

URS
 7650 West Courtney Campbell Causeway
 Suite 700
 Tampa, Florida 33607
 Ph. (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER
 12008609
 P.L: D. WILCOX
 ENG: F. BOHORQUEZ
 DRW: D. ELLIS
 DATE: September 15, 2009

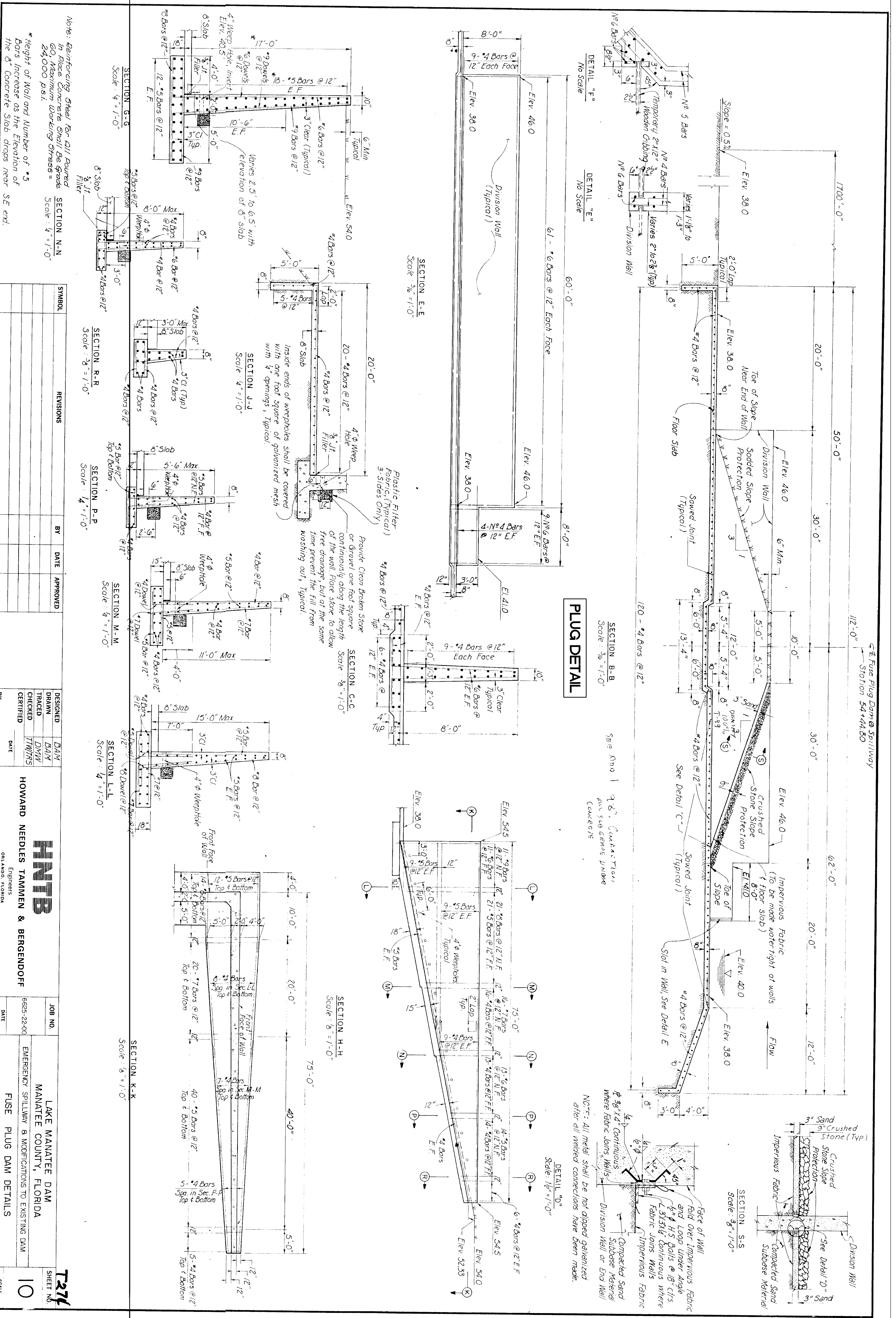
DAVID A. WILCOX
 FLORIDA P.E. NO. 34942



LAKE MANATEE DAM TAITER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

AERIAL SITE PLAN

PROJECT STATUS
 BID SET
 C-1



- RESTORATION OF PLUGS**
1. INSTALL COMPACTED EARTH IN 12" LIFTS TO ELEVATIONS SHOWN IN SECTION B-B. CONTRACTOR MAY REUSE EXISTING PLUG SOIL.
 2. INSTALL IMPERVIOUS FABRIC ON WATER SIDE OF PLUG. FABRIC IS TO MATCH THE EXISTING FABRIC INSTALLED. SUBMIT MANUFACTURER'S RECOMMENDED DETAILS FOR ANCHORING FABRIC TO EXISTING CONCRETE WALLS AND SLAB.
 3. INSTALL 9" OF #57 STONE OVER FILTER FABRIC
 4. REMOVAL OR EXISTING PLUGS WILL ONLY OCCUR AT THE DIRECTION OF THE COUNTY. CONTRACTOR MUST MOBILIZE EQUIPMENT AND LABOR AND BEGIN WORK WITHIN 24 HOURS OR RECEIVING NOTIFICATION FROM THE COUNTY.

NOTE:
 THIS DRAWING IS FOR ILLUSTRATION OF THE EXISTING EMERGENCY SPILLWAY CONFIGURATION ONLY.
 NEW WORK IS SHOWN IN BOLD AND BOXED.

URS
 7650 West Country Campbell Causeway
 Suite 700
 Tampa, Florida 33607
 Ph: (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

SYMBOL	REVISIONS	BY	DATE	APPROVED

DESIGNED	DRAWN	TRACED	CHECKED	CERTIFIED	DATE
DAVID A. WILCOX	DAVID A. WILCOX	DAVID A. WILCOX	DAVID A. WILCOX	DAVID A. WILCOX	SEPTEMBER 15, 2009

JOB NO.	DATE	SCALE	SHEET NO.
LAKE MANATEE DAM MANATEE COUNTY, FLORIDA EMERGENCY SPILLWAY & MODIFICATIONS TO EXISTING DAM	6-25-22-01	AS SHOWN	10

HOWARD NEEDLES TAMMEN & BERGENDOFF
 ENGINEERS
 ORLANDO, FLORIDA

LAKEMANATEE
 ENGINEERS
 ORLANDO, FLORIDA

**LAKE MANATEE DAM
 MANATEE COUNTY, FLORIDA
 EMERGENCY SPILLWAY & MODIFICATIONS TO EXISTING DAM**

FUSE PLUG DAM DETAILS
 2 OF 2

URS
 7650 West Country Campbell Causeway
 Suite 700
 Tampa, Florida 33607
 Ph: (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 000002

LAKE MANATEE DAM TAINTER GATES

EMERGENCY SPILLWAY MODIFICATIONS - SECTIONS & DETAILS

C-11

PROJECT STATUS
 BID SET

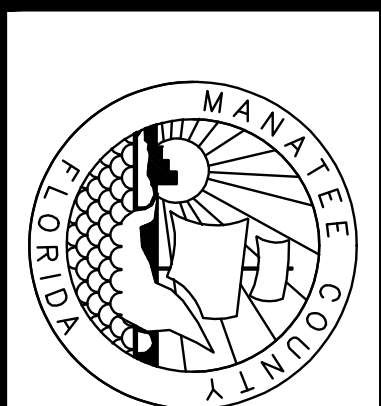
URS
7650 West Courtney Campbell Causeway
Suite 700
Tampa, Florida 33607
Ph: (813) 286-1711 Fax: (813) 286-6587
Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER
12008609

PK: D. WILCOX
ENG: F. BOHORQUEZ
DRW: D. ELLIS
DATE: September 15, 2009

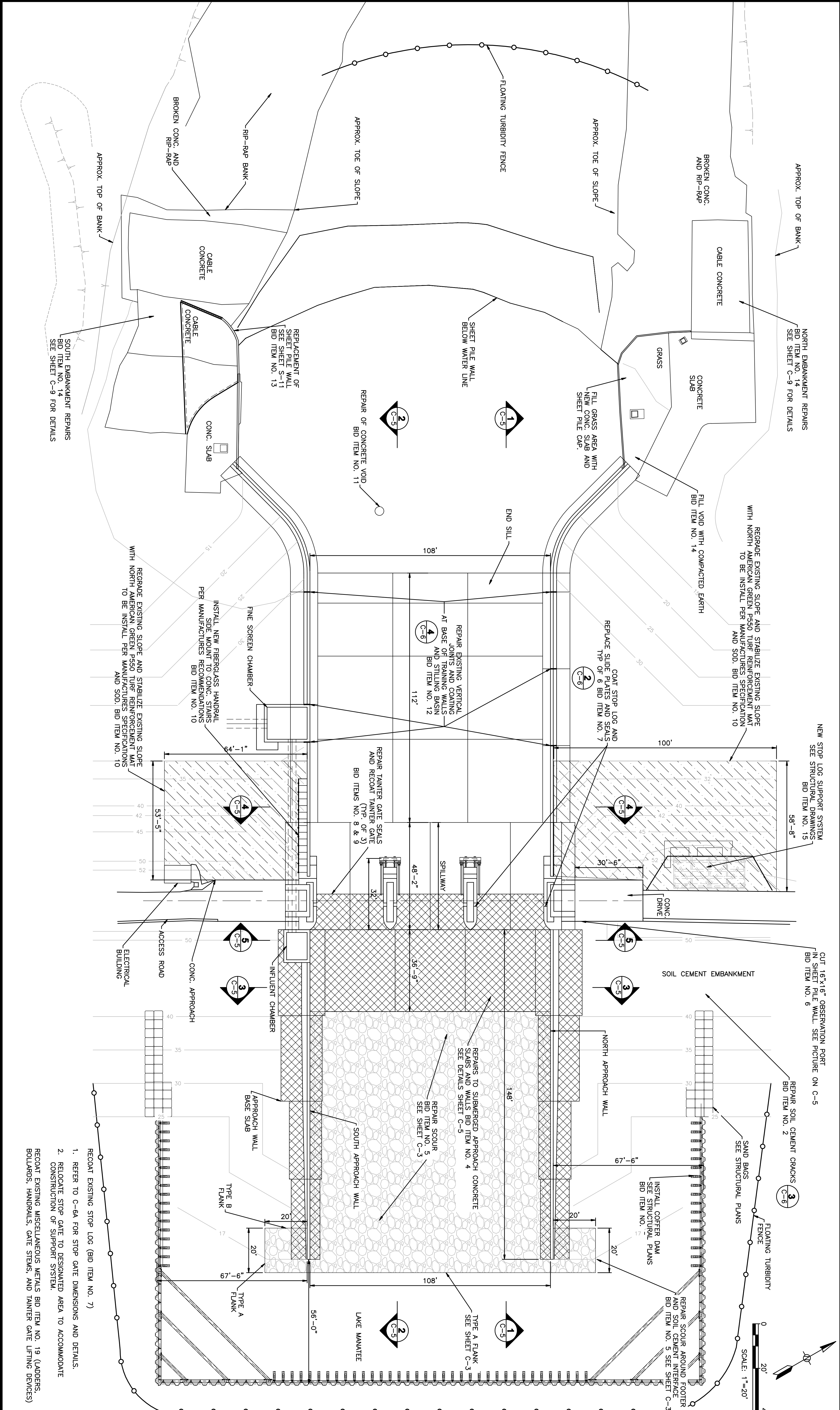
DAVID A. WILCOX
FLORIDA P.E. NO. 34842



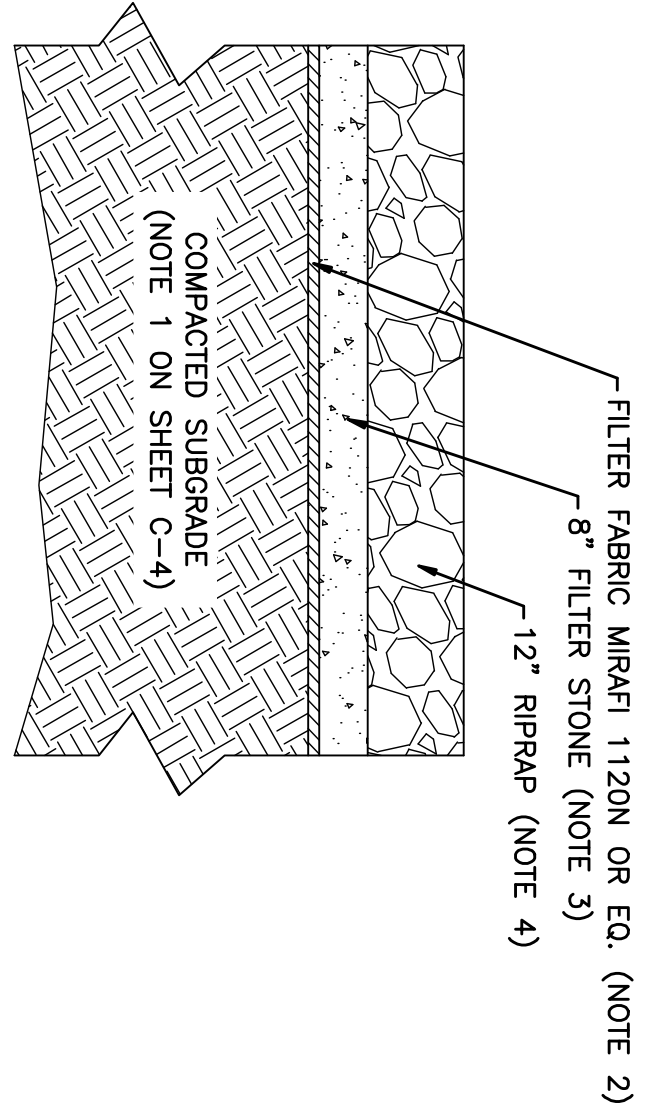
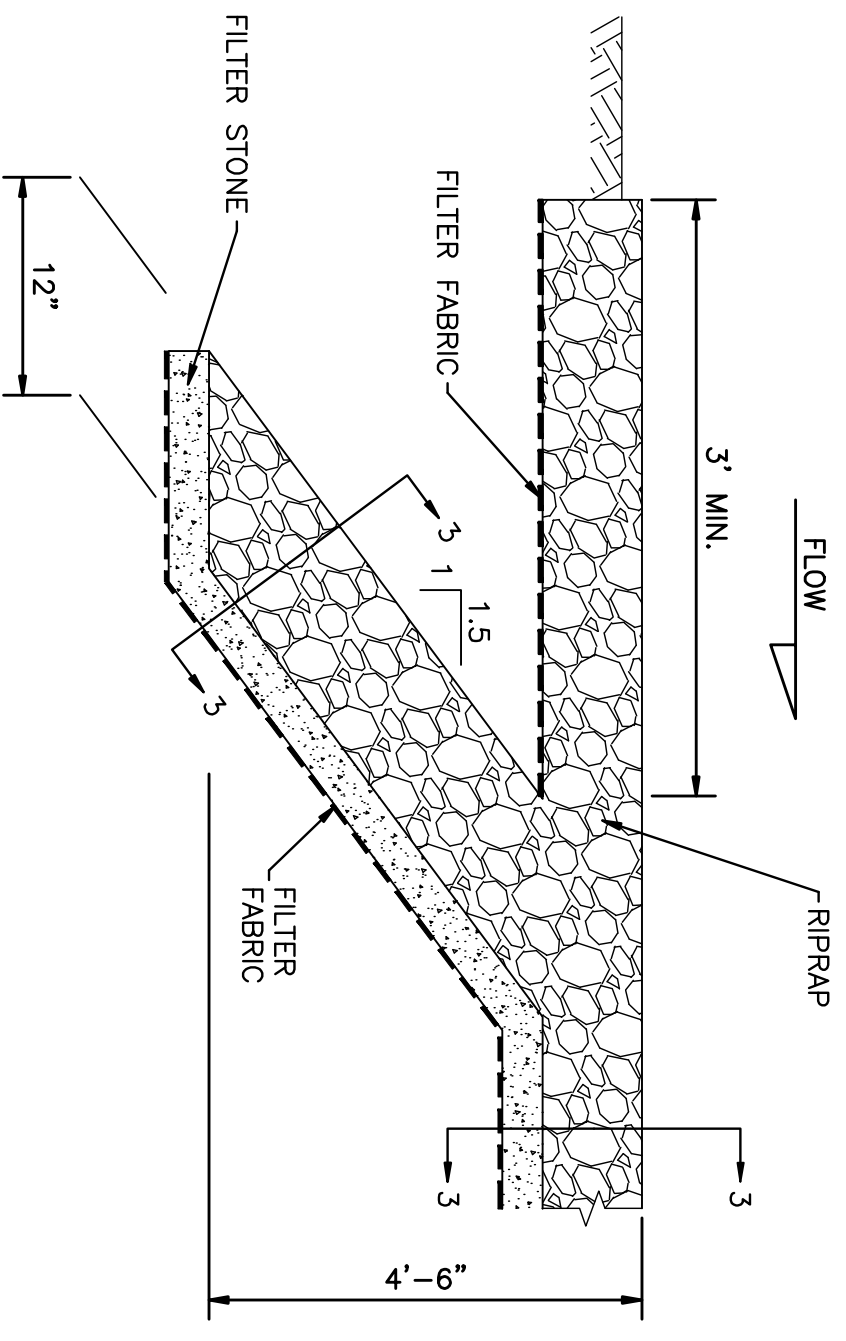
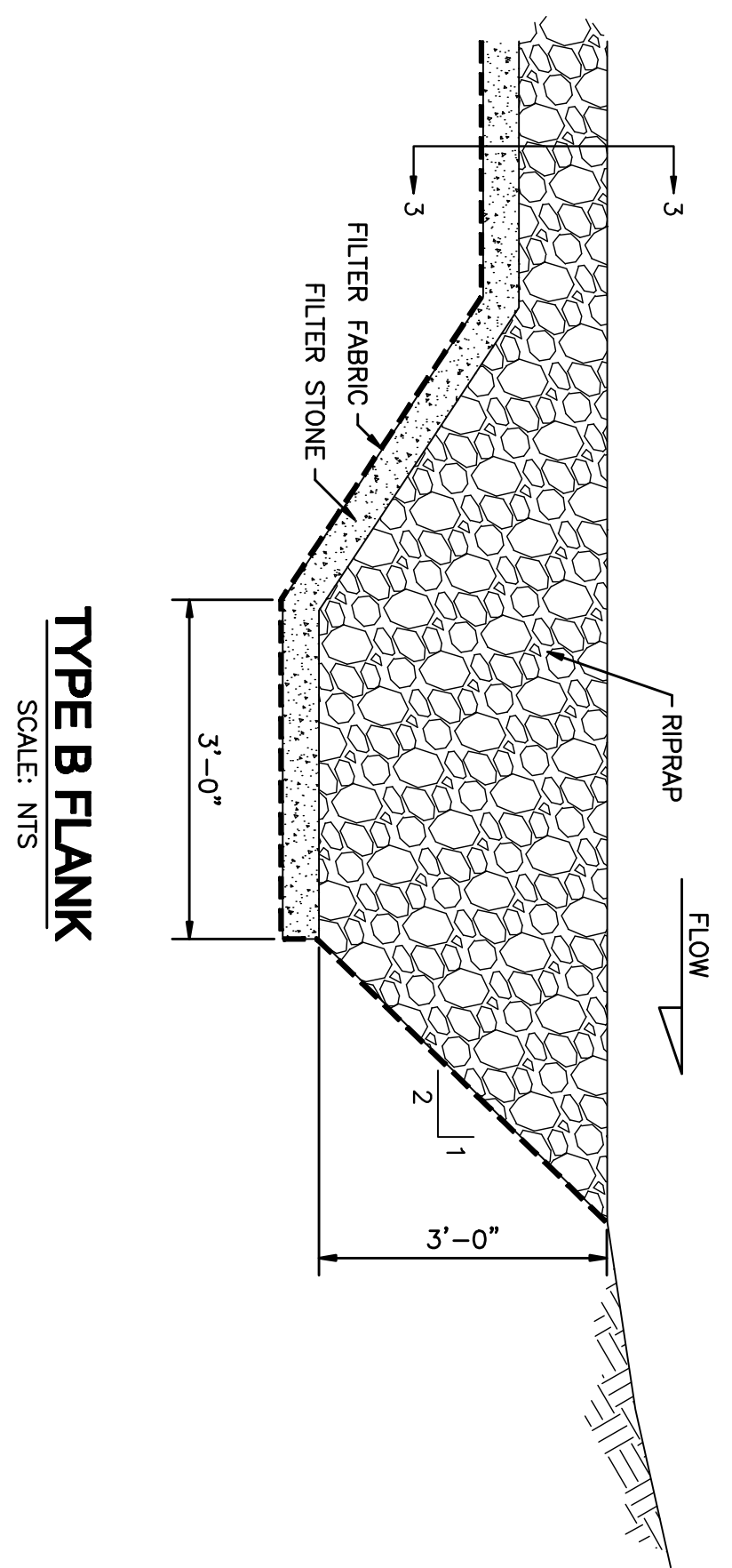
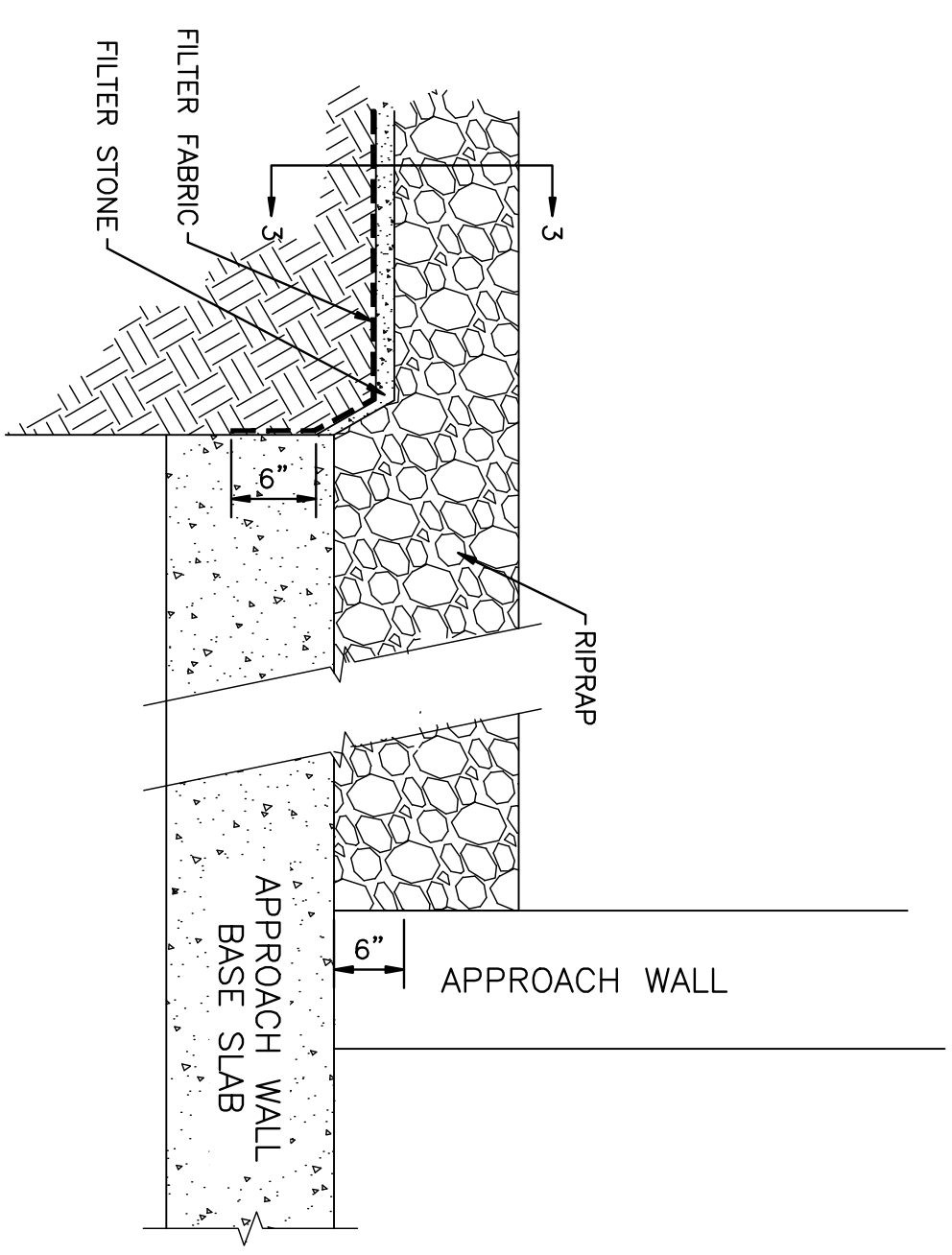
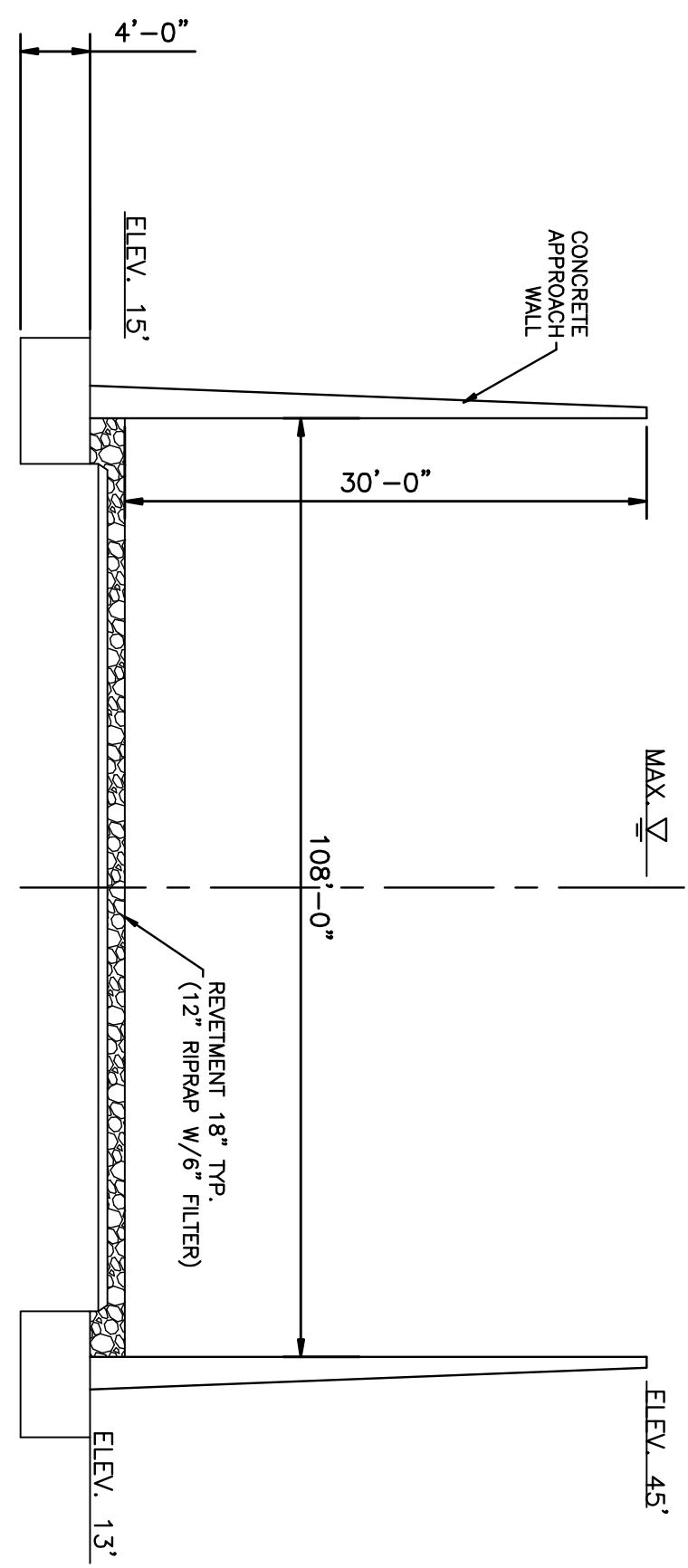
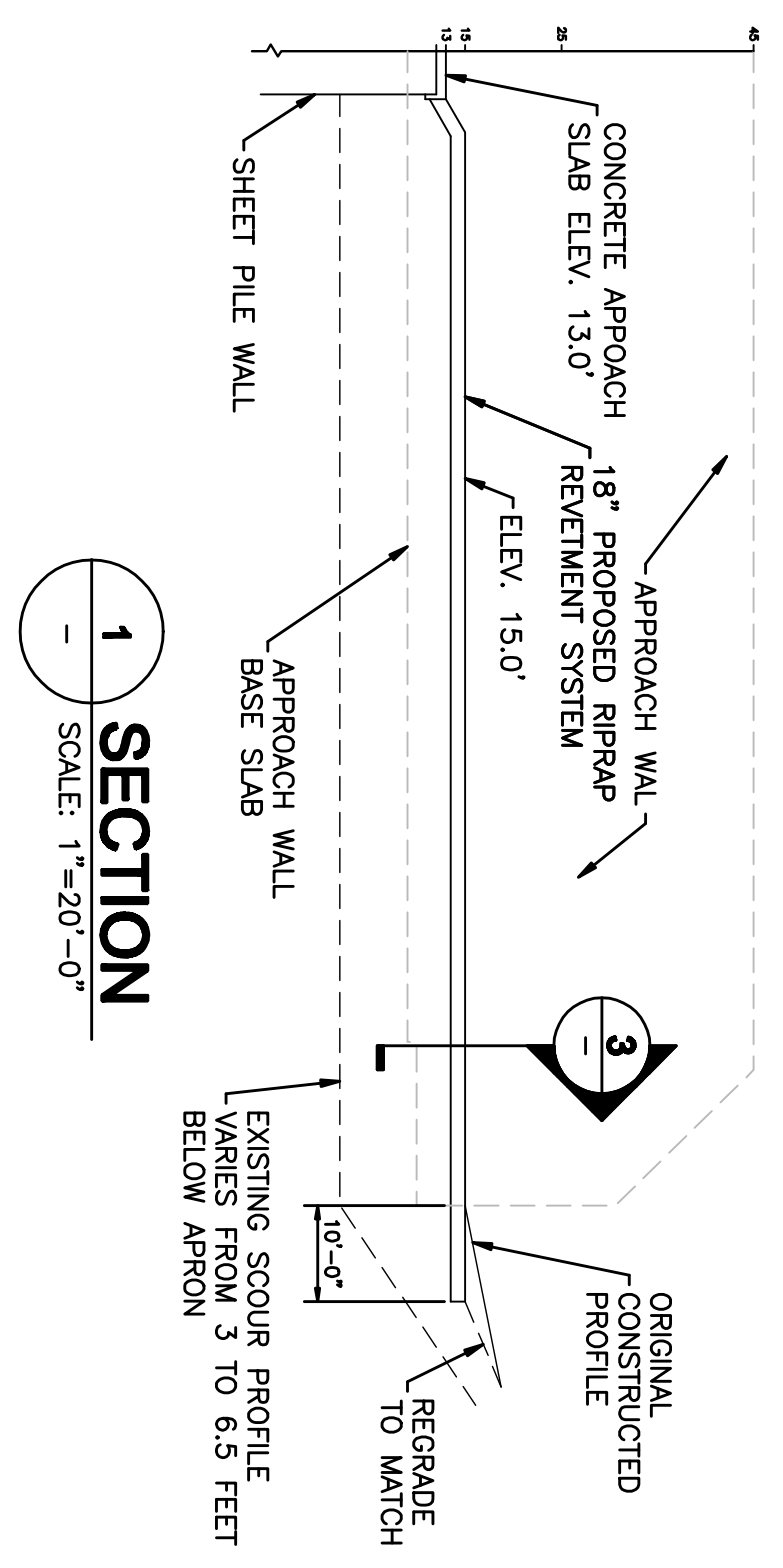
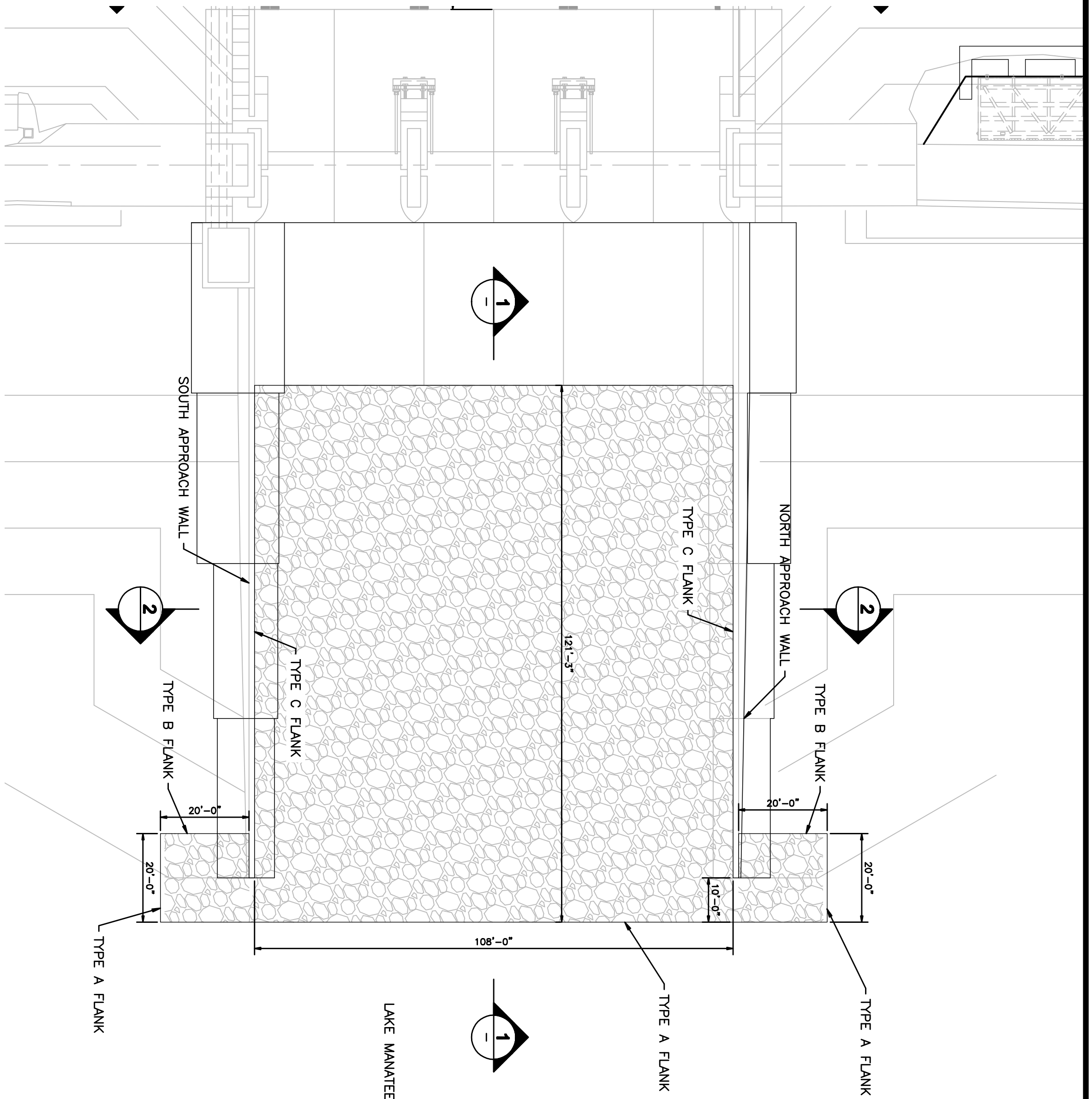
LAKE MANATEE DAM TAINTER GATES
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

SPILLWAY PLAN

PROJECT STATUS
BID SET
C-2



- RECOAT EXISTING STOP LOG (BID ITEM NO. 7)
- REFER TO C-6A FOR STOP GATE DIMENSIONS AND DETAILS.
 - RELOCATE STOP GATE TO DESIGNATED AREA TO ACCOMMODATE CONSTRUCTION OF SUPPORT SYSTEM.
- RECOAT EXISTING MISCELLANEOUS METALS BID ITEM NO. 19 (LADGERS, BOLLARDS, HANDRAILS, GATE STEMS, AND TANTRER GATE LIFTING DEVICES)

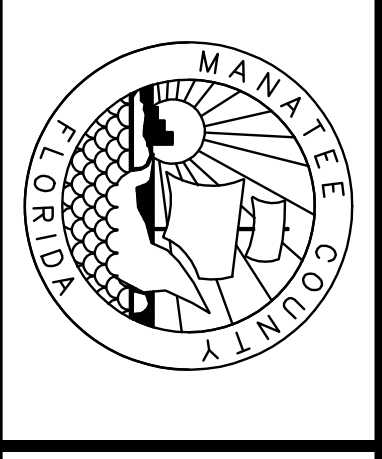


REFER TO MATERIAL SPECIFICATIONS ON SHEET C-4

URS
 7650 West Courtney Campbell Causeway
 Suite 700
 Tampa, Florida 33607
 Ph: (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER	12008609
P.M.: D. WILCOX	
ENG.: J. RUPERTO	
DRW.: D. ELLIS	
DATE:	September 15, 2009



LAKE MANATEE DAM TANTIER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

APPROACH CHANNEL
 REVETMENT PLAN

PROJECT STATUS	
BID SET	
C-3	

OUTLET CHANNEL NOTES

GENERAL NOTES:

- SLOPES TO BE PROTECTED BY RIPRAP SHALL BE FREE OF BRUSH, TREES, STUMPS, AND OTHER OBJECTIONABLE MATERIALS AND BE DRESSED TO SMOOTH SURFACE. ALL SOFT OR SPONGY MATERIAL SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AND REPLACED WITH APPROVED NATIVE MATERIAL. FILLED AREAS WILL BE COMPACTED AS SPECIFIED. A TOE TRENCH AS SHOWN ON THE PLANS SHALL BE DUG AND MAINTAINED UNTIL THE RIPRAP IS PLACED.
- RIPRAP TYPE AND PLACEMENT SHALL BE IN ACCORDANCE WITH SPECIFIC NOTE 4.
- THE SOURCES FROM WHICH RIPRAP ROCK WILL BE OBTAINED SHALL BE SELECTED WELL IN ADVANCE OF THE TIME WHEN THE STONE WILL BE REQUIRED IN THE WORK. THE ACCEPTABILITY OF THE STONE WILL BE DETERMINED BY SERVICE RECORDS AND/OR BY SUITABLE TESTS. IF TESTING IS REQUIRED, SUITABLE SAMPLES OF THE STONE SHALL BE TAKEN IN THE PRESENCE OF THE ENGINEER AT LEAST 25 DAYS IN ADVANCE OF THE TIME WHEN PLACEMENT OF THE STONE IS EXPECTED TO BEGIN.
- FILTER FABRIC (GEOTEXTILES) USED IN THE CONSTRUCTION OF THE OUTLET CHANNEL REVEMENT SYSTEM SHALL NOT BE EXPOSED TO SUNLIGHT FOR MORE THAN 21 DAYS.
- NO PART OF THE OF THE OUTLET CHANNEL REVEMENT SYSTEM (FILTER FABRIC, FILTER STONE AND RIPRAP), SHALL BE PLACED UNDER WATER.

SPECIFIC NOTES:

NOTE 1. SUBGRADE PREPARATION

- THE SUBGRADE FOR THE REVEMENT SYSTEM (RIPRAP/FILTER STONE/FILTER FABRIC) SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY 95% MAXIMUM DRY DENSITY ACCORDING TO AASHTO T-180.

NOTE 2. FILTER FABRIC

- RECOMMENDED MINIMUM PROPERTIES EROSION CONTROL CLASS B SYNTHETIC FABRIC GEOTEXTILES:

PROPERTY	VALUE (MIN)
GRAB STRENGTH	90 LB
ELONGATION	15%
PUNCTURE STRENGTH	40 LB
BURST STRENGTH	145 LB/IN2
TRAPEZOIDAL TEAR	30 LB
PIPING RESISTANCE	> US NO. 30 STD SIEVE
PERMEABILITY	> 0.21 GAL/MIN/FT2

- SUITABLE FABRIC MIRAFI FW 700 OR EQUIVALENT
- INSTALL PER MANUFACTURER SPECIFICATIONS

NOTE 3. FILTER STONE

- FILTER STONE MATERIAL SHALL CONSIST OF NATURALLY OCCURRING QUARTZ OR GRANITE MATERIALS CRUSHED AND SIZED ACCORDING TO THE GRADATION SHOWN BELOW. THIS MATERIAL SHALL BE ANGULAR IN NATURE REASONABLY FREE FROM FLAT AND ELONGATED PIECES AND SHOULD CONTAIN NO ORGANIC MATTER OR SOFT, FRIABLE PARTICLES.

FILTER STONE GRADATION	
SIZE (IN)	% PASSING
10	100
6	85
4	50
2.5	15
2	10

- THE FILTER STONE MATERIAL SHALL BE CAREFULLY SPREAD, SO AS TO AVOID DISTURBANCE OF THE FILTER FABRIC, TO A UNIFORM THICKNESS AS SHOWN.

NOTE 4. RIPRAP ROCK

- STONE USED AS RIPRAP SHALL BE HARD, DURABLE, ANGULAR IN SHAPE, RESISTANT TO WEATHERING AND FREE FROM DELETERIOUS MATERIAL AND SHALL MEET THE GRADATION REQUIREMENTS SHOWN BELOW. NEITHER BREADTH NOR THICKNESS OF A SINGLE STONE SHOULD BE LESS THAN ONE-THIRD ITS LENGTH. ROUNDED STONE IS NOT ACCEPTABLE. MINIMUM SPECIFIC WEIGHT OF THE STONE SHALL BE 165 POUNDS PER CUBIC FOOT AS

COMPUTED BY MULTIPLYING THE SPECIFIC GRAVITY (BULK-SATURATED-SURFACE-DRY BASIS, AASHTO TEST T85) TIMES 62.4 POUNDS PER CUBIC FOOT.

RIPRAP ROCK GRADATION	% PASSING	WEIGHT (lb)
4.5 - 51	100	4,550 - 4,970
36 - 42	85	2,330 - 3,700
30 - 35	50	1,350 - 2,060
12 - 18	15	90 - 290

- PLACEMENT OF RIPRAP SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE FILTER STONE. THE RIPRAP SHALL BE PLACED SO THAT IT PRODUCES A DENSE WELL-GRADED MASS OF STONE WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF STONES THROUGHOUT THE MASS SHALL BE OBTAINED BY CONTROLLED DUMPING OF SUCCESSIVE LOADS DURING FINAL PLACING. THE RIPRAP SHALL BE PLACED TO ITS FULL THICKNESS IN ONE OPERATION. THE RIPRAP SHALL NOT BE PLACED IN LAYERS. THE RIPRAP SHALL NOT BE PLACED BY DUMPING INTO CHUTES OR SIMILAR METHODS WHICH ARE LIKELY TO CAUSE SEGREGATION OF THE VARIOUS STONE SIZES. CARE SHOULD BE TAKEN NOT TO DISLODGE THE UNDERLYING MATERIAL WHEN PLACING THE STONES. THE FINISHED SLOPE SHOULD BE FREE OF POCKETS OF SMALL STONE OR CLUSTERS OF LARGE STONES. HAND PLACING MAY BE NECESSARY TO ACHIEVE THE REQUIRED GRADES AND A GOOD DISTRIBUTION OF STONE SIZES. FINAL THICKNESS OF THE RIPRAP BLANKET SHALL BE WITHIN PLUS OR MINUS ONE-FOURTH OF THE SPECIFIED THICKNESS.

APPROACH CHANNEL NOTES

NOTE 1. SUBGRADE PREPARATION

- THE SUBGRADE FOR THE REVEMENT SYSTEM (RIPRAP/FILTER STONE/FILTER FABRIC) SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY 95% MAXIMUM DRY DENSITY ACCORDING TO AASHTO T-180.

NOTE 2. FILTER FABRIC

- RECOMMENDED MINIMUM PROPERTIES EROSION CONTROL CLASS B SYNTHETIC FABRIC GEOTEXTILES:

PROPERTY	VALUE (MIN)
GRAB STRENGTH	90 LB
ELONGATION	15%
PUNCTURE STRENGTH	40 LB
BURST STRENGTH	145 LB/IN2
TRAPEZOIDAL TEAR	30 LB
PIPING RESISTANCE	> US NO. 30 STD SIEVE
PERMEABILITY	> 0.21 GAL/MIN/FT2

- SUITABLE FABRIC MIRAFI 1120 N OR EQUIVALENT
- INSTALL PER MANUFACTURER SPECIFICATIONS

NOTE 3. FILTER STONE

- FILTER STONE MATERIAL SHALL CONSIST OF NATURALLY OCCURRING QUARTZ OR GRANITE MATERIALS CRUSHED AND SIZED ACCORDING TO THE GRADATION SHOWN BELOW. THIS MATERIAL SHALL BE ANGULAR IN NATURE REASONABLY FREE FROM FLAT AND ELONGATED PIECES AND SHOULD CONTAIN NO ORGANIC MATTER OR SOFT, FRIABLE PARTICLES. STONE SHALL TESTED IN ACCORDANCE WITH AASHTO T-96 AND SHALL NOT HAVE A PERCENTAGE LOSS OF MORE THEN 40 AFTER 500 REVOLUTIONS.

FILTER STONE GRADATION	
SIZE (IN)	% PASSING
1	100
0.25	85
0.17	50
0.08	15
0.07	10

- THE FILTER STONE MATERIAL SHALL BE CAREFULLY SPREAD, SO AS TO AVOID DISTURBANCE OF THE FILTER FABRIC, TO A UNIFORM THICKNESS AS SHOWN.

NOTE 4. RIPRAP ROCK

- STONE USED AS RIPRAP SHALL BE HARD, DURABLE, ANGULAR IN SHAPE, RESISTANT TO WEATHERING AND FREE FROM DELETERIOUS MATERIAL AND SHALL MEET THE GRADATION REQUIREMENTS SHOWN BELOW. NEITHER BREADTH NOR THICKNESS OF A SINGLE STONE SHOULD BE LESS THAN ONE-THIRD ITS LENGTH. ROUNDED STONE IS NOT ACCEPTABLE. MINIMUM SPECIFIC WEIGHT OF THE STONE SHALL BE 165 POUNDS PER CUBIC FOOT AS COMPUTED BY MULTIPLYING THE SPECIFIC GRAVITY (BULK-SATURATED-SURFACE-DRY BASIS, AASHTO TEST T85) TIMES 62.4 POUNDS PER CUBIC FOOT.

RIPRAP ROCK GRADATION	
SIZE (IN)	% PASSING
4.5 - 5.1	100
3.6 - 4.2	85
3.0 - 3.5	50
1.0 - 1.8	15

- PLACEMENT OF RIPRAP SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE FILTER STONE. THE RIPRAP SHALL BE PLACED SO THAT IT PRODUCES A DENSE WELL-GRADED MASS OF STONE WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF STONES THROUGHOUT THE MASS SHALL BE OBTAINED BY CONTROLLED DUMPING OF SUCCESSIVE LOADS DURING FINAL PLACING. THE RIPRAP SHALL BE PLACED TO ITS FULL THICKNESS IN ONE OPERATION. THE RIPRAP SHALL NOT BE PLACED IN LAYERS. THE RIPRAP SHALL NOT BE PLACED BY DUMPING INTO CHUTES OR SIMILAR METHODS WHICH ARE LIKELY TO CAUSE SEGREGATION OF THE VARIOUS STONE SIZES. CARE SHOULD BE TAKEN NOT TO DISLODGE THE UNDERLYING MATERIAL WHEN PLACING THE STONES. THE FINISHED SLOPE SHOULD BE FREE OF POCKETS OF SMALL STONE OR CLUSTERS OF LARGE STONES. HAND PLACING MAY BE NECESSARY TO ACHIEVE THE REQUIRED GRADES AND A GOOD DISTRIBUTION OF STONE SIZES. FINAL THICKNESS OF THE RIPRAP BLANKET SHALL BE WITHIN PLUS OR MINUS ONE-FOURTH OF THE SPECIFIED THICKNESS.

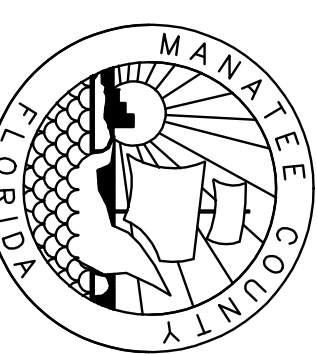


7650 West Courtney Campbell Causeway
Suite 700
Tampa, Florida 33607
Pr: (813) 286-1711 Fax: (813) 286-6587
Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER	12008609
P.M.: D. WILCOX	
ENG: F. BOHROQUEZ	
DRW: D. ELLIS	
DATE:	September 15, 2009

DAVID A. WILCOX	FLORIDA P.E. NO. 3842
-----------------	-----------------------



LAKE MANATEE DAM TAINTER GATES
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

APPROACH AND OUTLET CHANNEL
NOTES

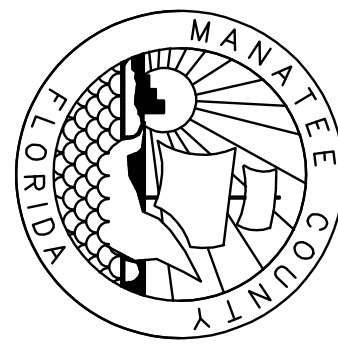
PROJECT STATUS	BID SET
	C-4

URS
 7650 West Courtney Campbell Causeway
 Suite 700
 Tampa, Florida 33607 Fax: (813) 286-6587
 Ph: (813) 286-1711 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER
 12008609
 PM: D. WILCOX
 ENG: F. BOHORQUEZ
 DRW: D. ELLIS
 DATE: September 15, 2009

DAVID A. WILCOX
 FLORIDA P.E. NO. 34942

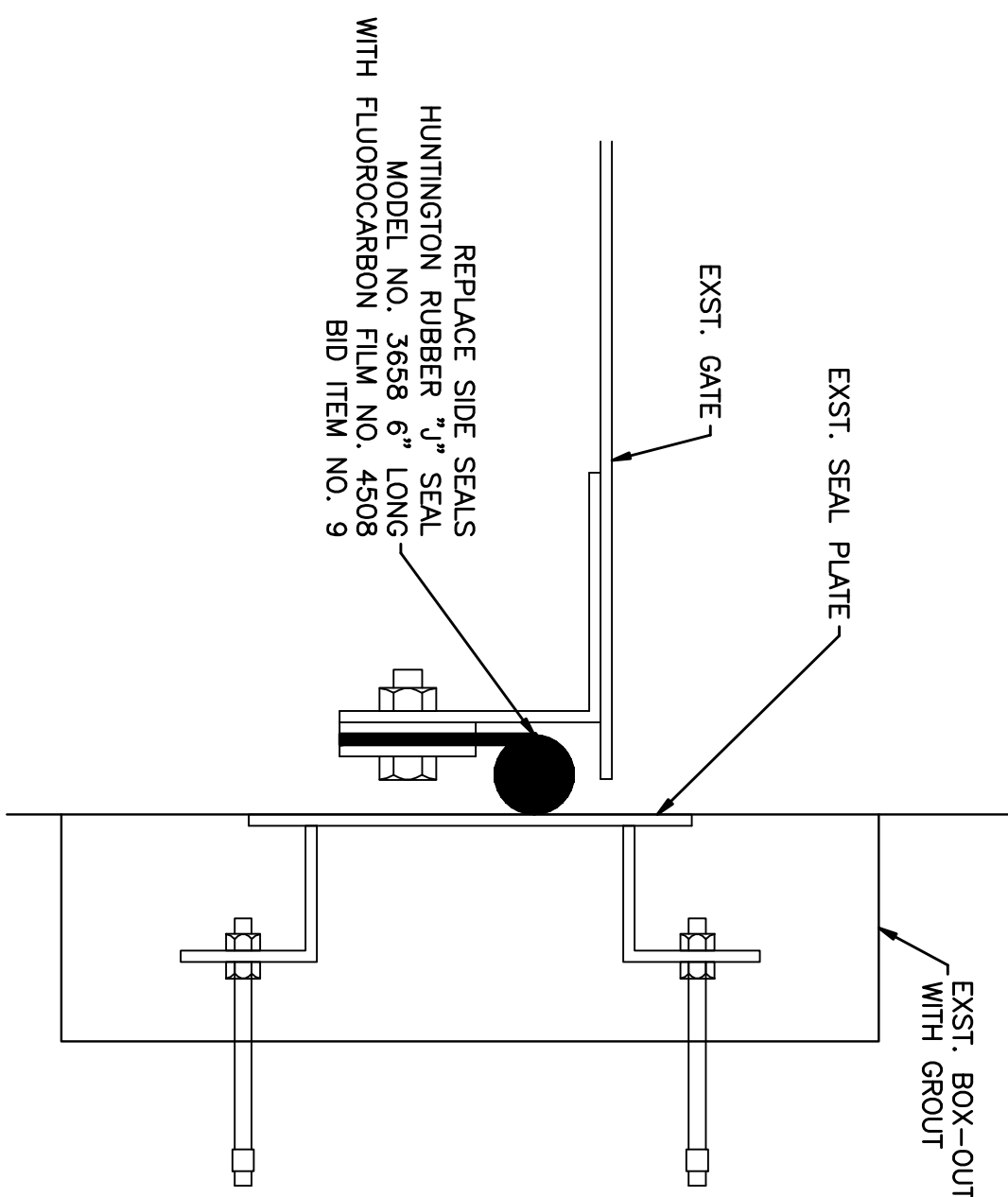


LAKE MANATEE DAM TANTIER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

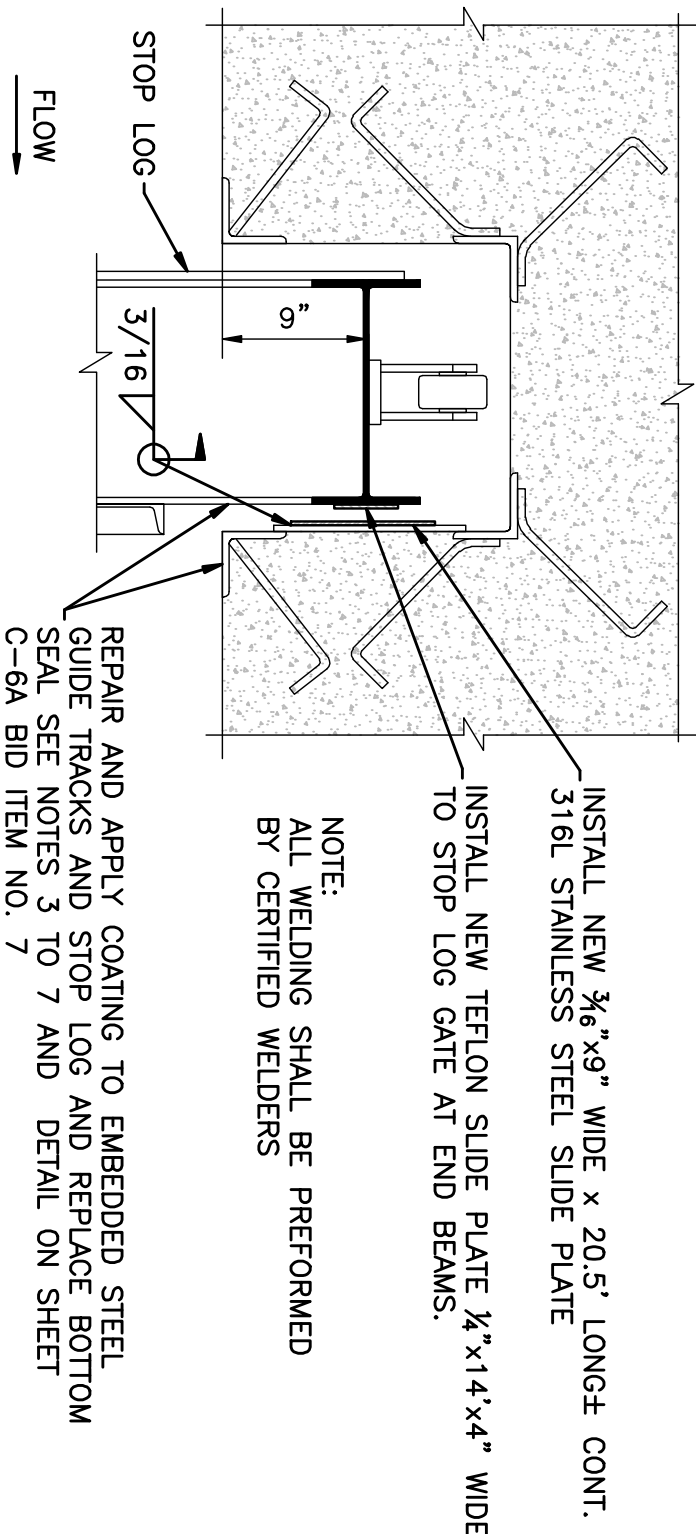
TANTIER GATE AND
 STOP LOG REPAIR

PROJECT STATUS
 BID SET
C-6

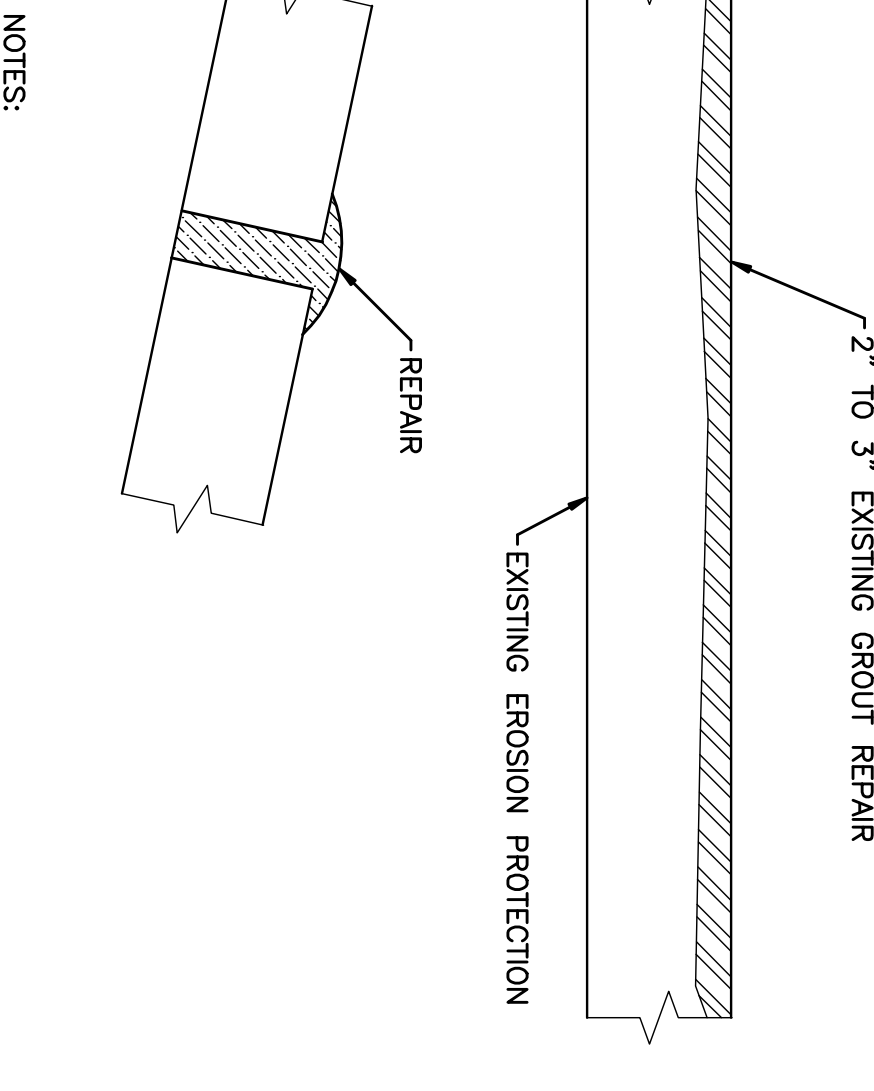
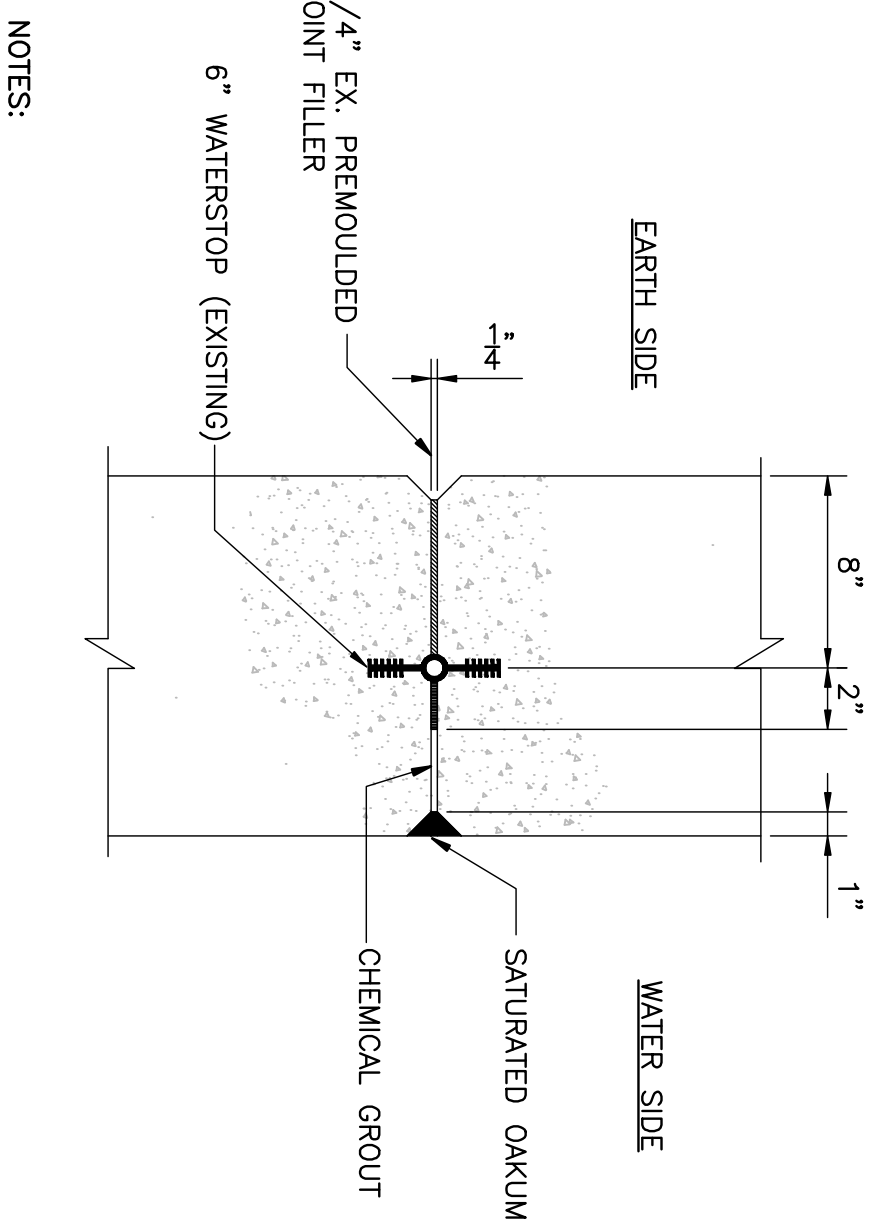
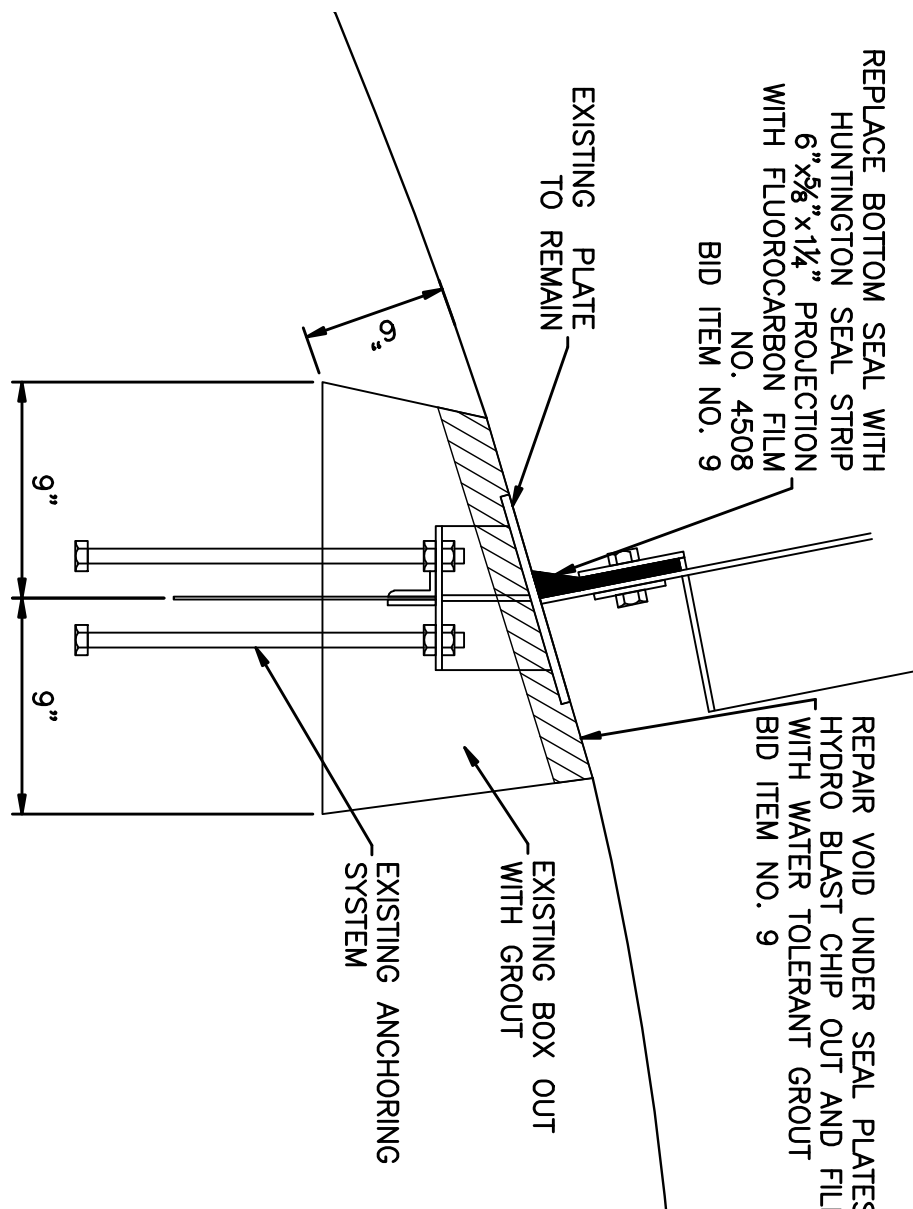
TANTIER GATE SIDE SEAL
5 DETAIL
 C-3 SCALE: 1 1/2"=1'-0"



REFURBISH STOP LOG GUIDE PLATES
2 DETAIL
 NTS SCALE: 1 1/2"=1'-0"



TANTIER GATE BOTTOM SEAL PLATE
1 DETAIL
 C-3 SCALE: 1 1/2"=1'-0"



- NOTES:
- CLEAN OUT EXPANSION JOINT OF EXISTING MATERIAL.
 - PLACE OKKUM SATURATED IN HYDRO ACTIVE GROUT INTO WET JOINT.
 - USING 3/8" TO 5/8" NEEDLE INSERTED THROUGH OKKUM TO INJECT CHEMICAL GROUT INTO JOINT. MATERIAL BY DE NEFF CONSTRUCTION CHEMICALS INC. OR APPROVED EQUAL/DRT, BUSTED JUTE OKKUM MADE IN ROPE FORM WITHOUT TAR OR OIL.
- CHEMICAL GROUT: HYDRO ACTIVE GROUT WITH ACCELERATOR, HYDRO ACTIVE CATALYST, AND HYDRO ACTIVE SEAL FOAM NP.

- NOTES:
- INSPECT ALL GROUT REPAIRS ALONG SOIL CEMENT WALL WITH ENGINEER.
 - REMOVE ALL LOOSE GROUT REPAIRS
 - CLEAN GRACK AREA AND REPAIR WITH ELASTOMERIC SEAL PX-516 BY FOX INDUSTRIES OR APPROVED EQUAL.
- TYPICAL SOIL CEMENT CRACK REPAIR

REFURBISH WALL EXP. JOINTS AT TRAINING WALLS
4 DETAIL
 C-2 SCALE: 1 1/2"=1'-0"

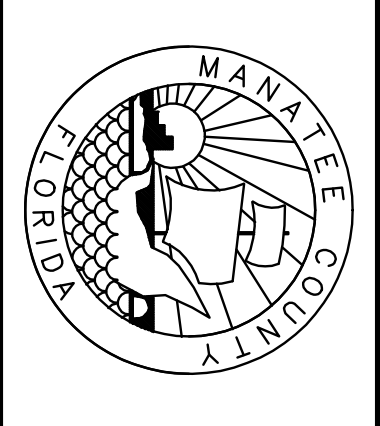
TYPICAL SOIL CEMENT CRACK REPAIR
3 DETAIL
 C-2 SCALE: 1 1/2"=1'-0"

URS
 7650 West Courtney Campbell Causeway
 Suite 700 Florida 33607
 Phone (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 000002

NO.	BY	DATE	REVISIONS

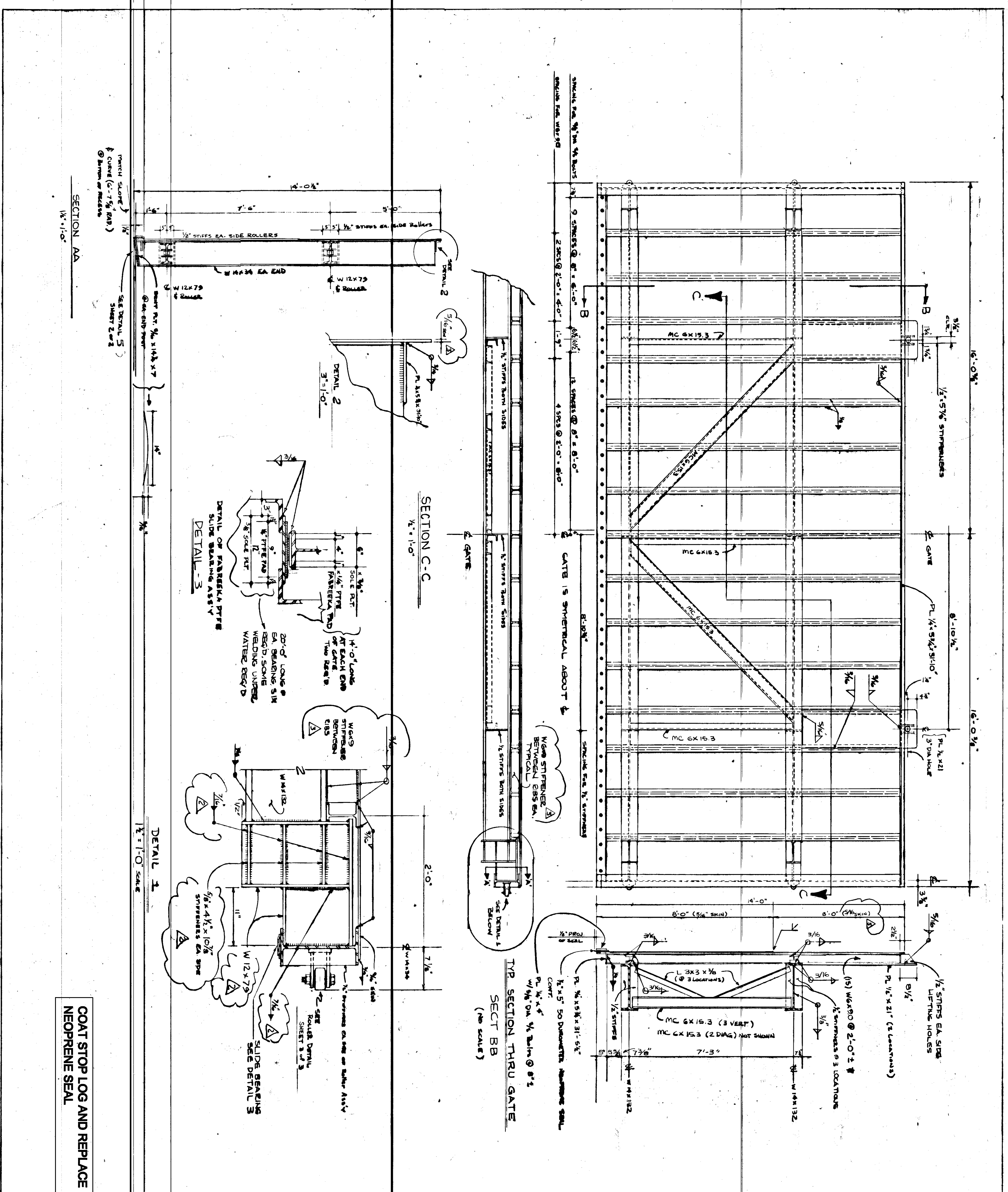
URS JOB NUMBER
 12008609
 P.M. D. WILCOX
 ENG. F. BOHORQUEZ
 DRW. D. ELLIS
 DATE: September 15, 2009

DAVID A. WILCOX
 FLORIDA P.E. NO. 34942



LAKE MANATEE DAM TANTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

STOP LOG
 PROJECT STATUS
 BID SET
 C-6A



COAT STOP LOG AND REPLACE
 NEOPRENE SEAL

THIS DRAWING IS FOR
 ILLUSTRATION OF THE STOP
 LOG CONFIGURATION ONLY.

- 1) EXCEPT FOR THE W12x79 & W14x34 MEMBERS WHICH SHALL BE A441 OR A572 GR50 ALL OTHER STEEL PLATES AND SECTIONS SHALL BE A-36.
- 2) STEEL SOLE PLATES SUPPLIED BY FABREKA AS PART OF SLIDE BEARING ASSY ARE A 508 STEEL.
- 3) ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS PER AISC D1.0-03
- 4) WELDING PROCESS SHALL BE SHIELDED METAL ARC USING LOW HYDROGEN E 70XX RODS
- 5) FOR THE UNDERWATER WELDING OF THE SOLE PLATES OF THE SLIDE BEARING ASSY'S THE ELECTRODES SHALL CONFORM AISC E6013 & SHALL BE PERFORMED BY EXPERIENCED WORKERS
- 6) STAINLESS STEEL NUTS & BOLTS SHALL BE TYPE 304
- 7) NEOPRENE SHALL MEET THE REQUIREMENTS OF SECTION 25 DIVISION II OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
- 8) GENERAL CONTRACTOR WILL CALIBRATE DIMENSIONS OF EXISTING CONCRETE.

MANATEE COUNTY UTILITIES DEPARTMENT	
NEW STOP-LOG GATE AT LAKE MANATEE	
DAM 8 SPILLWAY	
MANATEE COUNTY	FLORIDA
NO. DATE	REVISION DESCRIPTION
1 10/15/09	ISSUED FOR PERMIT
2 11/10/09	REVISED TO SHOW 1/2\"/>

DESIGNED BY	DATE DRAWN	CHECKED BY
DRAWN BY	7/25/09	12/11
SHEET 2 OF 3	HORIZONTAL SCALE AS NOTED	VERTICAL SCALE
3015		
7/26/09		

ABBREVIATIONS:

A	AMPS, AMPERE
AC	ALTERNATING CURRENT
AF	AMP FRAME, AMP FUSE
AFF	ABOVE FINISHED FLOOR
AL	ALUMINUM
AL.T.	ALTERNATE
AM	AMMETER
AMPS	AMPERES
APPROX.	APPROXIMATE
ASPH.	ASPHALT
AST	ABOVE-GROUND STORAGE TANK
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AT	AMP TRIP
AT	AUTOMATIC TRANSFER SWITCH
AUS	AUXILIARY
AUX.	AUTOMATIC
AUTO.	AVERAGE
AVG.	AMERICAN WIRE GAUGE
AWG	AND
&	
⊗	AT
BATT.	BATTERY
BC	BARE COPPER, BOLT CIRCLE
BET.	BETWEEN
BIS	BITS PER SECOND
BIL	BASIC IMPULSE LEVEL
BLDG	BUILDING
BKR	BREAKER
BNC	BYRONET-NELL-CONCELMAN BOTTOM
BT.	
C	CONDUIT, CONDUCTOR
CAB.	CABINET
CAT.	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER, CATCH BASIN
CEM.	CEMENT
CF	CUBIC FOOT
CP	CAST-IN-PLACE
CKT	CIRCUIT
CLR	CLEAR
CL	CLASS, CENTERLINE, CURRENT LIMITING
CLG	CEILING
COL.	COLUMN
CO.	COMMUNICATIONS, MANHOLE
COM.	CONCRETE
CONC.	CONCRETE
CONDUIT	CONDUIT
CONNL.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUED
CONTR.	CONTRACTOR
COORD.	COORDINATE
CPT	CONTROL, POWER TRANSFORMER
CR	CONTROL, RELAY
CRS	PVC COATED RIGID STEEL CONDUIT
CS	CONTROL STATION
CTR	CURRENT TRANSFORMER
CTR	CENTER
CTRL	CONTROL
CU	COPPER
DB	DIRECT BURRED
DECIBELS	
DC	DIRECT CURRENT
DED.	DEDICATED
DEG.	DEGREES
DET.	DETAIL
DIA.	DIAMETER
DIV.	DIVISION
DJFF.	DIFFERENTIAL
DM.	DIMENSIONS
DWG.	DRAWING
EA	EACH
ELEC.	ELECTRIC, ELECTRICAL
EL.	ELEVATION
EMBT	EMBEDMENT
EMT	ELECTRICAL METALLIC TUBING
ENCL.	ENCLOSURE, ENCLOSED
ENR	ENGINEER
EPO	EMERGENCY POWER OFF
EPR	ETHYLENE PROPYLENE RUBBER
EQ.	EQUAL
EQUIP.	EQUIPMENT
EQUIV.	EQUIVALENT
EXIST.	EXISTING
EXP.	EXPOSED

ABBREVIATIONS:

EXT.	EXTERIOR
F	FUSE
FA	FIRE ALARM
FAF	FIRE ALARM CONTROL AIR
FAC	FIRE ALARM CONTROL PANEL
FAOS	FIRE ALARM CONTROL SYSTEM
FD	FOOTCANDLE
FND	FOUNDATION
FDR	FEEDER
FHP	FRACTIONAL HORSEPOWER
FN.	FINISHED FLOOR
FN, FL	FINISHED FLOOR
FL	FLUORESCENT
FLR	FLOOR
FLOR.	FLUORESCENT
FO	FIBER OPTIC
FT	FOOT, FEET
FTG	FOOTING
FU	FUSE
FUT.	FUTURE
FV	FULL VOLTAGE
FVR	FULL VOLTAGE REVERSING
FVNR	FULL VOLTAGE NON-REVERSING
GA	GAUGE
GALV.	GALVANIZED
GEN.	GENERATOR
GENI	GROUND FAULT INTERRUPTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GNS	GALVANIZED RIGID STEEL
H	HEIGHT
HD	HEAVY DUTY
HOPE	HIGH DENSITY POLYETHYLENE
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HORIZ.	HORIZONTAL
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HR	HOURLY
HZ	HERTZ
I.D.	INSIDE DIMENSION
IE	INVERT ELEVATION
IEEE	INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS
IES	ILLUMINATING ENGINEERING SOCIETY
IN.	INCLUDING
INCL.	INSTANTANEOUS
INST.	INSTRUMENT, INSTRUMENTATION
INSTR.	INSTRUMENTATION MANHOLE
IMH	INVERT
INV.	
J, JB	JUNCTION BOX
JCT	JUNCTION
JT	JOINT
K	KIRK KEY INTERLOCK
KA	KILO AMPERES
KAC	KILO AMPS INTERRUPTING CAPACITY
KCMIL	ONE THOUSAND CIRCULAR MILS
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KW	KILOWATTS
KWH	KILOWATT HOURS
KWHD	KILOWATT HOURS DEMAND
L	LENGTH
LB	POUND
LBS	POUNDS
LC	LOAD CENTER
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET
LN.	LINEAR
LOC	LOCATIONS
LPS	LIGHTNING PROTECTION SYSTEM
LS	LIMIT SWITCH
LT	LIGHT
LTG	LIGHTING
LV	LOW VOLTAGE
LVS	LOW VOLTAGE
LWH	LOW VOLTAGE MANHOLE
L-G	LINE-TO-GROUND
L-L	LINE-TO-LINE
M	MOTOR
MAX.	MAXIMUM
MCV	ONE THOUSAND CIRCULAR MILS
MECH	MECHANICAL
MEWB	MEMBRANE
MFR	MANUFACTURER
MH	MANHOLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MOV	METAL OXIDE VARISTOR
MLO	MAIN LUGS ONLY
MID	MOUNTED
MTR	MOTOR
MW	MEDIUM VOLTAGE
MVA	MEGAVOLT AMPERES
N	NEUTRAL
NC	NORMALLY CLOSED
NE	NORTH EAST
NEG	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEUT.	NEUTRAL
NC	NOT IN CONTRACT
NO	NORMALLY OPEN
NO.	NUMBER
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NPT	NOMINAL PIPE THREAD
NPS	NOT TO SCALE
O.C.	ON CENTER(S)
O.D.	OUTSIDE DIAMETER
OH	OVERHEAD
OL	OVERLOADS
OPP.	OPPOSITE
OPER.	OPERATOR
OWS	OIL WATER SEPARATOR
P	POLE
PB	PULL BOX, PUSH BUTTON
PE	PHOTOELECTRIC DEVICE
PF	POWER FACTOR
PH OR Ø	PHASE
PIC	PROGRAMMABLE LOGIC CONTROLLER
PLCS	PLACES
PM	POWER METER
PMH	PRIMARY MANHOLE
PML	PANEL
PMLBD	PANELBOARD
PR	PRIMARY
PROJ.	PROJECT
PS	PRESSURE SENSOR, POWER SUPPLY
PSI	POUNDS PER SQUARE INCH
PT	POTENTIAL TRANSFORMER, PRESSURE TRANSMITTER
PVC	POLYVINYL CHLORIDE
PWR	POWER
%	PERCENT
QTY	QUANTITY
RECP.	RECEPTACLE
REF.	REFERENCE
REINF.	REINFORCEMENT
REO.	REQUIRED
REV.	REVISION, REVISED
RFS	RATING FACTOR
RGS	RIGID GALVANIZED STEEL
RMS	ROOT-MEAN-SQUARE
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
RVNR	REDUCED VOLTAGE NON-REVERSING
R/W	RIGHT-OF-WAY
SA	SURGE ARRESTER
SCH.	SCHEDULE
SEC.	SECONDARY, SECOND(S)
SECT.	SECTION
SF	SQUARE FOOT, SQUARE FEET
SHD	SHIELDED
SHT	SHEET
SI	SQUARE INCH, SQUARE INCHES
SIM.	SIMILAR
SMH	SECONDARY MANHOLE
SPDT	SINGLE POLE DOUBLE THROW
SPEC	SPECIFICATION(S)
SQ.	SQUARE
SS	STAINLESS STEEL
ST.	STREET

ABBREVIATIONS:

RECP.	RECEPTACLE
REF.	REFERENCE
REINF.	REINFORCEMENT
REO.	REQUIRED
REV.	REVISION, REVISED
RFS	RATING FACTOR
RGS	RIGID GALVANIZED STEEL
RMS	ROOT-MEAN-SQUARE
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
RVNR	REDUCED VOLTAGE NON-REVERSING
R/W	RIGHT-OF-WAY
SA	SURGE ARRESTER
SCH.	SCHEDULE
SEC.	SECONDARY, SECOND(S)
SECT.	SECTION
SF	SQUARE FOOT, SQUARE FEET
SHD	SHIELDED
SHT	SHEET
SI	SQUARE INCH, SQUARE INCHES
SIM.	SIMILAR
SMH	SECONDARY MANHOLE
SPDT	SINGLE POLE DOUBLE THROW
SPEC	SPECIFICATION(S)
SQ.	SQUARE
SS	STAINLESS STEEL
ST.	STREET

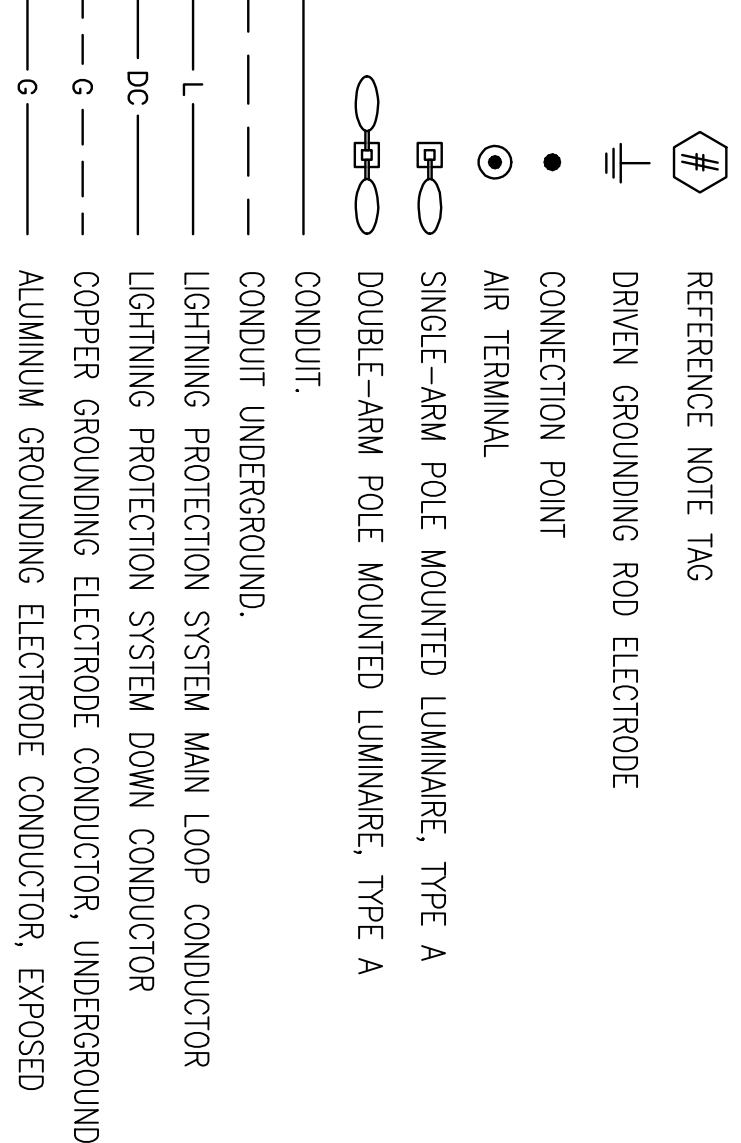
ABBREVIATIONS:

STA	STATION
STD	STANDARD
STL	STEEL
STR	STRANDED
SW.	SWITCH
SWBD	SWITCHBOARD
SYM.	SYMBOL
SYNC.	SYNCHRONOUS
SY	SQUARE YARD, SQUARE YARDS
SYS.	SYSTEM
TB	TERMINAL BLOCK
TBD	TO BE DETERMINED
TD	TIME DELAY
TELE.	TELEPHONE
TEMP.	TEMPORARY, TEMPERATURE
TERM.	TERMINAL
THHN	HEAT RESISTANT THERMOPLASTIC INSULATION
THK	THICK
THWN	HEAT AND MOISTURE RESISTANT THERMOPLASTIC INSULATION
THRU	THROUGH
T.O.S.	TOP OF STEEL, TOP OF SLAB
TP.	TYPICAL
TSP	TWISTED SHIELDED PAIR
UBC	UNIFORM BUILDING CODE
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
UVR	ULTRAVIOLET INFRARED
V	VOLTS, VOLTAGE
VAR	VOLT AMPERES REACTIVE
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VM	VOLT METER
VL.	VOLUME
V1	VOLTAGE TRANSFORMER
W	WATT, WIDE, WIDTH, WIRE
WF	WASTE FUEL
WH	WATHOUR METER
WM	WITH-OUT
W/O	WITH-OUT
WP	WEATHERPROOF
WTF	WEIGHT
WVF	WEIDED WIRE FABRIC
W/	WITH
X	REACTANCE
XHR	TRANSFORMER
XHHW	HEAT AND MOISTURE RESISTANT CROSS LINKED SYNTHETIC POLYMER
XP	EXPLOSION PROOF
Z	IMPEDANCE

GENERAL NOTES:

- REFER TO MECHANICAL DRAWINGS FOR PROJECT LOCATION, DAM LOCATION AND LOCATIONS OF BUILDINGS ON SITE PLAN.

LEGEND:

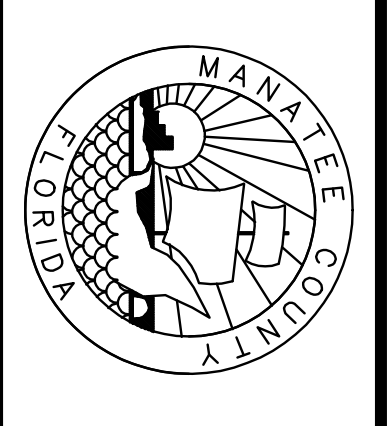


7650 West Courtney Campbell Causeway
Suite 700 Florida 33607
Phone: (813) 286-1771 Fax: (813) 286-6867
Florida Engineering Number: 000002

NO.	BY	DATE

URS JOB NUMBER	12008609
P.M. D. WILCOX	
ENG. G. DAVIS	
DRW. G. DAVIS	
DATE:	September 15, 2009

GLEN H. DAVIS
FLORIDA P.E. NO. 68443



LAKE MANATEE DAM TAINTER GATES
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

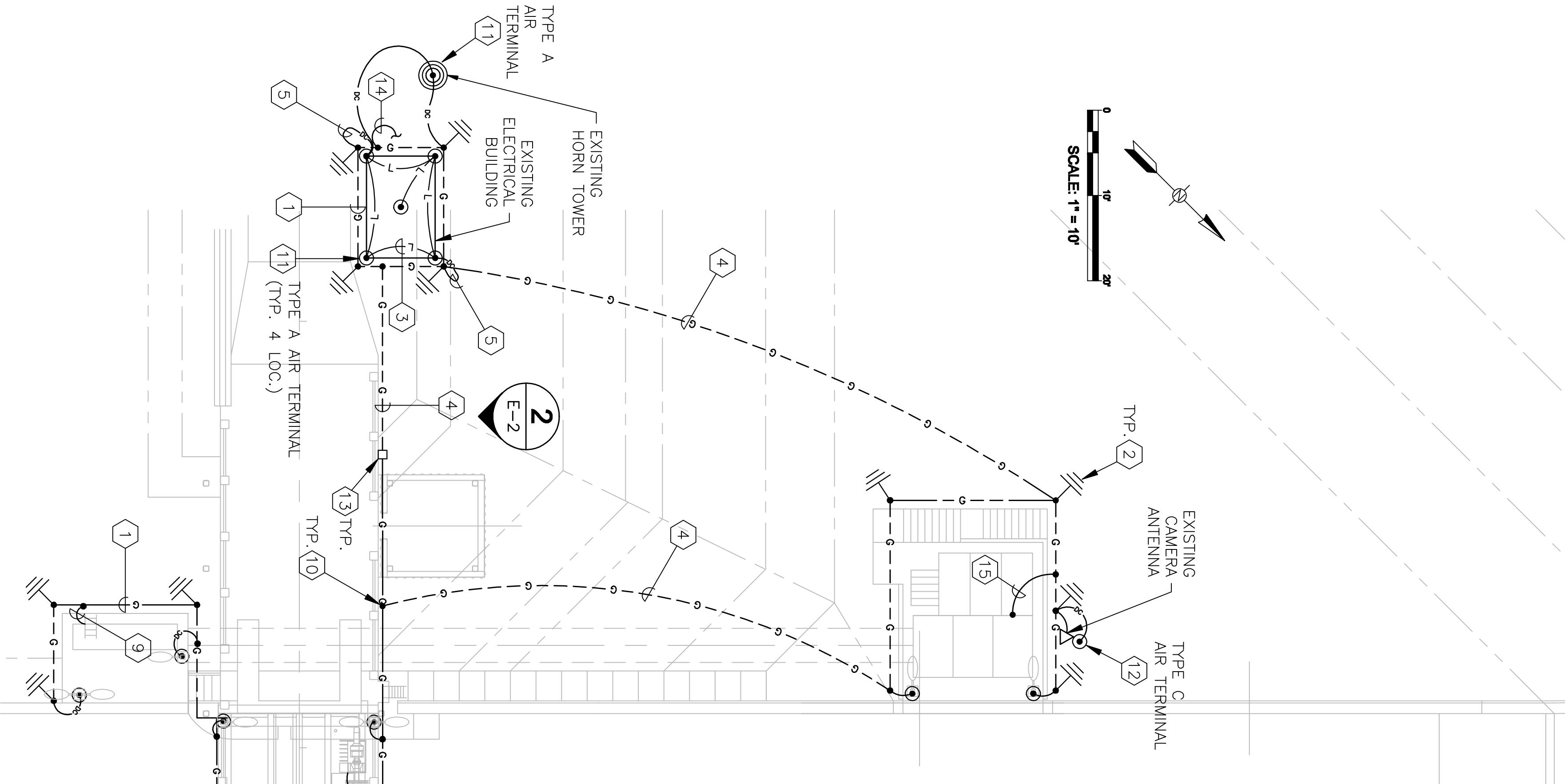
**ELECTRICAL ABBREVIATIONS, LEGEND
AND GENERAL NOTES**

GENERAL NOTES:

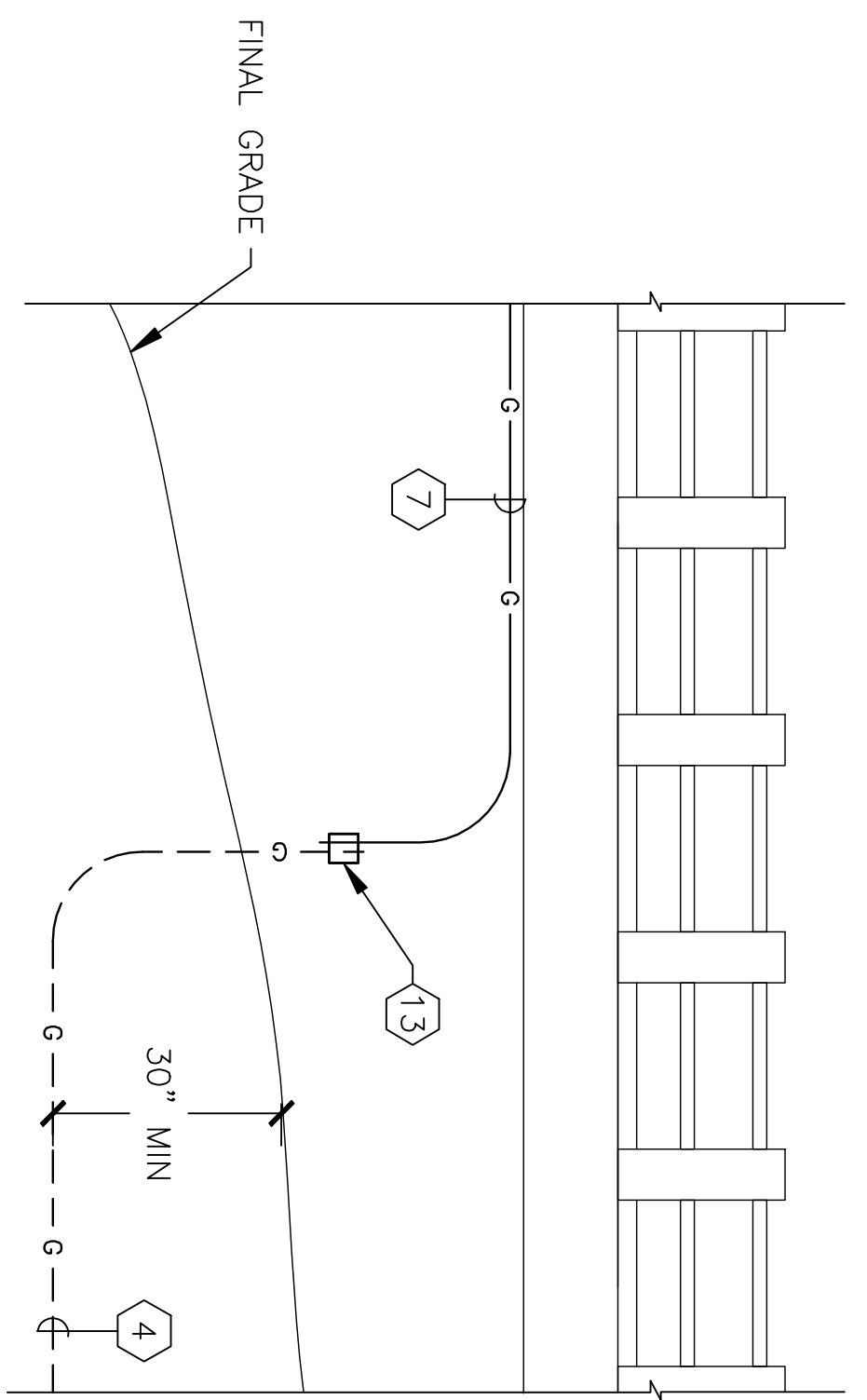
- REFER TO SINGLE LINE DIAGRAM FOR CONDUCTOR SIZES AND ADDITIONAL REQUIREMENTS.

REFERENCE NOTES:

- PROVIDE #4/0 AWG BARE STRANDED TINNED COPPER COUNTERPOSE GROUNDING ELECTRODE CONDUCTOR AROUND EXISTING STRUCTURE. DIRECT BURY COUNTERPOSE GROUNDING ELECTRODE CONDUCTOR A MINIMUM OF 30 IN. BELOW GRADE AT LEAST TWO (2) FT. FROM STRUCTURE BASE.
- PROVIDE 3/4 IN. DIA. BY 10 FT. LONG GROUND ROD.
- PROVIDE LPS MAIN CONDUCTORS BETWEEN AIR TERMINALS AND BONDING POINTS. LPS MAIN CONDUCTORS TO BE SECURED TO ROOF ON MAX. 3 FT. CENTERS.
- PROVIDE #4/0 AWG BARE STRANDED TINNED COPPER GROUNDING CONDUCTOR BETWEEN ADJACENT GROUNDING SYSTEMS.
- PROVIDE DOWN CONDUCTORS BETWEEN LPS MAIN CONDUCTORS AND COUNTERPOSE GROUNDING ELECTRODE CONDUCTOR.
- BOND EXISTING MOTOR FRAME TO GROUNDING CONDUCTOR WITH #2 AWG BARE STRANDED COPPER GROUNDING CONDUCTOR. MAKE BONDING CONNECTIONS USING THE EXOTHERMIC WELDING PROCESS.
- PROVIDE #4/0 AWG BARE STRANDED ALUMINUM GROUNDING CONDUCTOR ROUTED EXPOSED, UNDER EXISTING CONCRETE OVERHANG OF STRUCTURE. SUPPORT CONDUCTOR ON 3 FT. MAXIMUM.
- BOND EXISTING GATE MECHANISM TO GROUNDING CONDUCTOR WITH #2 AWG BARE STRANDED TINNED COPPER GROUNDING CONDUCTOR. MAKE BONDING CONNECTIONS USING THE EXOTHERMIC WELDING PROCESS.
- BOND EXISTING METAL LADDER TO GROUNDING CONDUCTOR WITH #2 AWG BARE STRANDED ALUMINUM GROUNDING CONDUCTOR. MAKE BONDING CONNECTIONS USING THE EXOTHERMIC WELDING PROCESS.
- EXOTHERMICALLY WELD BOND CONNECTIONS BETWEEN GROUNDING CONDUCTORS.
- PROVIDE 10" NICKLE TIPPED COPPER AIR TERMINAL.
- PROVIDE 24" NICKLE TIPPED COPPER AIR TERMINAL.
- PROVIDE BI-METALLIC CONNECTOR WITH TWO-BOLT TENSION GRIP ON EACH CABLE END.
- PROVIDE #2/0 COPPER GROUNDING CONDUCTOR IN SCHEDULE 80 PVC CONDUIT, BOND "MCC-4" GROUND TO COUNTERPOSE LOOP.
- PROVIDE #2 AWG AL TO BOND GRATING SUPPORT.
- EXOTHERMICALLY BOND GROUNDING CONDUCTOR TO STOP LOG SUPPORT FRAME WITH #2 AWG CU CONDUCTOR.
- EXOTHERMICALLY BOND GROUNDING CONDUCTOR TO STOP LOG ACCESS PLATFORM SUPPORT FRAME WITH #2 AWG CU CONDUCTOR.



1 PLAN
 GROUNDING AND LIGHTNING PROTECTION
 SCALE: 1" = 10'-0"



2 PLAN
 GROUNDING ELECTRODE CONDUCTOR BELOW GRADE TRANSITION
 SCALE: 1" = 10'-0"

TRANSITION BETWEEN ABOVE GRADE ALUMINUM GROUNDING CONDUCTOR AND UNDERGROUND COPPER GROUNDING CONDUCTOR VIA BI-METALLIC CONNECTOR.

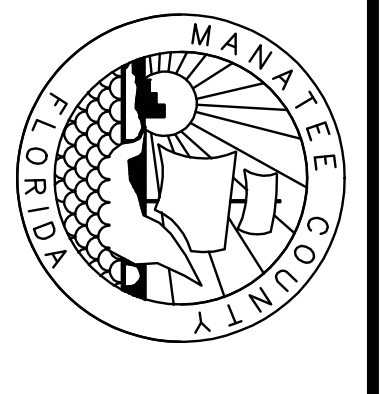


7650 West Courtney Campbell Causeway
 Suite 700 Florida 33607
 Phone: (813) 286-1771 Fax: (813) 286-6587
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER
 12008609
 P.M. D. WILCOX
 ENG. G. DAVIS
 DRW. G. DAVIS
 DATE:
 September 15, 2009


GLENN H. DAVIS
 FLORIDA P.E. NO. 68443



LAKE MANATEE DAM TAINTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

GROUNDING AND LIGHTNING PROTECTION

PROJECT STATUS
 BID SET
 E-2


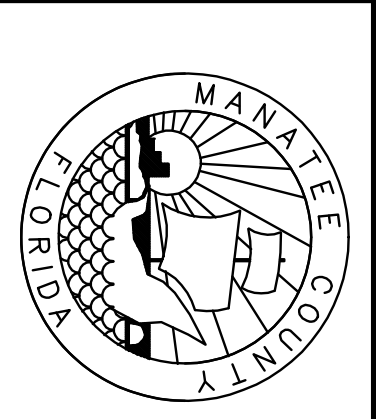


7650 West Courtney Campbell Causeway
 Suite 700 Florida 33607
 Phone: (813) 286-1771 Fax: (813) 286-6587
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER	12008609
PM: D. WILCOX	
ENG: G. DAVIS	
DRW: G. DAVIS	
DATE:	September 15, 2009

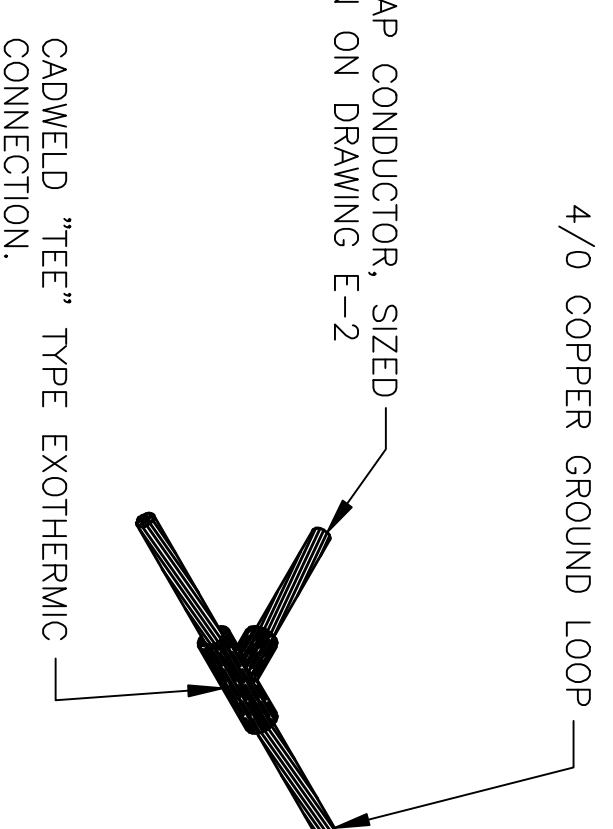
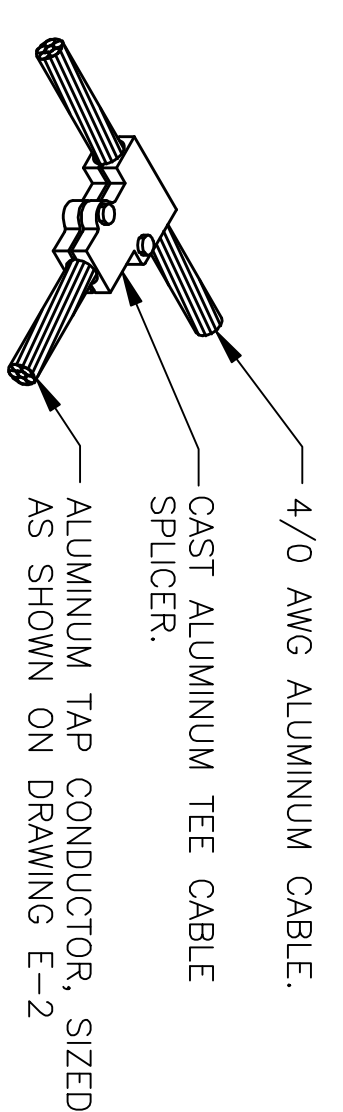
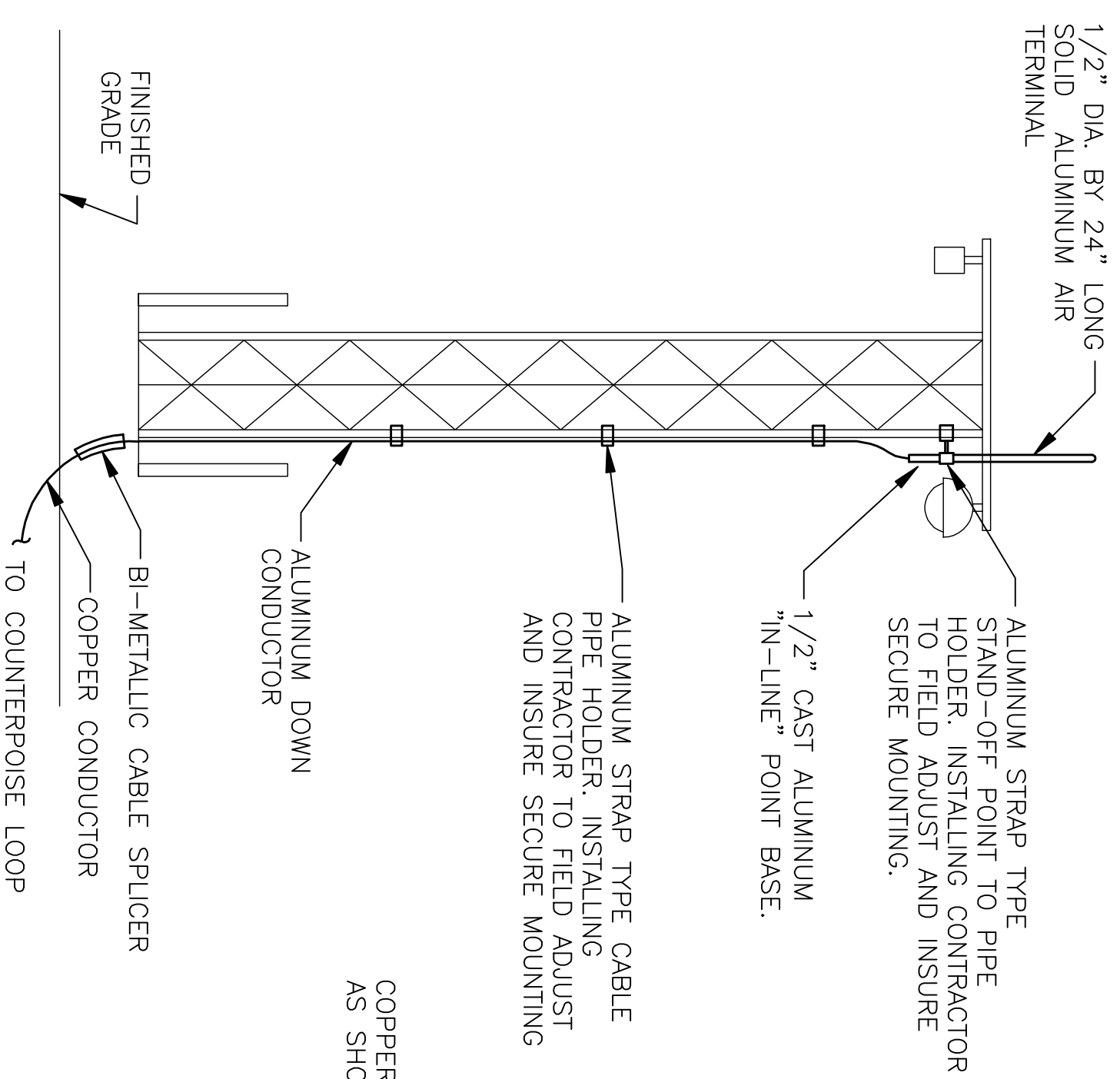
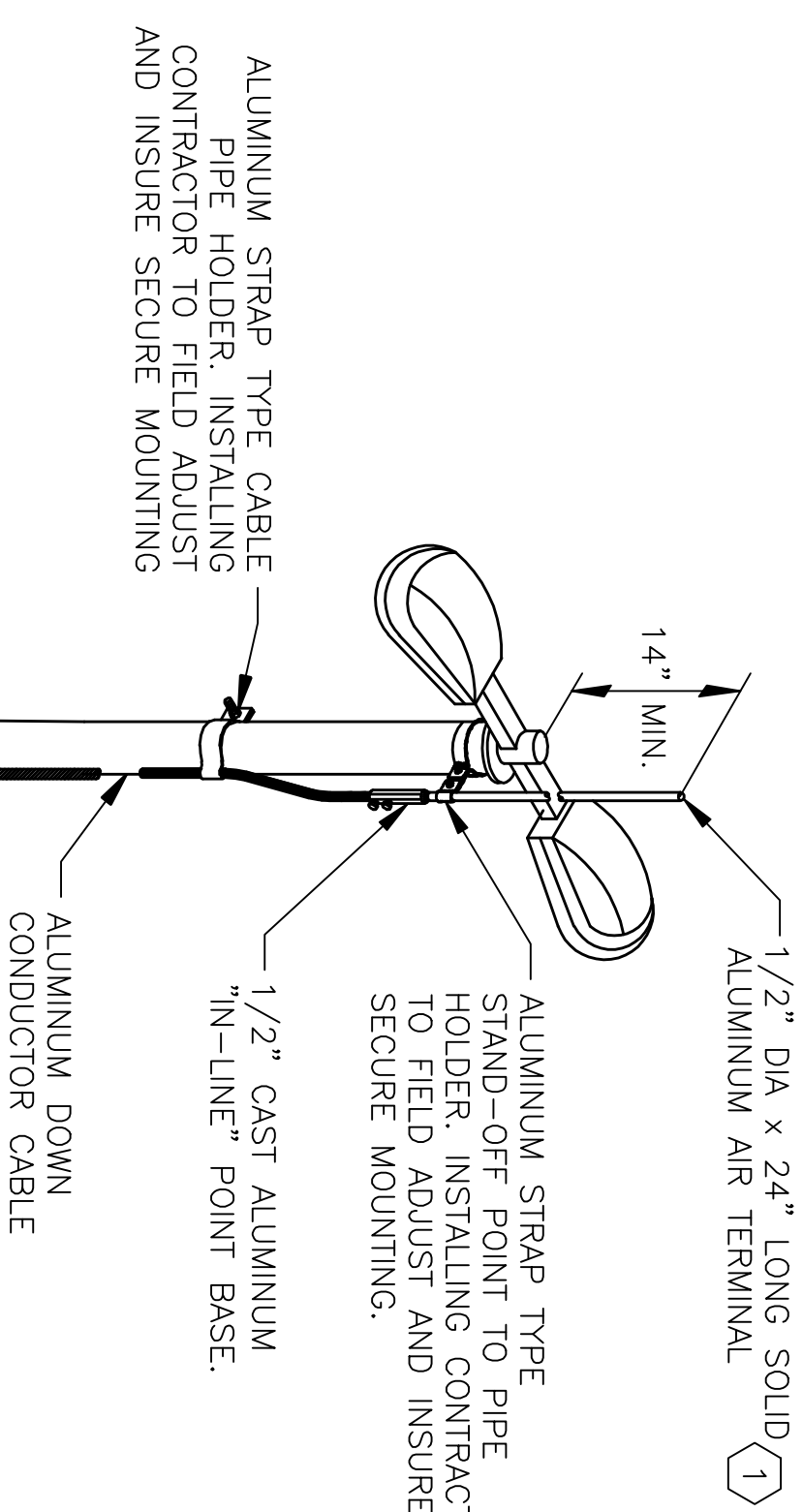
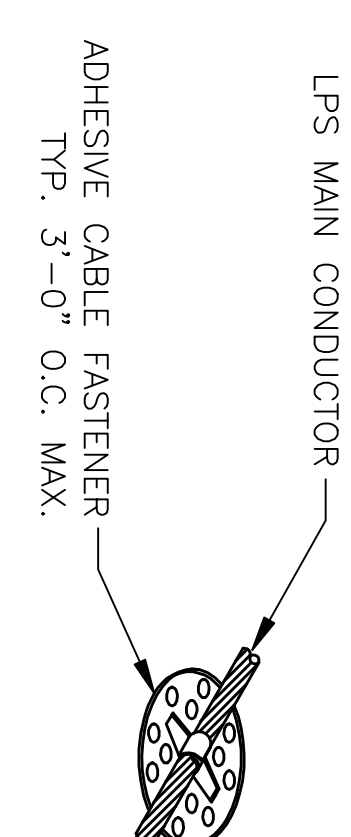
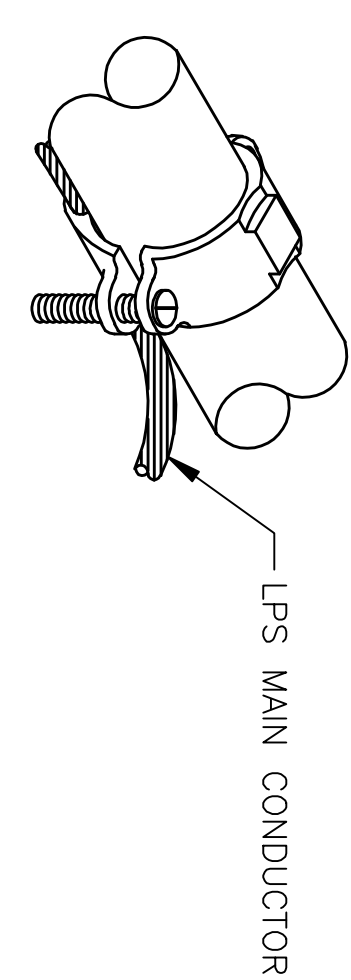
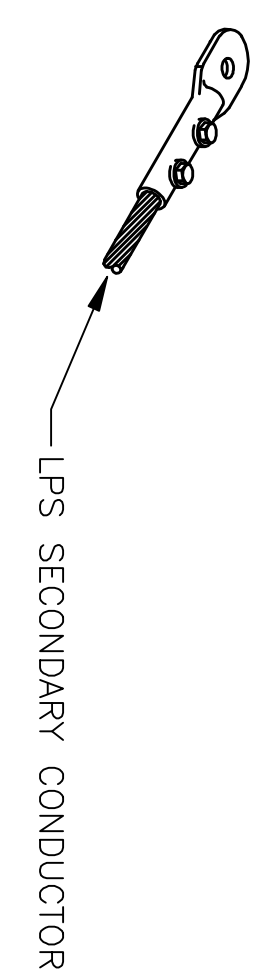
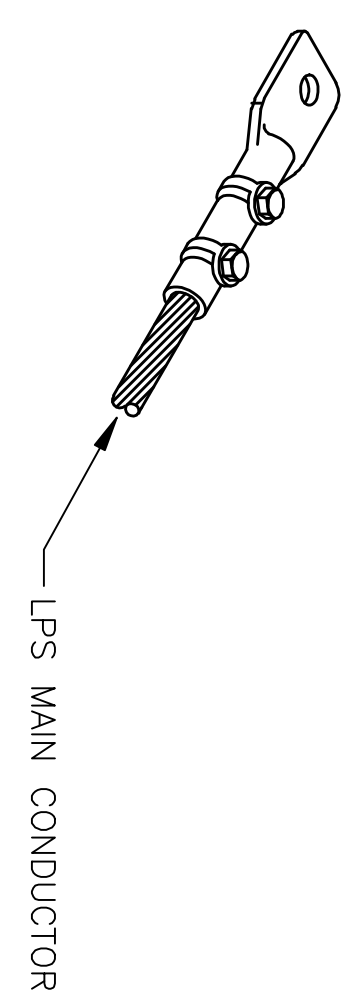
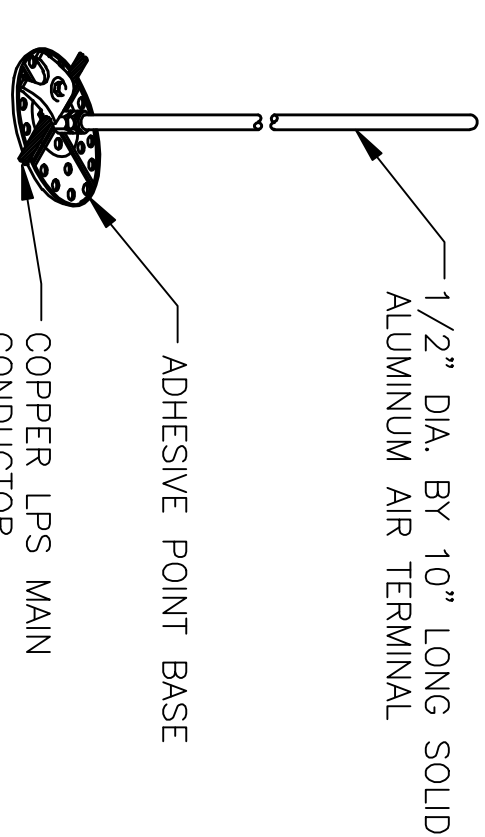
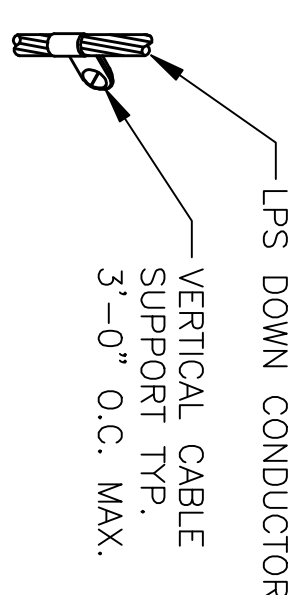
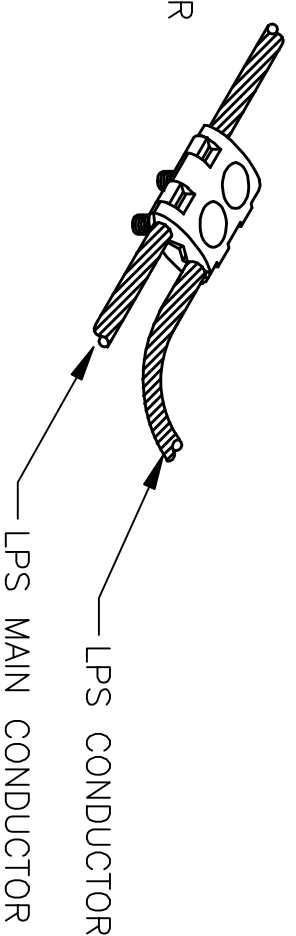
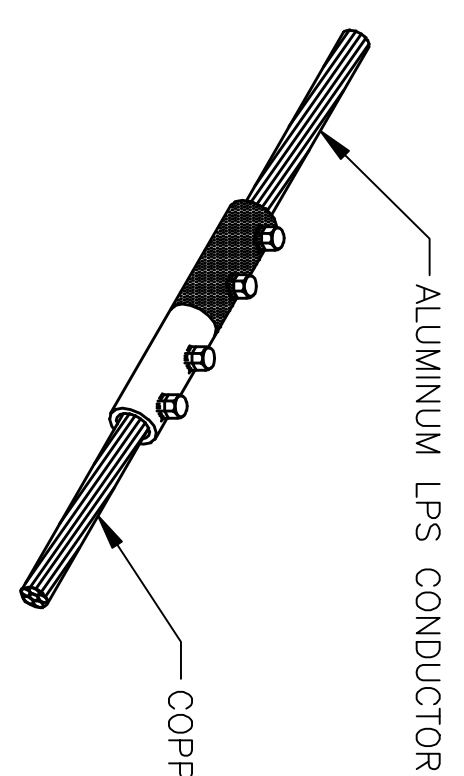
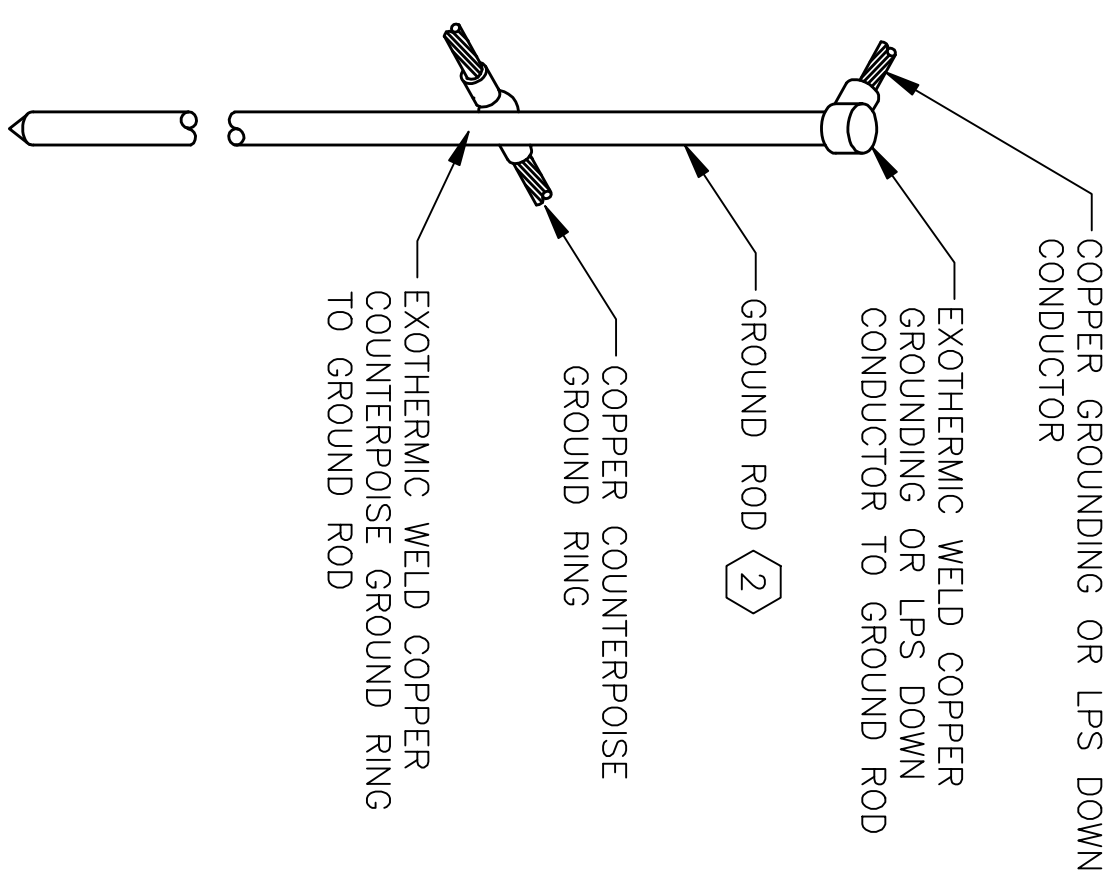
GLENN H. DAVIS
 FLORIDA P.E. NO. 68443

LAKE MANATEE DAM TAINTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

LIGHTNING PROTECTION AND
 GROUNDING DETAILS

PROJECT STATUS	BID SET
	E-3



- REFERENCE NOTES:**
- ① RIGIDLY MOUNT VERTICAL MOUNT POINT BASE TO LIGHT POLE VIA THROUGH BOLTING USING STAINLESS STEEL HARDWARE (i.e. BOLTS, NUTS, WASHERS, AND LOCK WASHERS). MOUNT VERTICAL MOUNT POINT BASE TO LIGHT POLE SUCH THAT A MINIMUM OF 18" OF THE AIR TERMINAL EXTENDS UP ABOVE THE TOP OF THE LIGHT POLE CAP.
 - ② DRIVE GROUND ROD UNTIL ITS TOP IS 12" BELOW FINAL GRADE.

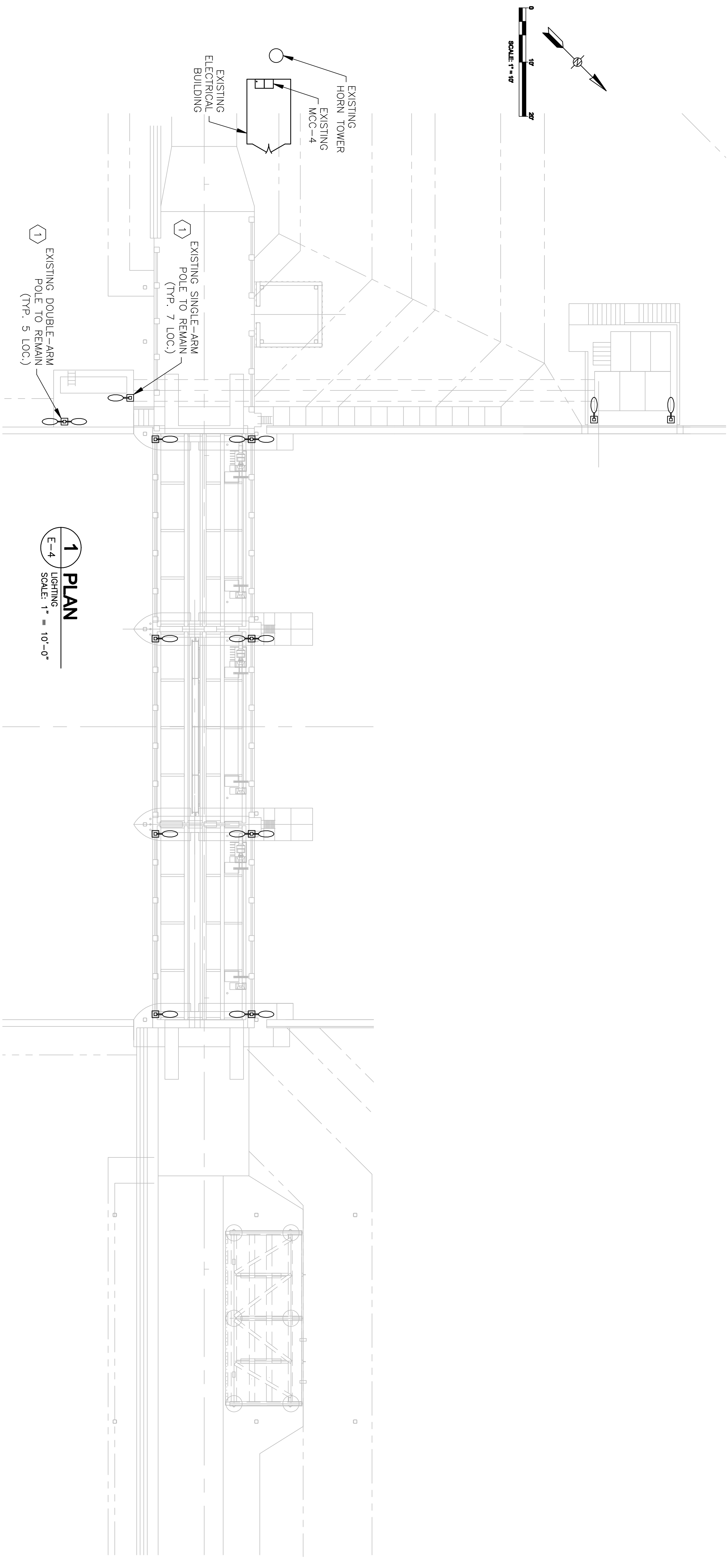
LIGHTING FIXTURE SCHEDULE					
FIXT. TYPE	FIXTURE DESCRIPTION	MANUFACTURER & CATALOG NUMBER (BASES OF DESIGN)	NO. AND TYPE OF LAMPS	VOLT	REMARKS
A	POLE MOUNTED SITE FIXTURE	GE M250 100W TYPE III DISTRIBUTION PULSE START MH	(1) 100W PMH	120	IESNA FULL CUTOFF LIGHTING CLASSIFICATION

GENERAL NOTES:

- ALL PVC UNDERGROUND CONDUITS SHALL TRANSITION TO RGS CONDUIT PRIOR TO CONDUIT TRANSITION FROM HORIZONTAL TO VERTICAL. ALL EXTERIOR VERTICAL CONDUITS ARE RGS.

REFERENCE NOTES:

- REPLACE EXISTING COBRA-HEAD FIXTURE WITH NEW PULSE START METAL HALIDE FULL-CUTOFF COBRA-HEAD FIXTURE ON EXISTING POLE.



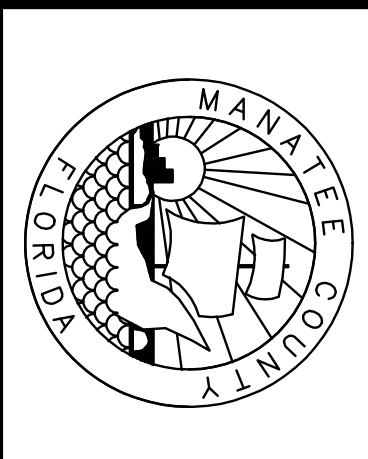
1 PLAN
 E-4 LIGHTING
 SCALE: 1" = 10'-0"

URS
 7650 West Courtney Campbell Causeway
 Suite 700 Florida 33607
 Phone: (813) 286-1771 Fax: (813) 286-6587
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION
REVISIONS			

URS JOB NUMBER
 12008609
 PM: D. WILCOX
 ENG: G. DAVIS
 DRW: G. DAVIS
 DATE: September 15, 2009

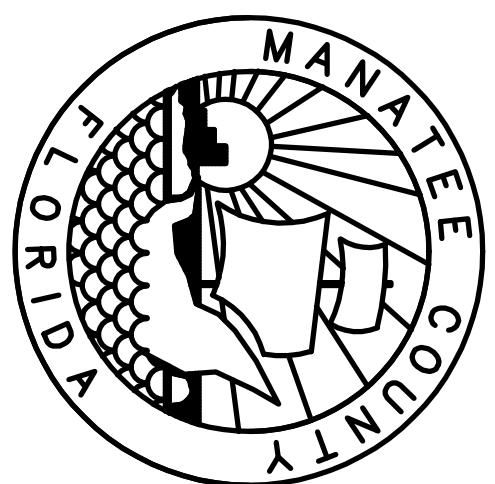
GLENN H. DAVIS
 FLORIDA P.E. NO. 68443



LAKE MANATEE DAM TAINTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

LIGHTING PLAN

PROJECT STATUS
 BID SET
 E-4

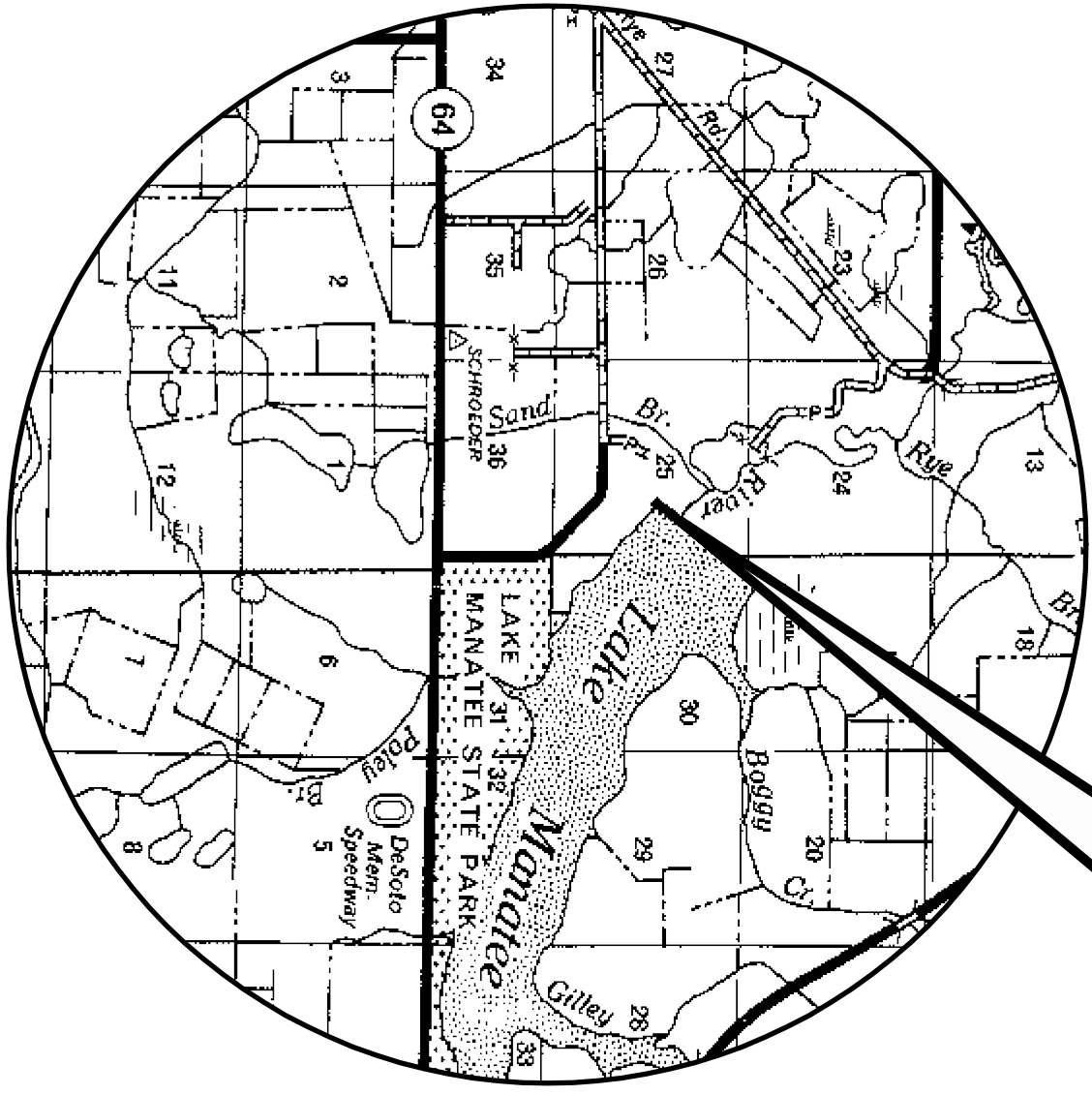


LAKE MANATEE DAM TAINTER GATES

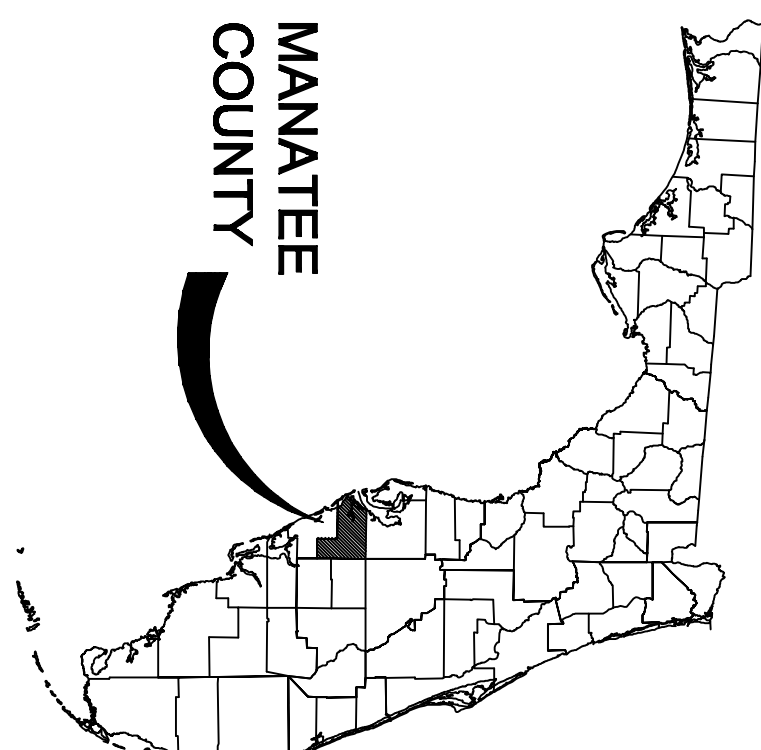
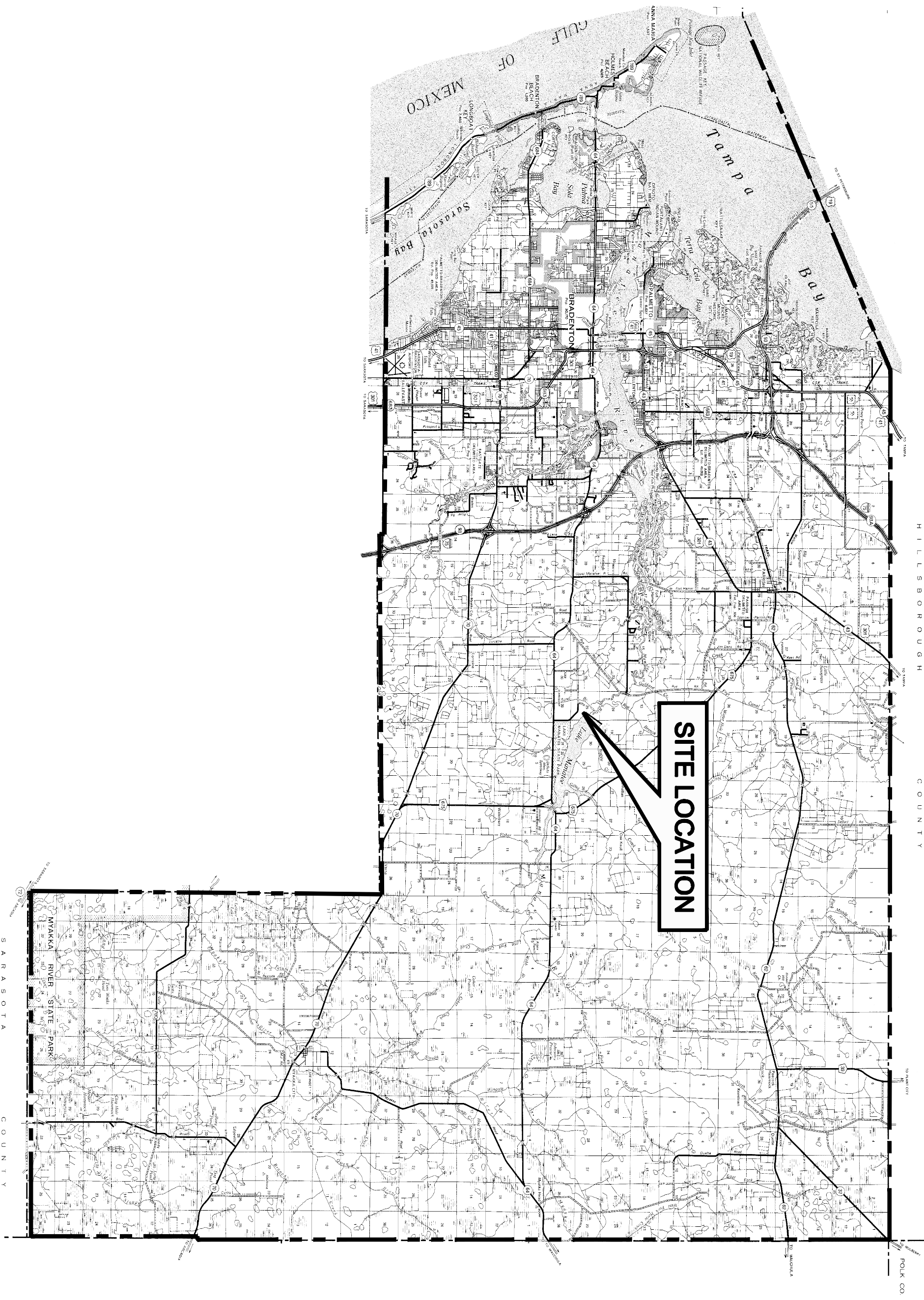
MANATEE COUNTY

COUNTY PROJECT NO. 6026073

MAY 2010
BID SUBMITTAL



PROJECT MAP
 N.T.S.



7650 West Courtney Campbell Causeway
 Suite 700
 Tampa, Florida 33607
 Phone: (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 0000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER
 12008609
 P.M.: D. WILCOX
 ENG.: F. BOHORQUEZ
 DRW.: D. ELLIS
 DATE:
 September 15, 2009

DAVID A. WILCOX
 FLORIDA P.E. NO. 38422



LAKE MANATEE DAM TAINTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

COVER SHEET

PROJECT STATUS
 BID SET
 G-1

PLOTTED: May 4, 2010, 10:34 AM, PLOTTED BY: ELLIS, DAVID
 X:\MANATEE PROJECTS\12008609 - DESIGN\CADD\G-2 GENERAL NOTES AND INDEX TO SHEETS.DWG
 VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

GENERAL NOTES

- ELEVATIONS SHOWN ON THE PLANS REFERENCE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (N.G.V.D. - 1929).
- LOCATION, ELEVATION, AND DIMENSIONS OF THE EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT TIME OF THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE COUNTY PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL REPAIR ALL DAMAGES RESULTING FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
- THE CONTRACTOR SHALL COMPLY WITH ALL STATE, COUNTY, AND LOCAL ORDINANCES AND OBTAIN ANY NECESSARY WORK PERMITS THAT MAY BE REQUIRED PRIOR TO CONSTRUCTION.
- UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS AND SPECIFICATIONS, THE CONTRACTOR SHALL PROVIDE SUITABLE BORROW MATERIAL, APPROVED BY THE ENGINEER, AND INSTALL SAID MATERIAL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- OVERALL CLEAN UP SHALL BE ACCOMPLISHED BY THE CONTRACTOR IN ACCORDANCE WITH COUNTY STANDARDS OR AS DIRECTED BY THE ENGINEER. ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR CLEAN UP.
- THE CONTRACTOR SHALL ENDEAVOR TO PROTECT PRIVATE PROPERTY. ANY DAMAGE CAUSED BY THE CONTRACTOR IN THE PERFORMANCE OF HIS WORK SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
- ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY PROJECT ENGINEER. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
- ANY U.S.C. AND G.S. MONUMENT WITHIN LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF IN DANGER OF DAMAGE, THE CONTRACTOR SHALL NOTIFY. GEODETIC INFORMATION CENTER
6001 EXECUTIVE BLVD. ROCKVILLE,
MARYLAND 20852 PH. (301)443-8319
- UNLESS OTHERWISE SPECIFIED IN THE PLANS, EXISTING SOD, DISTURBED BY CONSTRUCTION, SHALL BE REPLACED IN KIND.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL EXCESS MATERIAL AND THE PROPER DISPOSAL OF THE SAME.
- CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY STREETS, STORM SEWERS, AND WATERWAYS. IF IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE AND CLEAN SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES. THE MAINTENANCE OF EROSION CONTROL DEVICES AND THEIR COMPLETE REMOVAL ARE TO BE INCLUDED IN THE LUMP SUM BID PRICE.
- THE CONTRACTOR SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE AND ALL BARED SOILS ARE STABILIZED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE EXISTING DRAINAGE SYSTEM WITHIN THE LIMITS OF THE PROJECT AREA, FOR THE DURATION OF THE PROJECT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE WORK INVOLVED.
- THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND THAT MAY OCCUR AS A RESULT OF THIS WORK PERFORMED IN THIS CONTRACT.
- THE CONTRACTOR IS TO "PROTECT IN PLACE" THE FACILITIES THAT ARE NOT TO BE RELOCATED AND/OR REMOVED, BUT ARE TO REMAIN IN PLACE.
- THE CONTRACTOR IS TO ADJUST OR RELOCATE ALL THE FACILITIES THAT FALL IN CONFLICT IN ACCORDANCE WITH COUNTY STANDARDS.
- THE CONTRACTOR SHALL PROVIDE DETAILED RECORD DRAWINGS, ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR MISCELLANEOUS WORK AND CLEAN UP. RED-LINE DRAWINGS SHALL BE CURRENT WITH EACH PAY APP SUBMITTED AND WILL BE CHECKED AS PART OF THE PAY APPLICATION REVIEW PROCESS.
- ALL UTILITY CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST VERSION OF THE MANATEE COUNTY UTILITY STANDARDS.
- THE CONTRACTOR SHALL MAINTAIN ACCESS FOR INSPECTION BY THE COUNTY OR ENGINEER AT ALL TIMES.
- CONTRACTOR SHALL PROVIDE FOR DAILY COUNTY INSPECTION OF EMERGENCY SPILLWAY.

CONSTRUCTION SEQUENCE

PHASE 1 - UPSTREAM WORK: MUST BE PERFORMED BETWEEN DECEMBER 1, 2010 AND MAY 15, 2011

- INSTALL EMERGENCY SPILLWAY STOP LOGS.
- INSTALL BYPASS PUMPING SYSTEM (250,000 GPD).
- INSTALL COFFER DAM.
- DEWATER SPILLWAY APPROACH WAY.
- PERFORM ALL WORK ON SPILLWAY APPROACH INCLUDING REPAIRS TO TANTER GATE AND STOP LOG SEAL.
- ONCE WORK IS COMPLETE HYDROSTATICALLY TEST TANTER GATE AND STOP LOG SEAL SYSTEM. TESTING WILL BE BY VISUAL INSPECTIONS. ANY OBSERVED LEAKS MUST BE REPAIRED PRIOR TO THE REMOVAL OF THE COFFER DAM.
- REMOVE COFFER DAM.
- REMOVE EMERGENCY SPILLWAY STOP LOGS.
- DURING PHASE 1 WORK, THE COUNTY MAY INSTRUCT THE CONTRACTOR TO REMOVE FOUR (4) EARTHEN PLUGS IN THE EMERGENCY SPILLWAY DEPENDING ON RAINFALL CONDITIONS. ONCE NOTIFIED THE CONTRACTOR WILL REMOVE THE PLUGS WITHIN 48 HOURS. IF PLUGS ARE REMOVED THEY MUST BE RECONSTRUCTED ONCE THE SPILLWAY IS MADE OPERATIONAL.

PHASE 2 - DOWNSTREAM WORK: COMPLETED BY CONTRACT COMPLETION DATE.

- WORK MAY BE PERFORMED CONCURRENT WITH PHASE 1.
- MAINTAIN BYPASS PUMPING UNTIL ALL WORK IS COMPLETE AND ACCEPTED.
- ONCE WORK IS COMPLETE HYDROSTATICALLY TEST TANTER LOG AND STOP GATE SEAL SYSTEM.

BYPASS PUMPING NOTES:

- THE COUNTY IS REQUIRED BY PERMIT TO DISCHARGE DAILY A MINIMUM OF 250,000 GALLONS TO THE DOWNSTREAM RIVER.
- FOR THE DURATION OF THE CONTRACT, THE CONTRACTOR SHALL SUPPLY A PUMPING SYSTEM TO ACCOMPLISH THIS.
- THE PUMP DISCHARGE WILL BE 1050 GPM (4 HOUR DAILY OPERATION) TO BE OPERATED DURING DAYLIGHT HOURS. SYSTEM SHALL INCLUDE A FLOW METER TO RECORD DAILY FLOWS. REFER TO NOTE 7. THIS INCLUDED SATURDAY, SUNDAY AND HOLIDAY OPERATIONS.
- THE PUMP SHALL BE DIESEL POWERED AND SHALL BE MANNED DURING OPERATION.
- CONTRACTOR SHALL HAVE A BACKUP PUMP AVAILABLE FOR SETUP WITHIN 12 HOURS SHOULD BYPASS PUMP FAIL.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING BYPASS SYSTEM FOR APPROVAL PRIOR TO INSTALLING THE PROPOSED COFFER DAM.
- CONTRACTOR SHALL MAINTAIN A DAILY LOG, RECORD TOTAL DAILY DISCHARGE AND REPORT IT TO THE COUNTY. CONTRACTOR SHALL REPORT DAILY FLOW METER READINGS, INCLUDING START AND STOP TIMES.
- CONTRACTOR TO MAINTAIN BYPASS PUMPING UNTIL ALL WORK IS ACCEPTED BY COUNTY AND SPILLWAY IS RETURNED TO NORMAL OPERATION.

TESTING:

- PRIOR TO REMOVAL OF THE COFFER DAM SYSTEM, THE CONTRACTOR SHALL HYDROSTATICALLY TEST REPAIRS MADE TO THE TANTER GATES AND STOP LOG.
- WITH THE REPAIRED TANTER GATES IN THE CLOSED POSITION, THE COFFER SYSTEM SHALL BE FILLED WITH WATER TO ELEVATION 40.0. THE GATES SHALL BE TESTED FOR 24 HOURS MAXIMUM ALLOWABLE LEAKAGE SHALL BE 0.2 GPM PER LINEAR FOOT OF SEAL. IF LARGER LEAKS OCCUR, REPAIRS SHALL BE MADE AND THE HYDROSTATIC TEST PERFORMED AGAIN.
- ONCE THE GATES HAVE BEEN TESTED AND ACCEPTED, THE CONTRACTOR SHALL TEST THE STOP LOG. THE STOP LOG SHALL BE INSTALLED IN EACH SPILLWAY AND BE HYDROSTATICALLY TESTED FOR 2 HOURS AGAIN WITH THE WATER LEVEL AT ELEVATION 40.0 TO ENSURE NO LEAKS ARE OBSERVED, IF LEAKS OCCUR, REPAIR SHALL BE MADE AND THE HYDROSTATIC TEST PERFORMED AGAIN.
- ONCE THE GATES AND STOP LOG HAVE PASSED HYDROSTATIC TESTING, THE COFFER DAM SYSTEM SHALL BE REMOVED.

SPILLWAY MUST BE MADE OPERATIONAL
 BY MAY 15, 2011

INDEX TO SHEETS	
Sheet Number	Sheet Title
General	
G-1	COVER SHEET
G-2	GENERAL NOTES AND INDEX TO SHEETS
G-3	SYMBOLS AND ABBREVIATIONS
Civil	
C-1	AERIAL SITE PLAN
C-2	SPILLWAY PLAN
C-3	APPROACH CHANNEL REVETMENT PLAN
C-4	APPROACH AND OUTLET CHANNEL NOTES
C-5	SPILLWAY SECTIONS
C-6	TANTER GATE AND STOP LOG REPAIR
C-6A	STOP LOG
C-7	TANTER GATE COATING
C-8	TANTER GATE COATING
C-9	DOWNSTREAM BANK REINFORCEMENT DETAILS
C-10	EMERGENCY SPILLWAY MODIFICATIONS - PLAN & SECTIONS
C-11	EMERGENCY SPILLWAY MODIFICATIONS - SECTIONS & DETAILS
Structural	
S-1	STRUCTURAL GENERAL NOTES
S-2	COFFERDAM AND SHEET PILE PLAN
S-3	OVERALL FOUNDATION PLAN
S-4	OVERALL LAYOUT PLAN
S-5	OVERALL SECTIONS
S-6	COFFERDAM DETAILS
S-7	COFFERDAM DETAILS
S-8	STOP LOG SUPPORT FRAMING
S-9	STOP LOG SUPPORT DETAILS
S-10	STOP LOG ACCESS PLATFORM
S-11	FOUNDATION APRON AREA
Electrical	
E-1	ELECTRICAL ABBREVIATIONS LEGEND AND GENERAL NOTES
E-2	GROUNDING AND LIGHTNING PROTECTION
E-3	LIGHTNING PROTECTION AND GROUNDING DETAILS
E-4	LIGHTING PLAN

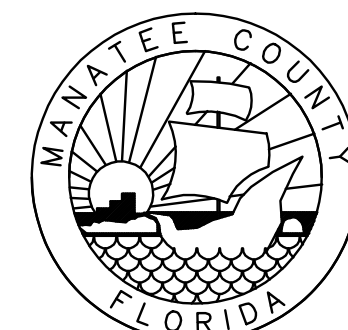


7650 West Courtney Campbell Causeway
 Suite 700
 Tampa, Florida 33607
 Ph: (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION
REVISIONS			

URS JOB NUMBER
 12008609
 PM: D. WILCOX
 ENG: F. BOHORQUEZ
 DRW: D. ELLIS
 DATE:
 September 15, 2009

DAVID A. WILCOX
 FLORIDA P.E. NO. 34942



LAKE MANATEE DAM TANTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

GENERAL NOTES AND
 INDEX TO SHEETS

PROJECT STATUS
 BID SET

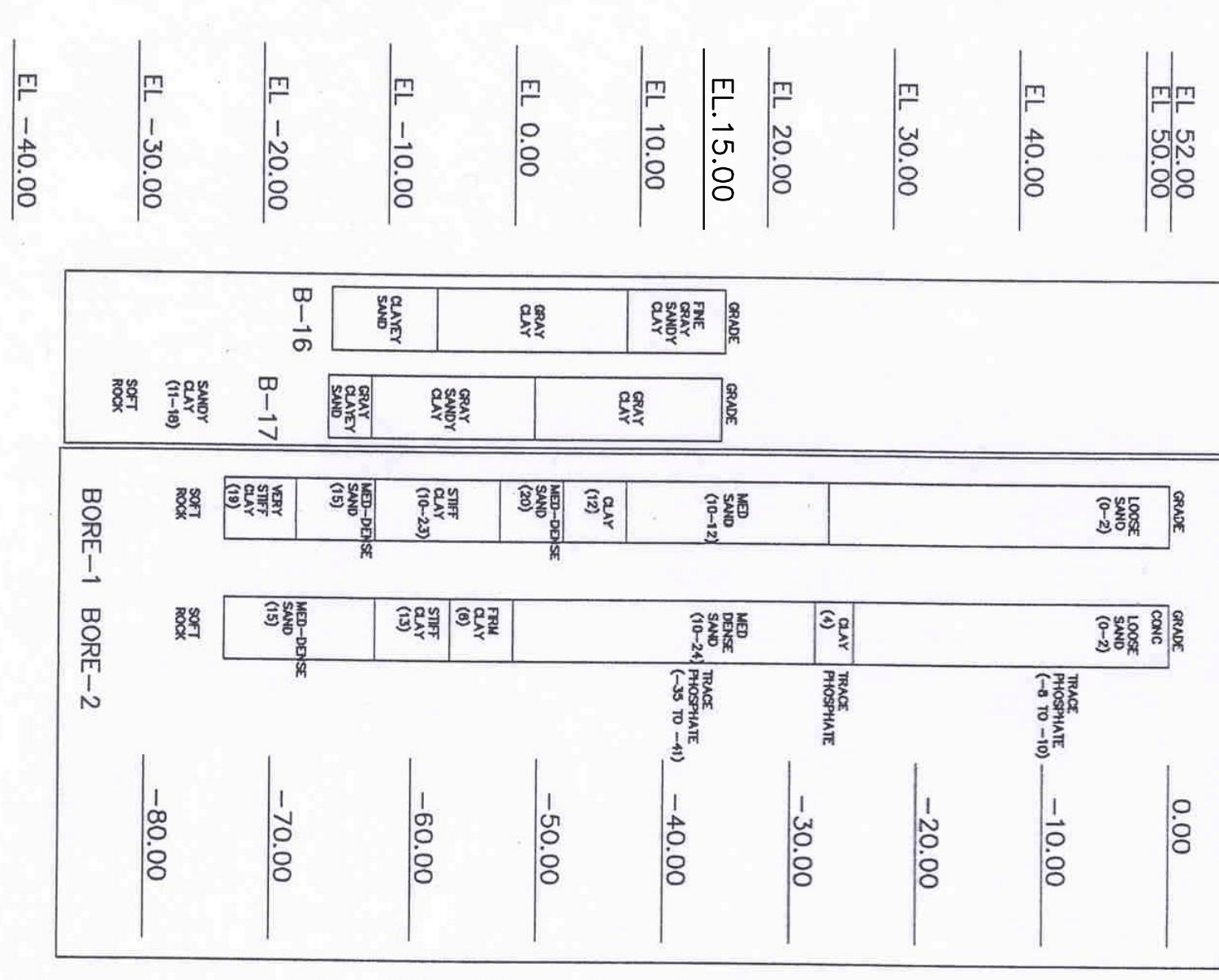
G-2

STRUCTURAL GENERAL NOTES:

- A. BUILDING CODES:**
- FLORIDA BUILDING CODE 2007 EDITION.
 - ACI 318-05 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, NINTH EDITION (AISC).
 - AWS STRUCTURAL WELDING CODE (CURRENT EDITION).
- B. DESIGN CRITERIA:**
- WIND LOADS AS PER ASCE 7-05 FOR A BASIC WIND SPEED OF 150 MPH;
 - WIND IMPORTANCE FACTOR: 1.15
 - BUILDING CATEGORY: **IV**
 - EXPOSURE "C"
 - ALLOWABLE SOIL PRESSURE - 2000 PSF (ASSUMED)
 - PLATFORM LIVE LOAD - 50 PSF
- C. CONSTRUCTION MATERIALS:**
- CAST-IN-PLACE CONCRETE COMPRESSIVE STRENGTH: 4000 PSI AT 28 DAYS
 - REINFORCING STEEL - ASTM A 615, GRADE 60 UNCOATED
 - STEEL W SHAPE ASTM A992 GRADE 50
 - STEEL HP SHAPE ASTM A572 GRADE 50
 - STEEL C SHAPE, S SHAPE, ANGLES, PLATES ASTM A36
 - WELDING ELECTRODES AWS E-70XX
 - CONNECTION BOLTS ASTM A 325N, 3/4" DIAMETER, UNLESS NOTED OTHERWISE.
 - FIBERGLASS GRATING: 1 1/2" MOLDED RECTANGULAR (PLAIN SURFACE) WITH STAINLESS STEEL CLIPS.
 - NON-SHRINK, NON-METALLIC GROUT: EUCO-NS BY EUCLID CHEMICAL OR APPROVED EQUAL.
 - STAINLESS STEEL EXPANSION ANCHORS: HILTI KWIK BOLT II OR APPROVED EQUAL.
 - WELED STEEL WIRE FABRIC - ASTM A185.
 - STEEL TUBES ASTM A 500, GRADE B.
 - STEEL PIPE ASTM A53, TYPE E OR S, GRADE B.
- D. CONCRETE WORK:**
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH:
 - SUBMITTAL:
 - SUBMIT FOR OWNER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS:
 - "TEMPORARY" COFFERDAM REINFORCING STEEL STRUCTURAL STEEL HANDRAIL/KICK PLATE/GRATING
 - ACI 347 "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK"
 - ACI 304 "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE."
 - ACI 309 "CONSOLIDATION OF CONCRETE".
- E. STRUCTURAL STEEL:**
- BEAM SHEAR CONNECTION DESIGN SHALL BE BASED ON BEARING TYPE BOLTED CONNECTIONS WITH BOLTS "SNUG TIGHT" PER AISC.
 - ALL CONNECTIONS NOT DETAILED OR OTHERWISE NOTED SHALL BE DESIGNED BY THE FABRICATOR. SHOP DRAWINGS AND CONNECTION CALCULATIONS SHALL BE SUBMITTED BEARING THE SEAL OF A FLORIDA P.E.
- F. FOUNDATIONS / SITEWORK:**
- ALL EARTHWORK AND COMPACTION FOR STRUCTURES SHALL BE AS NOTED IN THE SPECIFICATIONS.
- G. GENERAL NOTES:**
- CONTRACTOR SHALL VERIFY AND CORRELATE ALL DIMENSIONS BEFORE PROCEEDING WITH FABRICATION AND CONSTRUCTION.
 - ALL REINFORCEMENT TO BE DETAILED AND FABRICATED IN ACCORDANCE WITH ACI 315-94. ALL CONSTRUCTION JOINTS, WITH REINFORCING PASSING THROUGH THE JOINT, SHALL BE ROUGHENED TO A FULL AMPLITUDE OF APPROXIMATELY 1/4" INCH, UNLESS NOTED OTHERWISE.
- H. COORDINATION:**
- THE STRUCTURAL SHEETS SHALL BE COORDINATED WITH THE CIVIL SHEETS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER BEFORE PROCEEDING WITH THE WORK.

GEOTECHNICAL DATA

RUSSELL & AXON
 1964
 DRIGGERS ENGINEERING SERVICES
 2008



EL. (-) 20.00 IS ASSUMED BEGINNING OF SOFT ROCK.
 EL. 15.00 IS ASSUMED LAKE BOTTOM
 100 YEAR FLOOD ZONE EL. 28.00 (2004 INFO).

CONTRACTOR SHALL EXPECT TO PERFORM / MAINTAIN DEWATERING TO ALLOW CONSTRUCTION / CURING OF THE WORK IN THE DRY.

THE BRIDGE ON TOP OF THE SPILLWAY IS CAPABLE OF SUPPORTING TWO TRUCK MOUNTED CRANES (30 TON LOAD RATING EACH) AS THEY INSTALL/REMOVE THE STOP LOG. THE PLATE COVERING THE STOP LOG RECESS WILL SUPPORT PEDESTRIANS ONLY.

CONTRACTOR TO FOLLOW RECOMMENDATIONS / PROCEDURES (AS PER 2007 FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 455-1.1, PROTECTION OF EXISTING STRUCTURES) DURING AND AFTER THE TEMPORARY COFFERDAM CONSTRUCTION. THIS INCLUDES THE EMBANKMENT.

CONTRACTOR TO SUBMIT, FOR OWNER REVIEW, HIS PLAN TO SURVEY / MONITOR / RECORD SETTLEMENTS AND MOVEMENTS. PROVIDE A REPORT OF EXISTING CONDITIONS BEFORE CONSTRUCTION AND ANOTHER REPORT AFTER CONSTRUCTION.

ALL DESIGN AND FIELD WORK TO BE PERFORMED BY A QUALIFIED FLORIDA P.E. / QUALIFIED FLORIDA SPECIALTY ENGINEER, AS APPLICABLE.

PROVIDE PROPOSED REMEDIAL MEASURES, IF DAMAGE OCCURS.

7650 West Courtney Campbell Causeway
 Suite 700
 Tampa, Florida 33607
 Ph: (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 000002

URS JOB NUMBER
 12008609

PK: D. WILCOX
 ENG: W.N. HAUSHEER
 DWR: E.L. CHAUVERAT
 DATE: September 15, 2009

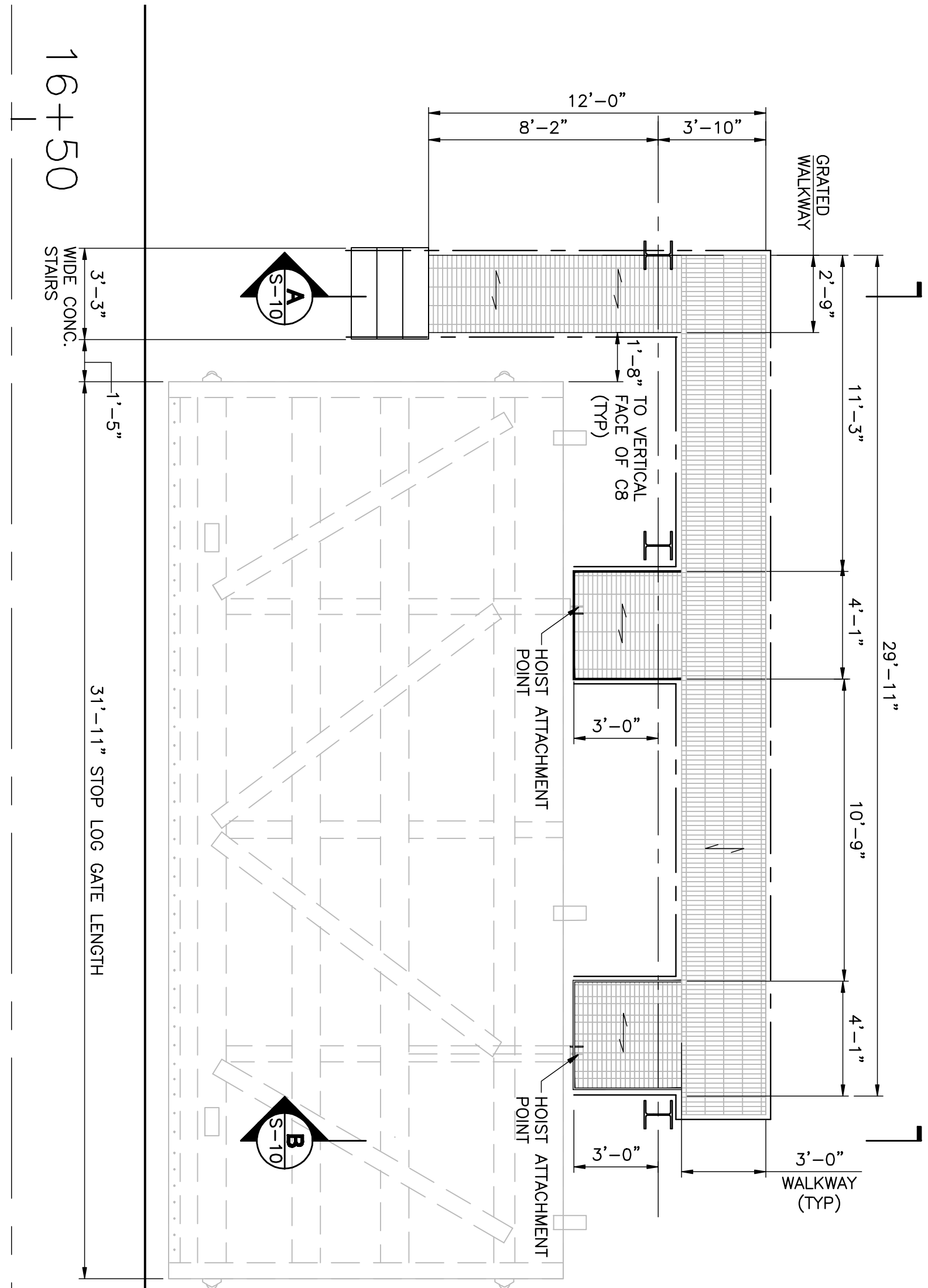
WILLIAM N. HAUSHEER
 FLORIDA P.E. NO. 31715



LAKE MANATEE DAM TAINTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

STRUCTURAL GENERAL NOTES

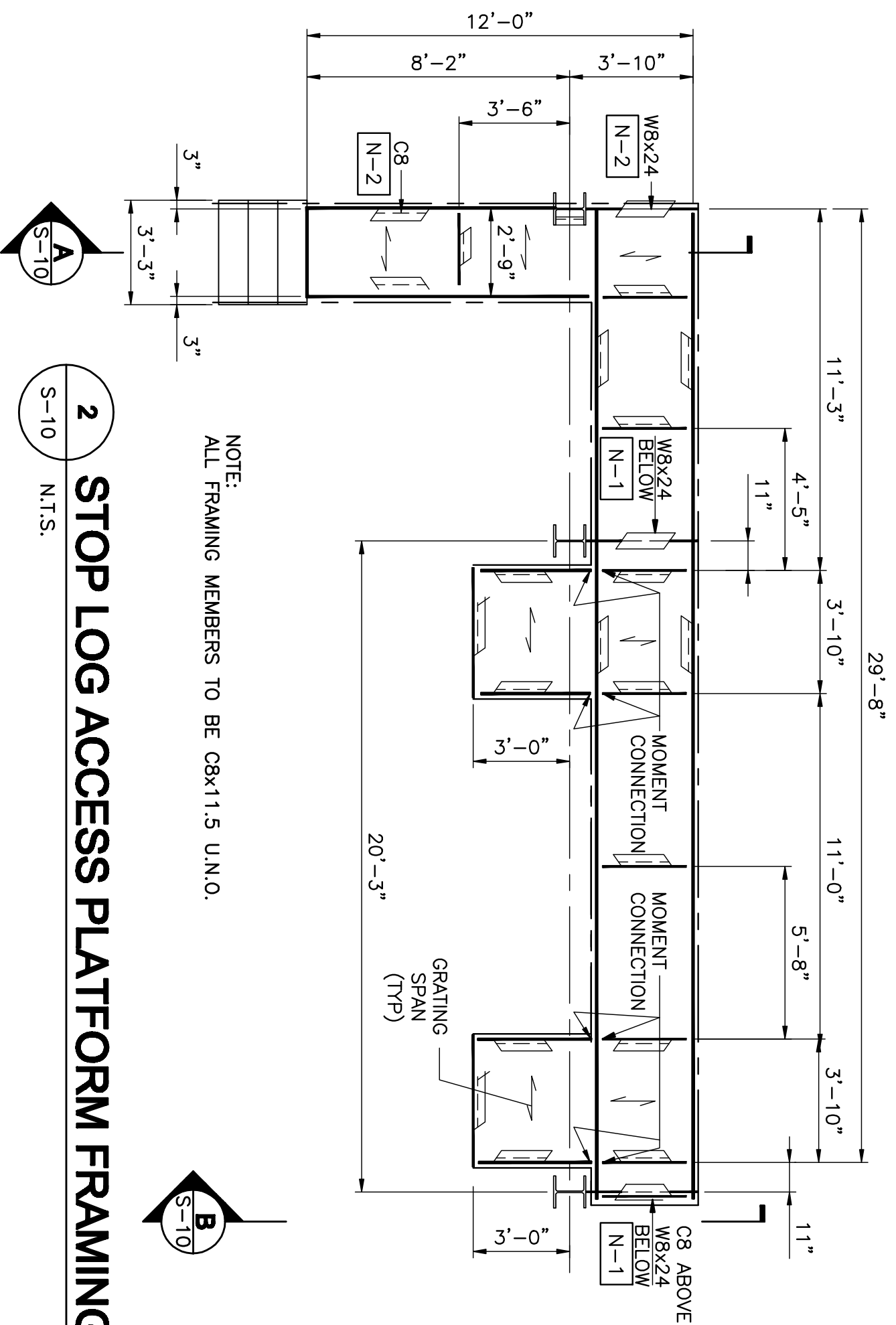
PROJECT STATUS
 BID SET
 S-1



1 PLAN - STOP LOG ACCESS PLATFORM

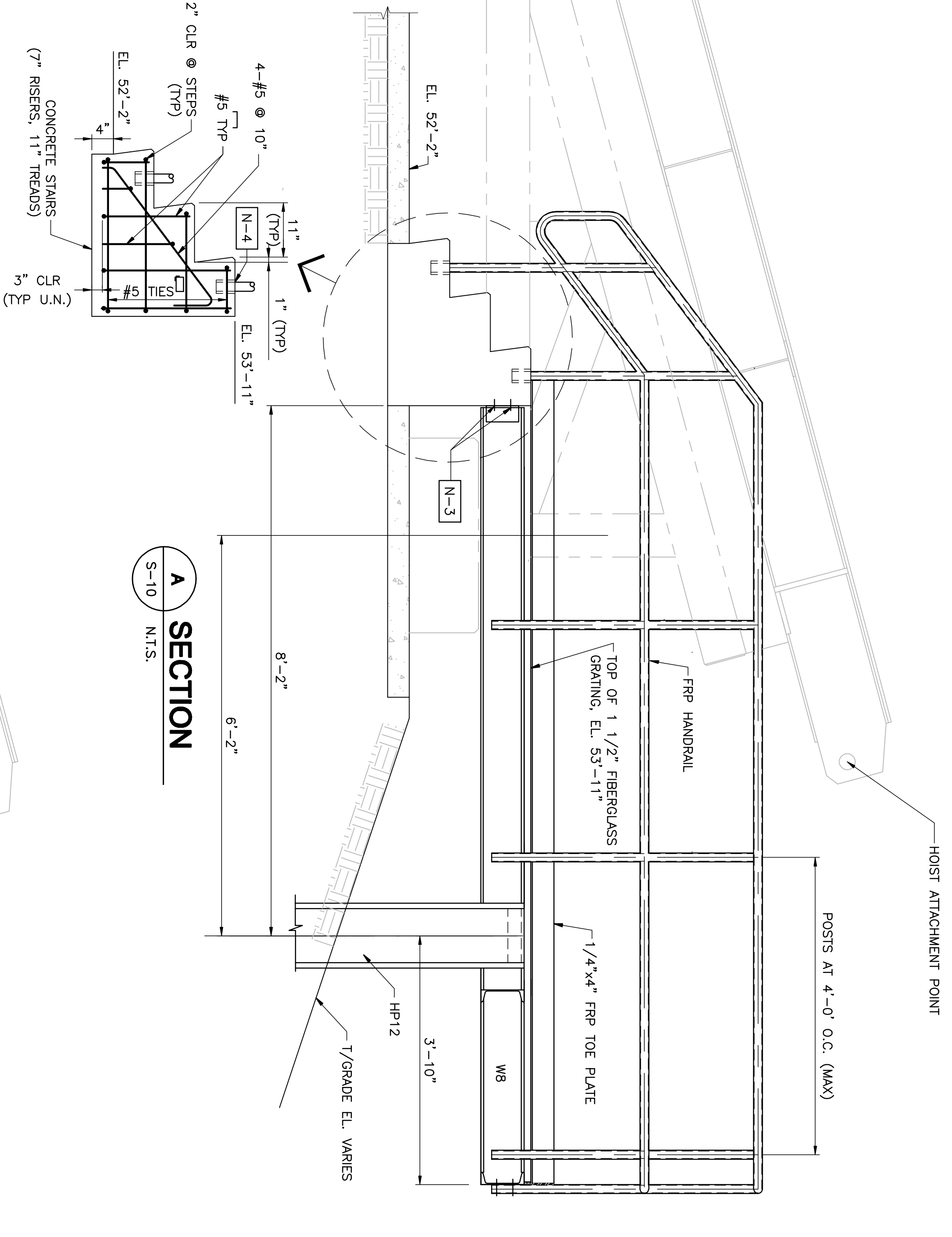
S-10 N.T.S.

- NOTES:
- N-1 PROVIDE 3/16" FILLET WELD, ALL AROUND, AT CONNECTION TO COLUMN.
 - N-2 PROVIDE 3/16" FILLET WELD, BOTTOM AND SIDES, AT CONNECTION TO COLUMN.
 - N-3 PROVIDE 1/2" HILTI KWIK BOLT II (4" MIN EMBEDMENT) AT 3 1/2" O.C.
 - N-4 CORE DRILL 2 1/4" x 3 1/2" DEEP HOLE, CLEAN IT OUT. SET POSTS AND FILL HOLE TO TOP WITH NON-SHRINK NON-METALLIC GROUT.



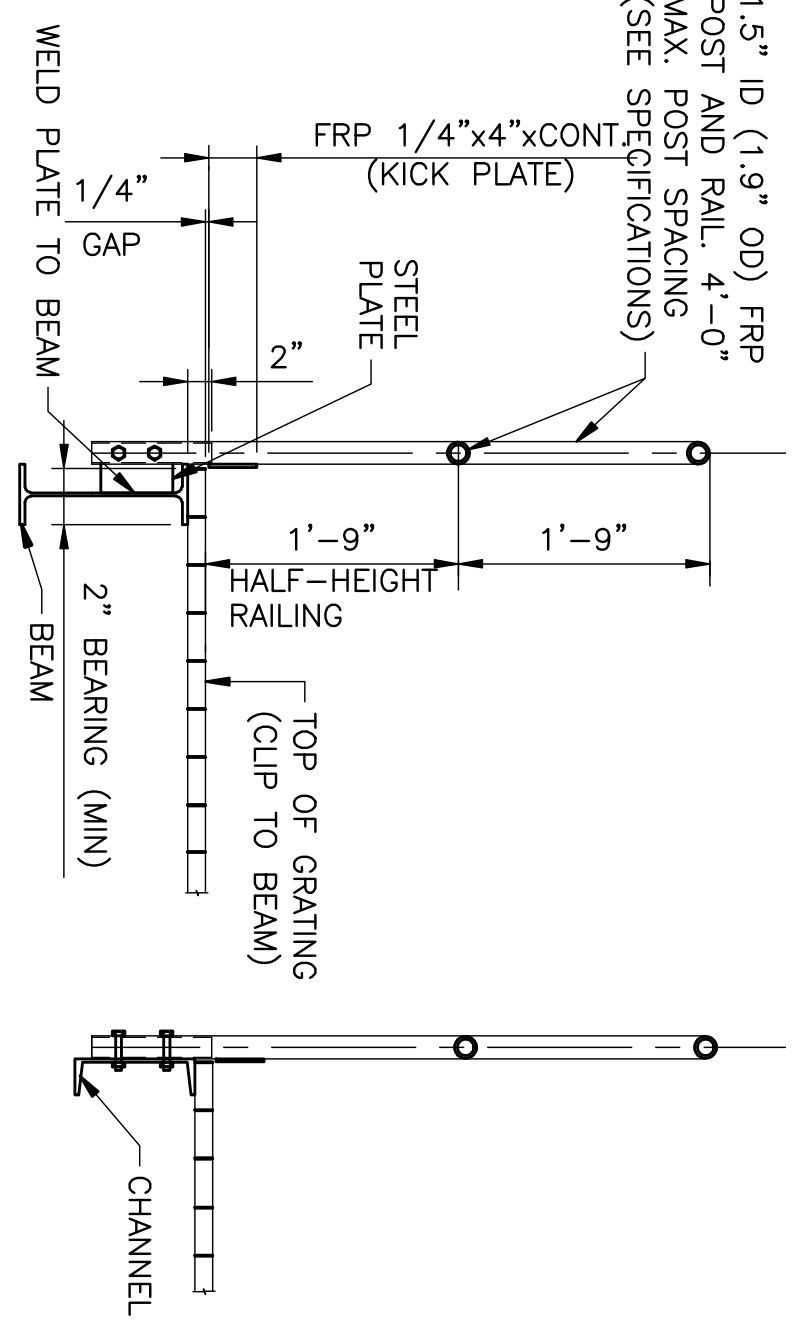
2 STOP LOG ACCESS PLATFORM FRAMING PLAN

S-10 N.T.S.



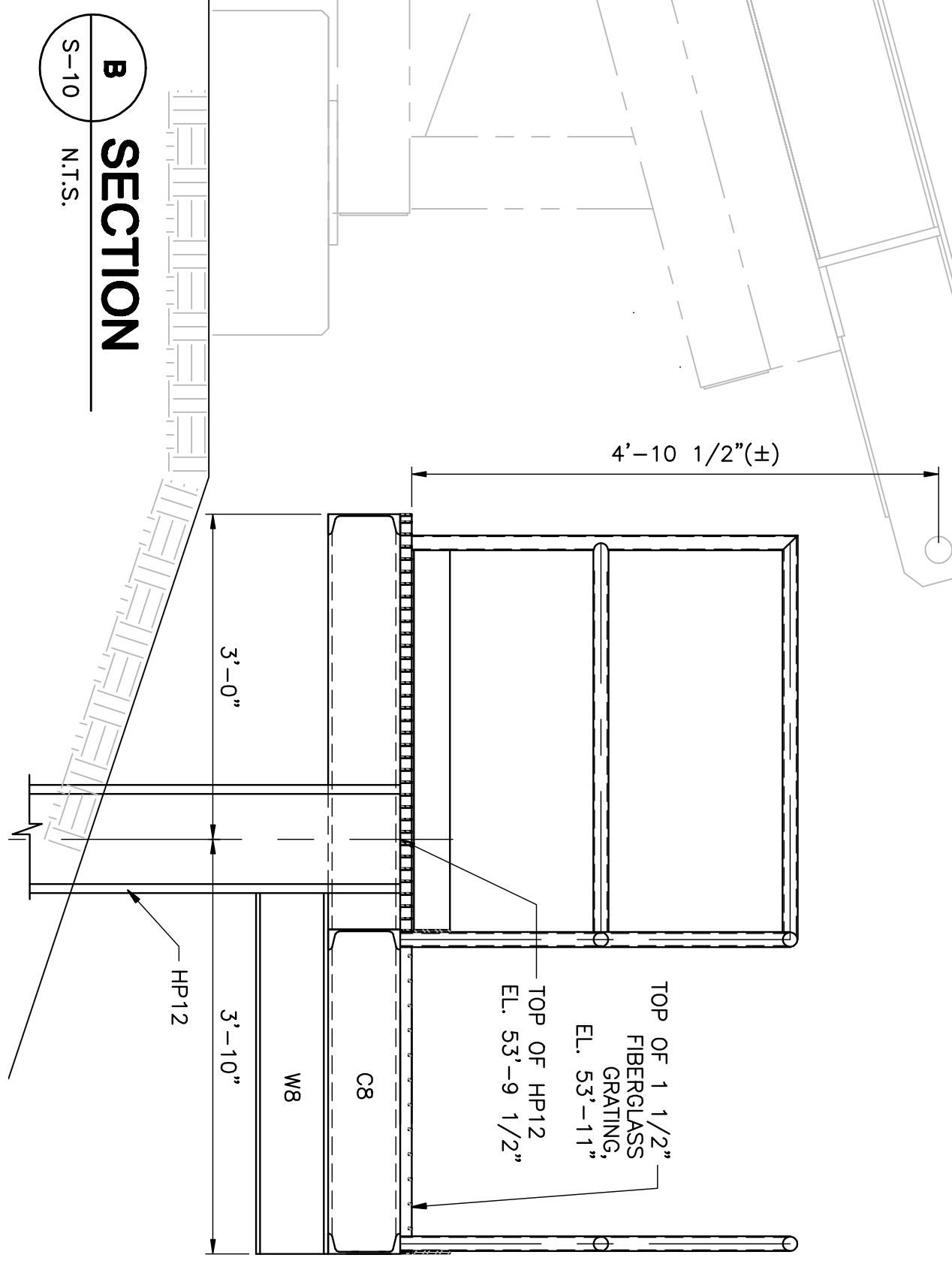
A SECTION

S-10 N.T.S.



3 TYPICAL DETAIL HANDRAIL

S-10 N.T.S.



B SECTION

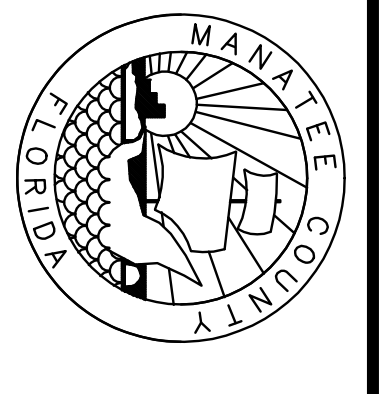
S-10 N.T.S.

7650 West Courtney Campbell Causeway
 Suite 700
 Florida, 33607
 Phone: (813) 286-1771 Fax: (813) 286-6867
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER	12008609
PK: D. WILCOX	
ENG: W.N. HAUSHER	
DRW: E.J. CHAVERRAT	
DATE:	September 15, 2009

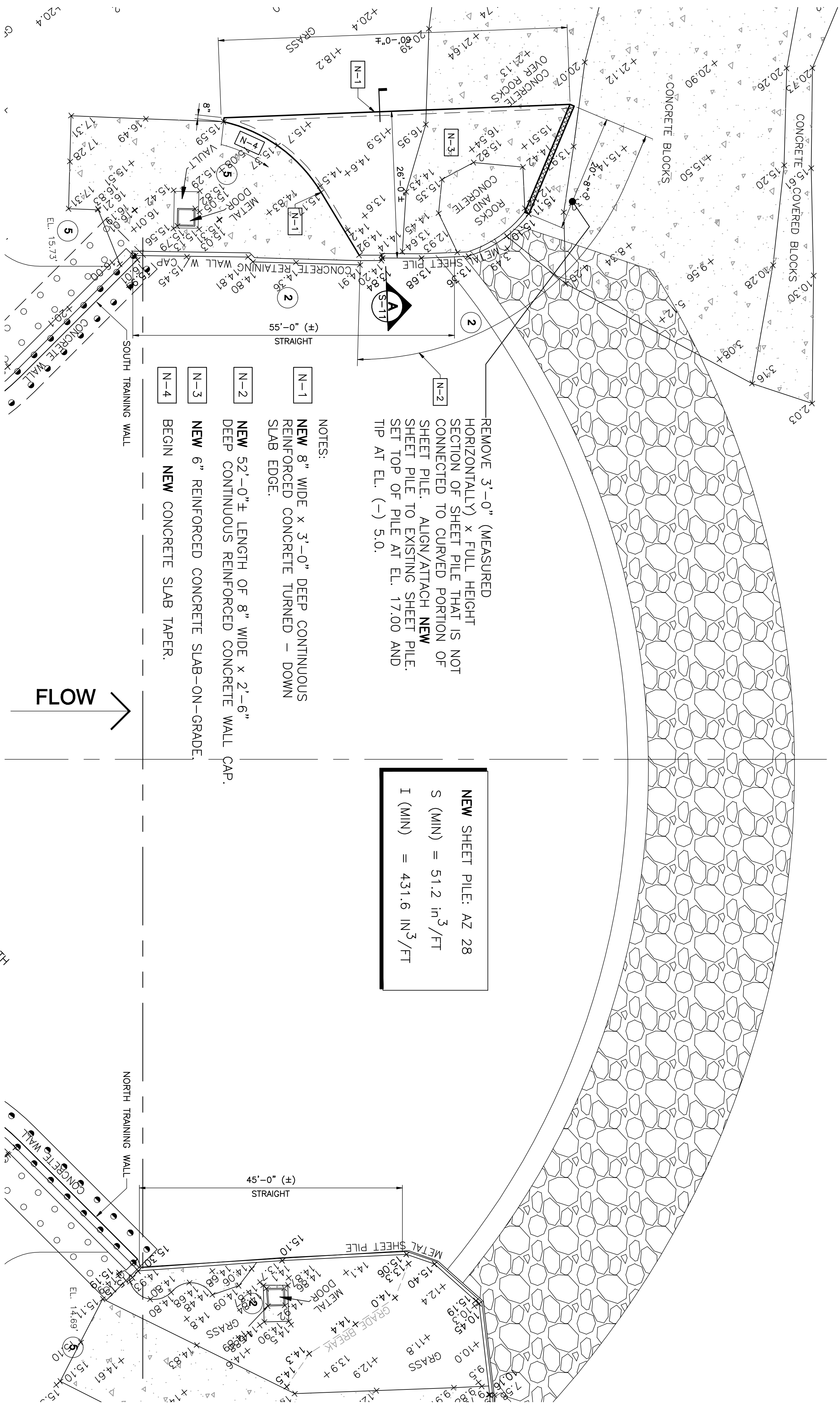
WILLIAM N. HAUSHER
 FLORIDA P.E. NO. 37715



LAKE MANATEE DAM TAINTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

STOP LOG ACCESS PLATFORM

PROJECT STATUS	
BID SET	
S-10	

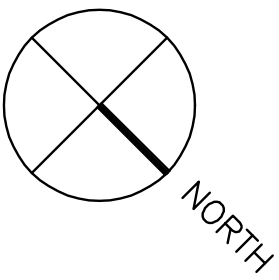


NEW SHEET PILE: AZ 28
 S (MIN) = 51.2 IN³/FT
 I (MIN) = 431.6 IN³/FT

REMOVE 3'-0" (MEASURED HORIZONTALLY) x FULL HEIGHT SECTION OF SHEET PILE THAT IS NOT CONNECTED TO CURVED PORTION OF SHEET PILE. ALIGN/ATTACH NEW SHEET PILE TO EXISTING SHEET PILE. SET TOP OF PILE AT EL. 17.00 AND TIP AT EL. (-) 5.0.

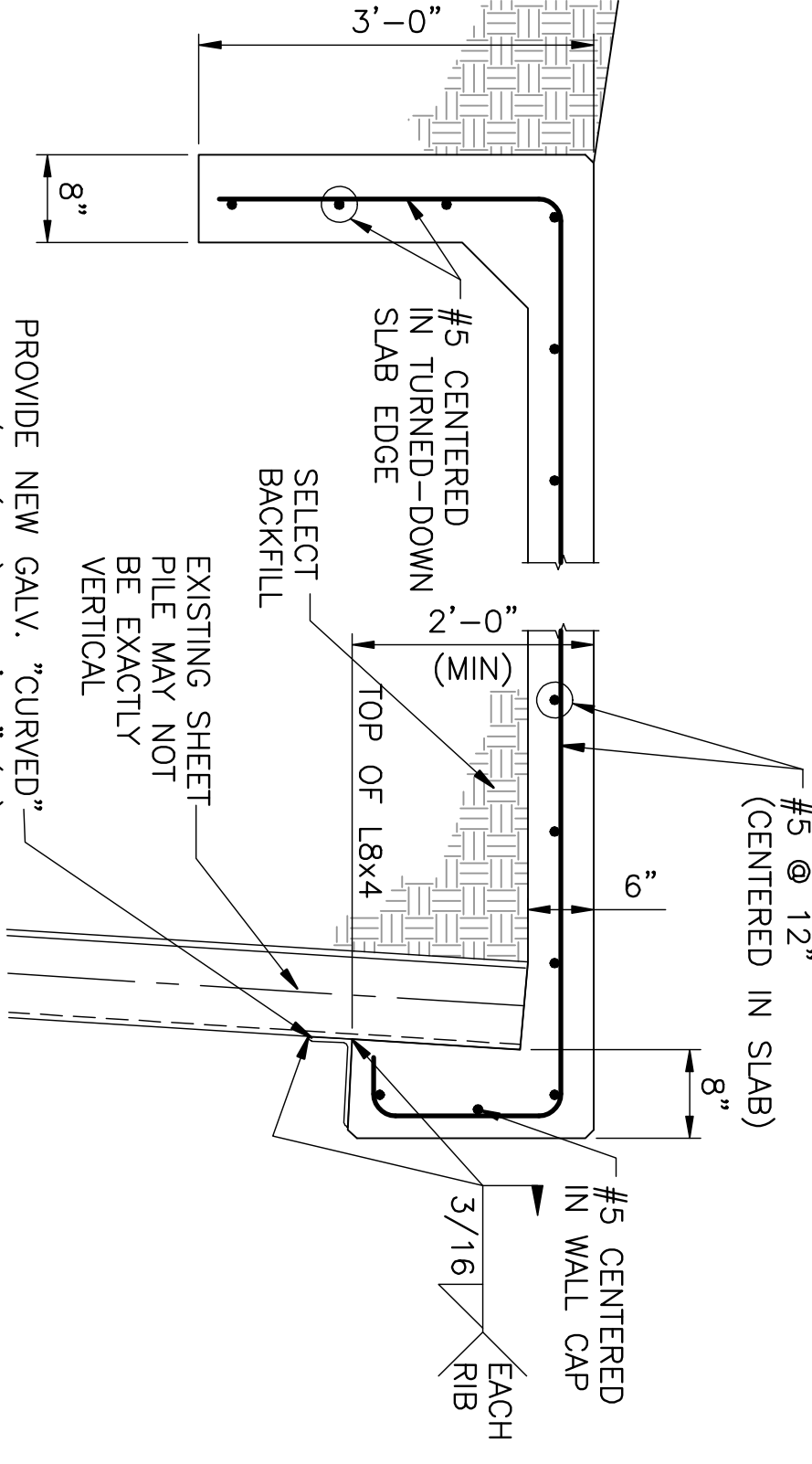
NOTES:
 N-1 NEW 8" WIDE x 3'-0" DEEP CONTINUOUS REINFORCED CONCRETE TURNED - DOWN SLAB EDGE.
 N-2 NEW 52'-0" ± LENGTH OF 8" WIDE x 2'-6" DEEP CONTINUOUS REINFORCED CONCRETE WALL CAP.
 N-3 NEW 6" REINFORCED CONCRETE SLAB-ON-GRADE.
 N-4 BEGIN NEW CONCRETE SLAB TAPER.

1 **PLAN - APRON AREA**
 TOP OF FOOTING EL. 7.0' UNLESS NOTED OTHERWISE.



DIMENSIONS AND INFORMATION ARE FROM THE FOLLOWING REFERENCES:

- 1 RUSSELL & AXON - EARTH DAM & GATED SPILLWAY PART B - DATED 1966 SHEET NOS 12, 14, 19, 24, 25, 27
- 2 MANATEE COUNTY UTILITIES DEPT REQUIRED MAINTENANCE AT THE GATED SPILLWAY - DATED 1984 SHEET NOS 1 OF 1
- 3 NOT USED
- 4 NOT USED
- 5 McKIM & CREED - LAKE MANATEE DAM TAINTER GATE REPAIR - DATED 2004 SHEET NO. C1



A **SECTION**
 S-11 N.T.S.

PROVIDE NEW GALV. "CURVED" L8x4x7/16 (LLH) IN 4'-0" (±) LENGTHS ALONG CURVED PORTION OF THE EXISTING SHEET PILE WALL. PROVIDE NEW CONTINUOUS GALV. L8x4x7/16 (LLH) ALONG STRAIGHT PORTIONS OF EXISTING AND NEW SHEET PILE WALL.

- LEGEND:
- PLUMB PILE
 - DENOTES DIRECTION OF BATTER PILE
 - BATTER PILE 3 UNITS VERTICAL TO 1 UNIT HORIZONTAL

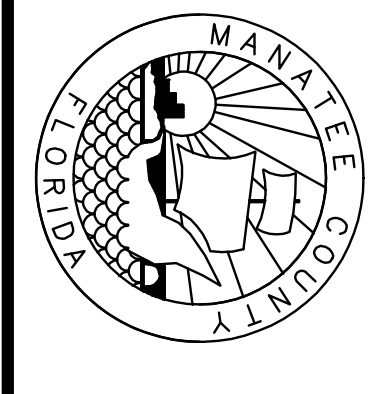
ALL CONSTRUCTION SHOWN IS EXISTING, EXCEPT THOSE ITEMS SPECIFICALLY NOTED AS "NEW".

URS
 7650 West Courtney Campbell Causeway
 Suite 700
 Tampa, Florida 33607
 Pn: (813) 286-1711 Fax: (813) 286-6567
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER
 12008609
 PM: D. WILCOX
 ENG: W.N. HAUSHEER
 DRW: E.J. CHAVERRAT
 DATE: September 15, 2009

WILLIAM N. HAUSHEER
 FLORIDA P.E. NO. 37715



LAKE MANATEE DAM TAINTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

FOUNDATION APRON AREA

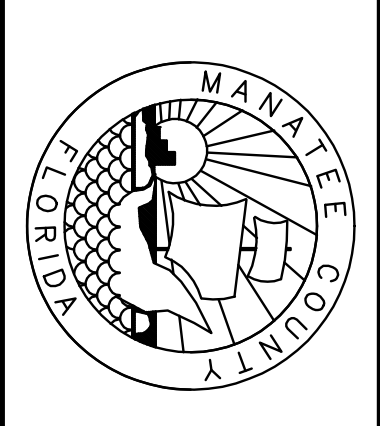
PROJECT STATUS
 BID SET
 S-11

URS
 7650 West Courtney Campbell Causeway
 Suite 700
 Tampa, Florida 33607
 Ph: (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER	12008609
PM: D. WILCOX	
ENG: W.N. HAUSHEER	
DRW: E.J. CHAVERRAT	
DATE:	September 15, 2009

WILLIAM N. HAUSHEER	FLORIDA P.E. NO. 57175
---------------------	------------------------

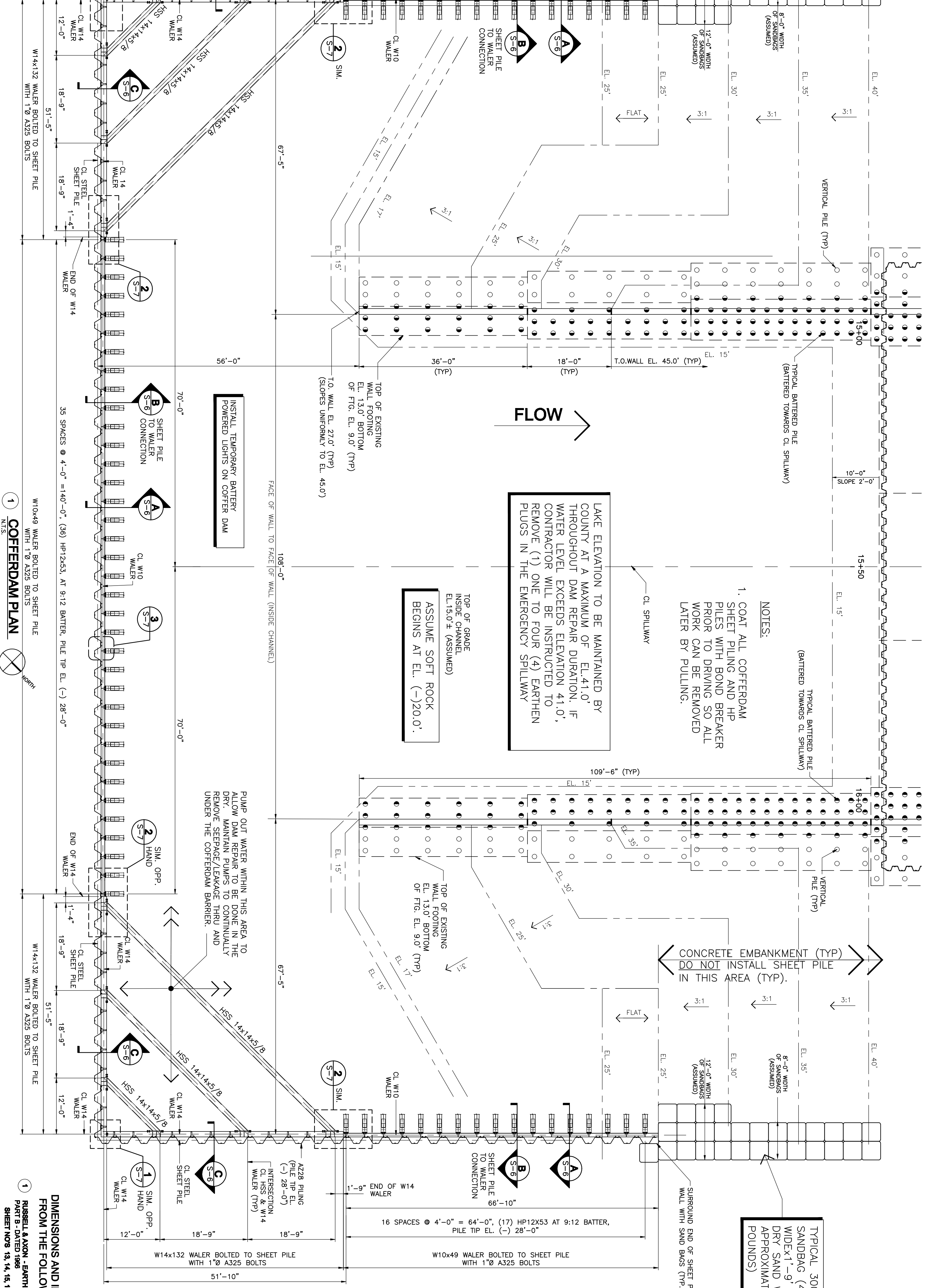


LAKE MANATEE DAM TAINTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

COFFERDAM AND SHEET PILE PLAN

PROJECT STATUS
 BID SET
 S-2

ITEM	ESTIMATED QTY.
W14x132 SHEET PILE	210 LIN. FT.
AZ28 SHEET PILE	490 LIN. FT.
HP12x53	70 PILES
HSS 14x14x5/8	265 LIN. FT.



1 COFFERDAM PLAN
 N.T.S.

1 DIMENSIONS AND INFORMATION ARE FROM THE FOLLOWING REFERENCES:
 RUSSELL & AXON - EARTH DAM & GATED SPILLWAY
 PART B - DATED 1998
 SHEET NOS 13, 14, 15, 16, 22, 23, 28

LAKE ELEVATION TO BE MAINTAINED BY COUNTY AT A MAXIMUM OF EL. 41.0' THROUGHOUT DAM REPAIR DURATION. IF WATER LEVEL EXCEEDS ELEVATION 41.0', CONTRACTOR WILL BE INSTRUCTED TO REMOVE (1) ONE TO FOUR (4) EARTHEN PLUGS IN THE EMERGENCY SPILLWAY

- NOTES:
1. COAT ALL COFFERDAM SHEET PILING AND HP PILES WITH BOND BREAKER PRIOR TO DRIVING SO ALL WORK CAN BE REMOVED LATER BY PULLING.

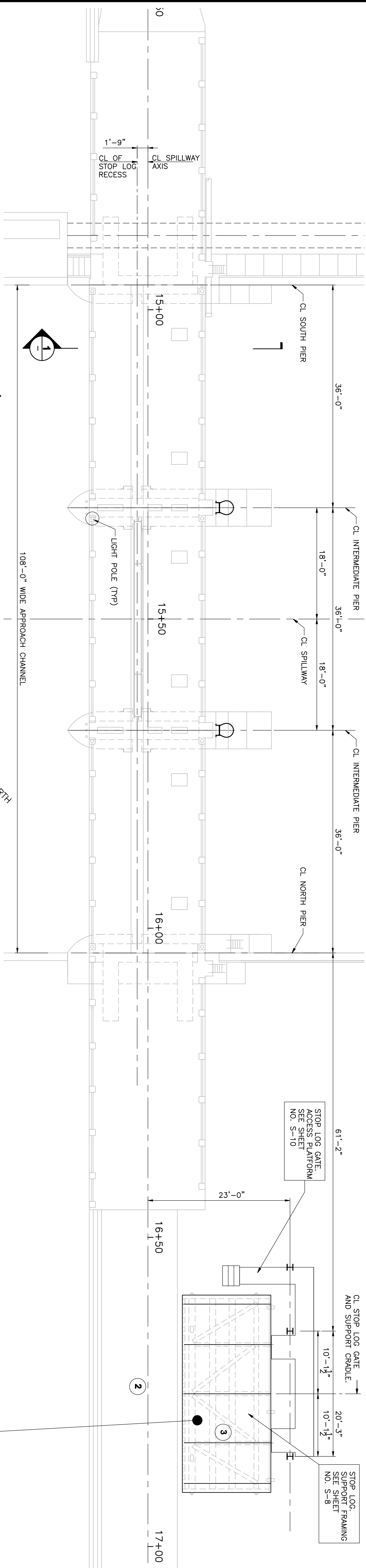
TYPICAL 3000 POUND SANDBAG (4' LONGx4' WIDEx1'-9" HEIGHT OF DRY SAND WEIGHS APPROXIMATELY 2800 POUNDS)

INSTALL TEMPORARY BATTERY POWERED LIGHTS ON COFFER DAM

PUMP OUT WATER WITHIN THIS AREA TO ALLOW DAM REPAIR TO BE DONE IN THE DRY. MAINTAIN PUMPS TO CONTINUALLY REMOVE SEEPAGE/LEAKAGE THRU AND UNDER THE COFFERDAM BARRIER.

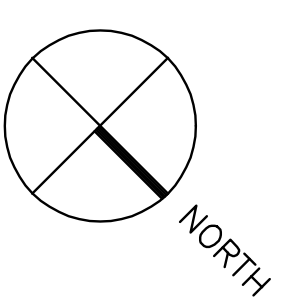
ASSUME SOFT ROCK BEGINS AT EL. (-)20.0'

CONCRETE EMBANKMENT (TYP) DO NOT INSTALL SHEET PILE IN THIS AREA (TYP).



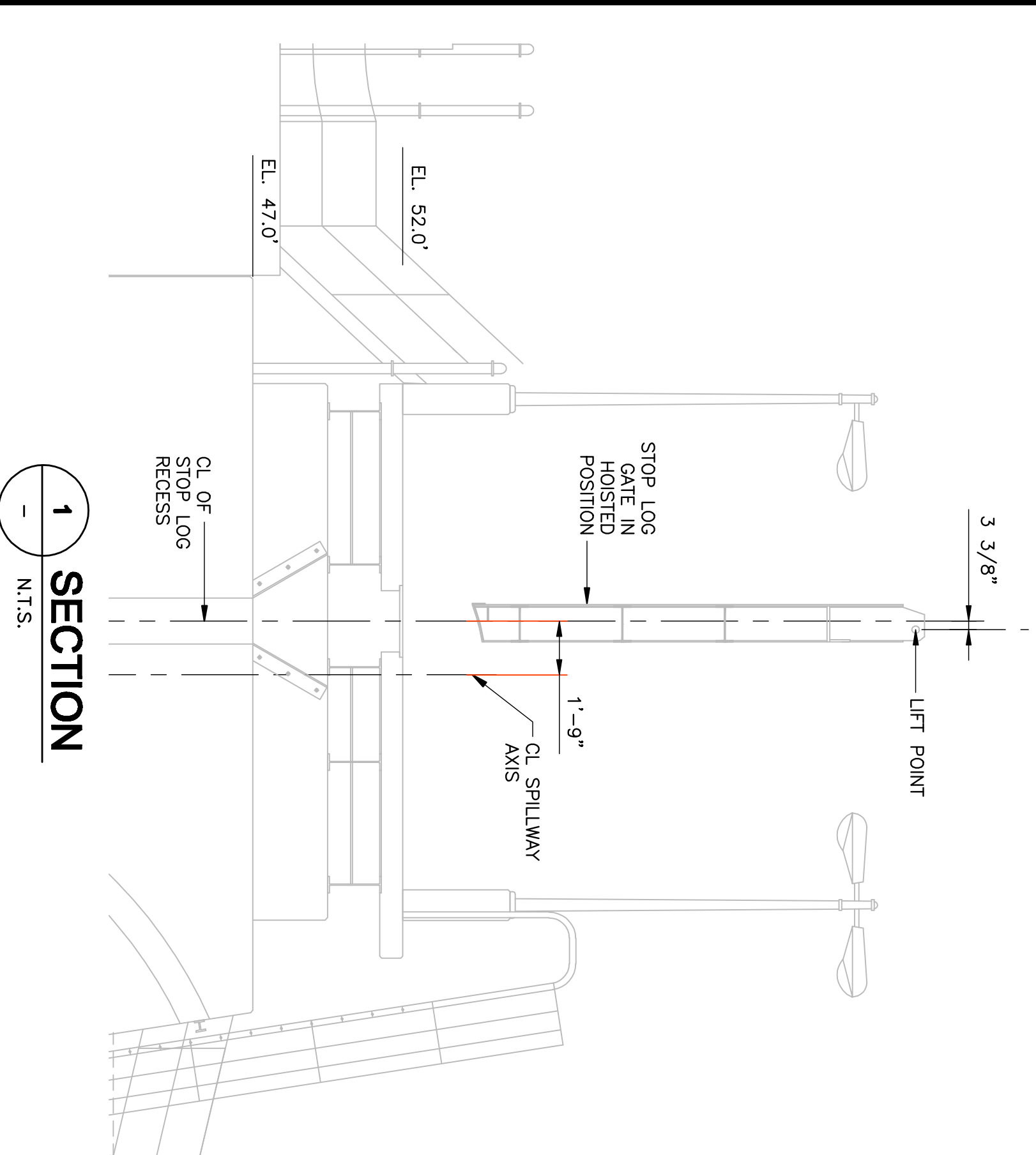
FLOW →

4 1 5
OVERALL LAYOUT PLAN
 N.T.S.



SITE OBSERVATIONS AND DISCUSSIONS OF 7-7-2009

- STOP LOG GATE:**
1. GATE OVERALL DIMENSIONS 31'-11" X 14'-0"
 2. THE OUTERMOST BEAMS WITH TIE/FLON PADS ARE NOT TO BEAR ON WOOD BLOCKING.
 3. PROVIDE A CURVED SURFACE AT BOTTOM OF NEW SUPPORT CRADLE.



1 SECTION
 N.T.S.

- DIMENSIONS AND INFORMATION ARE FROM THE FOLLOWING REFERENCES:**
- 1 RUSSELL & AXON - EARTH DAM & GATED SPILLWAY PART B - DATED 1988 SHEET NOS 20,21,31
 - 2 MANATEE COUNTY UTILITIES DEPT - REQUIRED MAINTENANCE AT THE GATED SPILLWAY - DATED 1984 SHEET NOS 1 OF 1
 - 3 MANATEE COUNTY UTILITIES DEPT - STOP LOG GATE FOR LAKE MANATEE SPILLWAY - DATED 1984 SHEET NOS 4,5,6 & 7
 - 4 HNTB - MODIFICATIONS TO EXISTING TAINTER GATE - DATED 1982 SHEET NOS 3,5,10 OF 12
 - 5 MCKIM & CREED - LAKE MANATEE DAM TAINTER GATE REPAIR - DATED 2004 SHEET NOS 4,5,6 & 7

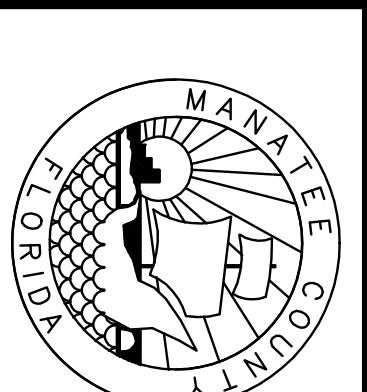


7650 West Courtney Campbell Causeway
 Suite 700 Florida 33607
 Phone (813) 286-1771 Fax: (813) 286-6567
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER
 12008609
 PM: D. WILCOX
 ENG: W.N. HAUSHER
 DRW: E.J. CHAVENAT
 DATE: September 15, 2009

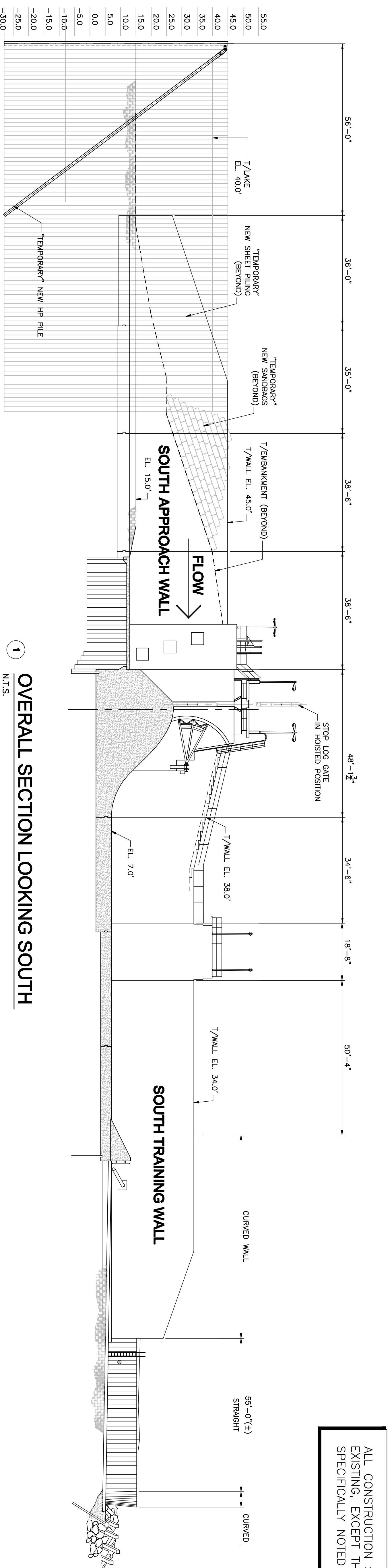
WILLIAM N. HAUSHER
 FLORIDA P.E. NO. 37715



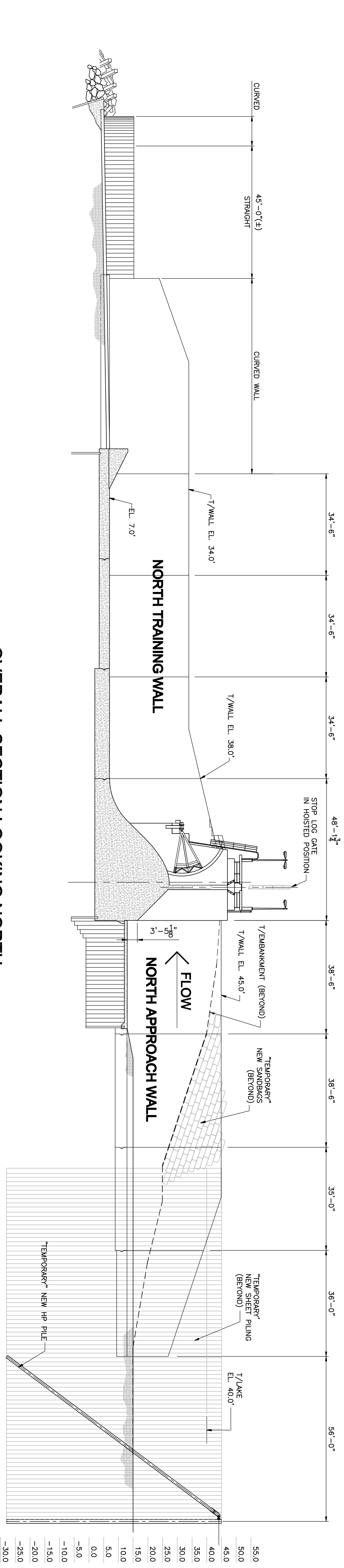
LAKE MANATEE DAM TAINTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

OVERALL LAYOUT PLAN

PROJECT STATUS
 BID SET
 S-4



1 OVERALL SECTION LOOKING SOUTH
 N.T.S.



1 OVERALL SECTION LOOKING NORTH
 N.T.S.

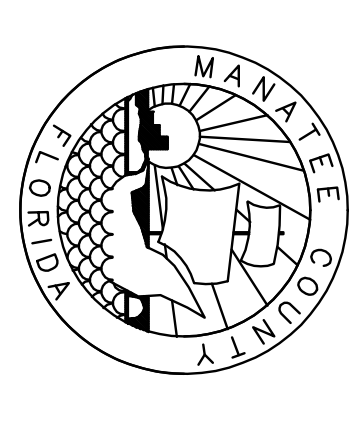
DIMENSIONS AND INFORMATION ARE FROM THE FOLLOWING REFERENCES:
 1 RUSSELL & AXON - EARTH DAM & GATED SPILLWAY PART B - DATED 1998 SHEET NOS 13, 14, 15, 16, 18, 20, 21, 22, 25, 26

URS
 7650 West Courtney Campbell Causeway
 Suite 700
 Tampa, Florida 33607
 Ph: (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION
REVISIONS			

URS JOB NUMBER	12008609
PM: D. WILCOX	
ENG: W.N. HAUSHER	
DRW: E.J. CHAVERIAT	
DATE:	September 15, 2009

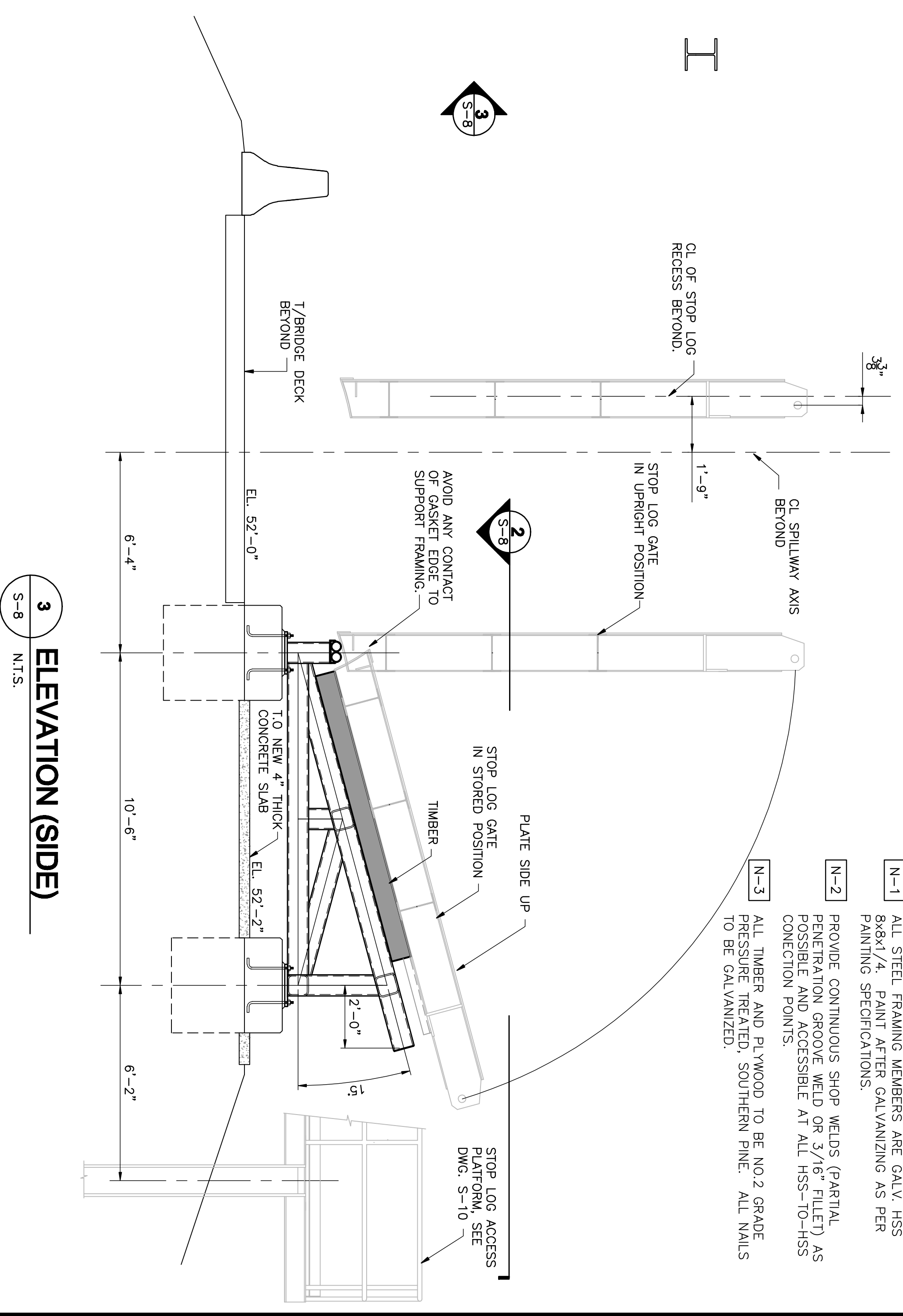
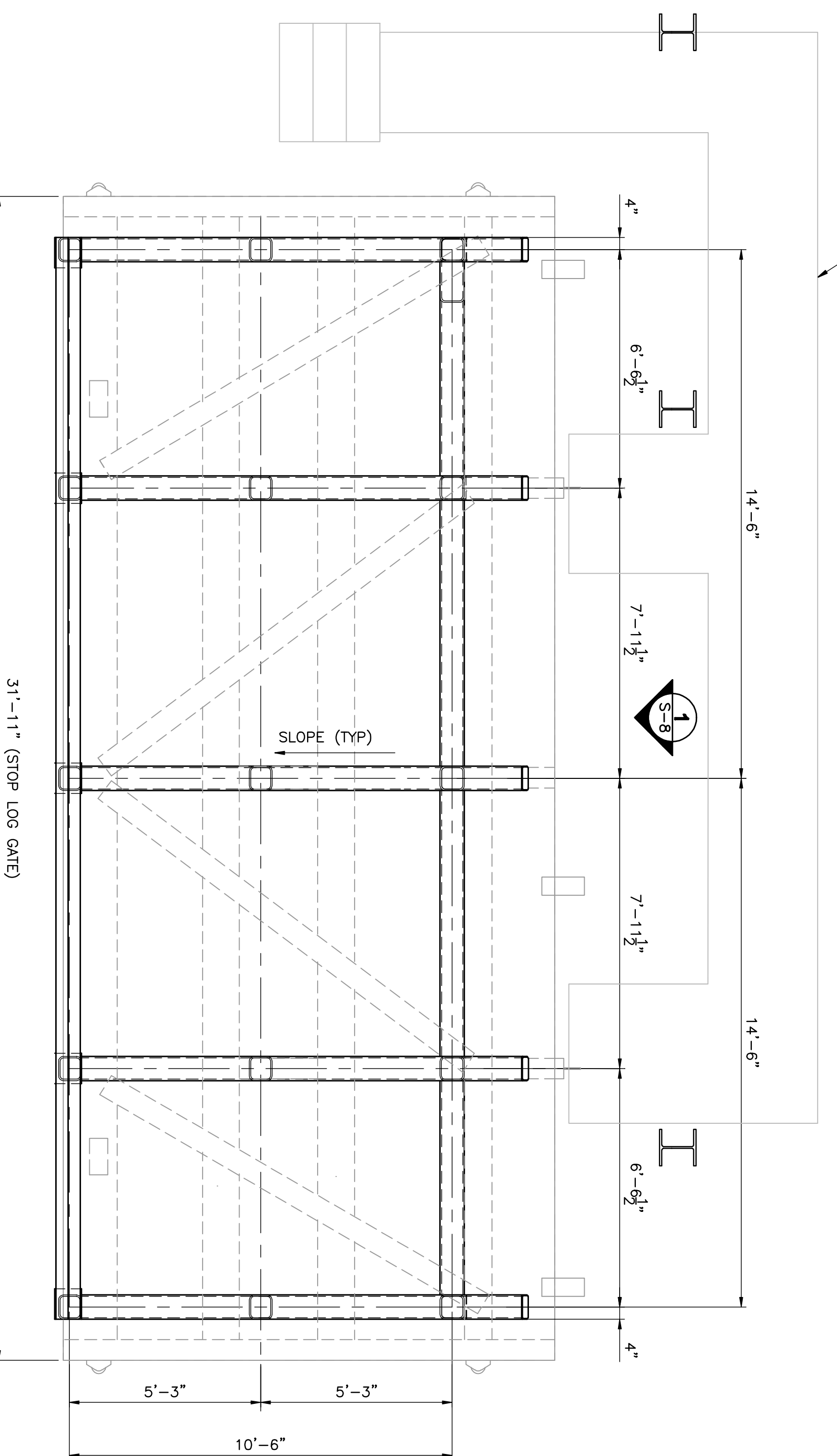
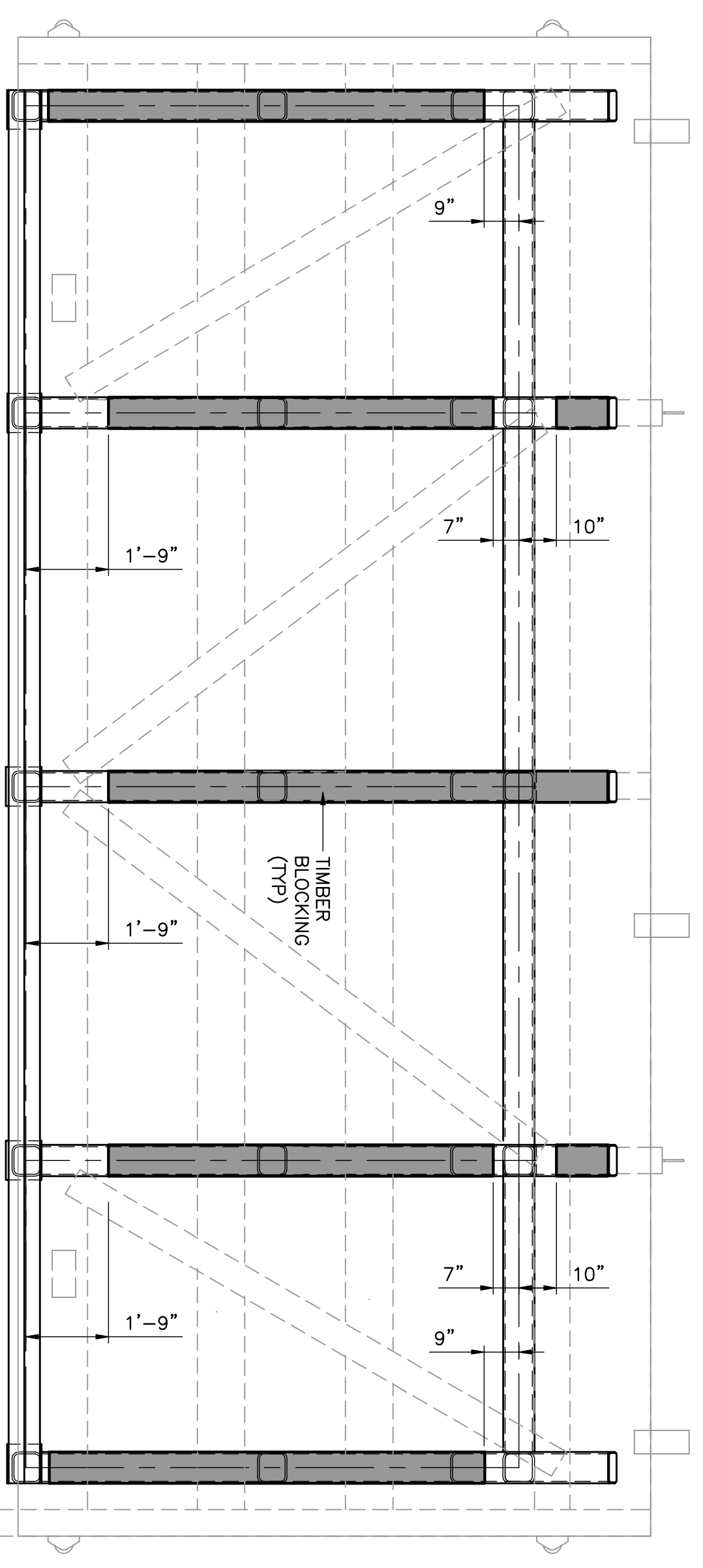
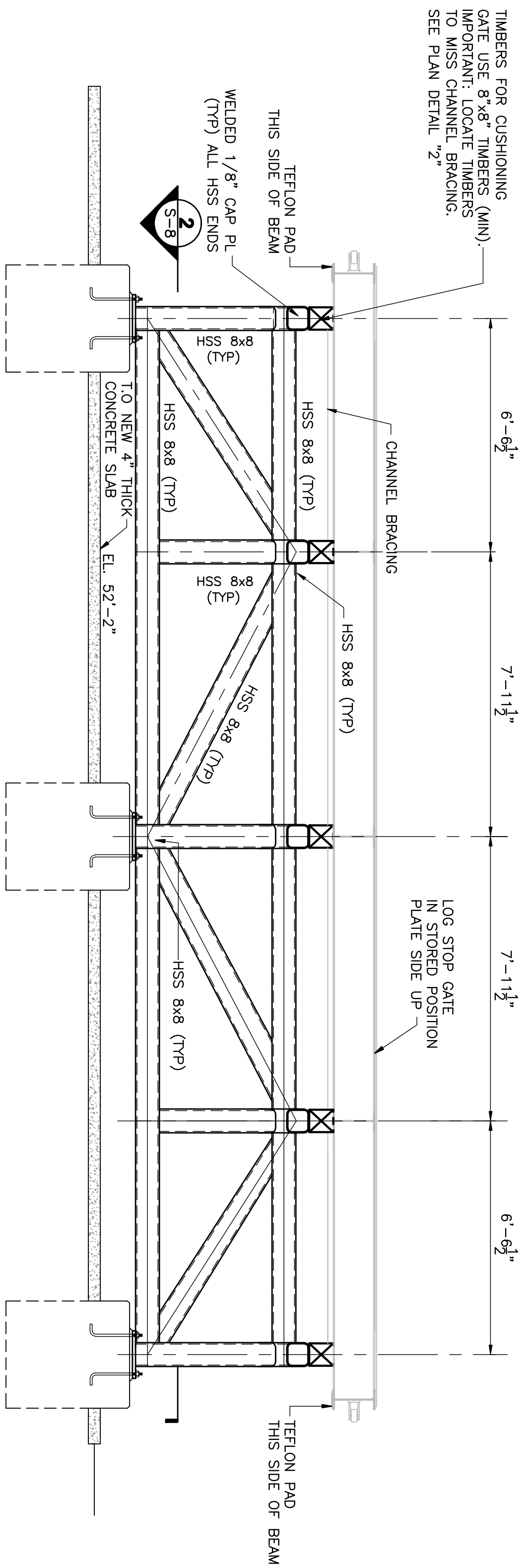
WILLIAM N. HAUSHER
 FLORIDA P.E. NO. 3775



LAKE MANATEE DAM TAINTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

OVERALL SECTIONS

PROJECT STATUS
 BID SET
 S-5

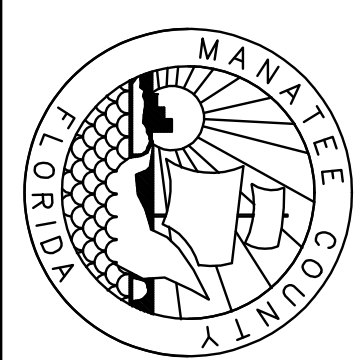


URS
 7650 West Courtney Campbell Causeway
 Suite 700
 Tampa, Florida 33607
 Ph: (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URB JOB NUMBER 12008609
 P.I. D. WILCOX
 ENG. W.N. THUSHEER
 DRW. E.J. CHAWERAT
 DATE: September 15, 2009

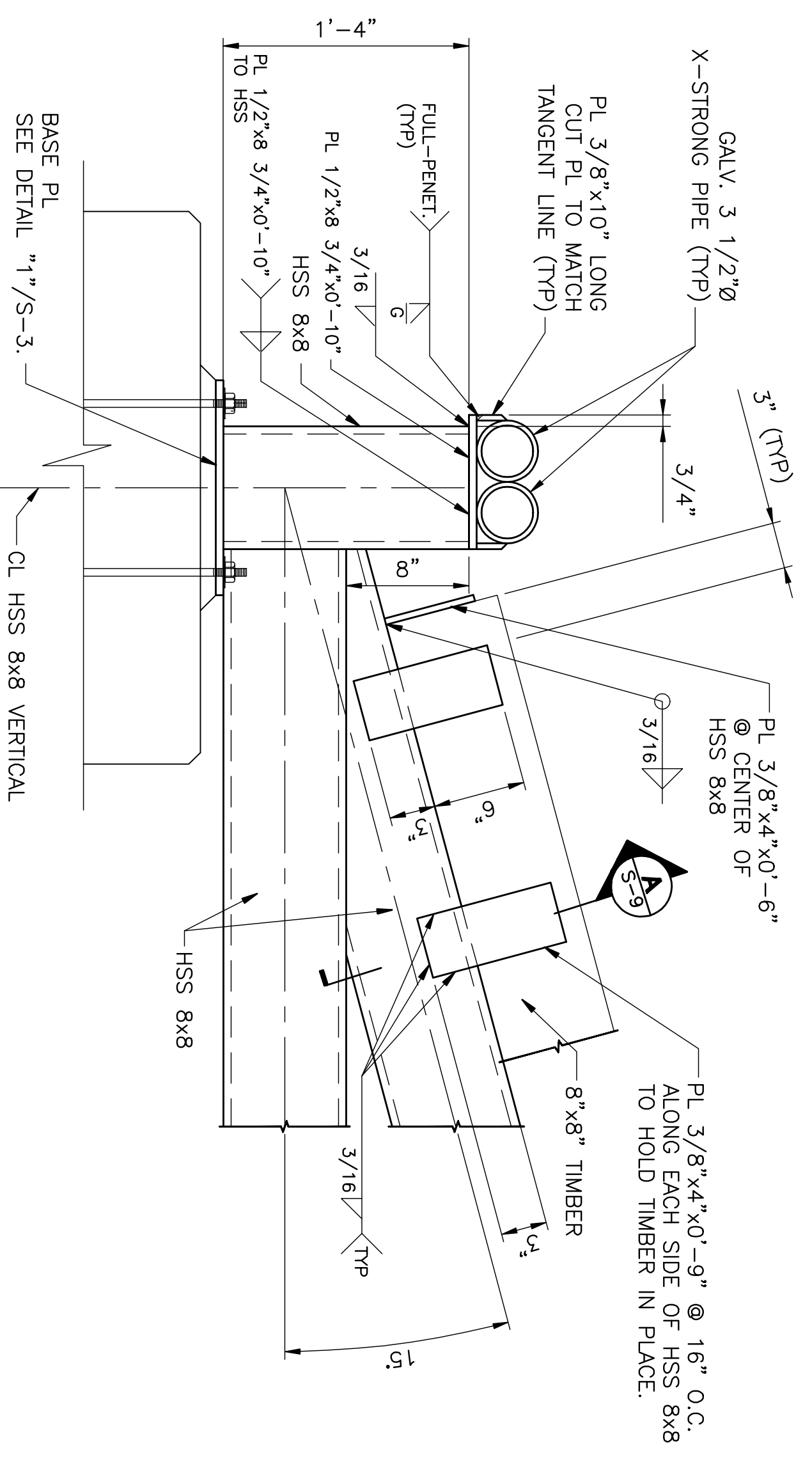
WILLIAM N. HAUSHEER
 FLORIDA P.E. NO. 31715



LAKE MANATEE DAM TAINTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

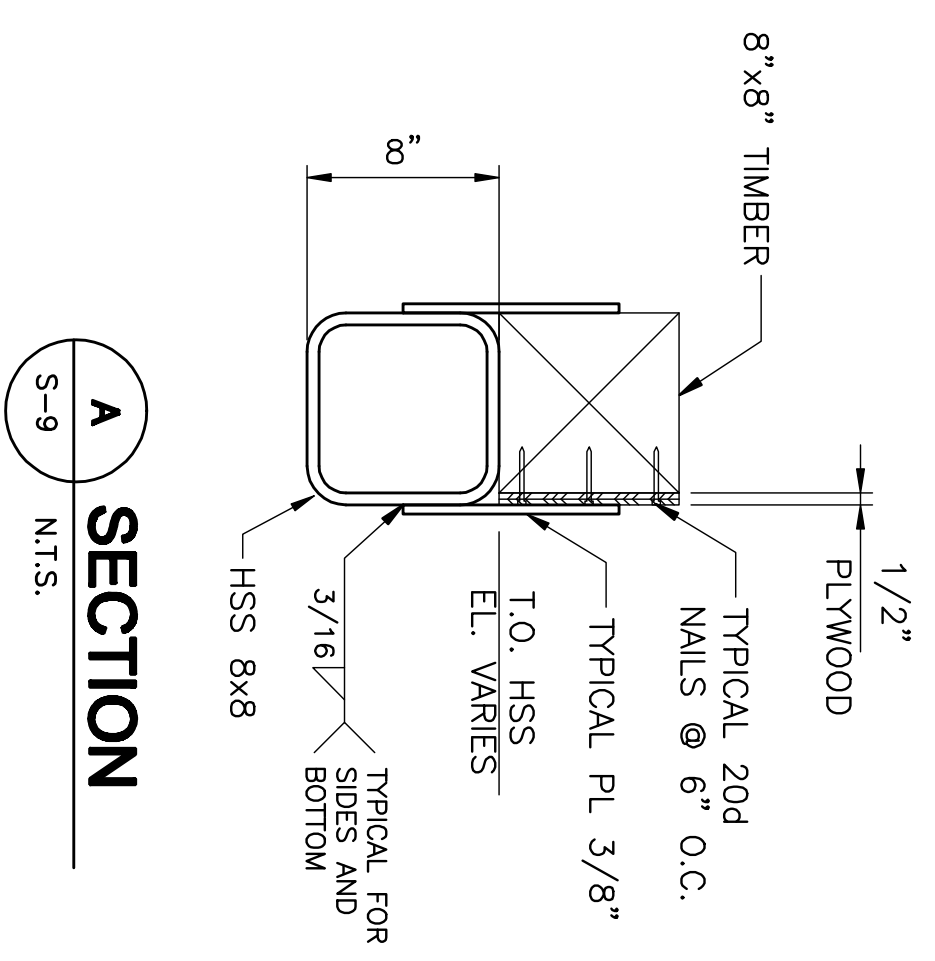
STOP LOG SUPPORT FRAMING

PROJECT STATUS
 BID SET
S-8



1
S-9
N.T.S.

DETAIL



A
S-9
N.T.S.

SECTION

URS
 7650 West Courtney Campbell Causeway
 Suite 700 Florida 33607
 Phone: (813) 286-1771 Fax: (813) 286-6587
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER
 12008609
 PM: D. WILCOX
 ENG: W.N. HAUSHER
 DRW: E.J. CHAVERAT
 DATE:
 September 15, 2009

WILLIAM N. HAUSHER
 FLORIDA P.E. NO. 37715



LAKE MANATEE DAM TAINTER GATES
 FOR
 MANATEE COUNTY GOVERNMENT
 MANATEE COUNTY, FLORIDA

STOP LOG SUPPORT DETAILS

PROJECT STATUS
 BID SET
S-9