

- NOTES:**
1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS & DEPRESSIONS PRIOR TO COMMENCING WORK.
  2. TREAT SOIL BELOW SLAB FOR TERMITES.
  3. CONCRETE MIX SHALL BE 3000 PSI.

COMMENTS FROM THE SOILS ANALYSIS WILL BE FOLLOWED:  
 Site preparation should include clearing to remove organic bearing materials and any rubble or debris that may be present within the area of planned construction. Soils containing objectionable materials should not be used for backfill. After the mitigation operations are performed (as described below), the entire area to be filled and/or occupied by paving or foundations should be proof-rolled with a loaded tandem-axle dump truck or similar pneumatic-tired equipment with a minimum weight of 15 tons and a maximum weight of 25 tons to observe for the presence of weak, yielding, or pumping foundation soils. If rutting or pumping is encountered, the areas should be further mitigated.

The in-place soils must be stable prior to the placement of fill materials or structures over them. At the time of this investigation, the near-surface clays (CH) were described as firm to very stiff in some areas and soft in others. In order to provide more uniform support, the entire site should be modified with hydrated lime mixed at 4% by weight to a minimum depth of 12 inches. The contractor should be required to provide a stabilizer capable of mixing to the full depth of 12 inches. The purpose of the lime is to remove excess moisture from the soil and to reduce the Plasticity Index (PI) of the moderately plastic areas. The procedure should follow the guidelines presented for Type C Mixing in Section 304 of the Louisiana Standard Specifications for Roads and Bridges, 2000 Edition (Red Book).

After completion of the lime modification, the subgrade area should be cement modified using Type 1 Portland cement mixed at 10% by weight to a minimum depth of 9 inches. If the building is to be supported on shallow foundations, then the building area should be included within the mitigation. Cement modification procedures should follow Section 301 of the Red Book. The exposed subgrade surface should be graded to shed water toward the lower perimeter areas. No traffic should be allowed on the prepared subgrade for at least 72 hours after final compaction and grading.

Excavations  
 Foundation excavations placed into the upper 4 feet in the firm to very stiff clays (CH) should be capable of standing on near vertical slopes for short-term conditions. The soft and very soft clays (OH) may require sloping or benching to maintain stability. Groundwater seepage should be minor. The depth to groundwater should be evaluated before foundation excavations are placed. All excavations should be made and kept in compliance with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations (29 CFR Part 1926). These regulations require that excavations greater than five feet in depth be sloped, benched, sheeted, or braced to protect employees working in or near the excavation against the risk of collapse.

Fill Materials  
 Fill used to bring the site to grade should be either a low plasticity clay (CL) or a clayey sand (SC). The sandy materials are easier to work during wet weather, but the lean clay is less susceptible to erosion, provides a better long-term barrier to surface water penetration and is generally more stable. Additionally, the lean clay materials would provide more uniform support system for slabs on grade. Imported soils to be used as fill should be free of roots, construction debris, organic matter or any other type deleterious matter. The clayey soils should have a liquid limit of less than 45 and a plasticity index of between 8 and 25.

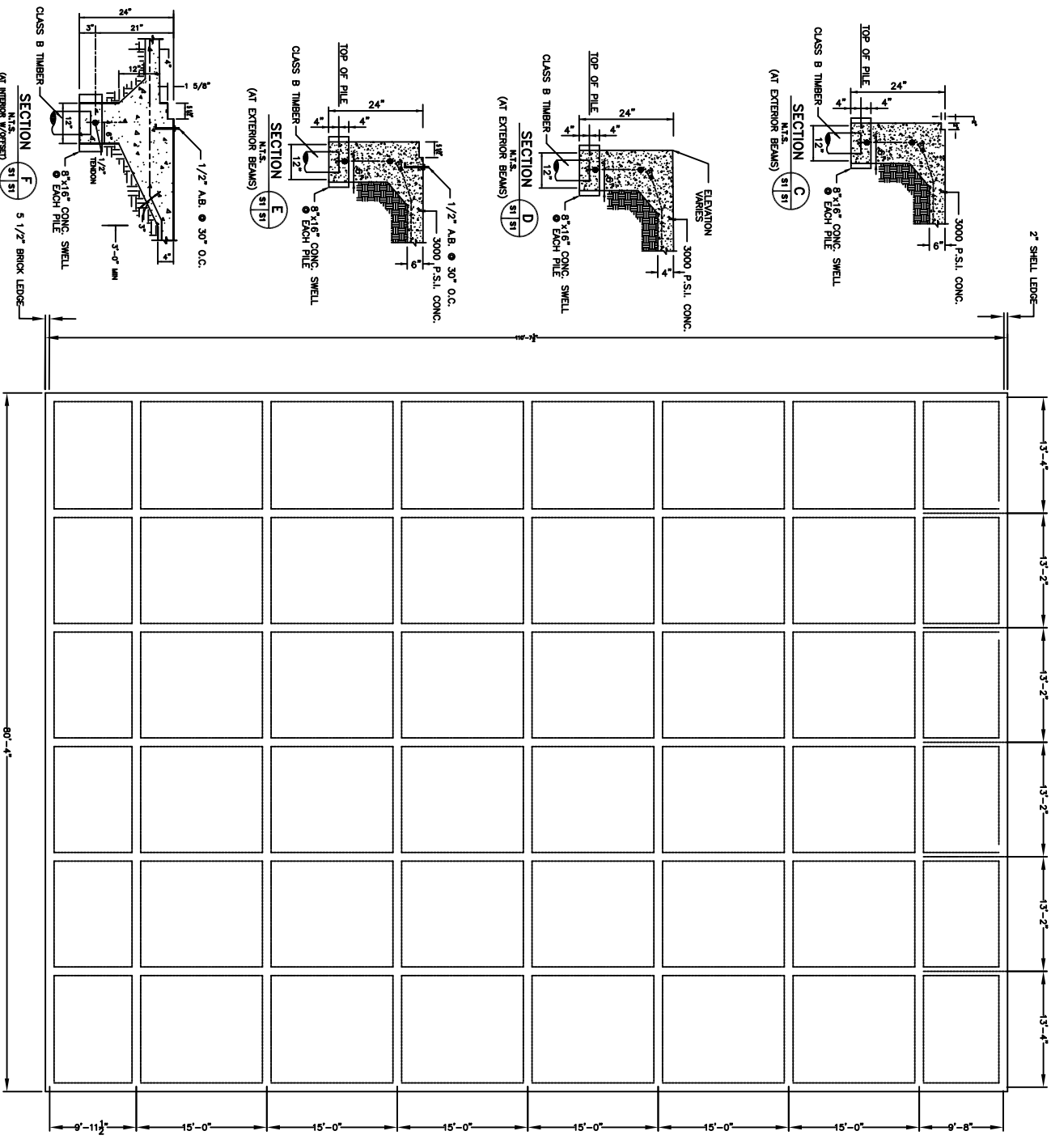
Fill Placement/Compaction  
 The fill should be placed in loose lifts graded to provide a uniform thickness not exceeding nine inches. The surface of each preceding, compacted lift should be lightly scarified to ensure adequate bonding between lifts. The moisture content during compaction should be maintained within five percent of its optimum as determined by the standard Proctor compaction test (ASTM D 698). The minimum compaction requirements are a function of the future use of the area. These requirements are as follows:

Structural Fill: (beneath footings, building pads, floor slabs, or parking/driveway areas) at least 95 percent of its maximum density as determined by the standard Proctor compaction test (ASTM D 698), and Grading Fill: (outside of the areas listed above) at least 90 percent of its maximum density as determined by the standard Proctor compaction test (ASTM D 698).

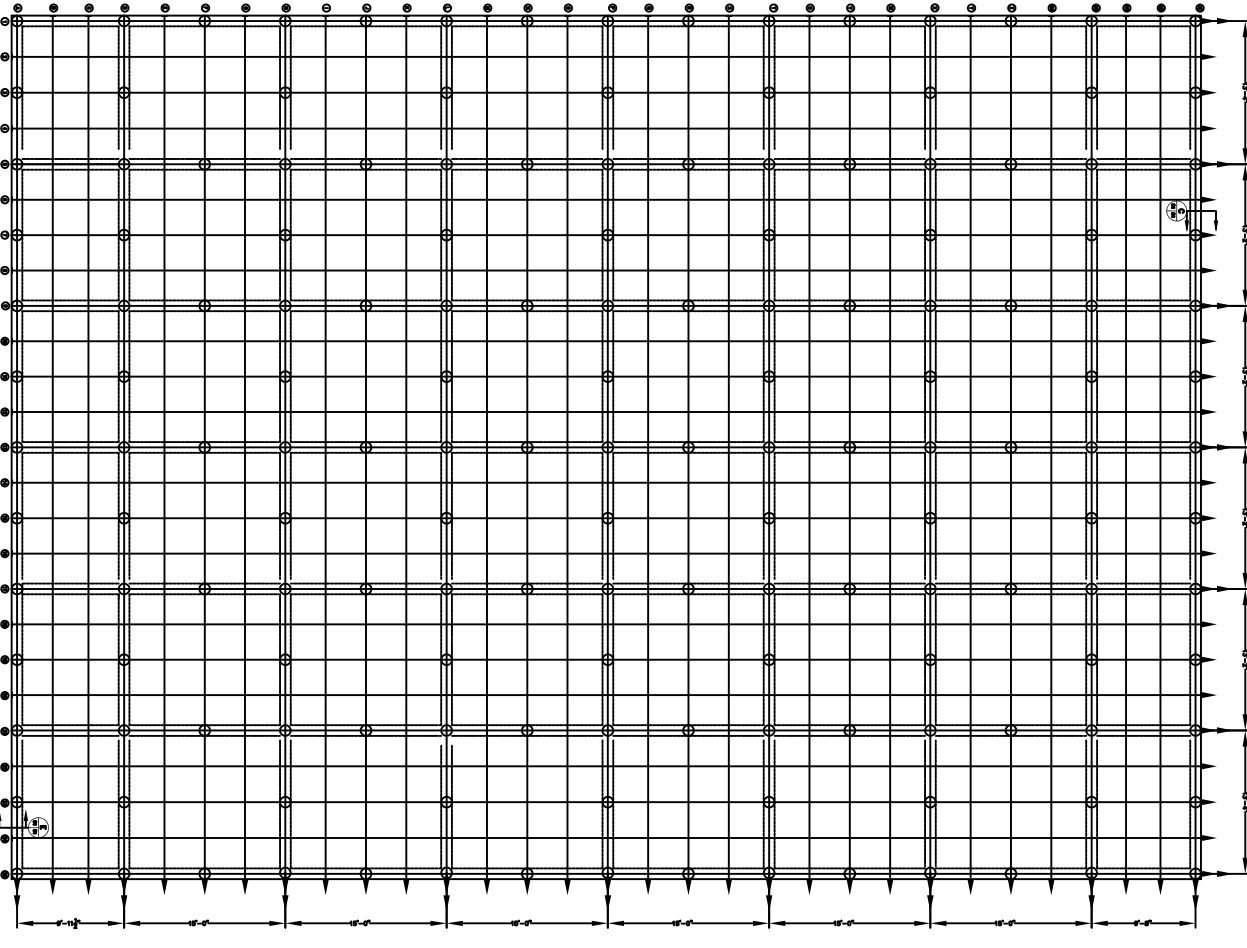
INSUL-TECH  
**DAMMON ENGINEERING, INC.**  
 1095 FLORIDA AVENUE 985-649-5832 SLIDELL, LA. 70458  
 DAMMONENGINEERING.COM

**FOUNDATION PLAN**  
 HIGHLAND INDUSTRIAL PARK  
 LOTS 8 & 9, SEC 24,68,&69  
 PLAQUEMINES PARISH LA

SCALE: AS NOTED  
 FILE:  
 JOB NO. 1726  
 DATE: 6-15-06  
 SHEET  
**S-1**  
 OF



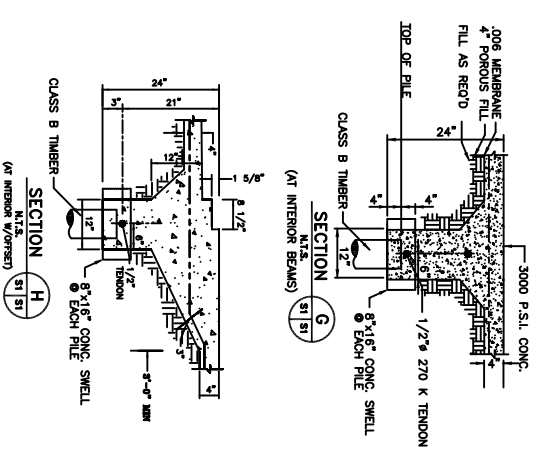
TENDON LENGTHS	
SECTION	LENGTH
SECTION C	15'-0"
SECTION D	15'-0"
SECTION E	15'-0"
SECTION F	15'-0"
SECTION G	15'-0"
SECTION H	15'-0"



SHORTEST DISTANCE BETWEEN PILING 6'-7"; LONGEST DISTANCE BETWEEN PILING 9'-11 1/2"  
 SHORTEST DISTANCE BETWEEN TENDONS (1-25) 13'-2"; LONGEST DISTANCE BETWEEN TENDONS (1-25) 13'-4"  
 SHORTEST DISTANCE BETWEEN TENDONS (A-AE) 9'-8"; LONGEST DISTANCE BETWEEN TENDONS (A-AE) 15'-0"

**PILING PLAN**

- GENERAL NOTES**
- CONCRETE DESIGN IS BASED UPON A CONCRETE MIX HAVING A MINIMUM OF 5.0 SACKS OF CEMENT PER CUBIC YARD AND A MAXIMUM OF 30 GALLONS WATER PER CUBIC YARD. SUCH A MIX SHOULD GIVE A MINIMUM COMPRESSION STRENGTH OF 3000 P.S.I. AT 28 DAYS. CONCRETE DESIGN MIX SHALL BE IN ACCORDANCE WITH THE A.C.I. BUILDING CODE REQUIREMENTS (A.C.I. 318-77).
  - CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 1500 P.S.I. AT THE TIME OF STRESSING.
  - ALL CONVENTIONAL REINFORCING STEEL SHALL BE ASTM DESIGNATION A-615 (GRADE 60) REINFORCING AND SHALL BE DETAILED AND ACCESSORIES PROVIDED IN ACCORDANCE WITH THE LATEST A.C.I. MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES.
  - ALL PRESTRESSING STEEL SHALL CONSIST OF SEVEN-WIRE STRESS RELIEVED STRAND CONFORMING TO ASTM A-416. MINIMUM ULTIMATE TENSILE STRENGTH SHALL BE 270,000 P.S.I. STRANDS SHALL BE COATED WITH A PERMANENT RUST PREVENTATIVE LUBRICANT AND A PLASTIC SHEATH.
  - REINFORCEMENT SHALL HAVE 2" COVER IN GRADE BEAM BOTTOMS, 2" COVER IN BEAM SIDES AND TOPS, AND 1 1/2" COVER IN SLAB TOPS AND BOTTOMS, UNLESS OTHERWISE SHOWN.
  - TENDONS AND BARS SHALL BE SECURELY SUPPORTED TO PREVENT BOTH VERTICAL AND HORIZONTAL MOVEMENT DURING PLACING OF CONCRETE.
  - THE CONTRACTOR SHALL VERIFY ALL DROPS, OFF-SETS, BRICK-LEDGES AND BLOCK-OUTS ON ARCHITECTURAL PLANS AND NOTIFY THE ENGINEER TO ANY DISCREPANCIES THAT MAY EXIST.
  - COORDINATE STRUCTURAL DRAWINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ALL OPENINGS, INSERTS AND ANY OTHER RELATED ITEMS.
  - PLANS FOR PIPES, CONDUITS, TIMBLES, ETC. TO PASS THROUGH CONCRETE SLAB OR BEAM, MUST NOT CONFLICT WITH REINFORCING WHERE A CONFLICT OCCURS BETWEEN TENDONS AND REINFORCING TENDON LOCATION IS TO TAKE PRECEDENCE.
  - PROVIDE .006 POLYETHYLENE MEMBRANE UNDER ALL CONCRETE SLABS AND GRADE BEAMS.
  - ALL SECTIONS SHOWN ARE THE SECTIONS AT MID-SPAN OF GRADE BEAMS UNLESS OTHERWISE SHOWN.
  - THE TENDON LOCATION AT THE END OF GRADE BEAM TO BE A MINIMUM OF 6" FROM THE TIP OF SLAB TO CONCRETE GRAVITY OF TENDONS.
  - TENDONS TO BE STRESSED NO EARLIER THAN 6 DAYS AND NO LATER THAN 14 DAYS AFTER PLACEMENT OF CONCRETE.
  - STRESSING:
    - 1 1/2" TENDON SHALL BE ANCHORED AT 28.9K PER STRAND, BUT SHALL BE INITIALLY STRESSED TO 33.0K PER STRAND.
    - 3/8" TENDON SHALL BE ANCHORED AT 16.1K PER STRAND, BUT SHALL BE INITIALLY STRESSED TO 18.4K PER STRAND.
  - LOADING OF SLAB PRIOR TO TENSIONING SHALL NOT BE DONE WITHOUT THE APPROVAL AND DIRECTION OF THE SUPERVISING ENGINEER.
  - CATHEADS TO BE PLACED ON ALL LIVE ENDS PRIOR TO PLACEMENT OF CONCRETE.



INSUL-TECH OFFICE WAREHOUSE

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**FOUNDATION PLAN**

INSUL-TECH  
 HERMAN DRIVE  
 HARVEY, LOUISIANA

SCALE: AS NOTED

FILE: \_\_\_\_\_

JOB NO. \_\_\_\_\_

DATE: XX-XX-06

SHEET **C-1**

OF \_\_\_\_\_