

FOUNDATION PLAN

GENERAL NOTES

- G1. IN CASES OF DISCREPANCIES IN DIMENSIONS AND ELEVATIONS BETWEEN STRUCTURAL AND ARCHITECTURAL DRAWINGS, CONTRACTOR SHALL COORDINATE WITH ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION.
- G2. CONTRACTOR SHALL PROVIDE TEMPORARY GUYS AND BRACING AS REQUIRED DURING CONSTRUCTION. STRUCTURE IS NOT STABLE UNTIL ALL STRUCTURAL MEMBERS, CONNECTIONS, AND DECKING ARE IN PLACE.
- CONDITIONS ARE IN CONFLICT WITH THE CONSTRUCTION DOCUMENTS.
- CONTRACTOR SHALL VERIFY ANCHOR BOLT LAYOUT AND BUILDING DIMENSIONS WITH PRE-ENGINEERED METAL BUILDING MANUFACTURER'S SHOP DRAWINGS BEFORE BEGINNING CONSTRUCTION.
- G5. FOUNDATION DESIGN INDICATED IN THESE DOCUMENTS WAS BASED UPON ENGINEERING JUDGEMENT. WHEN THE CONTRACTOR RECEIVES FINAL BUILDING REACTION DOCUMENTS THESE SHALL BE FORWARDED TO THE ENGINEER FOR FINAL REVIEW. THE STRUCTURAL ENGINEER OF RECORD RESERVES THE RIGHT TO MODIFY THE FOUNDATION DESIGN AFTER FINAL BUILDING REACTIONS ARE PROVIDED BY THE METAL BUILDING MANUFACTURER.

CONCRETE NOTES

- C1. CONCRETE WORK SHALL CONFORM TO BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318) AND SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
- C2. CONCRETE SHALL BE CONTROLLED CONCRETE, PROPORTIONED, MIXED AND PLACED UNDER THE SUPERVISION OF AN APPROVED CONCRETE TESTING AGENCY. SEE THE SPECIAL INSPECTION NOTES FOR ADDITIONAL INFORMATION.
- SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI AND SHALL BE AIR-ENTRAINED TO 6% +/- 1% WITH AN AIR-ENTRAINING ADMIXTURE CONFORMING TO ASTM C260. A MINIMUM OF 5 3/4 BAGS OF CEMENT SHALL BE USED PER CUBIC YARD WITH A SLUMP OF 4" +/- 1". THE MAXIMUM WATER TO CEMENT RATIO SHALL BE 0.45 BY WEIGHT.
- C4. IF ADDITIONAL FLOWABILITY IS REQUIRED FOR PLACEMENT OF ANY CONCRETE MIX, A WATER-REDUCING ADDITIVE CONFORMING TO ASTM C494, TYPE A, SHALL BE USED. NO ADDITIONAL WATER MAY BE ADDED TO THE MIX.
- C5. FLY ASH MAY BE USED AS A ONE TO ONE REPLACEMENT FOR THE CEMENT UP TO 20% OF THE TOTAL CEMENT CONTENT AS LONG AS THE AMBIENT TEMPERATURE IS ABOVE 50
- C6. FINE AND COARSE AGGREGATE SHALL MEET THE REQUIREMENTS OF ASTM C33 FOR GRADING SIZE, PARTICLE DISTRIBUTION, DELETERIOUS CONTENT, SOUNDNESS AND CHERT. COURSE AGGREGATES SHALL MEET THE REQUIREMENTS OF ASTM C33 TABLE 3 CLASS 4S. FINE AGGREGATE MAY BE NATUAL OR MANUFACTURED SAND FROM QUARRIES OR PITS WHICH HAVE GIVEN SATISFACTORY SERVICE PERFORMANCE WHEN EXPOSED IN A SIMILAR MANNER TO THAT TO BE ENCOUNTERED.
- C7. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. LAP ALL SPLICES 30 BAR DIAMETERS. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. LAP FABRIC 6" ON SP3. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE SIDES AND ENDS. MAINTAIN WIRE 1" TO 2" BELOW TOP SURFACE OF SLABS ON GRADE.
- C8. COLD-WEATHER PLACEMENT: COMPLY WITH ACI 306.1 AND AS FOLLOWS. PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH THAT COULD BE CAUSED BY FROST, FREEZING ACTIONS, OR LOW TEMPERATURES.
 - A. WHEN AIR TEMPERATURE HAS FALLEN TO OR IS EXPECTED TO FALL BELOW 40 DEG F, UNIFORMLY HEAT WATER AND AGGREGATES BEFORE MIXING TO OBTAIN A CONCRETE SP5. MIXTURE TEMPERATURE OF NOT LESS THAN 50 DEG F AND NOT MORE THAN 80 DEG F AT POINT OF PLACEMENT.
 - B. DO NOT USE FROZEN MATERIALS CONTAINING ICE OR SNOW. DO NOT PLACE CONCRETE ON FROZEN SUBGRADE OR ON SUBGRADE CONTAINING FROZEN MATERIALS. C. DO NOT USE CHEMICAL ACCELERATORS CONTAINING CALCIUM CHLORIDE.

FOUNDATION NOTES

- F1. A PAD HAS ALREADY BEEN CONSTRUCTED BY THE CITY FOR THIS STRUCTURE.
- EXCAVATION FOR FOOTINGS SHALL BE CUT TO ACCURATE SIZE AND DIMENSIONS AS SHOWN ON PLANS. ALL SOIL BELOW SLABS AND FOOTINGS SHALL BE PROPERLY COMPACTED AND SUBGRADE BROUGHT TO A REASONABLE TRUE AND LEVEL PLANE BEFORE PLACING CONCRETE.
- F3. AFTER EXCAVATION FOR FOUNDATIONS AND PRIOR TO PLACEMENT OF STEEL REINFORCEMENT OR CONCRETE, NOTIFY SOILS ENGINEER FOR INSPECTION OF SOIL
- FOOTINGS SHALL BEAR AT MINIMUM DEPTHS AS NOTED IN FOOTING SECTIONS AND PLANS SP9. OR INTO APPROVED BEARING STRATA, WHICHEVER DEPTH IS GREATER. NOTE THAT FOOTING BEARING ELEVATIONS GIVEN ON THE PLANS ARE ESTIMATED DEPTHS ONLY. WHERE UNSUITABLE SOIL IS ENCOUNTERED OR WHERE FINISHED EXTERIOR GRADE VARIES FROM THE ASSUMED EXTERIOR GRADE, FOOTING DEPTHS MAY VARY.
- ISOLATED FOOTINGS ARE DESIGNED FOR A NET ALLOWABLE SOIL BEARING OF 2000 PSF, FOR EITHER NATURALLY OCCURRING SOIL OR COMPACTED ENGINEERED FILL. AFTER FOOTING EXCAVATIONS HAVE BEEN MADE TO DESIGN ELEVATIONS, THE INDEPENDENT TESTING AGENCY EMPLOYED BY THE OWNER SHALL INSPECT AND TEST THE BEARING SOIL. WHEN SOIL OF INADEQUATE STRENGTH IS NOTED, CONTRACTOR SHALL FURTHER DEEPEN EXCAVATIONS UNTIL SUITABLE BEARING CONDITIONS ARE VERIFIED BY TESTING. OVER EXCAVATIONS MAY BE BACKFILLED WITH SUITABLE COMPACTED ENGINEERED FILL SUITABLE GRANULAR BASE, LEAN CONCRETE OR STRUCTURAL CONCRETE BACKFILL

METAL BUILDING NOTES

- MB1. METAL BUILDING SHALL HAVE THESE BASIC DIMENSIONS: 156' LONG, 35' WIDE, 26' BAY SPACING, 16' HIGH EAVE AND 8' LOW EAVE. BUILDING WILL BEAR ON CONCRETE PEDESTALS 6" ABOVE GRADE. SEE LOAD TABLE FOR REQUIRED LOADING.
- MB2. METAL BUILDING MANUFACTURER SHALL SUBMIT CALCULATIONS AND SHOP DRAWINGS, STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MISSOURI, FOR REVIEW PRIOR TO FABRICATION.
- G3. FIELD-VERIFY ALL EXISTING CONDITIONS. NOTIFY ARCHITECT/ENGINEER WHEN EXISTING MB3. METAL BUILDING SHALL BE DESIGNED TO RESIST THE LOADS SPECIFIED IN THE LOAD TABLE IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2012 INTERNATIONAL BUILDING CODE, THE 2012 JOPLIN ADOPTIVE CODE AND THE LATEST EDITION OF THE MBMA METAL BUILDING
 - MB4. METAL BUILDING VERTICAL BRACING SHALL CONSIST OF PORTAL FRAMES OR X-BRACING AS INDICATED AT LOCATIONS SHOWN ON PLANS. IF BRACING IS NOT SHOWN, METAL BUILDING MANUFACTURER SHALL COORDINATE LOCATION OF ALL BRACES TO MINIMIZE INTERFERENCE WITH ARCHITECTURAL FEATURES, MECHANICAL EQUIPMENT AND DUCTS. ROD OR CABLE BRACES MAY NOT BE SUBSTITUTED WHERE PORTAL FRAMES ARE SHOWN.
 - MB5. MAXIMUM PURLIN LIVE LOAD DEFLECTION SHALL NOT EXCEED SPAN/180 IN OTHER AREAS. MB6. FRAME LIVE LOAD DEFLECTION SHALL NOT EXCEED SPAN/180 IN OTHER AREAS.
 - MB7. MAXIMUM GIRT LATERAL DEFLECTION FROM WIND OR SEISMIC LOADS SHALL NOT EXCEED SPAN/100 FOR GIRTS PROVIDING LATERAL SUPPORT FOR METAL SIDING ONLY
 - MB8. MAXIMUM BUILDING SIDE SWAY (DRIFT) FROM WIND OR SEISMIC LOADS SHALL NOT EXCEED WALL HEIGHT/80.
- MB9. TYPICAL ANCHOR BOLTS SHALL BE HEADED BOLTS WITH A MINIMUM EMBEDMENT OF 16". SEE METAL BUILDING MANUFACTURER DRAWINGS FOR ANCHOR BOLT SIZE AND LOCATION. C3. CONCRETE FOR PIERS AND EXTERIOR USES, SIDEWALKS, EXTERIOR SLABS ON GRADE, ETC. MB10. VERIFY COLUMN PEDESTAL SIZES WITH METAL BUILDING MFR. PROVIDE FULL BEARING
 - UNDER BASE PLATES AND 2" MIN. CONCRETE COVER AROUND ANCHOR BOLTS AND LOCATE HORIZONTAL REINFORCEMENT AND TIES TO THE OUTSIDE FOR ANCHOR BOLT MB11. CONCENTRATED LOADS THAT ARE TO BE ATTACHED TO THE ROOF STRUCTURE SUCH AS
 - CEILINGS. PIPE HANGERS. MECHANICAL DUCT WORK. ELECTRICAL FIXTURES. ETC. SHALL BE ATTACHED TO PURLINS OR BEAMS. CONNECTIONS SHALL BE THRU WEB OF PURLINS -DO NOT DRILL HOLES IN THE FLANGES. DO NOT SUSPEND FROM CEILING OR METAL DECK.

SPECIAL INSPECTION NOTES

- SP1. SPECIAL INSPECTIONS SHALL BE REQUIRED IN ACCORDANCE WITH CHAPTER 17 OF THE 2012 IBC. THE CONTRACTOR SHALL EMPLOY A THRID PARTY TESTING AGENCY APPROVED BY THE OWNER FOR ALL TESTING STATED HEREIN. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INSPECTIONS WITH SAID INSPECTION AGENCY.
- THE STRUCTRUAL ENGINEER OF RECORD HAS BEEN HIRED BY THE CITY TO BE ON-SITE TO INSPECTION THE PLACEMENT OF THE REBAR AND CONCRETE FOR THE FOOTINGS AND TO INSPECT THE BUILDING AFTER ERECTED TO VERIFY BOLTS ARE ADEQUATELY TIGHTENED.
- COMPETENCE TO PERFORM THE REQUIRED INSPECTION TO THE SATISFACTION OF THE
- SP4. THE SPECIAL INSPECTOR SHALL KEEP RECORDS OF INSPECTIONS. INSPECTION REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.
- REPORTS SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK.
- SP3. A FINAL REPORT OF INSPECTIONS DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES SHALL BE SUBMITTED TO THE OWNER, BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AT THE COMPLETION OF THE STRUCTURAL PORTION OF THE WORK.
- SP7. THE THIRD PARTY TESTING AGENCY SHALL CONTACT THE STRUCTURAL ENGINEER OF RECORD PRIOR TO INITIATION OF CONSTRUCTION.
- CONCRETE CONSTRUCTION INSPECTION
- SP8. INSPECT REINFORCING STEEL PRIOR TO PLACING CONCRETE. CHECK REINFORCING SIZE, SPACING AND LOCATION.
- CYLINDERS SHALL BE MADE FOR DETERMINING THE CONCRETE STRENGTH FROM EACH CLASS OF CONCRETE TO BE PLACED. SAMPLES SHALL BE TAKEN NOT LESS THAN ONCE A DAY. NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5,000 SQUARE FEET OF SURFACE AREA FOR SLABS OR WALLS.
- SP10. EACH TIME THE CYLINDERS ARE MADE THE SLUMP, AIR CONTENT AND TEMPERATURE OF THE CONCRETE SHALL ALSO BE CHECKED.
- SP11. THE CONTRACTOR'S METHOD OF MAINTAINING THE MINIMUM CURING TEMPERATURE AND CURING TECHNIQUE SHALL BE REVIEWED

LOAD TABLE (2012 IBC)							
DEAD LOADS	(20	12	: IDC)				
ROOF							
METAL BLDG SELF WEIGHT	~~~~~	=	PER M	TL B	LDG MFR		
COLLATERAL LOAD	***************************************	=	= 2	PSF			
LIVE LOADS							
ROOF (NO LIVE LOAD REDUCTIONS)		=	= 20	PSF			
RISK CATEGORY		=	=	11	NCIDENTAL OCCUPANCY		
ROOF SNOW LOAD							
GROUND SNOW LOAD	Pg	=	= 30.0	PSF	=		
FLAT ROOF SNOW LOAD	P_{f}	=	= 30.0	PSF	(DO NOT REDUCE!)		
SNOW EXPOSURE FACTOR	Ce	=	= 1.0				
THERMAL FACTOR	Ct	=	= 1.2				
SNOW LOAD IMPORTANCE FACTOR	ls	=	= 0.9	I			
WIND DESIGN DATA							
ULTIMATE DESIGN WIND SPEED	V	=	= 115.0	MPI	4		
EXPOSURE CATEGORY		=	= C	•			
INTERNAL PRESSURE COEFFICIENT		=	+/-0.18				
EARTHQUAKE DESIGN DATA							
SEISMIC IMPORTANCE FACTOR	Ι _Ε	=	= 1.00	ı			
MAPPED SPECTRAL RESPONSE	Ss	=	= 0.12				
ACCELERATIONS	S ₁	=	= 0.08				
SITE CLASS		=	= D				
SPECTRAL RESPONSE	SDS	3 =	= 0.14				
COEFFICIENTS	S _{D1}		= 0.13				
SEISMIC DESIGN CATEGORY		=					
BASIC SEISMIC-FORCE-RESISTING		=	PERM	TL B	LDG MFR		
SYSTEM							
RESPONSE MODIFICATION FACTOR	R	=	PER M	TL B	LDG MFR		
SEISMIC RESPONSE COEFFICIENT	Cs	=	PER M	TL B	LDG MFR		
DESIGN BASE SHEAR	V				LDG MFR		
ANALYSIS PROCEDURE USED		=	PER M	TL B	LDG MFR		

DRILLED PIER SCHEDULE

24" | SEE 1/S1.0 | 96'-6" | 6-#5's | #3's @ 18" o.c.

6-#5's #3's @ 18" o.c

DRILLED PIER —

MARK

MARK DIA T.O. PIER B.O. PIER VERT REINF TIES

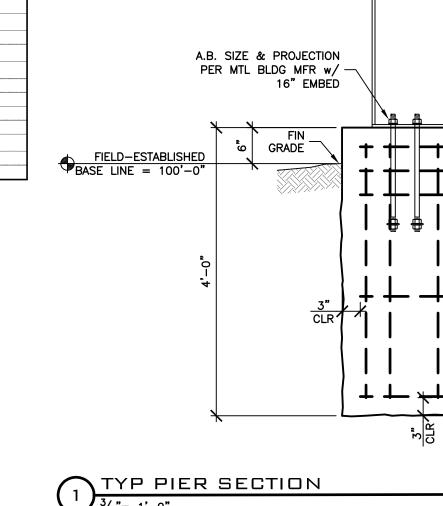
30" |SEE 1/S1.0 | 96'-6" |

2. TOP (3) TIES ARE AT 4" O.C. - REMAINDER ARE

I. CENTER ALL PIERS UNDER COLUMNS

AT THE SPACING INDICATED (TYPICAL)

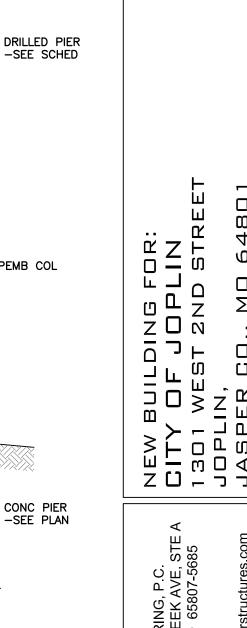
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3" CLR

1'-6"ø DP-1

2'-0"ø DP-2



SEE SCHED

— PEMB COL

_ CONC PIER

NUMBER

JERRY TRAVIS MILLER- ENGINEER MISSOURI LICENSE #2003023627

PROJECT: 4678 12.09.2016 CHECKED: DRAWN: _. STEPHENS T. MILLER SHEET NUMBER