

BASEMENT STANDARDS FOR ONE AND TWO FAMILY DWELLINGS



PREPARED BY

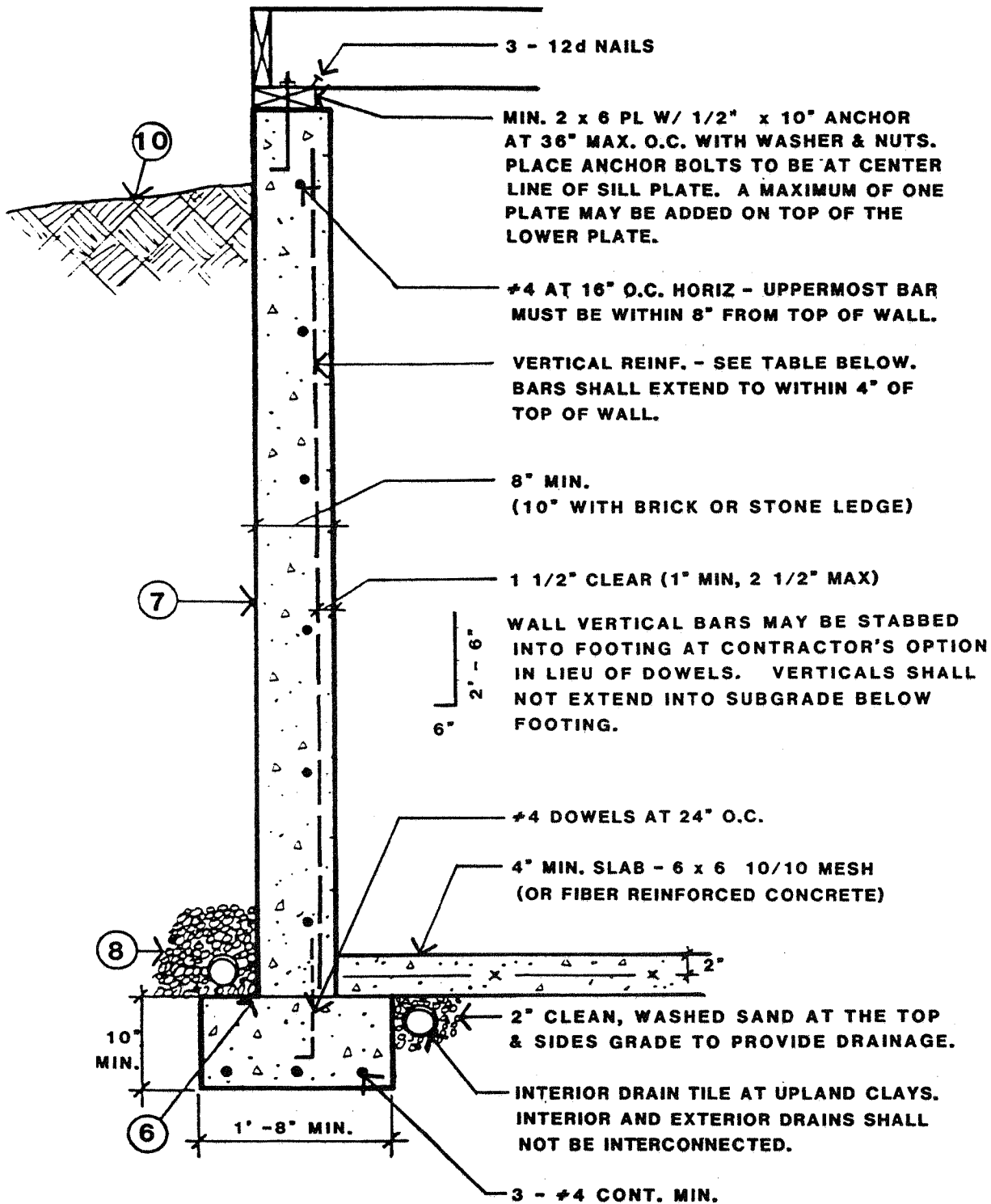
CENTRAL INSPECTION DIVISION

SEPTEMBER 1988

RECOMMENDED MINIMUM STANDARDS FOR RESIDENTIAL BASEMENT FOUNDATIONS

ADHERENCE TO THESE STANDARDS DOES NOT PRECLUDE THE RIGHT OF CID TO REQUIRE A FOUNDATION DESIGNED BY A LICENSED ARCHITECT OR ENGINEER. THESE RECOMMENDATIONS ONLY APPLY TO SITUATIONS NOT AFFECTED BY GROUNDWATER. RECOMMENDATIONS ASSUME HORIZONTAL GROUND SURFACE AND MINIMUM SURCHARGE ON WALL BACKFILL

- 1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.**
- 2. CONCRETE SHALL HAVE A 5" MAXIMUM SLUMP AT THE END OF THE CHUTE OR AN 8" MAXIMUM SLUMP IF A HIGH RANGE WATER REDUCER IS ADDED.**
- 3. DO NOT BACKFILL AN UNSUPPORTED STRAIGHT RUN OF WALL OVER 16' IN LENGTH (BETWEEN CORNERS AND CROSS WALLS OR SUPPORTING BUTTRESSES) UNLESS ADEQUATE BRACING IS PROVIDED OR THE FLOOR FRAMING HAS BEEN SET IN PLACE AND ANCHOR BOLTS TIGHTENED. BUTTRESSES SHALL BE A MINIMUM OF 30".**
- 4. DO NOT BACKFILL ANY WALL BEFORE 7 DAYS WHEN AVERAGE AIR TEMPERATURE IS ABOVE 50 DEGREES AND NOT BEFORE 10 DAYS WHEN AVERAGE AIR TEMPERATURE IS BELOW 50 DEGREES.**
- 5. BACKFILL WITH LOOSE, UNIFORM SOIL, PREFERABLY SLIGHTLY DAMP. NO HEAVY WHEEL LOADING ADJACENT TO THE WALL SHALL BE ALLOWED.**
- 6. SEAL TIE HOLES AND CRACKS WITH FIBER SEALANT BEFORE DAMPPROOFING.**
- 7. ONE COAT DAMPPROOFING MINIMUM SHALL BE APPLIED IN SAND AND SANDY CLAY SOILS AND TWO COATS, OR EQUIVALENT SHALL BE APPLIED IN UPLAND CLAYS.**
- 8. SURROUND THE DRAIN TILES WITH 10" - 12" OF COARSE WASHED SANDS (ROAD GRAVEL). CRUSHED LIMESTONE IS NOT ACCEPTABLE. ALL DRAIN TILE SHALL BE 3" OR 4" AND COVERED WITH SOCK OR FILTER CLOTH.**
- 9. DO NOT PLACE PATIO OR DRIVEWAY SLABS ON THE FILL NEXT TO THE BASEMENT WALL UNLESS SUPPORTED EITHER ON SUPPORTING LEDGES OR ON DOWELS OR BY SUPPORTING COLUMNS CARRIED DOWN TO THE BASEMENT FOOTING.**
- 10. TO ASSURE ADEQUATE DRAINAGE AWAY FROM THE FOUNDATION, GRADES AWAY FROM THE HOUSE SHALL SLOPE AT A RECOMMENDED RATE OF 1" PER FOOT WITH AN ABSOLUTE MINIMUM RATE OF 1/4" PER FOOT FOR THE FIRST 6'. POSITIVE DRAINAGE SHALL THEN BE MAINTAINED TO DIRECT DRAINAGE OFF OF THE LOT.**
- 11. ALL HORIZONTAL BARS SHALL LAP A MINIMUM OF 18" AT ENDS, SPLICES, AND AROUND CORNERS.**
- 12. SET ANCHOR BOLTS AT THE SPACING SHOWN ON THE WALL SECTIONS IN ATTACHED DRAWINGS, PREFERABLY SET BY TEMPLATES SECURED TO THE FORMS BEFORE CONCRETE IS PLACED, TO ASSURE PROPER PLACEMENT.**
- 13. THE PLACEMENT OF VERTICAL AND HORIZONTAL STEEL SHALL BE IN ACCORDANCE WITH THE ATTACHED DRAWINGS.**



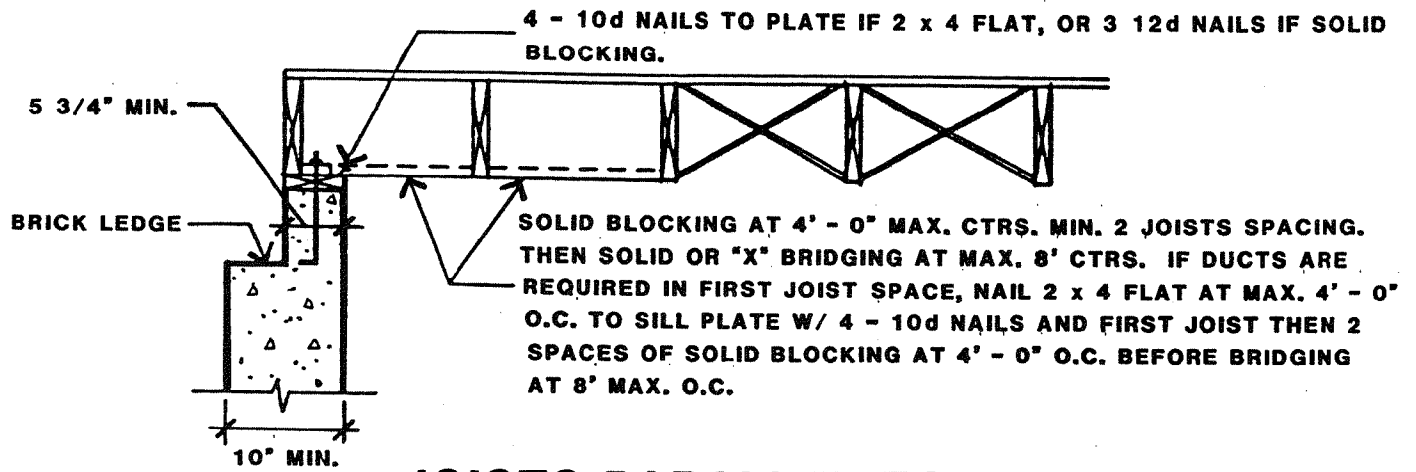
8' BASEMENT WALL

WALLS MORE THAN 8' - 8" HIGH SHALL BE DESIGNED BY AN ENGINEER.

VERTICAL REINFORCING SCHEDULE

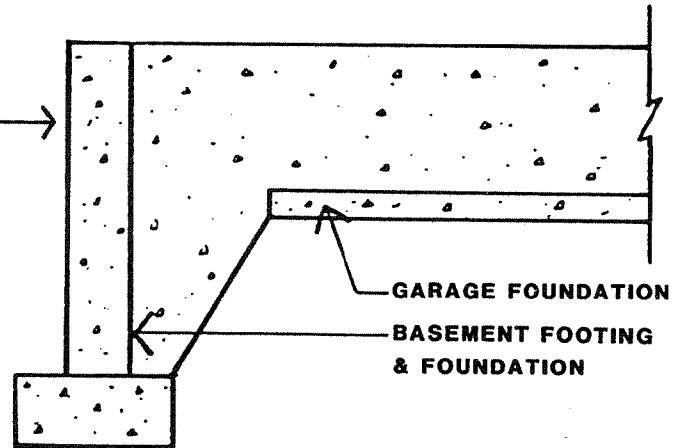
BACKFILL	8" WALL	10" WALL
SAND	#4 AT 24" CTS.	#4 AT 30" CTS.
SANDY CLAYS	#4 AT 18" CTS.	#4 AT 24" CTS.
HEAVY CLAYS	#4 AT 12" CTS.	#4 AT 18" CTS.

PROVIDE 1 - #4 4' - 0" LONGER THAN OPENING DIMENSION ON EACH SIDE OF ALL OPENINGS LARGER THAN 12" IN EITHER DIRECTION



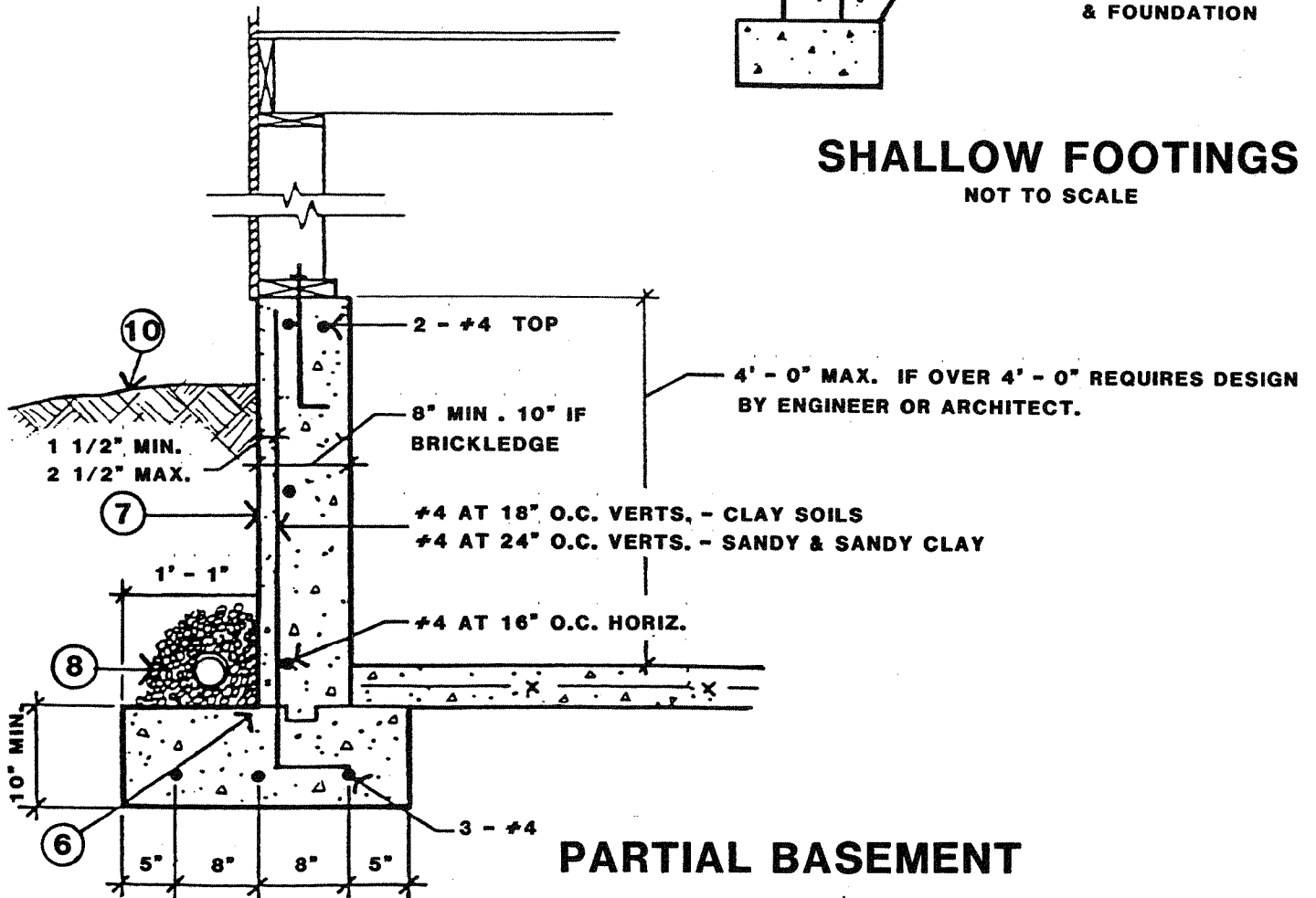
JOISTS PARALLEL TO WALL

SUPPORT THE ENDS OF SHALLOW FOOTINGS ADJACENT TO THE BASEMENT WALLS ON COLUMNS CARRIED DOWN TO THE BASEMENT WALL FOOTINGS.



SHALLOW FOOTINGS

NOT TO SCALE



NOTE REMAINDER OF WALL DETAILS AND NOTES SAME AS p. 3.