DESIGN CRITERIA 2015 IBC

ROOF LIVE LOAD ____ 20 PSF

ROOF DEAD LOAD ____ 20 PSF

WIND LOAD ____ (3 SECOND GUST) ____ 120 MPH (EXP. C)

GENERAL NOTES:

1. THE FOLLOWING SPECIFICATIONS ARE AN OUTLINE OF MINIMUM MATERIAL REQUIREMENTS AND THEIR APPLICATION. MANUFACTURER SPECIFICATION AND LOCAL CODE REQUIREMENTS, WHEN IN EXCESS OF MINIMUM SPECIFICATION, SHALL CONTROL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND SUBMIT ALL SHOP DRAWINGS AND REPORT ALL DOCUMENT DISCREPANCIES TO THE STRUCTURAL ENGINEER PRIOR TO FABRICATION OR ERECTION.
2. AT CONSTRUCTION ISSUE, THESE DRAWINGS REPRESENT STRUCTURAL COMPONENTS IN THEIR FINAL AND FINISHED STATE. CONSTRUCTION PROCEDURES, METHODS, SAFETY PRECAUTIONS OR MECHANICAL REQUIREMENTS USED TO ERECT THEM ARE THE SOLE RESPONSIBLITY OF THE GENERAL CONTRACTOR OR SUBCONTRACTOR DOING THE WORK.
3. FOR SOILS INFORMATION AND SITE PREPARATIONS REFER TO THE "GEOTECHNICAL SERVICES REPORT" PREPARED TERRACON INC. REPORT DATED JANUARY 28, 2019. REPORT No: 92185656 CONTRACTOR SHALL PREPARE SITE IN STRICT ACCORDANCE WITH THE SOILS REPORT.
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT EXISTING STRUCTURES WHICH AFFECT THE WORK PRIOR TO FABRICATION OF ANY CONSTRUCTION ITEMS, AND REPORT ANY VARIATIONS FROM THE DRAWINGS TO THE STRUCTURAL ENGINEER.
5. EXCAVATION FOR FOUNDATION SHALL BE PROTECTED TO MAINTAIN AN UNDISTURBED BEARING SURFACE.

CONCRETE NOTES AND SPECIFICATIONS:

1. ALL CONCRETE WORK SHALL CONFORM TO THE "A.C.I. BUILDING CODE", ACI 318 AND ACI 301, LATEST EDITION.
2. DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315–90, "ACI DETAILING MANUAL – 1990".
3. UNLESS OTHERWISE NOTED, ALL REINFORCING BARS #4 AND LARGER SHALL CONFORM TO ASTM A–615 GRADE 60 (60,000 PSI YIELD) AND ALL #2 AND #3 BARS SHALL CONFORM TO GRADE 40 (40,000 PSI YIELD). REINFORCING SHALL BE FREE FROM OIL, DIRT AND OTHER MATERIALS THAT WOULD REDUCE THE BOND WITH THE CONCRETE.
4. WELDED WIRE MESH (WWM) SHALL CONFORM TO ASTM A–185.
5. UNLESS OTHERWISE NOTED, CONCRETE PROTECTION FOR REINFORCING SHALL BE AS SPECIFIED IN THE "A.C.I. BUILDING CODE", (ACI 318 LATEST EDITION).
6. CONCRETE STRENGTH SHALL BE 3000 PSI (MIN.) AND PROTECTION FOR REINFORCEMENT OF POURED–IN–PLACE MEMBERS; SEE SECTION 7.7 ACI 318 LATEST EDITION.
7. FLYASH MAY BE USED TO REPLACE A PORTION OF THE PORTLAND CEMENT. THE RATIO OF FLYASH TO THE TOTAL OF THE FLYASH AND CEMENT IN A MIX SHALL NOT EXCEED 20%. FLYASH SHALL CONFORM TO ASTM C618, TYPE C OR F.
8. PROVIDE 1-#5 X 4'-0" CORNER BAR, TOP AND BOTTOM AT EXTERIOR FACE OF GRADE BEAMS AT CORNERS. AND PROVIDE 4-#5 X 4'-0" CORNER BARS, (2 TOP & 2 BOT.) AT T-INTERSECTION
9. AT SLABS CAST ON GRADE, PROVIDE BAR CHAIR AT 4'-0" ON CENTER MAXIMUM EACH WAY FOR SUPPORT OF REINFORCING.
10. NO WATER SHALL BE ADDED TO THE CONCRETE AT THE JOBSITE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE CONCRETE SUPPLIER TO ENSURE A PUMPABLE AND WORKABLE MIX WITHOUT THE ADDITION OF WATER AT THE JOBSITE. THE USE OF PLASTICIZERS, RETARDANTS AND OTHER ADDITIVES SHALL BE AT THE OPTION OF THE CONTRACTOR SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER. FOLLOW THE RECOMMENDATIONS OF THE MANUFACTURER FOR THE PROPER USE OF ADDITIVES. THE USE OF CALCIUM CHLORIDE OR OTHER CHLORIDE BEARING SALTS SHALL NOT BE PERMITTED.
11. CONCRETE SLUMP TESTS SHALL BE MADE BEFORE AND AFTER THE ADDITION OF ADMIXTURES AND MAY BE TAKEN AT THE BACK OF THE TRUCK. CONCRETE FOR THE PREPARATION OF TEST CYLINDERS SHALL BE TAKEN FROM THE HOSE END FOR CONCRETE PLACED BY PUMP.
12. ALL REINFORCING STEEL SHALL BE "CONTINUOUS" AND LAPPED PER THE "REINFORCING SPLICE SCHEDULE" AT SPLICES AND AROUND CORNERS OR INTERSECTIONS WITH A STANDARD 90 DEGREE BEND ON CORNER BARS. LAP TOP BARS AT CENTER OF SPAN; LAP BOTTOM BARS AT SUPPORTS. LAP WELDED WIRE MESH ONE FULL MESH AT SIDE AND END LAPS.

REINFORCING SPLICE SCHEDULE

CLASS A REINFORCING SPLICES						CLASS B REINFORCING SPLICES					
REINF. SIZE	CONCRETE STRENGTH (PSI)					REINF. SIZE	CONCRETE STRENGTH (PSI)				
	3000	4000	5000	6000	7000		3000	4000	5000	6000	7000
#3	17"	15"	13"	12"	12"	#3	22"	19"	17"	16"	14"
#4	22"	19"	17"	16"	15"	#4	29"	25"	23"	21"	19"
#5	28"	24"	22"	20"	18"	#5	36"	31"	28"	26"	24"
#6	33"	29"	26"	24"	22"	#6	43"	37"	34"	31"	28"
#7	48"	42"	38"	34"	32"	#7	63"	54"	49"	45"	41"
#8	55"	48"	43"	39"	36"	#8	72"	62"	56"	51"	47"
#9	62"	54"	48"	44"	41"	#9	81"	70"	63"	57"	53"
#10	70"	61"	54"	50"	46"	#10	91"	79"	71"	64"	60"
#11	78"	67"	60"	55"	51"	#11	101"	87"	78"	71"	66"

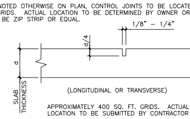
NOTE:

LAP SPLICES OF DEFORMED BARS IN TENSION SHALL BE CLASS B SPLICES EXCEPT THAT CLASS A SPLICES MAY BE USED WHEN:

A. THE AREA OF REINFORCEMENT PROVIDED IS AT LEAST TWICE THAT REQUIRED BY DESIGN OVER THE ENTIRE LENGTH OF THE SPLICE, AND

B. ONE HALF OR LESS OF THE TOTAL REINFORCEMENT IS SPLICED WITHIN THE REQUIRED LAP LENGTH.

13. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ANY OTHER ADDITIONAL SLEEVES, ANCHORS, VENT OPENINGS, ETC., NOT SHOWN ON STRUCTURAL PLANS THAT MIGHT BE REQUIRED.
14. PLACE CONCRETE IN A MANNER SO AS TO PREVENT SEGREGATION OF THE MIX. DELAY FLOATING AND TROWELING OPERATIONS UNTIL CONCRETE HAS LOST SURFACE WATER SHEEN OR ALL FREE WATER. DO NOT SPRINKLE FREE CEMENT ON THE SLAB SURFACE. FINISHING OF SLAB SURFACES SHALL COMPLY WITH THE RECOMMENDATIONS OF AC1 302.1 AND 304.
15. UNLESS NOTED OTHERWISE ON PLAN, CONTROL JOINTS TO BE LOCATED AT APPROXIMATELY 400 SQ. FT. GRIDS. ACTUAL LOCATION TO BE DETERMINED BY OWNER OR CONTRACTOR. CONTROL JOINT TO BE ZIP STRIP OR EQUAL.



TYP. CONTROL JOINT DETAIL

16. PROVIDE 7 DAY CURING OF SLAB IMMEDIATELY AFTER FINISHING USING ONE OF THE FOLLOWING METHODS:
    - A. CONTINUOUSLY WATERED BURLAP
    - B. WATERPROOF MEMBRANES
    - C. SPRAYED–ON LIQUID MEMBRANE
17. PROTECT THE CONCRETE SURFACE BETWEEN FINISHING OPERATIONS ON HOT, DRY DAYS OR ANY OTHER TIME THAT PLASTIC SHRINKAGE CRACKS COULD DEVELOP BY USING WET BURLAP, PLASTIC MEMBRANE OR FOGGING. PROTECT CONCRETE SLAB AT ALL TIMES FROM RAIN, HAIL OR OTHER INJURIOUS EFFECTS.
18. UNLESS SPECIFIED, CONCRETE MUST REACH THE FOLLOWING PERCENTAGES OF ITS 28–DAY COMPRESSIVE STRENGTH (F'c), BEFORE FORMS MAY BE REMOVED.

WALLS, COLUMNS, & BEAM SIDES ____ 40%
JOIST PANS & BEAM BOTTOMS (IF RESHORED) ____ 70%
SHORING FOR FLOOR SYSTEMS (IF NOT RESHORED) ____ 85%

19. RESHORING WHEN REQUIRED, TO EXTEND AT LEAST TWO FLOORS BELOW FLOOR SUPPORTING FALSEWORK (OR GROUND FLOOR). LAYOUT AND PROCEDURE TO BE SUBMITTED TO STRUCTURAL ENGINEER FOR REVIEW.

CONCRETE NOTES AND SPECIFICATIONS:(CONT.)

20. AN INDEPENDENT CERTIFIED TESTING LABORATORY SHALL VERIFY AND PROVIDE REPORTS CERTIFYING THE FOLLOWING:
    - A. CONCRETE PLANT BATCH TICKETS FOR EACH TRUCK VERIFY THAT THE CONCRETE MATCHES THE APPROVED DESIGN MIX.
    - B. CONCRETE SLUMP IS IN ACCORDANCE WITH APPROVED DESIGN MIX.
    - C. CONCRETE PLACEMENT OPERATIONS ARE IN ACCORDANCE WITH ACI SPECIFICATIONS.
    - D. CONTROL JOINTS ARE INSTALLED WITHIN THE ACI TIME ALLOWANCE.
    - E. PROPER CURING METHODS ARE BEING UTILIZED.
21. NO CONCRETE SHALL BE PLACED OUTSIDE OF THESE SPECIFICATIONS WITHOUT THE OWNER'S PRIOR APPROVAL. ANY ITEMS NOT IN COMPLIANCE WITH THE OUTLINED SPECIFICATION SHALL BE REPORTED TO THE OWNER AND STRUCTURAL ENGINEER WITHIN 24 HOURS.

MASONRY NOTES:

1. ALL MASONRY MATERIALS AND CONSTRUCTION SHALL COMPLY WITH THE RECOMMENDATIONS OF BRICK INSTITUTE OF AMERICA (BIA) AND NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA) AND MINIMUM REQUIREMENTS ESTABLISHED BY LOCAL BUILDING CODE.
2. ALL CONCRETE MASONRY UNITS (CMU) SHALL BE ASTM C–90 TYPE N UNLESS OTHERWISE SPECIFIED BY APPLICABLE BUILDING CODE.
3. CONTROL JOINTS SHALL BE SPACED PER PLANS AND SPECIFICATIONS OR AT A MAXIMUM SPACING OF 20'–0" CENTERS, AND WHERE MASONRY CHANGES DIRECTION UNLESS SPECIFICALLY APPROVED OTHERWISE BY ENGINEER.
4. MORTAR: EXCEPT AS OTHERWISE SET FORTH HEREIN ALL MORTARS AND THE MATERIALS THEREIN SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR MORTAR OF MASONRY UNITS, ASTM C270.

A) MORTAR USED TO BOND UNIT MASONRY SHALL BE OF TYPE M, S, OR N, AND SHALL COMPLY WITH THE PROPERTY SPECIFICATIONS SET FORTH BELOW:

MORTAR STRENGTH PROPERTY SPECIFICATIONS

TYPE	MINIMUM AVERAGE STRENGTH (PSI)
M	2500
S	1800
N	750

B) THE TYPE OF MORTAR BASED ON CONSIDERATION OF THE LOCATION OF THE UNIT MASONRY CONSTRUCTION SHALL BE AS FOLLOWS:

USE OF LOCATION	TYPE OF MORTAR
BELOW GRADE FOUNDATION AND WALLS	M
RETAINING WALLS	M
FIRE RESISTIVE WALLS RATED 2 HOURS OR MORE	M OR S
EXTERIOR WALLS AND LOAD BEARING WALLS	M OR S
PARTITIONS	M, S OR N
SOLID MASONRY UNITS	ONE CLASSIFICATION LESS THAN THE ABOVE
MORTAR OR GROUT UNDER CONCENTRATED LOADS	M
FENCES	M OR S

5. ALL REINFORCED MASONRY WALLS WITH OPENINGS UP TO 4'–0" WIDE, SHALL HAVE ONE BAR (MINIMUM) AT EACH SIDE OF OPENINGS. FOR OPENINGS LARGER THAN 4'–0" WIDE PROVIDE 2 BARS AT EACH SIDE OF OPENINGS. FILL ALL REINFORCED CELLS WITH 2500 P.S.I. GROUT. REINFORCING AT EDGES OF OPENINGS TO MATCH TYPICAL MASONRY REINFORCING SIZE (UNLESS NOTED OTHERWISE) AND EXTEND TO TOP OF WALL.
6. NO SPECIAL INSPECTION IS REQUIRED FOR CMU WALLS.
7. PROVIDE LADDER TYPE REINFORCING AT 16" O.C. FOR ALL CMU WALLS UNLESS NOTED OTHERWISE.
8. GROUT SOLID ALL REINFORCED CELLS AND BOND BEAMS WITH 2500 PSI GROUT.
9. ALL REINFORCED MASONRY WALL CORNERS AND INTERSECTIONS SHALL HAVE ONE VERTICAL BAR (MINIMUM). FILL REINFORCED CELL (S) WITH 2500 PSI GROUT. REINFORCING SHALL MATCH TYPICAL MASONRY REINFORCING SIZE (UNLESS NOTED OTHERWISE) AND EXTEND TO TOP OF WALL.
10. PROVIDE ONE VERTICAL BAR (MIN.) FIRST CELL EACH SIDE OF CONTROL JOINTS. FILL CELL WITH 2500 PSI GROUT.

LAP SPLICE LENGTHS FOR MASONRY REINFORCEMENT:

REINFORCING BAR SIZE	MIN LAP SPLICE LENGTH
#5	45"
#6	54"
#7	63"
#8	72"
#9	81"
#10	91"
#11	102"

WHEN ADJACENT SPLICES IN GROUTED MASONRY ARE SEPARATED BY 3 INCHES OR LESS, THE REQUIRED LAP LENGTH MUST BE INCREASED 30%.

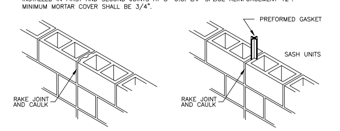
WHEN EPOXY–COATED BARS ARE USED, THE REQUIRED LAP SPLICE LENGTH SHALL BE INCREASED 50%.

STEEL LINTEL SCHEDULE FOR MASONRY OPENINGS

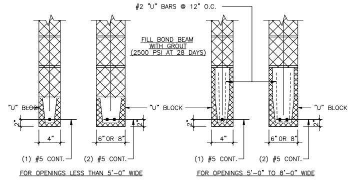
MAXIMUM SPAN	SIZE
3'–0"	∠3 1/2 X 3 1/2 X 1/4
4'–0"	∠5 X 3 1/2 X 1/4 (LLV)
5'–0"	∠5 X 3 1/2 X 5/16 (LLV)
8'–0"	∠5 X 3 1/2 X 3/8 (LLV)
9'–0"	∠6 X 4 X 3/8 (LLV)

PROVIDE ROLLED STEEL ANGLE LINTELS @ ALL ARCHES.
ALL LINTELS TO EXTEND 8" (MIN.) ONTO MASONRY.

11. HORIZONTAL CMU WALL REINFORCING SHALL BE TRUSS TYPE OF 3/16" SIDE RODS & #9 GAGE TRUSS ROD CONFORMING TO ASTM A82 AND IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE. REINFORCING SHALL BE INSTALLED AT A MINIMUM VERTICAL SPACING OF 16" O.C. EXCEPT IMMEDIATELY ABOVE LINTELS AND BELOW SILLS SHALL BE INSTALLED IN FIRST AND SECOND JOINTS AT 8" O.C. LAP SPLICE REINFORCEMENT 12". MINIMUM MORTAR COVER SHALL BE 3/4".



CMU CONTROL JOINT OPTIONS

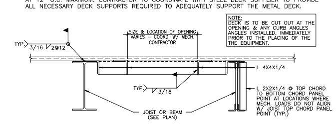


TYPICAL CMU LINTEL DETAILS – PROVIDE BLOCK LINTELS FOR ALL OPENINGS IN EXTERIOR BLOCK WALLS, INTERIOR BLOCK PARTITIONS AND BLOCK BACK–UP WALLS FOR WHICH STEEL LINTELS ARE NOT SCHEDULED. PROVIDE 8" MINIMUM BEARING AT EACH END. RE: ARCH. DRAWINGS FOR SIZE AND LOCATION OF OPENINGS.

TYP. CMU LINTEL DETAILS

ROOF NOTES:

1. ROOF TO BE * RIGID BOARD INSULATION OVER GALVANIZED ROOF DECK. (SEE NOTE #2 FOR DECK SPECIFICATION.) *RE: ARCH. FOR THICKNESS
2. ROOF DECK SPECIFICATION
METAL DECK SHALL BE TEMPERED COLD ROLLED STEEL, SHEET SHALL BE FORMED TO A CORRUGATED RIB PATTERN OF VULCRAFT TYPE 1.5B22 OR EQUAL. THE STEEL SHALL CONFORM TO ASTM A653, GRADE E ZINC COATING CONFORMING TO ASTM A924, G60 COATING CLASS FOR GALVANIZED MATERIAL. END LAPS AND SIDE LAPS ARE TO BE PER THE MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE METAL DECK SUPPORT AT ALL BUILDING CORNERS, SKEWED BUILDING LINES WHERE SUPPORTING STRUCTURE BEARS PERPENDICULAR AND AROUND ALL FRAMED OPENINGS WITH L 4X4X1/4 UNLESS NOTED OTHERWISE. INSTALL 6" WIDE X 12 GA. SHEET METAL COVER PLATES IN VALLEYS, RIDGES OR WHERE DECK CHANGES DIRECTION. SPOT WELD IN PLACE AT 12" O.C. MAXIMUM. CONTRACTOR TO COORDINATE WITH STEEL DECK SUPPLIER TO PROVIDE ALL NECESSARY DECK SUPPORTS REQUIRED TO ADEQUATELY SUPPORT THE METAL DECK.



TYPICAL ROOF OPENING DETAIL

4. REFERENCE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION ON OPENINGS, MECHANICAL AND PLUMBING EQUIPMENT AND ROOF SLOPES.
5. +XX'–YY" INDICATES TOP OF STEEL ELEVATION GIVEN ABOVE FINISHED FIRST FLOOR.
6. WELD DECK TO STEEL SUPPORTS USING MANUFACTURER'S RECOMMENDED PATTERN AND SPACING OR FMRC CLASS 1–90 SPECIFICATIONS. (1–90 CONTROLS)

STRUCTURAL STEEL FRAMING NOTES:

1. ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER. DRAWINGS TO HAVE CONTRACTORS STAMP AFFIXED PRIOR TO REVIEW.
2. ALL WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE.
3. STRUCTURAL ANGLES AND WIDE FLANGE SHAPES ARE TO CONFORM TO ASTM A572 GRADE 50 WITH SPECIAL REQUIREMENTS PER AISC TECHNICAL BULLETIN #3, DATED MARCH 1997. STEEL PIPE TO CONFORM TO ASTM A53 GRADE B (35 KSI). STRUCTURAL TUBING TO CONFORM TO ASTM A500, GRADE B (46 KSI). SHOP PAINT (REFERENCE ARCHITECTURAL SPECIFICATIONS).
4. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH "THE SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", AISC NINTH EDITION.
5. ALL FIELD CONNECTIONS TO BE BOLTED WITH A325 BOLTS (WELDED WHERE SHOWN). DESIGN SHEAR CONNECTIONS FOR ONE HALF OF THE TOTAL ALLOWABLE UNIFORM LOAD OF BEAMS UNLESS NOTED OTHERWISE, RE: AISC PART 4. ALL CONNECTIONS MUST BE DESIGNED BY A REGISTERED ENGINEER AND, IF REQUESTED, CALCULATIONS MUST BE AVAILABLE FOR REVIEW. BOLTS TO BE LE JEUNE TYPE OR EQUAL.
6. BRACING CONNECTIONS SHALL DEVELOP FULL FORCES SHOWN ON DRAWINGS AT EACH END OF MEMBER.
7. EXPANSION JOINT CONNECTIONS, WHERE USED, SHALL PROVIDE FREE MOVEMENT. BOLTS SHALL HAVE NUTS FINGER TIGHTENED AND THREADS CRIMPED.
8. SPLICING OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION AND TYPE OF SPLICE TO BE MADE.
9. MC = MOMENT CONNECTION.
10. ALL NON–SHRINK GROUTS FOR LEVELING OF BASE PLATES SHALL HAVE A MIN. 5,000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS. GROUT SHALL COMPLY WITH CORPS OF ENGINEERS SPECIFICATION CRD–C 621.
11. ALL STRUCTURAL STEEL AND JOISTS SHALL BE FABRICATED IN ACCORDANCE WITH OSHA SAFETY STANDARDS FOR STEEL ERECTION. STRUCTURAL DOCUMENTS INDICATE TYPICAL CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL OSHA REQUIREMENTS ARE MET.
12. CONTRACTOR SHALL CONFIRM ALL ELEVATIONS AND DIMENSIONS WITH ARCH./STRUCTURAL PLANS.
13. ALL STEEL TO STEEL CONNECTIONS SHALL BE WELDED (U. O, N.)

COLD ROLLED STEEL SPECIFICATIONS (UNIMAST OR EQUAL):

1. ALL STUDS AND/OR JOISTS AND ACCESSORIES SHALL BE OF THE TYPE, SIZE, GAUGE AND SPACING SHOWN ON THE DRAWINGS, AND SHALL BE AS MANUFACTURED BY UNIMAST, INC. OR EQUAL.
2. ALL STRUCTURAL MEMBERS AND CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION.
3. ALL STUDS, RUNNERS, JOISTS AND TRUSSES SHALL BE FORMED FROM GALVANIZED STEEL, CORRESPONDING TO THE REQUIREMENTS OF ASTM A446, WITH A MINIMUM YIELD STRENGTH OF 50 KSI FOR .097, .068, .054 THICK MEMBERS AND 33 KSI FOR .043 AND .033 THICK MEMBERS AND FLAT STRAP BRACING.
4. PRIOR TO FABRICATION THE CONTRACTOR SHALL SUBMIT ERECTION DRAWINGS TO THE STRUCTURAL ENGINEER FOR APPROVAL.
5. PREFABRICATED PANELS SHALL BE SQUARE, WITH COMPONENTS ATTACHED IN A MANNER AS TO PREVENT RACKING. HANDLING AND LIFTING SHALL BE DONE IN A MANNER SO AS NOT TO CAUSE DISTORTION IN ANY MANNER.
6. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT PERPENDICULAR MEMBERS OR, AS REQUIRED, FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.
7. AXIALLY LOADED STUDS SHALL BE INSTALLED IN A MANNER WHICH WILL ASSURE THAT THEIR ENDS ARE POSITIONED AGAINST THE INSIDE OF RUNNER WEB PRIOR TO FASTENING.
8. FASTENING OF COMPONENTS SHALL BE WITH SELF–DRILLING SCREWS OR WELDING SCREWS OR WELDS SHALL BE OF SUFFICIENT SIZE TO INSURE THE STRENGTH OF THE CONNECTION. WIRE TYING OF COMPONENTS SHALL NOT BE PERMITTED. ALL WELDS SHALL BE TOUCHED WITH A ZINC–RICH PAINT.
9. RUNNERS SHALL BE SECURELY ANCHORED TO THE SUPPORTING STRUCTURE. PROPOSED CONNECTION TO BE SUBMITTED FOR APPROVAL.
10. ABUTTING LENGTHS OF RUNNER SHALL EACH BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, BUTT–WELDED, OR SPLICED.
11. STUDS SHALL BE PLUMBED, ALIGNED AND SECURELY ATTACHED TO FLANGES OF BOTH UPPER AND LOWER RUNNERS.
12. JACK STUDS OR CRIPPLES SHALL BE INSTALLED BELOW WINDOW SILLS, ABOVE WINDOW AND DOOR HEADS, AND ELSEWHERE TO FURNISH SUPPORTS, AND SHALL BE SECURELY ATTACHED TO CONNECTING MEMBERS.
13. RESISTANCE TO MINOR AXIS BENDING AND ROTATION SHALL BE PROVIDED BY GYPSUM BOARD OR GYPSUM SHEATHING AND BY HORIZONTAL STRAP AND BLOCKING OR COLD–ROLLED CHANNEL BRACING AT THIRD POINTS.
14. SPLICES IN AXIALLY LOADED STUDS SHALL NOT BE PERMITTED.
15. PROVIDE A MINIMUM OF (3) #12 SCREWS FOR ALL STUD TO STUD CONNECTIONS.
16. BRIDGING SHALL BE INSTALLED IMMEDIATELY AFTER JOISTS ARE ERECTED AND BEFORE CONSTRUCTION LOADS ARE APPLIED TO PREVENT FLANGE ROTATION AND TO SUPPORT FLANGES IN COMPRESSION.

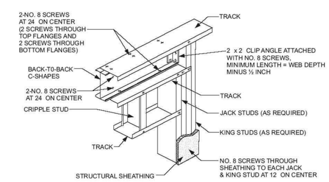
    BRIDGING SHALL CONSIST OF SOLID BLOCKING PLUS STRAP BRACING OR 1 1/2" COLD–ROLLED CHANNELS SCREW–ATTACHED OR WELDED TO BOTTOM JOIST FLANGES. BRIDGING SHALL E INSTALLED AT MIDSPAN FOR SPANS 16'–0" OR LESS AND AT 8'–0" O.C. MAX FOR SPANS GREATER THAN 16'–0" U.N.O.

    SOLID BLOCKING, OF FIELD–CUT TRACK OR JOIST SECTION SHALL BE PROVIDED, WELDED OR SCREW–ATTACHED BETWEEN OUTER JOISTS, OVER ALL INTERIOR SUPPORTS AND ADJACENT TO OPENINGS AT 10'–0" O.C.. MAX. COLD–ROLLED CHANNELS OR STRAP BRACING OF 1 1/2" X 33 MIL (0.033") CORROSION–RESISTANT STEEL SHALL BE SCREW–ATTACHED TO BOTTOM JOIST FLANGE BETWEEN SOLID BLOCKING. REFERENCE MAUNFACTURER INSTALLATION INSTRUCTIONS.
17. UNIMAST'S STEEL FRAMING CARRIES A FOUR PART CODE THAT IDENTIFIES THE WEB SIZE, STYLE, FLANGE WIDTH AND STEEL THICKNESS:

362 S 162–43

WEB SIZE:		STYLE:	FLANGE WIDTH	STEEL THICKNESS: MILS.
250 – 2 1/2"	600 – 6"	S OR J – STUD/JOIST	137 – 1 3/8"	33
350 – 3 1/2"	800 – 8"	T – RUNNER TRACK	162 – 1 5/8"	43
362 – 3 5/8"	1000 – 10"		200 – 2"	54
400 – 4"	1200 – 12"		250 – 2 1/2"	68
550 – 5 1/2"	1400 – 14"			97

REFERENCE 2009 IRC
R603.6 HEADERS. HEADER SHALL BE INSTALLED ABOVE ALL WALL OPENING IN EXTERIOR WALLS AND INTERIOR LOAD–BEARING WALLS. BOX BEAM HEADERS AND BACK–TO–BACK HEADERS EACH SHALL BE FORMED FROM TWO EQUAL SIZED C–SHAPED MEMBERS IN ACCORDANCE WITH FIGURES R603.6(1) AND R603.6(2), RESPECTIVELY, AND TABLES R603.6(1) THROUGH R603.6 (24). L–SHAPED HEADER SHALL BE PERMITTED TO BE CONSTRUCTED IN ACCORDANCE WITH AISI S230. ALTERNATELY, HEADERS SHALL BE PERMITTED TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AISI S100 SECTION D4.



NO	DATE	ISSUES/REVISIONS
0	06-07-2019	ISSUED FOR PERMIT
1	08-07-2019	REVISED PER CITY COMMENTS

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NEWQUEST PROPERTIES
JOSEPH M.FOSTER & ASSOCIATES

THE SHOPS AT SEDONA LAKES
MANVEL, TEXAS

REF#: 19 - 1467 - 0001
DRN: YAN | CHK: K.B. | DES: K.B.

GENERAL NOTES

SHEET NO. S4.0

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I:\2019\1467 - NewQuest Properties\0001 - The Shops At Sedona Lakes - CR 101 & CR 94\Structural Dwgs\REV 1 - 08-07-19\19-1467-0001 - The Shops Sedona - Struc - Rev 1 - 08.07.19