FRAMING CONSTRUCTION NOTES

REVISED AUGUST 21, 2003

1. GRADE GIRDERS AND BAND WITH 4" CURTAIN WALL AND PIER CONSTRUCTION SHALL BE 3-2x10 SOUTHERN YELLOW PINE #2 UNLESS NOTED OTHERWISE. MAXIMUM CLEAR SPAN TO BE 4'-8" (8'-0" O.C. SPACING OF PIERS).

   TO AVOID OBJECTIONABLE CRACKING IN FINISHED HARDWOOD FLOORS OVER ANY GIRDERS, USE THE FOLLOWING PROCEDURE:

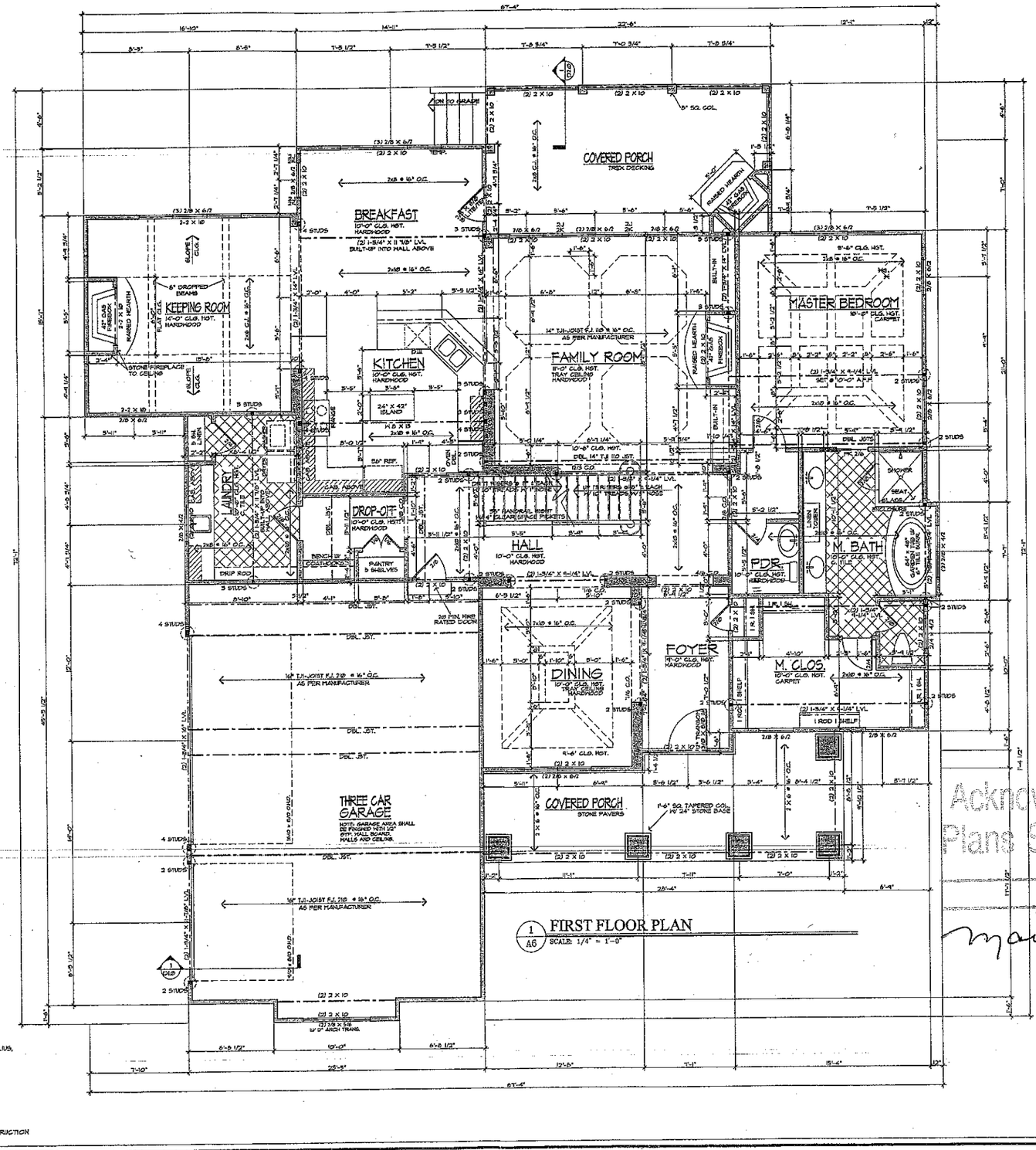
   A. NAILING
      I. ALL FLOOR JOISTS MUST BE TOENAILED TO THEIR SUPPORT GIRDERS WITH A MINIMUM OF 3-8d NAILS AT EACH END. LARGER NAILS WILL SPLIT AND RENDER THE TOENAIL INEFFECTIVE. NO END NAILING THROUGH THE GIRDER OR BAND IS PERMITTED.
      II. IF DROPPED GIRDERS ARE USED, END LAP ALL JOISTS AND SIDE NAIL EACH WITH A MINIMUM OF 3-16d NAILS AT EACH END OF EACH JOIST. LEDGER STRIPS NAILED WITH 3-16d NAILS AT EACH JOIST END, SPACED 3" APART.
      III. NAIL MULTIPLE MEMBER BUILT UP GIRDERS WITH TWO ROWS OF 16d NAILS STAGGERED AT 32" O.C., 3" DOWN FROM THE TOP AND 3" UP FROM THE BOTTOM WITH 3-16d NAILS AT EACH END OF EACH PIECE IN THE JOIST THROUGH THE MEMBERS MAKING UP THE MULTIPLE GIRDER.
      IV. THIS NAILING PATTERN WILL INSURE A TIGHT FLOOR FROM OUTSIDE OF HOUSE TO OUTSIDE SO THAT WHEN THE FRAMING SHRINKS DURING THE FIRST HEATING SEASON, THE SHRINKAGE WILL BE UNIFORMLY DISTRIBUTED OVER THE ENTIRE FLOOR. IF THE GIRDER NAILING PATTERN IS OMITTED, THEN THE SHRINKAGE WILL ACCUMULATE OVER THE GIRDERS AND AN OBJECTIONABLE CRACK WILL DEVELOP IN THE FINISHED HARDWOOD FLOOR OVER THE GIRDER LINE.
   B. AT ALL GIRDERS WHERE THE JOISTS CHANGE DIRECTION, INSTALL BRIDGING AT 6' O.C. FOR A MINIMUM OF SIX JOIST SPACINGS BEYOND ANY JOIST DIRECTION CHANGE. THIS WILL INSURE SHRINKAGE DISTRIBUTION OVER THE FLOOR AND NOT LET IT ACCUMULATE AT THE GIRDER.
   C. THERE MUST BE WOOD BLOCKING THRU BOLTED TO THE STEEL BEAM WITH JOISTS TOENAILED OR ATTACHED TO THE BEAM WITH METAL HANGERS UNDER ANY HARDWOOD FLOORS THAT PASS OVER A STEEL BEAM SUPPORTING FLOOR JOISTS. THIS CONDITION OFTEN EXISTS BASEMENT AREAS.
2. ALL OTHER LUMBER MAY BE SPRUCE #2 UNLESS NOTED OTHERWISE.
3. STEEL BEAMS MUST HAVE 3-2x4 STUD JACKS UNDER EACH END SUPPORT UNLESS NOTED OTHERWISE.
4. LVL BEAMS MUST HAVE 3-2x4 STUD JACKS UNDER EACH END SUPPORT UNLESS NOTED OTHERWISE.
5. MASONRY LINTELS.
   A. FOR SPANS UP TO 6'- USE 3 1/2" X 3 1/2" X 1/4" STEEL ANGLES.
   B. FOR SPANS FROM 6' TO 10', USE 5" X 3 1/2" X 5/16" STEEL ANGLES.
   C. FOR SPANS FROM 4' TO 18', USE A PAIR OF 9 GAUGE WIRES IN EACH OF THE FIRST 3 COURSES OF BRICK ON A 5" X 3 1/2" X 5/16" STEEL ANGLE. LAP ALL 9 GAUGE WIRE SPLICES 12" MINIMUM AND EXTEND WIRES 12" MINIMUM INTO JAMBS. TEMPORARILY SUPPORT STEEL ANGLE BEFORE LAYING MASONRY. SHORING MAY BE REMOVED FIVE DAYS FOLLOWING INSTALLATION OF MASONRY.
   D. WHEN STRUCTURAL STEEL BEAMS WITH BOTTOM PLATES ARE USED TO SUPPORT MASONRY, THE BOTTOM PLATE MUST EXTEND THE FULL LENGTH OF STEEL BEAM. THIS PROVIDES SUPPORT TO THE ENDS OF THE PLATE BY BEARING ON THE ADJACENT MASONRY JAMBS. THE BEAM SHOULD BE TEMPORALLY SHORED PRIOR TO LAYING THE MASONRY. THE SHORING MAY BE REMOVED FIVE DAYS AFTER LAYING THE MASONRY.
6. ALL BRICK VENEER OVER LOWER ROOFS (BRICK SLIMSS) MUST HAVE A STRUCTURAL ANGLE LAG SCRIBED TO ADJACENT STUD WALL IN ACCORDANCE WITH DETAIL WITH STEEL BRICK STOPS TO PREVENT SLIDING OF BRICK.
7. ALL RAFTER BRACES MUST HAVE 2 STUDS FROM PLATE THROUGH ALL FLOORS TO FOUNDATION OR SUPPORTING BEAM BELOW. NO BRACES SHALL BE ATTACHED TO TOP WALL PLATE WITHOUT STUDS DIRECTLY UNDER THEM.
8. WHERE PARTITIONS FALLS BETWEEN FLOOR JOISTS OR TRUSSES, 2"x4" LADDERS @ 16" O.C. MUST BE PLACED PERPENDICULAR TO THE TRUSSES TO SUPPORT THE PLYWOOD DECKING.
9. ALL WOOD I-JOISTS AND OPEN JOISTS MUST BE BRACED IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS PLUS DETAILS SHOWN ON PLANS. LOAD BEARING PARTITIONS, JACKS, BEAMS AND COLUMN SUPPORTS MUST BE SOLID BLOCKED THROUGH FLOOR TO JOISTS, TRUSSES, AND PLYWOOD CANNOT CARRY CONCENTRATED POINT LOADS. ALL POINT LOADS MUST BE CARRIED TO FOUNDATIONS WITH BLOCKING AND/OR BEAMS.
10. ALL STEEL COLUMNS SHALL BEAR ON CONCRETE, MASONRY, OR STEEL ONLY. AN ADEQUATELY-SIZED BASE PLATE SHALL BE USED TO SPREAD THE COLUMN LOAD ACROSS THE BEARING SURFACE AREAS SO AS NOT TO EXCEED ITS ALLOWABLE COMPRESSIVE STRESS. BEAMS THAT BEAR ON TOP OF STEEL COLUMNS SHALL BE WELDED TO THE COLUMN BASE PLATE SHALL BE BOLTED WITH FOUR 1/2" DIAMETER ANCHOR BOLTS OR EXPANSION BOLTS TO CONCRETE OR MASONRY.
11. UNLESS NOTED OTHERWISE ON THE PLANS, ALL EXTERIOR FACING STUD WALLS TALLER THAN 10' SHALL BE CONSTRUCTED AS FOLLOWS:
   A. WALLS 10' TO 12' HIGH, BALLOON FRAME 2X4 STUDS @ 12" O.C. WITH 1/2" OSB SHEATHING AND 3 KING STUDS ON EACH SIDE OF EACH OPENING NAILED SECURELY TO THE HEADER.
   B. WALLS 12' TO 20' HIGH, BALLOON FRAME 2X6 STUDS @ 16' O.C. 1/2" OSB SHEATHING REQUIRED FOR WALL HEIGHT (12'). PROVIDE 2-1 3/4" X 5 1/4" LVL KING STUDS ON EACH SIDE OF OPENINGS 8' TO 6' WIDE AND 2-2x6 KING STUDS FOR OPENINGS LESS THAN 3' WIDE. FASTEN KING STUDS SECURELY TO ALL HEADERS WITH A MINIMUM OF 12-16d NAILS OR 4-5/8" DIAMETER LAG SCREWS EMBEDDED A MINIMUM OF 4" INTO THE HEADER.
   C. GABLE END WALLS OF ROOMS WITH VAULTED CEILING JOISTS: BALLOON FRAME WALL AND PROVIDE TRIPLE KING STUD ON EACH SIDE OF OPENING, NAILED SECURELY TO THE HEADER.
   D. TWO-STORY HIGH FOYER WALLS LESS THAN 4' WIDE: EXTEND 3 1/2" X 9 1/4" PARALLAM PSL MEMBER WITH 3-2X4 FLAT PLATES ACROSS THE ENTIRE WALL. LOCATE THE BEAM NEAR MID-HEIGHT OF THE WALL AT OR NEAR FIRST FLOOR TOP PLATE.

   NOTE: SEE SPECIAL DESIGN OR ENGINEER FOR WALLS TALLER THAN 20', WHEN OPENINGS IN HIGH WALLS EXCEED 6' IN WIDTH, OR IF THE WALL CANNOT BE CONSTRUCTED USING ANY OF THE METHODS MENTIONED.
12. CONTINUOUS 2x6 BRIDGING SHALL BE NAILED TO DIAGONAL OR VERTICAL WEB MEMBERS OF ALL OPEN WEB FLOOR TRUSSES OVER 10' LONG. THEY SHALL BE INSTALLED NEAR MID-SPAN AS A LOAD DISTRIBUTION MEMBER. IF THE 2x6 BRIDGING IS NOT CONTINUOUS, LAP ENDS OF BRIDGING ONE TRUSS SPACE.
13. LOWER STUD WALLS FOR BUILDINGS OVER TWO STORIES, BUT NOT MORE THAN THREE STORIES:
   A. INTERIOR WALLS
      I. LOAD BEARING ——— 2x4 @ 12" O.C.
      II. NON LOAD BEARING ——— 2x4 @ 16" O.C.
   B. EXTERIOR WALLS
      USE 2x6 @ 16" O.C. WITH 1/2" X 4' X 8' PLYWOOD SHEATHING AT ALL CORNERS AND EVERY 25', OR USE 2x4 @ 12" O.C. WITH 1/2" PLYWOOD SHEATHING SOLID ON WALLS.
14. HEADERS SHALL BE AS SHOWN UNLESS NOTED DIFFERENTLY ON PLANS.
   A. INTERIOR
      I. SPANS UP TO 2'-6" ——— 2-2x6'S
      II. SPANS 2'-6" TO 3'-6" ——— 2-2x8'S
      III. SPANS 3'-6" TO 6'-6" ——— 2-2x10'S
      IV. SPANS 6'-6" OR MORE ——— SEE PLAN
   B. EXTERIOR
      I. SPANS UP TO 3'-0" ——— 2-2x6'S
      II. SPANS 3'-0" TO 5'-0" ——— 2-2x8'S
      III. SPANS 5'-0" TO 8'-0" ——— 2-2x10'S
      IV. SPANS 5'-0" OR MORE ——— SEE PLAN

   HEADERS WIDER THAN 5' SHALL HAVE A MINIMUM OF 3-2X4 KING STUDS ON EACH SIDE U.N.O.
15. HIGH CEILING JOISTS ARE PARALLEL TO AN EXTERIOR WALL AND RAFTERS BEAR ON THIS EXTERIOR STUD WALL TOP PLATE, TIE THE RAFTERS NEAR THE TOP PLATE TO CEILING JOISTS WITH 2x6 HOOKS A MINIMUM OF 6' LONG AT 4' ON CENTER ACROSS THE TOP OF THE CEILING JOISTS.
16. AT ALL BAY WINDOWS, EACH PANEL SHALL BE NAILED TO EACH ADJACENT PANEL WITH 3-16d NAILS OR TIED TOGETHER WITH METAL STRAPPING NAILED AT FOUR LOCATIONS BETWEEN FLOORS WITH A MINIMUM OF 2-16d NAILS INTO EACH PANEL AT EACH STRAP. THIS WILL AVOID VERTICAL CRACKING IN PANEL JOISTS DUE TO HORIZONTAL OSCILLATING PANELS.
17. AT ALL STAIRS, EVERY STUD AT EACH STRINGER MUST BE NAILED TO EACH STRINGER WITH A MINIMUM OF 2-16d NAILS. THIS WILL AVOID CRACKING BETWEEN WALLBOARD AND TOP OF BASE MOLDING DUE TO VERTICAL OSCILLATION OF STAIR STRINGERS.
18. STEEL PIPE COLUMNS MUST BE IN CONTACT WITH THE UPPORTED MEMBER AND CONTINUED SOLID TO THE SUPPORTING MASONRY OR CONCRETE FOUNDATION. NO INTERMEDIATE WOOD BLOCKING SHALL BE USED AS IT WILL CRUSH.

ADDITIONAL NOTES

1. ALL PARTS OF THESE PLANS ARE COPYRIGHTED WITH THE REGISTER OF COPYRIGHTS, LIBRARY OF CONGRESS WASHINGTON D.C. AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT CONCENT OF CROWE DESIGN & ASSOCIATES.
2. CROWE DESIGN & ASSOCIATES IS A PROFESSIONAL RESIDENTIAL DESIGN FIRM LOCATED IN CORNELIUS, NORTH CAROLINA. BECAUSE SITE CONDITIONS MAY VARY, CROWE DESIGN CANNOT WARRANT THE SUITABILITY OF THESE PLANS FOR USE ON YOUR SPECIFIC SITE. CONSTRUCTION FROM THESE PLANS SHOULD NOT BE UNDERTAKEN WITHOUT THE ASSISTANCE OF A PROFESSIONAL CONTRACTOR.
3. ALL FEDERAL, STATE AND LOCAL CODES, ORDINANCES AND REGULATION SHALL BE CONSIDERED AS PART OF THESE DRAWINGS AND DETAILS FOR THIS BUILDING AND SHALL TAKE PREFERENCE OVER ANYTHING SHOWN, DESCRIBED OR IMPLIED WHERE VARIANCES OCCUR.
4. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS BEFORE BEGINNING CONSTRUCTION AND COORDINATE ANY CORRECTIONS OR REVISIONS WITH THE OWNER AND DESIGNER. CROWE DESIGN & ASSOCIATES WILL ASSUME NO LIABILITY FOR DIMENSIONAL ERRORS ONCE CONSTRUCTION BEGINS.



FRAMED SQUARE FOOTAGE	
1ST FLOOR HEATED	2282
2ND FLOOR HEATED	1614
REC. ROOM HEATED	348
COVERED ENTRY	233
THREE-CAR GARAGE	767
COVERED PORCH	259
UNFINISHED BASEMENT	922
TOTAL HEATED	4244
TOTAL UNDER ROOF	6425

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE. CROWE DESIGN & ASSOCIATES HAVE TAKEN GREAT EFFORT AND PRECISION IN THE PREPARATION OF THESE DOCUMENTS. HOWEVER, THE USE OF THESE DOCUMENTS, BUT DOES NOT GUARANTEE "PERFECT" DOCUMENTS. ALL CONTRACTORS AND SUBCONTRACTORS SHALL REVIEW THESE DOCUMENTS AND REPORT ANY CONFLICTS BEFORE CONSTRUCTION BEGINS.

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Acknowledgement Of Plans Submittal ONLY
11/16/09
Date

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P.O. Box 1345 Cornelius, NC. 28031 (704) 910-4564

106 Dearborn Lane
Monroe Residence
MOORESVILLE, NORTH CAROLINA

KEAREY BUILDERS

NOVEMBER 12, 2009

FIRST LEVEL FLOOR PLAN

A6.0

FRAMING CONSTRUCTION NOTES

REVISED AUGUST 31, 2003

1. GIRDER, GIRDERS AND BAND WITH 4" CERTAIN WALL AND PIER CONSTRUCTION SHALL BE 2-2x10 SOUTHERN YELLOW PINE #2 UNLESS NOTED OTHERWISE. MAXIMUM CLEAR SPAN TO BE 4'-8" (6'-0" O.C. SPACING OF PIERS).

   TO AVOID OBJECTIONABLE CRACKING IN FINISHED HARDWOOD FLOORS OVER ANY GIRDERS, USE THE FOLLOWING PROCEDURE:

   A. NAILING
      I. ALL FLOOR JOISTS MUST BE TOENAILED TO THEIR SUPPORT GIRDERS WITH A MINIMUM OF 3-8d NAILS AT EACH END. LARGER NAILS WILL SPLIT AND RENDER THE TOENAIL INEFFECTIVE. NO END NAILING THROUGH THE GIRDER OR BAND IS PERMITTED.
      II. IF DROPPED GIRDERS ARE USED, END LAP ALL JOISTS AND SIDE NAIL EACH WITH A MINIMUM OF 5-16d NAILS AT EACH END OF EACH JOIST. LEDGER STRIPS NAILED WITH 3-16d NAILS AT EACH JOIST END, SPACED 8" APART.
      III. NAIL MULTIPLE MEMBER BUILT UP GIRDERS WITH TWO ROWS OF 16d NAILS STAGGERED AT 32" O.C., 2" DOWN FROM THE TOP AND 2" UP FROM THE BOTTOM WITH 3-16d NAILS AT EACH END OF EACH PIECE IN THE JOIST THROUGH THE MEMBERS MAKING UP THE MULTIPLE GIRDER.
      IV. THIS NAILING PATTERN WILL INSURE A TIGHT FLOOR FROM OUTSIDE OF HOUSE TO OUTSIDE SO THAT WHEN THE FRAMING SHRINKS DURING THE FIRST HEATING SEASON, THE SHRINKAGE WILL BE UNIFORMLY DISTRIBUTED OVER THE ENTIRE FLOOR. IF THE GIRDER NAILING PATTERN IS OMITTED, THEN THE SHRINKAGE WILL ACCUMULATE OVER THE GIRDERS AND AN OBJECTIONABLE CRACK WILL DEVELOP IN THE FINISHED HARDWOOD FLOOR OVER THE GIRDER LINE.

   B. AT ALL GIRDERS WHERE THE JOISTS CHANGE DIRECTION, INSTALL BRIDGING AT 6' O.C. FOR A MINIMUM OF SIX JOIST SPACINGS BEYOND ANY JOIST DIRECTION CHANGE. THIS WILL INSURE SHRINKAGE DISTRIBUTION OVER THE FLOOR AND NOT LET IT ACCUMULATE AT THE GIRDER.

   C. THERE MUST BE WOOD BLOCKING THRU BOLTED TO THE STEEL BEAM WITH JOISTS TOENAILED OR ATTACHED TO THE BEAM WITH METAL HANGERS UNDER ANY HARDWOOD FLOORS THAT PASS OVER A STEEL BEAM SUPPORTING FLOOR JOISTS. THIS CONDITION OFTEN EXISTS BASEMENT AREAS.

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3. STEEL BEAMS MUST HAVE 3-2x4 STUD JACKS UNDER EACH END SUPPORT UNLESS NOTED OTHERWISE.
4. LVL BEAMS MUST HAVE 3-2x4 STUD JACKS UNDER EACH END SUPPORT UNLESS NOTED OTHERWISE.
5. MASONRY LINTELS:
   A. FOR SPANS UP TO 6': USE 3 1/2" X 3 1/2" X 1/4" STEEL ANGLES.
   B. FOR SPANS FROM 6' TO 10': USE 5" X 3 1/2" X 5/16" STEEL ANGLES.
   C. FOR SPANS FROM 4' TO 18': USE A PAIR OF 9 GAUGE WIRES IN EACH OF THE FIRST 3 COURSES OF BRICK ON A 5" X 3 1/2" X 5/16" STEEL ANGLE. LAP ALL 9 GAUGE WIRE SPLICES 12" MINIMUM AND EXTEND WIRES 12" MINIMUM INTO JAMBS. TEMPORARILY SUPPORT STEEL ANGLE BEFORE LAYING MASONRY. SHORING MAY BE REMOVED FIVE DAYS FOLLOWING INSTALLATION OF MASONRY.
   D. WHEN STRUCTURAL STEEL BEAMS WITH BOTTOM PLATES ARE USED TO SUPPORT MASONRY, THE BOTTOM PLATE MUST EXTEND THE FULL LENGTH OF STEEL BEAM. THIS PROVIDES SUPPORT TO THE ENDS OF THE PLATE BY BEARING ON THE ADJACENT MASONRY JAMBS. THE BEAM SHOULD BE TEMPORARILY SHORED PRIOR TO LAYING THE MASONRY. THE SHORING MAY BE REMOVED FIVE DAYS AFTER LAYING THE MASONRY.
6. ALL BRICK VENEER OVER LOWER ROOFS (BRICK CLIMBS) MUST HAVE A STRUCTURAL ANGLE LAG SCREWED TO ADJACENT STUD WALL IN ACCORDANCE WITH DETAIL, WITH STEEL BRICK STOPS TO PREVENT SLIDING OF BRICK.
7. ALL RAFTER BRACES MUST HAVE 2 STUDS FROM PLATE THROUGH ALL FLOORS TO FOUNDATION OR SUPPORTING BEAM BELOW. NO BRACES SHALL BE ATTACHED TO TOP WALL PLATE WITHOUT STUDS DIRECTLY UNDER THEM.
8. WHERE PARTITIONS FALLS BETWEEN FLOOR JOISTS OR TRUSSES, 2"x4" LADDERS @ 16" O.C. MUST BE PLACED PERPENDICULAR TO THE TRUSSES TO SUPPORT THE PLYWOOD DECKING.
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11. UNLESS NOTED OTHERWISE ON THE PLANS, ALL EXTERIOR FACING STUD WALLS TALLER THAN 10' SHALL BE CONSTRUCTED AS FOLLOWS:
   A. WALLS 10' TO 12' HIGH: BALLOON FRAME 2X4 STUDS @ 12" O.C. WITH 1/2" OSB SHEATHING AND 3 KING STUDS ON EACH SIDE OF EACH OPENING NAILED SECURELY TO THE HEADER.
   B. WALLS 12' TO 20' HIGH: BALLOON FRAME 2X6 STUDS @ 16" O.C. (1/2" OSB SHEATHING REQUIRED FOR WALL HEIGHTS 17'). PROVIDE 2- 11/4" X 9 1/4" LVL KING STUDS ON EACH SIDE OF OPENINGS 3' TO 6' WIDE AND 3-2X6 KING STUDS FOR OPENINGS LESS THAN 3' WIDE. FASTEN KING STUDS SECURELY TO ALL HEADERS WITH A MINIMUM OF 12-16d NAILS OR 4-3/8" DIAMETER LAG SCREWS EMBEDDED A MINIMUM OF 4" INTO THE HEADER.
   C. GABLE END WALLS OF ROOMS WITH VAULTED CEILING JOISTS: BALLOON FRAME WALL AND PROVIDE TRIPLE KING STUD ON EACH SIDE OF OPENINGS, NAILED SECURELY TO THE HEADER.
   D. TWO-STORY HIGH FOYER WALLS LESS THAN 4' WIDE: EXTEND 3 1/2" X 4 1/4" PARALLAM PSL MEMBER WITH 3-2X4 FLAT PLATES ACROSS THE ENTIRE WALL. LOCATE THE BEAM NEAR MID-HEIGHT OF THE WALL AT OR NEAR FIRST FLOOR TOP PLATE.

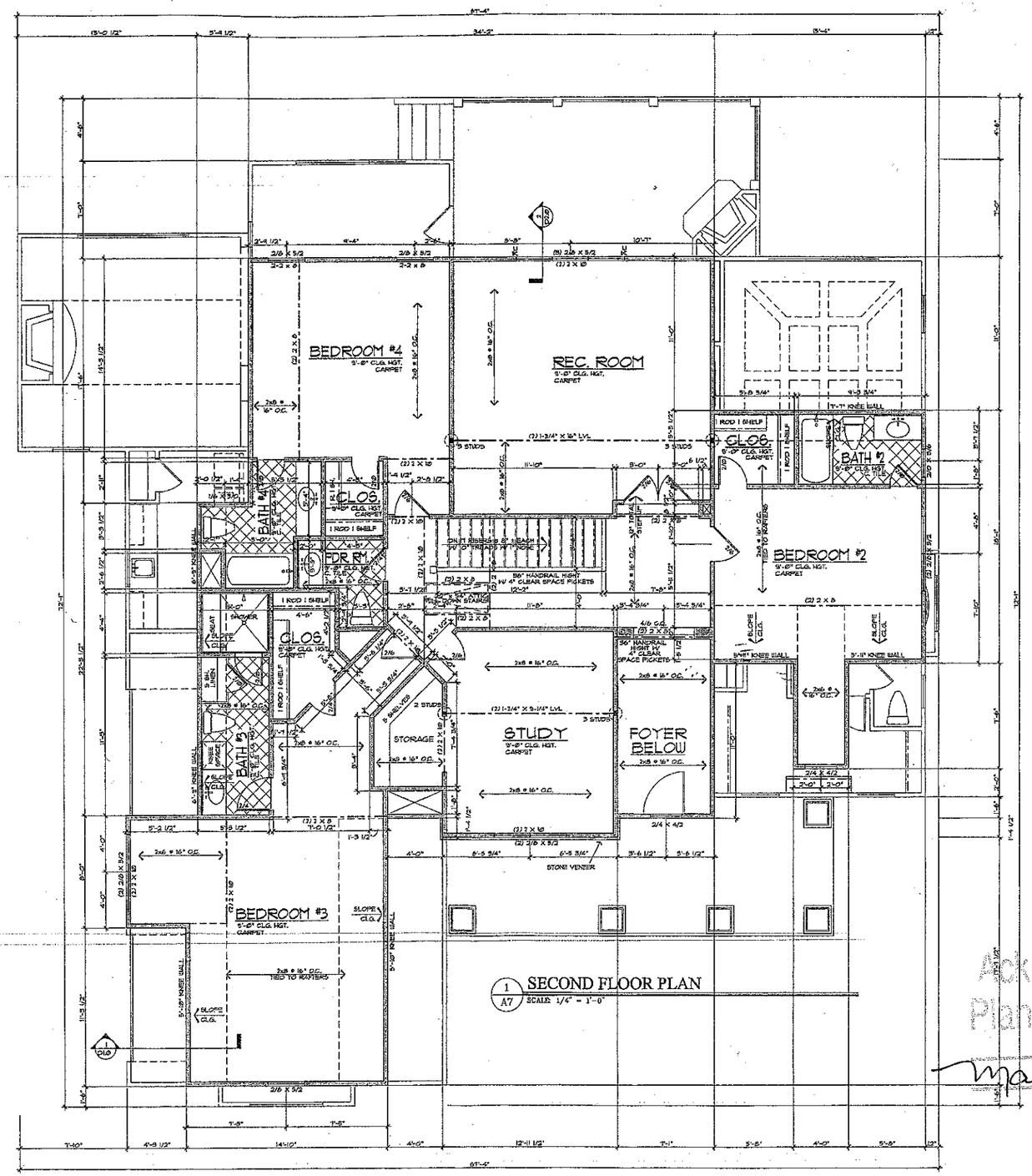
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12. CONTINUOUS 2x6 BRIDGING SHALL BE NAILED TO DIAGONAL OR VERTICAL WEB MEMBERS OF ALL OPEN WEB FLOOR TRUSSES OVER 10' LONG. THEY SHALL BE INSTALLED NEAR MID-SPAN AS A LOAD DISTRIBUTION MEMBER. IF THE 2x6 BRIDGING IS NOT CONTINUOUS, LAP ENDS OF BRIDGING ONE TRUSS SPACE.
13. LOWER STUD WALLS FOR BUILDINGS OVER TWO STORIES, BUT NOT MORE THAN THREE STORIES:
   A. INTERIOR WALLS
      I. LOAD BEARING ——— 2x4 @ 12" O.C.
      II. NON LOAD BEARING ——— 2x4 @ 16" O.C.
   B. EXTERIOR WALLS
      USE 2x6 @ 16" O.C. WITH 1/2" X 4' X 8' PLYWOOD SHEATHING AT ALL CORNERS AND EVERY 20', OR USE 2x4 @ 12" O.C. WITH 1/2" PLYWOOD SHEATHING SOLID ON WALLS.
14. HEADERS SHALL BE AS SHOWN UNLESS NOTED DIFFERENTLY ON PLANS:
   A. INTERIOR
      I. SPANS UP TO 2'-6" ——— 2-2x6'S
      II. SPANS 2'-6" TO 3'-6" ——— 2-2x8'S
      III. SPANS 3'-6" TO 6'-6" ——— 2-2x10'S
      IV. SPANS 6'-6" OR MORE ——— SEE PLAN
   B. EXTERIOR
      I. SPANS UP TO 2'-0" ——— 2-2x6'S
      II. SPANS 2'-0" TO 3'-0" ——— 2-2x8'S
      III. SPANS 3'-0" TO 5'-0" ——— 2-2x10'S
      IV. SPANS 5'-0" OR MORE ——— SEE PLAN

   HEADERS WIDER THAN 5' SHALL HAVE A MINIMUM OF 3-2X4 KING STUDS ON EACH SIDE U.N.O.
15. WHEN CEILING JOISTS ARE PARALLEL TO AN EXTERIOR WALL AND RAFTERS BEAR ON THIS EXTERIOR STUD WALL TOP PLATE, TIE THE RAFTERS NEAR THE TOP PLATE TO CEILING JOISTS WITH 2x6 HOSES A MINIMUM OF 6' LONG AT 4' ON CENTER ACROSS THE TOP OF THE CEILING JOISTS.
16. AT ALL BAY WINDOWS, EACH PANEL SHALL BE NAILED TO EACH ADJACENT PANEL WITH 8-16d NAILS OR TIED TOGETHER WITH METAL STRAPPING NAILED AT FOUR LOCATIONS BETWEEN FLOORS WITH A MINIMUM OF 2-16d NAILS INTO EACH PANEL AT EACH STRAP. THIS WILL AVOID VERTICAL CRACKING IN PANEL JOISTS DUE TO HORIZONTAL OSCILLATING PANELS.
17. AT ALL STAIRS, EVERY STUD AT EACH STRINGER MUST BE NAILED TO EACH STRINGER WITH A MINIMUM OF 2-16d NAILS. THIS WILL AVOID CRACKING BETWEEN WALLBOARD AND TOP OF BASE MOLDING DUE TO VERTICAL OSCILLATION OF STAIR STRINGERS.
18. STEEL PIPE COLUMNS MUST BE IN CONTACT WITH THE UPPORTED MEMBER AND CONTINUED SOLID TO THE SUPPORTING MASONRY OR CONCRETE FOUNDATION. NO INTERMEDIATE WOOD BLOCKING SHALL BE USED AS IT WILL CRUSH.

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Acknowledgement Of Plans Submittal ONLY
Date
Date

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106 Dearborn Lane
Warren Residence
MOORESVILLE, NORTH CAROLINA

KEARLEY BUILDERS

⚠ NOVEMBER 12, 2009

SECOND LEVEL FLOOR PLAN

A7.0

RESIDENTIAL FOUNDATION NOTES

REVISED AUGUST 27, 2003

1. SOIL BEARING CAPACITY ASSUMED AS 2000 PSF UNLESS NOTED OTHERWISE OR AS DETERMINED BY STANDARD PENETROMETER TEST.
2. ALL CONTINUOUS WALL FOOTINGS FOR ONE AND TWO-STORY HOUSES ARE A 15" THICK X 30" SIDE. REINFORCING IN FOOTINGS SHOULD BE (3) #4 REBAR IF NOTED ON PLANS. REINFORCEMENT NOT REQUIRED BY CODES.
3. ALL INTERIOR PIERS ARE 8" X 16" CMU UP TO A MAXIMUM HEIGHT TO 3'. ALL PIERS OVER 3' HIGH MUST BE FILLED WITH TYPE "S" MORTAR. MAXIMUM HEIGHT FOR 8" X 16" FILLED PIER IS 6'-8". PIERS LARGER THAN 8" X 16" ARE NOTED ON PLANS. PIER CAP BLOCKS SHOULD BE 8" OF SOLID MASONRY.
4. FOOTINGS FOR 8" X 16" PIERS ARE 2' X 2' X 12" UNLESS NOTED OTHERWISE. REINFORCING TO BE AS NOTED ON PLANS.
5. CONCRETE SHALL BE 3000 PSI IN 28 DAYS UNLESS NOTED OTHERWISE. NO CONCRETE SHALL BE POURED IN TEMPERATURES BELOW 40 DEGREES FAHRENHEIT UNLESS HEAT TO BE PROVIDED DURING CURING FOR TWO DAYS. THE BOTTOM OF ALL FOOTINGS MUST BE 36" BELOW GRADE.
6. ALL REBAR SPLICES SHALL BE A MINIMUM OF 21-0" UNLESS OTHERWISE NOTED.
7. ANY SPECIAL FOUNDATIONS FOR STRUCTURES SHALL BE DESIGNED BY LICENSED PROFESSIONAL ENGINEER UPON RECEIVING SOIL CAPACITY SPECIFICATIONS FOR ALL SOIL CONSIDERED TO AFFECT THE STRUCTURE.
8. CHIMNEY FOOTING SIZES ARE SHOWN IN THE STRUCTURAL DESIGN DRAWINGS.
9. FOUNDATION WALLS BACK-FILLED WITH DIRT AND SUPPORTING STRUCTURAL FRAMING SHALL BE CONSTRUCTED AS SHOWN ON DETAIL SHEET.
10. SPECIAL RETAINING WALL DESIGNS TO BE SHOWN ON DETAIL SHEETS.
11. ALL "FULL HEIGHT FOUNDATION WALLS ARE SHOWN ON STRUCTURAL DETAIL SHEET.
12. ALL MASONRY BASEMENT WALL CONSTRUCTION MUST BE INSPECTED BY THE COUNTY BUILDING OFFICIAL, ARCHITECT, OR ENGINEER FOR COMPLIANCE WITH STRUCTURAL SPECIFICATIONS.
13. ALWAYS FULL HEIGHT FOUNDATION OR BASEMENT WALLS RUN PARALLEL TO FLOOR FRAMING. BLOCKING MUST BE PROVIDED BETWEEN JOISTS 5'-3" OR MORE FOR NOT LESS THAN 50% JOIST SPACINGS OUT FROM WALL.
14. DETAILS OF ANY EARTH RETAINING STRUCTURES NOT ATTACHED TO THE HOUSE STRUCTURE WILL BE SHOWN ON SEPERATE DETAIL SHEETS.

NOTE: ALL POINT LOADS FROM ROOF BRACES, JACK STUDS, BEAM SUPPORTS + SIMILAR LOADS ON STEEL + CANOT BEAR ON SHEATHING ALONE. BLOCKING EQUAL TO OR BETTER THAN THE POINT LOAD SUPPORT ABOVE MUST BE CARRIED THROUGH ALL CONSTRUCTION TO THE FOUNDATION.

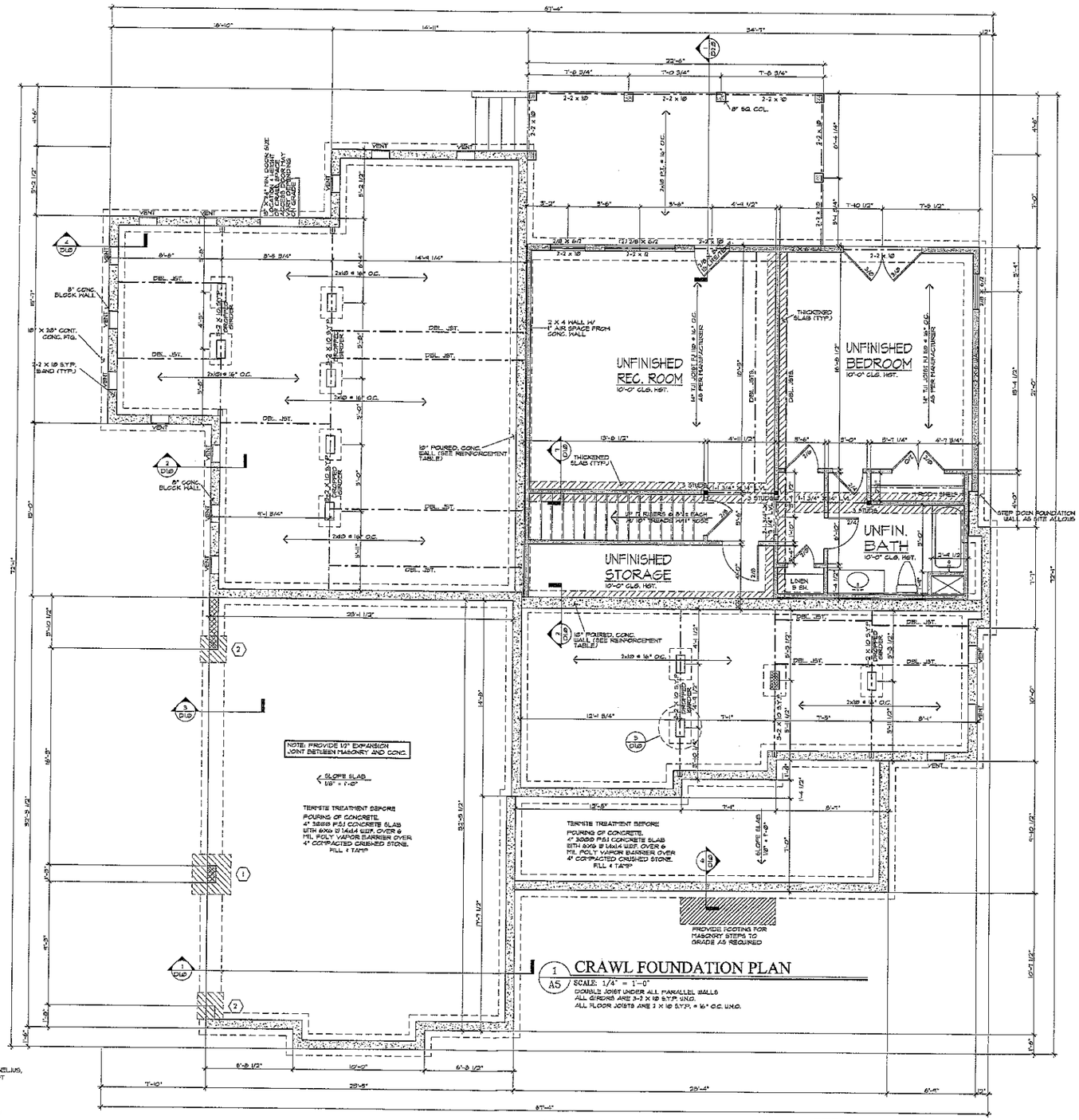
NOTE: ALL LOAD BEARING BASEMENT WALLS MUST BE 2 X 4 @ 12" O.C. OR 2 X 6 WALLS @ 16" O.C.

NOTE: EXTRA JOIST UNDER PARALLEL PARTITION WALLS OR 2 X 4 BLOCKING @ 24" O.C. BETWEEN JOIST UNDER PARRALEL PARTITION WALLS.

EXTERIOR WALL HGT. (H)	STUD SIZE/SPACING
H ≤ 10'-0"	2 X 4 @ 16" O.C.
10'-1" ≤ H ≤ 11'-0"	2 X 4 @ 12" O.C.
11'-1" ≤ H ≤ 16'-0"	2 X 6 @ 16" O.C.
H ≥ 16'-0"	CONSULT ENGINEER

FOOTING SCHEDULE

1. 36" X 36" X 12" CONC. FTG. W/ 4 #4 EACH WAY
2. 24" X 24" X 12" CONC. FTG. W/ 4 #4 EACH WAY



1 A5 CRAWL FOUNDATION PLAN

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

DOUBLE JOIST UNDER ALL PARALLEL WALLS
ALL GIRDERS ARE 3-2 X 10 S.Y.P. U.N.O.
ALL FLOOR JOISTS ARE 2 X 10 S.Y.P. @ 16" O.C. U.N.O.

CRAWL SPACE VENTILATION CALCULATIONS

CRAWL SPACE AREA = 1225
TOTAL SF. OF VENTILATION NEEDED: 1225 DIVIDED BY 150 = 8.16 SF.
ASSUMED NET FREE AREA = .64 SF. PER VENT
TOTAL 8" X 16" FOUNDATION VENTS NEEDED: 13 FOUNDATION VENTS.
TOTAL 8" X 16" FOUNDATION VENTS PROVIDED: 15 FOUNDATION VENTS.

[0] REPRESENTS DROPPED PIERS

ADDITIONAL NOTES

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3. ALL FEDERAL, STATE AND LOCAL CODES, ORDINANCES AND REGULATION SHALL BE CONSIDERED AS PART OF THESE DRAWINGS AND DETAILS FOR THIS BUILDING AND SHALL TAKE PREFERENCE OVER ANYTHING SHOWN, DESCRIBED OR IMPLIED WHERE VARIANCES OCCUR.
4. CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS BEFORE BEGINNING CONSTRUCTION AND COORDINATE ANY CORRECTIONS OR REVISIONS WITH THE OWNER AND DESIGNER. CROWE DESIGN & ASSOCIATES WILL ASSUME NO LIABILITY FOR DIMENSIONAL ERRORS ONCE CONSTRUCTION BEGINS.

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KEARLEY BUILDERS

NOVEMBER 12, 2009

CRAWL SPACE FOUNDATION

A5.0