

Hoop Building Plans

1530 NE 53rd Avenue
Des Moines, IA 50313

INDEX OF DRAWINGS:

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03	S000 STRUCTURAL NOTES
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Project: BG-4D22(000)-80-77



OFFICE OF FACILITIES SUPPORT

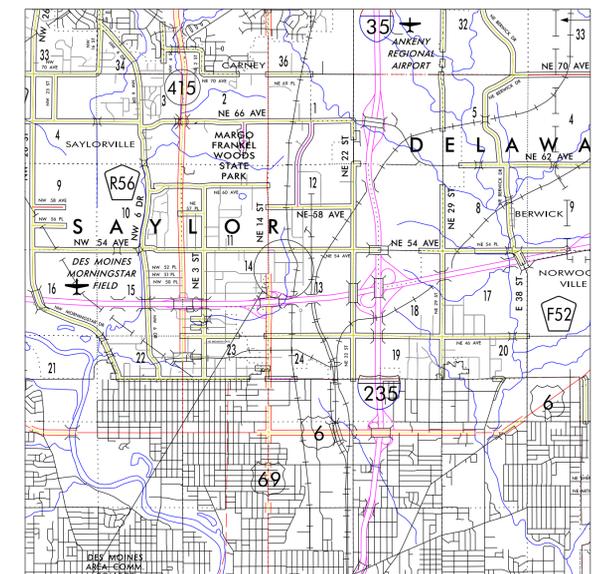
800 LINCOLN WAY, AMES, IOWA 50010

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FOR CONTRACT DOCUMENT QUESTIONS CALL:
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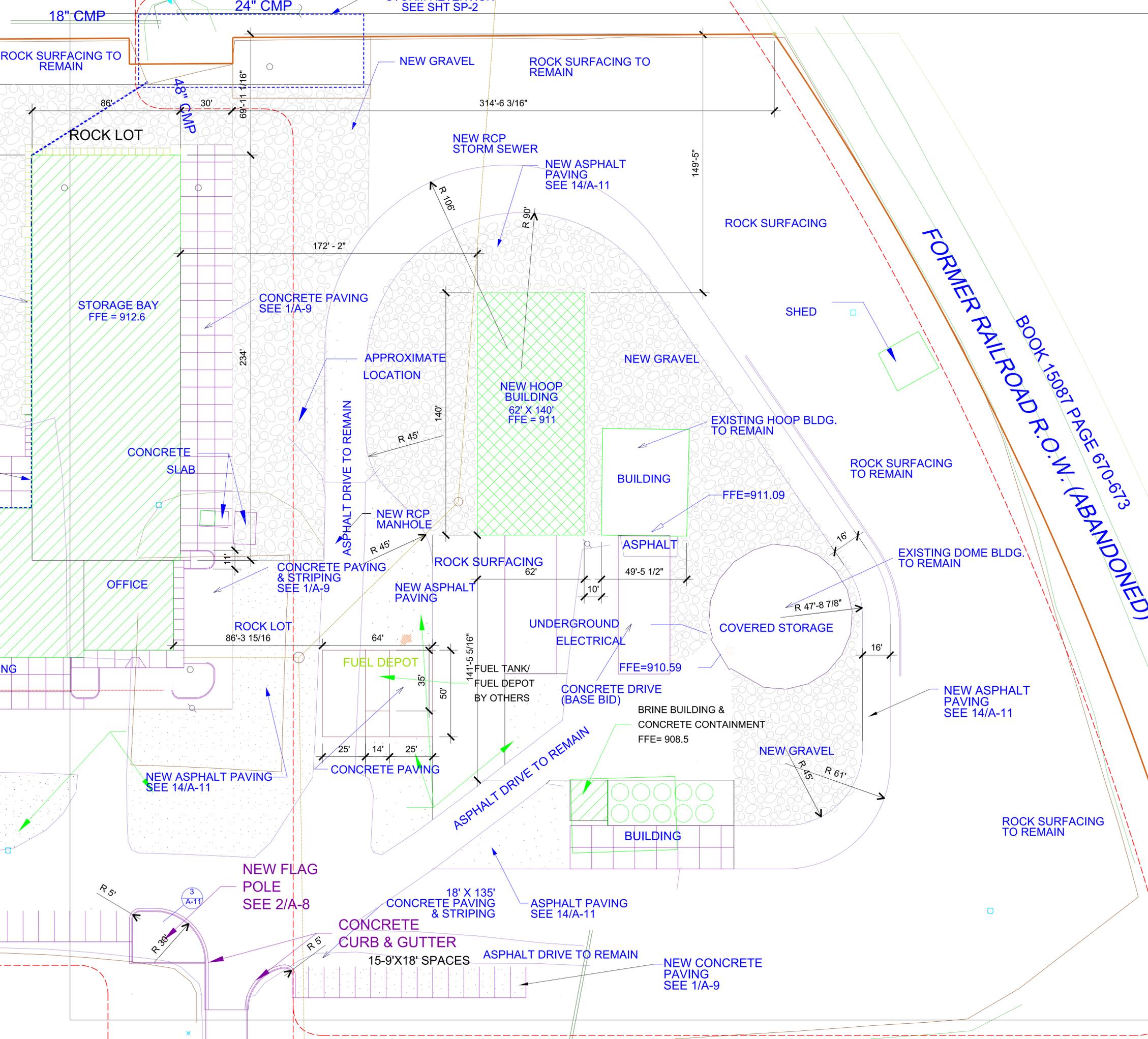
	I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly registered architect under the laws of the state of Iowa.	
	Jerry L. Burnes	
	Printed or typed name	
	Signature	Date
	Registration expires	Date issued
Pages or sheets covered by this seal:		



PROJECT LOCATION

SCALE: 1"=1 MILE





- NOTES:**
- ROCK PLACED BY CONTRACTOR FOR ACCESS TO BUILDING MAY BE LEFT IN PLACE WITH APPROVAL OF INSPECTOR
 - CONTRACTOR TO VERIFY ALL DIMENSIONS IN THE FIELD
 - CONTRACTOR RESPONSIBLE FOR PROVIDING TEMPORARY ROCK ACCESS TO JOB SITE TRAILER
 - CONTRACTOR SHALL CALL IOWA ONE CALL BEFORE ANY EXCAVATIONS AND SHALL COORDINATE BETWEEN ALL UTILITIES
 - GRADING BY OTHERS
 - ASPHALT BY OTHERS

KEY:

- EXISTING BUILDING
- PROPOSED BUILDING
- ASPHALT PAVEMENT
- GRAVEL SURFACE

SITE PLAN
SCALE: 1"=25'

FORMER RAILROAD R.O.W. (ABANDONED)
BOOK 15087 PAGE 670-673

DISTRICT: 01
COUNTY: POLK
PROJECT NUMBER: BG-4D22(000)-80-77

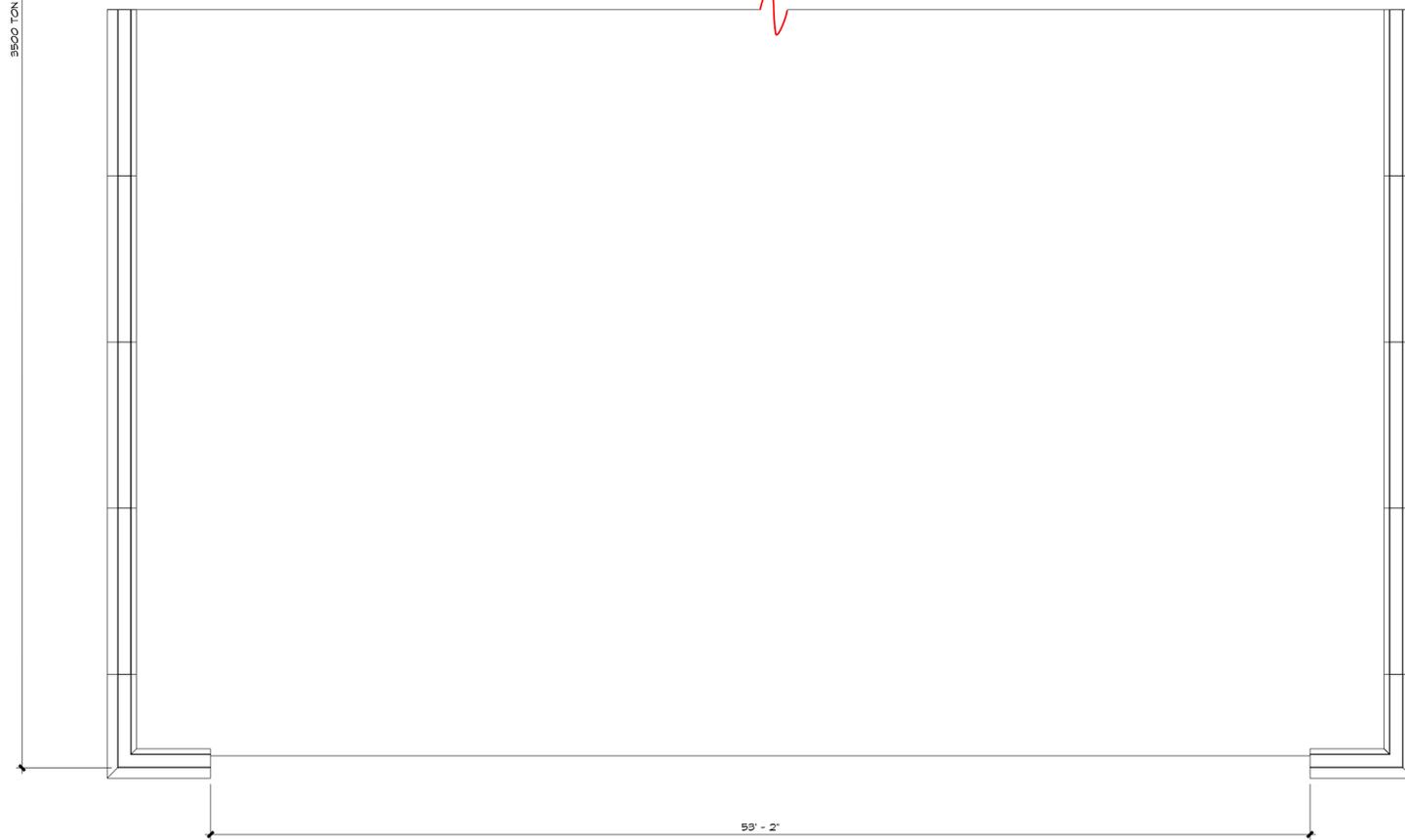
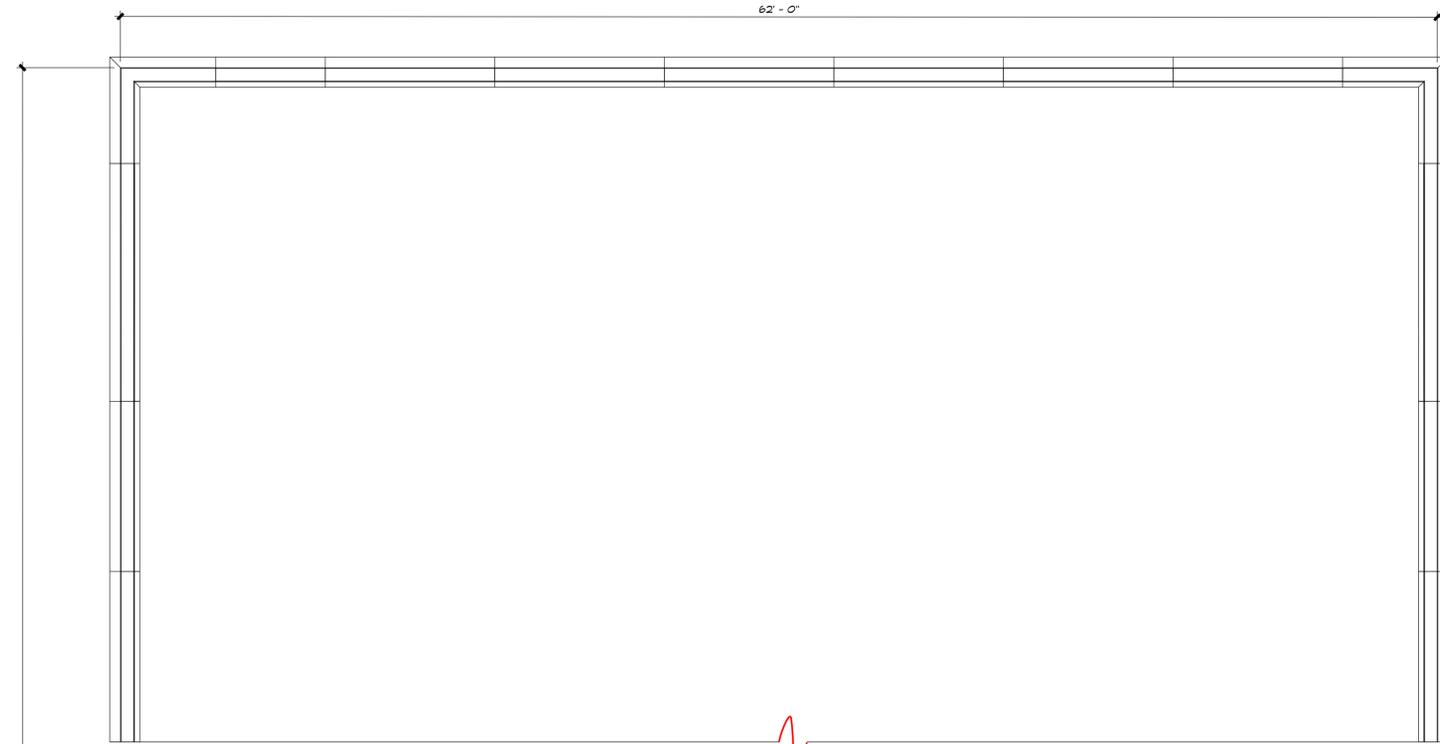
DES MOINES, IOWA

STANDARD HOOP BUILDING
SITE PLAN



DATE: 15 MAY 2015
DRAWN BY: DESIGN TEAM
APPROVED: J BURNES
REVISIONS:

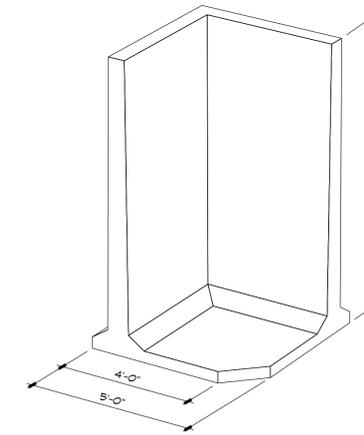
SHEET 01 OF 03
SP-1



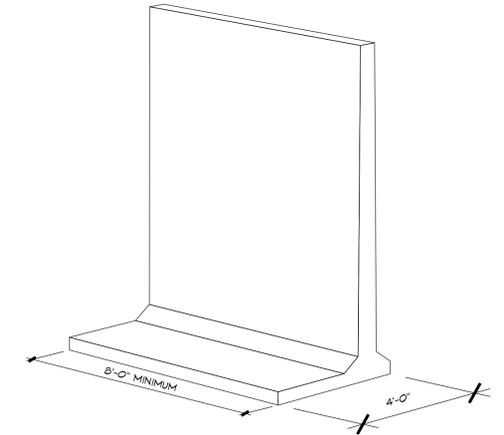
FLOOR PLAN
SCALE: 1/4" = 1'-0"

NOTES:

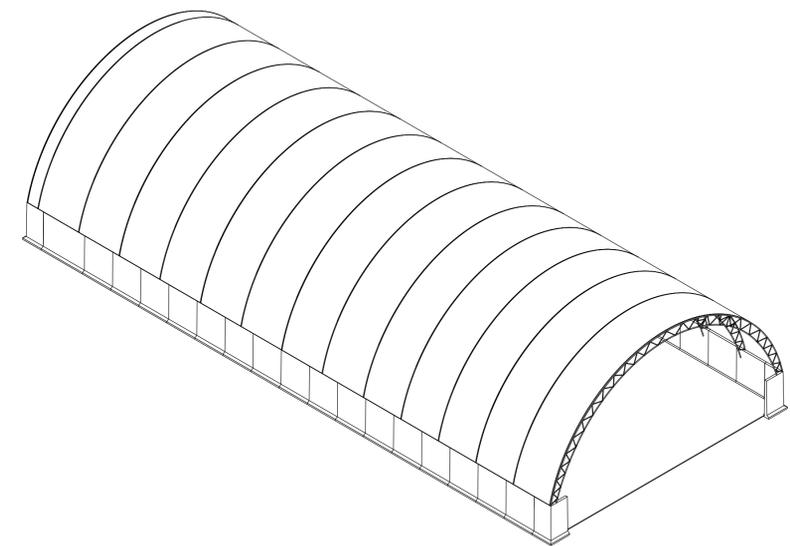
1. CONTRACTOR TO PROVIDE ALL MATERIALS FOR BUILDING PURPOSES
2. ASPHALT FLOOR AND APPROACH TO BE COMPLETED BY OWNER
3. STEEL TRUSSES ARE TO BE HOT DIPPED GALVANIZED
4. FABRIC TO BE MINIMUM 12 OZ PER SQ YD
5. PROVIDE 10 YEAR WARRANTY ON ENTIRE HOOP BUILDING SYSTEM
6. FABRIC ACCORDIAN STYLE DOOR TO BE INCLUDED
7. CONCRETE PANELS TO BE L-SHAPED PRECAST UNITS
8. INCLUDE 36" X 36" VENT (PVC) ON NORTH ELEVATION



CORNER PANEL DETAIL
SCALE: N.T.S.



PANEL DETAIL
SCALE: N.T.S.



ISOMETRIC VIEW
SCALE: N.T.S.

DISTRICT: 01
COUNTY: POLK

DES MOINES, IOWA

STANDARD HOOP BUILDING

HOOP BUILDING PLAN

PROJECT NUMBER:
BG-4D22(000)-80-77

IOWADOT
SMARTER | SIMPLER | CUSTOMER DRIVEN
OFFICE OF SUPPORT SERVICES
800 LINCOLN WAY
AMES, IOWA 50010 (515)238-1299

DATE: 15 MAY 2015
DRAWN BY: DESIGN TEAM
APPROVED: J. BURNES
REVISIONS:

02 SHEET OF 03

HA-1

GENERAL

- ALL ELEVATIONS REFERENCED TO FINISHED FIRST FLOOR (+0'-0") = 911.00 - HOOP BUILDING
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION.
- ALL OF THE WORK TO BE DONE UNDER THIS CONTRACT SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE DRAWINGS, THE GENERAL REQUIREMENTS OF DIVISION ONE, THE GENERAL CONDITIONS, THE SPECIFICATIONS, AND ANY ADDENDA THERETO.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ACQUAINT THEMSELVES AND ALL SUPERVISORY PERSONNEL WITH THE ABOVE-NAMED DRAWINGS AND DOCUMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING THE SITE OF THE PROPOSED WORK TO SATISFY THEMSELVES AS TO THE EXISTING CONDITIONS RELATIVE TO THE CONTRACT.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL TEMPORARY SHORING/BRACING OF COLUMNS, BEAMS, JOISTS, ETC., AS REQUIRED BY ALL FEDERAL, STATE AND LOCAL AGENCIES HAVING JURISDICTION, UNTIL ALL PERMANENT FRAMING IS INSTALLED.
- DRAWINGS OF THE EXISTING BUILDING ARE AVAILABLE. THE CONTRACTOR MAY MAKE COPIES OF THESE EXISTING DRAWINGS FOR THEIR REFERENCE.
- UTILITY LOCATIONS ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. SHOULD ANY UTILITIES BE FOUND DIFFERENT THAN LOCATED OR SHOWN ON THE DRAWINGS, THEY SHALL BE PROTECTED IN PLACE AND THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES.
- ALL CONSTRUCTION SHALL CONFORM TO INTERNATIONAL BUILDING CODE 2012 UNLESS NOTED OTHERWISE.

SNOW: SNOW DRIFT PER IBC 2012
 GROUND SNOW LOAD Pg = 30 PSF
 FLAT ROOF SNOW LOAD Pf = 24 PSF
 Is = 1.00
 Ce = 1.00
 Ct = 1.00

WIND: ULTIMATE DESIGN WIND SPEED (3 sec gust) Vult = 115 MPH
 NOMINAL DESIGN WIND SPEED (3 sec gust) Vasd = 90 MPH
 RISK CATEGORY II
 EXPOSURE B
 Gcpl = +/- 0.18

SEISMIC: RISK CATEGORY II
 Is = 1.00
 SITE CLASS D
 Ss = 0.064 SMs = 0.103 SDs = 0.069
 S1 = 0.046 SM1 = 0.111 SD1 = 0.074
 SEISMIC DESIGN CATEGORY B

- DIMENSIONS MARKED +/- REQUIRE VERIFICATION BY THE CONTRACTOR.
- IF CONFLICTS ARE FOUND BETWEEN DETAILS OR DIMENSIONS SHOWN ON STRUCTURAL PLANS AND THOSE SHOWN ON ARCHITECTURAL OR OTHER DISCIPLINES' PLANS, NOTIFY ARCHITECT AND ENGINEER IMMEDIATELY FOR CLARIFICATION PRIOR TO PERFORMING WORK.
- IN ANY CASE OF CONFLICT BETWEEN THE NOTES, DETAILS AND SPECIFICATIONS, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN. CONTRACTOR SHALL MAKE NO DEVIATION FROM DESIGN DRAWINGS WITHOUT WRITTEN APPROVAL OF THE ENGINEER.

FOUNDATION NOTES

- ALL PIERS AND COLUMNS ARE CENTERED ON PADS U.N.O. WALLS CENTERED ON FOOTINGS U.N.O.
- ALL FOOTINGS SHALL REST ON UNDISTURBED SOIL OR CONTROLLED COMPACTED FILL. IF UNUSUAL OR QUESTIONABLE CONDITIONS ARE ENCOUNTERED, DO NOT PROCEED UNTIL THE ARCHITECT AND ENGINEER HAVE BEEN NOTIFIED.
- POUR PIERS MONOLITHICALLY WITH CONCRETE WALLS.
- PROVIDE KEYWAY AT TOP OF ALL FOOTINGS, END OF WALL POURS, SLAB POURS AND END OF FOOTING POURS.
- PROVIDE DOWELS FROM FOOTINGS TO WALLS. USE SAME NUMBER AND SPACING AS VERTICAL WALL BARS, U.N.O.
- PROVIDE BENT BARS 2'-0" X 2'-0" AT ALL CORNERS AND INTERSECTIONS IN WALLS AND FOOTINGS. USE SAME NUMBER AND SPACING AS HORIZONTAL BARS.
- BACKFILL EACH SIDE OF WALL SIMULTANEOUSLY.
- WALLS BACKFILLED ON ONE SIDE ONLY ARE TO BE ADEQUATELY BRACED UNTIL SLABS ARE POURED AND CURED.
- HAND EXCAVATE THE LAST 6" OF ALL FOOTINGS AND PADS JUST PRIOR TO MAKING POUR.
- FORM TOPS OF ALL FOOTINGS, PADS AND GRADE BEAMS TO ENSURE CORRECT LINE AND GRADE.
- BOTTOM OF EXTERIOR FOOTINGS AND WALLS TO BE AT LEAST 3'-6" BELOW FINAL GROUND LINE.
- THE OWNER SHALL HIRE A SOIL TESTING LABORATORY TO VERIFY SOIL BEARING CAPACITY OF EACH FOOTING PRIOR TO PLACING CONCRETE.
- SHOULD THE SOILS BECOME DISTURBED OR SATURATED PRIOR TO CONCRETE PLACEMENT, AFFECTED SOIL SHALL BE REMOVED AND REPLACED WITH CONTROLLED COMPACTED ENGINEERED FILL.
- FOUNDATION CONSTRUCTION SHALL CONFORM TO CHOSEN VALLEY TESTING PROJECT NO. 6600.14.IAM DATED DECEMBER 23, 2014 AND GSI PROJECT NO. 156015 DATED FEBRUARY 5, 2015.
- IF UNSUITABLE SUPPORT MATERIALS ARE ENCOUNTERED, SOIL SHALL BE EXCAVATED UNTIL SUITABLE SOIL IS ENCOUNTERED. BACKFILL SHALL BE WITH CONTROLLED COMPACTED ENGINEERED FILL ACCORDING TO GEOTECHNICAL ENGINEER.
- ASSUMED NET ALLOWABLE FOUNDATION BEARING PRESSURE ON UNDISTURBED SOIL VARIES ACROSS SITE - SEE FOUNDATION PLAN VIEWS FOR FURTHER DETAILS.
- THE CONTRACTOR IS REQUIRED TO SUBMIT A CONTROU/COLD JOINT LAYOUT FOR ALL CAST-IN-PLACE ARCHITECTURAL CONCRETE (EXPOSED CONCRETE) TO THE ARCHITECT FOR APPROVAL PRIOR TO PERFORMING THE WORK. ANY WORK REQUIRING DEMOLITION DUE TO IMPROPERLY PLACED JOINTS WILL BE DONE AT NO ADDITIONAL COST TO THE OWNER. THE JOINT LOCATIONS SHOWN ON THE STRUCTURAL PLANS ARE FOR SCHEMATIC PURPOSES ONLY.
- PROVIDE 1/8" THICK BOND BREAK BETWEEN ADJOINING FOOTING PADS.
- CONTRACTOR SHALL BE RESPONSIBLE TO ADEQUATELY PROTECT ALL EXCAVATION SLOPES. WHERE NECESSARY, SHEETING AND SHORING OF EXCAVATION SHALL BE PROVIDED WITH ALL REQUIRED TIE-BACKS AND BRACING.
- CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION TO ALL FOOTINGS DURING CONSTRUCTION TO PREVENT SUPPORTING SOIL FROM FREEZING. USING ADDITIONAL TEMPORARY SOIL COVER OR OTHER MEANS. BOTTOM OF FOOTINGS SHALL BE A MINIMUM OF 3'-6" BELOW TOP OF TEMPORARY SOIL COVER.

CONCRETE

- CONCRETE TO BE IN ACCORDANCE WITH "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301 CURRENT EDITION)".
- REINFORCING STEEL TO BE BENT AND PLACED IN ACCORDANCE WITH "MANUAL OF STD. PRACTICE FOR DETAILING CONCRETE STRUCTURES (ACI 315 CURRENT EDITION)".
- ALL CONCRETE SHALL BE 4000 PSI AT 28 DAYS.
- CONCRETE EXPOSED TO FREEZE/THAW CONDITIONS SHALL BE AIR ENTRAINED.
- COARSE AGGREGATE FOR FOOTINGS AND UNEXPOSED WALLS MAY BE GRAVEL.
- COARSE AGGREGATE FOR SLABS AND EXPOSED WALLS TO BE CRUSHED LIMESTONE.
- MAXIMUM AGGREGATE SIZE TO BE 1" - U.N.O.
- ALL AGGREGATE IN ACCORDANCE WITH ASTM C33. LIMIT SHALE, CHERT, COAL AND IRON OXIDE.
- 4000 PSI CONCRETE TO HAVE A MIN. 6 SACKS CEMENT/MAX. 5 GAL. OF WATER/SACK.
- WATER REDUCER REQUIRED FOR ALL BEAMS, WALLS AND SLABS.
- CONCRETE WATER-CEMENT RATIO INDICATED FOR DESIGN MIXES TO HAVE CEMENT CONTENT ADJUSTED TO PROVIDE A WORKABLE MIX.
- USE OF CALCIUM CHLORIDES PROHIBITED.
- ALL REINFORCING STEEL TO BE ASTM A615 - GRADE 60.
- ALL WELDED WIRE FABRIC IN ACCORDANCE WITH ASTM A185.
- CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR TO BE: -3" CAST AGAINST EARTH. -2" ALL OTHER LOCATIONS U.N.O.
- ALL REINFORCING STEEL SHALL BE SECURELY WIRED IN PLACE BEFORE CONCRETE IS PLACED.
- MAXIMUM SPACING OF BAR SUPPORTS TO BE 3'-0" O.C. EACH WAY.
- PROVIDE 2#5 BARS AROUND ALL SIDES OF HOLES THROUGH CONCRETE WALLS AND SLABS. AT WALLS AND SLABS WITH MULTIPLE MATS OF REINFORCING, PROVIDE SUPPLEMENTAL REINFORCING BARS IN EACH FACE OF MEMBER. BARS TO EXTEND 2'-0" BEYOND EDGES OF OPENINGS.
- PROVIDE CLASS B TENSION SPLICES FOR CONTINUOUS BARS UNLESS OTHERWISE SHOWN.
- LAP WELDED WIRE FABRIC MESH A MINIMUM OF 6 INCHES OR ONE SPACE.
- PROVIDE CONTINUOUS KEYWAYS AT ALL UNREINFORCED AND FIBER REINFORCED SLAB CONSTRUCTION JOINTS.
- ALL SLAB REINFORCING STEEL SHALL CONTINUE THROUGH SLAB CONSTRUCTION JOINTS.
- ISOLATE ALL WALLS AND COLUMNS FROM SLAB ON GRADE. USE PREFORMED JOINT MATERIAL.
- CONCRETE CONTRACTOR SHALL SUBMIT A PLAN SHOWING PROPOSED JOINTING LOCATIONS AND JOINT DETAILS FOR ARCHITECTS APPROVAL. PRIOR TO PLACING SLAB. SLAB-ON-GRADE SHALL BE JOINTED SO THAT EACH AREA BOUNDED BY JOINTS DOES NOT EXTEND MORE THAN 48X SLAB THICKNESS IN ANY DIRECTION. JOINTING SHALL BE OF A REGULAR GRID PATTERN WITH INTERSECTING JOINTS AT 90 DEGREES AND SHALL INTERSECT AT COLUMNS WHERE POSSIBLE.
- DO NOT SAWCUT STRUCTURAL SLABS, STOOPS, OR SLABS ON METAL DECK WITHOUT PRIOR APPROVAL OF ENGINEER.
- THE CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL OPENINGS IN WALLS, SLABS AND FOUNDATIONS FOR DUCTS, PIPES, UTILITY LINES AND OTHER PENETRATIONS WITH THE RESPECTIVE TRADES. ALL SUCH PENETRATIONS SHALL BE FORMED OR SLEEVED IN CONCRETE AND STEEL LINTELS IN MASONRY WALLS.
- UNLESS OTHERWISE DETAILED ON PLANS, NO OTHER OBJECTS SHALL BE PLACED IN STRUCTURAL SLABS WITHOUT PRIOR APPROVAL OF ARCHITECT (I.E. CONDUIT, MECHANICAL LINES, PLUMBING LINES, ETC.).
- ALL CONCRETE SLABS SHALL BE POURED TO UNIFORM THICKNESS AS INDICATED ON PLANS.
- SEE ARCHITECTURAL PLANS FOR CONCRETE STOOP LOCATIONS AND DIMENSIONS.
- CONTRACTOR SHALL USE RIGID TEMPLATES TO INSTALL ANCHOR BOLTS. ANCHOR BOLTS SHALL BE TIED IN PLACE PRIOR TO POURING CONCRETE. NO WET STICKING OF ANCHOR BOLTS WILL BE ALLOWED.
- PIPES OR CONDUITS PLACED IN SLAB ON GRADE SHALL NOT BE SPACED CLOSER THAN 3 TIMES THE DIAMETER ON CENTER. PIPES AND CONDUITS PLACED IN SLAB ON GRADE SHALL NOT HAVE AN OUTSIDE DIAMETER LARGER THAN 1/3 THE SLAB THICKNESS. NO CONDUITS SHALL BE PLACED WITHIN 12 INCHES OF ANY COLUMN FACE. ALUMINUM CONDUIT SHALL NOT BE PLACED IN SLABS.
- PROVIDE CONSTRUCTION JOINTS IN ACCORDANCE WITH ACI 318, CHAPTER 6.4. SUBMIT SHOP DRAWINGS SHOWING CONSTRUCTION JOINT LOCATIONS ALONG WITH THE SEQUENCE OF POURS FOR REVIEW.

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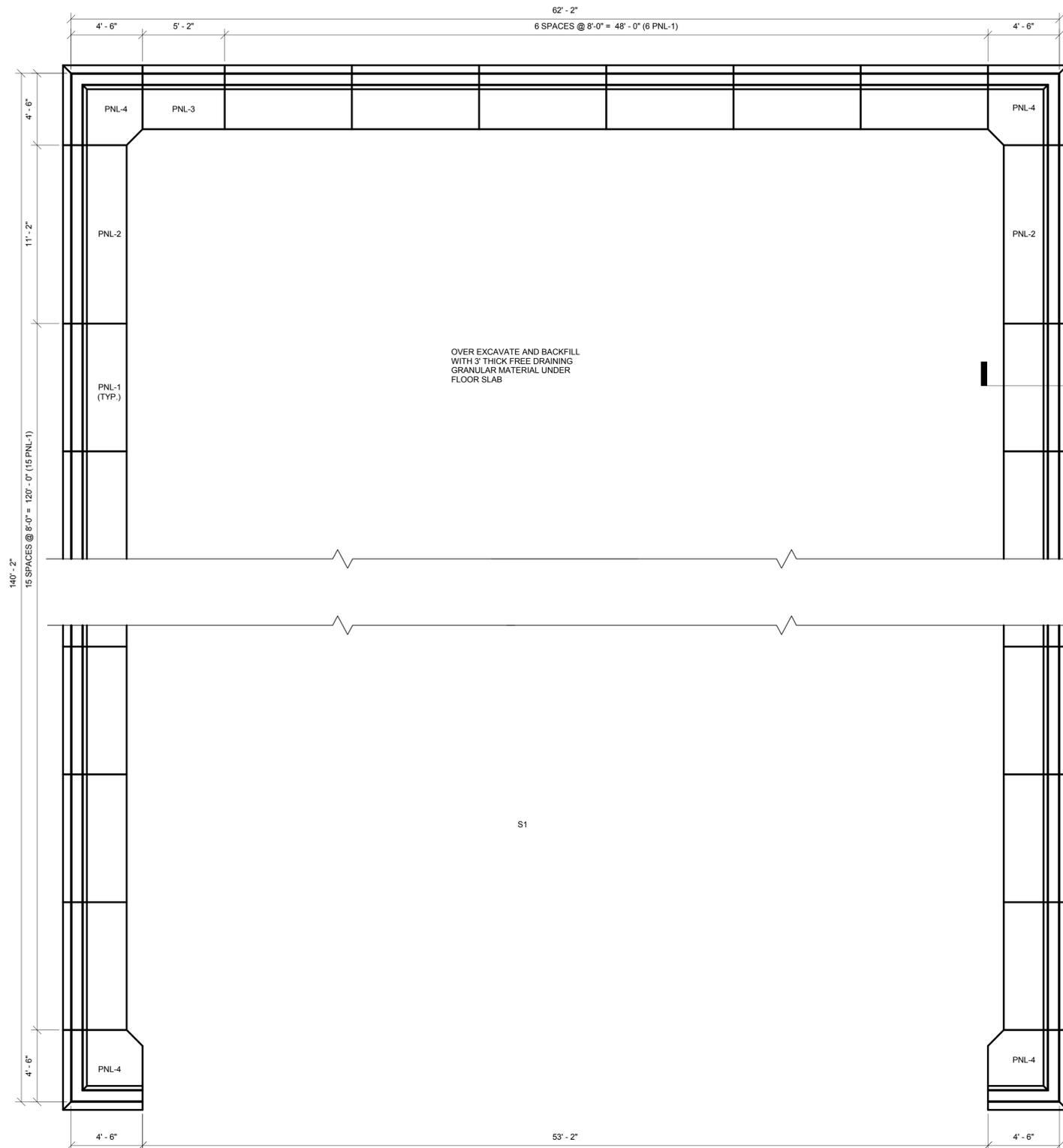
I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA

Joseph W. Stanisz 05/20/2015
 JOSEPH W. STANISZ, P.E. IOWA REG. NO. 16329

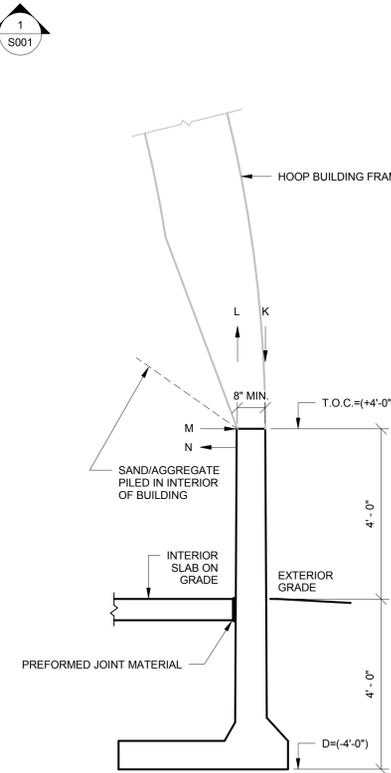
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2015

PAGES OR SHEETS COVERED BY THIS SEAL:
 S000 - S001

STANDARD HOOP BUILDING	DES MOINES, IOWA
NOTES	DISTRICT: 01 COUNTY: POLK PROJECT NUMBER: BG-4D22(000)-80-77
 <p style="font-size: 8px;">IOWA DOT <small>OFFICE OF SUPPORT SERVICES AMES, IOWA 50010 (515)281-1289</small></p>	<p>DATE: 05/20/15</p> <p>DRAWN BY: DESIGN TEAM</p> <p>APPROVED:</p> <p>REVISIONS:</p> <p>SHEET OF</p> <p style="font-size: 1.2em; font-weight: bold;">S000</p>



- PERFORMANCE CRITERIA FOR PRECAST FOUNDATIONS:**
- FOUNDATIONS SHALL BE DESIGNED TO RESIST ALL APPLIED LOADS, INCLUDING:
 - REACTIONS FROM HOOP FRAMES (VERTICAL AND LATERAL)
 - LATERAL LOAD FROM SAND/AGGREGATE PILE ON INTERIOR OF BUILDING.
 - WIND LOAD.
 - BASIS FOR HOOP BUILDING FRAMING IS SPAN - TECH STB60X 2190 SERIES FABRIC BUILDING WITH 12'-0" FRAME SPACING AND 24'-10" FRAME HEIGHT.
 - SPAN - TECH FRAME REACTIONS AT TOP OF FOUNDATION WALL (SERVICE LEVEL):
 - ENCLOSED CONDITION (K) VERTICAL LOAD 3.7K (L) VERTICAL LOAD 6.5K (M) HORIZONTAL LOAD 4.2K (N) HORIZONTAL LOAD 4.1K
 - PARTIALLY ENCLOSED CONDITION (K) VERTICAL LOAD 5.6K (L) VERTICAL LOAD 6.5K (M) HORIZONTAL LOAD 4.2K (N) HORIZONTAL LOAD 4.1K
 - VERIFY ALL LOADS PROVIDED WITH HOOP BUILDING MANUFACTURER.
 - PROVIDE DETAILS OF ANY REQUIRED PANEL TO PANEL CONNECTIONS.
 - PRECAST FOUNDATION PANELS SHALL BE DESIGNED BY AN IOWA REGISTERED PROFESSIONAL ENGINEER FOR LOADS INDICATED ABOVE. CERTIFIED CALCULATIONS, SHOP DRAWINGS, AND LAYOUT PLAN SHALL BE SUBMITTED FOR REVIEW PRIOR TO CONSTRUCTION.



1 PANEL SECTION
1/2" = 1'-0"



FOUNDATION PLAN - HOOP BUILDING
1/4" = 1'-0"

NOTES:

ALL ELEVATIONS REFERENCED TO FINISHED FIRST FLOOR LINE (+0'-0") = 911.00
 "D" DENOTES DISTANCE FROM FINISHED FIRST FLOOR LINE TO BOTTOM OF PRECAST FOUNDATION SECTION
 "D" = (-4'-0") EXTERIOR FOOTINGS (U.N.O.)
 T.O.C. DENOTES TOP OF CONCRETE
 T.O.C. = (+4'-0") (U.N.O.)
 FOR DIMENSIONS AND ELEVATIONS NOT SHOWN SEE ARCHITECTURAL
 SLOPE ALL EXTERIOR STOOP SLABS PER ARCHITECTURAL DRAWINGS
 SLAB ON GRADE: S1: 6" CONCRETE SLAB WITH #4 AT 24" O.C.
 PROVIDE CONTROL JOINTS AS SHOWN ON ARCHITECTURAL.

DESIGN NET ALLOWABLE FOUNDATION BEARING PRESSURE = 1500 PSF.
 VERIFY PRIOR TO PLACING PRECAST FOUNDATIONS.
 GEOTECHNICAL ENGINEER TO EVALUATE SOIL UNDER NEW PRECAST FOUNDATIONS TO DETERMINE IF ANY OVER EXCAVATION AND BACKFILL IS REQUIRED.

PRECAST FOUNDATION SCHEDULE

Count	Type Mark	Wall Width
36	PNL-1	8'-0" PANEL
2	PNL-2	11'-2" PANEL
1	PNL-3	5'-2" PANEL
4	PNL-4	4'-6" X 4'-6" CORNER PANEL

