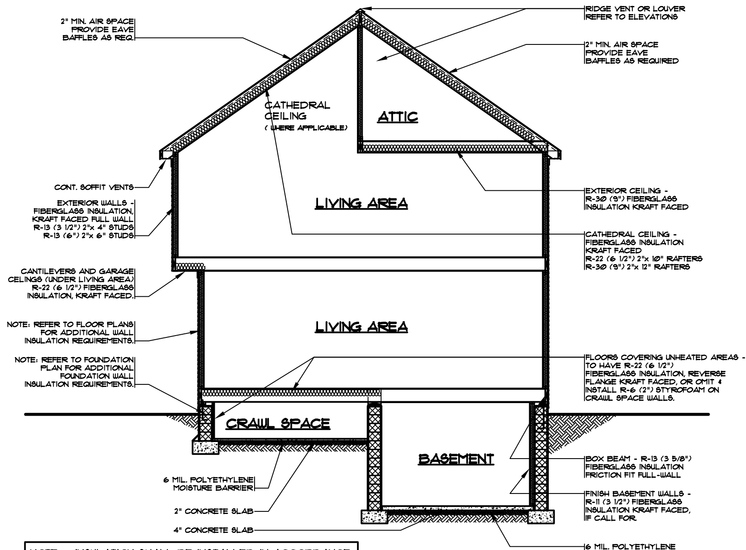


NOTE: INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

INSULATION DETAIL

REQUIRED MINIMUM "R" VALUES

WINDOWS	"R" VALUE	DOORS	"R" VALUE
BASEMENT SASH	2.13	SLIDING GLASS	1.55
DOUBLE HUNG	2.68	FRENCH	1.55
CASEMENT / AWNING	1.90	WOOD / STORM	3.85
FIXED	2.89	METAL	1.22

ROOF WINDOWS/ SKYLIGHTS	
ROOF WINDOW	1.80
SKYLIGHT	1.43

NOTE: TO MEET THE REQUIRED MINIMUM "R" VALUES GIVEN, WINDOWS ARE TO HAVE INSULATING GLASS AND/OR STORM PANELS / WINDOWS.

NOTE: SEE DRAWING GC-1 " THERMAL RESISTANCE OF BUILDING COMPONENTS" FOR ADDITIONAL INFORMATION.

ENERGY CONSERVATION CODE:

NOTE: ALL MATERIALS AND METHODS USED IN CONSTRUCTION SHALL COMPLY WITH THE LATEST ENERGY CONSERVATION CODE.

AIR LEAKAGE - MINIMUM INFILTRATION RATES:

WINDOWS _____ .050 CFM PER LIN. FT. OF SASH CRACK.

SLIDING DOORS _____ .050 CFM PER SQ. FT. OF DOOR AREA.

SWINGING DOORS _____ .125 CFM PER SQ. FT. OF DOOR AREA

THE AIR FILTRATION RATE FOR SWINGING, REVOLVING OR SLIDING DOORS IN OTHER THAN RESIDENTIAL BUILDINGS SHALL NOT EXCEED (1) ELEVEN CFM PER LINEAL FOOT OF DOOR CRACK.

A. EXTERIOR WALLS: 5000 AVERAGE DEGREE DAYS USING DOUBLE GLAZING U VALUE = .14, R VALUE = 7.1 CODE REQUIRES 3-1/2" BLANKET INSULATION. (R-13)

B. CEILING - ROOF ASSEMBLIES: CODE REQUIRES 6" BLANKET INSULATION IN ALL SPACES ABOVE HEATED AREAS. (R-30)

C. FLOORS ABOVE UNHEATED AREAS: CODE REQUIRES 6" BLANKET INSULATION OVER ALL UNHEATED BASEMENT, CRAWL SPACE AND GARAGE. (R-19 AND R-30)

THERMAL RESISTANCE OF BUILDING COMPONENTS:

BUILDING COMPONENT	R VALUE	U VALUE	CODE VALUE REQUIRED
EXTERIOR WALL (OPAQUE)	R-13	0.076	UW = 0.08
GLAZING	2.02	0.50	UG = 0.65
DOORS (TO UNHEATED SPACES)	2.50	0.40	UD = 0.40
FLOORS (OVER UNHEATED SPACES)	R-19	0.05	UF = 0.05
ROOF / CEILING	R-30	0.03	UR = 0.05

SPECIAL NOTE: IN ORDER TO PREVENT FREEZING OF PLUMBING LINES AND PLUMBING FIXTURES, SPECIAL CARE IS TO BE TAKEN WHEN INSTALLING PLUMBING LINES. INSULATE AND HEAT AND VENTILATE ALL AREAS WHERE BATHS, TOILETS OR OTHER SPACES CONTAINING PLUMBING ARE INSTALLED "ADJACENT TO" OR "OVER" UNHEATED SPACES.

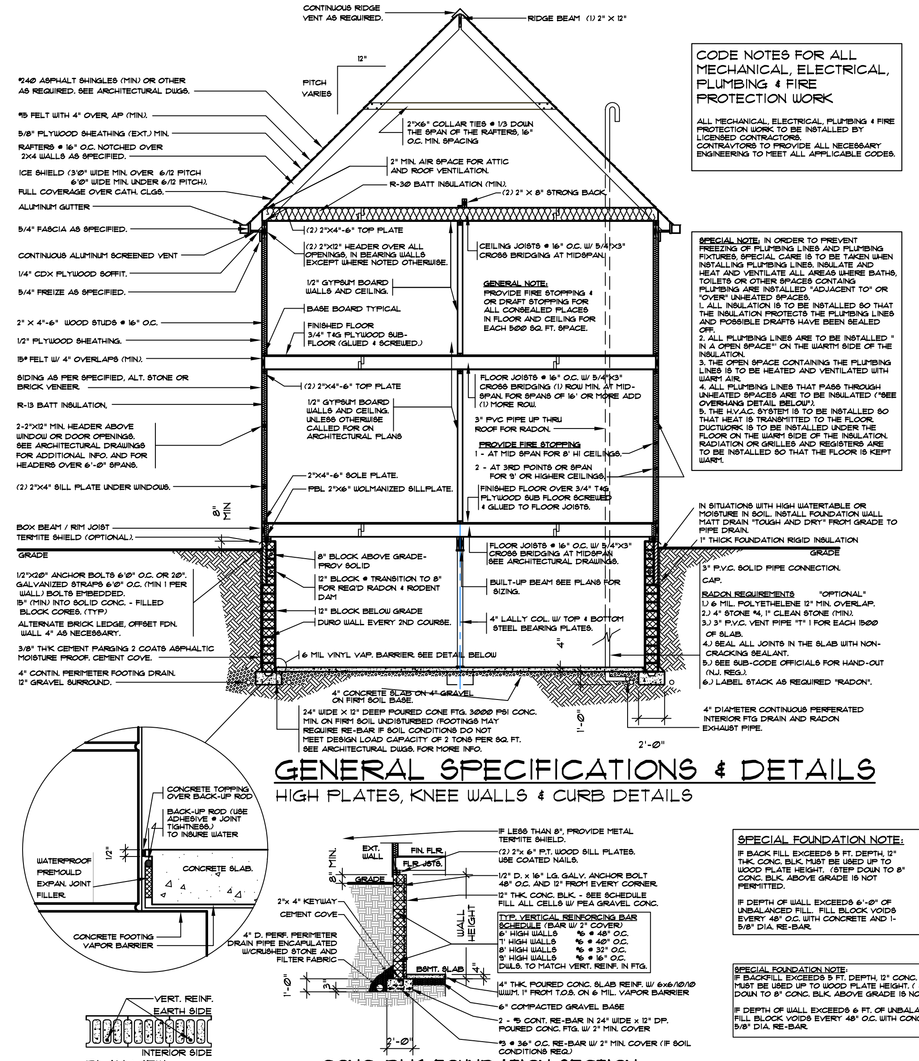
1. ALL INSULATION IS TO BE INSTALLED SO THAT THE BUILDING INSULATION PROTECTS THE PLUMBING LINES AND POSSIBLE DRAFTS HAVE BEEN SEALED OFF.

2. ALL PLUMBING LINES ARE TO BE INSTALLED " IN AN OPEN HEATED SPACE" ON THE WARM SIDE OF THE INSULATION.

3. THE OPEN SPACE CONTAINING THE PLUMBING LINES IS TO BE HEATED AND VENTILATED WITH WARM AIR.

4. ALL PLUMBING LINES THAT PASS OVER OR ADJACENT TO UNHEATED SPACES ARE TO BE INSULATED ("SEE OVERHANG DETAIL BELOW").

5. THE H.V.A.C. SYSTEM IS TO BE INSTALLED SO THAT HEAT IS TRANSMITTED TO THE FLOOR. DUCTWORK IS TO BE INSTALLED UNDER THE FLOOR ON THE WARM SIDE OF THE INSULATION. RADIATION OR GRILLES AND REGISTERS ARE TO BE INSTALLED SO THAT THE FLOOR IS KEPT WARM.

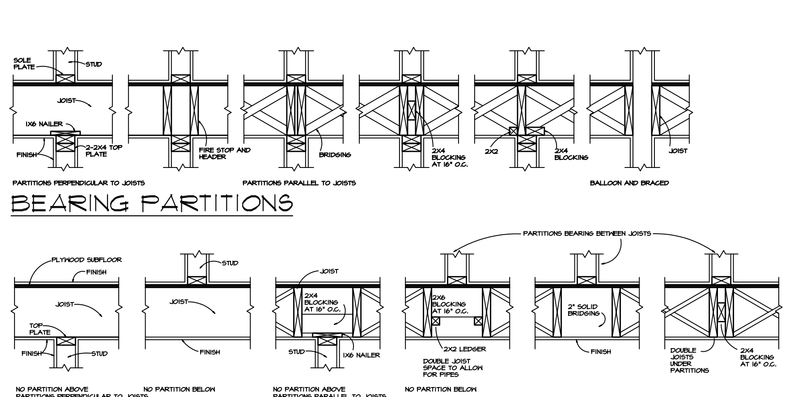


GENERAL SPECIFICATIONS & DETAILS

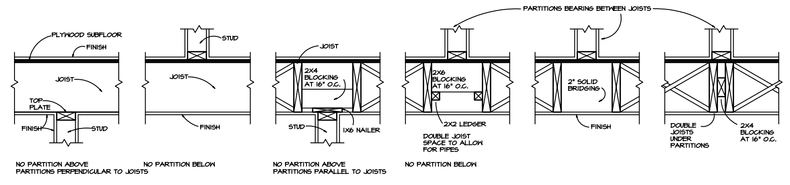
HIGH PLATES, KNEE WALLS & CURB DETAILS

CONC. BLK. FOUNDATION SECTION

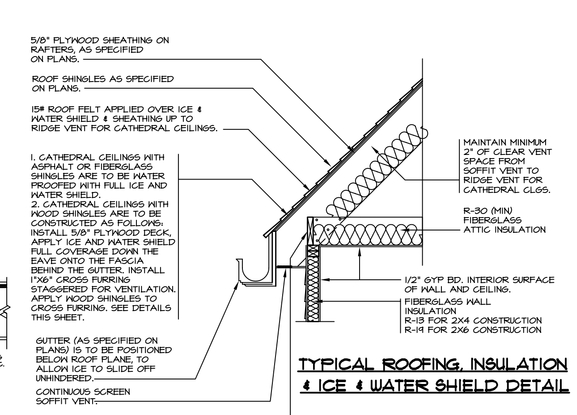
FOOTING TO BE PLACED ON FIRM UNDISTURBED SOIL W/ MIN. OF 2 TONS P.S.F. BRG. CAP.
SCALE : 1/2" = 1'-0"



BEARING PARTITIONS

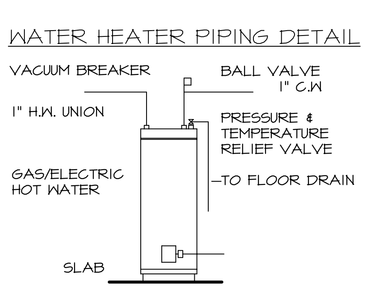


NON-BEARING PARTITIONS



TYPICAL ROOFING, INSULATION & ICE & WATER SHIELD DETAIL

WATER HEATER PIPING DETAIL



PLUMBING AND GAS PIPING SIZES

1. ALL PLUMBING PIPE SIZES TO BE DONE ACCORDING TO STANDARD PLUMBING CODE
2. ALL GAS PIPING TO BE SIZED ACCORDING TO NATIONAL GAS CODE AND B.O.C.A. MECHANICAL CODE

ALL WORK RELATING TO THESE TRADES TO BE DONE ACCORDING TO ALL APPLICABLE CODES.

DETAILS : FIRE RESISTANCE ASSEMBLIES

THE INFORMATION OF THE FIRE RESISTANCE ASSEMBLIES BELOW HAVE BEEN RESOURCED FROM THE FIRE RESISTANCE DESIGN MANUAL, AS PUBLISHED BY THE GYPSUM ASSOCIATION, 1603 ORRINGTON AVENUE, EVANSTON, ILLINOIS 60201.

SYSTEM DESCRIPTION	SKETCH AND DESIGN DATA

WALLS AND INTERIOR PARTITIONS, WOOD FRAME *

WP 3605 1 - HOUR	GYPSUM WALLBOARD, WALL STUDS ONE LAYER 5/8" TYPE X PLAIN OR PREDECORATED/GYPSUM WALLBOARD, WATER RESISTANCE BACKERBOARD OR VENEER BASE APPLIED PARALLEL WITH OR AT RIGHT ANGLES TO EACH SIDE OF 2 X 4 WOD STUDS @ 16" O.C. IN 1-1/8" LONG, 0.0915" SHANK, 1/4" HOADS, 7" O.C. JOINTS OF SQUARE EDGE, BEVEL EDGE OR PREDECORATED WALLBOARD MAY BE LEFT EXPOSED. STAGGER JOINTS EACH SIDE. (LOAD BEARING)	THICKNESS - 4-7/8" APPROX. WEIGHT - 7 PSF FIRE TEST - UL R3900-UIC(NIC 5442, 2-2-91 DESIGN U305 R2711-91, 1-20-94 R2304-92, 3-15-96 ULC DESIGN W301 SOUND TEST - OR 64-8, 2-4-64

WALLS AND EXTERIOR PARTITIONS, WOOD FRAME GYPSUM WALL BOARD, GYPSUM SHEATHING, WOOD STUDS

WP 8105 1 - HOUR	EXTERIOR SIDE: ONE LAYER 5/8" TYPE "X" GYPSUM SHEATHING, 48" WIDE, APLIED PARALLEL TO STUDS WITH GALVANIZED ROOF NAILS 1 3/4" LONG, 0.120" SHANK, 7/16" OR 1/2" HEADS, 7" O.C. IN FIELD, 4" O.C. PERIMETER. JOINTS OF GYPSUM SHEATHING MAY BE LEFT UNTREATED. WALLBOARD AND SHEATHING NAILED TO TOP AND BOTTOM PLATES AT 7" O.C. INTERIOR SIDE: ONE LAYER 5/8" "X" TYPE GYPSUM WALLBOARD OR WATER RESISTANT BOARD OR VENEER BASE APPLIED PARALLEL WITH OR RIGHT ANGLES TO 2"X4" WOOD STUDS WITH 9d COATED NAILS 1 7/8" LONG, 0.0915" SHANK, 1/4" HEADS 7" O.C. (LOAD-BEARING).	FIRE SIDE THICKNESS - 4-3/4" APPROX. WEIGHT 7 PSF FIRE TEST - GES HF 3910 INSULATION * SEE FG. 6 SEC. 101.

FLOOR-CEILING ASSEMBLIES, WOOD FRAMES *

FC 5420 1 - HOUR RATING	WOOD JOISTS, GYPSUM WALLBOARD 5/8" TYPE X GYPSUM WALLBOARD OR VENEER BASE APPLIED AT RIGHT ANGLES TO 2 X 10 WOOD JOISTS 16" O.C. WITH 80 COATED NAILS 1-1/8" LONG, 0.0915" SHANK, 1/4" HEADS, 6" O.C. JOISTS SUPPORTING 1" NOMINAL WOOD SUB FLOOR AND 1/2" GYPSUM WALLBOARD FINISHED FLOOR WITH LONG EDGES + & ENDS PERPENDICULAR WITH EXTERIOR GLUE SUBFLOOR PER-PENDICULAR WITH JOISTS STAGGERED.	APPROX. CEILING HEIGHT 2-1/2 PSF. FIRE TEST - UL R2905-5, 9, 1-15, 52 R2316-2, 5, 8-20-52 DESIGN L 501 ULC DESIGN W300 SOUND TEST - STC 52 IIC 4 TEST - 32 IIC 6 # 100 NOC 50152, 7-19-66

* 1 HOUR FIRE RATING NOTE FOR GARAGE CEILINGS USEING T.J.I. TYPE JOIST:

PROVIDE - 1 ADDITIONAL LAYER OF 5/8" X GYPSUM BOARD FOR T.J.I. TYPE JOISTS TO PROVIDE REQUIRED FIRE RATING.

FLOOR-CEILING ASSEMBLIES USING T.J.I. TYPE JOISTS, O TRUSSES.

GA FILE NO. FC 5512 PROPRIETARY	GYPSUM BOARD, PARALLEL CHORD WOOD TRUSSES CEILING: TWO LAYERS OF 1/2" TYPE X GYPSUM WALLBOARD OR VENEER BASE APPLIED PERPENDICULAR TO TRUSSES. BASE LAYERS/ JOINTS STAGGERED 24" AND ALL FACE LAYER JOINTS OFFSET 24" FROM THE JOINTS OF THE BASE LAYER. BASE LAYER ATTACHED WITH 1-7/8" TYPE S DRYWALL SCREWS 12" O.C. IN ADDITION, 1-1/2" TYPE G DRYWALL SCREWS SPACED 8" O.C. AND PLACED 3" FROM EACH SIDE OF FACE LAYER END JOINT. TRUSSES: CHORD AND WEB MEMBERS ARE FABRICATED FROM 2 X 4 LUMBER WITH 20 GAUGE STEEL CONNECTOR PLATES THAT HAVE A MINIMUM TOOTH LENGTH OF 5/16". PLATE DESIGN VALUES SHALL BE BASED UPON A SAFETY FACTOR OF 4. TRUSSES ARE SPACED A MAXIMUM OF 24" O.C. AND HAVE A MINIMUM DEPTH OF 12". FLOORING: 23/32" T & G PLYWOOD WITH EXTERIOR GLUE APPLIED AT RIGHT ANGLES TO TOP OF TRUSSES WITH 8D COMMON NAILS 6" O.C. END JOINTS OF PLYWOOD TO OCCUR ON TOP CHORD AND ARE TO BE STAGGERED 48".	1 HOUR FIRE APPROX. CEILING HEIGHT. 4 PSF FIRE TEST: UL R1900-UIC(NIC 5442, 2-2-91 UL R2711-91, 8-18-97 DESIGN L528 ALT. - MANUF. JOISTS
GA FILE NO. FC 5515 PROPRIETARY	WOOD TRUSSES, GYPSUM WALLBOARD 5/8" PROPRIETARY TYPE X GYPSUM WALLBOARD OR VENEER BASE APPLIED AT RIGHT ANGLES TO TRUSS FRAMING CHANNEL WITH 1" TYPE S DRYWALL SCREWS SPACED 12" O.C. AND LOCATED A MINIMUM OF 1-1/2" FROM EDGES AND END JOINTS. HALLBOARD END JOINTS LOCATED HIDWAY BETWEEN CONTINUOUS CHANNELS & ATTACHED TO ADDITIONAL PIECES OF CHANNEL 24" LONG WITH SCREWS SPACED 12" O.C. AND PLACED 3" FROM EACH SIDE OF FACE LAYER END JOINT. SECOND LAYER OF GYPSUM WALLBOARD OR VENEER BASE APPLIED AT RIGHT ANGLES TO FIRST LAYER WITH PROPRIETARY SCREWS SPACED 12" O.C. AND LOCATED HIDWAY BETWEEN FIRST LAYER SCREWS. FACE LAYER JOINTS LOCATED HIDWAY BETWEEN CONTINUOUS CHANNELS & ATTACHED TO ADDITIONAL PIECES OF CHANNEL 24" LONG WITH SCREWS SPACED 12" O.C. AND PLACED 3" FROM EACH SIDE OF FACE LAYER END JOINT. DOUBLE STRAND OF 18 GAUGE GALVANIZED STEEL WIRE 48" O.C. PERPENDICULAR TO 12" DEEP PARALLEL CHORD WOOD TRUSSES 24" O.C. SUPPORTING 3/4" NOMINAL INTERIOR PLYWOOD W EXTERIOR GLUE, T & G EDGES, PERPENDICULAR TO TRUSSES, JOINTS STAGGERED 4' WITH CONSTRUCTION ADHESIVE AND 6D RING SHANK NAILS 12" O.C. ADHESIVE APPLIED TO EACH TOP CHORD AND GROOVED EDGES OF PLYWOOD. CONSULT GYPSUM BOARD MANUFACTURER FOR TRUSS DETAILS. THE CELOTEX CORP. ——— 5/8" FI-ROK PLUS DONTAR GYPSUM ——— 5/8" GYPROC FIRESHIELD C GEORGIA-PACIFIC ——— 5/8" FIRESTOP, TYPE C PABCO GYPSUM ——— 5/8" FLAME CURB SUPER 'C' TEMPLE-INLAND FOREST PRODUCTS CORP. ——— 5/8" FIRE-RATED "T" UNITED STATES GYPSUM COMPANY ——— 5/8" SHEETROCK BRAND GYPSUM PANELS, FIRECODE C CORE	1 HOUR FIRE APPROX. CEILING HEIGHT. 3 PSF FIRE TEST: UL R1900-UIC(NIC 5442, 2-2-91 UL R2711-91, 8-18-97 DESIGN L528 ALT. - MANUF. JOISTS
GA FILE NO. FC 5511 PROPRIETARY	WOOD TRUSSES, GYPSUM WALLBOARD 5/8" PROPRIETARY TYPE X GYPSUM WALLBOARD OR VENEER BASE APPLIED AT RIGHT ANGLES TO 12" DEEP PARALLEL CHORD WOOD TRUSSES 24" O.C. WITH 1-7/8" TYPE S DRYWALL SCREWS SPACED 8" O.C. TO TRUSSES AND TO 2 X 4 WOOD BLOCKING INSTALLED BETWEEN TRUSSES, CENTERED BEHIND GYPSUM BOARD EDGES AND SEGURED AT EACH END TO THE TRUSSES BY NAIL ATTACHED 18 GAUGE Z-SHAPED STEEL CLIPS. FLOORING OF NOMINAL 5/8" INTERIOR PLYWOOD WITH EXTERIOR, T & G EDGES, PERPENDICULAR TO TRUSSES, JOINTS STAGGERED 4', WITH CONSTRUCTION ADHESIVE AND 8D SMOOTH SHANK NAILS 6" O.C. ADHESIVE APPLIED TO EACH TOP CHORD AND GROOVED EDGES OF PLYWOOD. CONSULT GYPSUM BOARD MANUFACTURERS FOR TRUSS DETAILS PROPRIETARY GYPSUM BOARD NATIONAL GYPSUM COMPANY ——— 5/8" GOLD BOND FIRE-SHIELD & GYPSUM WALLBOARD	1 HOUR FIRE APPROX. CEILING HEIGHT. 2-1/2 PSF FIRE TEST: FH FC05 - 1 HOUR, METHOD A 2-17-68 DESIGN FC-442 ALT. - MANUF. JOISTS
GA FILE NO. GM 1100 PROPRIETARY	GYPSUM WALLBOARD BASE LAYER 1/2" GYPSUM WALLBOARD OR VENEER BASE TIED TO PRO X #4 COLUMN WITH 18 GAUGE WIRE 12" O.C. FACE LAYER 1/2" GYPSUM WALLBOARD OR VENEER BASE APPLIED WITH LAMINATING COMPOUND OVER ENTIRE CONTACT SURFACE.	ALT. STEEL LALLY COL. 1 HOUR FIRE FIRE TEST: NBS 3013 1-3-52
GA FILE NO. BM 1137 PROPRIETARY	STEEL FRAME, GYPSUM WALLBOARD 2 LAYERS 1/2" PROPRIETARY TYPE X GYPSUM WALLBOARD ATTACHED TO BEAM CAGE WITH TYPE G-12 DRYWALL SCREWS, 1" LONG FOR BASE LAYER AND 1-5/8" LONG FOR FACE LAYER, 12" O.C. FACE LAYER JOINTS OFFSET FROM BASE LAYER JOINTS. BEAM CAGE FABRICATED FROM NO. 24 GAGE 7/8" X 1-5/8" STEEL ANGLES SCREW ATTACHED TO STEEL JOISTS STAGGERED AND NO. 25 GAGE 2-1/2" STEEL RUNNER TRACK SUPPORTING 1-5/8" STEEL STUDS 24" O.C. BELOW BEAM LOWER FLANGE. (ONE HOUR UNRESTRAINED BEAM.) PROPRIETARY GYPSUM BOARD THE CELOTEX CORPORATION ——— 1/2" FI-ROKFLUS DONTAR GYPSUM ——— 1/2" GYPROC FIRESHIELD EAGLE-GYPSUM PRODUCTS ——— 1/2" FLAME STOP TYPE 'C' UNITED STATES GYPSUM COMPANY ——— 1/2" SHEETROCK BRAND GYPSUM PANELS, FIRECODE C CORE TEMPLE-INLAND FOREST PRODUCTS CORP. ——— 1/2" FP-5	I HOUR FIRE FIRE TEST: ULR5114-183, 7-16-75 BASED ON UL R3960-7, 8, 11-12-87 DESIGN L524 ALT. HD. GIRDER

FIRE SEPARATION WALL, WOOD FRAME

WP 4135 2- HOUR	GYPSUM WALLBOARD, WALL STUDS BASE LAYER 5/8" TYPE X GYPSUM WALLBOARD OR VENEER BASE APPLIED AT RIGHT ANGLES TO EACH SIDE OF 2"X4" GOOD STUDS 24" O.C. WITH 6d COATED NAILS 1 7/8" LONG, 0.0915" SHANK, 1/4" HEADS, 8" O.C. FACE LAYER 5/8" TYPE X GYPSUM WALLBOARD OR VENEER BASE APPL