

DESIGN INFORMATION

- 1. BUILDING CODE: 2018 INTERNATIONAL RESIDENTIAL CODE AS ADOPTED AND/OR AMENDED BY LOCAL JURISDICTION/BUILDING CODES.
- 2. FLOOR DEAD LOAD (PSF): 10  
FLOOR LIVE LOAD (PSF): 40
- 3. ROOF DEAD LOAD(PSF): 10  
ROOF LIVE LOAD(PSF): 20
- 4. REFERENCE SHEET S2.0 FOR FRAMING & FOUNDATION DETAILS.

FOUNDATIONS

- 1. ALL FOUNDATIONS TO BEAR ON ORIGINAL, UNDISTURBED SOIL OF 2000 PSF BEARING CAPACITY OR FILL COMPACTED AND TESTED TO CONFORM TO THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER.
- 2. ALL FOOTING EXCAVATIONS ARE TO BE INSPECTED/APPROVED BEFORE PLACING CONCRETE.
- 3. FOOTINGS SHALL EXTEND BELOW THE FROST LINE: MINIMUM DEPTH OF 36" BELOW GRADE.






CONCRETE

- 1. CONCRETE MIX TO CONFORM TO THE FOLLOWING:
  - A. 3,000 PSI AT 28 DAYS
  - B. W/C RATIO = 0.5 (MAXIMUM)
  - C. SLUMP LIMIT = 4" (+/- 1")

ROUGH CARPENTRY

- 1. MATERIALS:
  - A. FRAMING LUMBER
    - 1. JOIST, RAFTERS, HEADERS, BEAMS 2x AND LARGER, PLATES, SILLS
      - a. NO. 2 SYP
    - 2. SPECIES AND GRADES SHOWN ARE THE MINIMUM ACCEPTABLE. BETTER GRADES MAY BE SUBSTITUTED.
    - 3. LUMBER EXPOSED TO THE WEATHER TO BE PRESSURE TREATED TO RESIST DECAY.
  - B. SHEATHING (WOOD STRUCTURAL PANEL)
    - 1. ROOF SHEATHING: 1/2" (NOMINAL) RATED 48/24.
    - 2. FLOOR SHEATHING: 3/4" (NOMINAL) RATED 48/24. FOR MAXIMUM JOIST SPACING. TONGUE-AND-GROOVE GLUED TO SUPPORTS.
    - 3. WALL SHEATHING: 1/2" NOMINAL.
    - 4. WOOD STRUCTURAL PANELS TO BE A.P.A. RATED AND EXPOSURE 1. PANELS TO BE MANU'D PER U.S. DEPARTMENT OF COMMERCE PRODUCT STANDARDS PS1 OR PS2.
  - C. LAMINATED VENEER LUMBER (LVL):  
Fb = 2600 PSI, E = 1.9 x 10 E6 PSI. WRAP OR TREAT ALL ENGINEERED LUMBER TO PROTECT AGAINST EXPOSURE.
  - D. HARDWARE:
    - 1. BOLTS AND THREADED ROD: ASTM A307 (MIN.)
    - 2. PREFABRICATED CONNECTORS: "SIMPSON STRONG TIE"/"USP" OR EQUAL.
    - 3. NAILS: BOX WIRE NAILS. UNLESS COMMON NAILS REQ'D BY METAL CONNECTORS.
    - 4. USE GALVANIZED OR STAINLESS STEEL HARDWARE FOR ALL EXTERIOR FRAMING.
- 2. NAILING: SHALL BE PER FASTENING SCHEDULE OF THE 2018 IRC BUILDING CODE. FOR PREFABRICATED CONNECTORS USE ALL FASTENERS AS PRESCRIBED BY THE MANUFACTURER.

RELEASE FOR CONSTRUCTION  
AS NOTED ON PLANS REVIEW  
DEVELOPMENT SERVICES  
LEE'S SUMMIT, MISSOURI  
10/27/2022 2:47:17

COLUMN & PIER SCHEDULE		
MARK	COLUMN SIZE	PIER DIA.
	6x6	12"
	6x6	16"
	6x6	18"
	6x6	24"
	6x6	28"

- 1. ALL PIERS TO BEAR ON ORIGINAL, UNDISTURBED SOIL OF 2000 PSF BEARING CAPACITY OR FILL COMPACTED AND TESTED TO CONFORM TO THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER.
- 2. PIERS SHALL EXTEND BELOW THE FROST LINE: MIN. DEPTH OF 36" BELOW GRADE.
- 3. POST SHALL BE TREATED OR CEDAR WITH **SIMPSON CB66** EMBED POST BASE

1

S1.0

GENERAL NOTES

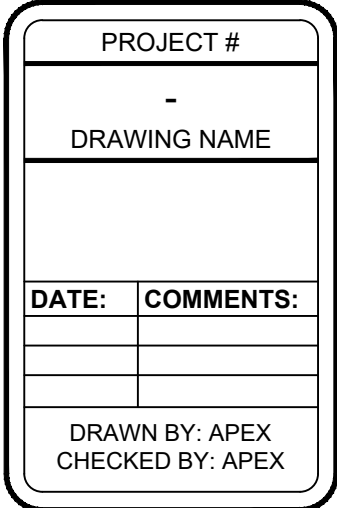
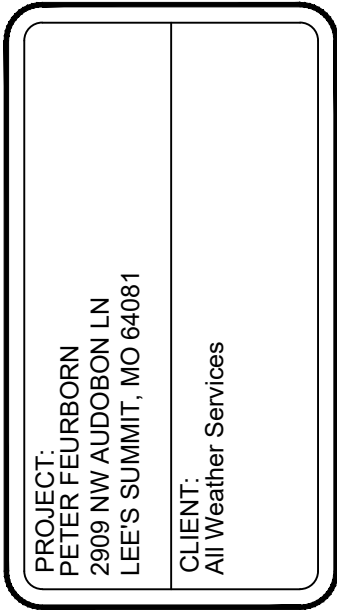
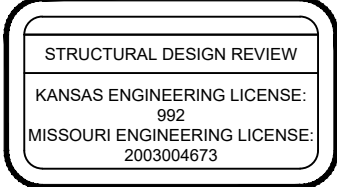
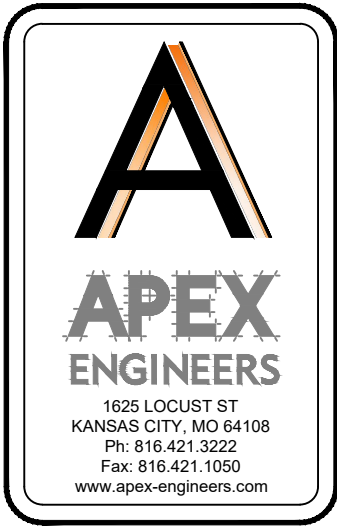
SCALE: 1/4" = 1'-0"

EXPANSIVE SOILS DISCLAIMER:

THESE PLANS HAVE BEEN PREPARED BASED ON A PRESUMPTIVE ALLOWABLE BEARING CAPACITY AS ALLOWED BY IRC CODE AND THE LOCAL ENFORCING JURISDICTION.

APEX ENGINEERS, INC. (APEX) RECOMMENDS THAT ALL FOOTING EXCAVATIONS BE EVALUATED BY A LICENSED GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF ANY FOUNDATION ELEMENTS. GEOTECHNICAL INVESTIGATION AND/OR TESTING IS NOT A SERVICE PROVIDED OR OFFERED BY APEX.

APEX HAS NOT BEEN RETAINED TO DETERMINE THE EXPANSIVE SOIL CHARACTERISTICS OF THE SUBGRADE SOIL AND THEREFORE CANNOT BE HELD RESPONSIBLE FOR THE VOLUMETRIC CHANGES OF THE SOIL (INCLUDING BELOW THE BASEMENT SLAB). BY USE OF THESE PLANS WITHOUT AN ACCOMPANYING GEOTECHNICAL ENGINEERING REPORT, APEX SHALL NOT BE HELD LIABLE FOR ANY FUTURE MOVEMENT AND/OR DIFFERENTIAL MOVEMENT OF THE PROPOSED STRUCTURE AND THE POSSIBLE DAMAGE THAT MAY BE CAUSED AS A RESULT OF SUCH MOVEMENT. DAMAGE FROM EXPANSIVE SOILS AND/OR SETTLEMENT CAN RESULT IN AMONGST OTHER THINGS, THE FOLLOWING: BASEMENT SLAB HEAVE, SHEETROCK CRACKS, WINDOWS AND DOOR BECOMING OUT OF PLUMB AND STICKING AND/OR NOT OPENING, DAMAGE TO TILE, MOULDING, AND OTHER COSMETIC FINISHES.



1. BUILDING CODE: 2018 INTERNATIONAL RESIDENTIAL CODE WITH ALL AMENDMENTS AND CODES ADOPTED BY LOCAL JURISDICTION/BUILDING CODES.  
FLOOR DEAD LOAD (PSF): 10  
FLOOR LIVE LOAD (PSF): 10
3. ROOF DEAD LOAD (PSF): 10  
ROOF LIVE LOAD (PSF): 20
4. REFERENCE SHEET S2.0 FOR FRAMING & FOUNDATION DETAILS.

FOUNDATIONS






1. ALL FOUNDATIONS TO BEAR ON ORIGINAL, UNDISTURBED SOIL OF 2000 PSF BEARING CAPACITY OR FILL COMPACTED AND TESTED TO CONFORM TO THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER.
2. ALL FOOTING EXCAVATIONS ARE TO BE INSPECTED/APPROVED BEFORE PLACING CONCRETE.
3. FOOTINGS SHALL EXTEND BELOW THE FROST LINE: MINIMUM DEPTH OF 36" BELOW GRADE.

CONCRETE

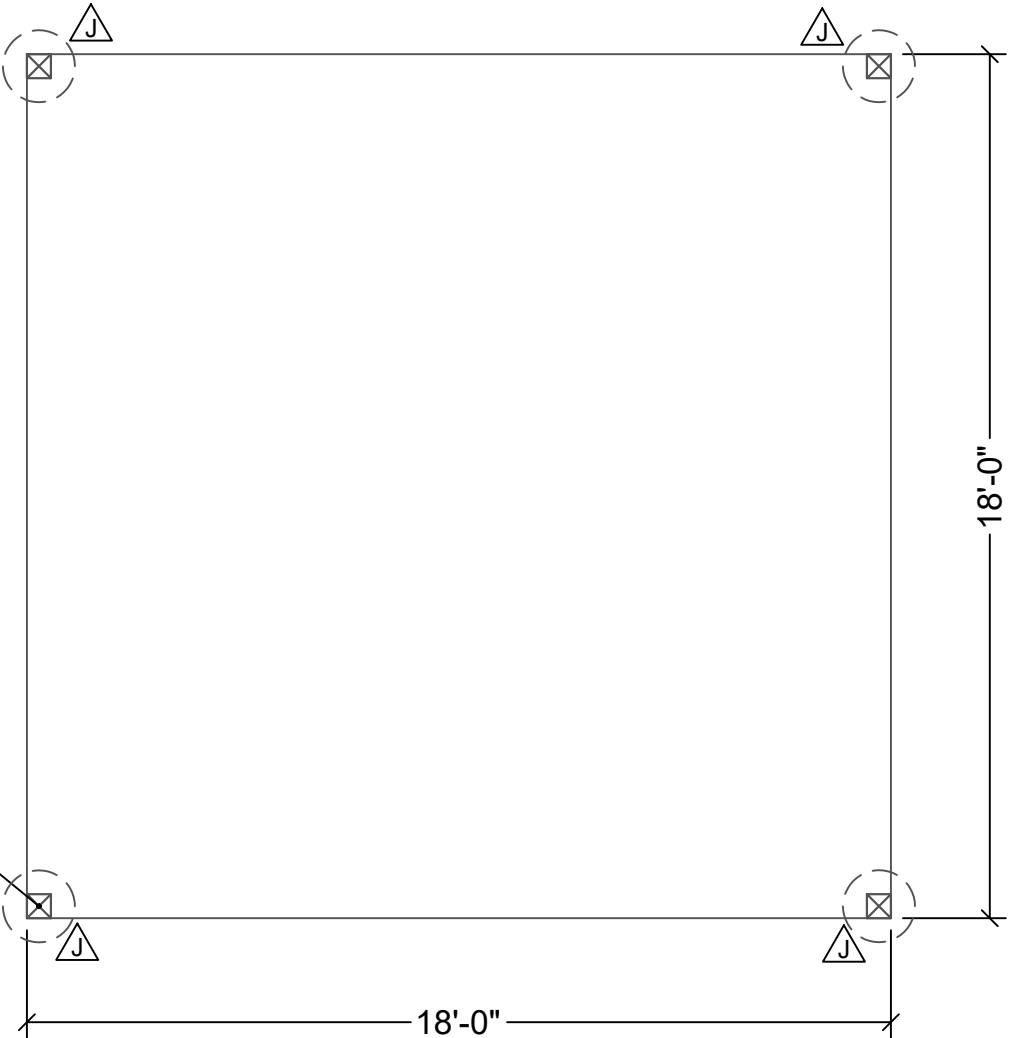
1. CONCRETE MIX TO CONFORM TO THE FOLLOWING:
- A. 3,000 PSI AT 28 DAYS
- B. W/C RATIO = 0.5 (MAXIMUM)
- C. SLUMP LIMIT = 4" (+/- 1")

ROUGH CARPENTRY

1. MATERIALS:
- A. FRAMING LUMBER
1. JOIST, RAFTERS, HEADERS, BEAMS 2x AND LARGER, PLATES, SILLS
- a. NO. 2 SYP
2. SPECIES AND GRADES SHOWN ARE THE MINIMUM ACCEPTABLE. BETTER GRADES MAY BE SUBSTITUTED.
3. LUMBER EXPOSED TO THE WEATHER TO BE PRESSURE TREATED TO RESIST DECAY.
- B. SHEATHING (WOOD STRUCTURAL PANEL)
1. ROOF SHEATHING: 1/2" (NOMINAL) RATED 48/24.
2. FLOOR SHEATHING: 3/4" (NOMINAL) RATED 48/24. FOR MAXIMUM JOIST SPACING. TONGUE-AND-GROOVE GLUED TO SUPPORTS.
3. WALL SHEATHING: 1/2" NOMINAL.
4. WOOD STRUCTURAL PANELS TO BE A.P.A. RATED AND EXPOSURE 1. PANELS TO BE MANU'D PER U.S. DEPARTMENT OF COMMERCE PRODUCT STANDARDS PS1 OR PS2.
- C. LAMINATED VENEER LUMBER (LVL):  
Fb = 2600 PSI, E = 1.9 x 10 E6 PSI. WRAP OR TREAT ALL ENGINEERED LUMBER TO PROTECT AGAINST EXPOSURE.
- D. HARDWARE:
1. BOLTS AND THREADED ROD: ASTM A307 (MIN.)
2. PREFABRICATED CONNECTORS: "SIMPSON STRONG TIE"/"USP" OR EQUAL.
3. NAILS: BOX WIRE NAILS. UNLESS COMMON NAILS REQ'D BY METAL CONNECTORS.
4. USE GALVANIZED OR STAINLESS STEEL HARDWARE FOR ALL EXTERIOR FRAMING.
2. NAILING: SHALL BE PER FASTENING SCHEDULE OF THE 2018 IRC BUILDING CODE. FOR PREFABRICATED CONNECTORS USE ALL FASTENERS AS PRESCRIBED BY THE MANUFACTURER.

COLUMN & PIER SCHEDULE		
MARK	COLUMN SIZE	PIER DIA.
	6x6	12"
	6x6	16"
	6x6	18"
	6x6	24"
	6x6	28"

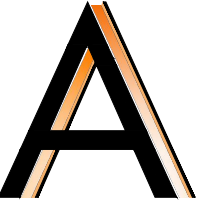
FULL HEIGHT  
CONTINUOUS 6x6  
CEDAR POST ON  
**SIMPSON CB66** EMBED  
POST BASE, TYP



1. ALL PIERS TO BEAR ON ORIGINAL, UNDISTURBED SOIL OF 2000 PSF BEARING CAPACITY OR FILL COMPACTED AND TESTED TO CONFORM TO THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER.
2. PIERS SHALL EXTEND BELOW THE FROST LINE: MIN. DEPTH OF 36" BELOW GRADE.
3. POST SHALL BE TREATED OR CEDAR WITH **SIMPSON CB66** EMBED POST BASE

1  
S1.1 PIER PLAN  
SCALE: 1/4" = 1'-0"





**APEX**  
ENGINEERS

1625 LOCUST ST  
KANSAS CITY, MO 64108  
Ph: 816.421.3222  
Fax: 816.421.1050  
www.apex-engineers.com

STRUCTURAL DESIGN REVIEW

KANSAS ENGINEERING LICENSE:  
992  
MISSOURI ENGINEERING LICENSE:  
2003004673

PROJECT:  
PETER FEURBORN  
2909 NW AUDOBON LN  
LEE'S SUMMIT, MO 64081

CLIENT:  
All Weather Services

PROJECT #  
-

DRAWING NAME

DATE: COMMENTS:

DRAWN BY: APEX  
CHECKED BY: APEX

SHEET #  
S1.1

1. BUILDING CODE: 2018 INTERNATIONAL RESIDENTIAL CODE WITH 2019 CODE UPGRADES, AS AMENDED BY LOCAL JURISDICTION/BUILDING CODES.
2. FLOOR DEAD LOAD (PSF): 10  
FLOOR LIVE LOAD (PSF): 10
3. ROOF DEAD LOAD (PSF): 10  
ROOF LIVE LOAD (PSF): 20
4. REFERENCE SHEET S2.0 FOR FRAMING & FOUNDATION DETAILS.

FOUNDATIONS

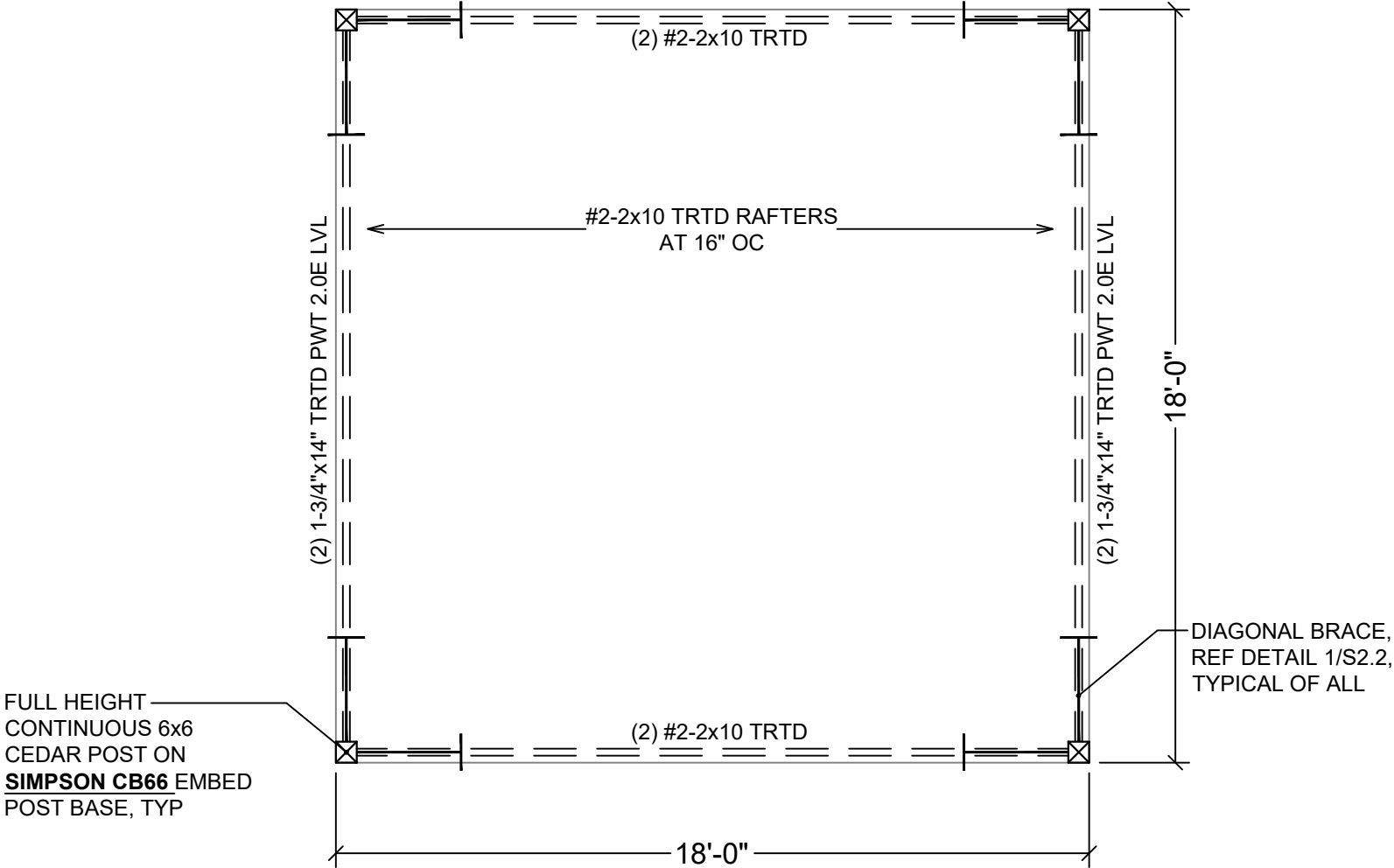
1. ALL FOUNDATIONS TO BEAR ON ORIGINAL, UNDISTURBED SOIL OF 2000 PSF BEARING CAPACITY OR FILL COMPACTED AND TESTED TO CONFORM TO THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER.
2. ALL FOOTING EXCAVATIONS ARE TO BE INSPECTED/APPROVED BEFORE PLACING CONCRETE.
3. FOOTINGS SHALL EXTEND BELOW THE FROST LINE: MINIMUM DEPTH OF 36" BELOW GRADE.

CONCRETE

1. CONCRETE MIX TO CONFORM TO THE FOLLOWING:
- A. 3,000 PSI AT 28 DAYS
- B. W/C RATIO = 0.5 (MAXIMUM)
- C. SLUMP LIMIT = 4" (+/- 1")

ROUGH CARPENTRY

1. MATERIALS:
- A. FRAMING LUMBER
1. JOIST, RAFTERS, HEADERS, BEAMS 2x AND LARGER, PLATES, SILLS
- a. NO. 2 SYP
2. SPECIES AND GRADES SHOWN ARE THE MINIMUM ACCEPTABLE. BETTER GRADES MAY BE SUBSTITUTED.
3. LUMBER EXPOSED TO THE WEATHER TO BE PRESSURE TREATED TO RESIST DECAY.
- B. SHEATHING (WOOD STRUCTURAL PANEL)
1. ROOF SHEATHING: 1/2" (NOMINAL) RATED 48/24.
2. FLOOR SHEATHING: 3/4" (NOMINAL) RATED 48/24. FOR MAXIMUM JOIST SPACING. TONGUE-AND-GROOVE GLUED TO SUPPORTS.
3. WALL SHEATHING: 1/2" NOMINAL.
4. WOOD STRUCTURAL PANELS TO BE A.P.A. RATED AND EXPOSURE 1. PANELS TO BE MANU'D PER U.S. DEPARTMENT OF COMMERCE PRODUCT STANDARDS PS1 OR PS2.
- C. LAMINATED VENEER LUMBER (LVL):
- Fb = 2600 PSI, E = 1.9 x 10 E6 PSI. WRAP OR TREAT ALL ENGINEERED LUMBER TO PROTECT AGAINST EXPOSURE.
- D. HARDWARE:
1. BOLTS AND THREADED ROD: ASTM A307 (MIN.)
2. PREFABRICATED CONNECTORS: "SIMPSON STRONG TIE"/"USP" OR EQUAL.
3. NAILS: BOX WIRE NAILS. UNLESS COMMON NAILS REQ'D BY METAL CONNECTORS.
4. USE GALVANIZED OR STAINLESS STEEL HARDWARE FOR ALL EXTERIOR FRAMING.
2. NAILING: SHALL BE PER FASTENING SCHEDULE OF THE 2018 IRC BUILDING CODE. FOR PREFABRICATED CONNECTORS USE ALL FASTENERS AS PRESCRIBED BY THE MANUFACTURER.



1 ROOF PLAN  
S1.2 SCALE: 1/4" = 1'-0"



**APEX ENGINEERS**

1625 LOCUST ST  
KANSAS CITY, MO 64108  
Ph: 816.421.3222  
Fax: 816.421.1050  
www.apex-engineers.com

STRUCTURAL DESIGN REVIEW

KANSAS ENGINEERING LICENSE: 992  
MISSOURI ENGINEERING LICENSE: 2003004673

PROJECT: PETER FEURBORN  
2909 NW AUDOBON LN  
LEE'S SUMMIT, MO 64081

CLIENT: All Weather Services

PROJECT #

-


DRAWING NAME

DATE:	COMMENTS:

DRAWN BY: APEX  
CHECKED BY: APEX

SHEET #

**S1.2**



**APEX**  
ENGINEERS

1625 LOCUST ST  
KANSAS CITY, MO 64108  
Ph: 816.421.3222  
Fax: 816.421.1050  
www.apex-engineers.com

STRUCTURAL DESIGN REVIEW

KANSAS ENGINEERING LICENSE:  
992  
MISSOURI ENGINEERING LICENSE:  
2003004673

PROJECT:

PETER FEURBORN  
2909 NW AUDOBON LN  
LEE'S SUMMIT, MO 64081

CLIENT:

All Weather Services

PROJECT #

-

DRAWING NAME

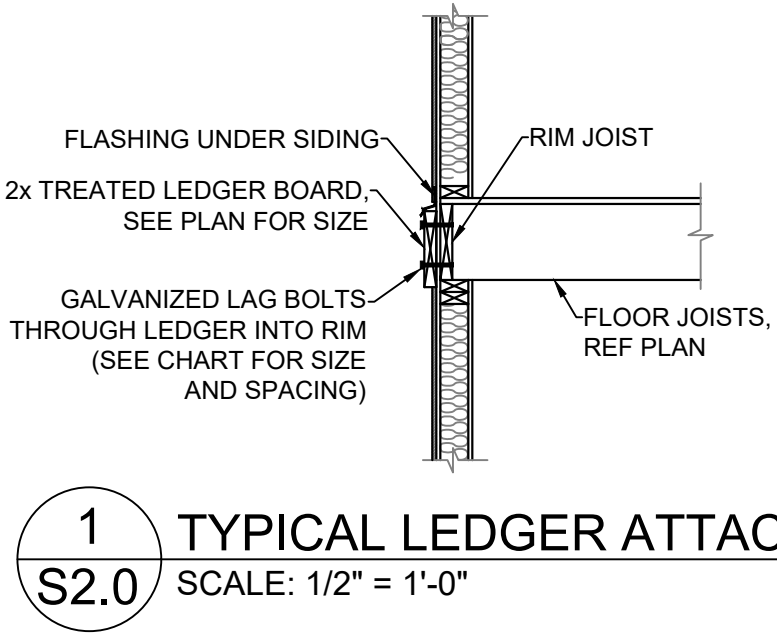
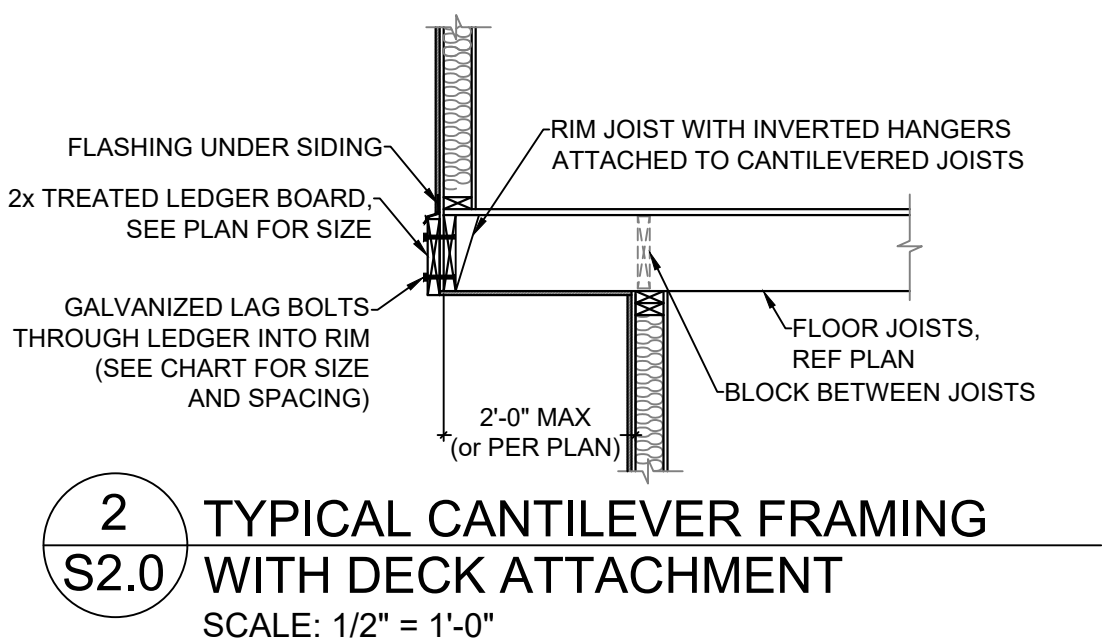
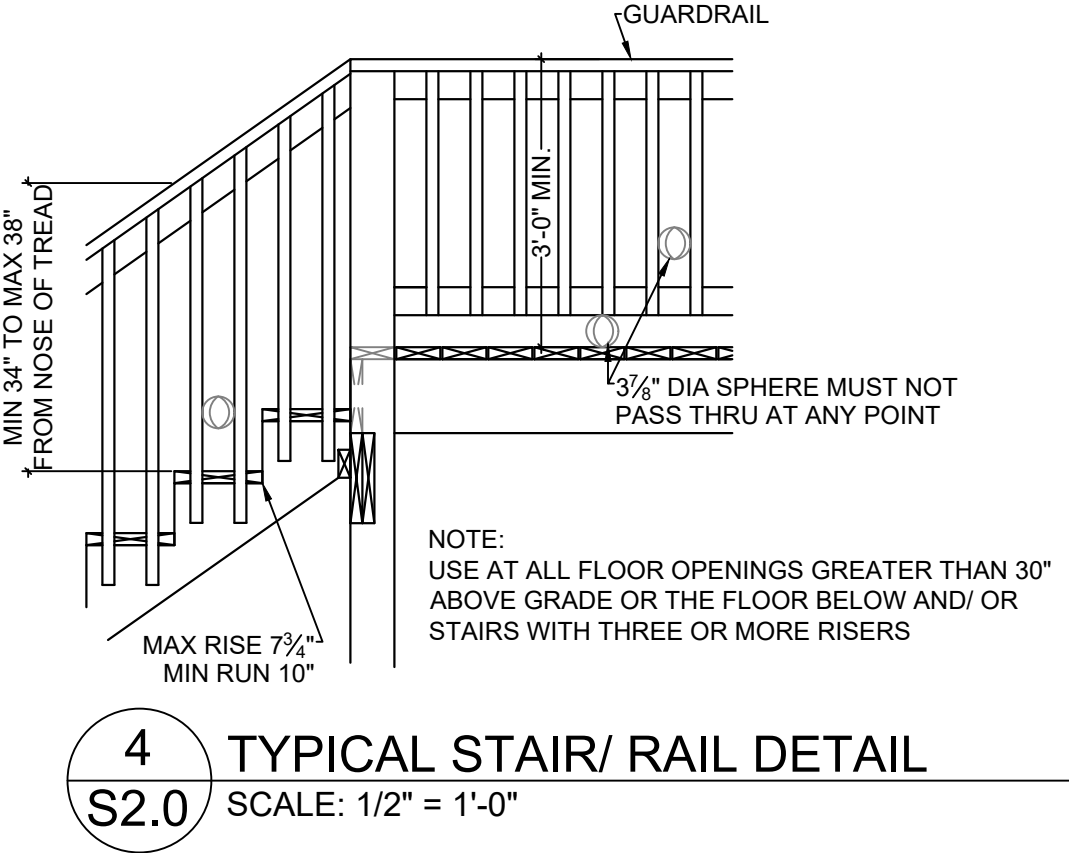
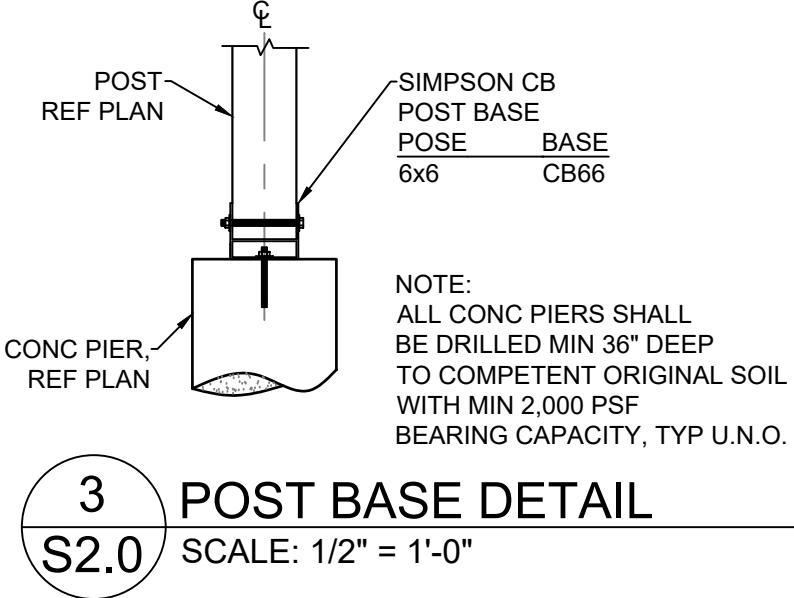
DATE:

COMMENTS:

DRAWN BY: APEX  
CHECKED BY: APEX

SHEET #

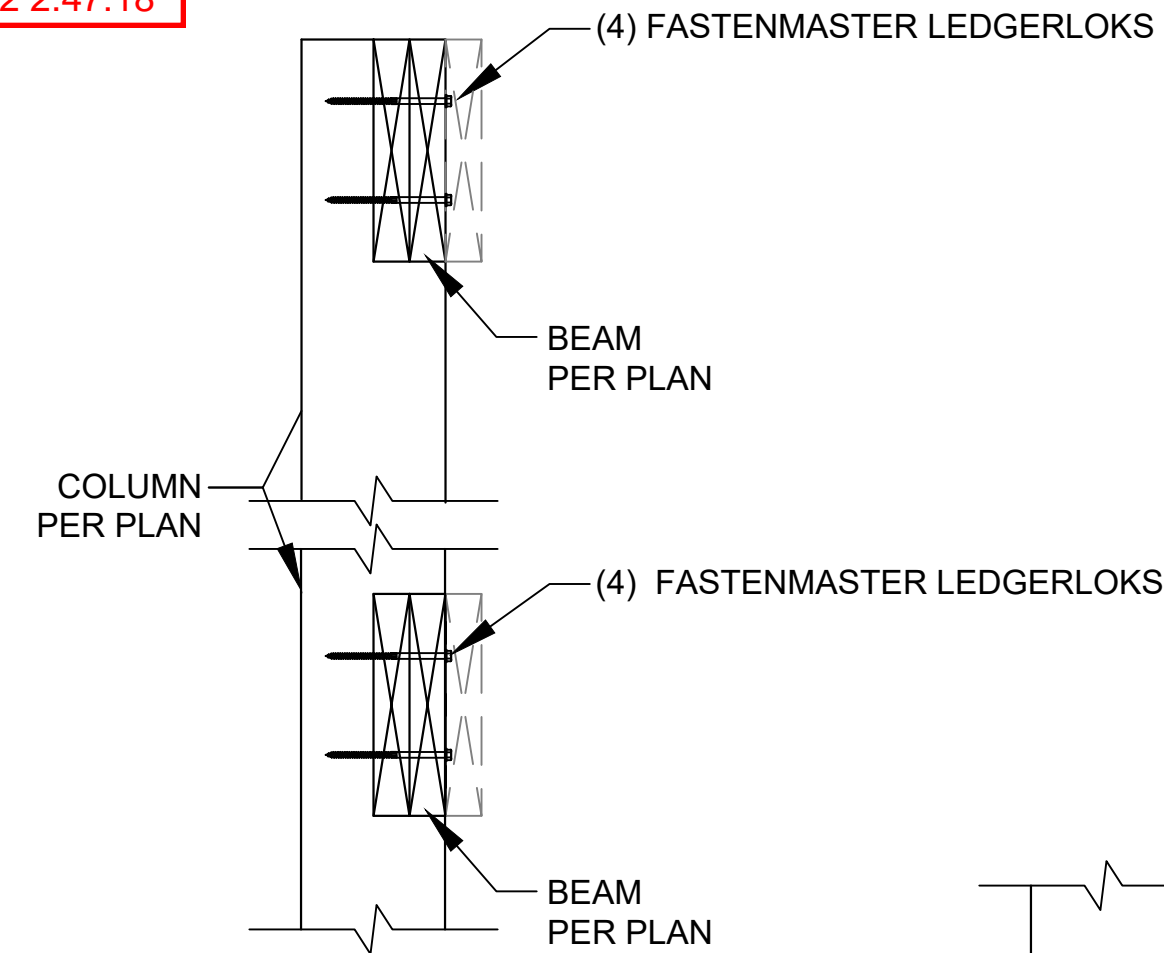
S2.0



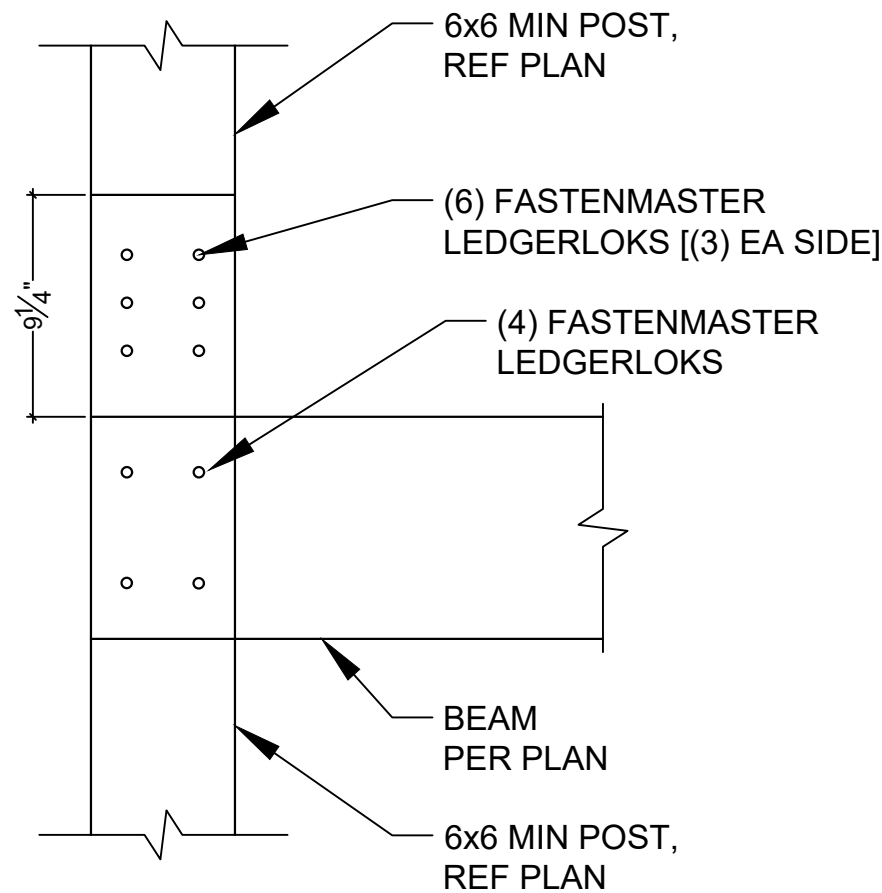
NOTE:  
CHART IS APPLICABLE ONLY WHEN DECK IS SHOWN ON APPROVED PLAN.

DECK JOIST SPAN	1/2" DIA LAG SPACING	EQUIVALENT SPACING FOR 16" OC JOIST BAYS
UP TO 10'-0"	16" OC	N/A
10'-0" - 14'-0"	12" OC	16" OC DBL EVERY OTHER
14'-0" - 18'-0"	8" OC	16" OC DBL EVERY JOIST BAY

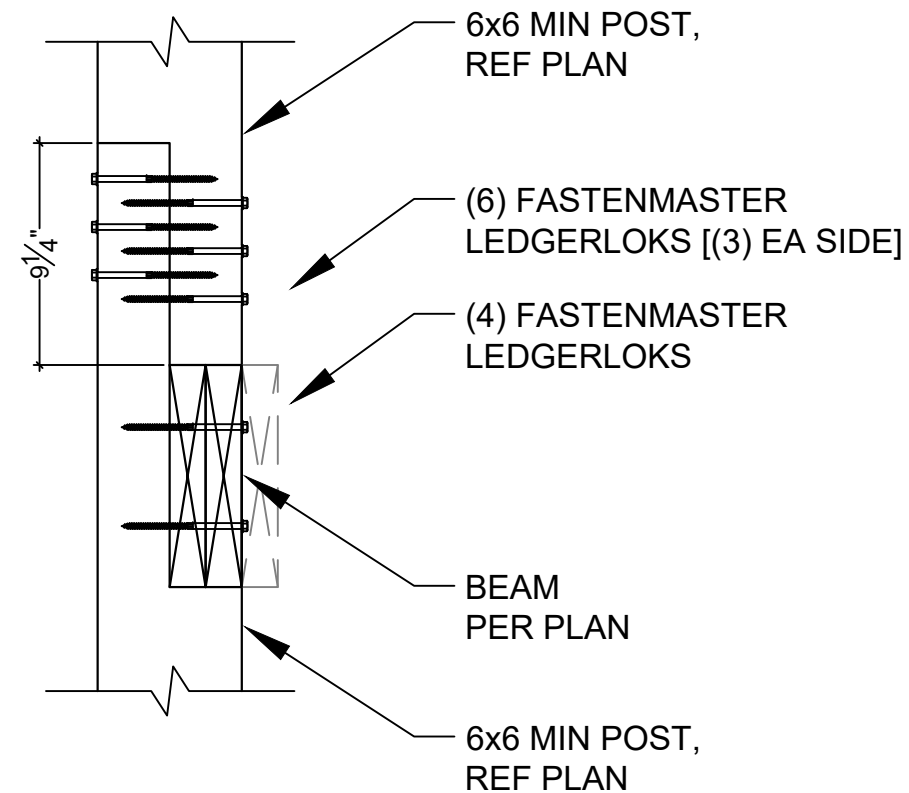




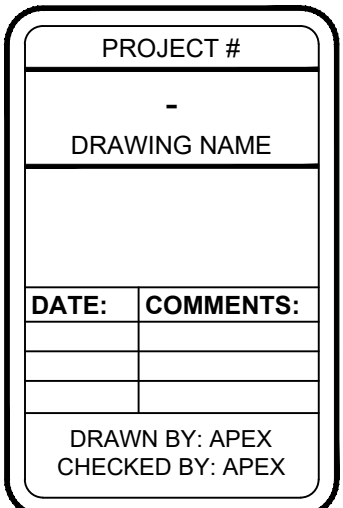
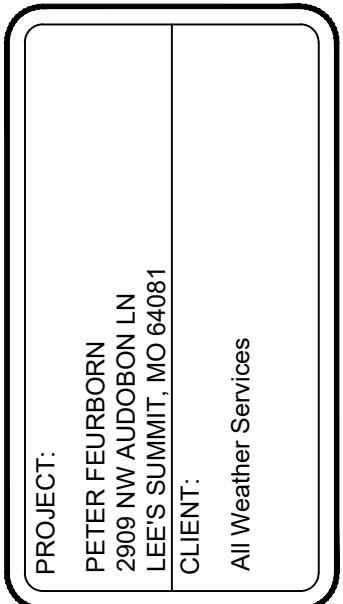
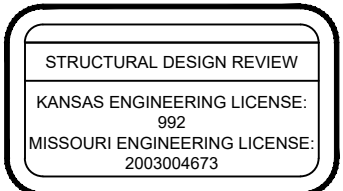
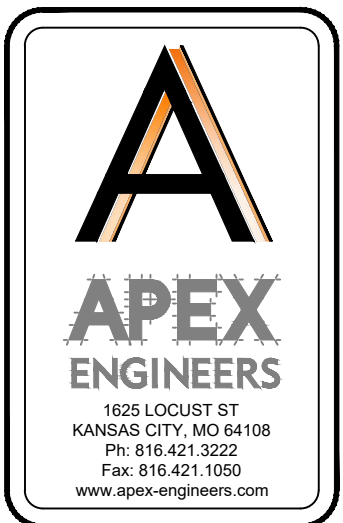
1 DECK BEAM/COLUMN CONNECTION  
S2.1 1 1/2" = 1'-0"



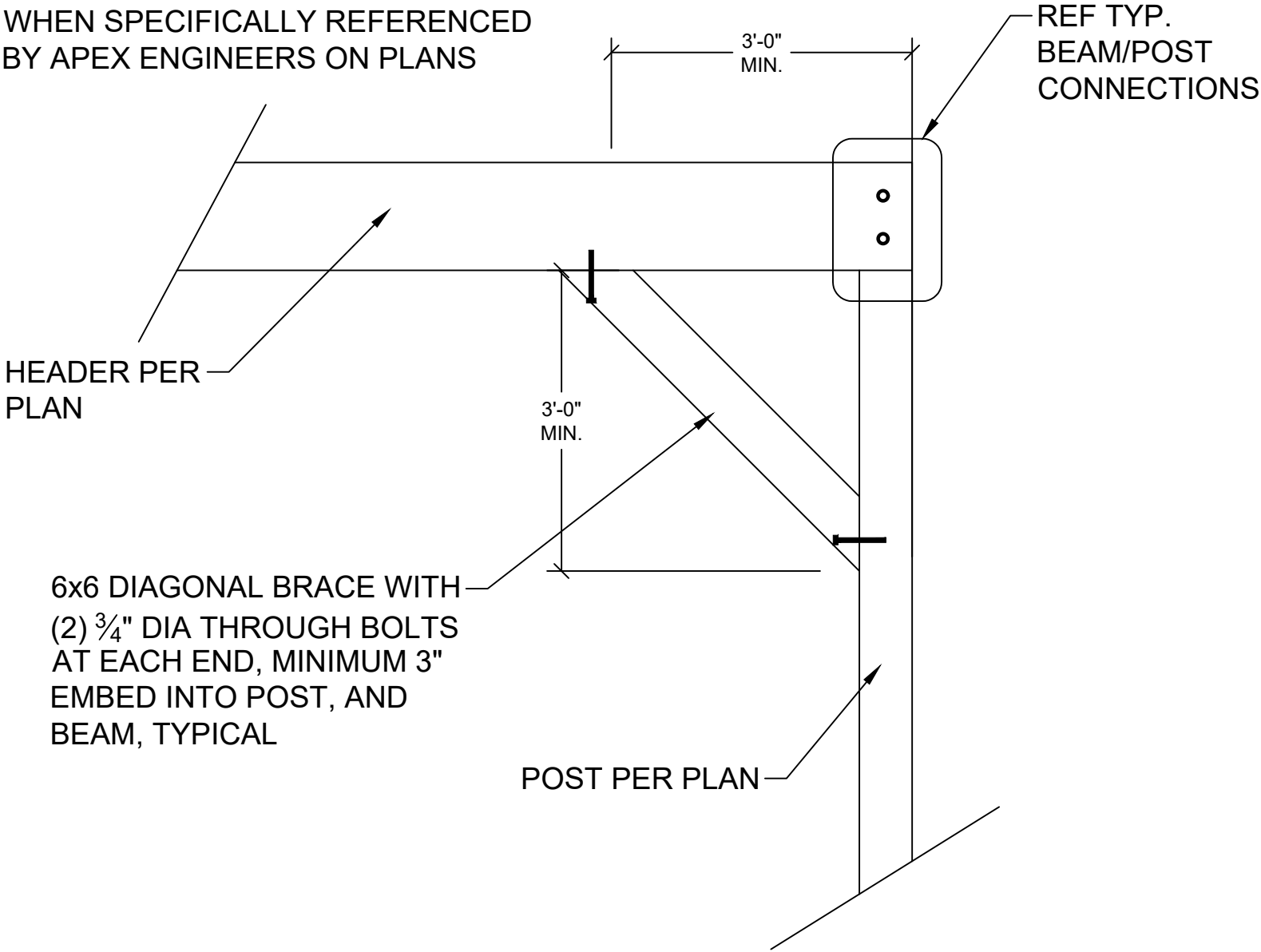
3 SPLICED DECK COLUMN CONNECTION  
S2.1 1 1/2" = 1'-0"



2 SPLICED DECK COLUMN CONNECTION  
S2.1 1 1/2" = 1'-0"




NOTE:  
THIS DETAIL SHOULD ONLY BE USED  
WHEN SPECIFICALLY REFERENCED  
BY APEX ENGINEERS ON PLANS



1 DECK BEAM/COLUMN BRACE  
S2.2 1 1/2" = 1'-0"





**APEX**  
ENGINEERS

1625 LOCUST ST  
KANSAS CITY, MO 64108  
Ph: 816.421.3222  
Fax: 816.421.1050  
www.apex-engineers.com

STRUCTURAL DESIGN REVIEW

KANSAS ENGINEERING LICENSE:  
992  
MISSOURI ENGINEERING LICENSE:  
2003004673

PROJECT:

PETER FEURBORN  
2909 NW AUDOBON LN  
LEE'S SUMMIT, MO 64081

CLIENT:

All Weather Services

PROJECT #

-

DRAWING NAME

DATE:

COMMENTS:

DRAWN BY: APEX

CHECKED BY: APEX

SHEET #

S2.2