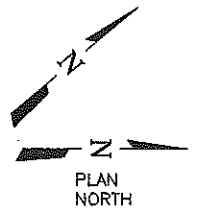
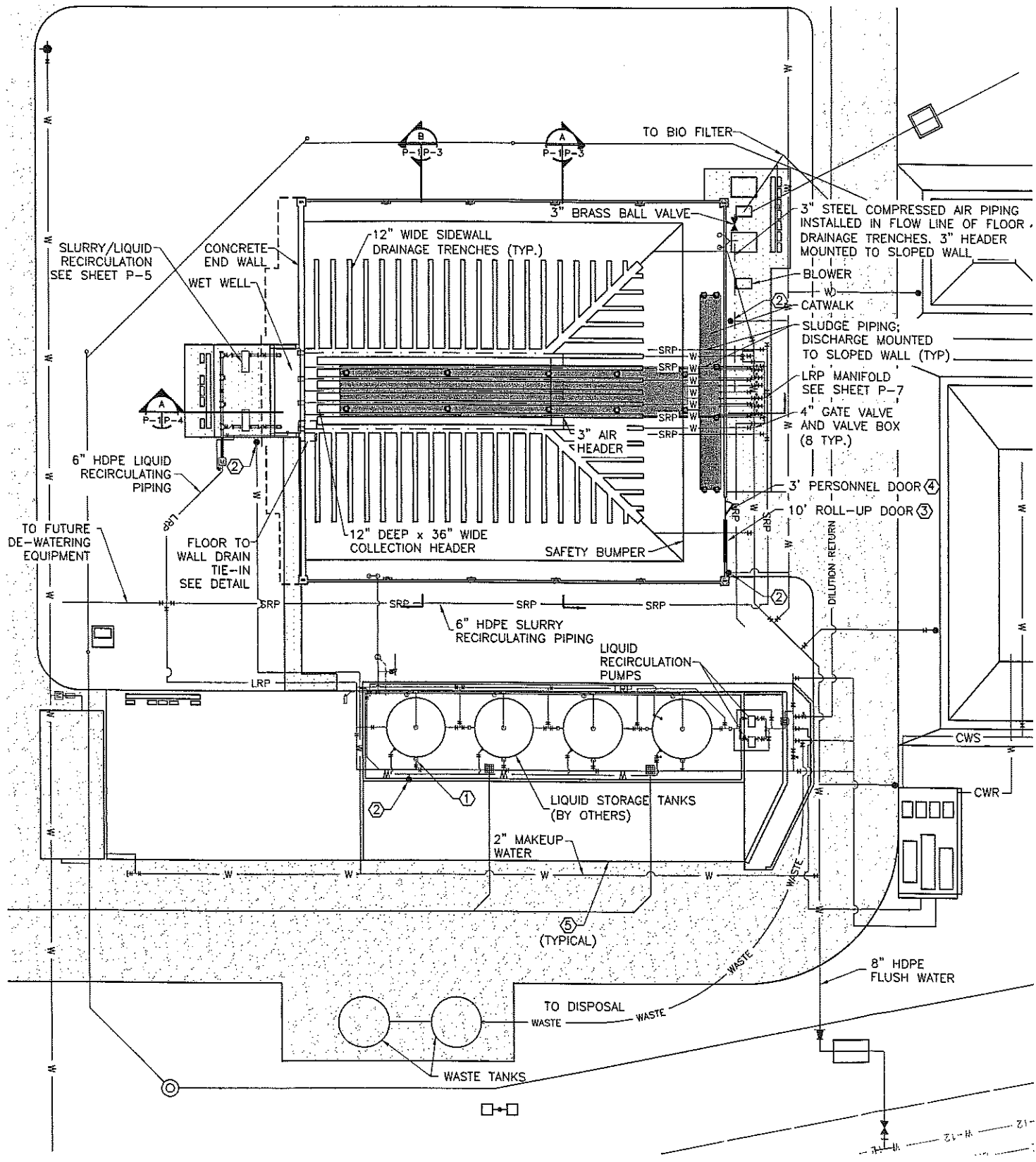


PROJECT: MIX ALCO BIOMASS PILOSTRATION FACILITY
 DRAWING NO: P-1
 DATE: 11-16-09
 DRAWN BY: J. NICHOLS
 CHECKED BY: J. NICHOLS
 PROJECT MANAGER: J. NICHOLS
 PROJECT ENGINEER: J. NICHOLS
 PROJECT ARCHITECT: J. NICHOLS
 PROJECT CONSULTANT: J. NICHOLS
 PROJECT CONTRACTOR: J. NICHOLS
 PROJECT OWNER: J. NICHOLS
 PROJECT LOCATION: J. NICHOLS
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LEGEND:

- SRP — SLURRY/LIQUID RECIRCULATING PIPE
- LRP — LIQUID RECIRCULATING PIPE
- W — WATERLINE
- FW — FOUL AIR
- CWS — COOLING WATER SUPPLY
- CWR — COOLING WATER RETURN

HDPE PIPING NOTES:

1. ALL HIGH DENSITY POLYETHYLENE PIPE SHALL BE MINIMUM SDR21 (CLASS 80) MANUFACTURED ACCORDING TO ASTM F714 WITH STANDARD THERMOPLASTIC MATERIAL DESIGNATION CODE OF PE3408 AND MADE USING EXTRA HIGH MOLECULAR WEIGHT (EHMW) HIGH DENSITY POLYETHYLENE.
2. ALL POLYETHYLENE FITTINGS SHALL HAVE THE SAME OR HIGHER INTERNAL PRESSURE RATING AS THE MATING PIPE.
3. PIPE SHALL BE JOINED USING BUTT FUSION, SADDLE FUSION, OR SOCKET FUSION PER MANUFACTURER'S RECOMMENDED PROCEDURES. PIPE AND FITTINGS MAY BE JOINED USING FLANGE ADAPTERS WITH BACK-UP RINGS. INSTALLATION SHALL BE PERFORMED ACCORDING TO THE FITTING MANUFACTURER'S RECOMMENDATIONS.
4. PIPE AND FITTINGS SHALL BE POLYPIPE PE3408 OR APPROVED EQUAL.
5. CONTRACTOR SHALL RESTRAIN AND SUPPORT PIPING AS REQUIRED. PIPING LOCATED ON F.F. SHALL BE FASTENED TO THE CONCRETE.

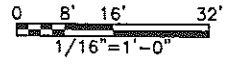
AIR PIPING NOTES:

1. COMPRESSED AIR PIPING SHALL BE CARBON STEEL, SCHEDULE 40, CONFORMING TO ASTM A53. FITTINGS 2" AND LARGER SHALL BE SCHEDULE 40 CARBON STEEL, CLASS 150. FITTINGS 1.5" AND SMALLER SHALL BE THREADED MALLEABLE IRON, CLASS 150. AIR PIPING SHALL BE PROTECTED FROM CORROSION WITH A COATING SYSTEM APPROVED BY THE ENGINEER.
2. AIR PIPING SHALL BE CONSTRUCTED WITH 3" HEADER PIPE, AND DISCHARGE LINES THAT REDUCE BY THE NEXT NOMINAL PIPE SIZE WITH EACH 20' SEGMENT OF PIPE. THE DISCHARGE LINE SHALL BEGIN WITH 2" DIAMETER PIPE, FOLLOWED BY 1.5" AND TERMINATED WITH 1". A DIFFUSER HOLE OF 1/8" DIAMETER SHALL BE DRILLED INTO THE TOPSIDE OF THE BRANCH PIPES AT A SPACING OF 5'.

NOTES BY SYMBOL "O"

- ① EXTEND PIPING BELOW SLAB TO EDGE OF TANK. EXTEND PIPE UP THROUGH PVC SLEEVES TO TOP OF TANK AND PROVIDE FITTINGS, CONNECTIONS, AND GALVANIZED UNISTRUT SUPPORTS AS NECESSARY TO CONNECT TO TANK.
- ② 2" WATERLINE TO HOSE BIBB 42" ABOVE GRADE. PROVIDE STANDARD HOSE CONNECTION AND 1 1/2" HOSE CONNECTION. PROVIDE ADEQUATE SUPPORT AND INSULATION FOR RISER PIPE. PROVIDE VACUUM BREAKER.
- ③ DOOR TO BE 10'x10' OVERHEAD COILING DOOR WITH MANUAL CHAIN OPERATOR WITH CORROSION RESISTANT COATING.
- ④ DOOR TO BE 3'-0"x7'-0" WITH FRAME. PROVIDE THRESHOLD, CLOSER, LEVER LOCKSET WITH DEADBOLT. PROVIDE 2' WIDE x 2' TALL DIAMOND WIRE GLASS WINDOW IN DOOR. ALL HARDWARE TO BE STAINLESS STEEL.
- ⑤ PROVIDE 6" HIGH HOUSEKEEPING PAD FOR TANKS. REINFORCED WITH #5 BARS AT 12" ON CENTER EACH WAY AND #5 DOWELS INTO SLAB BELOW.

PLANT FACILITY PLAN



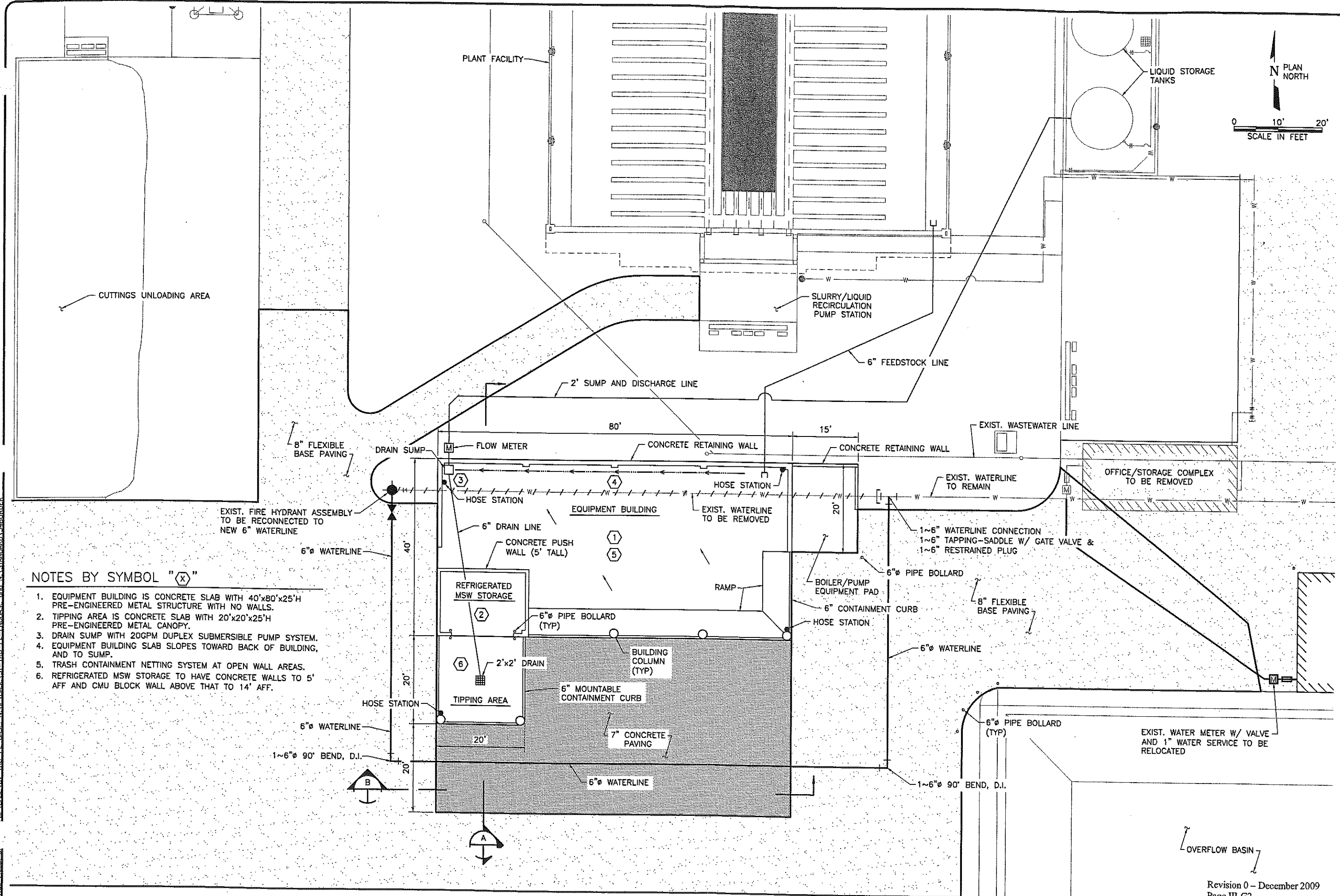
This Record Drawing is a combination of the sealed engineering contract drawings for this project, modified by information furnished by the contractor reflecting changes in the project. The contractor is responsible for the accuracy of the sealed drawings on file at the offices of FREESE AND NICHOLS, INC. 4855 INTERNATIONAL PLAZA, SUITE 200 FORT WORTH, TEXAS 76109-4855 RECORD DRAWINGS PREPARED ON: 6/5/2009



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TERRABON, LLC
 MIX ALCO BIOMASS PILOSTRATION FACILITY
 PLANT FACILITY PLAN

NO. ISSUE	DATE	BY	DESCRIPTION



NOTES BY SYMBOL "X"

1. EQUIPMENT BUILDING IS CONCRETE SLAB WITH 40'x80'x25'H PRE-ENGINEERED METAL STRUCTURE WITH NO WALLS.
2. TIPPING AREA IS CONCRETE SLAB WITH 20'x20'x25'H PRE-ENGINEERED METAL CANOPY.
3. DRAIN SUMP WITH 20GPM DUPLEX SUBMERSIBLE PUMP SYSTEM.
4. EQUIPMENT BUILDING SLAB SLOPES TOWARD BACK OF BUILDING, AND TO SUMP.
5. TRASH CONTAINMENT NETTING SYSTEM AT OPEN WALL AREAS.
6. REFRIGERATED MSW STORAGE TO HAVE CONCRETE WALLS TO 5' AFF AND CMU BLOCK WALL ABOVE THAT TO 14' AFF.

PLAN NORTH
SCALE IN FEET
0 10' 20'

90330
JOHNTA M. NEW
REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS
12-22-09

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TERRABON, INC.
MUMFORD ROAD RESEARCH STRUCTURE
PLANT FACILITY PLAN

NO.	ISSUE	DATE	BY	REVISED	FILE NAME
1	ISSUE	DEC 2009	JIN	DDH	CV-TRB-PL-SITE01.dwg

Bar is one inch on original drawing, if not one inch on this sheet, adjust scale.

VERIFY SCALE

SHEET P1

SEQ. 2

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 4 REFERENCE FILES: 91
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Revision 0 - December 2009
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FOR TCEQ REVIEW