

STANDARD STRUCTURAL NOTES APPLY UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS.

GENERAL

1. ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SITE AND PRE-ENGINEERED BUILDING DRAWINGS AND SPECIFICATIONS.
2. ALL STRUCTURAL WORK AND MATERIAL SPECIFICATIONS ARE DEFINED BY THESE DRAWINGS. THE TERM "DOORWAYS" USED HEREIN IS UNDERSTOOD TO MEAN THESE DRAWINGS ONLY.

DESIGN CRITERIA

1. DEAD, LIVE, SNOW, WIND AND SEISMIC LOADS ON FOUNDATION WERE DERIVED FROM "NACO" PRE-ENGINEERED BUILDING DRAWINGS DATED 06-30-07.
2. ALLOWABLE SOIL BEARING PRESSURE = 1500 PSF (ASSUMED)

STRUCTURAL MATERIALS

1. GRANULAR FILL: WELL GRADED SAND, RAIN OR CRUSHED RAIN GRAVEL AS FOLLOWS:

SELECT DESCRIPTION	EQ. DESIGN
NO. 4	100
NO. 10	40-70
NO. 20	5-20

2. SELECT BACKFILL GRADES OF FOUNDATION WALLS: APPROVED MATERIAL, FREE OF ORGANIC MATERIAL, TOPSOIL, DEBRIS AND BOLLERS LARGER THAN 6".

3. CONCRETE (C/P): NORMAL WEIGHT CLASS A CONCRETE WITH MINIMUM COMPRESSIVE STRENGTH (F'c) = 3000 PSI AT 28 DAYS. TYPICAL PORTLAND CEMENT: ASTM C150, TYPE II, 540 LBS PER CUBIC YARD MINIMUM
- AGGREGATE: ASTM C686, NO. 89, TYPICAL
- WATER-REDUCING ADJUTANT: MAXIMUM CEMENT RATIO OF 0.45 TYPICAL
- SUMP: 3" TO 4" MAX. AFTER ADDITION OF WATER REDUCER
- ADJUTANTS: USE AIR ENTRAINING ADJUTANT CONFORMING TO ASTM C494, TYPE A IN ALL CONCRETE. CALCIUM CHLORIDE MAY NOT BE USED TO ACCELERATE THE SETTING TIME
- REPAIRS TO BE ACCORDING TO THE SETTING TIME
- BAR: ASTM A615, GRADE 60 (F60000)
- STRUCTURAL STEEL & BRACING
- BOULTS: ANCHORAGE - ASTM A307 OR F1554

GRANULAR AND CRUSHED STONE FILL

1. PRIOR TO PLACING GRANULAR OR CRUSHED STONE FILL REMOVE ALL ORGANIC MATERIAL, DEBRIS AND ANY OTHER DELETERIOUS MATERIAL.
- GRANULAR FILL SHALL BE PLACED IN MAXIMUM 8" LIFTS AND CONSOLIDATED USING A HAND OPERATED VIBRATORY PLATE COMPACTOR. AS DETERMINED BY ASTM D1557, MODIFIED PROCTOR.
- CRUSHED STONE FILL SHALL BE PLACED IN 24" (MAX) LIFTS AND CONSOLIDATED USING A HAND OPERATED VIBRATORY PLATE COMPACTOR. A MINIMUM OF TWO (2) PASSES PER LIFT IS REQUIRED.
- MINIMUM OF TWO (2) PASSES PER LIFT IS REQUIRED.
- REFER TO FIELD TESTING FOR QUALITY CONTROL FOR FIELD TESTING REQUIREMENTS.

FOUNDATIONS

1. FOUNDINGS SHALL REST ON STABLE UNDISTURBED SOIL OR COMPACTED GRANULAR FILL. BOTTOM-UP-ROOTING ELEVATIONS ARE SHOWN ON THE DRAWINGS. ALL FOUNDATIONS SHALL BE CONSTRUCTED WITH A MINIMUM OF 12" CLEARANCE FROM FINISHED GRADE TO THE BOTTOM OF THE FOUNDATION.
2. WALLS (GRADE BEARS) WITH BACKFILL ON BOTH SIDES SHALL HAVE FILL COMPACTED IN EQUAL LIFTS EACH SIDE OF WALL. FILL LAYERS SHALL BE PLACED SUCH THAT THE DIFFERENCE BETWEEN ONE SIDE AND THE OTHER SHALL NOT EXCEED 2".
3. UNLESS SPECIFICALLY NOTED ON THE DRAWINGS, ALL FOUNDATION WALLS SHALL BE ABSOLUTELY BRACKET TO WITHSTAND EARTH AND CONSTRUCTION LOADS. PRESSURES SHALL BE AT LEAST SIX TIMES OLD BEFORE BACKFILLING.
4. FOUNDATION WALLS SHALL BE ABSOLUTELY BRACKET TO WITHSTAND EARTH AND CONSTRUCTION LOADS. PRESSURES SHALL BE AT LEAST SIX TIMES OLD BEFORE BACKFILLING.
5. CONTRACTOR TO DESIGN, FINISH AND INSTALL ALL TEMPORARY SHEETING, SHORING AND BRACING NECESSARY TO SAFELY COMPLETE THE CONSTRUCTION.
6. THE CONTRACTOR SHALL PROVIDE THE NECESSARY EQUIPMENT TO CONTINUOUSLY Dewater THE SITE TO FACILITATE CONSTRUCTION AND SAFE WORKING CONDITIONS.

CONCRETE

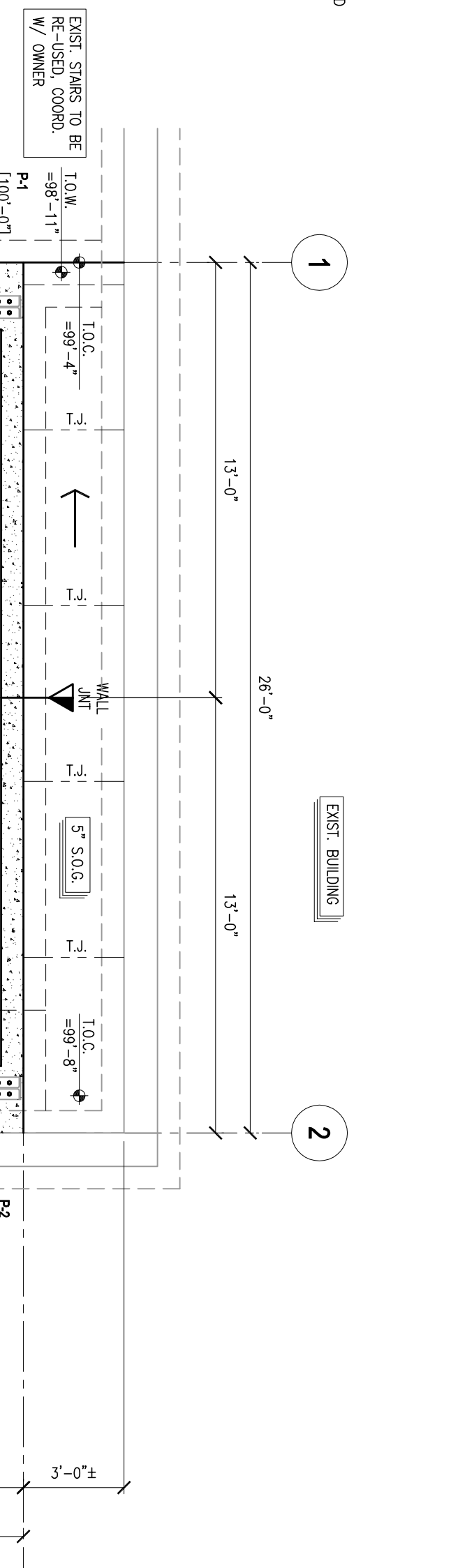
1. ALL BAR REINFORCEMENT SHALL BE DEFORMED BARS. REINFORCEMENT SHALL BE SECURELY TIED IN ITS PROPER PLACE BEFORE AND DURING PLACING OPERATIONS. USE APPROVED CHAINS AND SPACERS AS REQUIRED. NO CONCRETE SHALL BE CAST OR CURED IN THE FIELD WITHOUT PROTECTIVE COVERING. ALL REINFORCEMENT SHALL BE PROTECTED FROM WEATHER AND CORROSION BY THE FOLLOWING MEASURES:
2. WHERE CONCRETE BARS ARE INDICATED TO BE RUN CONTINUOUSLY AROUND CORNERS, DOWNWARD INTERSECTING WALLS AND UP AT SPACE LOCATIONS.
3. UP LAP ALL BARS SO SPACERS MINIMUM AT SPACE LOCATIONS UNLESS INDICATED OTHERWISE ON THE DRAWINGS. SPACES ARE TO BE STAGGERED.
4. REBAR SPACERS OR REQUIRED MINIMUM AT SPACE LOCATIONS IN THE SHOP ONLY. ONLY COUD BENDING WILL BE PERMITTED.
5. CONCRETE COVER OVER REINFORCEMENT SHALL AS FOLLOWS (UNLESS OTHERWISE NOTED ON DRAWINGS):
 - CONCRETE PLACED AGAINST AND PERMANENTLY EXPOSED TO EARTH: 2"
 - CONCRETE EXPOSED TO EARTH AND WEATHER: 3"
 - REBAR IN #18 BARS: 2"
 - REBAR IN #18 BARS: 2"
 - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: 1 1/2"
 - SLABS, WALL JOISTS: 1 1/2"
 - #11 BARS AND SMALLER: 3/4"
6. DEBRIS AND COBLES:
 - 1.5" - 1.5" WHEN PLACING CONCRETE AT TEMPERATURES ABOVE 90°F OR BELOW 40°F. STRICTLY AVOID TO BE PROHIBITED AND RECOMMENDATIONS IN AQ 305 (NOT WEATHER CONCRETE) AND AQ 306 (COLD WEATHER CONCRETE).
7. PROPER VIBRATION OF ALL CONCRETE IS ESSENTIAL. THE CONTRACTOR SHALL MAKE PROVISIONS FOR BACK-UP VIBRATION EQUIPMENT.
8. FOUNDATION WALL CONTROL AND CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE PLANS. CONTRACTOR MUST DELAY PLACEMENT OF CONCRETE TEMPORARILY DURING THE FIRST SEVEN DAYS SHALL BE MAINTAINED BETWEEN 50° AND 90° F. BEFORE DRAINING MUST BE PREVENTED.
9. HORIZONTAL SURFACES SHALL BE KEPT CONTINUOUSLY MOIST FOR A MINIMUM OF SEVEN DAYS. (ALTERNATE: PROVIDE AN APPROVED CURING/SEALING COMPOUND ACCEPTABLE TO THE ENGINEER. APPLY AT A RATE AND NUMBER OF COATS AS SPECIFIED BY THE MANUFACTURER THAT MAINTAINS MOISTURE FOR A MINIMUM OF 7 DAYS WHEN AIR TEMP > 50°F AND 10 DAYS WHEN AIR TEMP < 50°F. TO PROTECT THE SURFACE FROM WARRING FROM OTHER TRADES).
10. CURING:
 - HORIZONTAL SURFACES SHALL BE KEPT CONTINUOUSLY MOIST FOR A MINIMUM OF SEVEN DAYS. (ALTERNATE: PROVIDE AN APPROVED CURING/SEALING COMPOUND ACCEPTABLE TO THE ENGINEER. APPLY AT A RATE AND NUMBER OF COATS AS SPECIFIED BY THE MANUFACTURER THAT MAINTAINS MOISTURE FOR A MINIMUM OF 7 DAYS WHEN AIR TEMP > 50°F AND 10 DAYS WHEN AIR TEMP < 50°F. TO PROTECT THE SURFACE FROM WARRING FROM OTHER TRADES).
 - VERTICAL SURFACES SHALL RECEIVE AN APPROVED NON-TOXIC CURING COMPOUND, APPLY AT A RATE AND NUMBER OF COATS AS SPECIFIED BY THE MANUFACTURER THAT WILL MEET ASTM C-509, THE 1 SPECIFICATION FOR LIQUID MEMBRANE FORMING CURING COMPOUNDS.
11. CONTRACTOR SHALL INSPECT CONCRETE SPACERS, AFTER REMOVAL OF FORMS FOR AREAS OF DEFECTIVE (ROCK POCKETS, HONEYCOMB, ETC.). CONCRETE REMOVE DEFECTIVE CONCRETE BY "CHIPPING" QUESTIONABLE AREA UNTIL SOUND CONCRETE HAS BEEN OBTAINED.
12. CONTRACTOR SHALL INSPECT CONCRETE REPAIRS, CONTRACTOR SHALL INSPECT EXISTING CONCRETE AT LOCATIONS INDICATED ON THE DRAWINGS FOR EXISTING CONCRETE REPAIRS. REMOVE ALL LOOSENED CONCRETE AT DEFORCED AREAS AND REPAIR SURFACE FOR PROPER FINISH.
13. CONCRETE PATCHING TO BE PERFORMED BY OR DIRECTLY SUPERVISED BY INDIVIDUAL HAVING AT LEAST 3 YEARS OF EXPERIENCE IN THE PROPER INSTALLATION OF SPECIFIED MATERIALS.
14. UNLESS OTHERWISE SPECIFIED OR PERMITTED, FINISH AND INSTALL SINGLE SOURCE PATCHING SYSTEM WARRANTED BY ONE MANUFACTURER. ONLY PRODUCTS DERIVED FROM A COMPANY REPUTATION RATED (3 YEARS MINIMUM) IN MANUFACTURING CHAS REINFORCEMENT SHALL BE USED.
15. REFER TO "SHOP DRAWINGS & PROJECT SUBMITTALS" FOR TESTING REQUIREMENTS.

FIELD TESTING FOR QUALITY CONTROL

1. THE CONTRACTOR SHALL TAKE FIELD TESTING TESTS ON COMPACTED FILL & SUBGRADE MATERIAL IN ACCORDANCE WITH ASTM D1557. TESTING REQUESTS SHALL BE AS FOLLOWS:
 - (1) TEST FOR EACH 500 SQUARE FEET OF SLAB AREA.
 - (2) TEST FOR EACH 2000 SQUARE FEET OF SLAB AREA.
 - (3) TEST FOR EACH 2000 SQUARE FEET OF SLAB AREA.
- IF MATERIAL TESTS LESS THAN 98% COMPACTED, THEN CORRECTIVE ACTION AND ADDITIONAL TESTS WILL BE REQUIRED. ADDITIONAL TESTS AND CORRECTIVE ACTION WILL BE AT CONTRACTOR'S EXPENSE.
3. TESTING/INSPECTION READY TO PERFORM STANDARD FIELD TESTS FOR CONCRETE WORK IN ACCORDANCE WITH ASTM C172. THE SAMPLING/FREQUENCY FROM EACH CLASS OF CONCRETE SHALL BE AS FOLLOWS:
 - ONCE EACH DAY A GIVEN CLASS OF CONCRETE IS PLACED, NOT LESS THAN
 - ONCE FOR EACH 150 CUBIC YARDS OF EACH CLASS PLACED EACH DAY, NOT LESS THAN
 - ONCE FOR EACH 500 SF. OF SLAB OR WALL AREA PLACED EACH DAY. (IN CALCULATING THE SURFACE AREA OF A SLAB OR WALL, ONLY ONE SIDE OF THE SLAB OR WALL SHOULD BE CONSIDERED).

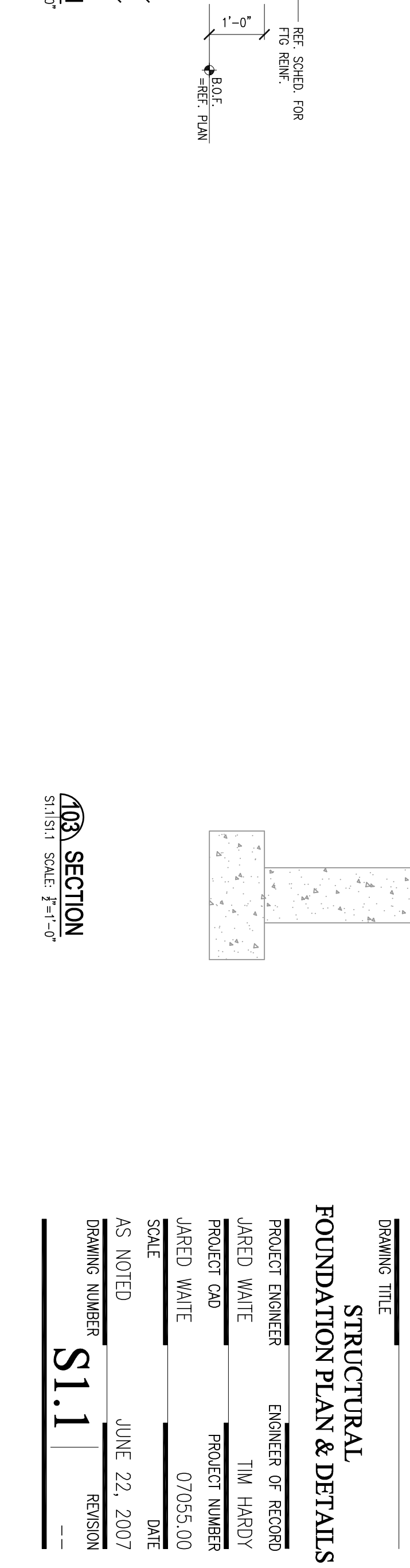
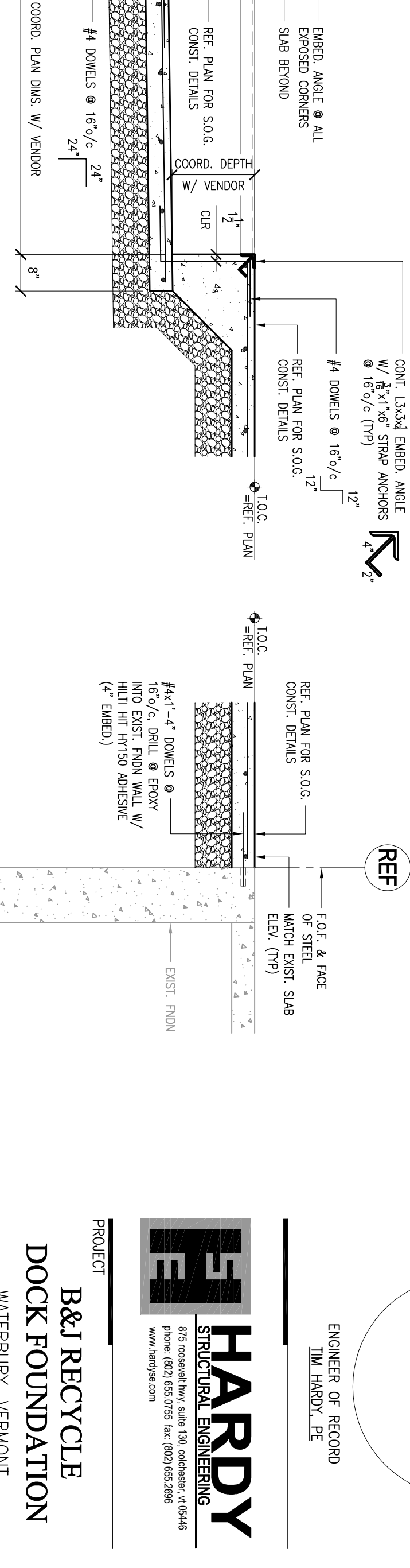
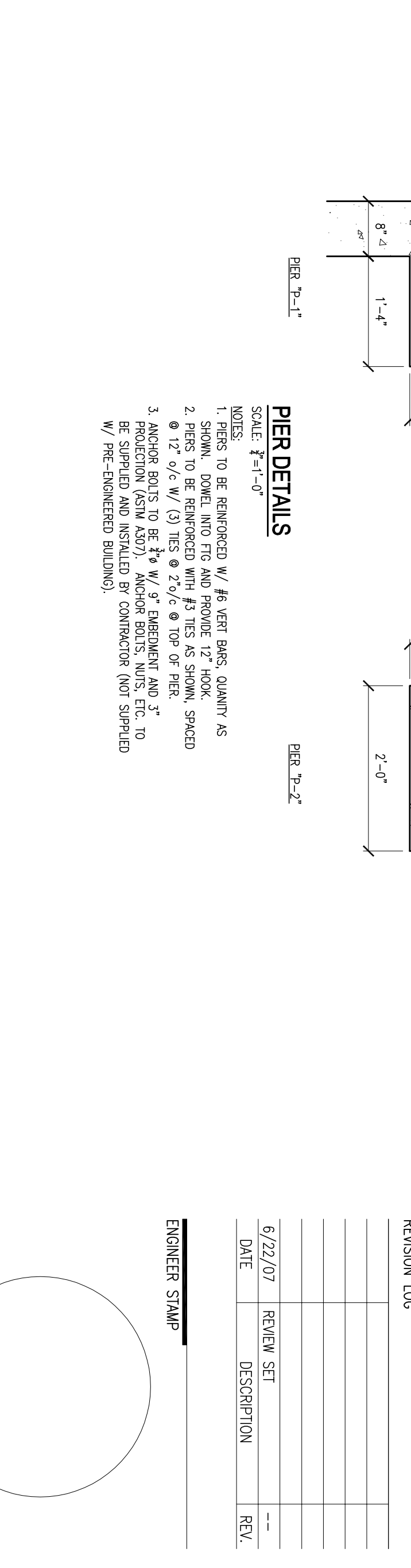
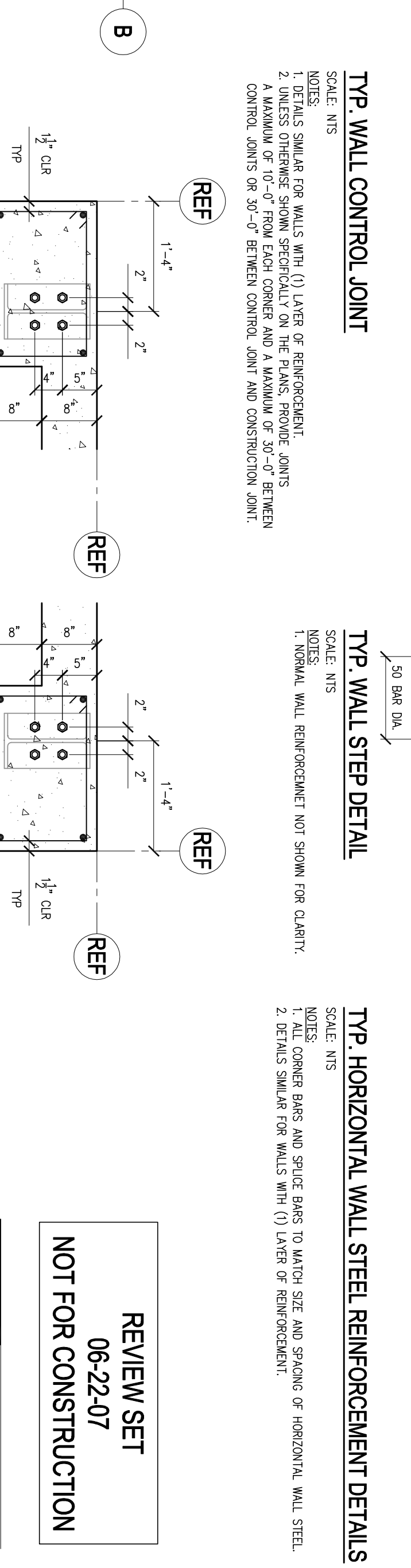
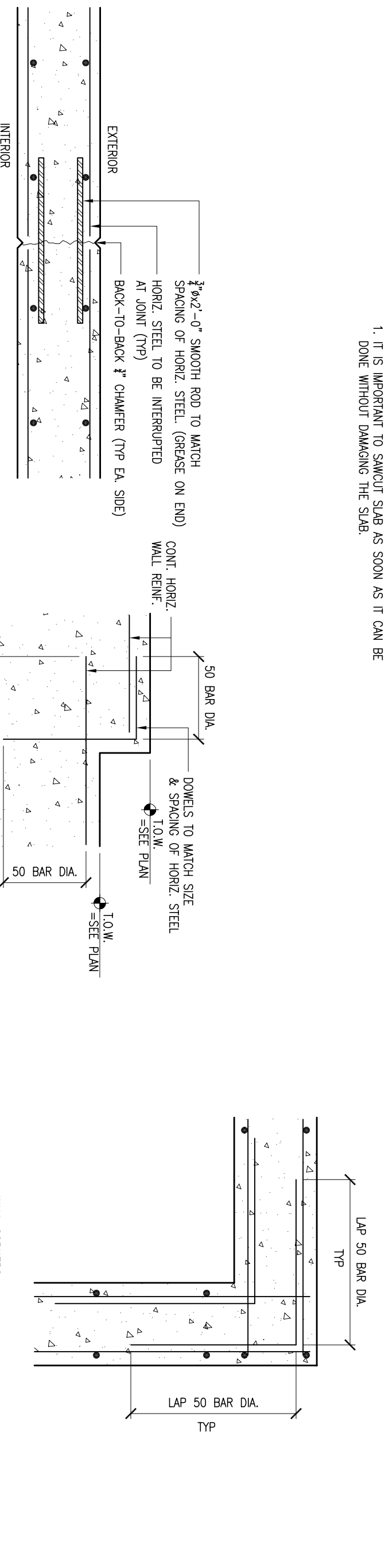
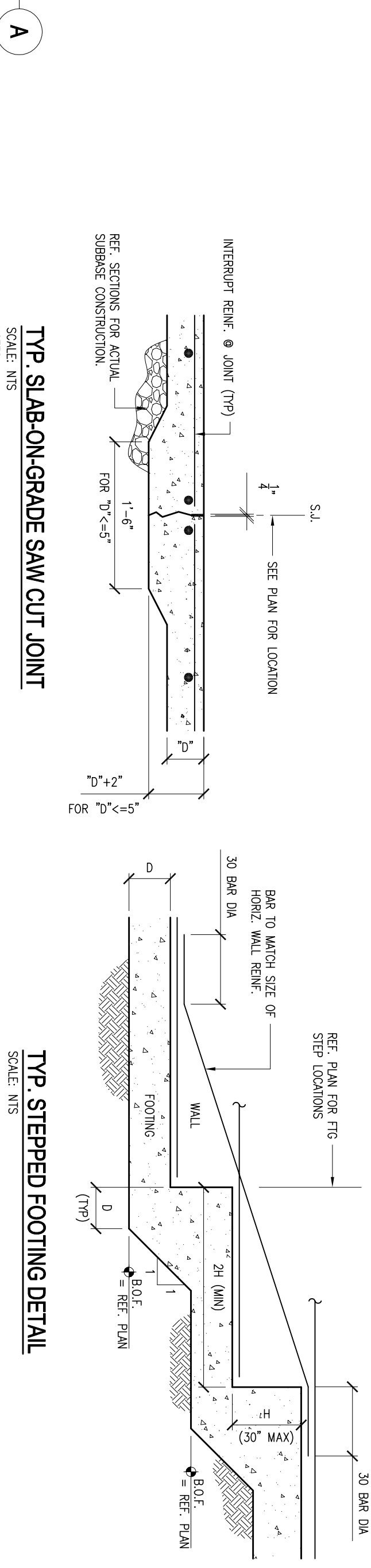
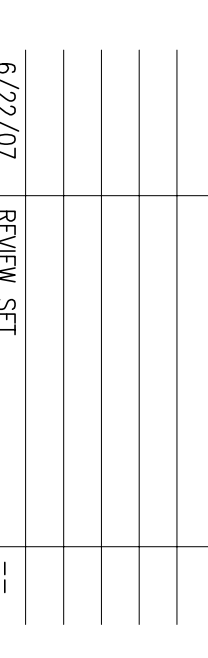
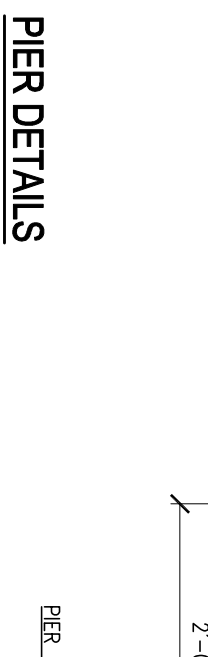
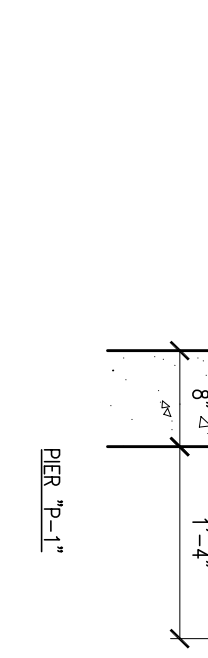
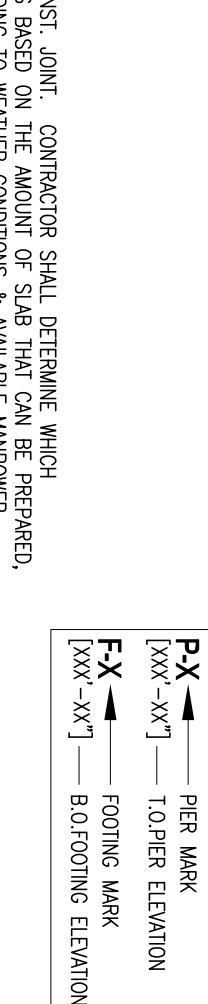
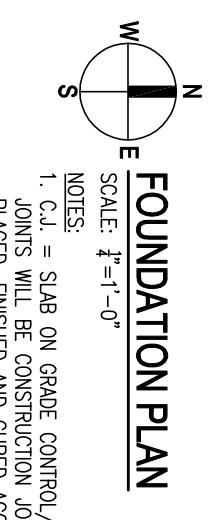
SHOP DRAWINGS & PROJECT SUBMITTALS

1. THE STRUCTURAL SHOP DRAWING REVIEW IS INTENDED TO HELP THE ENGINEER VERIFY HIS/HER DESIGN CONCEPT. THIS REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE DESIGN DRAWINGS & SPECIFICATIONS AND WHICH HAVE A PERMIT OVER THESE SHOP DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COMPARING & CHECKING ALL DIMENSIONS AND CONDITIONS OF THE WORK WITH THESE DRAWINGS AND THOSE OF HIS SUBCONTRACTORS.
2. THE FOLLOWING SHOP DRAWINGS/SUBMITTALS & CALCULATIONS, WHEN APPLICABLE, ARE REQUIRED FOR SUBMITTAL FOR REVIEW BY STRUCTURAL ENGINEER:
 - GRANULAR & CRUSHED STONE FILL
 - SELECT BACKFILL
 - CONCRETE MIX DESIGN (W/AL APPLICABLE ADJUTANTS)
 - CONCRETE REINFORCEMENT (PER AQ STANDARDS)
3. CONCRETE DESIGN MIX SHALL BE CURRENT (WITHIN 6 MONTHS) DESIGN MIX, WITH 28-DAY COMPRESSIVE STRENGTH TEST RESULTS, TO ENGINEER FOR APPROVAL. A MINIMUM OF 15 DAYS PRIOR TO BEGINNING CONSTRUCTION. THE MIX DESIGN SHALL COMPLY, AS A MINIMUM, AGGREGATE GRADATION, ADJUTANTS TO BE USED, SOURCE OF CEMENT AND TYPE, BATCH QUANTITIES, AND DATE OF MIX DESIGN AND TEST RESULTS.
4. SHEET STEEL REINFORCEMENT SHOP DRAWINGS (CONCRETE & COLD) PREPARED BY THE CONTRACTOR IN ACCORDANCE WITH AQ STANDARDS, TO THE ENGINEER PRIOR TO FABRICATION. REPRODUCTION OF THE ENGINEER'S DRAWINGS IS NOT ACCEPTABLE.



FOOTING SCHEDULE

WALL THICKNESS	WIDTH/DEPTH	REINFORCEMENT
F-1	2'-0" CONC.	3-F5 CONC.
F-2	3'-0" x 3'-0"	F5 @ 8" O/C EW. BOTH SIDES



REVIEW SET
06-22-07
NOT FOR CONSTRUCTION

REVISION LOG

NO.	DATE	DESCRIPTION	REV.
6/22/07		REVIEW SET	--

ENGINEER STAMP

ENGINEER OF RECORD
JIM HARDY, PE



PROJECT
B&J RECYCLE
DOCK FOUNDATION
WATERBURY, VERMONT

FOUNDATION PLAN & DETAILS

PROJECT	ENGINEER OF RECORD
JARED WAITE	TIM HARDY
PROJECT NO.	PROJECT NUMBER
JARED WAITE	07055.00
SCALE	DATE
AS NOTED	JUNE 22, 2007
DRAWING NUMBER	REVISION
S1.1	--