'-0"	1'-5"	7'-3"	1'-0"											
1	B226	12x16	st.	7/8"φ	1	1	18'-0"									10	10	0428	1/2"φ	3'-9"	1'-0"	1'-1"	@6"	
			bt.	1⅛"□	1	1	23'-4"	3'-6"	1'-5"	9'-0"	1'-5"	7'-6"	1'-0"	6"	Hook "A" end only									
2	B227	12x16	st.	7/8"φ	1	2	18'-0"									10	20	0428	1/2"φ	3'-9"	1'-0"	1'-1"	@6"	
			bt.	1"φ	1	2	26'-4"	7'-3"	1'-5"	9'-0"	1'-5"	7'-3"	1'-0"											
3	B228	12x16	st.	5/8"φ	1	3	18'-0"																	
			bt.	5/8"φ	1	3	26'-4"	7'-3"	1'-5"	9'-0"	1'-5"	7'-3"	1'-0"											
2	B229	8x20	st.	7/8"φ	1	2	17'-8"																	
			bt.	1"□	1	2	23'-0"	3'-5"	1'-11"	8'-6"	1'-11"	7'-1"	1'-4"	6"	Hook "A" end only									
4	B230	8x16	st.	1/2"□	1	4	18'-0"																	
			bt.	5/8"φ	1	4	25'-4"	7'-0"	1'-5"	8'-6"	1'-5"	7'-0"	1'-0"											
5	B231	8x20	st.	5/8"φ	1	5	18'-0"																	
			bt.	3/4"φ	1	5	26'-2"	7'-1"	1'-11"	8'-6"	1'-11"	7'-1"	1'-4"											
1	B234	10x28	st.	7/8"φ	1	1	19'-0"								Extends thru B232	8	8	0429	1/2"φ	5'-3"	2'-0"	7"	6/6/8/	
			bt.	1"□	1	1	24'-6"	5'-6"	2'-10"	7'-10"	2'-10"	5'-6"	2'-0"											
1	B235	8x28	st.	7/8"φ	1	1	22'-8"								Extends thru B233	8	8	0430	1/2"φ	5'-1"	2'-0"	5"	8/8/8/	
			bt.	1"□	1	1	28'-0"	7'-4"	2'-10"	8'-4"	2'-10"	7'-4"	2'-0"											
1	B236	12x18	st.	1"□	1	1	12'-10"																	
			bt.	1¼"□	1	1	14'-10"	2'-1"	1'-8"	6'-4"	1'-8"	2'-1"	1'-2"	6"	Hook both ends									
1	B237	10x20	st.	1/2"φ	1	1	18'-10"								Extends thru B247									
			st.	1"□	1	1	12'-0"								In top									
1	B238	10x22	st.	3/4"φ	1	1	20'-6"								["D" end thru B250	10	10	0431	1/2"φ	4'-3"	1'-6"	7"	6/8/8/10/	
			bt.	1⅛"□	1	1	30'-3"	3'-3"	2'-1"	11'-0"	2'-1"	11'-4"	1'-6"	6"	Hook "A" end only]									
3	B239	9x20	st.	3/4"φ	1	3	11'-4"																	
			bt.	1¼"□	1	3	12'-2"	1'-2"	1'-11"	5'-2"	1'-11"	1'-2"	1'-4"	6"	Hook both ends									
1	B240	6x12	st.	3/4"φ	2	2	7'-4"								Top & bottom									
1	B241	6x14	st.	3/4"φ	1	1	10'-6"																	
			bt.	1"φ	1	1	11'-4"	1'-9"	1'-2"	5'-4"	1'-2"	1'-9"	10"											
2	B242	8x36	st.	1/2"□	1	2	15'-11"									10	10	0432	1/2"φ	4'-9"	1'-10"	5"	6/6/8/10/	
			bt.	1"□	1	2	21'-10"	6'-4"	2'-7"	7'-1"	2'-7"	2'-7"	1'-0"	6"	Hook "D" end only									
1	B243	12x16	st.	7/8"φ	1	1	13'-3"									14	14	0428	1/2"φ	3'-9"	1'-0"	1'-1"	4/4/4/6/6/6/	
			bt.	1¼"□	1	1	19'-8"	2'-9"	1'-5"	6'-9"	1'-5"	6'-10"	1'-0"	6"	Hook "A" end only									
1	B244	8x30	st.	3/4"φ	1	1	15'-6"																	
			bt.	1⅛"□	1	1	26'-10"	6'-8"	3'-1"	7'-4"	3'-1"	6'-8"	2'-2"											
1	B245	8x30	st.	3/4"φ	1	1	15'-11"																	
			bt.	1⅛"□	1	1	23'-6"	6'-8"	3'-1"	7'-4"	3'-1"	2'-10"	2'-2"	6"	Hook "D" end only									
			st.	1"□	1	1	5'-3"								In top over col. 47									
1	B246	10x22	st.	1/2"φ	1	1	10'-6"																	
			bt.	1"□	1	1	12'-8"	1'-1"	2'-1"	5'-4"	2'-1"	1'-1"	1'-6"	6"	Hook both ends									
1	B247	10x22	bt.	1⅛"□	1	1	16'-6"	5'-6"	2'-1"	5'-2"	2'-1"	1'-2"	1'-6"	6"	Hook "D" end only									
1	B248	6x10	st.	1/2"φ	1	1	12'-4"																	
			bt.	3/4"φ	1	1	12'-10"	2'-10"	9"	5'-8"	9"	2'-10"	6"											
1	B249	12x16	st.	5/8"φ	1	1	18'-0"																	
			bt.	7/8"φ	1	1	23'-1"	3'-6"	1'-5"	9'-0"	1'-5"	7'-3"	1'-0"	6"	Hook "D" end only									
1	B250	8x20	st.	1/2"φ	1	1	8'-0"								In bottom									

BANK & OFFICE BLDG.

SCHEDULE No. 5

R.A. JEWETT

BEAM SCHEDULE FOR THIRD FLOOR

Designation		Concrete		Bars - bent bar marks same as beam mark												Remarks	Stirrups								Remarks
No. Req'd	Mark	Size	Tee	Type	Diam.	Number Per	Number Total	Length	A	B	C	B	D	E	F	Dimension E out-to-out	Number Per	Number Total	MK.	Diam.	Length	a	b	Spacing each end	First stirrup placed in plane of face of support.
2	B301	11x50		st.	7/8"φ	1	2	23'-2"																	
				bt.	1¼"□	1	2	24'-8"	3'-0"	5'-5"	4'-10"	5'-5"	5'-6"	3'-10"	6"	Hook "A" end only.									
1	B302	11x53		st.	1"φ	1	1	20'-4"								In top									
				st.	1"φ	1	1	10'-0"								In bottom									
2	B303	15x28		st.	1"φ	2	4	23'-10"									18	36	0405	½"φ	5'-8"	2'-0"	1'-0"	8/8/8/8/10/10/10/10/	
				bt.	1¼"□	2	4	29'-4	4'-7"	2'-10"	11'-1"	2'-10"	7'-6"	2'-0"	6"	Hook "A" end only									
				st.	1"□	2	4	5'-6"								In top over cols. 11 & 40.									
1	B304	15x28		st.	1"□	1	1	20'-4"								In top									
				st.	½"φ	2	2	10'-0"								In bottom									
1	B305	12x26		st.	1"□	1	1	15'-10"									8	8	0406	½"φ	4'-3"	1'-10"	9"	@ 10"	
				bt.	1⅛"□	1	1	24'-0"	3'-0"	2'-7"	7'-1"	2'-7"	8'-3"	1'-10"	6"	Hook "A" end only									
				st.	1"□	1	1	4'-0"								In top over col. 10.									
1	B306	12x26		st.	1"□	1	1	22'-3"									14	14	0406	½"φ	4'-3"	1'-10"	9"	@ 10"	
				bt.	1⅛"□	1	1	31'-2"	7'-9"	2'-7"	10'-6"	2'-7"	7'-9"	1'-10"											
				st.	1⅛"□	2	2	8'-3"								In top over cols. 15 & 36									
1	B307	12x26		st.	1"□	1	1	19'-0"									6	6	0407	½"φ	4'-3"	1'-10"	9"	@ 10"	
				bt.	1⅛"□	1	1	25'-7"	7'-9"	2'-7"	8'-6"	2'-7"	3'-8"	1'-10"	6"	Hook "D" end only									
				st.	½"□	1	1	5'-0"								In top over col. 41									
1	B308	14x27		st.	¾"φ	1	1	15'-6"									8	8	0408	½"φ	5'-5"	1'-11"	11"	@ 10"	
				bt.	1⅛"□	1	1	24'-3"	3'-0"	2'-8"	7'-2"	2'-8"	8'-3"	1'-11"	6"	Hook "A" end only									
				st.	1"□	1	1	4'-0"								In top over col. 9									
1	B309	14x27		st.	¾"φ	1	1	22'-6"									9	9	0408	½"φ	5'-5"	1'-11"	11"	8/8/8/8/10/10/10/10/	
				bt.	1⅛"□	1	1	28'-11"	7'-9"	2'-8"	10'-6"	2'-8"	4'-10"	1'-11"	6"	Hook "D" end only									
				st.	1¼"□	2	2	5'-0"								In top over col. 35									
2	B310	14x20		st.	1"φ	1	2	15'-10"									11	22	0417	½"φ	4'-3"	1'-4"	11"	6/6/6/6/8/8/8/8/8/8/	
				bt.	1¼"□	1	2	23'-8"	3'-6"	1'-11"	7'-1"	1'-11"	8'-9"	1'-4"	6"	Hook "A" end only									
2	B311	14x20		st.	1"φ	1	2	14'-0"									8	16	0417	½"φ	4'-3"	1'-4"	11"	6/6/6/8/8/8/8/	
				bt.	1¼"□	1	2	20'-0"	7'-0"	1'-11"	6'-5"	1'-11"	2'-3"	1'-4"	6"	Hook "D" end only									
1	B314	8x14		st.	½"□	1	1	9'-3"																	
				bt.	1⅛"□	1	1	11'-4"	1'-10"	1'-2	4'-4"	1'-2"	1'-10"	10"	6"	Hook both ends									
1	B315	10x20		st.	¾"φ	1	1	10'-0"																	
				bt.	1"φ	1	1	15'-11"	1'-6"	1'-11"	4'-4"	1'-11"	5'-7"	1'-4"	6"	Hook "A" end only									
1	B316	10x20		st.	¾"φ	1	1	18'-0"									10	10	301	⅜"φ	3'-11"	1'-4"	7"	@ 8"	
				bt.	1"□	1	1	24'-10"	7'-8"	1'-11"	8'-6"	1'-11"	4'-4"	1'-4"	6"	Hook "D" and only									
				st.	1⅛"□	1	1	4'-6"								In top over col. 36									
2	B317	12x18		st.	7/8"φ	1	2	18'-3"																	
				bt.	1¼"□	1	2	24'-10"	7'-10"	1'-8"	8'-6"	1'-8"	4'-8"	1'-2"	6"	Hook "D" end only									
1	B318	12x18		st.	7/8"φ	1	1	18'-0"																	
				bt.	1"□	1	1	25-10"	7'-0"	1'-8"	8'-6"	1'-8"	7'-0"	1'-2"											
5	B319	16x34		st.	½"φ	1	5	15'-10"									6	30	0409	½"φ	6'-8"	2'-6"	1'-0"	@ 14"	
				bt.	1"□	2	10	24'-10"	2'-7"	3'-6"	7'-1"	3'-6"	7'-8"	2'-6"	6"	Hook "A" and only									
3	B320	15x34		st.	1"φ	2	6	25'-6"									20	60	0407	½"φ	6'-8"	2'-6"	1'-0"	6/6/6/8/8/10/10/10/10/	
				bt.	1⅛"□	2	6	34'-6"	7'-10"	3'-6"	11'-10"	3'-6"	7'-10"	2'-6"											
1	B321	15x34		st.	1⅛"□	2	2	20'-0"								In top extends thru B348	12	12	0410	½"φ	6'-8"	2'-6"	1'-0"	6/6/8/8/8/	
2	B323	12x50		st.	7/8"φ	1	2	15'-6"									6	12	0418	½"φ	9'-1"	3'-10"	9"	@ 16"	
				bt.	¾"φ	1	2	25'-10"	2'-3"	5'-5"	3'-5"	5'-5"	9'-0"	3'-10"	4"	Hook "A" end only									
1	B324	12x30		st.	1"φ	1	1	25'-6"									10	10	0419	½"φ	5'-9"	2'-2"	9"	@ 12"	
				bt.	1¼"□	1	1	32'-10"	7'-6"	3'-0"	11'-10"	3'-0"	7'-6"	2'-2"											
2	B325	11x50		st.	¾"φ	1	2	17'-6"																	
				bt.	¾"φ	1	2	25'-10"	2'-6"	5'-5"	5'-1"	5'-5"	7'-1"	3'-10"	4"	Hook "A" end only									
9	B326	8x26		st.	¾"φ	1	9	18'-0"																	
				bt.	⅝"φ	1	9	29'-3"	7'-1"	3'-2"	8'-9"	3'-2"	7'-1"	1'-3"											
1	B327	6x10		st.	½"φ	1	1	12'-4"																	
				bt.	¾"φ	1	1	13'-6"	2'-10"	9"	5'-8"	9"	2'-10"	6"	4"	Hook both ends									
1	B328	9x20		st.	½"φ	1	1	18'-10"								Extends thru B329									
				st.	1"□	1	1	12'-0"								In top									
1	B329	9x20		bt.	1"□	1	1	14'-9"	4'-1"	1'-11"	5'-2"	1'-11"	1'-2"	1'-4"	6"	Hook "D" end only									
1	B330	9x20		st.	¾"φ	1	1	11'-4"																	
				bt.	1¼"□	1	1	12'-2"	1'-2"	1'-11"	5'-2"	1'-11"	1'-2"	1'-4"	6"	Hook both ends									
				st.	1¼"□	1	1	11'-4"								In top									
2	B331	9x20		st.	1"φ	1	2	11'-4"									10	20	0413	½"φ	3'-10"	1'-4"	6"	@ 8"	
				bt.	1"□	1	2	12'-2"	1'-2"	1'-11"	5'-2"	1'-11"	1'-2"	1'-4"	6"	Hook both ends									
				st.	1"□	1	2	11'-4"								In top									
1	B332	11x19		st.	1"□	1	1	16'-7"									8	8	0420	½"φ	4'-1"	1'-3"	1'-0"	@ 6"	
				bt.	1"□	1	1	22'-2"	3'-8"	1'-9"	7'-9"	1'-9"	6'-9"	1'-3"	6"	Hook "A" end only									
				st.	¾"φ	1	1	3'-6"								In top over col. 31.									
1	B333	14x30		st.	1"□	1	1	16'-0"																	
				bt.	1"□	2	2	25'-4"	5'-10"	3'-1"	7'-6"	3'-1"	5'-10"	2'-2"			12	12	0441	½"φ	5'-11"	2'-2"	11"	8/8/8/10/10/	
				st.	1⅛"□	2	2	8'-4"								In top over cols. 32 & 33									
1	B334	8x30		st.	1"□	1	1	18'-3"																	
				bt.	1⅛"□	1	1	23'-8"	5'-8"	3'-1"	8'-4"	3'-1"	3'-0"	2'-2"	6"	Hook "D" end only									
				st.	1¼"□	1	1	5'-0"								In top over col. 34									
1	B335	8x44		st.	7/8"φ	2	2	15'-11"									8	8	0416	½"φ	7'-9"	3'-4"	5"	@ 14"	
				bt.	1¼"□	1	1	25'-8"	2'-4"	4'-8"	6'-0"	4'-8"	7'-6"	3'-4"	6"	Hook "A" end only									
				st.	1⅛"□	1	1	5'-0"								In top over col. 50									
1	B336	8x30		st.	½"□	1	1	15'-11"									10	10	0417	½"φ	5'-5"	2'-2"	5"	@ 12"	
				bt.	1⅛"□	1	1	24'-10"	8'-0"	3'-1"	7'-4"	3'-1"	2'-10"	2'-2"	6"	Hook "D" end only									
2	B337	8x24		st.	7/8"φ	1	2	15'-11"									18	36	0421	½"φ	3'-9"	1'-8"	5"	@ 9"	
				bt.	1⅛"□	1	2	22'-6"	7'-0"	2'-4"	7'-4"	2'-4"	3'-0"	1'-8"	6"	do.									
1	B339	9x20		st.	7/8"φ	2	2	7'-8"								Top & bottom									
2	B340	8x16		st.	⅜"φ	1	2	11'-0"																	
				bt.	½"φ	1	2	11'-10"	1'-9"	1'-5"	5'-6"	1'-5"	1'-7"	1'-0"											
2	B341	8x16		st.	1"□	1	2	19'-0"																	
				bt.	1¼"□	1	2	20'-10"	4'-0"	1'-5"	9'-0"	1'-5"	4'-0"	1'-0"	6"	Hook both ends									
9	B342	8x16		st.	½"φ	1	9	9'-8"																	
				bt.	1"φ	1	9	10'-6"	1'-8"	1'-5"	4'-4"	1'-5"	1'-8"	1'-0"											
5	B343	8x16		st.	⅜"φ	2	10	4'-4"								Top & bottom									
1	B344	8x16		st.	⅜"φ	1	1	11'-6"																	
				bt.	7/8"φ	1	1	12'-4"	1'-10"	1'-5"	5'-10"	1'-5"	1'-10"	1'-0"											
1	B345	8x16		st.	⅜"φ	2	2	5'-5"								do.									
2	B346	8x16		st.	⅜"φ	2	4	5'-2"								do.									
2	B347	8x16		st.	½"φ	1	2	7'-4"																	
				bt.	1"φ	1	2	8'-2"	1'-2"	1'-5"	3'-0"	1'-5"	1'-2"	1'-0"											
1	B348	12x34		st.	⅜"φ	1	1	16'-0"								Extends through B321.									
				bt.	¾"φ	1	1	23'-4"	12'-3"	3'-6"	2'-7"	3'-6"	1'-2"	2'-6"	4"	Hook "D" end only									
6	B349	8x16		st.	1"□	1	6	18'-4"																	
				bt.	1¼"□	1	6	23'-6"	4'-5"	1'-5"	8'-6"	1'-5"	7'-3"	1'-0"	6"	Hook "A" end only									
2	B351	15x32		st.	7/8"φ	2	4	14'-9"																	
				bt.	1¼"□	1	2	16'-5"	1'-5"	1'-11"	9'-3"	1'-11"	1'-5"	1'-4"	6"	Hook both ends									
				st.	1¼"□	2	4	5'-0"								In top adjacent to cols 20 & 21									
2	B352	15x32		st.	7/8"φ	2	4	14'-9"								In bottom									
				st.	1¼"□	3	6	14'-9"								In top									
6	B353	8x16		st.	⅜"φ	1	6	9'-10"																	
				bt.	½"φ	1	6	10'-8"	1'-1"	1'-5"	5'-8"	1'-5"	1'-1"	1'-0"											
6	B354	8x16		st.	⅜"φ	1	6	18'-0"																	
				bt.	½"□	1	6	25'-10"	7'-3"	1'-5"	8'-6"	1'-5"	7'-3"	1'-0"											
2	B355	8x16		st.	1"□	1	2	18'-0"																	
				bt.	1"□	1	2	25'-10"	7'-3"	1'-5"	8'-6"	1'-5"	7'-3"	1'-0"											
3	B356	8x20		st.	⅝"φ	1	3	18'-0"																	
				bt.	7/8"φ	1	3	25'-10"	7'-0"	1'-11"	8'-6"	1'-11"	7'-0"	1'-4"											
2	B357	8x20		st.	⅝"φ	1	2	18'-0"																	
				bt.	1⅛"□	1	2	23'-7"	4'-3	1'-11"	8'-6"	1'-11"	7'-0"	1'-4"	6"	Hook "A" end only									

BANK & OFFICE BLDG.

R. A. JEWETT

SCHEDULE NO. 6.

BEAM SCHEDULE FOR FOURTH FLOOR

Designation				Bars - bent bar marks same as Beam mark													Stirrups								
No. Req'd.	Mark	Concrete Size	Concrete Tee	Type	Diam.	Number Per	Number Total	Length	A	B	C	B	D	E	F	Remarks Dimension E-out-to-out	Number Per	Number Total	MK.	Diam.	Length	a	b	Spacing each end	Remarks First stirrup placed in plane of face of support
2	B401	8x30		st.	1"φ	1	2	23'-2"									16	32	0404	½"φ	5'-5"	2'-2"	5"	@ 9"	
				bt.	1"□	1	2	29'-10"	4'-7"	3'-1"	11'-1"	3'-1"	7'-6"	2'-2"	6"	Hook "A" end only									
				st.	1¼"□	1	2	5'-6"								In top over cols 12 & 39									
1	B402	8x30		st.	1"□	1	1	20'-4"								In top									
				st.	1¼"□	1	1	10'-0"								In bottom									
2	B403	15x28		st.	1"φ	2	4	23'-10"									18	36	0405	½"φ	5'-8"	2'-0"	1'-0"	8/8/8/8/10/10/10/10/	
				bt.	1¼"□	2	4	29'-4"	4'-7"	2'-10"	11'-1"	2'-10"	7'-6	2'-0"	6"	Hook "A" end only									
				st.	1"□	2	4	5'-6"								In top over cols. 11 & 40									
1	B404	15x28		st.	1"□	1	1	20'-4"								In top									
				st.	½"φ	2	2	10'-0"								In bottom									
1	B405	12x26		st.	1"□	1	1	15'-10"									8	8	0406	½"φ	4'-3"	1'-10"	9"	@10"	
				bt.	1⅛"□	1	1	24'-0"	3'-0"	2'-7"	7'-1"	2'-7"	8'-3"	1'-10"	6"	Hook "A" end only									
				st.	1"□	1	1	4'-0"								In top over col. 10.									
1	B406	12x26		st.	1"□	1	1	22'-3"									14	14	0406	½"φ	4'-3"	1'-10"	9"	@ 10"	
				bt.	1⅛"□	1	1	31'-2"	7'-9"	2'-7"	10'-6"	2'-7"	7'-9"	1'-10"											
				st.	1⅛"□	2	2	8'-3"								In top over cols. 15 & 36.									
1	B407	12x26		st.	1"□	1	1	19'-0"									6	6	0407	½"φ	4'-3"	1'-10"	9"	@ 10"	
				bt.	1⅛"□	1	1	25'-7"	7'-9"	2'-7"	8'-6"	2'-7"	3'-8"	1'-10"	6"	Hook "D" end only									
				st.	½"□	1	1	5'-0"								In top over col. 41									
3	B408	14x27		st.	¾"φ	1	3	15'-6"																	
				bt.	1⅛"□	1	3	24'-3"	3'-0"	2'-8"	7'-2"	2'-8"	8'-3"	1'-11"	6"	Hook "A" end only	8	24	0408	½"φ	5'-5"	1'-11"	11"	@10"	
				st.	1"□	1	3	4'-0"								Top over cols. 4, 5 & 9.									
				st.	1¼"□	1	3	8'-3"								" " " 16, 20 & 21									
3	B409	14x27		st.	¾"φ	1	3	22'-6"									18	54	0408	½"φ	5'-5"	1'-11"	11"	8/8/8/8/10/10/10/10	
				bt.	1⅛"□	1	3	28'-11"	7'-9"	2'-8"	10'-6"	2'-8"	4'-10"	1'-11"	6"	Hook "D" end only									
				st.	1¼"□	2	6	4'-6"								In top over cols. 28, 29 & 35									
2	B410	12x26		st.	1"φ	1	2	15'-10"									10	20	0406	½"φ	4'-3"	1'-10"	9"	@10"	
				bt.	1"□	1	2	24'-0"	3'-0"	2'-7"	7'-1"	2'-7"	8'-3"	1'-10"	6"	Hook "A" end only									
2	B411	12x26		st.	1"φ	1	2	14'-0"																	
				bt.	1"□	1	2	20'-8"	6'-10"	2'-7"	6'-5"	2'-7"	1'-9"	1'-10"	6"	Hook "D" end only	6	12	0406	½"φ	4'-3"	1'-10"	9"	@ 10"	
1	B412	9x18		st.	⅞"φ	1	1	18'-6"																	
				bt.	1"□	1	1	24'-0"	4'-4"	1'-8"	8'-6"	1'-8"	7'-4"	1'-2"	6"	Hook "A" end only									
1	B413	9x18		st.	⅞"φ	1	1	18'-0"																	
				bt.	1"□	1	1	23'-3"	3'-7"	1'-8"	8'-6"	1'-8"	7'-4"	1'-2"	6"	Hook "A" end only									
1	B414	7x14		st.	½"□	1	1	9'-3"																	
				bt.	1⅛"□	1	1	11'-4"	1'-10"	1'-2"	4'-4"	1'-2"	1'-10"	10"	6"	Hook both ends									
1	B415	8x20		st.	⅝"φ	1	1	10'-0"																	
				bt.	¾"φ	1	1	15'-9"	1'-6"	1'-11"	4'-4"	1'-11"	5'-9"	1'-4"	4"	Hook "A" end only									
1	B416	8x22		st.	⅝"φ	1	1	18'-0"																	
				bt.	1¼"□	1	1	24'-11"	7'-6"	2'-1"	8'-6"	2'-1"	4'-3"	1'-6"	6"	Hook "D" end only									
2	B417	8x22		st.	⅞"φ	1	2	18'-3"																	
				bt.	1⅛"□	1	2	25'-2"	7'-8"	2'-1"	8'-6"	2'-1"	4'-4"	1'-6"	6"	do.									
1	B418	8x22		st.	⅞"φ	1	1	18'-0"																	
				bt.	⅞"φ	1	1	26'-8"	7'-0"	2'-1"	8'-6"	2'-1"	7'-0"	1'-6"											
4	B419	15x34		st.	½"φ	1	4	15'-10"																	
				bt.	1"□	2	8	24'-10"	2'-7"	3'-6"	7'-1"	3'-6"	7'-8"	2'-6"	6"	Hook "A" end only	3	12	0409	½"φ	6'-8"	2'-6"	1'-0"	@ 14"	End adjacent cols. 19, 22 & 23 26
2	B420	15x34		st.	1"φ	2	4	25'-6"									7	21	0409	½"φ	6'-8"	2'-6"	1'-0"	@10"	do. do. cols 22, 23 & 26
				bt.	1⅛"□	2	4	34'-6"	7'-10"	3'-6"	11'-10"	3'-6"	7'-10"	2'-6"			11	11	0410	½"φ	6'-8"	2'-6"	1'-0"	6/6/6/8/8/10/10/10/10/10/	End adj. col. 27.
1	B421	15x34		st.	1⅛"□	2	2	14'-0"								In top.	7	7	0410	½"φ	6'-8"	2'-6"	1'-0"	6/6/8/8/8/8/	End adj. col. 30
1	B422	15x34		st.	¾"φ	1	1	15'-10"									2	2	0410	½"φ	6'-8"	2'-6"	1'-0"	5" from face	of col.
				bt.	1"φ	2	2	24'-10"	7'-8"	3'-6"	7'-1"	3'-6"	2'-7"	2'-6"	6"	Hook "D" end only									
2	B423	8x22		st.	1"φ	1	2	15'-10"									6	12	0411	½"φ	4'-1"	1'-6"	5"	@ 9"	
				bt.	1¼"□	1	2	24'-2"	2'-9"	2'-1"	7'-1"	2'-1"	9'-8"	1'-6"	6"	Hook "A" end only									
1	B424	8x30		st.	1"φ	1	1	25'-6"									14	14	0412	½"φ	5'-5"	2'-2"	5"	@ 12"	
				bt.	1¼"□	1	1	32'-10"	7'-6"	3'-0"	11'-10"	3'-0"	7'-6"	2'-2"											
2	B425	6x20		st.	¾"φ	1	2	18'-0"																	
				bt.	1"□	1	2	24'-10"	3'-6"	1'-11"	8'-6"	1'-11"	8'-6"	1'-4"	6"	Hook "A" end only									
9	B426	6x20		st.	½"□	1	9	18'-0"																	
				bt.	¾"φ	1	9	29'-4"	8'-6"	1'-11"	8'-6"	1'-11"	8'-6"	1'-4"											
1	B427	6x10		st.	½"φ	1	1	12'-4"																	
				bt.	¾"φ	1	1	13'-6"	2'-10"	9"	5'-8"	9"	2'-10"	6"	4"	Hook both ends									
1	B428	9x20		st.	½"φ	1	1	13'-10"								Extends thru B429									
				st.	1"□	1	1	12'-0"								In top									
1	B429	9x20		bt.	1"□	1	1	14'-9"	4'-1"	1'-11"	5'-2"	1'-11"	1'-2"	1'-4"	6"	Hook "D" end only									
1	B430	9x20		st.	¾"φ	1	1	11'-4"																	
				bt.	1¼"□	1	1	12'-2"	1'-2"	1'-11"	5'-2"	1'-11"	1'-2"	1'-4"	6"	Hook both ends									
				st.	1¼"□	1	1	11'-4"								In top.									
2	B431	9x20		st.	1"φ	1	2	11'-4"									10	20	0413	½"φ	3'-10"	1'-4"	6"	@ 8"	
				bt.	1"□	1	2	12'-2"	1'-2"	1'-11"	5'-2"	1'-11"	1'-2"	1'-4"	6"	Hook both ends									
				st.	1"□	1	2	11'-4"								In top									
1	B432	10x26		st.	1"φ	1	1	16'-7"																	
				bt.	1"□	1	1	22'-8"	3'-3"	2'-7"	7'-9"	2'-7"	6'-0"	1'-10"	6"	Hook "A" end only									
				st.	½"□	1	1	5'-0"								In top over col. 31									
1	B433	10x26		st.	⅞"φ	1	1	16'-0"									16	16	0414	½"φ	4'-3"	1'-10"	7"	@10"	
				bt.	1"□	1	1	24'-2"	6'-0"	2'-7"	7'-0"	2'-7"	6'-0"	1'-10"											
				st.	1"□	1	1	7'-6"								In top over col. 32									
1	B434	8x26		st.	⅞"φ	1	1	18'-3"									6	6	0415	½"φ	4'-1"	1'-10"	5"	@ 10"	
				bt.	1"□	1	1	23'-5"	6'-0"	2'-7"	8'-4"	2'-7"	3'-5"	1'-10"	6"	Hook "D" end only									
				st.	1⅛"□	1	1	5'-0"								In top over col. 34									
1	B435	8x44		st.	⅞"φ	2	2	15'-11"									4	4	0416	½"φ	7'-7"	3'-4"	5"	@ 14"	End adjacent col. 50.
				bt.	1¼"□	1	1	25'-8"	2'-4"	4'-8"	6'-0"	4'-8"	7'-6"	3'-4"	6"	Hook "A" end only									
				st.	1¼"□			5'-0"								In top over col. 50.									
1	B436	8x30		st.	½"□	1	1	15'-11"									5	5	0417	½"φ	5'-5"	2'-2"	5"	@ 12"	End adjacent col. 49.
				bt.	1⅛"□	1	1	24'-10"	8'-0"	3'-1"	7'-4"	3'-1"	2'-10"	2'-2"	6"	Hook "D" end only.									
2	B437	8x26		st.	⅞"φ	1	2	15'-11"									18	36	0415	½"φ	4'-1"	1'-10"	5"	@ 9"	
				bt.	1⅛"□	1	2	22'-7"	7'-0"	2'-7"	7'-4"	2'-7"	2'-10"	1'-10"	6"	do.									
1	B438	15x34		st.	1"φ	2	2	25'-6"									7	7	0409	½"φ	6'-8"	2'-6"	1'-0"	@10"	End adjacent col. 19
				bt.	1⅛"□	2	2	38'-6"	7'-10"	3'-6"	11'-10"	3'-6"	11'-6"	2'-6"			11	11	0410	½"	6'-8"	2'-6"	1'-0"	6/6/6/8/8/10/10/10/10/10/	End adj. col 30.
1	B439	9x20		st.	⅞"φ	2	2	7'-8"								Top & bottom.									
1	B440	8x22		bt.	1"□	1	1	23'-0"	3'-3"	2'-1"	8'-6"	2'-1"	7'-1"	1'-6"	6"	Hook "A" end only									
				st.	⅞"φ	1	1	18'-0"								In bottom									
1	B441	8x22		bt.	1"□	1	1	23'-7"	4'-0"	2'-1"	8'-6"	2'-1"	7'-7"	1'-6"	6"	Hook "A" end only									
				st.	⅞"φ	1	1	18'-6"								In bottom									

BANK & OFFICE BLDG.

SCHEDULE No. 7

R. A. JEWETT

BEAM SCHEDULE FOR ROOF

Bars – bent bar marks same as Beam mark

Designation: No. Req'd.	Mark	Concrete: Size	Tee	Bars: Type	Diam.	Number: Per	Total	Length	A	B	C	B	D	E	F	Remarks: Dimension E out-to-out	Stirrups: Number: Per	Total	MK.	Diam.	Length	a	b	Spacing each end	Remarks: First stirrup in plane of face of support.
2	RB1	14x30		st.	7/8"φ	1	2	23'-2"									10	20	303	3/8"φ	5'-11"	2'-2"	11"	8/8/10/12/	
				bt.	1 1/8"□	1	2	29'-10"	4'-7"	3'-1"	11'-1"	3'-1"	7'-6"	2'-2"	6"	Hook "A" end only									
1	RB2	14x30		st.	1"□	1	1	20'-4"								In top									
				st.	1 1/4"□	1	1	10'-0"								In bottom									
2	RB3	14x30		st.	1"□	1	1	23'-10"									12	24	304	3/8"φ	5'-11"	2'-2"	11"	@ 12"	
				bt.	1 1/8"□	2	2	29'-10"	4'-7"	3'-1"	11'-1"	3'-1"	7'-6"	2'-2"	6"	Hook "A" end only									
				st.	1"□	2	4	5'-6"								In top over cols 11 & 40									
1	RB4	14x30		st.	1"□	1	1	20'-4"								In top									
				st.	7/8"φ	1	1	10'-0"								In bottom									
4	RB5	14x30		st.	7/8"φ	1	4	16'-0"																	
				bt.	1"φ	2	8	23'-9"	2'-6"	3'-1"	7'-1"	3'-1"	7'-6"	2'-2"	6"	Hook "A" end only									
1	RB6	14x30		st.	7/8"φ	1	1	22'-3"									10	10	304	3/8"φ	5'-11"	2'-2"	11"	8/10/10/12/	
				bt.	1"φ	2	2	31'-8"	7'-6"	3'-1"	10'-6"	3'-1"	7'-6"	2'-2"											
7	RB7	9x20		st.	3/4"φ	1	7	17'-9"																	
				bt.	1"□	1	7	24'-10"	3'-6"	1'-11"	8'-6"	1'-11"	8'-6"	1'-4"	6"	Hook "A" end only									
10	RB8	9x20		st.	3/4"φ	1	10	18'-0"																	
				bt.	3/4"φ	1	10	29'-4"	8'-6"	1'-11"	8'-6"	1'-11"	8'-6"	1'-4"											
8	RB9	14x30		st.	1/2"□	1	8	16'-0"									6	48	304	3/8"φ	5'-11"	2'-2"	11"	@ 12"	
				bt.	1"φ	2	16	23'-9"	2'-6"	3'-1"	7'-1"	3'-1"	7'-6"	2'-2"	6"	Hook "A" end only									
2	RB10	14x30		st.	7/8"φ	1	2	22'-3"									10	20	304	3/8"φ	5'-11"	2'-2"	11"	8/10/10/12/	
				bt.	1"φ	2	4	27'-11"	3'-3"	3'-1"	10'-6"	3'-1"	7'-6"	2'-2"	6"	Hook "A" end only									
2	RB12	16x32		st.	1"φ	2	4	25'-6"									7	21	0443	1/2"φ	6'-5"	2'-4"	1'-1"	@ 10"	Ends adjacent cols. 22, 23 & 26
				bt.	1 1/8"□	2	4	33'-8"	7'-8"	3'-3"	11'-10"	3'-3"	7'-8"	2'-4"			11	11	0444	1/2"φ	6'-5"	2'-4"	1'-1"	6/6/6/8/8/10/10/10/10/10/	do. col. 27
2	RB13	14x30		st.	1/2"φ	1	2	15'-6"																	
				bt.	1 1/8"□	1	2	23'-9"	2'-6"	3'-1"	7'-1"	3'-1"	7'-6"	2'-2"	6"	Hook "A" end only									
1	RB14	14x30		st.	1"φ	2	2	25'-6"									8	8	304	3/8"φ	5'-11"	2'-2"	11"	@ 12"	
				bt.	1"□	2	2	33'-4"	7'-8"	3'-1"	11'-10"	3'-1"	7'-8"	2'-2"											
2	RB15	8x20		st.	3/4"φ	1	2	18'-0"																	
				bt.	1"□	1	2	23'-0"	3'-5"	1'-11"	8'-6"	1'-11"	7'-3"	1'-4"	6"	Hook "A" end only									
1	RB16	9x20		st.	3/4"φ	2	2	6'-0"								Top & bottom									
1	RB17	16x36		st.	1"φ	1	1	22'-9"									12	12	0445	1/2"φ	7'-1"	2'-8"	1'-1"	6/6/8/8/10/	
				bt.	1"φ	2	2	30'-9"	7'-8"	3'-9"	10'-0"	3'-9"	3'-3"	2'-8"	6"	Hook "D" end only									
1	RB18	14x30		st.	7/8"φ	1	1	21'-6"																	
				bt.	1 1/8"□	1	1	27'-8"	7'-6"	3'-1"	10'-0"	3'-1"	3'-6"	2'-2"	6"	do.									
1	RB19	14x30		st.	3/4"φ	1	1	11'-4"																	
				bt.	7/8"φ	1	1	19'-0"	6'-3"	3'-1"	5'-3"	3'-1"	1'-4"	2'-2"		do.									
1	RB20	10x22		st.	3/4"φ	1	1	21'-0"								Bottom extends thru B21.									
				bt.	1"□	1	1	19'-8"	6'-9"	2'-1"	6'-0"	2'-1"	2'-3"	1'-6"	6"	Hook "A" end only									
1	RB21	10x22		st.	5/8"φ	1	1	15'-3"								In top									
2	RB22	15x24		st.	1"φ	1	2	14'-0"																	
				bt.	1 1/4"□	1	2	19'-11"	1'-10"	2'-4"	6'-2"	2'-4"	6'-9"	1'-8"	6"	Hook "A" end only									
2	RB23	14x24		st.	1"φ	1	2	18'-0"																	
				bt.	1 1/8"□	1	2	20'-0"	3'-2"	2'-4"	8'-4"	2'-4"	3'-2"	1'-8"	6"	Hook both ends									
1	RB24	14x30		st.	1"φ	1	1	14'-0"																	
				bt.	1 1/8"□	1	1	21'-1"	6'-3"	3'-1"	6'-2"	3'-1"	2'-0"	2'-2"	6"	Hook "D" end only									
1	RB25	14x30		st.	1"φ	1	1	19'-0"								Extends thru RB26.									
1	RB26	14x30		bt.	1"φ	2	2	19'-7"	1'-8"	3'-1"	5'-0"	3'-1"	6'-3"	2'-2"	6"	Hook "A" end only									
1	RB28	16x40		st.	1"φ	1	1	25'-6"																	
				bt.	1"φ	2	2	33'-0"	6'-4"	4'-3"	11'-10"	4'-3"	6'-4"	3'-0"											
1	RB29	16x40		st.	7/8"φ	2	2	7'-0"								Top & bottom									
1	RB30	12x30		st.	7/8"φ	1	1	17'-0"									12	12	0419	1/2"φ	5'-9"	2'-2"	9"	6/8/8/8/10/	
				bt.	1 1/8"□	1	1	25'-6"	2'-10"	3'-1"	8'-3"	3'-1"	7'-9"	2'-2"	6"										
1	RB31	12x30		st.	1"φ	1	1	14'-10"									14	14	0419	1/2"φ	5'-9"	2'-2"	9"	6/6/6/8/8/10/	
				bt.	1"φ	2	2	27'-6"	6'-9"	3'-1"	7'-10"	3'-1"	6'-9"	2'-2"											
1	RB32	8x30		st.	7/8"φ	1	1	18'-4"																	
				bt.	1 1/8"□	1	1	24'-8"	6'-8"	3'-1"	8'-4"	3'-1"	3'-0"	2'-2"	6"	Hook "A" end only									
3	RB33	8x16		st.	1"□	2	6	11'-6"								Top & bottom									
1	RB34	6x10		st.	3/4"φ	2	2	11'-6"								do.									
1	RB35	6x10		st.	1/2"φ	2	2	4'-8"								do.									
1	RB36	6x10		st.	3/8"φ	1	1	14'-8"																	
				bt.	5/8"φ	1	1	15'-4"	3'-4"	9"	7'-6"	9"	3'-4"	6"											
1	RB37	9x18		st.	1/2"φ	1	1	13'-0"																	
				bt.	3/4"φ	1	1	14'-0"	2'-4"	1'-8"	6'-0"	1'-8"	2'-4"	1'-2"	4"	Hook both ends									
1	RB40	15x36		st.	7/8"φ	2	2	10'-9"																	
				st.	1 1/4"□	1	1	10'-9"								In top									
				bt.	1"□	1	1	11'-9"	1'-7"	3'-9"	3'-0"	3'-9"	1'-7"	2'-8"											
1	RB42	16x36		st.	1"φ	1	1	18'-0"																	
				bt.	1"□	1	1	26'-3"	2'-9"	3'-9"	8'-6"	3'-9"	7'-6"	2'-8"	6"	Hook "A" end only									
1	RB43	16x36		st.	1"φ	1	1	18'-0"																	
				bt.	1"φ	1	1	31'-0"	7'-6"	3'-9"	8'-6"	3'-9"	7'-6"	2'-8"											
	RB44	16x36		st.	1"φ	2	2	18'-0"																	
				bt.	1 1/8"□	2	2	26'-3"	2'-9"	3'-9"	8'-6"	3'-9"	7'-6"	2'-8"	6"	Hook "A" end only									

BANK & OFFICE BLDG.

SCHEDULE No. 8

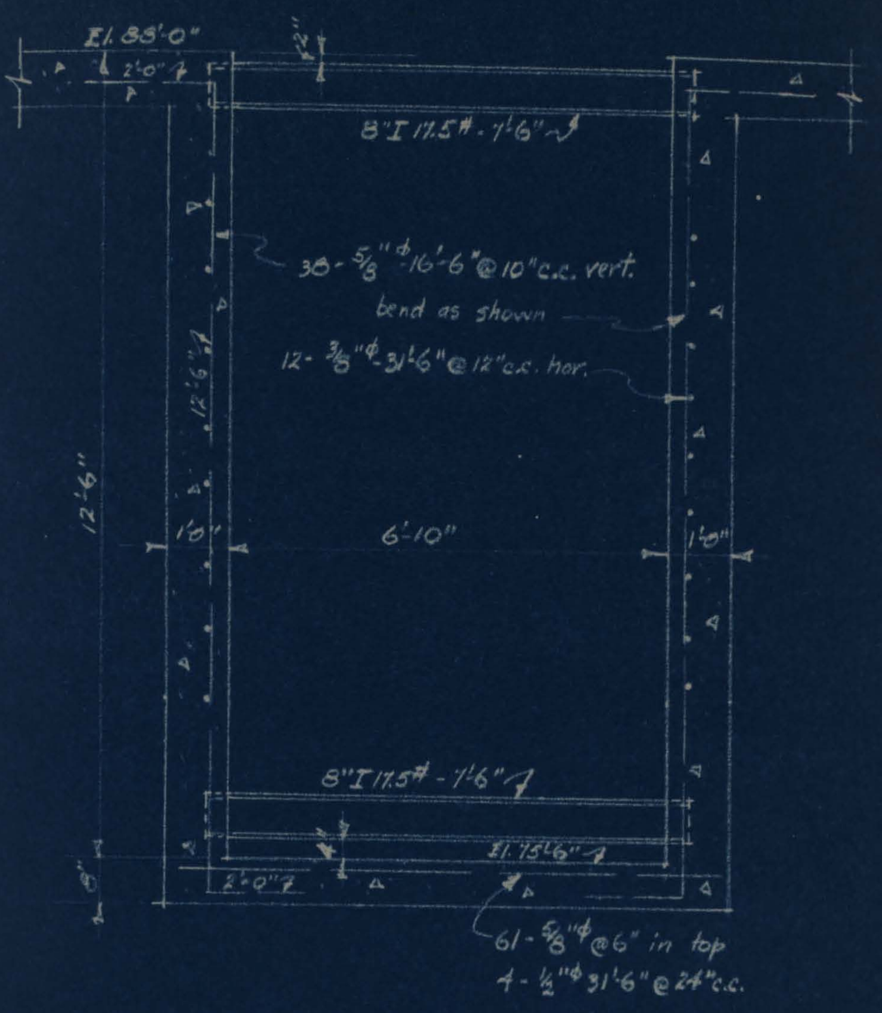
R. A. JEWETT

BEAM SCHEDULE FOR PENT HOUSE ROOF

Designation				Bars — bent bar marks same as Beam marks												
No. Req'd	Mark	Concrete Size	Concrete Tee	Type	Diam.	Number Per	Number Total	Length	 A	B	C	B	D	E	F	Remarks Dimension E out-to-out. No stirrups to be used
1	PRB1	12x26		st.	3/4"ϕ	1	1	18'-3"								
				bt.	1"□	1	1	24'-4"	3'-2"	2'-7"	8'-6"	2'-7"	7'-0"	1'-10"	6"	Hook "A" end only
				st.	1"□	1	1	5'-0"								In top over col. 19
1	PRB2	12x26		st.	3/4"ϕ	1	1	18'-0"								
				bt.	1"□	1	1	27'-8"	7'-0"	2'-7"	8'-6"	2'-7"	7'-0"	1'-10"		
1	PRB3	12x26		st	5/8"ϕ	1	1	13'-10"								
				bt.	1 1/8"□	1	1	20'-6"	6'-8"	2'-7"	6'-4"	2'-7"	2'-2"	1'-10"	6"	Hook "D" end only
2	PRB4	12x30		st.	3/4"ϕ	1	1	13'-0"								
				bt.	1"□	1	2	20'-2"	1'-9"	3'-1"	5'-6"	3'-1"	6'-3"	2'-2"	6"	Hook "A" end only
				st.	1"□	1	2	5'-3"								In top into PRB11.
2	PRB5	12x30		st.	7/8"ϕ	1	2	15'-6"								
				bt.	1 1/8"□	1	2	21'-10"	7'-4"	3'-1"	7'-0"	3'-1"	7'-4"	2'-2"		
2	PRB6	12x30		st.	7/8"ϕ	1	2	15'-6"								
				bt.	1 1/8"□	1	2	21'-10"	7'-4"	3'-1"	7'-0"	3'-1"	7'-4"	2'-2"		
2	PRB7	12x30		st.	5/8"ϕ	1	2	6'-1"								In bottom
				st.	1 1/8"□	1	2	10'-4"								In top
1	PRB8	12x24		st.	5/8"ϕ	1	1	16'-7"								
				bt.	1"ϕ	1	1	22'-11"	3'-4"	2'-4"	7'-9"	2'-4"	6'-8"	1'-8"	6"	Hook "A" end only
				st.	1"ϕ	1	1	5'-6"								In top over col 31.
1	PRB9	12x24		st.	5/8"ϕ	1	1	16'-0"								
				bt.	1"ϕ	1	1	25'-9"	6'-8"	2'-4"	7'-9"	2'-4"	6'-8"	1'-8"		
1	PRB10	12x24		st.	3/4"ϕ	1	1	17'-8"								
				bt.	1"ϕ	1	1	23'-2"	6'-8"	2'-4"	8'-4"	2'-4"	3'-0"	1'-8"	6"	Hook "D" end only
				st.	1"ϕ	1	1	5'-6"								In top over col. 34
1	PRB11	12x30		st	1"ϕ	1	1	25'-9"								[End "D" in PRB12
				bt.	1 1/4"□	2	2	35'-4"	4'-6"	3'-1"	12'-2"	3'-1"	11'-6"	2'-2"	6"	Hook both ends]
				st	1"□	1	1	6'-0"								In top over col. 19
1	PRB12	12x30		st.	1 1/8"□	1	1	11'-10"								In top
				st.	1"ϕ	1	1	7'-0"								In bottom
1	PRB13	12x30		st.	1"ϕ	1	1	21'-6"								
				bt.	1 1/4"□	2	2	29'-11"	3'-9"	3'-1"	10'-3"	3'-1"	8'-3"	2'-2"	6"	Hook "A" end only
1	PRB14	12x30		st.	7/8"ϕ	1	1	11'-4"								
				bt.	1"□	1	1	20'-2"	1'-7"	3'-1"	5'-3"	3'-1"	6'-8"	2'-2"	6"	do.
				st.	1"□	1	1	5'-6"								In top over col. 34

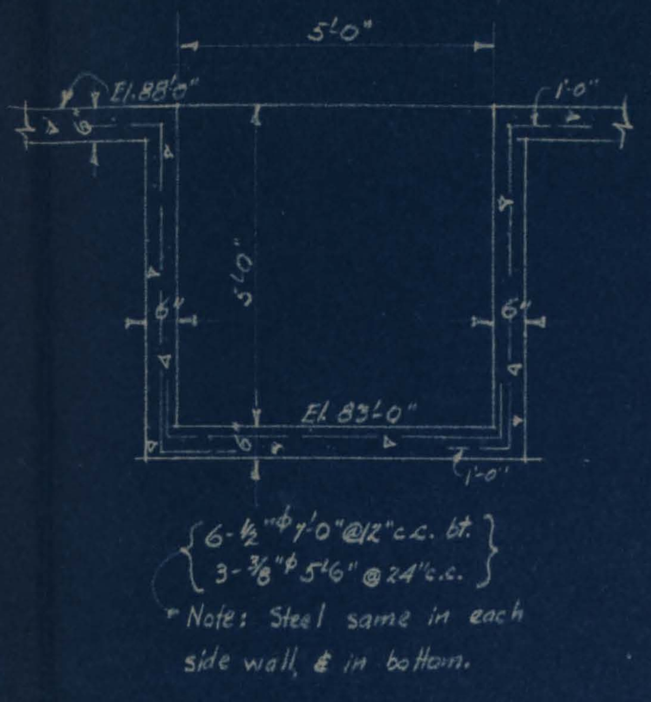
BANK & OFFICE BLDG. SCHEDULE No. 9

R. A. JEWETT



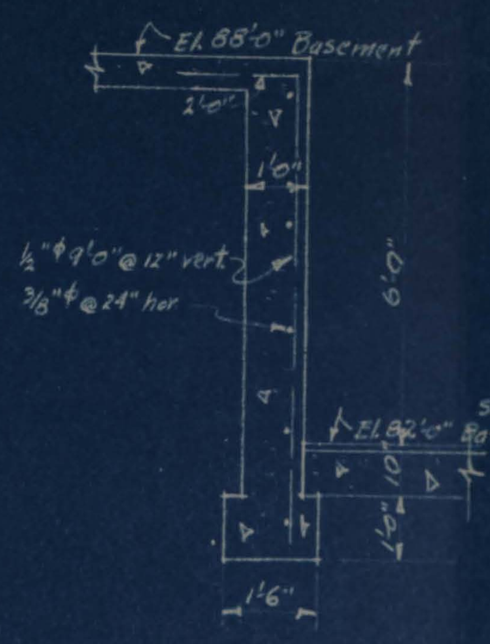
SECTION THRU ELEVATOR PIT

SCALE: 3/8" = 1'-0"

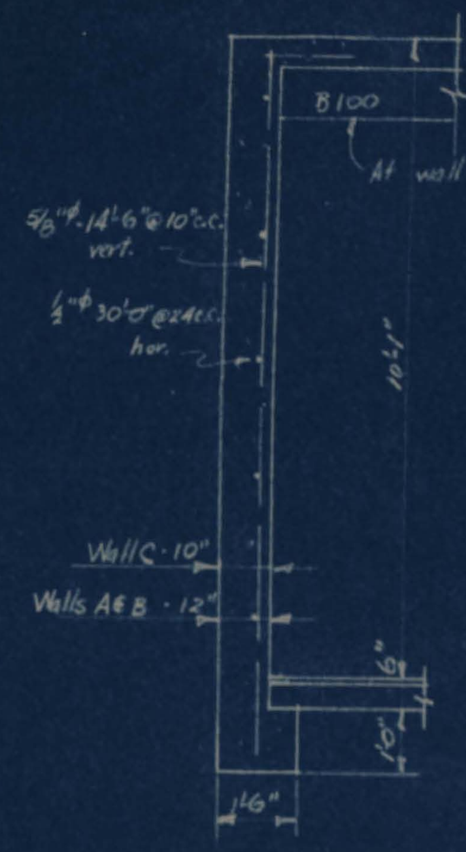


SECTION THRU COIN LIFT PIT

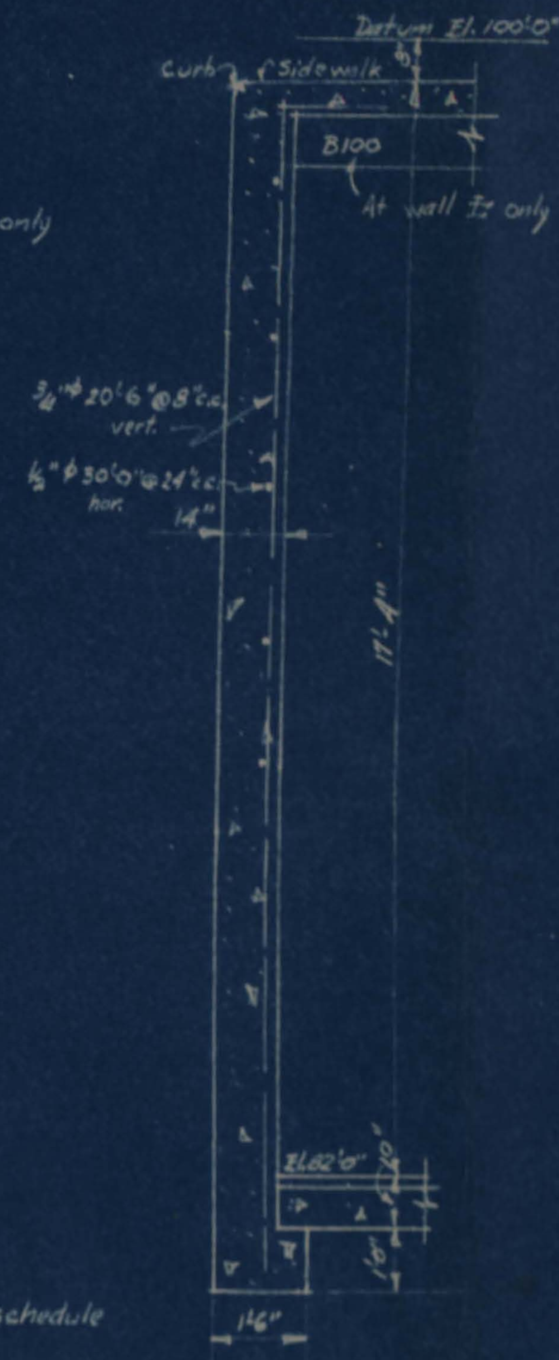
SCALE: 3/8" = 1'-0"



WALLS F, G, H, J, K, M, & N



WALLS A, B, C

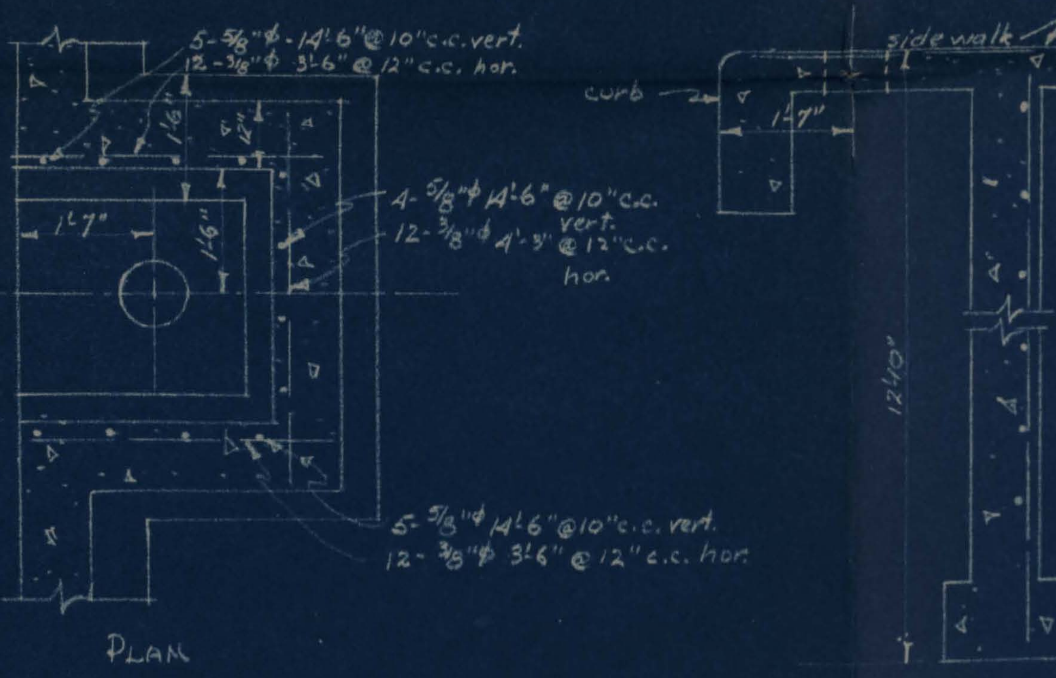


WALLS D, E

TYPICAL WALL SECTIONS

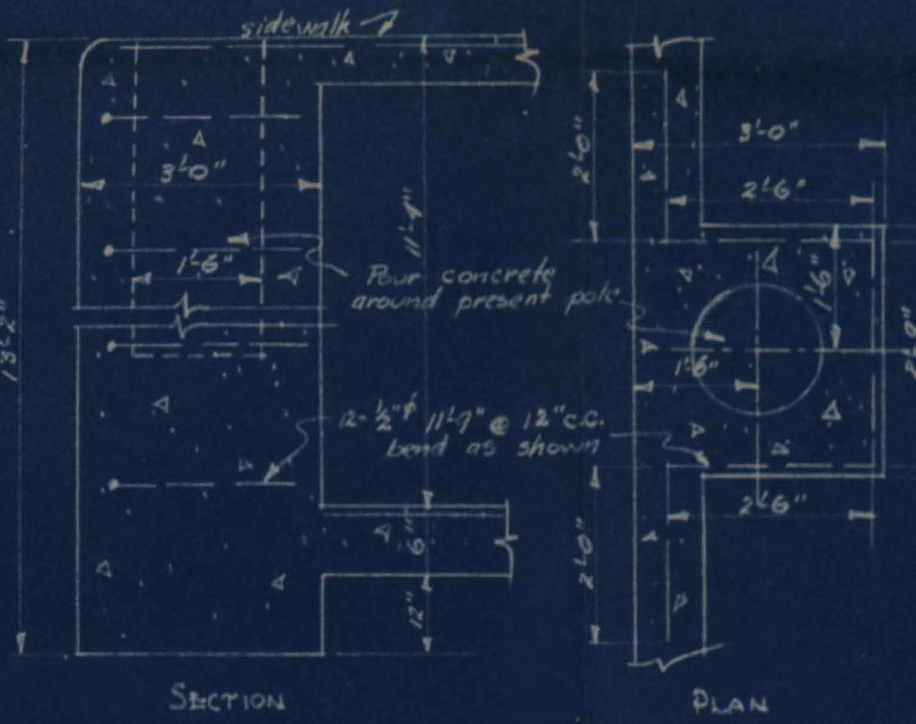
SCALE: 3/8" = 1'-0"

NOTE: See wall schedule for all steel.



DETAIL OF CHASE FOR FIRE PLUG

SCALE: 1/2" = 1'-0"

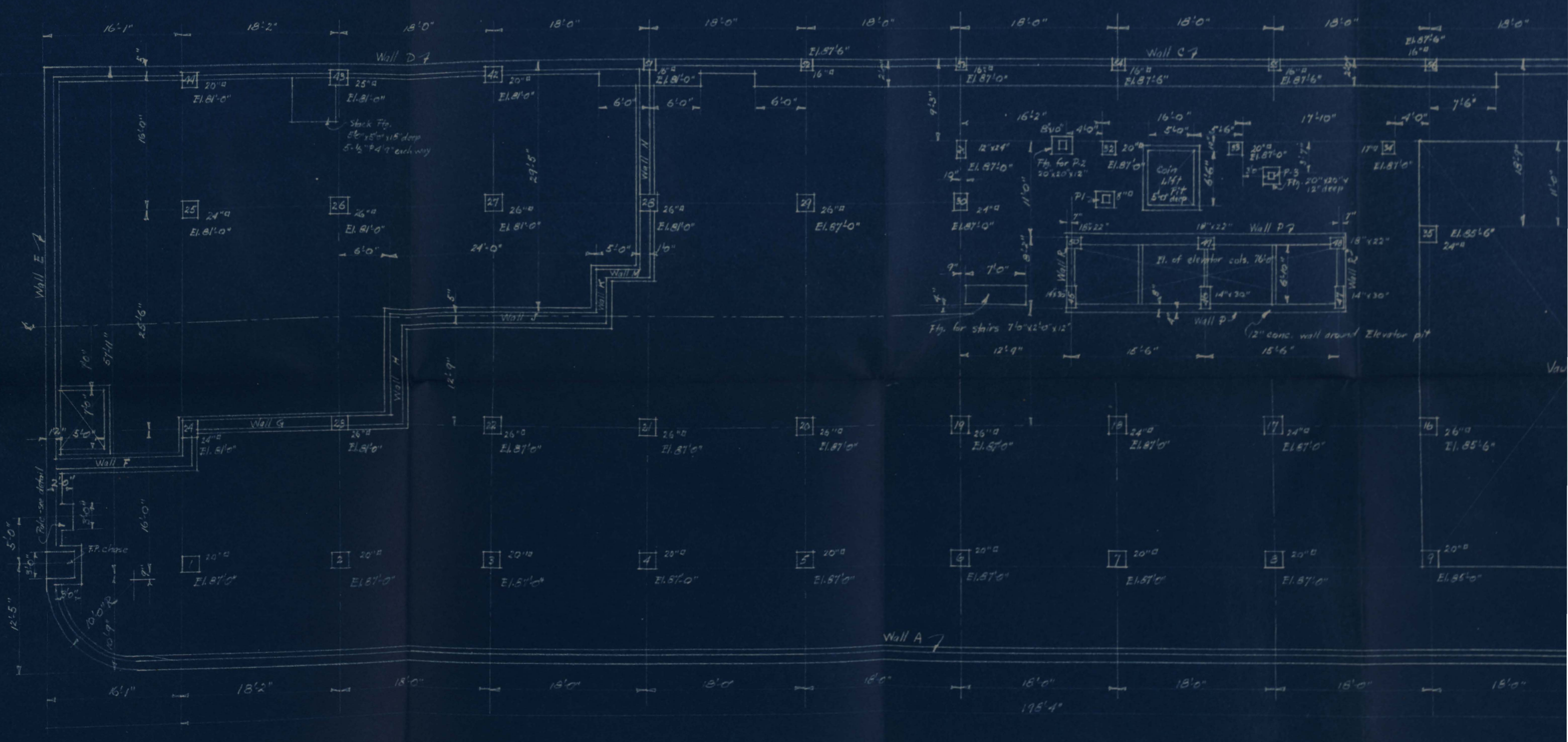


DETAIL OF POLE FRAMING

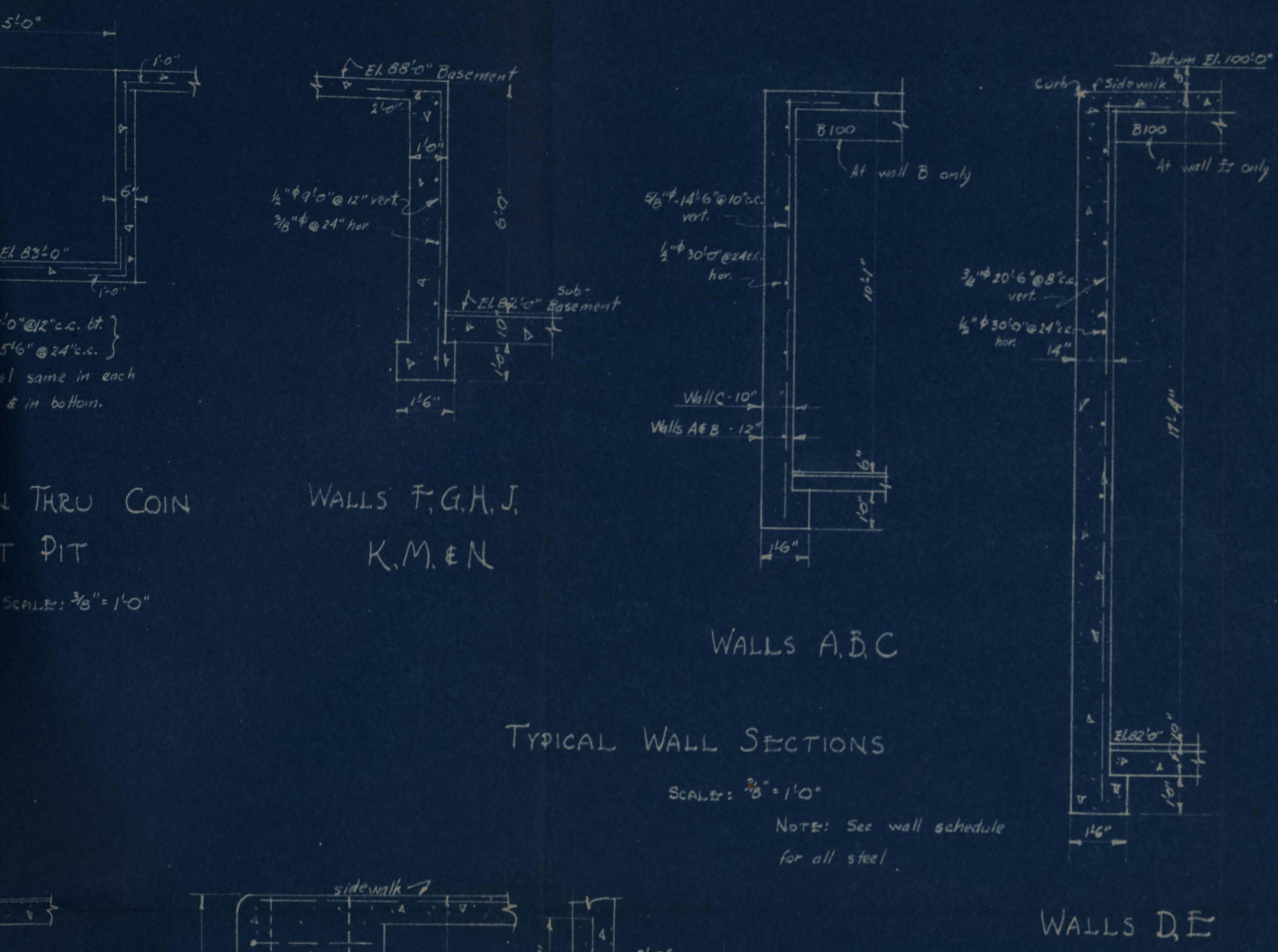
SCALE: 1/2" = 1'-0"

WALL SCHEDULE FOR BASEM

Mark	Thick	Height	Vertical Steel				Horizontal St		
			No.	Diam.	Length	Spacing	No.	Diam.	Lengt
A	12"	10'-7"	253	5/8"φ	14'-6"	10"	42	1/2"φ	30'-
							6	1/2"φ	12'-
B	12"	10'-7"	71	5/8"φ	14'-6"	10"	12	1/2"φ	30'-
C	10"	10'-7"	192	5/8"φ	14'-6"	10"	30	1/2"φ	30'-
							6	1/2"φ	21'-
D	14"	18'-2"	107	3/4"φ	20'-6"	8"	18	1/2"φ	30'-
							9	1/2"φ	14'-
E	14"	18'-2"	68	3/4"φ	20'-6"	8"	18	1/2"φ	23'-
F	12"	6'-10"	16	1/2"φ	9'-0"	12"	4	3/8"φ	15'-
G	12"	6'-10"	21	1/2"φ	9'-0"	12"	4	3/8"φ	24'-
H	12"	6'-10"	13	1/2"φ	9'-0"	12"	4	3/8"φ	12'-
J	12"	6'-10"	25	1/2"φ	9'-0"	12"	4	3/8"φ	12'-
K	12"	6'-10"	4	1/2"φ	9'-0"	12"	4	3/8"φ	4'-
M	12"	6'-10"	6	1/2"φ	9'-0"	12"	4	3/8"φ	5'-
N	12"	6'-10"	22	1/2"φ	9'-0"	12"	4	3/8"φ	24'-
P	12"	13'-2"	17	5/8"φ	16'-0"	10"	7	1/2"φ	32'-
R	12"	13'-2"	5	5/8"φ	16'-0"	10"	7	1/2"φ	8'-
Curve	12"	10'-7"	20	5/8"φ	14'-6"	10"	6	1/2"φ	18'-



CAN



Section Thru Coin ... Pit

Scale: 3/8" = 1'-0"

Walls F, G, H, J, K, M & N

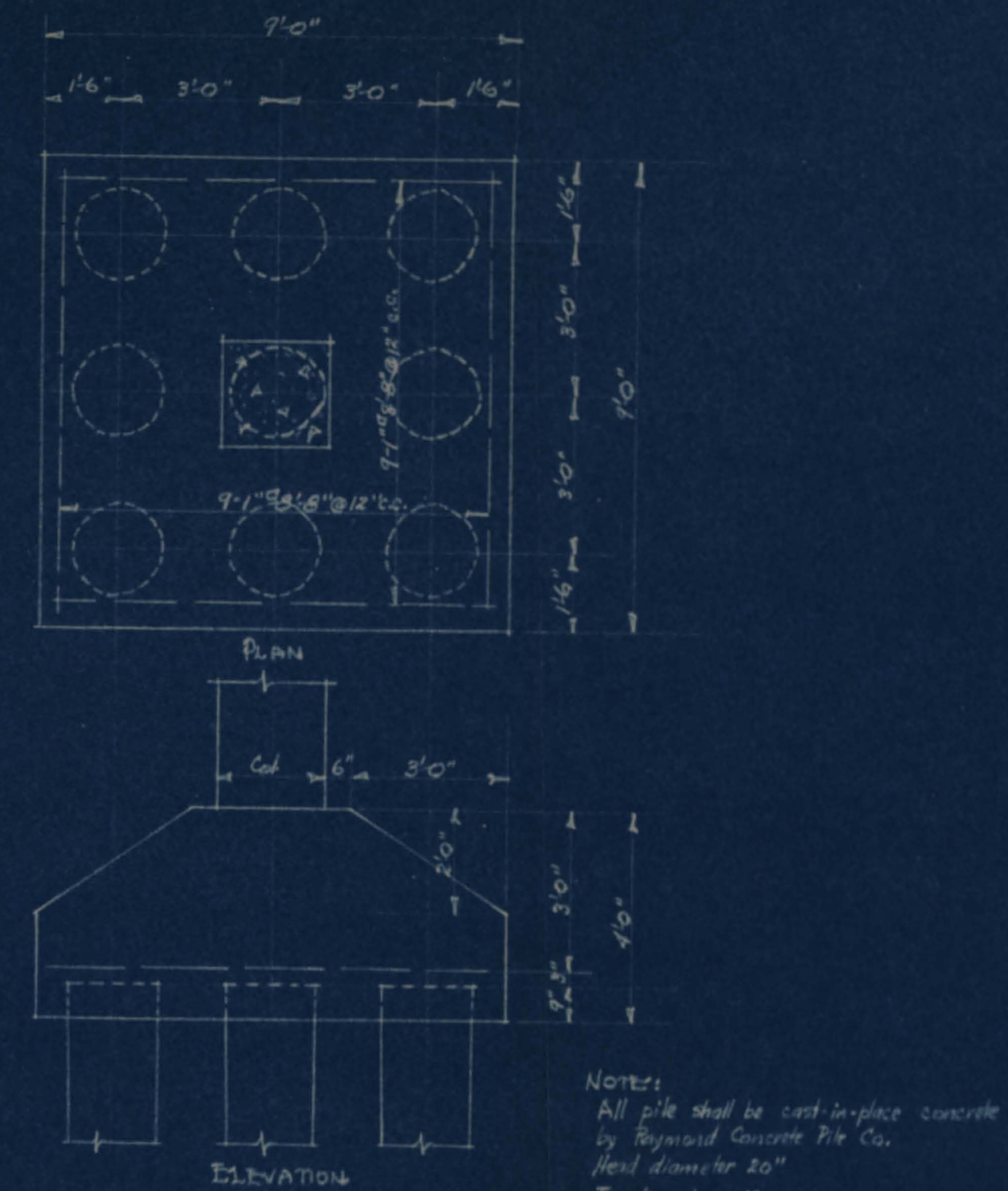
Walls A, B, C

Walls D, E

Typical Wall Sections

Scale: 3/8" = 1'-0"

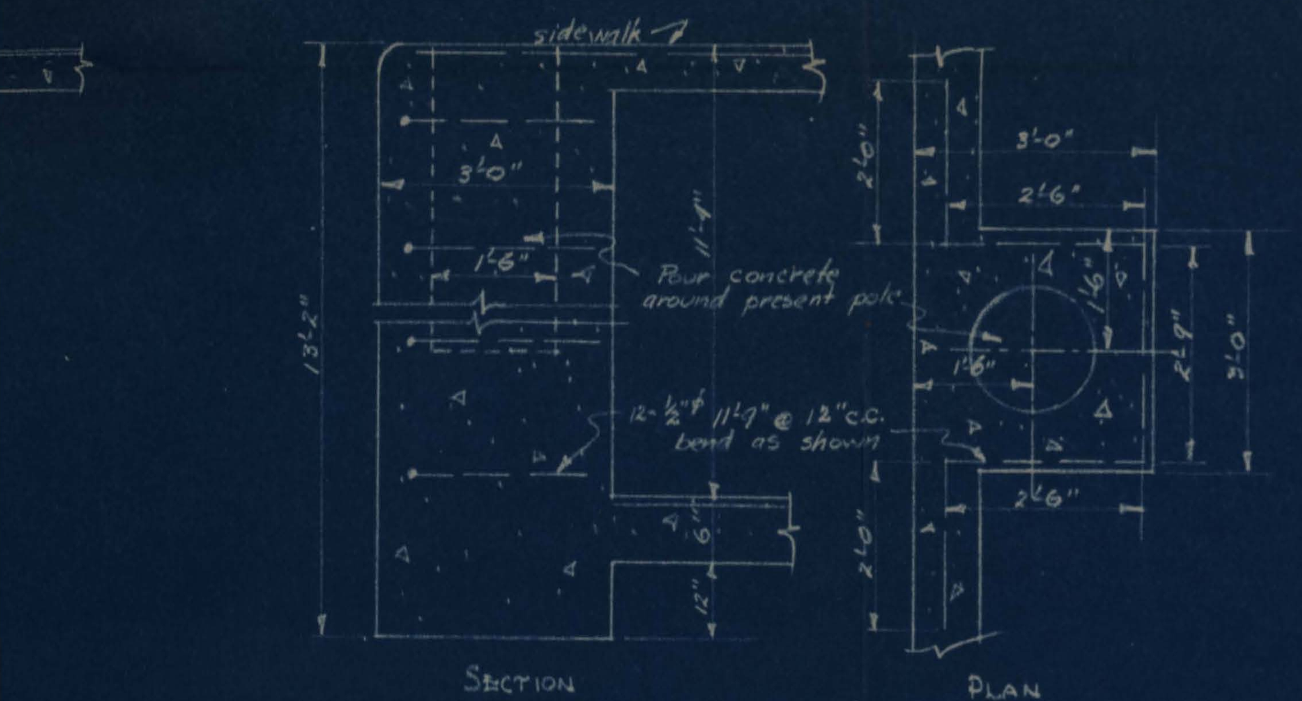
Note: See wall schedule for all steel



Typical Footing

Scale: 3/8" = 1'-0"

Notes:
All pile shall be cast-in-place concrete by Raymond Concrete Pile Co.
Head diameter 20"
Tip diameter 14"
Length 35'-0"

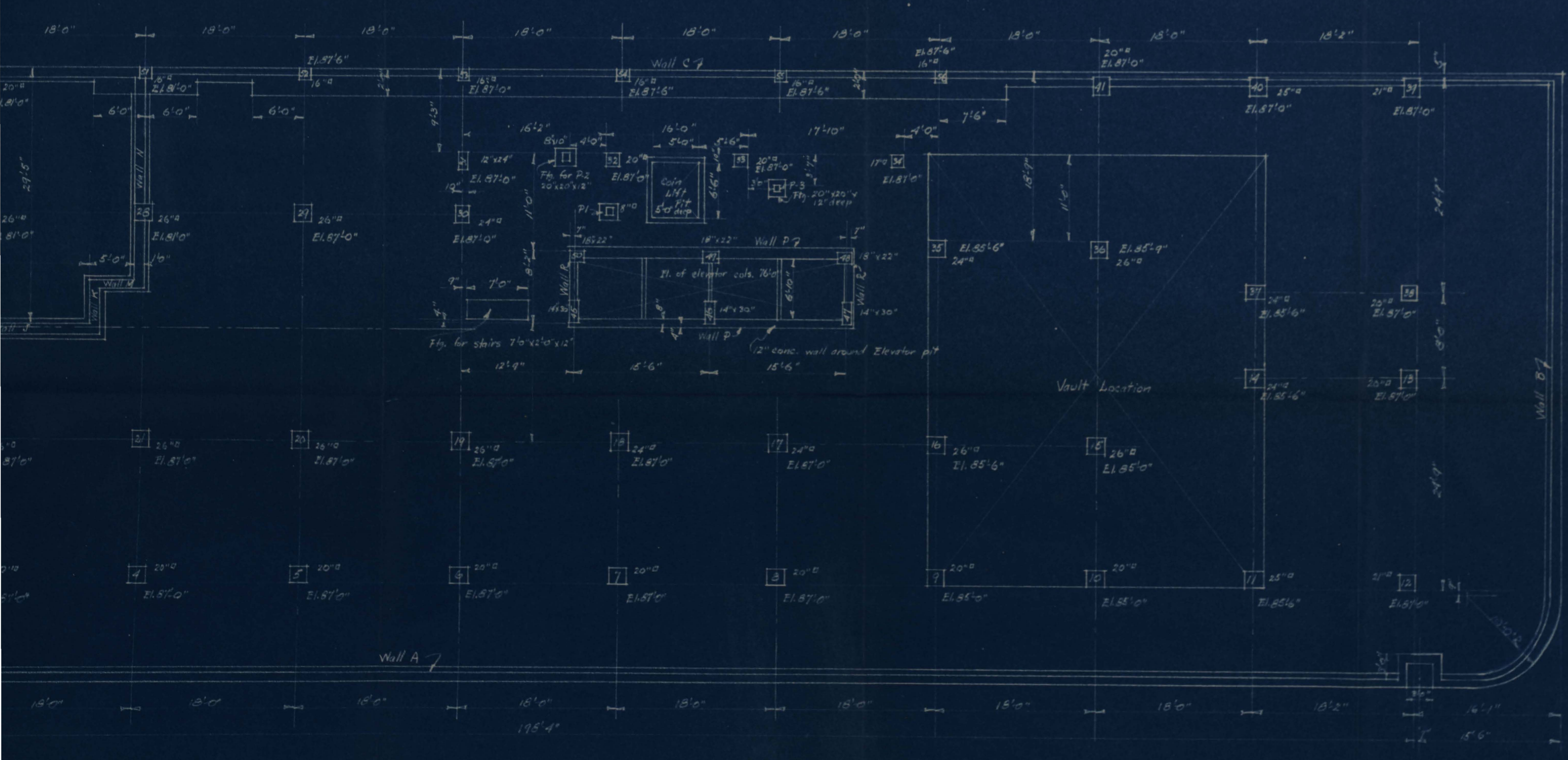


Detail of Pole Framing

Scale: 1/2" = 1'-0"

Wall Schedule for Basement

Mark	Thick	Height	Vertical Steel				Horizontal Steel				Remarks
			No.	Diam.	Length	Spacing	No.	Diam.	Length	Spacing	
A	12"	10'-7"	253	5/8"ϕ	14'-6"	10"	42	1/2"ϕ	30'-0"	24"	7 Groups of 6
							6	1/2"ϕ	12'-0"	24"	
B	12"	10'-7"	71	5/8"ϕ	14'-6"	10"	12	1/2"ϕ	30'-0"	24"	2 Groups of 6
C	10"	10'-7"	192	5/8"ϕ	14'-6"	10"	30	1/2"ϕ	30'-0"	24"	5 Groups of 6
							6	1/2"ϕ	21'-0"	24"	
D	14"	18'-2"	107	3/4"ϕ	20'-6"	8"	18	1/2"ϕ	30'-0"	24"	2 Groups of 9
							9	1/2"ϕ	14'-0"	24"	
E	14"	18'-2"	68	3/4"ϕ	20'-6"	8"	18	1/2"ϕ	23'-0"	24"	2 Groups of 9
F	12"	6'-10"	16	1/2"ϕ	9'-0"	12"	4	3/8"ϕ	15'-9"	24"	
G	12"	6'-10"	21	1/2"ϕ	9'-0"	12"	4	3/8"ϕ	24'-9"	24"	
H	12"	6'-10"	13	1/2"ϕ	9'-0"	12"	4	3/8"ϕ	12'-6"	24"	
J	12"	6'-10"	25	1/2"ϕ	9'-0"	12"	4	3/8"ϕ	12'-6"	24"	
K	12"	6'-10"	4	1/2"ϕ	9'-0"	12"	4	3/8"ϕ	4'-9"	24"	
M	12"	6'-10"	6	1/2"ϕ	9'-0"	12"	4	3/8"ϕ	5'-9"	24"	
N	12"	6'-10"	22	1/2"ϕ	9'-0"	12"	4	3/8"ϕ	24'-0"	24"	
P	12"	13'-2"	17	5/8"ϕ	16'-0"	10"	7	1/2"ϕ	32'-3"	24"	2 walls req'd.
R	12"	13'-2"	5	5/8"ϕ	16'-0"	10"	7	1/2"ϕ	8'-6"	24"	do.
Curve	12"	10'-7"	20	5/8"ϕ	14'-6"	10"	6	1/2"ϕ	18'-0"	24"	do.

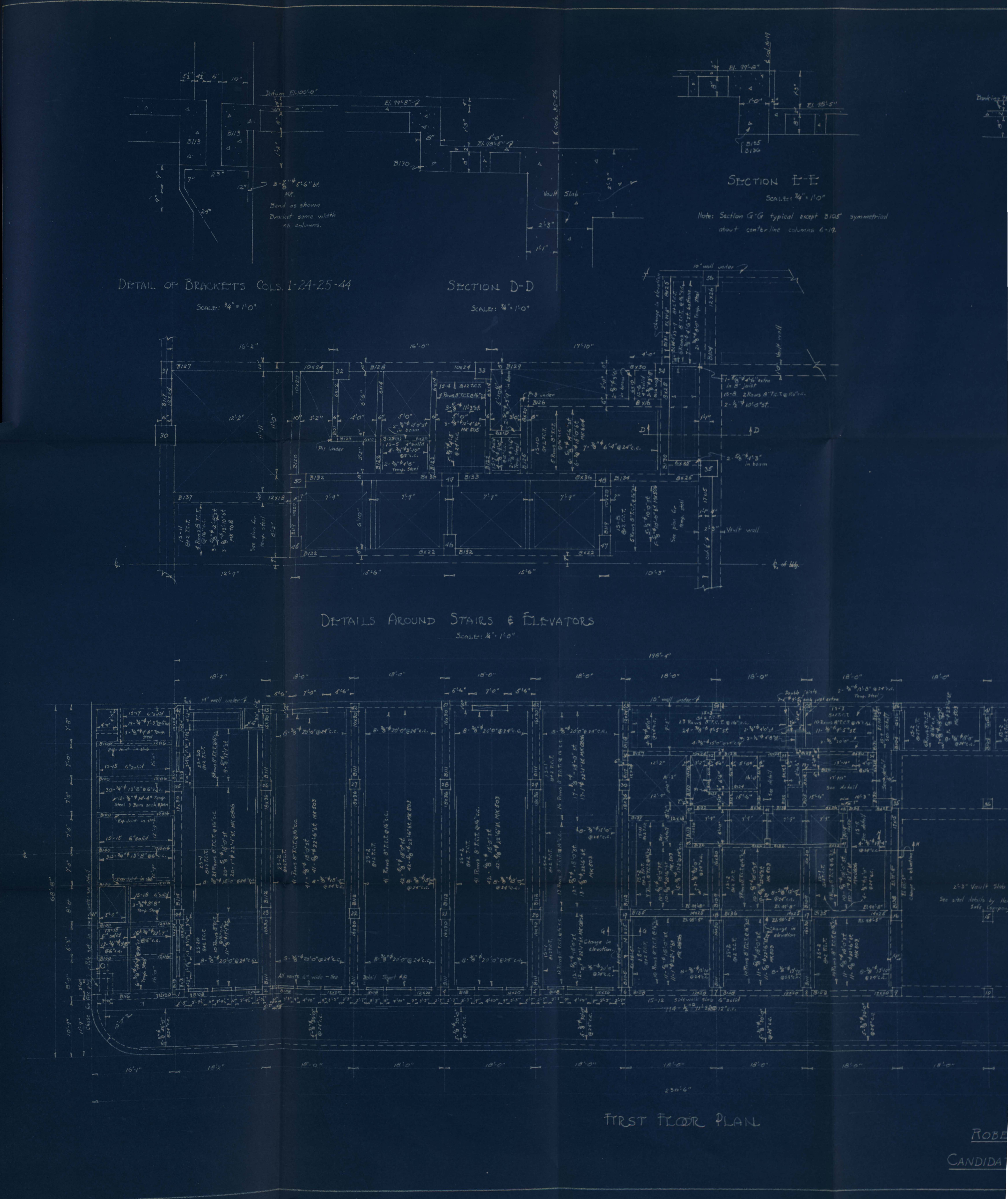


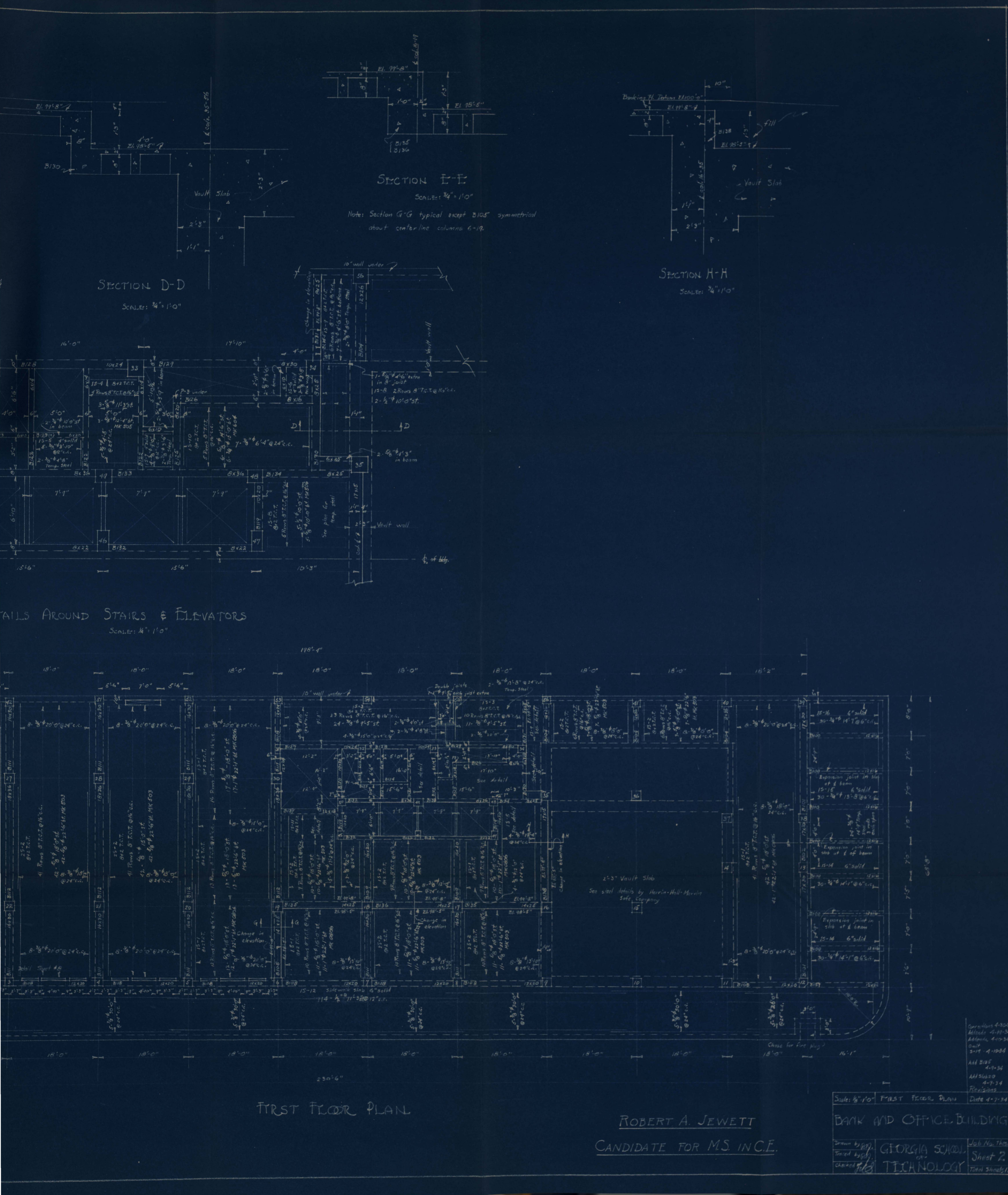
Robert A. Jewett

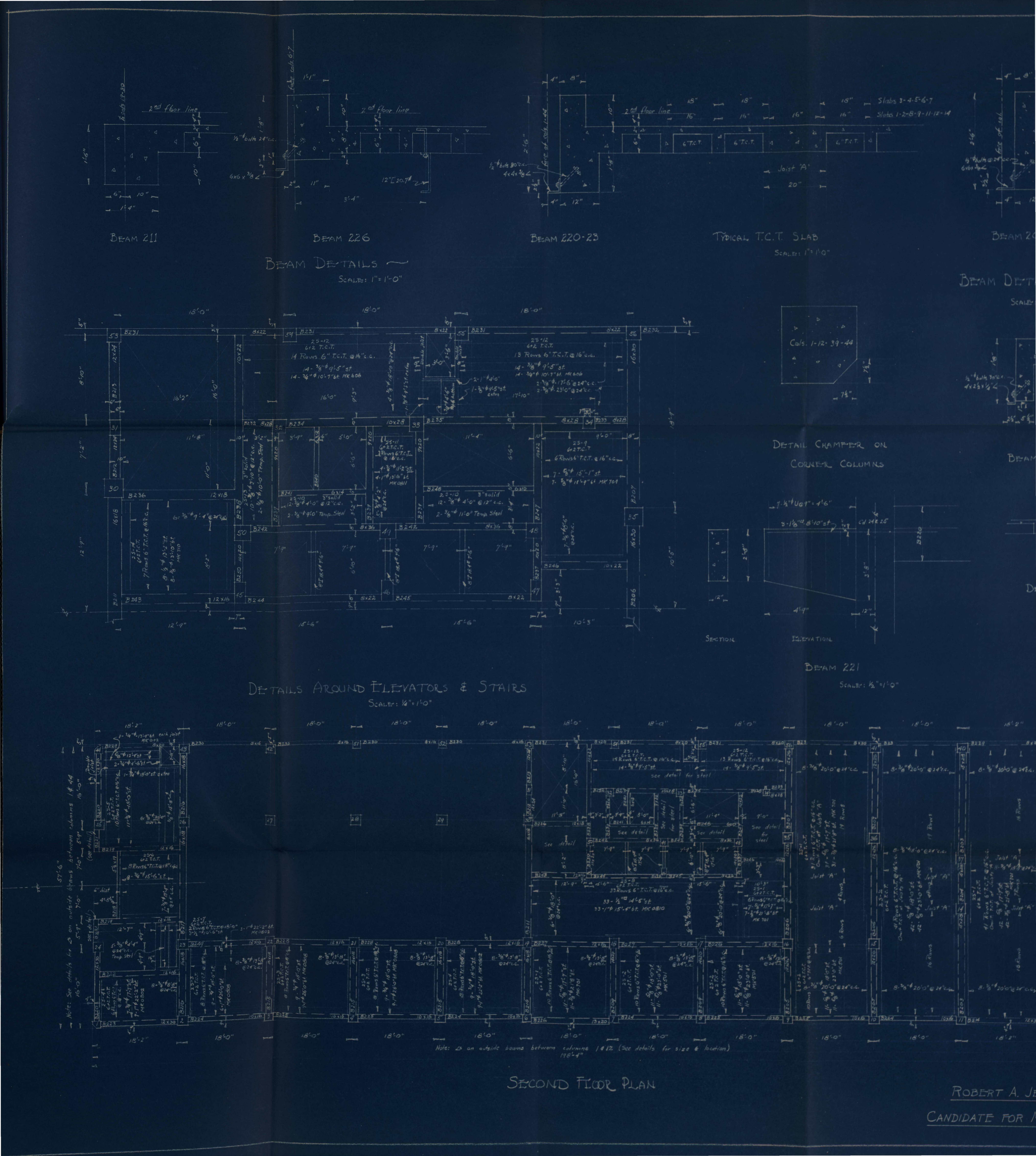
Candidate for M.S. in C.E.

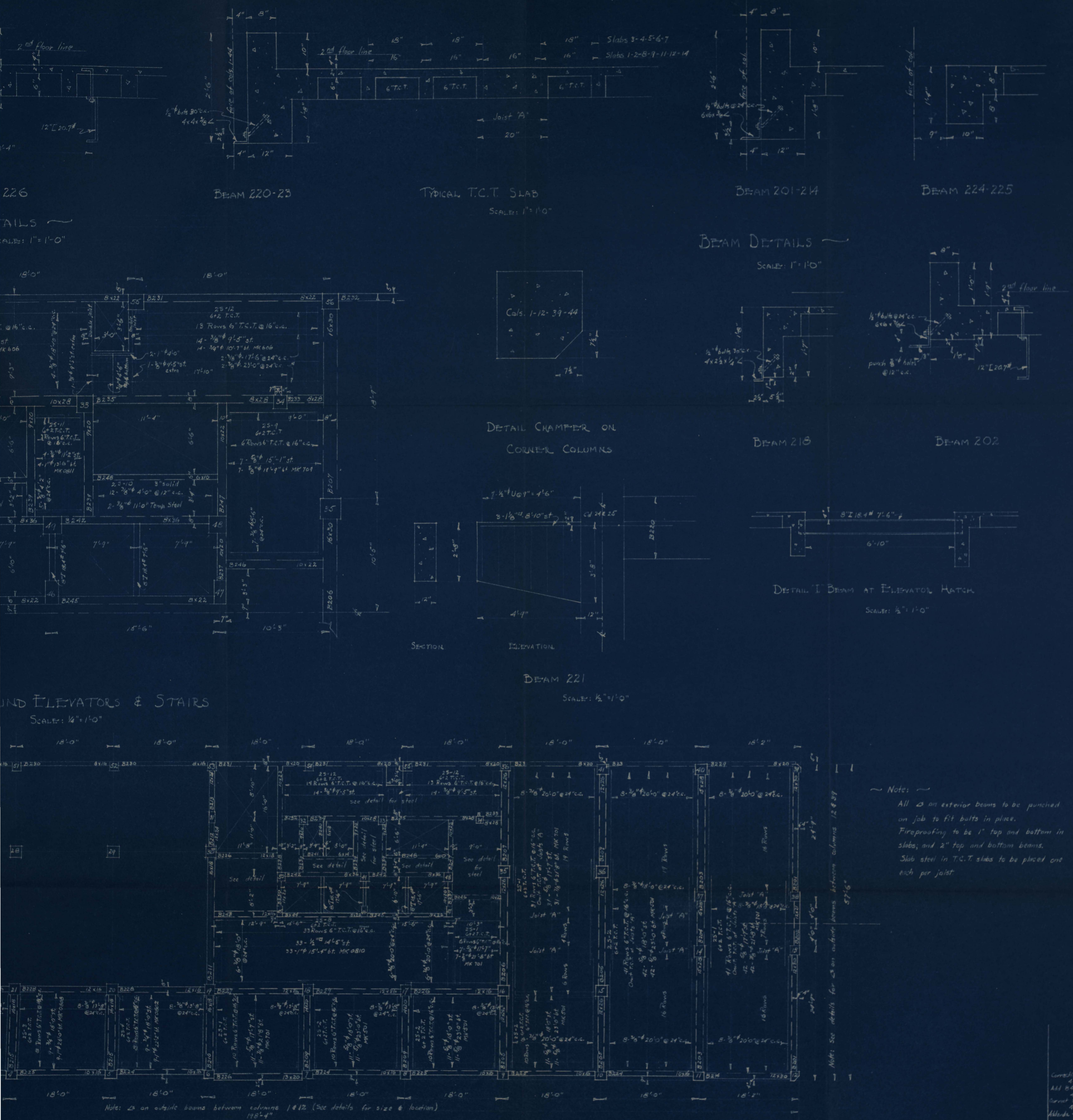
Add Typical Footing 4-30-34
Addenda 4-30-34
Revisions

Scale: 1/8" = 1'-0"	Footings	Date: 4-19-34
Bank and Office Building		
Drawn by R.A.J. / Traced by R.A.J. / Checked by J.L.S.	Georgia School of Technology	Job No. Thesis / Sheet 1 / Total Sheets 11


Detail of Brackets Cols. 1-24-25-44
Scale: 3/4" = 1'-0"
Section D-D
Scale: 3/4" = 1'-0"
Section E-E
Scale: 3/4" = 1'-0"
Note: Section G-G typical except B105 symmetrical about center line columns 6-19.
Details Around Stairs & Elevators
Scale: 1/4" = 1'-0"
First Floor Plan
Robe
Candida


SECTION D-D
SCALE: 3/4" = 1'-0"
SECTION E-E
SCALE: 3/4" = 1'-0"
Note: Section G-G typical except B105 symmetrical about center line columns 6-19.
SECTION H-H
SCALE: 3/4" = 1'-0"
...AILS AROUND STAIRS & ELEVATORS
SCALE: 1/4" = 1'-0"
FIRST FLOOR PLAN
2'-3" Vault Slab
See steel details by Herrin-Hall-Marvin Safe Company
Chase for fire plug
Corrections 4-30-34
Addenda 4-19-34
Addenda 4-10-34
Omit 5-19 4-10-34
Add B125 4-9-34
Add Slab 20 4-7-34
Revisions
Scale: 1/8" = 1'-0"
FIRST FLOOR PLAN
Date 4-7-34
BANK AND OFFICE BUILDING
Drawn by R.A.J.
Traced by R.A.J.
Checked
GEORGIA SCHOOL OF TECHNOLOGY
Job No. thesis
Sheet 2.
Total Sheets 11
ROBERT A. JEWETT
CANDIDATE FOR M.S. IN C.E.


BEAM 211
BEAM 226
BEAM 220-23
TYPICAL T.C.T. SLAB
SCALE: 1" = 1'-0"
BEAM DETAILS
SCALE: 1" = 1'-0"
DETAIL CHAMFER ON CORNER COLUMNS
Cols. 1-12-39-44
SECTION
ELEVATION
BEAM 221
SCALE: ½" = 1'-0"
DETAILS AROUND ELEVATORS & STAIRS
SCALE: ⅛" = 1'-0"
Note: ∠s on outside beams between columns 1 & 12 (See details for size & location)
SECOND FLOOR PLAN
ROBERT A. JE
CANDIDATE FOR M



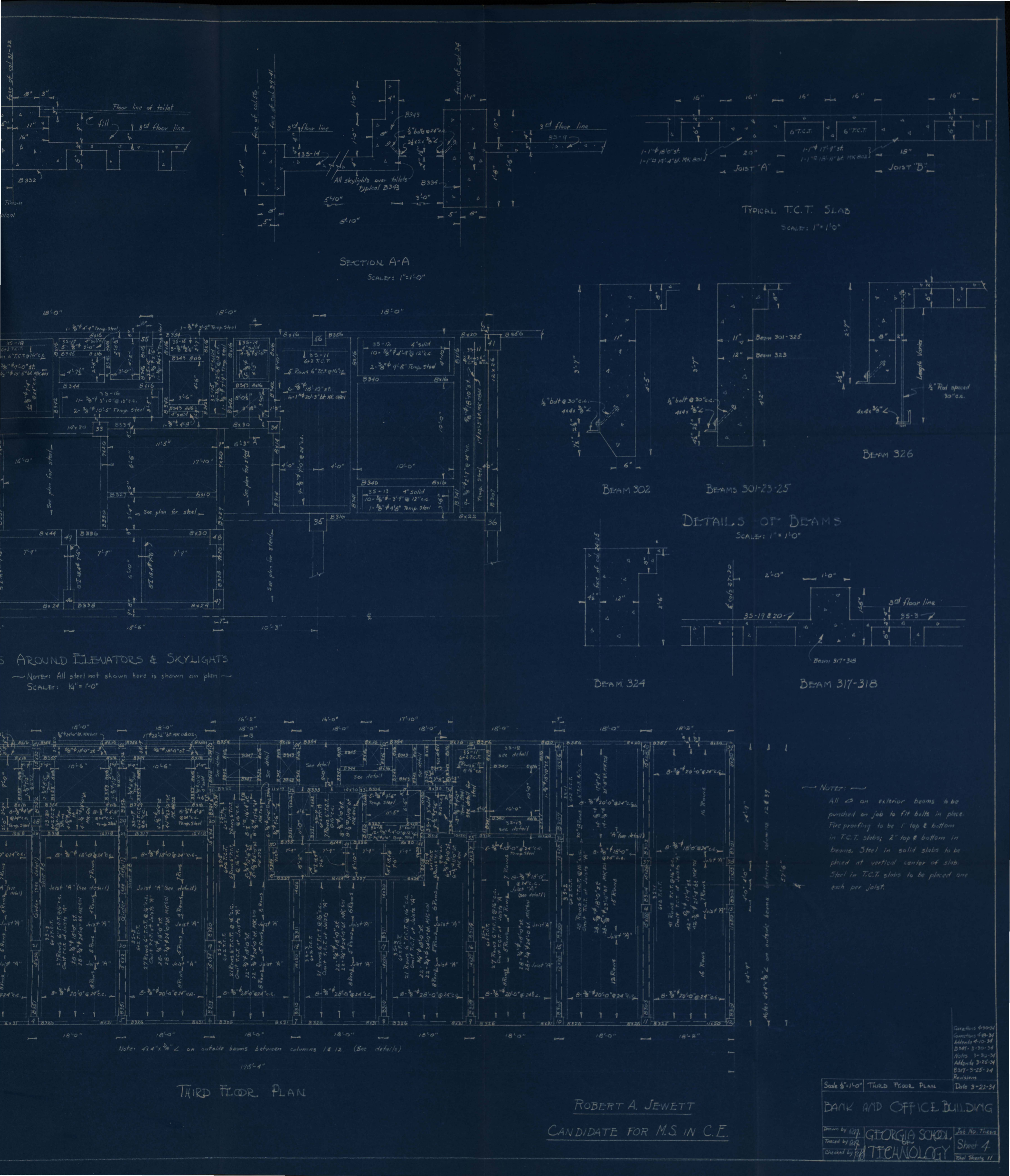
SECOND FLOOR PLAN

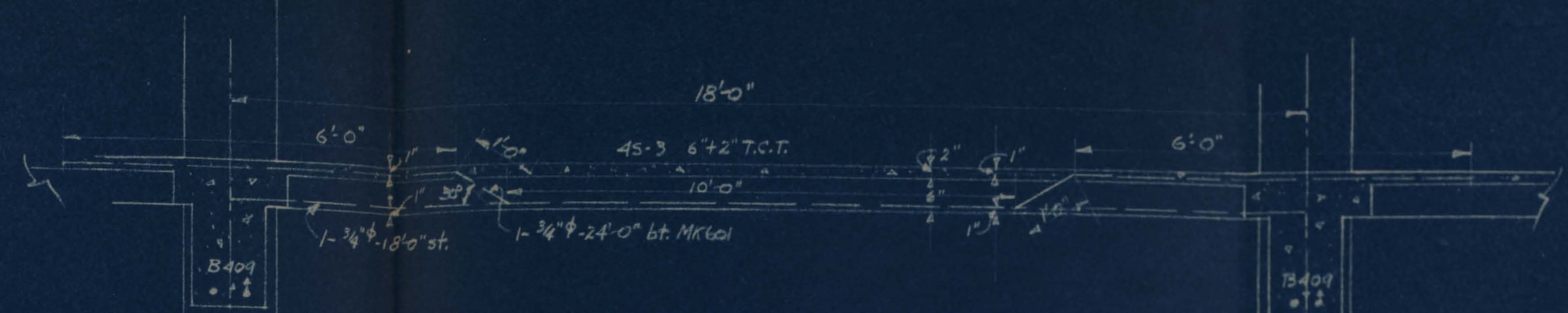
ROBERT A. JEWETT

CANDIDATE FOR M.S. IN C.E.

Corrections 4-30-34	Add B441-50 4-18-34	Revised Beam Nos. 4-18-34
Addenda 4-20-34	Revisions	
Scale 1/8"=1'-0"	Second Floor Plan	Date 3-26-34
Bank and Office Building		
Drawn by / Traced by / Checked by	Georgia School of Technology	Job No. Thesis; Sheet 3; Total Sheets 11

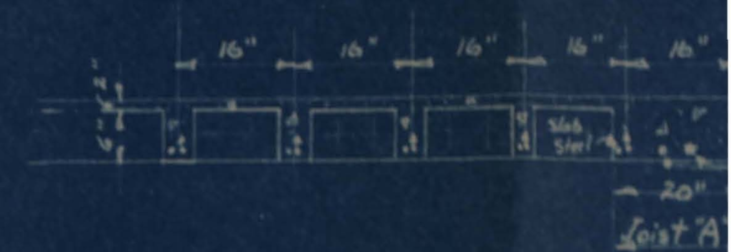
Note: Only beams around skylights over Banking Room and at Section B-B are splayed. B347 typical
~ SECTION B-B ~
SCALE: 1"=1'-0"
All skylights over toilets typical B349
SECTION A-A
SCALE: 1"=1'-0"
DETAILS AROUND ELEVATORS & SKYLIGHTS
~ NOTE: All steel not shown here is shown on plan ~
SCALE: 1/4"=1'-0"
Note: 4x4"x3/8" ∠ on outside beams between columns 1 & 12 (See details)
178'-4"
THIRD FLOOR PLAN


Section A-A
Scale: 1" = 1'-0"
Typical T.C.T. Slab
Scale: 1" = 1'-0"
Joist "A"
Joist "B"
Beam 302
Beams 301-23-25
Beam 326
Details of Beams
Scale: 1" = 1'-0"
Beam 324
Beam 317-318
Around Elevators & Skylights
— Note: All steel not shown here is shown on plan —
Scale: 1/4" = 1'-0"
Note: 4"x4"x3/8" ∠ on outside beams between columns 1 & 12 (See details)
Third Floor Plan
— Notes: —
All ⊿ on exterior beams to be punched on job to fit bolts in place. Fire proofing to be 1" top & bottom in T.C.T. slabs; 2" top & bottom in beams. Steel in solid slabs to be placed at vertical center of slab. Steel in T.C.T. slabs to be placed one each per joist.
Robert A. Jewett
Candidate for M.S. in C.E.
Corrections 4-30-34
Corrections 4-18-34
Addenda 4-10-34
B347 - 3-30-34
Notes 3-30-34
Addenda 3-26-34
B317 - 3-25-34
Revisions
Scale 1/8" = 1'-0"
Third Floor Plan
Date 3-22-34
Bank and Office Building
Drawn by R.A.J.
Traced by R.A.J.
Checked by R.A.J.
Georgia School of Technology
Job No. Thesis
Sheet 4
Total Sheets 11



Typical Bar Bending for Slabs

Scale: 1/2" = 1'-0"

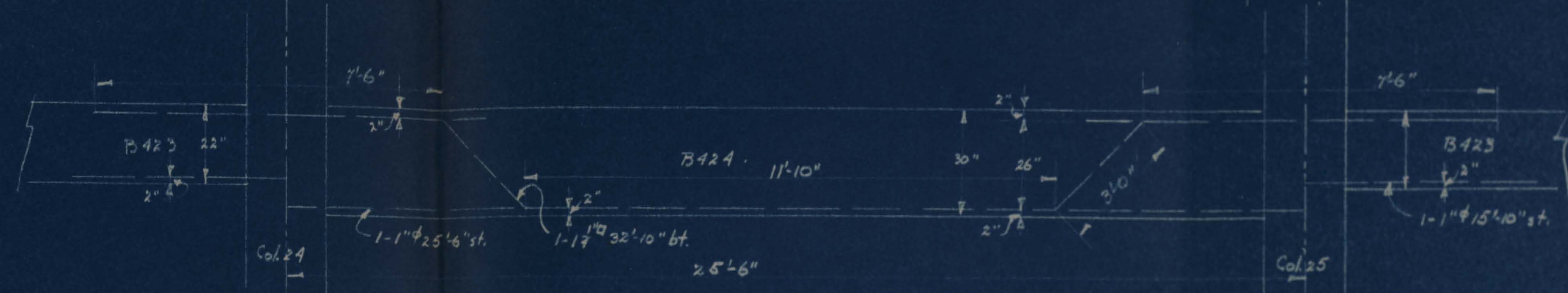


Typical 6" T.C.T. S…

See Pla…

Scale…

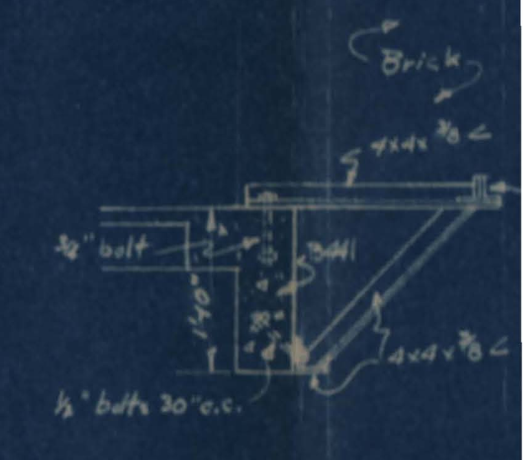
Notes:…



Detail Bar Bending Beam 424

Scale: 3/8" = 1'-0"

Fireproofing Typical in All Beams



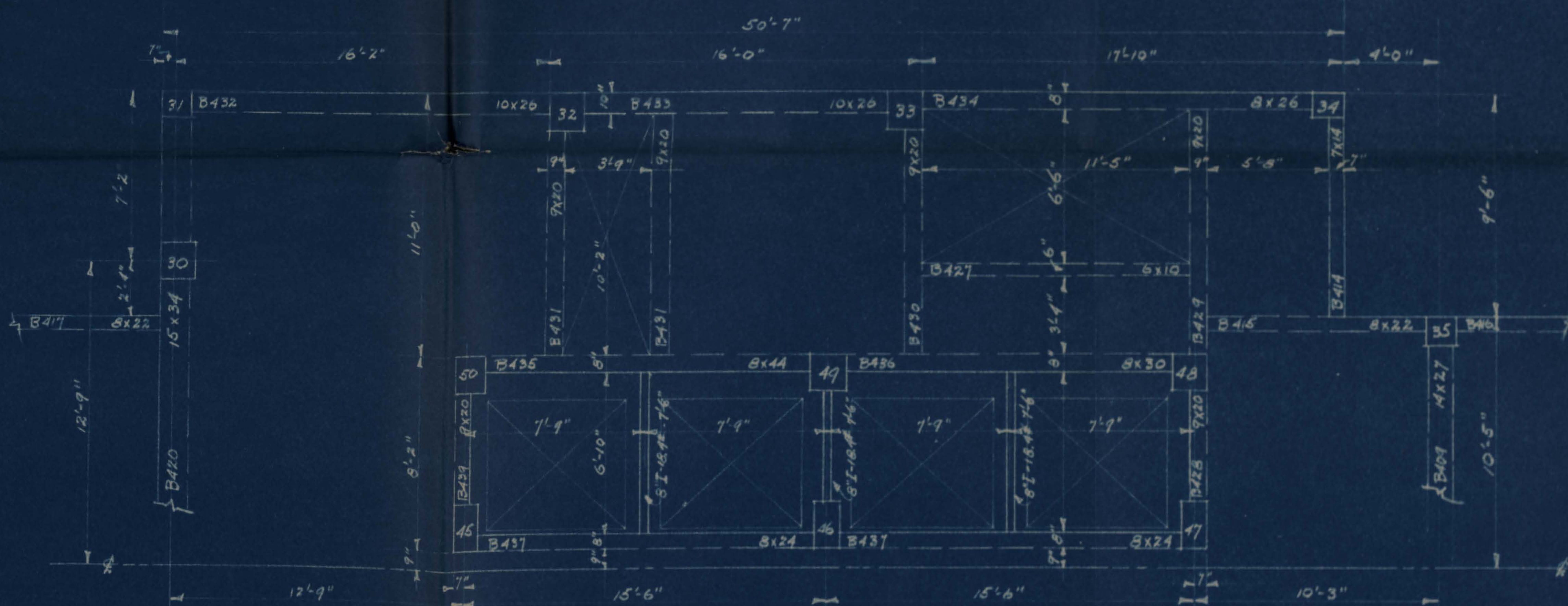
Elevation

Detail of Br…

adjoining…

Make flue…

Provide on…



Details Around Elevators & Stairs

~ Note: All Steel for Slabs Shown on Plan ~

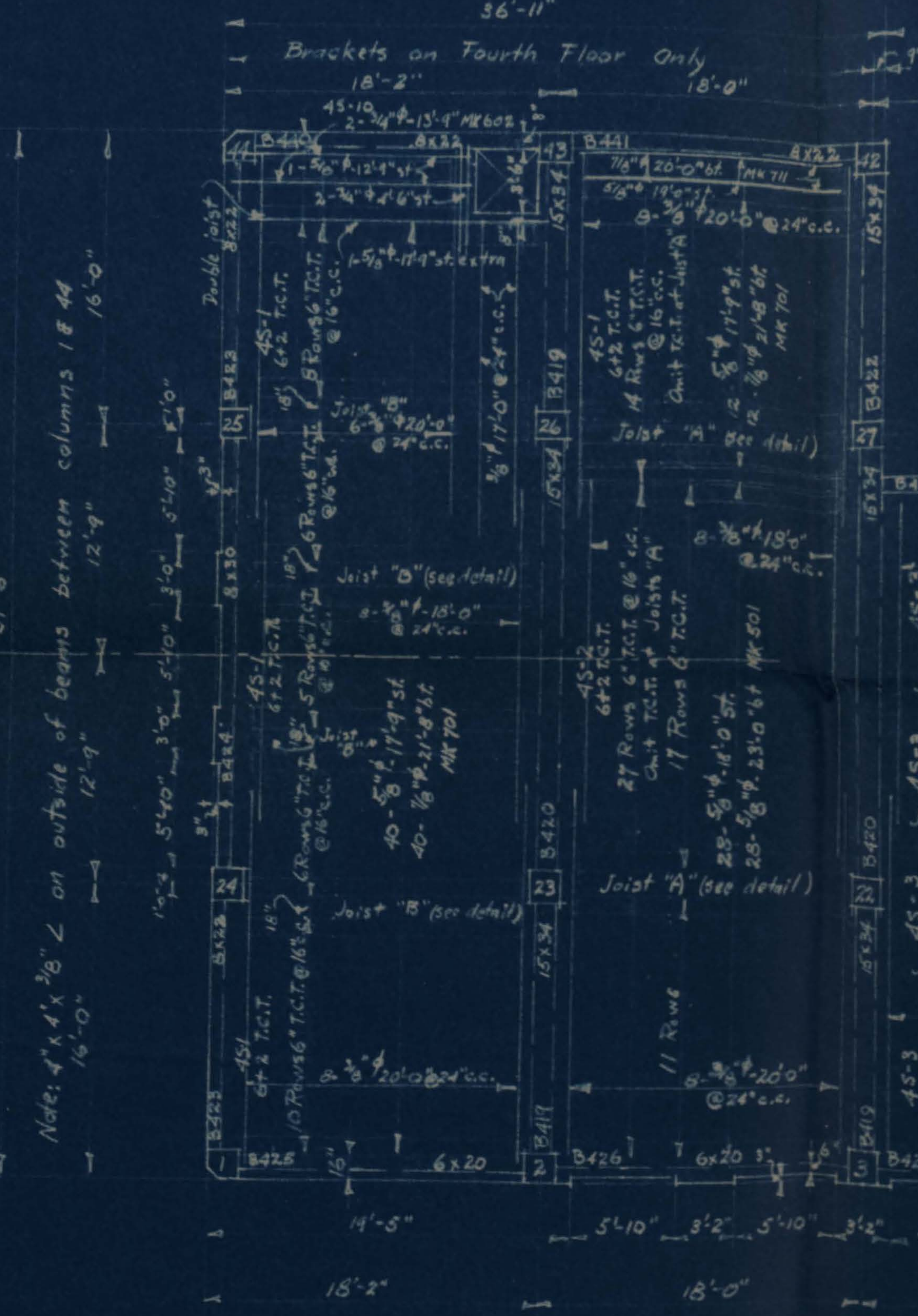
Scale: 1/4" = 1'-0"

Detail Beams 402…

& Beam 401 for 6'-1"…

Cols. 13 & 38.

Scale: 1" = 1'0"



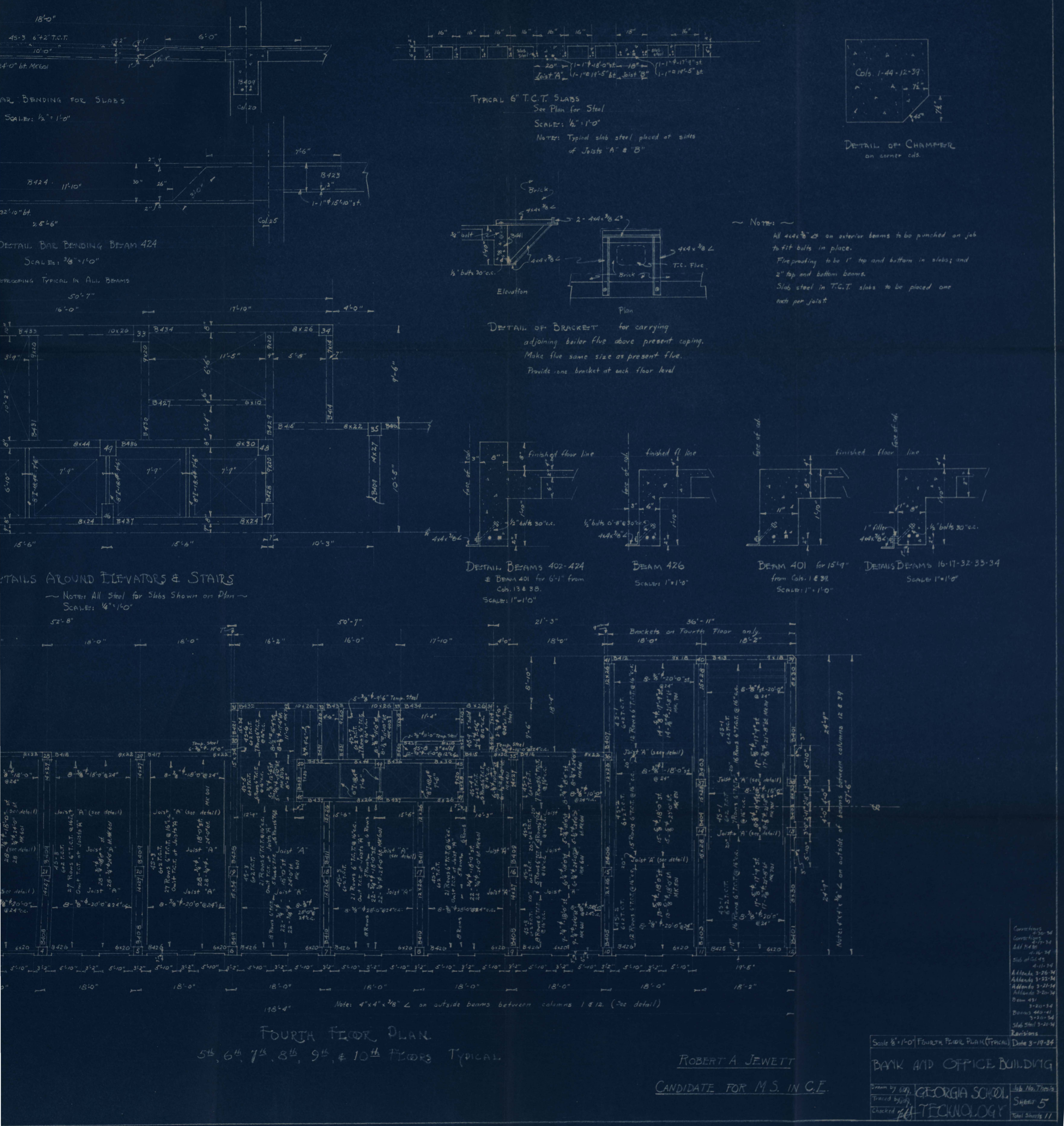
Brackets on Fourth Floor Only

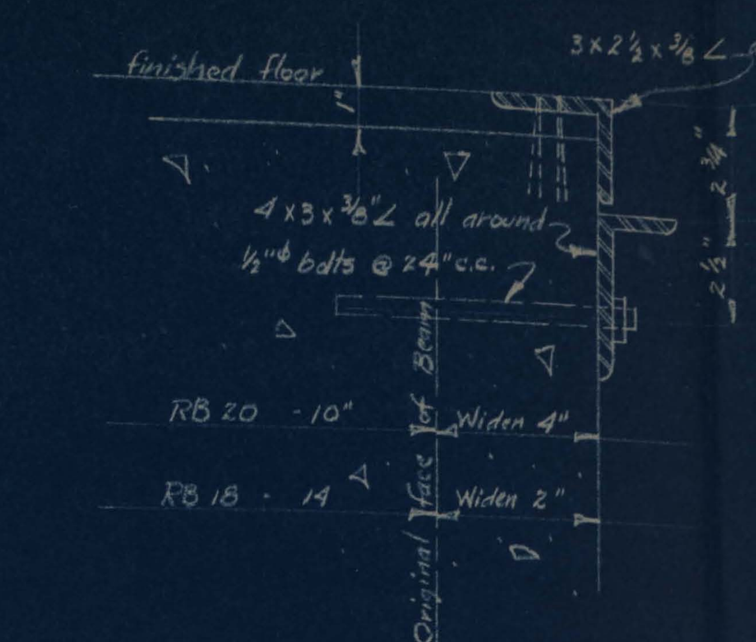
Note: 4"x4"x3/8" ∠ on outside of beams between columns 1 & 44

Note: 4"x4"x3/8" ∠ on outside beams between colum…

Fourth Floor Plan

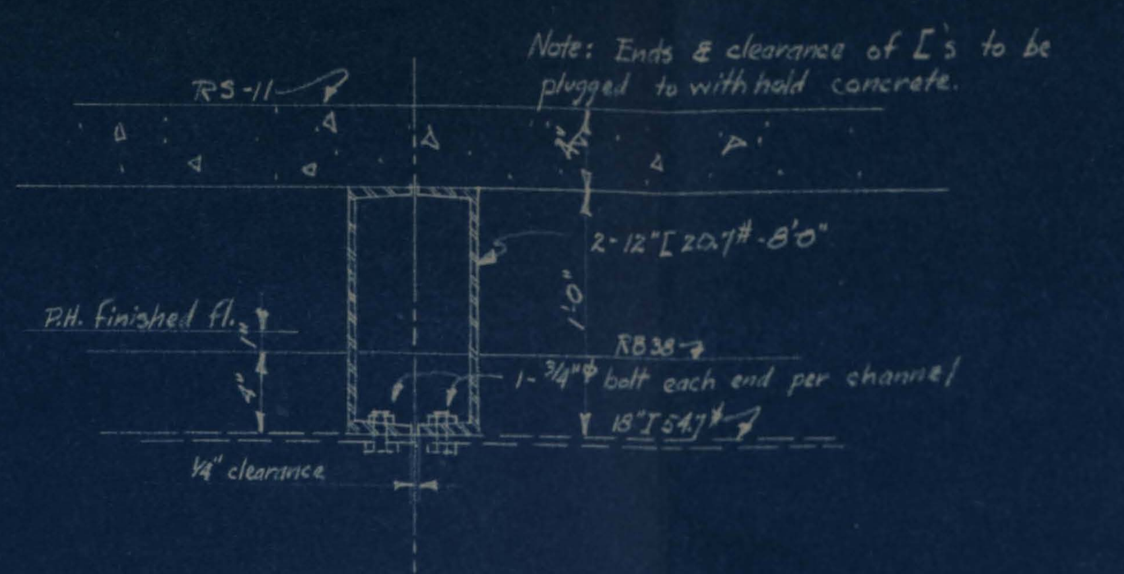
5th, 6th, 7th, 8th, 9th, & 10th Floors Typical


Bar Bending for Slabs
Scale: 1/2" = 1'-0"
Typical 6" T.C.T. Slabs
See Plan for Steel
Scale: 1/2" = 1'-0"
Note: Typical slab steel placed at sides of Joists "A" & "B"
Detail of Chamfer
on corner cols.
Cols. 1-44-12-39
Detail Bar Bending Beam 424
Scale: 3/8" = 1'-0"
Fireproofing Typical in All Beams
~ Note: ~
All 4x4x3/8 ∠s on exterior beams to be punched on job to fit bolts in place.
Fireproofing to be 1" top and bottom in slabs; and 2" top and bottom beams.
Slab steel in T.C.T. slabs to be placed one inch per joist.
Elevation
Plan
Detail of Bracket for carrying adjoining boiler flue above present coping.
Make flue same size as present flue.
Provide one bracket at each floor level
Details Around Elevators & Stairs
~ Note: All Steel for Slabs Shown on Plan ~
Scale: 1/4" = 1'-0"
Detail Beams 402-424 & Beam 401 for 6'-1" from Cols. 13 & 38.
Scale: 1" = 1'-0"
Beam 426
Scale: 1" = 1'-0"
Beam 401 for 15'-9" from Cols. 1 & 38
Scale: 1" = 1'-0"
Details Beams 16-17-32-33-34
Scale: 1" = 1'-0"
Brackets on Fourth Floor only.
Note: 4" x 4" x 3/8" ∠ on outside beams between columns 1 & 12. (See detail)
Fourth Floor Plan
5th, 6th, 7th, 8th, 9th, & 10th Floors Typical
Robert A Jewett
Candidate for M.S. in C.E.
Revisions
Scale 1/8" = 1'-0"
Fourth Floor Plan (Typical)
Date 3-19-34
Bank and Office Building
Georgia School Technology
Job No. Thesis
Sheet 5
Total Sheets 11



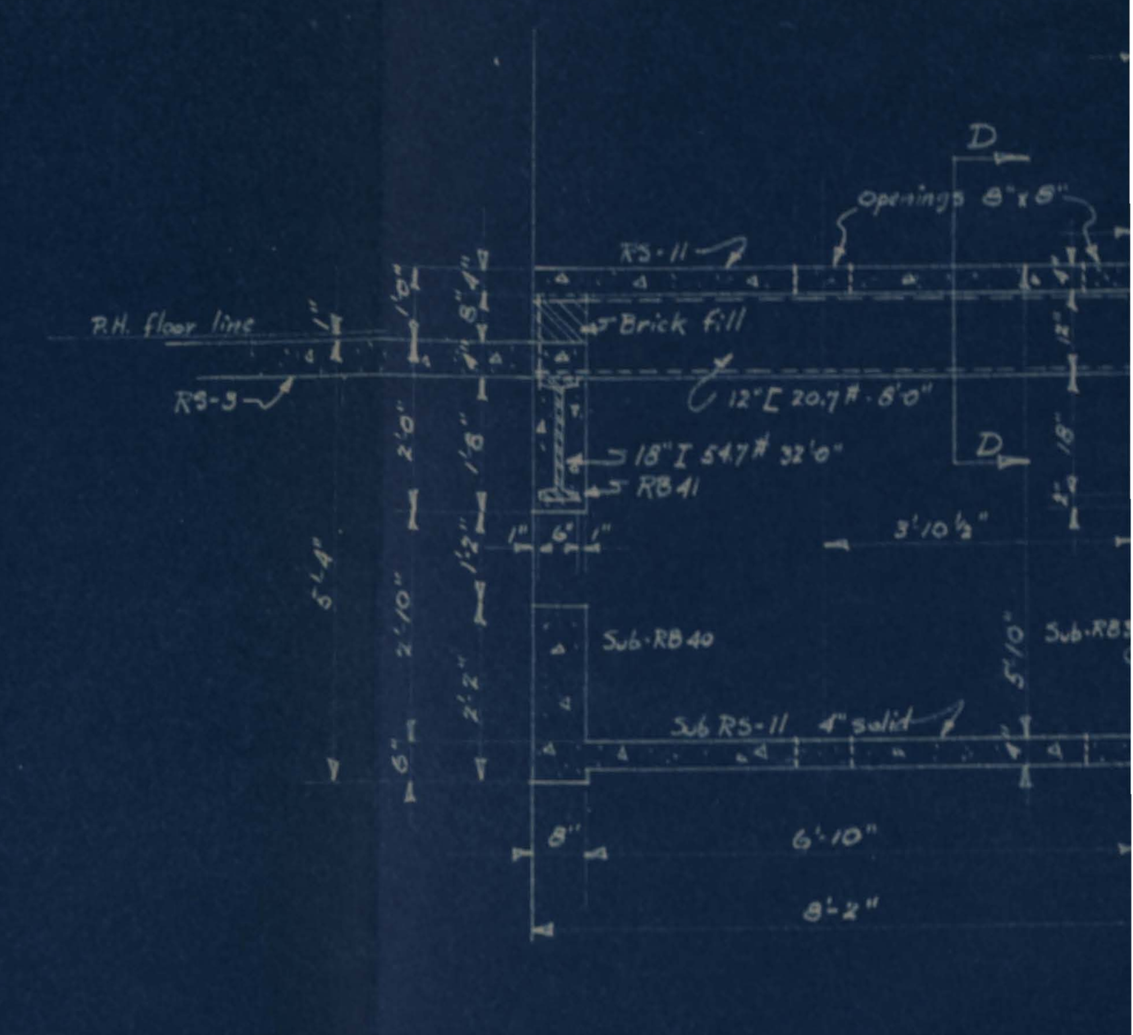
DETAIL AROUND TRAP DOOR

SCALE: 3" = 1'-0"



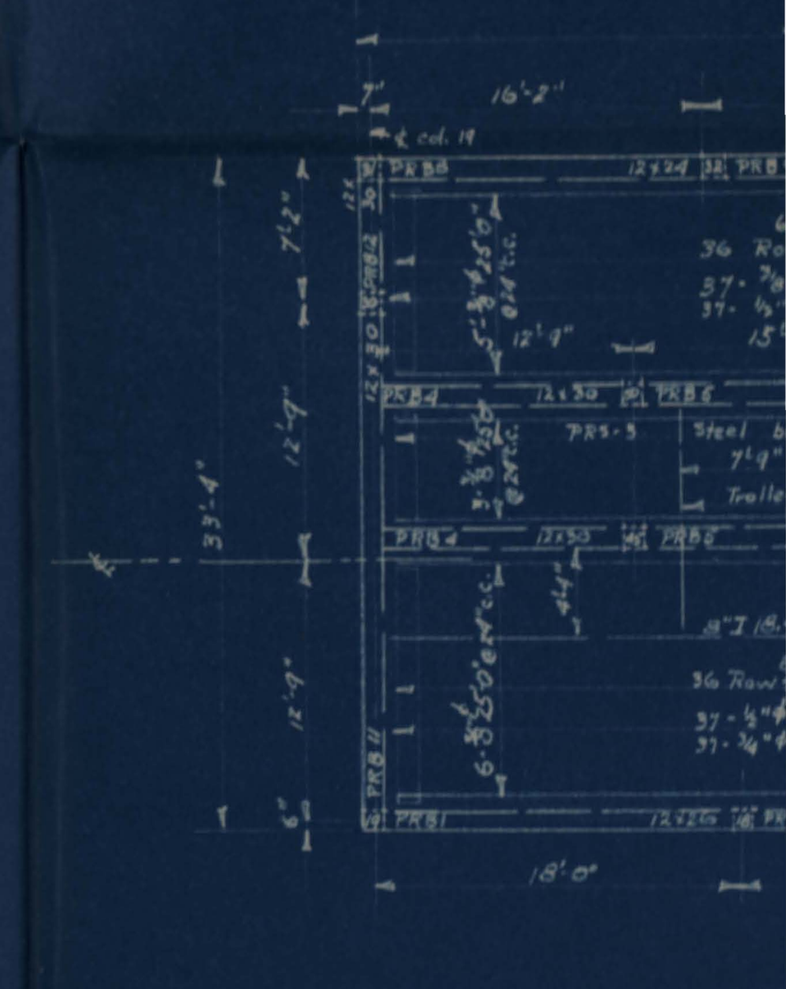
SECTION D-D

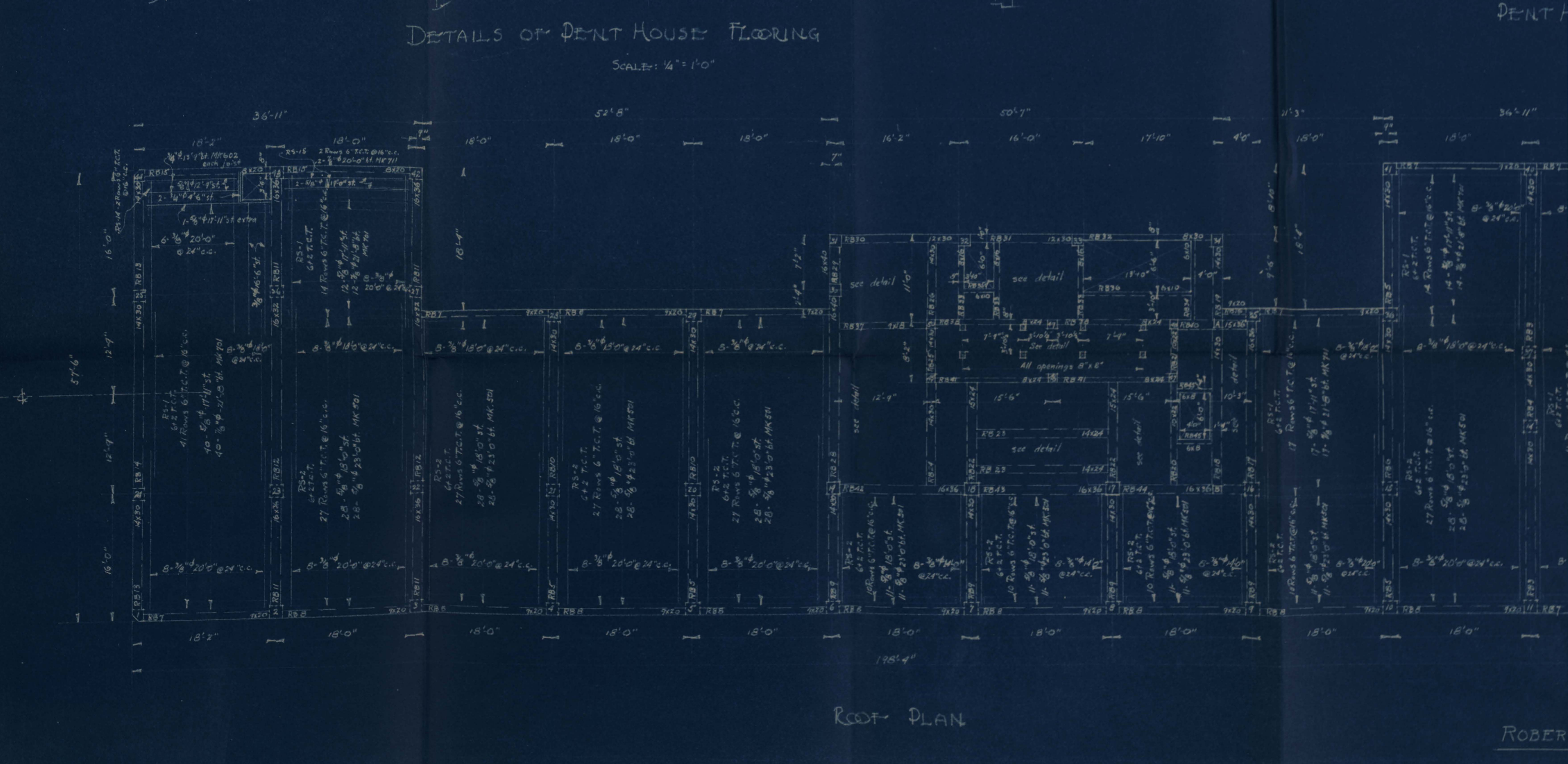
SCALE: 1½" = 1'-0"



DETAILS OF PENT HOUSE FLOORING

SCALE: ¼" = 1'-0"

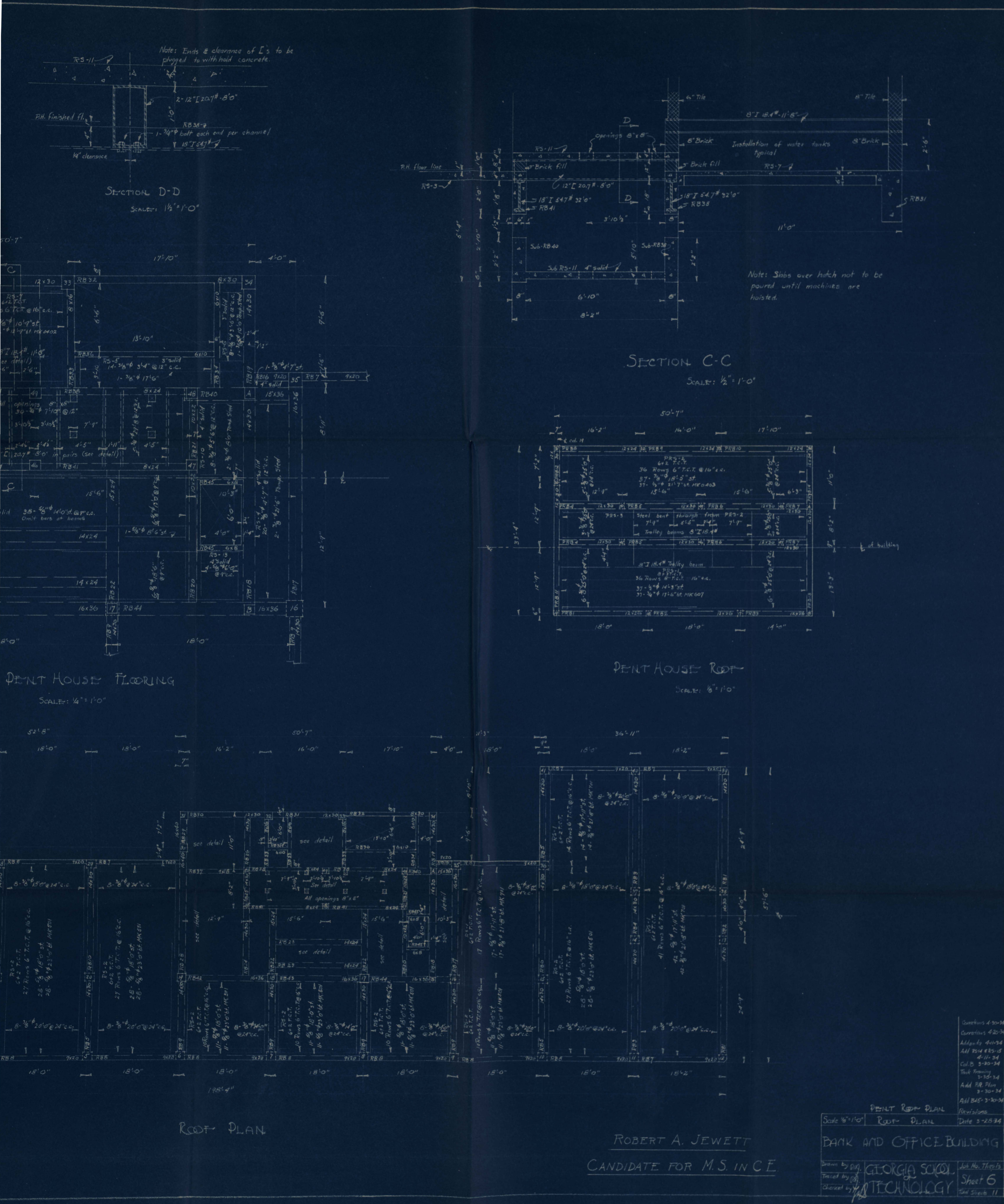




ROOF PLAN

ROBER

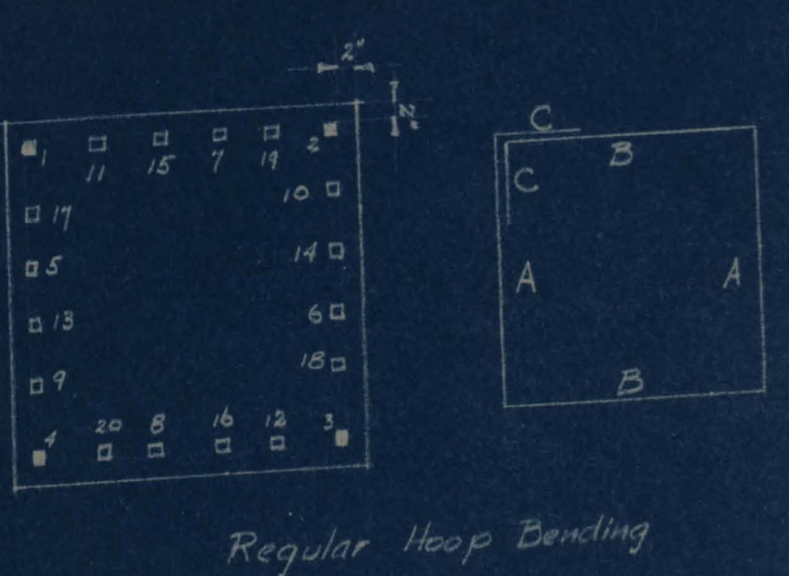
CANDIDATE


Note: Ends & clearance of ['s to be plugged to withhold concrete.
SECTION D-D
SCALE: 1½" = 1'-0"
Note: Slabs over hatch not to be poured until machines are hoisted.
SECTION C-C
SCALE: ½" = 1'-0"
PENT HOUSE FLOORING
SCALE: ¼" = 1'-0"
PENT HOUSE ROOF
SCALE: ⅛" = 1'-0"
ROOF PLAN
ROBERT A. JEWETT
CANDIDATE FOR M.S. IN C.E.
PENT ROOF PLAN
Scale ⅛" = 1'-0"
ROOF PLAN
Revisions
Date 3-28-34
BANK AND OFFICE BUILDING
Drawn by
Traced by
Checked by
GEORGIA SCHOOL of TECHNOLOGY
Job No. Thesis
Sheet 6
Total Sheets 11

— COLUMN SCHEDULE

COL. NUMBERS	1-44	2-3, 4-5, 6	7-8, 9-10	22-23, 26	13-38	14-37	15-16	17-18	19-20, 21	24-25
SUPPORTING PENT HOUSE ROOF										
COL. SIZE / VERT. STEEL / HOOPING								12"x12" 4-1/2"φ15'6" 22-1/4"φ3'4" MK 201	19 only 12"x12" 4-1/2"φ15'6" 22-1/4"φ3'4" MK 201	
SUPPORTING ROOF										
COL. SIZE / VERT. STEEL / HOOPING	15"x15" 4-1/2"□15'3" 22-1/4"φ4'4" MK 210	14"x14" 4-5/8"φ15'3" 22-1/4"φ4'0" MK 202	14"x14" 4-5/8"φ15'3" 22-1/4"φ4'0" MK 202	14"x14" 4-5/8"φ15'3" 22-1/4"φ4'0" MK 202	14"x14" 4-5/8"φ15'3" 22-1/4"φ4'0" MK 202	14"x14" 4-5/8"φ15'3" 22-1/4"φ4'0" MK202	14"x14" 4-5/8"φ15'3" 22-1/4"φ4'0" MK202	14"x14" 4-3/4"φ17'6" 22-1/4"φ4'0" MK 202	14"x14" Col. 19 4-3/4"φ17'6" Col. 20-21 4-5/8"φ15'3" 22-1/4"φ4'0" MK202	14"x14" 4-5/8"φ15'3" 22-1/4"φ4'0" MK202
SUPPORTING 10TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	15"x15" 4-5/8"φ13'0" 15-1/4"φ4'4" MK210	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	16"x16" 4-1"φ13'6" 15-1/4"φ4'8" MK203	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202
SUPPORTING 9TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	15"x15" 4-7/8"φ13'3" 15-1/4"φ4'4" MK210	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	16"x16" 6-1"□13'6" 15-1/4"φ4'8" MK203	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	14"x14" 4-1"□13'6" 15-1/4"φ4'0" MK202	14"x14" 6-1"□13'6" 15-1/4"φ4'0" MK202	16"x16" 4-1"□13'6" 15-1/4"φ4'8" MK203	14"x14" 6-1"□13'6" 15-1/4"φ4'0" MK202	14"x14" 4-1"□13'6" 15-1/4"φ4'0" MK202
SUPPORTING 8TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	16"x16" 4-7/8"φ13'3" 15-1/4"φ4'8" MK211	14"x14" 6-1"□13'6" 15-1/4"φ4'0" MK202	14"x14" 6-1"□13'6" 15-1/4"φ4'0" MK202	18"x18" 8-1"□13'6" 15-1/4"φ5'4" MK204	14"x14" 6-1"□13'6" 15-1/4"φ4'0" MK202	16"x16" 8-1"□13'6" 15-1/4"φ4'8" MK203	16"x16" 8-1"□13'6" 15-1/4"φ4'8" MK203	16"x16" 8-1"□13'6" 15-1/4"φ4'8" MK203	16"x16" 8-1"□13'6" 15-1/4"φ4'8" MK203	16"x16" 8-1"□13'6" 15-1/4"φ4'8" MK203
SUPPORTING 7TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	16"x16" 4-1"φ13'6" 15-1/4"φ4'8" MK 211	16"x16" 6-1"□13'6" 15-1/4"φ4'8" MK203	16"x16" 6-1"□13'6" 15-1/4"φ4'8" MK203	18"x18" 12-1"□13'6" 15-1/4"φ5'4" MK204	16"x16" 6-1"□13'6" 15-1/4"φ4'8" MK203	18"x18" 10-1"□13'6" 15-1/4"φ5'4" MK204	18"x18" 10-1"□13'6" 15-1/4"φ5'4" MK204	18"x18" 8-1"□13'6" 15-1/4"φ5'4" MK204	18"x18" 10-1"□13'6" 15-1/4"φ5'4" MK204	18"x18" 10-1"□13'6" 15-1/4"φ5'4" MK204
SUPPORTING 6TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	16"x16" 4-1"□13'6" 15-1/4"φ4'8" MK211	16"x16" 8-1"□13'6" 15-1/4"φ4'8" MK203	16"x16" 8-1"□13'6" 15-1/4"φ4'8" MK203	20"x20" 14-1"□13'6" 15-1/4"φ6'0" MK208	16"x16" 8-1"□13'6" 15-1/4"φ4'8" MK203	18"x18" 12-1"□13'6" 15-1/4"φ5'4" MK204	20"x20" 10-1"□13'6" 15-1/4"φ6'0" MK208	18"x18" 8-1"□13'6" 15-1/4"φ5'4" MK204	20"x20" 10-1"□13'6" 15-1/4"φ6'0" MK208	18"x18" 12-1"□13'6" 15-1/4"φ5'4" MK204
SUPPORTING 5TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	16"x16" 4-1"□-13'6" 15-1/4"φ4'8" MK 211	16"x16" 4-1"□-13'6" 60-1/4"φ3'5" @2"c.c. MK220	16"x16" 4-1"□-13'6" 60-1/4"φ3'5" @2"c.c. MK220	20"x20" 10-1"□13'6" 50-3/8"φ4'5" @2½"c.c. MK 321	16"x16" 10-1"□13'6" 15-1/4"φ4'8" MK203	18"x18" 8-1"□13'6" 50-3/8"φ3'11" @2½"c.c. MK 322	20"x20" 8-1"□13'6" 50-3/8"φ4'5" @2½"c.c. MK 321	18"x18" 10-1"□13'6" 15-1/4"φ5'4" MK204	20"x20" 8-1"□13'6" 50-3/8"φ4'5" @2½"c.c. MK321	18"x18" 8-1"□13'6" 50-3/8"φ3'11" @2½"c.c. MK322
SUPPORTING 4TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	18"x18" 4-1"□-13'6" 15-1/4"φ5'4" MK 213	16"x16" 6-1"□-13'6" 40-3/8"φ3'5" @3"c.c. MK 323	16"x16" 6-1"□13'6" 40-3/8"φ3'5" @3"c.c. MK 323	22"x22" 12-1"□13'6" 50-3/8"φ5'0" @2½"c.c. MK 325	18"x18" 10-1"□13'6" 15-1/4"φ5'4" MK204	18"x18" 10-1"□13'6" 55-3/8"φ3'11" @2½"c.c. MK. 322	22"x22" 10-1"□13'6" 50-3/8"φ5'0" @2½"c.c. MK 325	18"x18" 6-1"□13'6" 40-3/8"φ3'11" @3"c.c. MK 322	22"x22" 10-1"□13'6" 50-3/8"φ5'0" @2½"c.c. MK 325	18"x18" 10-1"□13'6" 55-3/8"φ3'11" @2½"c.c. MK. 322
SUPPORTING 3RD FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	18"x18" 6-1"□15'10" 15-1/4"φ5'4" MK213	18"x18" 6-1"□-15'10" 50-3/8"φ3'11" @3"c.c. MK 322	18"x18" 6-1"□15'10" 50-3/8"φ3'11" @3"c.c. MK 322	24"x24" 14-1"□15'10" 50-1/2"φ5'6" @3"c.c. MK 0481	18"x18" 12-1"□15'10" 18-1/4"φ5'4" MK 204	20"x20" 10-1"□15'10" 60-3/8"φ4'5" @2½"c.c. MK 321	22"x22" 12-1"□15'10" 50-3/8"φ5'0" @3"c.c. MK325	20"x20" 8-1"□15'10" 50-3/8"φ4'5" @3"c.c. MK 321	24"x24" 12-1"□15'10" 50-1/2"φ5'6" @3"c.c. MK0481	20"x20" 10-1"□15'10" 60-3/8"φ4'5" @2½"c.c. MK 321
SUPPORTING 2ND FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	18"x18" 8-1"□14'6" 21-1/4"φ5'4" MK 213	18"x18" 8-1"□-14'6" 54-3/8"φ3'11" @3"c.c. MK 322	18"x18" 8-1"□15'10" 54-3/8"φ3'11" @3"c.c. MK 322 Cols. 9-10 Dowels 8-1"□12'0" Cols 7-8	24"x24" 16-1"□14'4" 54-1/2"φ5'6" @3"c.c. MK0481	20"x20" 12-1"□15'6" 18-1/4"φ6'0" MK 208	22"x22" 12-1"□15'6" 75-3/8"φ5'0" @2"c.c. MK 325 Dowels 12-1"□12'0"	24"x24" 12-1"□15'6" 50-1/2"φ5'6" @3"c.c. MK 0481 Dowels 12-1"□12'0"	20"x20" 10-1"□14'4" 45-3/8"φ4'5" @3"c.c. MK321	24"x24" 14-1"□15'6" 52-1/2"φ5'6" @3"c.c. MK 0481	22"x22" 12-1"□14'4" 65-3/8"φ5'0" @2"c.c. MK 325
SUPPORTING 1ST FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	20"x20" Col-1 8-1"□14'9" Col-44 8-1"□20'9" Col-1 18-1/4"φ6'0" Col-44 27-1/4"φ6'0" MK 208	20"x20" 10-1"□14'9" 36-3/8"φ4'5" @3"c.c. MK 321	20"x20" 10-1"□14'9" 36-3/8"φ4'5" @3"c.c. MK 321	26"x26" Col. 22 18-1"□14'9" Col. 23-26 18-1"□-20'9" Col. 22 58-1/2"φ6'0" @2½"c.c. Col. 23-26 86-1/2"φ6'0" @2½"c.c. MK0480	20"x20" 14-1"□13'6" 15-1/4"φ6'0" MK208	Omit steel in Vault walls	Omit column steel in Vault walls	22"x22" 12-1"□14'9" 45-3/8"φ5'0" @3"c.c. MK 325	26"x26" 16-1"□14'9" 45-1/2"φ6'0" @3"c.c. MK0480	24"x24" 14-1"□20'9" 75-1/2"φ5'6" @3"c.c. MK0481
DOWELS	8-1"□-12'0"	10-1"□12'0"	10-1"□12'0"	18-1"□12'0"	14-1"□12'0"	12-1"□12'0"	14-1"□12'0"	12-1"□12'0"	16-1"□12'0"	14-1"□12'6"

COL. NUMBERS	27	28-29	30	32-33	31	34	36	12-39	11-40	41
SUPPORTING PENT HOUSE ROOF										
COL. SIZE / VERT. STEEL / HOOPING			12"x12" 4-1/2"φ15'6" 22-1/4"φ3'4" MK 201	12"x12" 4-1/2"φ15'6" 22-1/4"φ3'4" MK 201	12"x12" 4-1/2"φ15'6" 22-1/4"φ3'4" MK 201	12"x12" 4-1/2"φ15'6" 22-1/4"φ3'4" MK201				
SUPPORTING ROOF										
COL. SIZE / VERT. STEEL / HOOPING	14"x14" 4-5/8"φ15'3" 22-1/4"φ4'0" MK202	14"x14" 4-5/8"φ15'3" 22-1/4"φ4'0" MK202	14"x14" 4-3/4"φ17'6" 22-1/4"φ4'0" MK 202	14"x14" 4-3/4"φ17'6" 22-1/4"φ4'0" MK202	14"x14" 4-3/4"φ17'6" 22-1/4"φ4'0" MK202	14"x14" 4-3/4"φ17'6" 22-1/4"φ4'0" MK202	14"x14" 4-5/8"φ15'3" 22-1/4"φ4'0" MK202	15"x15" 4-1/2"□15'3" 22-1/4"φ4'4" MK210	14"x14" 4-5/8"φ15'3" 22-1/4"φ4'0" MK202	14"x14" 4-5/8"φ15'3" 22-1/4"φ4'0" MK202
SUPPORTING 10TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	15"x15" 4-5/8"φ13'0" 15-1/4"φ4'4" MK210	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202
SUPPORTING 9TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	16"x16" 6-1"□13'6" 15-1/4"φ4'8" MK203	14"x14" 4-1"□13'6" 15-1/4"φ4'0" MK 202	14"x14" 4-1"φ13'6" 15-1/4"φ4'0" MK202	14"x14" 4-1"φ13'6" 15-1/4"φ4'0" MK202	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	16"x16" 6-1"□13'6" 15-1/4"φ4'8" MK203	15"x15" 4-7/8"φ13'3" 15-1/4"φ4'4" MK210	14"x14" 6-1"□13'6" 15-1/4"φ4'0" MK202	14"x14" 4-3/4"φ13'0" 15-1/4"φ4'0" MK202
SUPPORTING 8TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	18"x18" 10-1"□13'6" 15-1/4"φ5'4" MK204	16"x16" 6-1"□13'6" 15-1/4"φ4'8" MK203	16"x16" 6-1"□13'6" 15-1/4"φ4'8" MK 203	14"x14" 6-1"□13'6" 15-1/4"φ4'0" MK202	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	18"x18" 10-1"□13'6" 15-1/4"φ5'4" MK204	16"x16" 4-7/8"φ13'3" 15-1/4"φ4'8" MK211	16"x16" 8-1"□13'6" 15-1/4"φ4'8" MK203	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202
SUPPORTING 7TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	18"x18" 14-1"□13'6" 15-1/4"φ5'4" MK204	18"x18" 8-1"□13'6" 15-1/4"φ5'4" MK204	16"x16" 8-1"□13'6" 15-1/4"φ4'8" MK203	16"x16" 6-1"□13'6" 15-1/4"φ4'8" MK203	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	18"x18" 14-1"□13'6" 15-1/4"φ5'4" MK204	16"x16" 4-1"φ13'6" 15-1/4"φ4'8" MK 211	18"x18" 12-1"□13'6" 15-1/4"φ5'4" MK204	14"x14" 6-1"□13'6" 15-1/4"φ4'0" MK202
SUPPORTING 6TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	20"x20" 16-1"□13'6" 15-1/4"φ6'0" MK208	20"x20" 12-1"□13'6" 15-1/4"φ6'0" MK208	18"x18" 8-1"□13'6" 15-1/4"φ5'4" MK204	16"x16" 6-1"□13'6" 15-1/4"φ4'8" MK 203	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	14"x14" 4-7/8"φ13'3" 15-1/4"φ4'0" MK202	20"x20" 16-1"□13'6" 15-1/4"φ6'0" MK 208	16"x16" 4-1"□13'6" 15-1/4"φ4'8" MK 211	20"x20" 12-1"□13'6" 15-1/4"φ6'0" MK208	16"x16" 6-1"□13'6" 15-1/4"φ4'8" MK203
SUPPORTING 5TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	20"x20" 10-1"□13'6" 50-3/8"φ4'5" @2½"c.c. MK 321	20"x20" 8-1"□13'6" 50-3/8"φ4'5" @2½"c.c. MK 321	18"x18" 10-1"□13'6" 15-1/4"φ5'4" MK204	16"x16" 4-1"□-13'6" 60-1/4"φ3'5" @2"c.c. MK 220	14"x14" 4-1"φ13'6" 15-1/4"φ4'0" MK202	14"x14" 4-1"φ13'6" 15-1/4"φ4'0" MK202	20"x20" 10-1"□13'6" 50-3/8"φ4'5" @2½"c.c. MK 321	16"x16" 6-1"□-13'6" 15-1/4"φ4'8" MK211	20"x20" 8-1"□13'6" 50-3/8"φ4'5" @2½"c.c. MK 321	16"x16" 4-1"□-13'6" 60-1/4"φ3'5" @2"c.c. MK 220
SUPPORTING 4TH FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	22"x22" 12-1"□13'6" 50-3/8"φ5'0" @2½"c.c. MK 325	20"x20" 12-1"□13'6" 40-3/8"φ4'5" @3"c.c. MK 321 8-1"□6'0" Dowels	20"x20" 12-1"□13'6" 15-1/4"φ6'0" MK208	16"x16" 6-1"□13'6" 40-3/8"φ3'5" @3"c.c. MK 323	14"x14" 6-1"φ13'6" 15-1/4"φ4'0" MK202	14"x14" 6-1"φ13'6" 15-1/4"φ4'0" MK202	20"x20" 12-1"□13'6" 50-3/8"φ4'5" @2½"c.c. MK 321	18"x18" 6-1"□-13'6" 15-1/4"φ5'4" MK213	20"x20" 10-1"□13'6" 50-3/8"φ4'5" @2½"c.c. MK321	16"x16" 6-1"□13'[illegible] 40-3/8"[illegible] @3"c.c. MK32[illegible]
SUPPORTING 3RD FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	24"x24" 16-1"□27'6" 105-1/2"φ5'6" @3"c.c. MK0481	24"x24" 16-1"□22'6" 105-1/2"φ5'6" @3"c.c. MK0481	20"x24" 14-1"□15'10" 18-1/4"φ6'8" MK 238	18"x18" 6-1"□15'10" 50-3/8"φ3'11" @3"c.c. MK322	12"x20" 8-1"□15'10" 18-1/4"φ4'8" MK236	16"x16" 6-1"□15'10" 18-1/4"φ4'8" MK203	22"x22" 14-1"□15'10" 50-3/8"φ5'0" @3"c.c. MK325	18"x18" 8-1"□15'10" 18-1/4"φ5'4" MK213	22"x22" 10-1"□15'10" 50-3/8"φ5'0" @3"c.c. MK 325	18"x18" 6-1"□15'[illegible] 50-3/8"[illegible] @3"c.c. MK3[illegible]
SUPPORTING 2ND FLOOR										
COL. SIZE / VERT. STEEL / HOOPING			20"x24" 16-1"□14'4" 16-1/4"φ6'8" MK238	18"x18" 8-1"□14'6" 44-3/8"φ3'11" @3"c.c. MK 322	12"x24" 10-1"□14'4" 16-1/4"φ5'4" MK237	16"x16" 8-1"□14'4" 16-1/4"φ4'8" MK203	24"x24" 14-1"□15'6" 52-1/2"φ5'6" @3"c.c. MK0481 Dowels 14-1"□12'0"	18"x18" 10-1"□15'10" 18-1/4"φ5'4" MK213	22"x22" 12-1"□15'6" 50-3/8"φ5'0" @3"c.c. MK 325 Dowels Col. 11 only 12-1"□12'0"	18"x18" 8-1"□15[illegible] 50-3/8"[illegible] @3"c.c. MK32[illegible]
SUPPORTING 1ST FLOOR										
COL. SIZE / VERT. STEEL / HOOPING	26"x26" 18-1"□-20'6" 85-1/2"φ6'0" @2½"c.c. MK 0480	26"x26" 18-1"□20'6" 85-1/2"φ6'0" @2½"c.c. MK0480	24"x24" 14-1"□14'9" 45-3/8"φ5'6" @3"c.c. MK0481	20"x20" 10-1"□14'9" 46-3/8"φ4'5" @3"c.c. MK 321	12"x24" 12-1"□14'9" 16-1/4"φ5'4" MK237	18"x18" 10-1"□14'9" 16-1/4"φ5'4" MK204	Omit column steel in vault wall	20"x20 10-1"□13'6" 15-1/4"φ6'0" MK 208	Column 40 only 24"x24" 14-1"□13'6" 50-1/2"φ5'6" @2½"c.c. MK0481	20"x[illegible] 10-1"[illegible] 40-3/8[illegible] @3"[illegible] MK3[illegible]
DOWELS	18-1"□12'0"	18-1"□12'0"	14-1"□12'0"	10-1"□12'0"	12-1"□12'0"	10-1"□12'0"	16-1"□12'0"	10-1"□12'0"	14-1"□12'0"	10-1"[illegible]



Regular Hoop Bending

Regular Hoop Bending Schedule

Column Size	Column Mark	Bar Size	Bar Length	A	B	C
12x12	201	1/4"φ	3'4"	8	8	4
14x14	202	1/4"φ	4'0"	10	10	4
16x16	203	1/4"φ	4'8"	12	12	4
18x18	204	1/4"φ	5'4"	14	14	4
14x16	205	1/4"φ	4'4"	10	12	4
14x18	206	1/4"φ	4'8"	10	14	4
14x20	207	1/4"φ	5'0"	10	16	4
20x20	208	1/4"φ	6'0"	16	16	4
14x22	209	1/4"φ	5'4"	10	18	4
8x8	230	1/4"φ	2'4"	5	5	4
8x10	231	1/4"φ	2'8"	5	7	4
14x24	232	1/4"φ	5'8"	10	20	4
14x26	233	1/4"φ	6'0"	10	22	4
14x28	234	1/4"φ	6'4"	10	24	4
14x30	235	1/4"φ	6'8"	10	26	4
12x20	236	1/4"φ	4'8"	8	16	4

Column Size	Column Mark	Bar Size	Bar Length	A	B	C
12x24	237	1/4"φ	5'4"	8	20	4
20x24	238	1/4"φ	6'8"	16	20	4
18x20	239	1/4"φ	5'8"	14	16	4
18x22	240	1/4"φ	6'0"	14	18	4
18x24	241	1/4"φ	6'4"	14	20	4
		Circular Hoops				
16x16	220	1/4"φ	3'5"	Diam = 13"		
16x16	323	3/8"φ	3'5"	do. = 13"		
18x18	322	3/8"φ	3'11"	do. = 15"		
20x20	321	3/8"φ	4'5"	do. = 17"		
22x22	325	3/8"φ	5'0"	do. = 19"		
24x24	324	3/8"φ	5'6"	do. = 21"		
24x24	0481	1/2"φ	5'6"	do. = 21"		
26x26	326	3/8"φ	6'0"	do. = 23"		
26x26	0480	1/2"φ	6'0"	do. = 23"		

Special Hoop Bending Schedule

Column Size	Column Mark	Bar Size	Bar Length	A	B	C	D	E
16x16	211	1/4"φ	4'4"	12	12	4½	11	4
18x18	213	1/4"φ	5'0"	14	14	6½	11	4
15x15	210	1/4"φ	4'0"	11	11	3½	11	4

— COLUMN SCHEDULE —

	17-18	19-20 21	24-25	27	28-29	30	32-33	31	34	36
SUPPORTING PENT HOUSE ROOF	12"x12" 4-½"φ 15'6" 22-¼"φ 3'4" MK 201	19 only 12"x12" 4-½"φ 15'6" 22-¼"φ 3'4" MK 201				12"x12" 4-½"φ 15'6" 22-¼"φ 3'4" MK 201	12"x12" 4-½"φ 15'6" 22-¼"φ 3'4" MK 201	12"x12" 4-½"φ 15'6" 22-¼"φ 3'4" MK 201	12"x12" 4-½"φ 15'6" 22-¼"φ 3'4" MK 201	
SUPPORTING ROOF	14"x14" 4-¾"φ 17'6" 22-¼"φ 4'0" MK 202	14"x14" Col. 19 4-¾"φ 17'6" Col. 20-21 4-⅝"φ 15'3" 22-¼"φ 4'0" MK 202	14"x14" 4-⅝"φ 15'3" 22-¼"φ 4'0" MK 202	14"x14" 4-⅝"φ 15'3" 22-¼"φ 4'0" MK 202	14"x14" 4-⅝"φ 15'3" 22-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 17'6" 22-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 17'6" 22-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 17'6" 22-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 17'6" 22-¼"φ 4'0" MK 202	14"x14" 4-⅝"φ 15'3" 22-¼"φ 4'0" MK 202
SUPPORTING 10TH FLOOR	16"x16" 4-1"φ 13'6" 15-¼"φ 4'8" MK 203	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 13'0" 15-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 13'0" 15-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 13'0" 15-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 13'0" 15-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 13'0" 15-¼"φ 4'0" MK 202	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202
SUPPORTING 9TH FLOOR	16"x16" 4-1"□ 13'6" 15-¼"φ 4'8" MK 203	14"x14" 6-1"□ 13'6" 15-¼"φ 4'0" MK 202	14"x14" 4-1"□ 13'6" 15-¼"φ 4'0" MK 202	16"x16" 6-1"□ 13'6" 15-¼"φ 4'8" MK 203	14"x14" 4-1"□ 13'6" 15-¼"φ 4'0" MK 202	14"x14" 4-1"φ 13'6" 15-¼"φ 4'0" MK 202	14"x14" 4-1"φ 13'6" 15-¼"φ 4'0" MK 202	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	16"x16" 6-1"□ 13'6" 15-¼"φ 4'8" MK 203
SUPPORTING 8TH FLOOR	16"x16" 8-1"□ 13'6" 15-¼"φ 4'8" MK 203	16"x16" 8-1"□ 13'6" 15-¼"φ 4'8" MK 203	16"x16" 8-1"□ 13'6" 15-¼"φ 4'8" MK 203	18"x18" 10-1"□ 13'6" 15-¼"φ 5'4" MK 204	16"x16" 6-1"□ 13'6" 15-¼"φ 4'8" MK 203	16"x16" 6-1"□ 13'6" 15-¼"φ 4'8" MK 203	14"x14" 6-1"□ 13'6" 15-¼"φ 4'0" MK 202	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	18"x18" 10-1"□ 13'6" 15-¼"φ 5'4" MK 204
SUPPORTING 7TH FLOOR	18"x18" 8-1"□ 13'6" 15-¼"φ 5'4" MK 204	18"x18" 10-1"□ 13'6" 15-¼"φ 5'4" MK 204	18"x18" 10-1"□ 13'6" 15-¼"φ 5'4" MK 204	18"x18" 14-1"□ 13'6" 15-¼"φ 5'4" MK 201	18"x18" 8-1"□ 13'6" 15-¼"φ 5'4" MK 204	16"x16" 8-1"□ 13'6" 15-¼"φ 4'8" MK 203	16"x16" 6-1"□ 13'6" 15-¼"φ 4'8" MK 203	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	18"x18" 14-1"□ 13'6" 15-¼"φ 5'4" MK 204
SUPPORTING 6TH FLOOR	18"x18" 8-1"□ 13'6" 15-¼"φ 5'4" MK 204	20"x20" 10-1"□ 13'6" 15-¼"φ 6'0" MK 208	18"x18" 12-1"□ 13'6" 15-¼"φ 5'4" MK 204	20"x20" 16-1"□ 13'6" 15-¼"φ 6'0" MK 208	20"x20" 12-1"□ 13'6" 15-¼"φ 6'0" MK 208	18"x18" 8-1"□ 13'6" 15-¼"φ 5'4" MK 204	16"x16" 6-1"□ 13'6" 15-¼"φ 4'8" MK 203	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	20"x20" 16-1"□ 13'6" 15-¼"φ 6'0" MK 208
SUPPORTING 5TH FLOOR	18"x18" 10-1"□ 13'6" 15-¼"φ 5'4" MK 204	20"x20" 8-1"□ 13'6" 50-⅜"φ 4'5" @ 2½" c.c. MK 321	18"x18" 8-1"□ 13'6" 50-⅜"φ 3'11" @ 2½" c.c. MK 322	20"x20" 10-1"□ 13'6" 50-⅜"φ 4'5" @ 2½" c.c. MK 321	20"x20" 8-1"□ 13'6" 50-⅜"φ 4'5" @ 2½" c.c. MK 321	18"x18" 10-1"□ 13'6" 15-¼"φ 5'4" MK 204	16"x16" 4-1"□ 13'6" 60-¼"φ 3'5" @ 2" c.c. MK 220	14"x14" 4-1"φ 13'6" 15-¼"φ 4'0" MK 202	14"x14" 4-1"φ 13'6" 15-¼"φ 4'0" MK 202	20"x20" 10-1"□ 13'6" 50-⅜"φ 4'5" @ 2½" c.c. MK 321
SUPPORTING 4TH FLOOR	18"x18" 6-1"□ 13'6" 40-⅜"φ 3'11" @ 3" c.c. MK 322	22"x22" 10-1"□ 13'6" 50-⅜"φ 5'0" @ 2½" c.c. MK 325	18"x18" 10-1"□ 13'6" 55-⅜"φ 3'11" @ 2½" c.c. MK 322	22"x22" 12-1"□ 13'6" 50-⅜"φ 5'0" @ 2½" c.c. MK 325	20"x20" 12-1"□ 13'6" 40-⅜"φ 4'5" @ 3" c.c. MK 321 8-1"□ 6'0" Dowels	20"x20" 12-1"□ 13'6" 15-¼"φ 6'0" MK 208	16"x16" 6-1"□ 13'6" 40-⅜"φ 3'5" @ 3" c.c. MK 323	14"x14" 6-1"φ 13'6" 15-¼"φ 4'0" MK 202	14"x14" 6-1"φ 13'6" 15-¼"φ 4'0" MK 202	20"x20" 12-1"□ 13'6" 50-⅜"φ 4'5" @ 2½" c.c. MK 321
SUPPORTING 3RD FLOOR	20"x20" 8-1"□ 15'10" 50-⅜"φ 4'5" @ 3" c.c. MK 321	24"x24" 12-1"□ 15'10" 50-½"φ 5'6" @ 3" c.c. MK 0481	20"x20" 10-1"□ 15'10" 60-⅜"φ 4'5" @ 2½" c.c. MK 321	24"x24" 16-1"□ 27'6" 105-½"φ 5'6" @ 3" c.c. MK 0481	24"x24" 16-1"□ 22'6" 105-½"φ 5'6" @ 3" c.c. MK 0481	20"x24" 14-1"□ 15'10" 18-¼"φ 6'8" MK 238	18"x18" 6-1"□ 15'10" 50-⅜"φ 3'11" @ 3" c.c. MK 322	12"x20" 8-1"□ 15'10" 18-¼"φ 4'8" MK 236	16"x16" 6-1"□ 15'10" 18-¼"φ 4'8" MK 203	22"x22" 14-1"□ 15'10" 50-⅜"φ 5'0" @ 3" c.c. MK 325
SUPPORTING 2ND FLOOR	20"x20" 10-1"□ 14'4" 45-⅜"φ 4'5" @ 3" c.c. MK 321	24"x24" 14-1"□ 15'6" 52-½"φ 5'6" @ 3" c.c. MK 0481	22"x22" 12-1"□ 14'4" 65-⅜"φ 5'0" @ 2" c.c. MK 325			20"x24" 16-1"□ 14'4" 16-¼"φ 6'8" MK 238	18"x18" 8-1"□ 14'6" 44-⅜"φ 3'11" @ 3" c.c. MK 322	12"x24" 10-1"□ 14'4" 16-¼"φ 5'4" MK 237	16"x16" 8-1"□ 14'4" 16-¼"φ 4'8" MK 203	24"x24" 14-1"□ 15'6" 52-½"φ 5'6" @ 3" c.c. MK 0481 Dowels 14-1"□ 12'6"
SUPPORTING 1ST FLOOR	22"x22" 12-1"□ 14'9" 45-⅜"φ 5'0" @ 3" c.c. MK 325	26"x26" 16-1"□ 14'9" 45-½"φ 6'0" @ 3" c.c. MK 0480	24"x24" 14-1"□ 20'9" 75-½"φ 5'6" @ 3" c.c. MK 0481	26"x26" 18-1"□ 20'6" 85-½"φ 6'0" @ 2½" c.c. MK 0480	26"x26" 18-1"□ 20'6" 85-½"φ 6'0" @ 2½" c.c. MK 0480	24"x24" 14-1"□ 14'9" 45-⅜"φ 5'6" @ 3" c.c. MK 0481	20"x20" 10-1"□ 14'9" 46-⅜"φ 4'5" @ 3" c.c. MK 321	12"x24" 12-1"□ 14'9" 16-¼"φ 5'4" MK 237	18"x18" 10-1"□ 14'7" 16-¼"φ 5'4" MK 204	Omit column steel in vault wall
DOWELS	12-1"□ 12'0"	16-1"□ 12'0"	14-1"□ 12'6"	18-1"□ 12'0"	18-1"□ 12'0"	14-1"□ 12'0"	10-1"□ 12'0"	12-1"□ 12'0"	10-1"□ 12'0"	16-1"□ 12'0"

	12-39	11-40	41	42	43	45-46 47	48-49 50	35	51-52-53 54-55-56	P-1	P-2	P-3	A-B
SUPPORTING PENT HOUSE ROOF						12"x12" 4-½"φ 15'6" 22-¼"φ 3'4" MK 201	12"x12" 4-½"φ 15'6" 22-¼"φ 3'4" MK 201						12"x12" 4-½"φ 16'1" 22-¼"φ 3'4" MK 201
SUPPORTING ROOF	15"x15" 4-½"□ 15'3" 22-¼"φ 4'4" MK 210	14"x14" 4-⅝"φ 15'3" 22-¼"φ 4'0" MK 202	14"x14" 4-⅝"φ 15'3" 22-¼"φ 4'0" MK 202	14"x14" 4-⅝"φ 15'3" 22-¼"φ 4'0" MK 202	14"x14" 4-⅝"φ 15'3" 22-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 17'6" 22-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 17'6" 22-¼"φ 4'0" MK 202	14"x14" 4-⅝"φ 15'3" 22-¼"φ 4'0" MK 202					
SUPPORTING 10TH FLOOR	15"x15" 4-⅝"φ 13'0" 15-¼"φ 4'4" MK 210	14"x14" 4-¾"φ 13'0" 15-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 13'0" 15-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 13'0" 15-¼"φ 4'0" MK 202	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	14"x14" 4-1"φ 13'6" 15-¼"φ 4'0" MK 202	14"x14" 4-1"φ 13'6" 15-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 13'0" 15-¼"φ 4'0" MK 202					
SUPPORTING 9TH FLOOR	15"x15" 4-⅞"φ 13'3" 15-¼"φ 4'4" MK 210	14"x14" 6-1"□ 13'6" 15-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 13'0" 15-¼"φ 4'0" MK 202	14"x14" 4-¾"φ 13'0" 15-¼"φ 4'0" MK 202	14"x14" 6-1"□ 13'6" 15-¼"φ 4'0" MK 202	14"x16" 6-1"□ 13'6" 15-¼"φ 4'4" MK 205	16"x16" 4-1"□ 13'6" 15-¼"φ 4'8" MK 203	14"x14" 4-1"φ 13'6" 15-¼"φ 4'0" MK 202					
SUPPORTING 8TH FLOOR	16"x16" 4-⅞"φ 13'3" 15-¼"φ 4'8" MK 211	16"x16" 8-1"□ 13'6" 15-¼"φ 4'8" MK 203	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	14"x14" 4-⅞"φ 13'3" 15-¼"φ 4'0" MK 202	16"x16" 10-1"□ 13'6" 15-¼"φ 4'8" MK 203	14"x18" 6-1"□ 13'6" 15-¼" 4'8" MK 206	16"x16" 6-1"□ 13'6" 15-¼"φ 4'8" MK 203	16"x16" 6-1"□ 13'6" 15-¼"φ 4'8" MK 203					
SUPPORTING 7TH FLOOR	16"x16" 4-1"φ 13'6" 15-¼"φ 4'8" MK 211	18"x18" 12-1"□ 13'6" 15-¼"φ 5'4" MK 204	14"x14" 6-1"□ 13'6" 15-¼"φ 4'0" MK 202	14"x14" 6-1"□ 13'6" 15-¼"φ 4'0" MK 202	18"x18" 12-1"□ 13'6" 15-¼"φ 5'4" MK 204	14"x20" 8-1"□ 13'6" 15-¼"φ 5'0" MK 207	18"x18" 6-1"□ 13'6" 15-¼"φ 5'4" MK 204	16"x16" 8-1"□ 13'6" 15-¼"φ 4'8" MK 203					
SUPPORTING 6TH FLOOR	16"x16" 4-1"□ 13'6" 15-¼"φ 4'8" MK 211	20"x20" 12-1"□ 13'6" 15-¼"φ 6'0" MK 208	16"x16" 6-1"□ 13'6" 15-¼"φ 4'8" MK 203	16"x16" 6-1"□ 13'6" 15-¼"φ 4'8" MK 203	18"x18" 14-1"□ 13'6" 15-¼"φ 5'4" MK 204	14"x22" 8-1"□ 13'6" 15-¼"φ 5'4" MK 209	18"x18" 8-1"□ 13'6" 15-¼"φ 5'4" MK 204	18"x18" 8-1"□ 13'6" 15-¼"φ 5'4" MK 204					
SUPPORTING 5TH FLOOR	16"x16" 6-1"□ 13'6" 15-¼"φ 4'8" MK 211	20"x20" 8-1"□ 13'6" 50-⅜"φ 4'5" @ 2½" c.c. MK 321	16"x16" 4-1"□ 13'6" 60-¼"φ 3'5" @ 2" c.c. MK 220	16"x16" 4-1"□ 13'6" 60-¼"φ 3'5" @ 2" c.c. MK 220	20"x20" 14-1"□ 13'6" 15-¼"φ 6'0" MK 208	14"x24" 8-1"□ 13'6" 15-¼"φ 5'8" MK 232	18"x18" 10-1"□ 13'6" 15-¼"φ 5'4" MK 204	20"x20" 12-1"□ 13'6" 15-¼"φ 6'0" MK 208					
SUPPORTING 4TH FLOOR	18"x18" 6-1"□ 13'6" 15-¼"φ 5'4" MK 213	20"x20" 10-1"□ 13'6" 50-⅜"φ 4'5" @ 2½" c.c. MK 321	16"x16" 6-1"□ 13'6" 40-⅜"φ 3'5" @ 3" c.c. MK 323	16"x16" 6-1"□ 13'6" 40-⅜"φ 3'5" @ 3" c.c. MK 323	20"x20" 8-1"□ 13'6" 50-⅜"φ 4'5" @ 2½" c.c. MK 321	14"x24" 10-1"□ 13'6" 15-¼"φ 5'8" MK 232	18"x20" 10-1"□ 13'6" 15-¼"φ 5'8" MK 239	20"x20" 8-1"□ 13'6" 40-⅜"φ 4'5" @ 3" c.c. MK 321					
SUPPORTING 3RD FLOOR	18"x18" 8-1"□ 15'10" 18-¼"φ 5'4" MK 213	22"x22" 10-1"□ 15'10" 50-⅜"φ 5'0" @ 3" c.c. MK 325	18"x18" 6-1"□ 15'10" 50-⅜"φ 3'11" @ 3" c.c. MK 322	18"x18" 6-1"□ 15'10" 50-⅜"φ 3'11" @ 3" c.c. MK 322	22"x22" 10-1"□ 15'10" 50-⅜"φ 5'0" @ 3" c.c. MK 325	14"x26" 10-1"□ 15'10" 18-¼"φ 6'0" MK 233	18"x20" 12-1"□ 15'10" 18-¼"φ 5'8" MK 239	20"x20" 12-1"□ 15'10" 60-⅜"φ 4'5" @ 2½" c.c. MK 321	16"x16" 4-⅞"φ 13'3" 15-¼"φ 4'8" MK 203				
SUPPORTING 2ND FLOOR	18"x18" 10-1"□ 15'10" 18-¼"φ 5'4" MK 213	22"x22" 12-1"□ 15'6" 50-⅜"φ 5'0" @ 3" c.c. MK 325 Dowels Col. 11 only 12-1"□ 12'0" Col. 40 only	18"x18" 8-1"□ 15'6" 50-⅜"φ 3'11" @ 3" c.c. MK 322	18"x18" 8-1"□ 14'4" 44-⅜"φ 3'11" @ 3" c.c. MK 322	22"x22" 12-1"□ 14'4" 44-⅜"φ 5'0" @ 3" c.c. MK 325	14"x28" 12-1"□ 14'4" 16-¼"φ 6'4" MK 234	18"x22" 12-1"□ 14'4" 16-¼"φ 6'0" MK 240	22"x22" 14-1"□ 15'6" 52-⅜"φ 5'0" @ 3" c.c. MK 325 Dowels 14-1"□ 12'0"	16"x16" 4-1"φ 14'3" 16-¼"φ 4'8" MK 203				
SUPPORTING 1ST FLOOR	20"x20" 10-1"□ 13'6" 15-¼"φ 6'0" MK 208	24"x24" 14-1"□ 13'6" 50-½"φ 5'6" @ 2½" c.c. MK 0481	20"x20" 10-1"□ 13'6" 40-⅜"φ 4'5" @ 3" c.c. MK 321	20"x20" 10-1"□ 20'9" 75-⅜"φ 4'5" @ 3" c.c. MK 321	24"x24" 14-1"□ 20'9" 75-½"φ 5'6" @ 3" c.c. MK 0481	14"x30" 14-1"□ 25'9" 40-¼"φ 6'8" MK 235	18"x24" 14-1"□ 25'9" 40-¼"φ 6'4" MK 241	Omit column steel in vault wall	16"x16" Col. 51 4-1"□ 20'9" Col. 52 thru 56 4-1"□ 14'9" Col. 51 27-¼"φ 4'8" Col. 52 thru 56 16-¼"φ 4'8" MK 203	8"x8" 4-⅝"φ 12'6" 16-¼"φ 2'4" MK 230	8"x10" 4-½"φ 6'0" 8-¼"φ 2'8" MK 231	8"x8" 4-⅝"φ 12'6" 16-¼"φ 2'4" MK 230	
DOWELS	10-1"□ 12'0"	14-1"□ 12'0"	10-1"□ 12'0"	10-1"□ 12'0"	14-1"□ 12'0"	14-1"□ 12'0"	14-1"□ 12'0"	16-1"□ 12'0"	4-1"□ 8'0"	4-⅝"φ 4'0"	4-⅝"φ 4'0"	4-⅝"φ 4'0"	

Hoop Bending Schedule

B	C
8	4
10	4
12	4
14	4
12	4
14	4
16	4
16	4
18	4
15	4
17	4
20	4
22	4
24	4
26	4
26	4

Column Size	Column Mark	Bar Size	Bar Length	A	B	C
12x24	237	¼"φ	5'4"	8	20	4
20x24	238	¼"φ	6'8"	16	20	4
18x20	239	¼"φ	5'8"	14	16	4
18x22	240	¼"φ	6'0"	14	18	4
18x24	241	¼"φ	6'4"	14	20	4
Circular Hoops						
16x16	220	¼"φ	3'5"	Diam = 13"		
16x16	323	⅜"φ	3'5"	do. = 13"		
18x18	322	⅜"φ	3'11"	do. = 15"		
20x20	321	⅜"φ	4'5"	do. = 17"		
22x22	325	⅜"φ	5'0"	do. = 19"		
24x24	324	⅜"φ	5'6"	do. = 21"		
24x24	0481	½"φ	5'6"	do. = 21"		
26x26	326	⅜"φ	6'0"	do. = 23"		
26x26	0480	½"φ	6'0"	do. = 23"		

Special Hoop Bending Schedule

Column Size	Column Mark	Bar Size	Bar Length	A	B	C	D	E
16x16	211	¼"φ	4'4"	12	12	4½	11	4
18x18	213	¼"φ	5'0"	14	14	6½	11	4
15x15	210	¼"φ	4'0"	11	11	3½	11	4

Special Hoop Bending

ROBERT A. JEWETT

CANDIDATE FOR M.S. IN C.E.

Steel corrections 4-30-34
Revisions

Scale	COLUMN SCHEDULES	Date 4-20-34
BANK AND OFFICE BUILDING		
Drawn by R.A.J. Traced by R.A.J. Checked by T.L.S.	GEORGIA SCHOOL OF TECHNOLOGY	Job No. Thesis Sheet 7 Total Sheets 11

NOTE:
This sheet is a reproduction of Sheet #34 of the Architects Plans. The numbering of the beams has been changed from the original drawing.

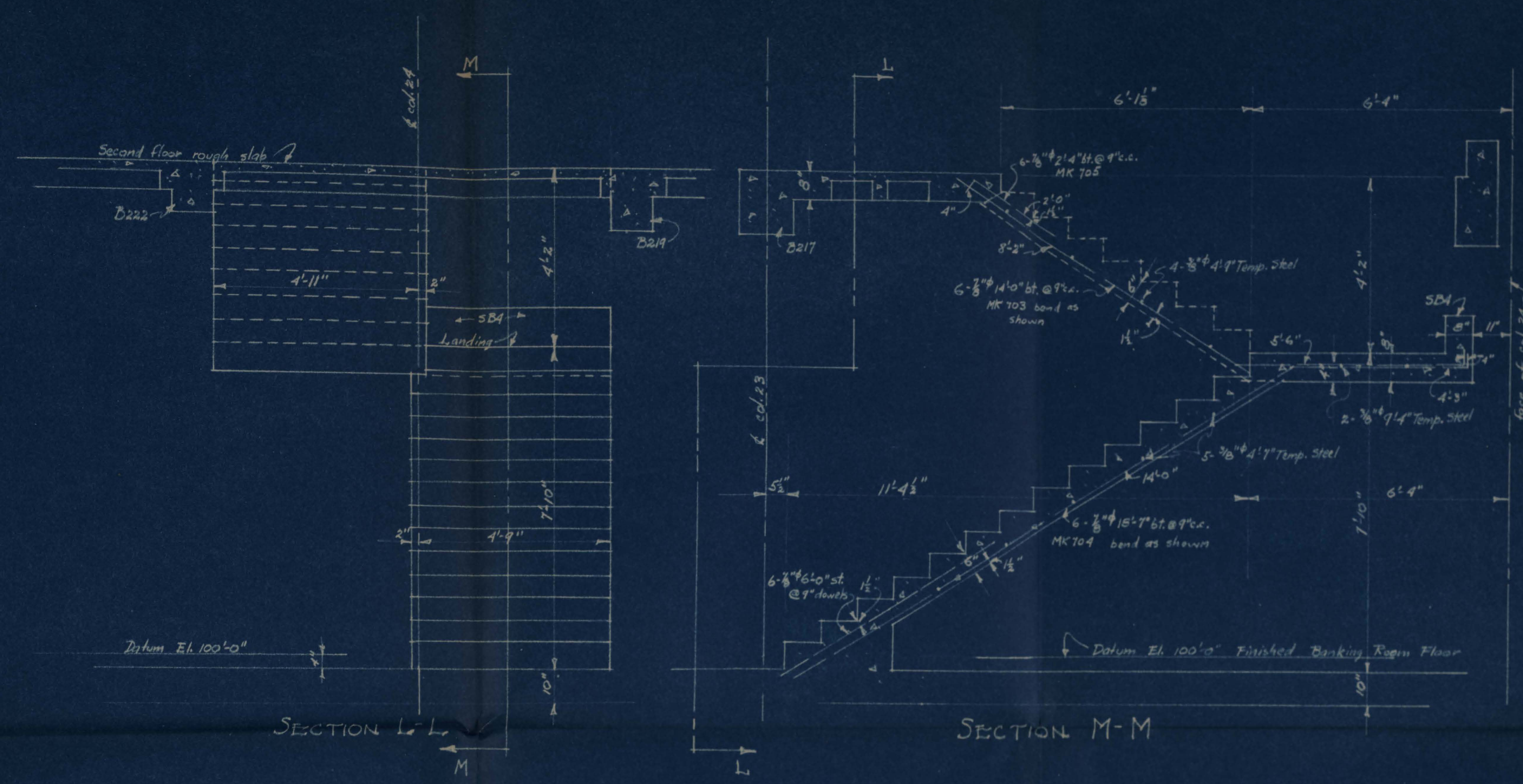
ROBERT A. JEWETT
CANDIDATE FOR M.S. IN C.

NOTE:
This sheet is a reproduction of Sheet # 34 of the Architects Plans. The numbering of the beams has been changed from the original drawing.

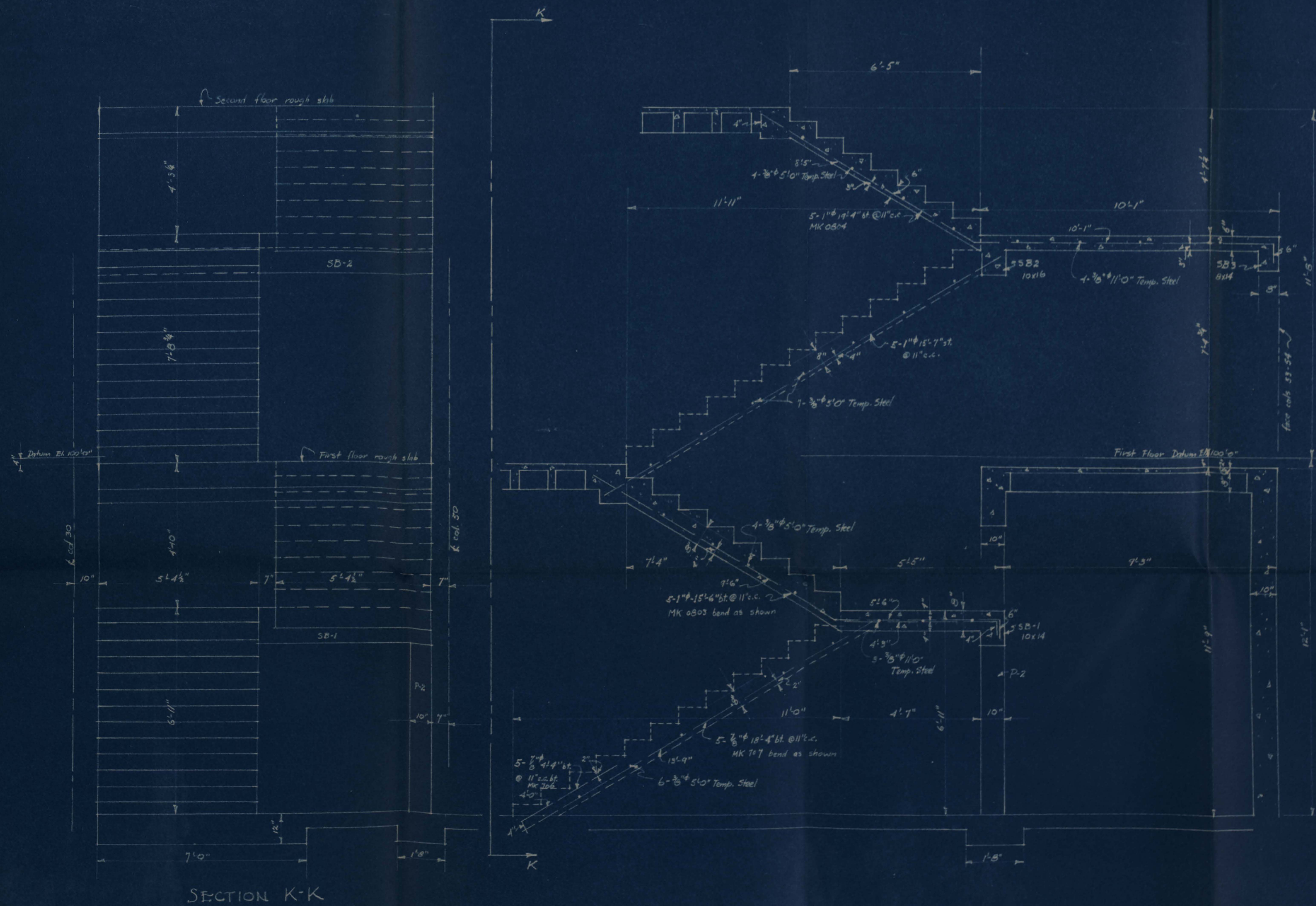
ROBERT A. JEWETT
CANDIDATE FOR M.S. IN C.E.

Add beam Nos. 4-30-34
Revisions

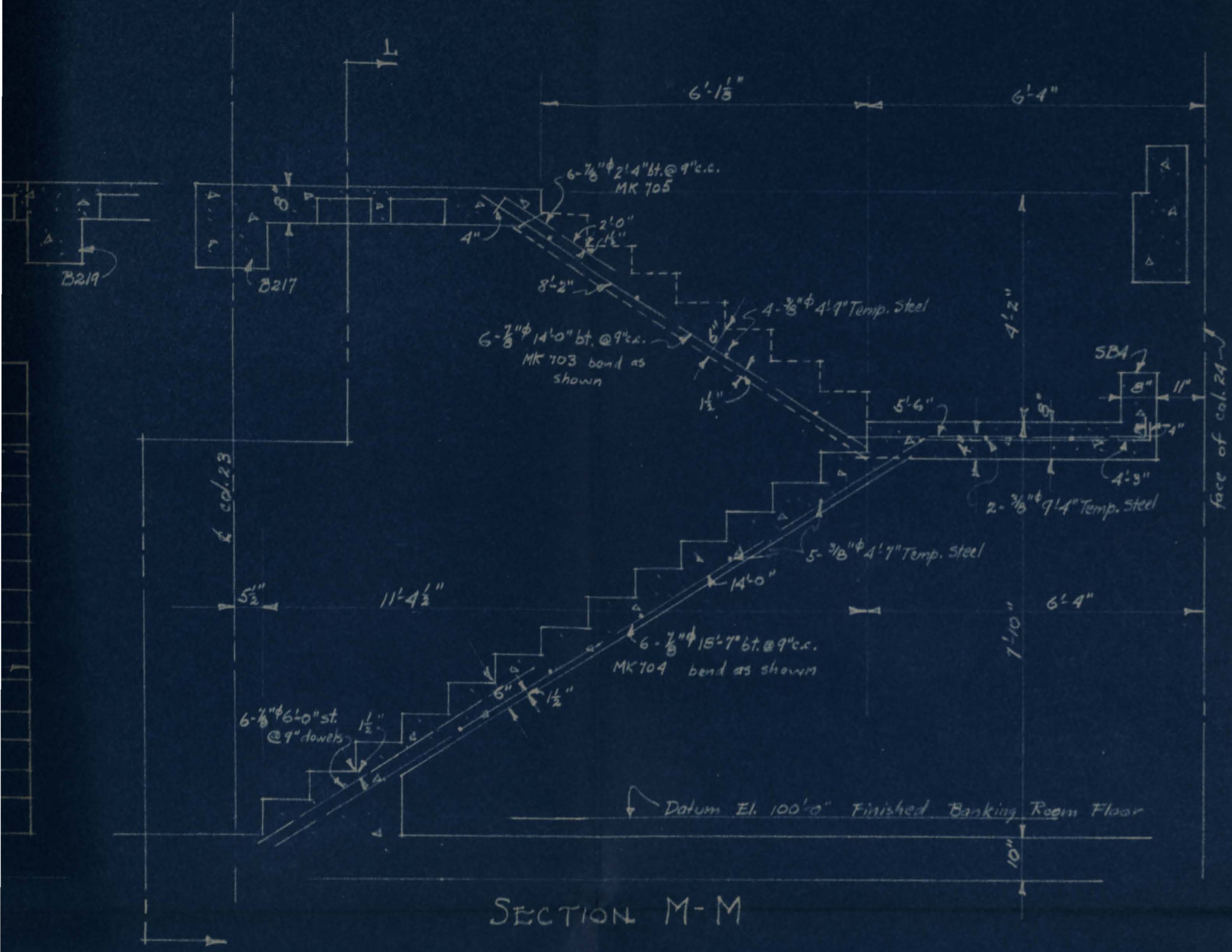
Scale: 1/4" & 3/4"	Details - First Floor & Grades	Date 3-31-34
BANK AND OFFICE BUILDING		
Drawn by -	GEORGIA SCHOOL OF TECHNOLOGY	Job No. Thesis
Traced by R.A.J.		Sheet 8
Checked T.L.S.		Total Sheets 11



MEZZANINE STAIRS AT COL. 24

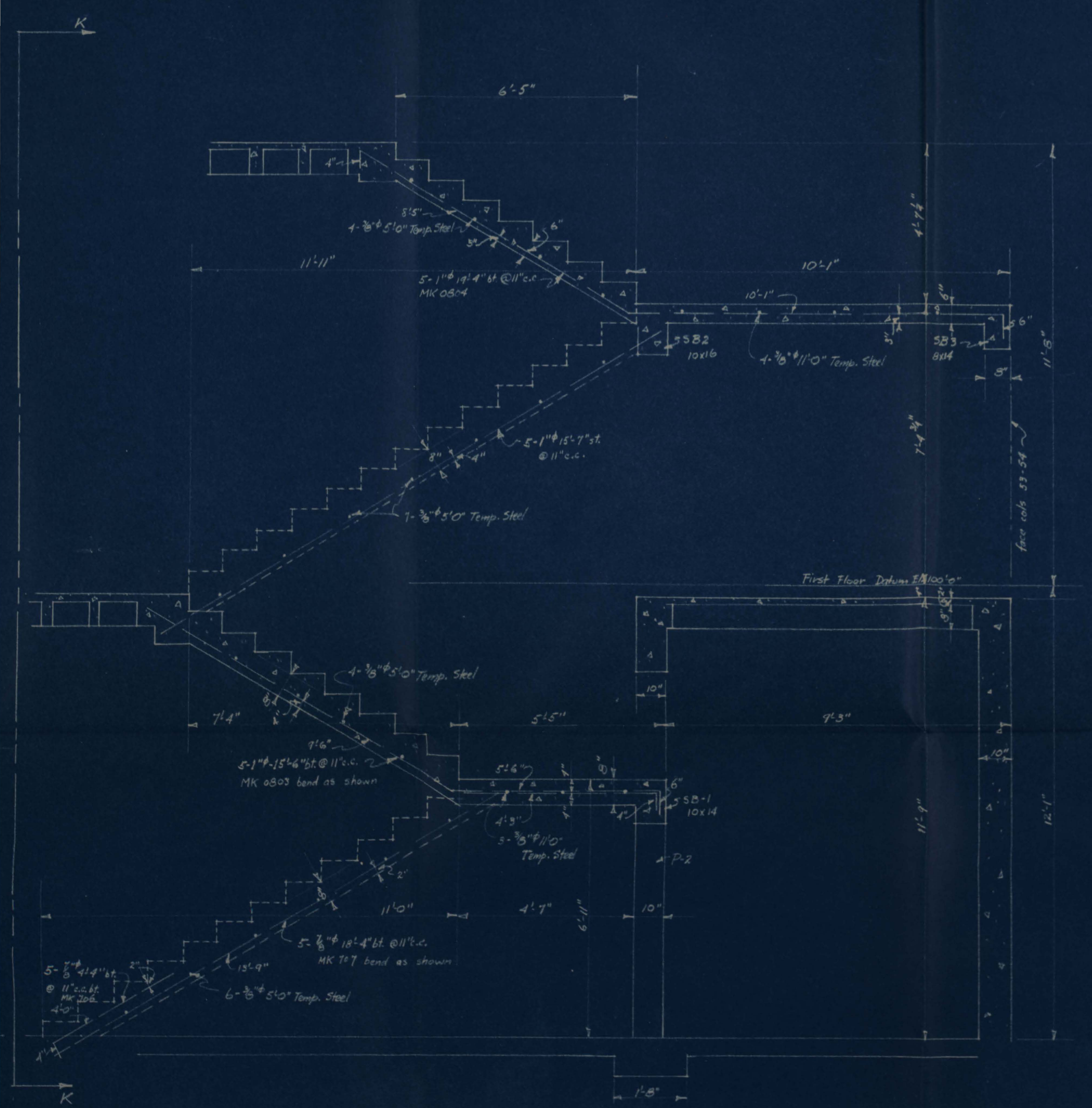


~ STAIRS AT COLS. 30-31 & 50 ~



SECTION M-M

STAIRS AT COL. 24

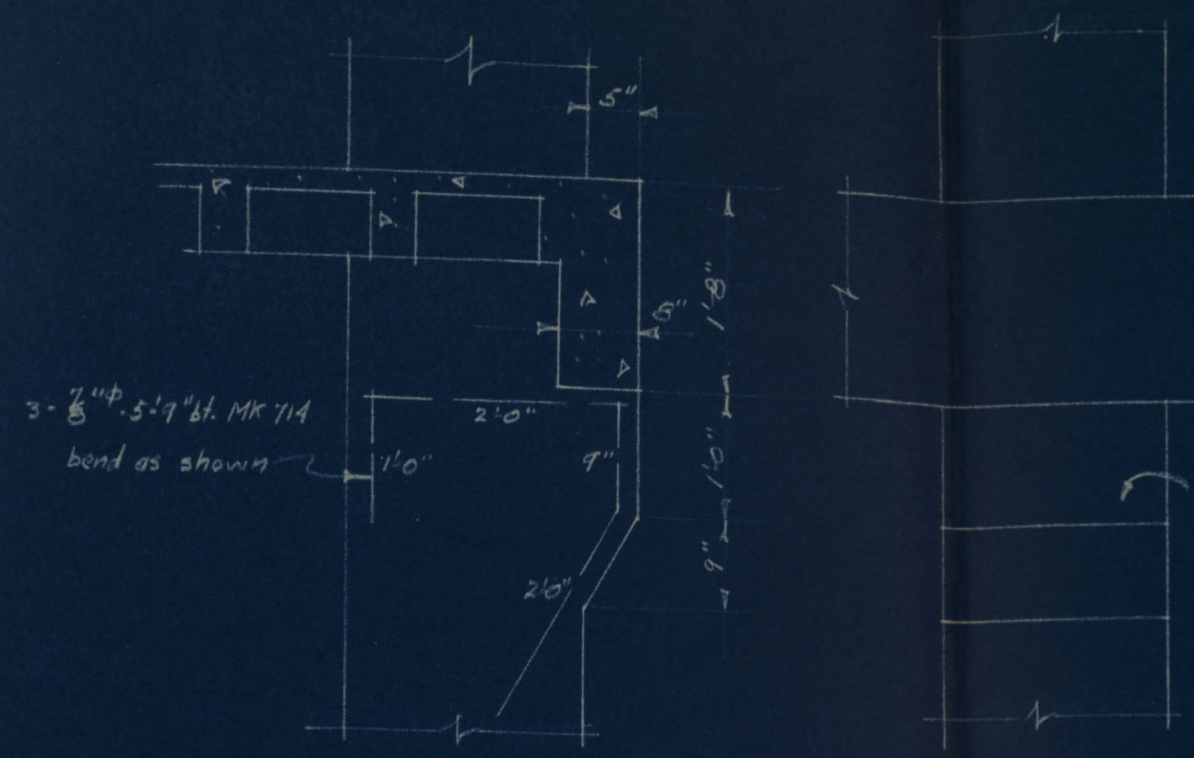


STAIRS AT COLS. 30-31-& 50 ~

ROBERT A. JEWETT

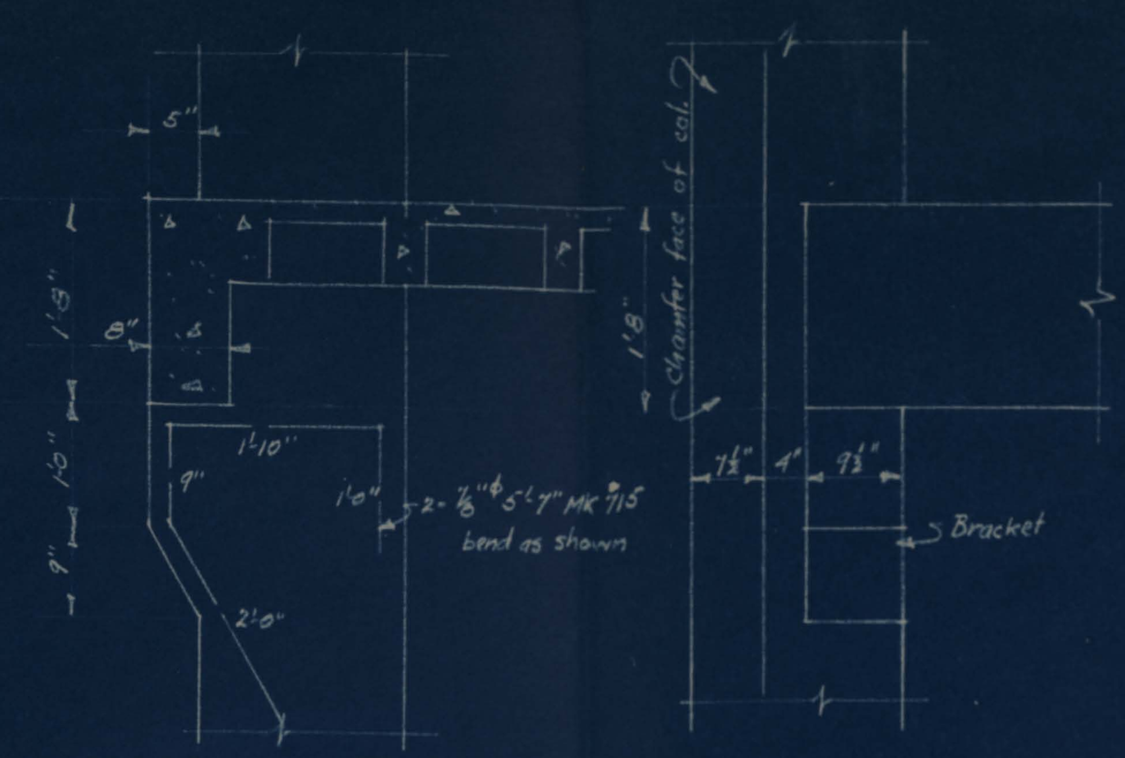
CANDIDATE FOR M.S. IN C.E.

		Temp. Steel Added 4-30-34 Revisions
Scale: ½"=1'0"	STAIR DETAILS	Date: 4-1-34
BANK AND OFFICE BUILDING		
Drawn by R.A.J. Traced by R.A.J. Checked by	GEORGIA SCHOOL of TECHNOLOGY	Job No. Thesis Sheet 9 Total Sheets 11



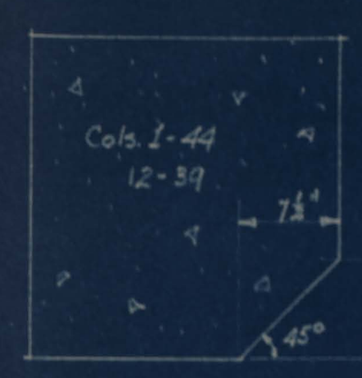
BRACKET AT COLS 40-41-42-43

SCALE: 3/4" = 1'-0"

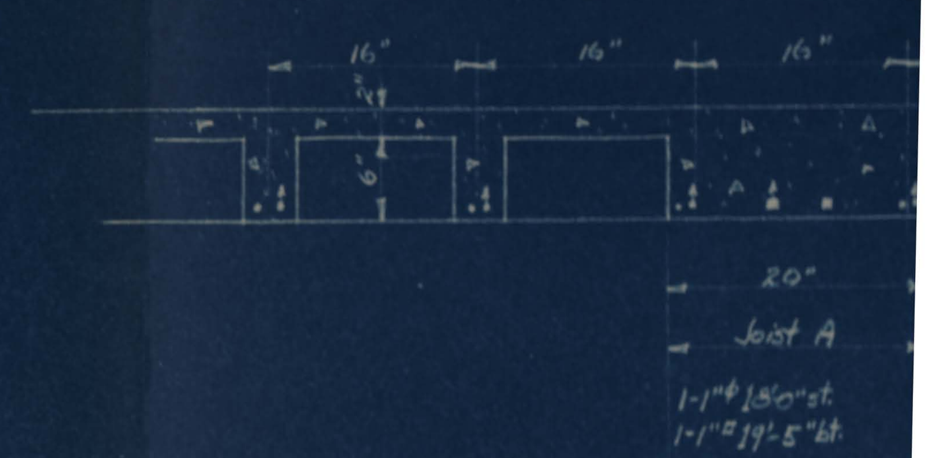


BRACKET AT COLS 39 & 44

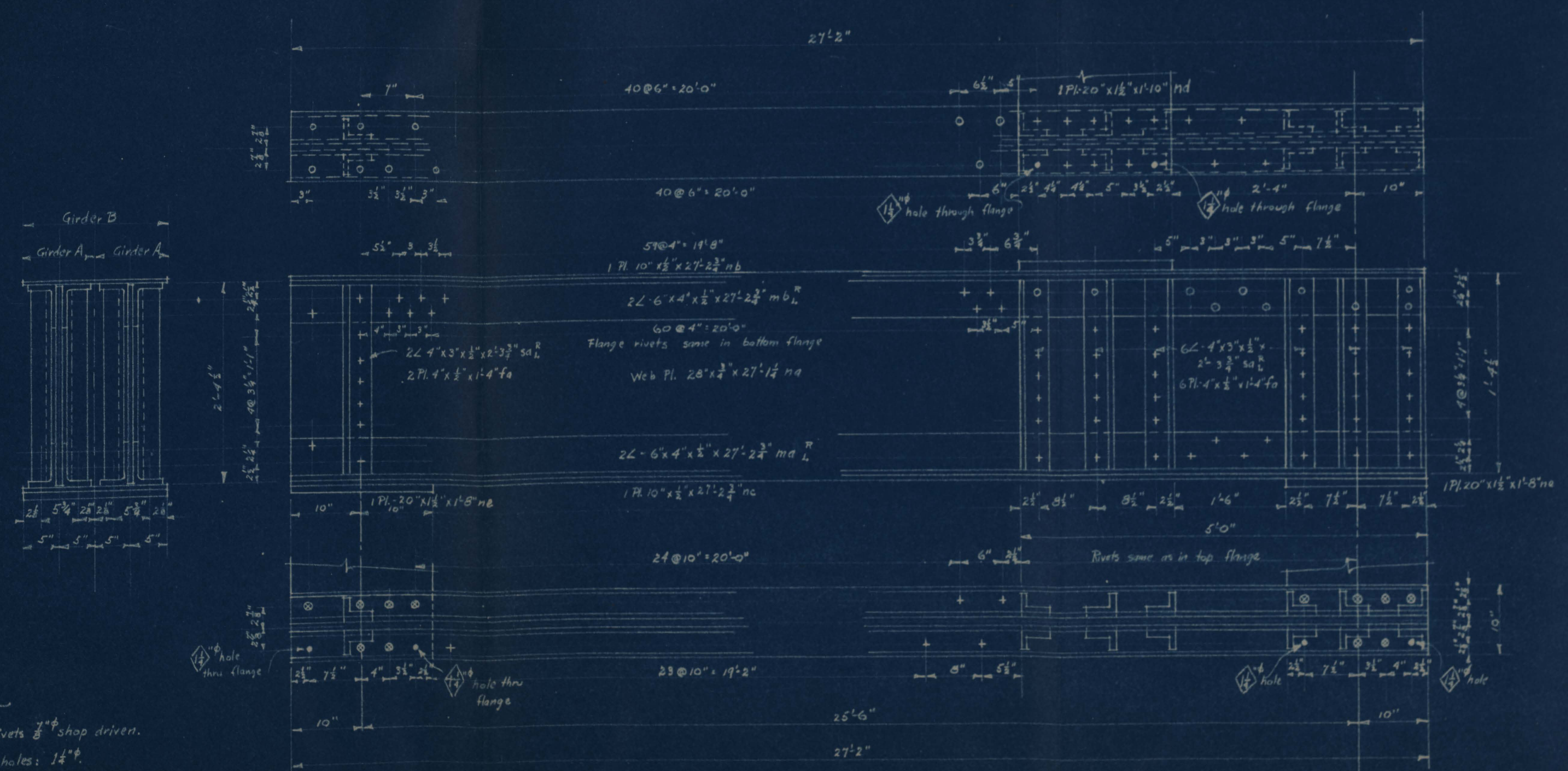
SCALE: 3/4" = 1'-0"



TYPICAL CORNER COL. CHAMFER DETAIL



TYPI



~ NOTE: ~

All rivets 7/8"ϕ shop driven.

Open holes: 1 1/4"ϕ.

One coat sublimed blue lead paint.

Rivets in contact with column plates nd & ne to be countersunk & chipped.

Dowels 1"ϕ x 4'-6". threaded 6" one end to take nut each side flange.

Girder B symmetrical about center line

DETAILS OF GIRDERS AT COLS. 28 & 29

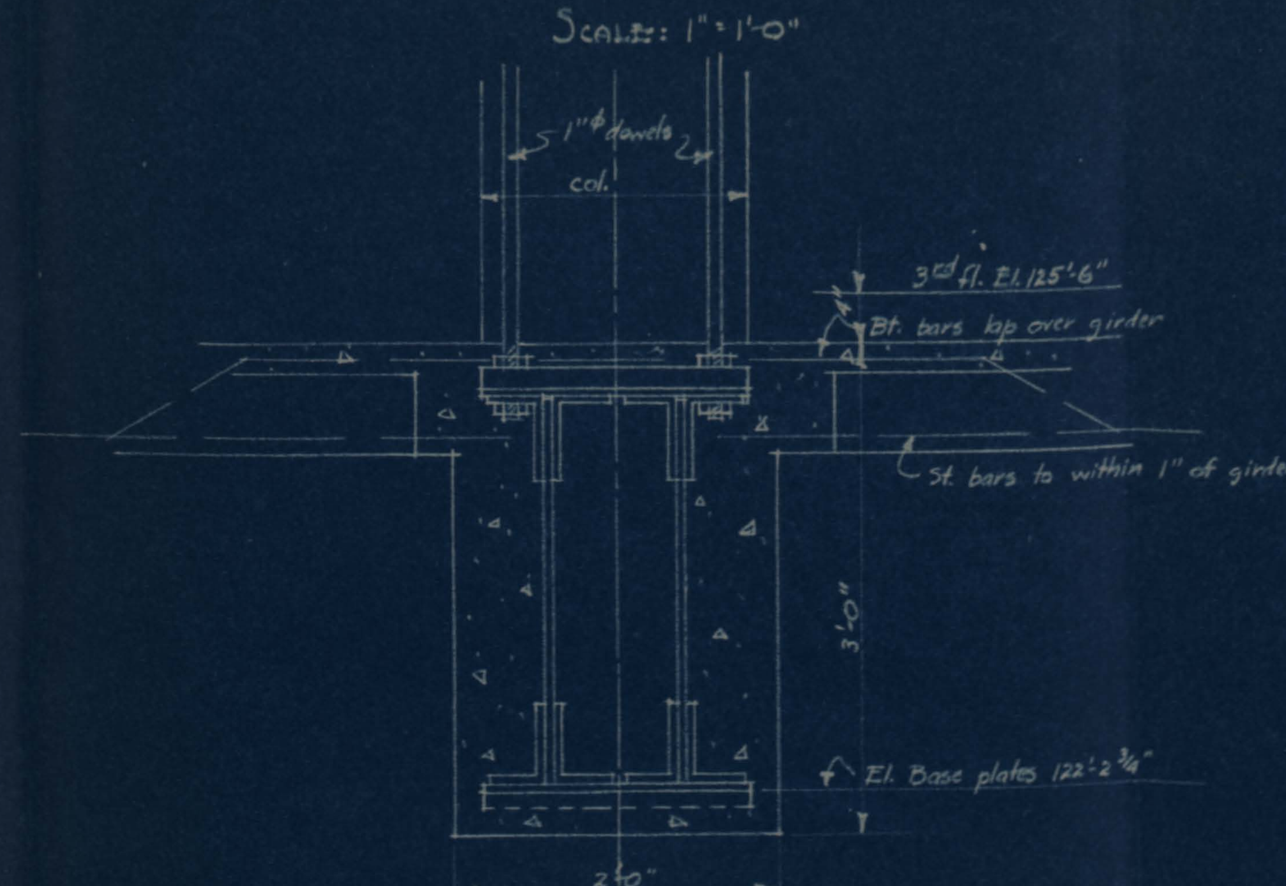
SCALE: 1" = 1'-0"

Bill of Material for Girder A
4 - Girders "A" R/L Required

No. Req'd	Mark	Material
1	na	Web Pl. 28"x 3/4"x 27'-1 1/4"
1	nb	Pl. 10"x 1/2" x 27'-2 3/4"
2	mb R/L	∠s 6"x4"x 1/2" x 27'-2 3/4"
1	nc	Pl. 10"x 1/2" x 27'-2 3/4"
2	ma R/L	∠s 6"x4"x 1/2" x 27'-2 3/4"
14	sa R/L	∠s 4"x3" x 1/2" x 2'-3 3/4"
14	fa	Pl. 4"x 1/2" x 1'-4"

Miscellaneous

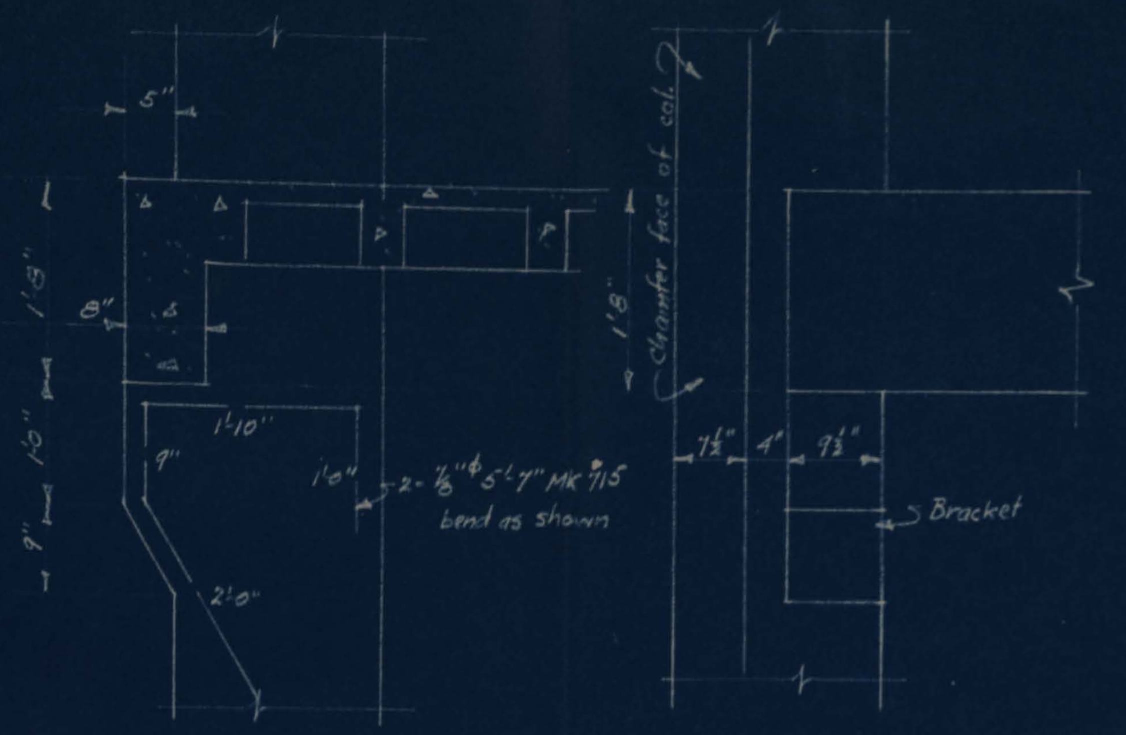
1	nd	Pl. 20" x 1 1/2" x 1'-10"
2	ne	Pl. 20" x 1 1/2 x 1'-8"
12		Dowels 1"ϕ x 4'-6"



ASSEMBLY DETAIL

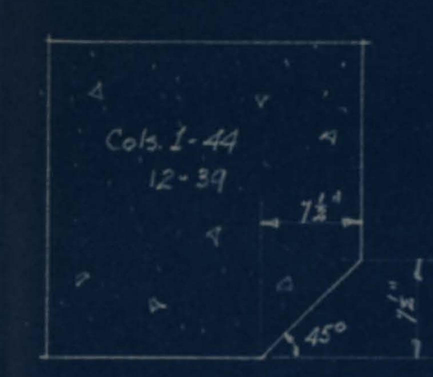
ROBE

CANDIDAT

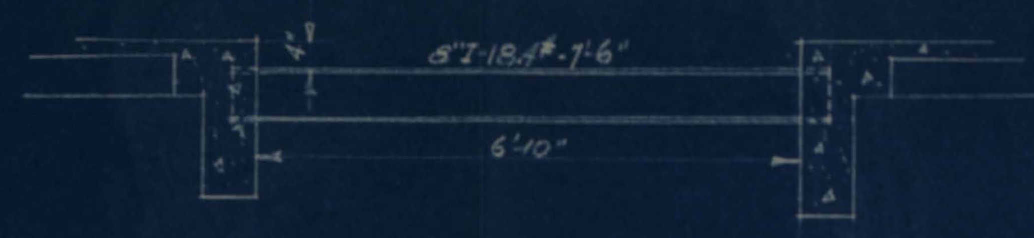


BRACKET AT COLS 39 & 44

SCALE: 3/4" = 1'-0"

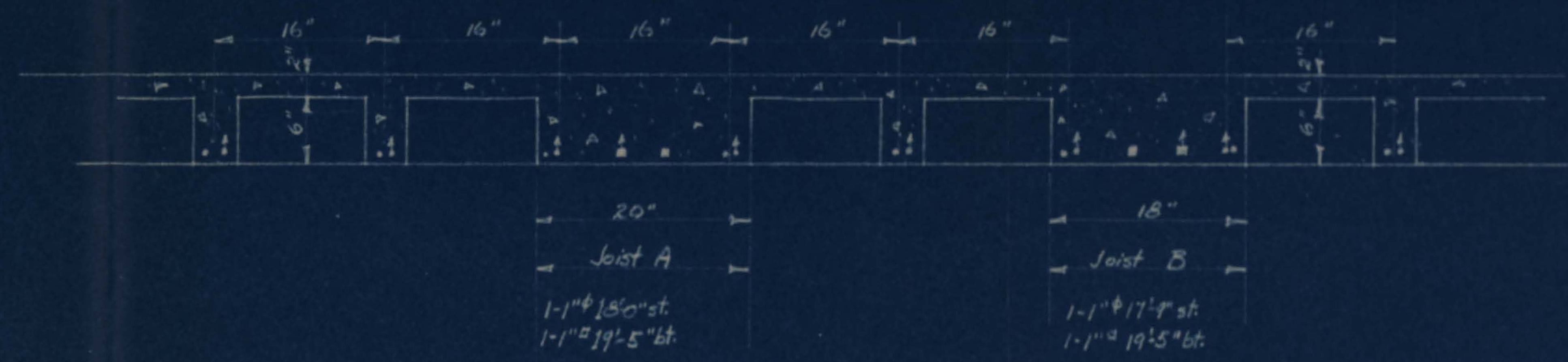


TYPICAL CORNER COL.
CHAMFER DETAIL



DETAIL I-BEAM AT ELEVATOR HATCH

SCALE: 1/2" = 1'-0"

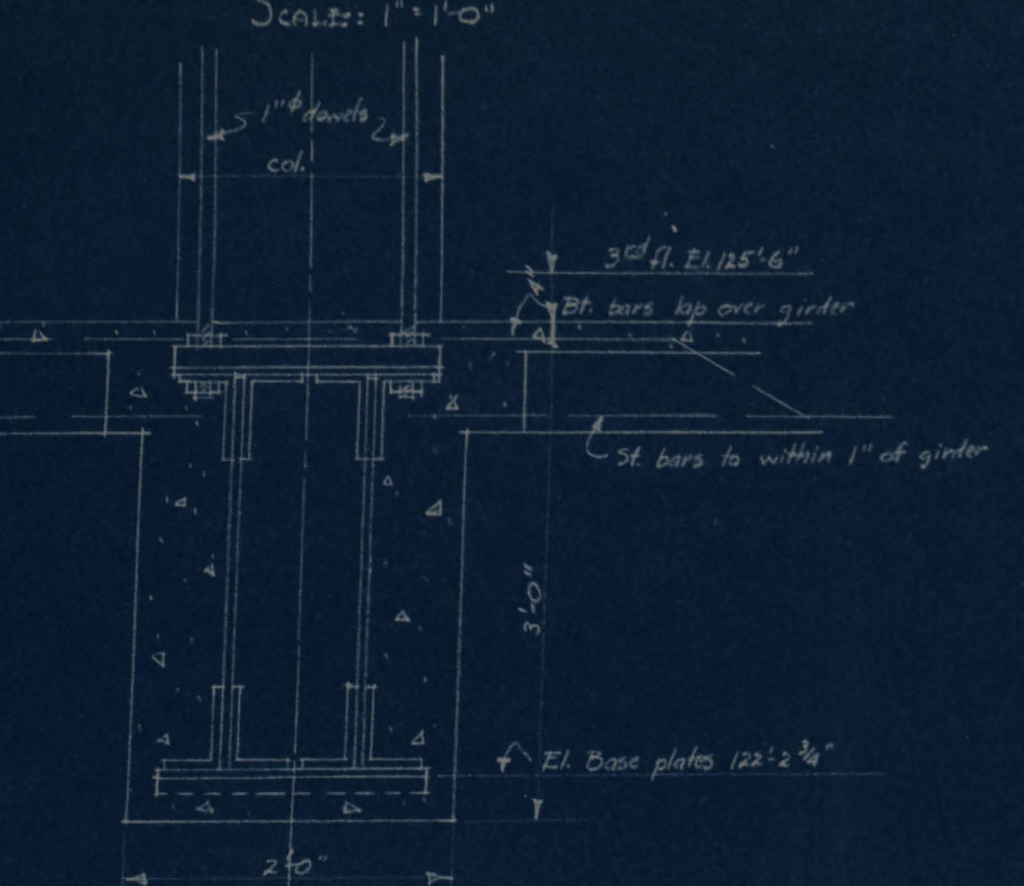


TYPICAL T.C.T. SLAB

SCALE: 1" = 1'-0"

...AILS OF GIRDERS AT COLS. 28 & 29

SCALE: 1" = 1'-0"

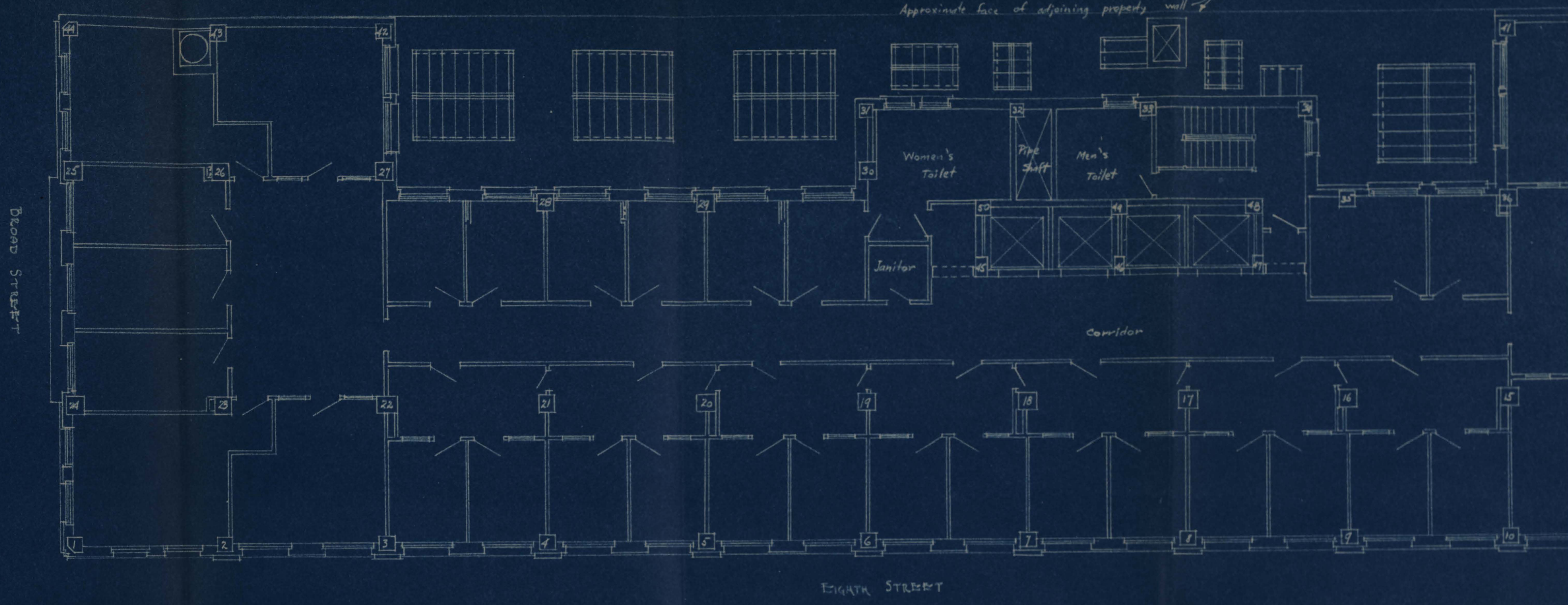


ASSEMBLY DETAIL

ROBERT A. JEWETT

CANDIDATE FOR M.S. IN C.E.

Scale: Varies	DETAILS	Date: 4-11-34
BANK AND OFFICE BUILDING		
Drawn by	GEORGIA SCHOOL OF TECHNOLOGY	Job No. Thesis
Traced by		Sheet 10
Checked		Total Sheets 11



TYPICAL OFFICE FLOOR PLAN

TRACED FROM THE ARCHITECT'S SHEET NO. 2

ONE HALF LONGITUDINAL SECTION

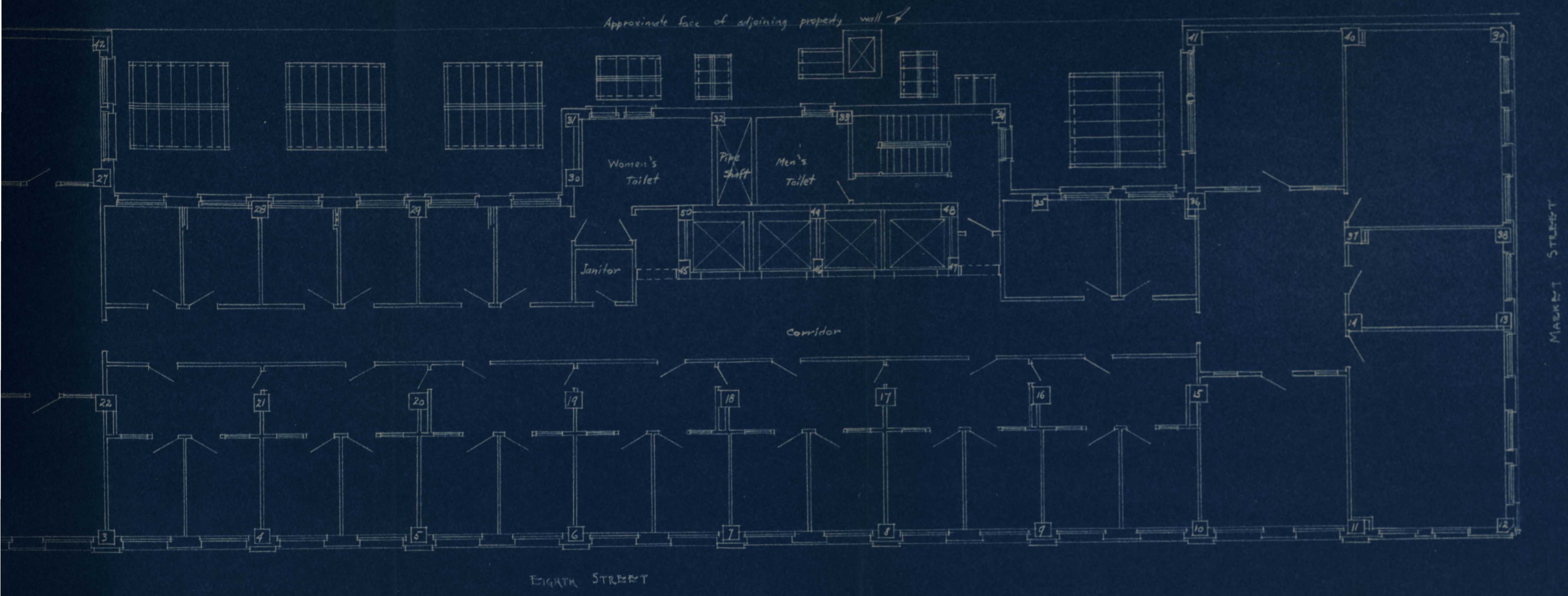
TRACED FROM THE ARCHITECT'S SHEET NO. 23.

ROBERT A. JEWETT

CANDIDATE FOR M.S. IN C.E.

ONE HALF LONGITUDINAL ELEVATI

TRACED FROM THE ARCHITECT'S Sheet No. 2



Typical Office Floor Plan

Traced from the Architect's Sheet No. 2

One Half Longitudinal Section

Traced from the Architect's Sheet No. 23.

Robert A. Jewett

Candidate for M.S. in C.E.

One Half Longitudinal Elevation

Traced from the Architect's Sheet No. 21

Scale: 1/8"=1'-0"	Architectural Drawings	Date 4-5-34
Bank and Office Building		Revisions
Drawn by	Georgia School of Technology	Job No. Thesis
Traced by R.A.J.		Sheet 11
Checked by		Total Sheets 11