

**1 POST-INSTALLED ANCHORS**

- A. ADHESIVE ANCHORS**
- APPROVED ADHESIVE FOR CONCRETE:
    - HILTI HIT-RE 500V3 WITH SAFESSET TECHNOLOGY (ICC-ES ESR-3814)
    - HILTI HIT-HY 200 WITH SAFESSET TECHNOLOGY (ICC-ES ESR-3187)
    - DEWALT PURE 110+ (ICC-ES ESR-3298)
    - SIMPSON SET-XP (ICC-ES ESR-2508), (NOT APPROVED FOR >20DIA. EMBEDMENT)
  - APPROVED ADHESIVE FOR GROUDED MASONRY:
    - HILTI HIT-HY 270 (ICC-ES ESR-4143)
    - HILTI HIT-HY-200 (ICC-ES ESR-3963)
    - SIMPSON SET-XP (IAPMO UES ER-265)
    - DEWALT AC100-GOLD (ICC-ES ESR-3200)
  - APPROVED ADHESIVE FOR UNGROUTED MASONRY:
    - HILTI HIT-HY 270 (ICC-ES ESR-4143)
    - DEWALT AC100-GOLD (ICC-ES ESR-3200)
  - APPROVED ADHESIVE FOR UNREINFORCED MASONRY OR BRICK:
    - HILTI HIT-HY 270 (ICC-ES ESR-4144)
    - SIMPSON SET (ICC-ES ESR-1772)
    - DEWALT AC100-GOLD (ICC-ES ESR-4105)
  - PLASTIC MESH OR STAINLESS-STEEL SCREEN TUBES SHALL BE USED FOR HOLLOW MASONRY IF INDICATED BY E.O.R. ON STRUCTURAL PLANS.
  - FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS AND CERTIFICATION TESTING REPORTS FOR ADHESIVE INSTALLATION.
  - ALTERNATIVE EPOXIES MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN CRACKED CONCRETE IS SUBMITTED TO THE E.O.R. AND APPROVED PRIOR TO USE.
  - UTILIZE HOLE CLEANING AS RECOMMENDED FOR THE PRODUCT BY THE MANUFACTURER, REFER TO THE MANUFACTURED PUBLISHED INSTALLATION INSTRUCTIONS (MPII) FOR INSTALLATION INSTRUCTIONS.
  - EPOXY SHALL BE WITHIN THE MANUFACTURER'S RECOMMENDED LIFE TIME AND PRIOR TO EXPIRATION DATE. DO NOT USE EPOXY THAT HAS NOT BEEN STORED PER MANUFACTURER'S RECOMMENDATIONS AND MAY HAVE EXPERIENCED FREEZE THAW CYCLES OR EXTREME HEAT.
  - DO NOT INSTALL ADHESIVE ANCHORS IN CONCRETE IF CONCRETE IS LESS THAN 21 DAYS OLD, CONTRACTOR MUST OBTAIN WRITTEN APPROVAL FROM THE E.O.R. TO INSTALL IN THE 7-21 DAY TIME PERIOD.
  - DO NOT INSTALL ADHESIVE ANCHORS IF SUBSTRATE TEMPERATURE IS BELOW 40 DEGREE F UNLESS EPOXY IS APPROVED FOR LOWER TEMPERATURE, REFER TO MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS (MPII)
  - DO NOT INSTALL ADHESIVE ANCHOR IN WET OR DAMP HOLE UNLESS PRODUCT IS APPROVED FOR SUCH CONDITIONS WITHOUT STRENGTH REDUCTION, CONTACT ENGINEER IF HOLES BECOME WET OR DAMP.
  - ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR VERTICAL OVERHEAD ORIENTATION TO SUPPORT SUSTAINED TENSION LOADS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI/CRSI (ACI 318) PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO E.O.R. FOR APPROVAL PRIOR TO INSTALLATION.
    - SHOULD AN ACI CERTIFIED INSTALLER NOT BE AVAILABLE AT A MINIMUM THE INSTALLER SHALL BE TRAINED BY THE MANUFACTURER'S EMPLOYED REPRESENTATIVE.
    - INSTALLATION OF ANCHORS SHALL HAVE CONTINUOUS OR PERIODIC INSPECTION IN ACCORDANCE WITH CURRENT IBC AND WHERE DESIGNATED IN THE SPECIAL INSPECTIONS PROGRAM.
    - HOLES WILL BE EPOXY FILLED UTILIZING A "PISTON PLUG" OR EQUIVALENT DEVICE TO ELIMINATE THE POSSIBILITY OF AIR GAPS.
  - BARS AND RODS USED MUST BE DEFORMED OR THREADED FOR THE FULL EMBEDMENT DEPTH EPOXY IS APPLIED.
- B. MECHANICAL ANCHORS**
- APPROVED MECHANICAL ANCHORS FOR CONCRETE:
    - HILTI KWIK BOLT T2Z (ICC-ES ESR-4266)
    - SIMPSON STRONG-BOLT 2 (ICC-ES ESR-3037)
    - DEWALT POWER-STUD-S02 (ICC-ES ESR-2502)
  - APPROVED MECHANICAL ANCHORS FOR GROUDED MASONRY:
    - HILTI KWIK BOLT T2Z (ICC-ES ESR-4561)
    - SIMPSON WEDGE-ALL (ICC-ES ESR-1396)
    - SIMPSON STRONG-BOLT 2 (IAPMO-UES ER-240)
    - DEWALT POWER-STUD-SD1 (ICC-ES ESR-2966)
  - FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS AND CERTIFICATION TESTING REPORTS FOR MECHANICAL ANCHOR INSTALLATION.
  - ALTERNATIVE MECHANICAL ANCHORS MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN CRACKED CONCRETE IS SUBMITTED TO THE STRUCTURAL ENGINEER AND APPROVED PRIOR TO USE.
  - DO NOT INSTALL MECHANICAL ANCHORS IN CONCRETE LESS THAN 7 DAYS OLD, CONTRACTOR MUST OBTAIN WRITTEN APPROVAL FROM THE ENGINEER TO INSTALL IN THE 7-21 DAY TIME PERIOD.
- C. SCREW ANCHORS**
- APPROVED SCREW ANCHORS FOR CONCRETE:
    - HILTI KWIK HUS-EZ (ICC-ES ESR-3027)
    - SIMPSON TITEN HD (ICC-ES ESR-2713)
    - DEWALT SCREW BOLT+ (ICC-ES ESR-3889)
  - APPROVED SCREW ANCHORS FOR GROUDED MASONRY:
    - HILTI KWIK HUS-EZ (ICC-ES ESR-3056)
    - SIMPSON TITEN HD (ICC-ES ESR-1056)
    - DEWALT WEDGE-BOLT+ (ICC-ES ESR-2526)
  - FOLLOW ALL OF THE MANUFACTURER'S RECOMMENDATIONS AND CERTIFICATION TESTING REPORTS FOR SCREW ANCHOR INSTALLATION.
  - ALTERNATIVE SCREW ANCHORS USED IN CONCRETE APPLICATION MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN CRACKED CONCRETE IS SUBMITTED TO THE E.O.R. PRIOR TO USE.
  - ALTERNATIVE SCREW ANCHORS USED IN GROUDED MASONRY APPLICATION MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN GROUDED MASONRY IS SUBMITTED TO THE E.O.R. AND APPROVED PRIOR TO USE.
- D. POWDER ACTUATED FASTENERS**
- APPROVED POWDER ACTUATED FASTENERS DRIVEN INTO STEEL:
    - HILTI X-U P8 TH UNIVERSAL KNURLED SHANK FASTENER (ICC-ES ESR-2269)
    - SIMPSON PDPA DRIVE PIN (ICC-ES ESR-2138)
    - DEWALT 8MM HEAD SPIRAL CSI DRIVE PIN (ICC-ES ESR-2024)
  - APPROVED POWDER ACTUATED FASTENERS DRIVEN INTO CONCRETE:
    - HILTI X-U UNIVERSAL KNURLED SHANK FASTENER (ICC-ES ESR-2269)
    - SIMPSON PDPA (ICC-ES ESR-2138)
    - DEWALT 8MM HEAD SPIRAL CSI DRIVE PIN (ICC-ES ESR-2024)
  - APPROVED POWDER ACTUATED FASTENERS DRIVEN INTO MASONRY:
    - HILTI X-U UNIVERSAL KNURLED SHANK FASTENER (ICC-ES ESR-2269)
    - SIMPSON PDPA (ICC-ES ESR-2138)
  - FOLLOW THE MANUFACTURER'S RECOMMENDATIONS AND CERTIFICATION TESTING REPORTS FOR POWDER ACTUATED FASTENER INSTALLATION.
  - ALTERNATIVE POWDER ACTUATED FASTENERS MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN STEEL IS SUBMITTED TO THE E.O.R. AND APPROVED PRIOR TO USE.
  - ALTERNATIVE POWDER ACTUATED FASTENERS MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN CRACKED CONCRETE IS SUBMITTED TO THE E.O.R. AND APPROVED PRIOR TO USE.
  - ALTERNATIVE POWDER ACTUATED FASTENERS MAY BE USED IF AN (ICC-ES ESR) OR (IAPMO-UES ER) APPROVAL FOR USE IN MASONRY IS SUBMITTED TO THE E.O.R. AND APPROVED PRIOR TO USE.
- E. ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY MANUFACTURER OR SUCH OTHER METHOD AS APPROVED BY THE E.O.R. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE E.O.R. PRIOR TO USE. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.**
- F. REFER TO STRUCTURAL DRAWINGS FOR EMBEDMENT DEPTH, ROD TYPE AND SIZE, AND OTHER SPECIFIC INFORMATION.**
- G. DO NOT APPLY LOAD TO ANCHOR UNTIL CONCRETE OR GROUT HAS REACHED FULL DESIGN STRENGTH.**
- H. ALL HOLES SHALL BE DRILLED WITH ANSI STANDARD BIT DESIGNED FOR CONCRETE OR HOLLOW DRILL BIT, DIAMOND CORED HOLES ARE NOT ALLOWED UNLESS INDICATED IN DESIGN DETAIL OR PRE-APPROVED BY THE E.O.R.**
- I. ABANDONED HOLES – NO ANCHOR SHALL BE INSTALLED WITHIN 1.5 ROD DIAMETERS OF AN ABANDONED HOLE THAT HAS BEEN GROUT FILLED, (3.0 ROD DIAMETERS FOR UN-GROUTED HOLES).**
- J. OVER DRILL BAR DIAMETER BY "X" U.N.O. BY THE MANUFACTURER AND TO THE REQUIRED DEPTH AS INDICATED ON THE STRUCTURAL DRAWINGS.**
- K. REMOVE ALL DIRT, DUST, WATER AND ICE FROM DRILLED HOLES BEFORE INSTALLATION.**
- L. REMOVE ANY DIRT, DUST, RUST OR OIL ON BAR OR ROD BEFORE INSTALLATION U.N.O.**
- M. ALL MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED EXACTLY.**

**2 MASONRY**

- 8" WALLS, SPECIFIED COMPRESSIVE STRENGTH,  $f_m = 2,000$  PSI
  - MASONRY UNITS = ASTM C-90, GRADE N,  $f_m = 2,000$  PSI MIN. NORMAL WEIGHT BLOCK.
  - MORTAR = ASTM C-270, TYPE S, MIN. COMPRESSIVE STRENGTH OF 1,500 PSI.
  - GROUT STRENGTH = 2,000 PSI MIN.
- REBAR USED = ASTM A615, GRADE 60 WHERE WELDING REQUIRED USE ASTM A706, GRADE 60.
- ALL REINFORCING SHALL BE CENTERED IN WALL, U.N.O.
- ALL CMU WALLS SHALL BE RUNNING BOND, U.N.O.
- REINFORCING BAR LAP = 60 BAR DIAMETERS.
- TYPICAL REINFORCING SHALL BE #5 VERT. BARS AT 16" O.C. w/ #5 HORIZ. BARS IN CMU BOND BEAM AT 4" O.C., U.N.O., RE: PLAN.
- SPECIAL INSPECTIONS ARE REQUIRED ON A CONTINUOUS BASIS.
- THE TYPICAL LINTEL OVER OPENINGS IN THE WALL SHALL HAVE (2) SETS OF (2) #5 BARS EQUALLY SPACED FOR 8" WALLS, U.N.O.
- LAP ALL BOND BEAMS WHERE STEPPED 4'-0".
- THERE SHALL BE A MIN. OF (1) #4 BAR ON ALL SIDES OF, AND ADJACENT TO, EVERY OPENING WHICH IS LESS THAN 48" IN BOTH DIRECTIONS. WHERE THE OPENINGS ARE 48" OR GREATER IN EITHER DIRECTION, A MIN. OF (2) #5 BAR SHALL BE USED, AND SUCH BARS SHALL EXTEND NOT LESS THAN 24" BEYOND THE CORNER OF THE OPENINGS, U.N.O. AS SHOWN.
- AT CORNERS AND WALL INTERSECTIONS, GROUT THE ADJACENT CORNERS WITH A VERTICAL BAR AND LAP THE BOND BEAM STEEL OR PROVIDE CORNER BARS OF EQUAL SIZE, RE:
- ALL DOWELS FROM THE FOUNDATION WALL SHALL MATCH SIZE AND LOCATION OF VERTICAL REINFORCING IN MASONRY, U.N.O. EXTEND DOWEL A MIN. OF 30 BAR DIAMETERS INTO THE FOUNDATION.
- VERTICAL CONTROL JOINT SHALL BE PROVIDED IN THE WALLS AS SHOWN ON THE ELEVATIONS AND RE:
- THE MASONRY CONTRACTOR SHALL COORDINATE THE PLACING OF ANY OPENINGS WITH THE GENERAL CONTRACTOR, RE: ROOF PLAN.
- COORD. WITH ARCH. SHEETS FOR TYPE OF BLOCK USED.
- ALL CMU WALLS ABOVE GRADE ARE TO BE PARTIALLY GROUTED, U.N.O. ALL CMU CELLS RECEIVING REINFORCEMENT, ANCHOR BOLTS OR H.C.A. SHALL BE SOLID GROUTED.
- ALL CMU WALLS BELOW GRADE / FINISHED FLOOR ARE TO BE SOLID GROUTED, HIGH STRENGTH BLOCK & TYPE 'N' MORTAR.
- NET SETTING OF REINFORCING BARS IN FOOTINGS AND WALLS IS NOT ALLOWED.
- ALL CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLIDLY WITH GROUT. GROUT SHALL BE A WORKABLE MIXTURE SUITABLE FOR PUMPING WITHOUT SEGREGATION AND SHALL BE THOROUGHLY MIXED. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACING AND RECONSOLIDATED AFTER EXCESS MOISTURE HAS BEEN ABSORBED, BUT BEFORE WORKABILITY IS LOST. THE GROUTING OF A WALL SHALL BE COMPLETED IN ONE DAY WITH NO INTERRUPTIONS GREATER THAN ONE HOUR.

**3 GENERAL STRUCTURAL NOTES**

- ALL ELEVATIONS AND HEIGHTS GIVEN ARE FROM THE FINISHED FLOOR DATUM ELEVATION, WHICH IS SET AT 100'-0".
- DO NOT SCALE DRAWINGS, CONTACT A.O.R. OR E.O.R. FOR DIMENSION CLARIFICATIONS PRIOR TO CONSTRUCTION.
- VERIFY ALL OPENINGS, BUILDING DIMENSIONS, COLUMN GRID LOCATIONS AND DIMENSIONS WITH OWNER PRIOR TO POURING OF ANY CONCRETE FOUNDATIONS OR CONSTRUCTION.
- THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THESE PLANS UNLESS SUCH CHANGES ARE AUTHORIZED IN WRITING TO THE STRUCTURAL ENGINEER OF RECORD.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SAFE AND ADEQUATE SHORING AND/OR TEMPORARY STRUCTURAL STABILITY FOR ALL PARTS OF THE STRUCTURE DURING CONSTRUCTION. THE STRUCTURE SHOWN ON THE DRAWINGS HAS BEEN DESIGNED FOR FINAL CONFIGURATION.
- NOTCHING AND/OR CUTTING OF ANY STRUCTURAL MEMBER IN THE FIELD IS PROHIBITED, UNLESS PRIOR CONSENT IS GIVEN BY THE STRUCTURAL ENGINEER OF RECORD.
- IT IS NECESSARY THAT THE STRUCTURAL DRAWINGS BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS TO HAVE A COMPLETE SCOPE OF WORK INVOLVED IN THIS PROJECT.

**4 STRUCTURAL OBSERVATIONS**

- PER IBC SECTION 1709, STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY A REPRESENTATIVE FROM THE ENGINEER OF RECORD'S OFFICE (TAMARACK GROVE ENGINEERING, PLLC) OR AN APPOINTED REPRESENTATIVE TO PERFORM ON-SITE STRUCTURAL OBSERVATION VISITS DURING SIGNIFICANT TIMES OF CONSTRUCTION-RELATED TO OUR DEFERRED SUBMITTAL SCOPE OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL SIGNIFICANT TIMES OF CONSTRUCTION WITH THE ENGINEER OF RECORD'S OFFICE PRIOR TO THE COMPLETION POINT REQUIRING SITE OBSERVATIONS FOR THE CONSTRUCTION AND/OR PLACEMENT (MINIMUM OF 4 CALENDAR DAYS). SIGNIFICANT TIMES OF CONSTRUCTION ARE AS FOLLOWS:
  - CONCRETE FOUNDATION AND REBAR PLACEMENT.
  - PLACEMENT OF PERIMETER LOAD BEARING WALLS, LOAD SUPPORTING BEAMS, FLOOR FRAMING AND/OR HEADERS AND LATERAL RESISTING CONNECTION ELEMENTS.
  - COMPLETION OF ROOF FRAMING AND LATERAL BRACING (SHEAR WALLS), PRIOR TO COVERING WITH ANY ARCHITECTURAL FINISHES.
  - COMPLETION OF ALL STRUCTURAL SYSTEMS AS REQUIRED AND/OR DEFINED BY THE LOCAL JURISDICTION.
- STRUCTURAL OBSERVATIONS DO NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE SPECIAL INSPECTIONS REQUIRED BY THE IBC SECTION 1704 OR OTHER SECTIONS OF THE CODE AS REQUIRED BY THE LOCAL BUILDING JURISDICTION.
- STRUCTURAL OBSERVATIONS REQUIRED IN OBSERVANCE OF SECTION 1704 OR PER LOCAL JURISDICTION.

**5 EXISTING CONDITIONS**

- CONTRACTOR SHALL VERIFY ANY AND ALL APPLICABLE EXISTING CONDITIONS, CONSTRUCTION, DIMENSIONS AND ELEVATIONS AND IMMEDIATELY NOTIFY ARCH. AND EOR OF ANY DISCREPANCIES BEFORE PROCEEDING WITH ANY CONSTRUCTION.

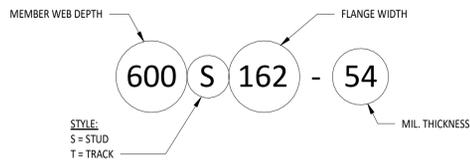
**6 SPECIAL INSPECTIONS AND TESTING**

- AS REQUIRED BY THE LOCAL JURISDICTION.

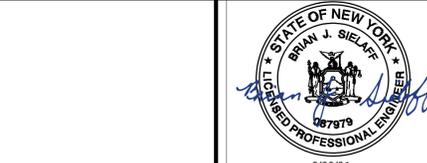
SPECIAL INSPECTIONS PROGRAM			
ESTABLISHED PER 2018 IBC CHAPTER 17			
ITEM	CONTINUOUS	PERIODIC	COMMENTS
GENERAL STRUCTURAL INSPECTIONS AS REQUIRED BY SECTION 1704.4			
SLAB REINFORCEMENT			BY BUILDING OFFICIAL
FINAL INSPECTION			BY BUILDING OFFICIAL
CONCRETE			
REINFORCING SIZE AND PLACEMENT		X	ACI 318: 20, 25.2, 25.3, 26.6.1-26.6.3
INSPECT ANCHORS CAST IN CONCRETE	X		ACI 318: 17.8.2
VERIFY USE OF REQUIRED DESIGN MIX		X	IBC 1904.1, 1904.2, 1908.3, ACI 318: 19, 26.4.3, 26.4.4
PREPARATION OF TEST SPECIMENS	X		ASTM C 172, ASTM C 31, ACI 318: 26.4, 26.12
CONCRETE PLACEMENT	X		IBC 1908.6-1908.8, ACI 318: 26.5
LIGHT WEIGHT CONCRETE AIR-DRY UNIT WEIGHT	X		ACI 318/EOR
MAINTENANCE OF SPECIFIED CURING TEMPERATURES AND TECHNIQUES		X	IBC 1908.9, ACI 318: 26.5.3-26.5.5
INSPECT FORM WORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X	ACI 318: 26.11.1.2(b)
WELDING: STRUCTURAL STEEL			
MATERIAL VERIFICATION OF WELD FILLER MATERIALS			AISC 360, SECTION A3.5
COMPLETE AND PARTIAL PENETRATION	X		
MULTIPASS FILLET WELDS	X		
SINGLE PASS FILLETS > 5/16"	X		IBC 1704.3.1, AWS D1.1
SINGLE PASS FILLETS < 5/16"		X	
FLOOR AND ROOF DECK WELDS		X	AWS D1.3
WELDED STUDS		X	IBC 1704.3
WELDING OF STAIRS AND RAILING SYSTEMS		X	IBC 1704.3
SPECIAL CASES: (IBC 1704.13)			
EPOXY OR ADHESIVE ANCHOR PLACEMENT	X		BY BUILDING OFFICIAL
EXPANSION OR SCREW ANCHOR PLACEMENT	X		WHERE INDICATED ON DRAWINGS

**7 LIGHT GAUGE STEEL FRAMING**

- A. MEMBER REQUIREMENTS:**
- DESIGN, FABRICATION AND ERECTION OF LIGHT GAUGE STEEL FRAMING SHALL CONFORM TO THE SPECIFICATIONS AND STAND OF THE AMERICAN IRON AND STEEL INSTITUTE (AISI), AS CONTAINED IN THE "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION, INCLUDING ALL APPLICABLE AMENDMENTS.
  - FRAMING MEMBER AND ACCESSORIES SHALL CONFORM TO:
    - 16 GAUGE AND HEAVIER =ASTM A1003, GR. 50
    - GALVANIZED =ASTM A 653, GR. 50
    - PAINTED =ASTM A 570, GR. 50
    - 18 GAUGE AND LIGHTER =ASTM A1002, GR. 33
    - GALVANIZED =ASTM A 653, GR. 33
    - PAINTED =ASTM A 570, GR. C
  - FOR MEMBERS 54 MILS (16 GAUGE) THICK OR THICKER, ALL STRUCTURAL MEMBERS SHALL HAVE A MIN. YIELD STRENGTH OF 50 KSI. U.N.O. ALL THINNER SHALL HAVE MIN. YIELD STRENGTH OF 33 KSI.
  - ALL CONT. TRACKS SHALL BE UNPUNCHED AND MATCH STUD GAUGE U.N.O. TYPICAL GAP AT SLOTTED SLIP TRACKS SHALL BE 3/4". U.N.O.
  - ALL MEMBERS SHALL CONFORM TO THE SECTION PROPERTIES TABLE OF STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) (ICPO ER-4943P).
  - WALL STUD BRIDGING AS RECOMMENDED BY MFR SHALL BE INSTALLED AT 4'-0" O.C. TO PREVENT BOTH WEAK AXIS BENDING AND STUD ROTATION. WALLS 8'-0" OR SHORTER SHALL HAVE A SINGLE ROW OF BRIDGING AT MID-HEIGHT. ADDITIONALLY, BRIDGING SHALL BE PROVIDE AT ROOF LINES AND WHERE NOTED ON THE DRAWINGS. SOLID BLOCKING SHALL BE INSTALLED IN LIEU OF BRIDGING WHERE NOTED ON THE DRAWINGS. WALL STUD BRIDGING ONLY REQUIRED WHEN WALL SHEATHING/DRYWALL IS NOT PROVIDED ON EITHER SIDE.
  - ALL MEMBERS SHALL BE ERECTED PLUMB AND BE SECURELY SEATED FOR FULL END BEARING ON TOP AND BOTTOM TRACK. U.N.O.
  - SLICING OF AXIALLY LOADED STUDS OR BRACING IS NOT PERMITTED.
  - FRAMING COMPONENTS SHALL BE CUT SQUARELY OR TO THE EXACT ANGLE TO TIGHT FIT THE ABUTTING MEMBERS. MEMBERS SHALL BE HELD FIRMLY UNTIL PROPERLY FASTENED.
  - PROVIDE BACK-TO-BACK OR NESTED MEMBERS AT ALL JAMBS, CORNERS, INTERSECTIONS AND BEAM BEARING. U.N.O.
  - FOR LEDGER TRACK CONDITIONS, THE SUPPORTED FRAMING IS TO BE WITHIN 1/8" OF TRACK LEDGER WEB.
  - PUNCH OUTS SHALL NOT BE LOCATED WITHIN 10" FROM ANY SUPPORT, BEARING LOCATIONS OR APPLIED LOAD.
  - NOTCHING OR COPING OF STUDS IS NOT ALLOWED, UNLESS SPECIFICALLY NOTED.
  - TYPICAL LIGHT GAUGE STEEL FRAMING MEMBER NOTATION SHOWN BELOW:



- B. FASTENING/WELDING REQUIREMENTS**
- FASTENING OF COMPONENTS SHALL BE WITH #10 SELF-TAPPING SCREWS OR WELDS AND FOLLOW THE LATEST EDITION OF THE AISI GUIDELINE RECOMMENDATIONS. WIRE TYING OF COMPONENTS IS NOT PERMITTED.
  - SCREWS SHALL BE SELF-TAPPING PAN HEAD, HEX HEAD OR WAFER HEAD SHEET METAL SCREWS AND HAVE A MINIMUM THREE (3) THREADS PENETRATION INTO SUPPORTING MEMBER. SCREWS WHICH ARE REMOVED SHALL BE REPLACED BY A SCREW OF A LARGER DIA. WHERE THE REPLACEMENT IS MADE INTO AN EXISTING HOLE. REPLACE ALL SCREWS WITH STRIP OUT MATERIAL. SCREWS SHALL BE SPACED NO CLOSER THAN 5/8" O.C. AND WITH A MIN. FREE EDGE DISTANCE OF 3/4". CLIP ANGLES OR FLAT CLIPS USED FOR ATTACHMENT SHALL BE 18 GA. MIN. U.N.O. ALL SCREWS #8 AND LARGER SHALL HAVE A MIN. HEAD SIZE OF 5/16".
  - ALL WELDING SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAUGE STEEL FRAMING WORK. ALL WELDING SHALL CONFORM WITH THE LATEST AMERICAN WELDING SOCIETY STANDARDS AND CONFORM TO THE FOLLOWING (MIN. ROD DIA.=1/8"):
    - 18 GAUGE AND LIGHTER: E60XX
    - 16 GAUGE AND HEAVIER: E70XX
    - LIGHT GAUGE TO STRUCTURAL STEEL: E70XX (LOW HYDROGEN)
  - ALL WELDS OF GALVANIZED STEEL SHALL BE TOUCHED UP WITH ZINC-RICH PAINT. ALL WELDS OF CARBON SHEET STEEL SHALL BE TOUCH UP WITH RUST INHIBITIVE PAINT.



**HARBOR FREIGHT TOOLS**

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NYACK, NY 10960

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REVISIONS												
#	DATE	TYPE	1	2	3	4	5	6	7	8	9	10
<b>GENERAL STRUCTURAL NOTES</b>												
DATE	9/22/21											
JOB NO.	20420											
<b>S0.1</b>												
SHEET NO.												

**TAMARACK GROVE ENGINEERING**  
812 S. La Cassia Drive  
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(208) 345-8946  
www.tamarackgrove.com  
Firm No. 87979  
Project No: TGE21-17855  
Checked By: DDH  
Drawn By: TW

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