**NEW BUILDING FOR:** 

# PALMYRA UNITED METHODIST CHURCH

**PALMYRA, MO 63461** 

# SITE PREP; STRUCTURAL & BUILDING SHELL BID PACKAGE WITH MINOR MEP INFRASTRUCTURE SYSTEMS

**ARCHITECT OF RECORD** 

E102



architects • engineers • interior designers

**CONTACT PERSON: JACQUES L. REYNOLDS MISSOURI ARCHITECT LICENSE NO. 2007030508** PROJECT NO. 5356

**ARCHITECTURAL CORPORATION LICENSE #000423 ENGINEERING CORPORATION LICENSE #02014009673** 

# **INDEX OF DRAWINGS**

TITLE G001	TITLE PAGE
CIVIL C101	SITE GRADING PLAN
C102 C103	SITE LAYOUT PLAN SITE UTILTY PLAN
STRUCTURAL	-
S001	STRUCTURAL NOTES
S002	STRUCTURAL NOTES
S101	FOUNDATION PLAN
S102	LOW ROOF FRAMING PLAN
S103	UPPER ROOF FRAMING PLAN
S201	STRUCTURAL SECTIONS
S301	FOUNDATION / CONCRETE DETAILS
S302	FOUNDATION / CONCRETE DETAILS
S303	FOUNDATION / CONCRETE DETAILS
S501	STEEL DETAILS
S601	WOOD DETAILS
ARCHITECTU	RAL
A101	FLOOR PLANS
A102	FUTURE BUILD OUT FLOOR PLANS
A103	ROOF PLAN
A201	EXTERIOR ELEVATIONS
A202	EXTERIOR ELEVATIONS
A301	BUILDING SECTIONS
A302	WALL SECTIONS
A303	WALL SECTIONS & SCHEDULES
A401	STAIR SECTIONS AND DETAILS
A402	CANOPY SECTIONS AND DETAILS
A501	DETAILS
MECHANICAL	
M101	MECHANICAL PLANS
PLUMBING	
P101	PLUMBING PLANS
ELECTRICAL	
E101	MAIN LEVEL PLAN

LOWER LEVEL PLAN & DETAILS

# **GENERAL NOTES**

1. CONTRACTOR TO VERIFY ALL DIMENSIONS. 2. ANY DISCREPANCIES BETWEEN STATED AND EXISTING CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT.

3. DISCREPANCIES OR CONFLICTS BETWEEN SPECIFICATIONS AND DRAWINGS SHALL BE MADE KNOWN TO THE ARCHITECT FOR CLARIFICATION.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THOSE AREAS TO REMAIN UNDISTURBED DURING CONSTRUCTION.

5. THE CONTRACTOR WITH THE COOPERATION OF THE OWNER SHALL TAKE NECESSARY PRECAUTIONS, AS PER THE WRITTEN SPECIFICATIONS, TO MAINTAIN SAFETY AT THE CONSTRUCTION SITE, AND HE IS SOLELY RESPONSIBLE FOR SAFETY MEASURES. THE CONTRACTOR IS ALSO SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, AND TECHNIQUES REGARDING EXECUTION OF THE WORK.

CONSTRUCTION.

7. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL PERMITS AND PAY ALL LEGAL FEES. HE SHALL ALSO COMPLY WITH ALL CITY, COUNTY, AND STATE BUILDING LAWS, ORDINANCES, OR REGULATIONS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE PREMISES OR ADJACENT PREMISES, OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION OF THE WORK, CAUSED BY HIMSELF, HIS SUBCONTRACTORS, OR THE CARELESSNESS OF ANY OF HIS EMPLOYEES.

FOR ITS SAFETY.

10. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY TEMPORARY MEASURES FOR THE PROTECTION OF THE WORK, INCLUDING BARRICADES, WARNING SIGNS, LIGHTS, ETC.

6. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL AND STATE CODES AND RECEIVE LOCAL AND STATE APPROVAL WHERE NECESSARY PRIOR TO

9. THE CONTRACTOR MUST UNDERSTAND THAT THE WORK IS ENTIRELY AT HIS RISK UNTIL SAME IS ACCEPTED, AND HE WILL BE HELD RESPONSIBLE

# **ALTERNATES - SEE SPEC 01 2300**

# ROOF:

ALTERNATE BID A-1:	STANDING SEAM ROOF SYSTEM. REFER TO SPEC SECTION 13 3419.
	(BASE BID - EXPOSED FASTENER SYSTEM. REFER TO SPEC SECTION 13 3419.)
EXTERIOR WALL CLA	DDING:
ALTERNATE BID A-2:	INSULATED METAL PANEL SYSTEM. REFER TO SPEC SECTION 13 3419.
	(BASE BID - SINGLE SKIN METAL PANEL W/ EXPOSED FASTENERS. REFER TO SPEC SECTION 13 3419
MASONRY:	
ALTERNATE BID A-3:	PARTIAL HEIGHT MASONRY AS NOTED ON DTL. 1/A302 WITH SINGLE SKIN METAL PANEL ABOVE.
	(BASE BID - FULL HEIGHT MASONRY AS INDICATED ON ELEVATION 2/A202.)
CLERESTORY WINDO	WS:
ALTERNATE BID A-4:	OMIT ALL CLERESTORY WINDOWS AS INDICATED ON DRAWING SHEET A202.
	(BASE BID - INSTALL CLERESTORY WINDOWS AS INDICATED ON DRAWING SHEET A202)
STEEPLE:	
ALTERNATE BID A-5:	OMIT THE STEEPLE IN ITS ENTIRETY. PROVIDE STRUCTURAL ROOF FRAMING FOR FUTURE INSTALLA
	(BASE BID - INSTALL THE STEEPLE AS INDICATED ON DRAWING SHEETS A201 AND A202)
COVERED DROP-OFF	<u>.</u>
ALTERNATE BID A-6:	REMOVE THE COVERED DROP-OFF AS INDICATED ON ELEVATION 2/A202.
	(BASE BID - INSTALL THE COVERED DROP OFF AS INDICATED ON ELEVATION 2/A202)

		<b>ABABABABABABABABABABABABABABABABABABAB</b>
		CURRENT 05/17/19 DATE: JACQUES L REYNOLDS L REYNN H REYNOLDS L REYNOLDS L REYNOLDS L REYNN H REYNN
	WALL / PARTITION TYPES	LICENSE EXPIRES: 12/31/19
	CONCRETE FOUNDATION WALL, 03 3000 FLUID APPLIED WATERPROOFING WHERE BASEMENT EXISTS, SEE SPEC	METHODIS1
В	METAL PANEL, 13 3419 2 X 6 WOOD STUD WALL, 06 1000 BATT INSULATION, 07 2100	ZA UNITED
¢C	4" NOM. SPLIT FACE CMU, OR 4" NOM. BRICK VENEER, SEE ELEVATIONS, 04 2000 AIR SPACE WEATHER BARRIER, SEE SPEC 2 x 6 WOOD STUD WALL, 06 1000 BATT INSULATION 07 2100	NEW BUILDING PALMYF CHURCH PALMYRA, MO 6
	METAL PANEL, 13 3419 8" GIRT, 13 3419 BATT INSULATION, 13 3419	FOR CONSTRUCTION SET ISSUE DATE: 05/17/19 DATE REMARKS 0
1		

ATION.

TION NTS **JCTION** 5/17/19 ARKS PROJECT NUMBER: 5356 TITLE PAGE DWG. NO. **G00**<sup>-</sup>









1. STRUCTURAL DRAWINGS ARE TO BE COORDINATED AND USED IN CONJUNCTION WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS. SEE MECHANICAL DRAWINGS FOR EQUIPMENT PADS, BASES, SUPPORTS, AND DUCT PENETRATIONS.

2. ARCHITECHNICS, INC. SHALL NOT BE RESPONSIBLE FOR, NOR HAVE CONTROL OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES. SEQUENCES OR PROCEDURES FOR THE SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THIS PROJECT. AND SHALL NOT BE RESPONSIBLE FOR CONTRACTOR'S FAILURE TO CARRY OUT HIS WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

3. ARCHITECHNICS, INC. SHALL NOT BE RESPONSIBLE FOR, NOR HAVE CONTROL OVER, THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, ANY OF THEIR AGENTS, OR EMPLOYEES, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

4. THE CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR ALL TEMPORARY SHORING AND BRACING REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT. ALL SHORING AND BRACING MEMBERS AND CONNECTIONS SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT THE IMPOSED LOADS. TEMPORARY MEMBERS AND CONNECTIONS SHALL NOT BE REMOVED UNTIL PERMANENT MEMBERS ARE IN PLACE AND FINAL CONNECTIONS ARE MADE.

5. CONTRACTOR SHALL VERIFY IN FIELD ALL DIMENSIONS, ELEVATIONS AND MEMBER SIZES AS SHOWN ON THE CONTRACT DRAWINGS FOR THE EXISTING CONSTRUCTION, PRIOR TO THE DETAILING OR FABRICATION OF ANY NEW STRUCTURAL ELEMENT CONTRACTOR SHALL DOCUMENT ANY CONSTRUCTION-RELATED DISCREPANCIES. CONTRACTOR SHALL FURNISH THE ABOVE INFORMATION IN THE FORM OF DETAILED SKETCHES TO THE ARCHITECT / STRUCTURAL ENGINEER FOR REVIEW (28) CALENDAR DAYS PRIOR TO THE SCHEDULED START OF ANY DETAILING OR **FABRICATION** 

6. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE AND SETTLEMENT OF EXISTING OR NEW CONSTRUCTION INSIDE OR OUTSIDE THE PROJECT LIMITS DURING EXCAVATION AND FOUNDATION CONSTRUCTION. ANY DAMAGE TO NEW OR EXISTING CONSTRUCTION INSIDE OR OUTSIDE OF THE PROJECT LIMITS, CAUSED BY CONSTRUCTION TECHNIQUES IS THE RESPONSIBILITY OF THE CONTRACTOR.

7. NO FIELD MODIFICATIONS TO ANY STRUCTURAL COMPONENTS SHALL BE MADE WITHOUT PRIOR APPROVAL BY THE ARCHITECT / STRUCTURAL ENGINEER. THIS INCLUDES, BUT IS NOT LIMITED TO REVISIONS DUE TO MISLOCATION, MISFIT, OR ANY OTHER CONSTRUCTION ERRORS.

8. NO OPENING SHALL BE PLACED IN ANY STRUCTURAL MEMBER (OTHER THAN AS INDICATED ON APPROVED SHOP DRAWINGS) UNTIL THE LOCATION HAS BEEN APPROVED BY THE ARCHITECT / STRUCTURAL ENGINEER.

9. PROVIDE SLEEVE LAYOUTS FOR ALL PENETRATIONS THROUGH STRUCTURAL MEMBERS (ALL TRADES ARE INCLUDED). LAYOUTS ARE TO BE SUBMITTED TO THE ARCHITECT / STRUCTURAL ENGINEER FOR **REVIEW PRIOR TO CONSTRUCTION.** 

10. SUPPORT ALL ROOF MOUNTED EQUIPMENT OR EQUIPMENT SUSPENDED FROM FLOORS OR THE ROOF ONLY ON/FROM BEAMS DESIGNATED FOR SUCH PURPOSE. IF NO SUPPORT HAS BEEN DESIGNATED, OR IF A QUESTION ARISES, NOTIFY ARCHITECT / STRUCTURAL ENGINEER PRIOR TO ERECTION OF EQUIPMENT.

11. ALL DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS ARE INTENDED TO BE TYPICAL FOR SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE NOTED, FOR DETAILS AND DIMENSIONS NOT INDICATED ON THE STRUCTURAL DRAWINGS, SEE THE ARCHITECTURAL DRAWINGS.

12. MATERIALS AND EQUIPMENT SHALL BE STORED AND TRANSPORTED IN A MANNER SO AS NOT TO EXCEED THE ALLOWABLE FLOOR OR ROOF LOADING INDICATED IN THE "SCHEDULE OF BUILDING DESIGN LOADS" ON THE CONSTRUCTION DOCUMENTS OR THE ALLOWABLE CAPACITY OF THE CONSTRUCTED MEMBER, WHICHEVER IS SMALLER.

# SHOP DRAWINGS

1. ALL SHOP DRAWING SUBMITTALS SHALL BE AS DESCRIBED IN THE PROJECT SPECIFICATIONS OR IN THESE NOTES IF THERE IS NO PROJECT SPECIFICATION.

2. SHOP DRAWINGS AND RELATED MATERIALS PREPARED BY SUPPLIERS AND SUBCONTRACTORS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING TO THE ARCHITECT / STRUCTURAL ENGINEER. THE GENERAL CONTRACTOR SHALL REVIEW ALL SUBMISSIONS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, MEANS, METHODS, TECHNIQUES, SEQUENCES. AND OPERATION OF CONSTRUCTION, TECHNICAL CONTENT, COORDINATION OF TRADES, DIMENSIONAL ACCURACY, SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL APPROVE AND SO STAMP EACH SUBMISSION

3. THE STRUCTURAL DRAWINGS SHALL NOT BE USED AS THE BACKGROUNDS FOR THE PRODUCTION OF ANY SHOP DRAWINGS THAT ARE SUBMITTED FOR REVIEW.

4. SUBMIT (1) ONE REPRODUCIBLE AND (1) PRINT FOR REVIEW. (1) ONE REPRODUCIBLE WILL BE RETURNED UPON COMPLETION OF REVIEW. MULTIPLE COPIES OF DRAWINGS WILL NOT BE MARKED-UP WITH REVIEW COMMENTS.

5. ANY DEVIATIONS FROM THE ORIGINAL DESIGN OR DESIGN CRITERIA AS SPECIFIED ON THE CONTRACT DOCUMENTS OF THE PROJECT SHALL BE NOTED (BUBBLED, NOTE, ETC.) ON THE SHOP DRAWINGS THAT ARE SUBMITTED FOR APPROVAL.

6. ALL CHANGES TO RESUBMITTED SHOP DRAWINGS SHALL BE BUBBLED.

## **FOUNDATIONS**

1. FOUNDATION DESIGN IS BASED ON THE SUBSURFACE SOIL INVESTIGATION PERFORMED BY GEOTECHNICS, DATED MARCH 14, 2019. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS SPECIFIED IN THIS REPORTS.

2. FOUNDATION STRUCTURE IS BASED ON THE USE OF CONTINUOUS STRIP FOOTINGS APPLYING A MAXIMUM PRESSURE OF 2,000 POUNDS PER SQUARE FOOT TO THE SOIL OR ISOLATED SPREAD FOOTINGS APPLYING A MAXIMUM PRESSURE OF 2,000 POUNDS PER SQUARE FOOT TO THE SOIL.

3. ALL ENGINEERED FILL IS TO BE COMPACTED TO ACHIEVE THIS BEARING PRESSURE AS VERIFIED BY FIELD TESTING BY A LICENSED GEOTECHNICAL ENGINEER. IF FIELD CONDITIONS DO NOT PROVIDE THIS MINIMUM VALUE. THE ARCHITECT AND ARCHITECT / STRUCTURAL ENGINEER SHOULD BE NOTIFIED IMMEDIATELY.

## FOUNDATIONS (CONT'D)

4. PER THE ABOVE REFERENCED REPORT, THE LATERAL EARTH PRESSURE IS AS FOLLOWS:

A. PASSIVE EARTH PRESSURE (NET ALLOWABLE) = 200 PSF/FOOT

5. SHOULD UNSUITABLE BEARING CONDITIONS BE ENCOUNTERED DURING EXCAVATION, NOTIFY THE OWNER, ARCHITECT, AND ARCHITECT / STRUCTURAL ENGINEER BEFORE CONTINUING WITH CONSTRUCTION.

6. THE CONCRETE FOR EACH ISOLATED FOOTING SHALL BE PLACED IN ONE (1) CONTINUOUS PLACEMENT.

7. ALL SLABS-ON-GRADE SHALL BE PLACED OVER AN EXTREME LOW PERMEANCE VAPOR BARRIER, 15 MIL MINIMUM THICKNESS, OVER A BASE/SUBBASE AS SPECIFIED BY THE GEOTECHNICAL ENGINEER FOR THE PROJECT. EXISTING SUBBASE WILL BE COMPACTED IN PLACE OR WILL BE CUT OUT AND REPLACED WITH AN ENGINEERED FILL AS SPECIFIED BY A GEOTECHNICAL ENGINEER.

8. THE CONTRACTOR MUST PROVIDE SURFACE DRAINAGE AND PUMPS TO PROTECT ALL EXCAVATION FROM FLOODING. FLOODING OF ANY EXCAVATION AFTER APPROVAL OF THE SUBGRADE WILL BE CAUSE FOR COMPLETE RE-PREPARATION AND RE-APPROVAL OF THE SUBGRADE.

9. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY WATER, FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER PLACING OF CONCRETE AND UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE.

10. THE CONTRACTOR SHALL REVIEW ALL EXISTING SITE CONDITIONS AND THE SUBSURFACE SOILS EXPLORATION REPORT AND ESTABLISH SPECIFIC "CONSTRUCTION PROCEDURES AND SEQUENCES" FOR THE EXCAVATION, COMPACTION, FILL AND INSTALLATION OF THE NEW BUILDING FOUNDATION. SUBMIT THESE FOR REVIEW TO THE OWNER'S SOIL TESTING LABORATORY, OWNER'S REPRESENTATIVE, ARCHITECT / STRUCTURAL ENGINEER. THE CONTRACTOR'S DESIGN, MEANS AND METHODS FOR FOUNDATION CONSTRUCTION SHALL MINIMIZE SETTLEMENT OF ADJACENT CONSTRUCTION. THE CONTRACTOR SHALL BEAR SOLE RESPONSIBILITY FOR ALL REMEDIAL WORK RESULTING FROM SUCH SETTLEMENT.

11. RECORDS OF ANY EXISTING SUBGRADE INTERFERENCES OTHER THAN THOSE INTERFERENCES SHOWN OR INDICATED ON THE CONSTRUCTION DOCUMENTS, ARE NOT CURRENTLY AVAILABLE. DURING EXCAVATION WORK, INTERFERENCES MAY BE DISCOVERED. CONTRACTOR SHALL DOCUMENT CONSTRUCTION- RELATED DIMENSIONS OF ALL INTERFERENCES. CONTRACTOR TO FURNISH THE ABOVE INFORMATION IN THE FORM OF DETAILED SKETCHES TO THE ARCHITECT / STRUCTURAL ENGINEER FOR REVIEW.

12. REFER TO THE TESTING AND INSPECTION SECTION OF THESE NOTES FOR THE FOUNDATION TESTING AND INSPECTION REQUIREMENTS.

# STRUCTURAL CONCRETE

1. CONCRETE MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE PUBLICATIONS:

A. ACI 301 - "SPECIFICATIONS FOR STRUCTURAL CONCRETE A
FOR BUILDINGS"
B. ACI 302 - "RECOMMENDED PRACTICE FOR CONCRETE FLOOR
AND SLAB CONSTRUCTION"
C. ACI 304 - "ACI MANUAL OF CONCRETE INSPECTION"
D. ACI 311 - "RECOMMENDED PRACTICE FOR MEASURING, MIXING
TRANSPORTING AND PLACING CONCRETE"
E. ACI 315 - "DETAILS AND DETAILING OF CONCRETE
REINFORCEMENT"
F. ACI 318 - "BUILDING CODE REQUIREMENTS FOR REINFORCED
CONCRETE"
G. ACI 347 - "RECOMMENDED PRACTICE FOR CONCRETE
FORMWORK"

2. PROVIDE CONCRETE TO OBTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS:

A. SPREAD FOOTINGS	f'c = 4000 PSI
B. WALL FOOTINGS	f'c = 4000 PSI
C. PIERS	f'c = 4000 PSI
D. INTERIOR SLABS-ON-GRADE	f'c = 4000 PS
E. EXTERIOR SLABS-ON-GRADE	f'c = 4000 PS

3. EXTERIOR FLATWORK, STAIRS, RAMPS, ETC. SHALL HAVE A WATER/CEMENT RATIO < 0.40

4. LABORATORY TEST REPORTS OR MATERIAL CERTIFICATES FOR CONCRETE MATERIALS AND MIX DESIGN TEST DATA, IN CONFORMANCE WITH ACI STANDARDS, SHALL BE SUBMITTED FOR REVIEW FOR EACH TYPE OF CONCRETE TO BE USED. EACH SUBMITTED MIX DESIGN SHALL IDENTIFY THE APPLICATION FOR WHICH THE MIX WILL BE USED.

5. ALL CONCRETE SHALL BE NORMAL WEIGHT UNLESS NOTED OTHERWISE.

6. ALL CONCRETE ELEMENTS SUBJECT TO FREEZING AND THAWING DURING CONSTRUCTION OR OVER THE SERVICE LIFE OF THE STRUCTURE SHALL CONTAIN AN AIR ENTRAINMENT ADMIXTURE AS SPECIFIED IN ACI-318, PART 3.

7. NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.

8. THE CONTRACTOR SHALL SUBMIT CHECKED, DETAILED REINFORCEMENT SHOP DRAWINGS SHOWING THE LOCATIONS AND DETAILING OF ALL FOOTINGS, WALLS, PIERS, BEAMS, COLUMNS, SLABS, CONSTRUCTION JOINTS, CONTROL JOINTS, ETC., PRIOR TO FABRICATION. DETAILS SHALL INCLUDE STEEL SIZES, LAPS, SPACING AND PLACEMENT.

9. THE MINIMUM CONCRETE COVER FOR CAST-IN-PLACE (NON-PRESTRESSED) CONCRETE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

	A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3
	B. CONCRETE EXPOSED TO EARTH OR WEATHER:	
	i. NO. 6 THROUGH NO. 18 BARS	2
	ii. NO. 5 BAR, W31 OR D31 WIRE,	
	AND SMALLER1	1/2
	C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT W GROUND:	VITI
	i. SLABS, WALLS, JOISTS:	
	NO. 14 AND NO. 18 BARS1	1/2
	NO. 11 BAR AND SMALLER	.3/4
	ii. BEAMS, COLUMNS:	
	PRIMARY REINFORCEMENT, TIES,	
	STIRRUPS, SPIRALS1	1/2
	III. SHELLS, FOLDED PLATE MEMBERS:	~
		2
	NO. 5 BAR, W31 OK D31 WIRE,	1/0
	AND SMALLERI	1/2
)	PROVIDE ADEQUATE BOI STERS HI-CHAIRS SUPPORT BARS F	тс

TO MAINTAIN SPECIFIED CLEARANCES FOR THE ENTIRE LENGTH OF ALL REINFORCING BARS. PROVIDE CONTINUOUS #4 SPACER BARS IN WALLS AND SLABS TO SUPPORT DOWELS.

## STRUCTURAL CONCRETE (CONT'D)

11. PROVIDE PLASTIC TIPPED ACCESSORIES FOR REINFORCEMENT AT ALL FACES OF EXPOSED CONCRETE, INTERIOR OR EXTERIOR.

12. ALL FIELD BENDING OF REINFORCEMENT SHALL BE DONE COLD. HEATING OF BARS WILL NOT BE PERMITTED.

13. ALL CONSTRUCTION JOINTS, EXCLUDING SLAB-ON-GRADE CONSTRUCTION JOINTS, SHALL BE WIRE BRUSHED, CLEANED, MOISTENED AND A CONCRETE SLURRY APPLIED IMMEDIATELY PRIOR TO PLACING NEW CONCRETE.

14. CONTROL AND CONSTRUCTION JOINTS IN NON-STRUCTURAL SLABS-ON-GRADE SHALL BE PROVIDED AS SHOWN ON DRAWINGS AND DETAILS. CONTROL JOINTS SHALL BE SPACED AT A MAXIMUM OF 15'-0" ON CENTER IN ANY DIRECTION. SAWED CONTROL JOINTS SHALL BE OF THE SOFT-CUT TYPE, 0.25 TIMES THE SLAB THICKNESS DEEP, AND CUT AS SOON AS PRACTICAL WITHOUT DISLODGING THE COARSE AGGREGATE AS PART OF THE FINISHING OPERATION. CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS INDICATING ALL CONTROL JOINTS FOR ALL SLAB-ON-GRADE CONSTRUCTION FOR REVIEW PRIOR TO CONSTRUCTING ALL SLABS-ON-GRADE.

15. CONCRETE SLABS-ON-GRADE SHALL BE A MINIMUM OF 5 INCH THICKNESS UNLESS NOTED OTHERWISE. CONCRETE FOR SLAB-ON-GRADE CONSTRUCTION SHALL USE A DESIGN MIX THAT INCORPORATES 1-1/2" MAXIMUM SIZE AGGREGATE, WELL GRADED AND TYPE I OR TYPE II CEMENT. THE MIX SHALL CONTAIN NO ADMIXTURES THAT EXACERBATE SHRINKAGE. PLACEMENT SLUMP

16. CONSTRUCTION JOINTS SHALL CONTAIN 1/4"x4-1/2" DIAMOND DOWEL PLATES SPACED AT 18" ON CENTER AND PLACED AT 1/2 OF THE SLAB DEPTH PERPENDICULAR TO THE PLANE OF THE JOINT.

17. AT EXPOSED CONCRETE ELEMENTS, SEE PROJECT SPECIFICATIONS FOR TYPE OF CONCRETE FINISHING REQUIRED.

18. AT ALL EXPOSED TO VIEW CONCRETE ELEMENTS (i.e. BEAMS, GIRDERS, COLUMNS, TOP OF RETAINING WALLS.ETC.), PROVIDE 3/4" CHAMFER AT EDGES.

19. PITCH ALL SLABS TO DRAINS WHERE DRAINS ARE INDICATED ON CONTRACT DRAWINGS.

20. ADDITIONAL BARS SHALL BE PROVIDED AT ALL OPENINGS IN SLABS-ON-GRADE AND CONCRETE WALLS. AT ALL OPENINGS, PROVIDE MINIMUM OF (2) - #4 BARS AT EACH SIDE EXTENDING 2'-0 BEYOND EACH SIDE OF OPENING.

21. ADDITIONAL BARS PROVIDED: CORNER BARS MATCHING TO HORIZONTAL BARS SHALL BE PROVIDED AT ALL WALL CORNERS AND INTERSECTIONS.

22. AT SLABS-ON-GRADE PROVIDE ADDITIONAL REINFORCING AT RE ENTRANT CORNERS. PROVIDE MINIMUM OF (2) - #4 BARS, 4'-0 LONG CENTERED ABOUT CORNER.

23. NO ALUMINUM OF ANY TYPE SHALL BE ALLOWED IN THE CONCRETE WORK, UNLESS COATED TO PREVENT ALUMINUM CONCRETE REACTION.

24. IN NO CASE SHALL EMBEDDED CONDUIT BE PLACED ABOVE REINFORCING IN SLAB-ON-GRADE CONSTRUCTION. MINIMUM SPACING OF ADJACENT CONDUITS SHALL BE 3 TIMES THE DIAMETER OR WIDTH OF THE LARGEST CONDUIT. MAXIMUM OUTSIDE DIAMETER OF EMBEDDED CONDUIT SHALL BE NO LARGER THAN ONE-THIRD OF THE SLAB THICKNESS.

25. UNLESS OTHERWISE NOTED ON THE DRAWINGS, SLEEVES FOR PIPES AND CONDUITS PENETRATING GRADE BEAMS AND CONCRETE WALLS SHALL BE STEEL PIPE SLEEVES OF NOMINAL DIAMETER 2 INCHES LARGER THAN THE NOMINAL SIZE OF THE PIPE PENETRATING THE STRUCTURAL MEMBER. THE THICKNESS OF THE SLEEVE SHALL CONFORM TO SCHEDULE 40 BUT NEED NOT BE MORE THAN 3/8 INCH. ALL SUCH SLEEVE LOCATIONS SHALL BE REVIEWED BY THE ARCHITECT/ENGINEER PRIOR TO INSTALLATION.

26. PROVIDE WATERSTOPS AT ALL CONSTRUCTION JOINTS LOCATED BELOW GRADE AS SHOWN ON THE DRAWINGS.

27. REFER TO THE SPECIFICATION FOR FLOOR FLATNESS AND FLOOR LEVELNESS REQUIREMENTS.

28. NO CONSTRUCTION SHALL BE MADE WITHOUT REINFORCEMENT. UNLESS OTHERWISE NOTED, THE FOLLOWING PERCENTAGE OF THE GROSS CROSS SECTIONAL AREA SHALL BE PROVIDED AS MINIMUM REINFORCEMENT

0.20%
0.33%
#3@D" (D=MEMBER DEPTH)
#3@10"
0.12% (#5's)
0.20% (#5's)
( , , , , , , , , , , , , , , , , , , ,
0.18% (#5's)

29. ALL REINFORCING STEEL SHALL BE HIGH STRENGTH NEW BILLET STEEL, CONFORMING TO ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE.

29. ALL BAR DETAILING AND ACCESSORIES TO BE FURNISHED SHALI CONFORM TO TYPICAL DETAILS IN THE LATEST ACI STANDARD 315 DETAILING MANUAL, EXCEPT AS OTHERWISE SHOWN, NOTED, OR SPECIFIED.

30. WELDED WIRE FABRIC SHALL CONFORM TO ASTM SPECIFICATIONS A185. ALL WELDED WIRE FABRIC SHALL BE LAPPED TWO PANELS AT EDGES AND ENDS, AND TIED SECURELY. AT EXTERIOR SLABS PROVIDE EPOXY COATED WELDED WIRE FABRIC CONFORMING TO ASTM A884, CLASS A.

31. DETAILING AND ACCESSORIES SHALL CONFORM TO THE ACI DETAILING MANUAL AND TO THE CRSI MANUAL OF STANDARD PRACTICE. CURRENT EDITIONS, UNLESS OTHERWISE NOTED BELOW, ON THE DRAWINGS, OR IN THE SPECIFICATIONS.

32. ALL HOOKS SHALL BE "STANDARD" AS PER ACI STANDARD.

STRUCTURAL CONCRETE (CONT'D)

33. THE MINIMUM LENGTH OF ALL SPLICES NOT DIMENSIONED ON THE DRAWINGS SHALL BE AS FOLLOWS:

BAR	fla	SLAB/BEAM		WALL		COLUMN
SIZE	IC	TOP	OTHER	VERT.	HORIZ.	VERTICAL
	4000	26"	21"	21"	26"	
#4	5000	24"	19"	19"	24"	-
	6000	23"	17"	17"	23"	
	4000	33"	25"	25"	33"	
#5	5000	30"	23"	23"	30"	19"
	6000	28"	21"	21"	28"	
	4000	39"	30"	30"	39"	
#6	5000	36"	28"	28"	36"	23"
	6000	33"	25"	25"	33"	
	4000	71"	55"	55"	71"	
#7	5000	64"	50"	50"	64"	27"
	6000	59"	45"	45"	59"	
	4000	81"	63"	63"	81"	
#8	5000	73"	56"	56"	73"	30"
	6000	67"	51"	51"	67"	
	4000	91"	71"	71"	91"	
#9	5000	82"	63"	63"	82"	34"
	6000	75"	58"	58"	75"	
	4000	102"	78"	78"	102"	
#10	5000	90"	71"	71"	90"	38"
	6000	82"	64"	64"	82"	
	4000	111"	86"	86"	111"	
#11	5000	99"	77"	77"	99"	42"
	6000	91"	71"	71"	91"	

A. TOP BARS ARE HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE.

B. FOR EPOXY COATED BARS MULTIPLY THE LAP LENGTHS SHOWN IN THE TABLE ABOVE BY 1.3 FOR TOP BARS AND 1.5 FOR OTHER BARS.

C. WHERE BARS OF DIFFERENT SIZE ARE TO BE SPLICED, THE SPLICE LENGTH FOR ALL BARS SHALL BE THAT REQUIRED FOR THE LARGER

D. SPLICE LENGTHS SHALL BE SPECIFICALLY DIMENSIONED AT ALL LOCATIONS ON THE SHOP DRAWINGS.

E. FOR CONCRETE STRENGTH BETWEEN LISTED VALUES, USE MINIMUM SPLICE LENGTH OF HIGHER LISTED VALUE.

34. CONTINUOUS TOP AND BOTTOM BARS, OTHER THAN IN FOOTINGS, WHEN SHOWN IN CROSS SECTION ONLY, SHALL BE LAPPED AS FOLLOWS:

A. TOP BARS AT MID SPANS B. BOTTOM BARS CENTERED OVER SUPPORTS.

35. EPOXY ADHESIVE EMBEDDED DOWELS SHALL USE HILTI HY 150 ADHESIVE WITH THE FOLLOWING MINIMUM EMBEDDMENT DEPTHS, UNLESS NOTED OTHERWISE:

#3 - 3"	#8 - 9"
#4 - 5"	#9 - 10"
#5 - 6"	#10 - 12
#6 - 7"	#11 - 14
#7 - 8"	

36. REFER TO THE TESTING AND INSPECTION SECTION OF THESE NOTES FOR THE CONCRETE TESTING AND INSPECTION REQUIREMENTS.

## POST INSTALLED ANCHORS

1. WHERE EPOXY SYSTEM IS INDICATED ON THE PLANS OR DETAILS, USE HILTI HY-200 ADHESIVE IN CONCRETE AND HILTI HY-70 IN SOLID GROUTED MASONRY UNLESS NOTED OTHERWISE. THE CONTRACTOR MAY SUBMIT SUBSTITUTE EPOXY SYSTEMS FOR APPROVAL PROVIDED THEY MEET OR EXCEED THE CAPACITY OF HILTI HY-200 OR THE HILTI HY-70 ADHESIVE SYSTEM.

2. DRILL HOLES TO EPOXY MANUFACTURER'S RECOMMENDED SIZE. CLEAN HOLES WITH A CIRCULAR WIRE OR NYLON BRUSH AND BLOW OUT WITH COMPRESSED AIR.

3. WHERE MECHANICAL EXPANSION ANCHORS ARE INDICATED ON THE PLANS OR DETAILS, USE HILTI KWIK BOLT-III IN CONCRETE UNLESS NOTED OTHERWISE. THE CONTRACTOR MAY SUBMIT SUBSTITUTE EXPANSION ANCHOR SYSTEMS FOR APPROVAL PROVIDED THEY MEET OR EXCEED THE CAPACITY OF HILTI KWIK BOLT III'S.

4. POST INSTALLED ANCHORS MUST BE INSTALLED USING THE SPACING AND EDGE DISTANCES GIVEN ON THE PLANS OR DETAILS. IF FIELD CONDITIONS DICTATE THAT THE ANCHOR SPACING OR EDGE DISTANCES BE MODIFIED, THE CONTRACTOR SHALL SUBMIT A FIELD SKETCH TO THE ARCHITECT / STRUCTURAL ENGINEER FOR REVIEW PRIOR TO MAKING ANY MODIFICATIONS.

## STRUCTURAL STEEL

1. FURNISH STRUCTURAL STEEL IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN (ASD OR LRFD), FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS AND AISC CODE OF STANDARD PRACTICE, LATEST EDITIONS.

2. THE STEEL FABRICATOR/ERECTOR SHALL VERIFY IN FIELD ALL DIMENSIONS, ELEVATIONS AND MEMBER SIZES AS SHOWN ON THE CONTRACT DRAWINGS FOR THE EXISTING CONSTRUCTION, PRIOR TO THE DETAILING OR FABRICATION OF ANY NEW STRUCTURAL ELEMENT. THE STEEL FABRICATOR/ERECTOR SHALL DOCUMENT ANY CONSTRUCTION RELATED DISCREPANCIES. THE STEEL FABRICATOR/ERECTOR SHALL FURNISH THE ABOVE INFORMATION IN THE FORM OF DETAILED SKETCHES TO THE ARCHITECT / STRUCTURAL ENGINEER FOR REVIEW. THERE SHALL BE RESOLUTION TO THE NOTED DISCREPANCIES PRIOR TO FABRICATION OF ANY NEW STRUCTURAL ELEMENTS.

3. STRUCTURAL STEEL SHALL BE AS INDICATED BELOW U.N.O.:

STRUCTURAL SHAPE/MATERIAL	ASTM SPECIFICATION
W-SHAPE	A992
CHANNELS	A36
ANGLES	A36
STEEL PIPE	A53, GRADE B
ROUND HSS	A500, GRADE B
SQUARE & RECTANGULAR HSS	A500, GRADE B
PLATE MATERIAL	A36
ANCHOR BOLT ASSEMBLIES	F1554, GRADE 36

## STRUCTURAL STEEL (CONT'D)

4. ALL STRUCTURAL STEEL FRAMEWORK INCLUDED IN THESE DOCUMENTS ARE CLASSIFIED AS NON-SELF-SUPPORTING. AL CONNECTIONS SPECIFIED HEREIN ARE BASED ON LOADING CONDITIONS OF THE FULLY COMPLETED STRUCTURE IN ITS ENTIRETY INCLUDING THE FUNCTIONS OF THE COLUMN BASE AND ANCHOR BOLTS. INSTABILITIES CAN BE EXPECTED DURI ERECTION PROCESS DUE TO LACK OF INSTALLED ROOF, FLO WALL AND SLAB DIAPHRAGMS AS WELL AS STEEL BRACINGS, CONNECTION RIDIGITIES AND OTHER SUCH STABILIZING ELE THE GENERAL CONTRACTOR SHALL IDENTIFY THE SEQUENC SCHEDULING OF CONSTRUCTION ITEMS AND COORDINATE ACTIVITIES OF ALL TRADES INCLUDING THE STEEL FABRICAT ERECTOR. THE ERECTOR SHALL SUBMIT AN ERECTION PLAN TEMPORARY BRACING SCHEME TO THE CONTRACTOR AND O WHICH IS FOR RECORD PURPOSES ONLY. THIS SUBMITTAL W BE REVIEWED AND IS NOT A DESIGN FUNCTION OF THE ARCHI STRUCTURAL ENGINEER OF RECORD.

5. THE FABRICATOR/ERECTOR SHALL SUBMIT TO THE ARCHITECT/STRUCTURAL ENGINEER, FOR REVIEW, ENGINEE CHECKED DRAWINGS SHOWING FABRICATION DETAILS, FIELD ASSEMBLY DETAILS AND ERECTION DIAGRAMS FOR ALL STRU STEEL ELEMENTS.

6. ALL BEAMS AND JOISTS SHALL BE FABRICATED WITH THE N CAMBER UP. PROVIDE FABRICATED CAMBERS AS INDICATED DRAWINGS.

7. AFTER FABRICATION, ALL STEEL SHALL BE CLEANED OF AL LOOSE MILL SCALE, AND OTHER FOREIGN MATERIALS. STEEL BE PRIMED AND PAINTED AS OUTLINED IN THE PROJECT SPECIFICATIONS. STEEL TO RECEIVE SPRAY-ON FIREPROOFI SHALL NOT BE PRIMED OR PAINTED.

8. WELDING SHALL BE PERFORMED WITH E70XX LOW HYDROG ELECTRODES. ALL WELDING SHALL BE PERFORMED BY CERTIFIED/QUALIFIED WELDERS AND SHALL CONFORM TO TH D1.1." STRUCTURAL WELDING CODE-STEEL." LATEST EDITION.

9. MINIMUM FILLET WELD SIZE SHALL COMPLY WITH THE AISC SPECIFICATION REQUIREMENTS, BUT SHALL NOT BE LESS TH INCH UNLESS NOTED OTHERWISE.

10. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF "AISC SPECIFICATION FOR STRUCTURAL USING ASTM A325 OR A490 BOLTS," LATEST EDITION. ALL BOL HOLES SHALL BE "SHORT SLOTTED", UNLESS NOTED OTHERV

11. ALL STEEL BEAM AND GIRDER CONNECTIONS SHALL BE SI SHEAR CONNECTIONS UTILIZING HIGH STRENGTH BOLTS IN B TYPE CONNECTIONS WITH THREADS EXCLUDED FROM THE S PLANE UNLESS NOTED OTHERWISE. BOLTS ARE TO BE TIGHT TO THE "SNUG TIGHT" CONDITION UNLESS NOTED AS "SLIP CF (SC)". BOLTS DESIGNATED AS "SLIP CRITICAL" ARE TO BE TIGH PER THE ABOVE MENTIONED BOLT SPECIFICATION.

12. BOLTED CONNECTIONS SHALL USE A MINIMUM OF (2) 3/4" UNLESS NOTED OTHERWISE.

13. PROVIDE CONNECTIONS AS DETAILED ON THE DESIGN DRAWINGS. ALTERNATE CONNECTION DESIGNS MAY BE SUB BY THE CONTRACTOR. THE ALTERNATE DESIGNS MUST BE PROPERLY ENGINEERED AND CALCULATIONS SEALED BY A QUALIFIED ARCHITECT / STRUCTURAL ENGINEER LICENSED STATE IN WHICH THE PROJECT IS LOCATED. THE DESIGN BY SPECIALTY ARCHITECT / STRUCTURAL ENGINEER AND THE RE BY THE ARCHITECT / STRUCTURAL ENGINEER OF RECORD OF ALTERNATE CONNECTIONS WILL BE AT THE CONTRACTOR'S EXPENSE

14. BEAM TO GIRDER AND BEAM OR GIRDER TO COLUMN MOM CONNECTIONS ARE DESIGNATED ON THE PLANS AS THUS:

# 

15. THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STE MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE APPROVAL OF THE ARCHITECT / STRUCTURAL ENGINEER OF RECORD.

16. STEEL WORK TO SLOPE IN ACCORDANCE WITH ELEVATION GIVEN ON STRUCTURAL DRAWINGS.

18. REFER TO ARCHITECTURAL DRAWINGS FOR MISCELLANEC STEEL NOT SHOWN ON STRUCTURAL DRAWINGS.

19. ALL STEEL INDICATED TO BE ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL CONFORM TO THE AESS REQUIREMENTS OF THE AISC CODE OF STANDARD PRACTICE.

20. PAINT SYSTEM FOR "EXPOSED TO OUTSIDE ATMOSPHERE" STRUCTURAL STEEL COMPONENTS:

A. SURFACE PREPARATION - CLEAN SURFACES PER SSPC SI POWER TOOL CLEANING. B. PRIME COAT: MINIMUM DRY FILM THICKNESS = 1.75 MILS. PRIME SURFACES OF STEEL AS REQUIRED BY PROJECT SPECIFICATIONS. USE PRIME COAT COMPATIBLE WITH FIREPROOFING SYSTEM WHERE APPLICABLE. C. FINISH COAT: SEE PROJECT SPECIFICATIONS.

21. REFER TO THE TESTING AND INSPECTION SECTION OF TH NOTES FOR THE STRUCTURAL STEEL TESTING AND INSPECTI REQUIREMENTS.

## <u>PLYWOOD</u>

1. ALL STRUCTURAL PLYWOOD SHALL BE GRADE CC EXTERI CD INTERIOR WITH EXTERIOR GLUE. ALL PLYWOOD SHALL CO TO UBC STANDARD 25-9, LATEST EDITION, AND TO U.S. PROE STANDARD PS1-83, AND SHALL BE IDENTIFIED WITH THE GRAD TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION.

2. ALL STRUCTURAL PLYWOOD NOTED ON THE DRAWINGS S CONFORM TO THE FOLLOWING:

A. ROOF SHEATHING - 5/8" THICKNESS - 32/16 SPAN RATING B. WALL SHEATHING - 5/8" THICKNESS - 24/0 SPAN RATING

3. UNLESS OTHERWISE NOTED, PLYWOOD NAILS SHALL BE C APPROVED FASTENERS TO BE SUBSTITUTED SHALL BE EQUIN IN LATERAL AND WITHDRAWAL STRENGTH TO THE SIZE COMM NAIL SPECIFIED.

4. ROOF SHEATHING: PLYWOOD ROOF SHEATHING SHALL B WITH THE GRAIN OF THE OUTER PLIES PERPENDICULAR TO FRAMING MEMBERS AND END JOINTS SHALL BE STAGGERED. BLOCKING OF UNSUPPORTED EDGES OF PLYWOOD SHEATHI BE OMITTED. PLYCLIPS OR APPROVED EQUAL CONNECTORS BE INSTALLED AT MIDSPAN BETWEEN EACH SUPPORT WHEN I SPACING EXCEEDS 16".

5. WALL SHEATHING: WALL SHEATHING MAY BE APPLIED HORIZONTALLY OR VERTICALLY. BLOCK ALL UNSUPPORTED EDGES OF PLYWOOD SHEATHING. TYPICAL NAILING SHALL BE #10 SCREW AT 6" O.C. ALL EDGES, AND #10 SCREW AT 12" O.C. ALL INTERMEDIATE SUPPORTS, UNLESS OTHERWISE NOTED.

PLYWOOD SHEATHING (CONT'D)	<b>f n</b> ll m
1. ALL STRUCTURAL PLYWOOD SHALL BE GRADE CC EXTERIOR OR CD INTERIOR WITH EXTERIOR GLUE. ALL PLYWOOD SHALL CONFORM TO UBC STANDARD 25-9, LATEST EDITION, AND TO U.S. PRODUCT STANDARD PS1-83, AND SHALL BE IDENTIFIED WITH THE GRADE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION	
2. ALL STRUCTURAL PLYWOOD NOTED ON THE DRAWINGS SHALL CONFORM TO THE FOLLOWING:	
A. ROOF SHEATHING - 5/8" THICKNESS - 32/16 SPAN RATING B. WALL SHEATHING - 5/8" THICKNESS - 24/0 SPAN RATING	
3. UNLESS OTHERWISE NOTED, PLYWOOD NAILS SHALL BE COMMON. APPROVED FASTENERS TO BE SUBSTITUTED SHALL BE EQUIVALENT IN LATERAL AND WITHDRAWAL STRENGTH TO THE SIZE COMMON NAIL SPECIFIED.	
4. ROOF SHEATHING: PLYWOOD ROOF SHEATHING SHALL BE LAID WITH THE GRAIN OF THE OUTER PLIES PERPENDICULAR TO THE FRAMING MEMBERS AND END JOINTS SHALL BE STAGGERED. EDGE BLOCKING OF UNSUPPORTED EDGES OF PLYWOOD SHEATHING MAY BE OMITTED. PLYCLIPS OR APPROVED EQUAL CONNECTORS SHALL BE INSTALLED AT MIDSPAN BETWEEN EACH SUPPORT WHEN RAFTER SPACING EXCEEDS 16".	
5. WALL SHEATHING: WALL SHEATHING MAY BE APPLIED HORIZONTALLY OR VERTICALLY. BLOCK ALL UNSUPPORTED EDGES OF PLYWOOD SHEATHING. TYPICAL NAILING SHALL BE #10 SCREW AT 6" O.C. ALL EDGES, AND #10 SCREW AT 12" O.C. ALL INTERMEDIATE SUPPORTS, UNLESS OTHERWISE NOTED.	Cts er Cts heet, Duincy, L
6. PLYWOOD ROOF DIAPHRAGM NAILING REQUIREMENTS . NAIL AT 6"o.c. AT ALL PLYWOOD SHEATHING PANEL EDGES AND ALL FRAMING MEMBERS WITH 10d NAILS. (1 5/8" MIN. PENETRATION) I. NAIL AT 12"o.c. TO ALL INTERMEDIATE FRAMING MEMBERS IN PANEL FIELD WITH 10d NAILS. (1 5/8" MIN. PENETRATION) II. PLYWOOD SHALL BE PLACED WITH THE FACE GRAIN PERPENDICULAR TO SUPPORTS AND WITH END JOINTS STAGGERED.	
CONDITION. PREFABRICATED METAL-PLATE CONNECTED WOOD TRUSSES	DATE:
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE ENGINEERING DESIGN OF ALL PREFABRICATED METAL-PLATE CONNECTED WOOD TRUSSES, INCLUDING ANY REQUIRED TEMPORARY OR PERMANENT LATERAL BRACING.	A L REYNOLDS
<ul> <li>2. MATERIALS</li> <li>A. PREFABRICATED METAL PLATE CONNECTED WOOD TRUSSES <ol> <li>SPECIES: VARIES</li> <li>GRADE: VARIES</li> <li>GRADE: VARIES</li> <li>MODULUS OF ELASTICITY: 1,500,000 PSI (MIN.)</li> <li>MINIMUM WORKING STRESS</li> <li>A. EXTREME FIBER IN BENDING, FB: 975 PSI</li> <li>B. TENSION PARALLEL TO GRAIN, FT: 625 PSI</li> <li>C. COMPRESSION PARALLEL TO GRAIN, FC: 1300 PSI</li> </ol> </li> </ul>	LICENSE EXPIRES: 12/31/19 CURRENT 05/17/19 DATE:
D. COMPRESSION PERPENDICULAR TO GRAIN, FC : 405 PSI E. HORIZONTAL SHEAR, FV: 175 PSI	TODD J.
3. DESIGN SHALL BE BASED ON THE INFORMATION PROVIDED ON THE CONTRACT DOCUMENTS AND IN ACCORDANCE WITH THE "NATIONAL DESIGN STANDARD FOR METAL-PLATE CONNECTED WOOD TRUSS CONSTRUCTION," TRUSS PLATE INSTITUTE AND THE "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION," NATIONAL FOREST PRODUCTS ASSOCIATION.	AGISTER AND
4. THE CONTRACTOR SHALL SUPPLY SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS AS OUTLINED IN THE PROJECT SPECIFICATIONS.	LICENSE EXPIRES: 12/31/19
5. TRUSS ENDS AND BEARING LOCATIONS SHALL BE CONNECTED TO SUPPORTS WITH METAL ANCHORS.	
6. TRUSSES SHALL BE FABRICATED IN ACCORDANCE WITH THE "NATIONAL DESIGN STANDARD FOR METAL-PLATE CONNECTED WOOD TRUSS CONSTRUCTION," TRUSS PLATE INSTITUTE	
7. TRUSSES SHALL BE HANDLED DURING ERECTION IN ACCORDANCE WITH RECOMMENDED PRACTICES SET FORTH IN "HANDLING, INSTALLING AND BRACING WOOD TRUSSES HIB-91", TRUSS PLATE INSTITUTE	DIS
8. TRUSSES SHALL BE BRACED AS REQUIRED DURING ERECTION TO PREVENT TOPPLING OR DOMINOING.	오
9. THE TRUSS MANUFACTURER SHALL INDICATE ON THE SHOP DRAWINGS THE LOCATIONS AND SIZES OR BRACING REQUIRED TO TRANSFER TRUSS MEMBER BUCKLING FORCES TO THE STRUCTURE. UPON REVIEW OF THE SHOP DRAWINGS, STRUCTURAL ENGINEER WILL INDICATE METHOD OF ATTACHMENT AND ADDITIONAL BRACING NEEDED TO TRANSFER MEMBER BUCKLING FORCES TO THE STRUCTURE. CONTRACTOR SHALL INCLUDE IN AND NOTE IN SUBMITTED BID, ALLOWANCE FOR ADDITIONAL BRACING, SIZE TO BE DETERMINED AFTER BEVIEW OF SUBMITTAL OF METAL-PLATE	DMET
CONNECTED TRUSS SHOP DRAWINGS. <u>TIMBER</u>	
1. THE DESIGN AND WORKMANSHIP OF ALL WOOD FRAMING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ANSI/NFOPA NATIONAL DESIGN SPECIFICATION.	
2. ALL LUMBER SHALL BE KILN DRIED TO HAVE A MAXIMUM MOISTURE CONTENT OF 15% UNLESS NOTED OTHERWISE.	
3. CONNECTIONS OF ALL 2x MATERIAL TO OTHER 2x MATERIAL OR OTHER WOOD MEMBERS SHALL BE AS INDICATED BELOW, UNLESS OTHERWISE NOTED ON THE DRAWINGS, AS NOTED IN THE SPECIFICATIONS OR NOTED WITHIN THE NAILING SCHEDULE BELOW.	V BUILDII <b>ALM</b> <b>ALM</b> MYRA, M
A. 2x4, 2x6 - (3) 10d NAILS MIN. B. 2x8, 2x10, 2x12 - (4) 10d NAILS MIN.	
4. MATERIALS A. ALL FIELD CUT LUMBER (U.N.O.)	CONSTRUCTION
I. SPECIES: SOUTHERN PINE ÓR BETTER (U.N.O.) II. GRADE: NO. 2 OR BETTER III. MODULUS OF ELASTICITY: 1,600,000 PSI IV. <u>MINIMUM WORKING STRESS</u> a. EXTREME FIBER IN BENDING, FB: 1000 PSI b. TENSION PARALLEL TO GRAIN, FT: 825 PSI	DOCUMENTS PHASE FOR CONSTRUCTION
c. COMPRESSION PARALLEL TO GRAIN, FC: 1650 PSI d. COMPRESSION PERPENDICULAR TO GRAIN, FC: 565 PSI e. HORIZONTAL SHEAR, FV: 175 PSI	SET ISSUE DATE: 05/17/19
B. HARDWARE I. CONNECTIONS FOR WOOD CONSTRUCTION a. GALVANIZED METAL, GAUGES AND DIMENSIONS AS INDICATED, MANUFACTURED BY SIMPSON OR APPROVED	
EQUAL. II. NAILS a. COATED COMMONS	
5. THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL TIMBER MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR REVIEW AND APPROVAL OF THE STRUCTURAL ENGINEER.	PROJECT NUMBER: 5356

6. NO WOOD TREATMENTS OR OR PRESERVATIVES SHALL BE USED WITHOUT PRIOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER.

7. ALL WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED IN CONFORMANCE WITH THE REQUIREMENTS OF AWPA. FIELD CUTS OR DRILLING IN PRESSURE TREATED LUMBER SHALL BE THROUGHLY BRUSHED AND COATED WITH A COMPATIBLE PRESERVATIVE LIQUID.

STRUCTURAL

DWG. NO.

NOTES

## TESTING AND INSPECTIONS

## 1. ALL TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE DESIGN CODE REFERENCED IN ITEM 1. OF THE STRUCTURAL LOADING SECTION OF THESE NOTES.

2. ALL TESTING SHALL BE PERFORMED BY A QUALIFIED TESTING AGENCY HIRED BY THE OWNER.

3. THE ARCHITECT / STRUCTURAL ENGINEER SHALL BE NOTIFIED OF ANY ITEM FOUND NOT TO BE IN COMPLIANCE WITH THE DESIGN INTENT OF THESE DOCUMENTS.

# FOUNDATIONS

4. ALL FOUNDATION EXCAVATIONS SHALL BE OBSERVED AND TESTED BY A REPRESENTATIVE OF A QUALIFIED GEOTECHNICAL ENGINEERING FIRM. DAILY REPORTS OF OBSERVATIONS SHALL BE PREPARED. ALL REPORTS ARE TO BE SUBMITTED TO THE ARCHITECT / STRUCTURAL ENGINEER FOR REVIEW. THE REQUIRED TEST TYPE AND FREQUENCY SHALL BE AS SPECIFIED IN THE PROJECT SPECIFICATIONS.

<u>CONCRETE</u>

5. ALL CONCRETE PLACED ON THE PROJECT SHALL BE TESTED FOR SLUMP, AIR CONTENT AND STRENGTH. THE FREQUENCY OF TESTING SHALL BE AS SPECIFIED IN THE PROJECT SPECIFICATION.

6. REINFORCEMENT PLACEMENT SHALL BE INSPECTED BY THE OWNER'S TESTING LABORATORY PRIOR TO ALL CONCRETE POURS. SEE THE SPECIFICATIONS FOR REQUIREMENTS.

## TESTING AND INSPECTIONS (CONT'D)

STRUCTURAL STEEL

7. THE OWNER'S TESTING AGENCY SHALL PERFORM ALL SHOP AND FIELD INSPECTION AND TESTING AS OUTLINED BELOW. REPORTS ARE TO BE SUBMITTED TO THE OWNER, ARCHITECT / STRUCTURAL ENGINEER AND CONTRACTOR FOR REVIEW. THE STRUCTURAL STEEL FABRICATOR AND ERECTOR SHALL SCHEDULE ALL WORK TO ALLOW THE FOLLOWING TESTING REQUIREMENTS.

A. ALL WELDS SHALL BE VISUALLY INSPECTED. 15% AT RANDOM SHALL BE MEASURED. B. FILLET WELDS FOR BEAM AND GIRDER SHEAR CONNECTION

PLATES, 15% AT RANDOM, SHALL BE CHECKED BY MAGNETIC PARTICLE FOR FINAL PASS ONLY. C. 100% OF ALL FULL PENETRATION WELDS SHALL BE

ULTRASONICALLY TESTED. D. 25% OF THE BOLTS, NO LESS THAN (2) BOLTS, IN EACH "SLIP

CRITICAL" CONNECTIONS SHALL BE CHECKED BY CALIBRATED TORQUE WRENCH. E. FOR NON-"SLIP CRITICAL" CONNECTIONS, INSPECT CONNECTION

TO INSURE THE PLIES OF THE CONNECTED ELEMENTS HAVE BEEN BROUGHT INTO SNUG CONTACT. F. ULTRASONICALLY TEST FOR LAMINATIONS IN ALL COLUMN

CONNECTION AREAS.

# PALMYRA UNITED METHODIST CHURCH DESIGN CRITERIA

- 1. BUILDING CODES: A. IBC 2009
- C. ASCE 7-05
- 2. DESIGN LOADS:
  - A. OCCUPANCY CATEGORY III B. DEAD LOADS:
    - 1. STANDING SEAM METAL ROOF AT METAL BUILDING SYSTE a. STANDING SEAM ROOFING =
      - b. INSULATION =
      - c. PURLIN FRAMING = d. MECHANICAL, ELECTRICAL & PLUMBING =
      - e. CEILING =
    - 2. WOOD JOIST FRAMING WITH PLYWOOD SHEATHING
      - a. STANDING SEAM ROOFING =
      - b. INSULATION = c. PLYWOOD SHEATHING =
      - c. ENGINEERED WOOD FRAMING =
      - d. MECHANICAL, ELECTRICAL & PLUMBING =
  - e. CEILING = C. ROOF LIVE LOAD = 20 PSF (TABLE 4-1)
  - D. ROOF SNOW LOADS:
    - 1. GROUND SNOW LOAD Pg = 20 PSF
    - 2. THERMAL FACTOR Ct = 1.03. EXPOSURE FACTOR Ce = 1.0
    - 3. IMPORTANCE FACTOR Is = 1.1
    - 4. FLAT ROOF SNOW LOAD Pf = 22 PSF (MINIMUM)
    - 5. RAIN-ON-SNOW SURCHARGE = 5 PSF 6. DRIFTING AND SLIDING LOADS - PER ASCE 7-05.
  - E. PONDING
  - 1. PONDING IS NOT APPLICABLE FOR ROOF SLOPES 1/4" OR GREATER F. WIND LOADING - ANALYTICAL PROCEDURE
  - 1. BASIC WIND SPEED (3 SECOND GUST) = 90 MPH
  - 2. EXPOSURE CATEGORY C
  - 3. IMPORTANCE FACTOR Iw = 1.15 4. DIRECTIONAL FACTOR Kd = 0.85
  - 5. TOPOGRAPHIC FACTOR Kzt = 1.0
  - 6. INTERNAL PRESSURE COEFFICIENT GCPi = +/- 0.18 (PARTIALLY ENCLOSED) 7. MAIN WIND FORCE RESISTING SYSTEM PRESSURES:
  - a. PER ASCE 7-05 MAIN FORCE RESISTING SYSTEM: SECTION 6.5.12.2.
  - 8. DESIGN PRESSURES FOR COMPONENTS AND CLADDING: a. PER ASCE 7-05 COMPONENTS AND CLADDING METHOD 2.
  - G. SEISMIC LOADING EQUIVALENT LATERAL FORCE PROCEDURE:
    - 1. IMPORTANCE FACTOR le = 1.25
    - 2. SITE CLASS C 3. Sds = 0.148 (Ss = 0.185)
    - 4. Sd1 = 0.095 (S1 = 0.083)
    - 5. SEISMIC DESIGN CATEGORY B 6. DESIGN COEFFICIENTS AND FACTORS FOR SEISMIC FORCE-RESISTING SYSTEMS
      - a. ASCE 7-05 TABLE 12.2-1
      - i. RESISTING SYSTEM STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE.
        - ii. RESPONSE COEFFICIENT, R = 3.0
        - iii. DEFLECTION AMPLIFICATION FACTOR Cd = 3.0
    - iv. SYSTEM OVERSTRENGTH FACTOR Xo = 3.0 7. COMPONENT DESIGN PER ASCE 7-05

FLANGES GREATER THAN 1.5 INCHES THICK AT ALL MOMENTS

EM	3 PSF 2 PSF 2 PSF 5 PSF 2 PSF
	3 PSF 2 PSF 2 PSF 3 PSF 5 PSF

2 PSF

LOCATION	FLOOR	FLOOR AREA	FLOOR / ROOF CONSTRUCTION	SUPERIMPOSED DEAD LOAD (psf)	PART'N LOAD (psf)	LIVE LOAD (psf)	REMARKS
		LOBBY	5" SLAB-ON-GRADE	15	-	100	
DING		PUBLIC AREAS & CORRIDORS	н	15	-	100	
		OFFICE	п	15	20	50	
	1ST STA	STORAGE	н	15	-	125	
BUIL		STAIRS / LADDERS	н	-	-	100	
		STAGE	n	15	-	100	
ž		CLASSROOM	n	15	-	40	
		MECHANICAL	п	15	-	125	MECHANICAL UNIT WEIGHTS
	ROOF	TYPICAL	*	**	-	22	SNOW DRIFT
	CANOPY ROOF	ENTRANCE CANOPY	OPEN WEB TRUSSES / PLYWOOD SHEATHING	5	-	22	SNOW DRIFT

SCHEDULE OF BUILDING DESIGN LOADS

<u>NOTES</u> 1. DURING CONSTRUCTION ALL CONSTRUCTION LOADS ON ANY AREA OF THE FLOOR SHALL NOT

EXCEED THE LOADS SHOWN IN THE TABLE.

2. 5" SLAB-ON-GRADE = 63 PSF

3. SUPERIMPOSED DEAD LOADS NOTED ABOVE DO NOT INCLUDE SELF WEIGHT OF STEEL JOIST FRAMING. 4. \* - INDICATES EITHER:

1. STEEL PURLINS ON PRE-ENGINEERED METAL BUILDING SYSTEM - RIGID METAL FRAME OR

2. ENGINEERED WOOD JOISTS WITH PLYWOOD SHEATHING. 5. \*\* - SEE BUILDIGN DESIGN LOADS FOR APPLICABLE DEAD LOADS.

LOCATION	LIMITS	LOAD CASE / COMBINATION	RAFTERS L /	PURLINS L /	RAFTERS L /	REMAF			
	ROOF LIMITS								
		LIVE	240	240	60				
		SNOW	240	240	60				
		WIND (SERVICE)	240	240	60				
		TOTAL GRAVITY	240	240	60				
		TOTAL UPLIFT	NA	240	60				
	FRAME LIMITS		SIDESWAY H /	PORTAL FRAME SIDEWAY - H /					
5		LIVE	180						
LDIP		SNOW	180						
BUI		WIND (SERVICE)	180						
AIN		SEISMIC DRIFT	40	40					
Σ		SERIVCE-LEVEL CRANE	NA	NA					
		PORTAL WIND (SERVICE)	NA	60					
		TOTAL GRAVITY	180						
		SERVICE SEISMIC	180	50					
	WALL LIMITS		LIMIT L /						
		TOTAL WIND (PANELS)	60						
		TOTAL WIND (GIRTS)	90						
		TOTAL WIND (COLUMNS)	180						

**NOTES**: 1. LOADS, LOAD COMBINATIONS AND FORCES SHALL BE PER THE ASCE 7-05.

# **BUILDING DEELECTION LIMITS**



RKS











	FOOTING SCHEDULE									
FOOTING MARK	WIDTH - W (FT)	LENGTH - L (FT)	THICKNESS (FT)	BOTTOM REINFORCING	TOP REINFORCING	REMARKS				
F3.5	3'-6"	3'-6"	1'-0"	(4) #5 EACH WAY						
F3.5A	3'-6"	6'-0"	1'-0"	(4) #5 LONG (7) #5 SHORT						
F4.0	4'-0"	4'-0"	1'-0"	(5) #5 EACH WAY						
F6.0	6'-0"	6'-0"	1'-0"	(7) #6 EACH WAY						
F8.0	8'-0"	8'-0"	1'-4"	(9) #6 EACH WAY	(9) #6 EACH WAY					
F9.0	9'-0"	9'-0"	1'-4"	(10) #6 EACH WAY	(10) #6 EACH WAY					
WF1	2'-6"		1'-0"	(3) #5 CON'T #5 @12" (TRANS.)						
WF2	3'-6"		1'-0"	(4) #5 CON'T #5 @12" (TRANS.)						

**GENERAL FOOTING NOTES:** 

1. ADD 6" TO WIDTH AND LENGTH OF FOOTING IF BANK POURING FOOTING. SIZE INDICATED ABOVE IS

FOR DESIGN PURPOSES. 2. SEE PLAN FOR BOTTOM OF FOOTING ELEVATION.





# 3 TYP. CONC. WALL CORNER, INTERSECTION AND CONSTRUCTION JOINT DETAILS SCALE: 3/4" = 1'-0"

PIER SCHEDULE										
PIER MARK	WIDTH	LENGTH	VERTICAL REINF. BARS, EXTEND INTO FOOTING	HORIZ. TIES	T.O. PIER	REMARKS				
P1	1'-0"	1'-0"	(4) #5	#4 @ 10" AND (3) AT TOP	VARIES					
P2	1'-4"	1'-4"	(4) #6	#4 @ 10" AND (3) AT TOP	VARIES					
P3	1'-6	" DIA.	(4) #6	#4 @ 10" AND (3) AT TOP	VARIES					
P4	2'-0"	2'-0"	(8) #6	#4 @ 10" AND (3) AT TOP	VARIES					



















# SHEAR PLATE CONNECTION SCHEDULE

BEAM SIZE	L	W	t <sub>PLATE</sub>	х	NUMBER OF BOLTS (A325-N)	REMARKS
W8, W10	6	4	3/8	3/16	2	-
W12, W14	9	4	3/8	1/4	3	-
W16, W18	12	4	3/8	1/4	4	-
W21	15	4	3/8	5/16	5	-
W24, W27	18	4	3/8	5/16	6	-

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

Ш CURRENT DATE: 05/17/19 JACQUES L. REYNOLDS UR NUMBER A-2007030508 000 CHIT LICENSE EXPIRES: 12/31/19 CURRENT 05/17/19 DATE: TODD J. MOORE LICENSE EXPIRES: 12/31/19 PALMYRA UNITED METHODIS CHURCH PALMYRA, MO 63461 **UILDING FOR:** W BL CONSTRUCTION DOCUMENTS PHASE FOR CONSTRUCTION SET ISSUE DATE: 05/17/19 DATE REMARKS PROJECT NUMBER: 5356 STEEL DETAILS DWG. NO. **\$501** 



![](_page_14_Picture_2.jpeg)

![](_page_15_Figure_0.jpeg)

![](_page_16_Figure_0.jpeg)

# ALTERNATES - SEE SPEC 01 2300

<u>00F:</u>	

ALTERNATE BID A-1: STANDING SEAM ROOF SYSTEM. REFER TO SPEC SECTION 13 3419.

(BASE BID - EXPOSED FASTENER SYSTEM. REFER TO SPEC SECTION 13 3419.)

# STEEPLE:

ALTERNATE BID A-5: OMIT THE STEEPLE IN ITS ENTIRETY. PROVIDE STRUCTURAL ROOF FRAMING FOR FUTURE INSTALLATION. (BASE BID - INSTALL THE STEEPLE AS INDICATED ON DRAWING SHEETS A201 AND A202)

COVERED DROP-OFF:

ALTERNATE BID A-6: REMOVE THE COVERED DROP-OFF AS INDICATED ON ELEVATION 2/A202. (BASE BID - INSTALL THE COVERED DROP OFF AS INDICATED ON ELEVATION 2/A202)

![](_page_17_Picture_9.jpeg)

![](_page_18_Figure_0.jpeg)

![](_page_19_Figure_0.jpeg)

![](_page_20_Figure_1.jpeg)

![](_page_20_Figure_2.jpeg)

![](_page_21_Figure_0.jpeg)

![](_page_21_Figure_1.jpeg)

![](_page_21_Figure_11.jpeg)

![](_page_21_Figure_12.jpeg)

9

1'-6" TO FACE

OF BLOCKING

METAL R-PANEL ROOF OVER-30# ROOFING FELT OVER ROOF SHEATHING ON ROOF

![](_page_22_Figure_0.jpeg)

![](_page_23_Figure_0.jpeg)

![](_page_24_Figure_0.jpeg)

![](_page_24_Figure_1.jpeg)

![](_page_24_Figure_2.jpeg)

![](_page_25_Figure_0.jpeg)

![](_page_25_Picture_13.jpeg)

![](_page_25_Picture_14.jpeg)

# 30# ROOFING FELT OVER PLYWOOD SHEATHING (SEE SPEC 06 1600) ON TRUSS JOIST FRAMING. SEE STRUCTURAL-DASHED LINE DENOTES 3'-0" ROW OF ICE AND WATER SHIELD-

OVERFRAMING AND LEDGER-PREFINISHED ALUMINUM

PREFINISHED ALUMINUM GUTTER-2X TREATED WD. FASCIA-PREFINISHED ALUMINUM FASCIA WRAP-CONTINUOUS SOFFIT VENT-METAL WALL PANEL BY METAL BUILDING

![](_page_25_Picture_18.jpeg)

![](_page_25_Figure_19.jpeg)

![](_page_26_Figure_0.jpeg)

![](_page_27_Figure_0.jpeg)

![](_page_28_Figure_0.jpeg)

![](_page_29_Figure_0.jpeg)

IO: LD6A-30-DE010TE-ERM6A-30-8-40-6LW1-H	6" LED MEDIUM BEAM REFLECTOR, 3000 LUMEN, 80 CRI, 4000 K COLOR, UNIVERSAL 120-277V, 0 - 10 DRIVER
LD6A-30-DE010TE-IEM14-ERM6A-30-8-40-6LW1-H	SAME AS FIXTURE F1 WITH 14W EMERGENCY MODULE WITH INTEGRAL TEST SWITCH
RAW-EDISON: IST-AF-1000-LED-E1-T3-BZ	LED WALL FIXTURE, TYPE III DISTRIBUTION, 6000 LUMEN 4000 K COLOR, ELECTRONIC 120-277V DRIVER
RAW-EDISON: IST-AF-1000-LED-E1-T3-BZ	SAME AS FIXTURE F2 WITH COLD WEATHER BATTERY PACK AND 120V BACK BOX
TION ELECTRICAL PRODUCTS (CEP): CL120LED	120 WATT LED HIGH BAY FIXTURE WITH 15A FEMALE

# Branch Panel: MDP

Location: KITCHEN 116 Supply FPon: MOUNTED TRANSFORMER Mounting: SURFACE Enclosure: NEMA 1

скт	Circuit Description	Trin	Poles
1			
3	Panelboard BP1	225 A	3
5			
7			
9	Future Panelboard BP2	225 A	3
11	-		
13			
15	Future 5 Ton Rooftop Unit	50 A	3
17			
19	Euture Air Cooled Condensing Unit	50 A	2
21		30 A	
23	Euture Air Cooled Condensing Unit	50 A	2
25		30 A	2
27	Future Air Cooled Condensing Unit	50 A	2
29		0077	
31	-		
33	Spare	50 A	3
35			
37	Space		
39	Space		
41	Space		
		Total	Load

Total Amps:

Δ

2756 0

0 0

0 0

48559 VA

405 A

0

.egend:

Load Classification	Connected Load
Other	0 VA
_ighting	450 VA
HVAC	137395 VA
SPEC	6436 VA
RCPT	1800 VA

1. PANELBOARD SHALL BE SQUARE-D I-LINE TYPE HCM, SEE SPECIFICATIONS FOR APPROVED SUBSTITUTIONS. 2. FEEDER CIRCUIT: (2) SETS EACH: (4) - #350KCM CONDUCTORS, 3-1/2" CONDUIT

	Branch Panel: BP1												
Location: KITCHEN 116 Supply From: MDP Mounting: SURFACE Enclosure: NEMA 1						Volts: Phases: Wires:	208/120 3 4				A M I	A.I.C. Rating: 22,000 AMPS SYMMETRIC Mains Type: MAIN CB ains Rating: 225 A MCB Rating: 225 A	AL
Notes:													
СКТ	Circuit Description	Trip	Poles		Δ		в		С	Poles	Trip	Circuit Description	СК
1	Exterior Canopy Lights	20 A	1	300	720					1	20 A	Exterior Receptacles	2
3	Exterior Building Lights	20 A	1			450	720			1	20 A	Exterior Receptacles	4
5	Temporary Main Level Lights	20 A	1					998	360	1	20 A	Quadruplex Receptacle	6
7	Temporary Main Level Lights	20 A	1	998	572								8
9	Temporary Main Level Lights	20 A	1			998	572			2	15 A	Sump Pump Receptacle	10
11	Temporary Main Level Lights	20 A	1					998	998	1	20 A	Temporary Lower Level Lights	12
13	Spare	20 A	1	0	0					1	20 A	Spare	14
15	Spare	20 A	1			0	0			1	20 A	Spare	16
17	Spare	20 A	1					0	0	1	20 A	Spare	18
19	Spare	20 A	1	0	0					1	20 A	Spare	20
21	Spare	20 A	1			0	0			1	20 A	Spare	22
23	Spare	20 A	1					0	0	1	20 A	Spare	24
25	Spare	20 A	1	0	0					1	20 A	Spare	26
27	Spare	20 A	1			0	0			1	20 A	Spare	28
29	Spare	20 A	1					0	0	1	20 A	Spare	30
31	Spare	20 A	1	0	0					1	20 A	Spare	32
33	Spare	20 A	1			0	0			1	20 A	Spare	34
35	Spare	20 A	1					0	0	1	20 A	Spare	36
37	Spare	20 A	1	0	0					1	20 A	Spare	38
39	Spare	20 A	1			0	0			1	20 A	Spare	40
41	Spare	20 A	1					0	0	1	20 A	Spare	42
	1	Tota	Load:	259	0 VA	274	0 VA	335	5 VA	1		1	I
		Total	Amps:	22	2 A	2	3 A	2	8 A	_			

Load Classification	Connec
Lighting	450
SPEC	643
RCPT	180

Legend:

1. PANELBOARD SHALL BE SQUARE-D NQ, SEE SPECIFICATIONS FOR APPROVED SUBSTITUTIONS. 2. FEEDER CIRCUIT: (4) - #4/0 CONDUCTORS, #4 GROUND, 2-1/2" CONDUIT.

# Volts: 208/120 **Phases:** 3 Mains Type: MAIN CB Wires: 4 Mains Rating: 600 A MCB Rating: 600 A **Circuit Description** Trip С 2590 15251 150 A 25 Ton Rooftop Unit 2740 15251 3355 15251 15251 15251 0 4443 2756 4443 2756 2756 2756 2756 2500

		3 150 A		Future 25 Ton Rooftop Unit	
	15251				
		2	50 A	Future Air Cooled Condensing Unit	
3	2756	2	50 A	Future Air Cooled Condensing Unit	
6	2500	2	30 A	Future Electric Vestibule Heater	
		2	20 A	Spare	
6	0	2	30 A	Spare	
	0	2	40 A	Spare	
				Space	
				Space	
	0			Space	
9068 VA					

CKT 2 4 6 8 10 12 14 16 18 20 22 24 26	ARCHITE	architects • engineers • 510 Maine Street, Quincy, IL 62301• 217-222
28	CURRENT	05/17/19
32	DATE:	
34	MINIMAN OF	MARS STREET
36	MILLING ST.	- SOUTH
38	JAC	YNOLDS
40		120
42	A-200	
	LICENSE EXPIRE	ES: 12/31/19
	CURRENT DATE:	05/17/19
	NUMBER OF	MISSOURIE

**()** 

![](_page_29_Picture_33.jpeg)

ted Load Demand Factor 0 VA 100.00% 36 VA 100.00% 00 VA 100.00%

# **Panel Totals**

Total Conn. Load: 8686 VA Total Est. Demand: 8686 VA Total Conn. Current: 24 A

Panel Totals

Total Conn. Load: 146081 VA

Total Est. Demand: 146081 VA

Total Conn. Current: 405 A

Total Est. Demand Current: 405 A

![](_page_29_Picture_42.jpeg)

450 VA

6436 VA

1800 VA

![](_page_29_Picture_43.jpeg)

A.I.C. Rating: 65,000 AMPS SYMMETRICAL

275

275

409 A

Estimated Demand

0 VA

450 VA

137395 VA

6436 VA

1800 VA

2756 0

0 0

0 0

48453 VA

404 A

Demand Factor

0.00%

100.00%

100.00%

100.00%

100.00%