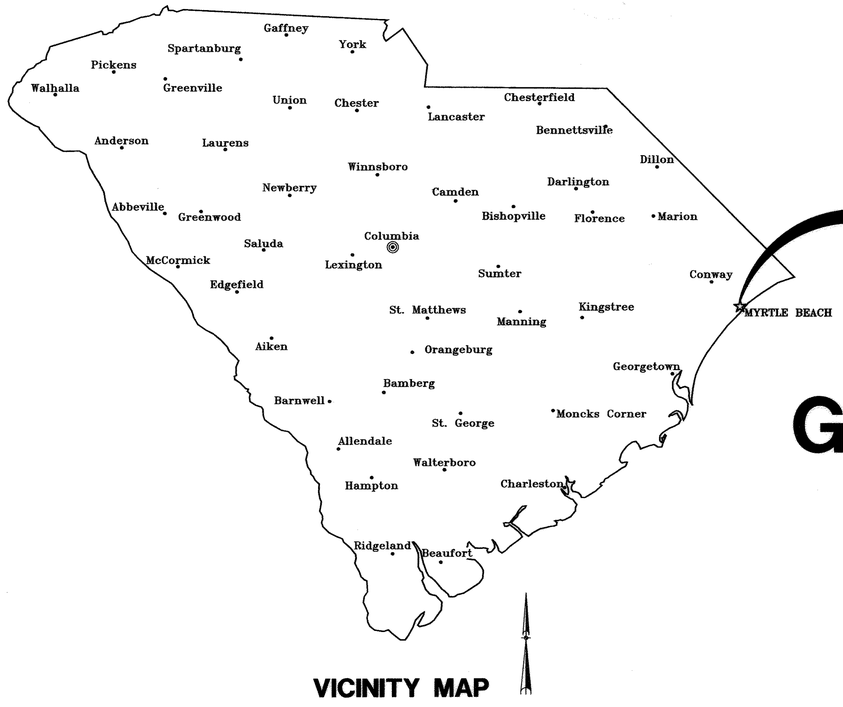
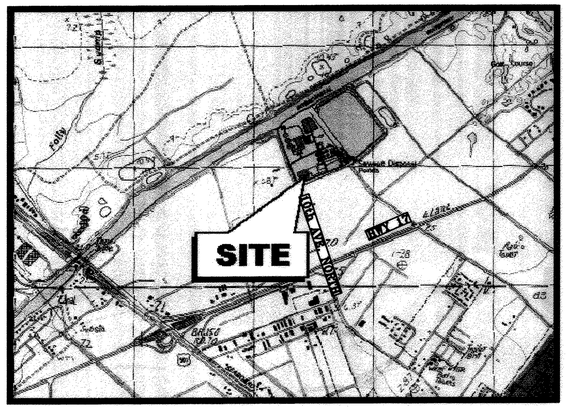


PROJECT SITE

VICINITY MAP

22.4 MGD
EXPANSION/UPGRADE
FOR
GSWSA/MYRTLE BEACH WWTP

HORRY COUNTY, SOUTH CAROLINA



LOCATION MAP
SCALE: NOT TO SCALE

51-011-001/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

SOUTH CAROLINA AUTHORIZATION NO. L.L.V.E. CERTIFICATE OF B.P. BARBER & ASSOCIATES, INC. No. C00020

DATE 11/24/11

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED DANIEL J. HUGHES, JR. No. 22097

SEAL

SIGNATURE

BP Barber
Engineering • Experience • Excellence
4016 SALT POINTE PARKWAY
N. CHARLESTON, SC. 29405-8419
(843) 767-4602

NOVEMBER 2010

PROJECT NO.
06553

FILE NO.
C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\CIVIL\06553-CIV-RD.DWG 10/28/2010 1:26:14 PM

DRAWING INDEX

GENERAL

SHEET TITLE	SHEET NO.
DRAWING INDEX	G1
GENERAL CIVIL AND MECHANICAL LEGEND	G2
HYDRAULIC PROFILE	G3
HYDRAULIC PROFILE	G4

CIVIL

SHEET TITLE	SHEET NO.
OVERALL SITE PLAN	C1
DEMOLITION PLAN "B"	C2
STAKING, GRADING & EROSION CONTROL PLAN "A"	C3
STAKING, GRADING & EROSION CONTROL PLAN "B"	C4
PARTIAL STAKING, GRADING AND EROSION CONTROL PLAN "B"	C5
PIPING PLAN "A"	C6
PIPING PLAN "B"	C7
PIPING PLAN "C" PARTIAL PIPING PLANS	C8
NEW SAMPLE PUMP STATION PLAN & SECTION N3FM PROFILE	C9
PROFILES N14RAS	C10
PROFILES N30EFF	C11
EROSION CONTROL, GENERAL DETAILS & NOTES	C12
SITE DEVELOPMENT DETAILS	C13
SITE DEVELOPMENT DETAILS	C14

DEMOLITION

SHEET TITLE	SHEET NO.
INFLUENT PUMP STATION PLAN	X1
MODIFICATIONS TO INFLUENT DISTRIBUTION CHAMBER PLAN & SECTION	X2
MODIFICATIONS TO METER VAULT PLAN & SECTION	X3
MODIFICATIONS TO CLARIFIER DISTRIBUTION CHAMBER #6 PLANS & SECTION	X4
MODIFICATIONS TO RETURN SLUDGE PUMP STATION PLAN & SECTION	X4A
EFFLUENT PUMPS DEMOLITION PLAN	X5
EFFLUENT PUMPS DEMOLITION SECTIONS	X6

STRUCTURAL

SHEET TITLE	SHEET NO.
INFLUENT PUMP STATION MODIFICATIONS PLAN	S1
INFLUENT PUMP STATION MODIFICATIONS SECTIONS	S2
INFLUENT PUMP STATION MODIFICATIONS REINFORCING	S3
NEW VALVE VAULT NO. 1 PLANS & SECTION	S4
NEW SECONDARY CLARIFIER #6 PLAN,SECTION & DETAIL	S5
NEW SECONDARY CLARIFIER #6 SECTIONS	S6
NEW SECONDARY CLARIFIER #6 SECTIONS	S7
NEW METER VAULT #4 PLANS & SECTION	S8
NEW METER VAULT #5 PLANS & SECTION	S9
NEW EFFLUENT PUMP BASES PLANS & SECTION	S10
NEW MONORAIL CRANE AT PROCESS CENTER PLAN & SECTIONS	S10A
NEW VALVE VAULT NO. 2 PLANS & SECTION	S11
MISCELLANEOUS DETAILS	S12
MISCELLANEOUS DETAILS	S13
MISCELLANEOUS CONCRETE DETAILS	S14

PROCESS

SHEET TITLE	SHEET NO.
INFLUENT PUMP STATION MODIFICATIONS PLAN	D1
INFLUENT PUMP STATION MODIFICATIONS SECTION & DETAILS	D2
NEW GRIT WASHING EQUIPMENT PLANS	D3
NEW GRIT WASHING EQUIPMENT SECTIONS	D4
NEW BAR SCREEN PLAN, SECTIONS & DETAIL	D5
MODIFICATIONS TO METER VAULT NEW VALVE VAULT NO. 1 PLAN & SECTION	D6
MODIFICATIONS TO INFLUENT DISTRIBUTION CHAMBER PLAN & SECTION	D7
MODIFICATIONS TO RETURN SLUDGE PUMP STATION PLAN & SECTION	D8
MODIFICATIONS TO INTERMEDIATE PUMP STATION PLAN	D9
MODIFICATIONS TO INTERMEDIATE PUMP STATION PLAN, SECTIONS & DETAIL	D10
MODIFICATIONS TO INTERMEDIATE PUMP STATION SECTION	D11
NEW SECONDARY CLARIFIER #6 PLAN	D12
NEW SECONDARY CLARIFIER #6 SECTION	D13
NEW SECONDARY CLARIFIER #6 SECTIONS	D14
NEW SECONDARY CLARIFIER #6 SECTIONS & DETAILS	D15
NEW SECONDARY CLARIFIER #6 PLAN, SECTION & DETAILS	D16
MODIFICATIONS TO CLARIFIER DISTRIBUTION CHAMBER NO. 6 PLANS & SECTION	D17
NEW METER VAULTS #4 & #5 PLANS, SECTION & DETAIL	D18
NEW EFFLUENT PUMPS PLAN	D19
NEW EFFLUENT PUMPS PARTIAL PIPING PLAN	D19A
NEW EFFLUENT PUMPS SECTIONS	D20
NEW EFFLUENT PUMPS SECTION & SCHEMATIC	D21
NEW VALVE VAULT NO. 2 PLAN & SECTION	D22
MISCELLANEOUS DETAILS	D23
MISCELLANEOUS DETAILS	D24
DISTRIBUTION CHAMBER NO. 5 IMPROVEMENTS	D24A
MISCELLANEOUS DETAILS	D25

ELECTRICAL

SHEET TITLE	SHEET NO.
ELECTRICAL GENERAL NOTES AND LEGEND	E1
ELECTRICAL SITE PLAN "A"	E2
ELECTRICAL SITE PLAN "B"	E3
INFLUENT PUMP STATION ELECTRICAL PLAN	E4
NEW BAR SCREEN AND VALVE VAULT #1 – ELECTRICAL PLANS	E5
NEW GRIT WASHERS ELECTRICAL PLAN	E6
MODIFICATIONS TO RETURN SLUDGE PUMP STATION ELECTRICAL PLAN	E7
MODIFICATIONS TO INTERMEDIATE PUMP STATION ELECTRICAL PLAN	E8
NEW SECONDARY CLARIFIER #6 ELECTRICAL PLAN	E9
NEW METER VAULTS #4 & #5 AND VALVE VAULT #2 ELECTRICAL PLANS	E10
EXISTING EFFLUENT PUMPS ELECTRICAL DEMOLITION PLAN	E11
NEW EFFLUENT PUMPS ELECTRICAL PLAN	E12
ONE-LINE DIAGRAMS	E13
SCHEDULES AND DETAILS	E14

51-011-002/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS: PROJECT ENG: M.A.B | DESIGNED BY: M.A.B | DRAWN BY: J.E.B | CHECKED BY: D.H. | APPROVED: M.A.B

SOUTH CAROLINA NOT VALID WITHOUT SIGNATURE B. P. BARBER & ASSOCIATES, INC. No. C00020 CERTIFICATE OF DATE 12/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL T. JR. No. 22067 LICENSED SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: DRAWING INDEX | DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	G1 OF 4
REF. 1731	
PROJECT NO. 06553	

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-G1-IND.DWG 10/28/2010 1:28:47 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-G2-RD.DWG 10/28/2010 12:26:28 PM

GENERAL SYMBOLS

- EXISTING BUILDING
- EXISTING ASPHALT/CONCRETE PAVEMENT
- NEW ASPHALT PAVEMENT
- RESURFACE ASPHALT PAVEMENT
- COQUINA SURFACE
- EXISTING STRUCTURE
- NEW STRUCTURE
- EXISTING SIDEWALK
- NEW SIDEWALK
- EXISTING RETAINING WALL
- NEW RETAINING WALL
- S849.42 W686.00 — COORDINATE LOCATION
- + 189.2 — EXISTING SPOT ELEVATION
- x 189.45 — NEW SPOT ELEVATION
- —189— — — — EXISTING CONTOUR
- — — 189 — — NEW CONTOUR
- P.P. — EXISTING POWER POLE
- P.P. — NEW POWER POLE
- L.P. — EXISTING LIGHT POLE
- NEW LIGHT POLE (TWO LIGHT FIXTURE)
- NEW LIGHT POLE (FOUR LIGHT FIXTURE)
- E.M.H. — EXISTING ELECTRICAL MANHOLE
- M.H. — EXISTING MANHOLE
- M.H. — NEW MANHOLE
- D.I. — EXISTING DROP INLET
- D.I. — NEW DROP INLET
- J.B. — EXISTING JUNCTION BOX
- J.B. — NEW JUNCTION BOX
- H.W. — EXISTING HEAD WALL
- H.W. — NEW HEAD WALL
- EXISTING FENCE

GENERAL SYMBOLS (CONT.)

- CONTROL POINT
- FH — EXISTING FIRE HYDRANT
- FH — NEW FIRE HYDRANT
- YH — EXISTING YARD HYDRANT
- YH — NEW YARD HYDRANT
- CO — EXISTING CLEAN OUT
- CO — NEW CLEAN OUT
- EXISTING YARD PIPING
- NEW YARD PIPING
- SILT FENCE
- EXISTING TREE LINE
- CLEARING LIMITS
- PROPERTY LINE
- OHP — POWER LINE (OVERHEAD)
- UGP — POWER LINE (UNDERGROUND)
- TELEPHONE LINE
- EXISTING DITCH LINE
- TOP OF DITCH (EXISTING)

DETAIL REFERENCES

1 / M3 — DETAIL NUMBER; SHEET WHERE DETAIL APPEARS

DETAIL 1 / M2 — DETAIL NUMBER; SHEET WHERE DETAIL IS NOTED
SCALE: 1/4" = 1'-0"

OPH — USED TO INDICATE THAT DETAIL SHOWN IS OPPOSITE HAND.

SECTION REFERENCES

A / M6 — SECTION LETTER; SHEET WHERE SECTION APPEARS

SECTION A / M6 — SECTION LETTER; SHEET WHERE SECTION IS CUT
SCALE: 1/4" = 1'-0"

OPH — USED TO INDICATE THAT SECTION SHOWN IS OPPOSITE HAND.

MATERIALS

- EARTH OR GRADE
- GRANULAR FILL (ROCK/GRAVEL)
- CONCRETE
- CMU (CONCRETE MASONRY UNIT)
- BRICK MASONRY
- CHECKERED PLATE
- STEEL
- BAR GRATING
- GROUT FILL
- RIGID INSULATION

PIPING

EXISTING — NEW

N | 6 | DWS
- N (NEW) / E (EXISTING)
- 6 — LINE SIZE
- DWS — PIPE IDENTIFIER

IDENTIFIER	DESCRIPTION
CW	COOLING WATER
AIR	AIR
CL	CHLORINE
CLS	CHLORINE SOLUTION
DWS	DEWATERED SLUDGE
DGSL	DIGESTED SLUDGE
DRN	DRAIN
DRSL	DRIED SLUDGE
DUCT	DUCT
EFF	EFFLUENT
FC	FERRIC CHLORIDE
LSD	LIME SOLUTION
LA	LIQUID ALUM
LPA	LOW PRESSURE AIR
MXL	MIXED LIQUOR
NaOCl	SODIUM HYPOCHLORITE
NG	NATURAL GAS
NPW	NONPOTABLE WATER
OVF	OVERFLOW
PIN	PLANT INFLUENT
PIN	PLANT INFLUENT
PLI	POLYMER
POS	POLYMER SOLUTION
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RCP	RECIRCULATED POLYMER
REC	RECIRCULATED CHLORINE
RD	ROOF DRAIN
SAN	SANITARY SEWER
SBS	SODIUM BISULFITE SOLUTION
SCW	SCUM WASTE
SE	SECONDARY EFFLUENT

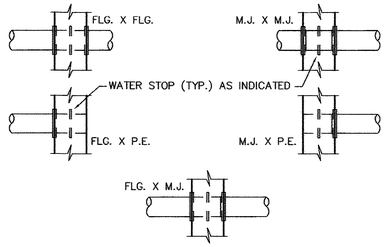
PIPING (CONT.)

IDENTIFIER	DESCRIPTION
SLF	SLUDGE FEED
SPFM	SUMP PUMP FORCE MAIN
SLG	SLUDGE
SD	STORM DRAIN
SMPL	SAMPLE LINE
SN	SUPERNATE
SPFM	SUMP PUMP FORCE MAIN
THR	THICKENED RETURN
TS	THICKENED SLUDGE
UDR	UNDER DRAIN
VNT	VENT
WAS	WASTE ACTIVATED SLUDGE

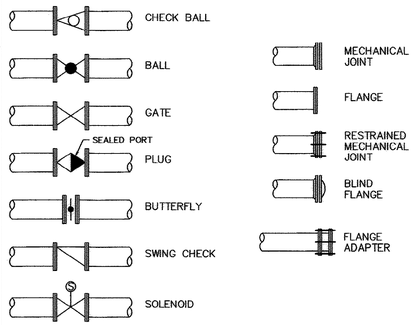
VALVE, GATE AND DAMPER ACTUATOR SYMBOLS

- E — ELECTRIC
- P — PNEUMATIC
- S — SOLENOID
- HW — MANUAL HANDWHEEL
- HW/EB — MANUAL HANDWHEEL W/EXTENDED BONNET
- MANUAL CHAINWHEEL
- MANUAL LEVER
- N — MANUAL OPERATING NUT

WALL PIPES



VALVES AND FITTING ENDS



GENERAL NOTES:

1. EXISTING ELEVATIONS TAKEN FROM DRAWINGS PREPARED BY PRC CONSOER TOWNSEND CONSULTING ENGINEERS. VERIFY ELEVATIONS PRIOR TO CONSTRUCTION.
2. EXISTING ELEVATIONS TAKEN FROM DRAWINGS PREPARED BY BP BARER & ASSOCIATES, "IMPROVEMENTS AND EXPANSION FOR THE WATER RECLAMATION FACILITY PHASE I", DATED SEPTEMBER 2003 AND MARKED AS RECORD DRAWINGS."
3. VIDEO TAPE ENTIRE SITE – SPECIFICALLY ASPHALT PAVING, PRIOR TO CONSTRUCTION.
4. PROVIDE PROPOSED SHUT PROCEDURES 30 DAYS IN ADVANCE. ENTIRE PLANT SHUT DOWN IS LIMITED TO 24 HOURS
5. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXACT LOCATIONS & ELEVATIONS OF EXISTING UTILITIES WITHIN THE PROJECT LIMITS. CONTACT PALMETTO UTILITY PROTECTION SERVICE 1–800–922–0983 PRIOR TO CONSTRUCTION.
6. ALL AREAS DISTURBED BY THE CONSTRUCTION OPERATIONS SHALL BE TEMPORALLY GRASSED.
7. CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID DAMAGE TO TREES AND THEIR ROOT SYSTEMS.
8. LOCATE, EXCAVATE AND EXPOSE ALL EXISTING LINES, IN ADVANCE OF TRENCHING OPERATIONS. THE CONTRACTOR SHALL ADJUST THE GRADE OF PIPE/CONDUIT WORK UP OR DOWN, OR SIDE TO SIDE TO MISS EXISTING UTILITIES AT NO ADDITIONAL COST TO THE OWNER, AS DIRECTED BY FIELD ENGINEER.
9. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE WORKMANLIKE REPAIR OF ANY DAMAGE DONE TO ANY OF THE EXISTING UTILITIES IN THE EXECUTION OF HIS WORK UNDER THIS SECTION.
10. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND BE PREPARED TO ADEQUATELY CARE FOR AND SAFEGUARD HIMSELF AND THE OWNER FROM DAMAGE.
11. HOLD POWER POLES AS REQUIRED AT NO ADDITIONAL COST TO OWNER.
12. CONTRACTOR IS RESPONSIBLE FOR RESETTING ANY PROPERTY CORNERS DISTURBED DURING CONSTRUCTION.
13. WORKING HOURS ARE MONDAY – FRIDAY 7:00 TO 5:30.
14. SURVEY BASED UPON 1929 N.A.G.V.
15. ALL BOLTS, NUTS, WASHERS TO BE 316L STAINLESS STEEL UNLESS OTHERWISE SPECIFIED.
16. INSPECTION TESTING SHALL BE PAID BY OWNER.
17. CUT AND REPLACE ASPHALT / CONCRETE FOR ALL NEW UTILITY INSTALLATIONS.

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

51-011-003/82

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA NOTIFICATION CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. 000300 — DATE: 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL H. HUNT, JR. LICENSED No. 22097 — SIGNATURE

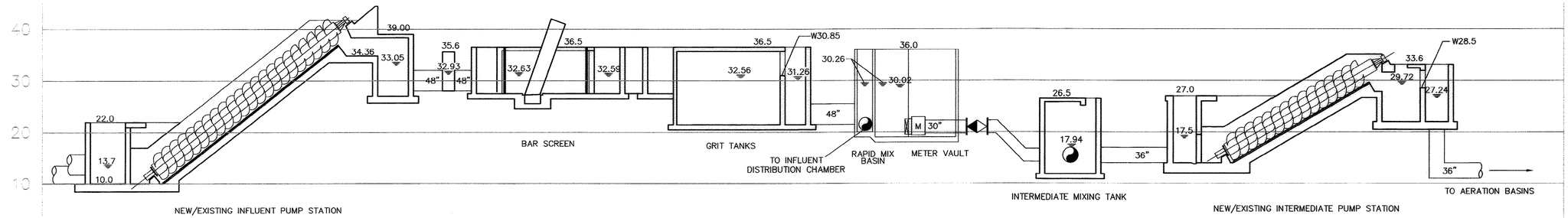
B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

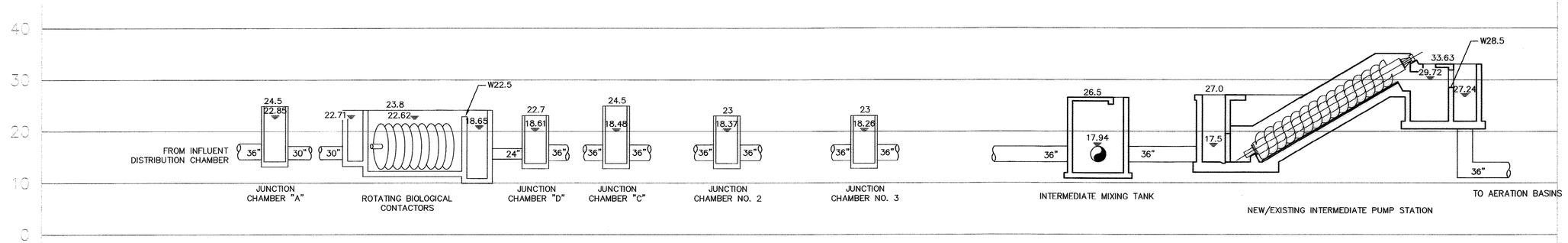
SHEET TITLE: GENERAL CIVIL AND MECHANICAL LEGEND
DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	G2
OF	4

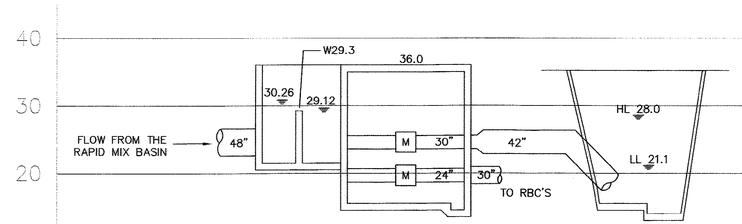
FILE NO. C1–22–03





BASIS FOR HYDRAULICS	
PROCESS UNIT	PEAK FLOW
INFLUENT PUMP STATION	51.5 MGD
HEADWORKS	51.5 MGD
LAGOON ROUTE	21.5 MGD
RBC ROUTE	7.5 MGD
AERATION BASIN ROUTE	22.5 MGD
INTERMEDIATE PUMP STATION	30 MGD
RAS	19.5 MGD
AERATION BASINS	49.5 MGD
SECONDARY CLARIFIERS 1 & 2	7 MGD
SECONDARY CLARIFIERS 3 & 4	18.5 MGD
SECONDARY CLARIFIERS 5 & 6	24 MGD
EFFLUENT PUMP STATION	30 MGD*

*22.4 MGD TO WACCAMAW RIVER, 7.6 MGD TO LAGOON.



51-011-004/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT.

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	EEB
CHECKED BY:	JDH
APPROVED:	MAB

SOUTH CAROLINA NOTARIZATION
B.P. BARBER & ASSOCIATES, INC.
No. C00020
CERTIFICATE OF AUTHORIZATION
DATE 12/8/11

SOUTH CAROLINA PROFESSIONAL ENGINEER
No. 22057
DANIEL J. HUGGINS, JR.
REGISTERED
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
HYDRAULIC PROFILE

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD
EXPANSION/UPGRADE
FOR
GSWSA
MYRTLE BEACH
WWTP

.DWC NAME	00149C12
N.B. NO.	
REF.	1731
PROJECT NO.	06553

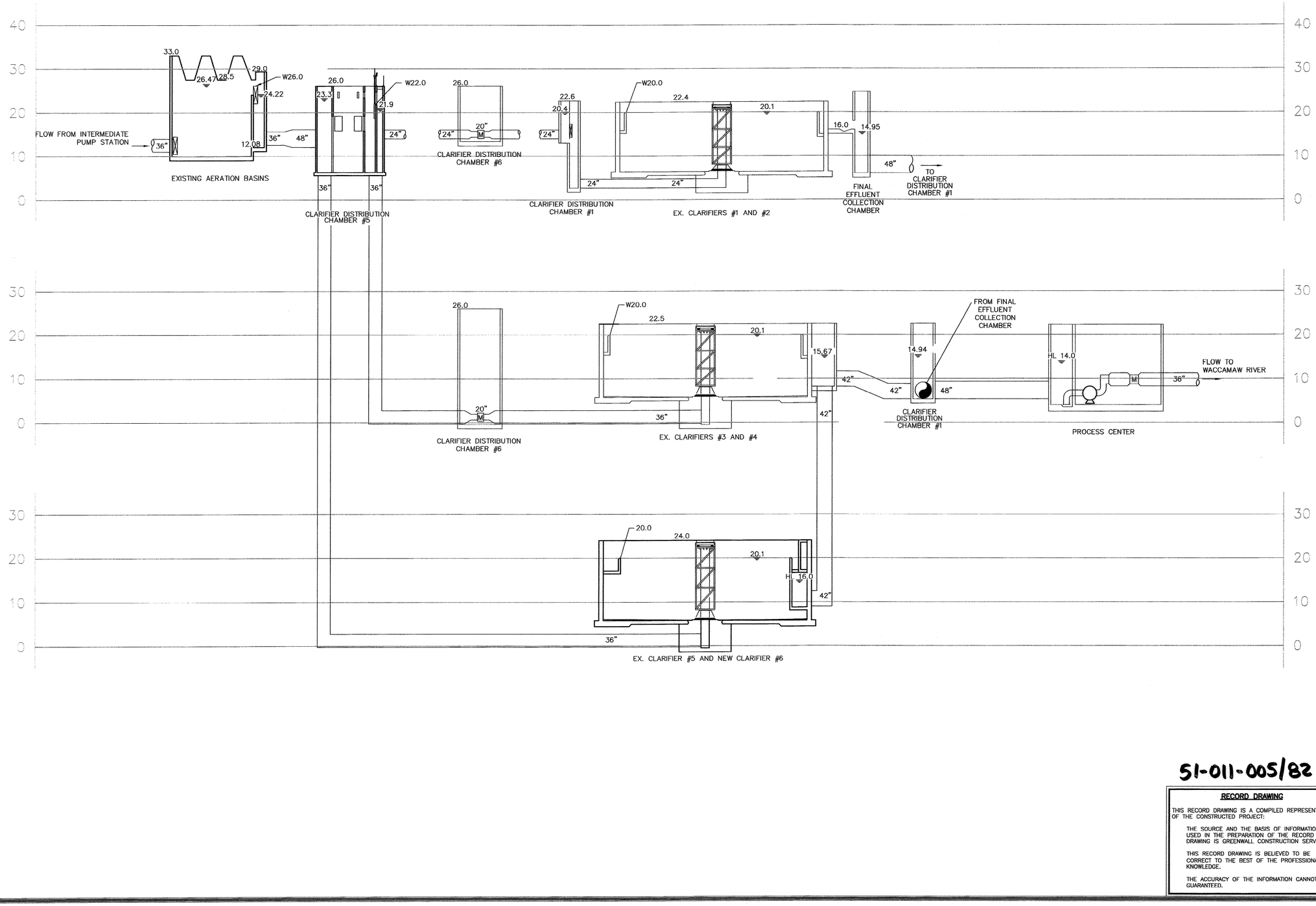
SHEET G3 OF 4

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-G3-04-RD.DWG 12/08/2010 1:30:07 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN, AND IS NOT TO BE USED ON ANY OTHER PROJECT.



51-011-005/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DHJ
APPROVED:	MAB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — B.P. BARBER & ASSOCIATES, INC. No. C00209 — DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER — LICENSED — No. 22097 — DANIEL H. JOHNSON JR. — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS — PLANNERS — SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: HYDRAULIC PROFILE

DATE: NOV 2010 | SCALE: AS SHOWN

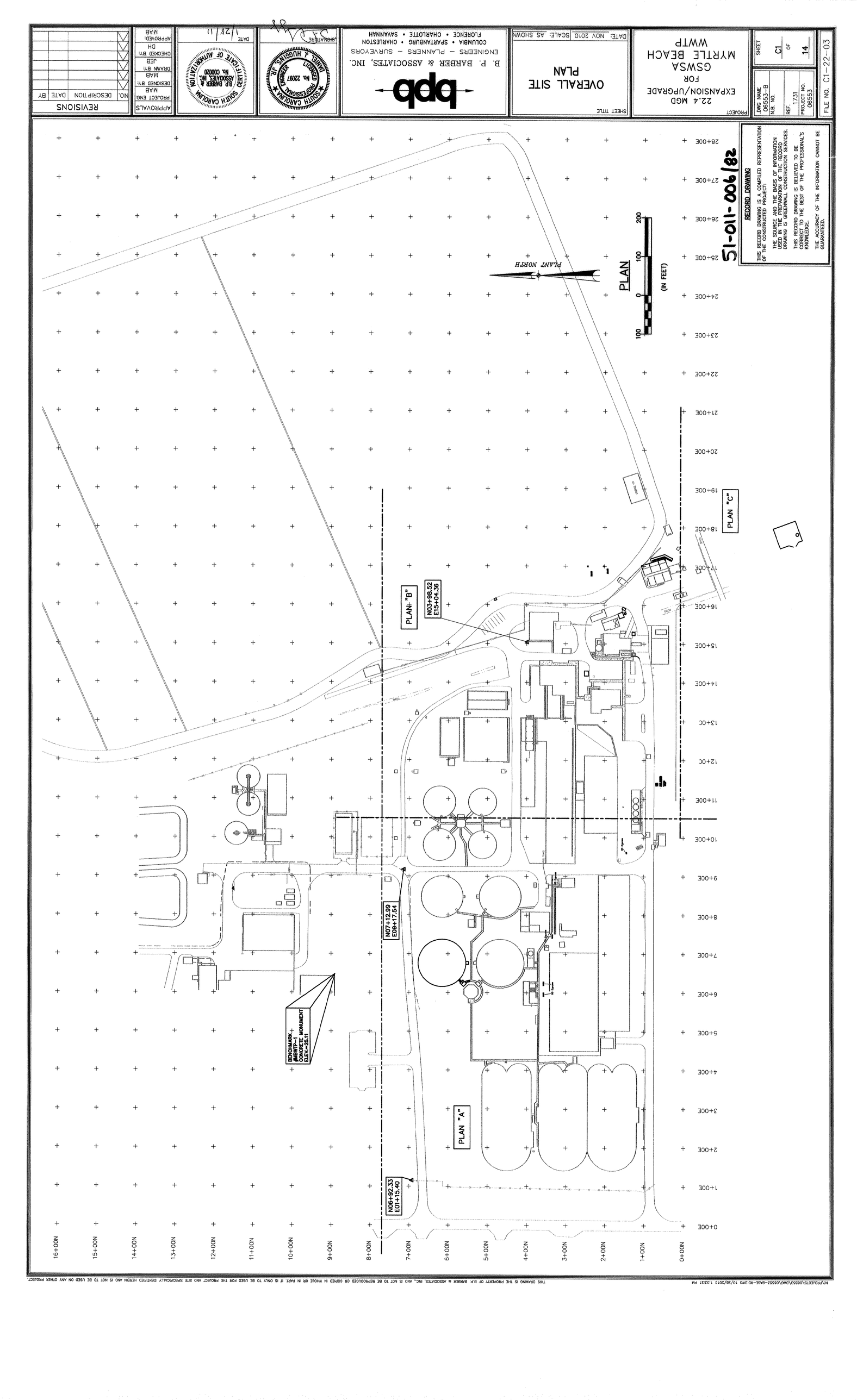
PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

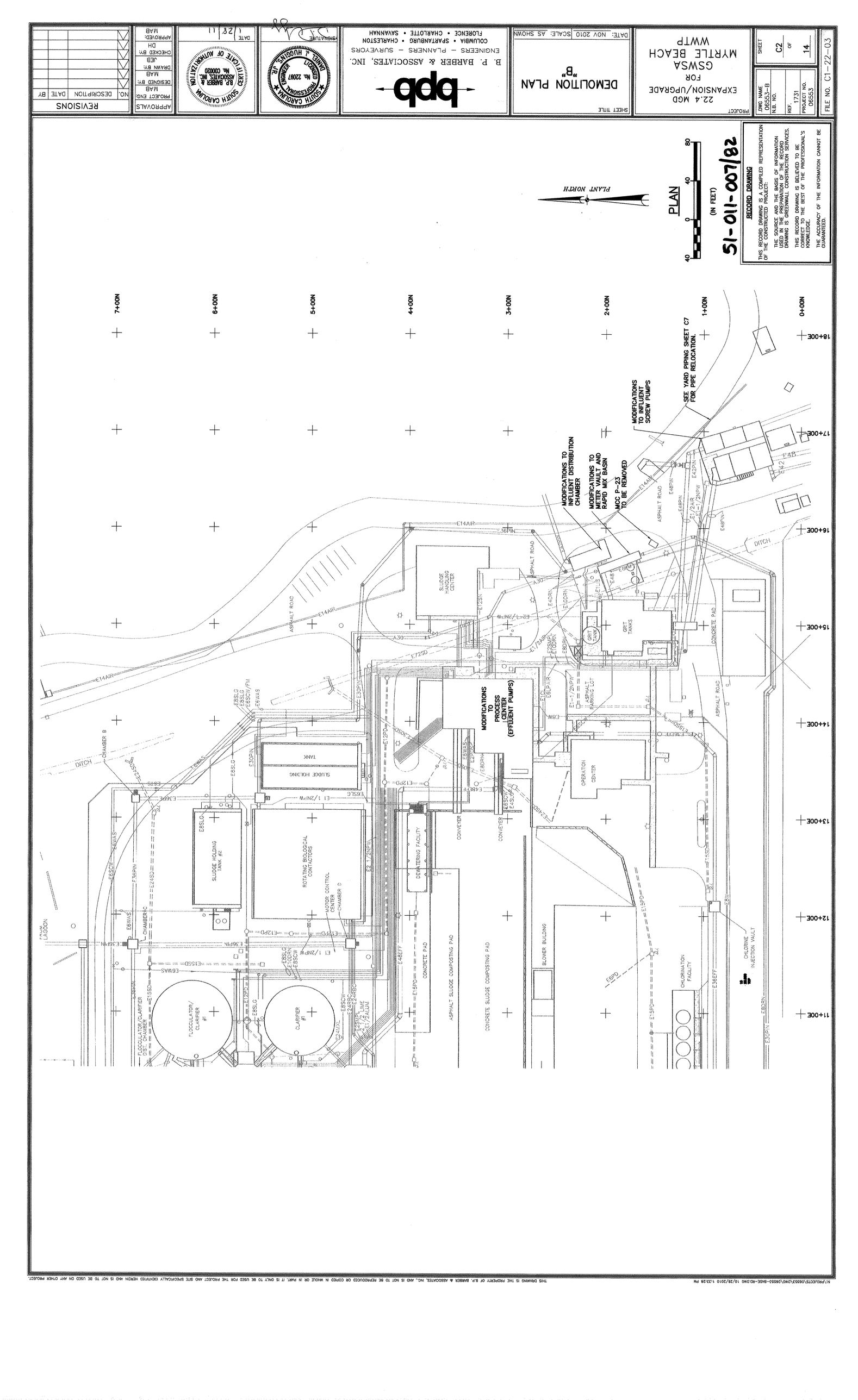
.DWG NAME	00149C12
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET G4 OF 4

FILE NO. C1-22-03

N:\PROJECTS\06553\DWG\06553-03-G4-RD.DWG 10/28/2010 1:30:22 PM


REVISIONS
NO. DESCRIPTION DATE BY
PROJECT ENG: MAB
DESIGNED BY: MAB
DRAWN BY: JEB
CHECKED BY: DH
APPROVED: MAB
APPROVALS
DATE 1/27/11
SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION R.P. BARBER & ASSOCIATES, INC. No. C00020
DANIEL J. HUDGINS, JR. No. 22097 REGISTERED PROFESSIONAL ENGINEER SOUTH CAROLINA
SIGNATURE
B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH
bpb
SHEET TITLE
OVERALL SITE PLAN
DATE: NOV 2010 SCALE: AS SHOWN
PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP
SHEET C1 OF 14
DWG NAME 06553-B
N.B. NO.
REF 1731
PROJECT NO. 06553
FILE NO. C1-22-03
RECORD DRAWING
THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT.
THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THIS RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.
THIS RECORD DRAWING IS RELIED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.
THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.
51-011-006/82
PLANT NORTH
PLAN
200 100 0 100
(IN FEET)
PLAN "A"
PLAN "B"
PLAN "C"
N03+98.52 E15+04.36
N07+12.99 E09+17.54
N06+92.33 E01+15.40
BENCHMARK = CONCRETE MONUMENT ELEV=25.11
28+00E
27+00E
26+00E
25+00E
24+00E
23+00E
22+00E
21+00E
20+00E
19+00E
18+00E
17+00E
16+00E
15+00E
14+00E
13+00E
12+00E
11+00E
10+00E
9+00E
8+00E
7+00E
6+00E
5+00E
4+00E
3+00E
2+00E
1+00E
0+00E
16+00N
15+00N
14+00N
13+00N
12+00N
11+00N
10+00N
9+00N
8+00N
7+00N
6+00N
5+00N
4+00N
3+00N
2+00N
1+00N
0+00N
THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY DESCRIBED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT
N:\PROJECTS\06553\DWG\06553-BASE-RD.DWG 10/28/2010 1:33:21 PM



PROJECT	
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP	
SHEET TITLE	DEMOLITION PLAN "B"
DATE: NOV 2010	SCALE: AS SHOWN

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SIGNATURE
SOUTH CAROLINA PROFESSIONAL ENGINEER
JAMES L. HUGGINS, JR.
No. 22057

DATE 12/8/11
CERTIFICATE OF AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC.
No. C000220
SOUTH CAROLINA

APPROVALS	
PROJECT ENG.	MAB
DESIGNED BY:	MAB
DRAWN BY:	JCB
CHECKED BY:	DH
APPROVED:	MAB

REVISIONS		
NO.	DESCRIPTION	DATE	BY

DWG NAME	06553-B
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	C2
OF	14
FILE NO.	C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.
N:\PROJECTS\06553\DWG\06553-BASE-RD.DWG 10/28/2010 1:33:28 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-BASE-R0.DWG 10/28/2010 1:33:41 PM

N06+15.00
E06+76.24

N05+60.25
E06+15.48

N05+52.48
E06+23.26

NEW SECONDARY CLARIFIER #6

NEW METER VAULT #4

SILT FENCE (TYP)

MODIFICATIONS TO CLARIFIER DISTRIBUTION CHAMBER #6

MODIFICATIONS TO DISTRIBUTION CHAMBER #5

MODIFICATIONS TO INTERMEDIATE PUMP STATION

MODIFICATIONS TO RETURN SLUDGE PUMPING STATION

AERATION BASIN #3

AERATION BASIN #2

AERATION BASIN #1

SECONDARY CLARIFIER #5

CLARIFIER #4

CLARIFIER #3

CLARIFIER #2

FLOCCULATOR/ CLARIFIER #2

METER VAULT #2

LIME FEED EQUIPMENT

FUEL TANKS

FUEL

RETURN SLUDGE METER VAULT

DRAINAGE PUMP STATION

ASPHALT COMPOSTING PAD

CONCRETE COMPOSTING PAD

COMPOSTING SCREEN

BLOWER BUILDING

SLUDGE COMPOSTING BUILDING

SLUDGE COMPOSTING

VALVE BOX

WELL HOUSE

7+00N
6+00N
5+00N
4+00N
3+00N
2+00N
1+00N
0+00N

0+00E
1+00E
2+00E
3+00E
4+00E
5+00E
6+00E
7+00E
8+00E
9+00E

PLAN

40 0 40 80

(IN FEET)

PLANT NORTH

51-011-008/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG.	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA B.P. BARBER & ASSOCIATES, INC. No. COA0263 CERTIFICATE OF AUTHORIZATION

DATE 11/28/11

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER DANIEL H. HUGHEY, JR. No. 22097

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
STAKING, GRADING AND EROSION CONTROL PLAN "A"

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	06553-B
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	C3
OF	14

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-BASE-RD.DWG 10/28/2010 1:33:51 PM

CHAMBER #2
FLOCCULATOR/CLARIFIER DIST. CHAMBER
CHAMBER C
DITCH
E24SD
E15SD
FLOCCULATOR/ CLARIFIER #1
SLUDGE HOLDING TANK #2
6+00N
CLARIFIER #1
ROTATING BIOLOGICAL CONTACTORS
SLUDGE HOLDING TANK
N6TS
MOTOR CONTROL CENTER
CHAMBER D
5+00N
N12WAS
E10SD
E7SD
SLUDGE HANDLING CENTER
4+00N
E15PD
CONCRETE PAD
DEWATERING FACILITY
PAVED SLUDGE COMPOSTING PAD
MODIFICATIONS TO PROCESS CENTER
NEW METER VAULT #5
3+00N
BLOWER BUILDING
E24SD
OPERATION CENTER
GRIT CHAMBERS
GRIT TANKS
MODIFICATIONS TO INFLUENT DISTRIBUTION CHAMBER
MODIFICATIONS TO METER VAULT AND RAPID MIX BASIN
NEW VALVE VAULT NO. 1
NEW MCC P-23
SEE SHEET C5
2+00N
E15PD
CHLORINATION FACILITY
1+00N
E15SD
CHLORINE INJECTION POINT
SAMPLE POINT/ METER VAULT #3
VAULT
CHAMBER #1
MODIFICATIONS TO MECHANICAL SCREEN
NEW GRIT WASHING EQUIPMENT
GENERATOR BUILDING
DITCH
GREASE PIT
MODIFICATIONS TO INFLUENT SCREW PUMPS
N14RAS
2/C12 SILT FENCE (TYP)
11+00E
12+00E
13+00E
14+00E
15+00E
16+00E
17+00E
18+00E

PLAN
40 0 40 80
(IN FEET)

PLANT NORTH

51-011-009/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS
PROJECT ENG: MAB
DESIGNED BY: MAB
DRAWN BY: JEB
CHECKED BY: DH
APPROVED: MAB

SOUTH CAROLINA NOTIFICATION CERTIFICATE OF B.P. BARBER & ASSOCIATES, INC. No. 00000
DATE 11/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. HUSCHKA JR. No. 22997 (PRINTED)
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
STAKING, GRADING AND EROSION "B" CONTROL PLAN

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

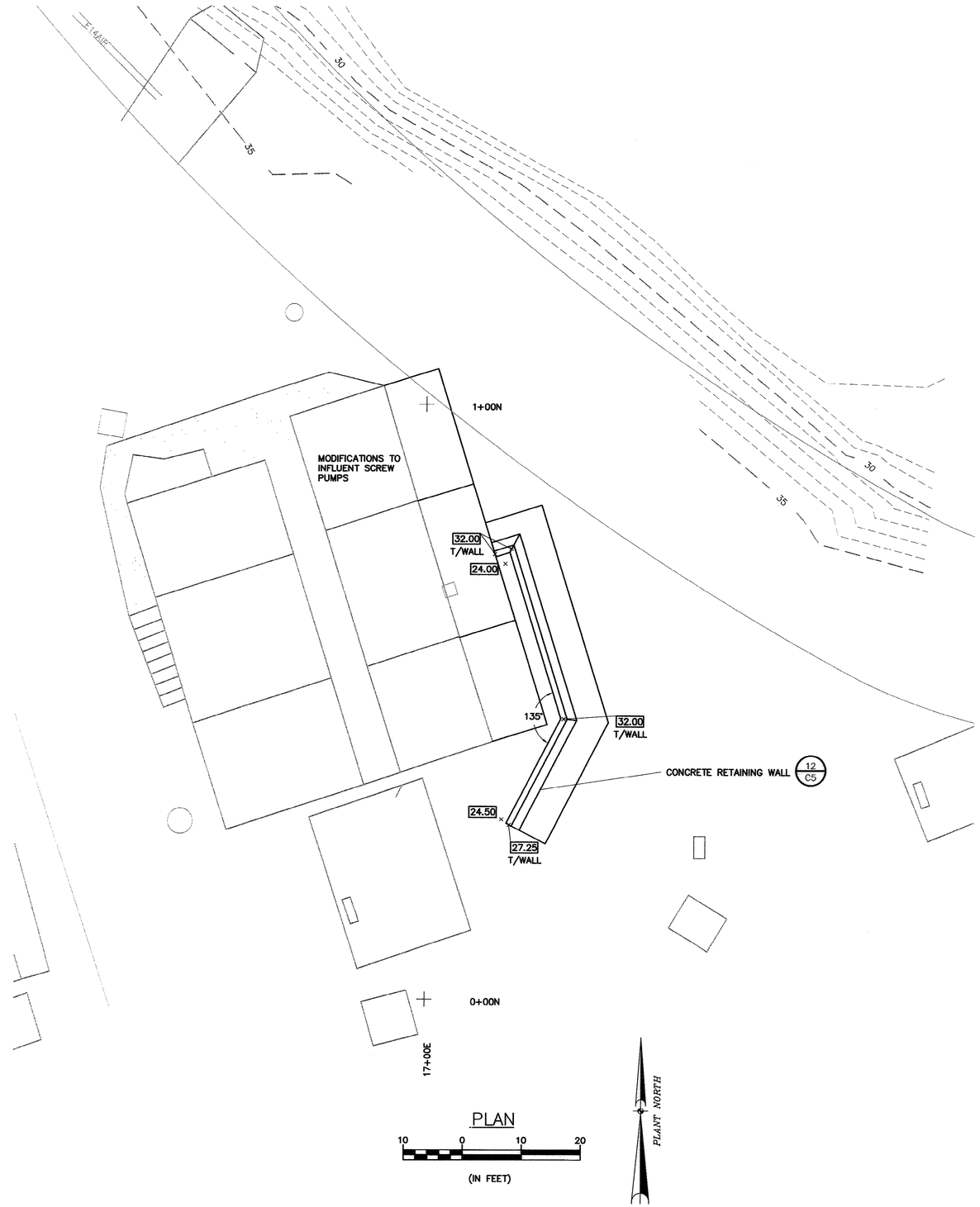
.DWG NAME 06553-B
N.B. NO.
REF. 1731
PROJECT NO. 06553

SHEET C4 OF 14

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

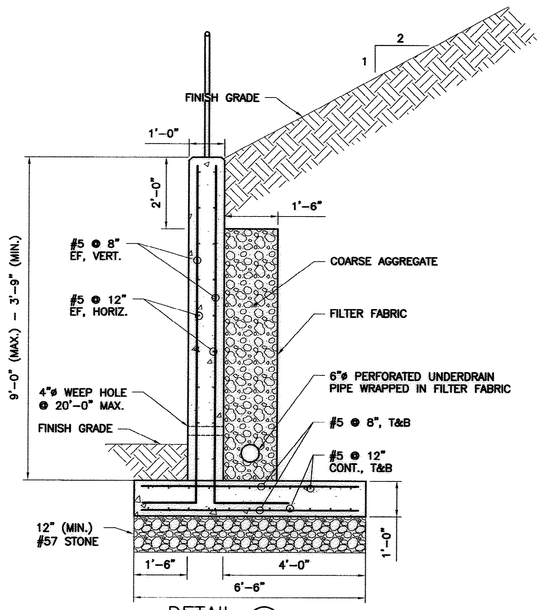
N:\PROJECTS\06553\DWG\06553-BASE-RD.DWG 10/28/2010 1:34:01 PM



PLAN

10 0 10 20

(IN FEET)



DETAIL (12 / C5)

CONCRETE RETAINING WALL

SCALE: NONE

51-011-00/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG: M.A.B
DESIGNED BY: M.A.B
DRAWN BY: J.E.B
CHECKED BY: D.H.
APPROVED: M.A.B

SOUTH CAROLINA — B.P. BARBER & ASSOCIATES, INC. — No. COA0260 — CERTIFICATE OF AUTHORIZATION

DATE 11/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER — DANIEL H. HUGHES JR — No. 22097 — REGISTERED

SIGNATURE

bpb

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
PARTIAL STAKING, GRADING AND EROSION CONTROL PLAN "B"

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
06553-B	C5
N.B. NO.	OF
REF. 1731	14
PROJECT NO. 06553	

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-BASE-RD.DWG 10/28/2010 1:34:11 PM

RELOCATE FOR TRAILER FEED

NEW METER VAULT #4

N36MXL
REMOVE E36PLUG AND TIE TO E36MXL

NEW SECONDARY CLARIFIER #6
SEE SHEET D12

C.O. N6SCW

N20RAS
N12DRN

MODIFICATIONS TO DISTRIBUTION CHAMBER #5

N2DRN

TIE N6SCW TO EXIST. MANHOLE

MODIFICATIONS TO CLARIFIER DISTRIBUTION CHAMBER #6

END N4NAOCL & CAP

N4NAOCL

METER VAULT #2

N36EFF
REMOVE E36PLUG AND TIE TO SECONDARY CLARIFIER #5 DISCHARGE EFFLUENT BOX.

I.E. 1.67

I.E. 2.33

N05+15.49
E06+65.08

N12DRN
N20RAS

N05+18.15
E06+68.08

SEE SHEET D9

INTERMEDIATE PUMP STATION MODIFICATIONS

TRANSFORMER

STA 1+22
1-ARV W/ MH

RAS METER VAULT #1

N14RAS

MODIFICATIONS TO RETURN SLUDGE PUMPING STATION

FUEL TANKS

COMPOSTING PAD

COMPOSTING SCREEN

BLOWER BUILDING

SLUDGE COMPOSTING BUILDING

STUB UP AND CAP 12" ABOVE GRADE

AERATION BASIN #3

AERATION BASIN #2

AERATION BASIN #1

SECONDARY CLARIFIER #5

CLARIFIER #4

CLARIFIER #3

FLOCCULATOR/ CLARIFIER #2

CLARIFIER #2

7+00N
6+00N
5+00N
4+00N
3+00N
2+00N
1+00N

0+00E
1+00E
2+00E
3+00E
4+00E
5+00E
6+00E
7+00E
8+00E
9+00E
10+00E

PLAN
40 0 40 80
(IN FEET)

PLANT NORTH

51-011-011/62

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS			
PROJECT ENG: MAB	DESIGNED BY: MAB	DRAWN BY: JEB	CHECKED BY: DH
APPROVED: MAB			

SOUTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 00000 CERTIFICATE OF AUTHORIZATION ELI BARBER & ASSOCIATES, INC. DATE 12/11

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22097 DANIEL H. HUGHES, JR. SIGNATURE

bpb
B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: PIPING PLAN "A" — DATE: NOV. 2010 — SCALE: AS SHOWN

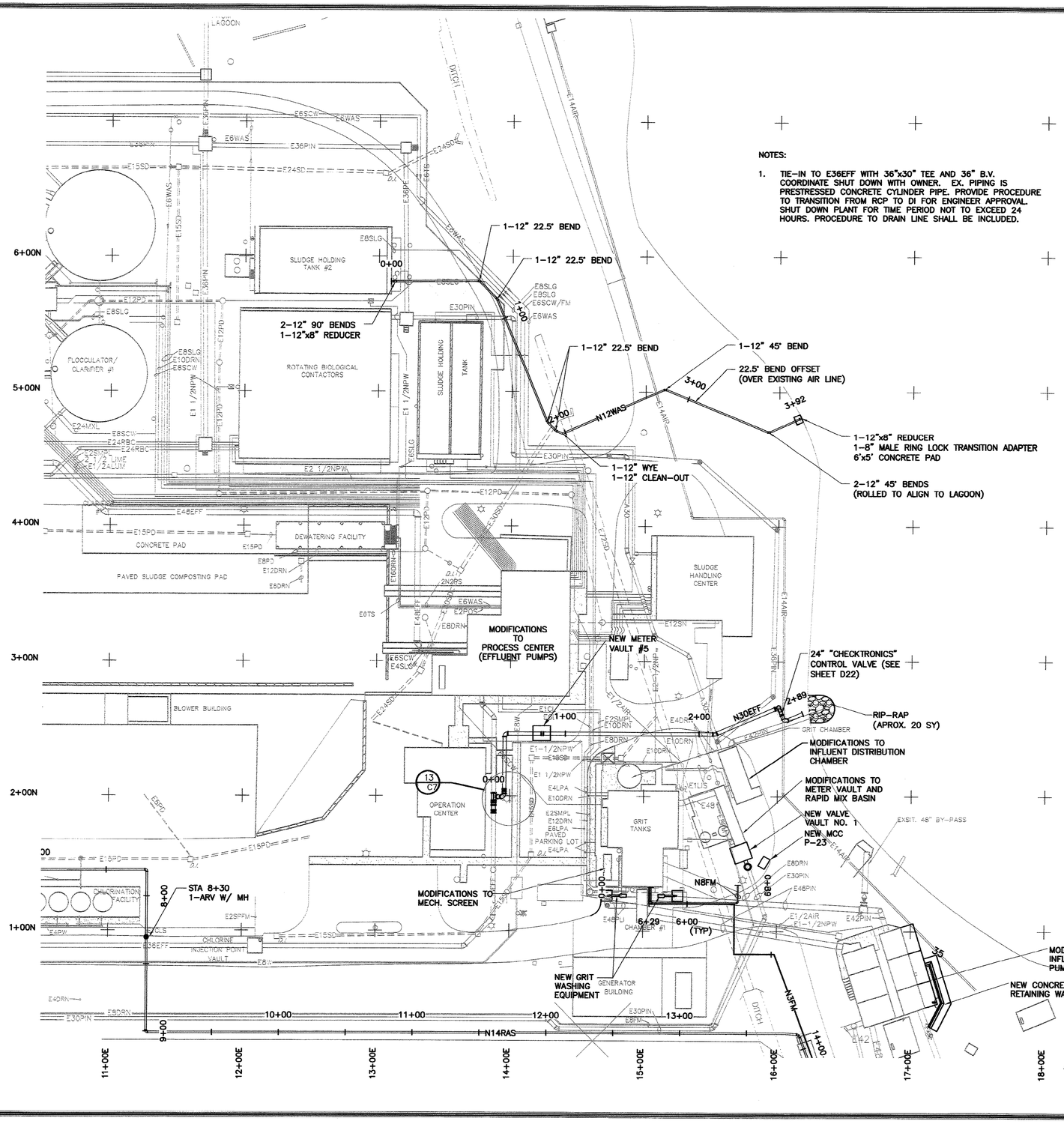
PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

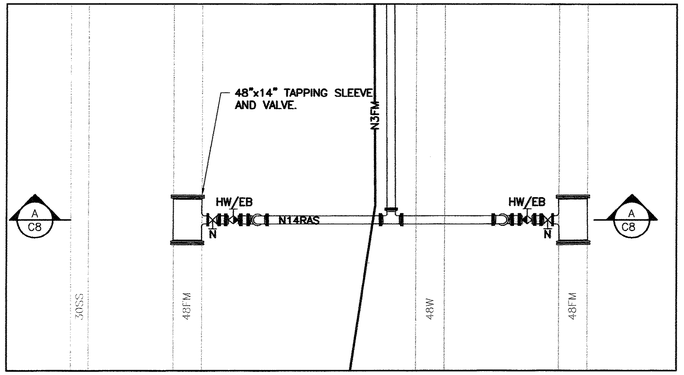
.DWG NAME	SHEET
06553-B	C6
N.B. NO.	OF
REF. 1731	14
PROJECT NO. 06553	

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-BASE-RD.DWG 10/29/2010 1:34:21 PM

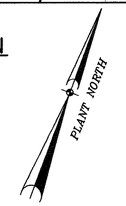

LAGOON
DITCH
E14AIR
E6SCW
E6WAS
E36PIN
E24SDR
E15SD
E36PIF
E6WAS
E8SLG
SLUDGE HOLDING TANK #2
E12PD
E8SLG
E8SCW
E10DRN
E12PD
E1 1/2NPW
FLOCCULATOR/ CLARIFIER #1
E24MXL
E8SCW
E24RBC
E24WSL
E1/2ALIME
E1/2ALSW
E48EFF
E15PD
CONCRETE PAD
DEWATERING FACILITY
E8PD
E12DRN
E8DRN
PAVED SLUDGE COMPOSTING PAD
E16RR
E6WAS
E2PDS
E8DRN
E6TS
E6SCW
E4SLG
E8SLG
E8SLG
E8SLG
E6SCW/FM
E6WAS
E30PIN
E30PIN
E12PD
E12PD
E30PIN
E12SN
E12PD
E12PD
E30PIN
E8PD
E14AIR
E14AIR
E14AIR



PARTIAL PIPING PLAN
N14RAS TIE–IN

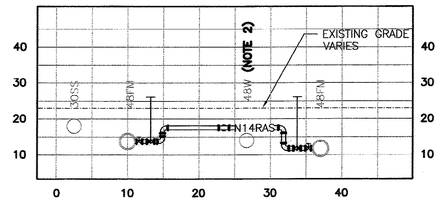
10 0 10 20

(IN FEET)



NOTES:

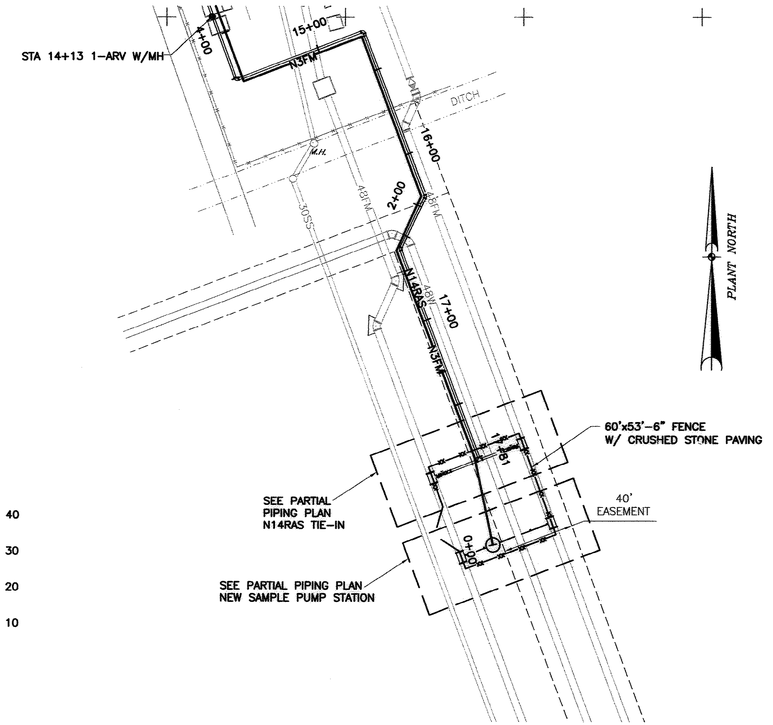
1. CONTRACTOR TO VERIFY TIE–IN TO 48FM IS LOCATED ON RECENTLY REPLACED DUCTILE IRON PIPE.
2. PROVIDE MIN. 12" VERTICAL SEPARATION BETWEEN N14RAS AND 48W.



SECTION A C8

20 0 20 40

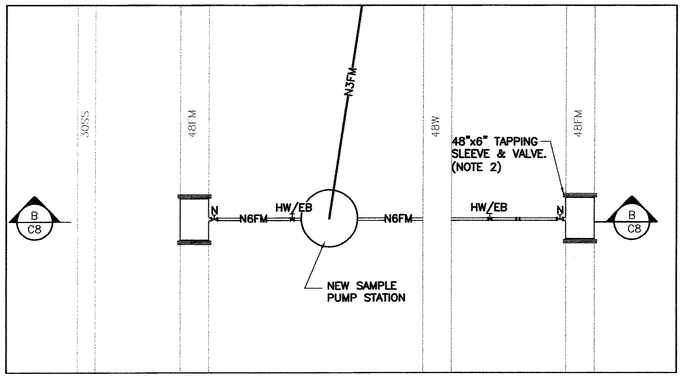
(IN FEET)



PLAN

40 0 40 80

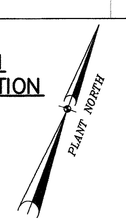
(IN FEET)



PARTIAL PIPING PLAN
NEW SAMPLE PUMP STATION

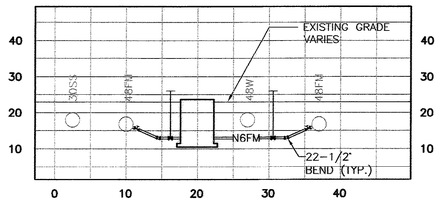
10 0 10 20

(IN FEET)



NOTES:

1. CONTRACTOR TO VERIFY TIE–IN TO 48FM IS LOCATED ON RECENTLY REPLACED DUCTILE IRON PIPE.



SECTION B C8

20 0 20 40

(IN FEET)

51-011-013/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG	M.AB
DESIGNED BY:	M.AB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	M.AB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C00020

DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. HUGHES JR. LICENSED No. 22097

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
PIPING PLAN "C" PARTIAL PIPING PLANS

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	06553–B
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET C8 OF 14

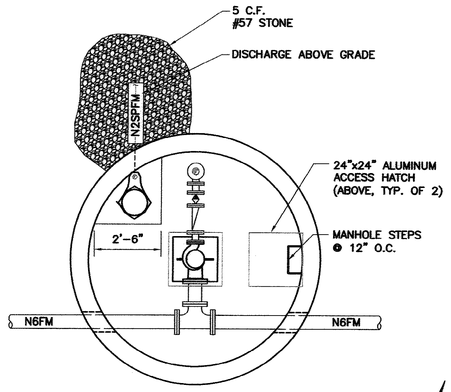
FILE NO. C1–22–03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

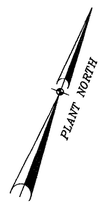
N:\PROJECTS\06553\DWG\06553-BASE-RD.DWG 10/28/2010 1:34:34 PM

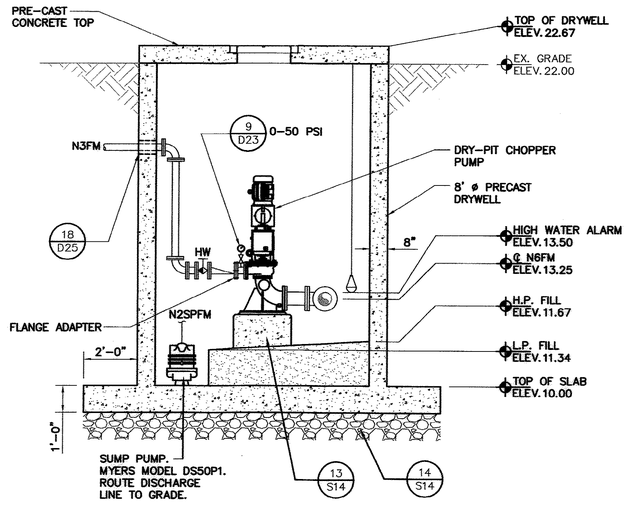
THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-BASE-R0.DWG 10/28/2010 1:34:48 PM



PLAN





SECTION

SAMPLE PUMP STATION

0 2 4

SCALE: 3/8" = 1'-0"

N3FM PROFILE

HORIZ. 40 0 40 80

VERT. 5 0 5 10

(IN FEET)

51-011-014/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG: MAB
DESIGNED BY: MAB
DRAWN BY: JEB
CHECKED BY: DH
APPROVED: MAB

SOUTH CAROLINA B.P. BARBER & ASSOCIATES, INC. No. C00820 CERTIFICATE OF AUTHORIZATION
DATE 12/8/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. HUGGINS JR. No. 22097 LICENSED
SIGNATURE

bpb

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

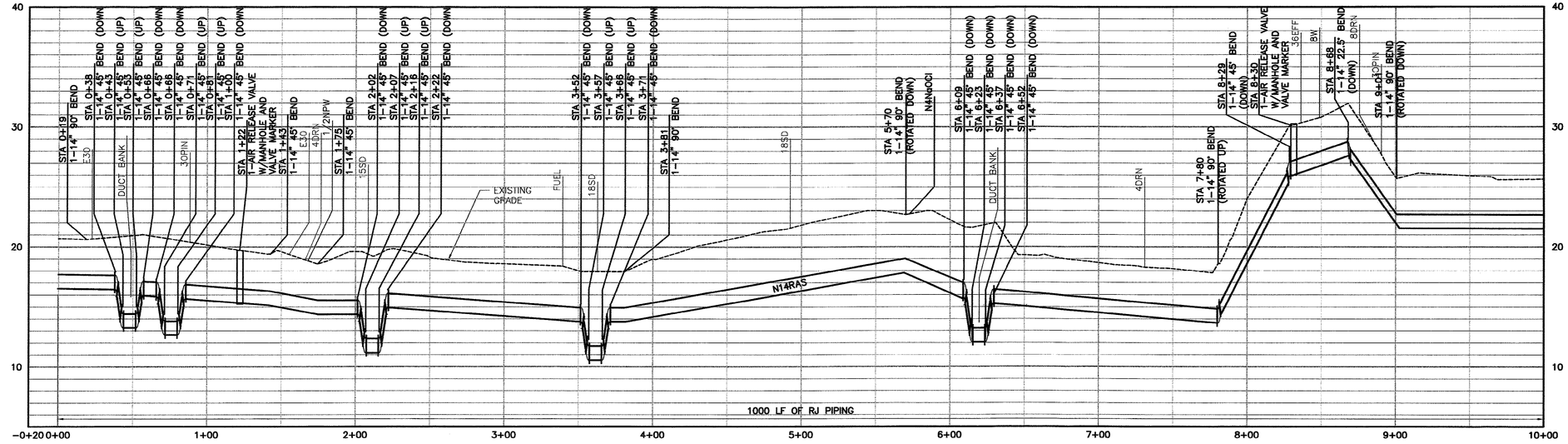
SHEET TITLE
NEW SAMPLE PUMP STATION PLAN & SECTION N3FM PROFILE

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

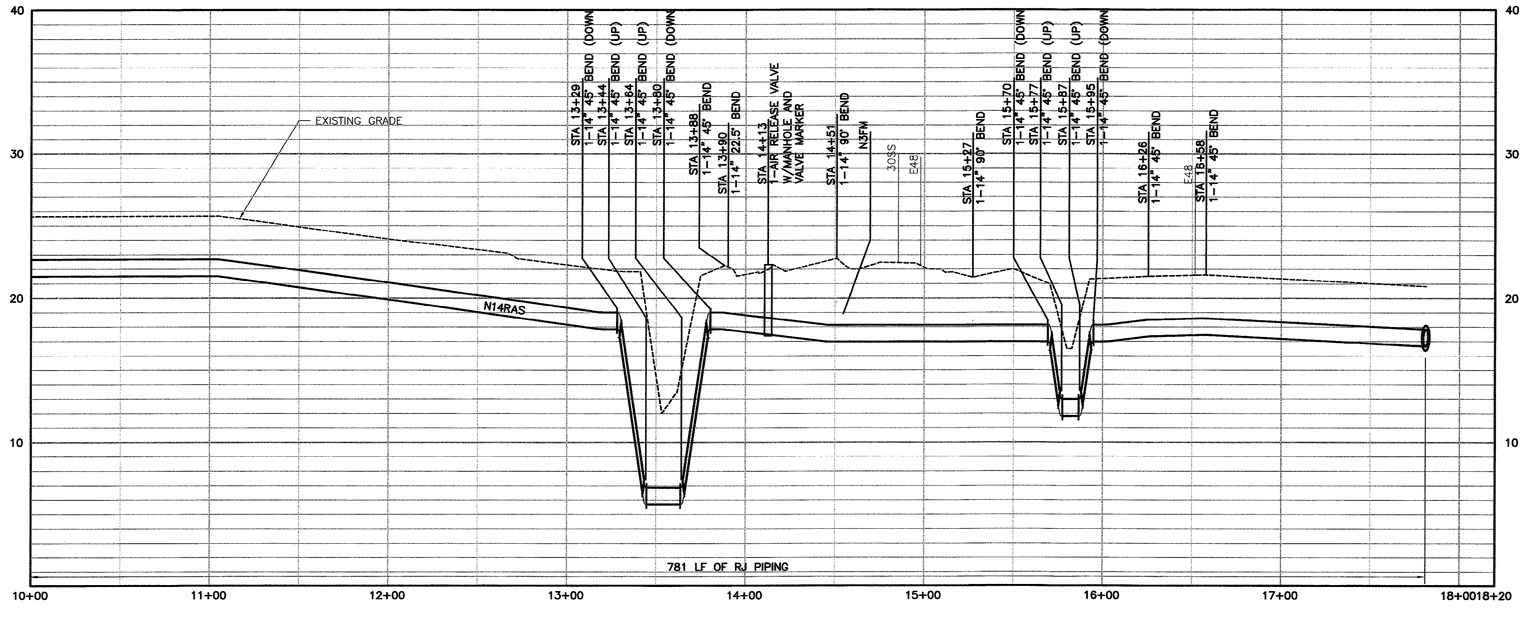
DWG NAME	SHEET
06553-B	C9
N.B. NO.	OF
REF. 1731	14
PROJECT NO. 06553	

FILE NO. C1-22-03



N14RAS PROFILE

HORIZ. 40 0 40 80
VERT. 5 0 5 10
(IN FEET)



N14RAS PROFILE

HORIZ. 40 0 40 80
VERT. 5 0 5 10
(IN FEET)

51-011-015/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	MAB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC. No. C00020
CERTIFICATE OF
DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. HUGHES, JR. LICENSED No. 22097
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS — PLANNERS — SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: PROFILES N14RAS
DATE: NOV 2010 SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	06553-B
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	C10
OF	14

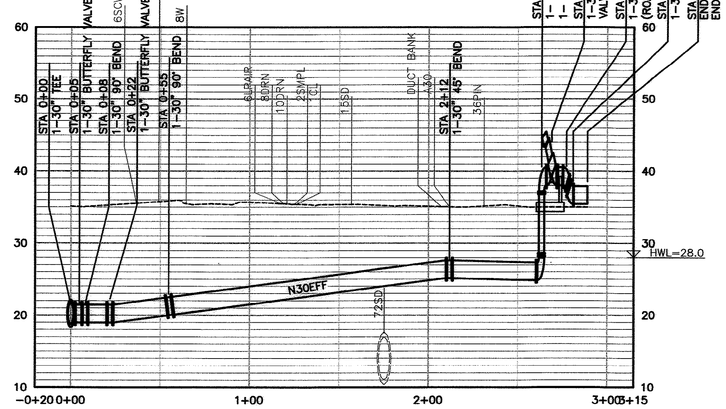
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-BASE-R0.DWG 10/28/2010 1:35:03 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-BASE-RD.DWG 10/28/2010 1:35:16 PM



N30EFF PROFILE

HORIZ. 40 0 40 80
VERT. 10 0 10 20
(IN FEET)

51-011-016/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DM
APPROVED:	MAB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C000220

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. MUSSINE, JR. LICENSED No. 22097

DATE 11/2/11

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: PROFILE N30EFF

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

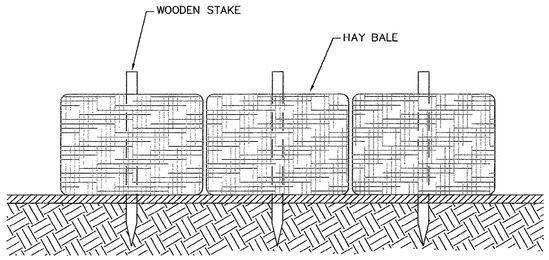
.DWG NAME	06553-B
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET C11 OF 14

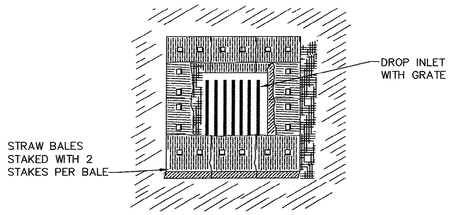
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

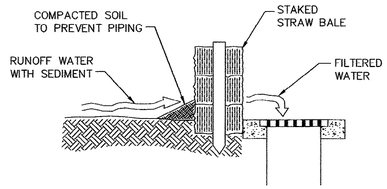
N:\PROJECTS\06553\DWG\06553-C12-RD.DWG 10/28/2010 1:44:20 PM



ELEVATION



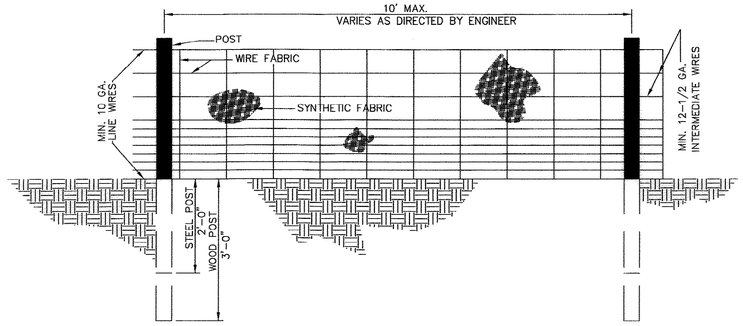
PLAN

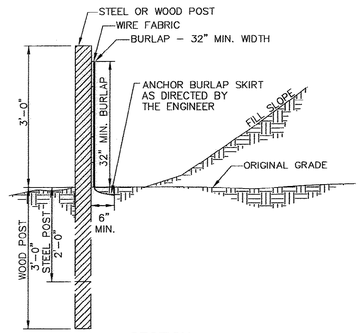


DETAIL (1 TYP)

STRAW BALE DROP INLET SEDIMENT FILTER

SCALE: NONE





SECTION

NOTES:

1. FENCE FABRIC SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
2. BURLAP SHALL BE 7-1/2 OZ. WEIGHT AND A MINIMUM OF 32" WIDTH. BURLAP SHALL BE FASTENED ADEQUATELY TO THE FABRIC AS DIRECTED BY THE ENGINEER.
3. STEEL POSTS SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
4. WOOD POSTS SHALL BE 6' TO 7' IN HEIGHT AND 3" TO 4" IN DIAMETER. WIRE FABRIC SHALL BE FASTENED TO WOODEN POST WITH NOT LESS THAN #9 WIRE STAPLES 1-1/2" LONG.
5. CONTRACTOR SHALL PERFORM INSPECTION AND MAINTENANCE OF SILT FENCES FOLLOWING ALL SIGNIFICANT RAINFALL EVENTS, INSURING FENCES ARE ERECT AND CLEAR, AND REPLACING ALL TORN FENCING.

DETAIL (2 TYP)

SILT FENCE WITH WIRE FABRIC DETAIL

SCALE: NONE

SEDIMENT AND EROSION CONTROL NOTES

1. ALL AREAS DISTURBED BY CONSTRUCTION NOT COVERED BY STRUCTURES OR PAVEMENT SHALL BE FINE-GRADED, GRASSED AND FERTILIZE IN ACCORDANCE WITH THE CONTRACT DOCUMENT SPECIFICATIONS.

   1A. PROVIDE SILT FENCING AROUND ALL PILES OF LOOSE EXCAVATED MATERIALS.

   1B. PROVIDE TEMPORARY GRASSING IN ACCORDANCE WITH THE SPECIFICATIONS.

3. PLACE SILT FENCE BARRIERS AT LOCATIONS SHOWN ON THE DRAWINGS AND AS REQUIRED BY SPECIFICATIONS. SILT BARRIERS SHALL BE MAINTAINED IN PLACE AND GOOD CONDITION UNTIL GRASSING IS ESTABLISHED.
4. ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDER DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PERCIPITATION DURING ANT 24-HOUR PERIOD. ALL SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION HAS BEEN OBTAINED. CONTRACTOR SHALL KEEP LOG BOOK OF ALL EROSION CONTROL MAINTENANCE AND INSPECTION ACTIVITIES.
4. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OE PERMANENTLY CEASED, UNLESS ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN 21 DAYS.
5. MAINTENANCE:

   PERIODICALLY AND AFTER EACH RAIN EVENT OF 1/2" OR MORE RAINFALL IN A 24 HOUR PERIOD CHECK EROSION CONTROL DEVICES AND CLEAN OR OTHERWISE REMOVE SILT BUILD-UP AS NECESSARY TO MAINTAIN THEM IN PROPER WORKING ORDER. MAINTAIN ON-SITE A LOG BOOK NOTING ALL INSPECTIONS OF EROSION CONTROL DEVICES. NOTE IN THE LOG THE DATES, CONDITION OF DEVICES AND CORRECTIVE ACTIONS TAKEN. THIS LOG SHALL BE MADE AVAILABLE FOR REVIEW UPON DEMAND TO THE OWNER, ENGINEER OR APPLICABLE REGULATORY AGENT.

6. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION.
7. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE TRACKING OF MUD ONTO THE PAVED ROADWAY FROM CONSTRUCTION AREAS. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.

51-011-017/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS
PROJECT ENG: MAB
DESIGNED BY: MAB
DRAWN BY: GMS
CHECKED BY: CDM
APPROVED: MAB

SOUTH CAROLINA AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC. No. 01000
CERTIFICATE OF
DATE 11/2/11

SOUTH CAROLINA PROFESSIONAL ENGINEER
LICENSED
DANIEL J. STATON, JR.
No. 22097
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS - PLANNERS - SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
EROSION CONTROL, GENERAL DETAILS, & NOTES

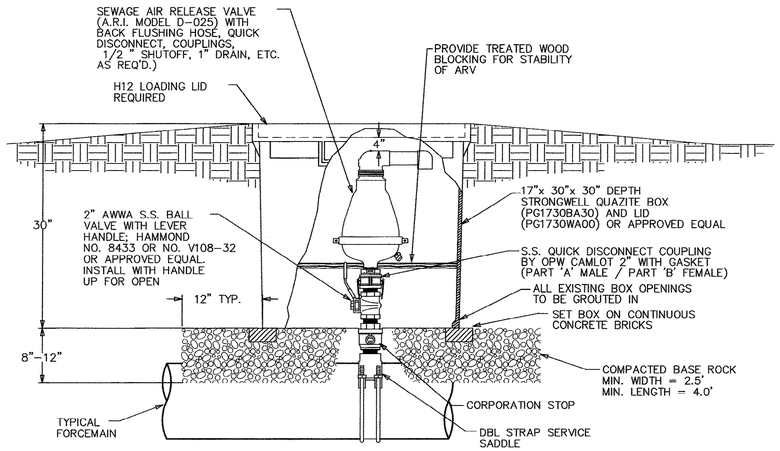
DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT
22.4 MGD
EXPANSION/UPGRADE
FOR
GSWSA
MYRTLE BEACH
WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

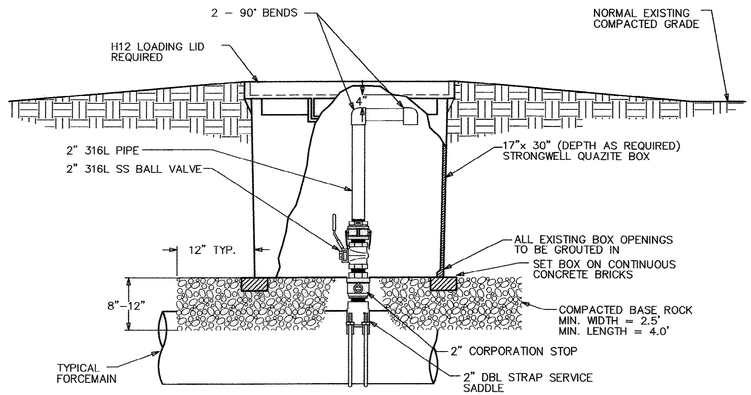
SHEET C12 OF 14

FILE NO. C1-22-03

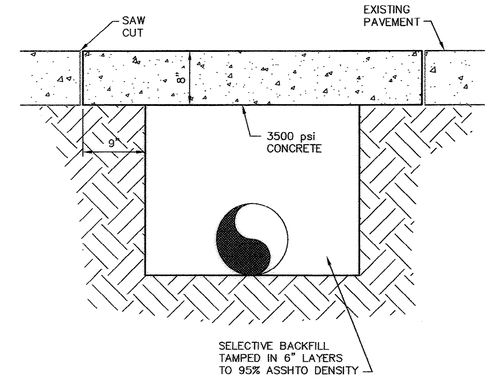


NOTES:
1) USE AN APPROVED JOINT COMPOUND ON ALL THREADED CONNECTIONS.
2) ROTATION & LOCATION OF BOX SETTING TO BE APPROVED BY THE INSPECTOR PRIOR TO INSTALLATION.
3) ARV ASSEMBLY SHOULD BE OFFSET TO ONE SIDE OF THE BOX AS SHOWN TO ALLOW EASIER ACCESS TO QUICK DISCONNECT AND BALL VALVE HANDLE.
4) 2" 316 S.S. NIPPLES SHALL BE USED IF NEEDED.

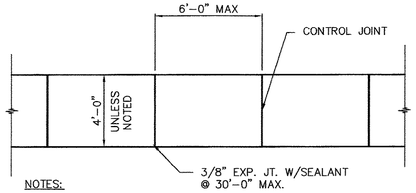
DETAIL
AIR RELEASE VALVE W/MANHOLE
NOT TO SCALE



DETAIL
MANUAL
AIR RELEASE VALVE ASSEMBLY
SCALE: NONE

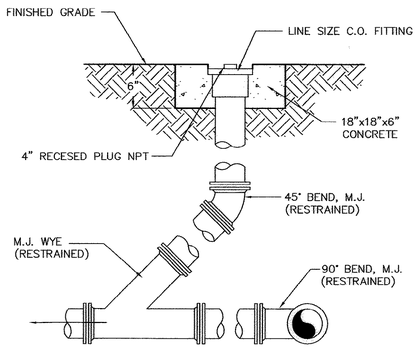


DETAIL
CONCRETE PAVEMENT REPLACEMENT
SCALE: NONE



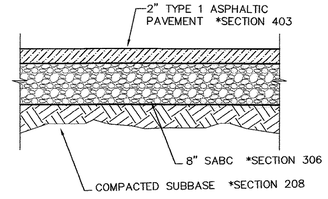
NOTES:
1. MIN. THICKNESS = 4".
2. PROVIDE EXPANSION JOINTS @ INTERSECTIONS OF WALKS AND WHERE WALK ABUTTS OTHER STRUCTURES OR AS SPECIFIED
3. 3000 PSI CONCRETE WITH FIBER REINFORCING AS SPECIFIED.
4. SIDEWALKS TO HAVE LIGHT BROOM FINISH.
5. ALL EDGES TO BE TOOLED.
6. CONTROL JOINTS TO BE TOOLED TO A MIN. DEPTH OF 1".

DETAIL 3 TYP
SIDEWALK
SCALE: NONE



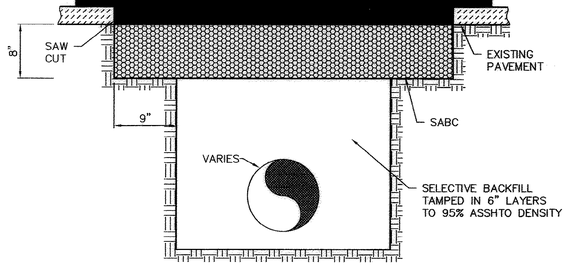
NOTE: INSTALL ADDITIONAL BENDS (NOT SHOWN) TO AVOID CONFLICT WITH NEIGHBORING PIPING.

DETAIL 5 TYP
PRESSURE CLEANOUT TO GRADE
SCALE: NONE



* REFER TO SCDOT STANDARD SPECS.

DETAIL 6 C5
NEW PAVED AREA CROSS SECTION
SCALE: NONE



DETAIL
PAVEMENT REPLACEMENT
SCALE:NONE

51-011-018/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG.	MAB
DESIGNED BY:	MAB
DRAWN BY:	JCS
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC. No. 000200
DATE 12/11

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED No. 22097 DANIEL J. GRISMER, JR.
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS - PLANNERS - SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: SITE DEVELOPMENT DETAILS
SCALE: AS SHOWN
DATE: NOV 2010

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	C13
OF	14

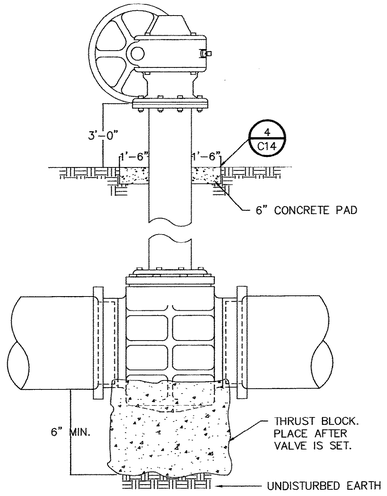
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF E.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-C13-C14-RD.DWG 10/29/2010 1:48:09 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

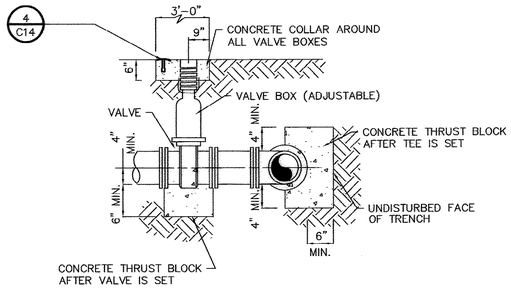
N:\PROJECTS\06553\DWG\06553-C13-C14-R0.DWG 10/28/2010 1:49:23 PM



DETAIL

BURIED PLUG VALVE WITH EXTENDED BONNET

SCALE: NONE



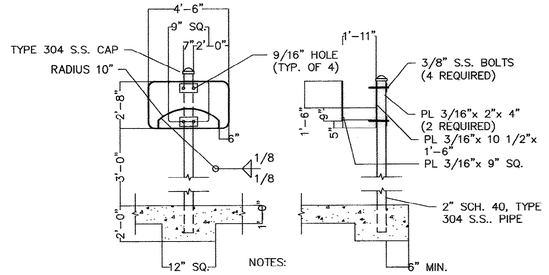
NOTE:

1.) ALL FITTINGS SHALL BE MECHANICAL JOINTS AT TEES, GATE VALVES & FIRE HYDRANTS WITH MEGALUGS.

DETAIL

VALVE & TEE SETTING

SCALE: NONE



NOTES:

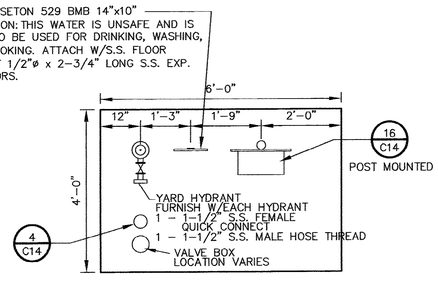
1. RACKS AND PLATES TO BE CONSTRUCTED OF 6061-T6 ALUMINUM ALLOY.
2. WHEN USED WITH YARD HYDRANT STATION, REFER TO CONCRETE PAD DIMENSIONS FOR YARD HYDRANT STATION DETAIL 11 SHEET C16.

POST MOUNT

DETAIL (16 TYP)

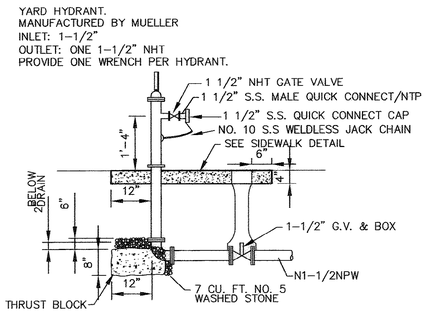
HOSE RACK

SCALE: NONE



NOTE:
HOSE RACK MOUNTING POST MAY BE EXTENDED UP 12" TO ALLOW ATTACHMENT OF SIGN ABOVE HOSE RACK RATHER THAN A SEPARATE SIGN MOUNTING POST.

PLAN

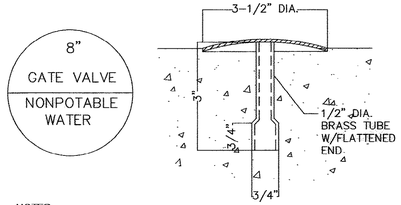


ELEVATION

DETAIL (13 TYP)

YARD HYDRANT STATION

SCALE: NONE



NOTES:

1. FACTORY STAMP USING 1/4" HIGH CHARACTERS. INDICATE VALVE SIZE AND TYPE ON UPPER HALF OF MARKER TOP. INDICATE EITHER POTABLE WATER OR NONPOTABLE WATER ON LOWER HALF OF MARKER TOP AS REQUIRED. SET MARKER IN 6" THICK CONCRETE PAD ADJACENT TO VALVE BOX.
2. PROVIDE ON ALL BURIED VALVES W/NUT OPERATORS

DETAIL (4 TYP)

BRASS IDENTIFICATION MARKER BURIED VALVES

SCALE: NONE

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS			
PROJECT ENG:	MAB	DESIGNED BY:	MAB
DRAWN BY:	EB	CHECKED BY:	DH
APPROVED:	MAB		

SOUTH CAROLINA AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C00000 CERTIFICATE OF

DATE 1/27/11

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22097 LICENSED DANIEL J. SMITH, JR.

SIGNATURE

bpb

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: SITE DEVELOPMENT DETAILS

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

51-011-019/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

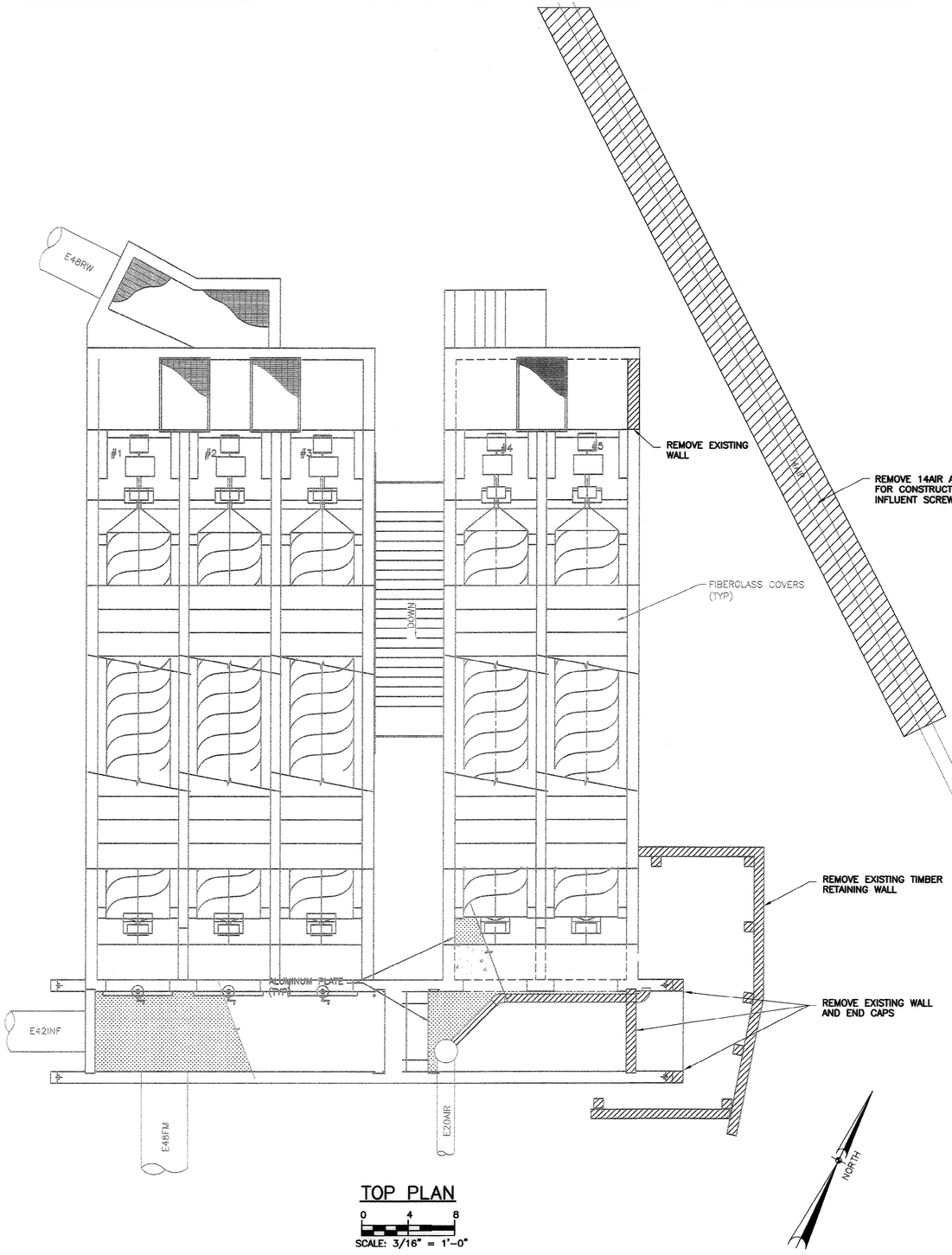
.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET C14 OF 14

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

H:\PROJECTS\06553\DWG\06553-Y1-X4-RD.DWG 10/29/2010 2:19:28 PM



TOP PLAN

SCALE: 3/16" = 1'-0"

51-011-020/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA AUTHORIZATION CERTIFICATE OF B.P. BARBER & ASSOCIATES, INC. No. C00620

DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER JOSEPH T. DANIEL JR. LICENSED No. 22097

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: INFLUENT PUMP STATION PLAN

DATE: NOV. 2010 SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

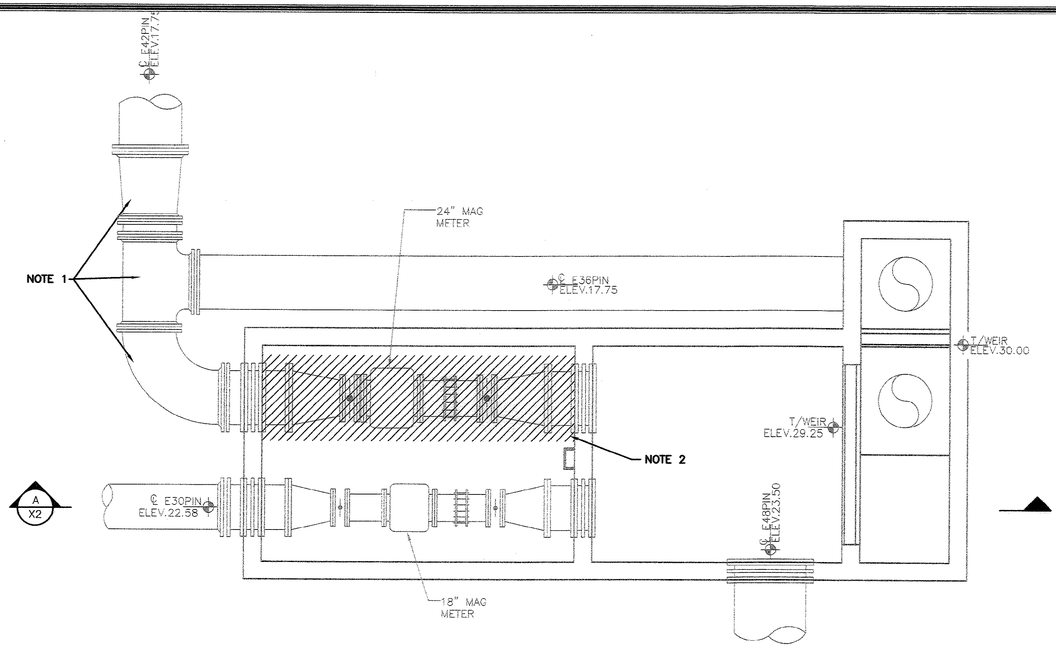
.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET X1 OF 6

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-X1-X4-RD.DWG, 10/28/2010 2:19:37 PM

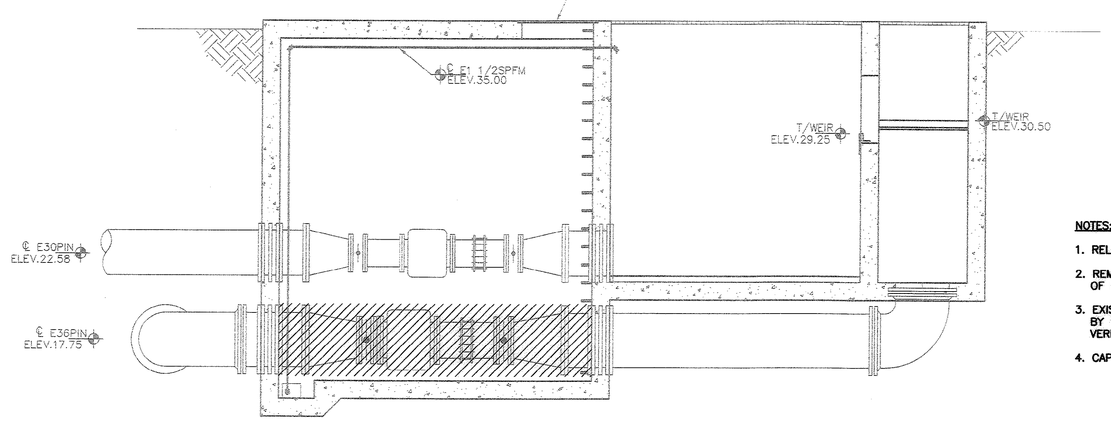


PIPING PLAN

0 4 8

SCALE: 1/4" = 1'-0"

NORTH



SECTION A X2

0 4 8

SCALE: 1/4" = 1'-0"

WORK TO BE COMPLETED BY OWNER. THIS SHEET IS FOR REFERENCE ONLY

NOTES:

1. RELOCATE EXISTING YARD PIPING.
2. REMOVE ALL PIPING, VALVES, AND METERS INSIDE OF HATCHED AREA AND DELIVER TO OWNER.
3. EXISTING ELEVATIONS TAKEN FROM DRAWINGS PREPARED BY PRC CONSOER TOWNSEND CONSULTING ENGINEERS. VERIFY ELEVATIONS PRIOR TO CONSTRUCTION.
4. CAP AIR LINES FOR PNEUMATIC VALVES.

51-011-021/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG.	DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED:
MAB	MAB	JEB	DH	MAB

SOUTH CAROLINA AUTHORIZATION — B.P. BARBER & ASSOCIATES, INC. No. C000220 — CERTIFICATE OF AUTHORIZATION — DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER — No. 22097 — LICENSED — DANIEL J. HUGGINS, JR. — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

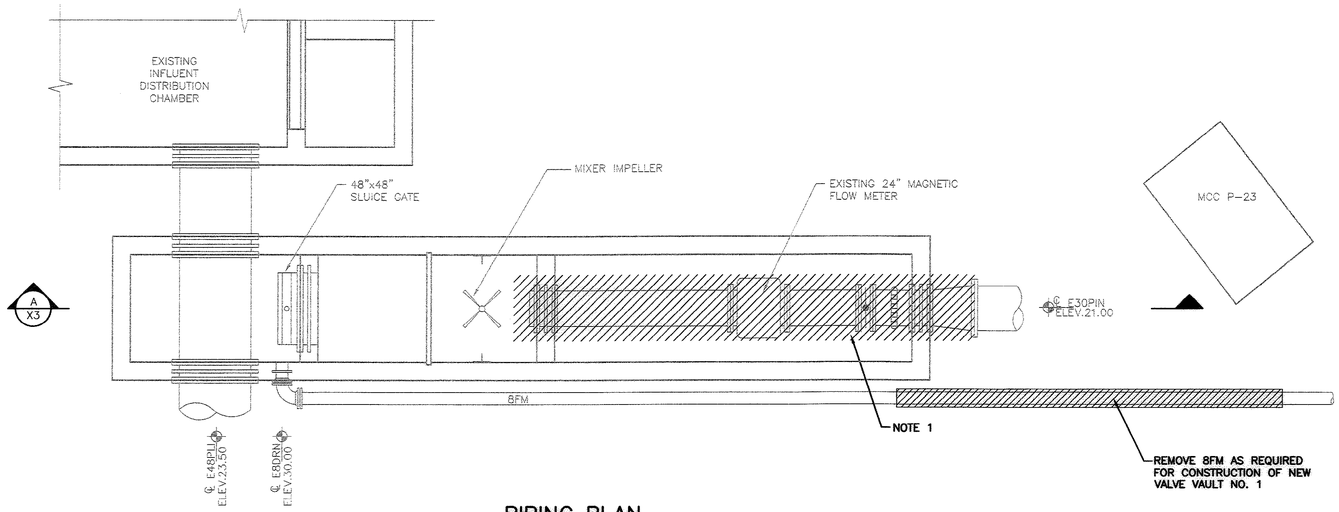
SHEET TITLE: MODIFICACTIONS TO INFLUENT DISTRIBUTION CHAMBER PLAN & SECTION

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	X2 OF 6
REF. 1731	
PROJECT NO. 06553	

FILE NO. C1-22-03



PIPING PLAN

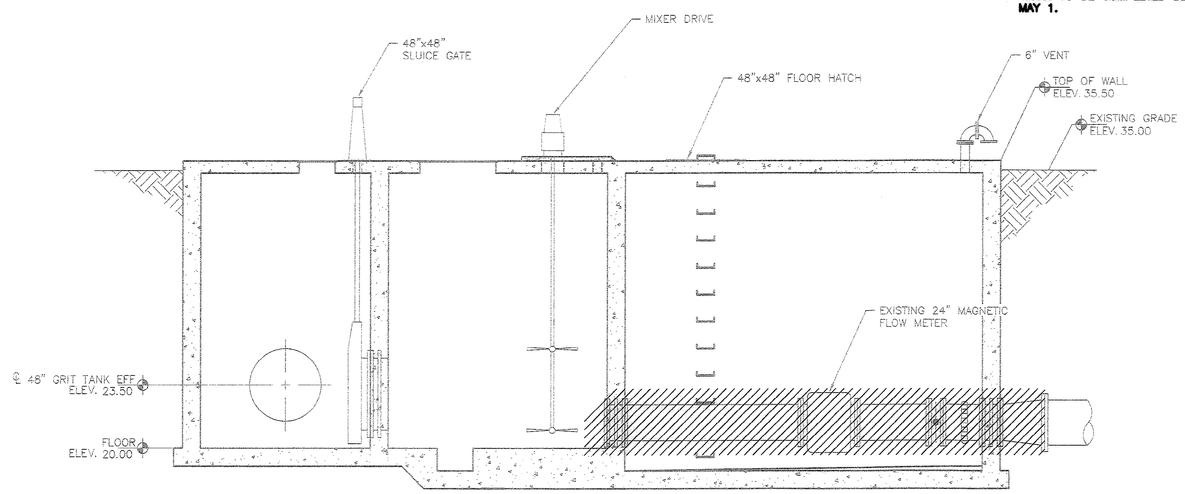
0 4 8

SCALE: 1/4" = 1'-0"

NORTH

NOTES:

1. REMOVE ALL PIPING, VALVES, AND METERS INSIDE OF HATCHED AREA AND DELIVER TO OWNER.
2. EXISTING ELEVATIONS TAKEN FROM DRAWINGS PREPARED BY PRC CONSOER TOWNSEND CONSULTING ENGINEERS. VERIFY ELEVATIONS PRIOR TO CONSTRUCTION.
3. CAP AIR LINES FOR PNEUMATIC VALVES.
4. **WORK TO BE COMPLETED BETWEEN SEPTEMBER 1 AND MAY 1.**



SECTION A X3

0 4 8

SCALE: 1/4" = 1'-0"

51-011-022/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	M.AB
DESIGNED BY:	M.AB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	M.AB

SOUTH CAROLINA NOTIFICATION CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C00020

DATE 12/8/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. HUGHES JR. LICENSED No. 22097

SIGNATURE

bpb

B. P. BARBER & ASSOCIATES, INC.

ENGINEERS – PLANNERS – SURVEYORS

COLUMBIA • SPARTANBURG • CHARLESTON

FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE

MODIFICATIONS TO METER VAULT PLAN & SECTION

DATE: NOV. 2010 SCALE: AS SHOWN

PROJECT

22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET X3 OF 6

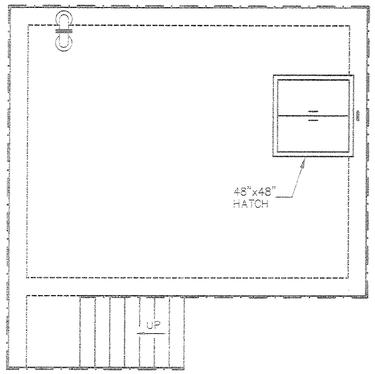
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-X1-X4-R0.DWG 10/28/2010 2:19:47 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-X1-X4-110.DWG 10/28/2010 2:19:07 PM

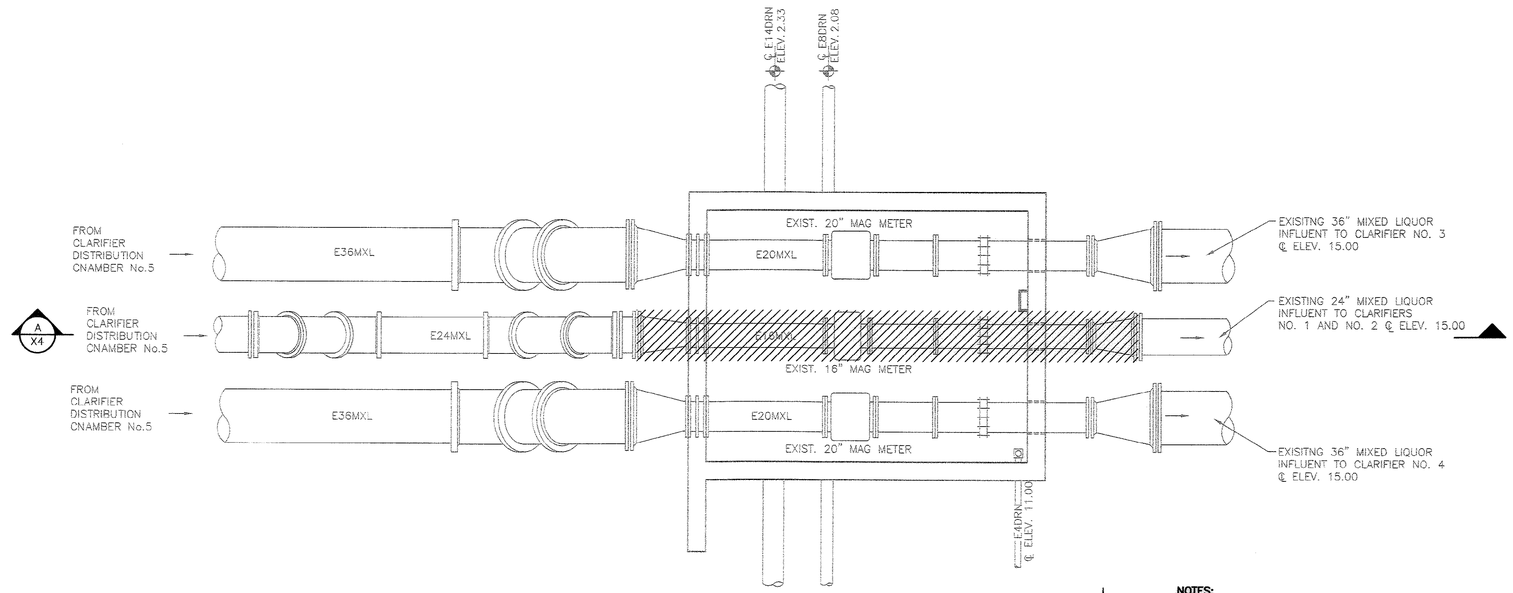


TOP PLAN

0 4 8

SCALE: 1/4" = 1'-0"

NORTH



PIPING PLAN

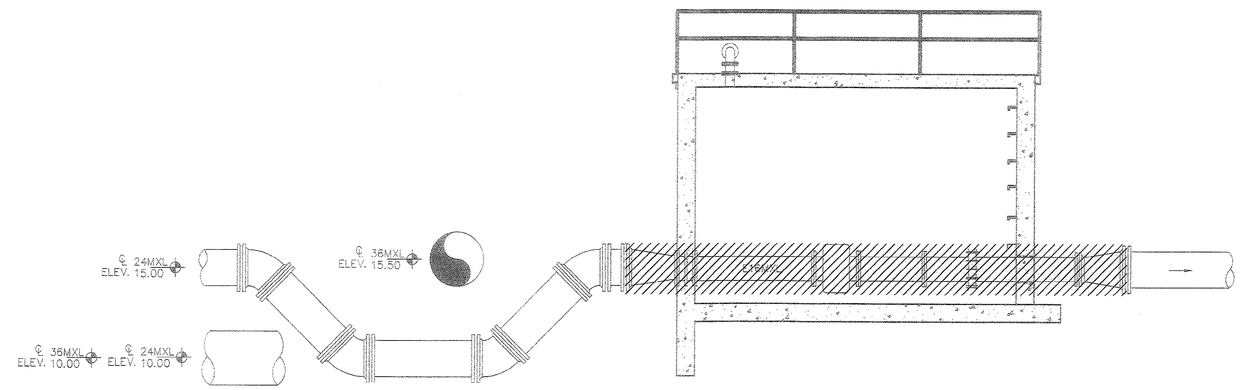
0 4 8

SCALE: 1/4" = 1'-0"

NORTH

NOTES:

1. **REMOVE PIPING AND METERS INSIDE OF HATCHED AREA AND DELIVER TO OWNER.**
2. **EXISTING ELEVATIONS TAKEN FROM DRAWINGS PREPARED BY PRC CONSOER TOWNSEND CONSULTING ENGINEERS. VERIFY ELEVATIONS PRIOR TO CONSTRUCTION.**
3. **WORK TO BE COMPLETED BETWEEN SEPTEMBER 1 AND MAY 1.**



SECTION A X4

0 4 8

SCALE: 1/4" = 1'-0"

51-011-023/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C00820

DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL HUGGINS JR LICENSED No. 22097

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
MODIFICATIONS TO CLARIFIER DISTRIBUTION CHAMBER #6 PLANS & SECTION

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

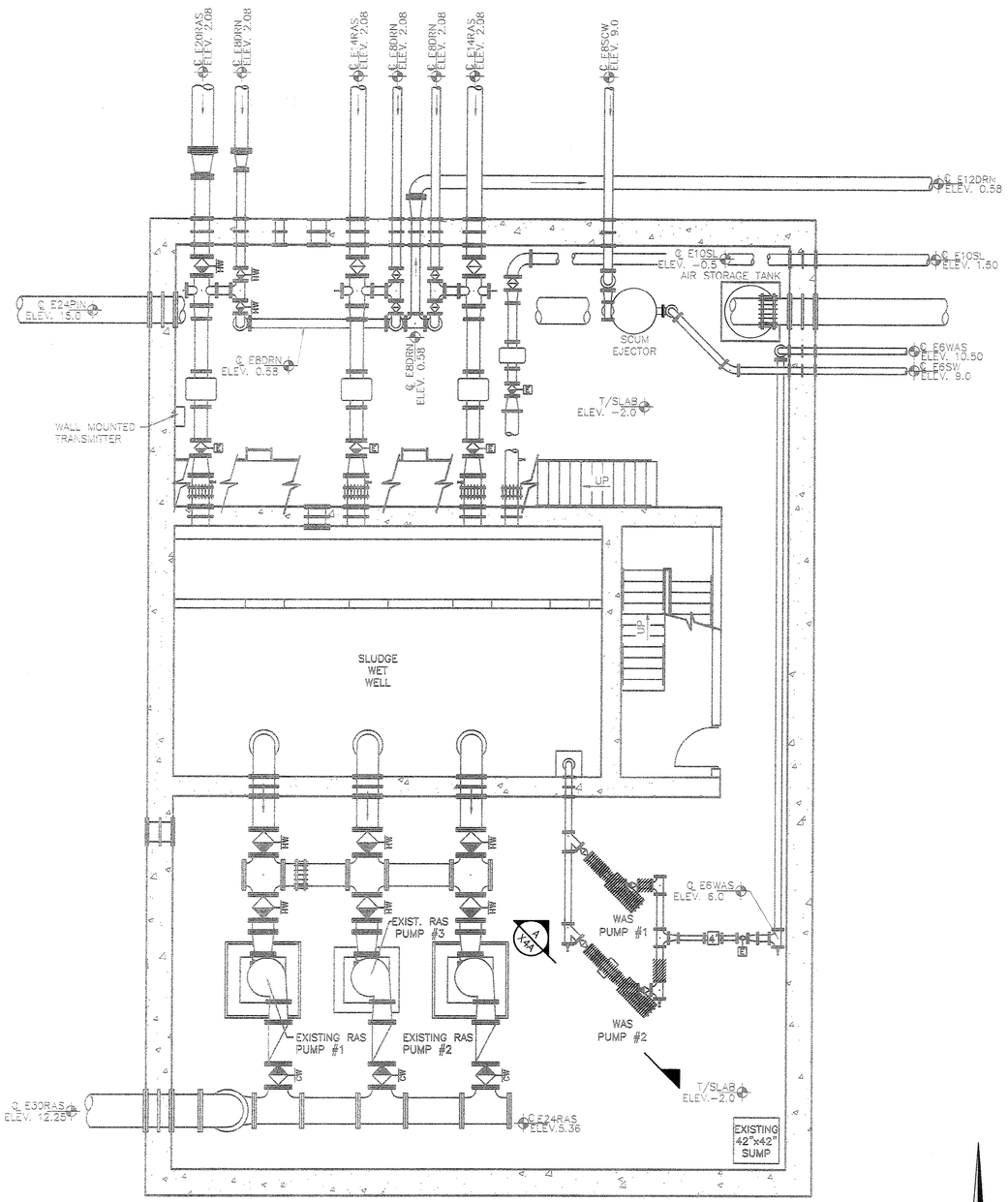
.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET X4 OF 6

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC. AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

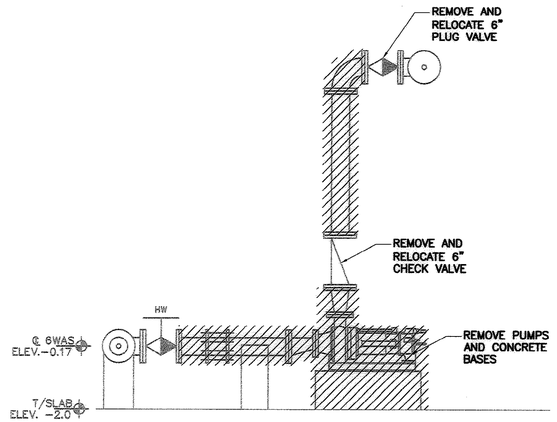
N:\PROJECTS\06553\DWG\06553-X1-X4-RD.DWG 10/28/2010 2:20:07 PM



PLAN @ ELEV. -2.0

0 4 8

SCALE: 3/16" = 1'-0"



SECTION A / X4A

0 2 4

SCALE: 1/2" = 1'-0"

NORTH

51-011-024/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	M.A.B
DESIGNED BY:	M.A.B
DRAWN BY:	J.E.B
CHECKED BY:	D.I.H
APPROVED:	M.A.B

SOUTH CAROLINA B.P. BARBER & ASSOCIATES, INC. No. C000020 CERTIFICATE OF AUTHORIZATION

DATE 11/28/10

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22097 DANIEL J. HUGHES

SIGNATURE

bpb

B. P. BARBER & ASSOCIATES, INC.

ENGINEERS – PLANNERS – SURVEYORS

COLUMBIA • SPARTANBURG • CHARLESTON

FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE

MODIFICATIONS TO RETURN SLUDGE PUMP STATION PLAN & SECTION

DATE: NOV. 2010 SCALE: AS SHOWN

PROJECT

22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

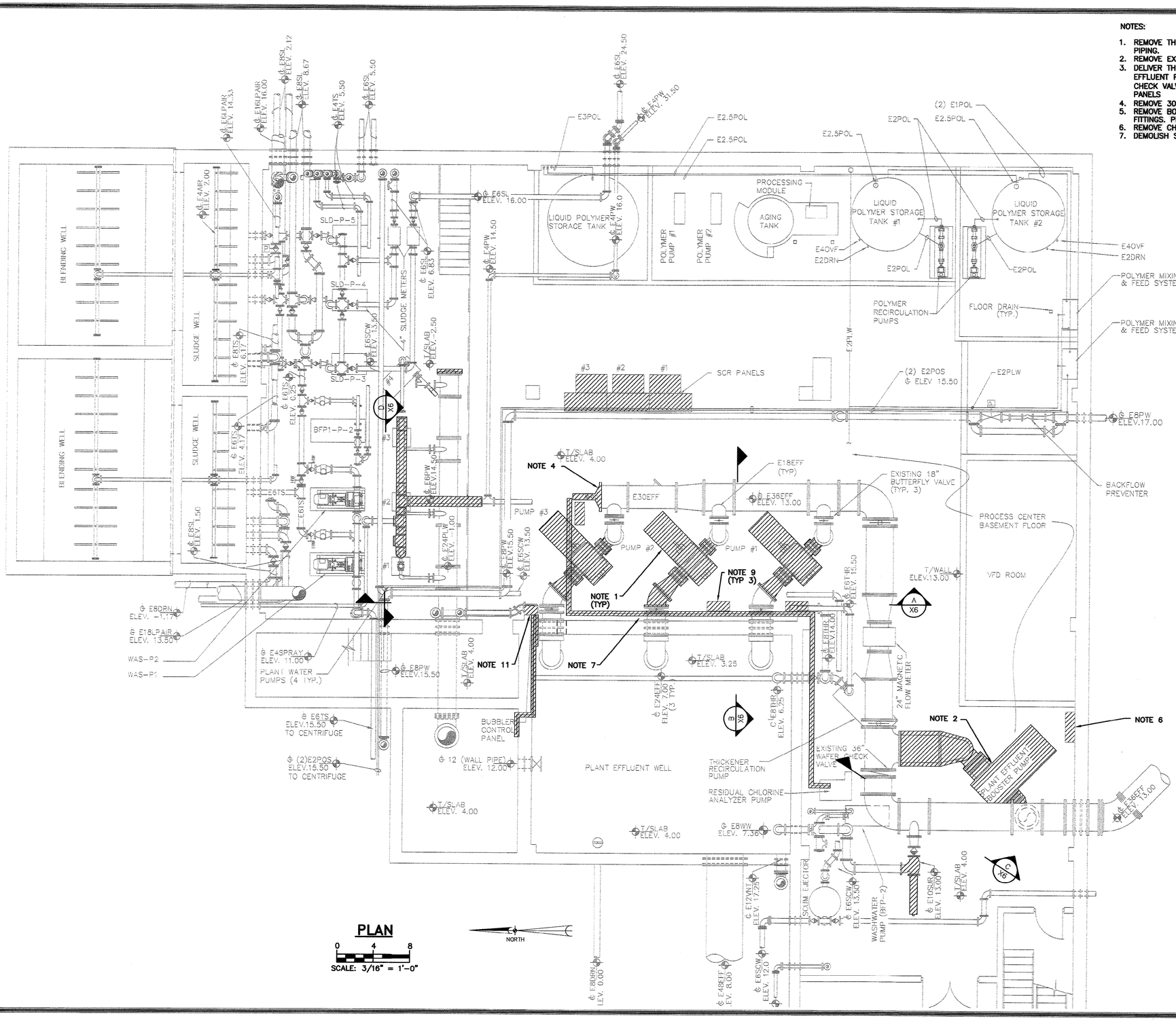
.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

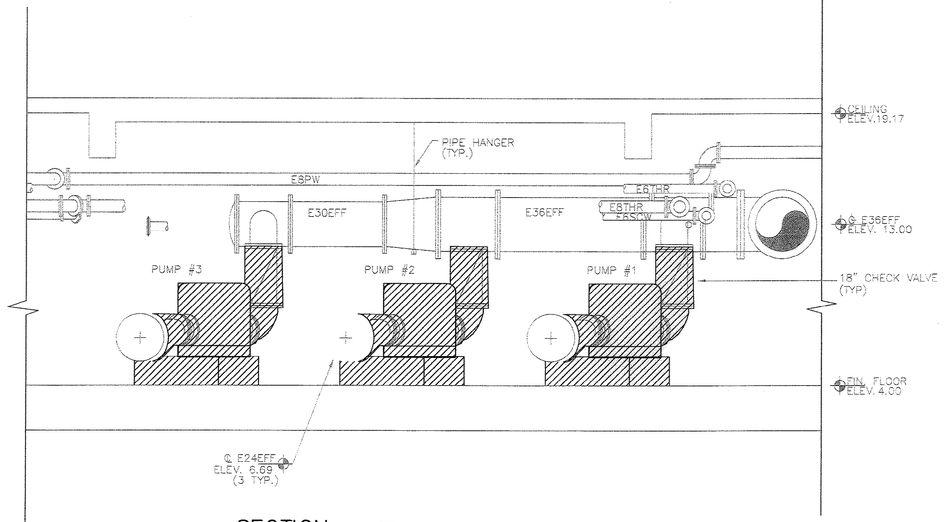
SHEET X4A OF 6

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC. AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-X5_X6_D19-21-R0.DWG 10/28/2010 2:39:35 PM

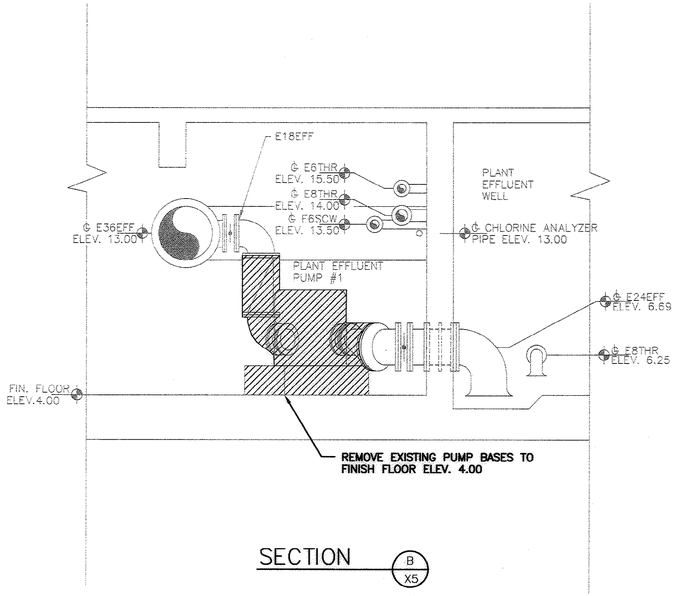

BLENDING WELL
SLUDGE WELL
SLD-P-5
SLD-P-4
SLD-P-3
BFP1-P-2
4" SLUDGE METERS
SCR PANELS
#3
#2
#1
PUMP #3
PUMP #2
PUMP #1
LIQUID POLYMER STORAGE TANK #1
LIQUID POLYMER STORAGE TANK #2
PROCESSING MODULE
AGING TANK
POLYMER PUMP #1
POLYMER PUMP #2
POLYMER RECIRCULATION PUMPS
POLYMER MIXING & FEED SYSTEM #2
POLYMER MIXING & FEED SYSTEM #1
FLOOR DRAIN (TYP.)
BACKFLOW PREVENTER
PROCESS CENTER BASEMENT FLOOR
VFD ROOM
T/WALL ELEV.13.00
24" MAGNETIC FLOW METER
EXISTING 18" BUTTERFLY VALVE (TYP. 3)
EXISTING 36" WAFER CHECK VALVE
PLANT EFFLUENT BOOSTER PUMPS
PLANT EFFLUENT WELL
THICKENER RECIRCULATION PUMP
RESIDUAL CHLORINE ANALYZER PUMP
WASHWATER PUMP (BFP-2)
SCUM EJECTOR
BUBBLER CONTROL PANEL
PLANT WATER PUMPS (4 TYP.)
WAS-P2
WAS-P1
TO CENTRIFUGE
TO CENTRIFUGE
NOTE 1 (TYP)
NOTE 2
NOTE 4
NOTE 6
NOTE 7
NOTE 9 (TYP 3)
NOTE 11
E3POL
E2.5POL
E2POL
E1POL
E40VF
E2DRN
E2PLW
E18EFF (TYP)
E30EFF
E36EFF
E48EFF
E8DRN
E18LPAIR
E4SPRAY
E8PW
E6TS
E12WNT
E10SUR
E6SCW
E8WW
E6THR
E24ELH
E8BHR
T/SLAB
(2) E2POS @ ELEV 15.50
E12PLW
E6SL
E4PW
E6PW
E4LPAIR
E8SL
E41TS
E61TS
E4PAIR
E4AIR
E24PLW
E63SCW
E65SL
E24PW
E8BRN
E4FPAIR
E6SCW
E6SW
E4FPW
E8FPW
E24PLW
E6SW
E6SCW
E6SL
E6SW
E6SCW
E6SW
E6SCW
E6SW
E6SCW



SECTION A X5

0 4 8

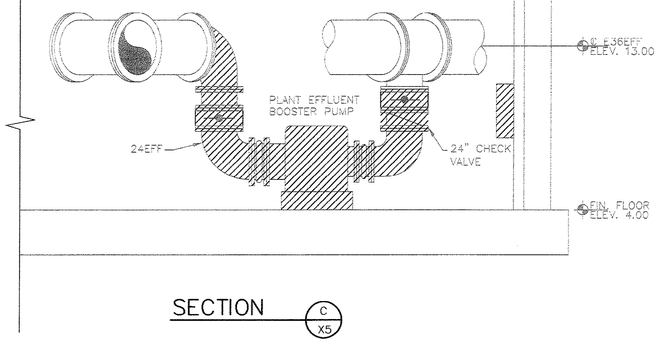
SCALE: 1/4" = 1'-0"



SECTION B X5

0 4 8

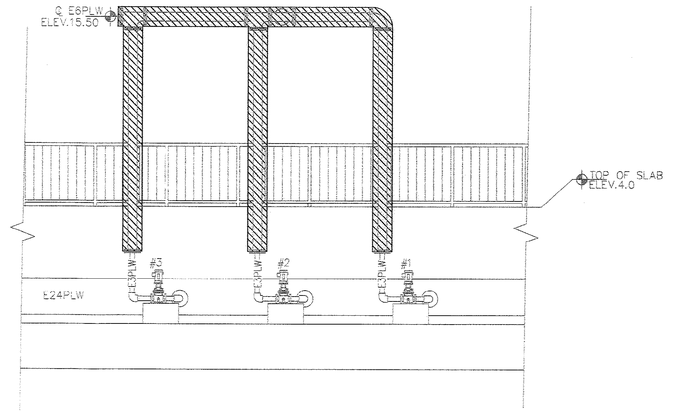
SCALE: 1/4" = 1'-0"



SECTION C X5

0 4 8

SCALE: 1/4" = 1'-0"



SECTION D X5

0 4 8

SCALE: 1/4" = 1'-0"

51-011-026/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG.	M.AB
DESIGNED BY:	M.AB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	M.AB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC.
ASSOC. No. C00820
DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER
DANIEL JOSEPH HUGHES, JR.
No. 40097
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
EFFLUENT PUMPS DEMOLITION SECTIONS

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT
22.4 MGD
EXPANSION/UPGRADE
FOR
GSWSA
MYRTLE BEACH
WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET X6 OF 6

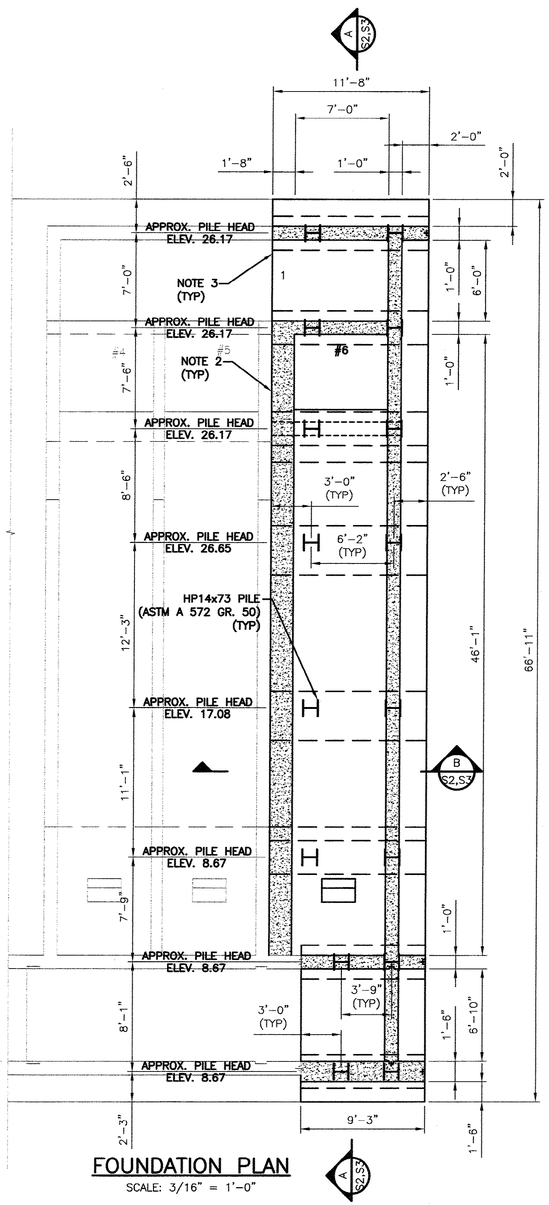
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

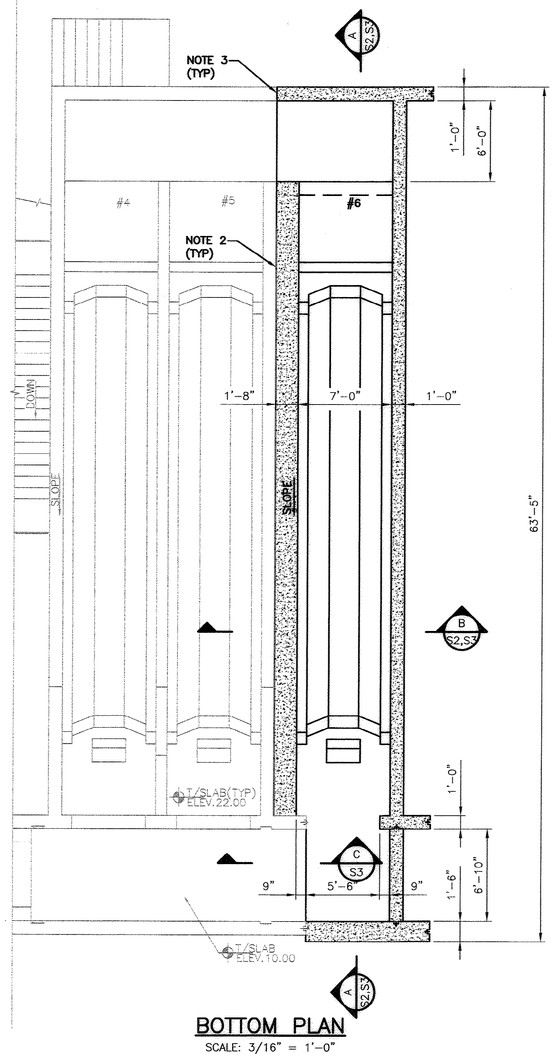
N:\PROJECTS\06553\DWG\06553-X5-XS-2010-21.DWG 10/28/2010 2:26:48 PM

NOTES:

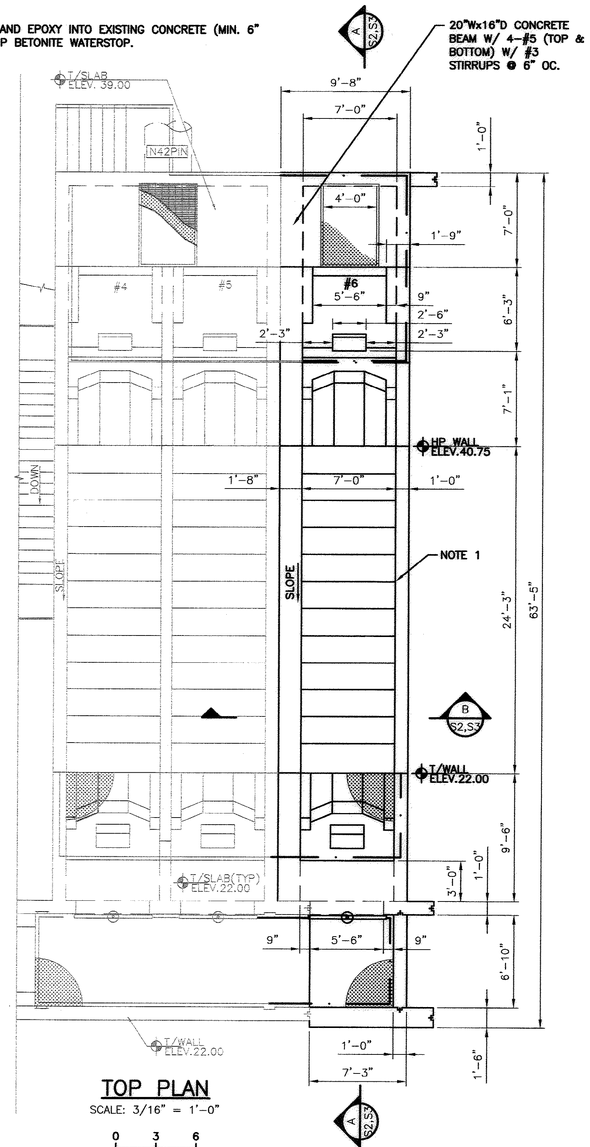
1. REMOVABLE FIBERGLASS COVERS, 1-1/2" THICK x 2'-0" WIDE, WITH HANDLE (MATCH EXISTING). COVERS TO BE ALTAC 400 CORROSION RESISTANT FIBERGLASS REINFORCED RESIN OR APPROVED EQUAL. COLOR TO MATCH EXISTING. DETAIL OF COVER SUPPORTS TO BE AS RECOMMENDED BY MANUFACTURER.
2. PROVIDE E.H.R. WATER STOP @ INTERFACE OF NEW CONCRETE WITH EXISTING. PLACE WATERSTOP MID-DEPTH OF WALL.
3. PROVIDE #5 (30" LONG) @8" OC (MAX)-DRILL AND EPOXY INTO EXISTING CONCRETE (MIN. 6" EMBEDMENT). PROVIDE (2) CONT. FLEXIBLE STRIP BETONITE WATERSTOP.



FOUNDATION PLAN
SCALE: 3/16" = 1'-0"



BOTTOM PLAN
SCALE: 3/16" = 1'-0"



TOP PLAN
SCALE: 3/16" = 1'-0"

0 3 6
GRAPHIC SCALE

NORTH

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREEN'WALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

RICKBORN & Associates, LLC
STRUCTURAL ENGINEERING
P.O. BOX 2000
MOORE PLEASANT, SC 29465-2000
(PHONE) 843.881.0818 (FAX) 843.881.0301

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

51-011-027/82

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	KBC
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC.
No. C00820
CERTIFICATE OF AUTHORIZATION
DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER
DANIEL J. DIGIOVANNI JR.
LICENSED No. 22087
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS - PLANNERS - SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
INFLUENT PUMP STATION MODIFICATIONS PLANS

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	06553S1
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET S1 OF 14

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-S1-S3-RD.DWG 10/29/2010 3:16:32 PM

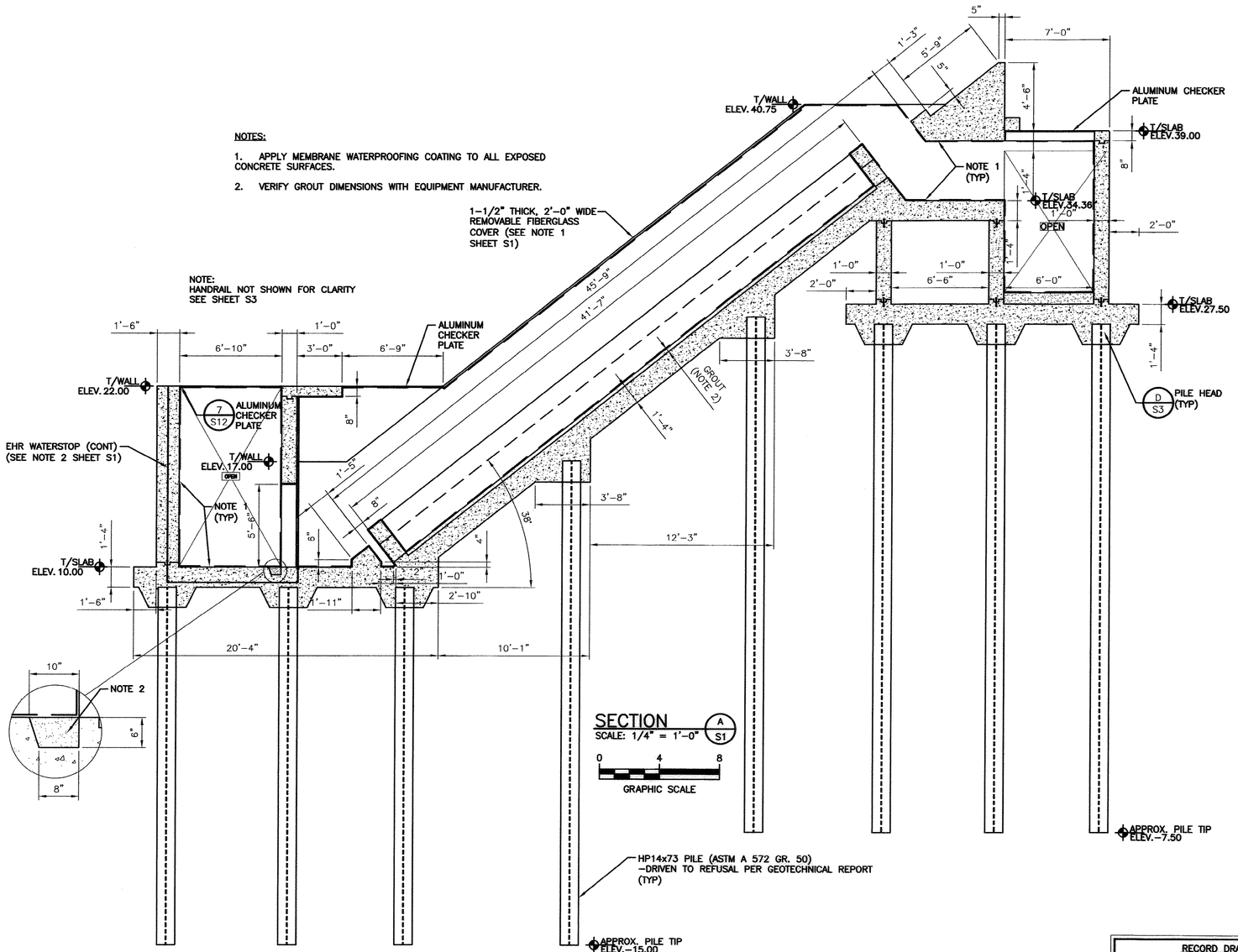
THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\S\DWG\06553-S1-RD.DWG 10/29/2010 3:16:48 PM

NOTES:

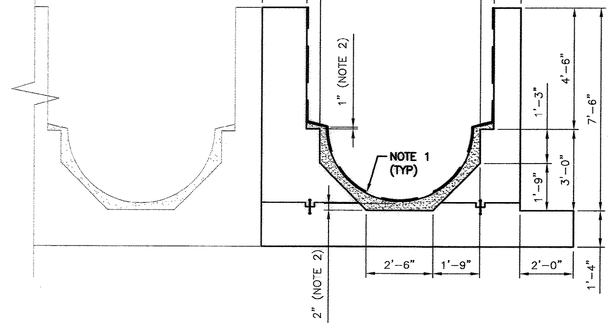
1. APPLY MEMBRANE WATERPROOFING COATING TO ALL EXPOSED CONCRETE SURFACES.
2. VERIFY GROUT DIMENSIONS WITH EQUIPMENT MANUFACTURER.

NOTE:
HANDRAIL NOT SHOWN FOR CLARITY
SEE SHEET S3



SECTION A S1
SCALE: 1/4" = 1'-0"

0 4 8
GRAPHIC SCALE



SECTION B S1
SCALE: 3/8" = 1'-0"

0 2 4
GRAPHIC SCALE

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

51-011-028|82

RICKBORN & ASSOCIATES, INC. STRUCTURAL ENGINEERING
P.O. BOX 2665 MOUNT PLEASANT, SC 29465-2665 (PHONE) 843.881.6818 (FAX) 843.881.8201

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	KBC
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA B.P. BARBER & ASSOCIATES, INC. No. C00820 CERTIFICATE OF AUTHORIZATION
DATE 12/8/11

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22097 LICENSED DANIEL J. HOGENSON JR
SIGNATURE

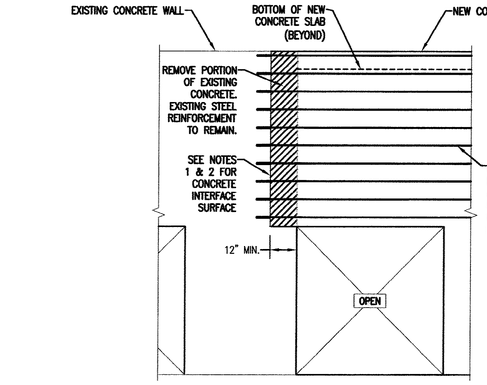
bpb
B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
INFLUENT PUMP STATION MODIFICATIONS SECTIONS
DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	06553S1
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	S2
OF	14

FILE NO. C1-22-03

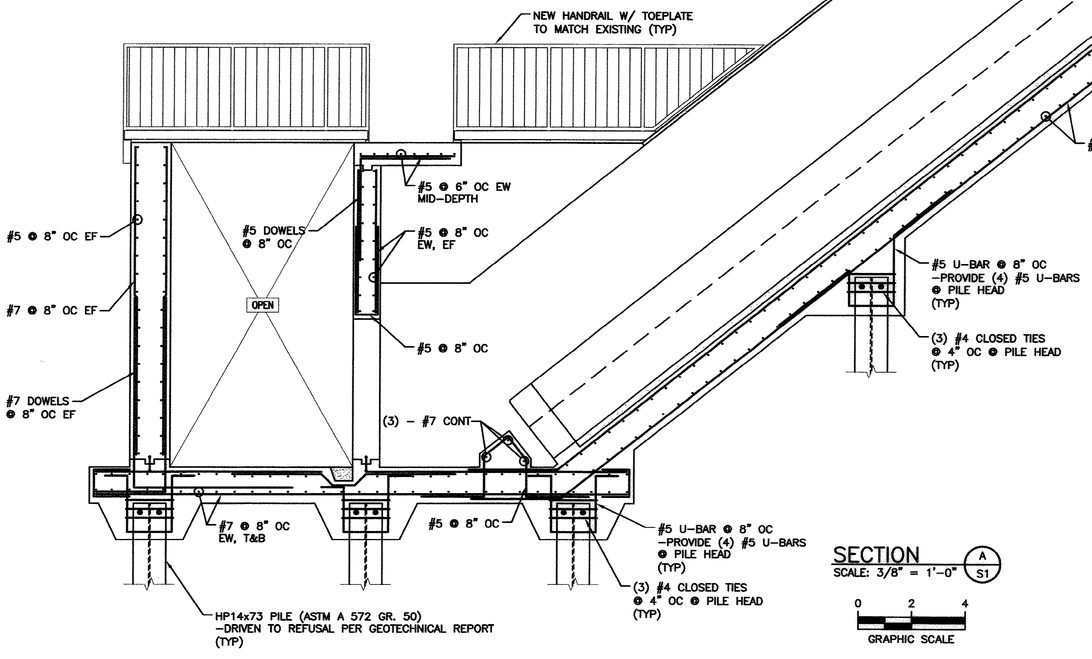


NOTES:

1. PROVIDE E.H.R. WATERSTOP @ INTERFACE OF NEW CONCRETE WITH EXISTING. PLACE WATERSTOP MID–DEPTH OF WALL.
2. ROUGHEN EXISTING CONCRETE SURFACE TO MIN¼" AMPLITUDE. APPLY CONCRETE BONDING AGENT TO EXISTING CONCRETE SURFACE @ INTERFACE WITH NEW CONCRETE.
3. EXISTING STEEL REINFORCEMENT AND NEW VERTICAL STEEL REINFORCEMENT NOT SHOWN FOR CLARITY.

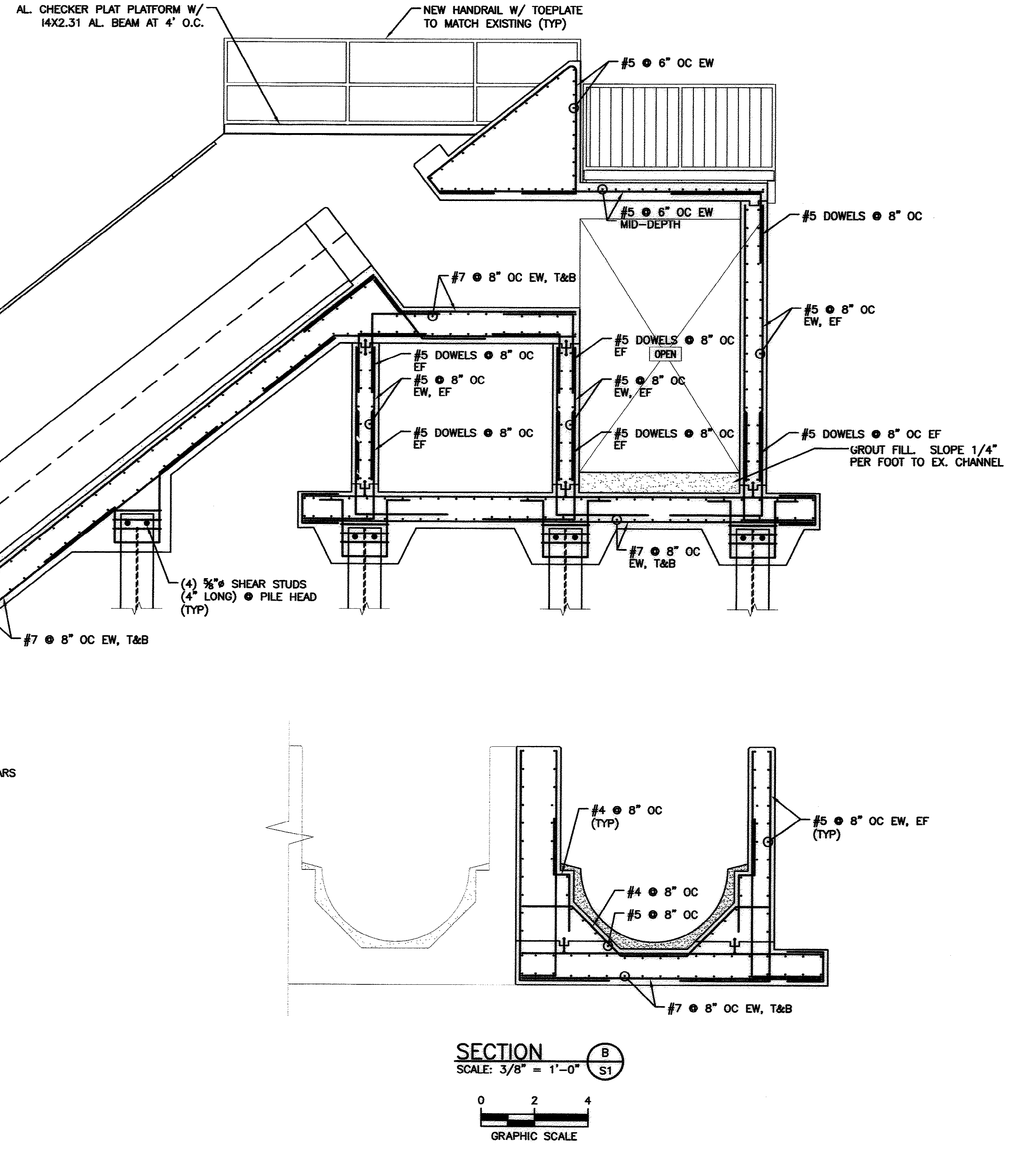
SECTION (C / S1)
SCALE: 3/8" = 1'–0"

0 2 4
GRAPHIC SCALE



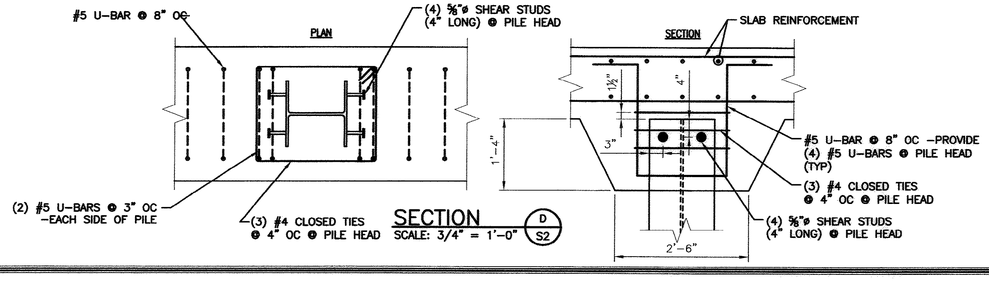
SECTION (A / S1)
SCALE: 3/8" = 1'–0"

0 2 4
GRAPHIC SCALE



SECTION (B / S1)
SCALE: 3/8" = 1'–0"

0 2 4
GRAPHIC SCALE



SECTION (D / S2)
SCALE: 3/4" = 1'–0"

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

RICKBORN ASSOCIATES, LLC
STRUCTURAL ENGINEERING
P.O. BOX 2666
MOUNT PLEASANT, SC 29465–2666
(PHONE) 843.881.9015 (FAX) 843.881.9201

PROJECT #:	2007–119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

51-011-029/82

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	
DESIGNED BY:	MAB
DRAWN BY:	MAB
CHECKED BY:	KBC
APPROVED:	DH
	MAB

SOUTH CAROLINA NOT VALID WITHOUT ORIGINAL SEAL AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. COA0020 CERTIFICATE OF DATE 12/2/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. LOESCH JR. No. 22007 SIGNATURE DATE

bpb

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
INFLUENT PUMP STATION MODIFICATIONS REINFORCING

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

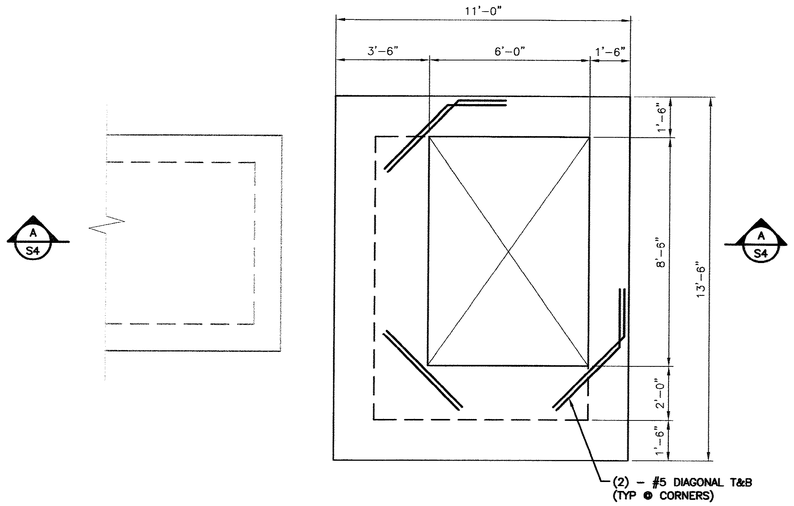
.DWG NAME	06553S1
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	S3
OF	14

FILE NO. C1–22–03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-S1-03-RD.DWG 10/28/2010 3:17:05 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT



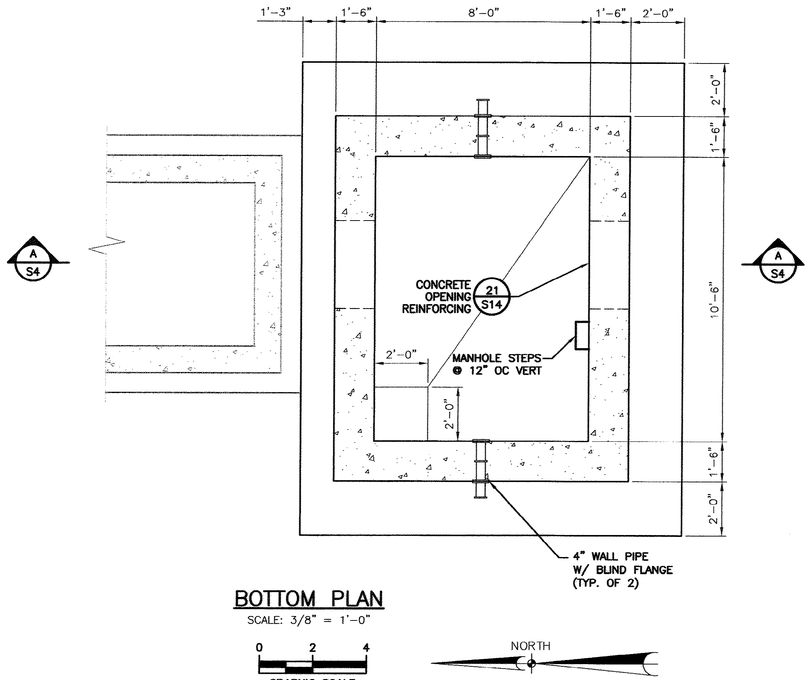
TOP PLAN

SCALE: 3/8" = 1'-0"

0 2 4

GRAPHIC SCALE

NORTH



BOTTOM PLAN

SCALE: 3/8" = 1'-0"

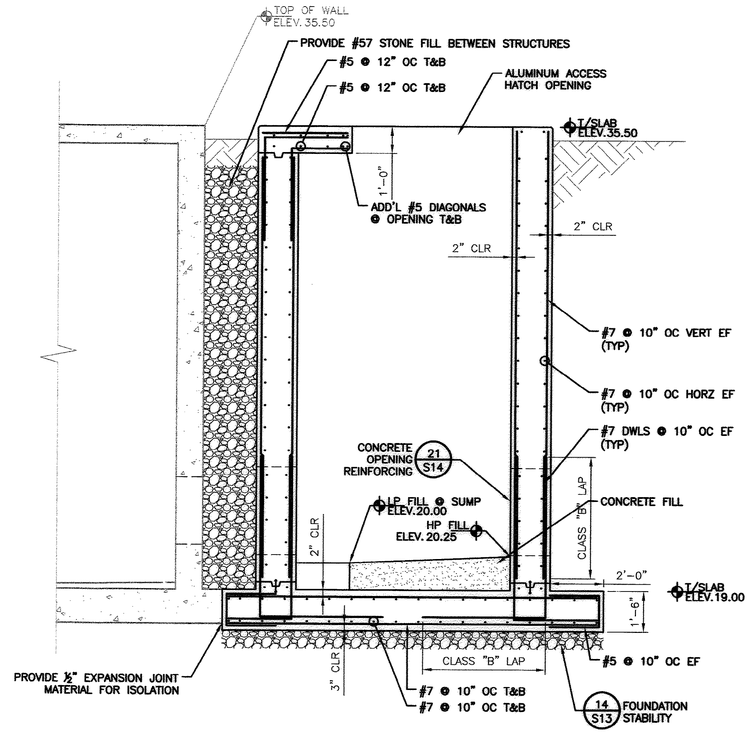
0 2 4

GRAPHIC SCALE

NORTH

NOTES:

1. VERIFY LOCATIONS AND SIZES OF ALL OPENINGS IN CONCRETE WITH PROCESS DRAWINGS.
2. CONTRACTOR TO PROVIDE ALL NECESSARY TEMPORARY SHORING & BRACING TO PROTECT ADJACENT EXISTING STRUCTURES.



SECTION

SCALE: 3/8" = 1'-0" (A S4)

0 2 4

GRAPHIC SCALE

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

51-011-030/82

RICKBORN & Associates, LLC
STRUCTURAL ENGINEERING
P.O. BOX 2888
MOUNT PLEASANT, SC 29465-2888
(PHONE) 843.881.8818 (FAX) 843.881.8381

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	KBC
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC.
No. COA0003
DATE 11/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER
DANIEL J. GOSSELIN JR.
No. 22097
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
NEW VALVE VAULT NO. 1
PLANS AND SECTION

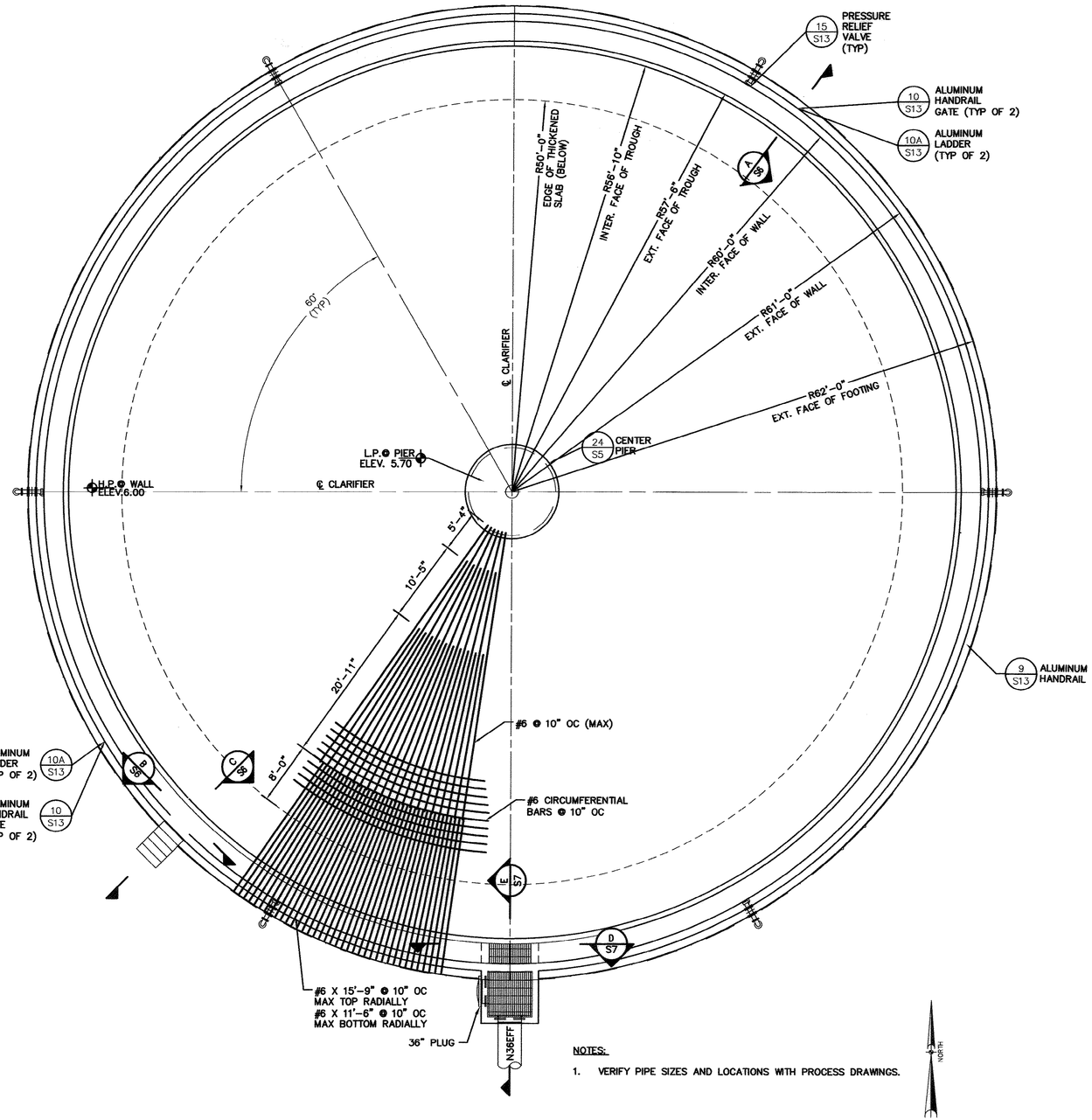
DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	06553S8
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	S4
OF	14

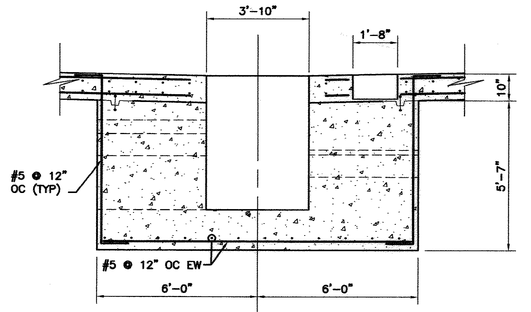
FILE NO. C1-22-03

R:\PROJECTS\06553\DWG\06553-S4-RD.DWG 10/28/2010 3:18:04 PM



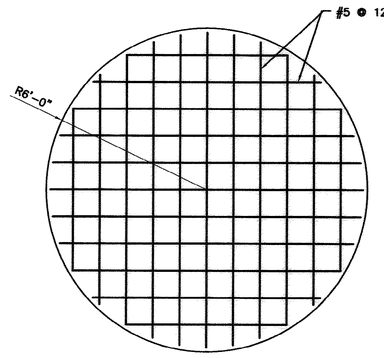
PLAN

SCALE: 1/8" = 1'-0"



SECTION

NOTE: PIPES SHOWN OUT OF PLANE.



BOTTOM PLAN

CENTER PIER DETAIL 24 S5

0 2 4

(IN FEET)

NOTES:

1. VERIFY PIPE SIZES AND LOCATIONS WITH PROCESS DRAWINGS.

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

51-011-031/82

RICKBORN & ASSOCIATES, LLC. STRUCTURAL ENGINEERING
P.O. BOX 2668 MOUNT PLEASANT, SC 29465-2668
(PHONE) 843.881.6616 (FAX) 843.881.9321

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG.	MAB
DESIGNED BY:	MAB
DRAWN BY:	KBC
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA AUTHORIZATION CERTIFICATE OF B.P. BARBER & ASSOC. INC. No. COA1000 DATE 12/11

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED DANIEL J. HIGHTOWER JR. No. 22097 SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW SECONDARY CLARIFIER # 6 PLAN, SECTION & DETAIL

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

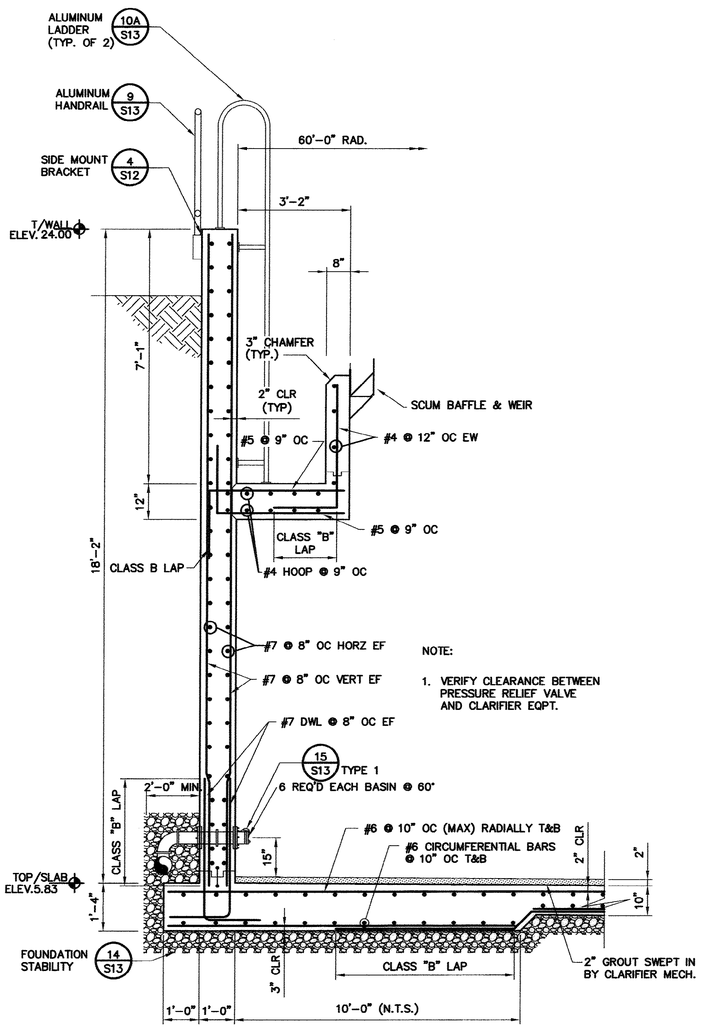
.DWG NAME	06553S5
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET S5 OF 14

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

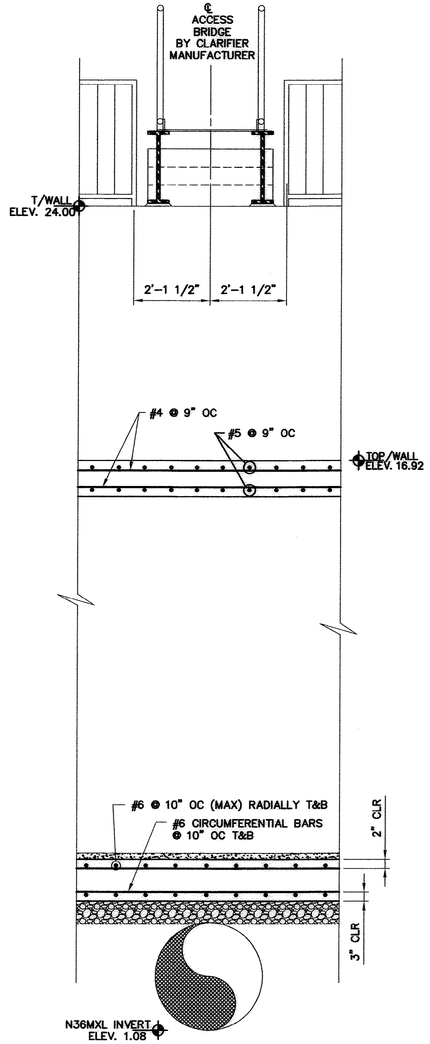
N:\PROJECTS\06553\DWG\06553-S5-RD.DWG 10/28/2010 3:18:55 PM



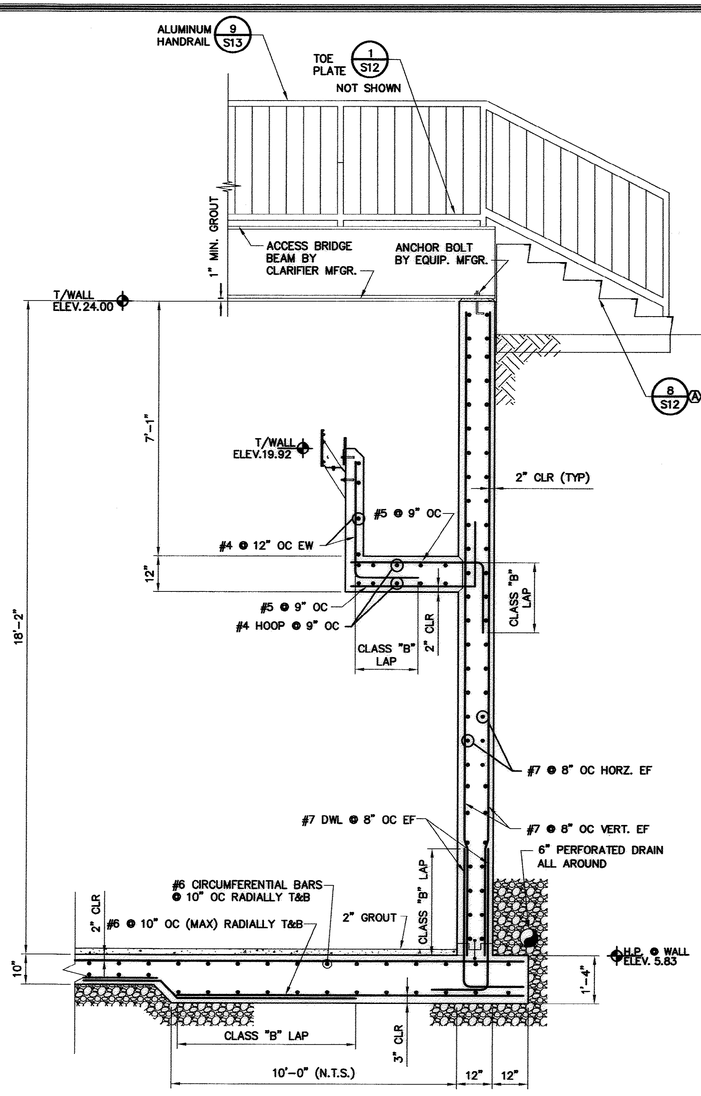
NOTE:

1. VERIFY CLEARANCE BETWEEN PRESSURE RELIEF VALVE AND CLARIFIER EQPT.

SECTION A S5
SCALE: 1/2" = 1'-0"
GRAPHIC SCALE 0 2 4



SECTION B S5
SCALE: 1/2" = 1'-0"
GRAPHIC SCALE 0 2 4



SECTION C S5
SCALE: 1/2" = 1'-0"
GRAPHIC SCALE 0 2 4

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

RICKBORN Associates, LLC
STRUCTURAL ENGINEERING
P.O. BOX 2658
MOORE FLORENCE, SC 29505-2658
(PHONE) 843.661.6016 (FAX) 843.661.6301

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

51-011-032/82

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	KBC
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA B.P. BARBER & ASSOCIATES, INC. No. C00620 CERTIFICATE OF AUTHORIZATION

DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. HUGHES, JR. LICENSED No. 22097

SIGNATURE

bpb
B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
NEW SECONDARY CLARIFIER # 6 SECTIONS

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

DWG NAME	06553S6
N.B. NO.	
REF.	1731
PROJECT NO.	06553

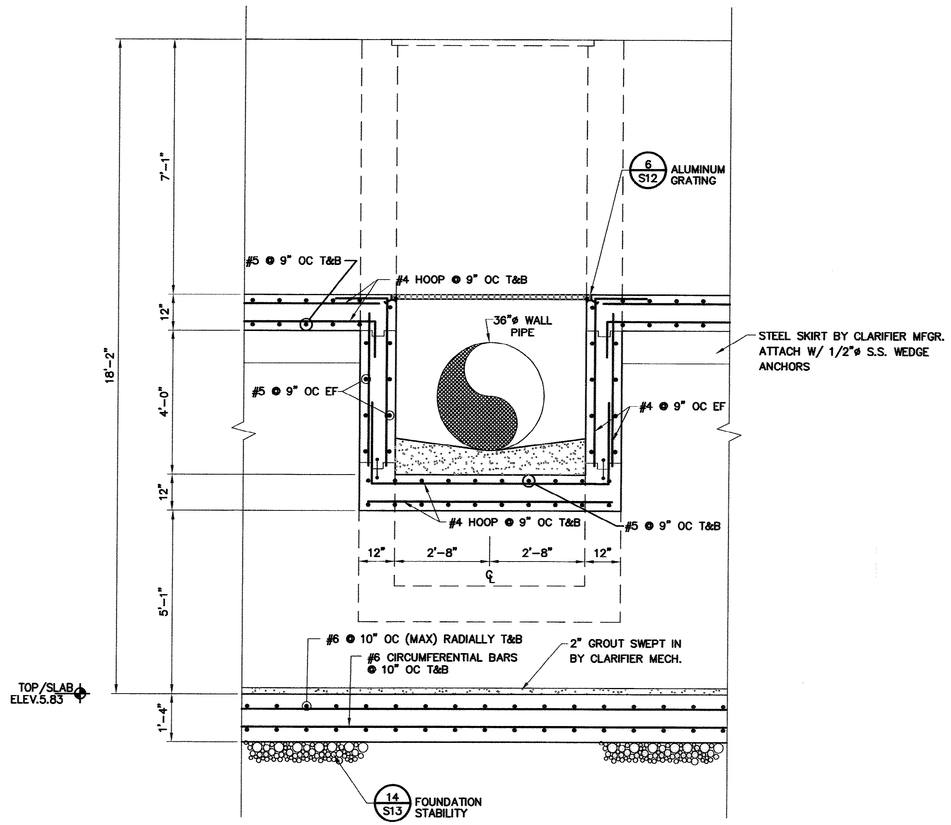
SHEET S6 OF 14

FILE NO. C1-22-03

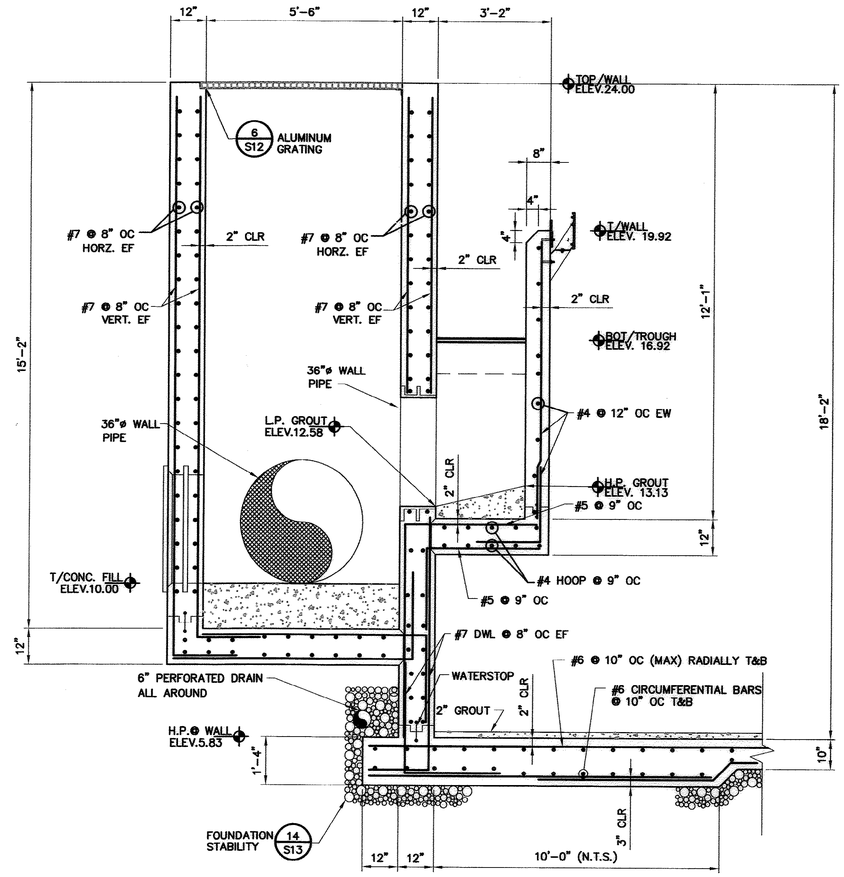
THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT

N:\PROJECTS\06553\DWG\06553-S6-RD.DWG 10/28/2010 3:19:21 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.



SECTION (D/S5)
SCALE: 1/2" = 1'-0"
0 2 4
GRAPHIC SCALE



SECTION (E/S5)
SCALE: 1/2" = 1'-0"
0 2 4
GRAPHIC SCALE

NOTES:

1. VERIFY DIMENSIONS WITH SHOP DRAWINGS.
2. HANDRAIL NOT SHOWN IN SECTIONS.
3. PROVIDE CLASS "B" LAPS ON ALL CONNECTIONS..

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

51-011-033/82

RICKBORN ASSOCIATES, P.A.
STRUCTURAL ENGINEERING
P.O. BOX 2665
MOUNT PLEASANT, SC 29465-2665
(PHONE) 843.881.6818 (FAX) 843.881.9201

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	KBC
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA AUTHORIZATION — B.P. BARBER & ASSOCIATES, INC. No. C00620 — CERTIFICATE OF AUTHORIZATION — DATE 1/26/11

SOUTH CAROLINA PROFESSIONAL ENGINEER — DANIEL J. HIGGINS JR — LICENSED No. 22097 — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW SECONDARY CLARIFIER #6 SECTIONS
DATE: NOV. 2010 SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

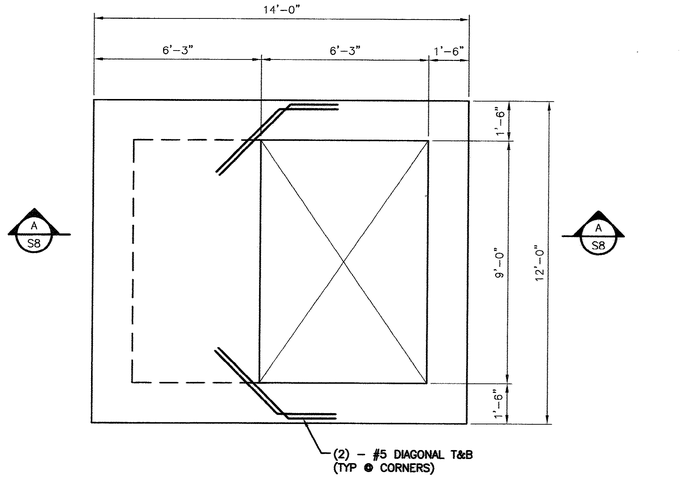
.DWG NAME	06553S7
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	S7
OF	14

FILE NO. C1-22-03

N:\PROJECTS\06553\DWG\06553-S7-RD.DWG 10/29/2010 3:20:12 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

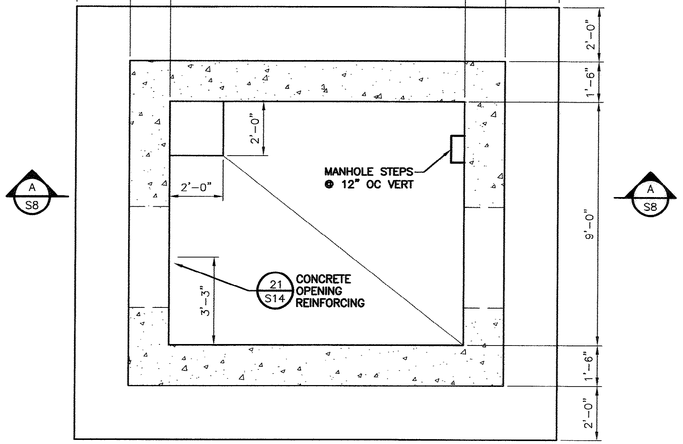
N:\PROJECTS\06553\DWG\06553-SB-SP-RD.DWG 10/28/2010 3:39:57 PM



TOP PLAN
SCALE: 3/8" = 1'-0"

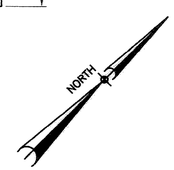
0 2 4
GRAPHIC SCALE





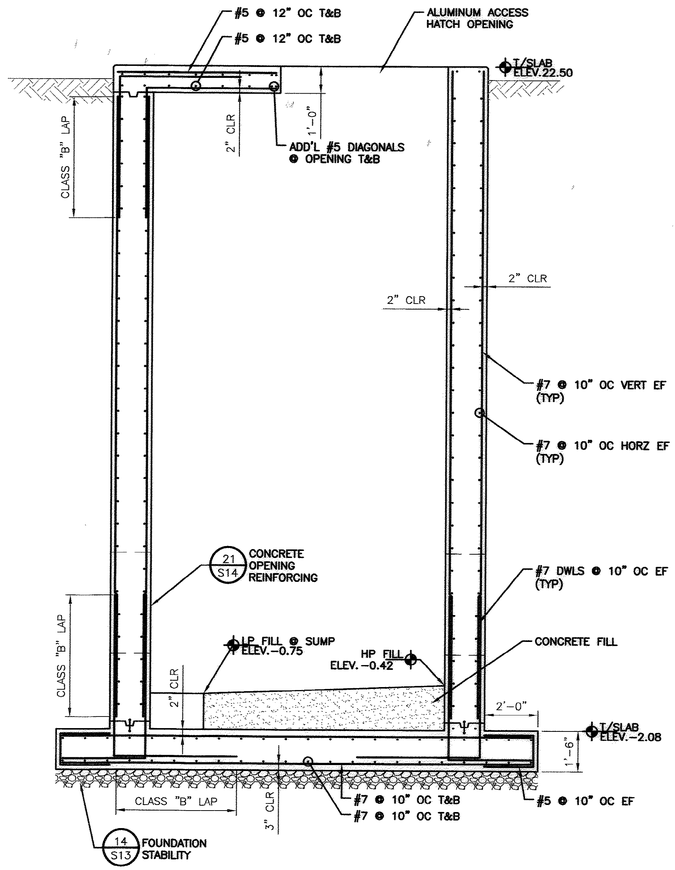
BOTTOM PLAN
SCALE: 3/8" = 1'-0"

0 2 4
GRAPHIC SCALE



NOTES:

1. VERIFY LOCATIONS AND SIZES OF ALL OPENINGS IN CONCRETE WITH PROCESS DRAWINGS.



SECTION
SCALE: 3/8" = 1'-0" (A S8)

0 2 4
GRAPHIC SCALE

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

RICKBORN
STRUCTURAL ENGINEERING
P.O. BOX 2089
MOUNT PLEASANT, SC 29465-2089
(PHONE) 843.881.8615 (FAX) 843.881.8301

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

51-011-034/82

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	KBC
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA NOTIFICATION CERTIFICATE OF AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC.
No. C00020
DATE 12/1/11

SOUTH CAROLINA PROFESSIONAL ENGINEER
DANIEL J. HUDGENS JR.
LICENSED No. 22097
SIGNATURE

bpb
B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

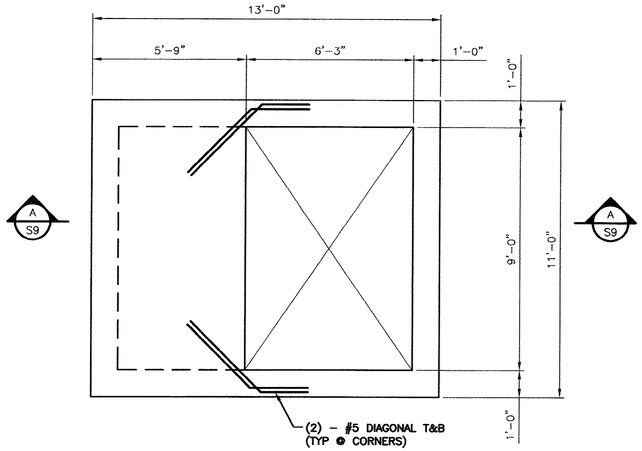
SHEET TITLE
NEW METER VAULT #4
PLANS AND SECTION
DATE: NOV. 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD
EXPANSION/UPGRADE
FOR
GSWSA
MYRTLE BEACH
WWTP

.DWG NAME	06553S8
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET S8 OF 14

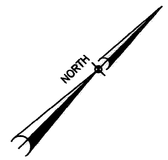
FILE NO. C1-22-03

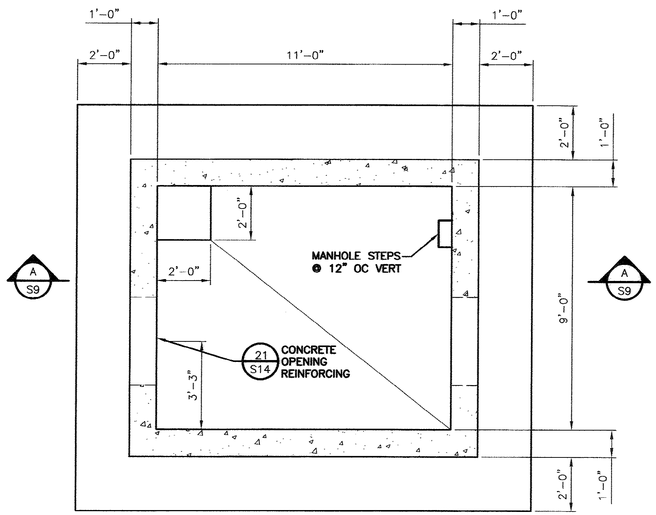


TOP PLAN

SCALE: 3/8" = 1'-0"

GRAPHIC SCALE 0 2 4





BOTTOM PLAN

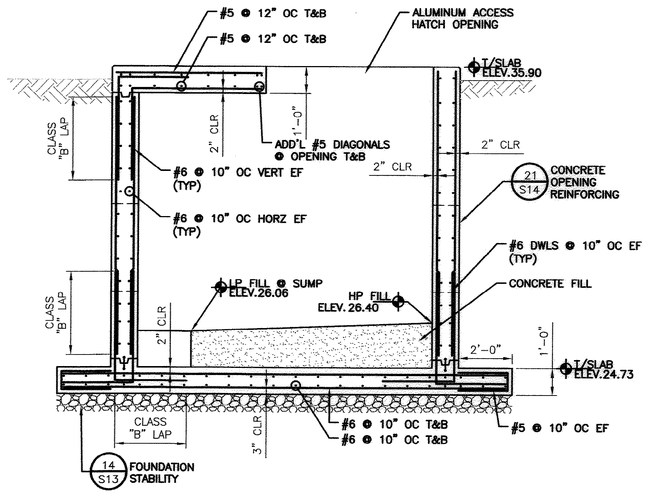
SCALE: 3/8" = 1'-0"

GRAPHIC SCALE 0 2 4



NOTES:

1. VERIFY LOCATIONS AND SIZES OF ALL OPENINGS IN CONCRETE WITH PROCESS DRAWINGS.



SECTION

SCALE: 3/8" = 1'-0" (A S9)

GRAPHIC SCALE 0 2 4

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

RICKBORN & ASSOCIATES STRUCTURAL ENGINEERING
P.O. BOX 2988
MOUNT PLEASANT, SC 29465-2988
(PHONE) 843.881.8818 (FAX) 843.881.8301

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2006

51-011-035/82

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	KBC
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA B.P. BARBER & ASSOCIATES, INC. No. C00800 CERTIFICATE OF AUTHORIZATION

DATE 2/11

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED DANIEL J. HUDGENS JR. No. 22087

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
NEW METER VAULT #5
PLANS AND SECTION

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD
EXPANSION/UPGRADE
FOR
GSWSA
MYRTLE BEACH
WWTP

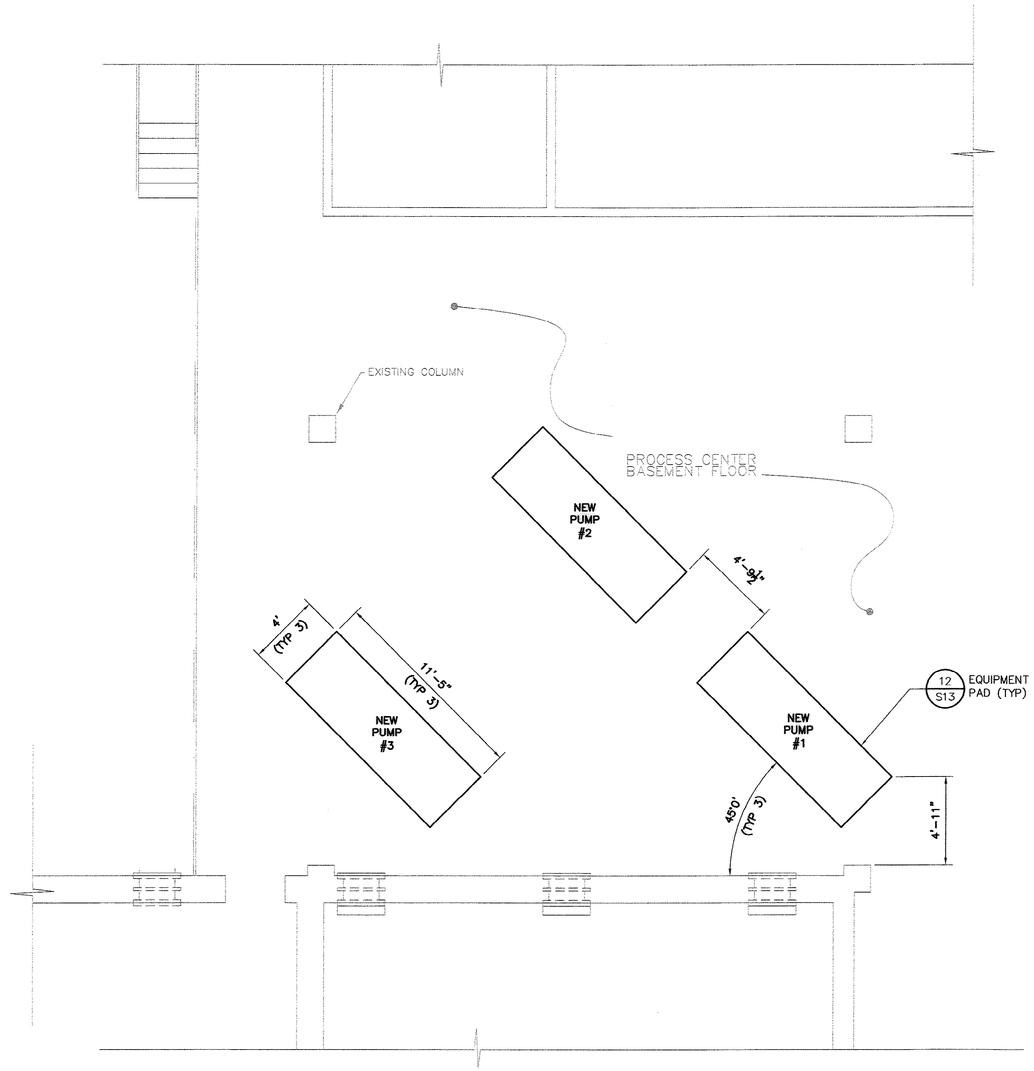
.DWG NAME	06553S8
N.B. NO.	
REF.	1/31
PROJECT NO.	06553

SHEET S9 OF 14

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN, AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-S8-S9-RD.DWG 10/29/2010 3:40:48 PM



PLAN

0 4 8

(IN FEET)

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

51-011-036/82

RICKBORN & Associates, LLC
STRUCTURAL ENGINEERING
P.O. BOX 30008
MOUNT PLEASANT, SC 29465-0008
(PHONE) 843.881.8018 (FAX) 843.881.5381

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	KBC
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA B.P. BARBER & ASSOCIATES, INC. No. C00800 CERTIFICATE OF AUTHORIZATION

DATE 1/25/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL H. HUGHEY JR LICENSED No. 22097

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
NEW EFFLUENT PUMP BASES PLANS & SECTION

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

DWG NAME	06553S10
N.B. NO.	
REF.	1731
PROJECT NO.	06553

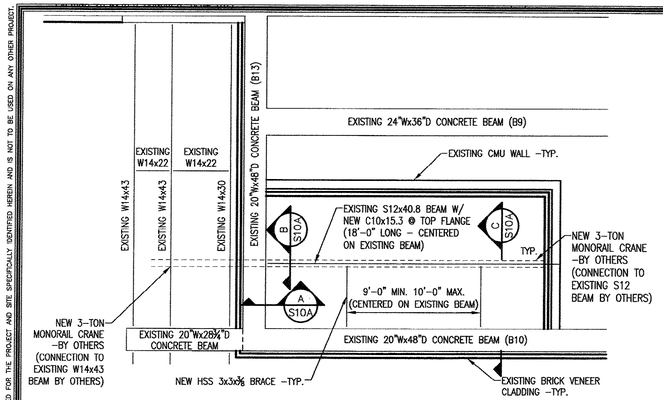
SHEET S10 OF 14

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-S10-RD.DWG 10/28/2010 4:08:58 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

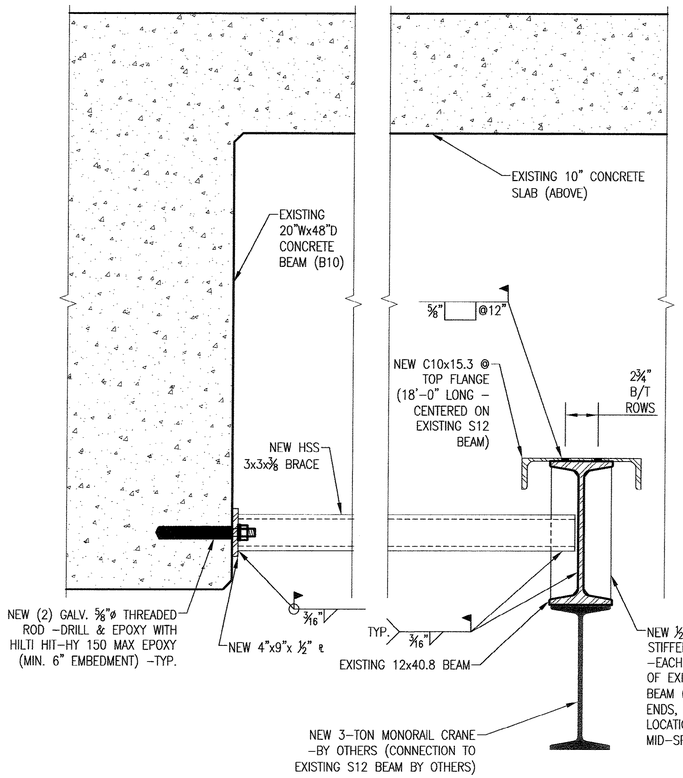


PLAN

SCALE: 3/16" = 1'–0"

0 4 8

GRAPHIC SCALE

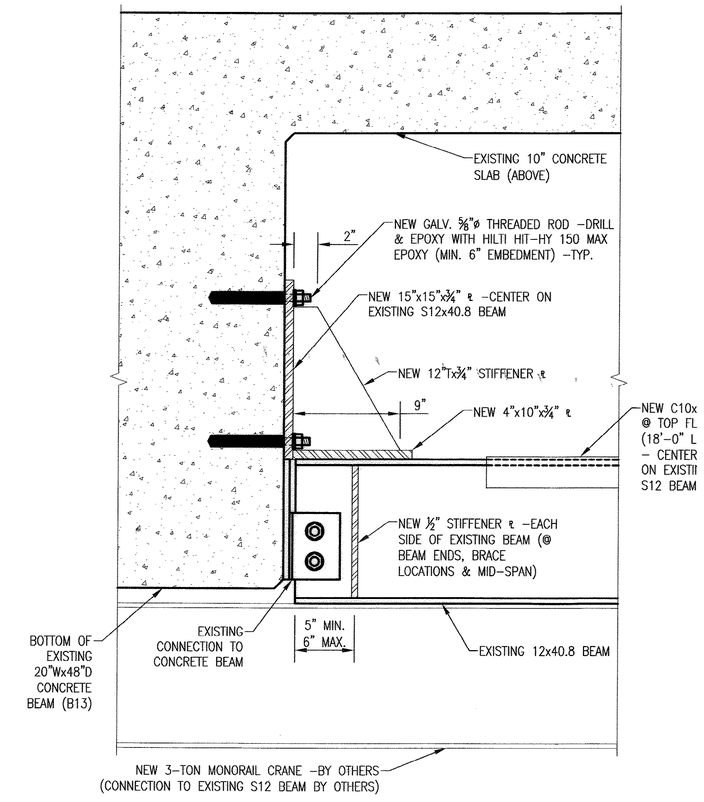


SECTION

SCALE:1–1/2" = 1'–0" (C S10A)

0 1 2

GRAPHIC SCALE

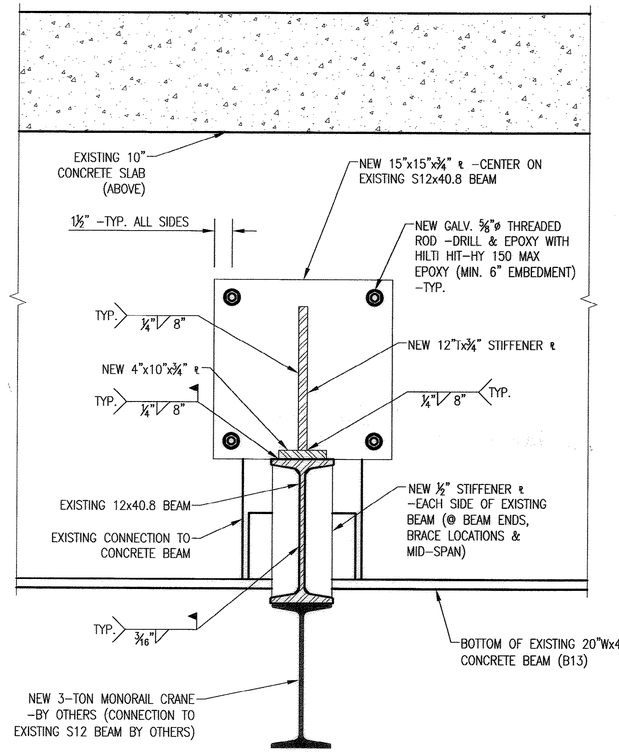


SECTION

SCALE:1–1/2" = 1'–0" (A S10A)

0 1 2

GRAPHIC SCALE



SECTION

SCALE:1–1/2" = 1'–0" (B S10A)

0 1 2

GRAPHIC SCALE

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

51-011-037/82

RICKBORN & ASSOCIATES, INC. STRUCTURAL ENGINEERING
P.O. BOX 2888
MOUNT PLEASANT, SC 29465-2888
(PHONE) 843.881.8818 (FAX) 843.881.8281

PROJECT #:	2007–119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED:
MAB	MAB	KBC	DJ	MAB

SOUTH CAROLINA NOTIFICATION B.P. BARBER & ASSOCIATES, INC. No. 00020 CERTIFICATE OF AUTHORIZATION

DATE: 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22097 DANIEL J. HUGHSTON, JR. LICENSED

SIGNATURE

bpb B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW MONORAIL CRANE AT PROCESS CENTER PLAN & SECTIONS

DATE: NOV 2010 SCALE: AS SHOWN

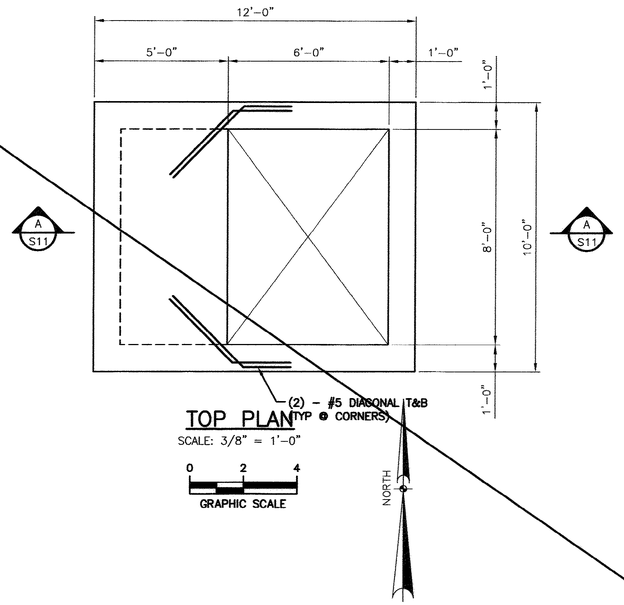
PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
06553S10	S10A
N.B. NO.	OF
REF. 1731	14
PROJECT NO. 06553	

FILE NO. C1–22–03

N:\PROJECTS\06553\DWG\06553-S10-10.DWG 10/29/2010 4:08:42 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

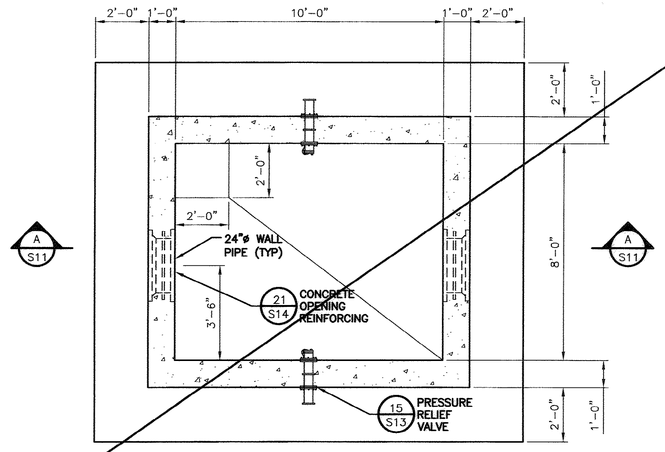


TOP PLAN

SCALE: 3/8" = 1'-0"

0 2 4

GRAPHIC SCALE



BOTTOM PLAN

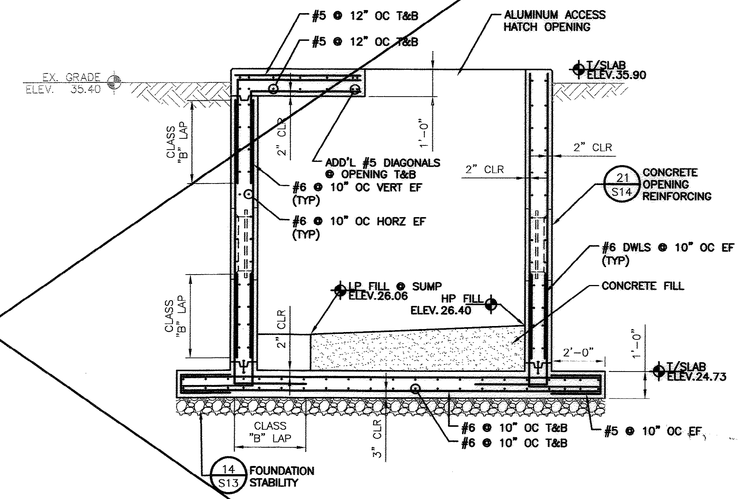
SCALE: 3/8" = 1'-0"

0 2 4

GRAPHIC SCALE

NOTES:

1. VERIFY LOCATIONS AND SIZES OF ALL OPENINGS IN CONCRETE WITH PROCESS DRAWINGS.



SECTION

SCALE: 3/8" = 1'-0"

A S11

0 2 4

GRAPHIC SCALE

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

51-011-038/82

RICKBORN

STRUCTURAL ENGINEERING

P.O. BOX 10305
MOUNT PLEASANT, SC 29465-2005
(PHONE) 843.881.8810 (FAX) 843.881.8301

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	KBC
CHECKED BY:	DJH
APPROVED:	MAB

SOUTH CAROLINA AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC.
No. COA0020
CERTIFICATE OF
DATE 12/8/11

SOUTH CAROLINA PROFESSIONAL ENGINEER
DANIEL J. HIGGINS, JR.
LICENSED No. 22097
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
NEW VALVE VAULT
NO. 2
PLANS AND SECTION

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD
EXPANSION/UPGRADE
FOR
GSWSA
MYRTLE BEACH
WWTP

.DWG NAME	06553S8
N.B. NO.	
REF.	1731
PROJECT NO.	06553

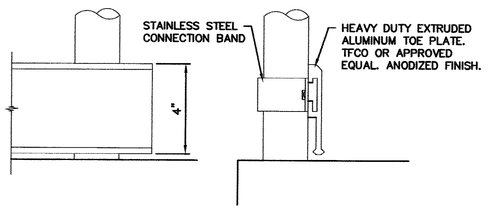
SHEET S11 OF 14

FILE NO. C1-22-03

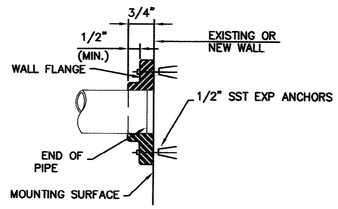
N:\PROJECTS\06553\DWG\06553-S11-RD.DWG 10/28/2010 4:09:47 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

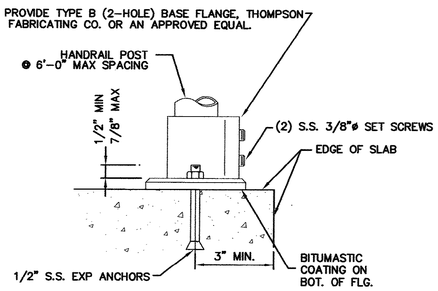
N:\PROJECTS\06553\DWG\06553-S12-S14-R0.DWG 10/28/2010 4:10:47 PM



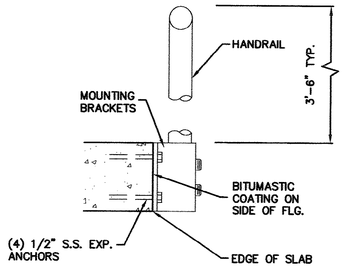
DETAIL 1 TYP
TOE PLATE
SCALE: NONE



DETAIL 2 TYP
FACE MOUNT BRACKET
SCALE: NONE

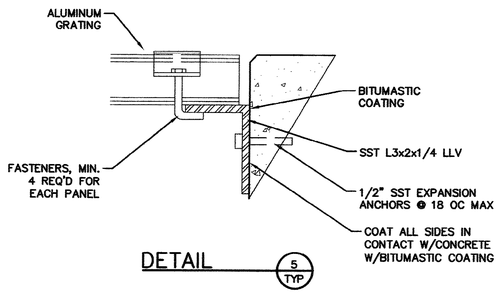


DETAIL 3 TYP
TOP MOUNT BRACKET
SCALE: NONE

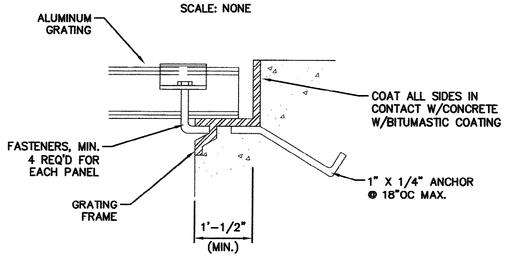


DETAIL 4 TYP
SIDE MOUNT BRACKET
SCALE: NONE

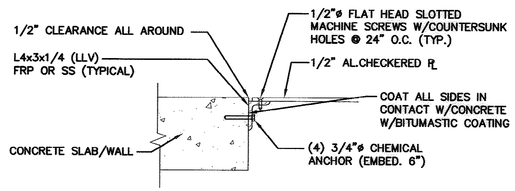
ALUMINUM HANDRAIL



DETAIL 5 TYP
GRATING ANGLE SUPPORT
SCALE: NONE



DETAIL 6 TYP
GRATING FRAME SUPPORT
SCALE: NONE



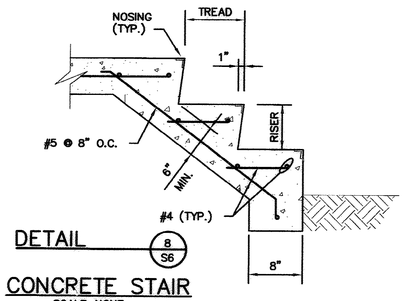
DETAIL 7 TYP
PLATE ANGLE SUPPORT
SCALE: NONE

ALUMINUM GRATING & PLATE

TENSION DEVELOPMENT & LAP SPLICE LENGTHS FOR GRADE 60 REINFORCING				
4,000 PSI NORMAL WEIGHT CONCRETE				
	TOP BARS		OTHER BARS	
BAR SIZE	EMBED	LAP	EMBED	LAP
#3	19"	24"	15"	19"
#4	25"	32"	19"	25"
#5	31"	40"	24"	31"
#6	37"	48"	29"	37"
#7	54"	70"	42"	54"
#8	62"	80"	48"	62"
#9	70"	91"	54"	70"

STAIR NOTES:
1. PROVIDE PROTECTION FOR DISSIMILAR METALS & CONC. AS SPECIFIED.
2. PROVIDE TOP MOUNTED HANDRAIL ATTACHED TO TOP FLANGE OF STAIR STRINGERS (NOT SHOWN)
3. PROVIDE FOOTING @ OUTDOOR STAIRS.
4. FOOTING WIDTH = STAIR WIDTH + 12"
5. BROOM FINISH TOP OF FTG.

* TWO STAIRS REQUIRED



DETAIL 8 S6
CONCRETE STAIR
SCALE: NONE

STAIR SCHEDULE							
MARK	LOCATION	HEIGHT	RISERS	TREADS	WIDTH	LANDING	REMARKS
(A)	SECONDARY CLARIFIER	2'-6"	5 @ 6.0"	4@ 11"	3'-8"	12"	

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

RICKBORN & ASSOCIATES
STRUCTURAL ENGINEERING
P.O. BOX 2888
MOUNT PLEASANT, SC 29465-2888
(PHONE) 843.881.8810 (FAX) 843.881.8001

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

51-011-039/82

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	KBC
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA NO LIMITATION OF AUTHORITY B.P. BARBER & ASSOCIATES, INC. No. C00000 CERTIFICATE OF
DATE 12/2/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. HUDGENS JR. LICENSED No. 22097
SEAL/SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS - PLANNERS - SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

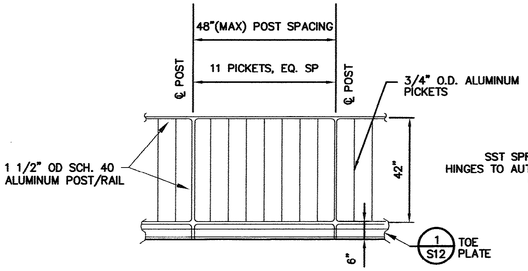
SHEET TITLE: MISCELLANEOUS DETAILS
DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	06553S12
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	S12
OF	14

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

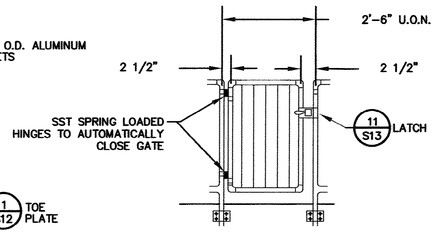


NOTE: TOP AND SIDE MOUNTED INSTALLATION APPLIES.

DETAIL 9 TYP

PICKET HANDRAIL

SCALE: NONE

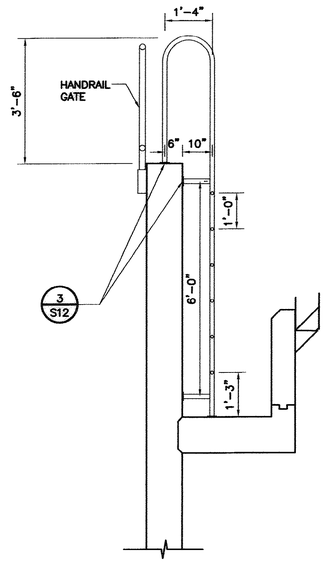


NOTE: TOP AND SIDE MOUNTED INSTALLATION APPLIES.

DETAIL 10 TYP

HANDRAIL GATE

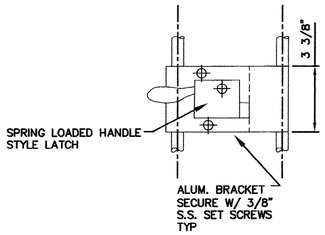
SCALE: NONE



DETAIL 10A TYP

LADDER

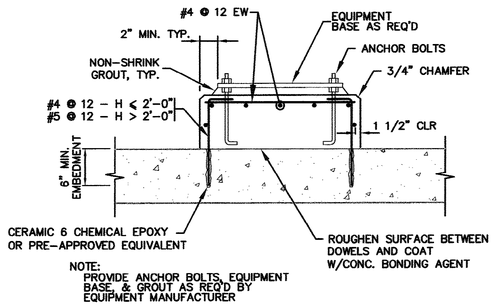
SCALE: NONE



DETAIL 11 S13

LATCH

SCALE: NONE



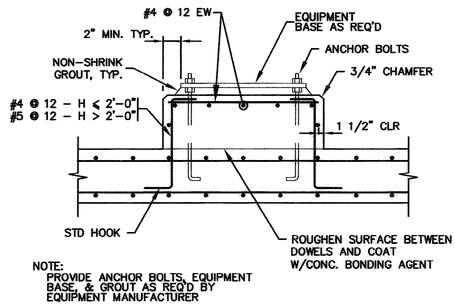
NOTE:
PROVIDE ANCHOR BOLTS, EQUIPMENT BASE, & GROUT AS REQ'D BY EQUIPMENT MANUFACTURER

DETAIL 12 TYP

EQUIPMENT PAD

EXISTING CONCRETE SLAB

SCALE: NONE



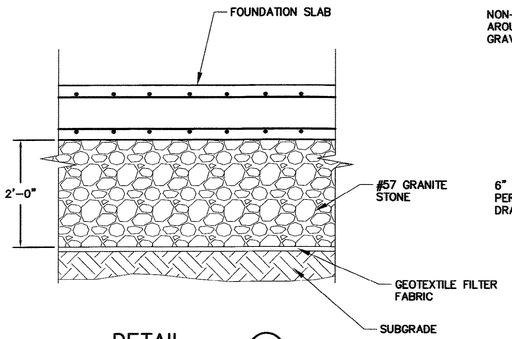
NOTE:
PROVIDE ANCHOR BOLTS, EQUIPMENT BASE, & GROUT AS REQ'D BY EQUIPMENT MANUFACTURER

DETAIL 13 TYP

EQUIPMENT PAD

NEW CONCRETE SLAB

SCALE: NONE

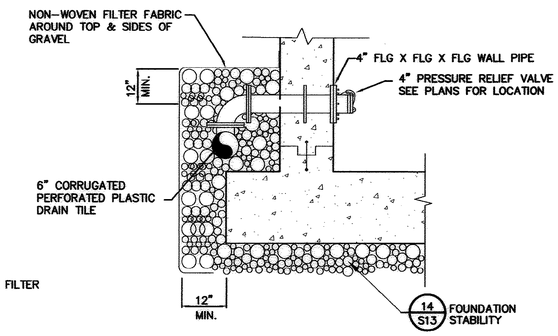


DETAIL 14 TYP

FOUNDATION STABILITY

(TYP. @ EXCAVATIONS.)

SCALE: NONE



DETAIL 15 TYP

PRESSURE RELIEF VALVE

SCALE: NONE

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

RICKBORN
STRUCTURAL ENGINEERING
P.O. BOX 2905
MOUNT PLEASANT, SC 29465-2905
(WORK) 843.881.6610 (FAX) 843.881.6301

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

51-011-040/82

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS		
PROJECT ENG:	MAB	
DESIGNED BY:	MAB	
DRAWN BY:	KBC	
CHECKED BY:	DH	
APPROVED:	MAB	

SOUTH CAROLINA AUTHORIZATION CERTIFICATE OF B.P. BARBER & ASSOCIATES, INC. No. C00020 — DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED No. 22097 DANIEL J. HUGHES — SIGNATURE

bpb
B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

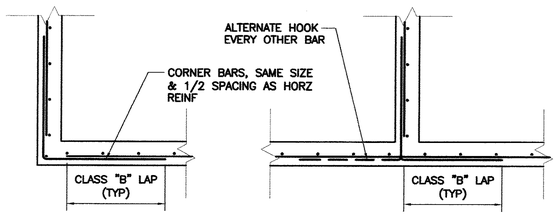
SHEET TITLE: MISCELLANEOUS DETAILS — DATE: NOV 2010 — SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	06553S13
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	S13
OF	14

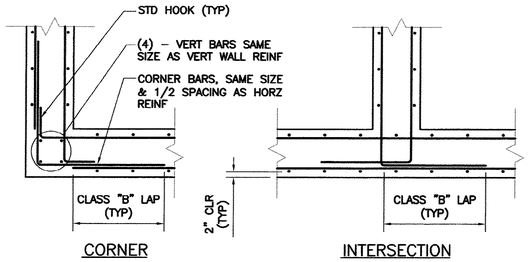
FILE NO. C1-22-03

N:\PROJECTS\06553\DWG\06553-S12-S14-RD.DWG 10/28/2010 4:11:02 PM



CORNER INTERSECTION

SINGLE MAT

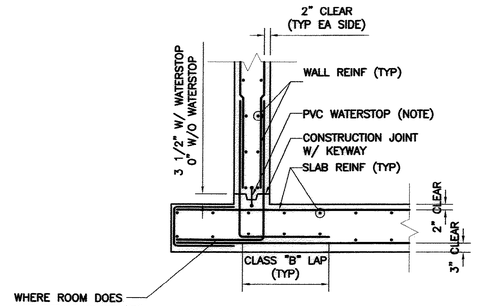


CORNER INTERSECTION

DOUBLE MAT

WALL REINFORCING DETAIL 16 TYP

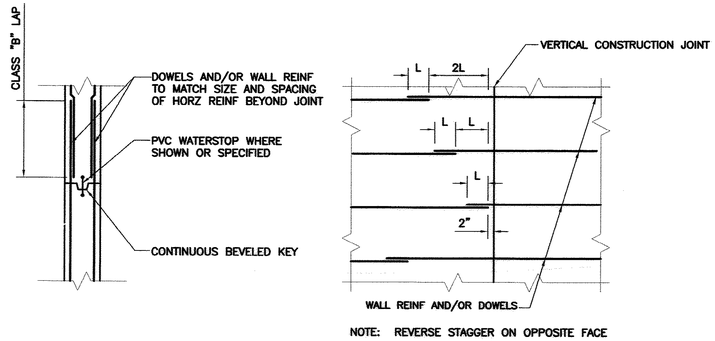
SCALE: NONE



NOTE: PVC WATERSTOP IS REQD IN ALL LIQUID RETAINIING STRUCTURES, BELOW GRADE STRUCTURES, OR AS NOTED OTHERWISE.

WALL – SLAB JOINT DETAIL 17 TYP

SCALE: NONE



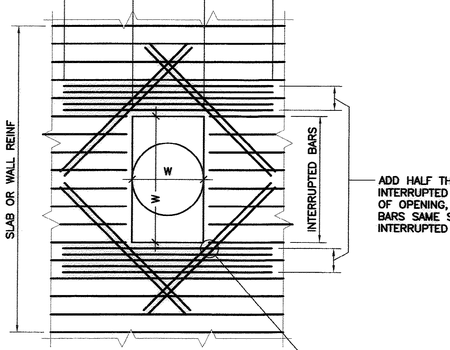
NOTE: REVERSE STAGGER ON OPPOSITE FACE

PLAN

WALL ELEVATION (L = CLASS "B" LAP)

VERTICAL CONCRETE CONSTRUCTION JOINT DETAIL 18 TYP

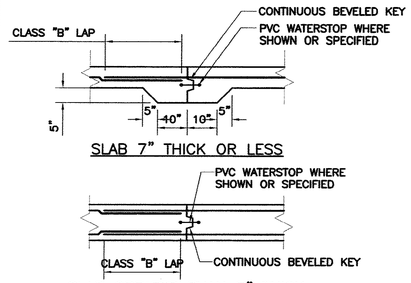
SCALE: NONE



NOTE: BARS SHOWN IN ONE DIRECTION ONLY FOR CLARITY. THIS DETAIL APPLIES TO BARS IN EACH DIRECTION

CONCRETE OPENING REINFORCING DETAIL 21 TYP

SCALE: NONE

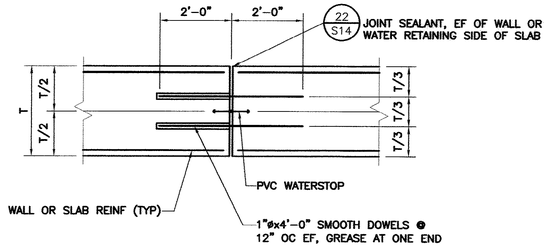


SLAB 7" THICK OR LESS

SLAB GREATER THAN 7" THICK

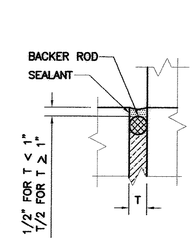
SLAB ON GRADE CONSTRUCTION JOINT DETAIL 19 TYP

SCALE: NONE



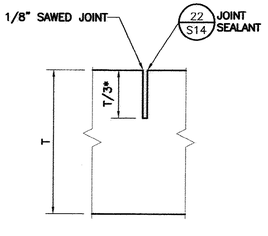
CONCRETE EXPANSION JOINT DETAIL 20 TYP

SCALE: NONE



JOINT SEALANT DETAIL 22 TYP

SCALE: NONE



CONTROL JOINT DETAIL 23 TYP

SCALE: NONE

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

51-011-041/82

RICKBORN & ASSOCIATES, INC. STRUCTURAL ENGINEERING
P.O. BOX 2888 MOUNT PLEASANT, SC 29465-2888 (PHONE) 843.881.8818 (FAX) 843.881.8301

PROJECT #:	2007-119
DESIGNED BY:	BKP/LAB
CHECKED BY:	BKP
DATE:	AUG 2008

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	KBC
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA NOTIFICATION CERTIFICATE OF B.P. BARBER & ASSOCIATES, INC. No. 000000 DATE 12/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. HUBBARD JR. No. 22097 CONSULTANT

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: MISCELLANEOUS CONCRETE DETAILS
DATE: NOV 2010 SCALE: AS SHOWN

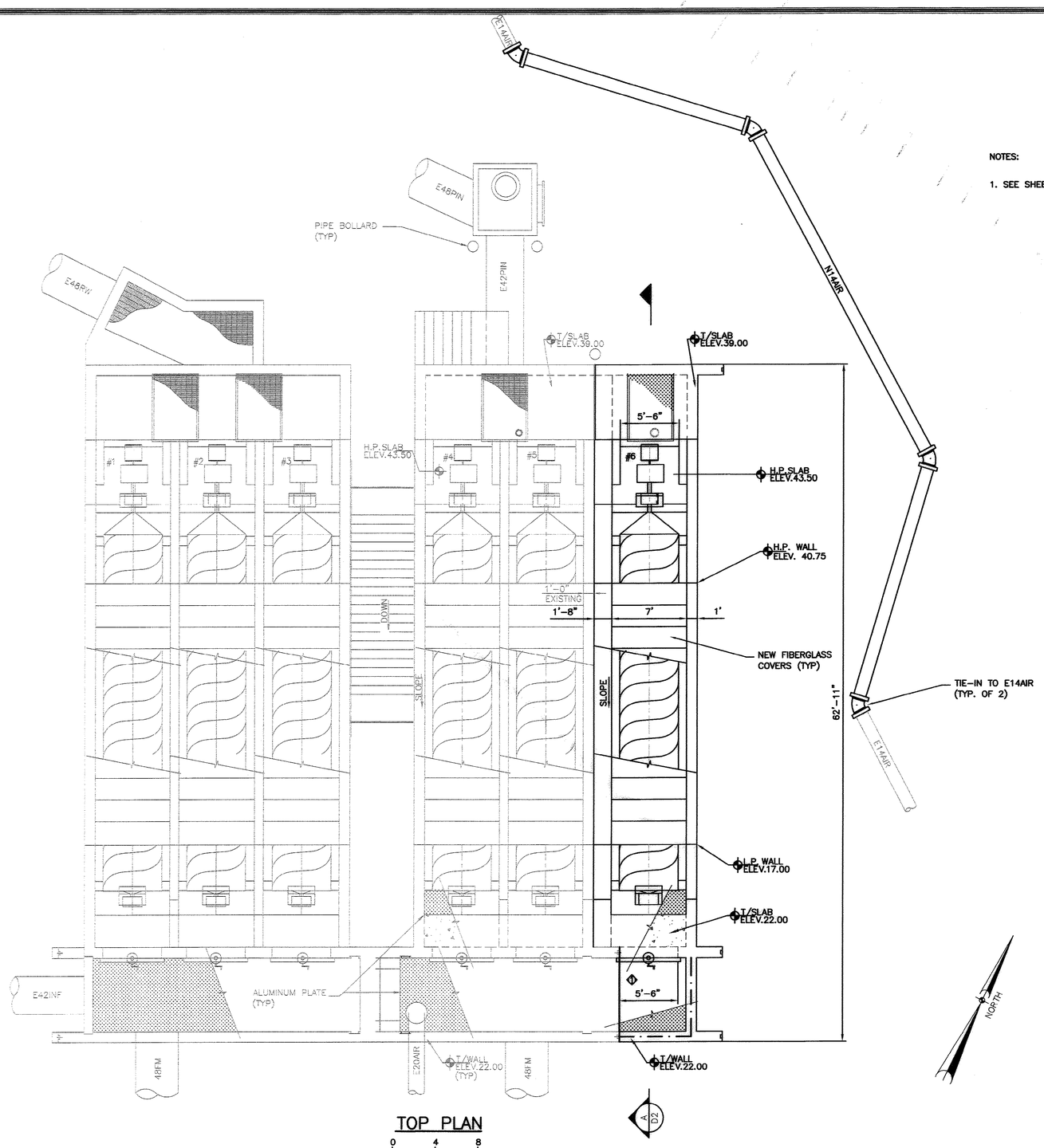
PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	06553S14
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	S14
OF	14

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-S12-S14-RD.DWG 10/28/2010 4:11:16 PM



TOP PLAN

SCALE: 3/16" = 1'-0"

NOTES:

1. SEE SHEET D23 FOR GATE SCHEDULE.

51-011-042/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS
PROJECT ENG: M.A.B
DESIGNED BY: M.A.B
DRAWN BY: E.C.B
CHECKED BY: D.H.
APPROVED: M.A.B

SOUTH CAROLINA AUTHORIZATION CERTIFICATE OF B.P. BARBER & ASSOCIATES, INC. No. C00200
DATE 12/8/11

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED No. 22097 DANIEL J. HIGGINS, JR.
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
INFLUENT PUMP STATION MODIFICATIONS PLAN
DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	D1 OF 25
REF. 1731	
PROJECT NO. 06553	

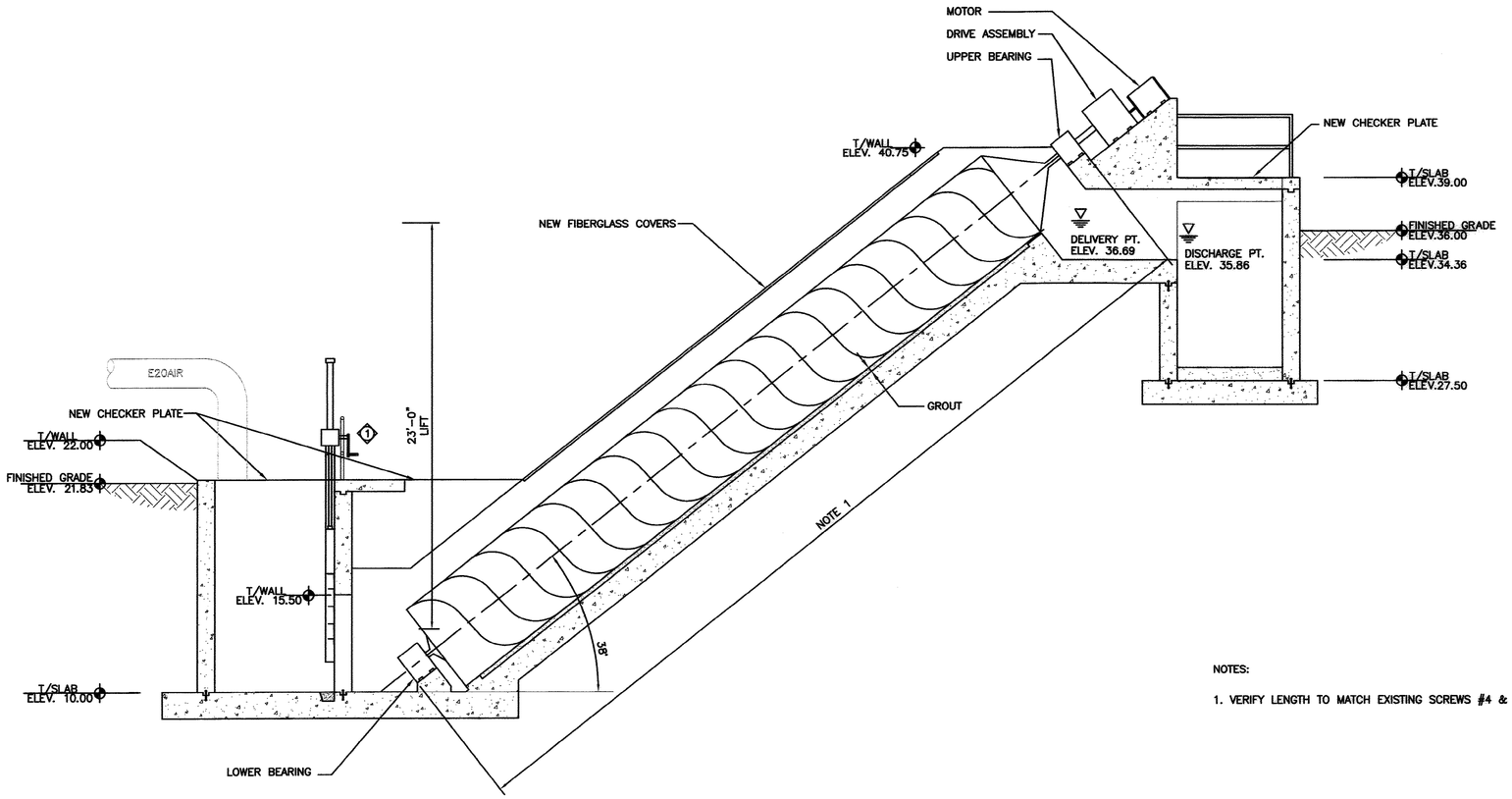
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-01-02-RC.DWG 10/29/2010 8:04:06 AM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-01-02-MD.DWG 10/29/2010 8:04:20 AM



SECTION A / D1

0 4 8

SCALE: 1/4" = 1'-0"

NOTES:

1. VERIFY LENGTH TO MATCH EXISTING SCREWS #4 & #5.

51-011-043/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG: MAB
DESIGNED BY: MAB
DRAWN BY: JEB
CHECKED BY: DH
APPROVED: MAB

SOUTH CAROLINA NO. AUTHORIZATION CERTIFICATE OF B.P. BARBER & ASSOCIATES, INC. No. C00003

DATE 1/25/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL R. HUGHES No. 22097

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: INFLUENT PUMP STATION MODIFICATIONS SECTION & DETAILS

DATE: NOV. 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

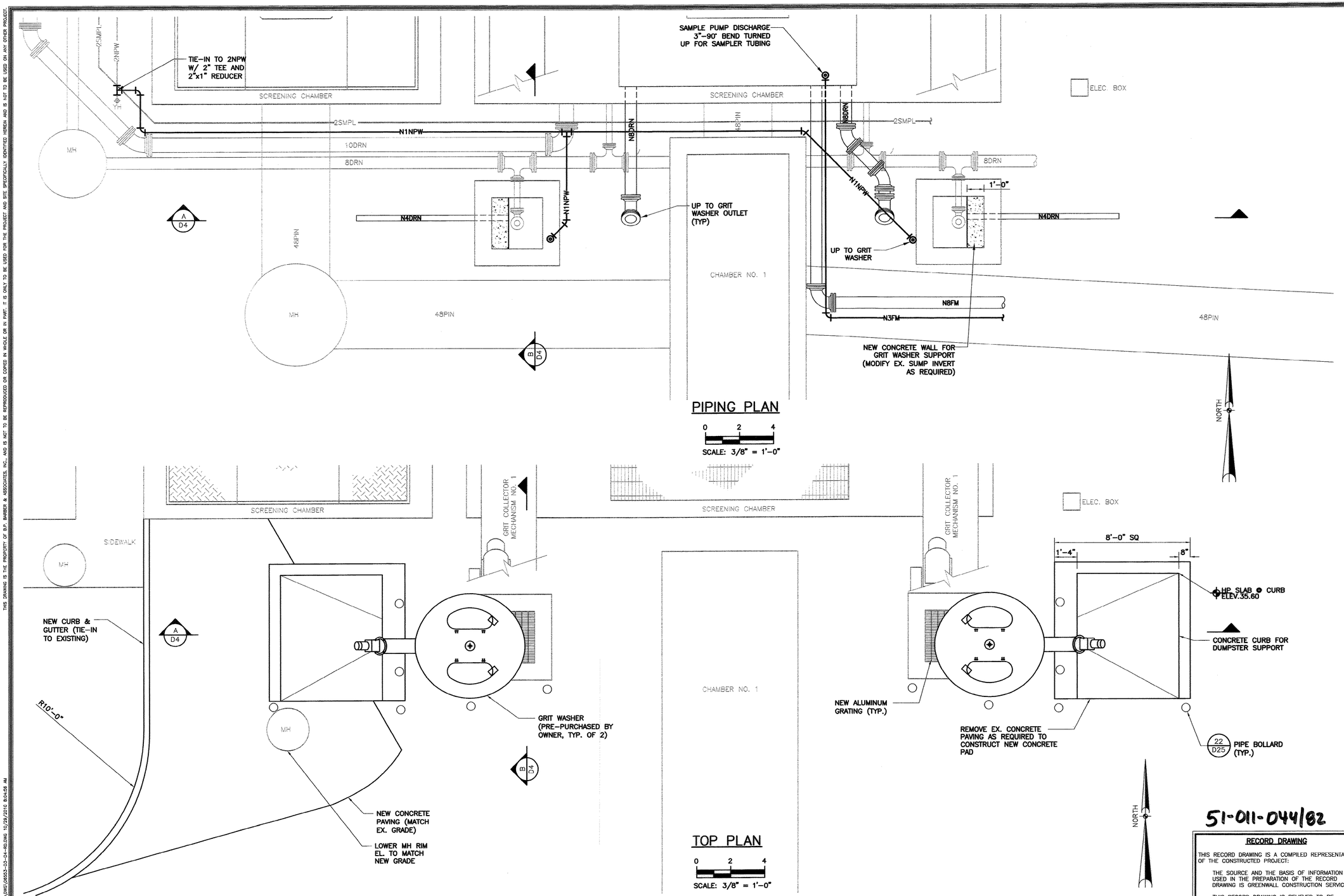
.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET D2 OF 25

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-D3-04-RD.DWG 10/28/2010 8:54:58 AM



51-011-044/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS
PROJECT ENG: MAB
DESIGNED BY: MAB
DRAWN BY: JEB
CHECKED BY: DH
APPROVED: MAB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC.
No. C00001
DATE 11/24/11

SOUTH CAROLINA PROFESSIONAL ENGINEER
DANIEL HUGHES, JR.
LICENSED
No. 22097
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS - PLANNERS - SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
NEW GRIT WASHING EQUIPMENT PLANS
DATE: NOV. 2010 SCALE: AS SHOWN

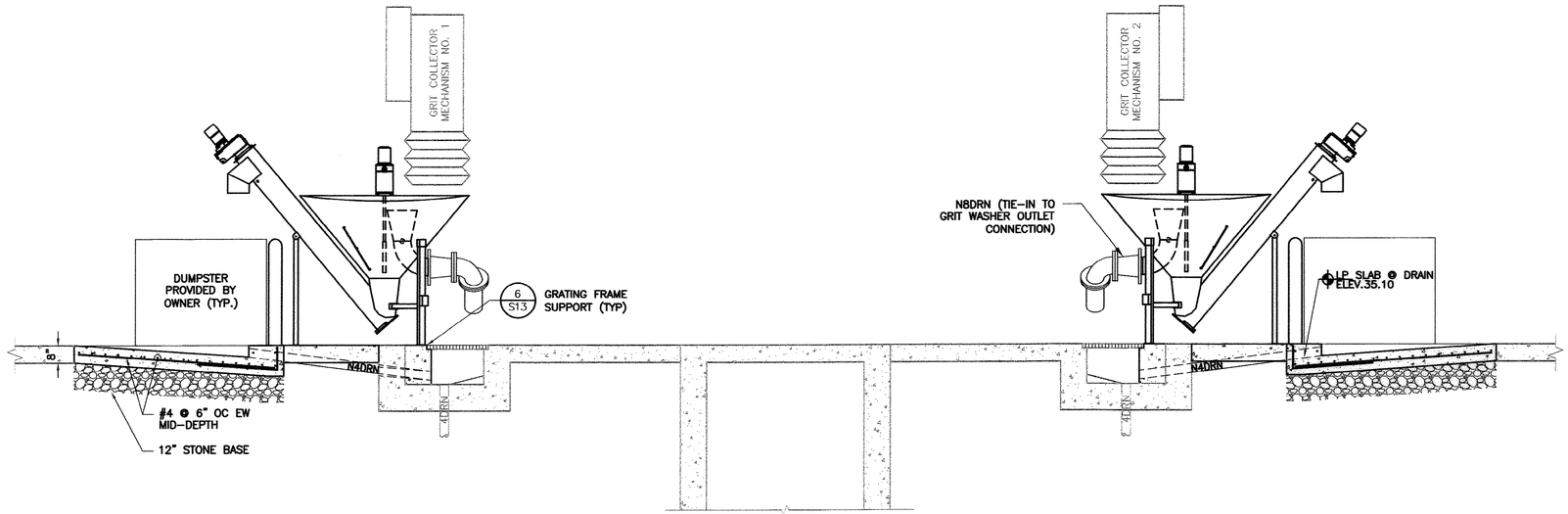
PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	D3
REF. 1731	OF
PROJECT NO. 06553	25

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

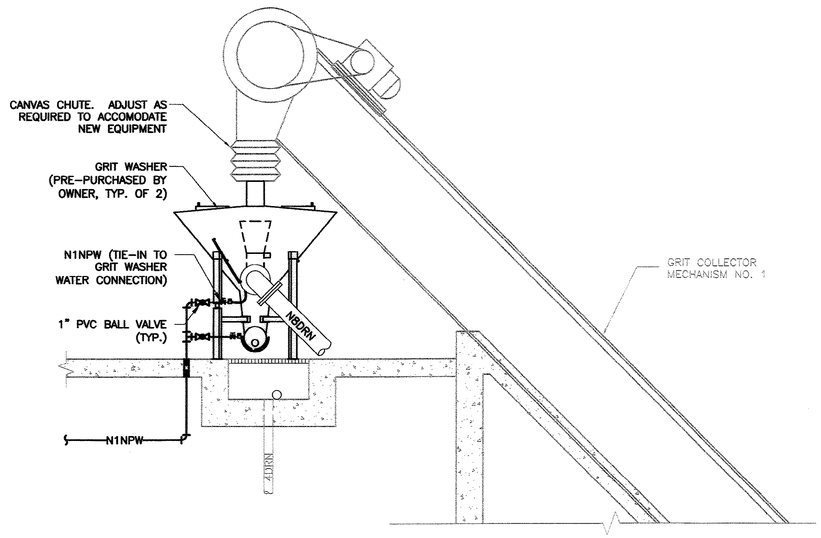
N:\PROJECTS\06553\DWG\06553-03-D4-RD.DWG 10/29/2010 8:05:15 AM



SECTION A / D3

0 2 4

SCALE: 3/8" = 1'-0"



SECTION B / D3

0 2 4

SCALE: 3/8" = 1'-0"

51-011-045/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	M.AB
DESIGNED BY:	M.AB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	M.AB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C00020

DATE 12/1/10

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL HUGH SEALS JR. LICENSED No. 22087

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW GRIT WASHING EQUIPMENT SECTIONS

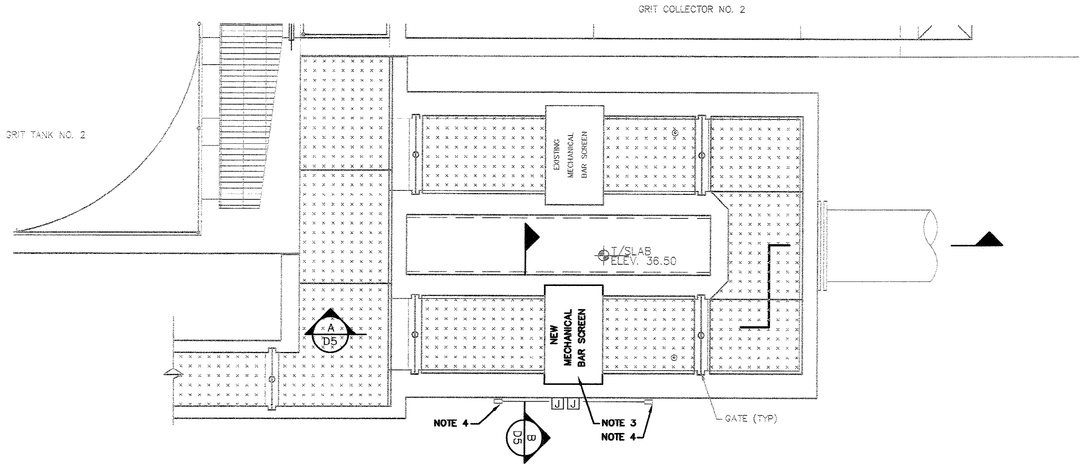
DATE: NOV 2010 SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET D4 OF 25

FILE NO. C1-22-03



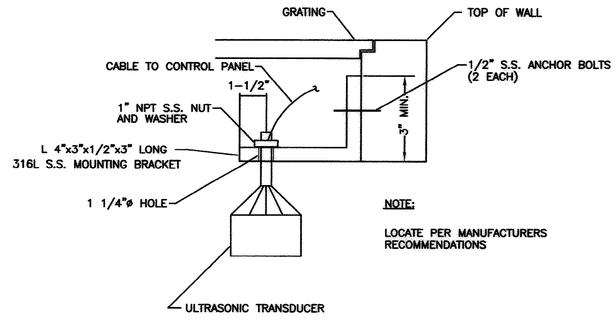
TOP PLAN

SCALE: 1/4" = 1'-0"

NORTH

NOTES:

1. PROVIDE ONE (1) MECHANICAL BAR SCREEN TO MATCH EXISTING ONE.
2. SCREENINGS CONTAINER TO BE SUPPLIED BY THE OWNER.
3. REMOVE EXISTING PLATE.
4. INSTALL CONDUIT, PER ELECTRICAL SHEET, FOR CABLE FROM LEVEL SENSOR.
5. PROVIDE CONCRETE FILL AT EXISTING SUMP. TOP OF FILL TO BE COATED WITH MEMBRANE WATERPROOF COATING.
6. #4 EPOXY DOWELS AT 10" O.C. E.W. W/ 6" EMBEDMENT.



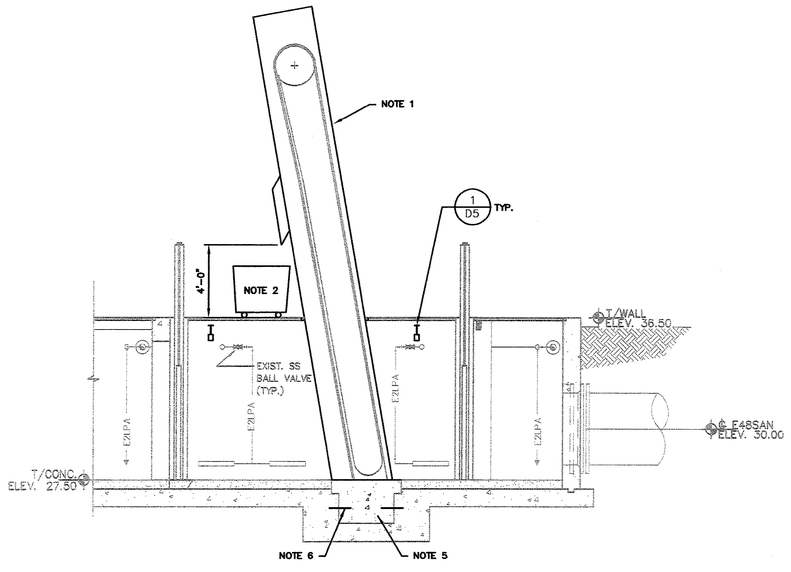
NOTE:

LOCATE PER MANUFACTURERS RECOMMENDATIONS

TRANSDUCER MOUNTING DETAIL

SCALE: N.T.S.

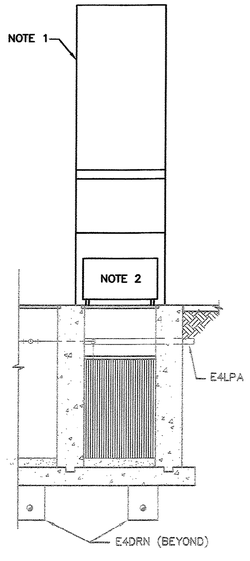
1 TYP



SECTION

A D5

SCALE: 1/4" = 1'-0"



SECTION

B D5

SCALE: 1/4" = 1'-0"

51-011-046/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1			

APPROVALS

PROJECT ENG.	DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED:
M.AB	M.AB	JEB	DH	M.AB

SOUTH CAROLINA AUTHORIZATION CERTIFICATE OF B.P. BARBER & ASSOCIATES, INC. ASSOCIATION No. 000630 — DATE 12/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL HUGHES JR LICENSED No. 22097 — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW BAR SCREEN PLAN, SECTIONS & DETAIL

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET D5 OF 25

FILE NO. C1-22-03

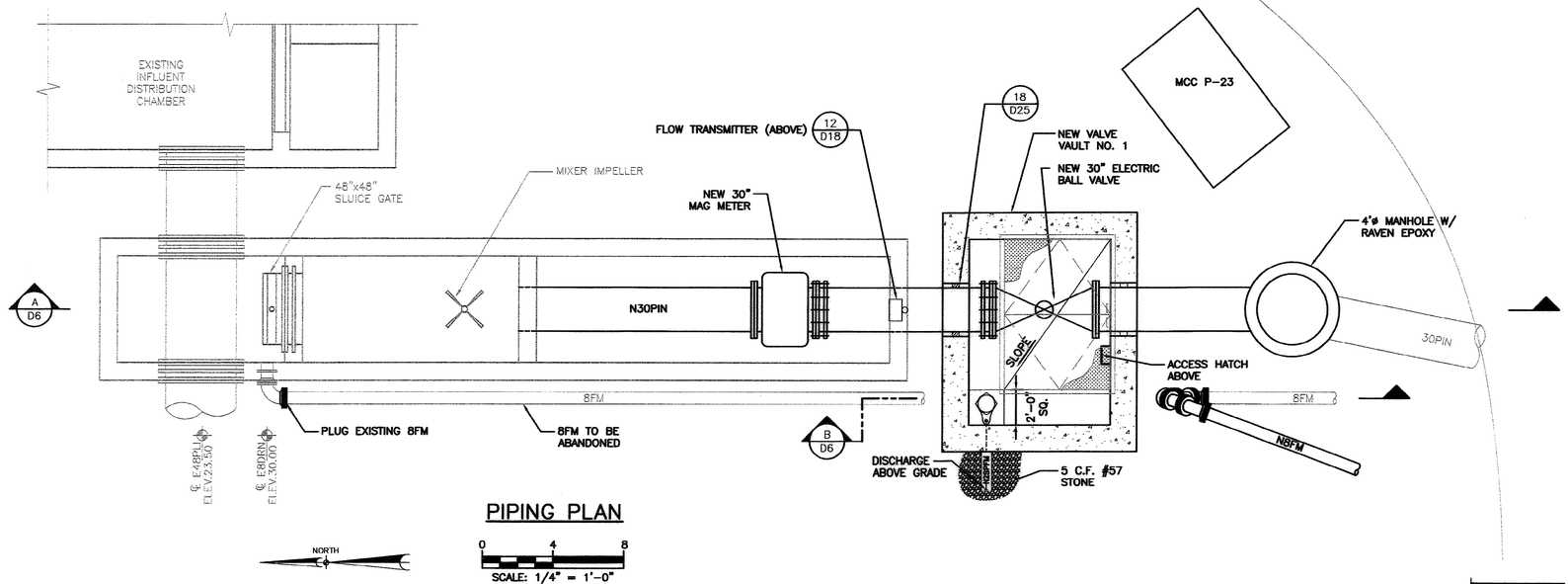
THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-D5-RD.DWG 10/29/2010 8:08:50 AM

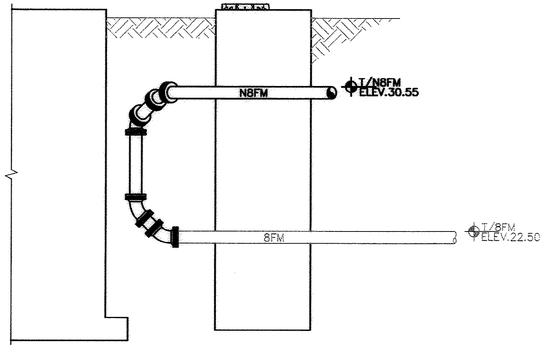
THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-D6-RD.DWG 11/1/2010 9:28:07 AM

NOTE:
1. WORK TO BE COMPLETED BETWEEN SEPTEMBER 1 AND MAY 1.



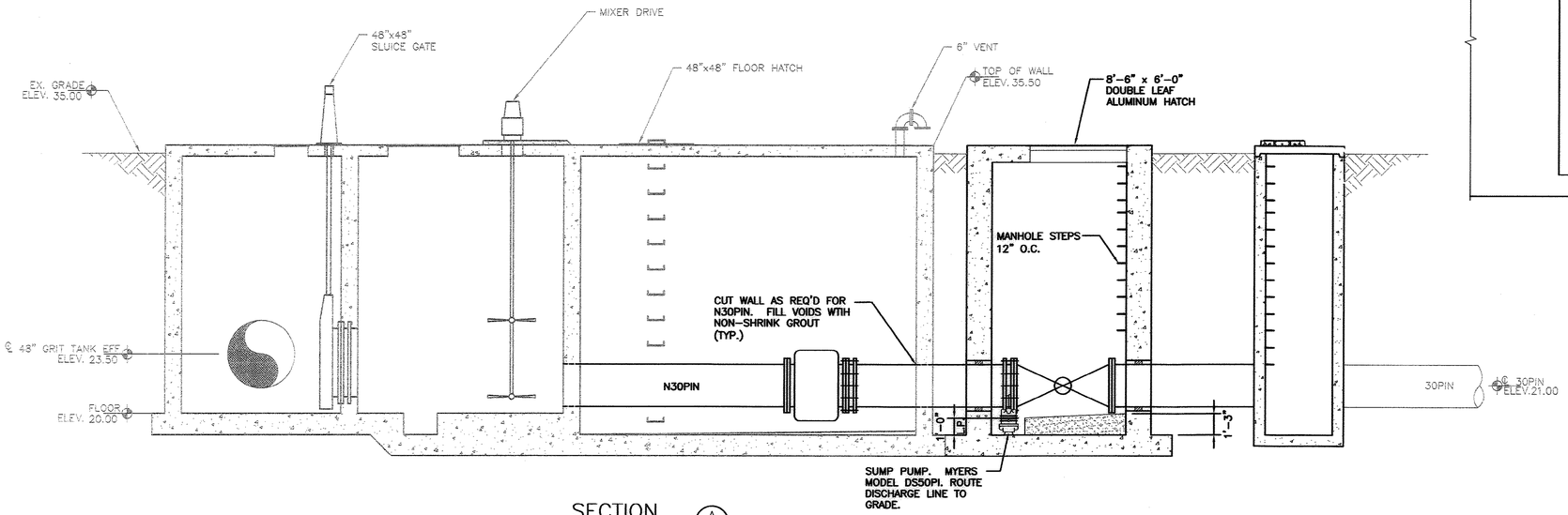
PIPING PLAN



SECTION B D6

0 4 8

SCALE: 1/4" = 1'-0"



SECTION A D6

0 4 8

SCALE: 1/4" = 1'-0"

51-011-047/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	M.A.B
DESIGNED BY:	M.A.B
DRAWN BY:	J.E.B
CHECKED BY:	D.H
APPROVED:	M.A.B

SOUTH CAROLINA NOTIFICATION — B.P. BARBER & ASSOCIATES, INC. No. C00020 — CERTIFICATE OF AUTHORIZATION — DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER — LICENSED — No. 22097 — DANIEL A. HUGHES JR. — SIGNATURE

bpb

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
MODIFICATIONS TO METER VAULT NEW VALVE VAULT NO. 1
PLAN & SECTION

DATE: NOV 2010 | SCALE: AS SHOWN

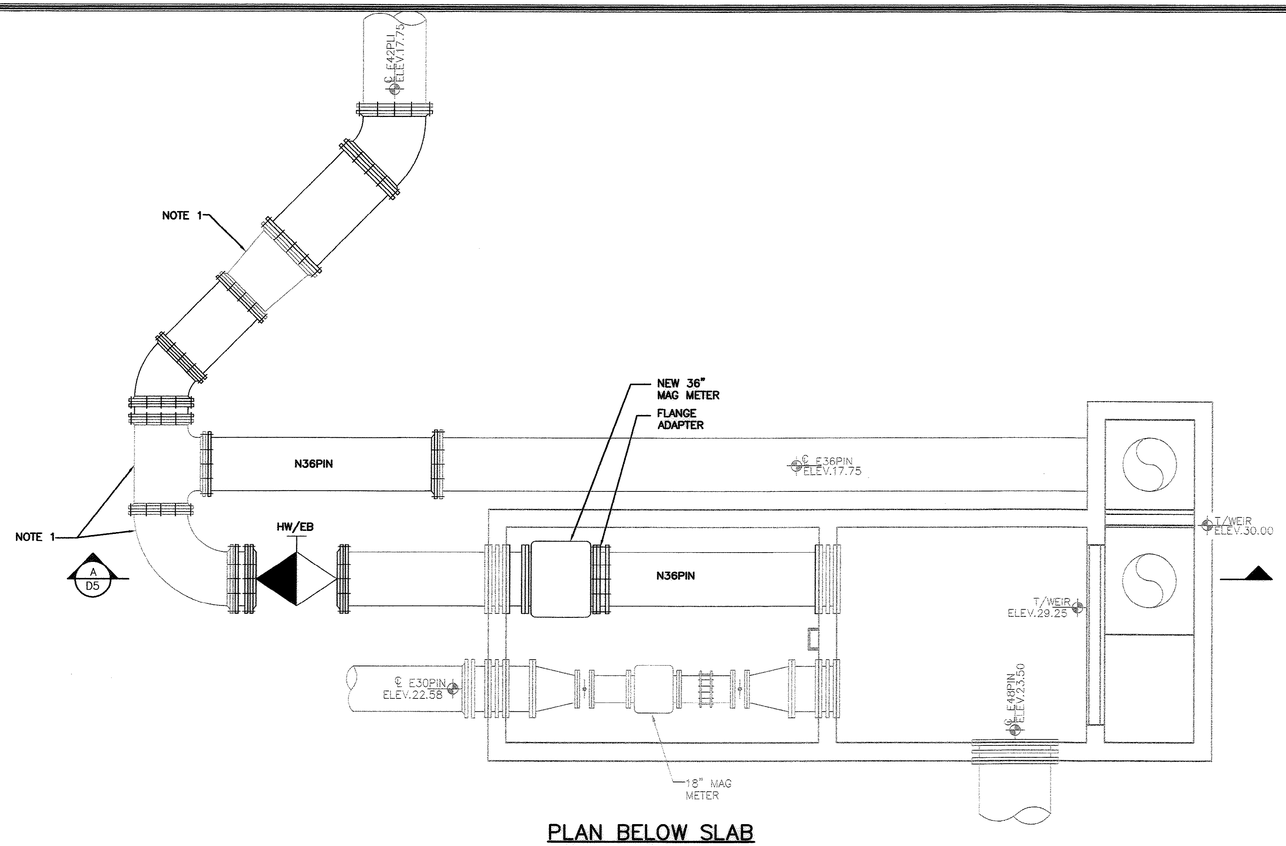
PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	D6
REF. 1731	OF 25
PROJECT NO. 06553	

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-07-RD.DWG 10/29/2010 8:06:59 AM

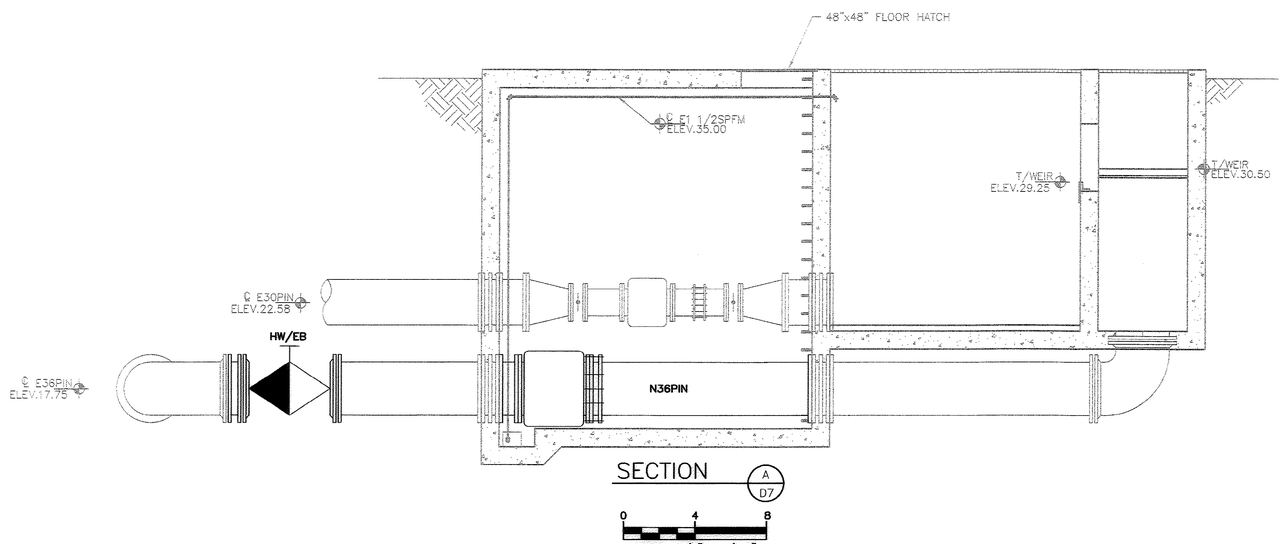


PLAN BELOW SLAB

0 4 8

SCALE: 1/4" = 1'-0"

NORTH



SECTION A D7

0 4 8

SCALE: 1/4" = 1'-0"

INSTALLED BY OWNER.
THIS SHEET IS FOR
REFERENCE ONLY

NOTES:

1. RELOCATED EXISTING YARD PIPING.

51-011-048/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS
PROJECT ENG: MAB
DESIGNED BY: MAB
DRAWN BY: JEB
CHECKED BY: DH
APPROVED: MAB

SOUTH CAROLINA AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC.
No. 00000
CERTIFICATE OF
DATE 11/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER
LICENSED
No. 22097
DANIEL J. HUGHES JR.
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

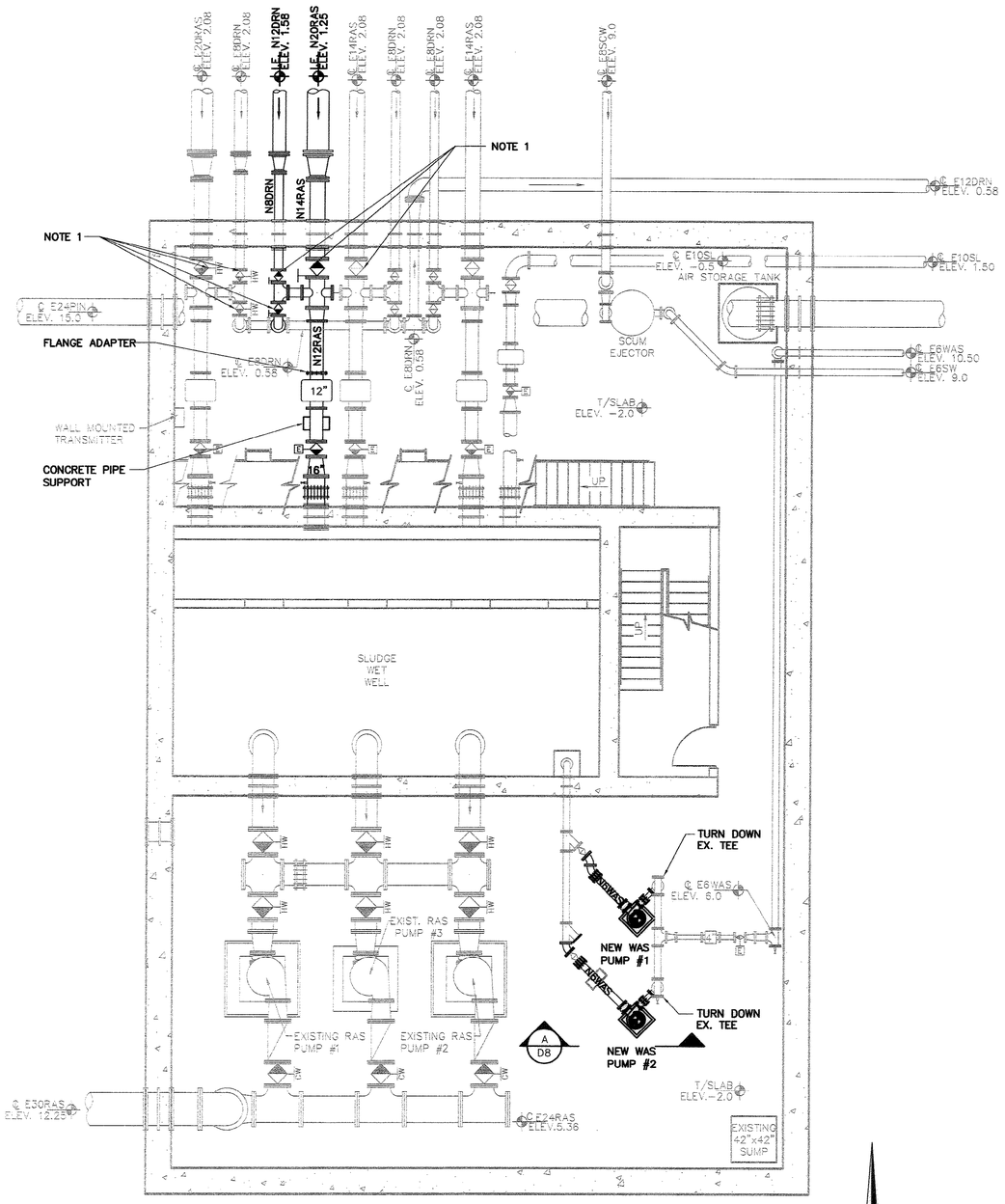
SHEET TITLE
MODIFICATIONS TO INFLUENT DISTRIBUTION CHAMBER PLAN & SECTION
DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET D7 OF 25

FILE NO. C1-22-03



PLAN @ ELEV. −2.0

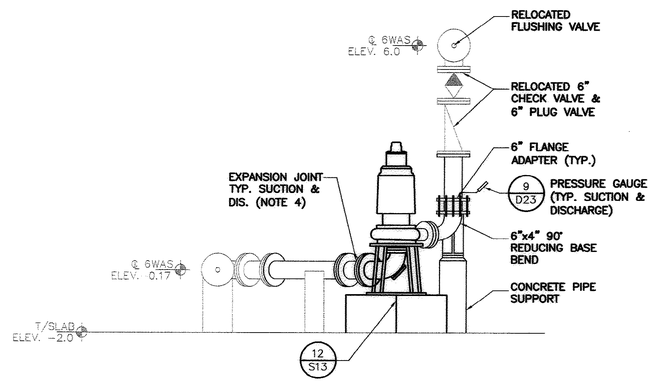
0 4 8

SCALE: 3/16" = 1'-0"

NORTH

NOTES:

1. ROTATE PLUG VALVES UP SUCH THAT OPERATOR IS IN VERTICAL POSITION (TYP. OLD AND NEW).
2. PROVIDE REDFLEX TYPE J-1 SINGLE ARCH EXPANSION JOINT AT PUMP SUCTION AND DISCHARGE AS MANUFACTURED BY RED VALVE CO. PROVIDE EXPANSION JOINTS WITH 316 S.S. CONTROL UNITS.



SECTION A D8

0 2 4

SCALE: 1/2" = 1'-0"

51-011-049/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C00820

DATE 12/8/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. HUDSON JR. LICENSED No. 22097

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
MODIFICATIONS TO RETURN SLUDGE PUMP STATION PLAN & SECTION

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET D8 OF 25

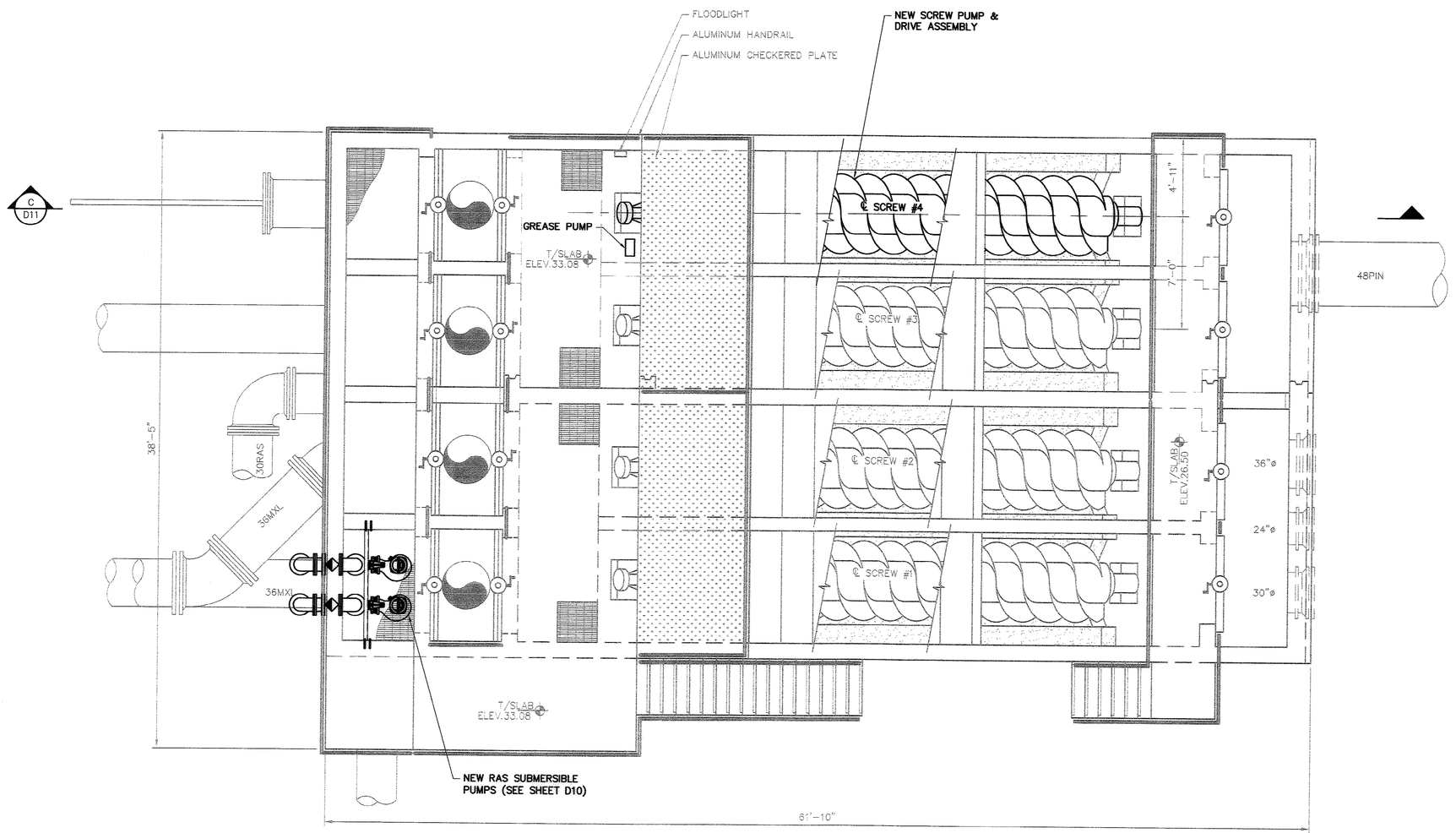
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-D8-R0.DWG 10/29/2010 8:41:20 AM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-09-RD.DWG 10/29/2010 9:42:15 AM



TOP PLAN

SCALE: 1/4" = 1'-0"

NORTH

51-011-050/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC.
No. C00020
DATE 12/11

PROFESSIONAL ENGINEER
SOUTH CAROLINA
No. 22097
LICENSED
DANIEL HUGH WILLIAMS, JR.
SIGNATURE

bpb

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
MODIFICATIONS TO INTERMEDIATE PUMP STATION PLAN

DATE: NOV 2010 SCALE: AS SHOWN

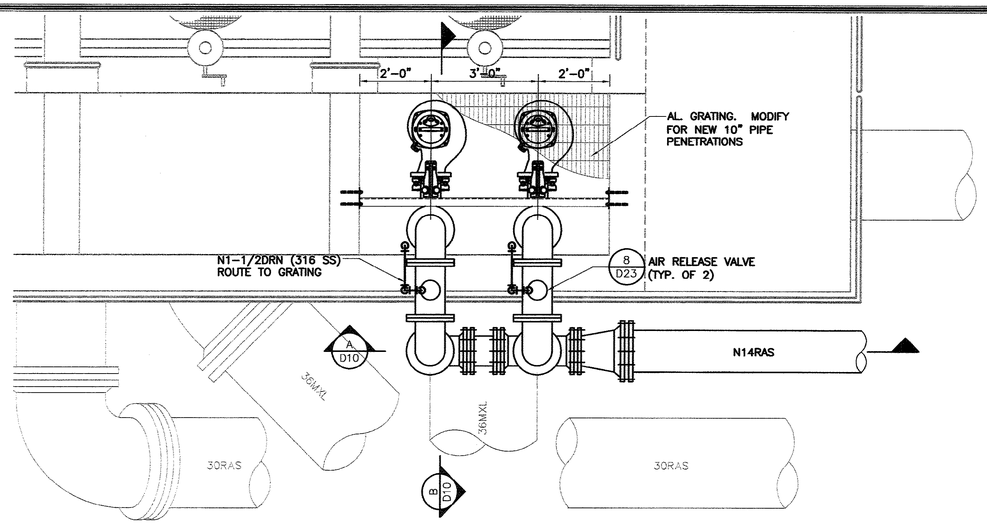
PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	D9
OF	25

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-D10-R0.DWG 10/29/2010 8:44:25 AM

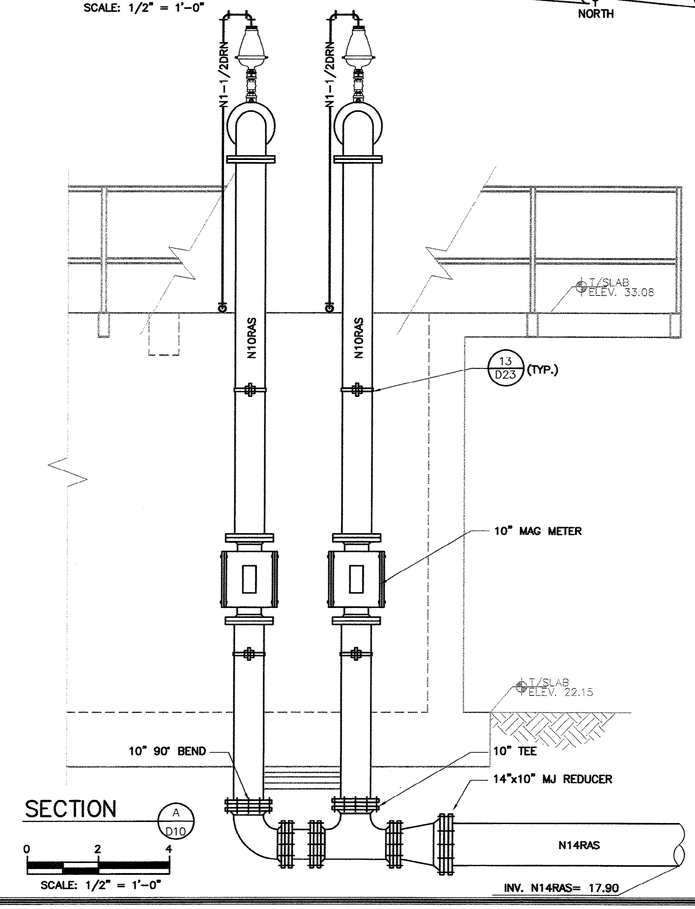


TOP PLAN

0 2 4

SCALE: 1/2" = 1'-0"

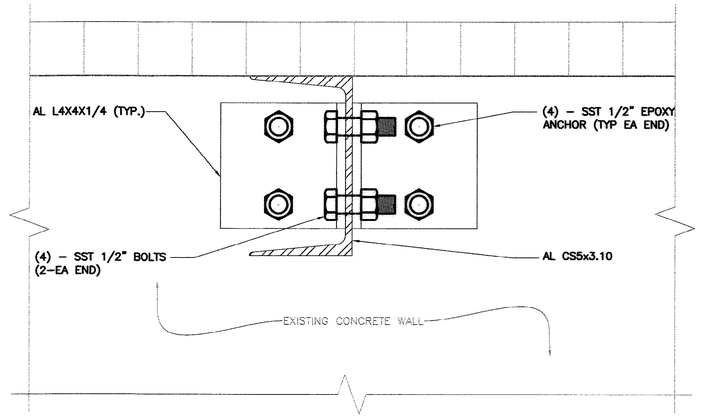
NORTH



SECTION A D10

0 2 4

SCALE: 1/2" = 1'-0"



GRATING SUPPORT DETAIL

SCALE: NONE

23 D10

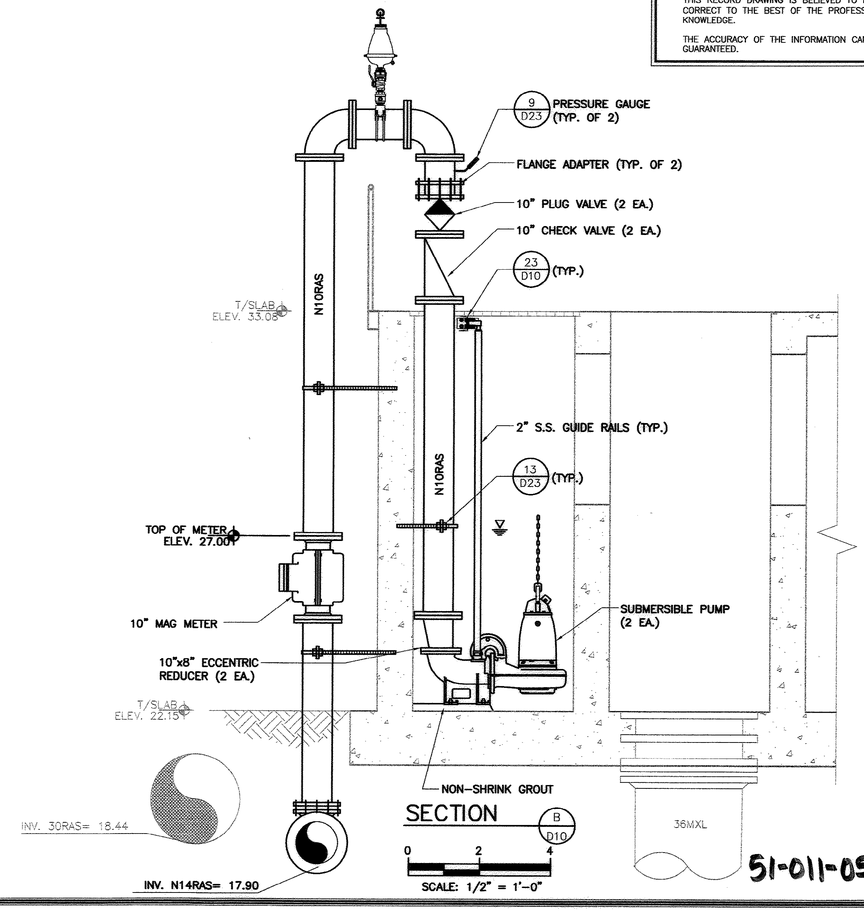
RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.



SECTION B D10

0 2 4

SCALE: 1/2" = 1'-0"

51-011-051/82

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS		DATE
PROJECT ENG	M.AB	
DESIGNED BY:	M.AB	
DRAWN BY:	JEB	
CHECKED BY:	DH	
APPROVED:	M.AB	

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL L. HOCHUM JR. No. 22097 LICENSED

AUTHORIZATION CERTIFICATE OF B.P. BARBER & ASSOCIATES, INC. No. C00520 SOUTH CAROLINA

DATE 12/8/11

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
MODIFICATIONS TO INTERMEDIATE PUMP STATION PLAN, SECTIONS AND DETAIL

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	D10
REF. 1731	OF
PROJECT NO. 06553	25

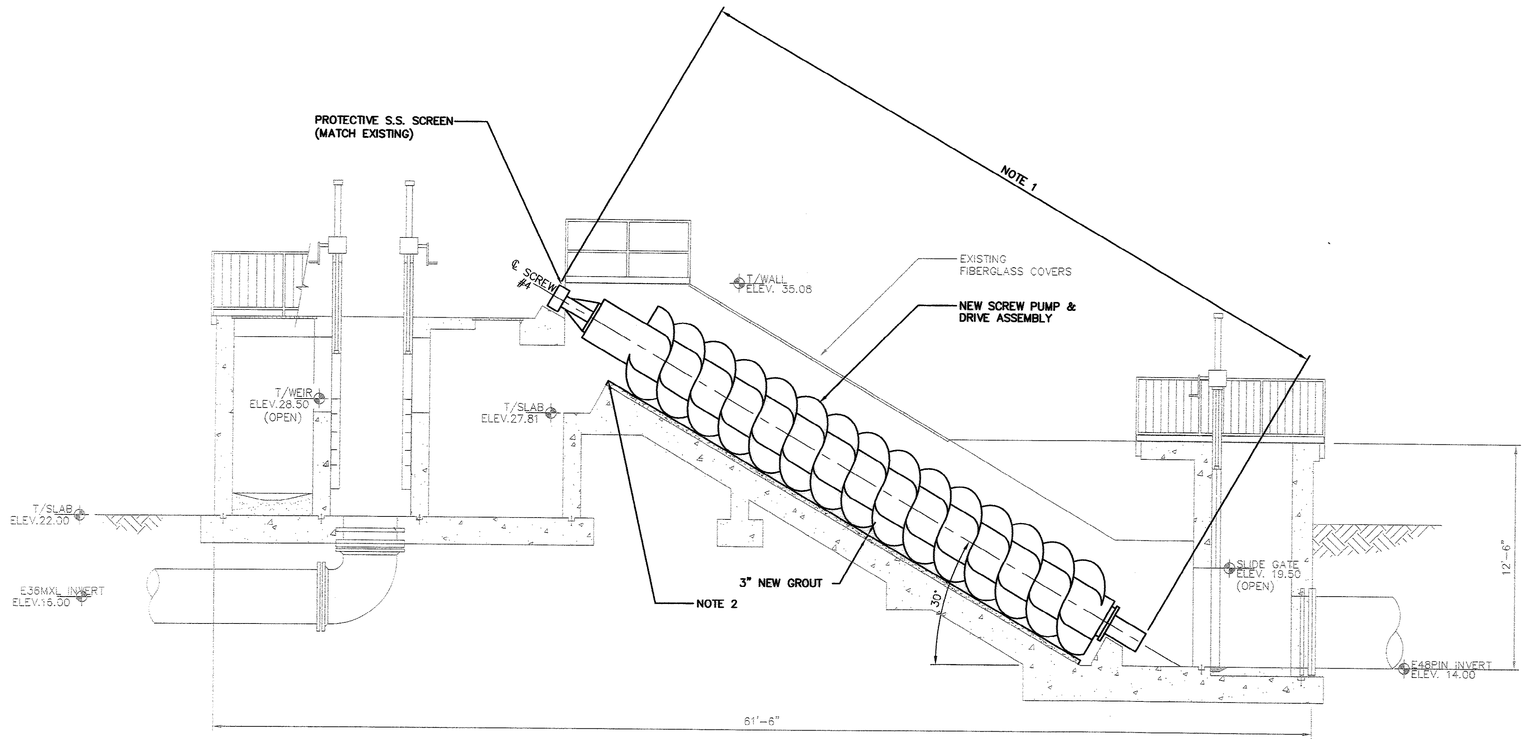
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

I:\PROJECTS\06553\DWG\06553-D11-HD.DWG 10/29/2010 8:43:40 AM

NOTES:

1. VERIFY LENGTH TO MATCH EXISTING SCREWS.
2. REPAIR ANY MEMBRANE WATERPROOFING COATING DAMAGED FROM EQUIPMENT INSTALLATION. TYPICAL ENTIRE STRUCTURE.



SECTION C / D9

0 4 8

SCALE: 1/4" = 1'-0"

51-011-052/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT;

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG.	DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED:
MAB	MAB	JEB	DH	MAB

SOUTH CAROLINA AUTHORIZATION — B.P. BARBER & ASSOCIATES, INC. No. C00020 — CERTIFICATE OF AUTHORIZATION — DATE 12/8/11

SOUTH CAROLINA PROFESSIONAL ENGINEER — LICENSED — J.R. DANIELS — No. 22897 — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: MODIFICATIONS TO INTERMEDIATE PUMP STATION SECTION

DATE: NOV 2010 | SCALE: AS SHOWN

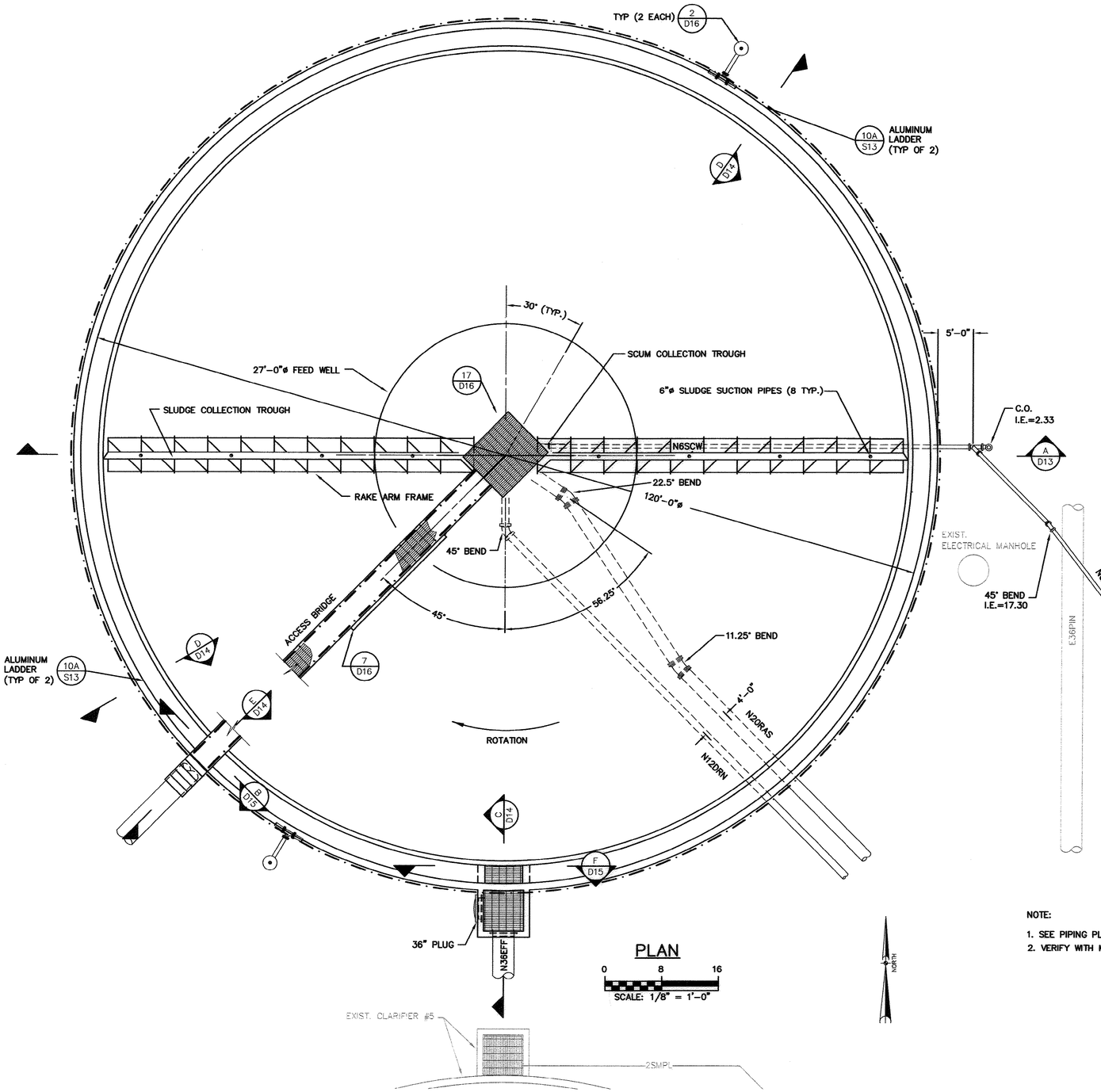
PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	D11
REF. 1731	OF 25
PROJECT NO. 06553	

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-D12-RD.DWG 10/29/2010 8:44:26 AM



PLAN

0 8 16

SCALE: 1/8" = 1'-0"

NORTH

NOTE:

1. SEE PIPING PLAN FOR ORIENTATION.
2. VERIFY WITH MANUFACTURERS SHOP DRAWING.

51-011-053/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED:
MAB	MAB	JEB	DH	MAB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C000620

DATE 11/29/10

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED DANIEL H. HUDGINS, JR. No. 22097

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

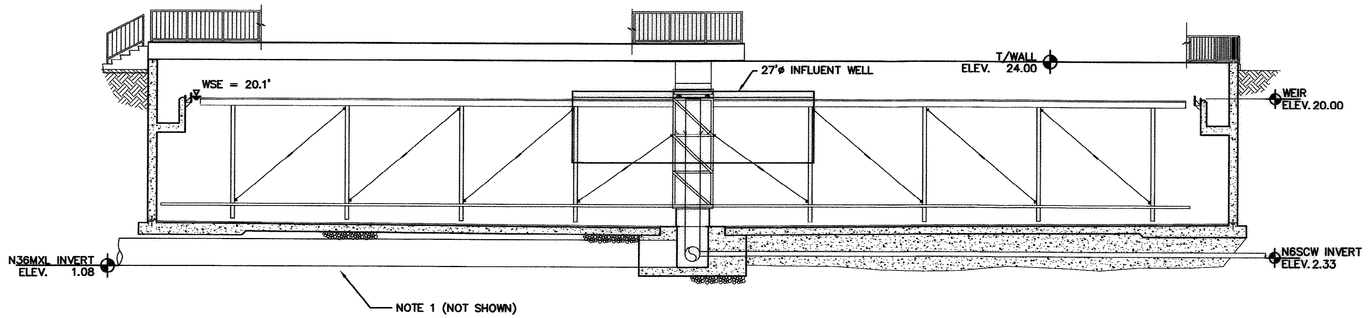
SHEET TITLE: NEW SECONDARY CLARIFIER # 6 PLAN

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	D12 OF 25
REF. 1731	
PROJECT NO. 06553	

FILE NO. C1-22-03



SECTION (A / D12)

0 8 16

SCALE: 1/8" = 1'-0"

NOTES:

1. ENCASE ALL PIPES UNDER SLAB IN 2500 PSI CONCRETE (12" MINIMUM ALL AROUND).
2. MECHANICAL EQUIPMENT FOR CLARIFIER IS SHOWN FOR INFORMATION ONLY. ALL EQUIPMENT SHALL CONFORM TO MANUFACTURERS DRAWINGS AS APPROVED BY THE ENGINEER.

51-011-054/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA B.P. BARBER & ASSOCIATES, INC. No. C000620 CERTIFICATE OF AUTHORIZATION

DATE 12/8/10

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL T. HUGHES, JR. No. 22097

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW SECONDARY CLARIFIER # 6 SECTION

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	D13
REF. 1731	OF
PROJECT NO. 06553	25

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

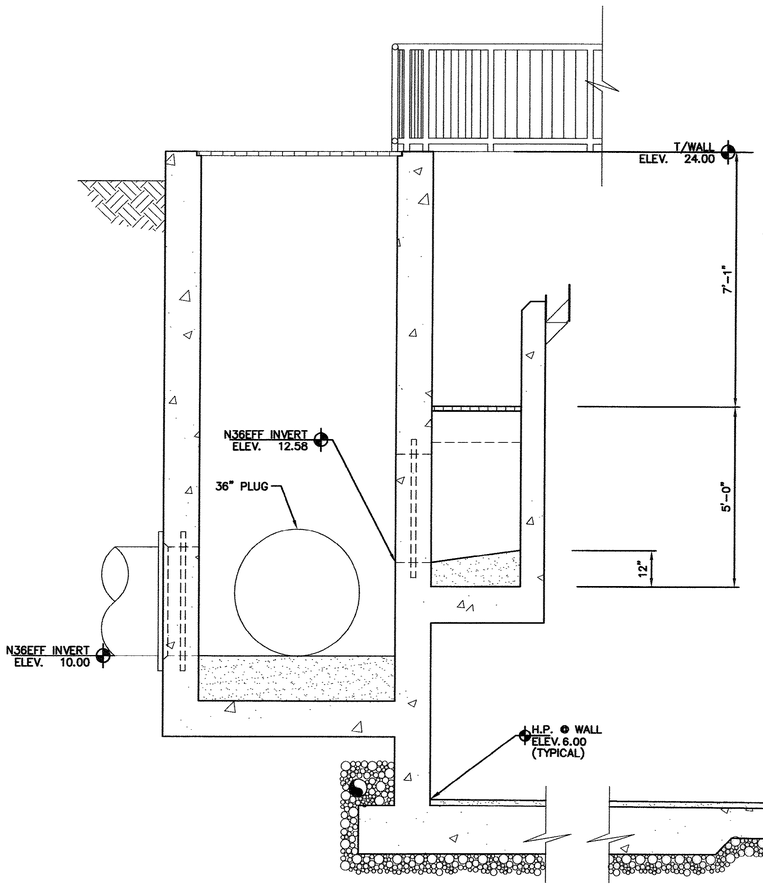
N:\PROJECTS\06553\DWG\06553-D13-RD.DWG 10/29/2010 8:45:00 AM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-014-RD.DWG 10/29/2010 8:45:41 AM

NOTES:

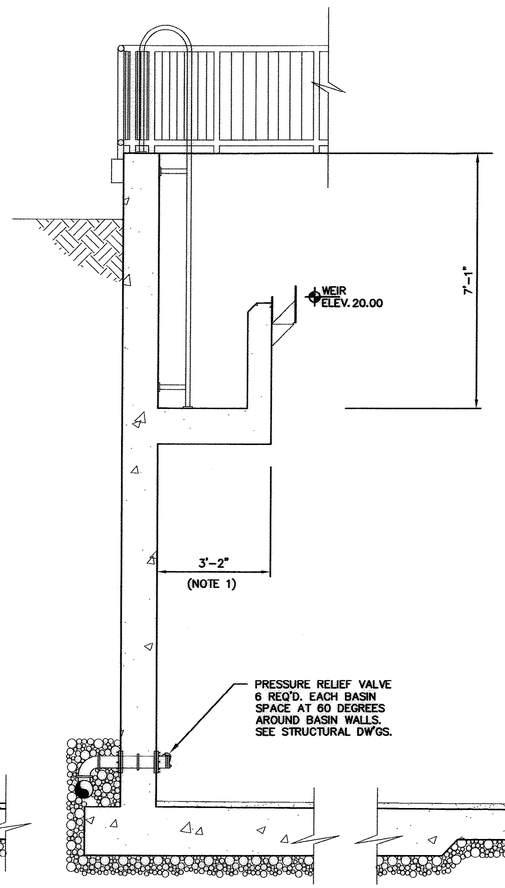
1. WIDTH OF EFFLUENT CHANNEL DETERMINED BY APPROVED MANUFACTURED SHOP DRAWINGS.
2. SURFACE OF EFFLUENT CHANNEL TO 6" ABOVE TOP OF WEIR SHALL BE PAINTED AS SPECIFIED IN SECTION 09900.



SECTION C D12

0 2 4

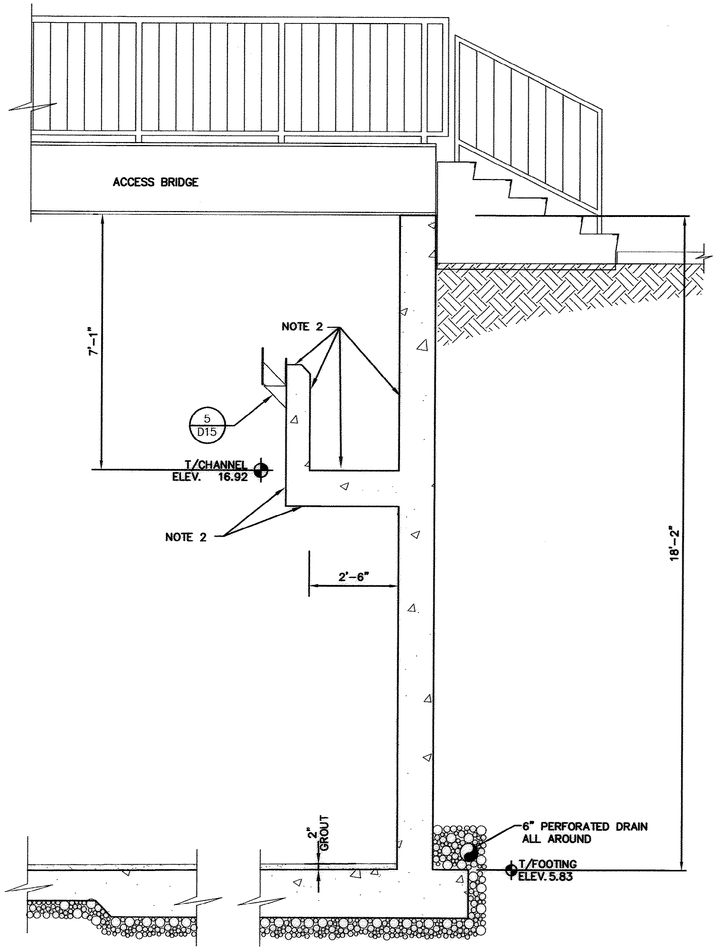
SCALE: 1/2" = 1'-0"



SECTION D D12

0 2 4

SCALE: 1/2" = 1'-0"



SECTION E D12

0 2 4

SCALE: 1/2" = 1'-0"

51-011-055/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	M.A.B
DESIGNED BY:	M.A.B
DRAWN BY:	J.E.B
CHECKED BY:	D.H
APPROVED:	M.A.B

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. 000600

DATE 12/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL HUGHEY JR LICENSED No. 22097

SIGNATURE

bpb

B. P. BARBER & ASSOCIATES, INC.

ENGINEERS – PLANNERS – SURVEYORS

COLUMBIA • SPARTANBURG • CHARLESTON

FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW SECONDARY CLARIFIER #6 SECTIONS

SCALE: AS SHOWN

DATE: NOV 2010

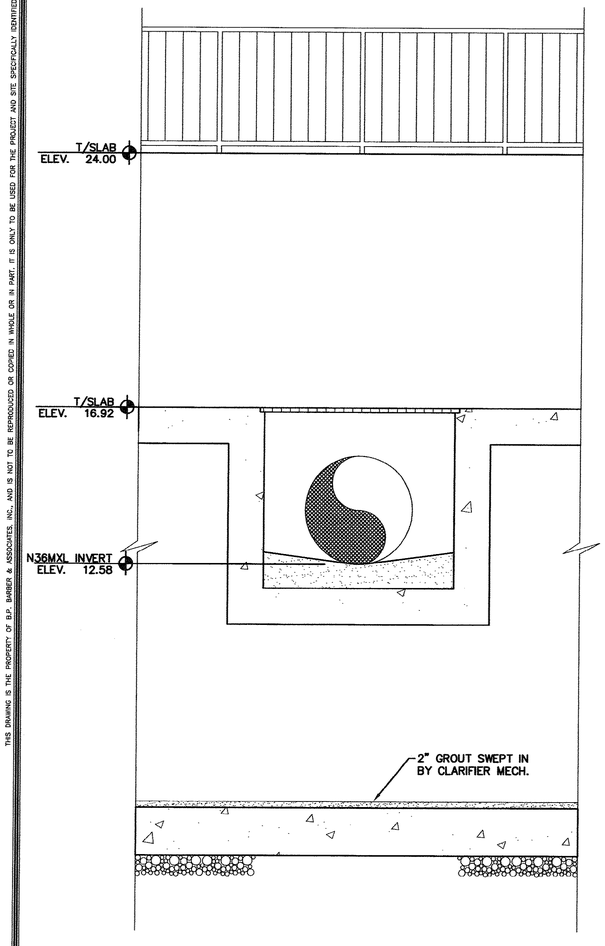
PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET D14 OF 25

FILE NO. C1-22-03

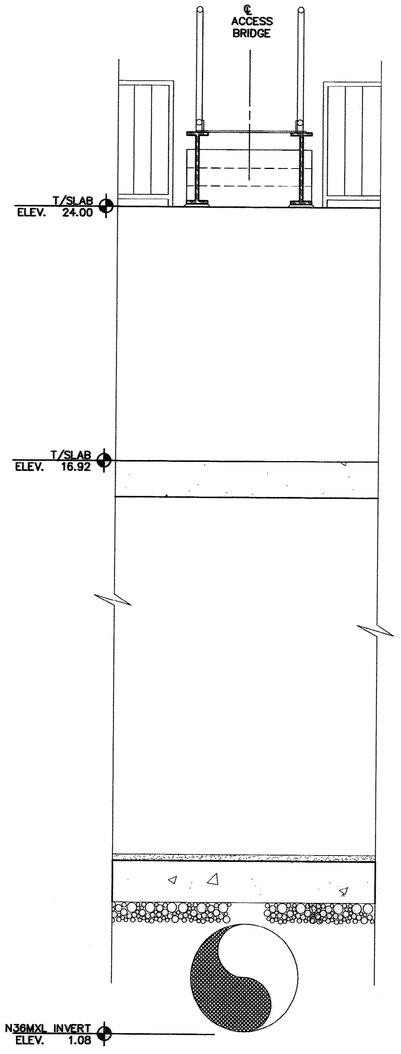
THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED, OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.



SECTION F D12

0 2 4

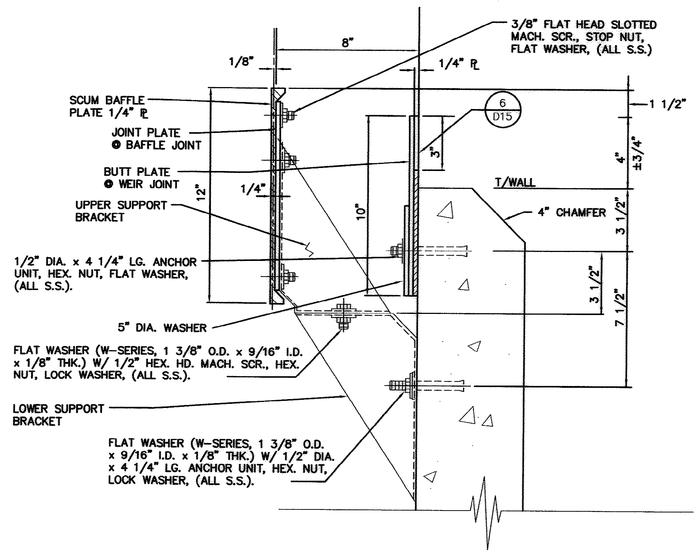
SCALE: 1/2" = 1'-0"



SECTION B D12

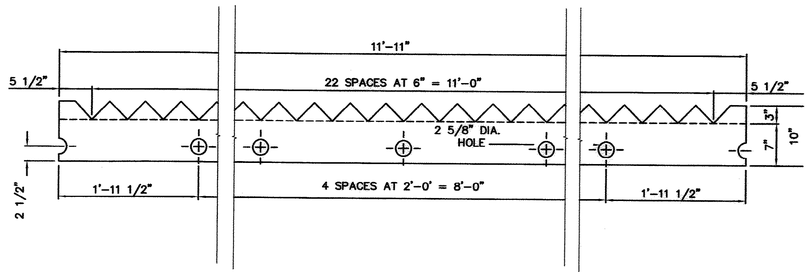
0 2 4

SCALE: 1/2" = 1'-0"



SCUM BAFFLE AND FRP WEIR PLATE AT JOINT DETAIL 5 D14

SCALE: N.T.S.



"V" NOTCH WEIR PLATE DETAIL 6 D15

SCALE: N.T.S.

51-011-056/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED:
MAB	MAB	JEB	DH	MAB

SOUTH CAROLINA NOTARIZATION CERTIFICATE OF B.P. BARBER & ASSOCIATES, INC. No. C00020

DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED DANIEL J. HUNTER JR. No. 22097

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW SECONDARY CLARIFIER # 6 SECTIONS & DETAILS

DATE: NOV 2010 | SCALE: AS SHOWN

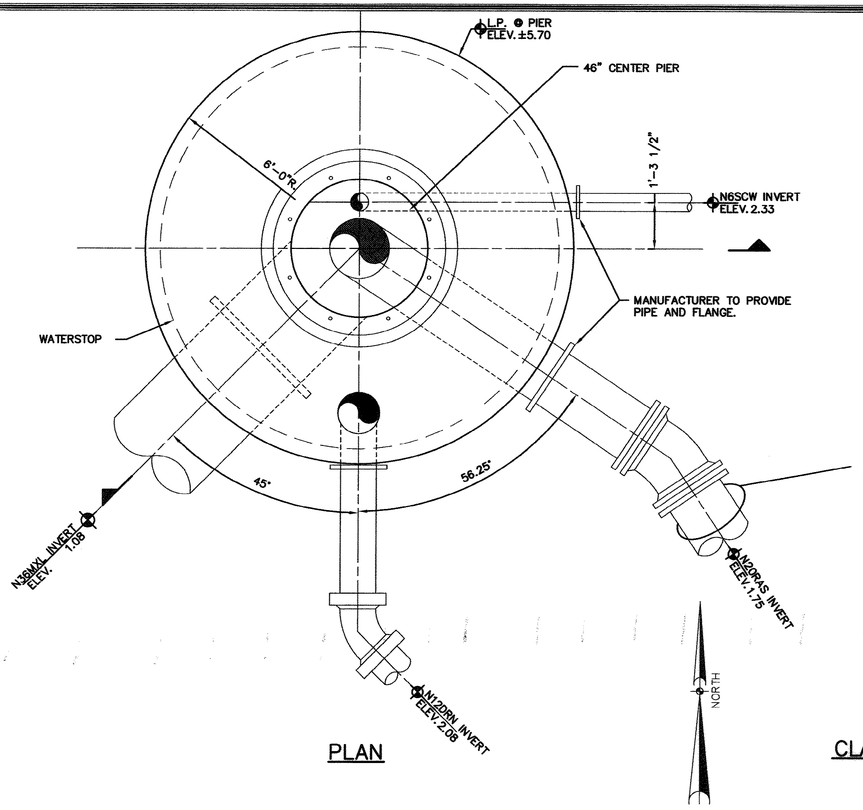
PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	D15
REF. 1731	OF
PROJECT NO. 06553	25

FILE NO. C1-22-03

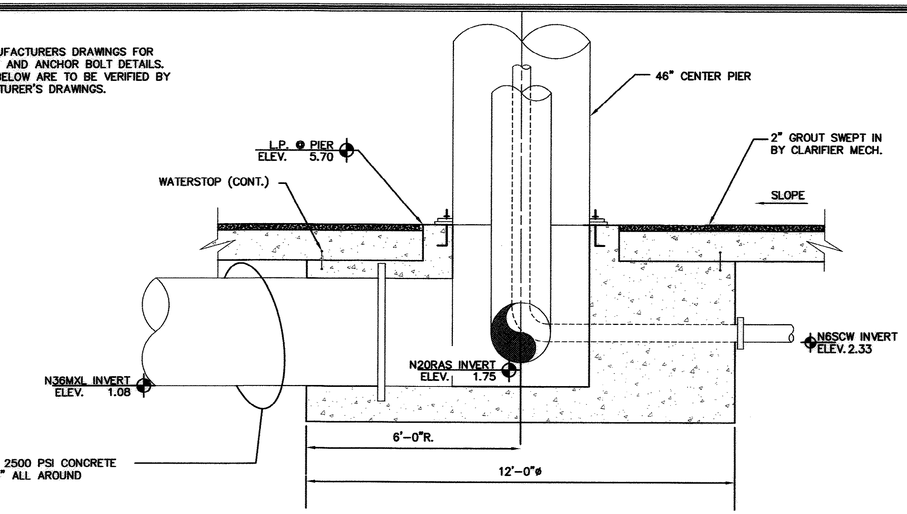
N:\PROJECTS\06553\DWG\06553-D15-RD.DWG 10/19/2010 8:40:33 AM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.



PLAN

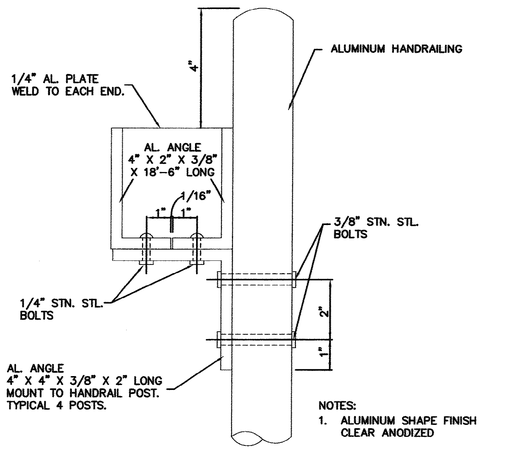
NOTE:
SEE EQUIPMENT MANUFACTURERS DRAWINGS FOR CLARIFIER EQUIPMENT AND ANCHOR BOLT DETAILS. DIMENSIONS SHOWN BELOW ARE TO BE VERIFIED BY EQUIPMENT MANUFACTURER'S DRAWINGS.



SECTION

CLARIFIER CENTER PIER DETAIL

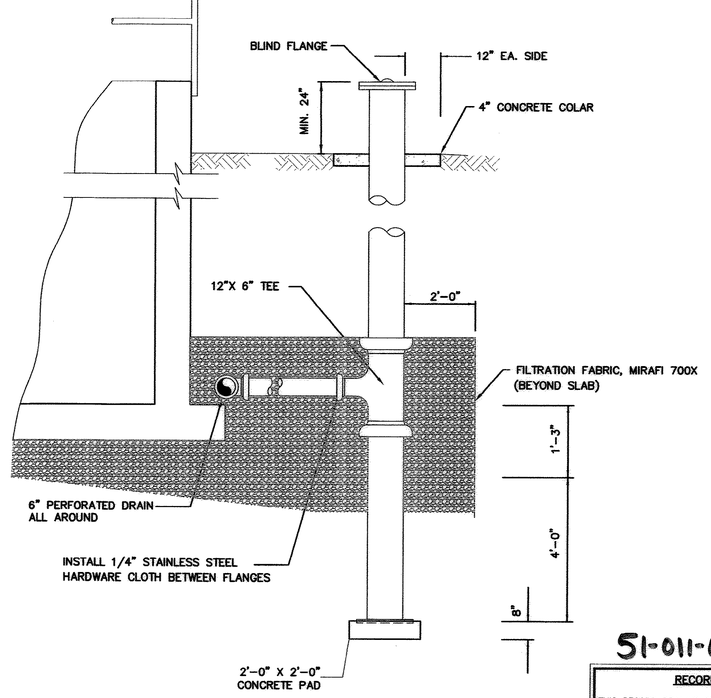
SCALE: 1/2"=1'-0" (17/D12)



NOTES:
1. ALUMINUM SHAPE FINISH CLEAR ANODIZED
2. MOUNT ON CLARIFIER ACCESS BRIDGE HANDRAIL
3. CONTRACTOR SHALL PROVIDE ONE "SLUDGE JUDGE" FOR EACH CLARIFIER

"SLUDGE JUDGE" TRAY DETAIL

SCALE: N.T.S. (7/D12)



UNDERDRAIN OUTLET DETAIL

SCALE: N.T.S. (2/D12)

51-011-057/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS			
PROJECT ENG: MAB	DESIGNED BY: MAB	DRAWN BY: MCB	CHECKED BY: DH
APPROVED: MAB			

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — B.P. BARBER & ASSOCIATES, INC. No. C00020 — DATE 12/1

SOUTH CAROLINA PROFESSIONAL ENGINEER — LICENSED No. 22097 — DANIEL J. HIGHTOWER — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW SECONDARY CLARIFIER # 6 PLAN, SECTION & DETAILS
DATE: NOV. 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

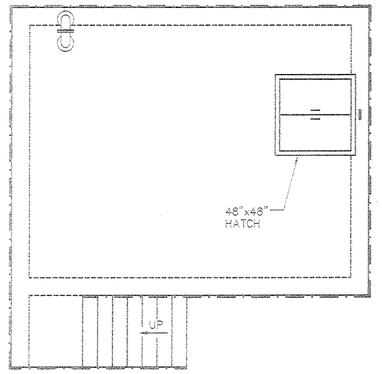
.DWG NAME	SHEET
N.B. NO.	D16 OF 25
REF. 1731	
PROJECT NO. 06553	

FILE NO. C1-22-03

N:\PROJECTS\06553\DWG\06553-SYS-RD.DWG 10/29/2010 8:16:10 AM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-D17-R0.DWG 10/29/2010 8:17:20 AM

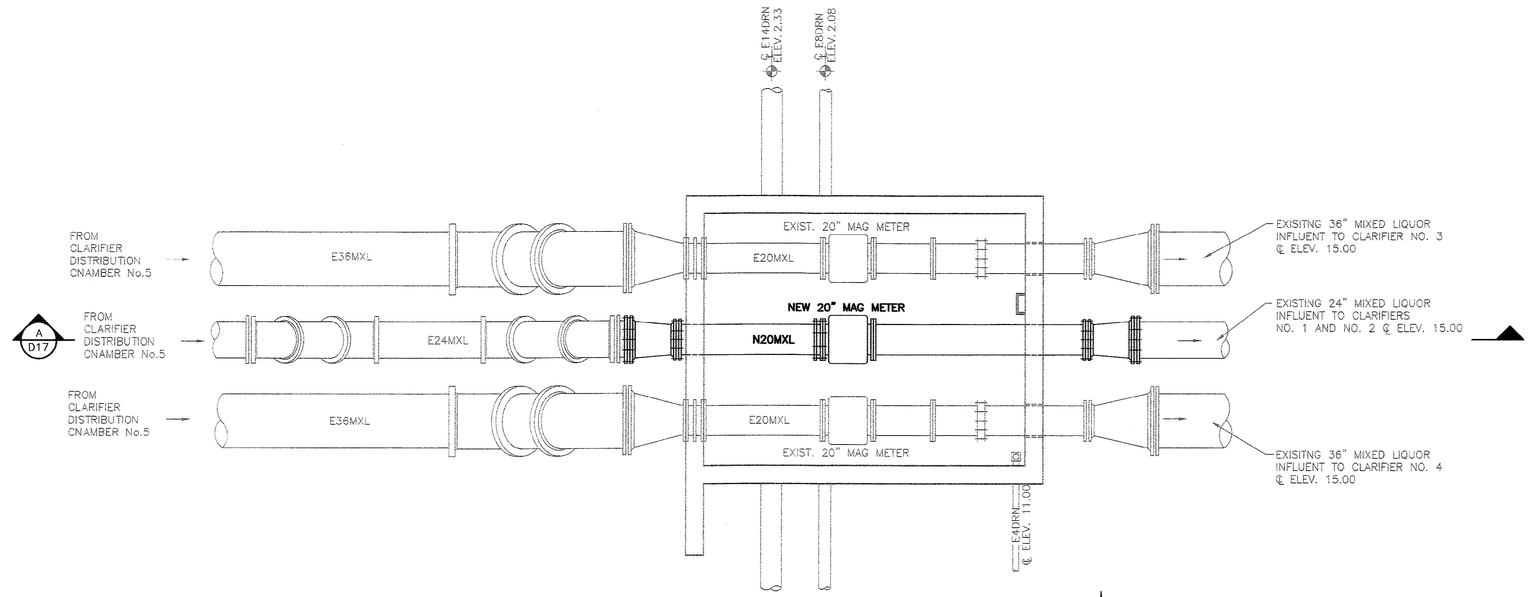


TOP PLAN

0 4 8

SCALE: 1/4" = 1'-0"

NORTH



PIPING PLAN

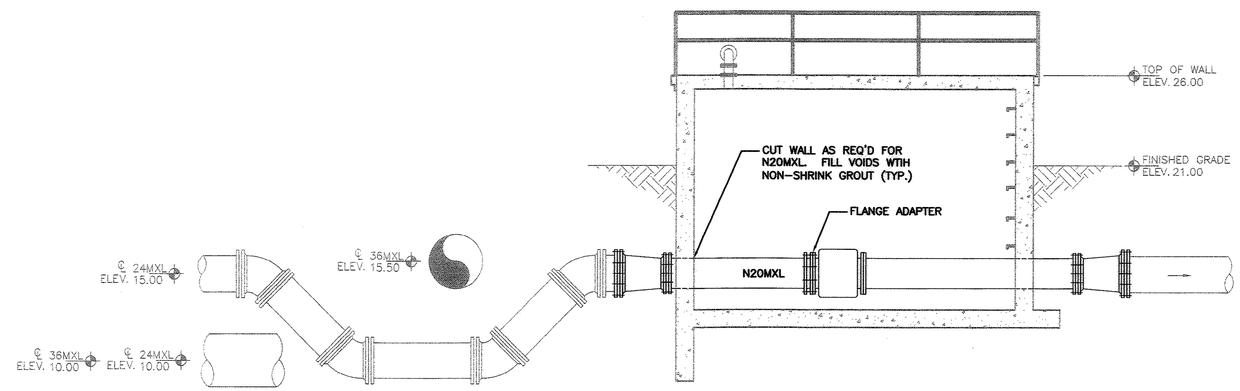
0 4 8

SCALE: 1/4" = 1'-0"

NORTH

NOTE:

1. EXISTING ELEVATIONS TAKEN FROM DRAWINGS PREPARED BY PRC CONCOER TOWNSEND CONSULTING ENGINEERS. VERIFY ELEVATIONS PRIOR CONSTRUCTION.
2. WORK TO BE COMPLETED BETWEEN SEPT. 1 AND MAY 1.



SECTION A/D17

0 4 8

SCALE: 1/4" = 1'-0"

51-011-058/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	
DESIGNED BY:	MAB
DRAWN BY:	MAB
CHECKED BY:	JEB
	DH
APPROVED:	MAB

SOUTH CAROLINA AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC.
No. 00000
CERTIFICATE OF
DATE 12/1/10

SOUTH CAROLINA PROFESSIONAL ENGINEER
LICENSED
DANIEL H. HIGHSMITH JR.
No. 22097
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
MODIFICATIONS TO CLARIFIER DISTRIBUTION CHAMBER #6 PLANS & SECTION

DATE: NOV 2010 | SCALE: AS SHOWN

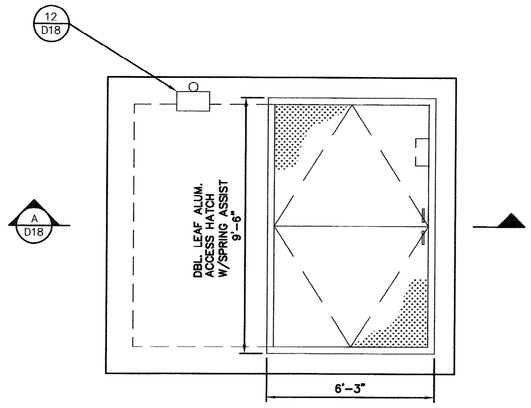
PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	D17
REF. 1731	OF
PROJECT NO. 06553	25

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-318-RE.DWG 12/29/2010 9:17:57 AM

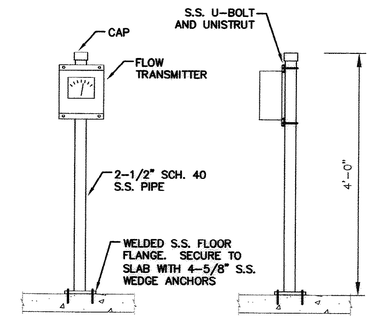


TOP PLAN

0 2 4

SCALE: 3/8" = 1'-0"

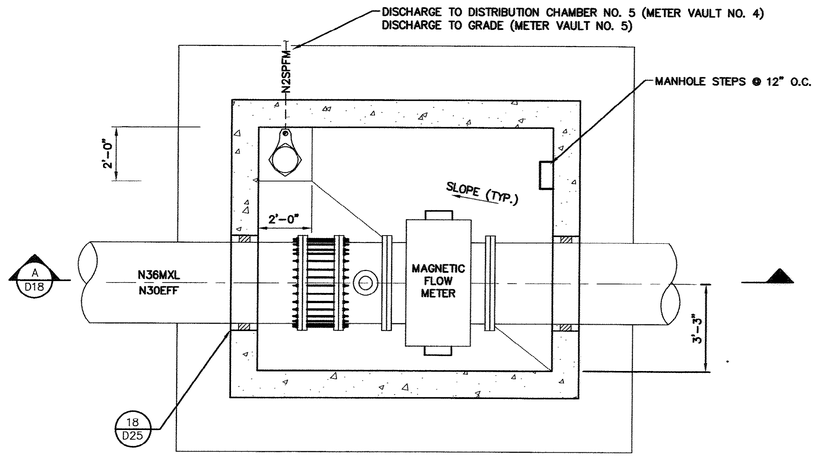




FLOW TRANSMITTER MOUNT DETAIL

SCALE: N.T.S.

12 TYP

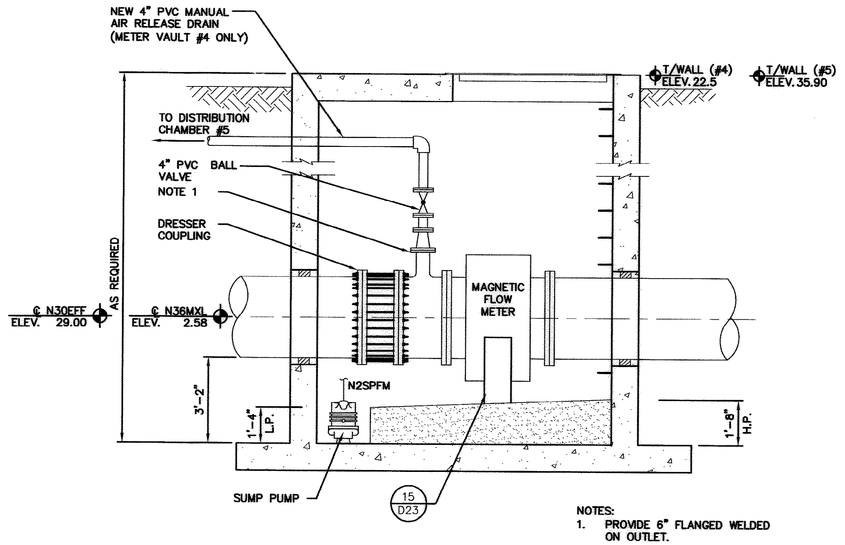


PIPING PLAN

0 2 4

SCALE: 3/8" = 1'-0"





NOTES:
1. PROVIDE 6" FLANGED WELDED ON OUTLET.

SECTION

A
D18

0 2 4

SCALE: 3/8" = 1'-0"

51-011-059/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG: MAB
DESIGNED BY: MAB
DRAWN BY: JEB
CHECKED BY: DH
APPROVED: MAB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
B.P. BARBER & ASSOCIATES, INC.
No. C00820
DATE: 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER
DANIEL H. HUTCHINSON JR
LICENSED
No. 22097
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
NEW METER VAULTS #4 AND #5 PLANS, SECTION AND DETAIL

DATE: NOV 2010 | SCALE: AS SHOWN

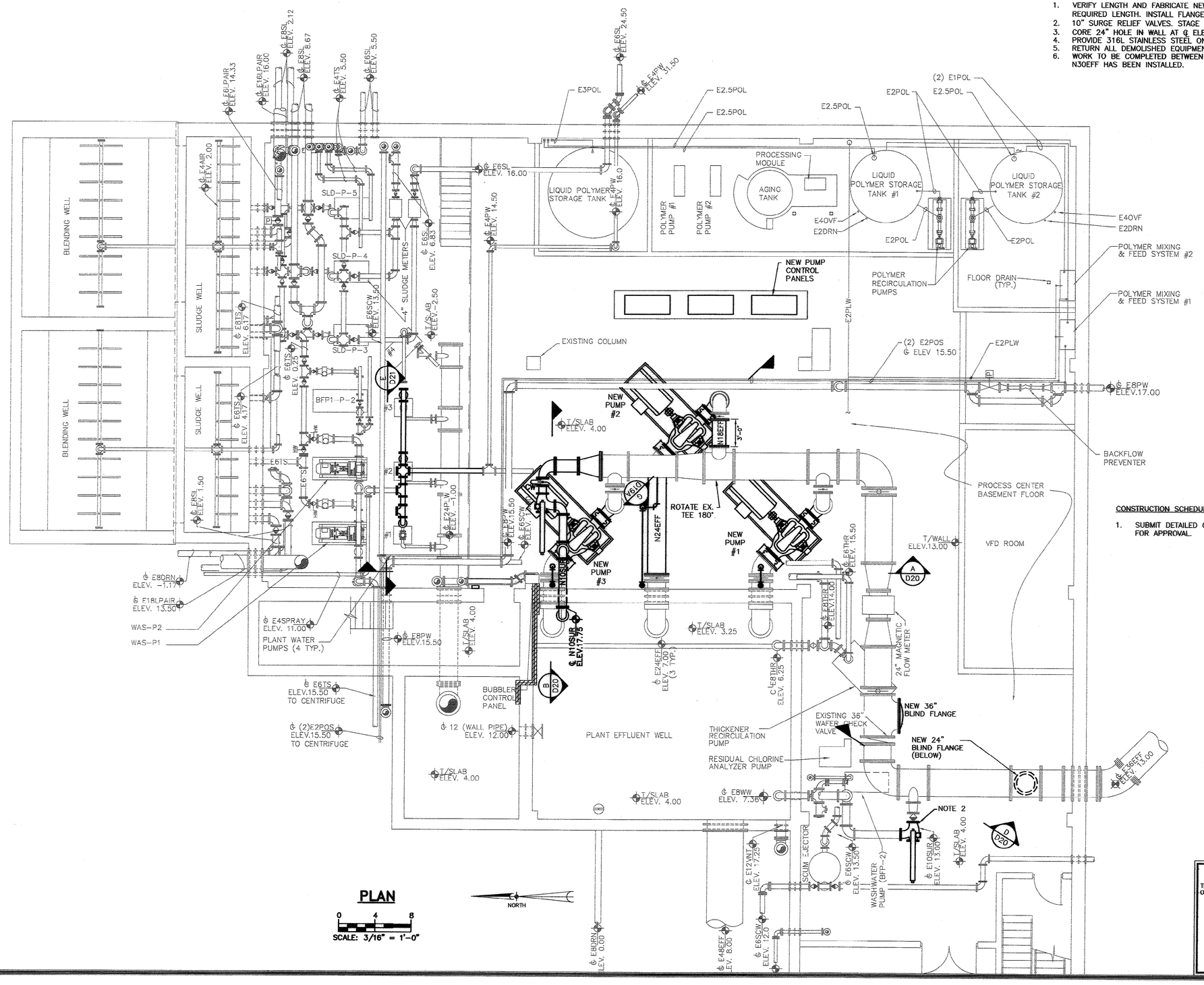
PROJECT
22.4 MGD
EXPANSION/UPGRADE
FOR
GSWSA
MYRTLE BEACH
WWTP

.DWG NAME	SHEET
N.B. NO.	D18 OF 25
REF. 1731	
PROJECT NO. 06553	

FILE NO. C1-22-03

NOTES:

1. VERIFY LENGTH AND FABRICATE NEW 24"x 18" ECCENTRIC REDUCER AT REQUIRED LENGTH. INSTALL FLANGE FILLERS IF REQUIRED. (TYP. (3) PUMPS).
2. 10" SURGE RELIEF VALVES. STAGE RELIEF SETTINGS AT 125 PSI & 135 PSI.
3. CORE 24" HOLE IN WALL AT ℄ ELEV 6.00 (ALTERNATE DEDUCT).
4. PROVIDE 316L STAINLESS STEEL ON ANCHOR BOLTS, MOUNTING HARDWARE, ETC.
5. RETURN ALL DEMOLISHED EQUIPMENT TO OWNER.
6. WORK TO BE COMPLETED BETWEEN SEPTEMBER 1 AND MAY 1 AND AFTER N30EFF HAS BEEN INSTALLED.



PLAN

SCALE: 3/16" = 1'-0"

CONSTRUCTION SCHEDULE

1. SUBMIT DETAILED CONSTRUCTION SCHEDULE TO ENGINEER FOR APPROVAL.

51-011-060/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1			

APPROVALS: PROJECT ENG: MAB; DESIGNED BY: MAB; DRAWN BY: JEB; CHECKED BY: DH; APPROVED: MAB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — B.P. BARBER & ASSOCIATES, INC. No. COA0600 — DATE 1/25/11

SOUTH CAROLINA PROFESSIONAL ENGINEER — DANIEL J. HUGHES JR. — No. 40007 — REGISTERED — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW EFFLUENT PUMPS PLAN

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	D19 OF 25
REF. 1731	
PROJECT NO. 06553	

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

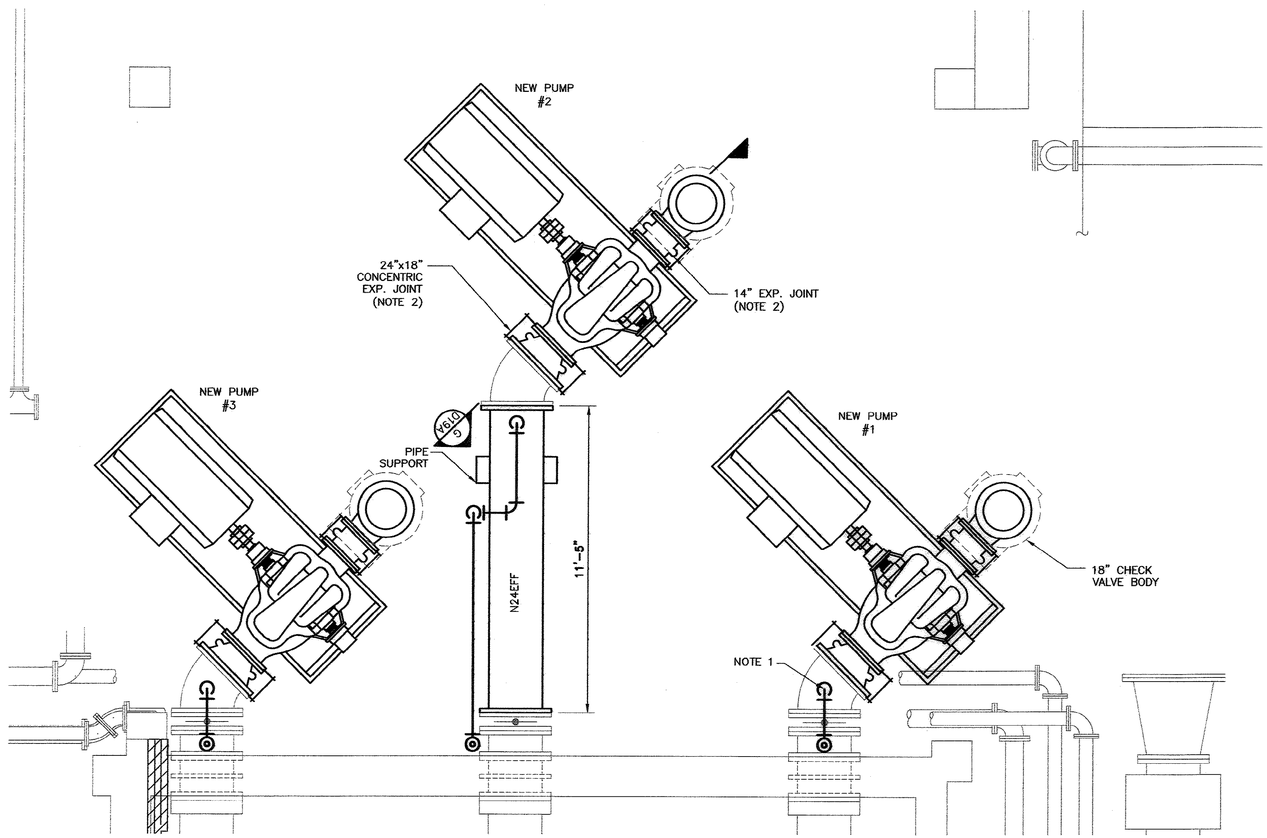
H:\PROJECTS\06553\DWG\06553-XS_K8.DWG 1/28/2011 11:41:07 AM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-XS_NA_D19-2-4D.DWG 1/28/2011 11:41:40 AM

NOTES:

1. PROVIDE 1" TAP WITH BRASS NIPPLE AND BALL VALVE FOR MANUAL AIR RELEASE AT EACH PUMP SUCTION. ROUTE DISCHARGE TO TOP OF WALL (TYP. OF 3).
2. PROVIDE EXPANSION JOINTS AT PUMP SUCTION AND DISCHARGE. PROVIDE EXPANSION JOINTS WITH CARBON STEEL CONTROL UNITS.

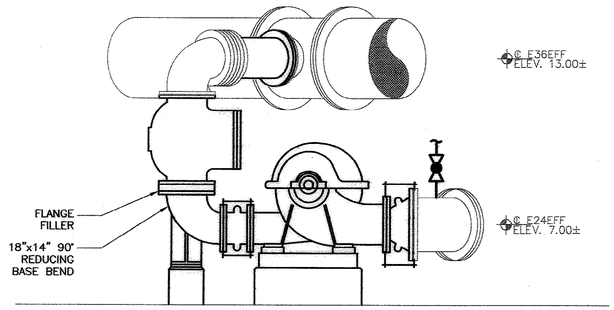


PUMP PIPING PLAN

NORTH

0 2 4

GRAPHIC SCALE



SECTION G / D19A

0 2 4

GRAPHIC SCALE

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A			

APPROVALS	
PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA NOTIFICATION CERTIFICATE OF B.P. BARBER & ASSOCIATES, INC. No. C000020 — DATE 1/27/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. HUGHES No. 22097 — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE

NEW EFFLUENT PUMPS PARTIAL PIPING PLAN

DATE: NOV. 2010 SCALE: AS SHOWN

PROJECT

22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

51-011-061/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

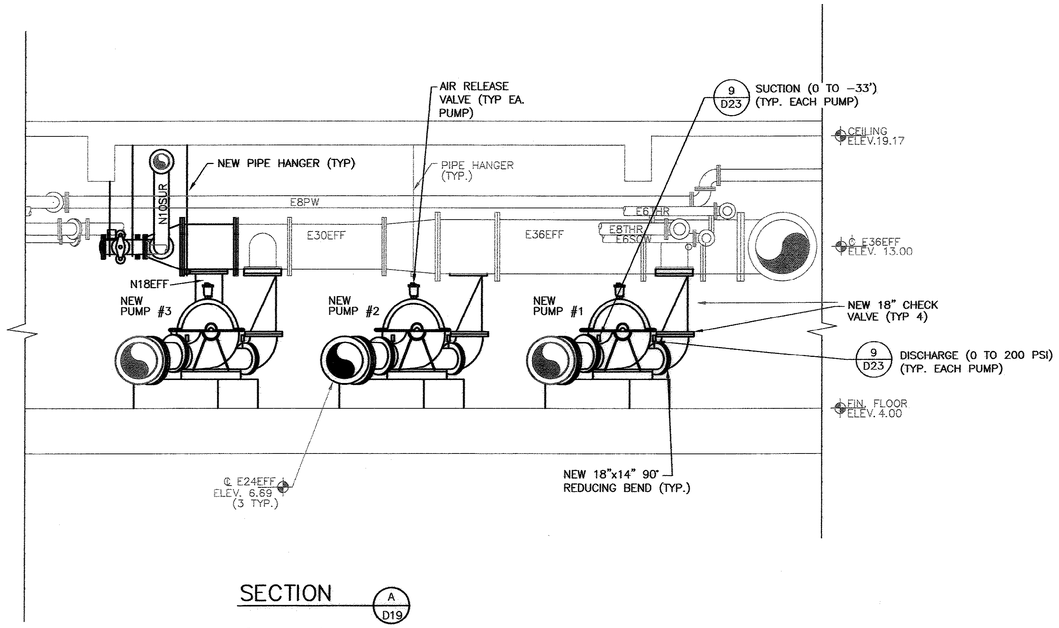
THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET D19A OF 25

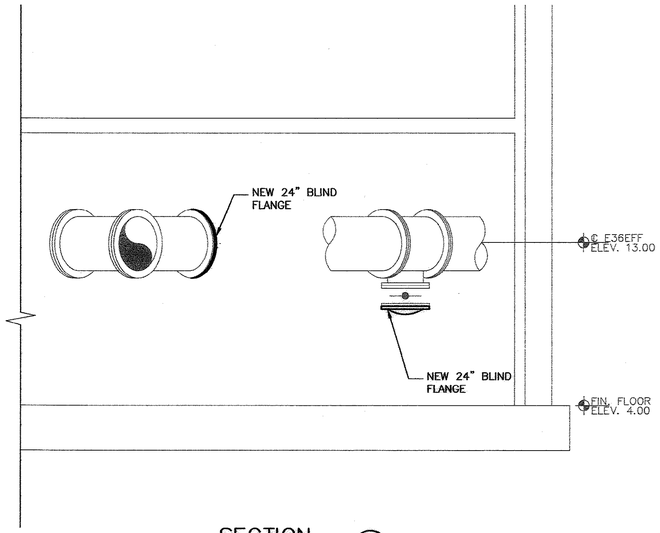
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.



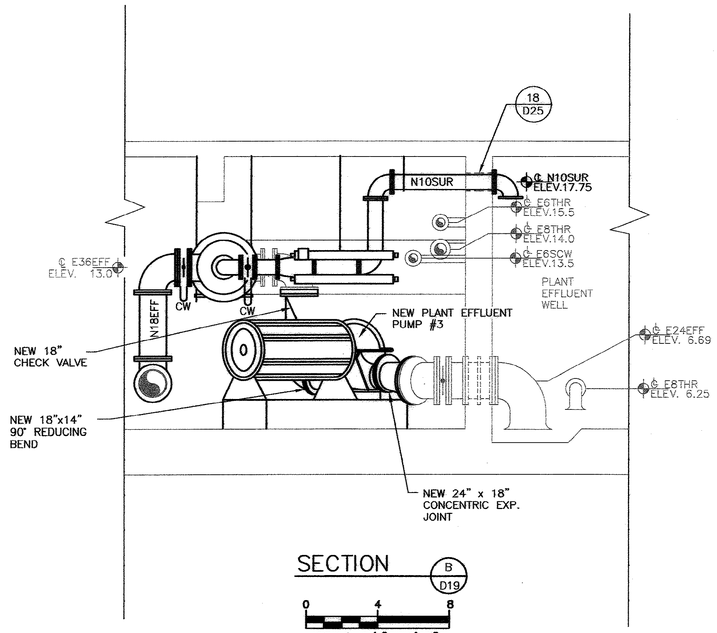
SECTION A D19

SCALE: 1/4" = 1'-0"



SECTION D D19

SCALE: 1/4" = 1'-0"



SECTION B D19

SCALE: 1/4" = 1'-0"

51-011-062/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA NOTIFICATION CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C00700

DATE 12/11

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 12007 JR SMITH LICENSED

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
NEW EFFLUENT PUMPS SECTIONS

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

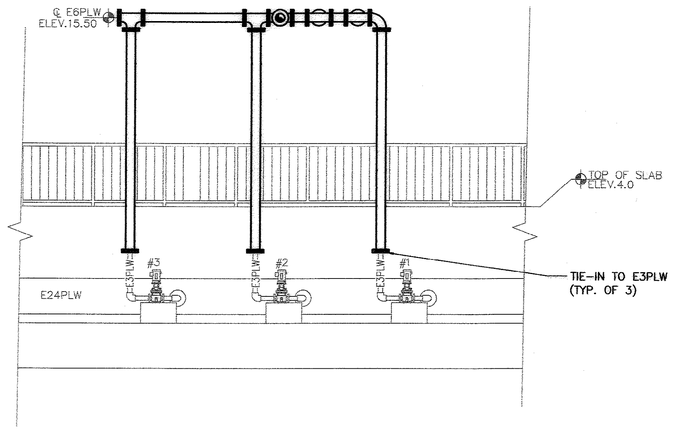
SHEET D20 OF 25

FILE NO. C1-22-03

N:\PROJECTS\06553\DWG\06553-18_18_D19-21-RC.DWG 1/28/2011 11:42:05 AM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-XS_XS_D19-21-RD.DWG 1/28/2011 11:42:26 AM



SECTION E/D19

0 4 8

SCALE: 1/4" = 1'-0"

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA NOTARIZATION
B.P. BARBER & ASSOCIATES, INC.
No. C00003
CERTIFICATE OF AUTHORIZATION
DATE 1/28/11

SOUTH CAROLINA PROFESSIONAL ENGINEER
LICENSED No. 22097
DANIEL A. HUSSEY
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
NEW EFFLUENT PUMPS SECTION

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT
22.4 MGD
EXPANSION/UPGRADE
FOR
GSWSA
MYRTLE BEACH
WWTP

51-011-063/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

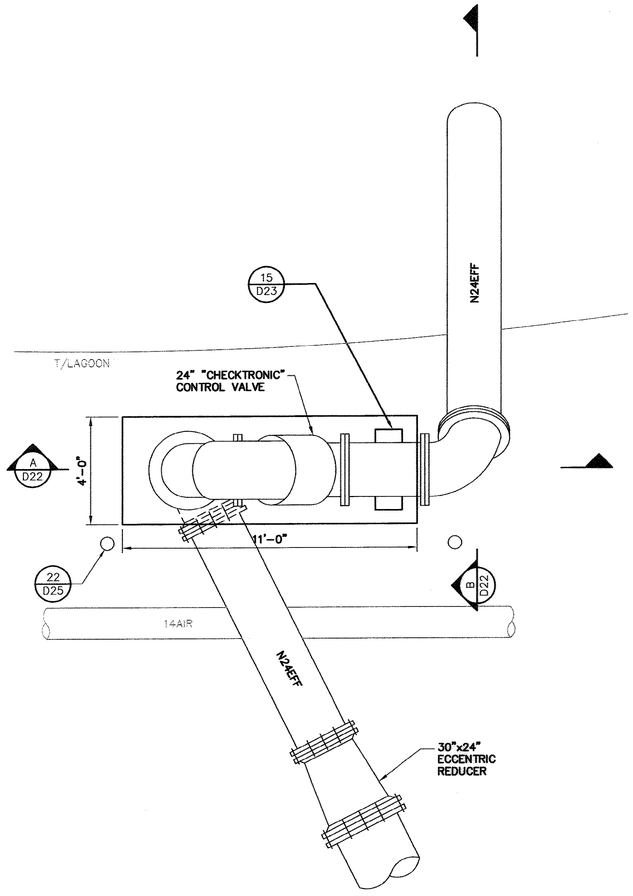
THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET D21 OF 25

FILE NO. C1-22-03

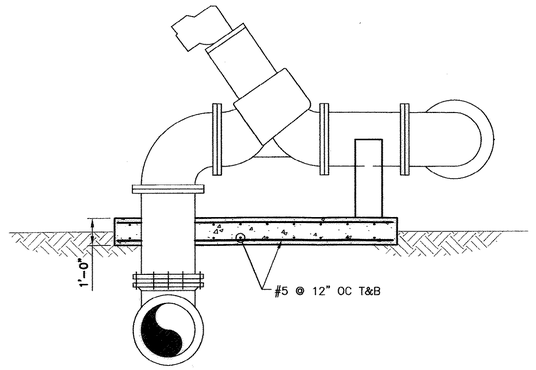
THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.



PIPING PLAN

0 2 4

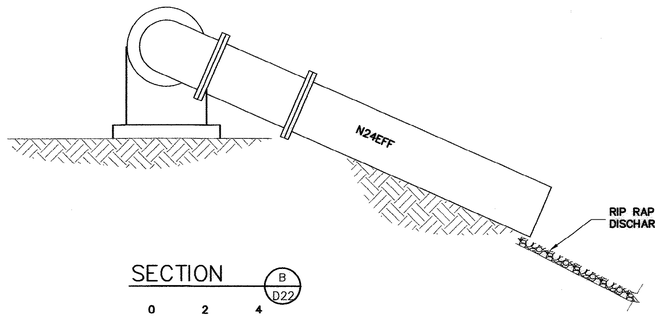
SCALE: 3/8" = 1'-0"



SECTION A D22

0 2 4

SCALE: 3/8" = 1'-0"



SECTION B D22

0 2 4

SCALE: 3/8" = 1'-0"

51-011-064/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1			

APPROVALS	
PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA NOTARIZED B.P. BARBER & ASSOCIATES, INC. No. C00000 CERTIFICATE OF AUTHORIZATION

DATE 1/27/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL J. HUBBARD JR. LICENSED No. 22097

SIGNATURE

bpb

B. P. BARBER & ASSOCIATES, INC.

ENGINEERS – PLANNERS – SURVEYORS

COLUMBIA • SPARTANBURG • CHARLESTON

FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE

NEW VALVE VAULT NO. 2 PLAN & SECTION

DATE: NOV. 2010 SCALE: AS SHOWN

PROJECT

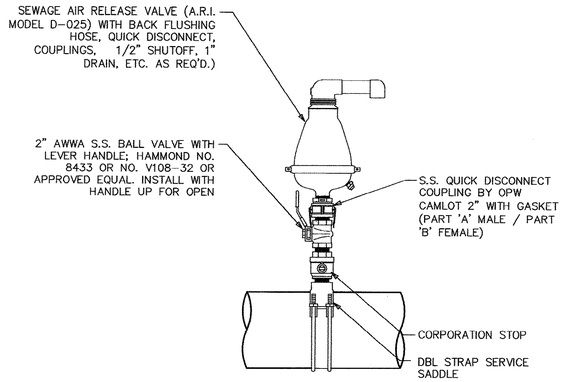
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET D22 OF 25

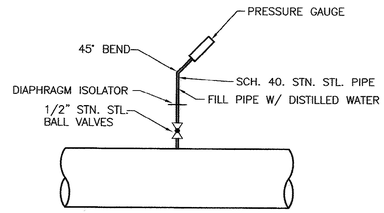
FILE NO. C1-22-03

N:\PROJECTS\06553\DWG\06553-D22-RD.DWG 11/1/2010 8:32:09 AM



AIR RELEASE VALVE DETAIL

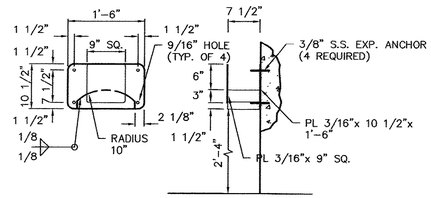
SCALE: N.T.S. — 8 TYP



PRESSURE GAUGE CONNECTION DETAIL

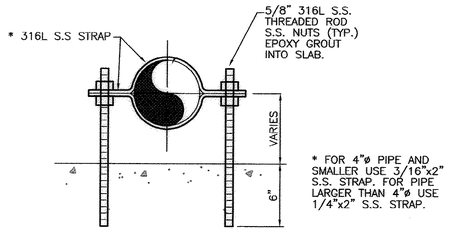
SCALE: N.T.S. — 9 TYP

NOTE: RACKS & PLATES TO BE CONSTRUCTED OF 6061-T6 ALUMINUMALLOY



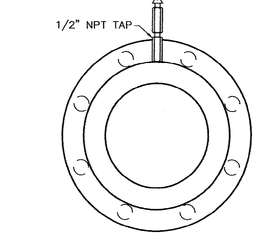
WALL MOUNTED HOSE RACK DETAIL

SCALE: 3/4"=1'-0" — 10 TYP



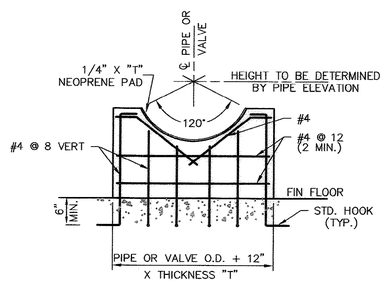
PIPE SUPPORT DETAIL

SCALE: N.T.S. — 13 TYP



PRESSURE MONITORING SENSOR AND TRANSMITTER DETAIL

SCALE: 1"=1'-0" — 14 TYP

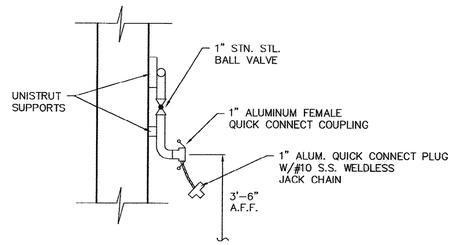


NOTES:

1. PIPE SUPPORT THICKNESS TO BE AS FOLLOWS:
   PIPE DIA. < 24": T = 9"
   PIPE DIA. > 24": T = 12"
2. PROVIDE ONE MAT OF REINF. FOR 9" THICK SUPPORT & TWO MATS (1 E.F.) FOR 12" THICK SUPPORTS.
3. PIPE SUPPORT AS SHOWN IS TYPICAL UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

PIPE/VALVE SUPPORT DETAIL

SCALE: N.T.S. — 15 TYP



DETAIL HOSE STATION

NOT TO SCALE

SLIDE GATE SCHEDULE

MARK	NO. REQUIRED	LOCATION	SIZE	HEADS		FRAME TYPE	TYPE LIFT	MATERIAL OF CONSTRUCTION
				SEATING	UNSEATING			
①	1	INFLUENT SCREW PUMP	66" x 66"	25	25	SELF CONTAINED GATE W/SEAL & FLUSH BOT. INVERT	HANDCRANK OPERATED FRAME MOUNTED	316 STAINLESS STEEL

51-011-065/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA — B.P. BARBER & ASSOCIATES, INC. — CERTIFICATE OF AUTHORIZATION NO. C00000 — NOT VALID WITHOUT SIGNATURE — DATE 12/11

SOUTH CAROLINA — PROFESSIONAL ENGINEER — No. 22097 — DANIEL J. HUDGENS, JR. — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: MISCELLANEOUS DETAILS

SCALE: AS SHOWN

DATE: NOV. 2010

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	D23
OF	25

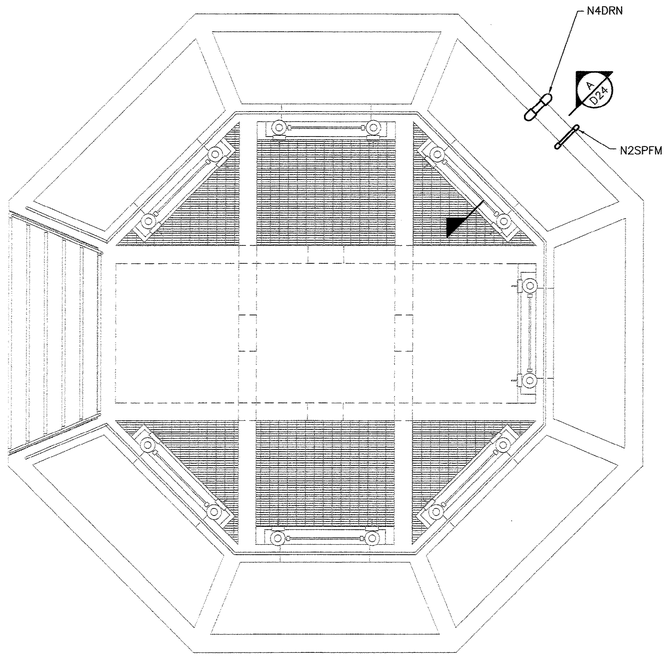
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-40-023-025-RD.DWG 10/29/2010 9:47:33 AM

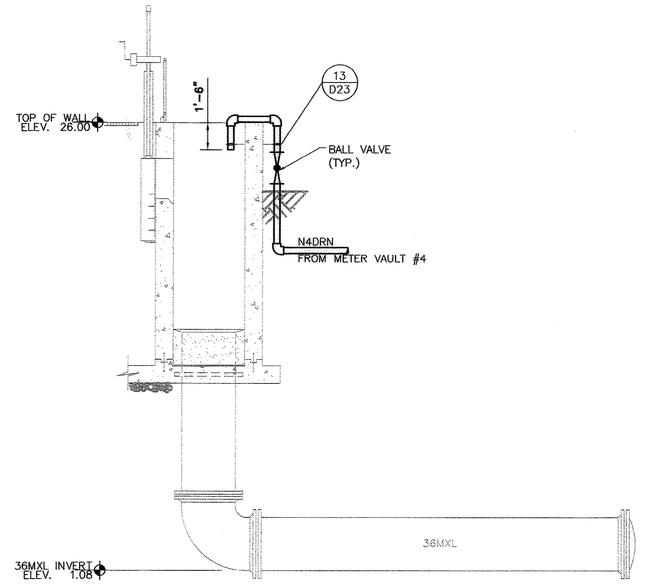
THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-MD-D23-D25-RD.DWG 10/29/2010 9:47:48 AM



PLAN
DISTRIBUTION CHAMBER #5

0 4 8
SCALE: 1/4" = 1'-0"



SECTION A/D24

0 4 8
SCALE: 1/4" = 1'-0"

51-011-066/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT.

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY
1			

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA NOTIFICATION
B.P. BARBER & ASSOCIATES, INC.
No. C00020
CERTIFICATE OF AUTHORIZATION
DATE 1/26/11

SOUTH CAROLINA PROFESSIONAL ENGINEER
DANIEL HUGH SAYERS, JR.
LICENSED No. 22097
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
MISCELLANEOUS DETAILS
DATE: NOV 2010 | SCALE: AS SHOWN

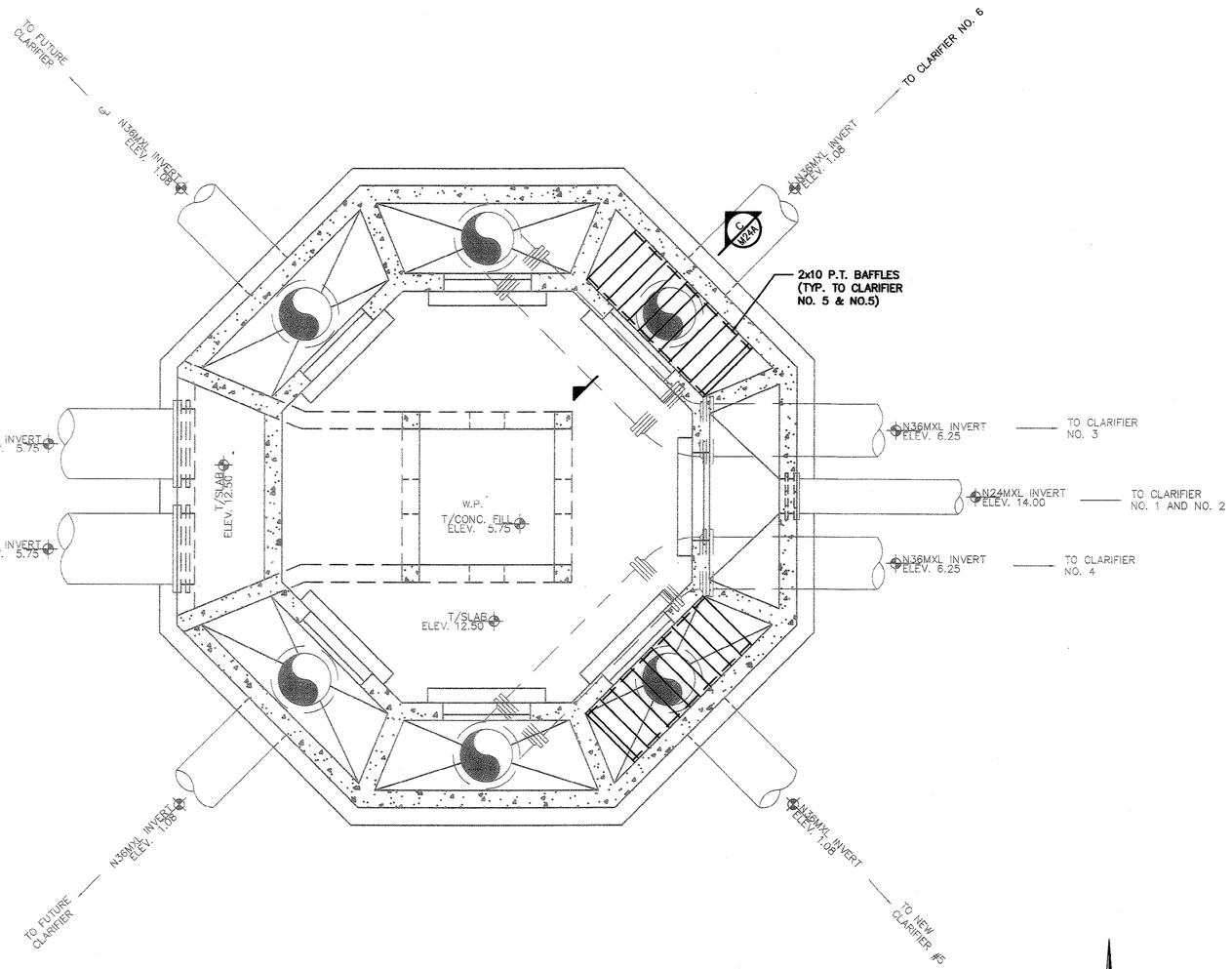
PROJECT
22.4 MGD
EXPANSION/UPGRADE
FOR
GSWSA
MYRTLE BEACH
WWTP

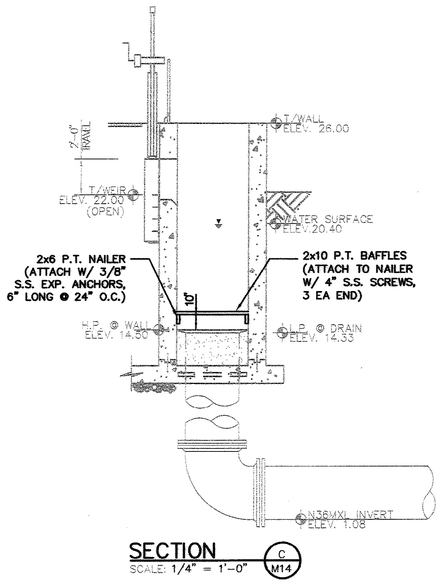
.DWG NAME	
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET D24 OF 25

FILE NO. C1-22-03

THE DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.





SECTION
SCALE: 1/4" = 1'-0"
C M14

PLAN @ ELEV. 24.00
SCALE: 1/4" = 1'-0"

0 4 8
GRAPHIC SCALE

51-011-06782

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS		
PROJECT ENG: MAB	DESIGNED BY: MAB	APPROVED: MAB
	DRAWN BY: GES	
	CHECKED BY: CJA	

SOUTH CAROLINA NO. 00002020 B.P. BARBER & ASSOCIATES, INC. CERTIFICATE OF AUTHORIZATION

DATE 2/7/11

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22097 JOSHUA T. DANIEL

SIGNATURE

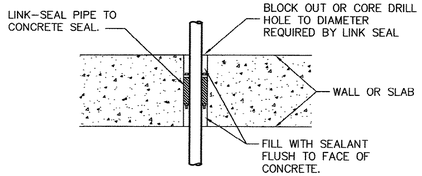
bpb
B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
DISTRIBUTION CHAMBER NO. 5 IMPROVEMENTS
DATE: NOV. 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	D24A
REF. 1731	OF 25
PROJECT NO. 06553	

FILE NO. C1-22-03



PIPE THRU CONCRETE DETAIL

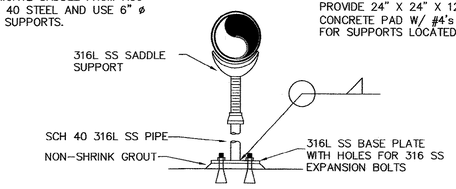
SCALE: N.T.S.

18 TYP

PIPE SIZE	BASE PLATE	ANCHORS
2 1/2" ø TO 3 1/2" ø	PL 1/2"x7" ø	4 3/8" ø EXP BOLTS W/2" EMBEDMENT MIN
4" ø TO 12" ø	PL 5/8"x8 1/2" ø	4 1/2" ø EXP BOLTS W/2 1/4" EMBEDMENT MIN
14" ø TO 48" ø *	PL 7/8"x12 5/8" ø	4 3/4" ø EXP BOLTS W/3 1/4" EMBEDMENT MIN

* FOR SIZES LARGER THAN 36" FABRICATE SADDLE FROM A36 SCH. 40 STEEL AND USE 6" ø PIPE SUPPORTS.

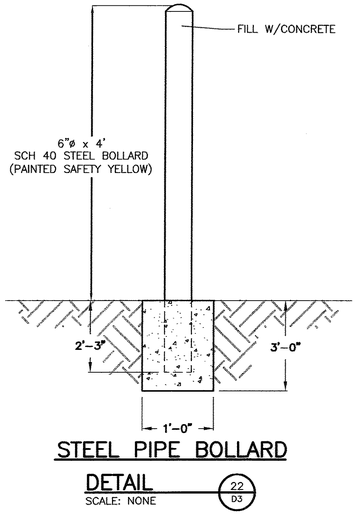
NOTE:
PROVIDE 24" X 24" X 12" THICK CONCRETE PAD W/ #4's @ 6" E.W. FOR SUPPORTS LOCATED ON SOIL.



PIPE SUPPORT DETAIL

SCALE: N.T.S.

21 TYP



STEEL PIPE BOLLARD DETAIL

SCALE: NONE

22 D3

51-011-068/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG: M.AB
DESIGNED BY: M.AB
DRAWN BY: JEB
CHECKED BY: DH
APPROVED: M.AB

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C00020

DATE 12/2/11

SOUTH CAROLINA PROFESSIONAL ENGINEER DANIEL HUDSON JR. LICENSED No. 22097

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
MISCELLANEOUS DETAILS

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
N.B. NO.	D25
REF. 1731	OF
PROJECT NO. 06553	25

FILE NO. C1–22–03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\06553-MD-023-025-RD.DWG 10/29/2010 9:48:22 AM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E1.DWG 11/10/2010 3:58:01 PM EDT

GENERAL ELECTRICAL NOTES

1. CONTRACTOR WILL BE HELD RESPONSIBLE FOR HAVING VISITED THE SITE AND BEING FAMILIARIZED WITH THE EXISTING CONDITIONS PRIOR TO SUBMITTING BID.
2. CONSULT APPROVED MANUFACTURER'S WIRING AND CONNECTION DIAGRAMS AND SHOP DRAWINGS IN DETAIL FOR EXACT CONNECTION REQUIREMENTS TO EQUIPMENT PROVIDED BY OTHER TRADES.
3. DO NOT SCALE THESE DRAWINGS. ALL ROUGHING TO BE DONE FROM DIMENSIONS ON LAYOUT, ARCHITECTURAL, MECHANICAL, STRUCTURAL DRAWINGS AND SITE INVESTIGATION.
4. CONSULT LAYOUT, MECHANICAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL DETAILS CONCERNING EQUIPMENT LOCATIONS AND REQUIREMENTS.
5. ALL CONTROL, STATUS AND SIGNAL CABLES/WIRING SHALL BE VERIFIED BY THE EQUIPMENT SUPPLIERS AND/OR SYSTEM INTEGRATOR. ANY CHANGES OR ADDITIONS TO THE SYSTEM INDICATED ON THESE ELECTRICAL DRAWINGS THAT ARE REQUIRED TO ACCOMMODATE A SPECIFIC MANUFACTURER'S EQUIPMENT OR INTEGRATOR'S SYSTEM SHALL BE COVERED BY THE SUPPLIER OR INTEGRATOR
6. ALL CONTROL, STATUS AND SIGNAL CABLES/WIRING SHALL BE IDENTIFIED AT EACH TERMINATION AND IN PULL BOXES BY COLOR CODE OR NUMBERING SYSTEM. PROVIDE SCHEDULE FOR CONNECTIONS BEING MADE UNDER OTHER DIVISIONS.
7. CONTRACTOR'S RECORD DRAWINGS SHALL SHOW EXACT LOCATIONS OF UNDERGROUND CONDUITS AND DUCT BANKS.
8. CONNECTIONS TO MOTORS AND EQUIPMENT MADE WITH WATERTIGHT FLEXIBLE CONDUIT (WFC) SHALL BE PROPERLY SUPPORTED AND CLAMPED.
9. ALL EXPOSED CONDUIT SHALL BE INSTALLED USING SPECIFIED CLAMPS PROVIDING MINIMUM OF 1/2" SPACE BETWEEN CONDUIT AND MOUNTING SURFACE.
10. ALL WIRING PULLS SHALL BE WITHIN CABLE MANUFACTURER'S RECOMMENDED CABLE PULL TENSIONS. VERIFY WITH MANUFACTURER AND FIELD RECORD TENSIONS FOR SUBMITTAL TO ENGINEER.
11. ALL CONDUIT JOINTS IN UNDERGROUND RUNS FEEDING EQUIPMENT LOCATED LEVEL WITH OR BELOW CONDUIT ELEVATIONS SHALL BE SEALED WITH COPPER BASE CONDUCTIVE COUPLING COMPOUND AFTER WHICH A SEALANT WITH A PVC TAPE WRAP (1/2" OVERLAP) SHALL BE APPLIED TO EXTERIOR OF COUPLING. EXTEND WRAP 6" BEYOND COUPLING ON BOTH SIDES. THIS SHALL BE IN ADDITION TO CONDUIT COATING AS SPECIFIED.
12. ANY COATED MATERIAL THAT HAS FINISH DAMAGED, BROKEN OR CUT DURING INSTALLATION SHALL BE CLEANED AND COATED WITH A REPAIR KIT.
13. ALL SUPPORT FRAMING HARDWARE, BOLTS, ANCHORS, ETC. SHALL BE PROVIDED IN ACCORDANCE WITH SPECIFICATIONS.
14. CONSULT YARD PIPING PLANS FOR NEW AND EXISTING UTILITIES. ACCURACY OF PLANS CANNOT BE GUARANTEED, BUT IT IS ASSUMED THE UTILITIES ARE DENOTED AS CLOSELY AS POSSIBLE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE, MAINTAIN AND PROTECT ANY EXISTING UTILITIES DURING NEW WORK AND REPAIR ANY AND ALL DAMAGED.
15. ALTERNATE ROUTING OF YARD CONDUITS FROM THAT INDICATED MAY BE CONSIDERED BUT MUST FIRST BE APPROVED BY ENGINEER.
16. ALL FLOOR SAW CUTTING AND CHASING, WALL AND FLOOR CORING AND CHASING OF EXISTING CONSTRUCTION TO ACCOMMODATE ELECTRICAL INSTALLATION SHALL BE PROVIDED UNDER ELECTRICAL CONTRACT. REPAIR OF SUCH FOR A WATERTIGHT INSTALLATION SHALL BE UNDER GENERAL CONTRACT.
17. REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, FIXTURES, CONDUIT AND WIRING DEEMED USELESS AND/OR WHERE REMAINING IN VIEW AFTER RENOVATIONS.
18. ALL CONTROL AND SIGNAL CABLES/WIRING SHALL BE CONTINUOUS FROM POINT OF ORIGINATION TO POINT OF TERMINATION AND PULLED THRU PULL BOXES. NO SPLICES WILL BE ALLOWED.
19. UNLESS OTHERWISE NOTED PULL AND JUNCTION BOXES SHALL BE PER SPECIFICATIONS AND SIZED PER CODE AND/OR AS CONDITIONS DICTATE.
20. MINIMUM RACEWAY SIZE SHALL BE 3/4".
21. LEAVE SUFFICIENT SLACK IN ALL WIRING AND CABLES TO REACH FINAL TERMINATION POINTS. VERIFY FROM APPROVED EQUIPMENT DRAWINGS AND WIRING DIAGRAMS.
22. ANY POWER INTERRUPTION SHALL BE SCHEDULED WITH OWNER IN WRITING 72 HOURS PRIOR TO SHUTDOWN. SHUTDOWNS MAY BE LIMITED TO OFF-PEAK HOURS (LATE NIGHT).
23. SUSPENDED CONDUITS SHALL BE SUPPORTED WITH PROPERLY INSTALLED TRAPEZE HANGERS AND CONDUIT CLAMPS. INSTALL ALL NECESSARY HARDWARE FOR HANGER RODS.
24. ROUTING OF RACEWAYS IS ONLY A SUGGESTION BUT SHOULD BE FOLLOWED AS CLOSELY AS POSSIBLE. HOWEVER, ALTERNATE ROUTING WILL BE CONSIDERED WHERE BROUGHT TO THE ATTENTION OF THE ENGINEER AND SHOWN TO BE MORE FEASIBLE. WHERE EXACT ROUTING IS NOT INDICATED, RACEWAYS SHALL BE ROUTED CONCEALED IN SLAB OR STRUCTURE IN THE MOST PRUDENT MANNER.
25. TERMINATE ALL METALLIC WIRING AT CONTROL/SCADA/CCTV PANELS AND PROCESS INSTRUMENTATION IN ACCORDANCE WITH MANUFACTURER'S APPROVED WIRING DIAGRAMS.
26. CONSULT DEMOLITION PLANS FOR WORK ASSOCIATED WITH EXISTING STRUCTURE RENOVATION AND/OR EQUIPMENT BEING REMOVED AND/OR RELOCATED. DISCONNECT, DEACTIVATE AND REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, FIXTURES, CONDUIT AND WIRING THAT IS NOT BEING REUSED OR WHERE DEEMED USELESS AND/OR REMAINING IN VIEW AFTER RENOVATIONS AND EQUIPMENT REMOVAL. REMOVE ALL WIRING FROM ANY RACEWAYS NOT REUSED OR REMOVED. CUT-OFF OR CAP RACEWAYS FLUSH WITH FINISH CONSTRUCTION. ALL SALVAGE MATERIAL TO REMAIN THE PROPERTY OF THE OWNER. ANY MATERIAL NOT WANTED BY OWNER SHALL BE PROPERLY DISPOSED OF BY CONTRACTOR. VERIFY EXACT WORK REQUIRED FROM ON SITE INVESTIGATION AND CONSULTATION WITH ENGINEER.
27. COORDINATE EXACT LOCATIONS OF LIGHT FIXTURES TO CLEAR WORK OF OTHER TRADES.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
b A 3 EM	DOWNLIGHT OR CIRCULAR TYPE LUMINAIRE – "A" REFERS TO LIGHTING FIXTURE SCHEDULE DESIGNATION, "3" REFERS TO THE CIRCUIT NUMBER, "b" REFERS TO SWITCH CONTROL IF NECESSARY. "EM" INDICATES LUMINAIRE SHALL BE PROVIDED WITH A BATTERY PACK FOR OPERATION DURING LOSS OF NORMAL BUILDING POWER. BATTERY PACK SHALL BE UN-SWITCHED EXCEPT FOR THE CIRCUIT BREAKER.
b A 3 EM	WALL MOUNTED TYPE LUMINAIRE – "A" REFERS TO LIGHTING FIXTURE SCHEDULE DESIGNATION, "3" REFERS TO THE CIRCUIT NUMBER, "b" REFERS TO SWITCH CONTROL IF NECESSARY. "EM" INDICATES LUMINAIRE SHALL BE PROVIDED WITH A BATTERY PACK FOR OPERATION DURING LOSS OF NORMAL BUILDING POWER. BATTERY PACK SHALL BE UN-SWITCHED EXCEPT FOR THE CIRCUIT BREAKER.
b A 3	SURFACE/PENDANT MOUNTED FLUORESCENT LUMINAIRE – "A" REFERS TO LIGHTING FIXTURE SCHEDULE DESIGNATION, "3" REFERS TO THE CIRCUIT NUMBER, "b" REFERS TO SWITCH CONTROL IF NECESSARY.
b A 3	RECESSED FLUORESCENT LUMINAIRE – "A" REFERS TO LIGHTING FIXTURE SCHEDULE DESIGNATION, "3" REFERS TO THE CIRCUIT NUMBER, "b" REFERS TO SWITCH CONTROL IF NECESSARY.
	SINGLE FACE WALL MOUNTED EXIT SIGN – EXIT SIGN SHALL HAVE DIRECTIONAL ARROWS AS SHOWN. FIXTURE SHALL HAVE SAME NOTATIONS AS ABOVE. PROVIDE WITH A BATTERY PACK FOR OPERATION DURING LOSS OF NORMAL BUILDING POWER. SIGN SHALL BE UN-SWITCHED EXCEPT FOR THE CIRCUIT BREAKER.
S_{3a}	WALL SWITCH – MOUNT AT 48" AFF. 20 AMP. RATED. SINGLE POLE UNLESS NOTED 3-WAY OR 4-WAY. "a" INDICATES LIGHT FIXTURE CONTROLLED.
#/ A-1,3	HOMERUN – EXTEND FEEDER TO THE DESIGNATED PANELBOARD OR DEVICE. WHERE MORE THAN TWO, CROSSHATCHED LINES INDICATE THE QUANTITY OF CURRENT CARRYING CONDUCTORS NOT INCLUDING THE GROUND CONDUCTOR. CIRCUITS SHARING A COMMON NEUTRAL SHALL BE CONNECTED TO DIFFERENT PHASES REGARDLESS OF THE NUMBERING. ALL FEEDERS SHALL BE PROVIDED WITH A GREEN CODE SIZE EQUIPMENT GROUND CONDUCTOR. BOND TO GROUND BUS BAR IN PANELBOARD
	RACEWAY RUN EXPOSED. NOTATIONS SAME AS ABOVE.
	RACEWAY RUN UNDERGROUND OR UNDERFLOOR. NOTATIONS SAME AS ABOVE.
WWW	WATERTIGHT FLEXIBLE CONDUIT (WFC).
3	FLUSH MOUNTED DUPLEX RECEPTACLE– 120-VOLT, 20-AMP. MOUNT 18" AFF TO CENTERLINE, UNLESS OTHERWISE NOTED. "3" REFERS TO THE CIRCUIT NUMBER.
WP 3	FLUSH MOUNTED GROUND FAULT CIRCUIT INTERRUPTING DUPLEX RECEPTACLE – 120-VOLT, 20-AMP WITH GFCI PROTECTION IN THE RECEPTACLE. MOUNT 18" AFF TO CENTERLINE, UNLESS OTHERWISE NOTED. "3" REFERS TO THE CIRCUIT NUMBER. "WP" INDICATES RECEPTACLE SHALL BE WEATHERPROOF AND PROVIDE WITH CONTINUOUS-USE COVER.
"A"	NEW PANELBOARD – FLUSH OR SURFACE MOUNTED AS INDICATED. MOUNT AT 6'-0" AFF TO TOP. "A" INDICATES THE PANEL DESIGNATION. SEE PANELBOARD SCHEDULE FOR REQUIREMENTS.
EX "A"	EXISTING PANELBOARD – FLUSH OR SURFACE MOUNTED AS INDICATED. "A" INDICATES THE PANEL DESIGNATION.
	SURFACE JUNCTION BOX OR PULL BOX. SEE SPECIFICATIONS FOR TYPE.
XXX/Y/ZZ/FAAA	600V. HEAVY DUTY SAFETY SWITCH. "XXX/Y/ZZ/FAAA". "XXX" INDICATES FRAME SIZE; "Y" INDICATES NUMBER OF POLES; "ZZ" INDICATES ENCLOSURE NEMA RATING ("1" = NEMA 1, "3R" = NEMA 3R, "4X" = NEMA 4X); AND "FAAA" INDICATES FUSE SIZE ("FPM" = FUSE PER MANUFACTURER REQUIREMENTS), NO TEXT INDICATES NON-FUSED DISCONNECT SWITCH.
LP	EXISTING AREA LIGHTING.
PB-1 MH-1 HH-1	NEW ELECTRIC MANHOLE/HANDHOLE/PULLBOX. REFER TO PLANS FOR LABELING. REFER TO DETAILS AND SPECIFICATIONS.
MH (E)	EXISTING ELECTRICAL MANHOLE.
M	INDUCTION MOTOR, DESIGNATION: HORSEPOWER
	DRY-TYPE TRANSFORMER, DELTA PRIMARY, GROUNDED WYE SECONDARY.
15/3	THERMAL MAGNETIC CIRCUIT BREAKER OR MOTOR CIRCUIT PROTECTOR (600V. OR LESS) AS SPECIFIED. NUMBER INDICATES TRIP RATING AND PHASE.
15	FUSE. NUMBER INDICATES AMPERE RATING. SEE SPECIFICATIONS FOR TYPE.
15/3 FVNR SIZE 1	COMBINATION MOTOR STARTER WITH MOTOR CIRCUIT PROTECTOR. CONTROL TRANSFORMER, AUXILIARY CONTACTS, ETC. AS SPECIFIED. NUMBERS INDICATE TRIP RATING, PHASE AND NEMA STARTER SIZE. "FVNR" (FULL VOLTAGE NON-REVERSING) INDICATES STARTER TYPE.
600F 400R 225T	DRAW OUT BREAKER AS SPECIFIED.. "600F" INDICATES FRAME SIZE, "400R" INDICATES RATING PLUG SIZE, "225T" INDICATES TRIP SETTING.

FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	LAMPS
A	FAILSAFE #FPS-332-120-EB81-Z. WET LOCATION, VAPOR-TIGHT, COLD WEATHER BALLAST, SURFACE FLUORESCENT	(3) F32T8
B	GREENLEE #WWS-150MH-MT-FT-BRZ-PS. CAST ALUMINUM, CUT-OFF WALLPAK. MOUNTING HT. VARIES.	(1) VENTURE MH150W/U/MED/PS
E	MCGRAW-EDISON #GSB-20329AR-BZ (FIXT.). SSA4T15WX2-EG (15' POLE). PROVIDE W/BOLT COVERS, HANDHOLE COVER, GFI RECEPTACLE WHERE SHOWN, AREA LIGHTING.	(1) VENTURE MS200W/BU/MED/PS

51-011-069/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	CJA
DRAWN BY:	GAS
CHECKED BY:	CJA
APPROVED:	MAB

SOUTH CAROLINA PROFESSIONAL ENGINEER B.P. BARBER & ASSOCIATES, INC. No. C00000 CERTIFICATE OF AUTHORIZATION DATE 1/27/11

SOUTH CAROLINA PROFESSIONAL ENGINEER SIMMY CHRISTOPHER No. 25410 LICENSED SIGNATURE

bpb B.P. Barber
Engineering • Experience • Excellence
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: ELECTRICAL GENERAL NOTES AND LEGEND

DATE: FEB 2007 SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

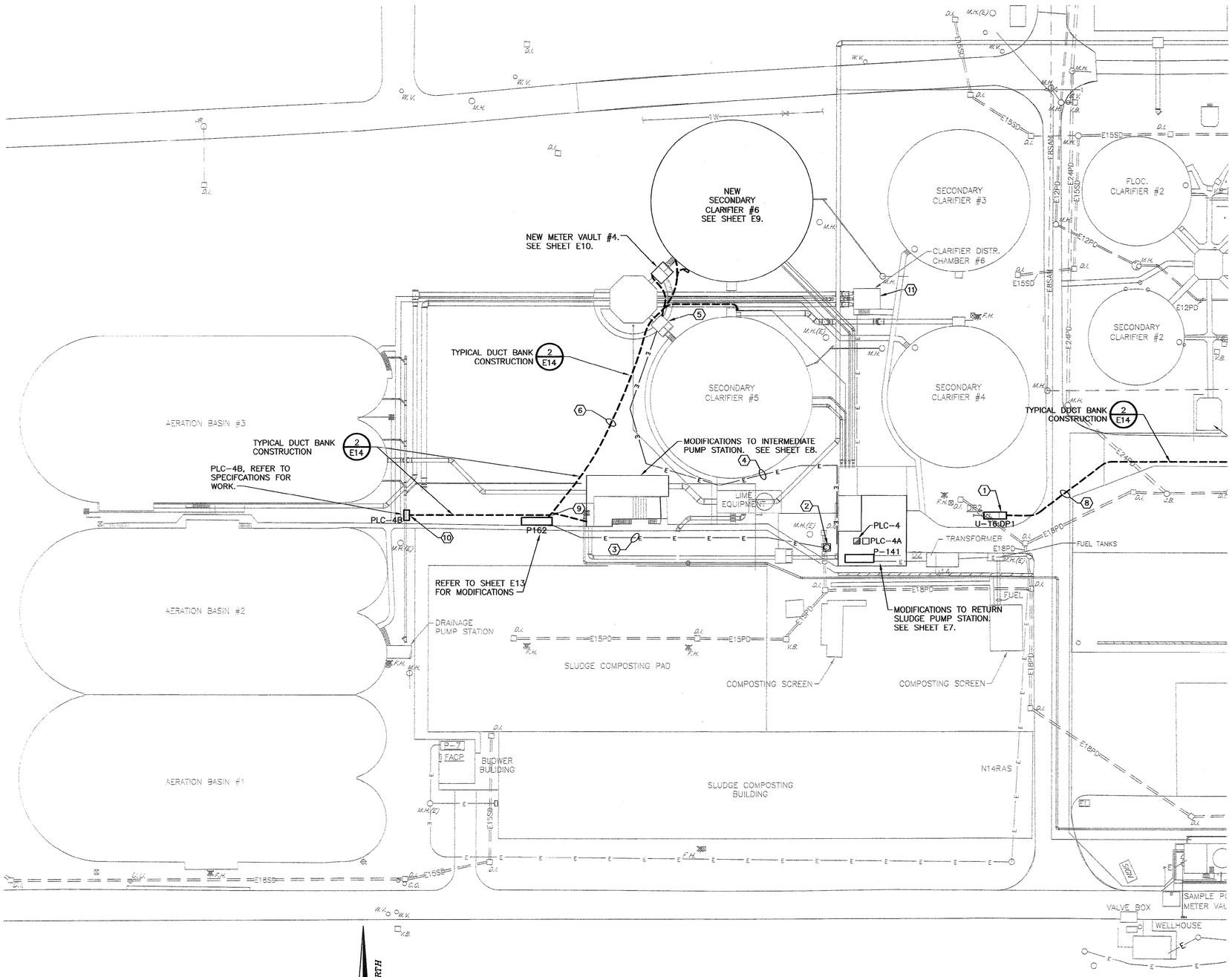
.DWG NAME	06553-E1
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET E1 OF 14

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E2.DWG 11/10/2010 3:26:58 PM



ELECTRICAL SITE PLAN

SCALE: 1" = 40'

40 0 40 80

(IN FEET)

ⓧ ELECTRICAL KEY NOTES:

1. EXISTING DISTRIBUTION PANEL DP-1. CONNECT FEEDER FOR SB2 TO SPARE 1600 BREAKER. PROVIDE NEMA 4X, STAINLESS STEEL, SCREW COVER JUNCTION BOX (SIZE PER CODE). PROVIDE GROMMETTED CABLE OPENINGS BETWEEN BOX AND GEAR. SEAL ALL PENETRATIONS WATERTIGHT.
2. EXISTING ELECTRICAL MANHOLE. ROUTE EXISTING CONDUCTORS AND NEW FEEDERS THROUGH MANHOLE.
3. EXISTING 3" CONDUIT WITH CONTROL CONDUCTORS. INSTALL 24#14 FOR CONTROL OF CLARIFIER #6 AND INTERMEDIATE SCREW PUMP #4.
4. EXISTING 3/4"C. WITH TSP FOR METER VAULT #2 FIT. REMOVE TSP AND INSTALL TWO (2) TSP FOR METER VAULT #2 FIT AND METER VAULT #4 FIT TO PLC-4.
5. ROUTE TSP FOR METER VAULT #4 FIT THROUGH METER VAULT #2.
6. FEEDERS FOR POWER AND CONTROL TO METER VAULT #4 AND CLARIFIER #6. REFER TO ASSOCIATED PLANS FOR SIZE AND QUANTITY.
7. NOT USED.
8. FEEDERS FOR POWER TO SB2 FROM U-16; DP1. REFER TO ASSOCIATED PLAN FOR SIZE AND QUANTITY.
9. PROVIDE TWO (2) NEMA 4X, STAINLESS STEEL, SCREW COVER JUNCTION BOXES (SIZE PER CODE), ONE FOR POWER AND ONE FOR CONTROL. PROVIDE GROMMETTED CABLE OPENINGS BETWEEN BOX AND GEAR. SEAL ALL PENETRATIONS WATERTIGHT.
10. PROVIDE NEMA 4X, STAINLESS STEEL, SCREW COVER JUNCTION BOX (SIZE PER CODE). PROVIDE GROMMETTED CABLE OPENINGS BETWEEN BOX AND GEAR. SEAL ALL PENETRATIONS WATERTIGHT.
11. DISCONNECT EXISTING MAG METER POWER AND MONITORING AND RECONNECT TO NEW MAG METER AFTER INSTALLATION. REFER TO SHEET D17 FOR EXACT METER.

51-011-070/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	MAB
DESIGNED BY:	CJA
DRAWN BY:	GAS
CHECKED BY:	CJA
APPROVED:	MAB

SOUTH CAROLINA NOTIFICATION CENTER, INC. CERTIFICATE OF AUTHORIZATION No. 00002 — DATE 1/24/11

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 24410 CHRISTOPHER J. CAHOY — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

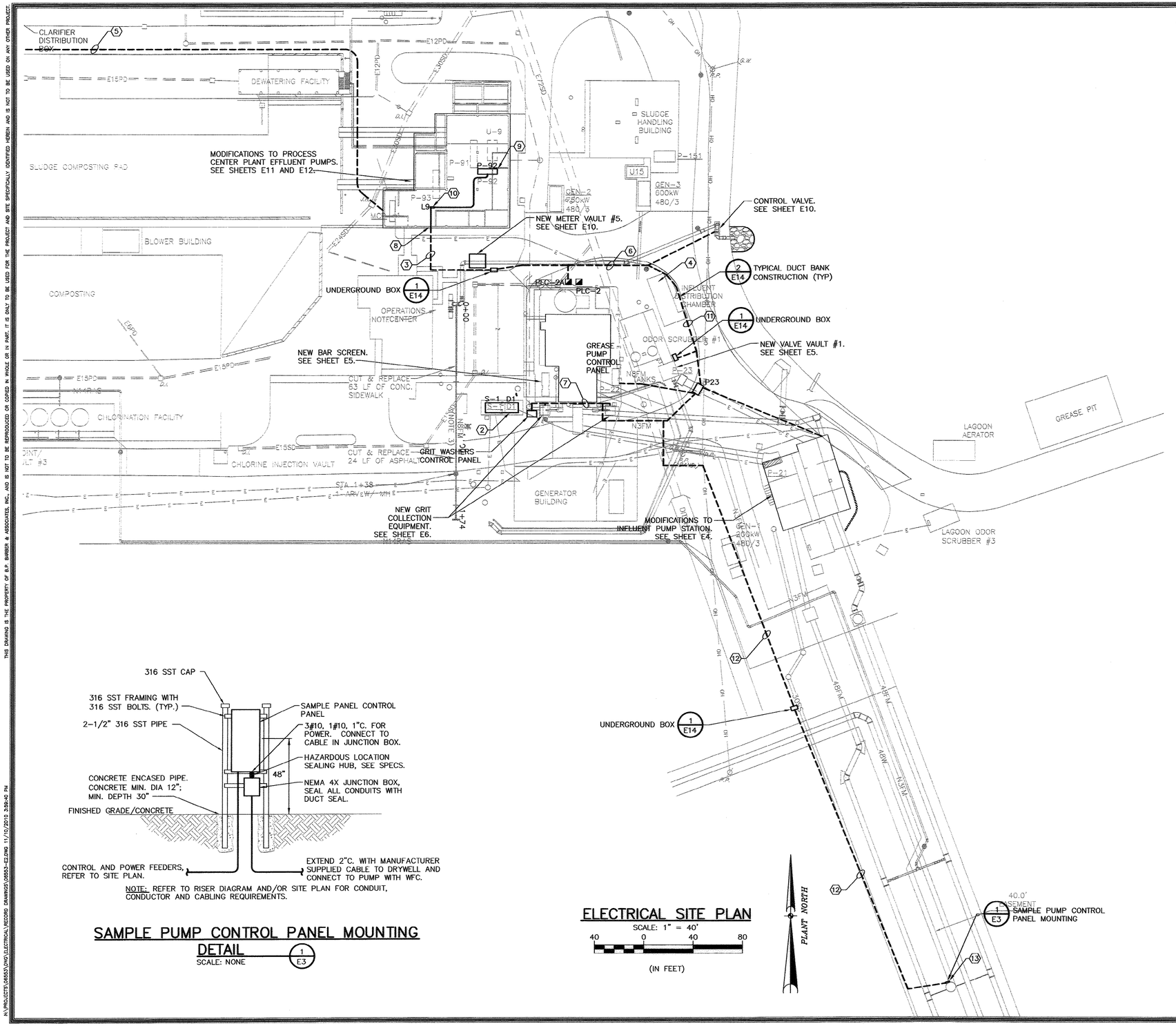
SHEET TITLE: ELECTRICAL SITE PLAN "A" — SCALE: AS SHOWN — DATE: NOV 2010

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	06553-E2
N.B. NO.	
REF.	
PROJECT NO.	

SHEET E2 OF 14

FILE NO. C1-22-03



ELECTRICAL KEY NOTES:

1. NOT USED.
2. EXISTING SWITCHGEAR S-1 AND DISTRIBUTION PANEL D-1. REMOVE EXISTING BREAKER IN D-1 FOR INFLUENT PUMP STATION AND INSTALL NEW 400 AMP BREAKER. REFER TO INFLUENT PUMP STATION PLAN FOR SEQUENCE.
3. FEEDERS FOR POWER TO METER VAULT #5. VALVE VAULTS #1 AND #2 AND GRIT WASHERS #1 AND #2. REFER TO ASSOCIATED PLAN FOR SIZE AND QUANTITY. PATCH SIDEWALK, ASPHALT, ETC. AS NECESSARY. MATCH ALL FINISHES.
4. DISCONNECT EXISTING MAG METER POWER AND MONITORING AND RECONNECT TO NEW MAG METER AFTER INSTALLATION. REFER TO SHEET D7 FOR EXACT METER. WORK TO BE PERFORMED BY OWNER.
5. FEEDERS FOR POWER TO SB2 FROM U-16; DP1. REFER TO ASSOCIATED PLAN FOR SIZE AND QUANTITY.
6. FEEDERS FOR CONTROL TO METER VAULT #5, VALVE VAULT #1, CONTROL VALVE AND GRIT WASHERS #1 AND #2. FEEDERS FOR POWER TO VALVE VAULT #1 AND CONTROL VALVE. REFER TO ASSOCIATED PLAN FOR SIZE AND QUANTITY.
7. FEEDERS FOR POWER AND CONTROL TO GRIT WASHERS #1 AND #2. REFER TO ASSOCIATED PLAN FOR SIZE AND QUANTITY.
8. ENTER BUILDING BELOW TOP LEVEL AND MOUNT JUNCTION BOX. PROVIDE SST, SCREW COVER JUNCTION BOX SIZED PER NEC. SEAL ALL PENTRATIONS WATERTIGHT.
9. EXISTING MCC P-92. FURINSH AND INSTALL FOUR (4) 20/3 BREAKERS (ONE FOR VALVE VAULT #1, ONE FOR VALVE VAULT #2 AND ONE FOR EACH GRIT WASHER) WHERE SPACE IS AVAILABLE.
10. EXISTING PANEL L9, 120V. FURNISH AND INSTALL FOUR (4) 20/1 BREAKERS (ONE FOR FLOW METER IN METER VAULT #5 AND ONE FOR EACH SUMP PUMP IN METER VAULT #5, VALVE VAULT #1 AND VALVE VAULT #2) WHERE SPACE IS AVAILABLE.
11. FEEDERS FOR POWER AND CONTROL TO VALVE VAULT #1. REFER TO ASSOCIATED PLAN FOR SIZE AND QUANTITY.
12. 3#10, 1#10G., 1"C. FOR POWER FROM MCC P-21 TO SAMPLE PUMP; 2#10, 1#10G., 1"C. FOR POWER FROM PANEL 21A TO SUMP PUMP AND 12#12, 1"C. FOR CONTROL FROM PLC-1 TO SAMPLE PUMP.
13. SAMPLE PUMP CONTROL PANEL AND SUMP PUMP CONNECTIONS. SEE DETAIL FOR SAMPLE PANEL CONNECTIONS. INSTALL NEMA 4X JUNCTION BOX INSIDE DRYWELL AND CONNECT SUMP PUMP.

NOTE: REFER TO RISER DIAGRAM AND/OR SITE PLAN FOR CONDUIT, CONDUCTOR AND CABLING REQUIREMENTS.

SAMPLE PUMP CONTROL PANEL MOUNTING DETAIL

1 / E3

SCALE: NONE

ELECTRICAL SITE PLAN

SCALE: 1" = 40'

40 0 40 80

(IN FEET)

51-011-071/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	CJA
DRAWN BY:	GAS
CHECKED BY:	CJA
APPROVED:	MAB

SOUTH CAROLINA NOTHING WORKS LIKE A B.P. BARBER & ASSOCIATES, INC. No. C00003 CERTIFICATE OF AUTHORIZATION

DATE 1/24/11

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 24410 CHRISTOPHER SIMONS

SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: ELECTRICAL SITE PLAN "B"

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

DWG NAME	06553-E2
N.B. NO.	
REF.	
PROJECT NO.	

SHEET E3 OF 14

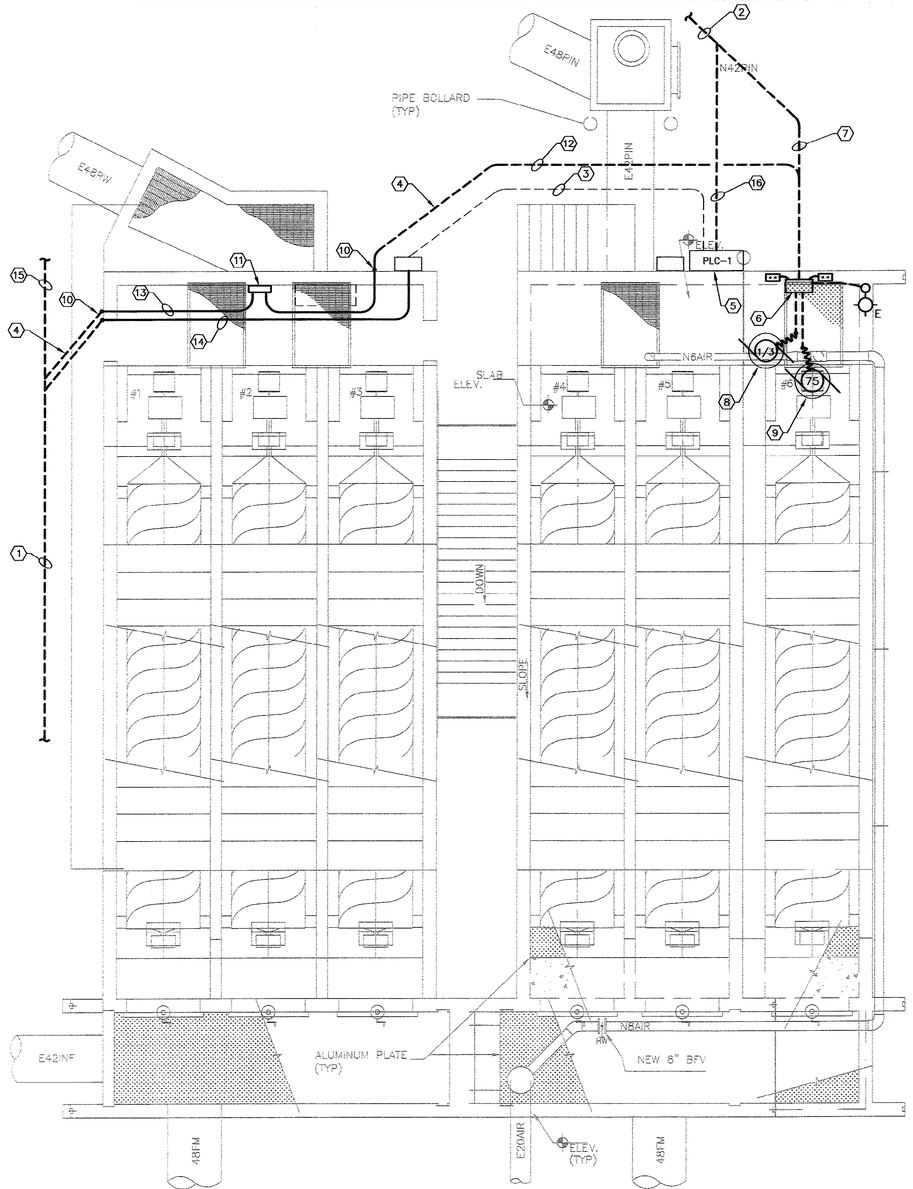
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E2.DWG 11/10/2010 3:58:40 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E4.DWG 11/10/2010 4:00:24 PM



ELECTRICAL PLAN

SCALE: 3/16" = 1'-0"

0 3 6

GRAPHIC SCALE

NORTH

⟨X⟩ ELECTRICAL KEY NOTES:

1. FEEDERS FOR POWER TO SAMPLE AND SUMP PUMPS. REFER TO SHEET E3 FOR CONTINUATION.
2. FEEDERS FOR POWER AND CONTROL TO INFLUENT SCREW PUMP AND GREASE PUMP. REFER TO SHEET E3 FOR CONTINUATION.
3. EXISTING CONDUIT WITH CONTROL CONDUCTORS FOR SCREW PUMPS. EXTEND 12#12 IN EXISTING CONDUIT FOR SAMPLE PUMP TO PLC-1 AND CONNECT.
4. CUT AND PATCH TO MATCH EXISTING.
5. EXISTING PLC-1. CONNECT CONTROLS AS DIRECTED.
6. PROVIDE AND INSTALL NEMA 4X SST JUNCTION BOX AND PUSH BUTTON STATIONS. SIZE JUNCTION BOX PER NEC. MOUNT TO HANDRAIL.
7. FEEDERS WITH THE FOLLOWING:
   - 3#1, 1#6G., 2-1/2"C. (SCREW PUMP POWER)
   - 3#12, 1#12G., 1"C. (GREASE PUMP POWER)
   - 12#12, 1"C. (CONTROL)
8. NEW GREASE PUMP, 480V., 3ø. CONNECT FOR POWER AND CONTROL.
9. NEW SCREW PUMP, 480V., 3ø. CONNECT FOR POWER AND CONTROL.
10. EXTEND UP WALL AND INSTALL CONDULET. ROUTE FEEDERS OVERHEAD.
11. EXISTING PANEL "A". FURNISH AND INSTALL TWO (2) 20/1 BREAKERS FOR SUMP PUMP AND NEW LIGHT POLE.
12. 2#10, 1#10G., 1"C. FOR POWER TO NEW LIGHTING.
13. 2#10, 1#10G., 1"C. FOR POWER TO SUMP PUMP.
14. 12#12, 1"C. FOR CONTROL FROM SAMPLE PUMP TO PLC-1.
15. FEEDER FOR POWER TO SAMPLE PUMP. REFER TO SHEET E3 FOR CONTINUATION.
16. 20#12, 1"C. FOR CONTROL FROM MCC P-23 FOR NEW SCREW AND GREASE PUMPS.

51-011-072/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS			
PROJECT ENG:	MAB	DESIGNED BY:	CJA
DRAWN BY:	GAS	CHECKED BY:	CJA
APPROVED:	MAB		

SOUTH CAROLINA NO LIVE LOAD/LOAD CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C00020 DATE 1/12/11

SOUTH CAROLINA PROFESSIONAL ENGINEER CHRISTOPHER T. SKYOCK LICENSED No. 21410 SIGNATURE

bpb BP Barber
Engineering • Experience • Excellence
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: INFLUENT PUMP STATION ELECTRICAL PLAN

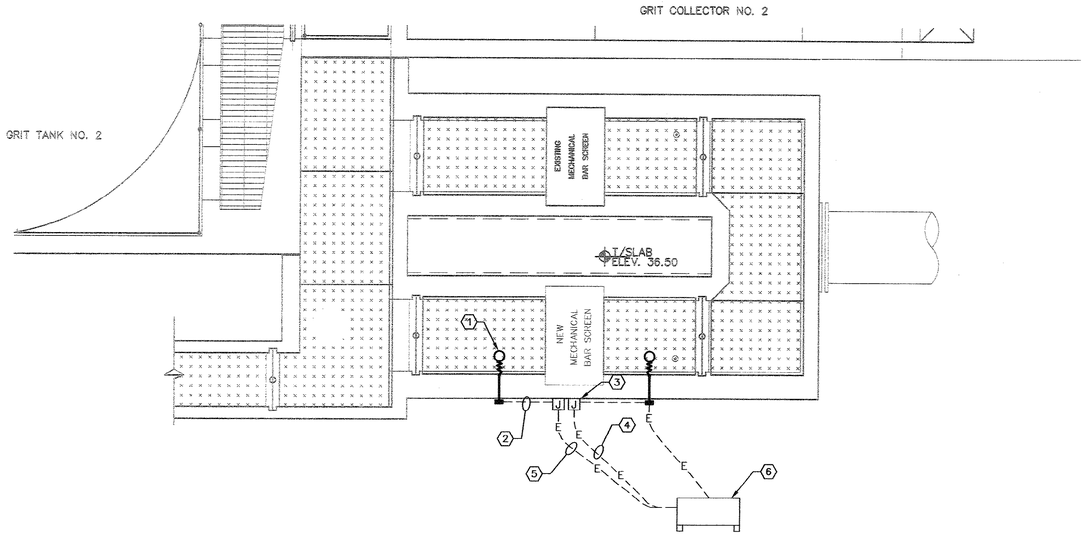
DATE: FEB 2007 SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

DWG NAME	06553-E4
N.B. NO.	
REF.	1731
PROJECT NO.	06553

SHEET E4 OF 14

FILE NO. C1-22-03



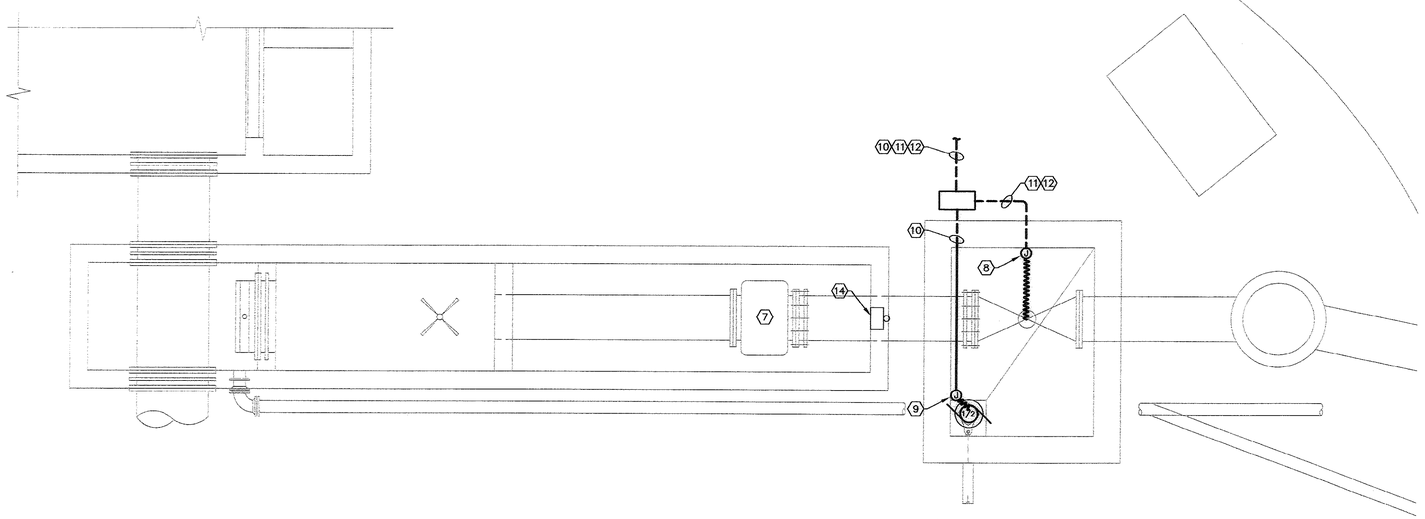
NEW BAR SCREEN – ELECTRICAL PLAN

SCALE: 1/4" = 1'-0"

0 4 8

GRAPHIC SCALE

NORTH



NEW VALVE VAULT #1 – ELECTRICAL PLAN

SCALE: 1/4" = 1'-0"

0 4 8

GRAPHIC SCALE

ⓧ ELECTRICAL KEY NOTES:

1. ULTRASONIC LEVEL TRANSDUCER. TYPICAL OF TWO (2).
2. EXISTING 1"C., INSTALL MANUFACTURER SUPPLIED CABLE. VERIFY.
3. EXTEND CIRCUITS TO MOTOR AND CONNECT FOR POWER AND CONTROL.
4. 3#12, 1#12G. IN EXISTING CONDUIT. VERIFY TO ACCOMMODATE NEW CIRCUITS.
5. 16#14 IN EXISTING CONDUIT. VERIFY TO ACCOMMODATE NEW CIRCUITS.
6. EXISTING BAR SCREEN CONTROL PANEL.
7. DISCONNECT EXISTING MAG METER POWER AND MONITORING AND RECONNECT TO NEW MAG METER AFTER INSTALLATION.
8. PROVIDE AND INSTALL TWO (2) NEMA 4X SST JUNCTION BOXES (ONE FOR POWER AND ONE FOR CONTROL). MOUNT TO VAULT WALL AND CONNECT TO VALVE WITH WFC.
9. PROVIDE AND INSTALL NEMA 4X SST JUNCTION BOX 24" ABOVE SUMP PUMP AND CONNECT WITH WFC.
10. 2#12, 1#12G., 3/4"C., PANEL L9 (SUMP PUMP POWER). REFER TO SHEET E3 FOR CONTINUATION.
11. 3#10, 1#10G., 1"C., MCC P-92 (VALVE POWER). REFER TO SHEET E3 FOR CONTINUATION.
12. TWO (2) TSP, 1"C., 8#12, 1"C., PLC-2 (CONTROL). REFER TO SHEET E3 FOR CONTINUATION.
13. UNDERGROUND BOX. SEE DETAIL 1 ON SHEET E14.
14. NEW FLOW METER TRANSMITTER.

51-011-073/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	CJA
DRAWN BY:	GAS
CHECKED BY:	CJA
APPROVED:	MAB

SOUTH CAROLINA NO AUTHORIZATION OF ANY KIND B.P. BARBER & ASSOCIATES, INC. No. COA0030 CERTIFICATE OF

DATE 1/24/11

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 23440 CHRISTOPHER G. CJA

SIGNATURE

bpb

B. P. BARBER & ASSOCIATES, INC.

ENGINEERS – PLANNERS – SURVEYORS

COLUMBIA • SPARTANBURG • CHARLESTON

FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE

NEW BAR SCREEN AND VALVE VAULT #1 – ELECTRICAL PLANS

DATE: NOV 2010 SCALE: AS SHOWN

PROJECT

22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	06553-E5
N.B. NO.	
REF.	
PROJECT NO.	

SHEET E5 OF 14

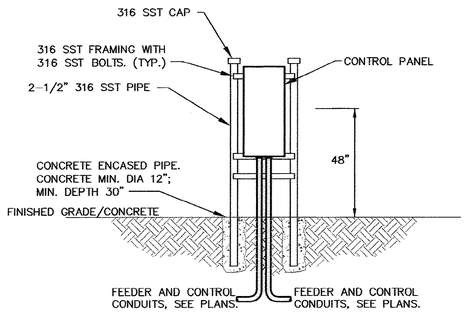
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E5.DWG 11/10/2010 4:00:51 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E6.DWG 11/10/2010 4:01:28 PM



NOTE: REFER TO RISER DIAGRAM AND/OR SITE PLAN FOR CONDUIT, CONDUCTOR AND CABLING REQUIREMENTS.

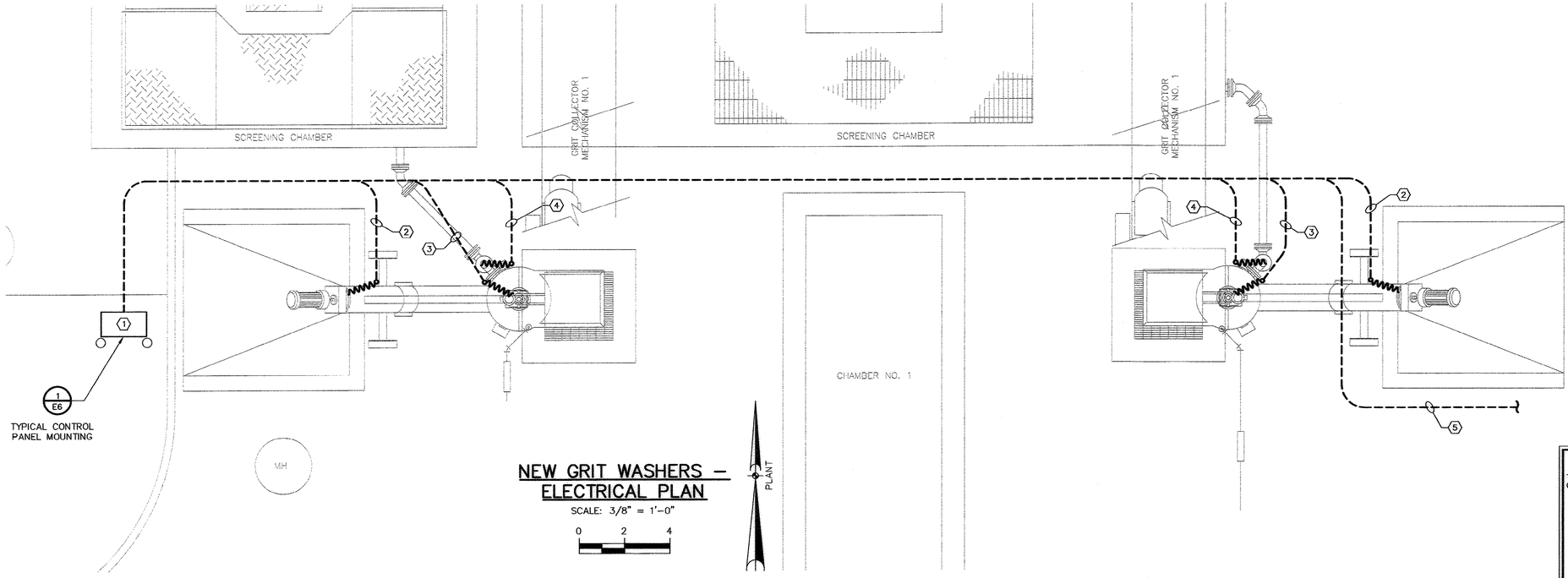
TYPICAL CONTROL PANEL MOUNTING DETAIL

SCALE: NONE

(1 / E6)

ELECTRICAL KEY NOTES:

1. GRIT WASHER CONTROL PANEL, 480V. CONNECT POWER AND CONTROLS AS DIRECTED BY VENDOR AND APPROVED SHOP DRAWINGS.
2. EXTEND 3#10, 1#10G., 1"C. FOR POWER AND 1"C. WITH SENSOR CABLING FOR GRIT SCREW DRIVE. STUB UP AT SUPPORT AND CONNECT TO DRIVE WITH WFC. VERIFY SENSOR CABLING TYPE WITH VENDOR OR APPROVED SHOP DRAWINGS.
3. EXTEND 3#10, 1#10G., 1"C. FOR POWER AND 1"C. WITH SENSOR CABLING FOR GRIT STIRRER DRIVE. STUB UP AT SUPPORT AND CONNECT TO DRIVE WITH WFC. VERIFY SENSOR CABLING TYPE WITH VENDOR OR APPROVED SHOP DRAWINGS.
4. EXTEND 8#12, 1"C. FOR BLOWDOWN VALVE CONNECTIONS. STUB UP AT SUPPORT AND CONNECT TO WITH WFC. FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
5. EXTEND 3#10, 1#10, 1"C. FOR POWER TO MCC P-23 AND 12#12, 1"C. FOR CONTROL/STATUS TO PLC-2. REFER TO SHEET E3 FOR CONTINUATION.



NEW GRIT WASHERS - ELECTRICAL PLAN

SCALE: 3/8" = 1'-0"

0 2 4

SI-011-074/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	CJA
DRAWN BY:	GAS
CHECKED BY:	CJA
APPROVED:	MAB

SOUTH CAROLINA NOTIFICATION — B.P. BARBER & ASSOCIATES, INC. — CERTIFICATE OF AUTHORIZATION No. C00000 — DATE 1/24/11

SOUTH CAROLINA PROFESSIONAL ENGINEER — No. 23410 — CHRISTOPHER SYDNEY LICENSED — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS - PLANNERS - SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW RETURN SLUDGE PUMP STATION AND GRIT WASHERS ELECTRICAL PLAN

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

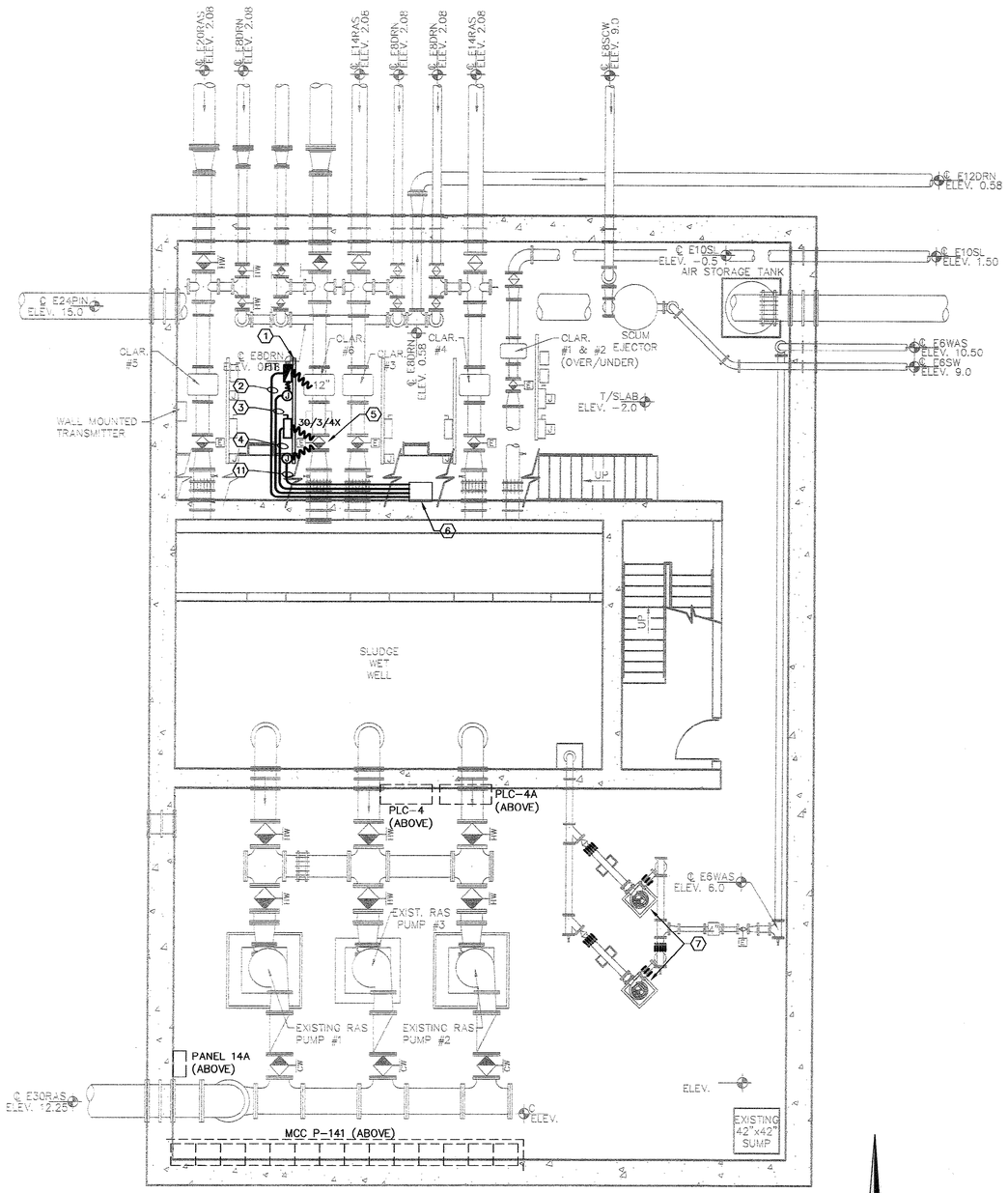
.DWG NAME	06553-E6
N.B. NO.	
REF.	
PROJECT NO.	

SHEET E6 OF 14

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E7.DWG 11/10/2010 4:01:58 PM



ELECTRICAL PLAN @ ELEV. −2.0

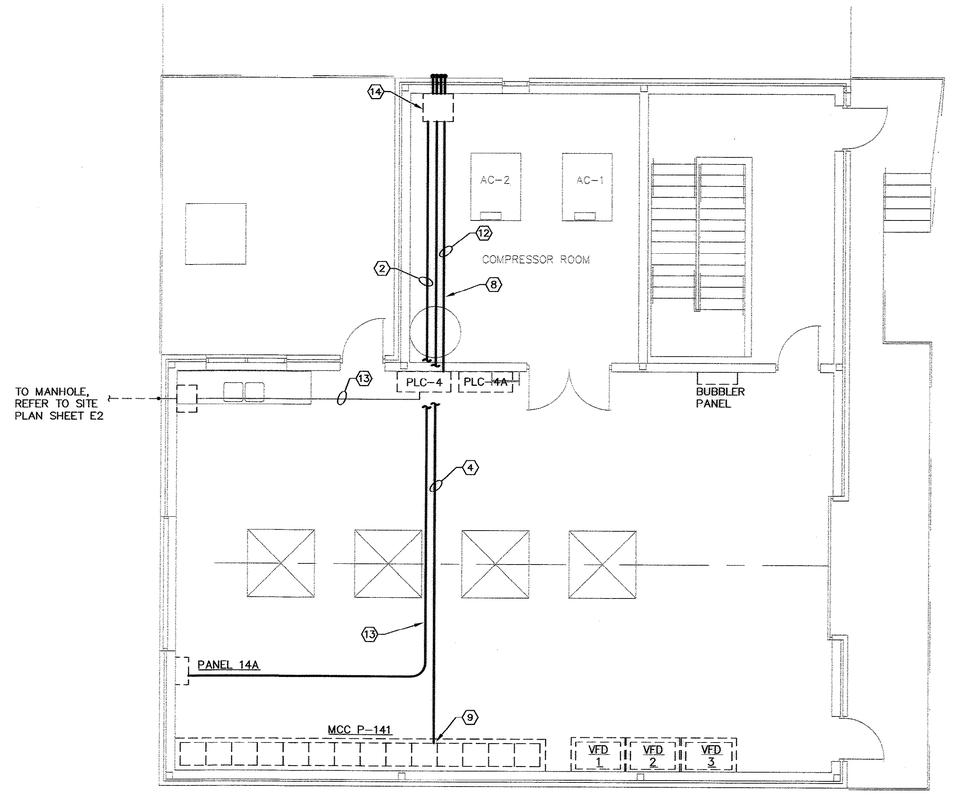
SCALE: 3/16" = 1'-0"

0 3 6
GRAPHIC SCALE

NORTH

ⓧ ELECTRICAL KEY NOTES:

1. PROVIDE AND INSTALL NEW UNISTRUT FRAME.
2. 2#12, 1#12G., 3/4"C. TO PANEL 14A-38 (FIT POWER).
3. ONE (1) TSP, 3/4"C. TO PLC-4A (CONTROL).
4. 3#12, 1#12G., 3/4"C. TO MCC P141-38 (VALVE MOTOR OPERATOR POWER).
5. VALVE MOTOR OPERATOR. CONNECT FOR POWER AND CONTROL WITH WFC.
6. EXISTING JUNCTION BOX UNDER WALKWAY. RUN CONDUITS UP OUT OF BOX AND THROUGH FLOOR ABOVE.
7. DISCONNECT EXISTING PUMPS AND RE-CONNECT POWER AND CONTROL AFTER NEW INSTALLATION.
8. SUPPORT CONDUITS WITH TRAPEZE HANGERS AS REQUIRED. ALL CONCRETE ANCHORS SHALL BE 316 SST.
9. PROVIDE 20/3 BREAKER IN AVAILABLE SPACE FOR VALVE OPERATOR.
10. NOT USED.
11. ONE (1) TSP, 3/4"C. AND 4#14, 3/4"C. TO PLC-4A (CONTROL).
12. TWO (2) TSP, 3/4"C. (FIT AND VALVE) AND 4#14, 3/4"C. (VALVE) TO PLC-4A.
13. EXISTING 3" CONDUIT WITH CONTROL CONDUCTORS. INSTALL 24#14 FOR CONTROL OF CLARIFIER #6 AND INTERMEDIATE SCREW PUMP #4.



51-011-075/82

FIRST FLOOR PARTIAL ELECTRICAL PLAN

SCALE: 3/16" = 1'-0"

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	CJA
DRAWN BY:	GAS
CHECKED BY:	CJA
APPROVED:	MAB

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 20440 CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C00026 — DATE 1/24/11

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 20440 CHRISTOPHER MABRY — SIGNATURE

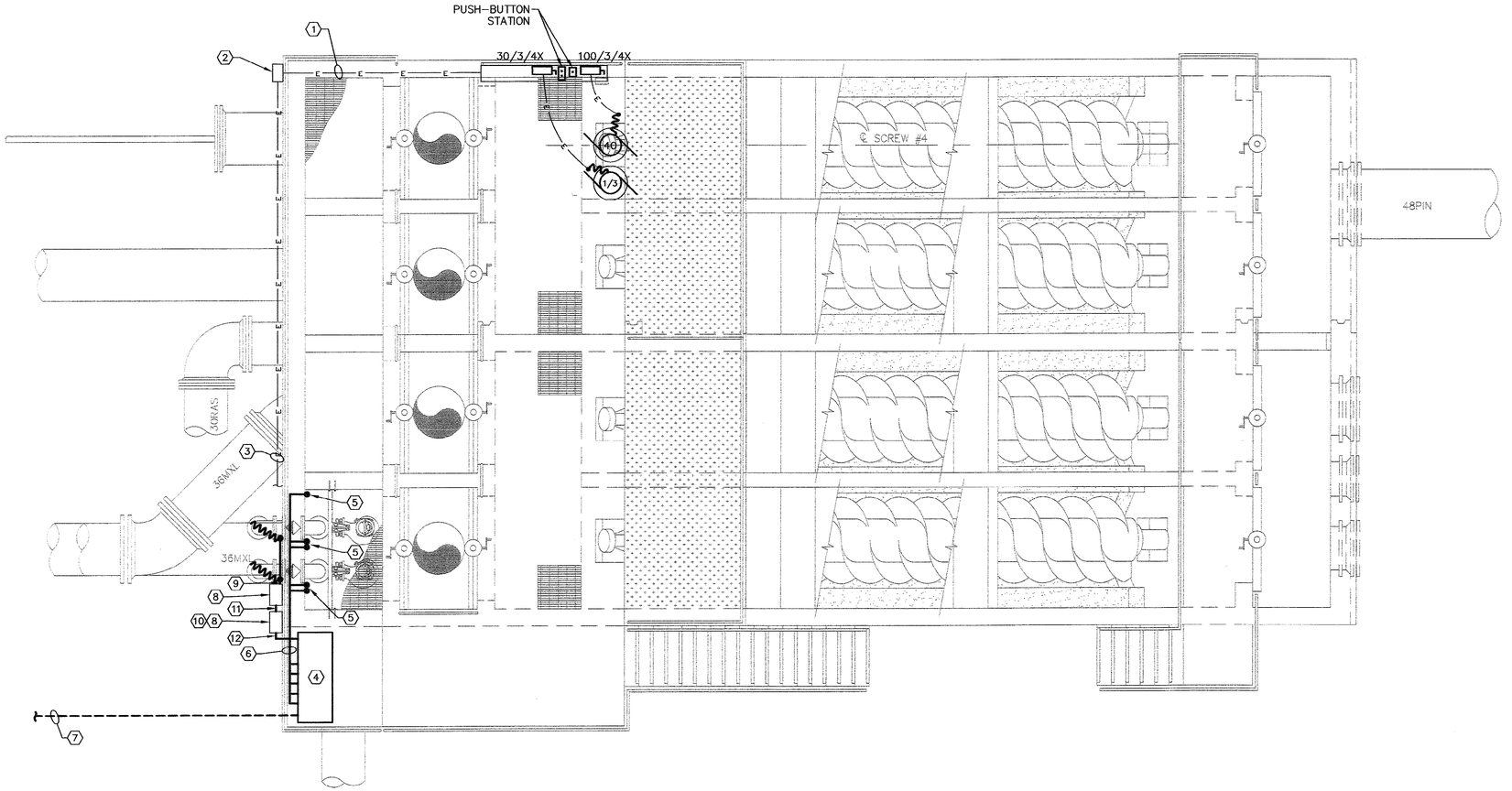
bpb BP Barber
Engineering • Experience • Excellence
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: MODIFICATIONS TO RETURN SLUDGE PUMP STATION ELECTRICAL PLAN
DATE: FEB 2007 SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

DWG NAME	06553-E7
N.B. NO.	
REF.	1731
PROJECT NO.	06553
SHEET	E7
OF	14

FILE NO. C1-22-03



⟨X⟩ ELECTRICAL KEY NOTES:

1. FEEDERS WITH THE FOLLOWING:
   - 3#4, 1#8G. IN EXISTING 1-1/2"C. (POWER)
   - 3#12, 1#12G. IN EXISTING 3/4"C. (POWER)
   - 12#12 IN EXISTING 1-1/2"C.
2. EXISTING JUNCTION BOX MOUNTED ON WALL.
3. FEEDERS WITH THE FOLLOWING:
   - 3#4, 1#8G. IN EX 1-1/2"C., P162-9 (INT PUMP #4 POWER)
   - 3#12, 1#12G. IN EX 3/4"C., P162-10 (GREASE PUMP #4 POWER)
   - 12#12 IN EX 1-1/2"C., P162-9,10 (INT PUMP #4 & GREASE PUMP #4 CONTROL)
4. CONTROL PANEL BY EQUIPMENT MANUFACTURER, 480V., 3ø. CONNECT FOR POWER AND CONTROL AS DIRECTED BY MANUFACTURER. MOUNT ON TOP SLAB.
5. STOP CONDUIT AT TOP OF WETWELL AND SEAL WITH DUCT SEAL AFTER INSTALLATION OF CABLES.
6. CONDUITS WITH MANUFACTURER SUPPLIED CABLING FOR TWO (2) PUMPS WITH SENSORS AND FLOAT SWITCHES. PROVIDE TWO (2) 3" CONDUITS FOR PUMP POWER CABLES, PROVIDE TWO (2) 2" CONDUITS FOR PUMP SENSOR CABLES, AND ONE (1) 2" CONDUIT FOR FLOAT SWITCH CABLES. ROUTE ON EXTERIOR WALL, EXTEND UP AND OVER TO WET WELL. PROVIDE HAZARDOUS LOCATION SEAL-OFF HUBS BELOW CONTROL PANEL.
7. 3#3, 1#8G., 2"C. TO EXISTING P-162 FOR POWER, 30#12, 2"C AND SIX (6) TSP, 2" FOR CONTROL AND FLOW TO PLC-4B. REFER TO SHEET E2 FOR CONTINUATION.
8. WALL MOUNTED FLOW TRANSMITTER. CONNECT FOR POWER AND SIGNAL.
9. TWO (2) 1"C., WITH MANUFACTURER SUPPLIED CABLE. ROUTE CONDUIT ON WALL TO FLOW METERS IN VERTICAL PIPE. REFER TO SHEET D10 FOR EXACT LOCATION. CONNECT TO FLOW METER WITH WFC.
10. PROVIDED NEMA 4X SST, SCREW COVER JUNCTION BOX WITH DIVIDER ON PIPE FOR POWER AND CONTROL.
11. ONE (1) TSP, 1"C. FOR CONTROL AND 2#12, 1#12G., 3/4"C. FOR POWER.
12. TWO (2) TSP, 1"C. FOR CONTROL AND 2#12, 1#12G., 3/4"C. FOR POWER FROM RAS CONTROL PANEL. ROUTE TSP THROUGH RAS CONTROL PANEL TO PLC-4B.

ELECTRICAL PLAN

SCALE: 1/4" = 1'-0"

0 4 8

GRAPHIC SCALE

NORTH

51-011-076/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	MAB
DESIGNED BY:	CJA
DRAWN BY:	GAS
CHECKED BY:	CJA
APPROVED:	MAB

SOUTH CAROLINA NOTIFICATION CERTIFICATE OF AUTHORIZATION B.P. BARBER & ASSOCIATES, INC. No. C00020 DATE 11/2/10

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED CHRISTOPHER JOHNS No. 23410 SIGNATURE

bpb

B. P. BARBER & ASSOCIATES, INC.

ENGINEERS - PLANNERS - SURVEYORS

COLUMBIA • SPARTANBURG • CHARLESTON

FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: MODIFICATIONS TO INTERMEDIATE PUMP STATION ELECTRICAL PLAN

DATE: NOV. 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

DWG NAME	06553-E8
N.B. NO.	
REF.	
PROJECT NO.	

SHEET E8 OF 14

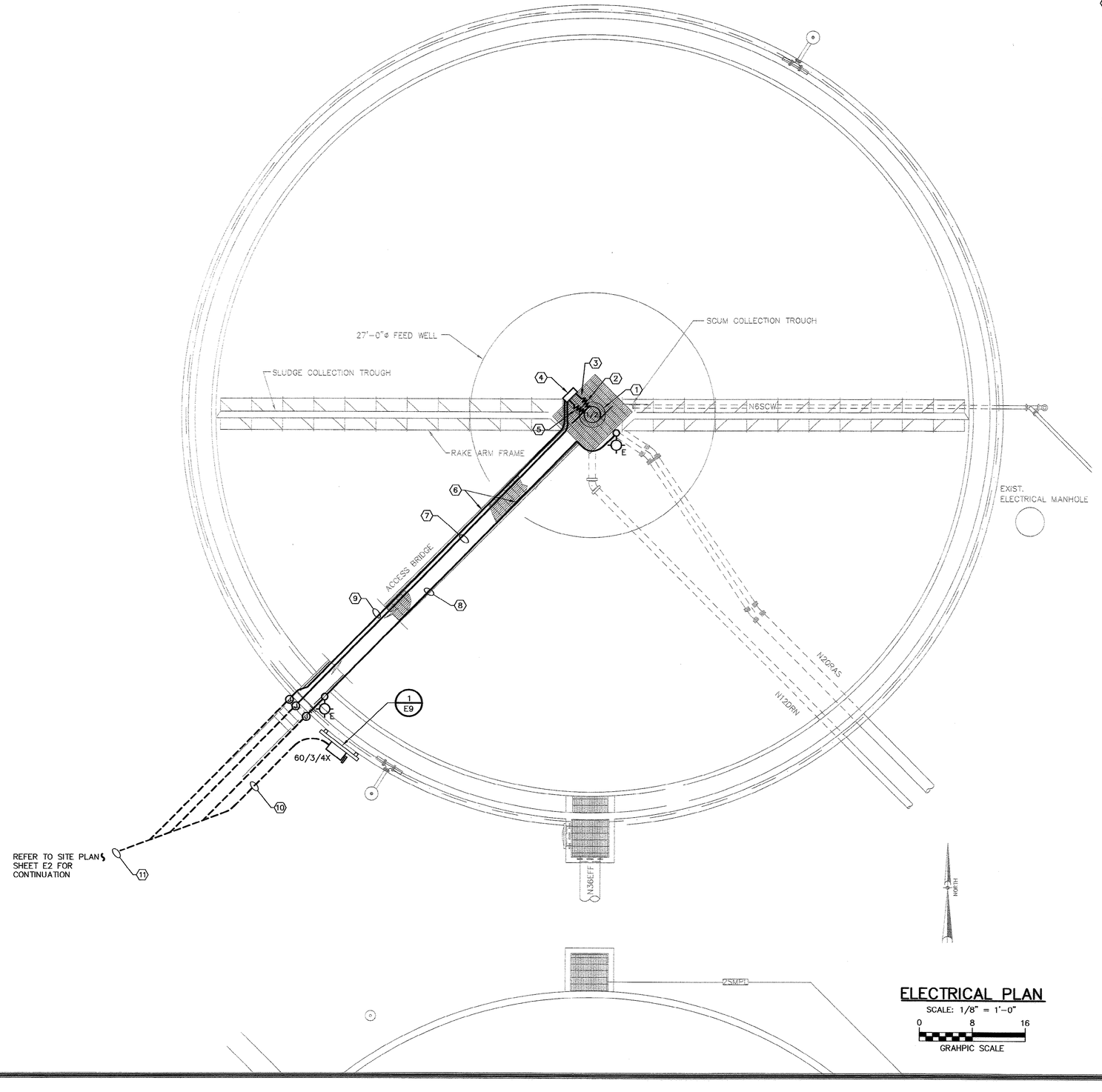
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E8.DWG 11/10/2010 4:03:27 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E9.DWG 11/10/2010 4:03:58 PM

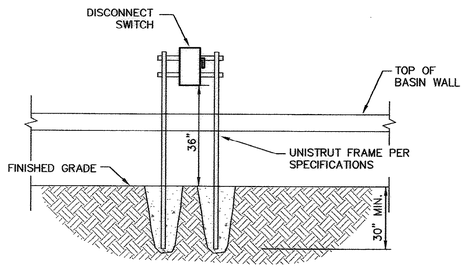


ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

0 8 16
GRAHPIC SCALE

ⓧ ELECTRICAL KEY NOTES:

1. CLARIFIER DRIVE MOTOR, 480V., 3ø. CONNECT FOR POWER AND CONTROL.
2. 3#12, 1#12G., 3/4"C. CONNECT TO MOTOR WITH WFC (POWER).
3. ROUTE CONDUIT BELOW GRATING (TYP).
4. CLARIFIER CONTROL PANEL. MOUNT TO HANDRAIL TO ALLOW FOR REQUIRED MINIMUM CLEARANCE PER NEC.
5. 9#14, 3/4"C. CONNECT TO MOTOR WITH WFC (ALARM/CONTROL).
6. ROUTE CONDUIT ALONG EDGE OF BRIDGE (TYP).
7. 9#14, 3/4"C. (ALARM/CONTROL).
8. 2#12, 1#12G., 3/4"C. (LIGHT)
9. 3#12, 1#12G., 3/4"C. (POWER).
10. 3#6, 1#10G., 1-1/4"C. (POWER)
11. FEEDERS WITH THE FOLLOWING:
    - 3#6, 1#10G., 1-1/4"C. (POWER)
    - 3#12, 1#12G., 3/4"C., P-162 (CLARIFIER DRIVE POWER)
    - 9#14, 3/4"C., PLC-4 (ROUTE THROUGH P-162)
    - 2#12, 1#12G., 3/4"C., P-162 (LIGHTS)



DETAIL
SCALE: NONE — 1 / E9

51-011-077/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS		
PROJECT ENG:	M.A.B	
DESIGNED BY:	C.J.A.	
DRAWN BY:	G.A.S.	
CHECKED BY:	C.J.A.	
APPROVED:	M.A.B.	

SOUTH CAROLINA — AUTHORIZATION — B.P. BARBER & ASSOCIATES, INC. No. C00328 — CERTIFICATE OF — DATE 11/24/10

SOUTH CAROLINA — PROFESSIONAL ENGINEER — No. 23410 — CHRISTOPHER J. HOISEY — SIGNATURE

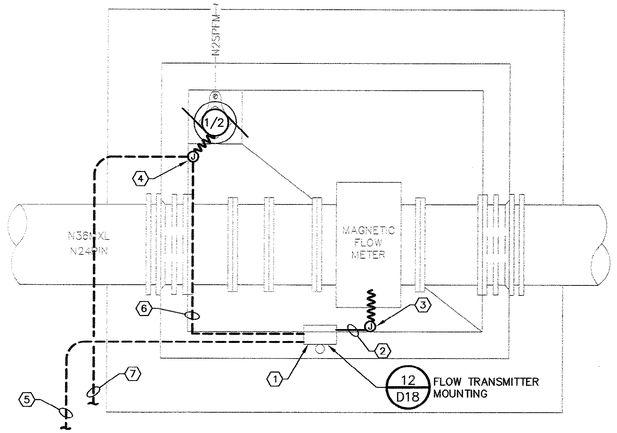
B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW SECONDARY CLARIFIER #6 ELECTRICAL PLAN — DATE: NOV. 2010 — SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

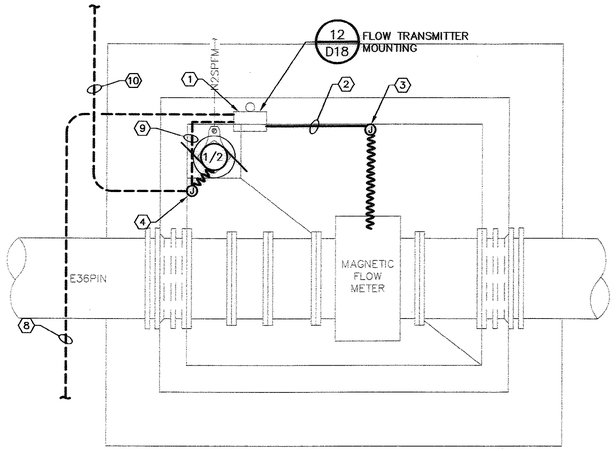
.DWG NAME	SHEET
06553-E9	E9
N.B. NO.	OF
REF.	14
PROJECT NO.	

FILE NO. C1-22-03



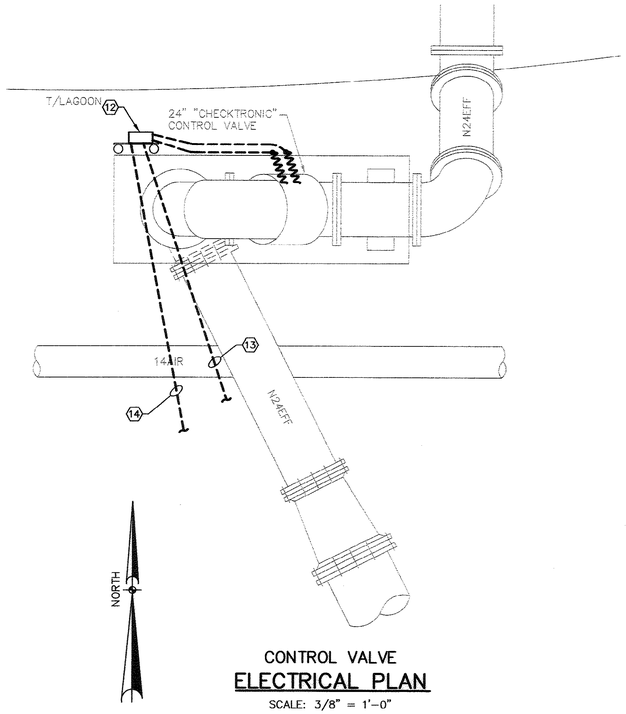
METER VAULT #4
ELECTRICAL PLAN
SCALE: 3/8" = 1'-0"

0 2 4
GRAPHIC SCALE



METER VAULT #5
ELECTRICAL PLAN
SCALE: 3/8" = 1'-0"

0 2 4
GRAPHIC SCALE



CONTROL VALVE
ELECTRICAL PLAN
SCALE: 3/8" = 1'-0"

ELECTRICAL KEY NOTES:

1. NEW PIPE-MOUNTED FLOW TRANSMITTER ON TOP OF VAULT. CONNECT FOR POWER AND SIGNAL.
2. 1"C., WITH MANUFACTURER SUPPLIED CABLE.
3. PROVIDE AND INSTALL NEMA 4X SST JUNCTION BOX ABOVE FLOW TUBE AND CONNECT TO FLOW METER WITH WFC.
4. PROVIDE AND INSTALL NEMA 4X SST JUNCTION BOX 24" ABOVE SUMP PUMP AND CONNECT WITH WFC.
5. ONE (1) TSP, 1"C., PLC-4 (CONTROL). REFER TO SHEET E2 FOR CONTINUATION.
6. 2#12, 1#12G., 3/4"C. (FLOW TRANSMITTER POWER).
7. 3#12, 1#12G., 3/4"C., PANEL 6A (FLOW TRANSMITTER AND SUMP PUMP POWER). REFER TO SHEET E2 FOR CONTINUATION.
8. ONE (1) TSP, 1"C., PLC-2 (CONTROL). REFER TO SHEET E3 FOR CONTINUATION.
9. 2#12, 1#12G., 3/4"C. (FLOW TRANSMITTER POWER).
10. 3#12, 1#12G., 3/4"C., PANEL L9 (FLOW TRANSMITTER AND SUMP PUMP POWER). REFER TO SHEET E3 FOR CONTINUATION.
11. 2#12, 1#12G., 3/4"C., PANEL L9 (SUMP PUMP POWER). REFER TO SHEET E3 FOR CONTINUATION.
12. EQUIPMENT RACK FOR DISCONNECT WITH JUNCTION BOX BELOW FOR POWER AND CONTROL OF CONTROL VALVE. CONNECT TO VALVE WITH WFC.
13. 3#10, 1#10G., 1"C., MCC P-92 (VALVE POWER). REFER TO SHEET E3 FOR CONTINUATION.
14. TWO (2) TSP, 1"C., 8#12, 1"C., PLC-2 (CONTROL). REFER TO SHEET E3 FOR CONTINUATION.

51-011-078/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	MAB
DESIGNED BY:	CJA
DRAWN BY:	GAS
CHECKED BY:	CJA
APPROVED:	MAB

SOUTH CAROLINA B.P. BARBER & ASSOCIATES, INC. No. C00800 CERTIFICATE OF AUTHORIZATION
DATE 11/24/10

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 23410 LICENSED CHRISTOPHER JAMES
SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS - PLANNERS - SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE
NEW METER VAULTS #4 & #5 AND VALVE VAULT #2 - ELECTRICAL PLANS
DATE: NOV 2010 SCALE: AS SHOWN

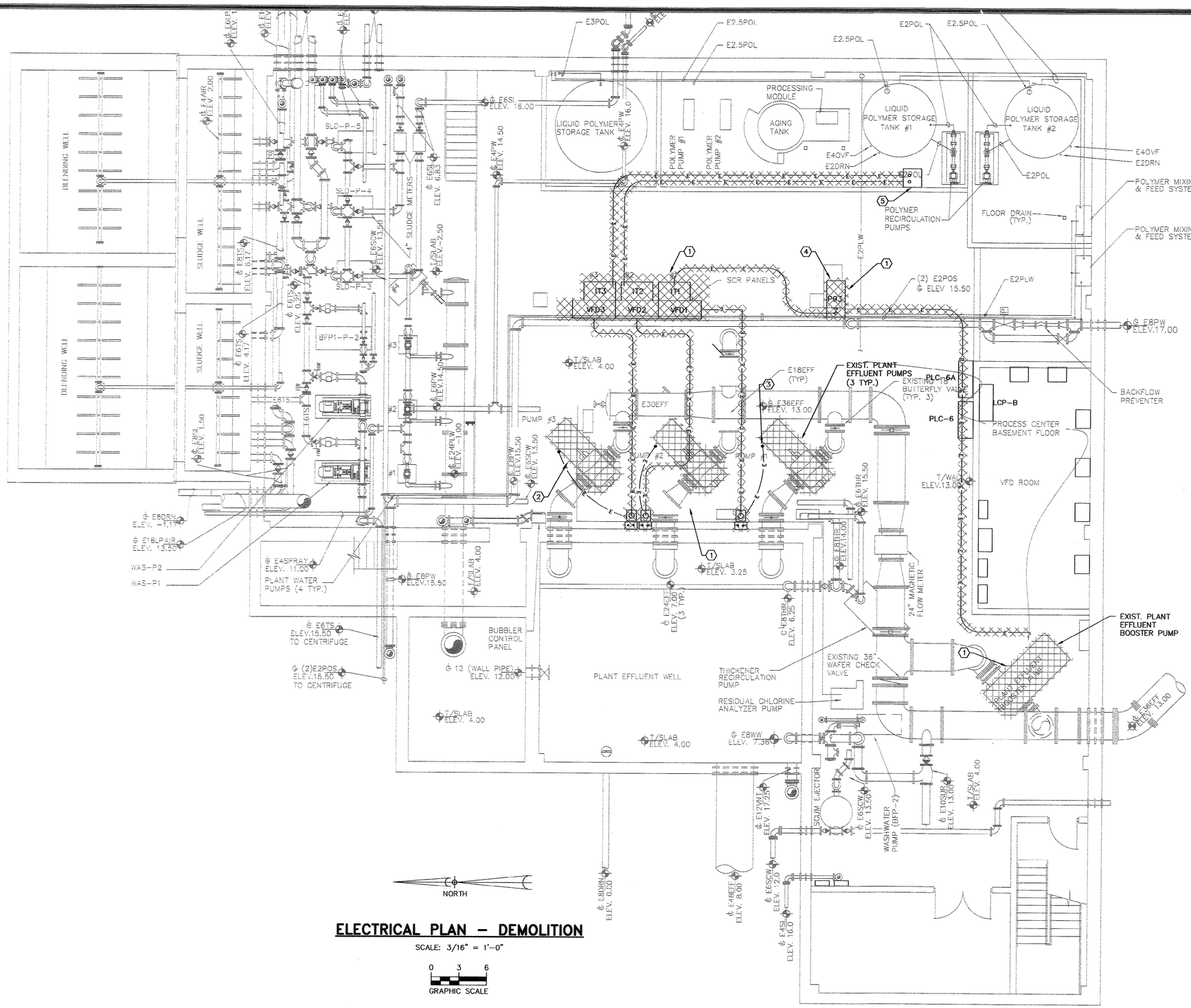
PROJECT
22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

DWG NAME	SHEET
06553-E10	E10
N.B. NO.	OF
REF.	14
PROJECT NO.	

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E10.DWG 11/10/2010 4:03:28 PM



ELECTRICAL PLAN – DEMOLITION

SCALE: 3/16" = 1'–0"

0 3 6

GRAPHIC SCALE

ⓧ ELECTRICAL KEY NOTES:

1. REMOVE ALL CONDUITS, CONDUCTORS, JUNCTION BOXES, PUSH-BUTTON STATIONS, ETC. ASSOCIATED WITH TWO (2) 200 HP EFFLUENT PUMPS, ONE (1) 150 HP BOOSTER PUMP AND MCC P-93. TURN ALL EQUIPMENT OVER TO OWNER.
2. DISCONNECT AND RELOCATE EXISTING PLANT EFFLUENT PUMP #3 TO NEW LOCATION SHOWN ON SHEET E12. REFER TO CONSTRUCTION SCHEDULE ON PROCESS DRAWINGS.
3. ABANDON ALL UNDERFLOOR CONDUIT IN PLACE. REMOVE CONDUIT 2" BELOW FINISHED FLOOR AND PATCH TO MATCH EXISTING.
4. REMOVE EQUIPMENT PADS CURRENTLY SERVING VFD CABINETS, ISOLATION TRANSFORMERS AND MCC P-93 FLUSH WITH FINISHED FLOOR.
5. EXISTING JUNCTION BOX TO REMAIN.

51-011-079/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG.	MAB
DESIGNED BY:	CJA
DRAWN BY:	GAS
CHECKED BY:	CJA
APPROVED:	MAB

SOUTH CAROLINA B.P. BARBER & ASSOCIATES, INC. No. COA0100 CERTIFICATE OF AUTHORIZATION — DATE

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 25410 LICENSED CHRISTOPHER M. JOHNSON — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: EXISTING EFFLUENT PUMPS ELECTRICAL DEMOLITION PLAN

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

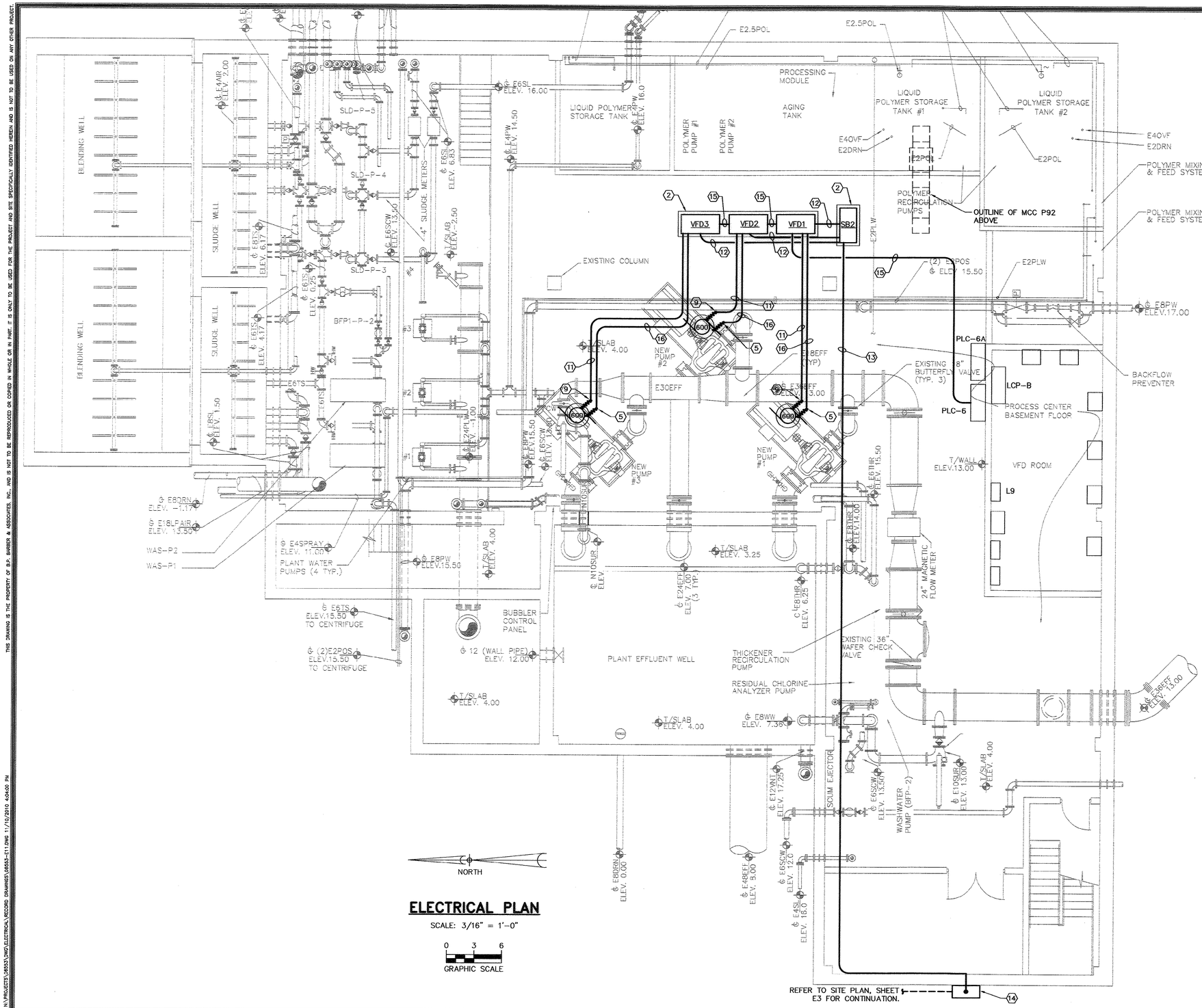
.DWG NAME	06553-E11
N.B. NO.	
REF.	
PROJECT NO.	

SHEET E11 OF 14

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E11.DWG, 11/10/2010 4:04:17 PM



ELECTRICAL PLAN

SCALE: 3/16" = 1'-0"

0 3 6

GRAPHIC SCALE

REFER TO SITE PLAN, SHEET E3 FOR CONTINUATION.

ELECTRICAL KEY NOTES:

1. NOT USED.
2. NEW 4" STEEL REINFORCED CONCRETE EQUIPMENT PAD. 1" CHAMFER ALL SIDES.
3. NOT USED.
4. NOT USED.
5. PROVIDE AND INSTALL A NEMA 4X SST JUNCTION BOX AT PAD. SIZE PER NEC. CONNECT TO MOTOR FOR SENSORS WITH WFC.
6. NOT USED.
7. NOT USED.
8. NOT USED.
9. INSTALL FLOOR FLANGE AND CONDULET AS REQUIRED TO ACCOMMODATE POWER CONDUCTORS. CONNECT TO MOTOR FOR POWER WITH WFC.
10. NOT USED.
11. THREE (3) RUNS OF 4"C., EACH WITH 3#400MCM, 1#2/0G FOR POWER TO MOTOR. 2#12, 1#12G., 1"C. TO SPACE HEATER.
12. THREE (3) RUNS OF 4"C., EACH WITH 3#400MCM, 1#2/0G FOR POWER TO VFD.
13. FIVE (5) RUNS OF 4"C., EACH WITH 3#400MCM, 1#4/0G.
14. PROVIDE AND INSTALL A NEMA 4X SST HINGED JUNCTION BOX ON OUTSIDE WALL. MOUNT 36" ABOVE FINISHED GRADE. SIZE PER NEC.
15. CAT-5E ETHERNET CABLING, 1"C.
16. (7) TSP CABLES, 2"C. FOR RTD'S AND VIBRATION TRANSMITTER.

51-011-080/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG: MAB
DESIGNED BY: CJA
DRAWN BY: GAS
CHECKED BY: CJA
APPROVED: MAB

SOUTH CAROLINA — B.P. BARBER & ASSOCIATES, INC. — No. C00630 — CERTIFICATE OF AUTHORIZATION — DATE 11/24/10

SOUTH CAROLINA — PROFESSIONAL ENGINEER — No. 24910 — LICENSED — CHRISTOPHER — SIGNATURE

B. P. BARBER & ASSOCIATES, INC.
ENGINEERS – PLANNERS – SURVEYORS
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: NEW EFFLUENT PUMPS ELECTRICAL PLAN

DATE: NOV 2010 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

.DWG NAME	SHEET
06553-E11	E12
N.B. NO.	OF
REF.	14
PROJECT NO.	

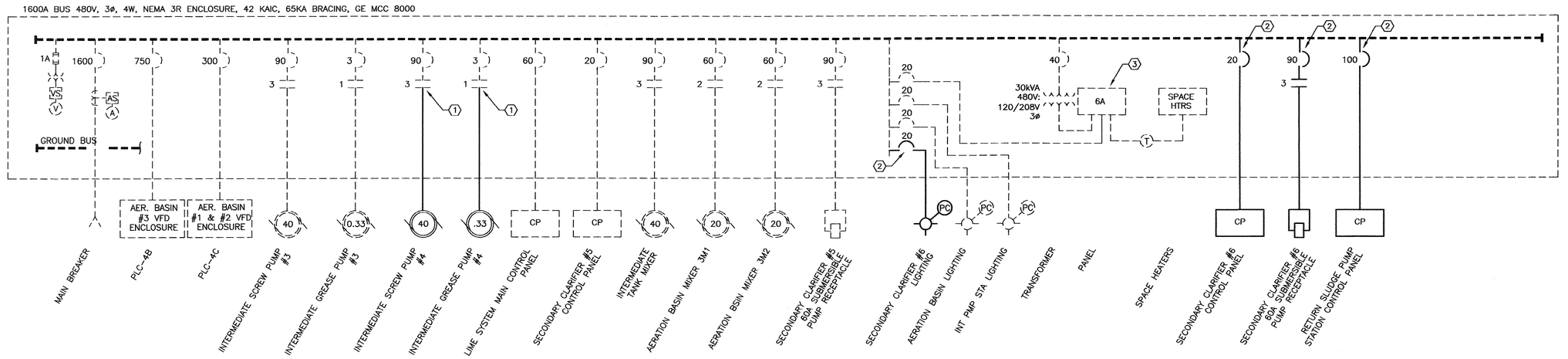
FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E11.DWG 11/10/2010 4:04:00 PM

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

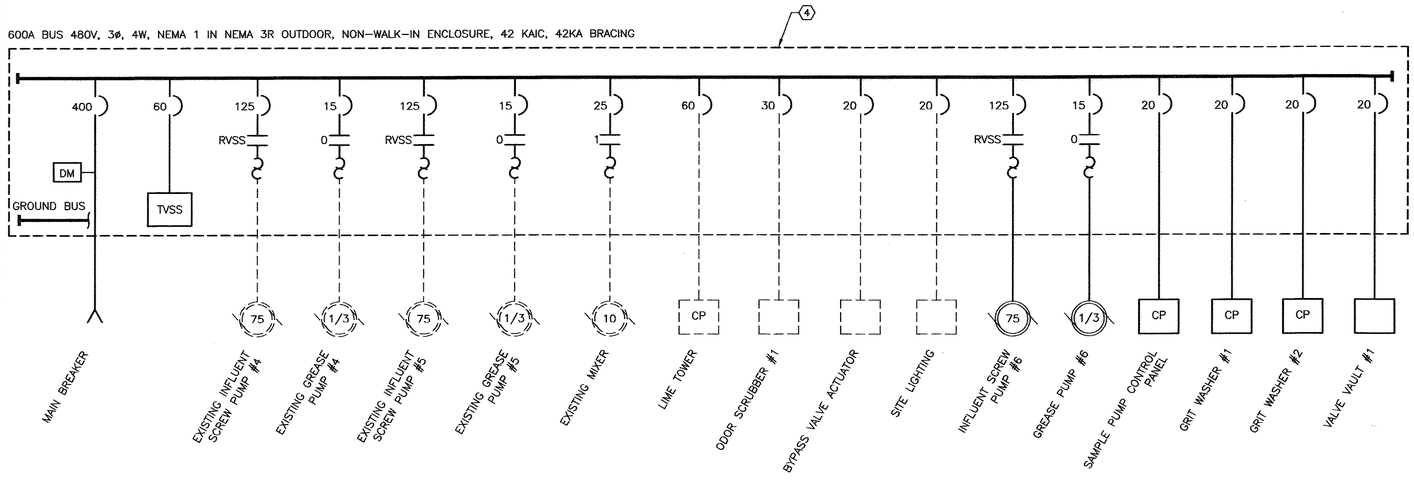
N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E13.DWG 1/10/2010 4:08:03 PM



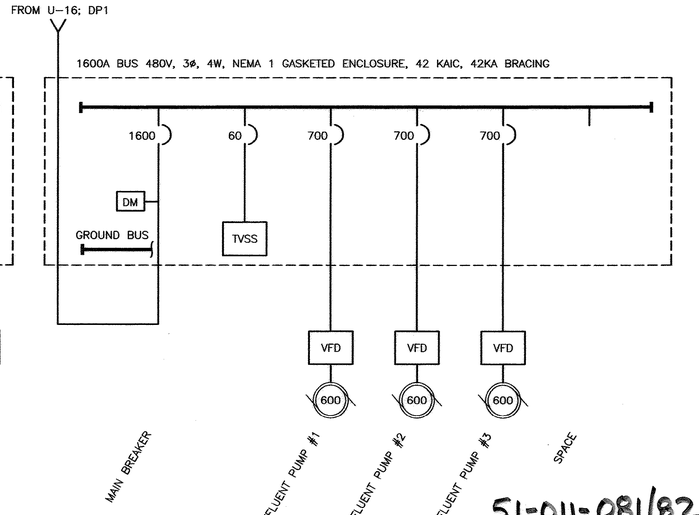
EXISTING MCC P162
NEAR INTERMEDIATE PUMP STATION

ELECTRICAL KEY NOTES:

1. CONNECT NEW INTERMEDIATE SCREW PUMP AND GREASE PUMP TO EXISTING STARTERS.
2. PROVIDE NEW WHERE SPACE IS AVAILABLE.
3. PROVIDE THREE (3) 20/1 BREAKER WHERE SPACE IS AVAILABLE FOR METER VAULT #4 SUMP PUMP, METER VAULT #4 MAGNETIC FLOW METER AND SECONDARY CLARIFIER #6 RECEPTACLE.
4. REMOVE EXISTING MCC AND INSTALL NEW AS SHOWN. FIELD VERIFY ALL CONTROL OF EXISTING EQUIPMENT AND MATCH. FIELD VERIFY ALL EXISTING CONNECTIONS, BREAKER SIZES, STARTERS SIZES, ETC. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY EXISTING AND TO PROVIDE THE CORRECT QUANTITY AND SIZE OF EXISTING CONNECTIONS.



NEW MCC P23



NEW SWITCHBOARD SB2
PROCESS CENTER BASEMENT

51-011-081/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

APPROVALS	
PROJECT ENG:	NAB
DESIGNED BY:	NAB
DRAWN BY:	JCB
CHECKED BY:	
APPROVED:	NAB

SOUTH CAROLINA NO. LV-21 B.P. BARBER & ASSOCIATES, INC. No. C00020 CERTIFICATE OF AUTHORIZATION
DATE 1/29/10

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED No. 23410 STATE CHRISTOPHER T. GREENWALL
SIGNATURE

bpb
BP Barber
Engineering • Experience • Excellence
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: **ONE-LINE DIAGRAMS**
DATE: FEB 2007 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

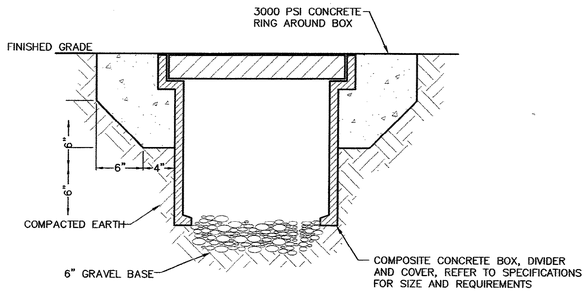
.DWG NAME	SHEET
06553-E13	E13
N.B. NO.	OF
REF. 1731	14
PROJECT NO. 06553	

FILE NO. C1-22-03

21A	RATING: 100 AMPS	VOLTAGE: 120/208	MAIN: BREAKER	MOUNTING: MCC
PANEL LABEL	PHASE: 1 WIRE: 3	ENCLOSURE: NEMA 1	SCCR: 10,000 AIC	SIZE (WxD): 20"X6"
	LOAD SUMMARY PHASE A: KW	PHASE B: KW	KW TOTAL: KW	

LOAD DESCRIPTION	BKR	KW		AB		KW	BKR	LOAD DESCRIPTION
GREASE PUMP #1	20/1	0.8	1		2	1.0	20/1	PLC-1
GREASE PUMP #1	20/1	0.8	3		4	1.0	20/1	BUBBLER PANEL
GREASE PUMP #1	20/1	0.8	5		6	1.0	20/1	PH TRANSMITTER
EXISTING EQUIPMENT	20/1	1.0	7		8	1.0	20/1	RECEPTACLE
EXISTING EQUIPMENT	20/1	1.0	9		10	1.0	20/1	LIGHTS - INTERIOR
EXISTING EQUIPMENT	20/1	1.0	11		12	1.0	20/1	LIGHTS - EXTERIOR
SAMPLE PUMP STATION - SUMP PUMP	20/1	1.0	13		14	1.0	20/1	LIGHTS - EXISTING
SPARE	20/1		15		16	1.0	20/1	LIGHTS - EXISTING
SPARE	20/1		17		18	1.0	20/1	LIGHTS - EXISTING
SPARE	20/1		19		20		20/1	SPARE

NOTES:

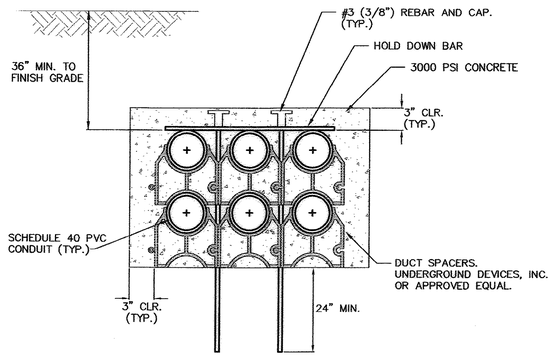


NOTE:

1. PROVIDE BOX COVER LOGO AS "ELECTRIC".

UNDERGROUND BOX INSTALLATION DETAIL

SCALE: NONE — 1 TYP

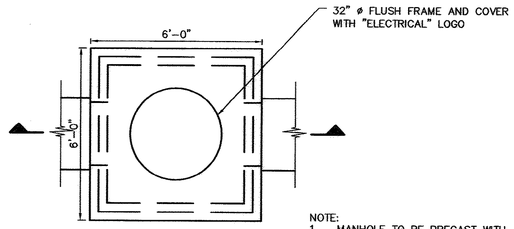


NOTE:

1. DETAIL SHOWN AS A GUIDE AND TO ESTABLISH MINIMUM STANDARDS. REFER TO PLANS FOR SIZE AND QUANTITY OF CONDUITS.
2. INSTALL DUCT SPACERS, REBAR AND HOLD DOWN BAR EVERY 10'-0".

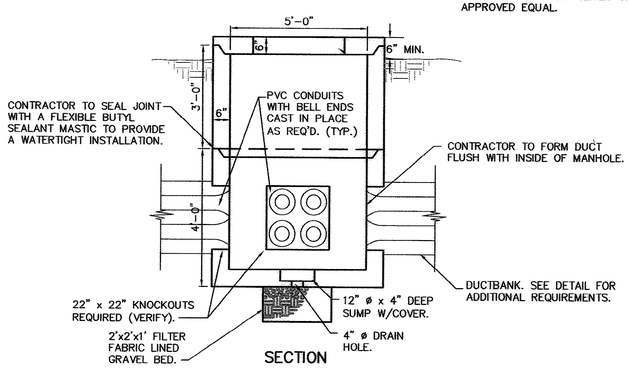
TYPICAL DUCT BANK CONSTRUCTION DETAIL

SCALE: NONE — 2 TYP



PLAN

NOTE:
1. MANHOLE TO BE PRECAST WITH LIFTING INSERTS AND PULLING IRONS. DEKALB 1300 SERIES OR APPROVED EQUAL.



SECTION

ELECTRICAL MANHOLE DETAIL

SCALE: NONE — 3 TYP

51-011-082/82

RECORD DRAWING

THIS RECORD DRAWING IS A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT:

THE SOURCE AND THE BASIS OF INFORMATION USED IN THE PREPARATION OF THE RECORD DRAWING IS GREENWALL CONSTRUCTION SERVICES.

THIS RECORD DRAWING IS BELIEVED TO BE CORRECT TO THE BEST OF THE PROFESSIONAL'S KNOWLEDGE.

THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.

REVISIONS

NO.	DESCRIPTION	DATE	BY

APPROVALS

PROJECT ENG:	MAB
DESIGNED BY:	MAB
DRAWN BY:	JEB
CHECKED BY:	DH
APPROVED:	MAB

SOUTH CAROLINA NOTIFICATION OF B.P. BARBER & ASSOCIATES, INC. No. C00020 CERTIFICATE OF AUTHORIZATION — DATE 1/24/11

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 23410 LICENSED CHRISTOPHER M. HICKS — SIGNATURE

bpb BP Barber
Engineering • Experience • Excellence
COLUMBIA • SPARTANBURG • CHARLESTON
FLORENCE • CHARLOTTE • SAVANNAH

SHEET TITLE: SCHEDULES AND DETAILS
DATE: FEB 2007 | SCALE: AS SHOWN

PROJECT: 22.4 MGD EXPANSION/UPGRADE FOR GSWSA MYRTLE BEACH WWTP

DWG NAME	SHEET
06553-E13	E14
N.B. NO.	OF
REF. 1731	14
PROJECT NO. 06553	

FILE NO. C1-22-03

THIS DRAWING IS THE PROPERTY OF B.P. BARBER & ASSOCIATES, INC., AND IS NOT TO BE REPRODUCED OR COPIED IN WHOLE OR IN PART. IT IS ONLY TO BE USED FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN AND IS NOT TO BE USED ON ANY OTHER PROJECT.

N:\PROJECTS\06553\DWG\ELECTRICAL\RECORD DRAWINGS\06553-E13.DWG 1/10/2010 4:04:49 PM