

BOROUGH OF PENNSBURG

76 West Street, Pennsburg, PA 18073 Office: 215-679-4546 Fax: 215-679-5140

INFORMATION FOR DECKS, BALCONIES, PORCHES, LANDINGS AND STAIRS

EXTERIOR DECKS, PORCHES, BALCONIES & LANDINGS

60 lbs. per sq. ft. L. load
10 lbs. per sq. ft. D. load
70 lbs. per sq. ft. Total load

HANDRAILS & GUARDRAILS

200 lb. concentrated load
at any point in any direction
STAIRS – 100 lbs. per sq. ft

LUMBER

All wood shall be pressure treated or naturally resistant heartwood of redwood, black walnut, black locust or cedar. All cuts, notches, or bored holes shall be retreated in the field with the same material as originally treated when available. When not available, use a similar material with not less than 2% copper metal.

FASTENERS

Fasteners used with pressure treated wood shall be of hot-dipped zinc coated, galvanized or stainless steel, silicon, bronze or copper metal.

MAXIMUM CANTILEVER OF JOISTS AND BEAMS - 2' (24")

FOOTINGS

All footings shall extend a minimum of 36" below grade level and shall bear on undisturbed soil. The sides and bottoms of all footings shall be smooth and straight. The size of the footings shall be determined by the size of the deck but in NO case shall the footings be less than 12" in diameter. ALL footings shall be a minimum of 8" in thickness.

-Whenever the product of the deck width times the clear span between the posts exceeds 66' and is less than 105', footings shall be minimum 15" in diameter when more than two posts are required.

-Whenever there are more than two posts required, the minimum size of the circular concrete footings shall be 18" whenever the product of the deck width times the clear span between the posts exceeds 105' and is less than 150'.

-When the product of the deck width times the clear span between posts exceeds 150' or a roof is constructed over the deck, the services of a professional engineer or registered architect shall be obtained to design the footings. A seal and signature are required on the plans.

GUARDRAILS

Decks, porches, balconies and landings greater than 30" above grade or floor level shall be protected at the open sides with guardrails not less than 36" in height with ornamental spindles spaced so that a 4" object cannot pass through.

-Guardrails at the open sides of stairs shall not be less than 34" in height measured from the leading edge of the treads. The maximum permitted opening in the guardrail shall be less than 4" except where the triangle is formed by the bottom of the guardrail and the stair riser and tread which shall not permit the passage of a 6" object.

HANDRAILS

Handrails shall have either a circular cross section with a diameter of 1 ¼ inches (32 mm) to 2 inches (51 mm), or a noncircular cross section with a perimeter dimension of at least 4 inches (102 mm) but not more than 6 ¼ inches (159 mm) and a largest cross-section dimension not exceeding 2 ¼ inches (28.6 mm). Edges shall have a minimum radius of 1/8 inch (3.2 mm).

LANDINGS

Minimum 3' x 3' not more than 8 ¼ " below the threshold at the exterior of doors.

SUPPORT POSTS

When the deck is greater than 4' – 0" above grade level, 6" x 6" posts are required.

STAIRS

Minimum 36" clear width with maximum 7 ¾ " risers and minimum 10" treads.

JOIST AND BEAM SPAN CHART

MAXIMUM SPAN FOR TREATED DECK FLOOR JOISTS SPACED 16" O.C.

2" x 6" = 8'-0"

2" x 12" = 16'-5"

2" x 8" = 10'-6"

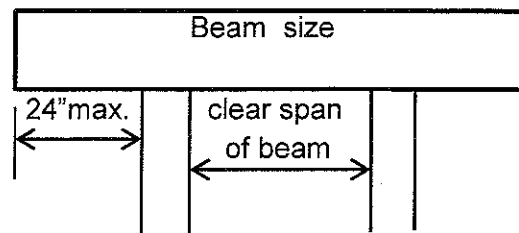
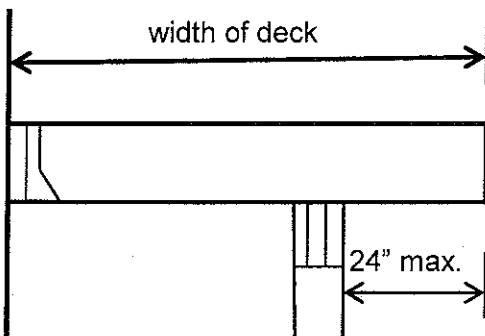
* Redwood spans can be increased 8%

2" X 10" = 13'-6"

* Depends on grade of redwood

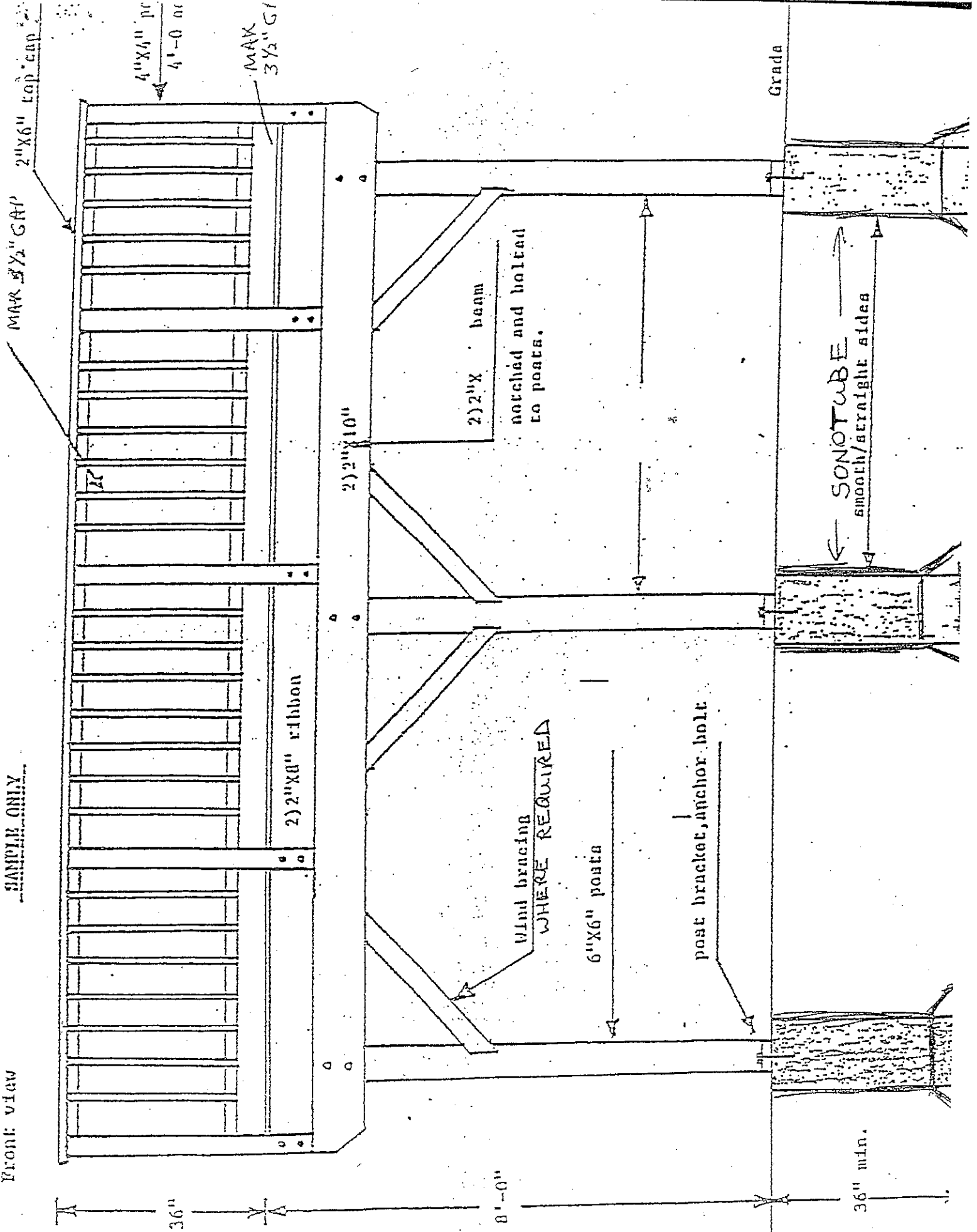
BEAM SPANS

BEAM SIZE	WIDTH OF DECK	CLEAR SPAN BETWEEN POSTS
2) 2 x 6	6'	5'- 11"
	8'	5' - 5"
	10'	5' - 0"
2) 2 x 8	6'	7'-11"
	8'	7' - 3"
	10'	6' - 8"
	12'	6' - 2"
	14'	5" - 9"
2) 2 x 10	6'	10'-2"
	8'	9' - 3"
	10'	8' - 7"
	12'	7' -11"
	14'	7' - 5"
	16'	7' - 0"
2) 2 x 12	6'	12'-5"
	8'	11'-4"
	10'	10'-6"
	12'	9' -9"
	14'	9' - 1"
	16'	8' -7"
3) 2 x 12	6'	15 -3"
	8'	14' -0"
	10'	12 -11"
	12'	12' - 0"
	14'	11' - 3"
	16'	10' - 7"
	18'	10' -1"



FRONT VIEW

SAMPLE ONLY



4"X4" pc
4'-0" ac

MAX
3 1/2" GAT

MAX 3 1/2" GAT

2"X6" top cap

2"X8" ribbon

2"X10"

2"X beam

notched and bolted
to posts.

Wind bracing
WHERE REQUIRED

6"X6" posts

post bracket, anchor bolt

SONOTUBE
SMOOTH/STRAIGHT SIDES

Grada

36"

8'-0"

36" min.

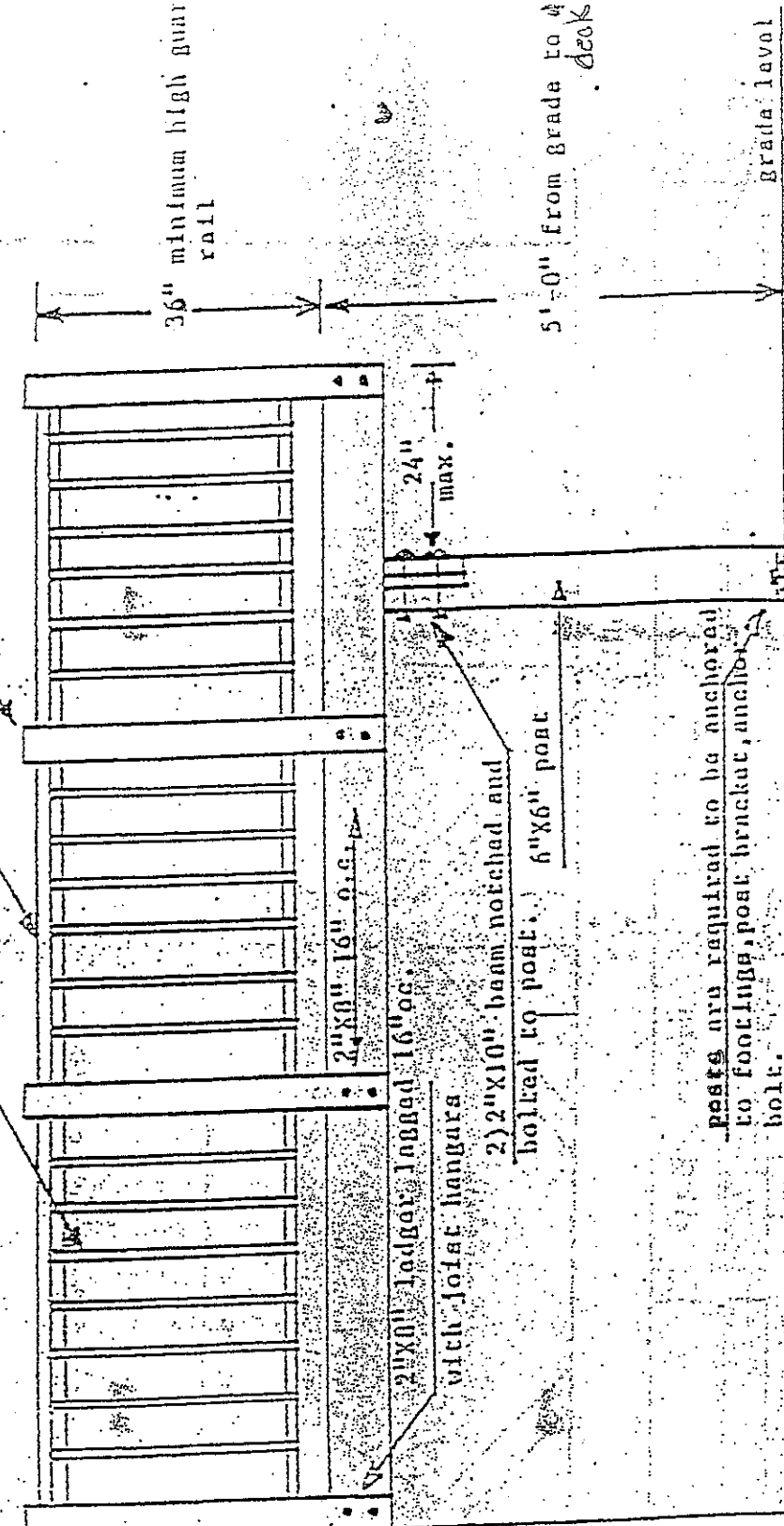
SIDE VIEW

2"X6" top rail

4"X4" posts 5'-0" o.c.

excavating

floor line



36" minimum high guar rail

2"X10" 16" o.c.

2"X10" ledger lagged 16" oc.

with joist hangers

2"X10" beam notched and

bolted to post. 6"X6" post

24" max.

5'-0" from grade to deck

Grade level

posts are required to be anchored to footings, post bracket, anchor bolt.

SONOTUBE

smooth/straight sides

36" minimum deep conc. footings

15" dia. conc. footings

SAMPLE ONLY

TOP VIEW

Existing dwelling

THRU BOLTS 16" o.c.
2"X8" ledger

5/4"X6" decking

4"X4" Bt
rail post
4' o.c.

6"X6" post
18" dia.
deep for

bridging mid-span

2"X8" joists 16" o.c.

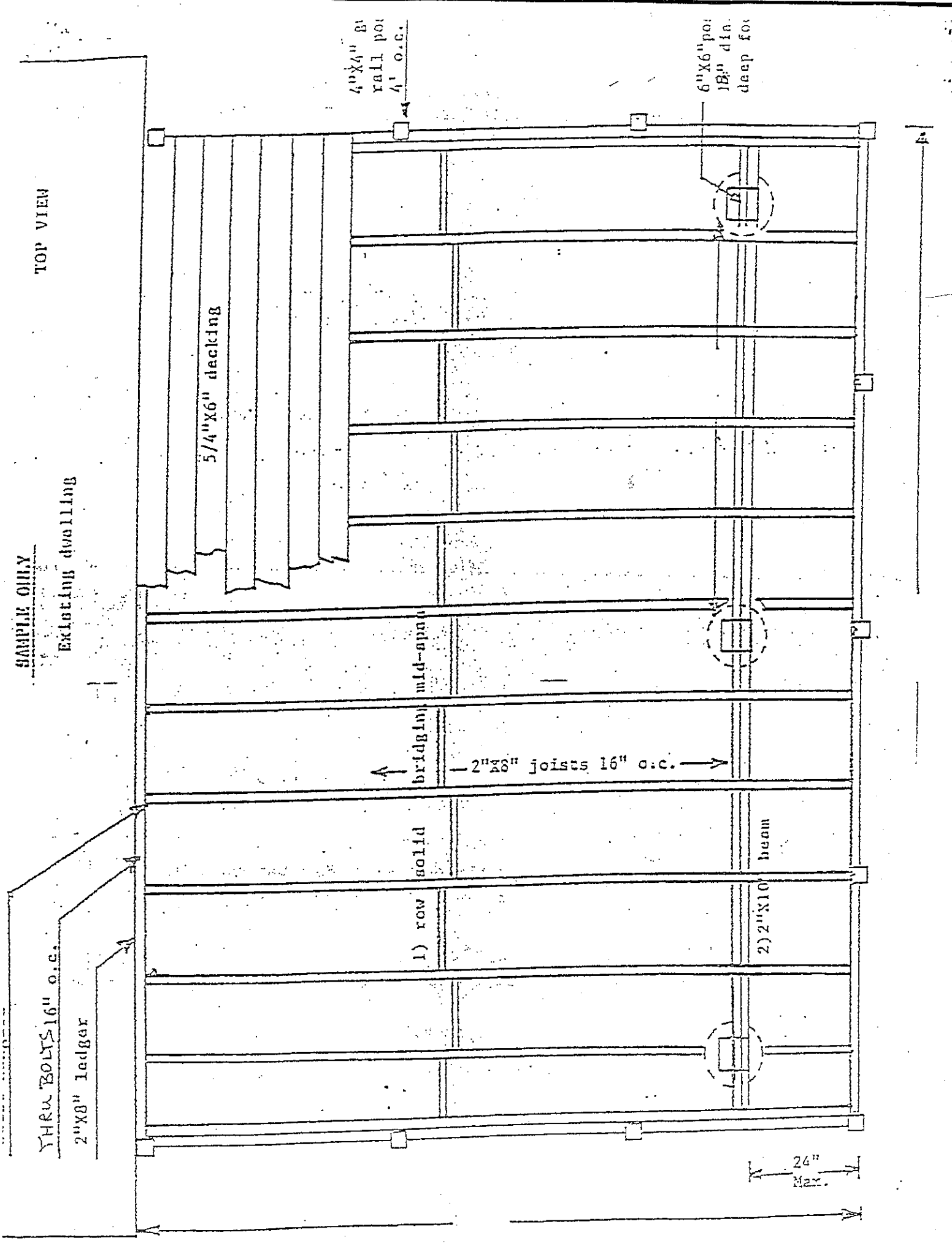
solid

1) row

beam

2) 2"X10"

24" Max.



Section R-214.1 requires open sides of stairs with a total rise of more than 30 inches above the floor or grade below to have guardrails. Section R-214.2, specifies a required guardrail height of 36 inches for porches, balconies or raised floor surfaces and 34" for open sides of stairs.

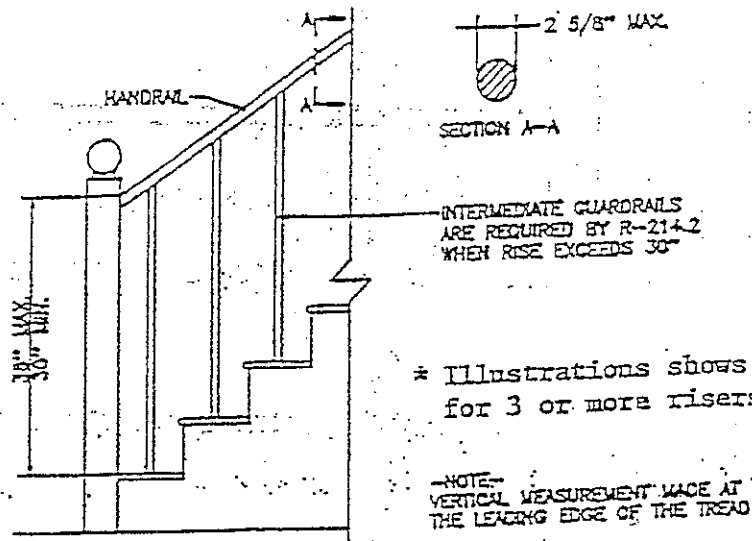


Figure No. 214.1
HANDRAILS

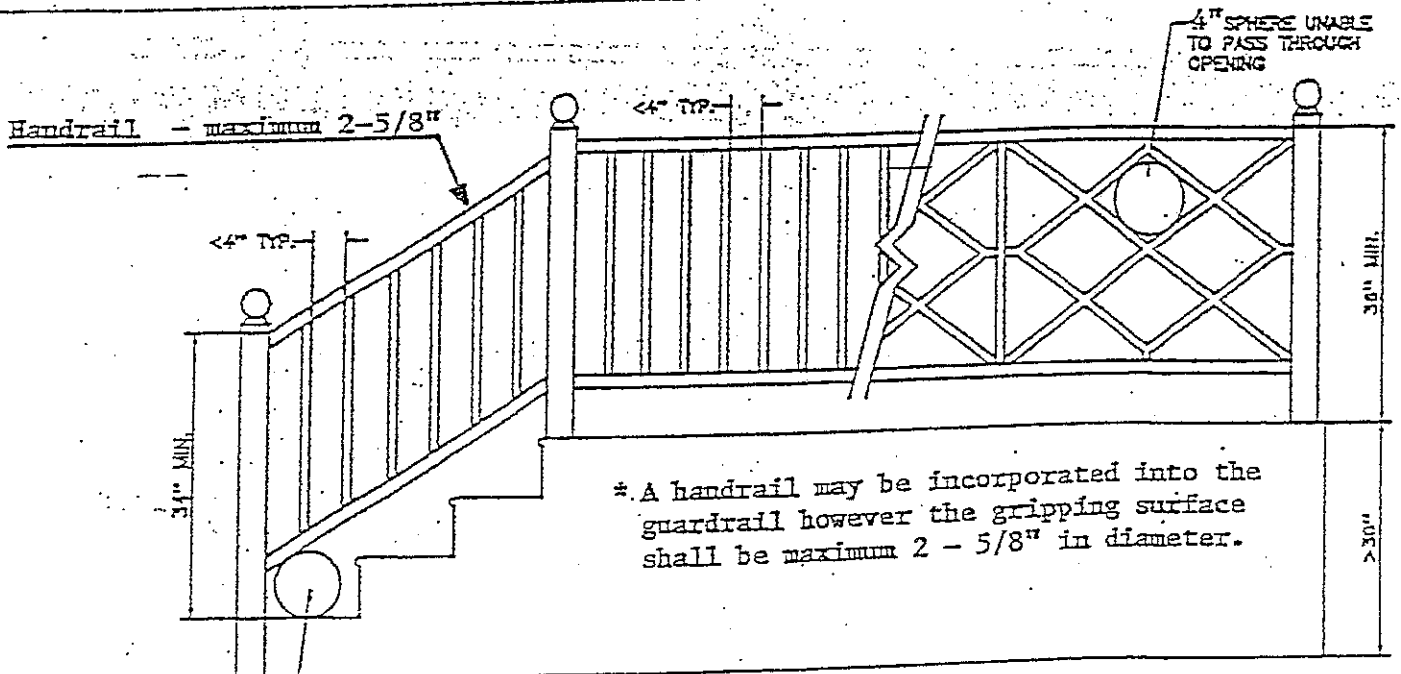


Figure No. 214.2
GUARDRAILS

(See Figure No. 214.1 for handrail requirements)