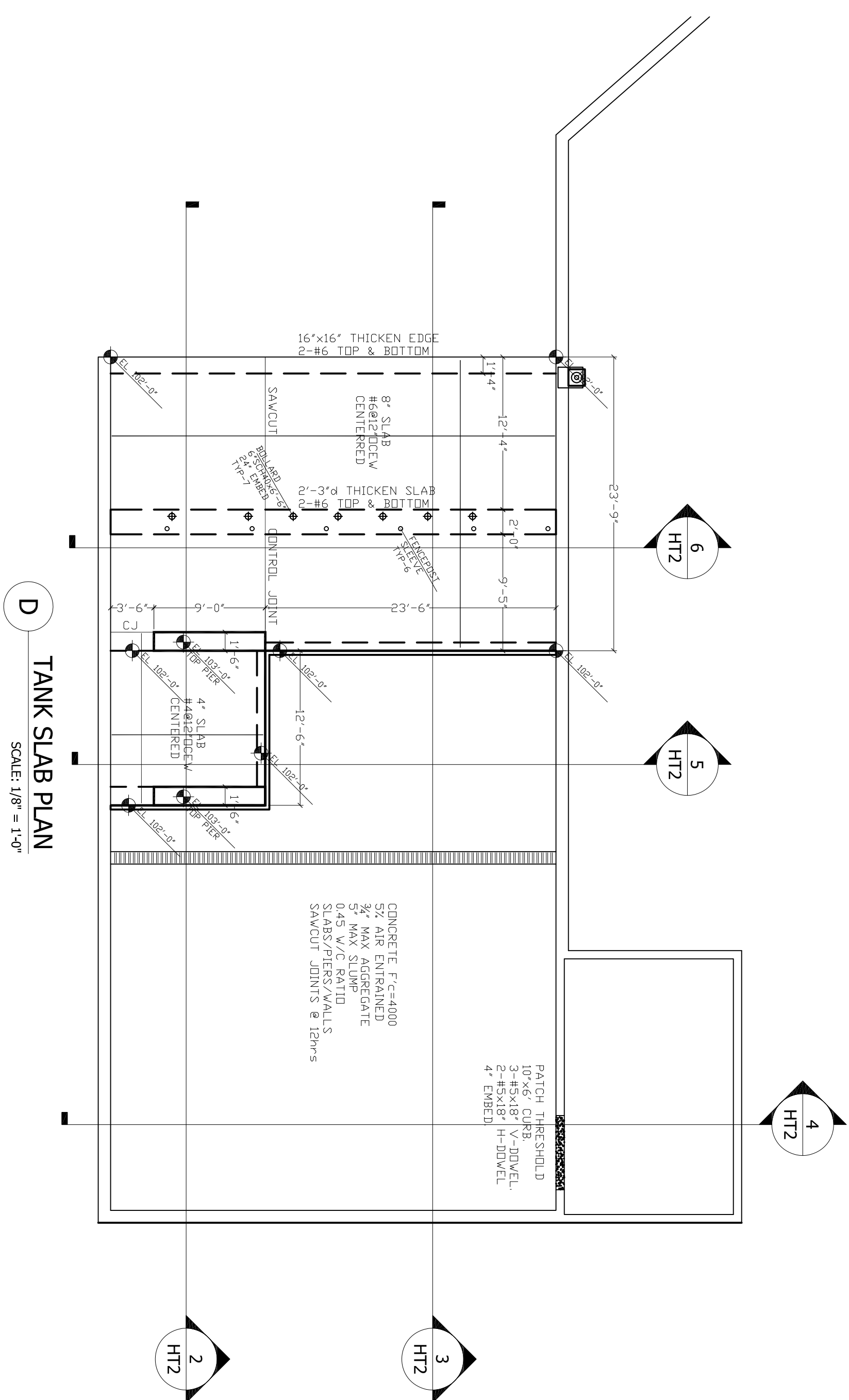
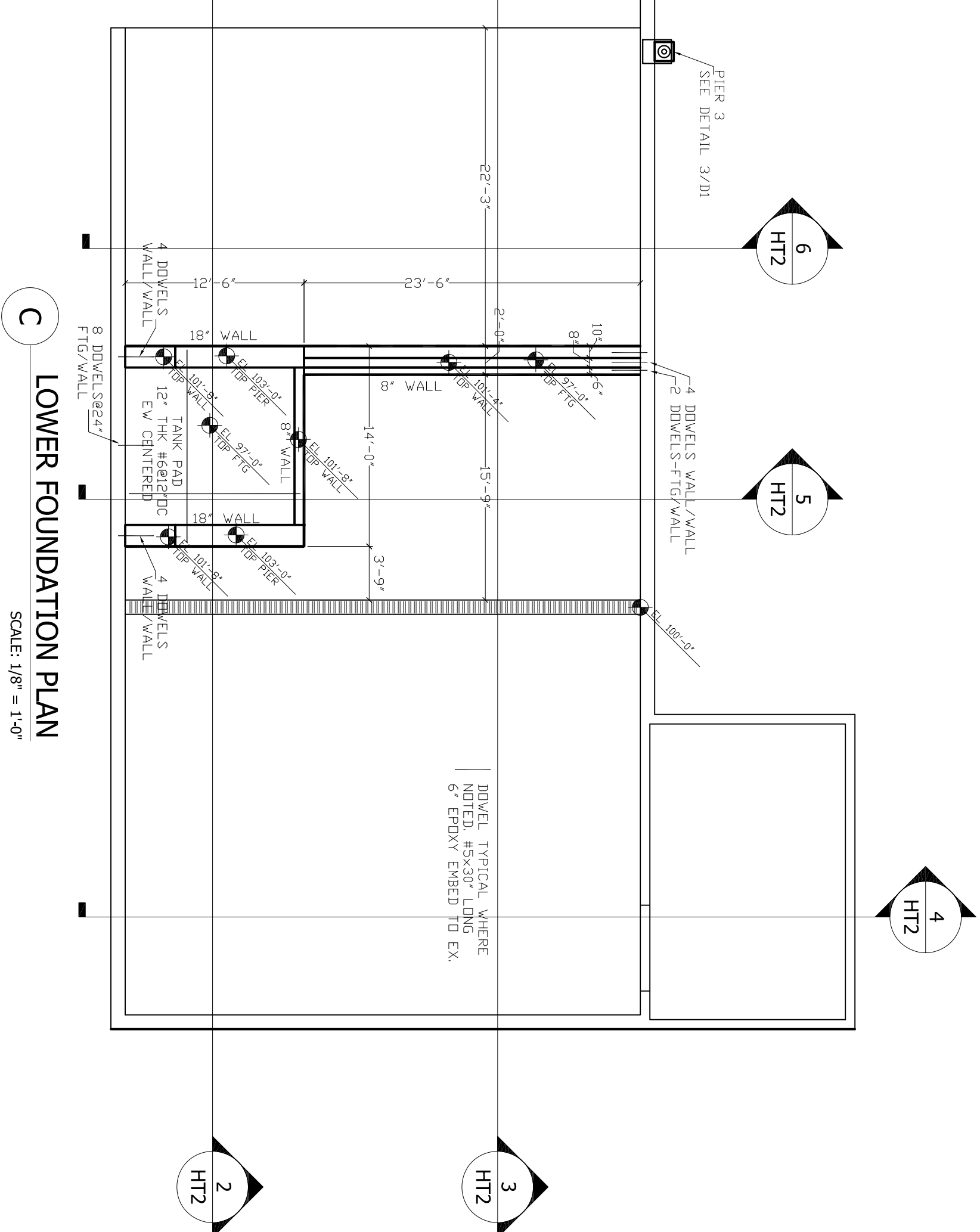
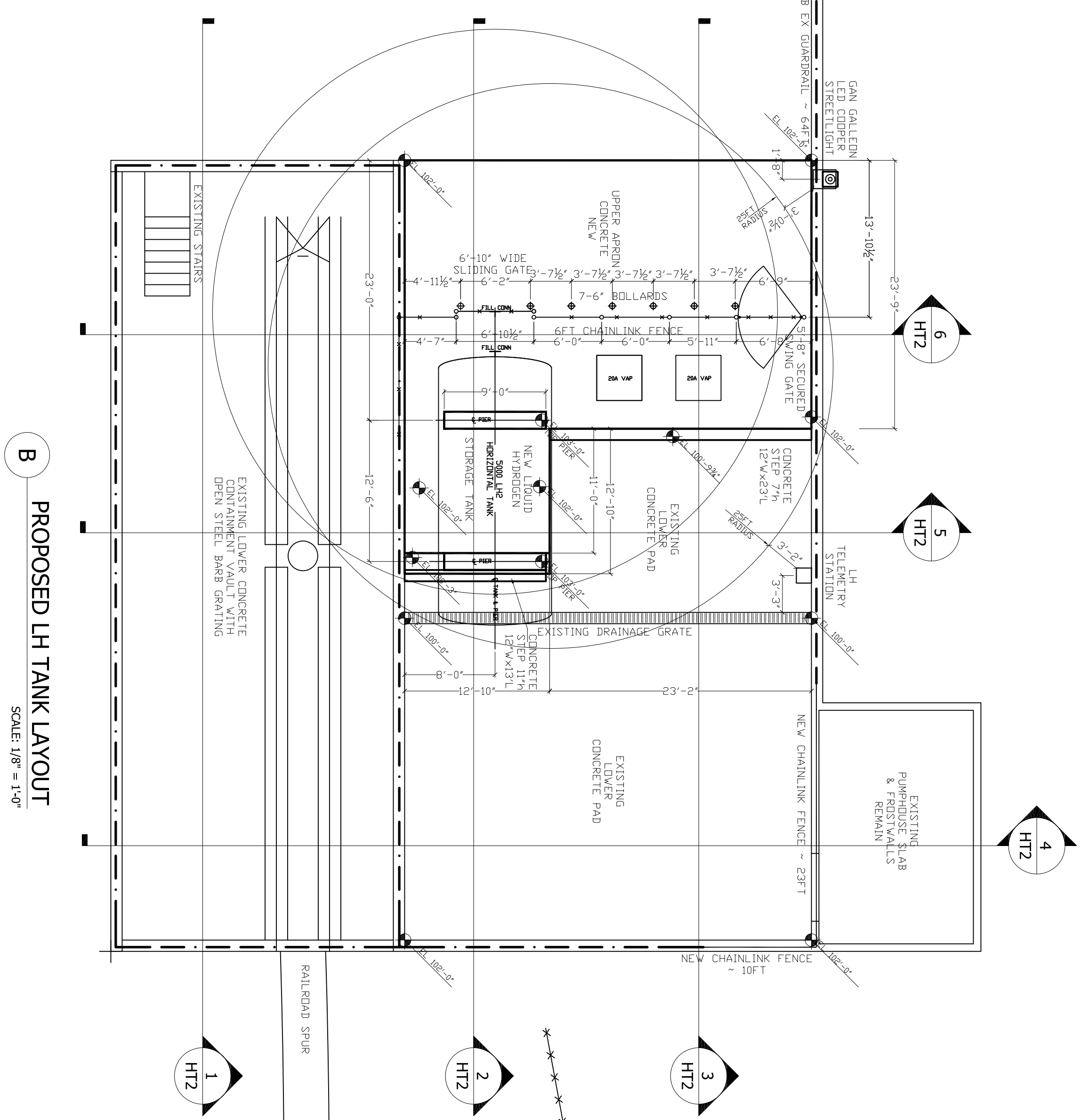
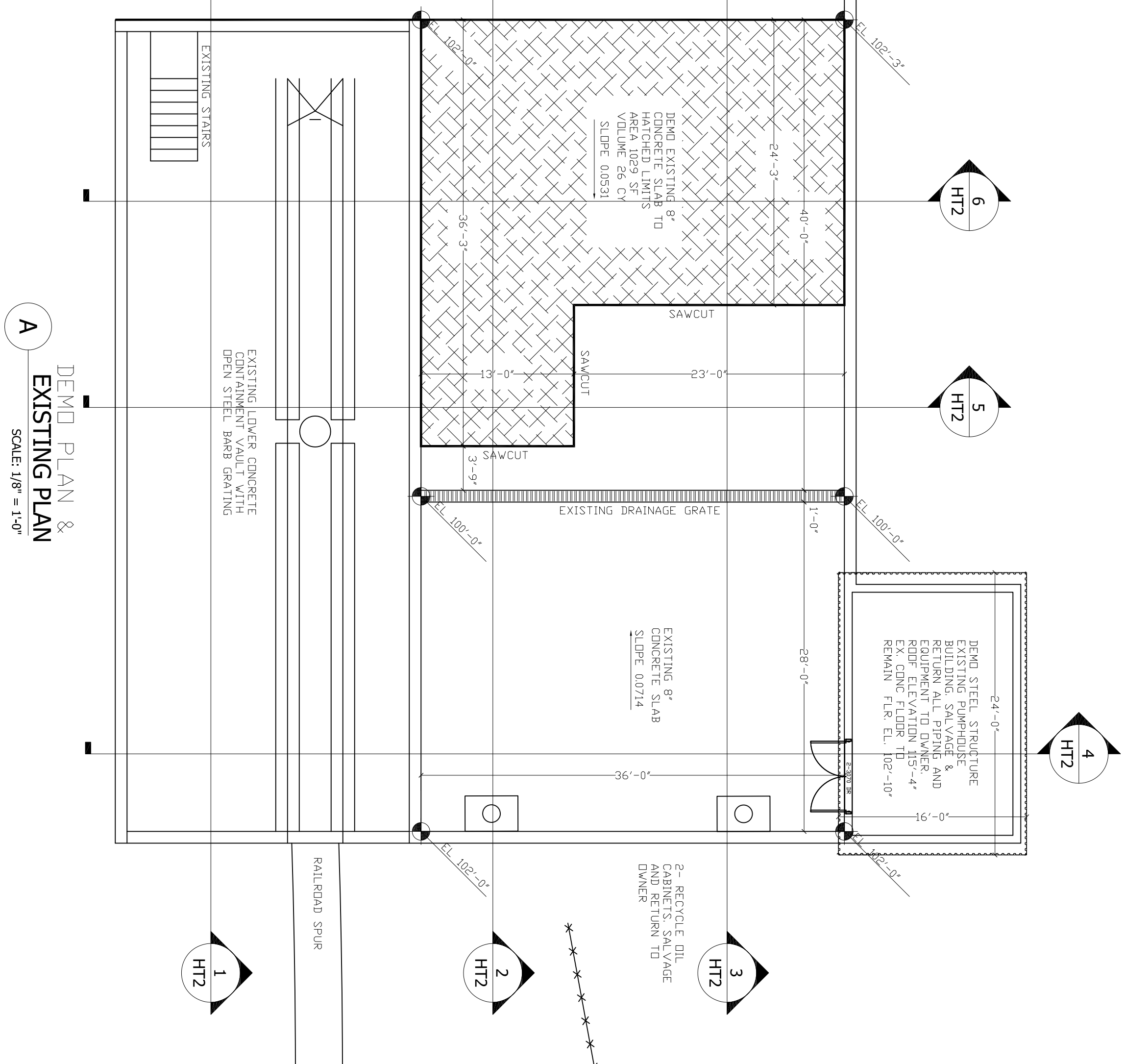




1	PLAN COMMISSION REVIEW	07/2011	
No.	Revision/Issue	Date	

Allan Wobick Sr Mfg Eng
EATON COOPER POWER SYSTEMS
1900 East North Street
Waukesha, WI 53188-3899
T:262.524.4217 E:AllanWobick@Eaton.com

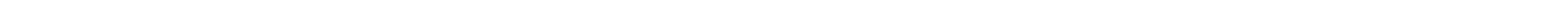
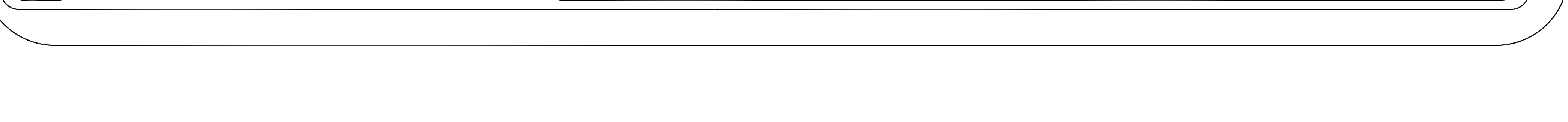
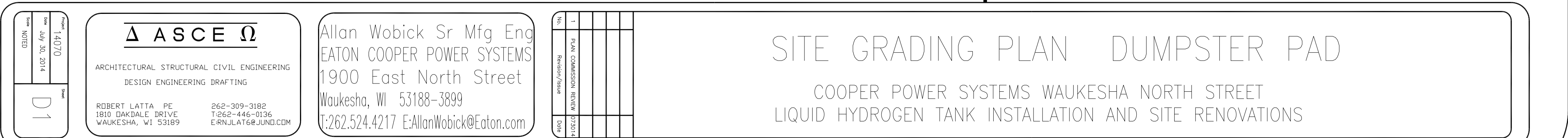
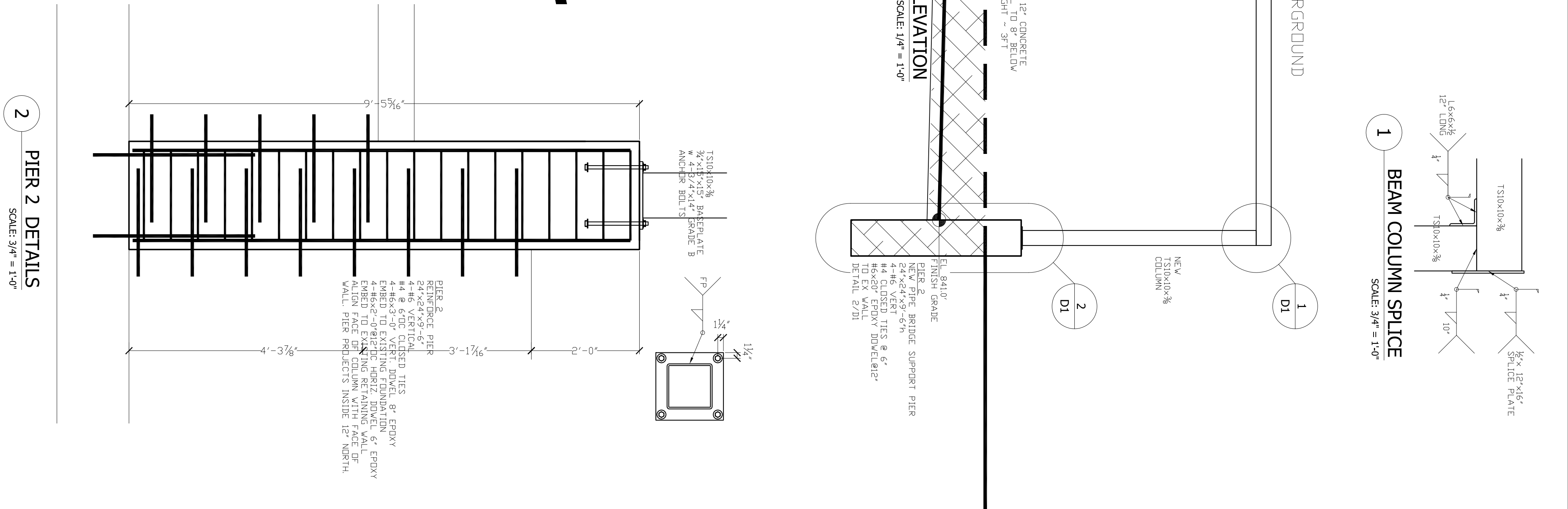
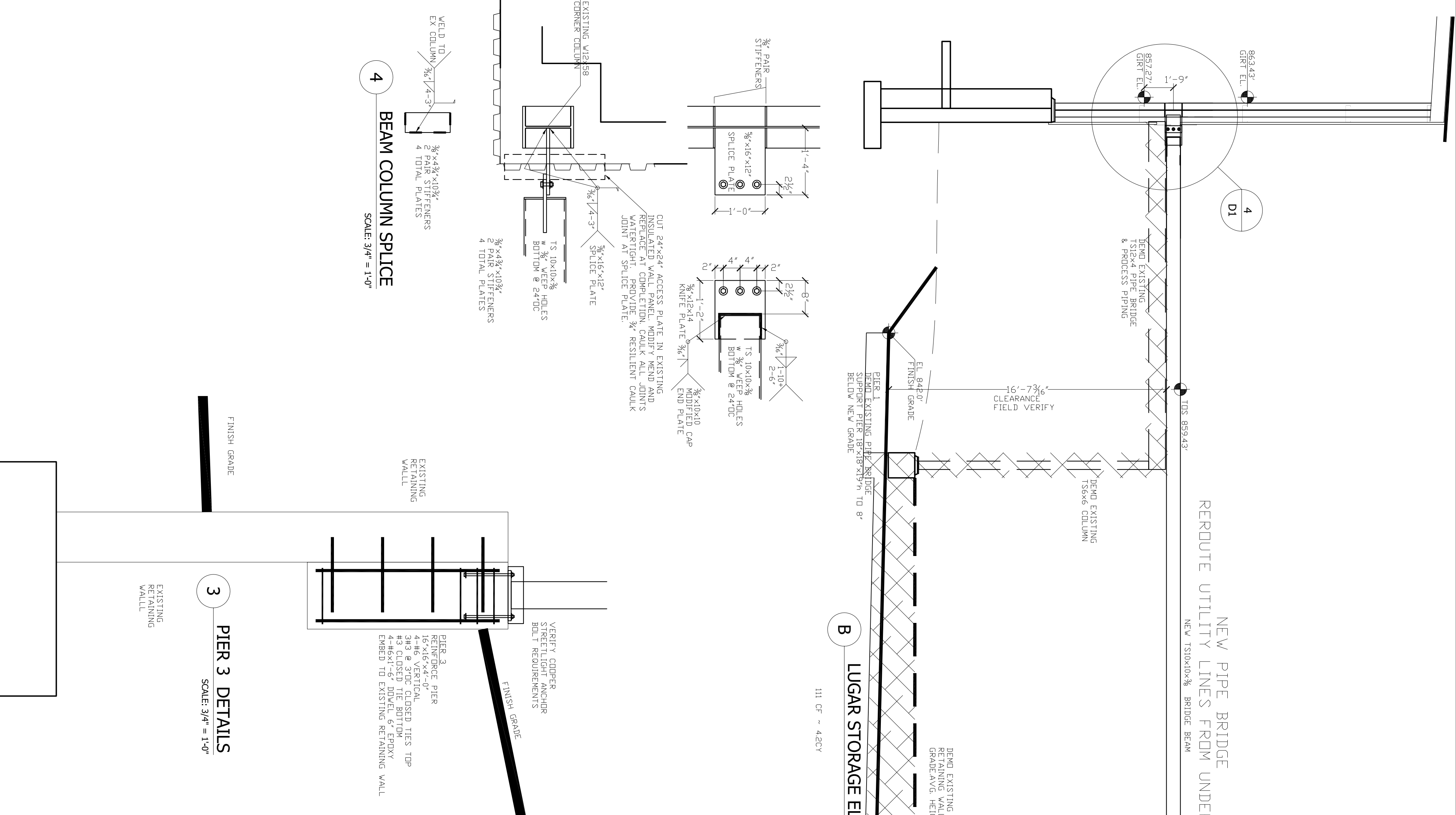
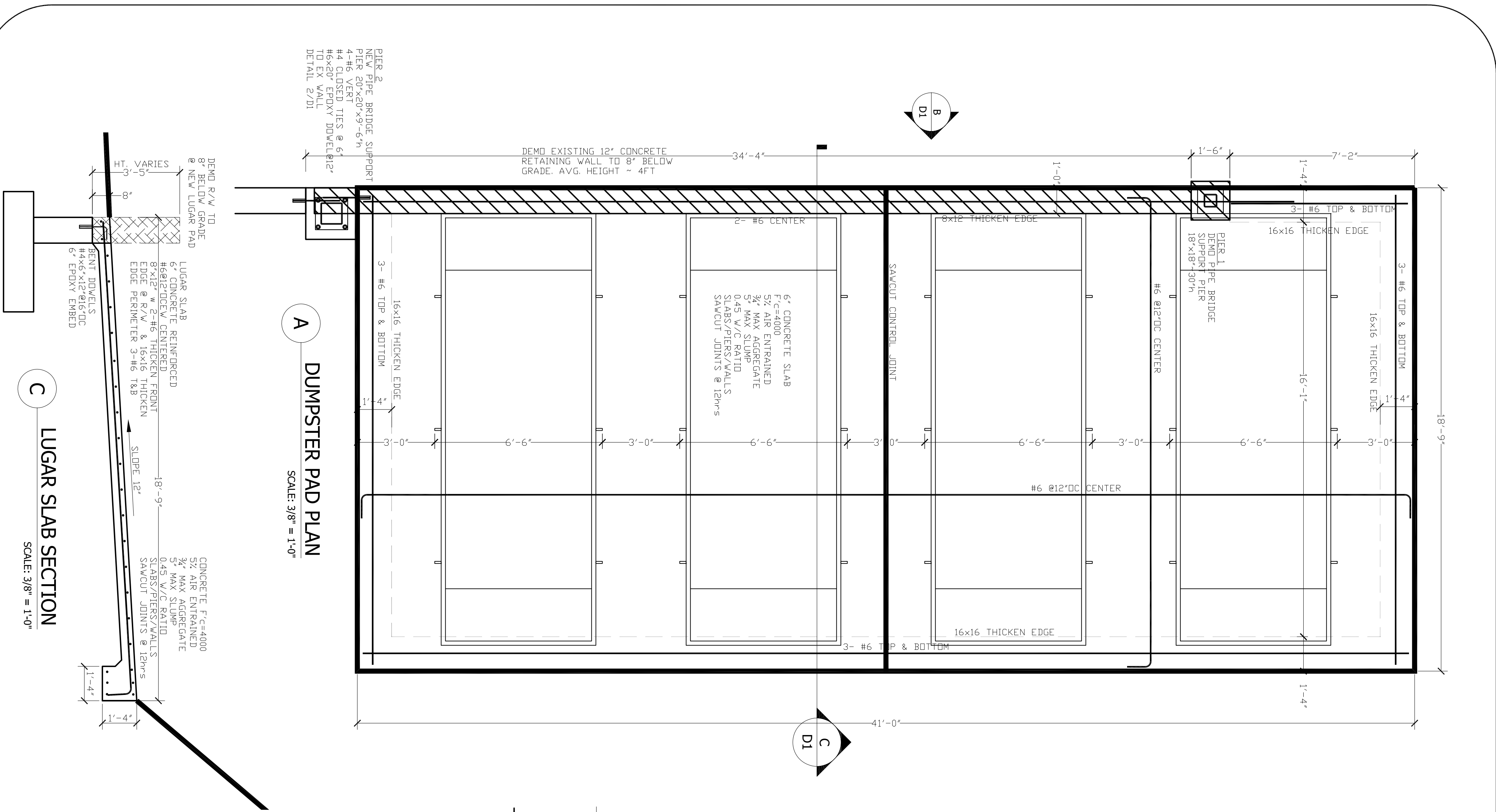
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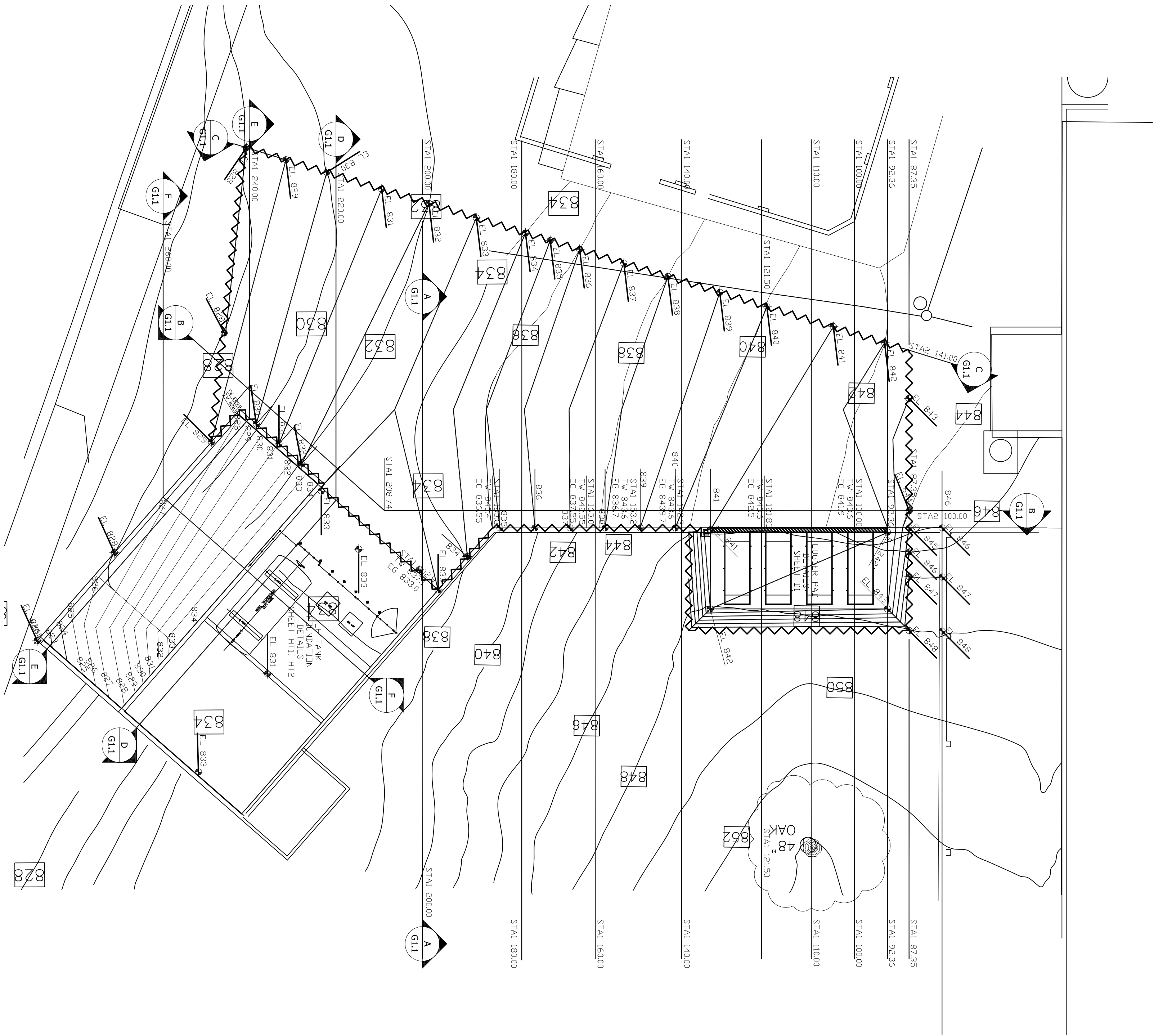
ARCHITECTURAL STRUCTURAL CIVIL ENGINEERING
DESIGN ENGINEERING DRAFTING

ROBERT LATTA PE
1810 DAKDALE DRIVE
WAUKESHA, WI 53189

262-309-3182
T:262-446-0136
ERNJLATA@JUND.COM

Project	14070	Sheet	HT1
Date	July 30, 2014		
Scale	$\frac{1}{8}'' = 1'-0''$		





A
GRADING PLAN
SCALE: 1/16" = 1'-0"

GRADING AREA + QUANTITY SUMMARIES
BASIC GRADES PROVIDED BY OWNER AS SHOWN. NO CURRENT
CERTIFIED SURVEY OR GRADING PLAN AVAILABLE. ALL GRADES
AND MEASUREMENTS ARE TO BE FIELD VERIFIED BY CONTRACTOR.

A/C PAVEMENT			
A/C REPAVE AREA	10,010 SF (@ 0.7% SLOPED)		
A/C DEMO PVT	10,130 SF	130 CY w LUGAR WALK	A/C
NEW 4" A/C PAVEMENT	10,010 SF	124 CY	
NET REGRADE VOLUMES	CUT ~ 143CY	FILL ~ 54CY	
LUGAR PAD			
NEW LUGAR DUMPSTER PAD	730 SF		
LUGAR SLAB CONCRETE	16.3 CY		
LUGAR PAD EXCAVATION	1160SF	184 CY (INCL. 4.6CY PVT)	
LUGAR PAD R/W DEMO	4FTx36FTx1FT	144 CF = 5.4CY	
LUGAR RESEED LANDSCAPE AREA	675 SF = 755Y		
PIPE BRIDGE			
PIPE BRIDGE PIER	9.7FTx2FTx2FT = 39CF = 1.5CY		
CONTAINMENT BASIN			
CONTAINMENT BASIN FILL	1660SF	520 CY	
RESEED AREA BASIN	1840 SF	205 SY	
NEW RIP RAP COBBLES	10FTx10FTx2FTx1FT	60SF 60CF 2.3CY	
NEW 3"x33FT SCH 40 DRAIN			
LH TANK			
DEMO EX. 7" CONCRETE SLAB	992SF	600CF	22.1CY
EXCAVATION FOUNDATIONS	1701 CF	63CY (INCL. EX. SLAB)	
BACKFILL LH TANK SLAB	11FTx11.9FTx4.7FT	131SF 627CF 23.3CY	
TANK SLABS, WALLS, FOOTINGS, PIERS	1035SF SLAB	76.5CY	

SEE SHEET P1 FOR PAVING PLAN
SEE SHEET D1 FOR LUGAR PAD AND OVERHEAD F
SEE G2 & G2.1 FOR GRADING SECTIONS.
SEE HT1, HT2 FOR LH TANK FND UPGRADES.

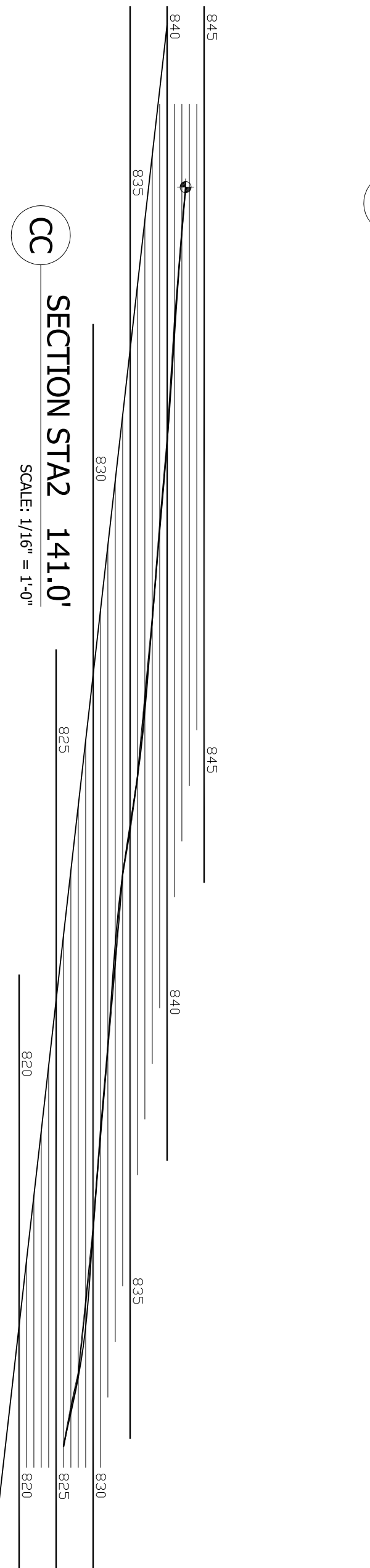
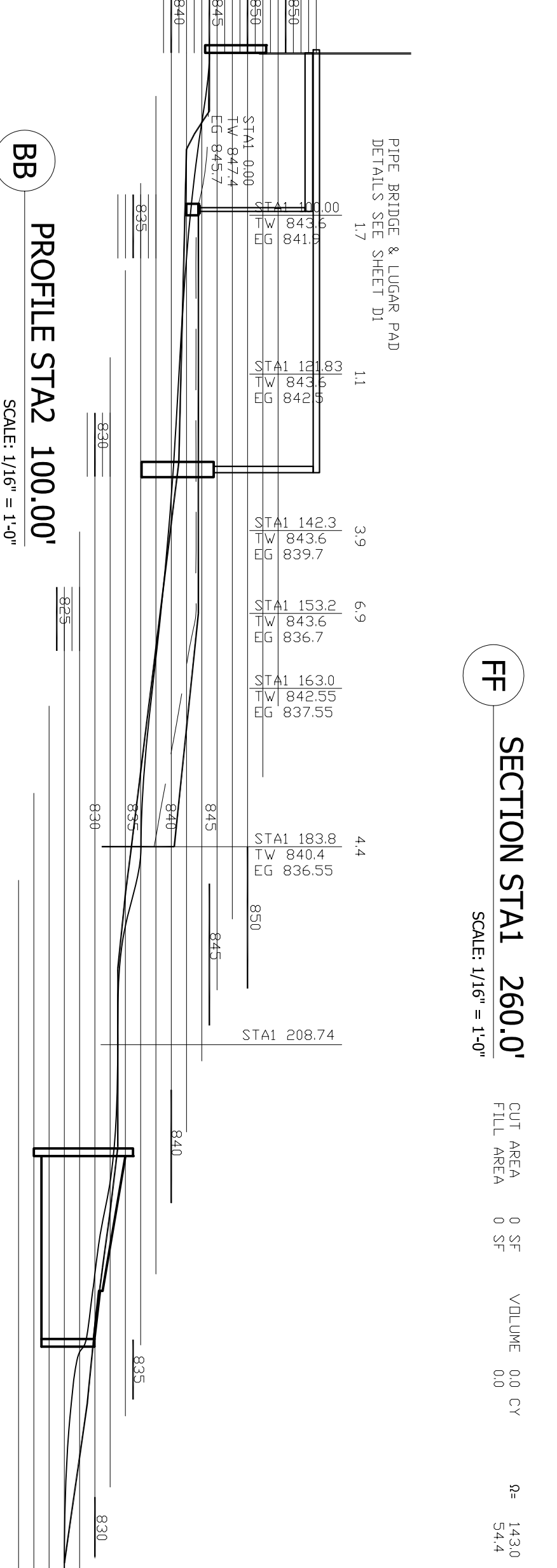
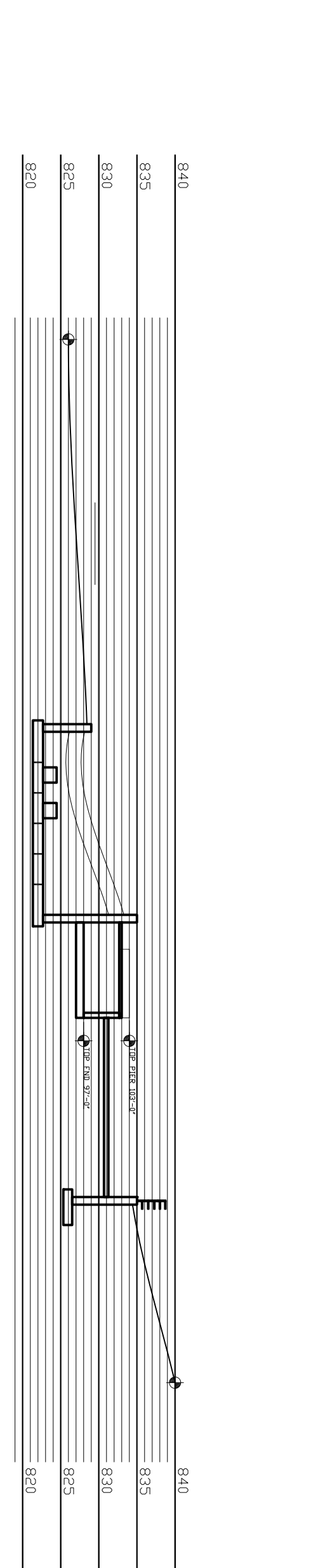
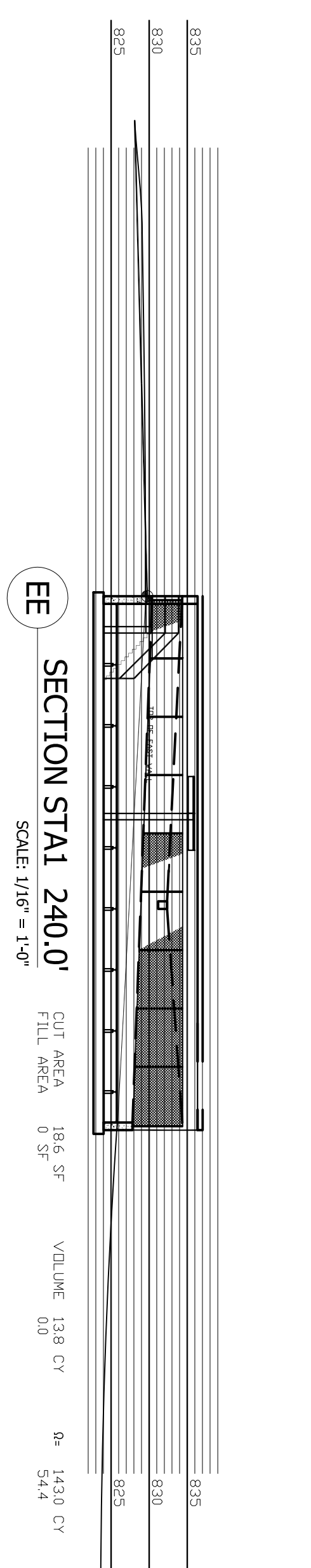
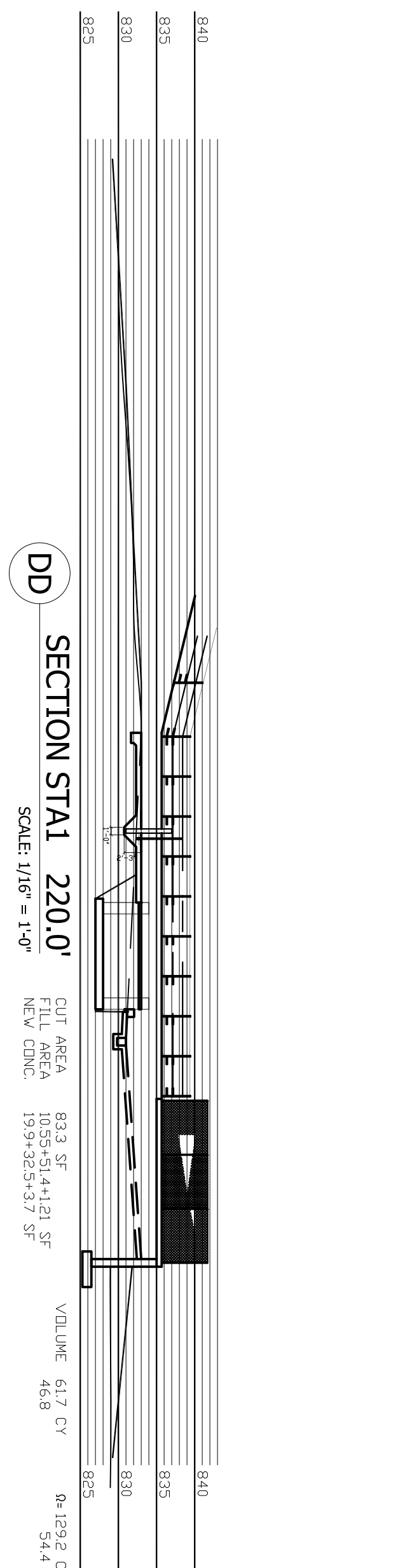
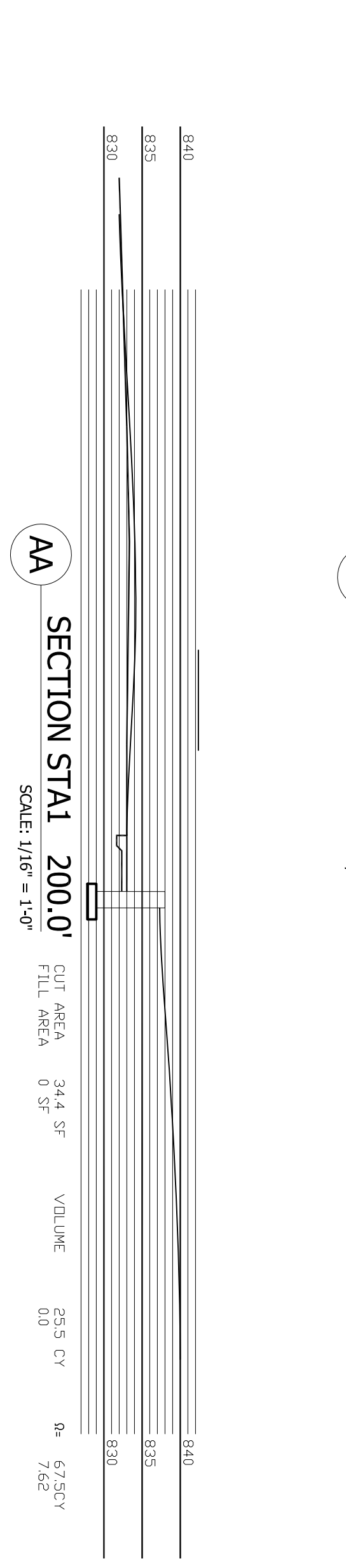
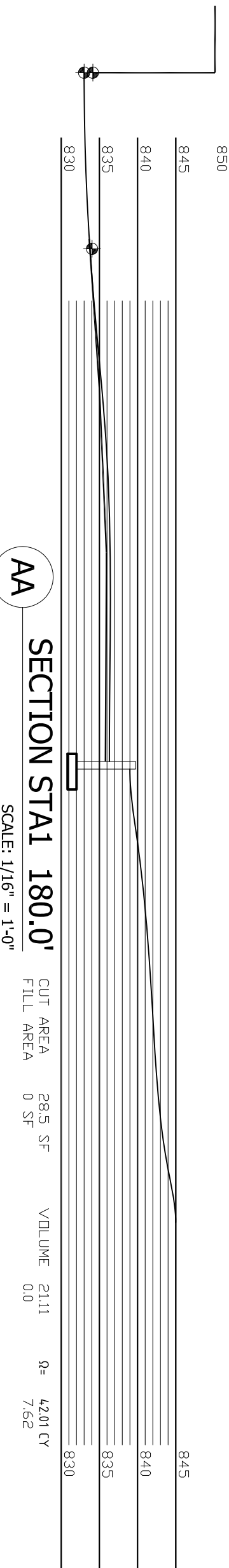
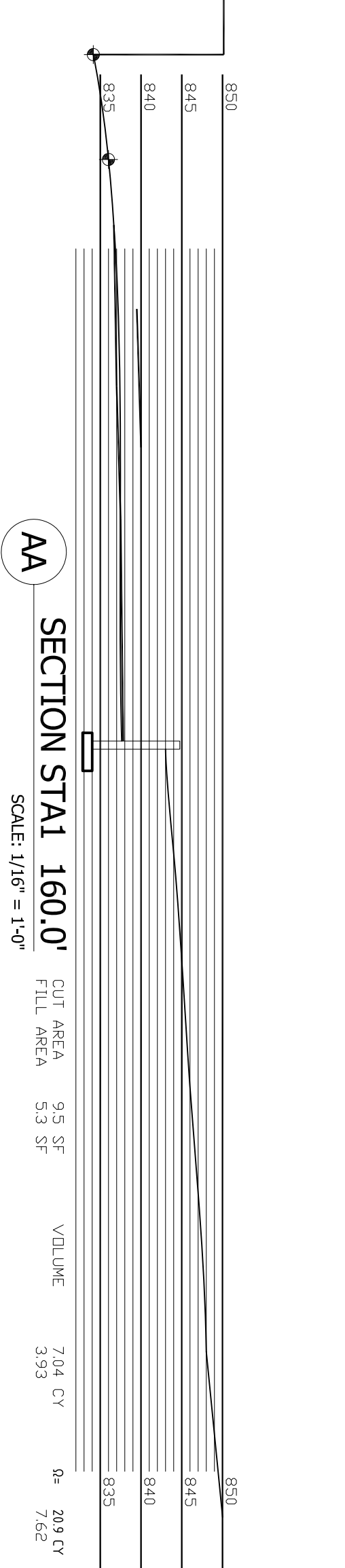
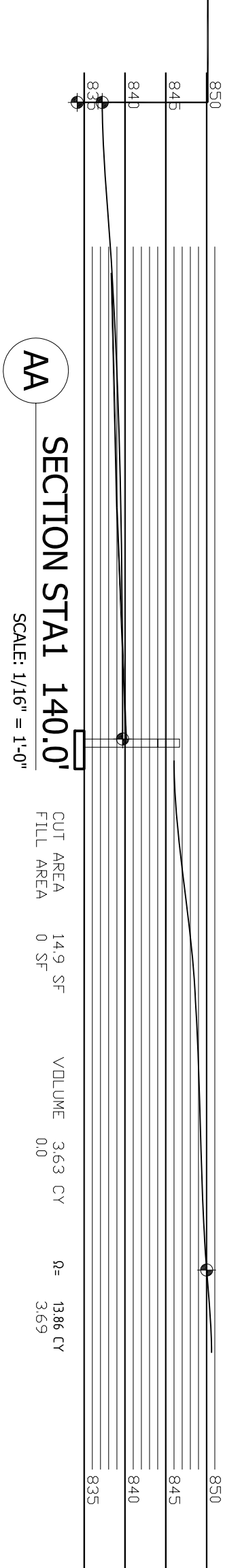
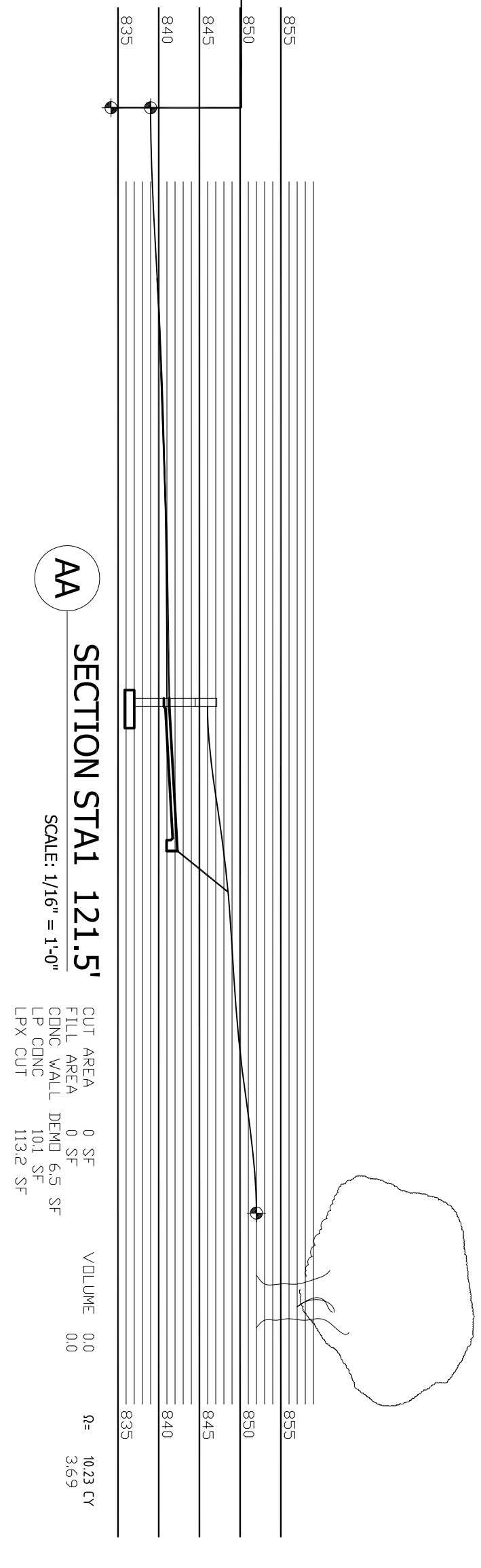
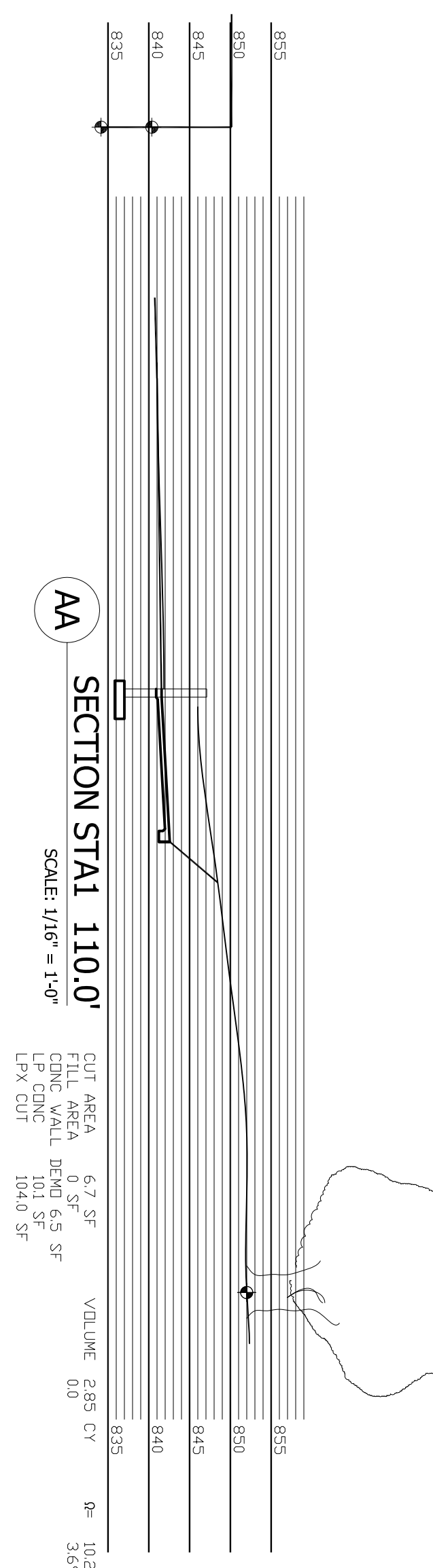
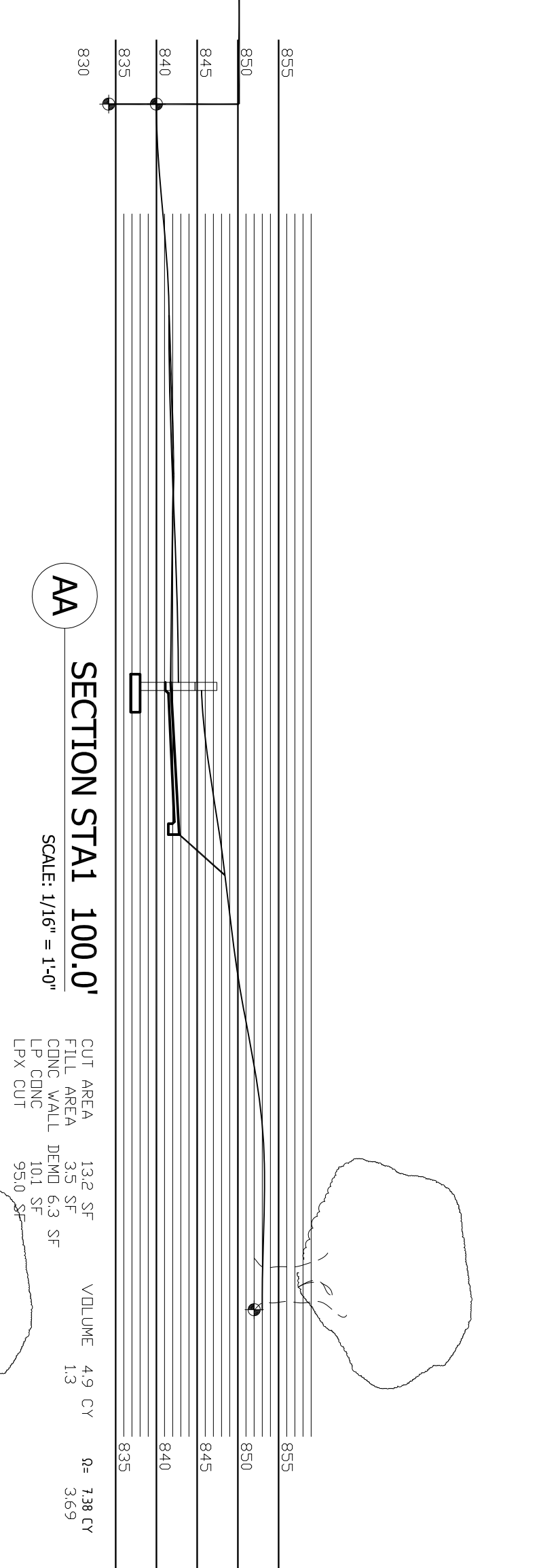
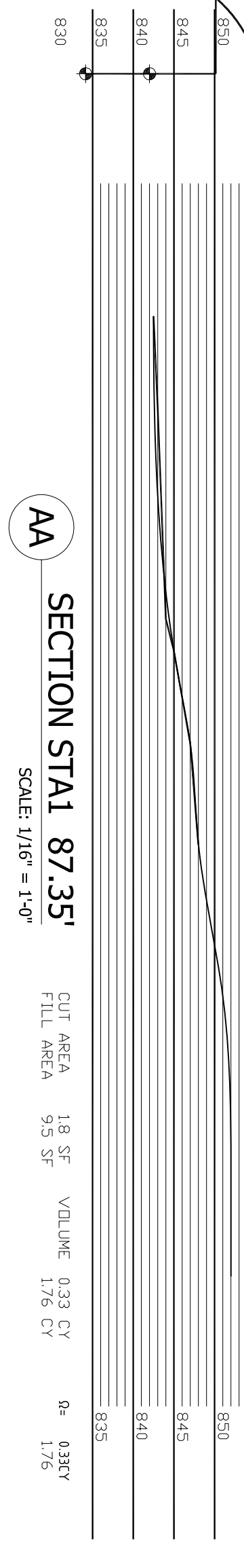
EXISTING & FINAL SITE GRADING PLAN

COOPER POWER SYSTEMS WAUKESHA NORTH STREET
LIQUID HYDROGEN TANK INSTALLATION AND SITE RENOVATIONS

1	TANK FOUNDATION, REPAIR, DEMO
2	LIQUID HYDROGEN TANK
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Allan Wobick Sr Mfg Eng
EATON COOPER POWER SYSTEMS
1900 East North Street
Waukesha, WI 53188-3899
T:262.524.4217 E:AllanWobick@Eaton.com

ASCE
ARCHITECTURAL STRUCTURAL CIVIL ENGINEERING
DESIGN ENGINEERING DRAFTING
ROBERT LATTA PE
1810 DAKDALE DRIVE
WAUKESHA, WI 53189
262-309-3182
T:262-446-0136
ERNULAT68@JUNO.COM



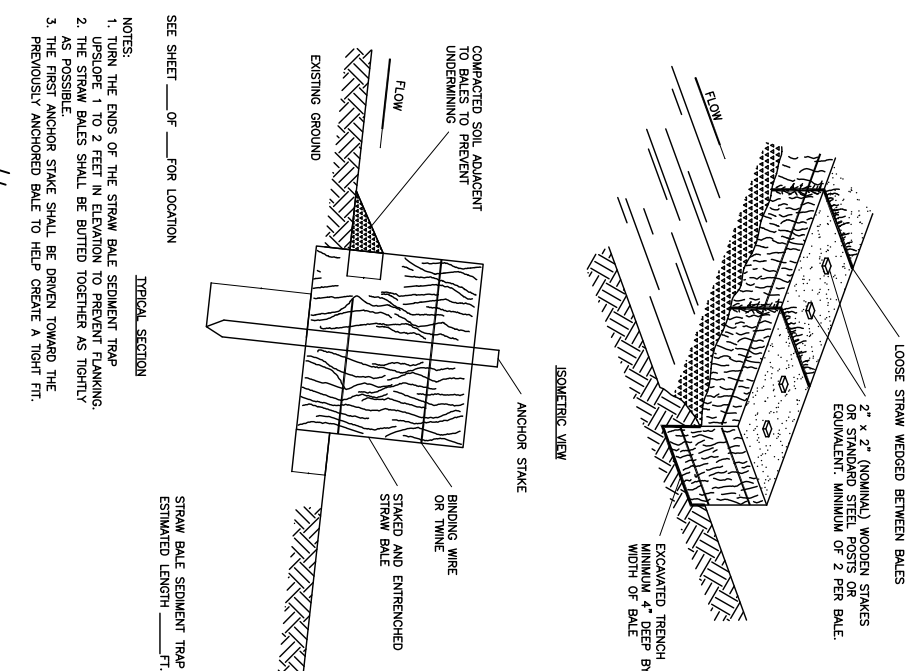
1	DATE	10/20/2014
2	BY	ALLAN WOBICK
3	CHECKED	ALLAN WOBICK
4	DATE	10/20/2014

SITE GRADING TRAVERSE SECTIONS STATION 1 87FT – 260FT
LONG SECTIONS STATION 2 100FT – 141FT
COOPER POWER SYSTEMS WAUKESHA NORTH STREET
LIQUID HYDROGEN TANK INSTALLATION AND SITE RENOVATIONS

ASCE
ARCHITECTURAL, STRUCTURAL, CIVIL, ENGINEERING
DESIGN ENGINEERING DRAFTING
ROBERT LATTA PE
1810 DAKDALE DRIVE
WAUKESHA, WI 53189
262-309-3182
T:262-446-0136
E:RNJLATT@JUNO.COM

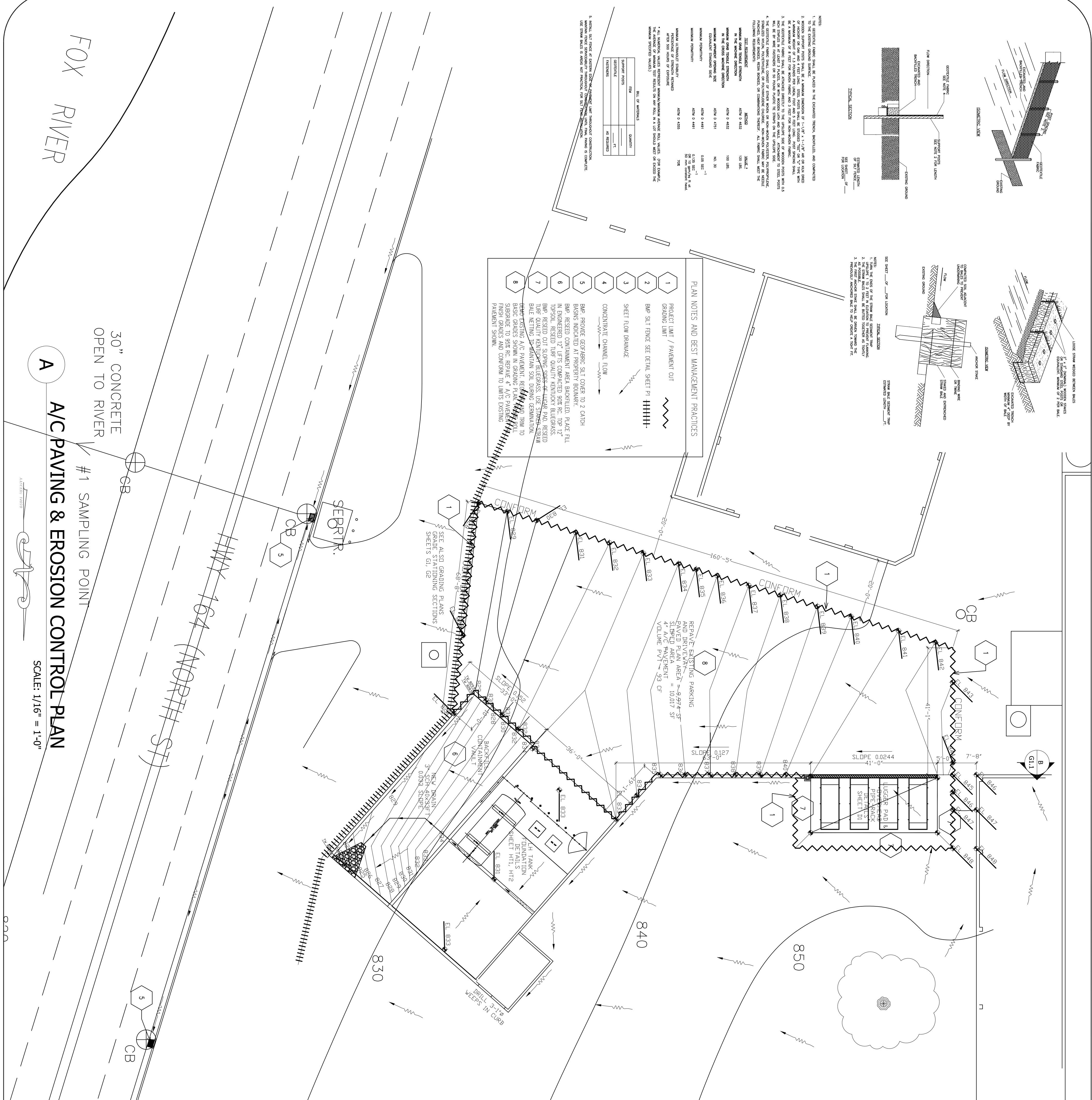
Allan Wobick Sr Mfg Eng
EATON COOPER POWER SYSTEMS
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Waukesha, WI 53188-3899
T:262.524.4217 E:AllanWobick@Eaton.com

14070
July 30, 2014
G2



ITEM	QUANTITY
SUPPORT POSTS	_____
GEOTECHNICAL	_____ FT.
PASTENES	AS REQUIRED

~~MAINTAIN FENCE SERVICEABILITY THROUGHOUT CONSTRUCTION UNTIL FINAL PAVING IS COMPLETE. USE STRAW BALES IN AREAS NOT PRACTICAL FOR SILT FENCE INSTALLATION.~~

[illegible]

- 1. GENERAL SITE WORK AND DRAINAGE**
- A. ALL WORK TO CONFORM TO REGULATORY REQUIREMENTS INCLUDING COMPLIANCE WITH ALL LAWS, CODES, ORDINANCES AND REGULATIONS OF FEDERAL, STATE AND MUNICIPAL JURISDICTIONS. CONTRACTOR OBTAIN ALL NECESSARY PERMITS FROM SUCH AGENCIES.
 - B. PROVIDE AND EMPLOY EROSION CONTROL MEASURES INCLUDING BUT NOT LIMITED TO PROTECT BOUNDARY SLOPE ENGINEERING, 30FT X 30FT GRASS TRUCKING PAD, CLEAN TALLWAYS FOR MUD AND DEBRIS DAILY THROUGHOUT DURATION OF PROJECT.
 - C. MAINTAIN ACCESS TO ADJACENT PROPERTY AT ALL TIMES.
 - D. THE STREET IS NOT AVAILABLE FOR THIS PROJECT.
 - E. VERIFY SITE CONDITIONS PRIOR TO BEGINNING WORK. CERTIFY EXAMINATION OF SITE, EXISTING CONDITIONS, UTILITY LINES AND RECORDS, SAMPLE PLANS AND SPECIFICATIONS, REMEDY DETRIMENTAL CONDITIONS FOR PROPER AND TIMELY COMPLETION OF WORK. REPORT ALL CONDITIONS CONTRARY TO RECORDED INFORMATION TO OWNER AND ENGINEER.
 - F. CONTRACTORS SHALL RETAIN THE SERVICES OF A SOILS CONSULTANT FOR ADVISE EXCAVATION'S STRUCTURES, DEMATERING, COMPACT AREA AND CONSTRUCTION METHODS FOR QUALITY FINISHED WORK PREVENTING DAMAGE OR SETTLEMENT EXISTING AND NEW FACILITIES AS REQUIRED.
 - G. PIPE ASTM D3684, SDR-35; FREE OF DEFECTS, 1-LAY WITH SMOOTH UNIFORM INVERT, USE PNEUMATICALLY USED COMPONENTS FOR CURVES AND OFFSETS.
 - H. PVC JOINTS, ASTM 3712 IN BEGAL WALL BELLE AND SPIGOT JOINTS BY ASTM D2855 SOLVED WELDED JOINTS.
- SUBJECT WEATHER CONDITIONS:
- L. TOPSOIL SHALL BE OBTAINED FROM ON-SITE EXCAVATION OR ACCEPTABLE OFF-SITE SOURCE. PAYMENT WILL EMPLY HIS OWN TESTING AGENCY TO MONITOR QUALITY CONTROL.
 - K. PROTECT ALL EXISTING UTILITIES FROM DAMAGE FROM EXCAVATION. NOTIFY DIGGERS HOTLINE BEFOREHAND TO MARK AND VERIFY UTILITY LOCATIONS.
 - L. PROMPTLY ABANDON OR REMOVE EXISTING UTILITIES NOT SCHEDULED FOR CONTINUED USE. REMOVE OR PLUG ENDS OF PIPE OR CONDUTTS WITH CONCETRETE.
 - M. ALL FOUNDATIONS TO BE PLACED ON FIRM UNDSTURBED COMPACTED SOIL AT ELEAVATIONS NOTED. REPLACE UNSATISFACTORY SOILS. EXCAVATEIONS TO BE FREE OF DEBRIS, STANDING WATER, LOOSE SOIL. PRIOR TO POURING CONCRETE.
 - N. FOOTINGS AND SLABS SHALL BE PLACED ON COMPACTED 95% RELATIVE COMPACTION AT OPTIMUM MOISTURE CONTENT. ASTMD 1557 (ASTM 12) MINUS OF SUBGRADE ELEVATION. PROVIDE MINIMUM 12 INCHES OF GRANULAR BASE COURSE CRUSHED STONE SECTION 304 LOWER BANDER COURSE MARSHAL STABILITY TWO (2) INCHES MAXIMUM GRADE -2 TO +100 IN ITS SECTION 4 CURED 72 HOURS ROLLER COMPACTED TO REQUIRED DENSITY. ARE AS INACCESSIBLE COMPACT BY HAND METHODS.
 - T. AREAS FAILING VISUAL INSPECTION AND COMPACTION SPECIFICATIONS SHALL BE REPLACED OR CORRECTED AND RETESTED AT CONTRACTOR EXPENSE.
- 2. CONCRETE**
- A. DESIGN MIX STRENGTH (PSI) @ 28 DAYS PER ASTM C34.
 1. FOOTINGS AND WALLS
 4000
 2. SLAB ON GRADE
 4000
 3. STRUCTURAL SLAB
 4000
 4. COLLUMNS, BEAMS
 4000
 5. EXTENSION CONCRETE
 4000
 - B. MAX. SLOWUP 4 INCHES.
 - C. EXTENSION EXCEED CONCRETE SHALL BE AIR ENTRAINED WITH 4.2% AIR CONTENT.
 - D. TEMPERATURE SHALL BE REVIEWED AND APPROVED BY THE ENGINEER. CALCIUM CHLORIDE SHALL NOT BE USED.
 - E. MAXIMUM AGGREGATE SIZE FOR FOOTING AND ALL OTHER WORK IS ¾"
 - F. PROVIDE CONSTRUCTION JOINTS OR SAW JOINT CONTROL JOINTS NOT EXCEEDING A MAXIMUM OF 3X THE SLAB THICKNESS IN FEET INTO
 1. SAW CUT AS SOON AS POSSIBLE, BUT NO LATER THAN 12 HOURS AFTER CONCRETES IS PLACED. REPAIR SPALLED OR RAGGED SAWCUT EDGES WITH SQUARE EDGE TOOL. AND 6000 PSI GROUT.
 - G. EXTERIOR SLABS TO HAVE A LIGHT BROOM FINISH MAINTAIN FLOR LEVEL +/- .108 PER FOOT.
 - H. WHERE NOTED AND PROVIDE SMOOTH UNIFORM SLOPE GRADE WHERE NOTED.
 - I. CURE CONCRETE 7 DAYS. SPRAY CURE. COORDINATE AND WATER CURE WITH 6 MIL PLASTIC.
 - J. PROVIDE 1/2" FIBER JOINT AT EXTERIOR AND IS LB FELT AT INTERIOR SLAB EDGES. USE CAP STRIP TO ALLOW ½ x ¼ GAULK JOINT AT COMPLETION.
 - K. BACKFILLING OPERATIONS:
 1. BACKFILL BEHIND INDRAAGED WALLS SHALL NOT EXCEED 2 FT.
 A. PLAN SHOW FINAL DESIGNED SUPPORT CONDITIONS. PROVIDE TEMPORARY BRACING AS NEEDED TO MAINTAIN SHAPES. ALL OPERATIONS SHOULD BE UNDER CLOSE SUPERVISION RESPONSIBLE FOR ALL TEMPORARY BRACING.
 - L. RECONCRETE REINFORCED:
 1. REBAR ASTM A615 GRADE #6
 2. BARS TO BE WELDED GRADE #6W
 3. REINFORCEMENT SHALL BE FREE OF GREASE/OIL, DIRT OR DEEP RUST WHEN PLACED. WELDED INDICATING MIX DESIGN, STRENGTH, AMOUNT OF WATER ADDED, SLUMP AT TIME OF PLACEMENT. CONCRETES AMPLING AND TESTING SHALL BE PROVIDED AS INDICATED IN THE CONTRACT.
 - N. EQUIPMENT PADS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER.
 - O. COORDINATE WITH CARPENTER, AND MECHANICALS ALL EMBERS, LOCATION AND INSTALLATION OF ANCHOR BOLTS AND HARDWARE.
 - P. GROUT OR RESINS SHALL ALL PENETRATIONS WEATHER TIGHT.
 - Q. GROUT WHERE SIZE OR DEPTH EXCEEDS 2". THE CONCRETE SHALL BE INVESTIGATED FOR DEMOLITION AND REPLACEMENT AT CONTRACTORS' EXPENSE.
- 3. STRUCTURAL STEEL**
- A. FABRICATOR PROVIDE ALL HOLES, BOLTS, ANCHOR BOLTS, WASHERS, NUTS, BEARING PLATES, LIMITS, STEPPERS, CLIP ANGLES, WEB PLATES, EMBEDMENTS, ETC., AS REQUIRED FOR STEEL FABRICATIONS IN THE DRAWINGS.
 - B. ALL WELDING SHALL BE PERFORMEDBY CURRENT CERTIFIED WELDERS, USE E70XX
 - C. WELDPOSS REVIEW ALTERNATES WITH ENGINEER.
 - D. ALL BOLTS NUTS AND WASHERS SHALL CONFORM TO REQUIREMENTS OF ASTM A325.
 - E. STEEL SHALL BE GALVANIZED TO PREVENT CORROSION.
 - F. STEEL WIDE FLANGE COLUMN AND BEAMS : ASTM A992 OR ASTM A572 / 1.5-50 KSI
 2. ANGLES PLATES EMBEDMENTS : ASTM A36 FY-36 KSI
 3. STEEL TUBES : ASTM A500 GRADE B FY-46 KSI
 - E. STEEL FINISH:
 1. ALL STEEL SHALL BE CLEANED AND PRIMERFINSH WITH ONE COAT OF RED PRIMER.
 2. ALL FIELD WELDS SHALL BE CLEANED AND PRIMED.
 - F. COORDINATE AND PROVIDE EXPEDITIED LIMITS, BEARING PLATES AND FABRICATED STEEL EMBBMS AS REQUIRED TO REQUIREMENTS FOR LH TRANS CONCRCT WORK.
 - G. SEE ALSO SPECIAL GALVANIZING REQUIREMENTS FOR LH TRANS CONCRCT WORK.