

GENERAL STRUCTURAL NOTES

- A. GENERAL REFERENCE:
ALL WORK MUST CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, 2006 EDITION, AND OSHA, LATEST EDITION.
- B. THE CONTRACTOR SHALL CONTRACT A QUALIFIED THIRD-PARTY INSPECTION AGENCY APPROVED BY THE AUTHORITY HAVING JURISDICTION. THE INSPECTION AGENCY SHALL PREPARE A QUALITY ASSURANCE AND TESTING PROGRAM IN ACCORDANCE WITH CHAPTER 17 OF THE IBC, LATEST EDITION. SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING WITH INSPECTION REQUIREMENTS PER IBC 2006, TABLE 1704.3 & 1704.4 WITH LOCAL AMENDMENTS:

	YES	NO
1. CONCRETE	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. REINFORCING STEEL AND PRE STRESSING STEEL TENDONS	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. SPECIAL GRADING, EXCAVATION & FILLING	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. STRUCTURAL MASONRY	<input checked="" type="checkbox"/>	<input type="checkbox"/>

C. DESIGN LOADS:

- DEAD LOAD = 129K (FULL FUEL TANK)
- WIND LOAD:
 $V_{WS} = 90\text{MPH}$
 $W = 1.15$
EXPOSURE "C"
- SEISMIC DESIGN:
SEISMIC USE GROUP IV (FUEL TANK)
 $S_S = 0.285$
 $S_1 = 0.089$

1. SHEET CROSS-SECTION (ASSEMBLED). THEREFORE, REFERENCE IBC TABLE 1804.2 BEARING CAPACITY: 1,500 PSF @ 1'-6" BELOW FINISHED GRADE

- D. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING OF LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

- E. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH THE EXISTING CONDITIONS PRIOR TO START OF CONSTRUCTION. RESOLVE ANY DISCREPANCY WITH ENGINEER.

- F. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.

- G. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

- H. WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.

- I. THE CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS PRIOR TO ORDERING MATERIALS AND STARTING CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.

- J. SPREAD FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL OR CONTROLLED COMPACTED FILL.

- K. FOUNDATION DESIGN HAS BEEN BASED ON A 12,000 GALLON "REGULAR" CYLINDRICAL TANK BY MODERN WELDING COMPANY. FOUNDATIONS MUST BE COORDINATED WITH ANY VARIATIONS OF TANK OR EQUIPMENT.

- L. ALL CONSTRUCTION BRACING AND SHORING REQUIRED PER OSHA MUST BE DESIGNED BY THE CONTRACTOR.

SOILS

A. FILL MATERIAL:

- ANY IMPORTED ENGINEERING FILLS SHALL HAVE THE FOLLOWING GRADATION BY WEIGHT:
100% PASSING 6" SIEVE
70-100% PASSING 3" SIEVE
50-100% PASSING #4 SIEVE
15% MAXIMUM PASSING #200 SIEVE
LIQUID LIMIT 30 MAX
PLASTICITY INDEX 15 MAX
MAXIMUM SOLUBLE SILICATES = 0.1%
MAXIMUM EXPANSION POTENTIAL OF 1.5%
 - SLAB BASE COURSE SHALL HAVE 100% PASSING 1-1/2" SIEVE, 45% TO 90% PASSING #4 SIEVE, NO MORE THAN 12% PASSING #200 SIEVE.
 - COMPACTION TO 95% OF ASTM D-1557 AS PER ABOVE.
- B. FINISH GRADING SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO ELIMINATE ANY POTENTIAL PONDING NEAR FOUNDATIONS.

CONCRETE

- A. ALL CONCRETE SHALL BE READY MIXED CONCREING WITH ASTM C-94 AND ATTAIN THE FOLLOWING MINIMUM STRENGTHS AT 28 DAYS:
1. SLAB ON GRADE AND FOUNDATION..... 3000 PSI (2500 PSI USED IN DESIGN)

- B. ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE PROVISIONS OF THE FOLLOWING LATEST ACI STANDARDS:
1. ACI 301-SPECIFICATIONS FOR STRUCTURAL CONCRETE BUILDING
2. ACI 318-BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.

- C. CONCRETE FOOTINGS AND PADS MAY BE POURED AGAINST NEAT EXCAVATIONS.

- D. MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE AS FOLLOWS:

- CONCRETE POURED DIRECTLY AGAINST EARTH..... 3"
- FORMED CONCRETE EXPOSED TO WEATHER OR EARTH..... 2"
- AGAINST LEVELLED BASE COURSE..... 2"

- E. ALL REINFORCING BARS, ANCHOR BOLTS AND CONCRETE INSERTS SHALL BE SECURED IN POSITION PRIOR TO PLACING CONCRETE.

- F. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING CONCRETE. VERIFY OPENINGS WITH ELECTRICAL AND MECHANICAL DRAWINGS. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT.

- G. NO CONSTRUCTION JOINTS (OTHER THAN THOSE SHOWN ON DRAWINGS) SHALL BE INSTALLED WITHOUT APPROVAL OF THE ENGINEER. PROVIDE 3/4" CHAMFER AT ALL EXPOSED CORNERS.

- H. CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER 24 HRS IN ADVANCE TO OBSERVE COMPLETED FOOTING EXCAVATION AND ALL REINFORCING BAR PLACEMENTS BEFORE ANY CONCRETE IS PLACED.

I. REINFORCING STEEL:

- ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A-615 GRADE 60 FOR #4 OR GREATER.
- ALL REINFORCING IN CONCRETE SHALL BE CONTINUOUS OR LAPPED IN ACCORDANCE WITH ACI 318, AND NOT LESS THAN 36 DIAMETERS.

J. JOINTS IN SIDEWALKS:

- SAW CUT OR TOoled JOINTS IN SIDEWALKS SHALL BE 1/4" INCH DEEP, CARRIED THROUGH COMPLETELY TO THE EDGE. AT THE EDGE, THE JOINT SHALL BE DEEPENED TO 5/16".
- JOINTS SHALL BE PLACED TO ACHIEVE APPROXIMATELY SQUARE PANELS.

K. SLABS ON GRADE:

- 6" SLABS SHALL HAVE ONE LAYER OF #4 REBAR @ 16" O.C. EACH WAY AT CENTER OF SLAB, RECOMMENDED MAXIMUM JOINT SPACING: 12' X 12'.

L. CONCRETE PLACEMENT:

- CONSOLIDATE PLACED CONCRETE WITH MECHANICAL VIBRATING EQUIPMENT ACCORDING TO ACI 301. DO NOT VIBRATE SELF-CONSOLIDATING CONCRETE. CONCRETE SHALL NOT BE DROPPED MORE THAN FOUR FEET VERTICALLY WITHOUT THE USE OF A TREMIE.
- ALL CONCRETE MUST BE CURED IN ACCORDANCE WITH ACI 308.1.
- DO NOT ADD WATER TO CONCRETE DURING DELIVERY, AT PROJECT SITE, OR DURING PLACEMENT UNLESS APPROVED IN ADVANCE BY THE STRUCTURAL ENGINEER OF RECORD IN WRITING.

MASONRY

- A. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MASONRY SOCIETY AND NATIONAL CONCRETE MASONRY ASSOCIATION.

- B. MASONRY UNITS: ASTM C-90, GRADE N, TYPE I, $f_m = 1500$ PSI

- C. MASONRY MORTAR SHALL BE TYPE "S" CONFORMING TO ASTM C-270.

- D. MASONRY GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2000 PSI, ASTM C-476.

- E. ALL MASONRY SHALL BE REINFORCED WITH TRUSS TYPE JOINT REINFORCEMENTS HORIZONTALLY AT 16 INCH O.C., 3/16" DIAMETER RODS, $F_U = 80$ KSI, ASTM A-82.

F. REINFORCING:

- REINFORCING STEEL FOR MASONRY SHALL CONFORM TO ASTM A615, GRADE 60, AND BE LAPPED A MINIMUM OF 40 BAR DIAMETERS.
 - PROVIDE ONE (1) #4 VERTICAL REINFORCING BAR AT ALL WALL CORNERS, INTERSECTIONS, AND ENDS UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
 - OTHER VERTICAL REINFORCING BARS SHALL BE AS SHOWN ON DRAWINGS BUT IN NO CASE LESS THAN #5 BARS AT 48" O.C. MASONRY CELLS WITH REINFORCING BARS SHALL BE FILLED SOLID WITH GROUT.
 - PROVIDE 1 #5 HORIZONTAL REINFORCING BAR IN 8" BOND BEAM AT 8'-0" MAX. ON CENTER, MINIMUM. REFER TO DRAWINGS FOR ADDITIONAL BOND BEAMS REQUIRED.
- G. CONSTRUCTION JOINTS IN MASONRY SHALL NOT EXCEED 30 FEET UNLESS NOTED ON DRAWINGS.

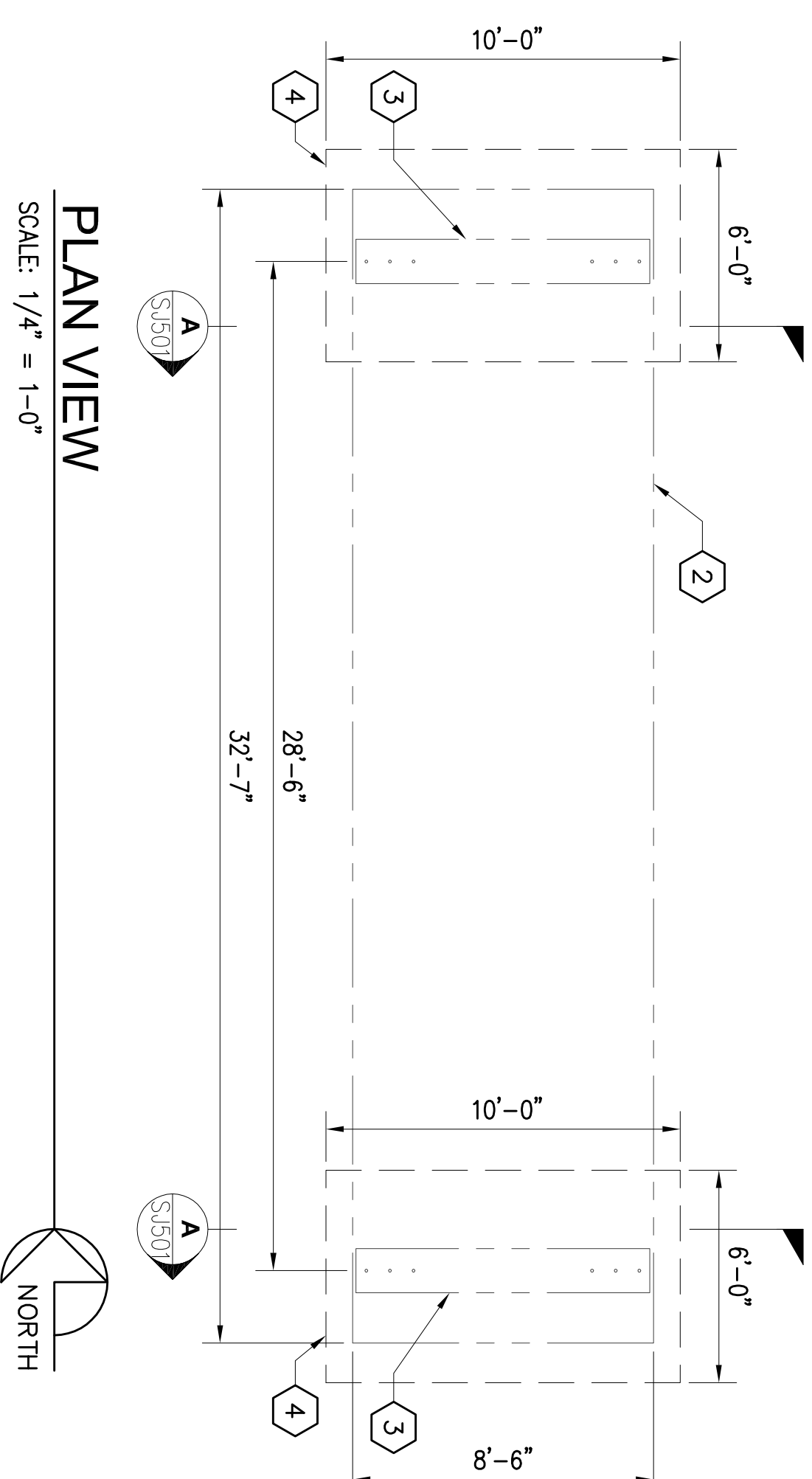
KEY NOTES

- NEW 6" CONCRETE SLAB. SEE CIVIL DRAWINGS.
- NEW 12,000 GALLON ABOVE-GROUND FUEL TANK, SEE MECHANICAL. TANK TO BE PAINTED SAME COLOR AS WALL. COORDINATE COLOR WITH COUNTY. ALL FACTORY LABELS OR MARKINGS ON TANK SHALL BE PROTECTED FROM OVER SPRAY.
- LOCATION OF TANK SUPPORTS.
- CONCRETE FOUNDATION PER DETAIL A/S/S501. FOUNDATION MUST BE COORDINATED WITH APPROVED TANK SUBMITTAL.
- PROVIDE BOLLARD, PAINT OSHA YELLOW, SEE DETAILS 4/O501 & 5/O501 FOR MORE INFORMATION, TYPICAL ALL LOCATION PER CIVIL DRAWINGS.
- PROVIDE 8'-0" HIGH 8" CMU WALL PER DETAIL B/S/S501. USE STANDARD 8x8x16 SMOOTH FACE BLOCK TO BE PAINTED TAN, COORDINATE COLOR W/ COUNTY.
- PROVIDE 6" CONCRETE PAD FOR EQUIPMENT. SEE DETAIL 1/S/S502.
- SAW CUT EXISTING CONCRETE PER CIVIL DRAWINGS.
- NOT USED
- MASONRY CONTROL JOINT PER DETAIL 2/S/S502.
- CONCRETE SWALE PER CIVIL DRAWINGS.

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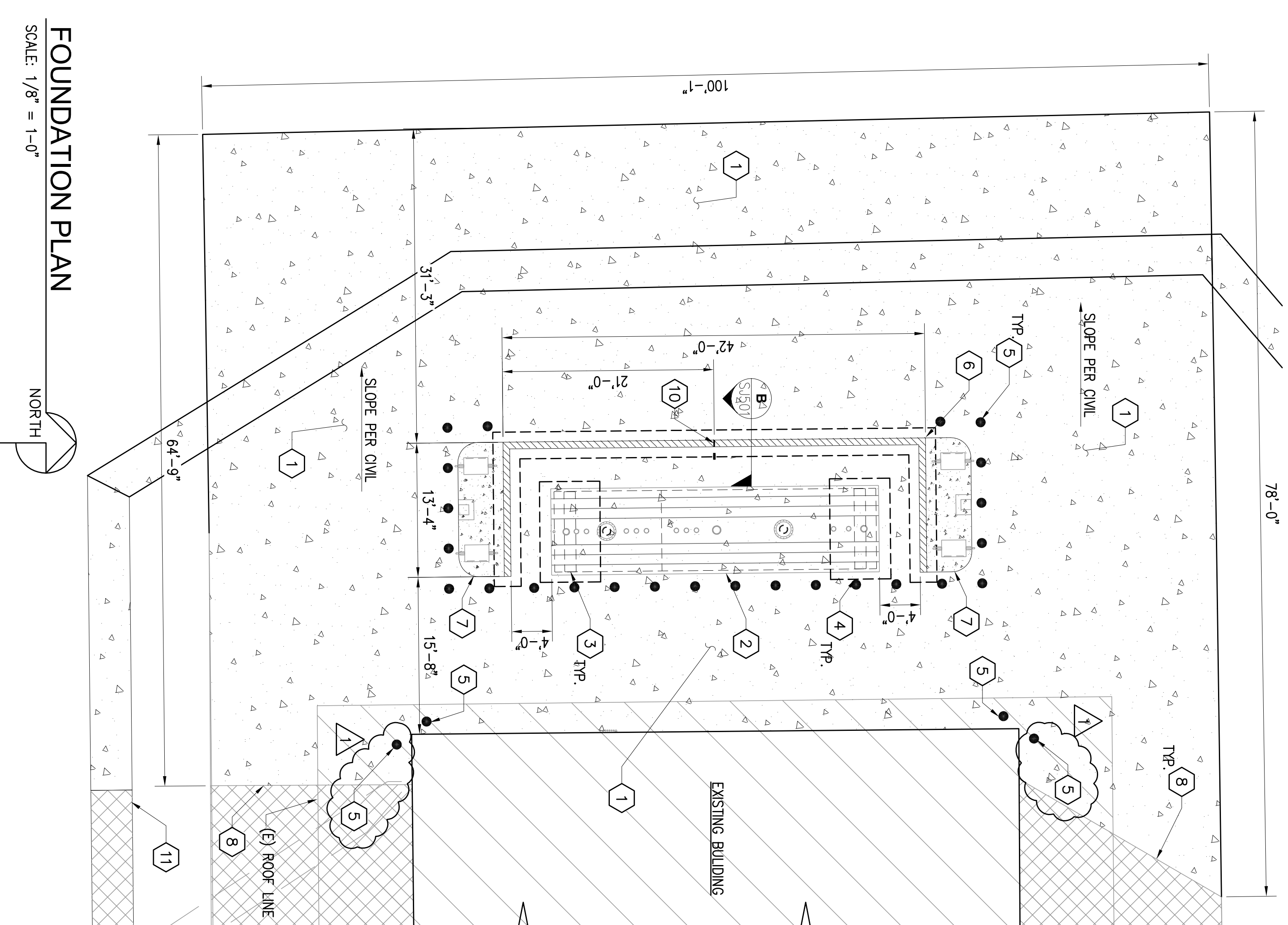
GENERAL NOTES

- SEE CIVIL FOR MORE INFO.
- COORDINATE BLOCKOUTS WITH MECH. EQUIP.
- FIELD VERIFY DIMENSIONS.



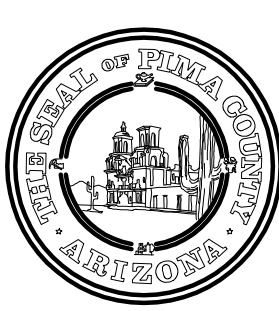
PLAN VIEW

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



FOUNDATION PLAN

SCALE: 1/8" = 1'-0"



RICHEY BLVD. FUEL TANK REPLACEMENT

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