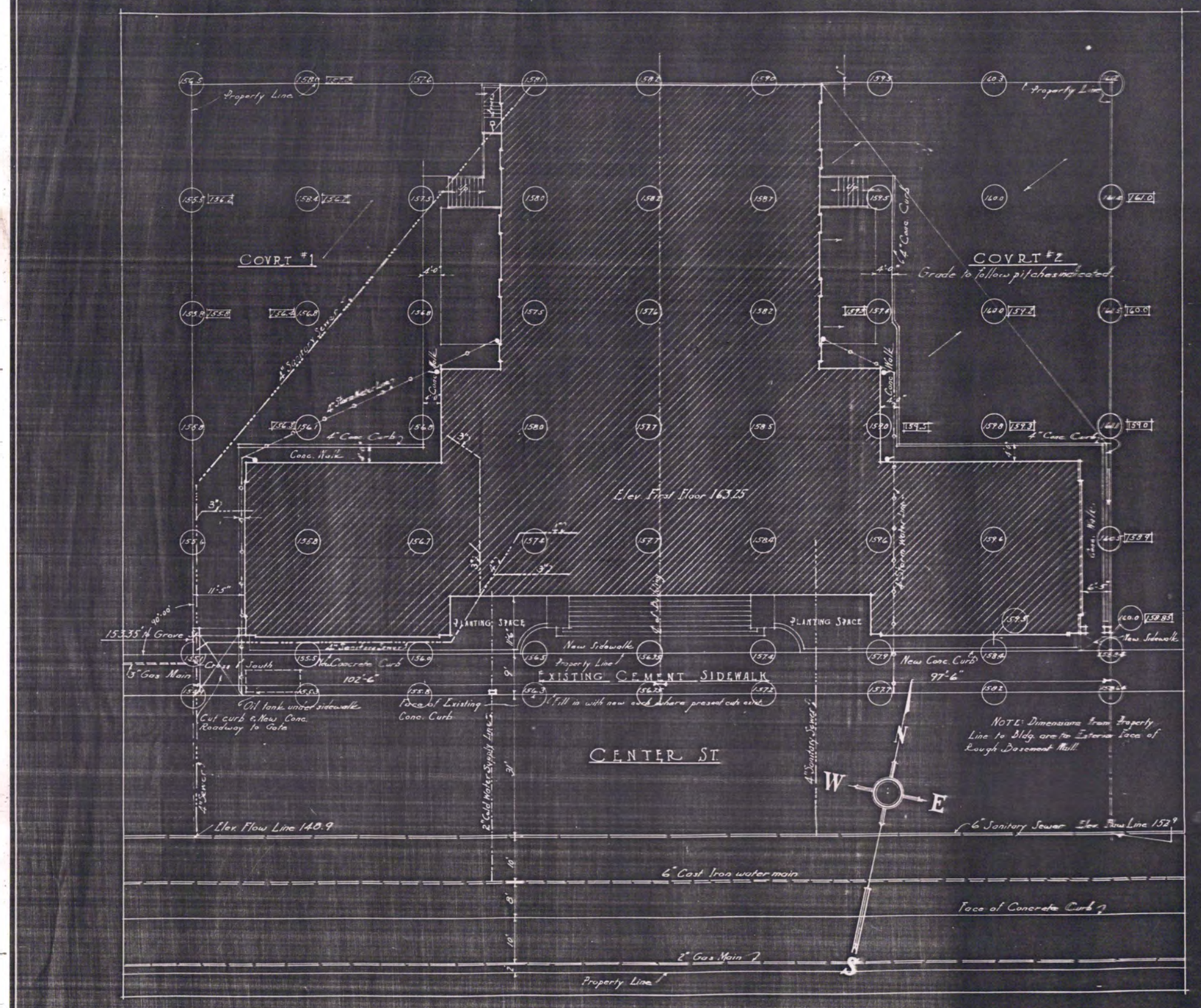
APPENDIX A



PLOT PLAN
SCALE 1/8" = 1'-0"

LEGEND

- Natural Grades
- Finish Grade
- Sanitary Sewer
- Storm Sewer

NOTE. WHERE NATURAL GRADES ARE SHOWN ONLY, THE GRADE WILL NOT REQUIRE ANY CHANGE.

24754

DRAWING NO. 1

V

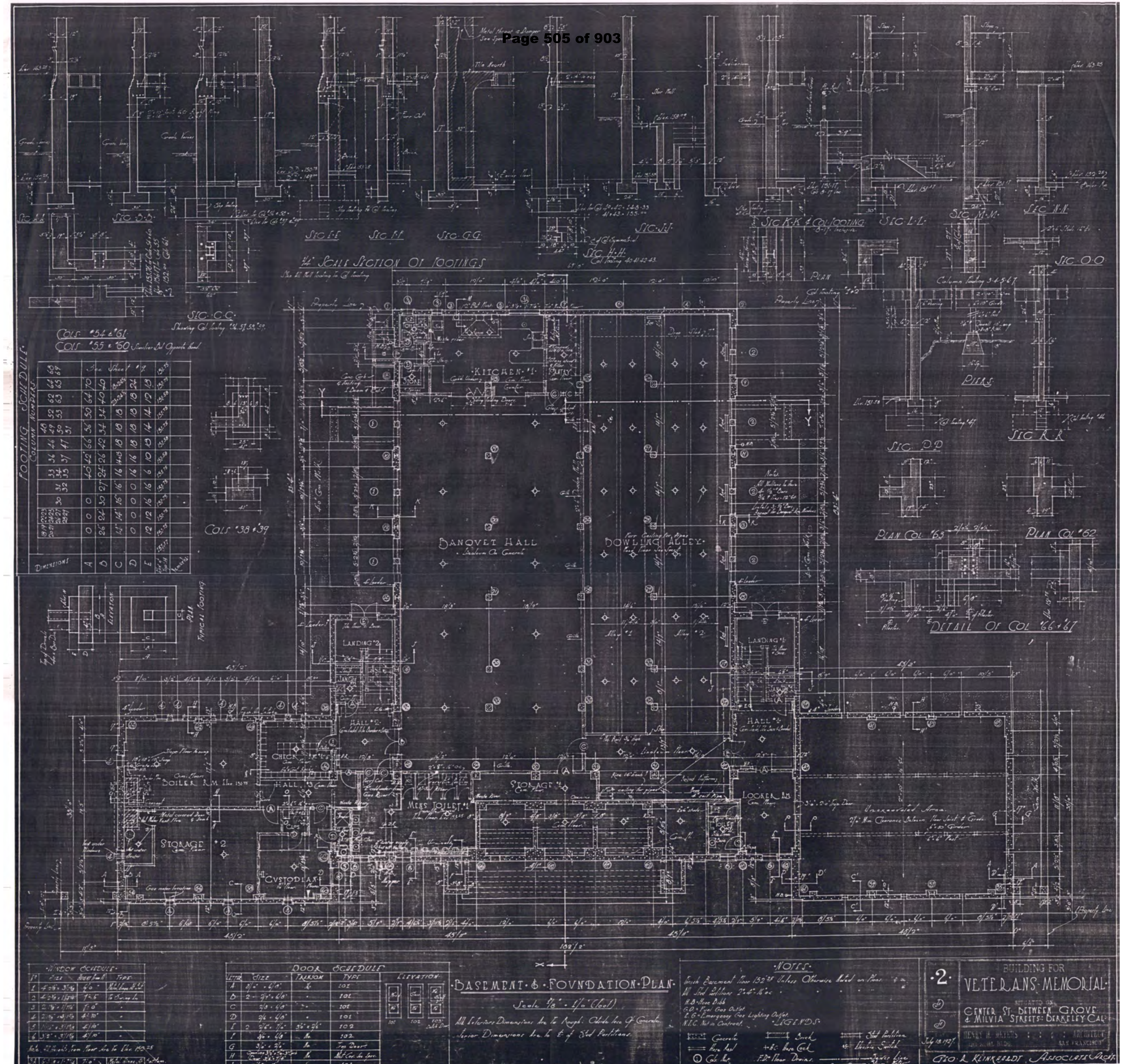
V

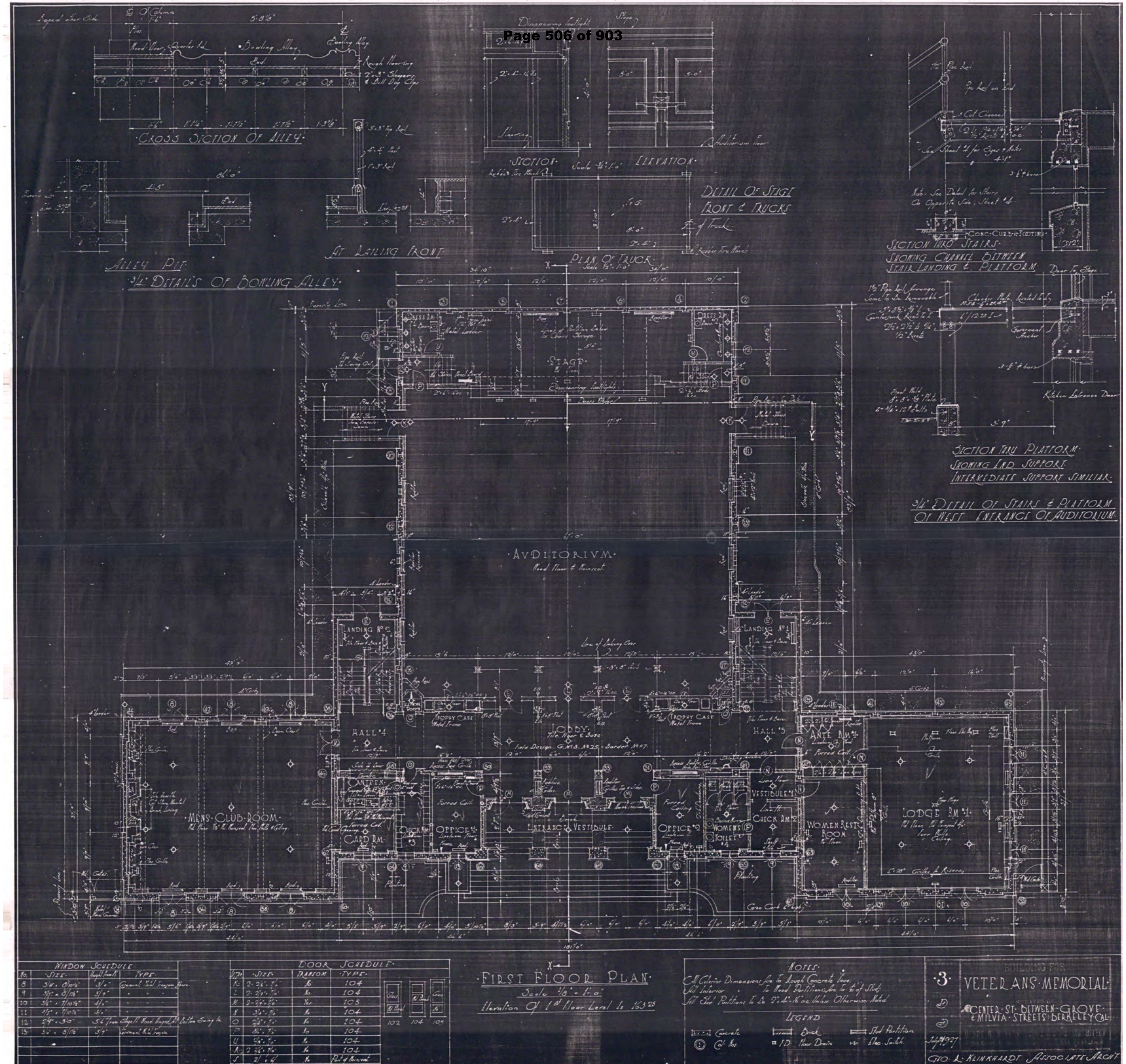
DATE July 18/1927

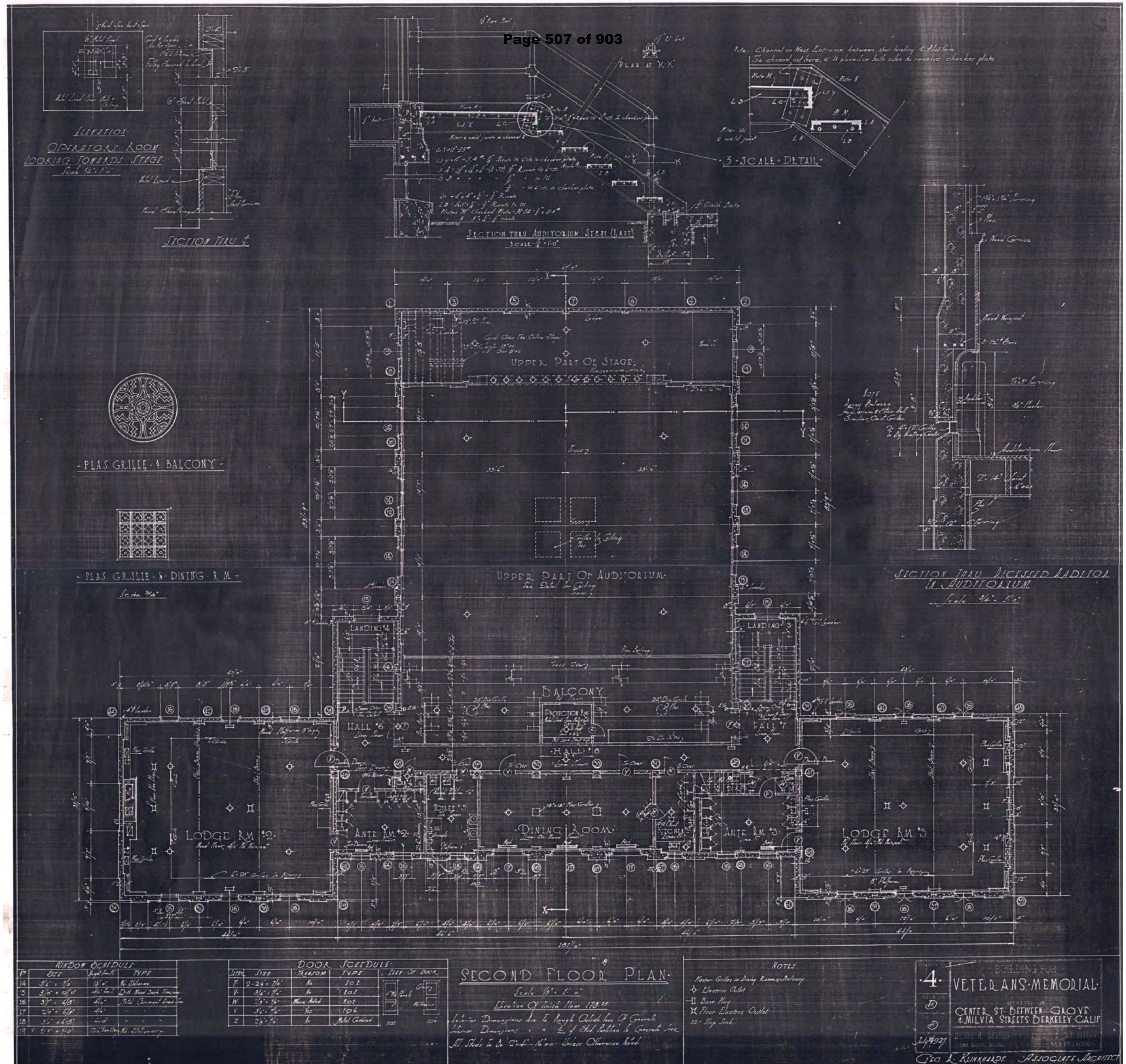
BUILDING FOR
VETERANS MEMORIAL
LOCATED ON
CENTER ST. BETWEEN GROVE & MILVIA STREETS-BERKELEY-CAL.

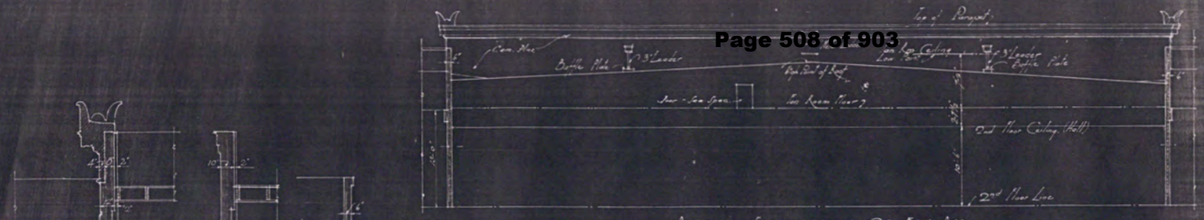
ALBERT H. MEYERS ARCHITECT
ROOM 1010 SAN FRANCISCO

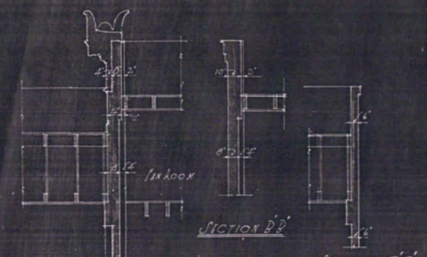
GEO. R. KLINKHARDT ASSOCIATE ARCHITECT

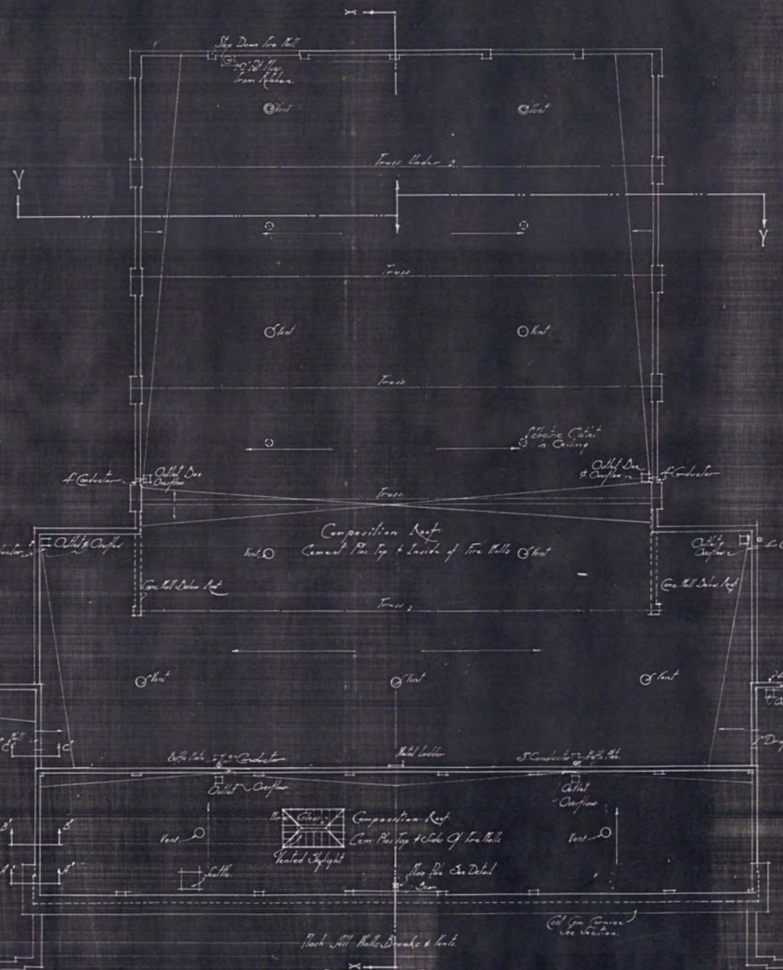

3/4" Scale Section Of Footings
Sec. C-C
Sec. E-E
Sec. F-F
Sec. G-G
Sec. J-J
Sec. K-K & Col. Footing
Sec. L-L
Sec. M-M
Sec. N-N
Sec. O-O
Sec. P-P
Sec. R-R
Piers
Footing Schedule
Cols. 38 & 39
Typical Footing
Plan Col. 63
Plan Col. 62
Detail Of Col. 66 & 67
Kitchen
Banquet Hall
Bowling Alley
Landing
Hall
Boiler Rm.
Storage
Custodian
Mens Toilet
Storage
Lockers
Unexcavated Area
Property Line
Window Schedule
No. | Size | Height from Fl. | Type
1 | 4-2 1/8 x 3/1 5/8 | 6/0" | Metal Hinged At Bot.
2 | 4-2 3/8 x 1/5 3/4 | 7-6" | To Swing In
3 | 2/1 5/8 x 1/11 1/4 | 7-0" | "
4 | 2/1 5/8 x 3/1 5/8 | 4-10" | "
5 | 1/11 1/2 x 3/1 5/8 | 4/10" | "
6 | 3/2" x 3/1 5/8 | 4/10" | "
Note: All Heights From Floor Are To Elev. 152.25
3A | 6-3 1/8 x 1-7 1/4 | 7-0" | Metal Hinged At Bottom.
Door Schedule
Letter | Size | Transom | Type
A | 8/0" x 6/8" | No | 102
B | 2 - 2/4" x 6/8" | " | 101
C | 2/8 x 6/8" | " | 101
D | 2/6 x 6/8" | " | 101
E | 2 - 2/6 x 7/0" | 5/6" x 2/6" | 102
F | 3/6 x 6/8" | No | 102
G | 3/6" x 2/6" | No | Trap Door
H | Opening 3/5 x 7/0; Door 3/6 x 7/6 | No | Met. Cov. See Spec.
J | 3/6" x 7/0" | No | 103
Elevation
101
102
103 Dutch Door
·Basement · & · Foundation · Plan ·
Scale 1/8" = 1'0" (Tool)
All Exteriors Dimensions Are To Rough Outside Face Of Concrete.
Interior Dimensions Are To C of Stud Partitions.
·Notes·
Finish Basement Floor 152.25 Unless Otherwise Noted on Plans.
All Stud Partitions 2"x4" - 16" o.c.
H.B. - Hose Bibb
G.O. - Fuel Gas Outlet.
E.G. - Emergency Gas Lighting Outlet.
N.I.C. Not in Contract.
·Legends·
Concrete
Brick
Stud Partition
Hose Reel
H.C. Hose Cock
Electric Switch
Col. No.
F.D. - Floor Drains.
Sewer Line
Storm Water
·2·
July 13, 1927.
Building For
Veterans · Memorial ·
Situated On
Center St. Between Grove & Milvia Streets · Berkeley · Cal.
Henry H. Meyers · Architect
San Francisco
Geo. L. Klinkhardt, Associate Arch't.

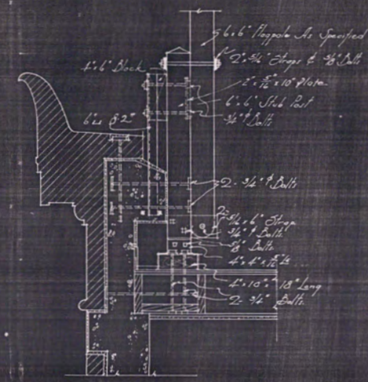

Cross Section Of Alley
Alley Pit
3/4" Details Of Bowling Alley
At Railing Front
Section
Elevation
Detail Of Stage Front & Trucks
Plan Of Truck
Section Thru Stairs Showing Channel Between Stair Landing & Platform
Section Thru Platform Showing End Support Intermediate Support Similar
3/4" Detail Of Stairs & Platform Of West Entrance Of Auditorium
Stage
Auditorium
Landing No. 6
Landing No. 5
Lobby
Hall 4
Hall 5
Trophy Case
Mens Club Room
Canteen
Office 1
Office 2
Entrance Vestibule
Womens Toilet
Check Rm
Vestibule
Women Rest Room
Ante Rm
Lodge Rm
Window Schedule
Door Schedule
First Floor Plan
Scale 1/8" - 1'-0"
Elevation Of 1st Floor Level Is 163.25
Notes
All Exterior Dimensions Are To Rough Concrete Face.
All Interior To Wood Partitions Are To ℄ of Studs
All Stud Partitions To Be 2"x4"-16" oc Unless Otherwise Noted
Legend
Concrete
Brick
Stud Partition
Col. Nos.
FD Floor Drain
Elec. Switch
3
Building For
Veterans Memorial
Center St. Between Grove & Milvia Streets Berkeley Cal.
July 1927
Geo. A. Klinkhardt Associate Archt.


SECOND FLOOR PLAN
Scale 1/8" = 1'-0"
Elevation Of Finish Floor 178.25
Exterior Dimensions Are To Rough Outside Face Of Concrete
Interior Dimensions " " ℄ of Stud Partition To Concrete Face
All Studs To Be 2"x4" - 16" o.c. Unless Otherwise Noted.
NOTES
Plaster Grilles in Dining Room & Balcony.
Electric Outlet
Base Plug
Floor Electric Outlet
SS - Slop Sink.
WINDOW SCHEDULE
DOOR SCHEDULE
4
BUILDING FOR
VETERANS MEMORIAL
SITUATED ON
CENTER ST. BETWEEN GROVE & MILVIA STREETS BERKELEY CALIF
July 1927
GEO. L. KLINKHARDT ASSOCIATE ARCHITECT
UPPER PART OF STAGE
UPPER PART OF AUDITORIUM
BALCONY
LANDING 4
LANDING 3
HALL 6
HALL 7
HALL 8
LODGE RM 2
ANTE RM 2
DINING ROOM
ANTE RM 3
LODGE RM 3
PLAS. GRILLE - A - BALCONY
PLAS. GRILLE - A - DINING RM.
ELEVATION OPERATORS ROOM LOOKING TOWARDS STAGE
SECTION THRU ℄
SECTION THRU AUDITORIUM STEPS (EAST)
3 SCALE DETAIL
SECTION THRU RECESSED RADIATOR IN AUDITORIUM









BUILDING FOR
VETERANS MEMORIAL
SITUATED ON
CENTER ST. BETWEEN GROVE & MILVIA STREETS BERKELEY, CAL.

GEO. L. KUKKARDT — ASSOCIATE ARCHITECT

VETERANS MEMORIAL

SOUTH ELEVATION.

VETERANS · MEM

SECTION · THRU · ONE · HALF · ENTRANCE · · VESTIBULE · LOOKING · IN ·

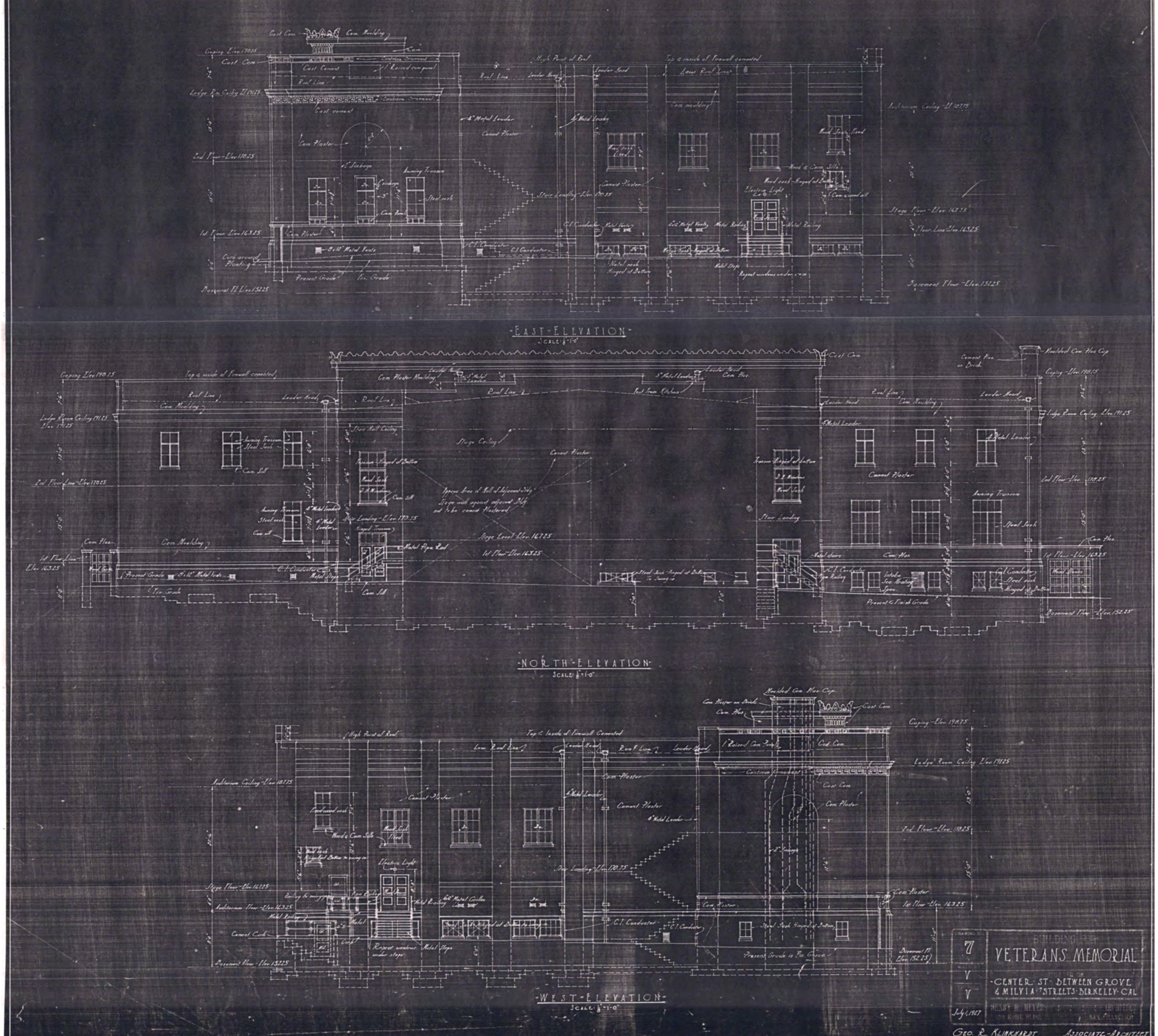
SECTION · THRU · ONE · HALF · ENTRANCE · · VESTIBULE · LOOKING · OUT ·

PORTION OF SOUTH ELEVATION.

6 VETERANS MEMORIAL

CENTER ST. BETWEEN GROVE & MILVIA STREETS · BERKELEY · CAL.

GEO. R. KLINKHARDT ASSOCIATE ARCHITECT


EAST ELEVATION
NORTH ELEVATION
WEST ELEVATION
7
BUILDING FOR
VETERANS MEMORIAL
CENTER ST BETWEEN GROVE
& MILVIA STREETS BERKELEY CAL
July 1, 1927
GEO. R. KLINKHARDT
ASSOCIATE ARCHITECT

-ELEVATION - CHENEAU-

-ELEVATION - CORNICE-

-ELEV - SPANDREL-

-SOFFIT - BEAM-

-SECTION - THRU - ℄ - FRONT - ENTRANCE-

SCALE 3/4"

-CHENEAU - FRIEZE - ℄ - ENTRANCE-

-SEAL - OF - AMERICA-

-SEAL - OF - CALIFORNIA-

SCALE 3/4"

-SAILOR - PLACQUE-

-SOLDIER - PLACQUE-

-AIRMAN - PLACQUE-

-ELEV - ℄ - FRIEZE - ℄ - WINGS-

-PLAN - OF - PILASTER-

-PILASTER ℄ CAP-

-DETAIL - SPLAYED - JAMB-

-REFLECTED - HEAD - ARCHITRAVE - ℄ - ENTRANCES-

-SECTION - THRU - FRONT - WALL - WINGS-

8

BUILDING FOR
-VETERANS - MEMORIAL-
SITUATED ON
CENTER ST. - BETWEEN GROVE & MILVIA STREETS. BERKELEY, CAL.

HENRY H. MEYERS : : : : ARCHITECT
SAN FRANCISCO

-QUARTER - AUDITORIUM - CEILING - PLAN-
SCALE 1/4"=1'-0"

3/4" DET. RADIATOR GRILLE

-HALF - ELEVATION - LOBBY - LOOKING - TO - ENTRANCE-

-ELEVATION - DINING - ROOM - LOOKING - TO - STREET-

HEAD & JAMB SECTION

BIUNTIN

SILL

-SECTION - THRU - TROPHY - CASE - WINDOW-
SCALE ONE-HALF FS.

-HALF - ELEVATION - LOBBY - LOOKING - TO - AUDITORIUM-

-ELEVATION - DINING - ROOM - LOOKING - TO - HALL-

-ONE - QUARTER - CEILING - PLAN - OF - LOBBY-
SCALE 1/4"=1'-0"

AUDITORIUM CEILING DETAIL
SCALE 1"=1'-0"

METHOD FOR APPLYING ACOUSTICAL FELT - SEE ALTERNATE NO 4 -

-LONGITUDINAL - SECTION - ON - CENTER - LINE - OF - BLDG - "X-X"
SCALE 1/8"=1'-0"

-DETAIL - OF - COLS. 68 & 69.

ATTIC
DINING ROOM
VESTIBULE
LOBBY
BALCONY
AUDITORIUM
EXIT
STAGE
STORAGE
BANQUET ROOM

9

BUILDING FOR
VETERANS' MEMORIAL

CENTER - ST - BETWEEN GROVE & MILVIA STREETS - BERKELEY - CAL.

JOHN H. BETERS

GEO. R. KUNKHARDT ASSOCIATE - AR

-SOUTH-ELEVATION-

-½-SOUTH-ELEVATION-LODGE "1"

-SOUTH-ELEVATION-

-WEST-ELEVATION-

-EAST-ELEVATION-LODGE "3"

-WEST-ELEVATION-(LODGE ROOM "2")

-EAST-ELEVATION-
-MENS-CLUB-ROOM-

-NORTH-ELEV-LODGE "1"

-EAST-ELEVATION-
-LODGE-ROOM-2-

CROSS SECTION ON LINE Y-Y
SCALE: ¼"-1'-0"

10

BUILDING FOR
VETERANS MEMORIAL

CENTER ST. BETWEEN GROVE & MILVIA STREETS-BERKELEY-CAL.

July 10, 1927

GEO R. KLINKHARDT ASSOCIATE ARCHITECT

HALL No 6

CANTEEN

HALL No 4

HALL No 3

HALL No 2

SECTION THRU STAIRS

SECTION A-B

3/4" SCALE DETAIL OF STAIRS AT 1st FLOOR

3" SCALE DETAIL OF BALUSTRADE

3/4" SCALE OF STAIRS AT 2nd FLOOR

CHECK ROOM No 5

TELEPHONE BOOTH

LOBBY

KITCHEN #2

EAST ELEVATION

SOUTH ELEVATION

NORTH ELEVATION

PANTRY IN BASEMENT

SECTION THRU SERVING COUNTER (KITCHEN #2)

1/4" SCALE ELEVATIONS OF INTERIORS

TELEPHONE BOOTH

TROPHY CASES SCALE 1"=1'-0"

CHICK RM #3

CHICK RM #1

1/4" PLAN OF LOBBY & STAIR HALLS

SECTION THRU CANTEEN COUNTER

SOUTH ELEVATION

CANTEEN NORTH ELEVATION SCALE 1"=1'-0"

HALL ELEVATION

DRAWING NO. 11

BUILDING FOR VETERANS-MEMORIAL

SITUATED ON CENTER ST. BETWEEN GROVE & MILVIA STREETS BERKELEY CAL.

HENRY H. MEYERS ARCHITECT 838 HUNT BLDG. SAN FRANCISCO

GEO. L. REINHARDT ASSOCIATE ARCHT.

DIAGRAM OF BOILER AND VAC PUMP CONNECTIONS

DIAGRAM OF TELEPHONE SERVICE.

METHOD OF CONNECTING SUCTION PIPE TO TANK SHELL
OIL TANK DETAILS

METHOD OF CONNECTING McDONNEL AND MILLER WATER FEEDER TO BOILERS

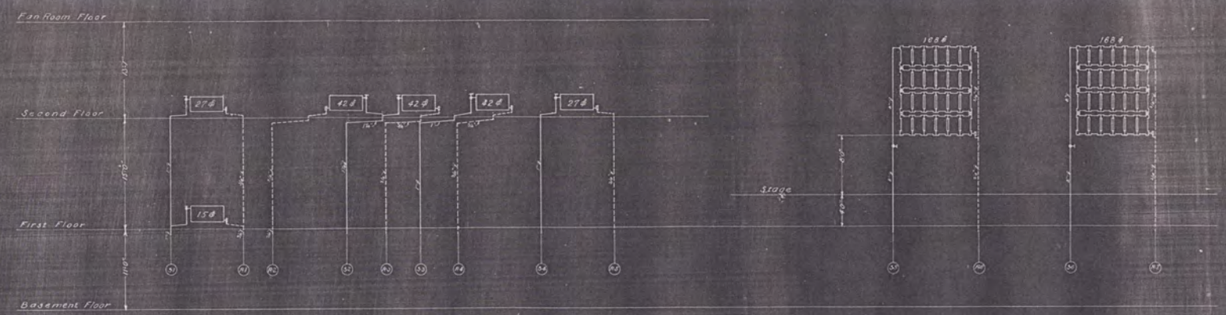
ME. 1 VETERANS MEMORIAL

CENTER ST. BETWEEN GROVE & MILVIA STREETS BERKELEY CAL.

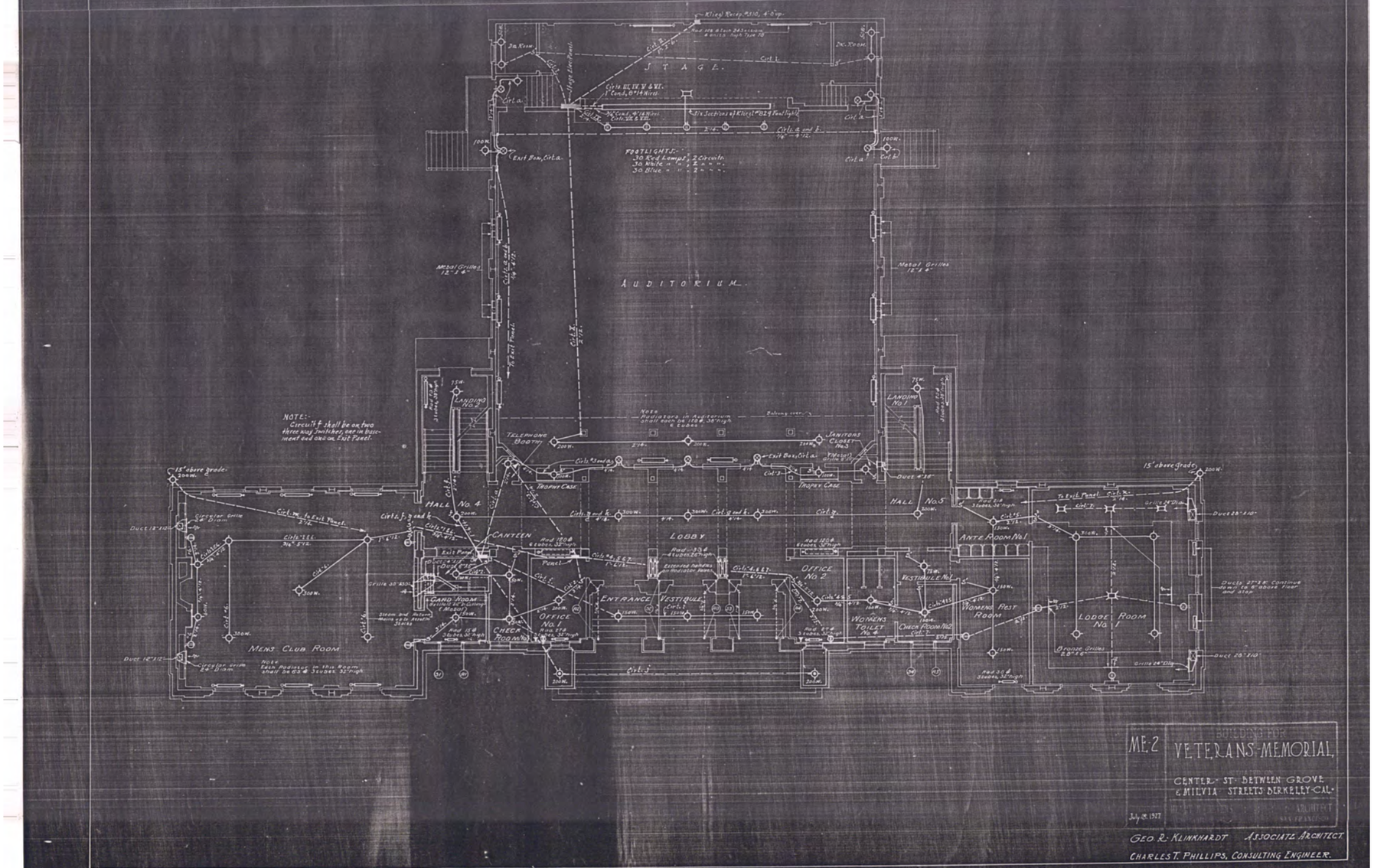
July 1927

GEO R. KLINKHARDT ASSOCIATE ARCHITECT.

CHARLES T. PHILLIPS, CONSULTING ENGINEER.



STEAM AND RETURN RISER DIAGRAM



ME. 2

BUILDING FOR
VETERANS' MEMORIAL
CENTER ST. BETWEEN GROVE & MILVIA STREETS BERKELEY, CAL.

July 1927

GEO. R. KLINKHARDT ASSOCIATE ARCHITECT
CHARLES T. PHILLIPS, CONSULTING ENGINEER.

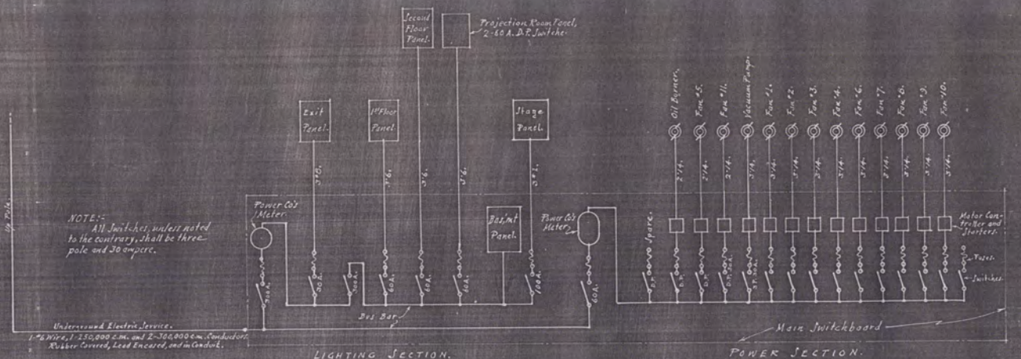
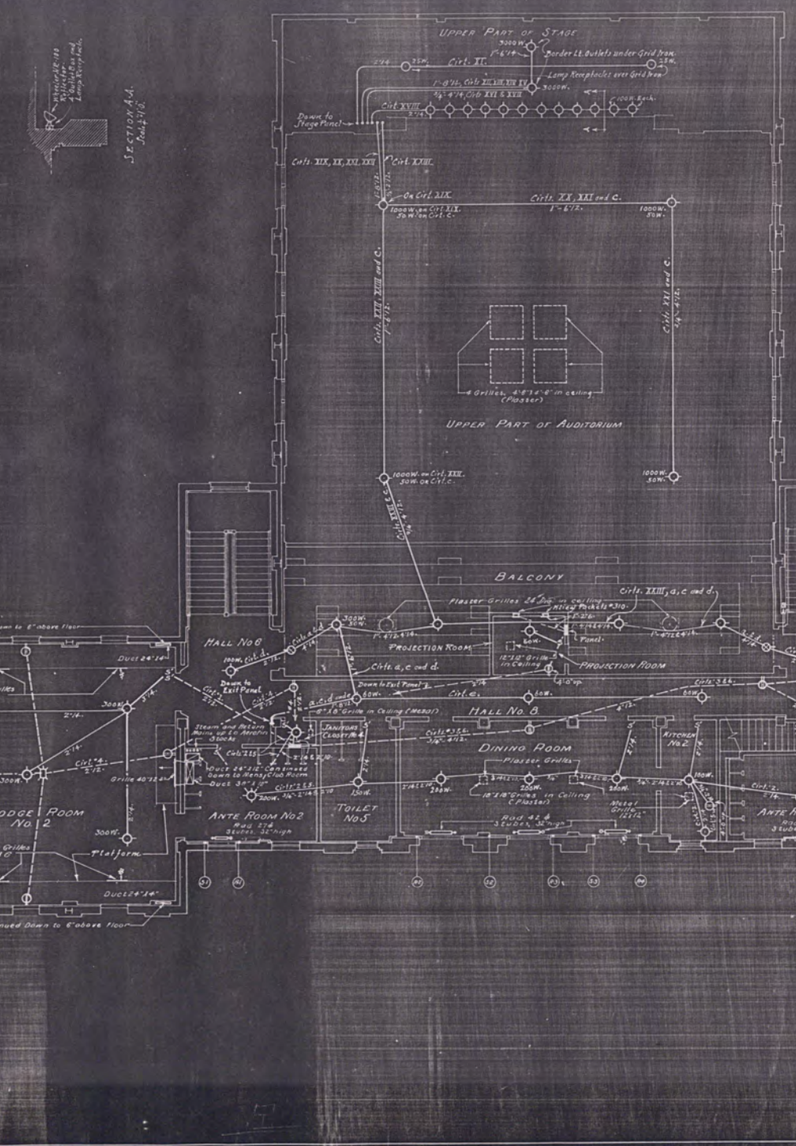


DIAGRAM OF ELECTRICAL CONNECTIONS.



ME-3

VETERANS MEMORIAL

CENTER ST. BETWEEN GROVE & MILVIA STREETS BERKELEY, CAL.

July 18 1927

GEO. R. KLINKHARDT ASSOCIATE ARCHITECT.
CHARLES T. PHILLIPS CONSULTING ENGINEER.

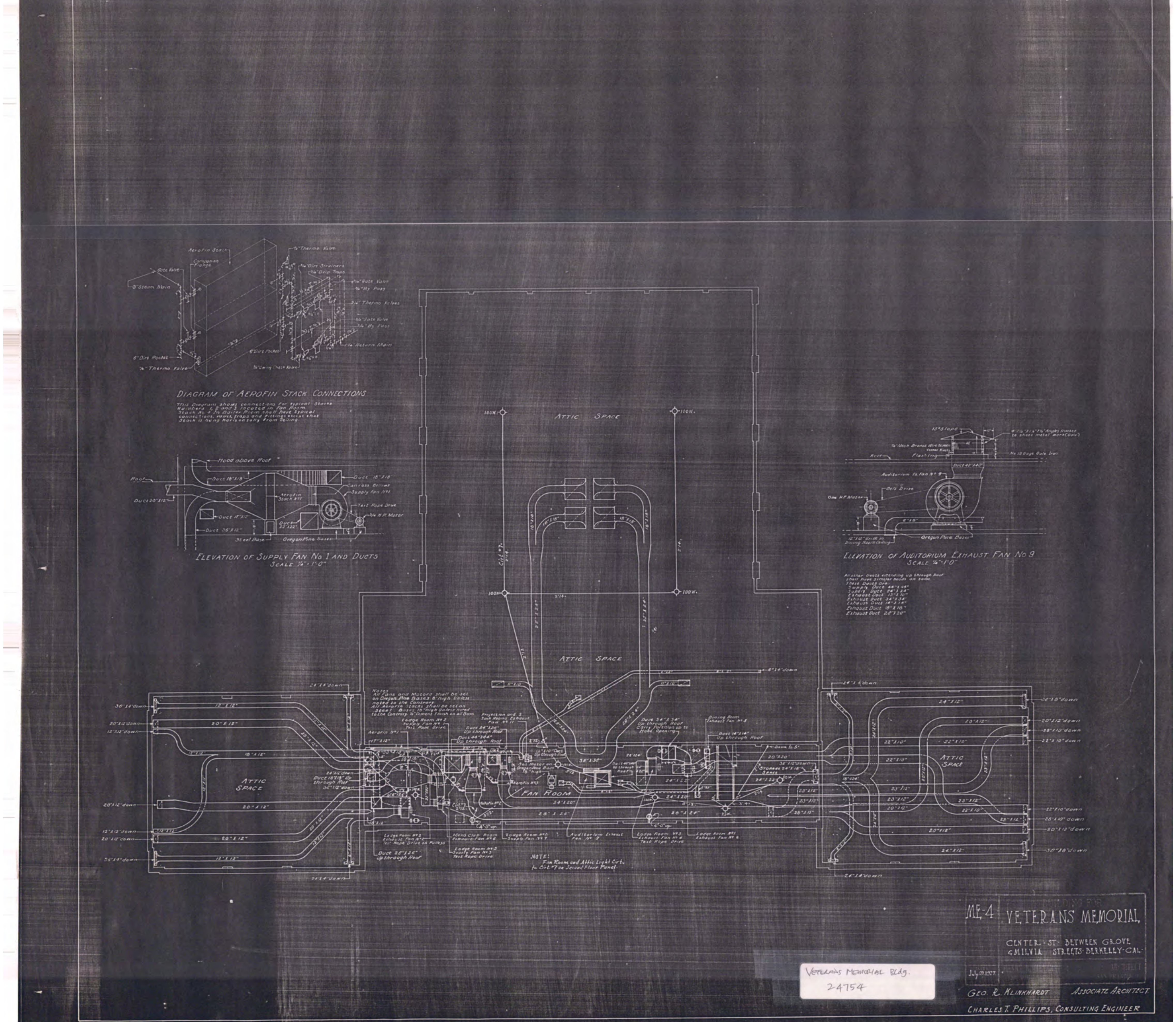
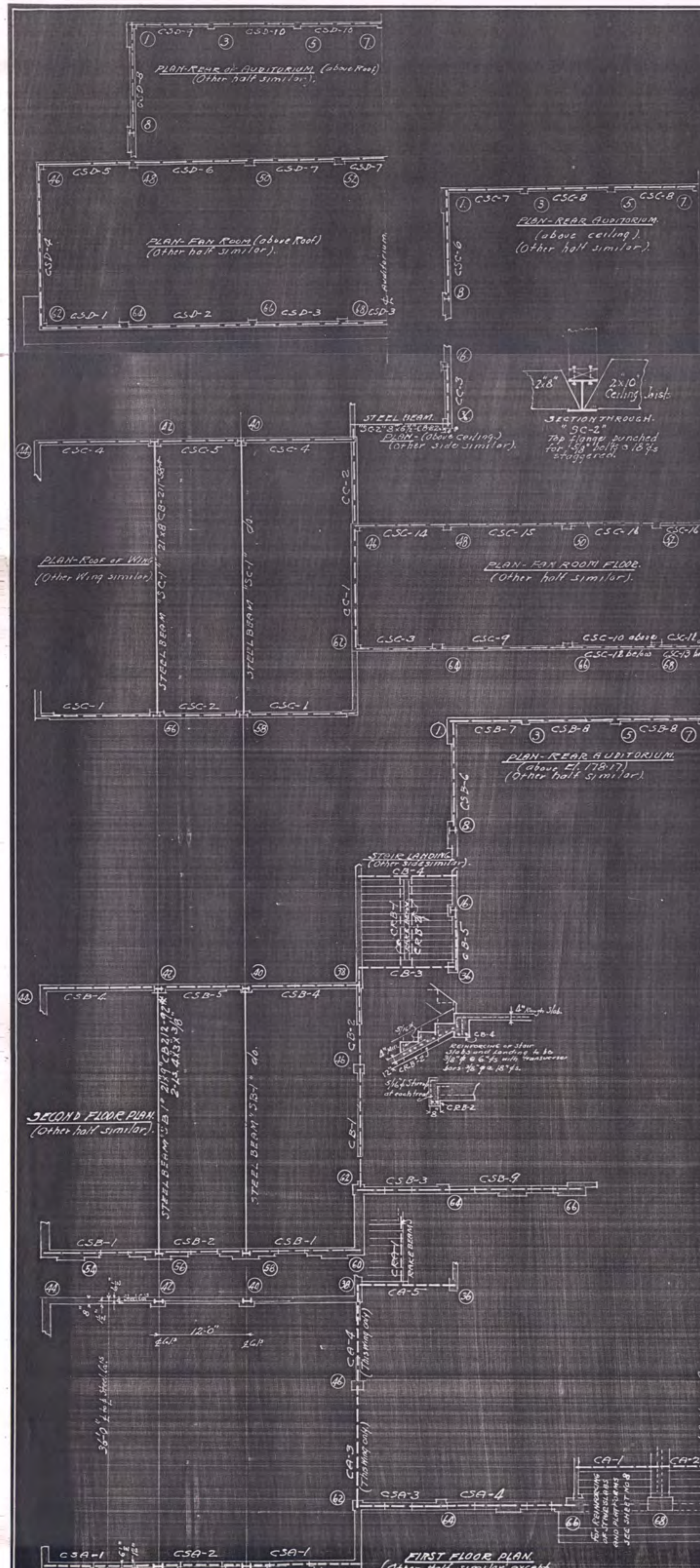


DIAGRAM OF AEROFIN STACK CONNECTIONS
This Diagram shows connections for typical Stacks Numbers 1, 2 and 3 located in Fan Room. Stack No. 4 In Boiler Room shall have typical connections, valves, traps and fittings except that Stack is hung horizontally from ceiling.
Aerofin Stack
Companion Flange
Gate Valve
3" Steam Main
6" Dirt Pocket
¾" Thermo Valve
Dirt Strainers
Drip Traps
Gate Valve
By Pass
Thermo Valves
Return Main
ELEVATION OF SUPPLY FAN No 1 AND DUCTS
SCALE ¼" = 1'-0"
Hood above Roof
Roof
Duct 18"X18"
Duct 20"X12"
Aerofin Stack No 1
Duct 17"X12"
Duct 36"X12"
Duct 22"X22"
Canvass Bellows
Supply Fan No 1
Text Rope Drive
¾ H.P. Motor
Steel Base
Oregon Pine Bases
ELEVATION OF AUDITORIUM EXHAUST FAN No 9
SCALE ¼" = 1'-0"
13° Slope
No 18 Gage Galv. Iron
Flashing
Roof
Duct 40"X40"
Auditorium Ex. Fan No 9
Belt Drive
One H.P. Motor
Oregon Pine Bases
12"X12" Grille in Dining Room Ceiling
All other Ducts extending up through Roof shall have similar hoods on same. These Ducts are:
Supply Duct 44"X44"
Supply Duct 24"X24"
Exhaust Duct 12"X10"
Exhaust Duct 34"X34"
Exhaust Duct 14"X14"
Exhaust Duct 18"X18"
Exhaust Duct 26"X26"
ATTIC SPACE
ATTIC SPACE
ATTIC SPACE
ATTIC SPACE
FAN ROOM
Notes
All Fans and Motors shall be set on Oregon Pine Bases 8" high Unless noted to the Contrary. All Aerofin Stacks shall be set on Steel Bases 18" high Unless noted to the Contrary. ¾" Cement Finish on all Bases.
NOTE:
Fan Room and Attic Light Cirt. to Cirt. #7 on Second Floor Panel.
ME-4
VETERANS MEMORIAL
CENTER ST. BETWEEN GROVE & MILVIA STREETS BERKELEY CAL.
July 19 1927
GEO. R. KLINKHARDT ASSOCIATE ARCHITECT
CHARLES T. PHILLIPS, CONSULTING ENGINEER
Veterans Memorial Bldg.
24754



NOTE: These PLANS are diagrammatic only, in order to show location of BEAMS.

CONCRETE COLUMN SCHEDULE.

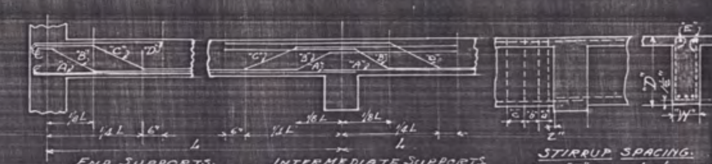
Numbers	1-2-3-4 5-6-7	18-19-20-21 22-23-24-25 26-27-28-29	30-31-32	33-34-35	36-37	38-39	44-45	46-47	48-49-50 51-52-53	54-55 60-61	56-57 58-59	62-63	64-65	66-67	68-69
Fan Room Fl. El.	12"x12" 4-3/4"ϕ	—	—	—	12"x12" 4-5/8"ϕ	10"x36" 6-1/2"ϕ 5/16ϕ@10"c/s	12"x12" 4-5/8"ϕ	12"x16" 4-7/8"ϕ	10"x10" 4-3/4"ϕ 5/16ϕ@10"c/s	16"x15 6-1/2	22"x15" 4-1/2"ϕ	12"x16" 4-3/4"ϕ	16"x16" 6-3/4"ϕ	10"x21" 6-5/8"ϕ 5/16"ϕ@10"c/s	10"x21" 6-5/8"ϕ 5/16"ϕ@10"c/s
Second Fl. El. 178.25	12"x12" 4-3/4"ϕ	—	—	—	12"x12" 4-5/8"ϕ	10"x36" do. do.	12"x12" do.	16"x16" 6-7/8"ϕ	14"x14" 4-7/8"ϕ	16"x15" do.	22"x15" do.	16"x16" 6-3/4"ϕ	16"x16" do.	10"x24" 6-3/4"ϕ 5/16"ϕ@10"c/s	10"x24" 6-3/4"ϕ
First Fl. El. 163.25	12"x12" 4-3/4"ϕ	—	—	—	12"x15" 4-3/4"ϕ	10"x36" 6-3/4"ϕ 5/16"ϕ@10"c/s	12"x12" do.	16"x16" 6-1"ϕ	16"x16" 6-1"ϕ	16"x15" do.	22"x15" do.	16"x16" 6-7/8"ϕ	18"x16" 6-3/4"ϕ	16"x24" 6-3/4"ϕ	14"x24" 6-3/4"ϕ
Basement Fl. El. 152.25	12"x12" 4-3/4"ϕ	14"x14" 4-3/4"ϕ	16"x16" 4-3/4"ϕ	16"x16" 4-7/8"ϕ	14"x15" 4-7/8"ϕ	13"x36" 6-3/4"ϕ 5/16"ϕ@12"c/s	12"x12" do.	18"x18" 6-1"ϕ	18"x18" 6-1"ϕ	16"x22" 6-1/2"ϕ	22"x22" 4-1/2"ϕ	23"x23" 6-7/8"ϕ	18"x23" 6-7/8"ϕ	16"x28" 6-3/4"ϕ	16"x28" 6-3/4"ϕ
Top of Col. Footing	Elevation 151.17	151.75	151.75	151.75	151.58	151.58	44: 151.25; 45: 157.50	151.58	151.75	54, 60: 151.75; 55: 156.17; 61: 152.00	56, 58: 151.00; 57: 157.67; 59: 155.17	151.58	151.75	151.75	151.75

TYPICAL DETAIL COLUMN TIES.

NOTE: All Column Reinforcing bars to be square deformed (ϕ). All ties to be 5/16" round (ϕ) spaced at 12" c/s except as noted otherwise. Contractor shall submit for approval complete reinforcing schedules. Column bars or Dowels to lap 40 times bar diameter at all splices. Place Dowels in all Footings same number and size as bars in Column above.

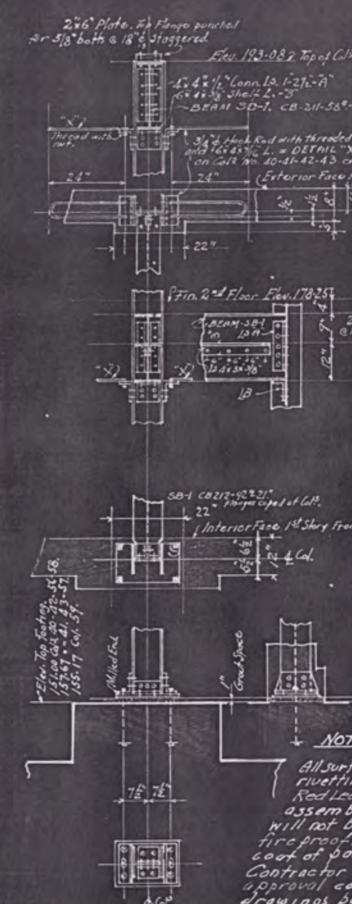
BEAM SCHEDULE:

MARK	Dimension Width "W"	Depth "D"	Bars "A" No.	"A" Size	"B" No.	"B" Size	"C" No.	"C" Size	"D" No.	"D" Size	Stirrups No. Req'd	Size	Spacing "a"	"b"	"c"	NOTES
CA-1	12"	16"	2	5/8ϕ	1	5/8ϕ	1	5/8ϕ	1	1/2ϕ	22	5/16ϕ	6@6½	4@12½	—	See Sec. Sh. 8
" 2	"	"	"	"	"	"	"	"		—	"	"	"	"	—	" " "
" 3	10"	26"	2	7/8	1	7/8		—	"	"	24	"	"	5 " "	—	D bar at Col. 62.
" 4	10"	20"	2	3/4	"	"		—	"	"	18	"	"	2 " "	—	" " " " 38
" 5	15"	24"	"	"	"	"		—	2	"	14	"	6@12½	—	—	See Sec. Sh. 11
CSA-1	22"	16"	"	"	"	"		—	2	3/4	16	3/8ϕ	3@6½	4@10½	—	" " Sh. 8
" 2	"	"	"	"	"	"		—	"	"	16	"	"	"		
" 3	19"	"	"	"	1	3/4	1	3/4	1	1/2	16	"	4 " "	4 " "	—	D bar at Col. 62
CSA-4	"	"	2	7/8	"	"	"	"	"	"	22	"	" "	6 " "	—	" " " " 66
CRA-1	8"	12"	2	3/4	"	←		—		—		5/16ϕ	at each Stair tread			See Sec. Sh. 11
CB-1	10"	30"	2	7/8	1	1"		—	1	3/4	24	"	6@6½	5@12½	—	D bar at Col. 62
" 2	10"	22"	2	3/4	1	7/8		—	1	1/2	18	"	"	2 " "	—	" " " " 38
" 3	15"	"	"	"	1	3/4		—	2	1/2	14	"	6@12½	—	—	See Sec. Sh. 11
" 4	10"	"	"	"	"	"		—	"	"	"	"	"	—	—	" " "
" 5	8"	14"	2	5/8	1	5/8		—	1	"	—	—	—	—	—	D bar at Col. 36
CSB-1	11	24"	2	3/4	1	7/8		—	2	3/4	16	3/8ϕ	3@6½	4@10½	—	See Sec. Sh. 8
" 2	"	"	"	"	"	"		—	"	"	"	"	"	"	—	
" 3	12"	28"	"	"	1	3/4	1	3/4	1	1/2	18	"	4 " "	"	—	D bar at Col. 62
" 4	8	"	2	7/8	"	"		—	2	"	—	—	—	—	—	D " each end
" 5	"	"	2	3/4	"	"		—	"	"	—	—	—	—	—	" " " "
" 6	12"	21"	"	"	"	"		—	"	"	—	—	—	—	—	" " " "
" 7	"	14"	2	1/2	1	1/2	1	1/2	1	1/2	—	—	—	—	—	" " at Col. 1.
" 8	"	"	"	"	"	"	"	"		—	—	—	—	—	—	
CSB-9	12"	28"	2	3/4	1	3/4	1	3/4	1	1/2	22	3/8ϕ	4@6½	6@10½		
CRB-1	8"	12"	"	"		—		—		—		5/16ϕ	at each Stair tread			See Sec. Sh. 11
" -2	"	"	"	"		—		—		—		"	"	"	"	" " "
CC-1	12"	23"	"	"	1	3/4	1	3/4	1	1/2	24	"	6@6½	5@12½	—	D bar at Col. 62
" 2	10"	18"	"	"	1	7/8		—	"	"	18	"	"	2 " "	—	" " " " 38
" 3	8"	12"	2	1/2	1	1/2		—	"	"	—	—	—	—	—	" " " " 36
CSC-1	9"	24"	2	5/8	1	3/4		—	2	"	16	3/8ϕ	3@6½	4@10½	—	See Sec. Sh. 8
" 2	"	"	"	"	"	"		—	"	"	"	"	"	"	—	
" 3	12	30"	2	3/4	1	7/8		—	1	"	18	"	4 " "	"	—	D bar at Col. 62
" 4	8"	18"	2	5/8	1	5/8		—	2	"	—	—	—	—	—	D " each end
" 5	"	"	"	"	"	"		—	"	"	—	—	—	—	—	" " " "
" 6	"	"	"	"	"	"		—	"	"	—	—	—	—	—	" " " "
" 7	12"	14"	2	1/2	1	1/2	1	1/2	1	"	—	—	—	—	—	" " at Col. 1.
" 8	"	"	"	"	"	"	"	"		—	—	—	—	—	—	
" 9	12"	30"	2	7/8	1	7/8		—	1	3/4	22	3/8ϕ	4@6½	6@10½	—	
" 10	31"±	17"	3	5/8	2	5/8	1	5/8	3	5/8		3/8ϕ	@12½ throughout			See Sec. Sh. 8
" 11	"	"	"	"	"	"	"	"		—		"	"	"	"	" " " "
" 12	9"	18"	2	"	1	"		—	1	5/8		"	"	"	"	" " " "
" 13	"	"	"	"	"	"		—		—		"	"	"	"	" " " "
CSD-1	11(min)	24"	2	3/4	1	3/4	1	3/4	1	1/2	18	3/8ϕ	4@6½	4@10½	—	D bar at Col. 62
" 2	"	"	2	7/8	1	"	1	"		—	22	"	"	6 " "	—	
" 3	"	"	2	3/4	1	"	1	"		—	18	"	"	4 " "	—	
" 4	12"	22"	2	"	"	"	"	"	2	1/2	24	5/16ϕ	6@6½	5@12½	—	D bar each end
" 5	10"	16"	2	1/2	1	5/8		—	1	"	14	"	"	—	—	" " at Col. 46
" 6	"	"	"	"	1	3/4		—		—	18	"	8@6½	—	—	
" 7	"	"	"	"	1	5/8		—		—	14	"	6@6½	—	—	
" 8	8"	16"	2	"	1	1/2		—	2	1/2	—	—	—	—	—	D bar each end
" 9	"	12"	"	"	"	"		—	1	"	—	—	—	—	—	" " at Col. 1.
" 10	"	"	"	"	"	"		—	1	—	—	—	—	—	—	



The Contractor shall submit for approval complete Schedules of all Reinforcement.
Symbol (ϕ) denotes a square deformed bar.
" " (ϕ) " " plain round bar.
All reinforcing shall be square deformed (ϕ) unless noted otherwise.

WALLS. All Concrete Walls shall be reinforced both vertically and horizontally with (ϕ) bars as noted in the SPECIFICATIONS. Horizontal bars shall turn past corners and wall intersections at least 15".



COL. BASES.
4-Ls 6"x4"x1/2"
Sole Pl. 18"x3/4"x1'-0"
Bed Pl. 20"x3/8"x1'-2"
2 Anchor bolts 3/4"ϕx18"
2 Pls. 4"x4"x3/8"

COLs. No. 40-41-42 43-56-57-58-59.
10"x9" CB-103-49#

NOTES. Shop and Field Rivets-3/4".
All surfaces inaccessible after rivetting to have a shop coat of Red Lead in Oil paint before assembling. All surfaces that will not be covered by concrete fireproofing to have a similar coat of paint before shipping.
Contractor shall submit for approval complete shop detail drawings before starting fabrication.
For Field painting, see the Specifications.

STRUCTURAL DETAILS.

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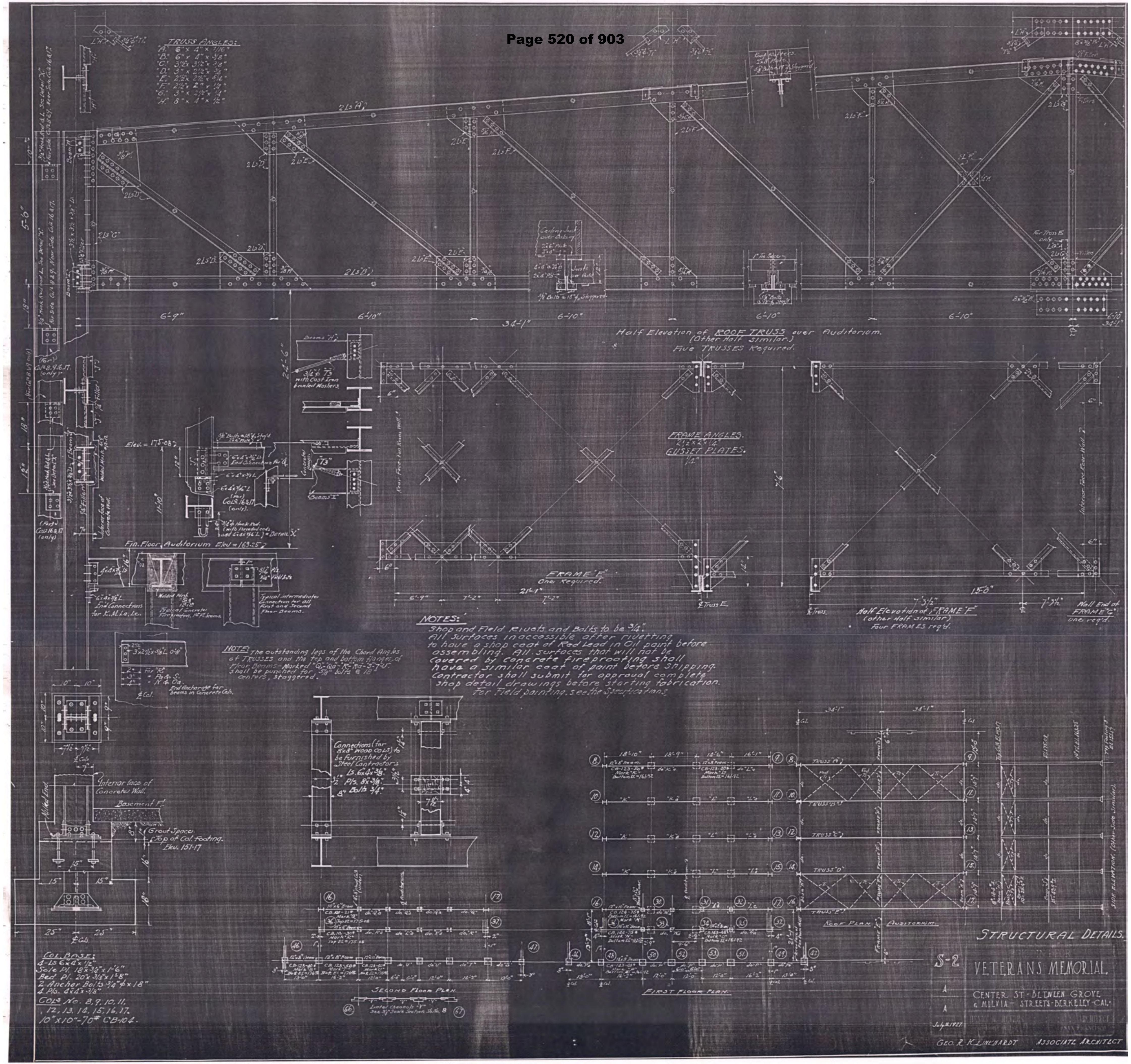
BUILDING FOR VETERANS MEMORIAL

CENTER ST. BETWEEN GROVE & MILVIA STREETS. BERKELEY. CAL.

July 1927.

GEO. R. KLINKHARDT · ASSOCIATE · ARCHITECT


Half Elevation of ROOF TRUSS over Auditorium.
(Other Half similar.)
Five TRUSSES Required.
FRAME ANGLES.
GUSSET PLATES.
FRAME "E"
One Required.
Half Elevation of FRAME "F"
(other half similar)
Four FRAMES req'd.
NOTES:
Shop and Field Rivets and Bolts to be 3/4".
All surfaces inaccessible after rivetting to have a shop coat of Red Lead in Oil paint before assembling. All surfaces that will not be covered by concrete fireproofing shall have a similar coat of paint before shipping.
Contractor shall submit for approval complete shop detail drawings before starting fabrication.
For Field painting, see the Specifications.
NOTE: The outstanding legs of the Chord Angles of TRUSSES and the top and bottom flanges of Floor Beams - Marked "Q"-"Qa"-"R"-"Ra"-"S"-"T"-"U" shall be punched for 5/8" bolts @ 18" centers, staggered.
Typical intermediate Connection for all First and Second Floor Beams.
Fin. Floor Auditorium
SECOND FLOOR PLAN.
FIRST FLOOR PLAN.
ROOF PLAN - AUDITORIUM.
SIDE ELEVATION
STRUCTURAL DETAILS.
S-2
VETERANS MEMORIAL.
CENTER ST. - BETWEEN GROVE & MILVIA - STREETS - BERKELEY - CAL.
July 1927
GEO. R. KLINKHARDT
ASSOCIATE ARCHITECT

INDEX

APPENDIX B

CONCRETE WORK

EXTENT OF WORK:

The work herein will consist in general of all footings, foundations, piers, exterior and interior walls of basement and superstructure; columns, girders, beams and slabs; stairways, areas and landings; steps, curbs and approaches; fireproofing of steel columns, beams and girders; sill, belt and water table courses; finished and unfinished concrete floor work; sidewalks and curbs; together with any other concrete indicated on the drawings or that may be required for the full completion of the work.

QUANTITTIES AND SHOP DRAWINGS:

The detail drawings indicating the construction for all reinforced and mass concrete will be supplied by the architect and accompany these specifications.

All quantities for the work herein shall be taken from the plans by a competent engineer and in the absence of any specific details among those supplied by the architect, he shall provide the required scale working drawings or framing plans as necessary and these shall be submitted for the architect's approval.

Contractors shall make all schedules of materials for the work and shall indicate clearly thereon the methods of bending reinforcing bars and the lengths of same and shall submit the schedule for the approval of the architect. This approval, when given, will not relieve the contractor of the responsibility for errors in his schedules or drawings.

The contractor shall furnish the services of a competent engineer who has had previous experience in reinforced concrete work and he shall be kept on the job continuously during the operations to oversee the placing of all reinforcement and superintend the proper bending of all reinforcing steel. He shall also layout and check generally all measurements and all levels.

ORDINANCES TO APPLY:

In the absence of any specific information as to the requirements herein, the contractor shall supply shop details as above noted and in all calculations therein the provisions of the building ordinances of the City of Berkeley shall apply and shall be considered as attached hereto.

Ample provision shall be made for sheer stresses and small section steel shall be used liberally for ties, stirrups, U bars, et cetera.

FLOOR REINFORCEMENT:

The reinforcing metal in floor slabs, landings, stairs and steps shall be of an approved type of square deformed bar of the quality hereinafter specified. Bars shall be of the sizes noted on the drawings, located and spaced as indicated.

All tapping shall be of a character to maintain the proper proportion of reinforcement. At junctions with walls, slab reinforcement shall be extended into and properly tied to the concrete walls as directed.

COLUMN REINFORCEMENT:

All concrete columns throughout, whether built as isolated columns, or in conjunction with curtain walls, shall be of the dimensions indicated on the structural drawings, square or rectangular in section, extending from proper footings and carried to the heights shown on the drawings.

Columns to be reinforced with vertical deformed bars of the number and size indicated, properly placed and shall be spliced as directed on the detailed drawings by lapping 40 diameters and securely wired together.

Columns shall have the vertical reinforcements tied with stirrups not exceeding the smallest diameter of the column, using 5/16" round iron stirrups unless otherwise shown. All reinforcement shall be carefully constructed of proper dimensions. Provide for the required covering of concrete at the outside faces.

Any special conditions requiring a departure from the typical requirements herein specified, shall be provided as noted on the drawings or as directed on the job.

Columns and column reinforcements shall be extended to proper footings and conforming to the requirements of the drawings. Where permissible, dowels may be set in the footings of the same size and number as the corresponding columns, extending to proper height with a lap of 40 diameters and secured with stirrups and wire ties.

GIRDER AND BEAM REINFORCEMENT:

All girders and beams shall be reinforced with straight and bent rods in each and the rods shall extend into and through intersecting columns or girders. Typical and special sections for this reinforcement are indicated on the accompanying drawings, to which the contractor is specially referred.

Where steel girders are provided in conjunction with the reinforced concrete construction, all concrete work and the reinforcement thereof shall be provided in accordance with scale details and arranged for proper continuity.

In all girders and beam reinforcement, the bars shall be properly bent at ends or intersections in such manner as to provide for absolute continuity and form a prope tie.

Where beams or girders connect to walls or are in conjunction with steel girders, all bars to be bent at right angles in such manner as to connect to and secure to the wall reinforcement or to the steel work. In all beams and girders provide the necessary stirrups properly bent around and wired to the reinforcing bars.

In the absence of any specific directions on the drawings as to the spacing or sizes of stirrups bars, they shall be placed to conform to the requirements of the Berkeley Building Laws as applied to reinforced concrete construction.

EXTERIOR WALL REINFORCEMENT:

The exterior walls throughout shall have reinforcement placed in same, extending full height from foundations to top of copings as herein specified.

Walls from column 44 to 54; Column 45 to 55; Columns 38 and 39 around Stair wells to junction with auditorium walls adjacent to Columns 14 and 15 shall be treated as continuous bearing walls and reinforced with vertical bars, 1/2" square deformed, placed at 12" centers and horizontal bars, 3/8" square deformed placed at 12" o.c.

All other exterior walls shall be reinforced both vertically and horizontally with 3/8" square deformed bars placed at 12" o.c.

In addition to the above reinforcing, supplementary bars shall be placed in projecting cornice, belt and sill courses as indicated on the details, and as special anchorage at cast cement cornices and panels.

At all openings in walls, the vertical reinforcing shall be doubled at both sides and properly lapped and horizontal reinforcing doubled at under side; at top side where no reinforced beams occur, contractor shall place two 1/2" square bars at all openings of 3'0 or less in width and three 1/2" square bars at openings wider than 3'0; these bars extending at least 12" on each side of opening.

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In all cases one-half of the bars specified are to be placed near the inside face of the wall and the other half to be placed next to the outside face. At least one-half the horizontal bars to extend continuously through any wall columns. All bars to be wired at intersections and to the wall columns in a secure and substantial manner.

The reinforcement above noted shall be provided in all exterior walls including basement, first and second stories, and in all fire walls. At any basement footings there shall be provided stud bars or dowels in the basement footings, spaced at proper intervals and connected to the upper reinforcing bars as preciously specified.

All bars shall be lapped at splices at least 30 diameters and bent around all corners at intersections at least 15". Splices shall be staggered. Doubled horizontal bars shall be carried around the top of all coping and fire walls, to which the vertical bars shall be wired securely.

INTERIOR WALL REINFORCEMENT:

All concrete interior walls in basement, first and second stories, are to be reinforced to correspond with the preceding exterior walls. All 12" concrete walls are to be reinforced with 1/2" square deformed steel vertical bars, 12" o.c. and 3/8" square deformed steel horizontal bars, 12" o.c. All 6" and 8" interior concrete walls are to be reinforced in both directions with 3/8" square steel deformed bars, 12" o.c. In all cases these bars shall be placed one-half near one face, the other half near the other face as provided for the exterior walls.

Where applied in conjunction with interior reinforced concrete columns, horizontal bars shall be extended continuously through the columns, and in all cases securely wired at intersections and to the columns.

All bars for these exterior and interior walls shall be lapped at the intersections 30 diameters and shall be bent at all corners and at all intersections in the manner indicated on the structural drawings. Where reinforcing bars lap at intersections they must be properly wired in all cases.

At all wall openings vertical and horizontal reinforcing shall be doubled and lapped as specified above for openings in exterior walls.

Horizontal bars of all interior walls shall extend into the exterior walls bent at right angles and be wired to the reinforcement of same.

LABOR, ET CETERA:

The contractor shall furnish all labor, materials, transportation, and tools, including mixers, hoisting engines and other power machinery and appliances necessary for the execution and completion of the work and including all necessary form and false work. The contractor shall execute his work with reasonable speed within the limits of safety in the structure.

METHOD OF HANDLING WORK:

The work shall be so laid out in all parts and operated that the form builders, steel crew and concrete men may follow each other continuously without interruption or intermission. The general contractor shall arrange his work tocooperate with that of the subcontractors employed under him as well as with other contractors whom the County may employ to form supplementary work to that under his contract.

Provision shall be made so that the electrician, plumber, steam fitter and othertradesmen may be permitted to install their work simultaneously with that of the concrete.

Openings in all cases must be left in the forms and concrete work to permit the installation of all pipes necessary. Where sewer lines and main service lines enter into or pass through walls, sleeves or tubes shall be inserted in form work, providing for proper openings for this piping. All information as to the position of openings to be secured from the respective tradesmen and the concrete man and respective tradesmen to be responsible for the accuracy in locating such openings.

All concrete surfaces shall show smooth when the forms are removed and all work shall be straight, regular and true to size.

FORMS:

All forms and false work shall be made of dressed pine lumber, of good sound material, free from loose knots. In general, this material shall be placed with the dressed side next to the concrete, but at any interior partition walls where plastering is to be applied directly on the concrete, the rough side of the boards shall be placed next to the concrete. Any form lumber used successively shall be thoroughly cleaned each time it is used.

The forms for columns, beams, girders or floor slabs shall be made of 1" stock, surfaced and sized to width. The column forms shall have clamps surr unding the columns not more than 2'0 apart, shall be made of 2 x 4"-Lumber with 1/2" tie bolts or spiked to the satisfaction of the architect. Each column form shall have a removable section at the bottom for cleaning out.

Walls and partitions forms shall also have loose sections at base for cleaning and for convenient inspection.

The forms for all beams and girders shall be put together with battens at sufficient intervals to insure against spreading and shall be supported at intervals of not more than 5'0 with 4 x 4 posts, having solid bearing on double wedges in such manner that they may be removed without shocking the concrete.

The centering for slabs shall be supported on 2 x 4 joists, laid not more than 1'8" apart and supported at the ends on a 1 x 4 ribbon, nailed to the sides of the beam forms or by other approved methods. These 2 x 4 joists shall be sized and shall be carefully and substantially erected. All of this false work shall be so arranged that it may be removed without injury to the green concrete.

All form work shall be sufficiently rigid to prevent vibration injurious to the concrete from wheeling barrows or from other building operations. Runways for wheel barrows must be provided over all forms, blocked up to prevent disturbance of reinfocring bars.

In the specifications for form work above noted, it is the intention to provide for a thoroughly substantial construction, well braced in every direction and well supported. Any modification of the above requirements to provide for this shall be performed by the contractor at no additional expense.

Should however the contractor desire to construct his form work by any other system, using heavier lumber, or modifying the construction of that specified, or by the use of steel or metal forms, he will be permitted to do so if the suggested method will be provided of equal stability and strength; any such change, however, to receive the sanction and approval of the architect.

Forms shall remain on all columns at least five days after they are cast and on beams the side boards may be removed in fourteen days, but bottom boards and supports shall remain in paceat least twenty days. The centering under slabs shall not be removed within fourteen days.

Forms shall be uniform in size and shall be straight, true and plumb and set with secure anchors, proper alignments and with all surfaces flat and out of wind.

All forms and false work shall be thoroughly braced and stiffened to withstand vibration under wheel barrows and tampers. All forms shall be made collapsible without jarring the concrete unduly and all joints shall fit closely to avoid poor concrete by reason of water percolating thru the open joints and washing out the cement.

Forms for the exterior walls of the building shall be of proper size and shape as required, using 2 x 4" studs, 18" o.c. thoroughly braced and secured. All wire ties used for bonding the inner and outer forms and the exterior walls, shall be so placed that the outer end will be 1" lower than the inner end.

On the exterior walls provide and set in the forms any necessary blocking or furrings to provide for the offsets indicated and for base courses, belt courses, water tables, cement cornices, sills, pilasters and other finish noted on the drawings.

Where cast cement is indicated, the forms must be cored out as necessary to provide for proper bearings in the walls with a 1 1/2" space at the back for filling and the concrete man shall cooperate with the cast cement man to the end that proper coring is provided in every case and the concrete walls left in such condition as necessary to receive the cast cement. At any points where the facing of cast cement extends to an unusual vertical height, the exterior surface of the concrete work shall be corrugated by inserting horizontal strips in the form work.

Frame in the wall forms throughout for the various windows and door openings indicated on the drawings.

ANCHOR BARS AND STAPLES:

All necessary anchor bars, loops, staples, etc. necessary for the anchorage of the cast cement, facing must be provided for under this contract and the concrete man shall cooperate with the cast cement manufacturer to the end that all necessary anchorages are provided and at proper locations to fit the individual pieces of facings.

For the main cornice at the central front section of building, the overhanging members shall be supported and anchored to the concrete as indicated by the details. The concrete man to see that these anchors are properly placed in the building to fit to the cast cement.

For all cast cement facing, where applied against the concrete wall, the concrete man shall apply No. 3 galv. wire loops or staples extending at least 4" into the concrete wall and with the inner ends turned at right angles at least 2". These staples are to be so set as to permit placing of a 1/2" round steel bar, which will be used for the purpose of securing the cast cement anchors thereto. The concrete man shall provide and apply these 1/2" round bars in horizontal line, one near the top of each joint of the cast cement and where the cast cement work is applied in vertical lines, the bars may be applied vertically in a similar manner.

These bars may be placed in conjunction with the forms or the loops may be installed and the bars drawn through afterward, at the option of the contractor. All loops or staples to be placed not to exceed 12" apart. The round bars must be wedged out from the concrete face so that the loop takes full weight and pressure of the bar. Where vertical bars are used they shall be spaced approximately 12" o.c. or as may be best suited to take up with the facing material.

At any special locations where the facing material is limited in extent, the contractor may have the option of putting in the loops and bars above specified, or if desired he may eliminate the bars and provide staples or loops for the individual anchorage at each piece of facing material. The contractor may have the option of

using in lieu of the above staples and rods, the Steelform Contracting Company's dovetail anchor system of equivalent spacing, etc.

For further information relative to anchors, etc. see the department of Miscellaneous Wrought Iron.

REPAIRS TO WALLS:

On the removal of the forms, the concrete walls specified herein, both on the interior and exterior, are to be pointed up with cement mortar at all voids, and all portions of these walls left in a reasonably smooth condition, in readiness to receive painting, furring or plastering as required. The contractor shall, however, do no repairing or plastering of walls until they have been inspected by the architect and permission given to do the repairing.

All wire ties in the walls must be clipped off close to the surface of the walls, both inside and outside. Any spreaders used in the wall forms must be removed as the concrete is poured.

STEEL:

All steel used for concrete reinforcement shall be manufactured by the open hearth process and shall conform to the Manufacturers' Standard Specifications, for Billet Steel Concrete Reinforcing bars adopted by the American Society for Testing Materials, serial designated A-15, 1914, together with any subsequent amendments.

All reinforcing steel shall be of some type of square deformed bars excepting where round bars are noted on plans for column ties and beam stirrups.

The use of re-rolled bars will not be permitted. All bars to be free from flaking rust, scale or coatings of any character which would reduce the bond.

The contractor shall present test sheets from some responsible firm of testing engineers to be approved by the Architect, certifying that the steel supplied conforms to the Manufacturers' Standard Specifications above noted.

PLACEMENT OF REINFORCING STEEL:

All reinforcing steel shall be accurately placed in strict accordance with the general plans and scale details.

Particular attention shall be paid to the bending and spacing of stirrup bars in beams and girders. Stirrups shall be wired to the longitudinal bars.

Stirrups shall lap at the top and bottom of girders as shown. Stirrups to have a gradual bend as shown at top where there are no longitudinal bars. All bends in the main reinforcing bars to be gradual bends, no sharp angle bends to be used.

All lapping of bars not otherwise specified shall be 36 dia. of the bars used. Place double bars at edges of all wall openings and at openings in floor slabs.

CEMENT:

All cement required for the various portions of this work shall be furnished by the contractor and shall be of an approved brand of Portland cement from a permanently established factory or mill which shall have been engaged in the manufacture of Portland cement at least two years previous to the date of the contract.

TESTING OF CEMENT:

Before its delivery, however, the contractor shall provide for its being tested by some approved testing engineer and the test sheets shall be delivered to the architect for approval.

It shall be tested in accordance with the methods proposed by the Committee of Uniform Test of Cement of the American Society of Civil Engineers and shall fulfill in every respect the following requirements.

REQUIREMENTS OF TESTING:

In specific gravity it shall not be less than 3.1 thoroughly dried at 212 degrees Fahrenheit. In fineness at least 92% shall pass a No. 100 standard testing sieve and at least 80% shall pass a No. 200 sieve.

In chemical analysis it shall contain not more than 4" magnesia (MgO) nor more than 2% gypsum (Ca 204).

In pat tests pats of neat cement about 1/4" thick and 3" dia. with thin edges, after hard set in air, or immersed in water, shall show no signs of cracking, discoloration or disintegration, and when submitted to the boiling test shall give satisfactory evidence of soundness without cracking, blowing or warping.

In tensile tests neat cement briquettes shall develop the following tensile strength per square inch.

24 hours in water after hard set, 175 pounds
7 days, 1 day in air, 6 days in water, 500 pounds
28 days, 1 day in air, 27 days in water, 600 pounds

In tensile tests sand briquettes made of a standard sand passing a No. 20 sieve and retained on a No. 30 sieve, three parts of sand to one of cement by weight shall develop the following tensile strength per square inch.

7 days, 1 day in air and 6 days in water, 275 pounds
28 days, 1 day in air and 27 days in water, 400 pounds

It shall be properly housed after being delivered on tje job, kept above the ground and protected against damage by water or other causes. The tests herein specified shall be in addition to any other test which may have bee made by the manufacturers and immediately upon being awarded this contract, the contractor shall arrange for testing so that there may be no delay to the work.

For the contractor's information, it may be stated that the various manufacturers of cement maintain at their factories sealed bins of material which have been tested by the independent testing engineers and cement may be used from these bins provided an arrangement be made with the testing engineers for releasing it in carload lots as required.

DELIVERY OF CEMENT:

Cement shall be delivered in strong cotton duck bags. A bag of cement shall contain 94 pounds.

The brand and name of the manufacturer shall be plaintly marked on each package.

Identification tags shall be placed in or on bags by the testing engineer and evidence given after delivery that these are intact and that the cement delivered is that from which tests were made of which testing sheets were delivered to the architect. If delivery is made from manufacturers bins and released by the testing engineers who will seal the car, information shall be supplied as to the car number and initial and the seal broken on delivery by the County's inspector.

SAND:

All sand in the concrete material herein shall be clean river sand, free from clay, loam, mud, organic matter or other impurities and shall contain not more than 2% silt. In fineness it shall be such that not more than 30% shall pass a 30 mesh screen and not more than 15% shall be retained on a 20 mesh screen and all shall pass a 10 mesh screen.

GRAVEL:

Gravel shall be composed of hard durable stone and shall be clean, free from clay, loam, mud, organic matter or other impurities.

BROKEN ROCK:

All broken rock required for the concrete material herein shall be furnished by the contractor, delivered on the site and used under the requirements of these specifications and at the direction of the architect. It shall be of sound basalt or trap rock or blue flint rock, free from clay, loam, mud, organic matter or other impurities.

SIZES OF ROCK AND GRAVEL:

All material for concrete shall be screened as necessary to conform to the requirements herein. For foundation footings and mass concrete the rock shall pass thru a 2" screen and be retained on a 1/4" screen. For reinforced concrete from 8" to 16" the stone shall pass a 1" screen and be retained on a 1/4" screen and for reinforced concrete less than 8" the rock shall pass a 3/4" screen and be retained on a 1/4" screen.

The exact proportions of rock, gravel and sand should be carefully measured at the building so as to have a minimum of voids and any reasonable modification of the above to improve it shall be provided by the contractor as directed.

Rock, gravel and sand submitted for this work shall be tested by some approved firm of testing engineers at the expense of the contractor. One such test will be sufficient if the material is maintained unfform, otherwise succeeding tests will be required.

These tests shall be for the purpose of determining the cleanness of the material and to determine the densest possible mixture.

WATER:

The contractor shall use a sufficient quantity of water in his concrete to form a quaking mixture. That for the reinforced portion shall be of such consistency as will insure complete contact with the metal but no more water shall be used than is necessary to secure such contact. It shall be a plastic mixture and not fluid.

If the water rises to the surface of the concrete, in the barrows, in transferring from mixer to the place of deposit, it shall be turned over with a shovel in the barrow before being deposited in the forms.

All water required for the concrete work and other building operations under this contract shall be provided and paid for by the contractor. He may have the servive provided under the Plumbing specifications herein installed at the beginning of the work with such taps made thereto as necessary for the handling of building operations.

The water used for concrete shall be fresh and clean, free from organic matter or other deleterious substance. The use of salt water will not be permitted.

WETTING OF CONCRETE:

All forms shall be well wet with a hose immediately before the concrete is placed.

All concrete shall be wet down thoroughly with a hose three times each day in sunshine and twice daily in wet weather for at least six days immediately after its pouring. In dry weather the columns and ceilings shall be sprayed also for several days after the forms are removed.

PROPORTIONS:

In the proportions herein given for concrete mixtures, one bag of cement weighing 94 pounds shall be taken as the equivalent of one cu. ft. If required by the architect, the contractor shall actually weigh a sufficient number of bags to insure the required amount of cement in the mixture.

Concrete in large footings where no horizontal reinforcements occur shall be mixed in the following proportions by volume.

One part cement, two parts clean sharp river sand, three parts gravel and three parts crushed rock. This proportion shall likewise be provided in basement floors and such other portions of the work as may be referred to herein as one to eight mixture.

Concrete for all reinforced walls, floors, slabs, beams, girders columns and where not specified to be of 1 - 8 mixture, shall be mixed in the following proportions by volume

One part cement, one part clean sharp river sand, one and one-half parts gravel, three and one-half parts crushed rock.

Topping material on floors where specified herein to be mixed in the following proportions by volume.

One part cement to one part of fine screened gravel.

Contractors are to be held strictly accountable for the mixture and should they architect so demand, all batches shall be first measured into a measuring chute or loading skip to insure a uniform mixture throughout.

Concrete shall be mixed in a batch mixer and each batch shall be mixed for at least 45 second before starting to remove batch from the mixer. Aggregates must not be fed into the mixer until the previous batch has been completely dumped.

Contractors are warned that the above requirements result in the batch being mixed considerably longer than is customarily done but that the requirements will be insisted upon by the architect.

Proportions as above noted may require slight modifications after testing made of the material offered for the work by the contractor in order to avoid unnecessary voids.

CLEANING OUT FORMS:

All forms shall be properly cleaned out with a broom and hose before any concrete is put into them and all sawdust, shavings and other refuse shall be carefully removed. Extreme care shall be exercised by the foreman in this particular, especially in the column forms. They shall be cleaned out through a hole provided in the face of the column form and carefully inspected with an electric torch just before they are filled. The superintendent shall inspect each one just before it is poured and shall give the foreman a written OK for each as it is filled and these shall be preserved by the foreman and delivered to the architect.

Before new work is placed on top of a column or wall that has been previously poured, the top surface of the old work shall be carefully chipped and levelled up to remove any scum or other excrescence that may have been formed there. Likewise, remove any loose aggregates that may not have sufficient cementing material in same. In all cases joints between old and new work shall be secured in same and grouted with neat cement when the new work is begun.

Before pouring in each case, the contractor shall make careful examination of the reinforcement rods and properly support or secure them where they may be displaced.

Concrete spattered over the forms in transit or when pouring must be thoroughly cleaned off before pouring in that particular section.

MIXING:

All concrete shall be mixed by a mechanical mixer of a type approved by the architect. At the beginning of the work it shall be tested on the material required to determine as to the best results and careful records kept to insure uniformity in the work.

Water must be carefully measured to insure the result desired and the quantity maintained for all batches. Should too much water be added by mistake the batch shall be remixed with sufficient additional cement to take up the water.

The mixing machine used in the shrk shall be of such capacity that no fractional bags of cement are necessary.

Transporting of concrete from mixer to forms shall be in barrows or buggies, unless otherwise approved by the architect.

Should contractor desire to convey concrete in spouts to the place of deposit, the design of equipment shall be such as will provide for a continuous flow without separation of fine and coarse material and before such equipment will be accepted and used, the contractor shall submit for the architect's consideration, examples of work constructed with similar equipment. Should such equipment be installed and the results not equal requirements herein and not meet with the architect's approval, the spout shall discharge in a hopper to provide for a remixing and delivered thence in wheel barrows. Spouts shall be thoroly flushed with water after each run.

EXECUTION:

A competent and conscientious foreman shall be employed by the contractor on this work and all portions shall be carefully executed, particularly as to the mixing of the concrete, placing of steel and tamping of the concrete.

The foreman shall be required to read carefully these specifications and keep fully informed of their contents. The foreman employed shall be trained in engineering principles as to reinforced concrete construction and understand the importance of steel reinforcement being in its proper position.

In pouring the columns, beam boxes and floor slabs, the foreman shall see that the farthest from the hoist shall be filled first and care taken to avoid dirt getting into the form over which the barrows pass.

In no case shall concrete be poured in beams, girders, columns, floor slabs, or in walls or other reinforced work until the architest or his representative have carefully inspected the reinforcement of same and given direct orders permitting the pouring to proceed.

TAMPING:

All concrete shall be thoroughly tamped with a pointed or flat blade tamper even when the concrete is so wet to be almost liquid. It shall be well worked with a tamper to force it into the places behind the steel and into all corners and angles and curves where it will not run without careful working and particularly at the outer surfaces of the forms to force the finer materials to the surface.

At all walls, partitions and other portions during the operation of the pouring, one man shall be kept on the outside of the forms

and one inside where practicable and at the level where the fresh concrete is being deposited and by hammering or tapping on the form boards insure the settling of the concrete mix so as to force out voids and air pockets.

Where it is necessary to deposit the concrete from a greater height than 5'0 as in column forms and walls, extreme care shall be exercised by the contractor and it shall be well worked with a tamper to thoroughly remix the fine and coarse parts.

PROTECTION OF CONCRETE:

All concrete shall be protected from injurious action of the sun, air or heavy rains or mechanical injury. It shall be wet down as provided for elsewhere herein. Any projecting ledges and surfaces that are subject to danger through the building operations must be covered with planks or boards as necessary or directed.

INTEGRAL WATER PROOFING:

All concrete in the exterior walls from the basement floor to the roof, also all concrete in basement floors, shall be waterproofed with Celite, Calatom or equal diatomaceous earth of an approved grade and fineness. This material shall be used in the proportions of 2 1/2 pounds of the material to each sack of cement used. The contractor may, if he desires, use an equal quantity of this material in the concrete for interior walls as a means of making the concrete flow more readily.

EXTERIOR WALLS:

The exterior concrete walls shall be of the thickness indicated on the various drawings and varying in the different stories as shown. Reinforcement for all exterior walls shall be as previously specified.

Contractor will note that the basement walls of the building will extend beyond the walls of the upper stories and the form work will be so arranged to provide for a cemented water table moulding as indicated.

Walls shall be thickened where indicated or necessary to prepare for a cast cement facing and all necessary coring provided at such points to give proper bearing and anchorage for the cast cement work as previously specified.

Also prepare in the rough construction for the various offsets, bolts, channels, and other finish noted on the drawings. ~~The~~

Frame out in proper manner for all window and door openings in the exterior and interior walls, arranging the jambs of these openings in such manner that the frames will have proper connection and supply and set any necessary nailing blocks or other means of securing these frames.

Rough sill finish for all openings shall be kept at a proper distance below the finish wood sills so that the cement can be provided as per details.

SAFETY ANCHORS:

All windows throughout the building whose sills are 12'6" or more above the ground immediately below same, or 12'6" above the fla roof below same, are to have provided for each, some approved type of bronze safety anchors permitting the attachment of safety belts for window washing.

Anchors must be set as far as possible in the concrete or cast cement jambs or reveals and must conform to the requirements of the State Industrial Accident Commission but where impossible to set in jamb may be set on face of wall.

At mullion windows apply bronze anchors, bolted through wood mullions.

The following devices are approved by the architect for the above specifications but the contractor may submit for approval any similar type he wishes. In any event, whether the following or other approved type is sued, it is to have the approval of the Industrial Accident Commission before applying same.

Royal Safety Anchors, manufactured by the Royal Safety Anchor Co. 62 W. Washington St., Chicago, Ills. No. 1 bronze anchor for applying on face of wall. No. 2 bronze anchor for applying on jambs or reveals. No. 3 bronze anchor for applying on wood mullions.

Peerless Safety Anchors manufactured by the Peerless Safety Devices Co., 1053 Market St., San Francisco, Calif. Type D bronze anchor for face of wall and for jambs and reveals. Type C. bronze anchor for mullions.

Under the above requirements supply anchors at windows in the auditoriu, stage, and stair landings only.

SETTING IRON WORK:

The concrete man shall assist in the setting and placing of all iron work coming in conjunction with his concrete, including proper anchorages for any railings, stairways, ladders, joist anchors, etc. Set all outriggers for cornices and apply all anchor bolts for wall plates.

Complete information as to the iron work necessary to be set shall be secured from the drawings and from the specifications of other departments herein.

WALL FURRING ANCHORS:

In general, the furrings of the exterior walls and interior walls will be of wood and secured to nailing strips previously specified. Where, however, provision is made for certain specific cases to be furred with metal furrings, the contractor shall provide No. 12 galv. wire loops into the concrete walls in such manner that they may be utilized in securing these metal furrings. The contractor is referred to the Department of Interior Plastering for complete information.

CEILING ANCHORS:

At the locations noted below, where plaster ceilings are to be suspended at the underside of the concrete floor construction, the concrete man shall supply and set before the concrete is poured, No. 10 galv. wire hangers for the support of the suspended plaster ceiling. Each hanger to be doubled and looped over the reinforcing bar and slab and they should be of sufficient length that e ch may be twisted twice around the carrying bar and doubled twice around itself. The contractor shall submit for approval the proper length of these wires for the respective cases.

At the respective ceiling areas, these hangers shall be distributed as follows:

They shall be placed parallel with the wall, the first line in each case being kept 6" away from the inne face of the wall and succeeding lines approximately 3'0 apart. Hangers in each of these lines to be spaced approximately 3'0 o.c. All lines must be kept parallel and spacing made as uniform as possible. At any point where thefinished ceiling indicated in the section is cut by deep girders, additi nal hangers must be put in for carring the ceiling.

Under the above requirements suspended ceilings of this character will be provided in the following locations.

Under stair slabs and landings between first and second floors.

BASEMENT FLOOR:

A concrete floor of the type hereinafter described shall be provided over the entire area of the basement of the building.

Basement floors will be of varying elevtations, thicknesses and finishes and shall be strictly in accordance with the requirements herein. In the boiler room the basement floor shall be constructed with arough concrete slab 5 1/2" thick, composed of one part cement to eight parts aggregates, conforming to the general requirements herein and finished with a 1/2" topping of one part cement to one part screened gravel, trowelled smooth and marked off in blocks approximately 4'6" square.

At custodian's living room and closet, where finished wood floors are required and at area under bowling alleys, a concrete rough slab, 3 1/2" thick of 1 - 8 material shall be spread uniformly over the levelled ground and the top finished to a float surface filling all voids and crevices. Galv. sheet iron clips of an approved make for securing wooden sleepers shall then be inserted in the concrete floor at intervals of 24" in lines 16" apart, with additional clips at wall lines as may be necessary for securing the sleepers. There shall then be applied over the entire floor area a heavy mop coat of hot asphaltum, filling all crevices and voids, forming a substantial waterproof coating.

At custodian's bath and shower and toilet rooms #1 and 2, stair halls and landings where tile floors are indicated, the rough concrete slab shall be depressed as necessary to prepare for tile and bed and composed of 1 - 8 material laid 3 1/2" thick and floated to a level surface.

All other basement floors shall be laid double as follows: After the ground has been levelled and thoroughly tamped, there shal be applied a rough concrete slab of 1 - 8 material, 2" thick, spread uniformly and floated to a reasonably smooth surface. If necessary to fill voids and crevices, a float course of cement grout shall be applied and extended out against all concrete walls and piers, and made tight. When dry, there shall be applied over all surfaces a heavy mop coat of hot asphaltum, filling all voids and crevices and covering all surfaces with a coat of heavy body. Over this shall be applied the finished concrete floor 3" thick, of which 2 1/2" shall be rough concrete of 1 - 8 material and the top 1/2" shall be of 1 - 1 material, worked and trowelled to a smooth uniform finish. All surfaces, except where linoleum is to be applied, shall be blocked off as directed into approximately 4'0 squares.

FIREPROOFING:

All structural steel columns and the steel beams and girders in the first floor of the auditorium and lobby and second floor of the lodge rooms and the steel spandrel beams in the side walls of the auditorium, shall be fireproofed with concrete as indicated on the drawings and directed. All columns shall be wrapped with electric welded mesh 5 x 9" - #12-12 wire and flanges of beams similarly wrapped and as shown on details , before concrete is placed.

SUMPS:

At the basement floor of the boiler room, the concrete man shall form a sump 18" square by 10" deep and shall extend 8" concrete walls and a 6" floor in same. Provide and supply over the top of this sump a cast iron grating, fitting to a rabbet on 4 sides.

The contractor shall construct in the floor of the toilet room adjacent to basement kitchen, a section of flooring about 16 x 16" where marked "Hand Hole" which shall have a dry joint between it and adjacent slab, so that section can be broken out if required at some future time, without injury to the balance of the floor.

SILLS:

All exterior doors throughout the building not otherwise provided for herein or as shown on the plans must be finished with approved cement sills and moulded thresholds formed as per details and neatly finished.

REGLETS:

Suitable raglets shall be formed in all concrete or other masonry walls throughout the building for proper flashing with the roof material. They shall generally be formed by means of 3/4 x 3/4" bevelled strips, set in proper manner so that they may be withdrawn without injury to the edges of the grooving. They shall be formed at proper height in every case and carried parallel with the roof to which they connect. The concrete man shall confer with the architect as to the properhandling of the raglets in the various roofs.

Before placing the necessary strips in the form work for these raglets, the contractor must accurately lay out on the forms the exact position of the intersection of the roof line with the walls and shall place this raglet parallel to the roof at a height of 6" above the surface of same, excepting that at the flat deck roofs where outlets occur, the raglets will run horizontally at a height of 10" above the outlet box until they intersect with the preceding. Any violation of this requirement will result in the re-cutting of the raglets. For further information in connection with this work, see Roofing specifications.

PIPE CASINGS:

The general contractor shall furnish and set fire hose and pipe casings in the first floor construction over the basement spaces as may be required by the fire department or by the building ordinances.

These shall be of the number required by the ordinances and shall be located as directed by the proper authorities. Such location to be submitted to the architect for final approval.

They shall have the top flanges and covers of finished brass and at the lower end shall flange the ceiling and finish neatly. Ceiling flange to be set at proper height to be flush with the plaster finish.

GROOVES OR CHASES:

Any necessary grooves or chases in the concrete walls for placing of pipes shall be provided for by the contractor as directed and approved by the architect. Generally it is not the intention to cut these walls except in extreme cases for which the architect's sanction must be obtained. Form openings in walls where required for heater man's inlet vents.

GROUNDS:

The contractor shall build in wooden grounds, plugs or nailing strips where required for securing finish and furring. In general, the interior of all concrete walls will be furred by the carpenter, the contractor noting the exceptions where plastering is applied directly on the concrete. Where furring is to be provided, the concrete man shall apply at the center of the height of each story also near the floor and ceiling lines, a horizontal ground, dovetailing into the concrete work in proper form to provide nailings for the vertical furring strips.

TEMPLATES:

The concrete man shall set by templates any anchor bolts or other iron work that may be furnished by the carpenter or by the iron man. The respective subcontractors shall supply all necessary directions which the concrete man shall work to. See Carpenter and Iron specifications.

BEDDING PLATES:

The concrete man shall assist the carpenter in the bedding and anchoring of wall plates in preparation for floor and roof construction and shall supply the necessary cement mortar for same.

AREAS:

The area and steps indicated at the basement entrance to kitchen hall are to be constructed of concrete of the form and dimensions indicated on the drawings.

Exterior walls of area to be of the thickness shown with finished cemented surfaces where exposed to view and with reinforcement in the body of same as previously specified. Floor of area to be 4" thick, the lower 3 1/2" of which shall be of rough 1 - 8 concrete, and with a topping 1/2" thick of 1 - 1 material, smoothly cemented.

Grade floor to the drain indicated and make proper connection to same. Prepare as necessary and directed for the pipe railing indicated.

The steps indicated to be of concrete, reinforced with at least one 3/4" rod to each step, properly extended into the main walls and into the area walls.

Finish steps with projecting nosings 1 x 4" and the surfaces of treads to be at least 1/2" thick of 1 - 1 material and all parts smoothly trowelled.

WALKS, CURBS AND DRIVEWAYS:

The contractor shall construct the new entrance walk from the present side walk to the main entrance steps together with the new curb and returns as shown in plans. He shall also construct the concrete walk in the courts and approaches as indicated on Plot Plan and as directed.

Walls shall be of concrete 4" thick, the lower 3 1/2" of which shall be of 1 - 8 rough concrete and the 1/2" topping of 1 - 1 material, carefully applied and trowelled to a hard, smooth, uniform surface and marked off in blocks. Lamp black shall be added to the topping material as directed by the architect.

Curbs at front entrance walk shall be 10" wide - 16" deep, standing 6" above the finished surface of the walk, with all exposed surfaces carefully cement finished.

A new walk shall be laid at the pedestrian entrance gate, connecting present sidewalk to the walks above specified. This piece to be 4" thick of same construction as above specified.

At the service entrance the contractor shall construct a new approach from the street to the inner line of entrance gate posts, by cutting down and properly returning the present street curbs, removing the present section of sidewalk, preparing a properly graded and tamped subgrade and laying over it a concrete driveway 6" in thickness, the lower 5 1/4" of which shall be of 1 - 8 rough concrete and the 3/4" topping of 1 - 1 material, thoroughly worked and bonded to the under slab and surface scarred and roughened as directed.

Before the completion of the building the contractor shall replace any or all portions of the present sidewalk and curb fronting on the lot that are broken, damaged or in unsatisfactory condition with new work conforming generally to that specified herein and leave the entire system of walks, curbs and approaches in first class condition.

EXTERIOR WATERPROOFING:

The contractor shall apply waterproofing to the exterior of all basement walls not in contact with adjoining buildings, as follows:

All surfaces of the concrete shall be cleaned of rough scale, loose particles, etc. and have all void pockets and crevices carefully pointed up with cement mortar, and all protruding form tie wires cut back behind the face of the wall and pointed up, from finished exterior grade lines down to underside of basement floor levels. Following this there shall be applied a solid mop coat of hot asphaltum, forming a water tight membrane. Care shall be taken that the asphalt does not extend above grade lines and that none is spattered over adjoining finish or construction.

Included in the walls to be waterproofed as above shall be the piece of wall extending from column 39 to 63 which shall be coated on the side next the unexcavated space under lodge room.

RUBBISH:

The concrete man shall clean up all rubbish and debris incidental to his department of the work, during the progress of the same, and on final completion shall leave all parts in a clean condition, satisfactory to the architect.

MISCELLANEOUS IRON & STEEL WORK

and

ORNAMENTAL IRON & BRONZE WORK

EXTENT OF WORK:

Under this heading the general contractor shall furnish and erect all miscellaneous items of steel, wrought iron and cast iron and bronze indicated on the drawings in connection with the structure or as may be specifically noted in these specifications. The contractor is referred to the general drawings for complete information as to the various requirements and to such structural details as may be included among these drawings, also to the itemized requirements herein given.

QUALITY OF MATERIALS:

All beams and other steel required in these specifications shall be of the size indicated on the detailed drawings, properly rivetted up as shown and all connections made as indicated.

Steel to be open hearth or Bessemer process under the following requirements.

To contain not to exceed one tenth of one per cent. of phosphorous. Record of chemical analysis for carbon and phosphorous or each blow or melt, to be furnished to the inspector at the mill, if desired, before any material for such blow or melt is shipped from the mill. The original blow or melt number must be indelibly stamped on each piece of finished material from said blow or melt.

Finished material must present a smooth, clean, surface, free from buckle , flaws, cracks, ragged edges, or any other defects and must be straight throughout and true in section. A variation in e weight of more than 2 per cent. from order weights will be considered cause for rejection.

Tensile strength, elastic limit, elongation and reduction of areas shall if required be determined from a standard test piece cut from the finished material and planed or drilled parallel for at least 10" of its length, the piece to have a sectional area of as nearly one half square inch as practical and the elongation to be measured on the original length of eight inches.

Specimens for bending test if required may be made of the same form and size as required for tension test.

PAINTING OF STEEL:

All steel work herein which is to be incorporated in the concrete construction and entirely surrounded and protected by concrete will require no painting. All other steel and iron work throughout shall be cleaned and have a coat of red lead and linseed oil of Dixon's or U. S. Graphite Co's graphite paint at the shop after being finished. After the erection of same, all exposed surfaces of steel shall have an additional coat of contrasting color.

Before applying the paint at shop or building, all metal work shall be thoroughly cleaned of all mud, grease, and concrete or other foreign substance, using wire brushes where necessary. Likewise, all unpainted steel in concrete shall be cleaned of any foreign material.

No painting hsall be done in wet weather and all surfaces must be dry when the paint is applied.

CAST IRON:

All cast iron required shall be of good, sound castings, free from blow holes, cold shuts and other defects and properly cleaned

The usual tests required for both the steel and cast iron work under the manufacturers' Standard specifications as revised and adopted Feb. 6, 1903, shall apply herein and be considered as a part of these specifications.

SHOP DRAWINGS:

The subcontractor for steel shall submit to the architect full and complete shop drawings for the work covered under this department.

ERECTION:

All material herein specified to be delivered at the building and erected in place in proper manner. Such erection may be provided for with subcontractors of the respective departments. Such arrangements to be a matter between the general contractor and his subcontractor.

All material herein specified shall be the best of their respective kind, free from flaws and properly machined or otherwise finished for the respective purposes.

All necessary cutting, fitting anddrilling of the material herein specified necessary to complete the same and for the connection into the building shall be performed by the contractor in proper manner.

Where anchorage is to be provided previous to the setting of any steel or wrought iron, cast iron work proper templates or complete information and supervision shall be furnished by the iron man to the respective subcontractors to provide for its proper installation.

STRUCTURAL STEEL:

All structural steel indicated in conjunction with floors, roofs, etc. and as indicated by the framing plans or as specified herein, shall be of the quality herein designated. All material to be provided and put in place by this contractor unless specifically stated to the contrary. All work to be done in a neat and skillful manner as per details or as specified and if not detailed or specified, shall be with standard connections to the architect's approval.

All shop and field connections shall be made with rivets, except where bolts are specifically called for on plans.

The pitch of rivets shall never be less than three times the diameter of rivets used, nor more than 6", while the minimum distance from the center of any rivet to the edge of the sheet shall be 1 1/4". No rivets to be used in tension. An excess of 25% shall be allowed in proportioning field rivets.

Rivet holes may be punched or drilled but must not be more than 1/16" larger than the diameter of rivets. Rivet holes must be accurately spaced as drift pins will be allowed for assembling only. The rivets shall completely fill the holes with full holes concentric with the rivets and with full contact with the surface of the metal.

Complete shop drawings shall be prepared by this contractor and two sets of same shall be delivered to the architect for his inspection and approval. These will include the following:

Steel columns, roof trusses, truss bracing and spandrel beams in the auditorium section.

Steel beams in the floor of auditorium and lobby entrance and hallways.

Steel beams in the second floor and balcony floor and in ceiling over stairways.

Steel channel lintels and hangers at main entrance way.
Steel angle for support of fan room floor joists at exterior wall.

PIPE RAILINGS:

At the basement area entrance to kitchen hall, the contractor shall furnish and erect the pipe railing as shown on plans and herein specified. Railing shall be constructed of 2" wrought galv. iron pipe for rails and standards with screw joints, galv. malleable iron ball pattern fittings. Standards are to extend into the concrete curbs and stair construction 12" and well cemented in place. Horizontal rails where they connect to the building shall likewise extend into the concrete 4" with a cross bar anchor. Provide for the lower end of standards and at building line approved flanges.
All parts of this railing work to be erected substantially in vertical and horizontal lines and any necessary rail fittings for inclined rails to be of the proper angle to fit the conditions. See drawings for location of rails and positions of standards.

EXIT STAIRS AND PLATFORM:

This contractor shall furnish and erect at auditorium side exit doors and at stage exit door, the steel and iron stairways and platform as shown on details. Complete shop detail drawings shall be submitted for approval. Pipe rails shall be of material and workmanship as above specified and a section at stage exit shall be arranged in an approved manner for ready removal so that platform may be used as a loading shelf. Beams and channels shall be securely anchored into the concrete of walls and foundations, making a rigid construction throughout. Shop and field painting shall be as specified and shown for other structural steel work Galvanized pipe shall be painted first coat of Goheen Mfg. Co's Galvanum followed by one coat of lead and oil paint in color selected.

BALCONY PIPE RAILINGS:

The contractor shall furnish and erect in the balcony, the pipe railings along balcony facia, and at sides of balcony steps, Rails and standards to be of 1 1/2" wrought iron pipe with fittings and construction as above specified for other similar railings. Railings shall be securely anchored to the wood framing and made rigid.

STEEL LINTELS AND JOIST SUPPORTS:

This contractor shall furnish and cooperate with the concrete man in setting the steel lintels and cast cement anchors over the main entrance way and the angle iron support and anchor bolts at the fan room floor joists along the front wall. See Sheet ~~Metal specifications~~ #8 for details of this.

CORNICE ANCHORS:

This contractor shall furnish and cooperate with the concrete man and the cast cement man in setting the anchor bolts and plates required for anchorage of the main cornice of cast cement along front of building and returns. These shall be accurately placed to suit the jointing of the cast cement cornice.

WROUGHT IRON LADDERS:

This contractor shall furnish and erect the rought iron ladder on the stage, extending from stage to attic space above the grid platform. Ladder shall be in two sections, one section from stage to top of dressing room and another section from top of dressing room to attic space. Ladders shall be constructed of 3/4 rounds at 13" centers, rivetted into 2 x 3/8" side pieces spaced 18" apart. Side pieces shall be turned at the bottom and top where coming against wood work and securely lag bolted to same, and where coming against concrete, shall be turned into and anchored to same.

Intermediate rigid anchors shall be supplied at not more than 6'0 centers. Side pieces shall be turned over at the top of the dressing room and returned to form a hand grip.

The contractor shall supply and set in the concrete at time of pouring, 3/4" round steps at 18" centers and 18" wide, to form a ladder from the roof over auditorium to the roof over the fan room. Metal for the above ladders shall be given a shop coat of lead in oil paint before shipment and a second coat in colors as selected after erection.

ANCHORS:

The iron man shall furnish and deliver at the building in quantities as necessary, anchors for the securing of wood construction to the concrete walls. These shall be provided for the anchorage of all ceiling joists over the second story and over the auditorium stage, etc. and at all roof joists throughout, They shall be provided at all end bearings of roof and ceiling joists both at exterior and interior walls as follows: At every fourth joist where they are 16" o.c; at every third joist where they are 2'0 o.c.; and at every alternate joist where they are 32" o.c. At exterior and interior walls where the joists are parallel thereto, they are to be supplied at intervals of 5'0.

Anchors are to consist of 3/4" round iron, 2'6" long with one end turned down 2" the other turned as a hook 2" to fasten to the reinforcing bars or supplied with a 4 x 4 x 1/4" plate as indicated on the drawings.

The carpenter will set these anchors but iron man must obtain carpenter's receipt for delivery or be held responsible for any shortages.

Provide similar anchors for the securing of grid joists over stage.

ANCHOR BOLTS:

This contractor shall furnish to the carpenter all necessary bolts for securing wood plates to concrete work and to structural steel work. All plates shall be anchored and where no bolts are shown on the plans the contractor shall supply 5/8 x 12" bolts in numbers sufficient to provide for a bolt at each end of plate and at approximate intermediate intervals of 3'0.

WHEEL GUARDS:

This contractor shall furnish and set at service entrance driveway the two cast iron wheel guards. These shall conform to details and be of ~~xxxx~~ heights shown with a flange projecting at least 4" into the concrete slab. They shall be set before concrete is poured and securely and rigidly anchored into the concrete posts in an approved manner. No metal shall be less than 5/8" in thickness and all shall conform to quality and finish previously specified.

DOWELLS:

This contractor shall supply to the carpenter the necessary iron dowells as indicated on Sheet #2 for the wood posts under first floor of lodge room #1.

VENT PLATES:

This contractor shall furnish to the carpenter the vent plates indicated on plans of unexcavated area under lodge room #1 and at janitor's closet. These shall be of cast iron, stock pattern, plain lattice design, of sizes shown on plans and drilled for countersunk headed wood screws.

RADIATOR GRILLES:

This contractor shall furnish to the carpenter the four cast bronze radiator enclosures in the lobby of the first floor. Two of these will be single face plates arranged to be fastened to a wood framing with countersunk screws. Two will be double face plates with grilled covers arranged to the anchored to the tile platform and to the adjoining column construction with countersunk tap screws and cinch bolts. These grilles shall be made in accordance with scale details to be supplied by the architect and weight of metal; mechanical workmanship and finish shall be the equal of Tuttle and Baily Manufacturing Co's, 78th annual catalog, design #43.

All surfaces visible after installation shall have an electro plate finish in color to harmonize with surrounding decorations as directed by the architect.

STAIR BALUSTRADES:

This contractor shall furnish and install the metal balustrades in the stairways extending from basement floor to second floor, with returns to wall at second floor level, as indicated on the plans. These shall be built up with cast iron newel and angle posts and wrought iron balusters with cast iron moldings planted on, all properly framed to suit the respective locations, thoroughly connected by an approved method and securely anchored in a rigid manner to the floor and walls.

The top channel shall be properly prepared to receive the wooden hand railing. T

These balustrades shall conform to the scale details supplied by the architect and all workmanship and finish shall be strictly high grade, executed by a firm having had previous experience in this class of work. There shall be submitted to the architect for approval full details of construction and finish.

METAL FRAMES AT TROPHY CASES:

This contractor shall furnish to the carpenter the ornamental iron frames as shown in details, sheet #9, for the two trophy cases in the lobby. These shall be constructed of Braun moldings of the catalog numbers noted, made up into a solid frame with rails and muntins as indicated. Finished frames shall have true lines and right angles and free from wind, and fitting accurately to the wooden backs provided and set by the carpenter. Joints and intersections shall be mitered and rigidly welded. The exterior members on all four sides shall be punched for countersunk headed wood screws, not less than two holes each glazing section and interior members shall be punched for bolts to attach the wood glass stops with two holes at each glazing section. These frames shall be electro plated to a finish to match surrounding decoration as directed by the architect.