

GENERAL NOTES:

FOR SOIL INFORMATION AND SITE PREPARATIONS REFER TO THE "GEOTECHNICAL STUDY, PROPOSED IVY KIDS ON C.R.94 NEAR C.R. 101, MANVEL, TEXAS" BY TEXAS GEOTECHNICAL CONSULTANTS, LLC., HOUSTON, TEXAS TGC REPORT NO. 807231, DATED AUGUST 8, 2018.

EXCAVATION FOR FOOTINGS SHALL BE SCHEDULED TO PERMIT PLACEMENT OF CONCRETE IMMEDIATELY FOLLOWING EXCAVATION. PROTECT EXCAVATION TO MAINTAIN AN UNDISTURBED BEARING SURFACE.

BUILDING SITE SHOULD BE PARPARED IN ACCORDANCE WITH "SITE PREPARATION" ON PAGE 14 TO PAGE 15 OF PROJECT GEOTECHNICAL STUDY. EXISTING SOIL TO THE DEPTH OF 6 INCH OF BUILDING PAD SHOULD BE REMOVED. EXISTING SOIL FROM 6 INCH TO THE DEPTH OF 2 FEET SHOULD BE PROPERLY EXCAVATED, LIME STABILIZED USING 5% AND 6% LIME BY DRY WEIGHT, AND PLACED BACK. THE PLACED-BACK SOIL SHOULD BE PLACED IN ACCORDANCE WITH "SITE PREPARATION" SECTION 4 ON PAGE 14 OF PROJECT GEOTECHNICAL STUDY. ADD 4 TO 5 FEET COMPACTED SELECT FILL TO ACHIEVE FINAL SLAB ELEVATION IN ACCORDANCE WITH CIVIL DRAWINGS. THE STRUCTURAL FILL SHALL BE SELECTED AND PLACED IN AS OUTLINED IN THE "SITE PREPARATION" SECTION 4 ON PAGE 14 OF PROJECT GEOTECHNICAL STUDY.

CONCRETE WORK SHALL BE IN ACCORDANCE WITH BUILDING CODE REQUIREMENT FOR REINFORCED CONCRETE, ACI 318.

ALL CONCRETE SHALL BE NORMAL WEIGHT (SAND AND GRAVEL) WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI.

ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE, ACI 315. UNLESS SHOWN OTHERWISE, LAP CONTINUOUS BARS 30 BAR DIAMETERS AT SPLICES. REBAR SHOULD CONFORM TO ASTM A615, GRADE 60.

PROVIDE 1-#5x4'-0" CORNER BAR, TOP AND BOTTOM AT EXTERIOR FACE OF GRADE BEAMS AT CORNERS, AND PROVIDE 4-#5x4'-0" CORNER BARS, (2 TOP & 2 BOT.) AT T-INTERSECTIONS.

AT SLABS CAST ON GRADE, PROVIDE BAR CHAIRS AT 4'-0" SPACING OFF CENTER EACH WAY FOR SUPPORT OF REBAR.

UNLESS SHOWN OTHERWISE, CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

| | |
|---------------|--|
| FOOTINGS | 3" |
| GRADE BEAMS | 2" TOP; 3" BOTTOM & SIDES |
| SLAB ON GRADE | 3/4" TOP (INTERIOR); 1 1/2" TOP (EXTERIOR) |

DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS, LATEST EDITION.

ALL STRUCTURAL SHAPES AND PLATES SHALL CONFORM TO ASTM A36. ALL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S. TUBE SHALL CONFORM TO ASTM A53, GRADE B.

UNLESS SHOWN OTHERWISE, CONNECTIONS SHALL BE SHOP WELDED AND FIELD BOLTED AND SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE AISC. ANCHOR BOLTS SHALL CONFORM TO ASTM A307. MECHINE BOLTS SHALL CONFORM TO ASTM A325 AND BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS RECOMMENDED BY THE RESEARCH COUNCIL OF ENGINEERING FOUNDATION, LATEST EDITION. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 WITH WELDING ELECTRODES ASW A5.1 OR A5.5, E70XX. WELD SIZES NOT INDICATED SHALL BE 3/16 INCH FILLET WELDS. SPLICE SHALL BE DETAILED ON THE SHOP DRAWINGS.

PLACE A 10 MIL VAPOR BARRIER OF POLYTHYLENE UNDER ALL BUILDING SLABS. ALL SLABS SHALL BE MINIMUM OF 4 1/2 INCHES THICK.

DESIGN, FABRICATION, AND ERECTION OF WOOD SHALL BE IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION.

WOOD FRAMING FOR INTERIOR AND EXTERIOR BEARING WALLS, ROOF AND FLOOR JOISTS, BEAMS, HEADERS, ETC., SHALL BE No. 2 GRADE SOUTHERN YELLOW PINE KILN DRIED, USED AT 19 PERCENT MOISTURE CONTENT. RAFTER & CEILING JOISTS MAY BE No. 3 GRADE SOUTHERN YELLOW PINE.

JOIST AND BEAM HANGERS SHALL BE OF SUCH CAPACITY TO SUPPORT THE SHEAR CAPACITY OF THE SUPPORTED JOIST OR BEAM. JOIST HANGERS SHALL BE CONSTRUCTED OF MINIMUM OF 16 GAGE GALVANIZED STEEL AND CONFORM TO THE REQUIREMENTS OF UNIFORM BUILDING CODE.

HOLLOW LOAD-BEARING MASONRY UNITS SHALL CONFORM TO ASTM C90 MADE WITH LIGHT WEIGHT AGGREGATE CONCRETE. MINIMUM ULTIMATE NET COMPRESSIVE STRENGTH SHALL BE 1,350 PSI.

MORTAR AND GROUT SHALL CONFORM TO ASTM C476. MINIMUM 28 DAY COMPRESSIVE STRENGTH, AS DETERMINED BY ASTM C91, SHALL BE 1,800 PSI FOR MORTAR AND 2,000 PSI FOR GROUT.

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 UNIFORM 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".

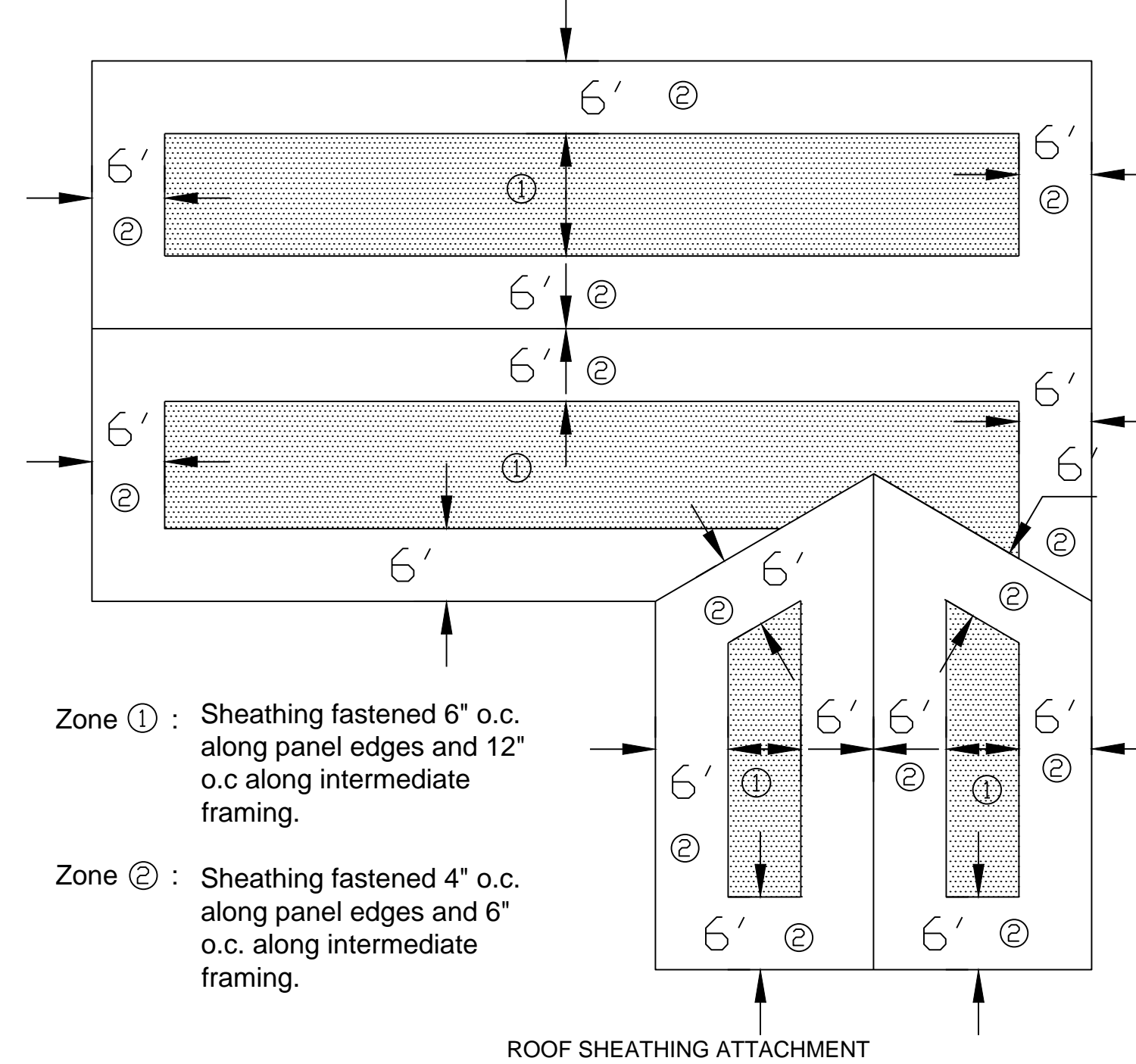
BUILDING CODE: 2012 INTERNATIONAL BUILDING CODE.
WIND SPEED: $V_{ult}=139$ MPH, EXPOSURE B, IMPORTANCE FACTOR 1
LIVE LOADS:
ROOF: 20 PSF
NET WIND UP LIFT LOAD: 20 PSF

WINDSTORM DESIGN REQUIREMENTS:

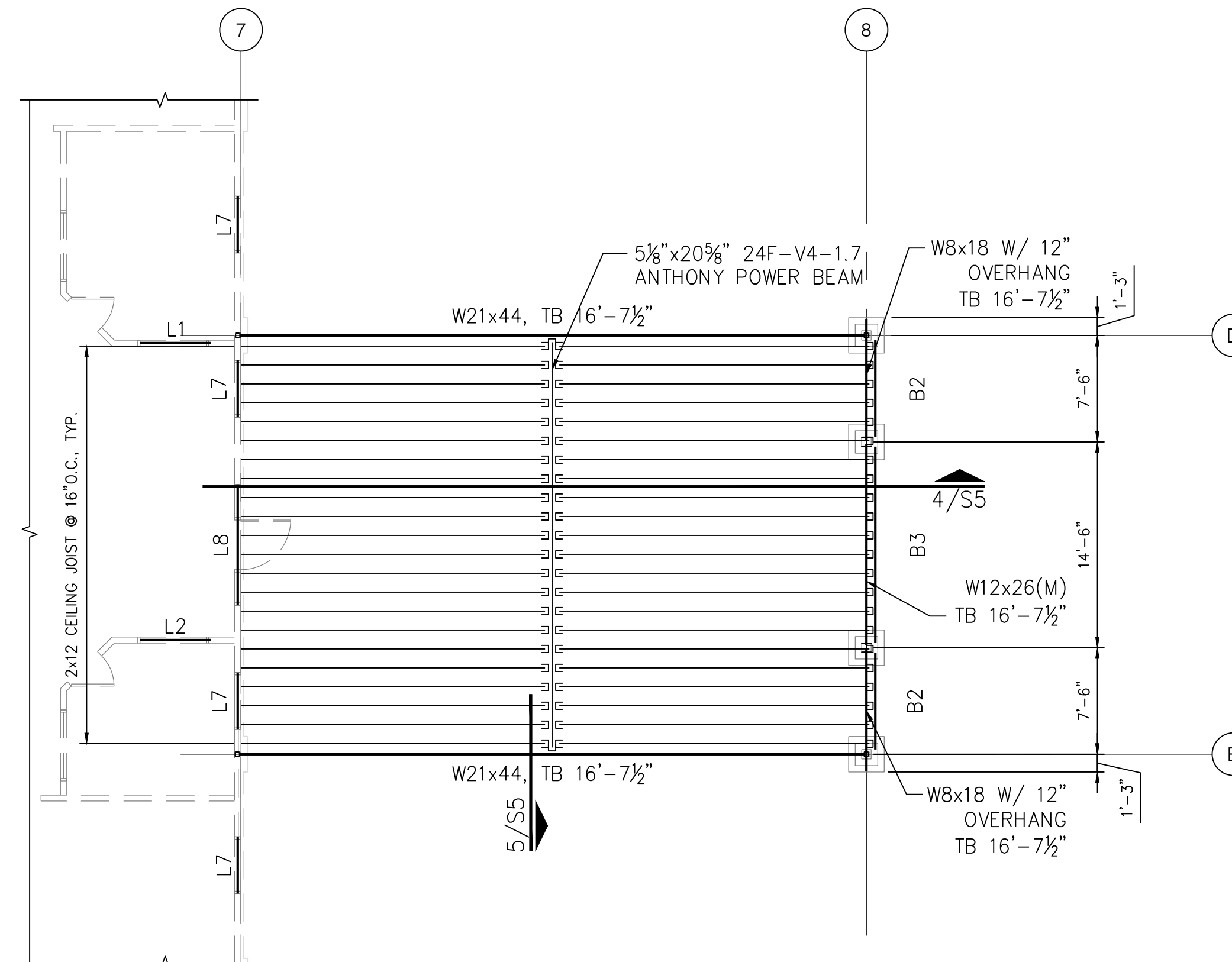
PROJECT SITE IS LOCATED IN INLAND II CATASTROPHE ZONE AS PER TEXAS DEPARTMENT OF INSURANCE. IN REFERENCE TO 2006 INTERNATIONAL BUILDING CODE, THE DESIGN WIND SPEED IS 110 MPH WITH 3 SECONDS GUST, EXPOSURE C, IMPORTANCE FACTOR 1.

CORNER/EDGE ZONE OF SUBJECT BUILDING IS 6 FEET. WALL COMPONENT AND CLADDING DESIGN LOAD, INCLUDING WINDOWS AND DOORS, IS 25 PSF AT INTERIOR ZONE AND 30 PSF AT 6 FEET END ZONES. THE NET ROOF UPLIFT PRESSURE IS 23 PSF AT INTERIOR ZONE 1 IN BELOW DETAIL 2 AND NET ROOF UPLIFT PRESSURE IS 35 PSF AT EDGE ZONE 2. FOLLOW BELOW ROOF SHEATHING FASTENING DIAGRAM.

CONTRACTOR MUST RETAIN AND PAY FOR A WINDSTORM INSPECTOR FROM BEGINNING OF PROJECT TO CONDUCT STEP BY STEP WINDSTORM INSPECTIONS THROUGHOUT THE BUILDING CONSTRUCTION AND OBTAIN WPI-8 CERTIFICATION FROM TEXAS DEPARTMENT OF INSURANCE UPON COMPLETION OF CONSTRUCTION.



2 ROOF DECK FASTENING DIAGRAM
N.T.S.



1 CEILING FRAMING PLAN
SCALE: 1/8" = 1'-0"

| | HEADER AND BEAM SCHEDULE | JACK STUD/COLUMN |
|----|----------------------------------|------------------|
| L1 | 2-2x6 HEADER | 2 |
| L2 | 2-2x8 HEADER | 2 |
| L3 | 2-2x10 HEADER | 3 |
| L4 | 2-2x12 HEADER | 3 |
| L5 | 3 1/2"x11 1/4" POWER BEAM HEADER | 4 |
| L6 | 3-2x6 | 2 |
| L7 | 3-2x8 | 2 |
| L8 | 3-2x10 | 3 |
| B1 | 2-2X12 BEAM | 3 |
| B2 | 3 1/2"x11 1/4" POWER BEAM | 5 |
| B3 | 3 1/2"x14" POWER BEAM | 6 |

NOTES:

- TRUSS LAYOUT SHOWN IS SCHEMATIC ONLY. THE TRUSS MFR SHALL SUBMIT ERECTION PLAN AND CALCULATIONS FOR ENGINEER'S APPROVAL. TRUSS MFR SHALL NOT CHANGE LOCATION OF LOAD-BEARING WALLS OR BEAMS. OTHERWISE, FOUNDATION NEEDS TO BE REVISED.
- TRUSS MFR SHALL COORDINATE WITH MEP DRAWINGS FOR EQUIPMENT LOADS, DUCT PENETRATIONS, AND ROOF DRAIN PENETRATIONS FOR THE TRUSS DESIGN. PITCH FLAT TRUSSES SHALL HAVE LEVEL BOTTOM CHORD AND 1/4"/FT SLOPE TOP CHORD.
- ROOF DESIGN LIVE LOAD = 20 PSF.
- DESIGN WIND SPEED $V_{ult}=139$ MPH, EXPOSURE C, IMPORTANCE FACTOR 1.
- DENOTES 5/8" GYPSUM BOARD EACH FACE WITH 7" FASTENER SPACINGS. INSTALL SIMPSON STRONG-TIE HD3B SHEARWALL HOLDDOWN ANCHOR AT EACH END.
- ////// DENOTES INTERIOR LOAD-BEARING WALL.
- (M) DENOTES WELDED MOMENT CONNECTION AT EACH END OF THE BEAM (SEE DETAIL ON D/S6).
- SEE ARCHITECTURAL PLANS FOR CEILING HEIGHTS OF BUILDING. THE WALLS PLATE HEIGHTS ARE SHOWN ON THIS DRAWING. CONTRACTOR MUST FIELD VERIFY SUCH PLATE HEIGHTS AND ACHIEVE TRUSS STRUCTURAL SLOPE AS INDICATED.
- FRAME ALL EXTERIOR WALLS OF MAIN BUILDING AND THREE (3) EXTERIOR UTILITY ROOMS WITH 2x6 STUDS @ 16"O.C.. FRAME INTERIOR LOAD-BEARING WALLS WITH 2-2x4 STUDS @ 16"O.C., FRAME REST OF INTERIOR WALLS WITH 2x4 STUDS @ 16"O.C., USE S.Y.P. GRADE #2. PLATE HEIGHT IS 10'-3 1/4" UNLESS OTHERWISE NOTED.
- INSTALL 1/2" PLYWOOD SHEATHING ALONG EXTERIOR FACE OF MAIN BUILDING EXTERIOR WALLS AND EXTERIOR FACE OF THREE (3) EXTERIOR UTILITY ROOMS, USE 8d COMMON NAILS @ 12"O.C. FOR INTERMEDIATE SUPPORTS AND @ 6"O.C. AT EDGES.
- USE GYPSUM BOARD NAIL @ 8"O.C. AT ALL INTERIOR WALLS WITH GYPSUM BOARD SHEATHING.
- ROOF DECK SHOULD BE 5/8" T&G PLYWOOD SHEATHING UNLESS OTHERWISE NOTED.
- INDICATES JOIST/BEAM HANGER.
- INSTALL 1/2" THICK CAP PLATE FOR ALL STEEL COLUMNS. TOP OF STEEL COLUMNS ELEVATION SHALL MATCH HIGHEST TOP OF BEAM ELEVATION WHICH FRAME INTO COLUMN.

REVISIONS AND ISSUANCE

| NO. | DATE | DESCRIPTION |
|-----|---------|-------------|
| 1 | 8/13/18 | PRICING |

IVY KIDS EARLY LEARNING CENTER

4434 CR 94
MANVEL, TEXAS 77578

MISSION ENGINEERING INC.
10370 RICHMOND AVE, #560
HOUSTON, TEXAS 77042
[T] 713-981-0018
[E] dzhuang@missioneng.com
TPEF Registration No. F-11771

interim review only
not for permit or
construction

YIFENG ZHUANG
TX # 87950

08/13/2018

DRAWING TITLE
**CEILING JOIST
PLAN**

| DRAWN BY | CHECKED BY |
|------------|------------|
| KN | EL |
| DATE | JOB NO. |
| 08/13/2018 | 1806251 |

DRAWING NO.

S2A