

**PRE-ENGINEERED LIGHT GAUGE STRUCTURAL FRAMING:**

**GENERAL:**

- LIGHT GAUGE FRAMING INCLUDING EXTERIOR WALL STUDS, INTERIOR WALLS AND SOFFIT STUDS FLOOR JOISTS, AND ROOF JOISTS SHALL BE DESIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE PROJECT STATE.
- PRIOR TO FABRICATION, THE CONTRACTOR SHALL SUBMIT SEALED SHOP DRAWINGS INDICATING DESIGN DATA AND SHALL INCLUDE COMPLETE PLANS AND DETAILS.
- INFORMATION INCLUDED IN THESE PLANS ARE THE MINIMUM REQUIREMENTS. EXTERIOR WALL STUDS SHALL BE A MINIMUM OF 600 S 162-54 AT 16" O.C.
- METAL STUD STRENGTH CRITERIA:

A GAUGES 20 THROUGH 18 - 33 KSI MIN. YIELD STRESS  
 B GAUGES 16 THROUGH 12 - 50 KSI MIN. YIELD STRESS  
 C TRACK RUNNER - 33 KSI MIN. YIELD STRESS

METAL STUD MEMBER DESIGNATION: 600 S 162-33	MILS	GAUGE
WEB DEPTH: 600 = 6"	33	20
MEMBER TYPE: S = STUD	43	18
FLANGE WIDTH: 162 = 1.625" (1 5/8")	54	16
MINIMUM THICKNESS IN MILS	68	14
	97	12

- FASTENERS:
  - SCREW CONNECTIONS
    - FASTENING STUD TO STUD  
USE #10-16 TEK®/3 x 5/8" LONG BY ITW BUILDEX UNLESS OTHERWISE NOTED.  
MIN. EDGE DISTANCE = 3/4"  
MIN. SPACING BETWEEN FASTENERS = 3/4"
    - FASTENING STUD TO MASONRY:  
USE 1/4" DIA. TAPCON SCREWS BY ITW BUILDEX.  
MIN. EMBEDMENT = 1" MIN. EDGE DISTANCE = 2"  
MIN. SPACING BETWEEN FASTENERS = 3"
  - POWDER ACTUATED FASTENERS (P.A.F.):
    - FASTENING TO CONCRETE or MASONRY:  
USE 0.145" DIA. DOME HEAD NAIL BY HILTI, UNLESS NOTED OTHERWISE.  
MIN. EMBEDMENT = 1 1/4" MIN. EDGE DISTANCE = 2"  
MIN. SPACING BETWEEN FASTENERS = 3"
    - FASTENING TO STEEL:  
USE 0.145" DIA. DOME HEAD KNURLED SHANK FASTENER BY HILTI, UNLESS NOTED OTHERWISE.  
MIN. EMBEDMENT = FULL PENETRATION MIN. EDGE DISTANCE = 1/2"  
MIN. SPACING BETWEEN FASTENERS = 1"

- FASTENING:
  - MINIMUM FASTENING REQUIREMENTS, UNLESS NOTED OTHERWISE.
    - TRACK TO CONCRETE:  
(2) FASTENERS AT 16" O.C. TYP. w/ADD'L FASTENER 3" FROM END OF TRACK AND (2) FASTENERS MINIMUM AT JAMBS.
    - TRACK TO STRUCTURAL STEEL:  
12" O.C. TYP. w/ADD'L FASTENER 3" FROM END OF TRACK AND (2) FASTENERS MINIMUM AT JAMBS.
    - STUD TO TRACK:  
(1) SCREW MINIMUM AT EACH FLANGE
    - STUD TO STUD:  
(3) SCREWS MINIMUM
    - STUD TO STEEL OR CONCRETE:  
USE POWDER ACTUATED FASTENERS REFERENCED ABOVE.  
SEE DETAILS FOR CONNECTIONS, MINIMUM 2 FASTENERS.

- WALL OPENING FRAMING: ALL STUDS CUT TO CREATE WALL OPENING MUST BE REPLACED WITH EQUAL FULL HEIGHT KING STUDS ON EACH SIDE OF THE OPENING.
- CURTAIN WALL AND NON LOAD BEARING PARTITIONS:  
MECHANICAL BRACING OF STUDS IS NOT NECESSARY WHERE WALL SHEATHING IS ATTACHED ON BOTH SIDES OF THE STUDS.  
WHEN ONLY ONE FACE OF THE STUDS RECEIVE SHEATHING, PROVIDE BRACING BY ONE OF THE FOLLOWING METHODS:
  - COLD ROLLED CHANNEL, RUN HORIZONTALLY THROUGH STUD PUNCH CUTS AND ATTACHED AT EACH STUD.
  - 2" WIDE, 18 GAUGE, STEEL STRAPS RUN HORIZONTALLY, ON BOTH SIDES OF THE STUDS, AND ATTACHED AT EACH STUD.

VERTICAL SPACING OF THE BRACING IS LIMITED TO A MAXIMUM OF 4'-0" THROUGHOUT THE HEIGHT OF THE WALL.

- PROVIDE ALL ACCESSORIES AS REQUIRED BY THE METAL STUD MANUFACTURER.
- JOISTS SHALL BE FABRICATED TO PROVIDE 12" OF UNPUNCHED WEB AT BEARING ENDS.
- PROVIDE JOIST WEB STIFFENERS PER METAL STUD MANUFACTURERS' RECOMMENDATIONS AT BEARING POINTS.
- PROVIDE END BLOCKING WHERE JOISTS ARE NOT RESTRAINED AGAINST ROTATION.
- NO LIGHT GAUGE MEMBER, THAT HAS BEEN TRIMMED OR CUT, SHALL BE INSTALLED SO THAT AN EDGE OF A WEB PUNCH OUT OCCURS WITHIN 10" MINIMUM OF THE TRIMMED OR CUT MEMBER END.
- ALL MEMBER CUTTING MUST BE PERFORMED USING A SAW OR SHEAR. NO TORCH CUTTING IS ALLOWED AT ANY TIME. ALSO CUTTING OF ADDITIONAL HOLES, OTHER THAN THOSE PROVIDED BY THE MANUFACTURER, IN THE MEMBER WEB IS NOT PERMITTED AT ANY TIME.
- SPLICING OF AXIALLY LOADED MEMBERS IS NOT ALLOWED AT ANY TIME.
- BUILT UP LIGHT GAUGE HEADERS, CONSTRUCTED FOR EXTERIOR WALL CONDITIONS, SHALL HAVE INSULATION PLACED WITHIN THEM PRIOR TO THEIR INSTALLATION IN WALL SYSTEM.

**PERFORMANCE REQUIREMENTS:**

- STRUCTURAL PERFORMANCE: PROVIDE COLD FORMED METAL FRAMING CAPABLE OF WITHSTANDING DESIGN LOADS WITHIN LIMITS AND UNDER CONDITIONS INDICATED.
  - DESIGN LOADS: AS INDICATED IN STRUCTURAL DESIGN CRITERIA.
  - DEFLECTION LIMITS: DESIGN FRAMING SYSTEMS TO WITHSTAND DESIGN LOADS WITHOUT DEFLECTIONS GREATER THAN THE FOLLOWING:
    - EXTERIOR LOAD BEARING WALL FRAMING: HORIZONTAL DEFLECTION OF L/360 OF THE WALL HEIGHT.
    - INTERIOR LOAD BEARING WALL FRAMING: HORIZONTAL DEFLECTION OF L/240 OF THE WALL HEIGHT.
    - WALL FRAMING SUPPORTING BRICK VENEER: DEFLECTION OF L/600 OF THE SPAN LENGTH.
  - DESIGN FRAMING SYSTEMS TO PROVIDE FOR MOVEMENT OF FRAMING MEMBERS WITHOUT DAMAGE OR OVERSTRESSING, SHEATHING FAILURE, CONNECTION FAILURE, UNDUE STRAIN ON FASTENERS AND ANCHORS, OR OTHER DETRIMENTAL EFFECTS WHEN SUBJECT TO A MAXIMUM AMBIENT TEMPERATURE CHANGE OF 120 DEG. F.
  - DESIGN FRAMING SYSTEM TO MAINTAIN CLEARANCES AT OPENINGS, TO ALLOW FOR CONSTRUCTION TOLERANCES, AND TO ACCOMMODATE LIVE LOAD DEFLECTION OF PRIMARY BUILDING STRUCTURE.
  - METAL STUD MANUFACTURER SHALL BE A MEMBER OF THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA).
  - ALL METAL STUDS AND ACCESSORIES SHALL HAVE A G60 GALVANIZED COATING, UNLESS NOTED OTHERWISE.

**SUBMITTALS:**

- PRODUCT DATA: FOR EACH TYPE OF COLD FORMED METAL FRAMING PRODUCT AND ACCESSORY INDICATED.
- SHOP DRAWINGS: SHOW LAYOUT, SPACINGS, SIZES, THICKNESSES, AND TYPES OF COLD FORMED METAL FRAMING, FABRICATION, AND FASTENING AND ANCHORAGE DETAILS, INCLUDING MECHANICAL FASTENERS. SHOW REINFORCING CHANNELS, OPENING FRAMING, SUPPLEMENTAL FRAMING, STRAPPING, BRACING, BRIDGING, SPLICES, ACCESSORIES, CONNECTION DETAILS, AND ATTACHMENT TO ADJOINING WORK.
  - FOR COLD FORMED METAL FRAMING INDICATED TO COMPLY WITH DESIGN LOADS, INCLUDE STRUCTURAL ANALYSIS DATA SIGNED AND SEALED BY THE QUALIFIED PROFESSIONAL ENGINEER (LICENSED IN THE PROJECT STATE) RESPONSIBLE FOR THEIR PREPARATION.

**QUALITY ASSURANCE:**

- INSTALLER QUALIFICATIONS: AN EXPERIENCED INSTALLER WHO HAS COMPLETED COLD FORMED METAL FRAMING SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THAT INDICATED FOR THIS PROJECT AND WHOSE WORK HAS RESULTED IN CONSTRUCTION WITH A RECORD OF SUCCESSFUL IN SERVICE PERFORMANCE.
- ENGINEERING RESPONSIBILITY: ENGAGE A QUALIFIED PROFESSIONAL ENGINEER (LICENSED IN THE PROJECT STATE) TO PREPARE DESIGN CALCULATIONS, SHOP DRAWINGS, AND OTHER STRUCTURAL DATA.  
REFER TO LIGHT GAUGE FRAMING DRAWINGS FOR LIGHT GAGE METAL NOTES, PLANS AND DETAILS REQUIRED TO COMPLETE SYSTEM.
- AISI SPECIFICATIONS: COMPLY WITH AISI'S "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" OR "LOAD AND RESISTANCE FACTOR DESIGN SPECIFICATION FOR COLD FORMED STEEL STRUCTURAL MEMBERS".

ABBREVIATIONS			
A.B	ANCHOR BOLT	MAS	MASONRY
AFF	ABOVE FINISHED FLOOR	MAX	MAXIMUM
ARCH	ARCHITECT	MFR	MANUFACTURER
		MIN	MINIMUM
B/	BOTTOM OF	MISC	MISCELLANEOUS
BM	BEAM	M.O	MASONRY OPENING
BOTT	BOTTOM	MTL	METAL
BLKG	BLOCKING		
BLDG	BUILDING	N.A	NOT APPLICABLE
		N/A	NOT APPLICABLE
CJ	CONTROL/CONSTRUCTION	N.D.T.	NON-DESTRUCTIVE TESTING
CMU	JOINT	N.I.C.	NOT IN CONTRACT
CLR	CLEAR	N.T.S.	NOT TO SCALE
COL	CONCRETE MASONRY UNIT		
CONC	COLUMN	O.C	ON CENTER
CONT	CONCRETE	O.D.	OUTSIDE DIAMETER
CONST	CONTINUOUS	O.H.	OPPOSITE HAND
CONTR	CONSTRUCTION	OPNG	OPENING
COORD	CONTRACTOR	OPP.	OPPOSITE
CTR	COORDINATE		
	CENTER	P.A.F.	POWDER ACTUATED
DET.		P.JF	FASTENER
DIA	DETAIL	PL	PREMOLDED JOINT FILLER
DN	DIAMETER	PLY'WD	PLYWOOD
DN	DOWN	PREFAB	PREFABRICATED
DIM	DIMENSION	P.T	PRESSURE TREATED
DWG	DRAWING	PTD	PAINTED
		RAD	RADIUS
EA	EACH	REINF	REINFORCING
E.J	EXPANSION JOINT	REQ'D	REQUIRED
EL	ELEVATION		
ELEV	ELEVATION	SECT.	SECTION
E.O.R.	ENGINEER OF RECORD	SHT.	SHEET
E.W	EACH WAY	SIM.	SIMILAR
EXIST.	EXISTING	SPCS	SPACES
E.O.S.	EDGE OF SLAB	SQ	SQUARE
		STD.	STANDARD
F.F	FINISH FLOOR	STRUC	STEEL
FIN. FLR.	FINISH FLOOR	S.W.	STRUCTURAL
FT.	FOOT		SHORT WAY
F.S	FOOTING STEP		
FTG	FOOTING	T/	TOP OF
F.V.	FIELD VERIFY	THK.	THICK
		T.O.S	TOP OF STEEL
GA	GAUGE	TYP	TYPICAL
GALV.	GALVANIZED		
G.C	GENERAL CONTRACTOR	U.N.O.	UNLESS NOTED OTHERWISE
GDR	GIRDER	VERT.	VERTICAL
HT.	HEIGHT	WD	WOOD
HORIZ	HORIZONTAL	WF	WIDE FLANGE
		WWF	WELDED WIRE FABRIC
JBE	JOIST BEARING ELEVATION	WWM	WELDED WIRE MESH
JST	JOIST	W/	WITH
JT	JOINT	W/O	WITHOUT
		WP	WORK POINT
KB	KNEE BRACE		
LG	LONG		
LLH	LONG LEG HORIZONTAL		
LLV	LONG LEG VERTICAL		
LW	LONG WAY		

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**DESIGN PROFESSIONALS**



**ARCHITECTURE ENGINEERING**

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**ISSUE/REVISION RECORD**

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**RaceTrac**

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**PROJECT NAME**

**EAST MAIN STREET**

**CARTERSVILLE GEORGIA**

1325 E. MAIN ST. CARTERSVILLE, GA 30121

**RACETRAC STORE NUMBER**

**1310**

**PROTOTYPE SERIES 5.5K 2.0**

**2018 RH MO**

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**PROJECT NUMBER**

18.714.00

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**GENERAL STRUCTURAL NOTES**

**SHEET NUMBER**

**S001**

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