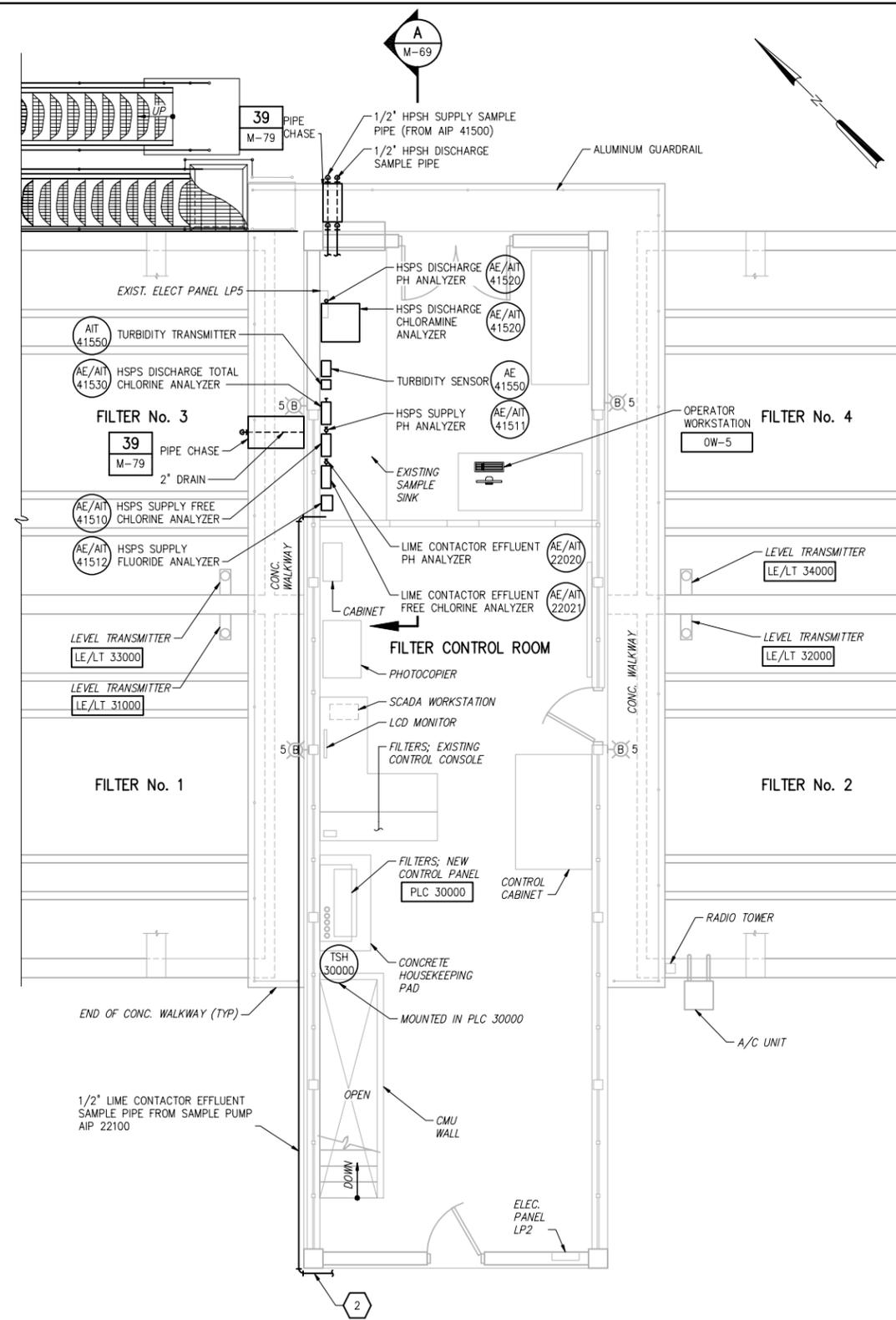
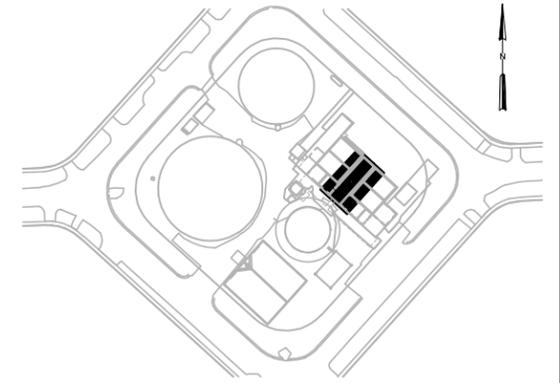


FILTER CONTROL ROOM PLAN EXISTING CONDITIONS
1/4" = 1'-0"



FILTER CONTROL ROOM PLAN PROPOSED CONDITIONS
1/4" = 1'-0"



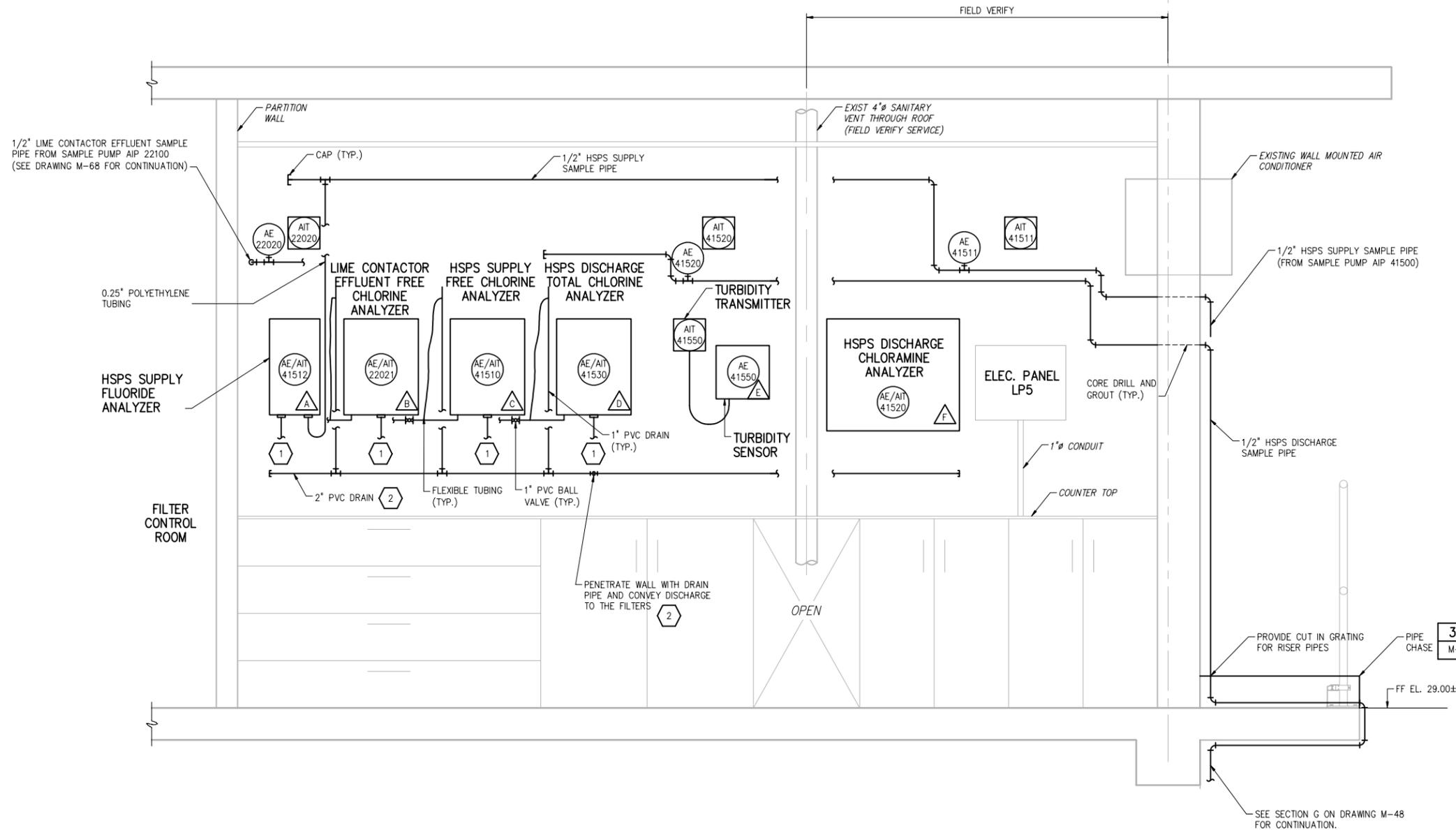
LOCATION MAP

- KEYED NOTES:**
- 1 EXISTING CHLORAMINE AND CHLORINE RESIDUAL ANALYZERS TO BE REMOVED.
 - 2 FIELD ROUTE THE PROPOSED PIPE WITH OWNERS ASSISTANCE TO CONNECTION WITH SAMPLE PUMP AIP 22100 (SEE DRAWING M-35 FOR SAMPLE PUMP LOCATION).

- LEGEND:**
- EXISTING
 - PROPOSED
 - ▨ TO BE REMOVED



	DESIGNED G.A.B.	HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771	SCALE 1/4"=1'-0"	CLIENTS PROJECT: -	 CITY OF NORTH MIAMI PUBLIC WORKS UTILITIES	WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB	DATE: JULY 2015
	DRAWN G.P.B.			ENGINEERS PROJECT: 44238-004		EXISTING FILTER CONTROL ROOM WATER QUALITY ANALYZERS	DATE: JULY 2015
	CHECKED G.N.C.			CAD REFERENCE: 44238-004BP3-M68		SHEET: 129 OF 335	DATE: JULY 2015
1	07/24/15		REQUEST FOR PROPOSAL	G.A.B.			DRAWING: M-68
NO.	DATE	ISSUED FOR	BY				



SIGN SCHEDULE	
MARK	TEXT
△ A	HIGH SERVICE PUMP STATION SUPPLY FLUORIDE ANALYZER
△ B	LIME CONTACTOR EFFLUENT FREE CHLORINE ANALYZER
△ C	HIGH SERVICE PUMP STATION SUPPLY FREE CHLORINE ANALYZER
△ D	HIGH SERVICE PUMP STATION DISCHARGE TOTAL CHLORINE ANALYZER
△ E	FINISHED WATER TURBIDITY ANALYZER
△ F	HIGH SERVICE PUMP STATION DISCHARGE CHLORAMINE ANALYZER

- SIGN SCHEDULE NOTES:**
- SIGNS SHALL BE ENGRAVED PLASTIC WITH BLACK BACKGROUND AND WHITE LETTERS.
 - PROVIDE ALL NEEDED MOUNTING ACCESSORIES.
 - SIGNS ARE NOT DRAWN TO SCALE IN THE SECTION VIEW AND ARE SHOWN FOR CONCEPTUAL PURPOSES ONLY.
 - MINIMUM SIGN SIZE SHALL BE 1.5-INCHES HIGH 4-INCHES WIDE.
- GENERAL NOTE:**
- NOT ALL PIPING SHOWN FOR CLARITY. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

- KEYED NOTES:**
- DRAINS FROM WATER QUALITY INSTRUMENTS THAT CONTAIN REAGENT MUST BE DISPOSED OF TO SANITARY SEWER WITH AIR GAP CONNECTION. FIELD ROUTE TO NEAREST SUITABLE DRAIN.
 - DRAINS FROM WATER QUALITY PANELS THAT DO NOT CONTAIN REAGENT SHALL BE CONNECTED TO THE PROPOSED 2" PVC DRAIN AND DISCHARGED INTO THE FILTERS.
 - AS REQUIRED FOR INSTRUMENT REMOVAL.

SECTION A
1" = 1'-0"



PLOT DATE: 7/24/2015 11:33 AM BY: TBUCAS

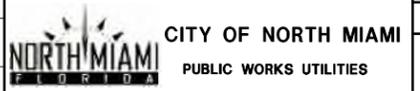
DESIGNED	G.A.B.		
DRAWN	G.P.B.		
CHECKED	G.N.C.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

GEORGE A. BROWN
No. 56076
P.E.

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

SCALE
1" = 1'-0"

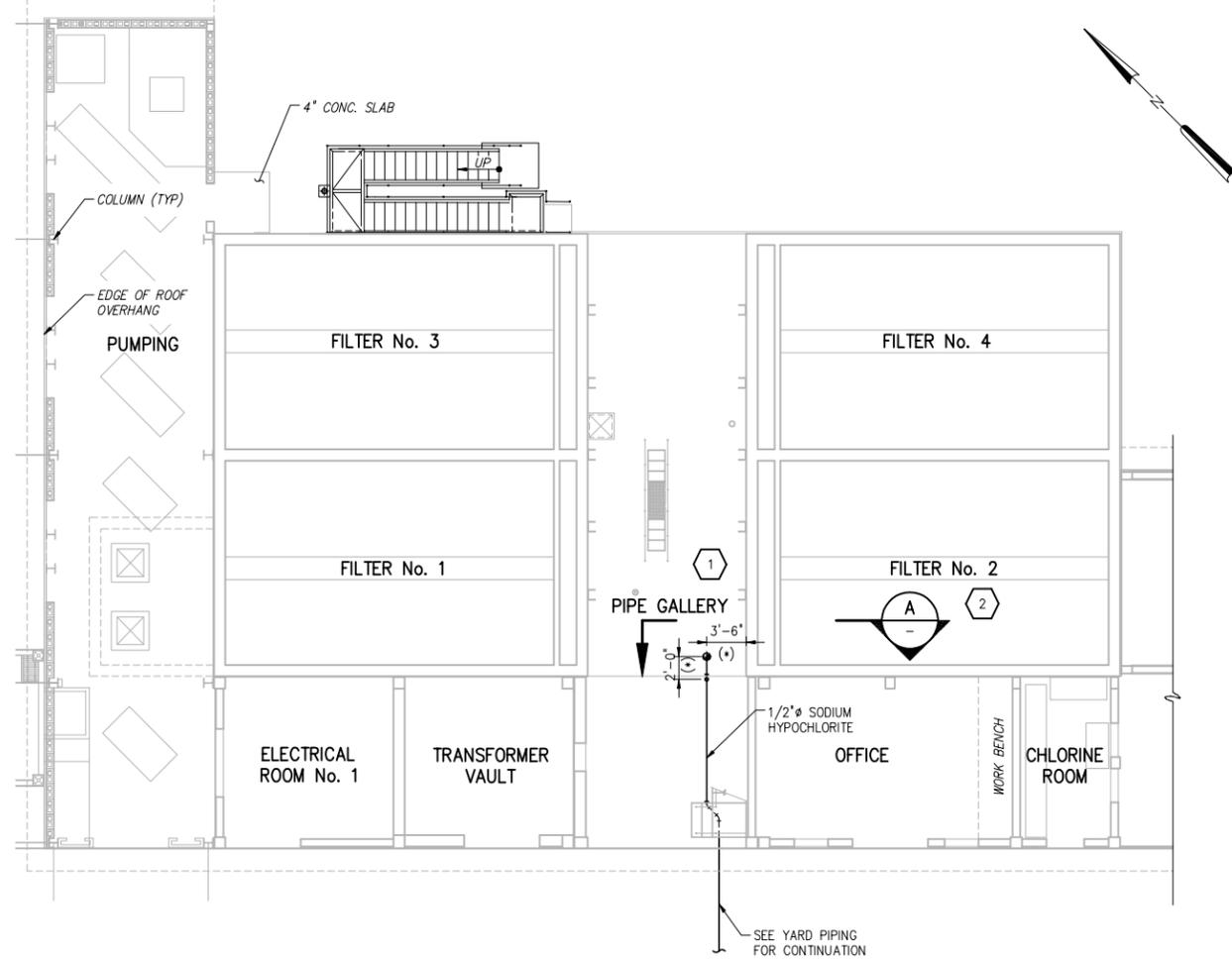
CLIENTS PROJECT: -
ENGINEERS PROJECT: 44238-004
CAD REFERENCE: 44238-004BP3-M69



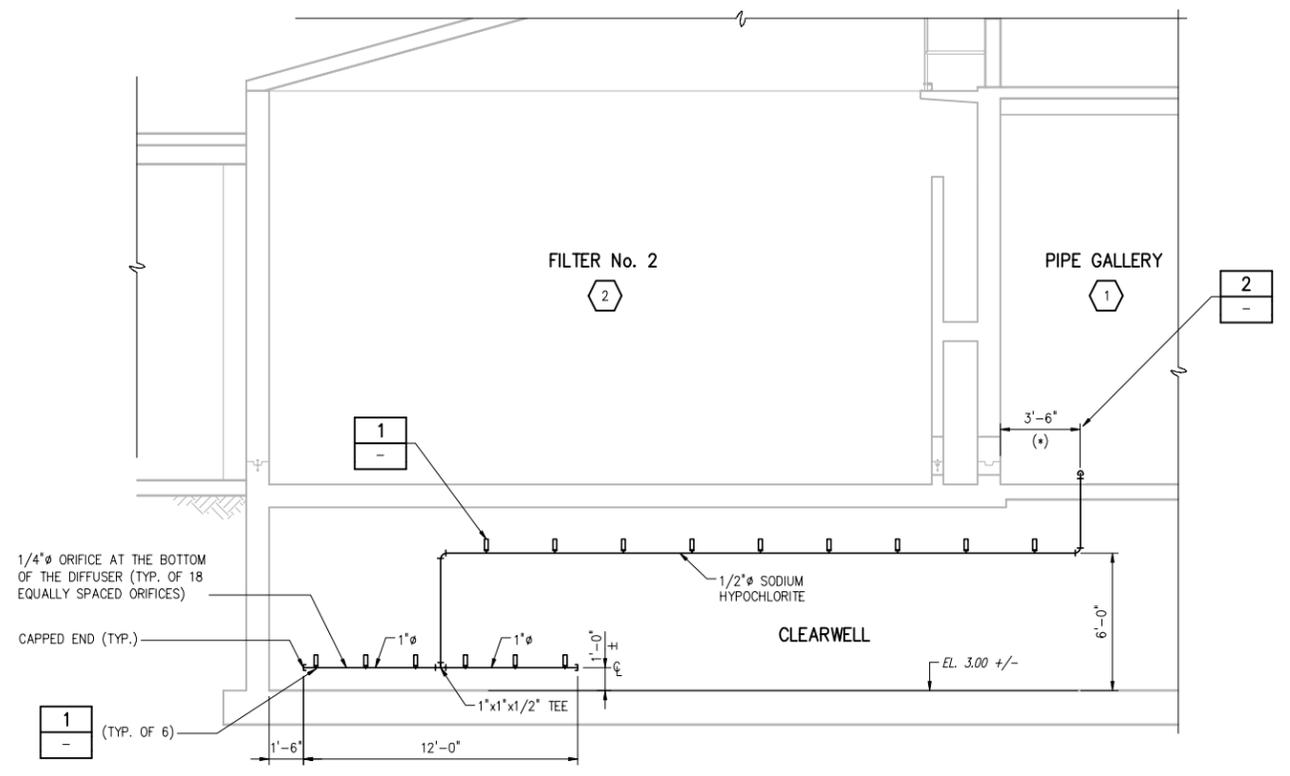
WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
EXISTING FILTER CONTROL ROOM WATER QUALITY ANALYZERS - SECTION

DATE: JULY 2015
SHEET: 130 OF 335
DRAWING: M-69

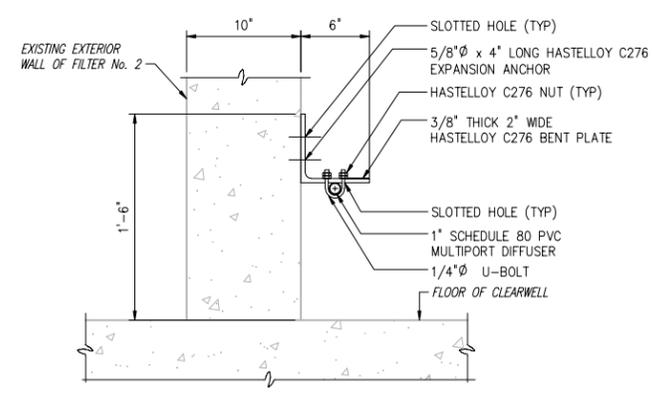
REQUEST FOR PROPOSAL



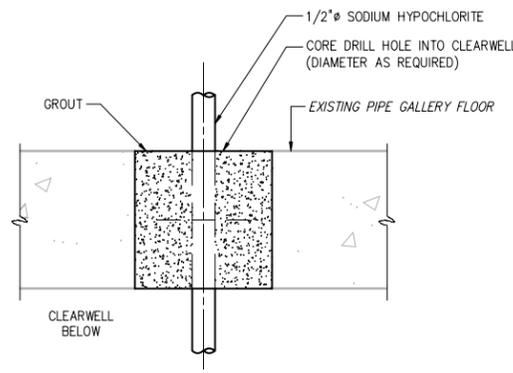
FILTER PLAN AT EL. 15.00 ±
1/8" = 1'-0"



SECTION A-A
1/4" = 1'-0"



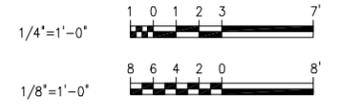
DETAIL 1
NTS



DETAIL 2
NTS

- KEYED NOTES:**
- 1 PIPE GALLERY PIPING AND EQUIPMENT NOT SHOWN FOR CLARITY.
 - 2 MEDIA, UNDERDRAIN AND PIPING WITHIN FILTER ARE NOT SHOWN FOR CLARITY.

- GENERAL NOTES:**
1. ALL FILTER PIPING AND EQUIPMENT NOT SHOWN FOR CLARITY.
 2. DIMENSIONS MARKED WITH AN ASTERISK (*) SHALL BE ADJUSTED IN THE FIELD WITH THE CITY TO SUIT FIELD CONDITIONS



PLOT DATE: 7/24/2015 11:33 AM BY: TBUCAS

DESIGNED	G.A.B.		
DRAWN	C.A.Z.		
CHECKED	G.N.C.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	G.A.B.	GEORGE A. BROWN P.E. No. 56076
DRAWN	C.A.Z.	
CHECKED	G.N.C.	
PROJ. ENGR.	G.A.B.	

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 Environmental Engineers & Scientists
 4000 Hollywood Boulevard, Suite 750N
 Hollywood, Florida 33021
 Certificate of Authorization Number: 2771

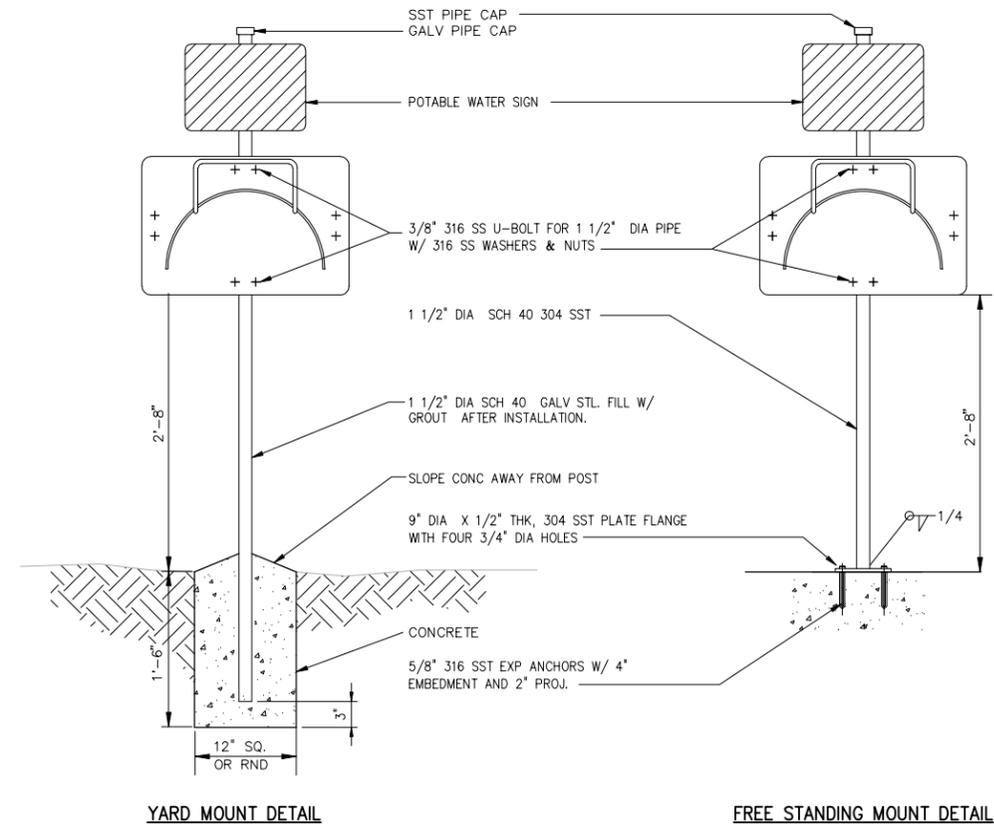
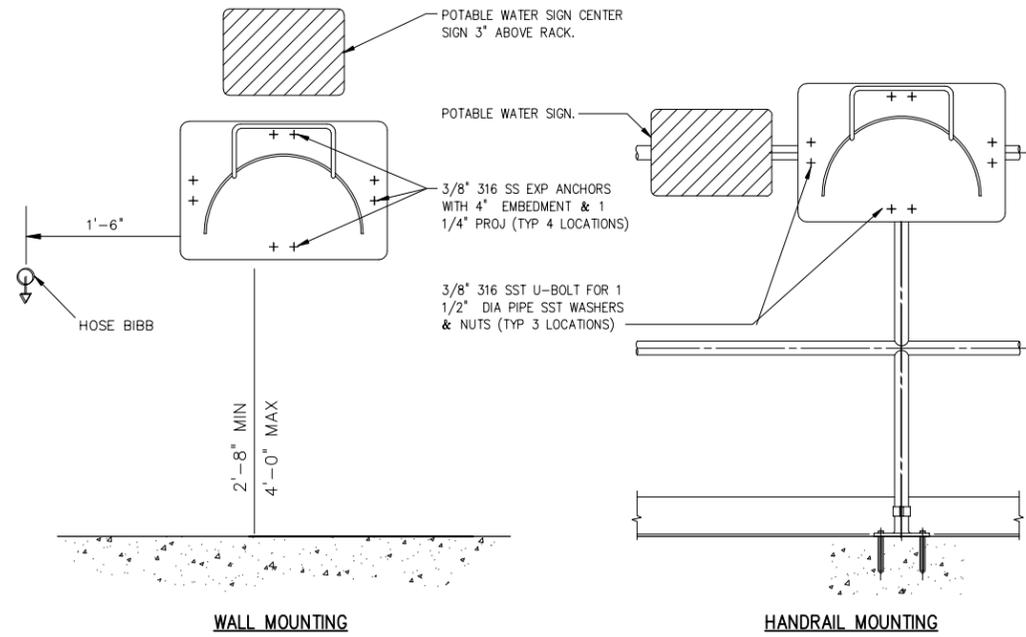
SCALE	AS NOTED
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-M70

CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
EXISTING FILTERS HYPOCHLORITE INJECTION

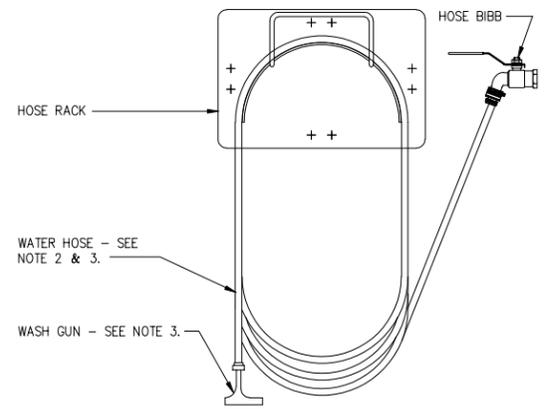
DATE:	JULY 2015
SHEET:	131 OF 335
DRAWING:	M-70

REQUEST FOR PROPOSAL



HOSE RACK MOUNTING DETAILS

DETAIL	1
NTS	-

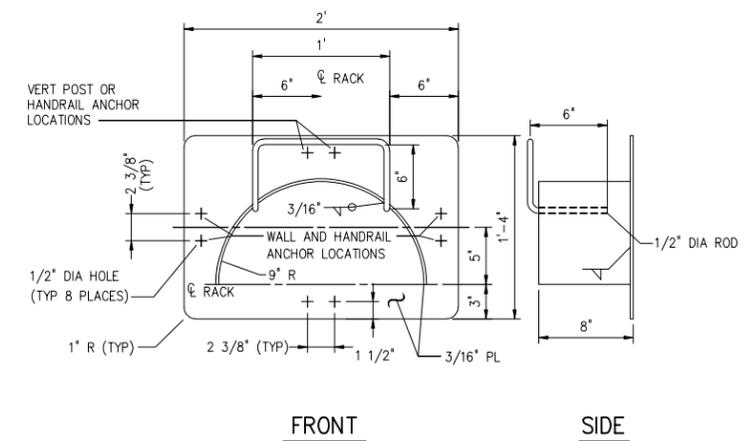


NOTES:

- FURNISH 75' OF 3/4" ϕ HEAVY DUTY WATER HOSE WITH CORD BRAID REINFORCING AND FLEXIBLE NEOPRENE EXTERIOR.
- HOSE TO BE FITTED WITH 3/4" FEMALE GHT FITTING ON ONE END AND 3/4" FEMALE GHT SWIVEL SPRAY NOZZLE ON FREE END. PROVIDE STAINLESS STEEL SPRING PROTECTOR ON BOTH ENDS.
- PROVIDE LEVER ACTION WASH GUN, BRONZE BODY, SST INTERNALS, RUBBER COVERED, 150 PSI RATED. McMASTER CARR WASH GUN - #6451157 OR EQUAL.

HOSE STATION

DETAIL	2
NTS	-



NOTES:

- ALL MATERIAL TO BE 304 STAINLESS STEEL. ANNEAL ASSEMBLY AFTER FABRICATION.
- CHAMFER, GRIND, DEBURR ALL METAL EDGES FOR SMOOTH CONTOUR.
- ATTACH TO HANDRAIL WITH 316 STAINLESS STEEL U-BOLTS, NUTS AND WASHERS.

HOSE RACK

DETAIL	3
NTS	-

DESIGNED	G.A.B.		
DRAWN	G.P.B.		
CHECKED	G.N.C.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	G.A.B.	HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771
DRAWN	G.P.B.	
CHECKED	G.N.C.	
PROJ. ENGR.	G.A.B.	
GEORGE A. BROWN No. 56076		P.E.

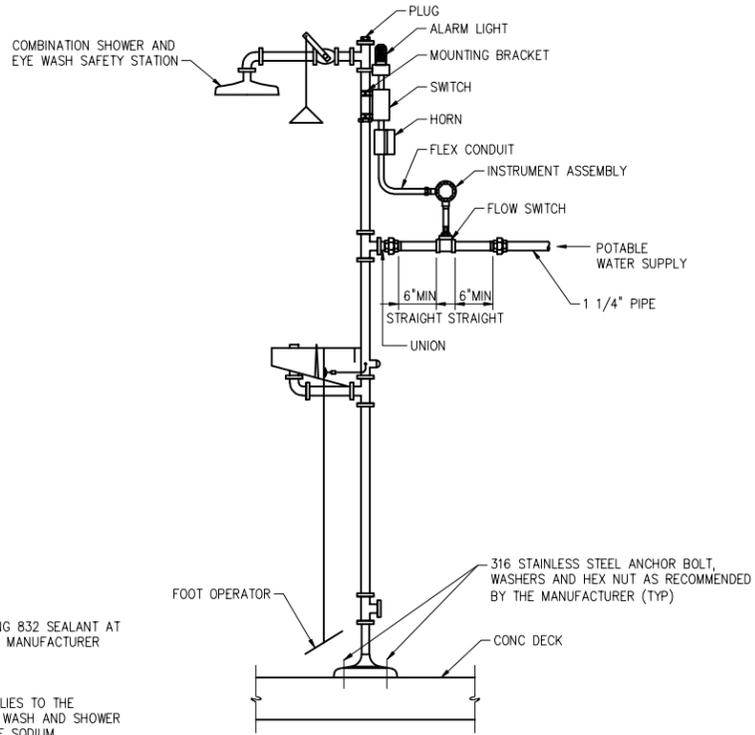
SCALE	CLIENTS PROJECT:	-
NTS	ENGINEERS PROJECT:	44238-004
	CAD REFERENCE:	44238-004BP3-M71

CITY OF NORTH MIAMI PUBLIC WORKS UTILITIES	
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WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB	
MECHANICAL DETAILS - SHEET 1	

DATE:	JULY 2015
SHEET:	132 OF 335
DRAWING:	M-71

DATE:	JULY 2015
SHEET:	132 OF 335
DRAWING:	M-71

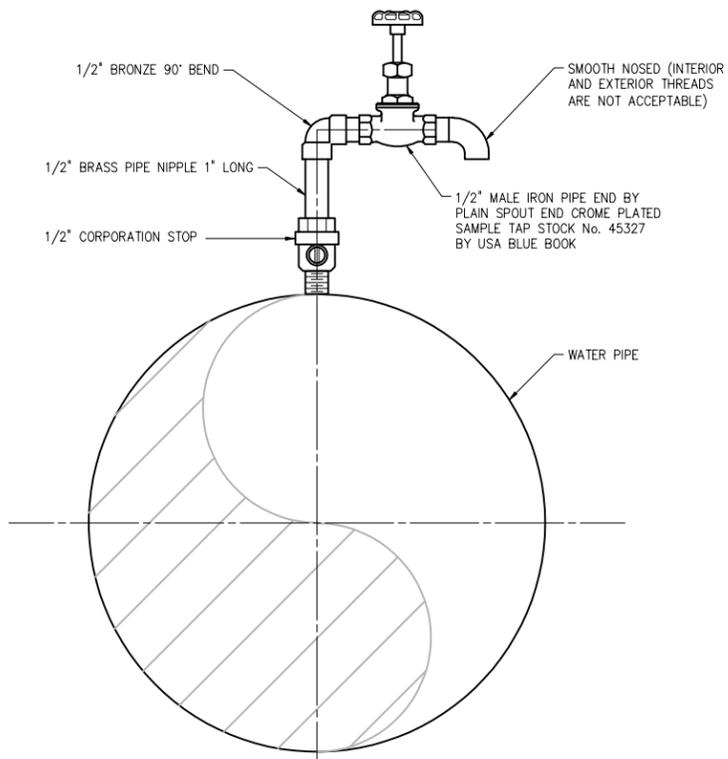


NOTE:

1. USE DOW CORNING 832 SEALANT AT PIPE JOINTS PER MANUFACTURER INSTRUCTIONS.
2. THIS DETAIL APPLIES TO THE EMERGENCY EYE WASH AND SHOWER STATIONS AT THE SODIUM HYPOCHLORITE FACILITIES AND THE CHEMICAL HANDLING FACILITY. SEE PLUMBING DRAWINGS FOR EYE WASH AND SHOWER STATIONS WITHIN THE NEW ADMINISTRATION BUILDING.

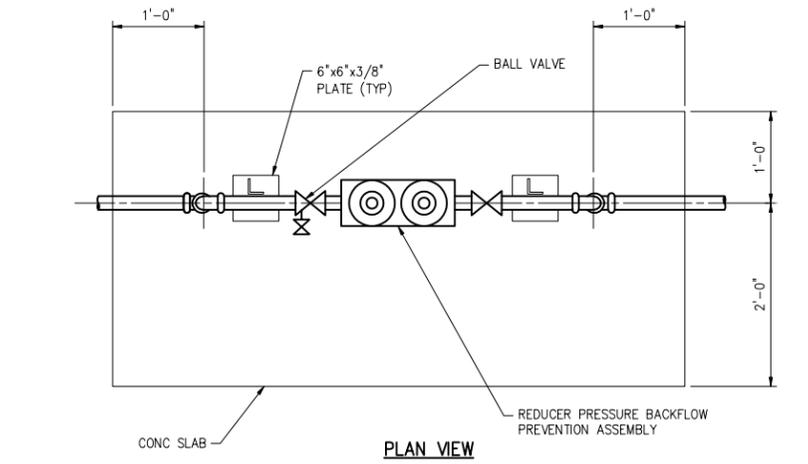
EMERGENCY EYE WASH AND SHOWER

DETAIL	4
NTS	-

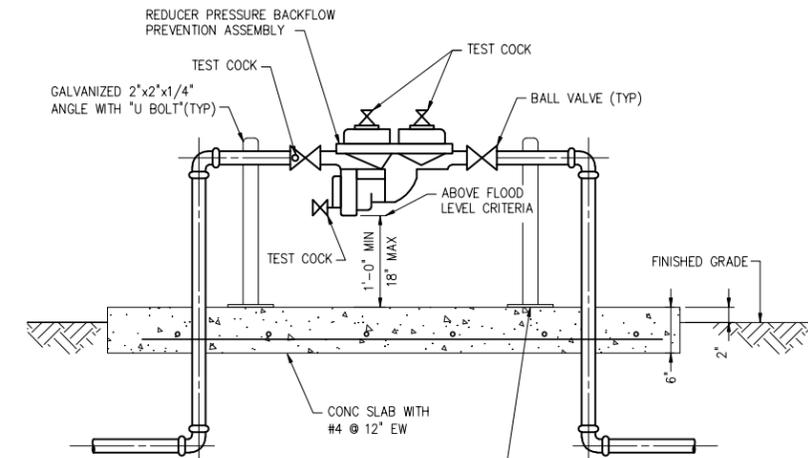


SAMPLE TAP/MANUAL BLEED VALVE

DETAIL	5
NTS	-



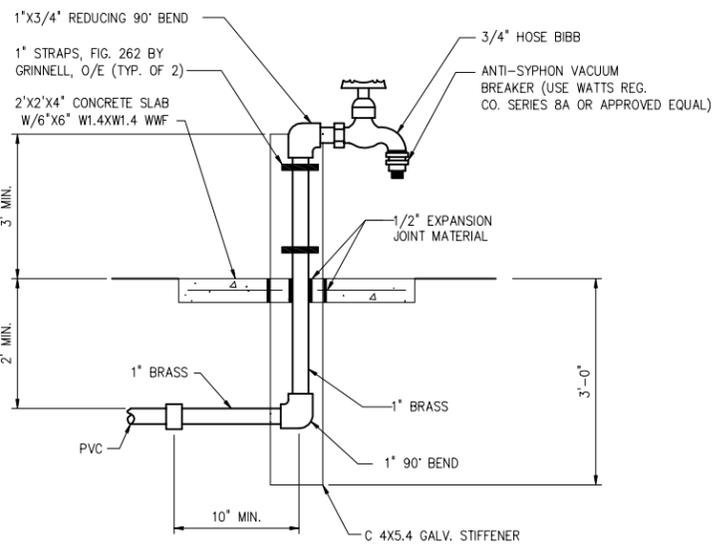
PLAN VIEW



ELEVATION VIEW

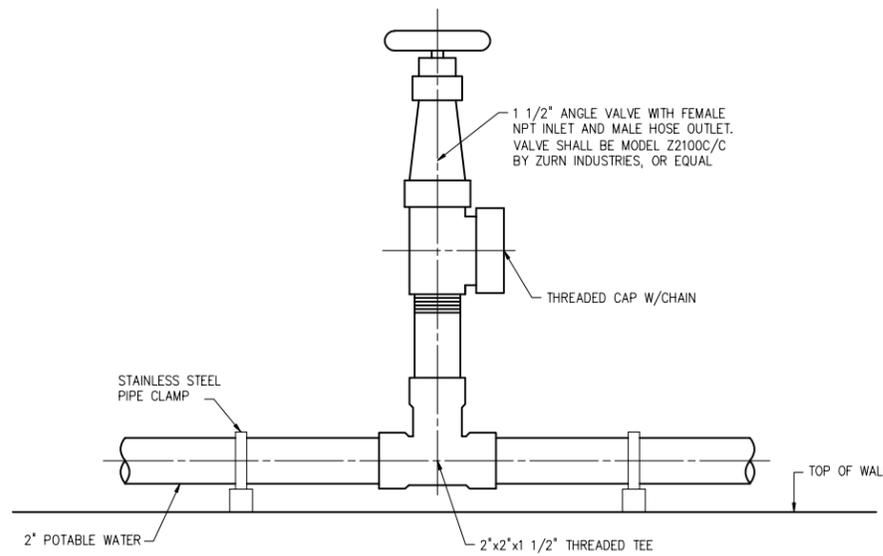
BACKFLOW PREVENTER

DETAIL	6
NTS	-



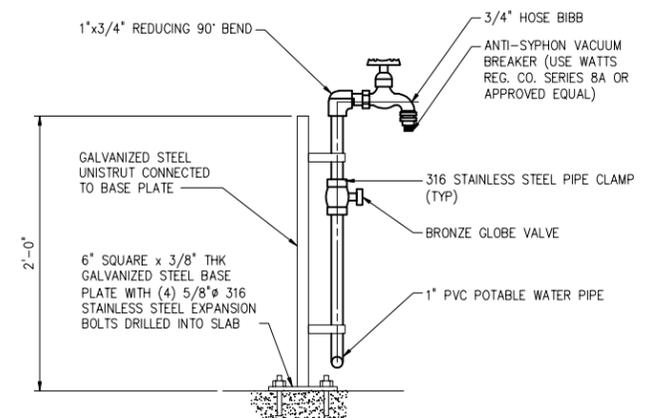
HOSE BIBB - TYPE 1

DETAIL	7
NTS	-



HOSE BIBB - TYPE 2

DETAIL	8
NTS	-



HOSE BIBB - TYPE 3

DETAIL	9
NTS	-

PLOT DATE: 7/24/2015 11:33 AM BY: TBCCAS

DESIGNED	G.A.B.	PROJ. ENGR.	G.A.B.
DRAWN	L.M.S.	ISSUED FOR	REQUEST FOR PROPOSAL
CHECKED	G.N.C.	DATE	07/24/15
NO.	1	BY	G.A.B.

DESIGNED	G.A.B.	PROJ. ENGR.	G.A.B.
DRAWN	L.M.S.	ISSUED FOR	REQUEST FOR PROPOSAL
CHECKED	G.N.C.	DATE	07/24/15
NO.	1	BY	G.A.B.

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

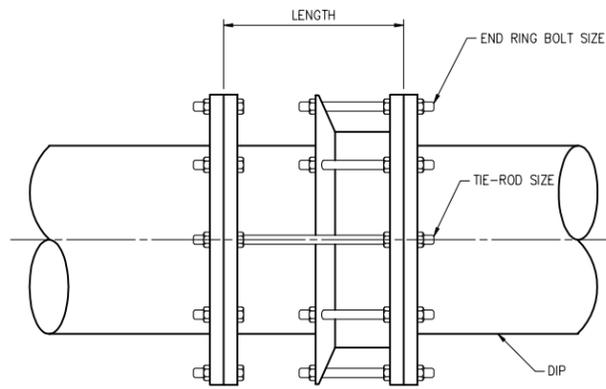
SCALE	CLIENTS PROJECT:	-
NTS	ENGINEERS PROJECT:	44238-004
	CAD REFERENCE:	44238-004BP3-M72

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
MECHANICAL DETAILS - SHEET 2

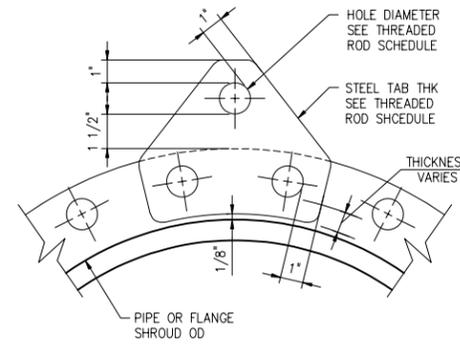
DATE:	JULY 2015
SHEET:	133 OF 335
DRAWING:	M-72

REQUEST FOR PROPOSAL



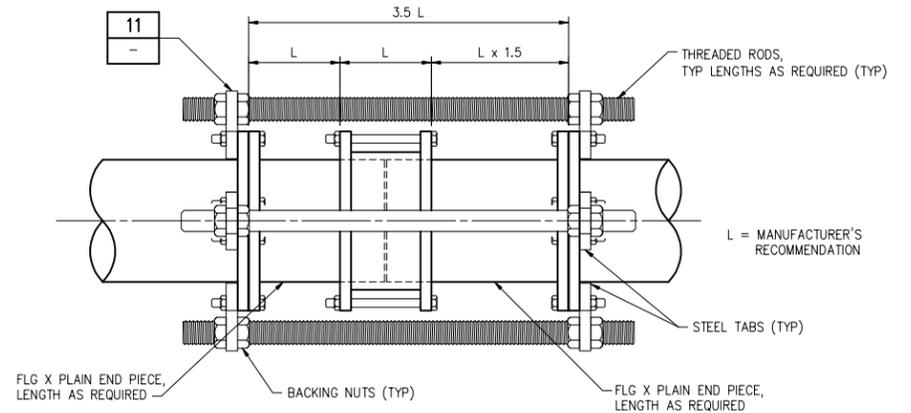
PIPE SIZE	LENGTH			QTY.	END RING BOLTS		TIE RODS	
	NOM.	MIN.	MAX.		SIZE	SIZE (UNC)	LENGTH	QTY.
4	8.00	7.00	9.00	4	5/8-11	5/8-11	13.50	2
6	8.38	7.38	9.38	4	3/4-10	3/4-10	15.00	2
8	8.38	7.38	9.38	4	3/4-10	3/4-10	15.00	2
10	10.50	9.50	11.50	6	7/8-9	7/8-9	17.75	2
12	10.50	9.50	11.50	6	7/8-9	7/8-9	17.75	2
14	13.50	12.00	15.00	8	5/8-11	1-8	22.00	2
16	13.50	12.00	15.00	10	5/8-11	1-8	22.00	2
18	13.75	12.25	15.25	10	5/8-11	1 1/8-7	23.25	2
20	13.75	12.25	15.25	12	5/8-11	1 1/8-7	23.25	2
24	14.25	12.75	15.75	14	5/8-11	1 1/4-7	25.50	2
30	14.75	13.25	16.25	16	5/8-11	1 1/4-7	25.50	4
36	15.75	14.25	17.25	18	5/8-11	1 1/2-6	27.50	4

DISMANTLING JOINT
DETAIL 10
 NTS -

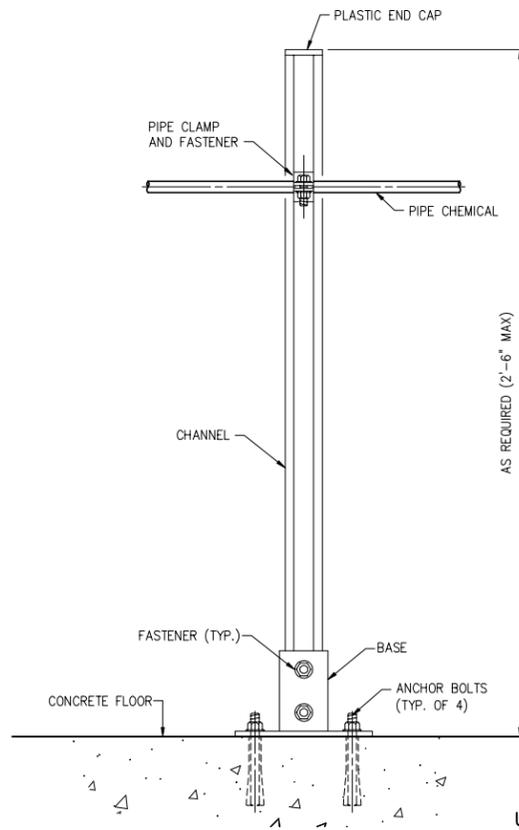


STEEL TAB
DETAIL 11
 NTS -

- NOTES:
- ALL FLEXIBLE COUPLINGS SHALL BE HARNESSSED AND BACK BOLTED TO PREVENT MOVEMENT IN EITHER DIRECTION.
 - SEE THREADED ROD SCHEDULE FOR ROD DIAMETER, MATERIAL AND STEEL TAB THICKNESS.
 - THREADED RODS SHALL BE BOLTED TO TABS ON FLANGED PIPE JOINTS OR DUCTILE IRON HARNESS RING FACTORY WELDED TO PIPE.



HARNESSSED MECHANICAL COUPLING
DETAIL 12
 NTS -



MATERIAL OF CONSTRUCTION		
ITEM	SODIUM HYPOCHLORITE	OTHER CHEMICAL SERVICES
CHANNELS	FRP VINYL ESTER RESIN	316 STAINLESS STEEL
BASES	FRP VINYL ESTER RESIN	316 STAINLESS STEEL
ANCHOR BOLTS	HASTELLOY C276	316 STAINLESS STEEL
FASTENERS	GLASS - REINFORCED POLYURETHANE	316 STAINLESS STEEL
PIPE CLAMPS	GLASS - REINFORCED POLYURETHANE	316 STAINLESS STEEL

NOTE:
 1. SUBMIT SHOP DRAWING

UNISTRUT POST - PIPE SUPPORT
DETAIL 13
 NTS -

THREADED ROD SCHEDULE														
DESIGN PRESSURE (DIMENSIONS IN INCHES)														
PIPE SIZE	50 PSI		100 PSI		150 PSI		200 PSI		250 PSI		300 PSI		350 PSI	
	RODS NO-DIA	TAB THK												
4,6	2-3/4	1	2-3/4	1	2-3/4	1	2-3/4	1	2-3/4	1	2-3/4	1	2-3/4	1
8	2-3/4	1 1/4	2-3/4	1 1/4	2-3/4	1 1/4	2-3/4	1 1/4	2-3/4	1 1/4	4-3/4	1 1/4	4-3/4	1 1/4
10	2-3/4	1 1/4	2-3/4	1 1/4	2-3/4	1 1/4	4-3/4	1 1/4	4-3/4	1 1/4	4-3/4	1 1/4	4-3/4	1 1/4
12	2-3/4	1 1/4	2-3/4	1 1/4	4-3/4	1 1/4	4-3/4	1 1/4	4-3/4	1 1/4	6-3/4	1 1/4	6-3/4	1 1/4
14	2-3/4	1 1/2	4-3/4	1 1/2	4-3/4	1 1/2								
16	2-3/4	1 1/2	4-3/4	1 1/2	6-3/4	1 1/2								
18	2-3/4	1 3/4	4-3/4	1 3/4	6-3/4	1 3/4								
20	4-3/4	1 3/4												
24	4-3/4	2												
30	4-1	2 1/4												
36	4-1	2 1/2												
42	4-1 1/4	2 3/4												
48	6-1/4	2 3/4												
54	8-1 1/4	3												

- ASSUME A DESIGN PRESSURE OF 200 PSI.
- THREADED RODS FOR ALL PIPE DIAMETERS IN THE SHADED AREA SHALL BE ASTM A193 (GRADE B7).
- ALL OTHER THREADED RODS SHALL BE ASTM A36. ALL TABS SHALL BE ASTM A572 GR50.
- ASTM A193 (GRADE B7) RODS SHALL BE LABELED AND BUNDLED SEPARATELY.
- THIS SCHEDULE SHALL APPLY FOR HARNESSSED FLANGED ADAPTERS, HARNESSSED FLEXIBLE COUPLINGS AND ALL MECHANICAL JOINT COUPLINGS, SLEEVES ETC. THAT ARE REQUIRED TO BE HARNESSSED.
- RODS THREADED AT ENDS (INCLUDING NUTS) SHALL BE EQUALLY SPACED AROUND PIPE BETWEEN ALL MECHANICAL JOINT FITTINGS (TEE, VALVES, BEND, PLUG, ETC.) OR AS OTHERWISE SHOWN ON THE CONTRACT DRAWINGS. THREADED RODS SHALL BE AS SHOWN IN THE THREADED ROD SCHEDULE. SEE NOTE 7.
- RODS, NUTS, ETC., IN CONTACT WITH SOIL SHALL BE PAINTED WITH TWO COATS COAL TAR (MIN 26 DRY MIL THICKNESS) TNE MEC 46-465 HI-BUILD OR EQUAL.

PLOT DATE: 7/24/2015 11:33 AM BY: TBUCAS

DESIGNED	G.A.B.		
DRAWN	L.M.S.		
CHECKED	J.N.M.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

PROJ. ENGR.	G.A.B.	GEORGE A. BROWN	P.E.
		No. 56076	

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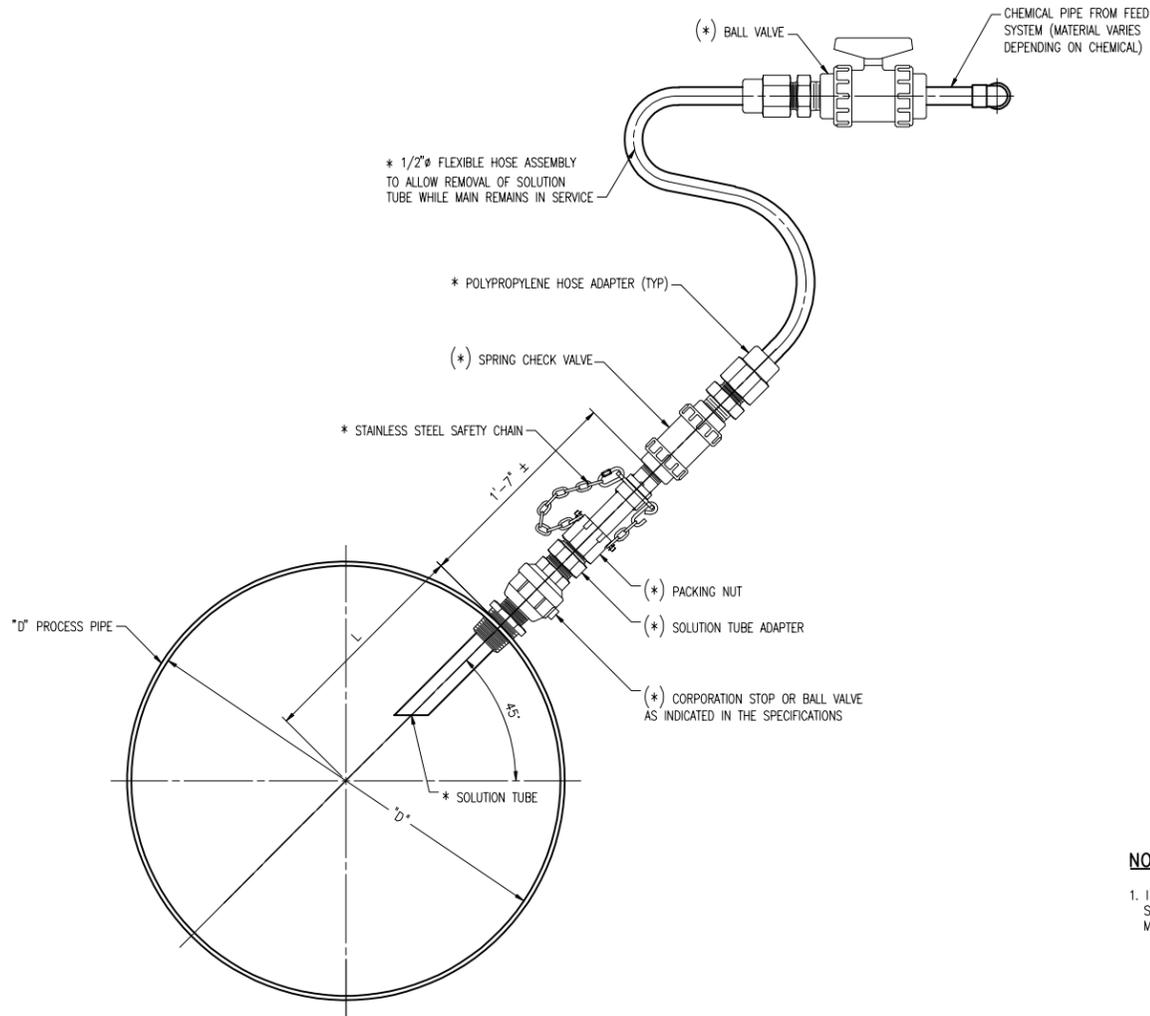
SCALE	CLIENTS PROJECT:	-
NTS	ENGINEERS PROJECT:	44238-004
	CAD REFERENCE:	44238-004BP3-M73

CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
 RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
MECHANICAL DETAILS - SHEET 3

DATE:	JULY 2015
SHEET:	134 OF 335
DRAWING:	M-73

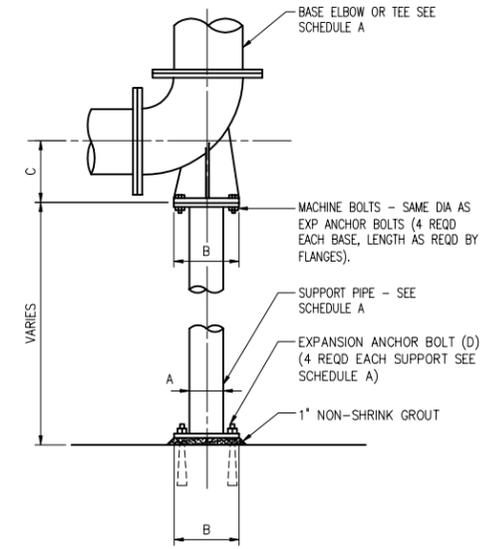
REQUEST FOR PROPOSAL



NOTES:
 1. ITEMS MARKED WITH (*) INDICATE THEY ARE SUPPLIED BY THE CHEMICAL INJECTOR MANUFACTURER.

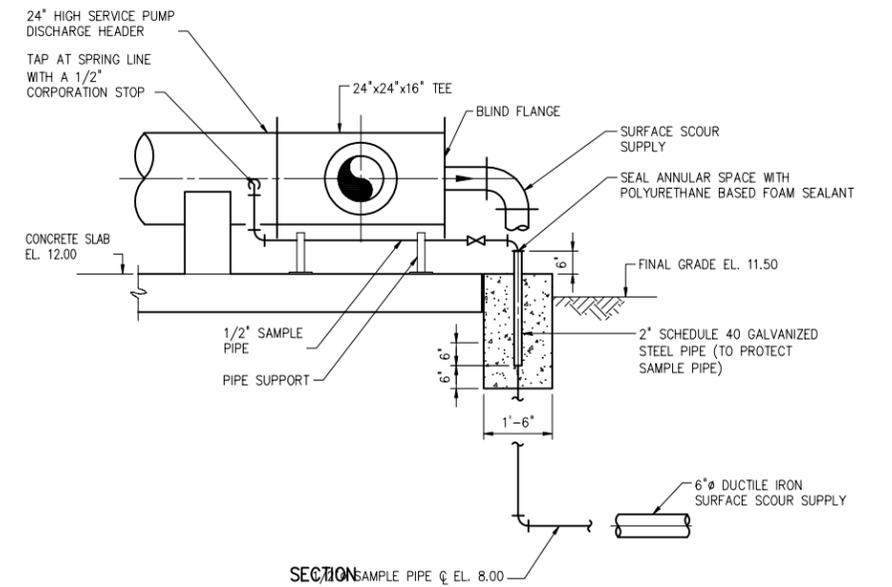
PROPOSED CHEMICAL INJECTION ASSEMBLIES						
CHEMICAL	INJECTION POINT DESCRIPTION	"D" PROCESS PIPE DIAMETER	"L" LENGTH OF SOLUTION TUBE INTO MAIN	SOLUTION TUBE MATERIAL	TIP CONFIGURATION	CHEMICAL PIPE DIAMETER
AQUEOUS AMMONIA	CHEMICAL INJECTION VAULT ON HIGH SERVICE PUMP STATION SUPPLY MANIFOLD	30"	12"	316 STAINLESS STEEL	EPDM ELASTOMERIC TIP	1/2"
FLUORIDE	TRANSFER PUMP DISCHARGE MANIFOLD	24"	8"	HASTELLOY ALLOY C276	EPDM ELASTOMERIC TIP	1/2"
SODIUM HYPOCHLORITE	12" LIME CONTACTOR BY-PASS PIPE	12"	6"	CPVC	VITON ELASTOMERIC TIP	1/2"

CHEMICAL INJECTOR FOR PIPE
DETAIL 14
 NTS C-32



SCHEDULE A				
BASE ELBOW (TEE) (DIM IN INCHS)				
PIPE SIZE	A	B	C	D DIA X LG
3	1 1/2	5	4 7/8	1/2 X 5
4	2	6	5 1/2	5/8 X 5
5-6	2 1/2	7	VARIES	5/8 X 5
8-10	4	9	VARIES	5/8 X 5
12-16	6	11	VARIES	3/4 X 6
18-24	8	13 1/2	VARIES	3/4 X 6
30	10	16	23	7/8 X 7
36	12	19	26	7/8 X 7

BASE ELBOW (TEE)
DETAIL 15
 NTS -



SECTION: SAMPLE PIPE @ EL. 8.00
DETAIL 16
 NTS M-45

PLOT DATE: 7/24/2015 11:33 AM BY: TBUCAS

DESIGNED	G.A.B.		
DRAWN	C.A.Z.		
CHECKED	G.N.C.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	G.A.B.		
DRAWN	C.A.Z.		
CHECKED	G.N.C.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

HAZEN AND SAWYER
 Environmental Engineers & Scientists
 4000 Hollywood Boulevard, Suite 750N
 Hollywood, Florida 33021
 Certificate of Authorization Number: 2771

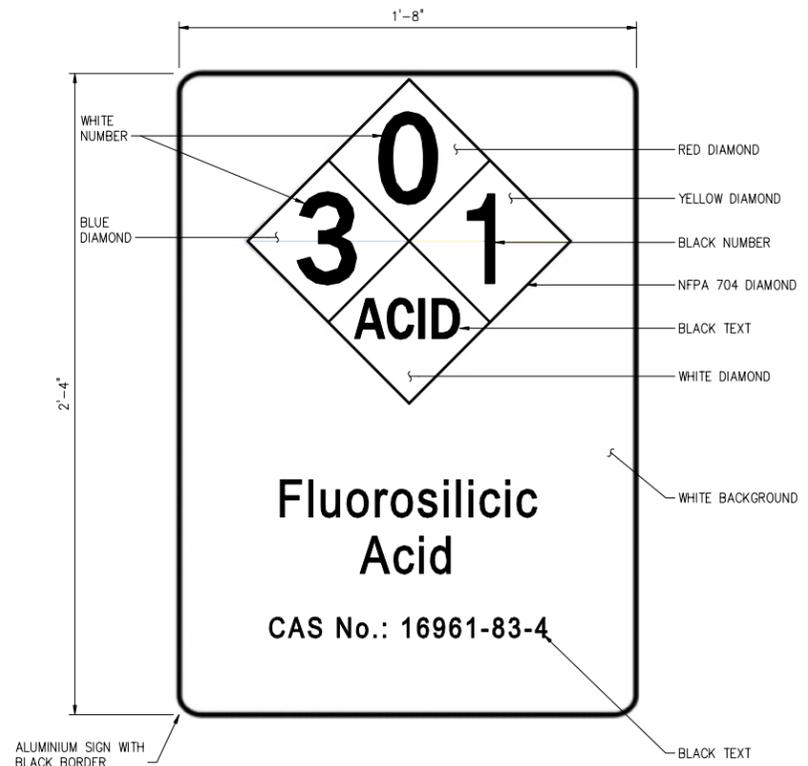
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 CLIENTS PROJECT: -
 ENGINEERS PROJECT: 44238-004
 CAD REFERENCE: 44238-004BP3-M74

CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
MECHANICAL DETAILS - SHEET 4

DATE: JULY 2015
 SHEET: 135 OF 335
 DRAWING: M-74

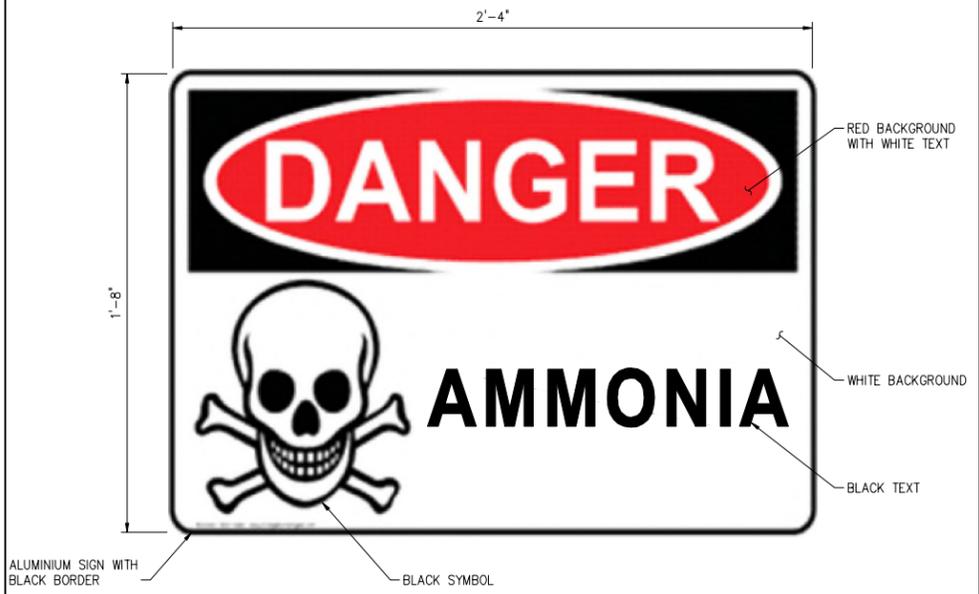
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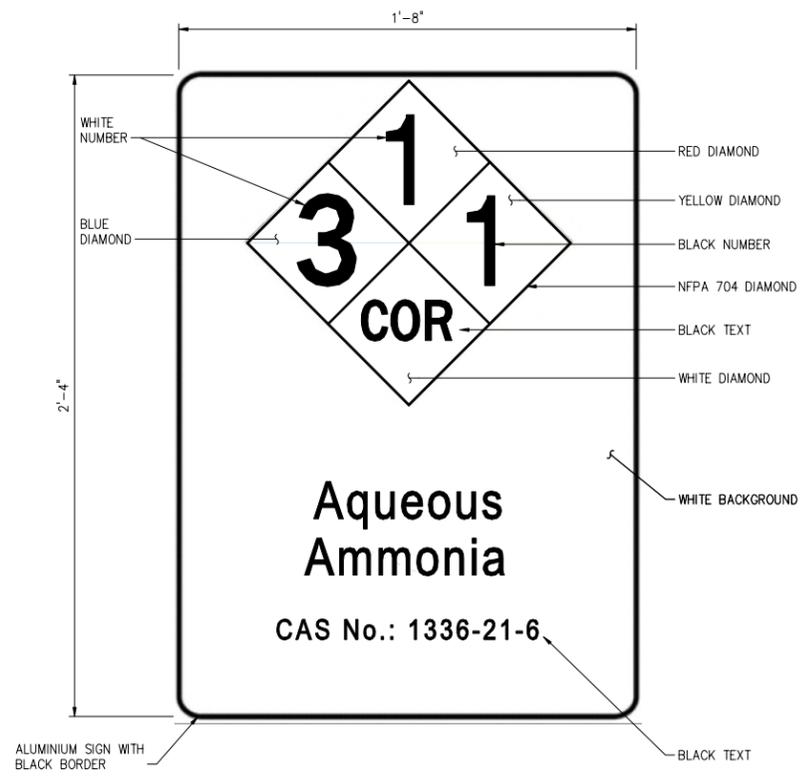
DETAIL 17
NTS -



DETAIL 18
NTS -



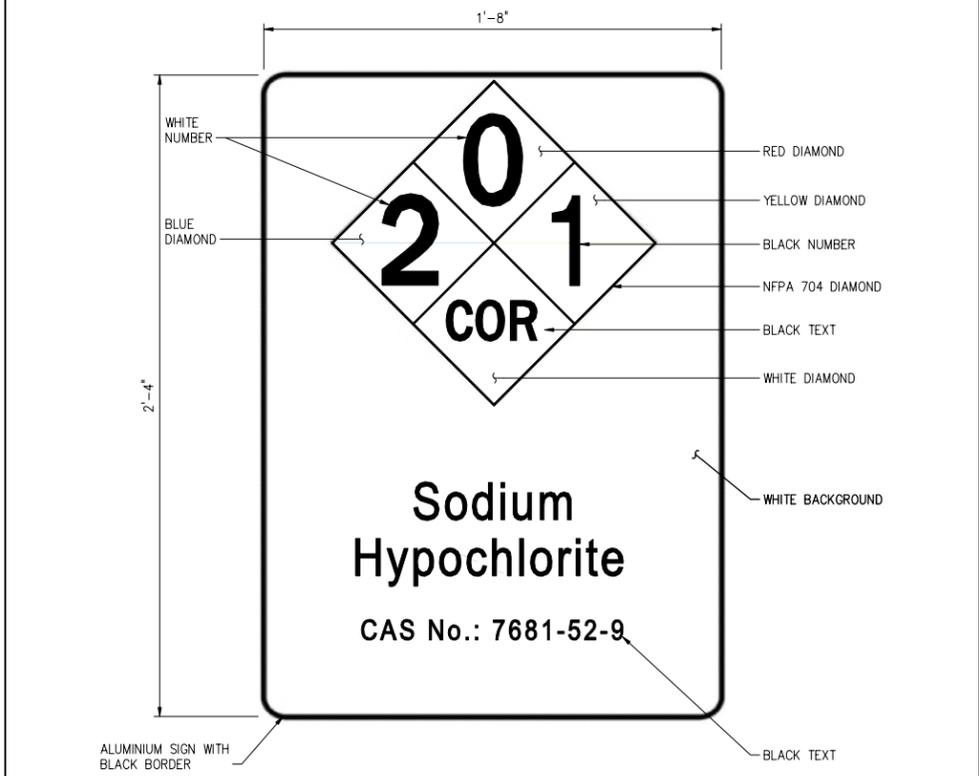
DETAIL 19
NTS -



DETAIL 20
NTS -



DETAIL 21
NTS -



DETAIL 22
NTS -

PLOT DATE: 7/24/2015 11:33 AM BY: TBG/CAS

DESIGNED	G.A.B.		
DRAWN	C.A.Z.		
CHECKED	G.N.C.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED G.A.B.
DRAWN C.A.Z.
CHECKED G.N.C.
PROJ. ENGR. G.A.B.

GEORGE A. BROWN P.E.
No. 56076

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SCALE: CLIENTS PROJECT: -
NTS: ENGINEERS PROJECT: 44238-004
CAD REFERENCE: 44238-004BP3-M75

CITY OF NORTH MIAMI
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WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
MECHANICAL DETAILS - SHEET 5

DATE: JULY 2015
SHEET: 136 OF 335
DRAWING: M-75

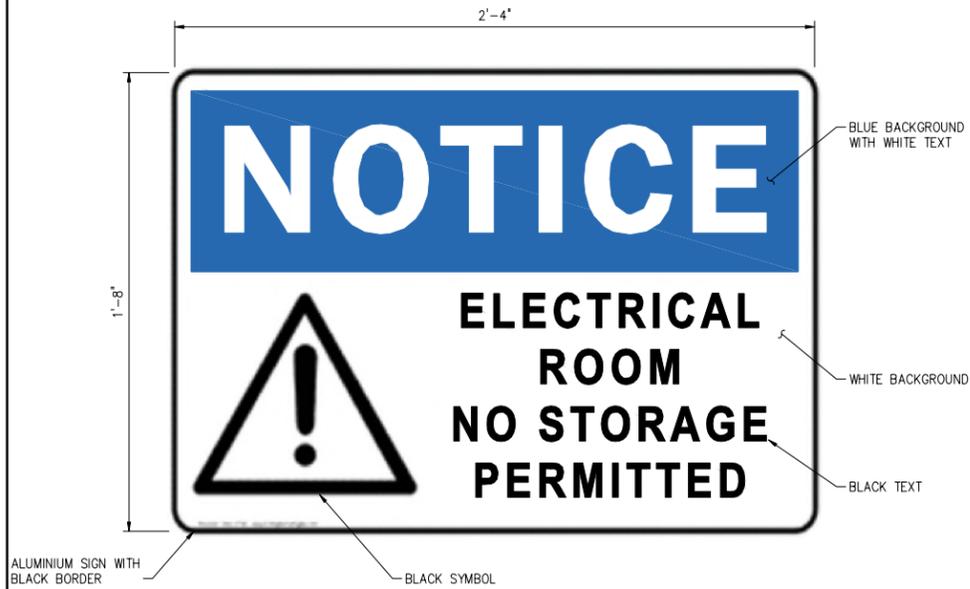
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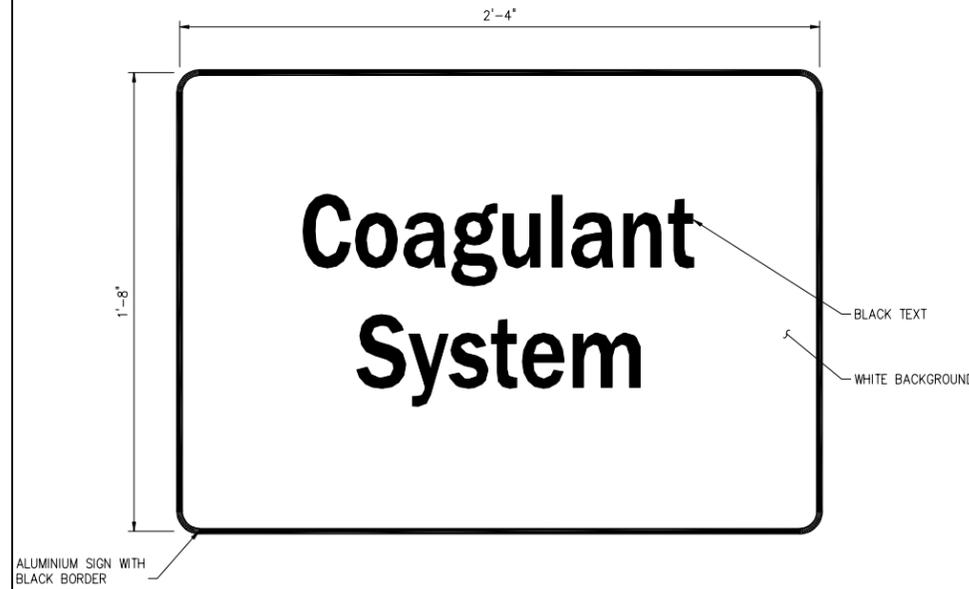
DETAIL 23
NTS -



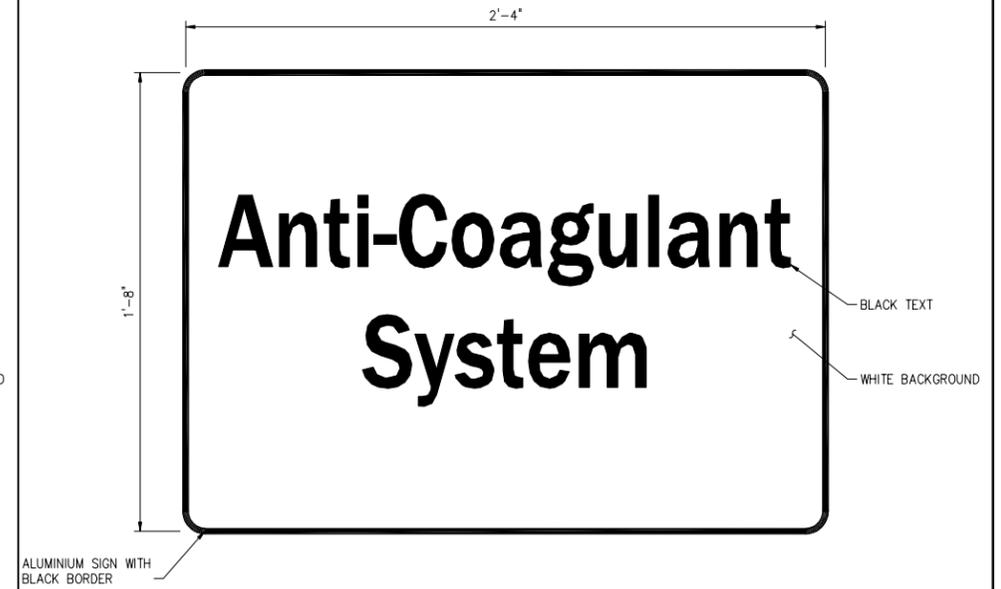
DETAIL 24
NTS -



DETAIL 25
NTS -



DETAIL 26
NTS -



DETAIL 27
NTS -

PLOT DATE: 7/24/2015 11:33 AM BY: TBocas

DESIGNED	G.A.B.		
DRAWN	C.A.Z.		
CHECKED	G.N.C.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED G.A.B. DRAWN C.A.Z. CHECKED G.N.C. PROJ. ENGR. G.A.B.	GEORGE A. BROWN No. 56076	P.E.
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4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

SCALE	CLIENTS PROJECT:	-
NTS	ENGINEERS PROJECT:	44238-004
	CAD REFERENCE:	44238-004BP3-M76



WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
MECHANICAL DETAILS - SHEET 6

DATE:	JULY 2015
SHEET:	137 OF 335
DRAWING:	M-76

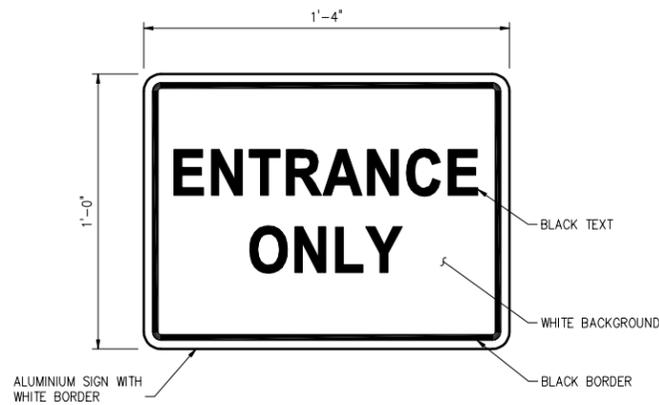
REQUEST FOR PROPOSAL



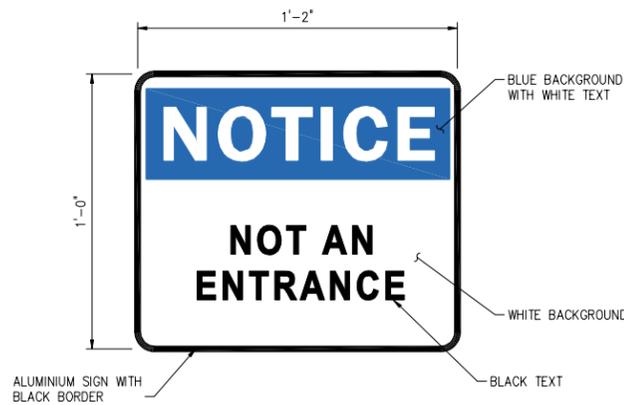
DETAIL 28
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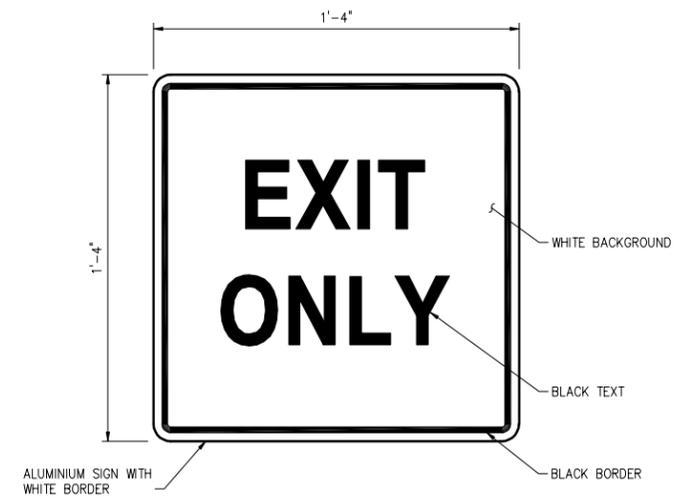
DETAIL 29
NTS



DETAIL 30
NTS



DETAIL 31
NTS



DETAIL 32
NTS

PLT DATE: 7/24/2015 11:34 AM BY: TBUCAS

DESIGNED	G.A.B.		
DRAWN	G.P.B.		
CHECKED	G.N.C.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	G.A.B.
DRAWN	G.P.B.
CHECKED	G.N.C.
PROJ. ENGR.	G.A.B.

GEORGE A. BROWN
No. 56076
P.E.

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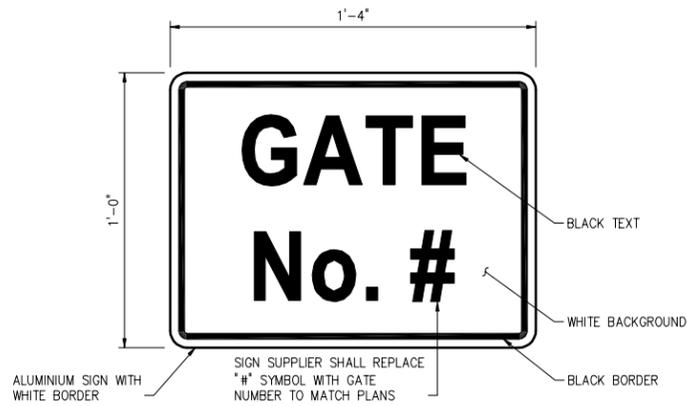
SCALE
NTS
CLIENTS PROJECT: -
ENGINEERS PROJECT: 44238-004
CAD REFERENCE: 44238-004BP3-M77

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
MECHANICAL DETAILS - SHEET 7

DATE: JULY 2015
SHEET: 138 OF 335
DRAWING: M-77

REQUEST FOR PROPOSAL



SIGN SUPPLIER SHALL REPLACE
"#" SYMBOL WITH GATE
NUMBER TO MATCH PLANS

NOTES:

1. FURNISH TWO SIGNS FOR EACH EXISTING AND PROPOSED GATES.
2. INSTALL ONE SIGN ON THE EXTERIOR OF THE GATE AND ONE ON THE INTERIOR OF THE GATE.

DETAIL	33
NTS	-



ALUMINIUM SIGN WITH
WHITE BORDER

DETAIL	34
NTS	-



ALUMINIUM SIGN WITH
WHITE BORDER

DETAIL	35
NTS	-



ALUMINIUM SIGN WITH
BLACK BORDER

DETAIL	36
NTS	-

NOTES:

1. INSTALL SIGN ABOVE OIL SMART ALARM PANEL.



ALUMINIUM SIGN WITH
BLACK BORDER

DETAIL	37
NTS	-

NOTES:

1. INSTALL SIGN NEAR ELEVATOR PIT PUMP-OUT CONNECTION WHERE DIRECTED BY THE OWNER.

PLOT DATE: 7/24/2015 11:34 AM BY: TBocas

DESIGNED	G.A.B.		
DRAWN	G.P.B.		
CHECKED	G.N.C.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	G.A.B.
DRAWN	G.P.B.
CHECKED	G.N.C.
PROJ. ENGR.	G.A.B.

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No. 56076 P.E.

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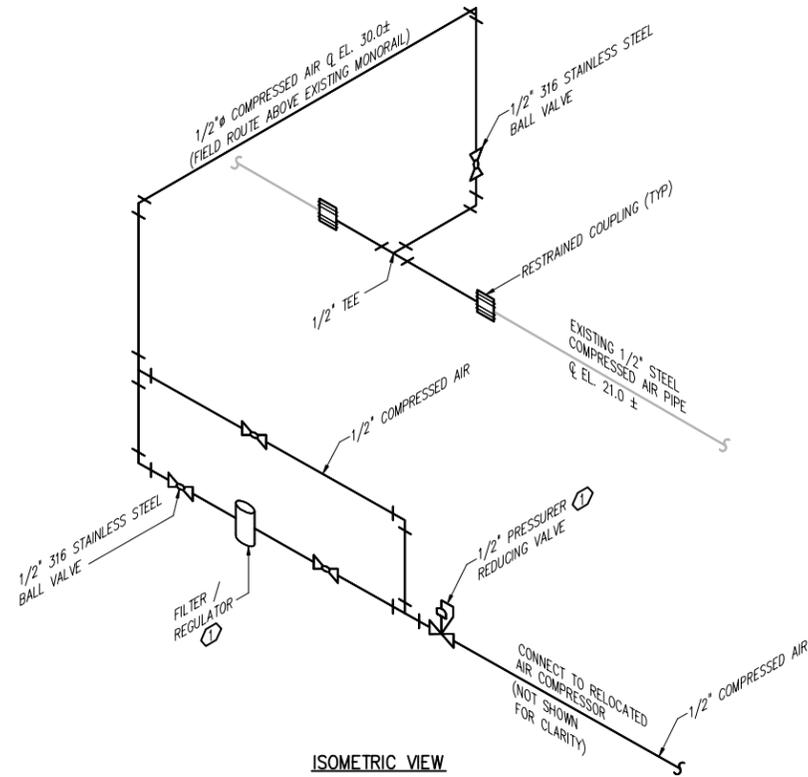
SCALE
NTS
CLIENTS PROJECT: -
ENGINEERS PROJECT: 44238-004
CAD REFERENCE: 44238-004BP3-M78



WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
MECHANICAL DETAILS - SHEET 8

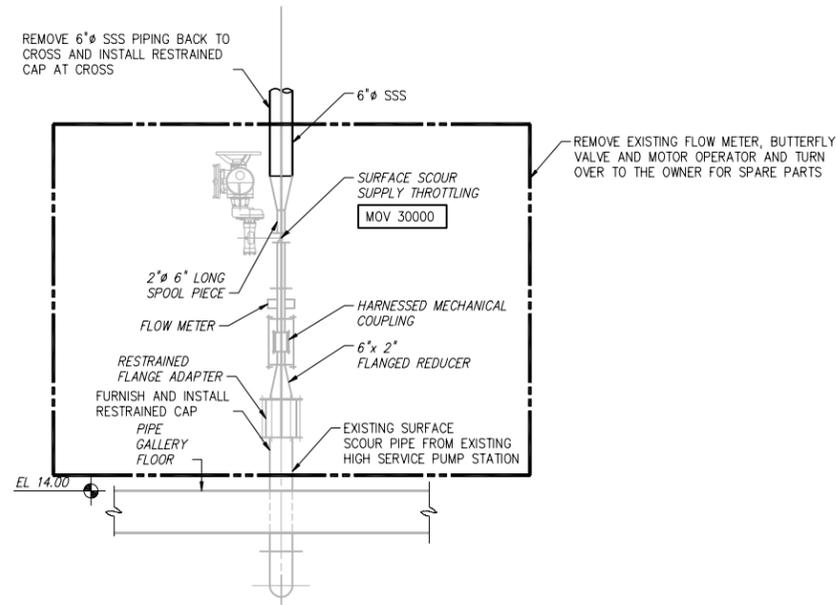
DATE:	JULY 2015
SHEET:	139 OF 335
DRAWING:	M-78

REQUEST FOR PROPOSAL



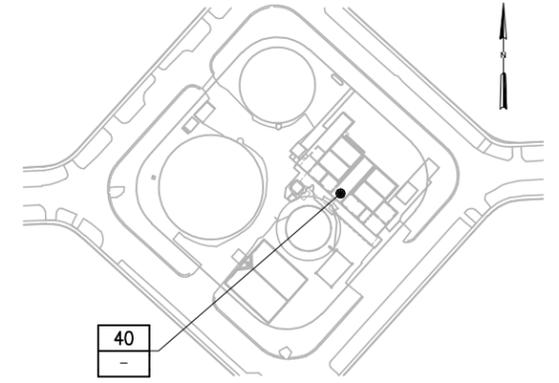
KEYED NOTES:
 1 LOCATE FILTER / REGULATOR AND PRESSURE REDUCING VALVE APPROXIMATELY 3- FEET ABOVE PUMP STATION FLOOR TO ENSURE ACCESSIBILITY FOR MAINTENANCE

DETAIL 38
 NTS

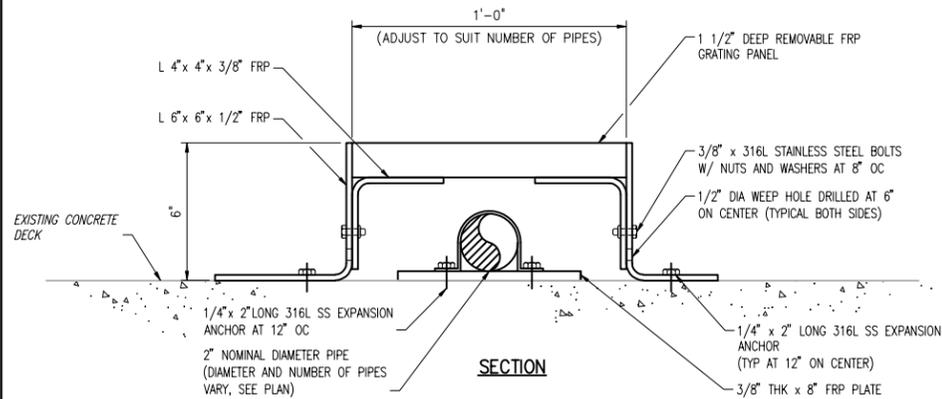


MODIFICATION OF EXISTING SURFACE SCOUR SUPPLY THROTTLING VALVE ASSEMBLY

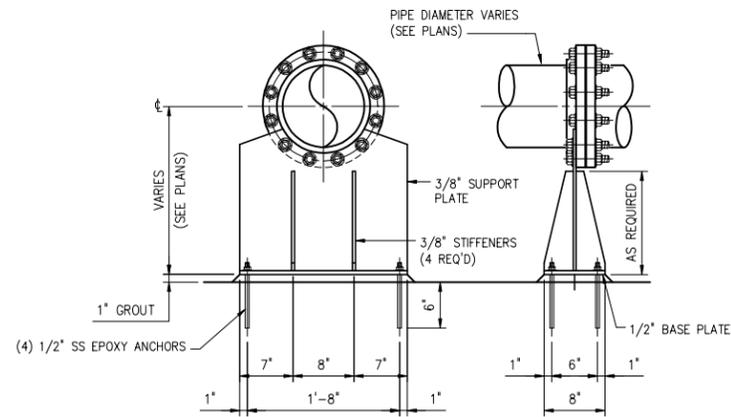
DETAIL 40
 NTS



LOCATION MAP



PIPE CHASE
DETAIL 39
 NTS



PIPE SUPPORT AT FLANGE
DETAIL 41
 NTS

LEGEND:
 _____ EXISTING
 _____ PROPOSED

PLOT DATE: 7/24/2015 11:34 AM BY: TBCCAS

DESIGNED	G.A.B.		
DRAWN	G.P.B.		
CHECKED	G.N.C.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	G.A.B.		
DRAWN	G.P.B.		
CHECKED	G.N.C.		
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SCALE: NTS
 CLIENTS PROJECT: -
 ENGINEERS PROJECT: 44238-004
 CAD REFERENCE: 44238-004BP3-M79

CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
 RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
MECHANICAL DETAILS
SHEET 9

DATE: JULY 2015
 SHEET: 140 OF 335
 DRAWING: M-79

REQUEST FOR PROPOSAL

GENERAL STRUCTURAL NOTES

- G-1 THESE NOTES ARE GENERAL AND SUPPLEMENT THE SPECIFICATIONS. THESE NOTES APPLY TO THE ENTIRE PROJECT UNLESS MODIFIED OR NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.
- G-2 STANDARD DETAILS SHALL BE USED WHEN REFERRED TO OR WHEN NO MORE RESTRICTIVE OR DIFFERENT DETAILS ARE SHOWN ON THE DRAWINGS.
- G-3 DESIGN IS IN ACCORDANCE WITH AND CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE FLORIDA BUILDING CODE 2010. THE DESIGN LOADS AND OTHER DESIGN VALUES GIVEN IN NOTES G-4 AND G-5 WERE USED FOR DESIGN OF STRUCTURES UNLESS NOTED OTHERWISE ON THE DRAWINGS (*1).

G-4 LIVE LOADS:

LEVEL	ROOF	SECOND FLOOR		BOTTOM/FIRST FLOOR		
		OFFICE BREAK ROOM CONTROL ROOM LAB TOILET	OBSERVATION DECK	OFFICE EOC LOBBY LOCKER ROOMS	MECH/ELECTRICAL ROOM	PROCESS AREA/CHEMICAL STORAGE
STRUCTURE						
NEW ADMINISTRATION BUILDING	30 PSF	100 PSF	100 PSF	100 PSF	300 PSF	-
HYPOCHLORITE STORAGE AND FEED FACILITY	30 PSF	-	-	-	-	300 PSF

-ALL STAIRWAYS, LANDINGS AND PLATFORMS ARE DESIGNED FOR A LIVE LOAD = 100 PSF UNLESS NOTED OTHERWISE.

- G-5 WIND DESIGN CRITERIA:
WIND LOADS ARE IN ACCORDANCE WITH ASCE 7 AS REFERENCED BY THE FLORIDA BUILDING CODE:

1. ADMINISTRATION BUILDING:
RISK CATEGORY = IV
ULTIMATE WIND SPEED = 220 MPH
EXPOSURE CATEGORY = C
2. ALL OTHER:
RISK CATEGORY = III
ULTIMATE WIND SPEED = 186 MPH
EXPOSURE CATEGORY = C

STRUCTURE	PRESSURE COEFFICIENTS	LATERAL LOAD RESISTING SYSTEM
NEW ADMINISTRATION BUILDING	+/-0.18	CONC. MOMENT FRAME
HYPOCHLORITE STORAGE AND FEED FACILITY	OPEN BLDG	STEEL FRAME

BUILDING COMPONENTS AND CLADDING SHALL BE DESIGNED FOR THE CONDITIONS SPECIFIED IN ASCE 7 IN COMPLIANCE WITH THE DESIGN PARAMETERS SPECIFIED ABOVE. EQUIPMENT AND PRODUCT VENDORS SHALL COMPLY WITH THE DESIGN PARAMETERS SPECIFIED ABOVE FOR OUTDOOR EQUIPMENT.

- G-6 ALL DIMENSIONS INDICATED (+) SHALL BE VERIFIED EITHER BY FIELD MEASUREMENTS FOR EXISTING STRUCTURES OR BY SHOP DRAWINGS FOR EQUIPMENT FURNISHED. STRUCTURAL DIMENSIONS NOT SHOWN BUT CONTROLLED BY OR RELATED TO EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR WITH THE MANUFACTURER PRIOR TO CONSTRUCTION.
- G-7 THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION IN THE FIELD AS REQUIRED FOR NEW WORK
- G-8 IF A CONFLICT IS FOUND BETWEEN DIFFERENT PORTIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. CONTINUED CONSTRUCTION OF THE AREA IN CONFLICT SHALL BE AT THE CONTRACTOR'S OWN RISK UNTIL THE CONFLICT IS RESOLVED.
- G-9 EQUIPMENT ANCHOR BOLT SIZES, TYPES, EMBEDMENT AND PATTERNS SHALL BE VERIFIED WITH THE MANUFACTURER. ALL BOLT PATTERNS SHALL BE TEMPLATED TO INSURE ACCURACY OF PLACEMENT.
- G-10 STRUCTURAL DRAWINGS SHALL BE USED IN COORDINATION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND MANUFACTURER'S SHOP DRAWINGS.
- G-11 STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURE. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND TEMPORARY SUPPORTS WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR. OVERSTRESSING OF ANY STRUCTURAL ELEMENT IS PROHIBITED.
- G-12 NO BACKFILL SHALL BE PLACED AGAINST ANY SUBSTRUCTURE WALLS UNLESS ALL ADJACENT SUPPORTING ELEMENTS HAVE ACHIEVED DESIGN STRENGTH, OR WALLS HAVE BEEN PROPERLY BRACED, AND IN ANY CASE NOT SOONER THAN 28 DAYS AFTER THE PLACING OF CONCRETE UNLESS APPROVED BY THE ENGINEER. SUPPORTING ELEMENTS SHALL INCLUDE ADJACENT WALLS, SLABS, BEAMS AND COLUMNS.
- G-13 LEAKAGE TESTING OF HYDRAULIC STRUCTURES SHALL NOT BEGIN UNTIL ALL STRUCTURAL ELEMENTS HAVE REACHED THE SPECIFIED MINIMUM CONCRETE STRENGTH. BACKFILL SHALL NOT BE PLACED AROUND ANY HYDRAULIC STRUCTURE UNTIL THE LEAKAGE TEST HAS BEEN COMPLETED.

STRUCTURAL METALS

- M-1 DETAIL, FABRICATE, AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AISC 360-05.
- M-2 STEEL MATERIAL:
A) STRUCTURAL TUBING: ASTM A500, GRADE B OR A501 (42 KSI)
B) STRUCTURAL PIPE: ASTM A53, TYPE E OR S, GRADE B (35 KSI)
C) PLATES AND BARS: ASTM A36 UNO (36 KSI)
D) STRUCTURAL W SHAPES: ASTM A992 (50 KSI)
E) STRUCTURAL S, M, C, & L SHAPES: ASTM A36 (36 KSI)
F) STRUCTURAL HP SHAPES: ASTM A 572, GRADE 50 (50 KSI)
- M-3 PROVIDE MINIMUM 3/4" DIAMETER ASTM A325 HIGH STRENGTH BOLTS WITH FULLY TIGHTENED TYPE N CONNECTIONS FOR STRUCTURAL STEEL UNLESS NOTED OTHERWISE.
- M-4 PROVIDE TYPICAL STEEL BEAM CONNECTIONS FOR A CAPACITY OF NOT LESS THAN THE TOTAL UNIFORM LOAD CAPACITY TABULATED IN THE AISC TABLES FOR ALLOWABLE LOADS OF BEAMS UNLESS NOTED OTHERWISE.
- M-5 DO NOT PAINT STEEL SURFACES WHICH ARE TO BE WELDED OR ARE TO BE ENCASED IN CONCRETE.
- M-6 ALL STAINLESS STEEL FABRICATIONS SHALL BE TYPE 316, UNLESS NOTED OTHERWISE.
- M-7 ALUMINUM SHALL BE ALLOY 6061-T6 UNLESS NOTED OTHERWISE.
- M-8 ALL BOLTS, ANCHOR BOLTS, AND CONCRETE ANCHORS CONNECTING ALUMINUM SHALL BE TYPE 316 STAINLESS STEEL.
- M-9 DETAIL, FABRICATE, AND ERECT ALUMINUM IN ACCORDANCE WITH THE LATEST EDITION OF THE ALUMINUM ASSOCIATION ALUMINUM DESIGN MANUAL.
- M-10 ALUMINUM SHALL BE ISOLATED FROM CONTACT WITH CONCRETE AND DISSIMILAR METALS.
- M-11 ALL GROOVE AND BUTT WELDS SHALL BE FULL PENETRATION.
- M-12 FILLET WELD SIZES SHALL BE THE MINIMUM SIZE REQUIRED BY AISC CODE FOR PLATE SIZES TO BE CONNECTED AND SHALL BE APPLIED TO THE ENTIRE JOINT CONTACT LENGTH, BUT NOT LESS THAN 3/16".
- M-13 BOTTOM SURFACES OF BASE PLATES SHALL BE GROUTED TO INSURE FULL BEARING CONTACT WITH CONCRETE SLAB.
- M-14 WHENEVER ONE MEMBER IS FASTENED TO ANOTHER WITH FASTENINGS (BOLTS, WELDS, ETC.) SET AT A UNIFORM SPACING, THERE SHALL BE A MINIMUM OF TWO FASTENINGS PER PIECE CONNECTED AND THE FIRST AND LAST FASTENINGS SHALL BE LOCATED NOT TO EXCEED 0.25 OF FASTENER SPACING FROM EACH END.

M-15 BOLTED CONNECTIONS SHALL BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A325 OR ASTM A490 BOLTS.

M-16 STRUCTURAL WELDED JOINTS SHALL CONFORM TO THE PROVISIONS OF AWS D1.1, STRUCTURAL WELDING CODE BY AMERICAN WELDING SOCIETY. PROOF OF WELDER CERTIFICATION SHALL BE AVAILABLE AT THE JOB SITE DURING TIMES OF INSPECTION.

M-17 SPECIAL PERIODIC AND CONTINUOUS INSPECTIONS SHALL BE IN ACCORDANCE WITH SPECIFICATIONS AND THE BUILDING CODE.

FOUNDATIONS

- F-1 CONCRETE (CAST-IN-PLACE) NOTES APPLY TO FOUNDATIONS.
- F-2 ALLOWABLE SOIL BEARING PRESSURE

STRUCTURE	ALLOWABLE SOIL BEARING PRESSURE
NEW ADMINISTRATION BUILDING	3000 PSF
HYPOCHLORITE STORAGE AND FEED FACILITY	3000 PSF

- F-3 SET BOTTOM OF FOUNDATIONS AT ELEVATIONS SHOWN ON DRAWINGS
- F-4 SOFT OR LOOSE SOILS MAY BE ENCOUNTERED DURING EARTHWORK OPERATIONS, REQUIRING ADDITIONAL UNDERCUTTING AND FILL. REFER TO GEOTECHNICAL REPORT FOR DETAILED SOIL STRATIFICATION.
- F-5 GROUNDWATER CONTROL MAY BE REQUIRED DURING CONSTRUCTION. REFER TO GEOTECHNICAL REPORT FOR BORINGS.
- F-6 ALL STRUCTURES DESIGNED FOR SEASONAL HIGH GROUNDWATER ELEVATION OF 4.

CONCRETE (CAST-IN-PLACE)

- C-1 DESIGN OF CONCRETE ELEMENTS INCLUDING WALLS, FORMED SLABS, BEAMS, AND COLUMNS IS IN ACCORDANCE WITH ACI 318 (CODE REQUIREMENTS FOR STRUCTURAL CONCRETE) AND 350 (CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES).
- C-2 FOR CONCRETE MIX DESIGN SEE SPECIFICATION SECTION 03300.
- C-3 CONCRETE STRENGTH CLASSES (28-DAY COMPRESSIVE STRENGTH):
A) CLASS A - (4,000 PSI) CLASS A STRUCTURAL CONCRETE SHALL BE USED IN ALL STRUCTURES UNLESS NOTED OTHERWISE.
B) CLASS B - (4,000 PSI) CLASS B STRUCTURAL CONCRETE SHALL BE USED AT LOCATIONS SHOWN OR APPROVED ON A CASE BY CASE BASIS.
C) CLASS C - (3,000 PSI) CLASS C CONCRETE SHALL BE USED IN ALL CURBS, GUTTERS, CATCH BASINS, FENCE AND GUARD POST EMBEDMENTS, ENCASEMENTS, AND ALL OTHER CONCRETE APPURTENANT TO ELECTRICAL FACILITIES UNLESS NOTED OTHERWISE. CLASS C CONCRETE SHALL ALSO BE USED FOR THRUST BLOCKS, PIPE TRENCH CUT-OFF BLOCKS AND CRADLES, MUDMATS AND CONCRETE FILLS WHERE THEY ARE UNREINFORCED.
- C-4 ALL BAR REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60, OR ASTM A706, GRADE 60 WHERE REINFORCEMENT IS TO BE WELDED IN ACCORDANCE WITH AWS D1.4. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- C-5 CONCRETE COVER FOR REINFORCING (UNLESS NOTED OTHERWISE ON THE DRAWINGS):
A) CONCRETE DEPOSITED DIRECTLY AGAINST SOIL: 3"
B) FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:
1. SLABS (#5 OR SMALLER) 1 1/2"
2. SLABS (#6 OR LARGER) 2"
3. WALLS 12" OR MORE 2"
4. WALLS LESS THAN 12" (#5 OR SMALLER) 1 1/2"
5. WALLS LESS THAN 12" (#6 OR LARGER) 2"
6. BEAMS AND COLUMNS (TO MAIN REINFORCEMENT) 2"
7. BEAMS AND COLUMNS (TO TIES OR STIRRUPS) 1 1/2"
8. FOR SURFACES EXPOSED TO WATER OR SEWAGE, ADD 1/2" TO ABOVE
- C-6 SPLICES SHALL BE CLASS 'B' CONFORMING TO THE PROVISIONS OF ACI 318 UNLESS NOTED OTHERWISE.
- C-7 CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. CONSTRUCTION JOINTS NOT SHOWN SHALL BE SUBMITTED BY THE CONTRACTOR FOR THE APPROVAL OF THE ENGINEER PRIOR TO SUBMITTING REBAR SHOP DRAWINGS. VERTICAL CONSTRUCTION JOINTS IN WALLS AND HORIZONTAL JOINTS IN SLABS SHALL BE PROVIDED AT A SPACING NOT GREATER THAN 45 FEET ON CENTER. FOR EXPOSED WALLS WITH FLUID OR EARTH ON THE OPPOSITE SIDE, THE SPACING BETWEEN VERTICAL JOINTS SHALL BE A MAXIMUM OF 25 FEET.
- C-8 WHERE HORIZONTAL CONSTRUCTION JOINTS, LOCATED ABOVE THE FOUNDATION SLAB, EXTEND BEYOND WHERE NEEDED, THEY SHALL BE TERMINATED AT A VERTICAL CONSTRUCTION JOINT APPROVED BY THE ENGINEER.
- C-9 ALL JOINTS WHICH ARE IN MEMBERS IN CONTACT WITH LIQUID OR BELOW GRADE SHALL HAVE A WATERSTOP. CONSTRUCTION JOINTS SHALL HAVE A 6" PVC RIBBED WATERSTOP. EXPANSION JOINTS SHALL HAVE A 9" PVC CENTERBULB RIBBED WATERSTOP. IN VERTICAL JOINTS, WATERSTOPS SHALL TERMINATE NO LESS THAN 18" ABOVE THE MAXIMUM WATER SURFACE OR 18" ABOVE GRADE, WHICHEVER IS HIGHER.
- C-10 SLABS WITH SLOPING SURFACES SHALL HAVE THE INDICATED SLAB THICKNESS MAINTAINED AS THE MINIMUM. SLAB BOTTOMS CAN EITHER SLOPE WITH THE TOP SURFACE OR BE LEVEL. REINFORCEMENT IN SLABS WITH SLOPING SURFACES SHALL BE PLACED AT THE REQUIRED CLEARANCE FROM THE SLAB SURFACE.
- C-11 ALL EXPOSED CORNERS SHALL HAVE A 3/4" CHAMFER OR A 1/2" RADIUS TOOLED CORNER.
- C-12 EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DOCUMENTS, SHALL BE PROVIDED FOR PRIOR TO PLACING CONCRETE.
- C-13 REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH ANY METAL PIPE, PIPE FLANGE, METAL CONDUIT, OR OTHER METAL PARTS EMBEDDED IN CONCRETE. A MINIMUM CLEARANCE OF 2" SHALL BE PROVIDED.
- C-14 DOWELS, ANCHOR BOLTS, PIPES, WATERSTOPS AND OTHER EMBEDDED ITEMS SHALL BE HELD SECURELY IN POSITION WHILE CONCRETE IS BEING PLACED.
- C-15 CONDUITS AND OTHER SIMILAR ITEMS EMBEDDED IN OR PENETRATING THROUGH CONCRETE SHALL BE SPACED ON CENTER NOT LESS THAN 3 TIMES THEIR OUTSIDE DIMENSION, BUT NOT LESS THAN 2 1/2" CLEAR. WHEN SUCH ITEMS ARE EMBEDDED IN WALLS OR SLABS, THEY SHALL NOT OCCUPY MORE THAN 1/3 OF THE MEMBER THICKNESS.
- C-16 AT ALL TYPICAL CURBS, EQUIPMENT PADS, AND PIPE SUPPORT PIERS, REINFORCING DOWELS SHOWN MAY BE REPLACED WITH MATCHING DOWELS SET IN EPOXY IN DRILLED HOLES AS SPECIFIED. DOWELS LOCATED CLOSER THAN 3" FROM ANY EDGE OF CONCRETE SHALL NOT BE REPLACED WITH DRILLED DOWELS.
- C-17 DRILLED ADHESIVE DOWELS (WHERE DOWELS ARE SHOWN TO BE PLACED INTO HARDENED CONCRETE):
A) THE HOLE DIAMETER SHALL BE NO LARGER THAN 1/8" GREATER THAN THE DIAMETER OF THE REINFORCING BAR AT THE DEFORMATIONS.
B) THE DEPTH OF EMBEDMENT SHALL BE 12 BAR DIAMETERS, UNLESS NOTED OTHERWISE.
C) ADJUST THE DOWEL LOCATIONS AS NEEDED TO AVOID DRILLING THROUGH ANY REINFORCING BARS. IF THE LOCATION NEEDS TO BE MODIFIED, CONTACT THE ENGINEER.
- C-18 CLEAR DISTANCE FROM ANCHOR BOLTS TO ANY CONCRETE EDGE SHALL BE 4" MINIMUM UNLESS NOTED OTHERWISE.

CONCRETE BLOCK MASONRY WALLS:

- W-1 ALL REGULAR MASONRY WALLS USED AS FILLER BETWEEN CONCRETE FRAMED STRUCTURE AND/OR MASONRY LOAD BEARING WALLS WITH REINFORCING SHALL BE TWO CELL LOAD BEARING TYPE CMU WITH f'm = 1,500 P.S.I. (MIN.), UNLESS NOTED OTHERWISE ON THE PLANS.
- W-2 MASONRY MORTAR SHALL BE ASTM C270 TYPE "M" AND MASONRY GROUT SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 FOR GRADE 60 BILLET STEEL.
- W-3 MASONRY JOINT REINFORCEMENT SHALL CONFORM TO ASTM A82 AND REINFORCEMENT STEEL SHALL CONFORM TO REQUIREMENTS OF ASTM A615 FOR GRADE 60 BILLET STEEL.
- W-4 MASONRY REINFORCEMENT BAR SPLICES SHALL BE CONTACT SPLICES. LENGTH OF SPLICE SHALL BE A MINIMUM OF 25 INCHES FOR #4 BARS, 32 INCHES FOR #5 BARS, AND 39" FOR #6 BARS.
- W-5 BOND BEAM REINFORCEMENT SHALL BE PROVIDED WITH STD 90 DEGREE HOOKS AT ALL WALL INTERSECTIONS. WHERE BOND BEAM REINFORCEMENT IS INTERRUPTED BY OPENINGS, REINFORCEMENT SHALL BE PROVIDED WITH STD 180 DEGREE HOOKS AT ENDS.
- W-6 A FLORIDA REGISTERED ARCHITECT OR PROFESSIONAL ENGINEER SHALL FURNISH INSPECTION OF ALL REINFORCED MASONRY STRUCTURES

MASONRY LINTELS:

- L-1 MASONRY LINTELS SHALL BE EITHER PRECAST CONCRETE "U" SECTIONS OR CONCRETE MASONRY "U" BLOCK.
- L-2 NOMINAL DEPTH OF "U" SECTIONS BE 8" AND WIDTH SHALL MATCH CONCRETE MASONRY WALL.
- L-3 PRECAST CONCRETE "U" SECTIONS SHALL BE REINFORCED WITH 2 #3 TOP AND 2 #5 BOTTOM. ADDITIONAL FIELD ADDED KEY REINFORCEMENT AND TOTAL NOMINAL DEPTH SHALL BE AS FOLLOWS:

SPAN	TOTAL NOMINAL LINTEL DEPTH (IN)	FIELD ADDED REINFORCEMENT
UP TO 4'-0"	8	NONE
UP TO 8'-0"	8	1-#5 BOTTOM. 1 #5 TOP
UP TO 12'-0"	16	1-#5 BOTTOM. 2 #5 TOP

ADDITIONAL LINTEL DEPTH SHALL BE 8" DEEP CONCRETE MASONRY BLOCK.

- L-4 CONCRETE MASONRY "U" BLOCK LINTELS SHALL HAVE THE FOLLOWING REINFORCEMENT AND TOTAL NOMINAL DEPTH.

SPAN	TOTAL NOMINAL LINTEL DEPTH (IN)	FIELD ADDED REINFORCEMENT
UP TO 4'-0"	8	2-#5 BOTTOM
UP TO 8'-0"	16	2-#5 BOTTOM
UP TO 12'-0"	24	2-#5 BOTTOM

ADDITIONAL LINTEL DEPTH SHALL BE 8" DEEP CONCRETE MASONRY BLOCK.

- L-5 LINTELS SHALL BE GROUTED SOLID.
- L-6 EXTEND LINTELS (MIN) 8" BEYOND OPENING.
- L-7 WHEN FRAMING LINTEL AGAINST A CONCRETE COLUMN, PROVIDE SHEAR KEY AT COLUMN FACE AND DOWELS FROM COLUMN TO MATCH MASONRY LINTEL REINFORCEMENT. KEY DIMENSION SHALL BE 1"x8"x8" MINIMUM REINFORCEMENT LAP SHALL BE 32 BAR DIAMETER.

DEMOLITION

- D-1 FOR DEMOLITION REQUIREMENTS, REFER TO SPECIFICATION 02050 - DEMOLITION AND REMOVAL OF EXISTING STRUCTURES AND EQUIPMENT.
- D-2 CONCRETE DEMOLITION WITHIN STRUCTURES BEING MODIFIED SHALL BE SELECTIVE DEMOLITION BY CORE DRILLING OR SAWCUTTING AND CAREFUL REMOVAL OF CONCRETE SHOWN TO BE REMOVED. NO OVER CUTTING OF AREAS TO BE DEMOLISHED SHALL BE PERMITTED. CONTRACTOR SHALL CORE DRILL CORNERS OF OPENING PRIOR TO SAWCUTTING. EXPLOSIVES AND VIBRATORY HAMMERS SHALL NOT BE USED FOR DEMOLITION WORK.
- D-3 UNLESS ANCHORING DEVICES AND/OR REINFORCEMENT IS NOTED TO REMAIN FOLLOWING DEMOLITION, REMOVE AND/OR BURN BACK ANCHORS AND REINFORCEMENT STEEL 1/2" MIN BELOW SURFACE. VOIDS CREATED SHALL BE FILLED WITH EPOXY RESIN BINDER.
- D-4 WHERE DRAWINGS INDICATE A CONCRETE EQUIPMENT PAD TO BE DEMOLISHED, THE FLOOR SLAB SURFACE SHALL BE REPAIRED AS APPROVED BY ENGINEER. FOLLOWING SELECT DEMOLITION AND REMOVAL OF THE EQUIPMENT PAD REMOVE THE REPAIR SHALL BE:
A. SAWCUT THE FLOOR AROUND THE EQUIPMENT PAD PERIMETER TO A DEPTH OF 1/4".
B. SCARIFY AND REMOVE SLAB CONCRETE WITHIN THE PERIMETER TO A NOMINAL 1/4" DEPTH CLEAN AND REMOVE ALL CONCRETE LAITANCE.
C. RESURFACE THE AREA BY APPLYING A POLYMER MODIFIED OR SILICA FUME ENHANCED CEMENTITIOUS REPAIR MORTAR, APPROVED BY THE ENGINEER, FOLLOWING THE MANUFACTURER'S SURFACE PREPARATION AND APPLICATION RECOMMENDATIONS. LEVEL AND FINISH THE SURFACE TO MATCH THE FLOOR SLAB SURROUNDING AREA.
- D-5 CONCRETE SURFACES LEFT EXPOSED FOLLOWING DEMOLITION SHALL BE SEALED WITH EPOXY RESIN COATING SUCH AS "SIKAGARD" BY SIKA CORPORATION, "DURACOTE 240" BY TAMMS INDUSTRIES, OR APPROVED EQUAL.
- D-6 A DETAILED CONSTRUCTION AND DEMOLITION PLAN SHALL BE SUBMITTED TO THE ENGINEER AND APPROVED BY THE ENGINEER AND COUNTY PRIOR TO BEGINNING CONSTRUCTION. ANY SHUTDOWNS SHALL BE SUBMITTED TO, COORDINATED WITH, AND APPROVED BY THE OWNER. ONCE APPROVED, CONTRACTOR SHALL PROVIDE A MINIMUM OF 14 DAYS NOTICE TO OWNER PRIOR TO SHUTDOWN.

EXISTING INFORMATION

- X-1 ALL EXISTING INFORMATION SHOWN ON THESE DRAWINGS INCLUDING LOCATION, DIMENSIONS, ELEVATIONS, AND CONFIGURATIONS IS DERIVED FROM RECORD DRAWINGS "CITY OF NORTH MIAMI, FLORIDA-PROJECT No. 1203-H AND H.F.A. PROJECT No. APW-FLA-30G WEST SIDE WATER TREATMENT PLANT, 1962" BY INTERSTATE ENGINEERING CO, INC. PROVIDED BY THE CITY AND IS NOT GUARANTEED TO BE COMPLETE OR CORRECT. RECORD DRAWINGS ARE AVAILABLE FOR REVIEW AT THE CITY'S OFFICES.
- X-2 ELEVATIONS IN RECORD DRAWINGS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929. ELEVATIONS ON THESE DRAWINGS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.

SPECIAL INSPECTIONS

- SI-1 SPECIAL PERIODIC AND CONTINUOUS INSPECTIONS SHALL BE IN ACCORDANCE WITH SPECIFICATIONS AND THE FLORIDA BUILDING CODE.

DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

JEAN PAUL SILVA	P.E.
No. 66522	

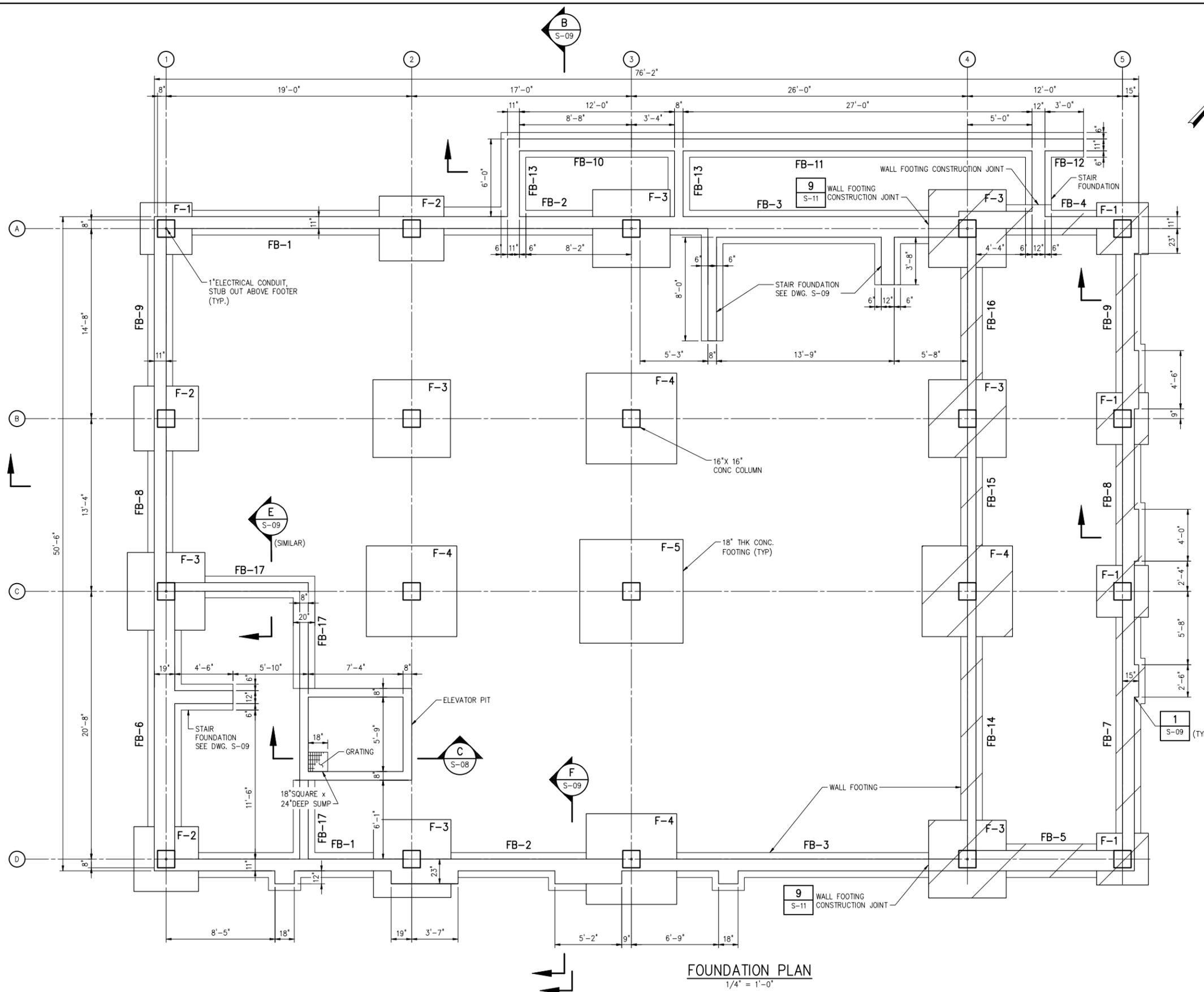
HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

SCALE	CLIENTS PROJECT:	-
NTS	ENGINEERS PROJECT:	44238-004
	CAD REFERENCE:	44238-004BP3-S01

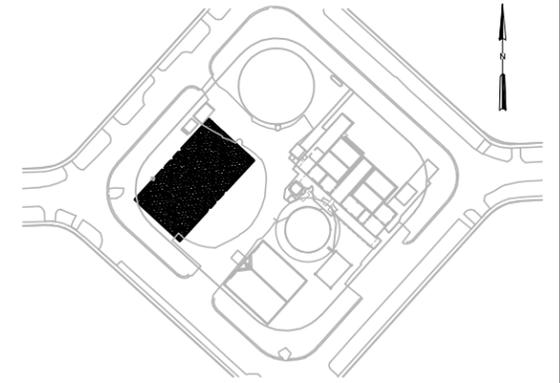
CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT	
RELIABILITY IMPROVEMENTS -- VOLUME B: WTP REHAB	
GENERAL STRUCTURAL NOTES	

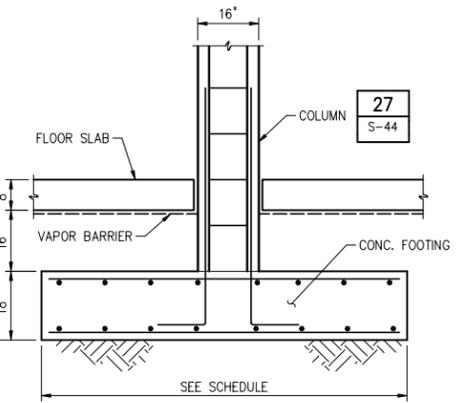
DATE:	JULY 2015
SHEET:	141 OF 335
DRAWING:	S-01



FOUNDATION PLAN
1/4" = 1'-0"



LOCATION MAP



FOOTING TYPICAL SECTION
1/2" = 1'-0"

FOOTING SCHEDULE				
FOOTING	DIMENSIONS	QUANTITY	REINFORCEMENT	BEARING ELEVATION
F-1	4'-0"x4'-0"x18	5	#6@12" EW, T&B	EL. 9.00
F-2	5'-0"x5'-0"x18	3	#6@12" EW, T&B	EL. 9.00
F-3	6'-0"x6'-0"x18	7	#6@12" EW, T&B	EL. 9.00
F-4	7'-0"x7'-0"x18	4	#6@12" EW, T&B	EL. 9.00
F-5	8'-0"x8'-0"x18	1	#6@12" EW, T&B	EL. 9.00

LEGEND

MAIN ELECTRICAL ROOM TO BE CONSTRUCTED DURING PHASE I AND PHASE II OF CONSTRUCTION. MAIN ELECTRICAL ROOM CONSTRUCTION SHALL BE FINALIZED IN PHASE II OF CONSTRUCTION.

FB- # DENOTES WALL FOOTING. SEE SCHEDULE ON S-12



PLOT DATE: 7/24/2015 11:34 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED: J.P.S.
 DRAWN: C.C.P.
 CHECKED: A.F.H.
 PROJ. ENGR.: G.A.B.

JEAN PAUL SILVA
 No. 66522 P.E.

HAZEN AND SAWYER
 Environmental Engineers & Scientists
 4000 Hollywood Boulevard, Suite 750N
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 Certificate of Authorization Number: 2771

SCALE
 1/4" = 1'-0"

CLIENTS PROJECT: -
 ENGINEERS PROJECT: 44238-004
 CAD REFERENCE: 44238-004BP3-S02

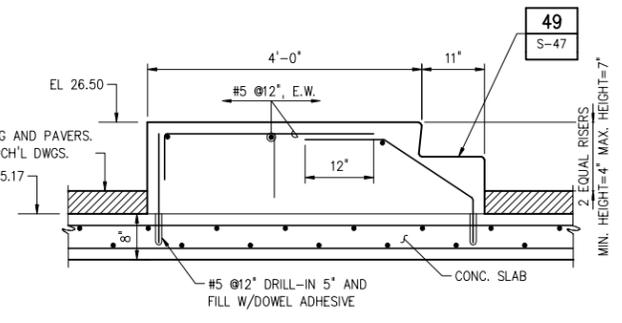
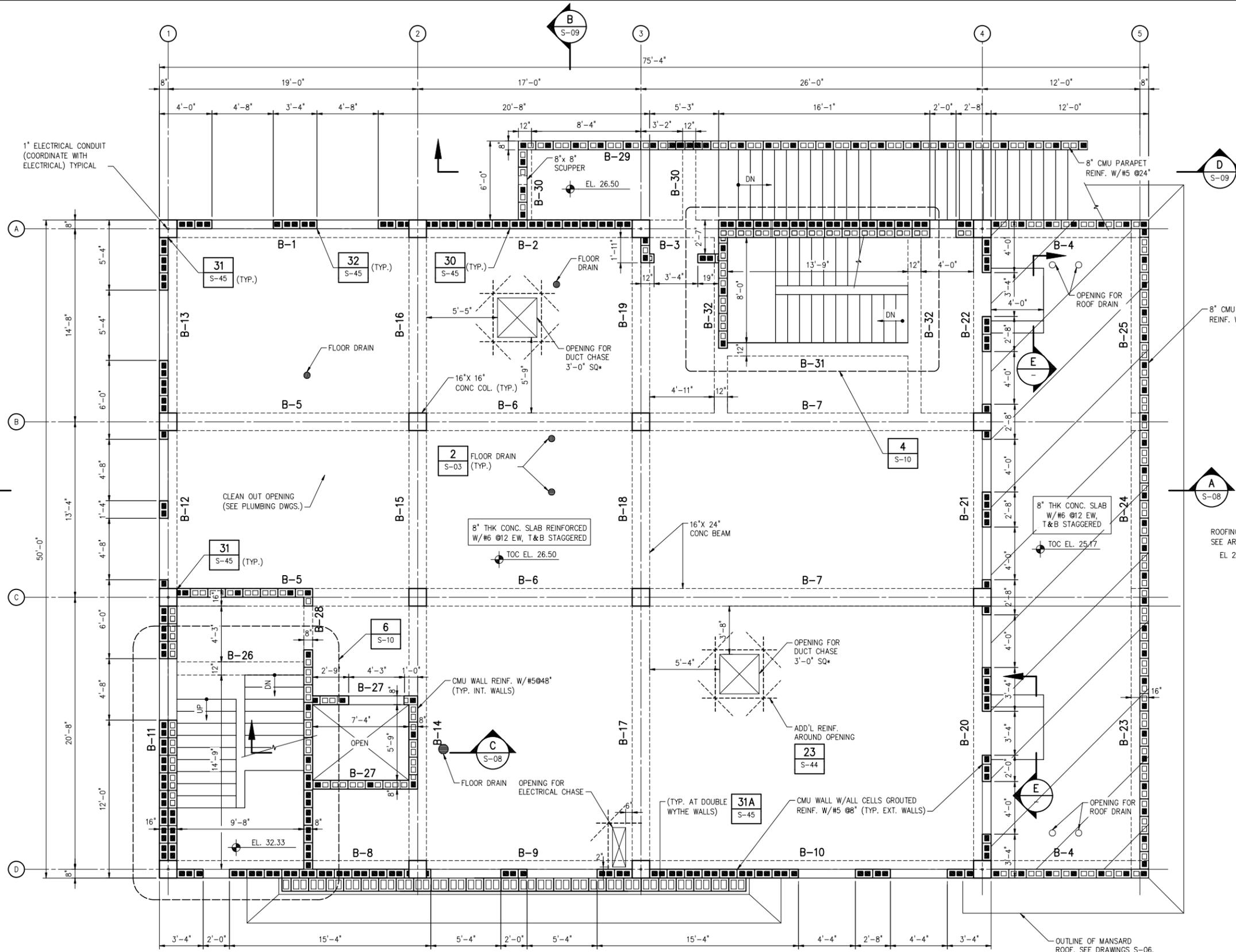
CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
 RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB

NEW ADMINISTRATION BUILDING
 FOUNDATION PLAN

DATE: JULY 2015
 SHEET: 142 OF 335
 DRAWING: S-02

REQUEST FOR PROPOSAL



NOTE:
SEE ARCHITECTURAL DRAWINGS FOR FLOOR SLOPE AROUND FLOOR DRAINS.

LEGEND

- INDICATES VERTICAL REINFORCEMENT IN GROUTED CELL - 8" CMU
- GROUTED CELLS
- CONCRETE BLOCK TO BE CONSTRUCTED CONCURRENT WITH REINFORCED CONCRETE FRAME CONSTRUCTION
- MAIN ELECTRICAL ROOM TO BE CONSTRUCTED DURING PHASE I AND PHASE II OF CONSTRUCTION. MAIN ELECTRICAL ROOM CONSTRUCTION SHALL BE FINALIZED IN PHASE II OF CONSTRUCTION.

SECOND FLOOR PLAN
1/4" = 1'-0"

1/4" = 1'-0"

PLOT DATE: 7/24/2015 11:34 AM BY: TBODAS

DESIGNED	J.P.S.		
DRAWN	A.B.C.		
CHECKED	A.F.H.		
PROJ. ENGR.	J.P.S.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.
DRAWN	A.B.C.
CHECKED	A.F.H.
PROJ. ENGR.	J.P.S.
JEAN PAUL SILVA	P.E.
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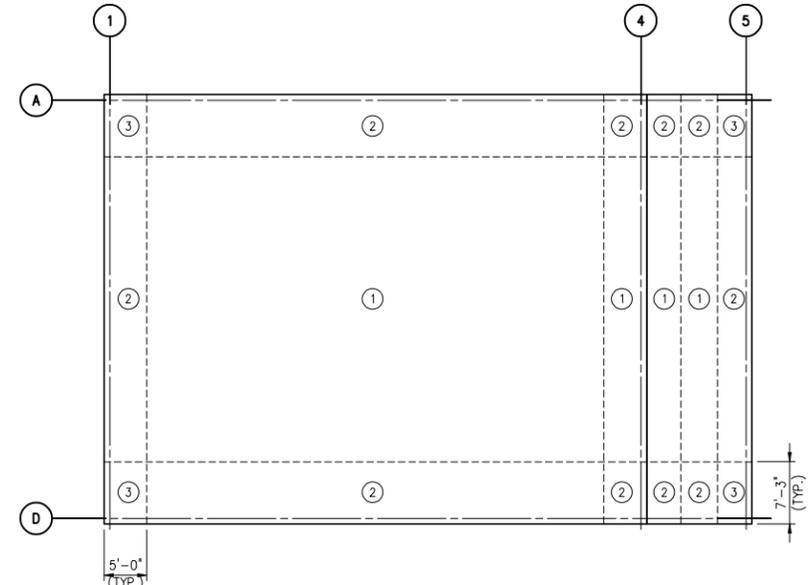
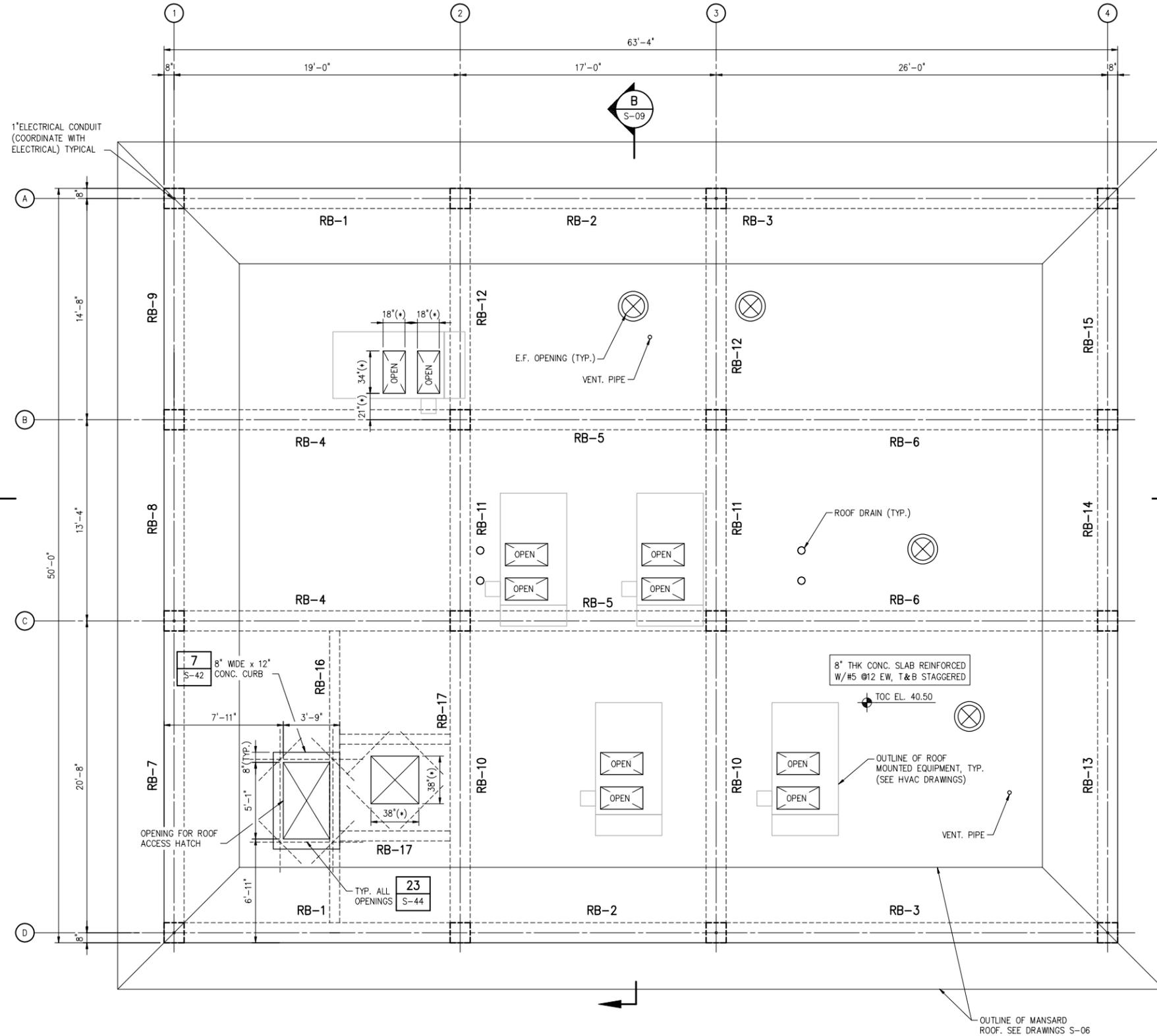
SCALE	1/4" = 1'-0"
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S04

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
NEW ADMINISTRATION BUILDING
SECOND FLOOR PLAN

DATE:	JULY 2015
SHEET:	144 OF 335
DRAWING:	S-04

REQUEST FOR PROPOSAL



WIND PRESSURE ZONES
NTS

ROOF NOMINAL WIND PRESSURES (PSF)		
ZONE	P+	P-
1	35	86
2	35	144
3	35	216

ROOF PLAN
1/4" = 1'-0"



PLOT DATE: 7/24/2015 11:34 AM BY: TBUCAS

NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.
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PROJ. ENGR.	J.P.S.

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SCALE
1/4"=1'-0"

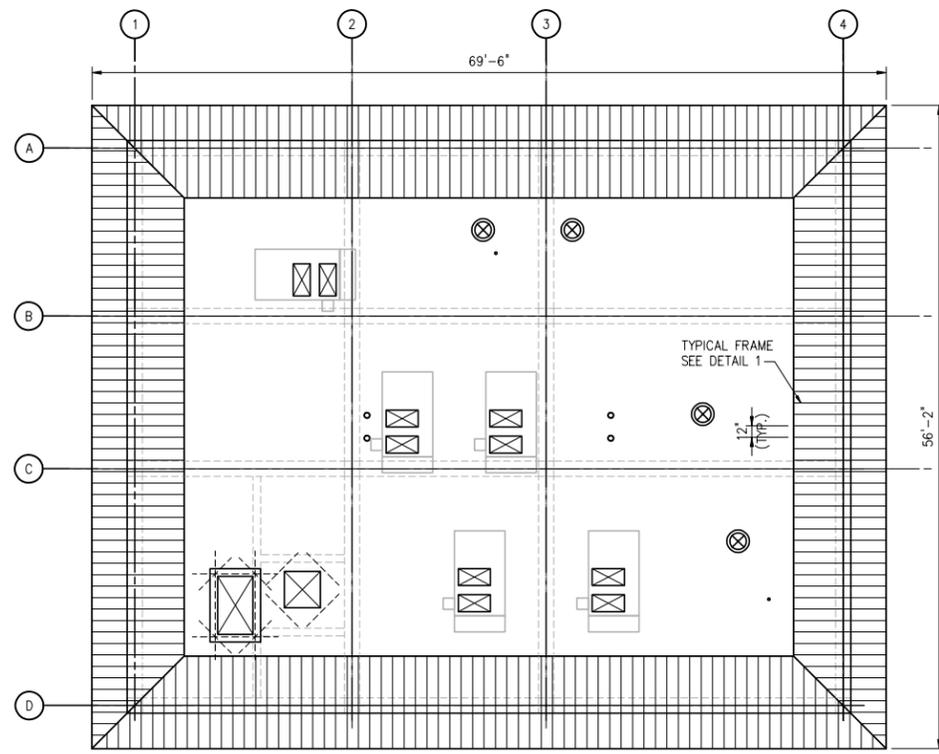
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ENGINEERS PROJECT: 44238-004
CAD REFERENCE: 44238-004BP3-S05

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

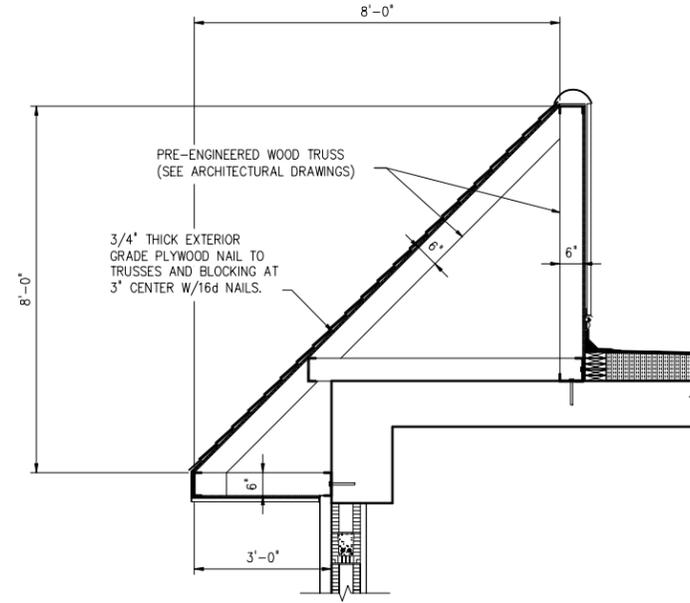
WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
NEW ADMINISTRATION BUILDING
ROOF PLAN

DATE: JULY 2015
SHEET: 145 OF 335
DRAWING: S-05

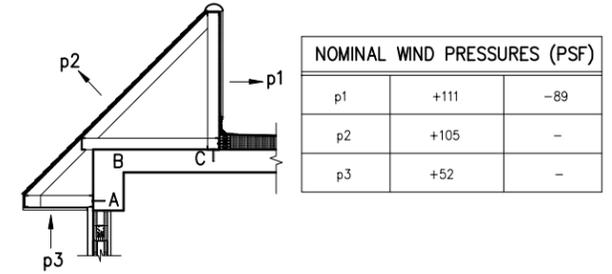
REQUEST FOR PROPOSAL



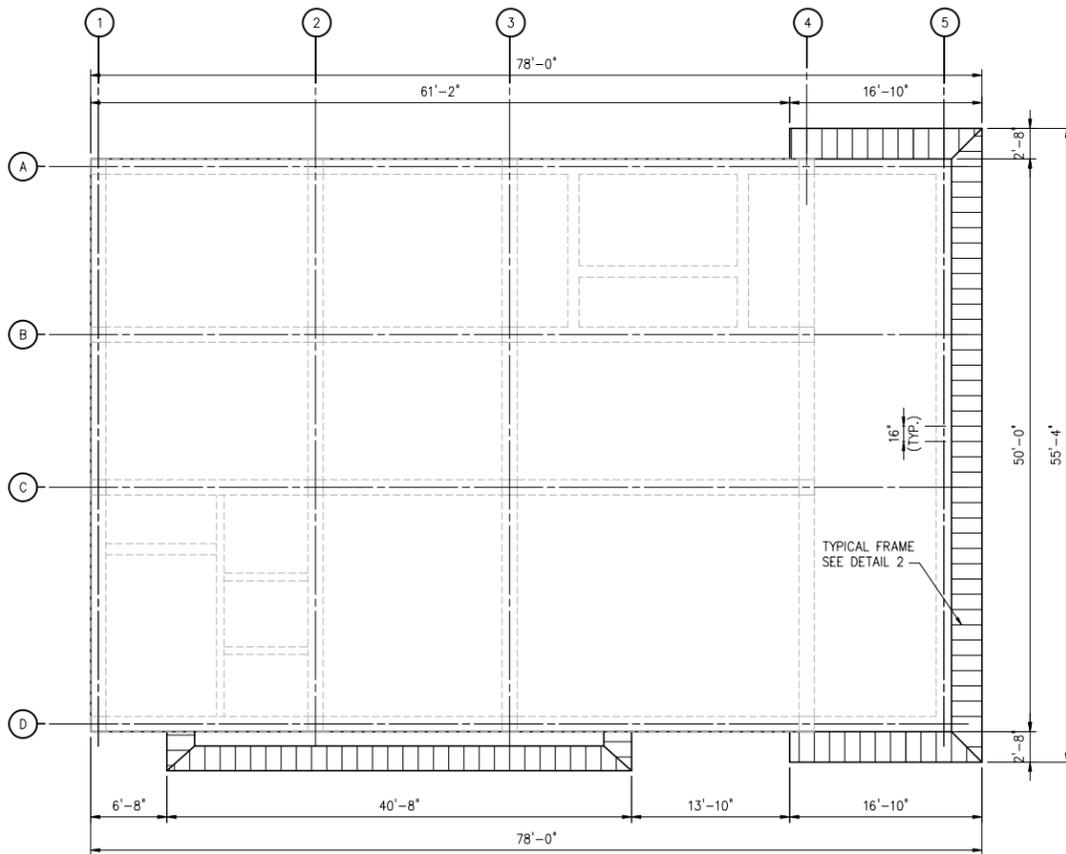
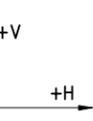
ROOF PLAN
1/8" = 1'-0"



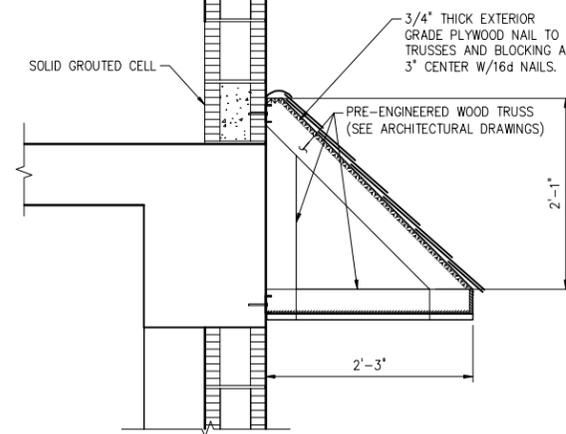
DETAIL 1
NTS S-08 S-09



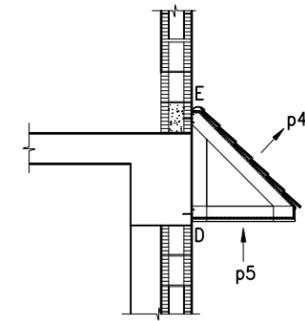
REACTIONS (Lb) (PER TRUSS @ 12" O.C.)			
SUPPORT	H	V	CONNECTOR
A	+810	-265	HGAM10
B	+72	-1609	LGT2
C	+534	-117	HGAM10



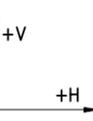
SECOND FLOOR PLAN
1/8" = 1'-0"



DETAIL 2
NTS S-08 S-09



REACTIONS (Lb) (PER TRUSS @ 16" O.C.)			
SUPPORT	H	V	CONNECTOR (+)
D	416	146	HGAM10
E	79	349	HGAM10



NOTES:

- SIMPSON STRONG-TIE CONNECTORS AND FASTENERS HAVE BEEN USED AS THE BASIS TO MEET THE STRUCTURAL CALCULATIONS. CONTRACTOR SHALL CONFIRM LOAD CAPACITY BASED ON RELIABLE PUBLISHED TESTING DATA OR CALCULATIONS IF CONNECTORS ARE SUBSTITUTED, AND SHALL SUBMIT TO THE ENGINEER FOR APPROVAL.
- CONTRACTOR SHALL USE FASTENERS RECOMMENDED BY CONNECTOR MANUFACTURER TO MEET DESIGN LOADS AND COMPLY WITH PRODUCT APPROVAL.



PLOT DATE: 7/24/2015 11:34 AM BY: TBUCAS

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DESIGNED: J.P.S.
DRAWN: C.C.P.
CHECKED: A.F.H.
PROJ. ENGR: J.P.S.

JEAN PAUL SILVA P.E.
No. 66522

HAZEN AND SAWYER
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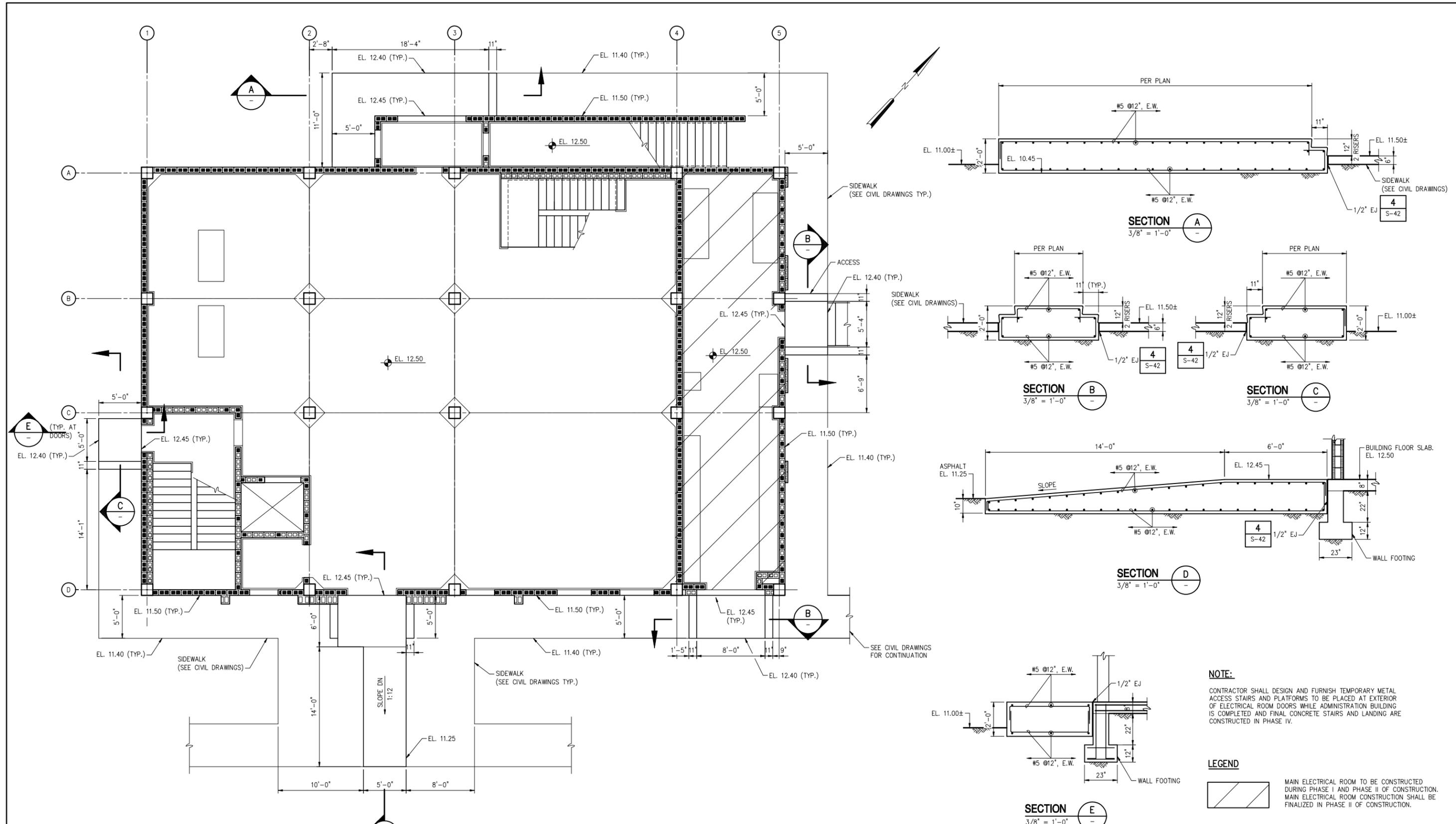
SCALE: -
CLIENTS PROJECT: -
ENGINEERS PROJECT: 44238-004
CAD REFERENCE: 44238-004BP3-S06

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
NEW ADMINISTRATION BUILDING
ROOF TRUSS PLANS

DATE: JULY 2015
SHEET: 146 OF 335
DRAWING: S-06

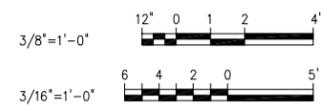
REQUEST FOR PROPOSAL



NOTE:
 CONTRACTOR SHALL DESIGN AND FURNISH TEMPORARY METAL ACCESS STAIRS AND PLATFORMS TO BE PLACED AT EXTERIOR OF ELECTRICAL ROOM DOORS WHILE ADMINISTRATION BUILDING IS COMPLETED AND FINAL CONCRETE STAIRS AND LANDING ARE CONSTRUCTED IN PHASE IV.

LEGEND

	MAIN ELECTRICAL ROOM TO BE CONSTRUCTED DURING PHASE I AND PHASE II OF CONSTRUCTION. MAIN ELECTRICAL ROOM CONSTRUCTION SHALL BE FINALIZED IN PHASE II OF CONSTRUCTION.
--	---



FIRST FLOOR PLAN - ACCESS
 3/16" = 1'-0"

PLOT DATE: 7/24/2015 11:34 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.F.H.		
PROJ. ENGR.	J.P.S.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED **J.P.S.**
 DRAWN **C.C.P.**
 CHECKED **A.F.H.**
 PROJ. ENGR. **J.P.S.**
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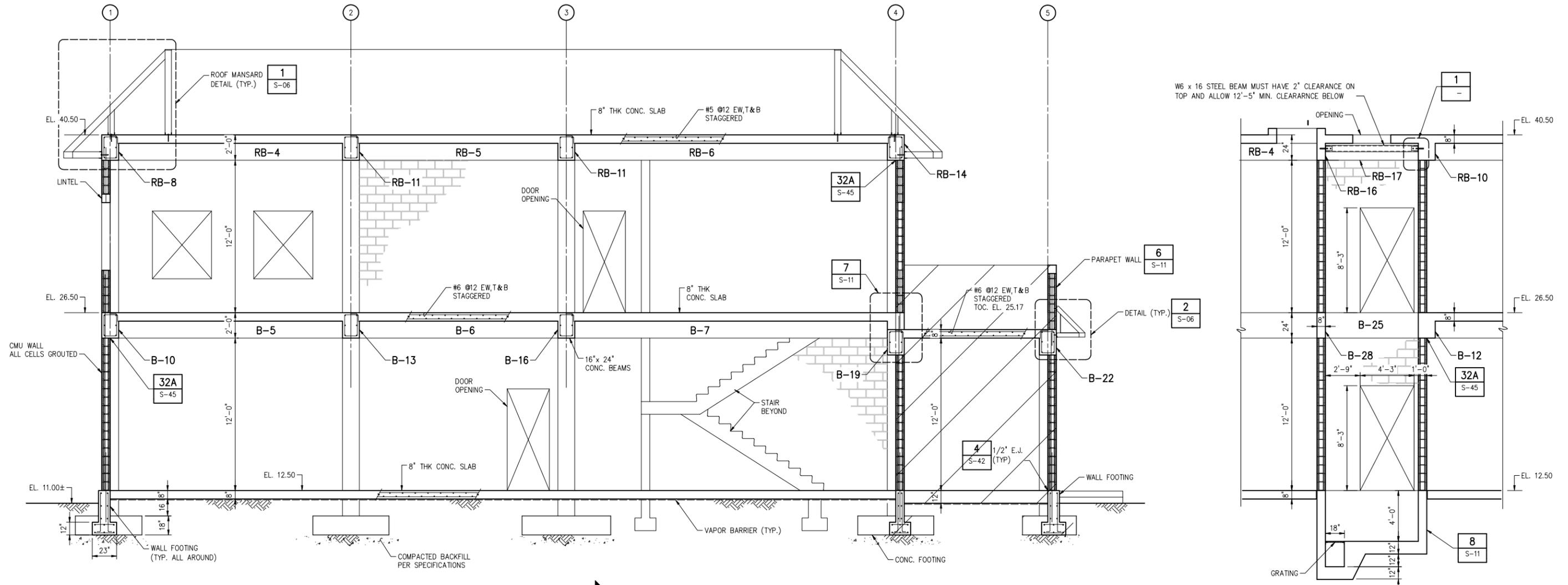
SCALE
1/4" = 1'-0"
 CLIENTS PROJECT: -
 ENGINEERS PROJECT: 44238-004
 CAD REFERENCE: 44238-004BP3-S07

CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
 RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
NEW ADMINISTRATION BUILDING
 ACCESS AND SIDEWALK

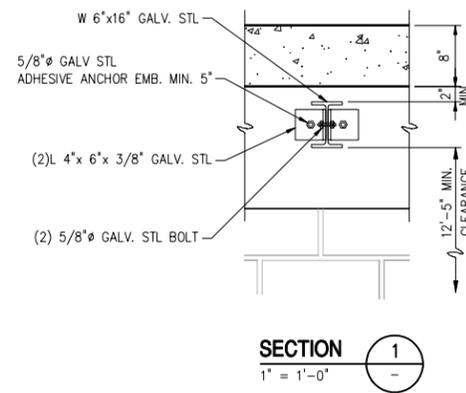
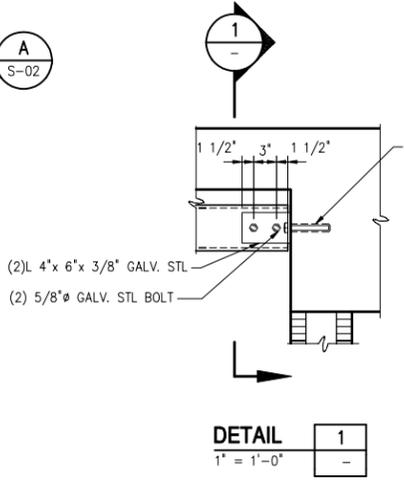
DATE: **JULY 2015**
 SHEET: **147** OF **335**
 DRAWING: **S-07**

REQUEST FOR PROPOSAL



SECTION A
1/4" = 1'-0" S-02

SECTION C
1/4" = 1'-0" S-03



LEGEND

MAIN ELECTRICAL ROOM TO BE CONSTRUCTED DURING PHASE I AND PHASE II OF CONSTRUCTION. MAIN ELECTRICAL ROOM CONSTRUCTION SHALL BE FINALIZED IN PHASE II OF CONSTRUCTION.



PLOT DATE: 7/24/2015 11:34 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.	JEAN PAUL SILVA P.E. No. 66522
DRAWN	C.C.P.	
CHECKED	A.F.H.	
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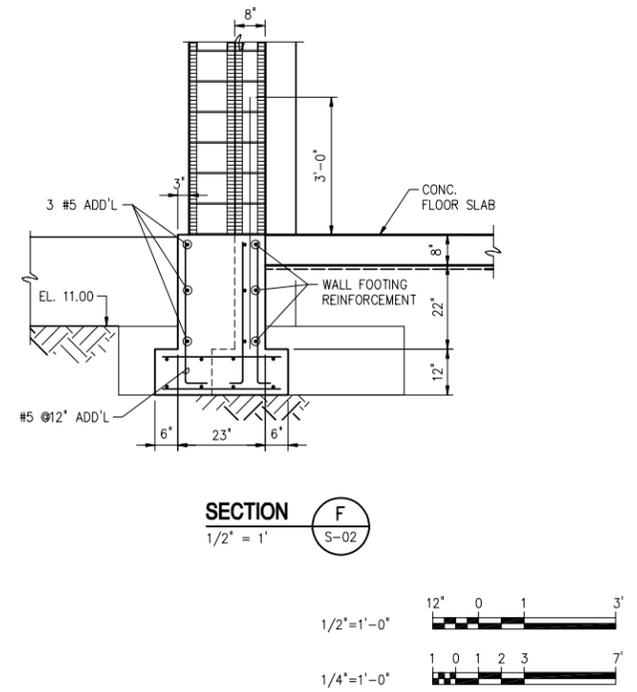
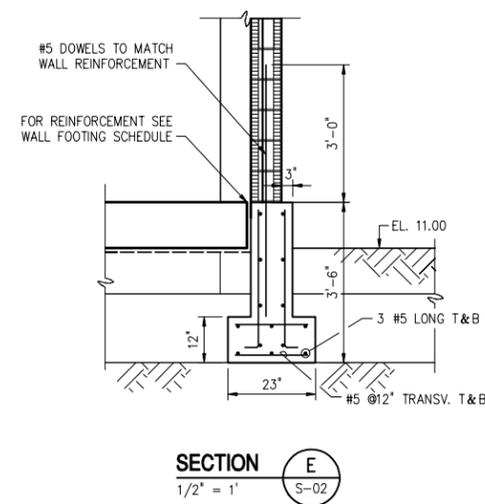
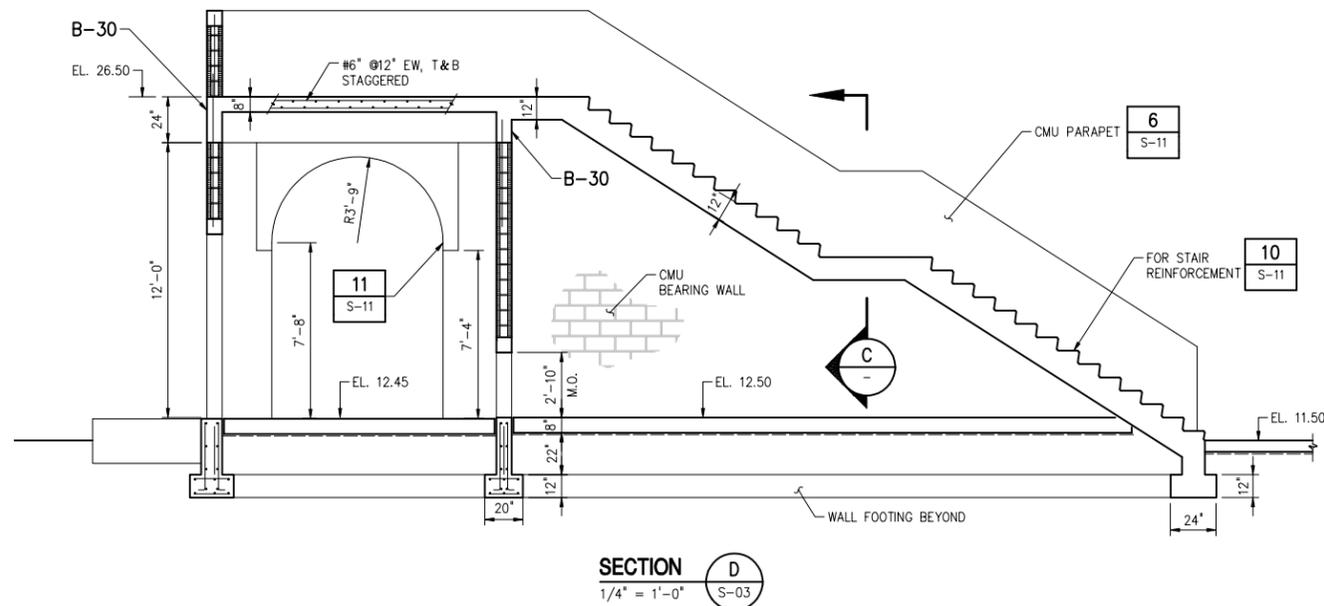
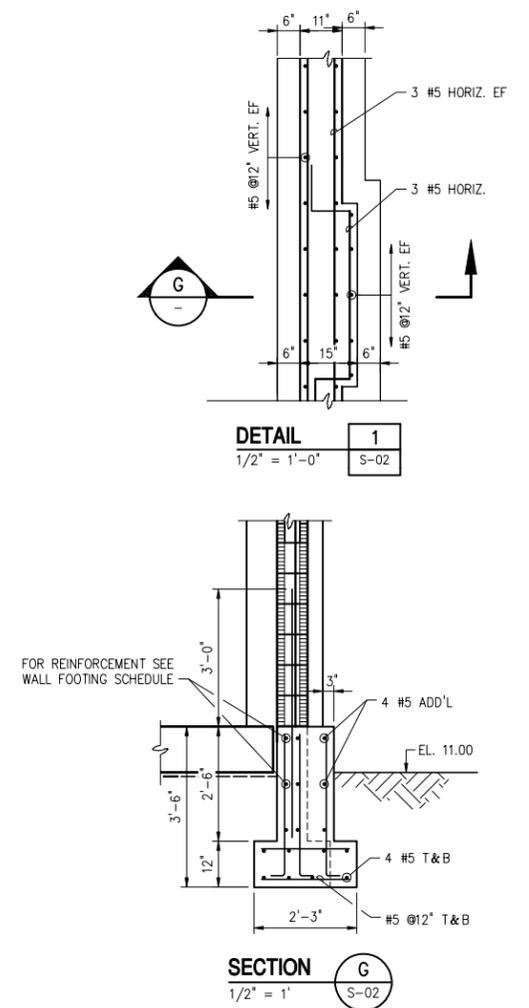
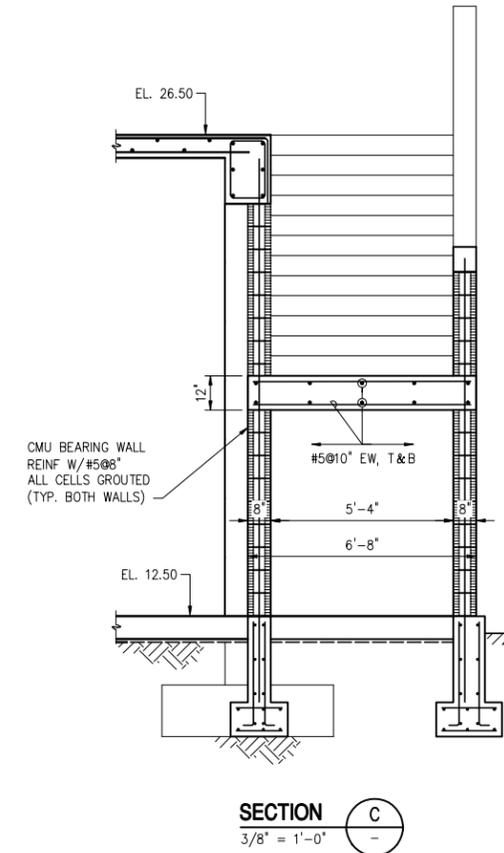
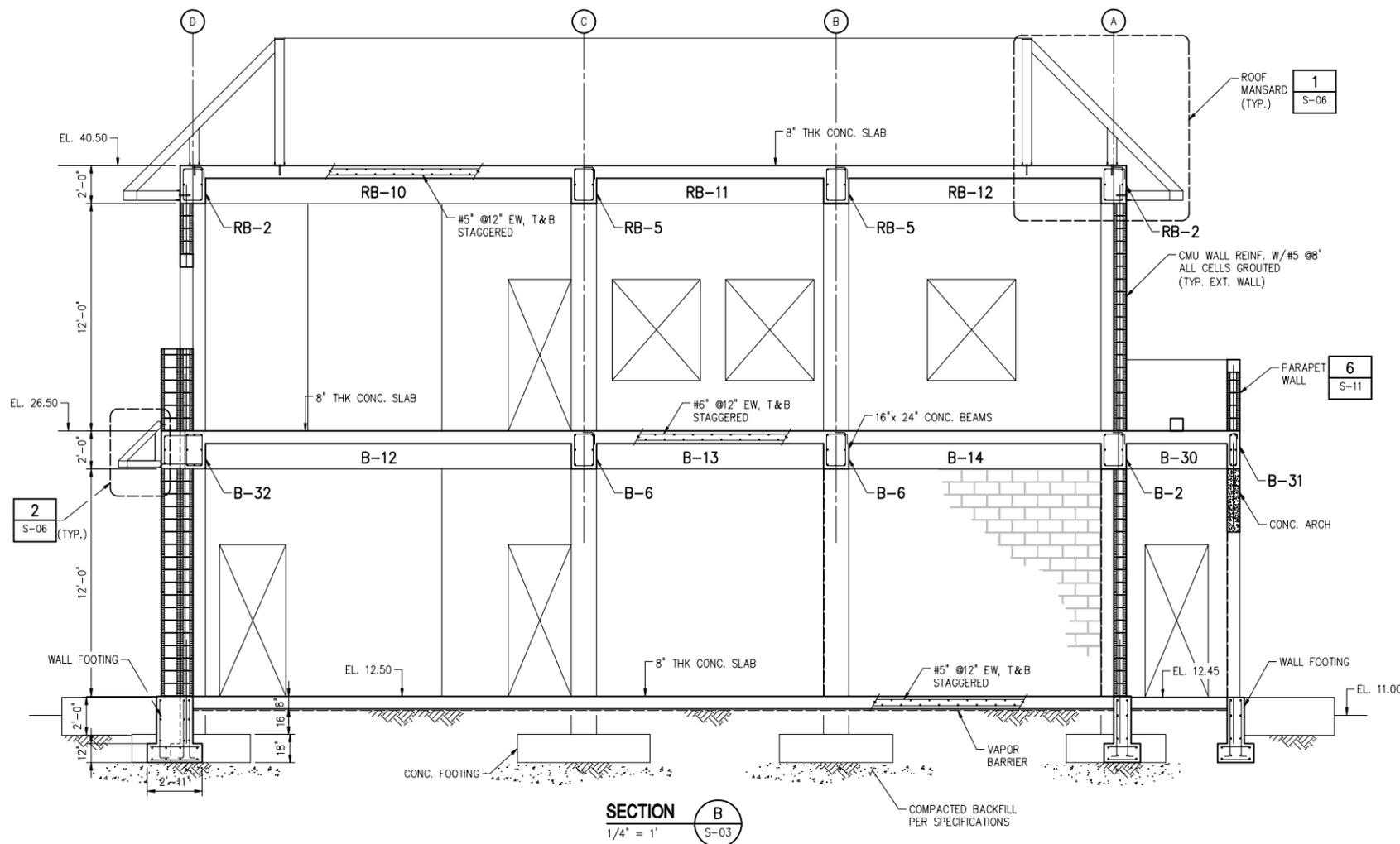
SCALE	1/4" = 1'-0"
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S08

CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
NEW ADMINISTRATION BUILDING
SECTIONS SHEET 1

DATE:	JULY 2015
SHEET:	148 OF 335
DRAWING:	S-08

REQUEST FOR PROPOSAL



PLOT DATE: 7/24/2015 11:35 AM BY: TBUCAS

NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.
DRAWN	A.B.C.
CHECKED	A.F.H.
PROJ. ENGR.	G.A.B.

JEAN PAUL SILVA	P.E.
No. 66522	

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

SCALE
1/4" = 1'-0"

CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S09

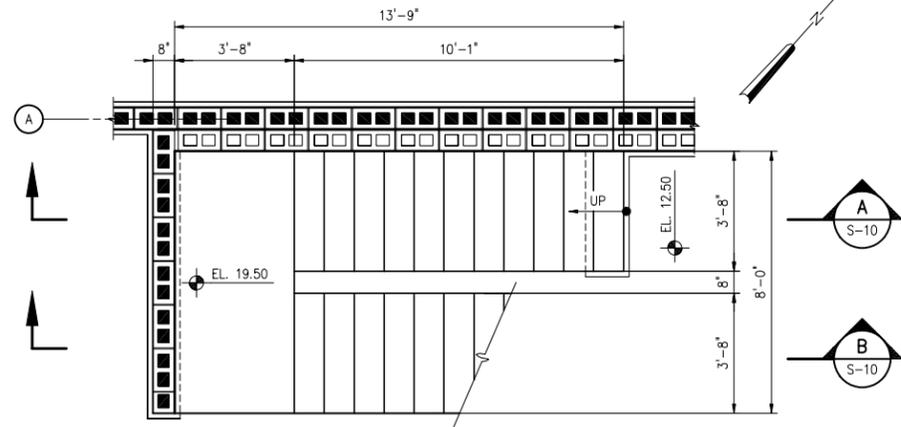


CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

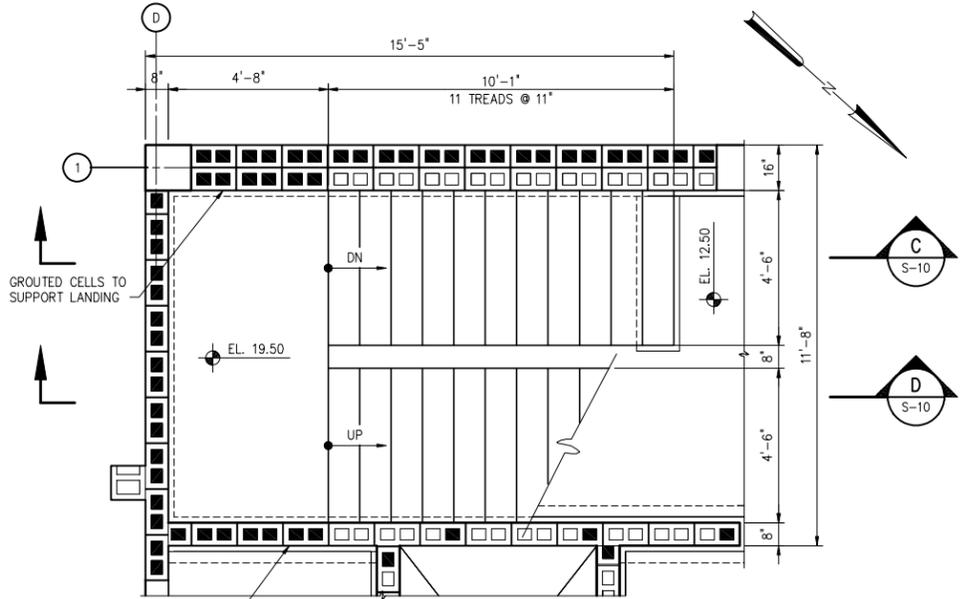
WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
NEW ADMINISTRATION BUILDING
SECTIONS SHEET 2

DATE:	JULY 2015
SHEET:	149 OF 335
DRAWING:	S-09

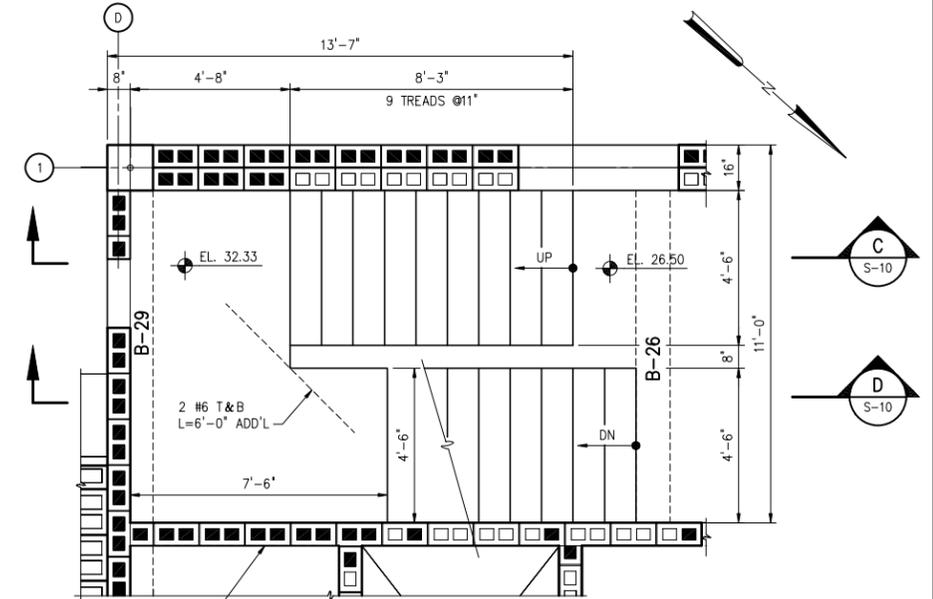
REQUEST FOR PROPOSAL



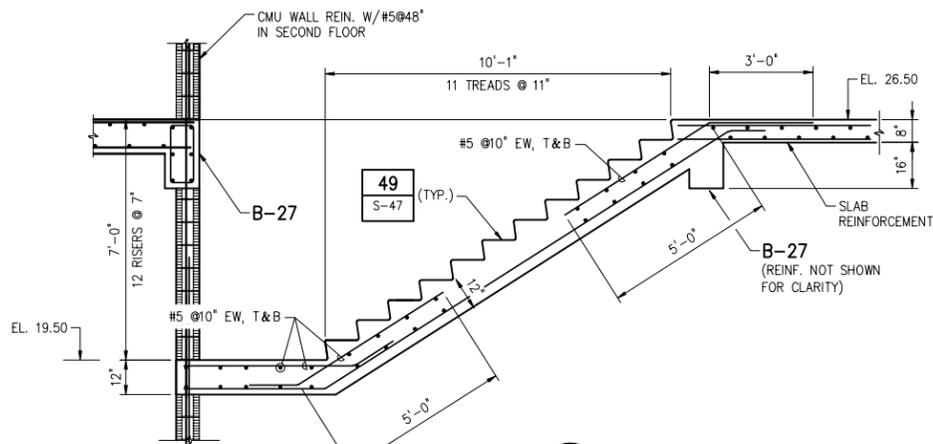
DETAIL 4
3/8" = 1'-0" S-03



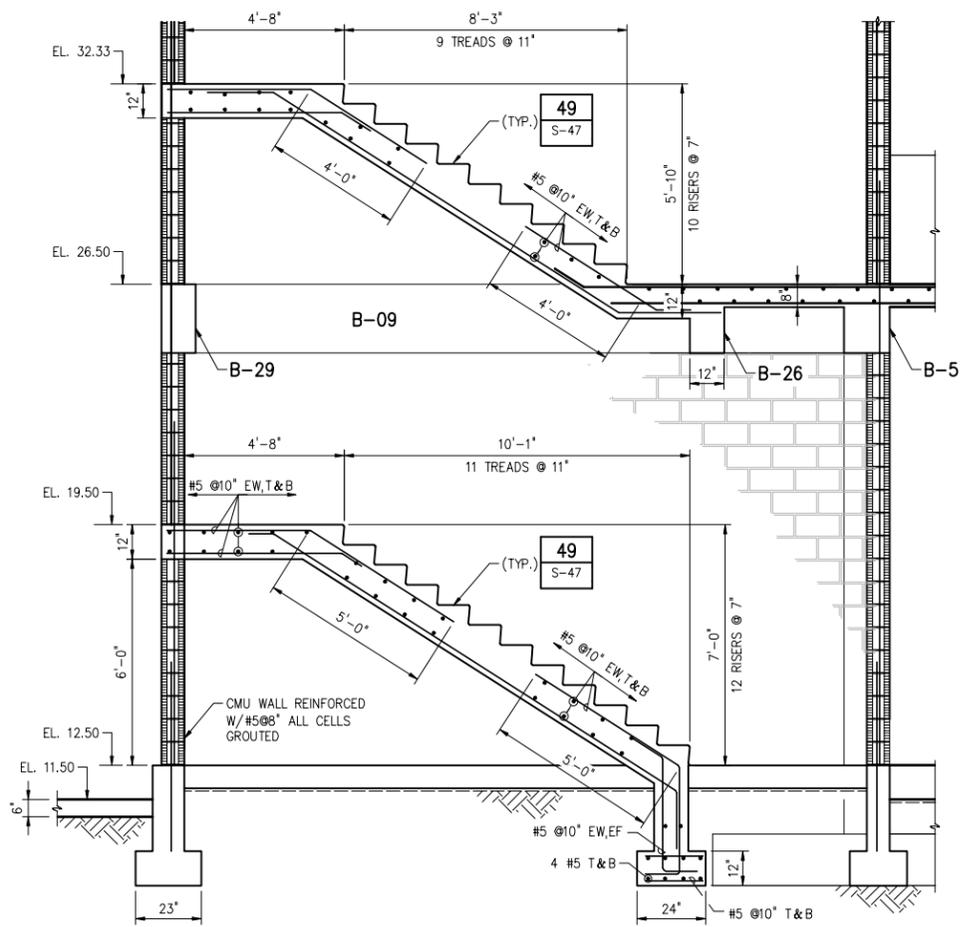
DETAIL 5
3/8" = 1'-0" S-03



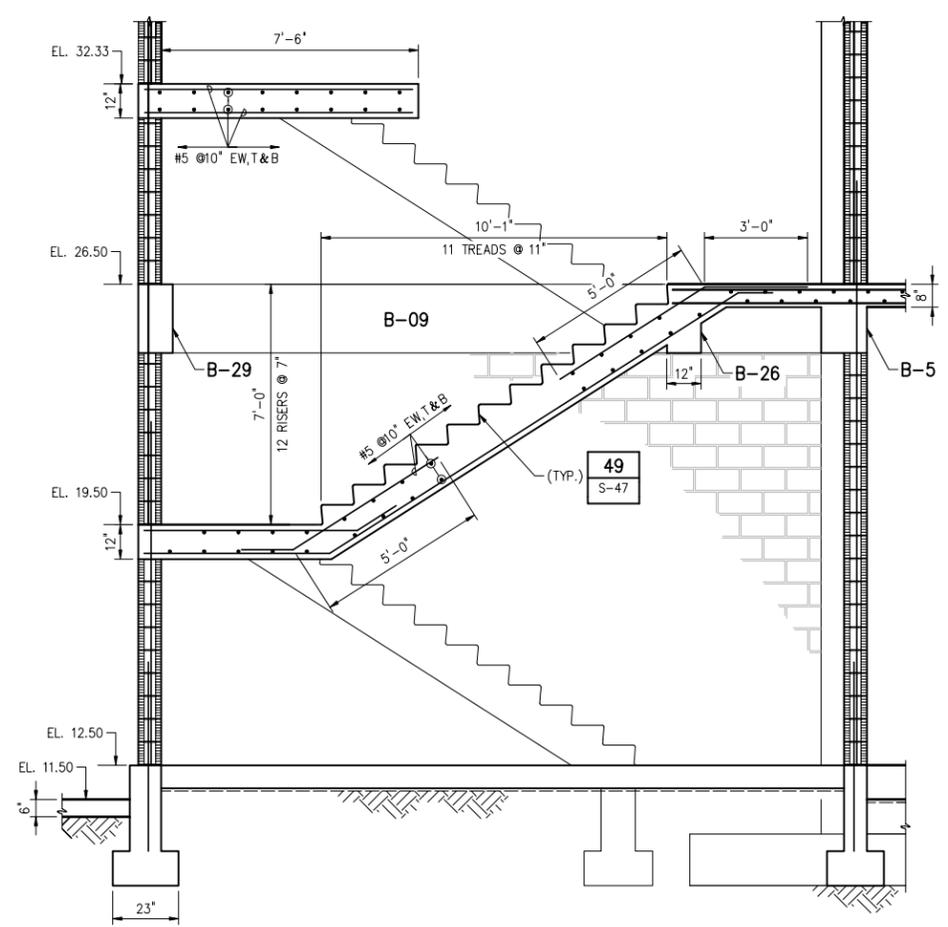
DETAIL 6
3/8" = 1'-0" S-04



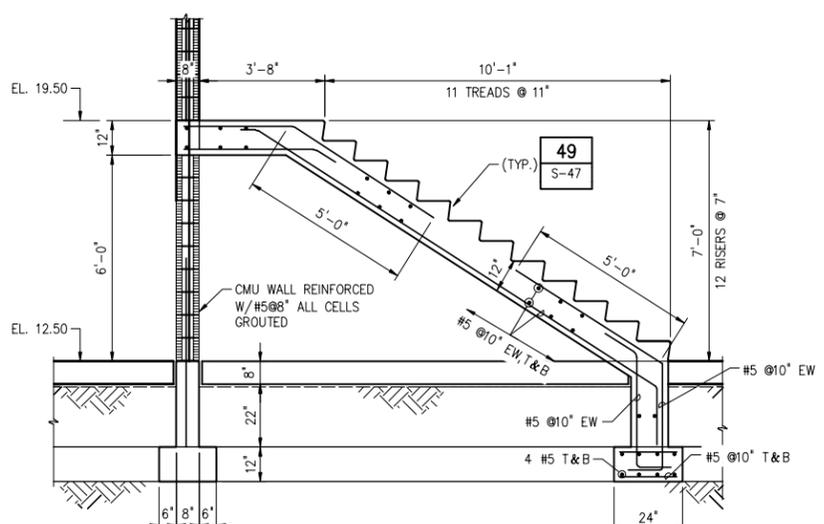
SECTION B
3/8" = 1'-0" S-10



SECTION C
3/8" = 1'-0" S-10



SECTION D
3/8" = 1'-0" S-10



SECTION A
3/8" = 1'-0" S-10

PLOT DATE: 7/24/2015 11:35 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.V.F.		
PROJ. ENGR.	J.P.S.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.	JEAN PAUL SILVA No. 66522	P.E.
DRAWN	C.C.P.		
CHECKED	A.V.F.		
PROJ. ENGR.	J.P.S.		

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
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Certificate of Authorization Number: 2771

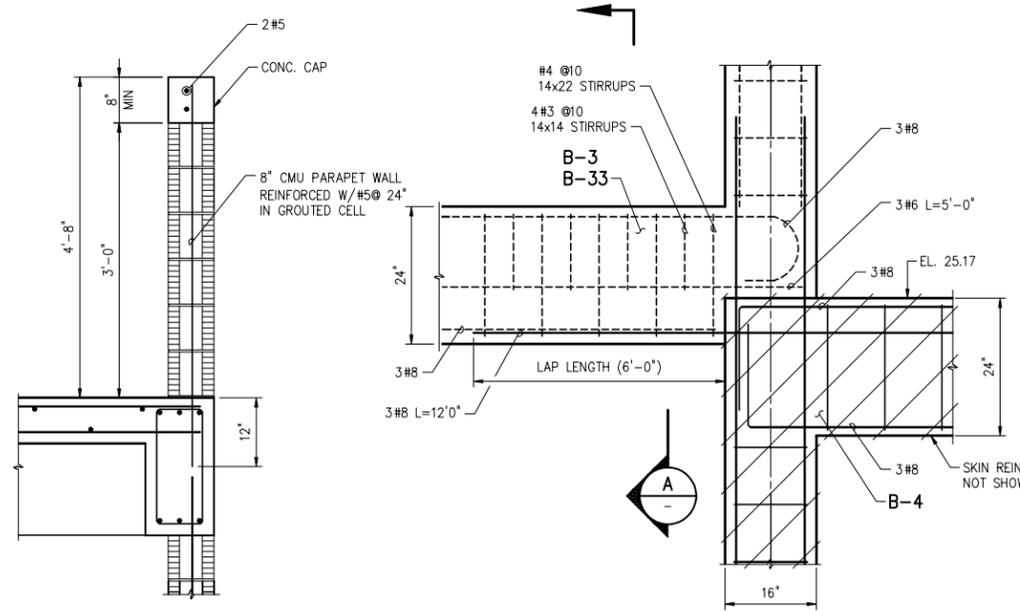
SCALE	AS NOTED
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S10

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

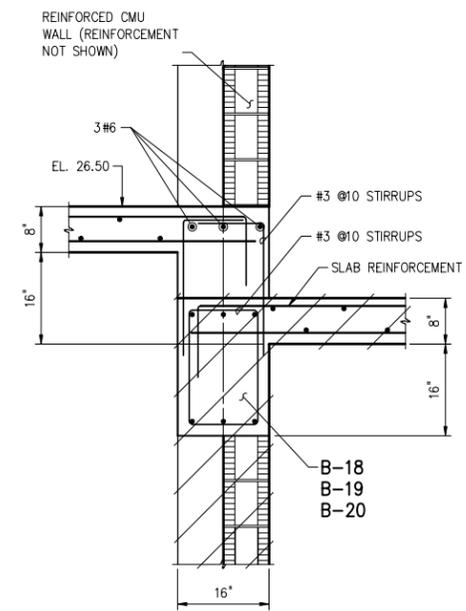
WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
NEW ADMINISTRATION BUILDING
DETAILS SHEET 1

DATE:	JULY 2015
SHEET:	150 OF 335
DRAWING:	S-10

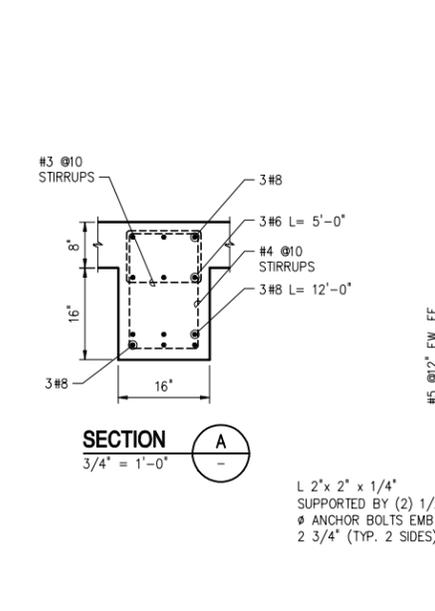
REQUEST FOR PROPOSAL



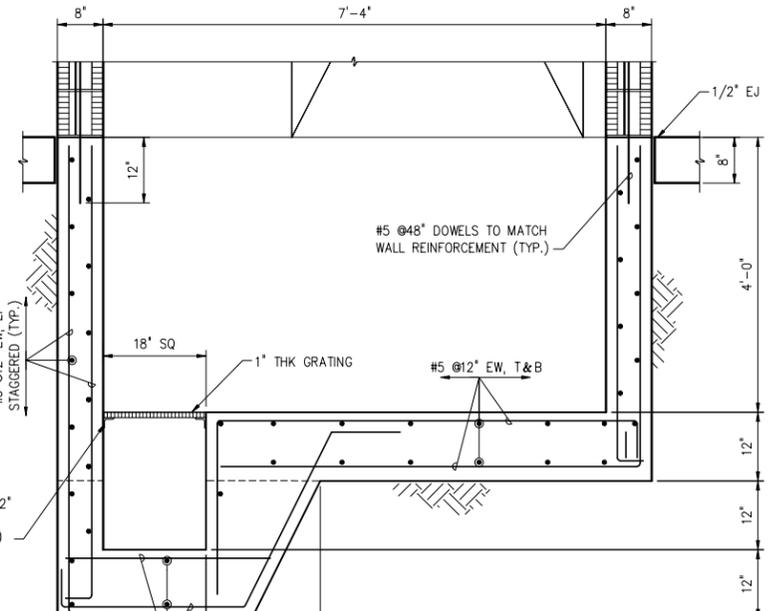
DETAIL 6
3/4" = 1'-0"
S-08 S-09



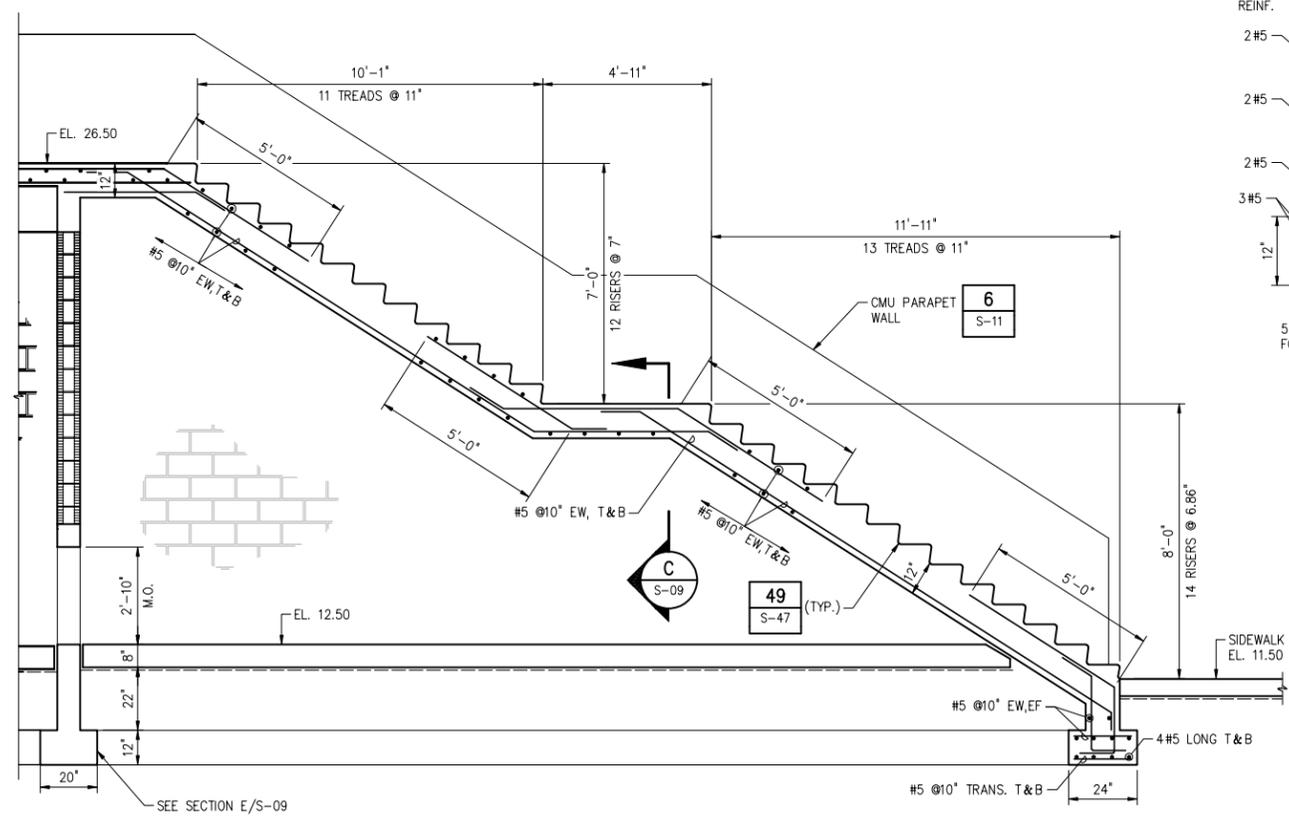
DETAIL 7
3/4" = 1'-0"
S-08



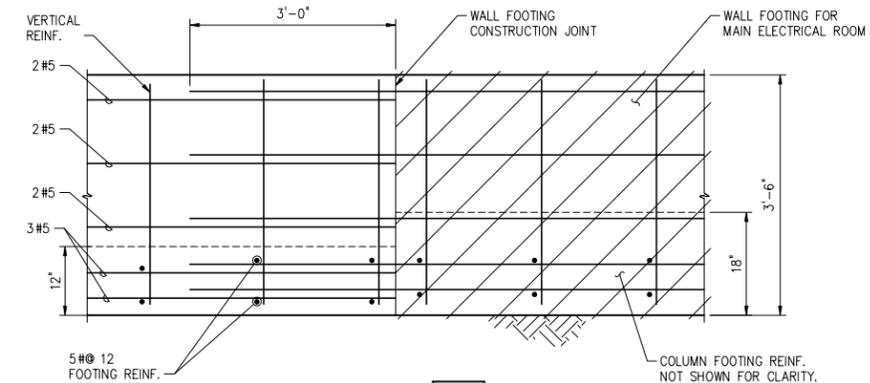
SECTION A
3/4" = 1'-0"



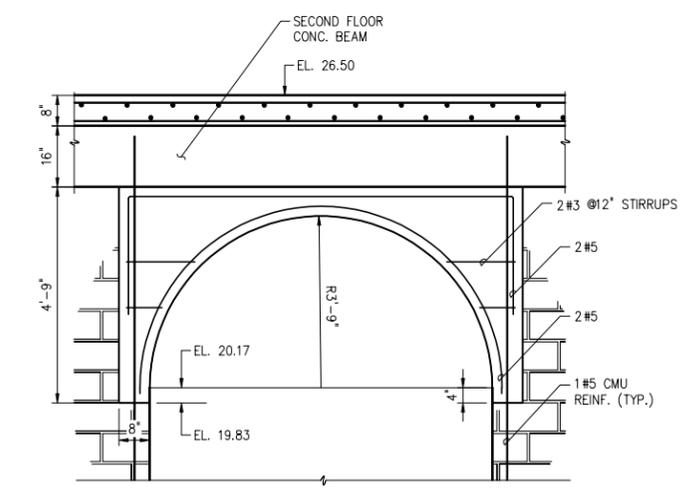
DETAIL 8
3/4" = 1'-0"
S-09



DETAIL 9
3/4" = 1'-0"
S-02



DETAIL 10
3/8" = 1'-0"
S-09

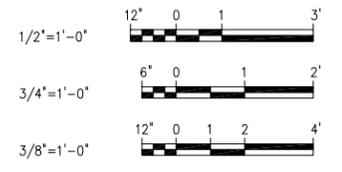


DETAIL 11
1/2" = 1'-0"
S-09

LEGEND



MAIN ELECTRICAL ROOM TO BE CONSTRUCTED DURING PHASE I AND PHASE II OF CONSTRUCTION. MAIN ELECTRICAL ROOM CONSTRUCTION SHALL BE FINALIZED IN PHASE II OF CONSTRUCTION.



PLOT DATE: 7/24/2015 11:35 AM BY: TBUCAS

NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.
XREF=		\\Block\44238-004-BP3-TB...Base-BP3\S-BP3-Admin-Sections	

DESIGNED	J.P.S.	JEAN PAUL SILVA	P.E.
DRAWN	F.C.T.	No. 66522	
CHECKED	A.V.F.		
PROJ. ENGR.	J.P.S.		

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

SCALE	AS NOTED
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S11

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
NEW ADMINISTRATION BUILDING
DETAILS SHEET 2

DATE:	JULY 2015
SHEET:	151 OF 335
DRAWING:	S-11

REQUEST FOR PROPOSAL

BEAM SCHEDULE												
MARK	SPAN TYPE	SIZE		TOP ELEVATION	No. REQ'S	MAIN REINF.			ADD. REINF.			REMARKS
		W'	D'			TOP	BOT.	A	B	C	SIZE	
SECOND FLOOR BEAMS												
B-1	END	16"	24"	26.50	1	3#8	3#6				#4	8
B-2	INT	16"	24"	26.50	1	3#9	3#6				#4	10
B-3	END	16"	24"	26.50	1	3#9	3#8				#4	10
B-4	SIMPLE	16"	24"	25.17	2	3#8	3#8				#4	10
B-5	END	16"	24"	26.50	2	3#8	3#6				#4	10
B-6	INT	16"	24"	26.50	2	3#8	3#6				#4	10
B-7	END	16"	24"	26.50	2	3#9	3#8				#4	10
B-8	END	16"/28"	24"	26.50	1	3#8	3#6				#4	10
B-9	INT	28"	24"	26.50	1	3#8	3#8				#4	8
B-10	END	16"/28"	24"	26.50	1	3#9	3#8				#4	8
B-11	END	16"	24"	26.50	1	2#9	3#8			2#9	#4	10
B-12	INT	16"	24"	26.50	1	3#9	3#6				#4	10
B-13	END	16"	24"	26.50	1	3#9	4#9				#4	10
B-14	END	16"	24"	26.50	1	2#9	3#8			2#9	#4	10
B-15	INT	16"	24"	26.50	1	3#8	3#6				#4	10
B-16	END	16"	24"	26.50	1	3#9	3#8				#4	10
B-17	END	16"	24"	26.50	1	2#9	3#8			2#9	#4	10
B-18	INT	16"	24"	26.50	1	3#8	3#6				#4	10
B-19	END	16"	24"	26.50	1	3#9	3#6				#4	10
B-20	END	16"	24"	25.17	1	2#9	3#8			2#9	#4	10
B-21	INT	16"	24"	25.17	1	3#9	3#6				#4	10
B-22	END	16"	24"	25.17	1	3#9	3#8				#4	10
B-23	END	16"	24"	25.17	1	3#8	3#6				#4	6
B-24	INT	16"	24"	25.17	1	3#8	3#6				#4	8
B-25	END	16"	24"	25.17	1	3#8	3#6				#4	6
B-26	SIMPLE	12"	24"	26.50	1	2#8	2#8				#3	10
B-27	SIMPLE	8"	24"	26.50	2	2#6	2#6				#3	10
B-28	SIMPLE	8"	24"	26.50	1	2#8	2#8				#3	10
B-29	SIMPLE	8"	24"	26.50	1	2#6	2#6				#3	10
B-30	SIMPLE	12"	24"	26.50	2	2#8	2#8				#3	10
B-31	SIMPLE	12"	24"	26.50	1	2#6	2#6				#3	10
B-32	SIMPLE	12"	24"	26.50	2	2#8	2#8				#3	10
ROOF BEAMS												
RB-1	END	16"	24"	40.50	2	4#6	4#6				#3	8
RB-2	INT	16"	24"	40.50	2	4#6	4#6				#3	8
RB-3	END	16"	24"	40.50	2	4#6	4#6				#3	6
RB-4	END	16"	24"	40.50	2	4#6	3#6				#3	10
RB-5	INT	16"	24"	40.50	2	4#6	3#6				#3	10
RB-6	END	16"	24"	40.50	2	4#6	4#6				#3	10
RB-7	END	16"	24"	40.50	1	4#6	4#6				#3	10
RB-8	INT	16"	24"	40.50	1	4#6	4#6				#3	10
RB-9	END	16"	24"	40.50	1	4#6	4#6				#3	10
RB-10	END	16"	24"	40.50	2	3#6	3#6				#3	10
RB-11	INT	16"	24"	40.50	2	3#6	3#6				#3	10
RB-12	END	16"	24"	40.50	2	3#6	3#6				#3	10
RB-13	END	16"	24"	40.50	1	4#6	4#6				#3	6
RB-14	INT	16"	24"	40.50	1	4#6	4#6				#3	8
RB-15	END	16"	24"	40.50	1	4#6	4#6				#3	8
RB-16	SIMPLE	8"	24"	40.50	1	2#6	2#6				#3	10
RB-17	SIMPLE	8"	24"	40.50	2	2#6	2#6				#3	10

SEE DETAIL 28/S-44 FOR BEAM ELEVATIONS

CONCRETE COLUMN SCHEDULE							
LOCATION	ELEVATION	DESIGNATION	A-1, B-1, C-1,	A-2, B-2, C-2, D-1, D-2 A-3, B-3, C-3,	D-3	A-5, B-5 C-5, D-5	A-4, B-4 C-4, D-4
ROOF	EL. 40.50	SIZE: BxD VERT. REINF. TIES	16'x 16' 8#11 #4@10"	16'x 16' 8#10 #4@10"	16'x 16' 8#9 #4@10"	16'x 16' 8#9 #4@10"	16'x 16' 8#10 #4@10"
SECOND FLOOR	EL. 26.50						
OBSERVATION DECK	EL. 25.17						
FIRST FLOOR	EL. 12.50	SIZE: BxD VERT. REINF. TIES	16'x 16' 8#11 #4@10"	16'x 16' 8#10 #4@10"	16'x 16' 8#9 #4@10"	16'x 16' 8#9 #4@10"	16'x 16' 8#10 #4@10"
TOP OF FOUNDATION	EL. 10.05						
FOUNDATION	EL. 9.00	DOWELS	8#11	8#10	8#9	8#9	8#10

SEE DETAIL 27 / S-44 FOR COLUMNS ELEVATION

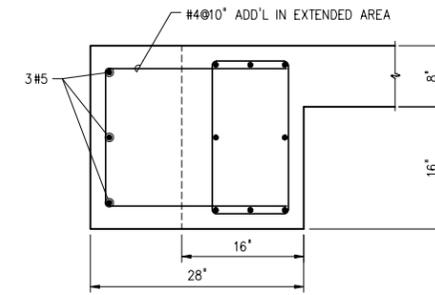
COLUMN SCHEDULE

1/4" = 1'-0"

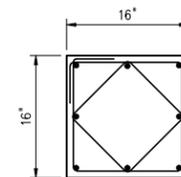
WALL FOOTING SCHEDULE

FOOTING	REINFORCEMENT				DIMENSIONS		
	WALL		WALL		FOOTING		WALL
	LONG	TRANSV.	LONG	TRANSV.	WIDE	HEIGHT	THICK
FB-1	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	23	12	11
FB-2	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	23	12	11
FB-3	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	*	12	*
FB-4	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	*	12	*
FB-5	4#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	35	12	19
FB-6	4#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	35	12	19
FB-7	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	23	12	11
FB-8	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	23	12	11
FB-9	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	23	12	11
FB-10	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	23	12	11
FB-11	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	23	12	11
FB-12	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	23	12	11
FB-13	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	23	12	11
FB-14	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	20	12	8
FB-15	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	20	12	8
FB-16	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	20	12	8
FB-17	3#5 T&B	#5 @12 T&B	3#5 EF	#5 @12 EF	20	12	8

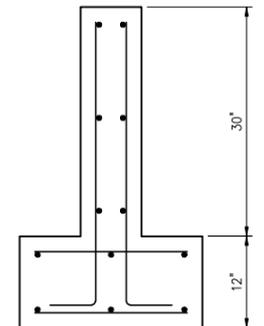
* SEE PLAN



DETAIL 1
1" = 1'-0"



TYPICAL COLUMN SECTION



WALL FOOTING TYPICAL SECTION

DESIGNED	J.P.S.		
DRAWN	G..P.B.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.	SCALE	NTS
DRAWN	G..P.B.	CLIENTS PROJECT:	-
CHECKED	A.F.H.	ENGINEERS PROJECT:	44238-004
PROJ. ENGR.	G.A.B.	CAD REFERENCE:	44238-004BP3-S12
JEAN PAUL SILVA	P.E.		
No. 66522		4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771	

CITY OF NORTH MIAMI PUBLIC WORKS UTILITIES	

WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS -- VOLUME B: WTP REHAB	
NEW ADMINISTRATION BUILDING BEAM AND COLUMN SCHEDULES	

DATE:	JULY 2015
SHEET:	152 OF 335
DRAWING:	S-12



PHOTO 1
NTS



PHOTO 2
NTS

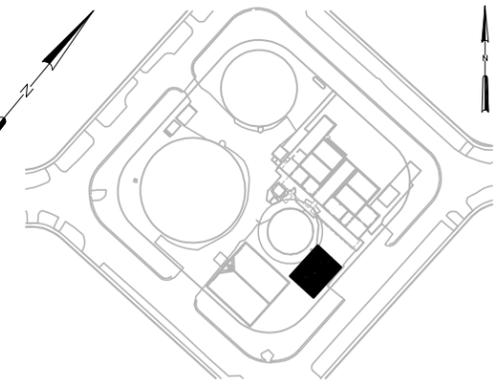
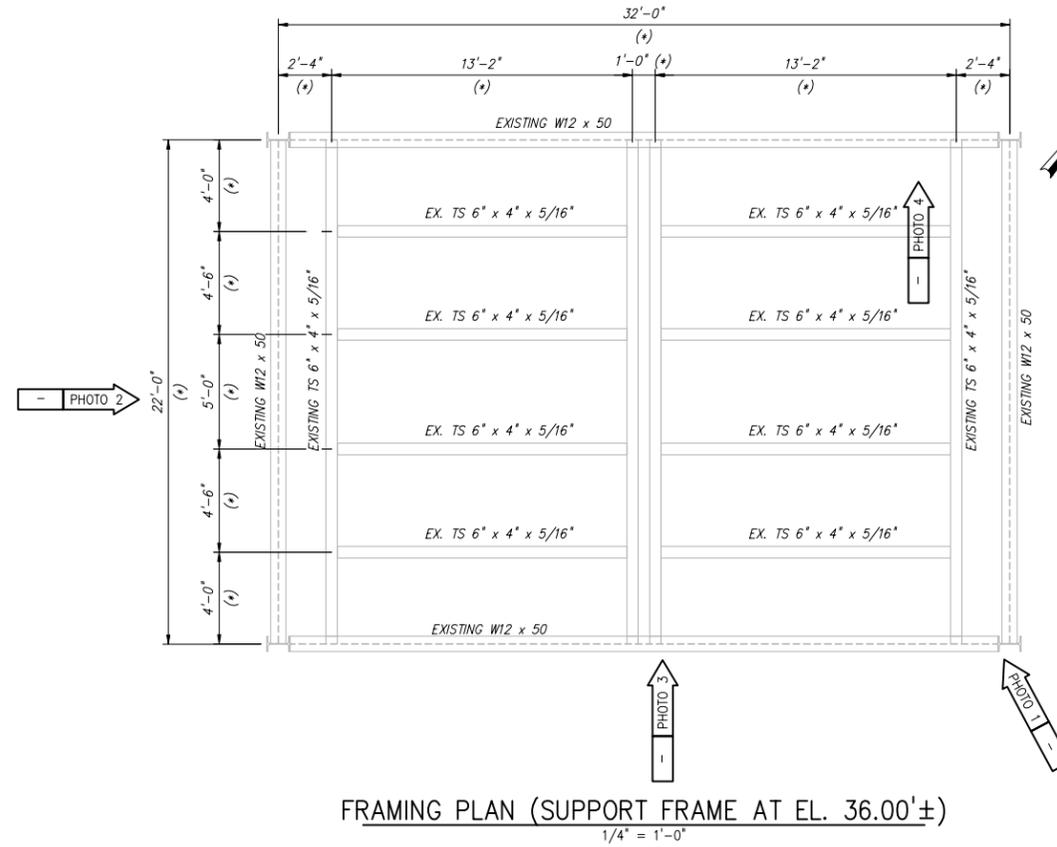
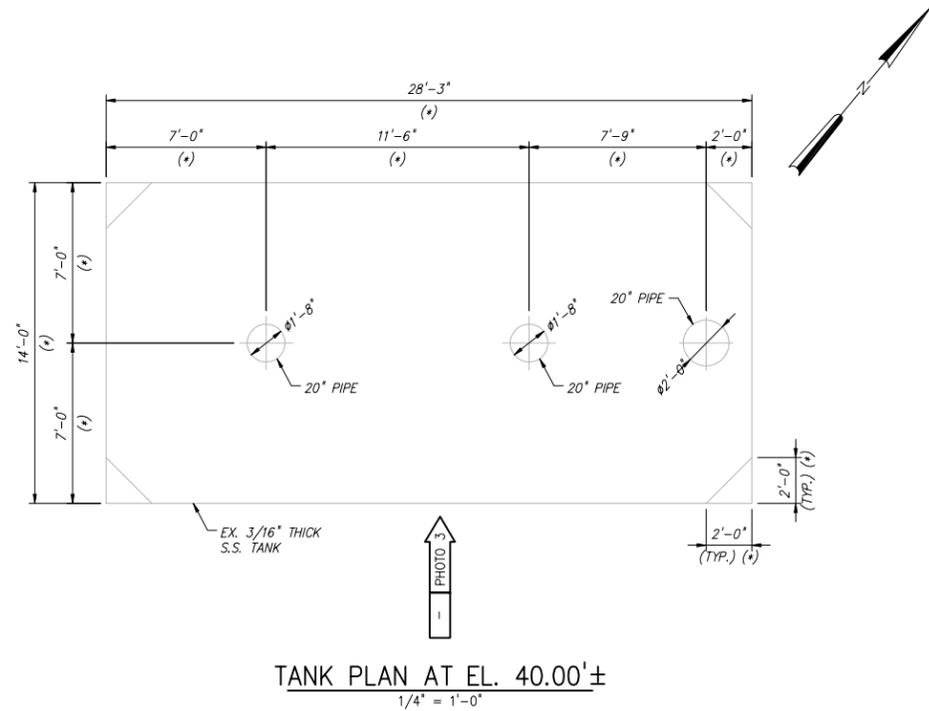


PHOTO 3
NTS



PHOTO 4
NTS



GENERAL NOTES:

1. LIMITED RECORD DRAWINGS EXIST FOR THIS STRUCTURE AND/OR AREA. REFERENCE THE APPENDIX "RECORD DRAWINGS" FOR AVAILABLE INFORMATION. THE RECORD DRAWINGS ARE PROVIDED FOR INFORMATIONAL PURPOSES. PHOTOS PROVIDED FOR GENERAL INFORMATION PURPOSES.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID PER THE REQUIREMENTS OF DIVISION 1 OF THE SPECIFICATIONS.
3. CONTRACTOR RETAINS FULL RESPONSIBILITY FOR FIELD VERIFICATION OF ALL ABOVE GROUND IMPROVEMENTS TO BE REMOVED FOR THIS WORK. SUCH VERIFICATION SHALL INCLUDE: STRUCTURAL, ARCHITECTURAL, HVCA, PLUMBING, ELECTRICAL, IRRIGATION, CONTROLS, FREE STANDING EQUIPMENT, LANDSCAPING, AND ANY AND ALL OTHER EXISTING IMPROVEMENTS WITHIN THE BOUNDARY OF THE WORK WHETHER SHOWN HEREIN OR NOT.
4. FOR BELOW GRADE IMPROVEMENTS TO BE REMOVED REFERENCE APPLICABLE CIVIL AND ELECTRICAL DRAWINGS ACCORDINGLY.
5. REFER TO SPECIFICATIONS SECTION ENTITLED "DEMOLITION OF EXISTING FACILITIES".
6. PRE-BID ACCESS TO THE SITE SHALL BE COORDINATED BY THE CONTRACTOR UPON REQUEST THROUGH A CONTACT TO BE DETERMINED AT THE CITY OF NORTH MIAMI.



PLOT DATE: 7/24/2015 11:35 AM BY: TBUCAS

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NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

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PROJ. ENGR.	G.A.B.
JEAN PAUL SILVA	P.E.
No. 66522	

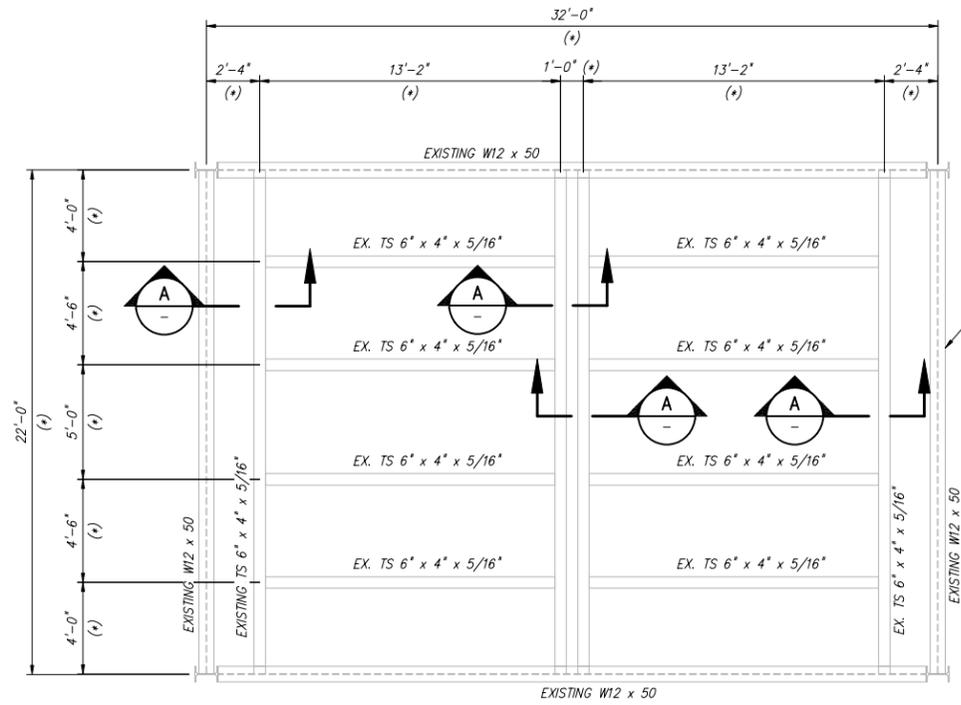
HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

SCALE	AS NOTED
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S13

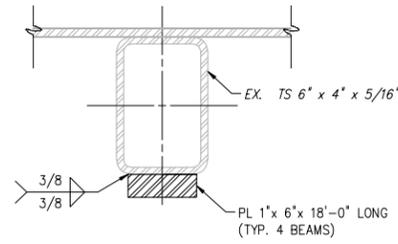


WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
AERATOR EXISTING PLAN AND PHOTOS

DATE:	JULY 2015
SHEET:	153 OF 335
DRAWING:	S-13



PREPARE AND PAINT AERATOR SUPPORT STRUCTURE AND CAGE



SECTION A
3" = 1'-0"

FRAMING PLAN (SUPPORT FRAME AT EL. 36.00'±)
1/4" = 1'-0"

NOTES:

1. THE OWNER SHALL BY-PASS THE AERATOR AND CONVEY WATER FROM THE WELL FIELD DIRECTLY TO THE LIME CONTACTOR DURING THE INSTALLATION OF THE PROPOSED REINFORCING PLATES. REFERENCE THE SPECIFICATION SECTION ENTITLED "SUMMARY OF WORK" FOR CONSTRUCTION SEQUENCING CONSTRAINTS.

LEGEND:

- EXISTING
- PROPOSED



PLOT DATE: 7/24/2015 11:35 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	G.P.B.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

<p>HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771</p>	<p>SCALE AS NOTED</p>	<p>CLIENTS PROJECT: —</p> <p>ENGINEERS PROJECT: 44238-004</p> <p>CAD REFERENCE: 44238-004BP3-S14</p>	<p>WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS — VOLUME B: WTP REHAB</p>	<p>DATE: JULY 2015</p> <p>SHEET: 154 OF 335</p> <p>DRAWING: S-14</p>
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HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

SCALE
AS NOTED

CLIENTS PROJECT: —

ENGINEERS PROJECT: 44238-004

CAD REFERENCE: 44238-004BP3-S14



WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS — VOLUME B: WTP REHAB

**AERATOR SUPPORT STRUCTURE IMPROVEMENTS
PLAN AND SECTIONS**

DATE: JULY 2015

SHEET: 154 OF 335

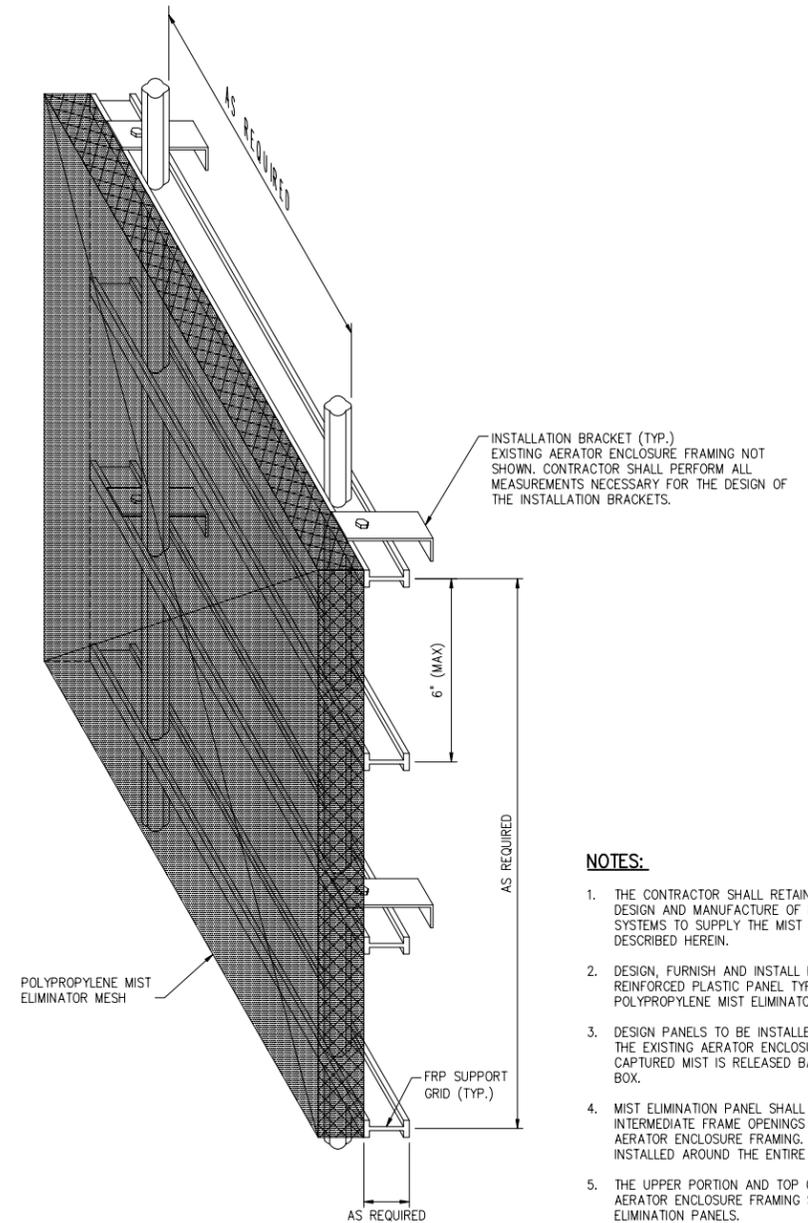
DRAWING: S-14

REQUEST FOR PROPOSAL

1
S-15
MIST ELIMINATOR PANEL
(TYP. ALL AROUND)

FIELD MEASURE ALL DIMENSIONS OF
EXISTING FRAMING OPENINGS TO DETERMINE
MIST ELIMINATOR PANEL DIMENSIONS

PREPARE AND PAINT
AERATOR STRUCTURE



NOTES:

1. THE CONTRACTOR SHALL RETAIN A SPECIALIST IN THE DESIGN AND MANUFACTURE OF MIST ELIMINATION SYSTEMS TO SUPPLY THE MIST ELIMINATION PANEL DESCRIBED HEREIN.
2. DESIGN, FURNISH AND INSTALL FIBERGLASS REINFORCED PLASTIC PANEL TYPE INSERTS FILLED WITH POLYPROPYLENE MIST ELIMINATOR MESH.
3. DESIGN PANELS TO BE INSTALLED ON THE SIDE OF THE EXISTING AERATOR ENCLOSURE FRAMING SO THAT CAPTURED MIST IS RELEASED BACK INTO THE AERATOR BOX.
4. MIST ELIMINATION PANEL SHALL BE INSTALLED ON THE INTERMEDIATE FRAME OPENINGS OF THE EXISTING AERATOR ENCLOSURE FRAMING. PANELS SHALL BE INSTALLED AROUND THE ENTIRE AERATOR.
5. THE UPPER PORTION AND TOP OF THE EXISTING AERATOR ENCLOSURE FRAMING SHALL NOT HAVE MIST ELIMINATION PANELS.
6. THE MANUFACTURER SHALL BE COMPLETELY RESPONSIBLE FOR THE DESIGN OF THE MIST PANELS ALONG WITH ALL NECESSARY ACCESSORIES FOR ATTACHING THE MIST PANELS TO THE EXISTING AERATOR ENCLOSURE FRAMING.
7. DESIGN SHALL REMOVE 95 PERCENT OF WATER DROPLETS GREATER THAN 50 MICRONS IN DIAMETER WITH A HEADLOSS OF APPROXIMATELY 2-INCHES IN A CONTINUOUS 25 MILE PER HOUR WIND.
8. MIST ELIMINATOR PANELS SHALL BE DESIGNED TO BE EASILY REMOVABLE BY WATER PLANT PERSONNEL. PANEL MAXIMUM WEIGHT SHALL BE 50 POUNDS.
9. IF DIRECTED BY THE OWNER IN WRITING, THE CONTRACTOR SHALL REMOVE THE MIST ELIMINATOR PANELS DURING A HURRICANE WATCH AND REINSTALL THE PANELS AFTER THE HURRICANE THREAT HE PASSED, AT NO ADDITIONAL COST TO THE OWNER.
10. MANUFACTURER: KIMRE, INC., OR EQUAL.
11. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INDICATING CONSTRUCTION AND ANCHORAGE DETAILS.

INSTALLATION DETAIL
NTS

MIST ELIMINATOR PANEL
DETAIL 1
NTS

PLOT DATE: 7/24/2015 11:35 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.H.		
PROJ. ENGR.	J.P.S.		
NO.	DATE	REQUEST FOR PROPOSAL	G.A.B.
1	07/24/15	ISSUED FOR	BY

<p>HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771</p>	<p>SCALE NTS</p>	<p>CLIENTS PROJECT: - ENGINEERS PROJECT: 44238-004 CAD REFERENCE: 44238-004BP3-S15</p>	<p> CITY OF NORTH MIAMI PUBLIC WORKS UTILITIES </p>	<p> WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB AERATOR MIST PANEL IMPROVEMENTS SECTIONS AND DETAILS </p>	<p>DATE: JULY 2015 SHEET: 155 OF 335 DRAWING: S-15</p>
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HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

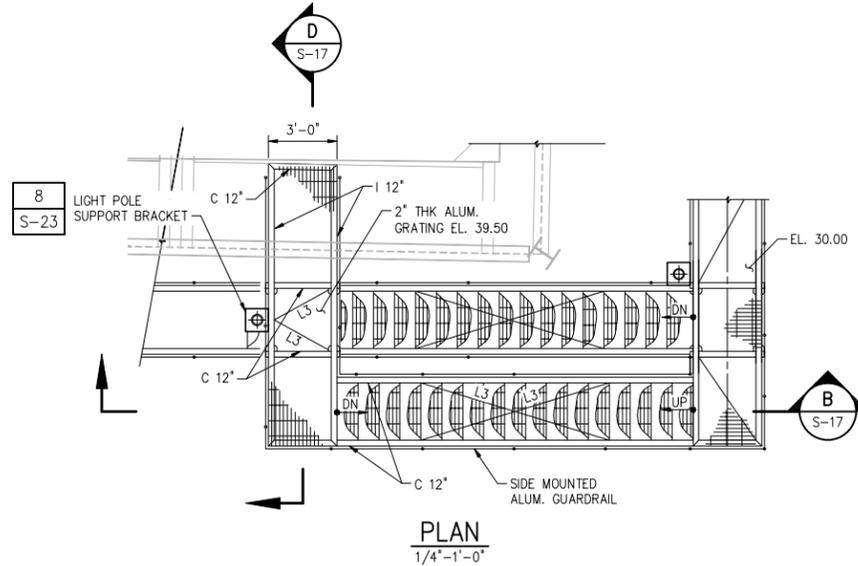
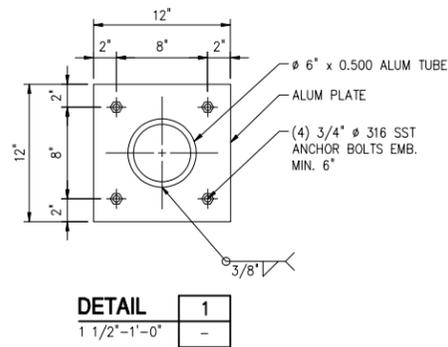
REQUEST FOR PROPOSAL

OCCUPANCY CLASSIFICATION:

SPECIAL PURPOSE INDUSTRIAL OCCUPANCY (FFPC 40.1.4.1.2)

OCCUPANT LOAD:

TOTAL OCCUPANT LOAD = 2
OCCUPANT LOAD FACTOR = NA (FFPC TABLE 7-3-1-2)

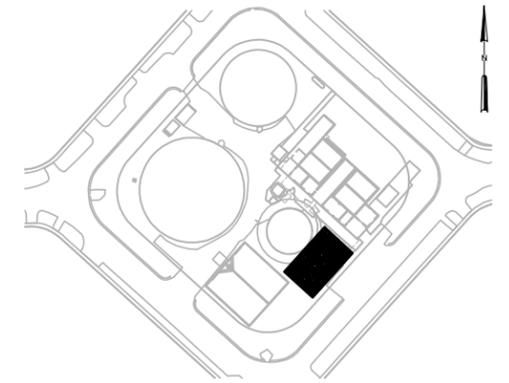


KEYED NOTE:

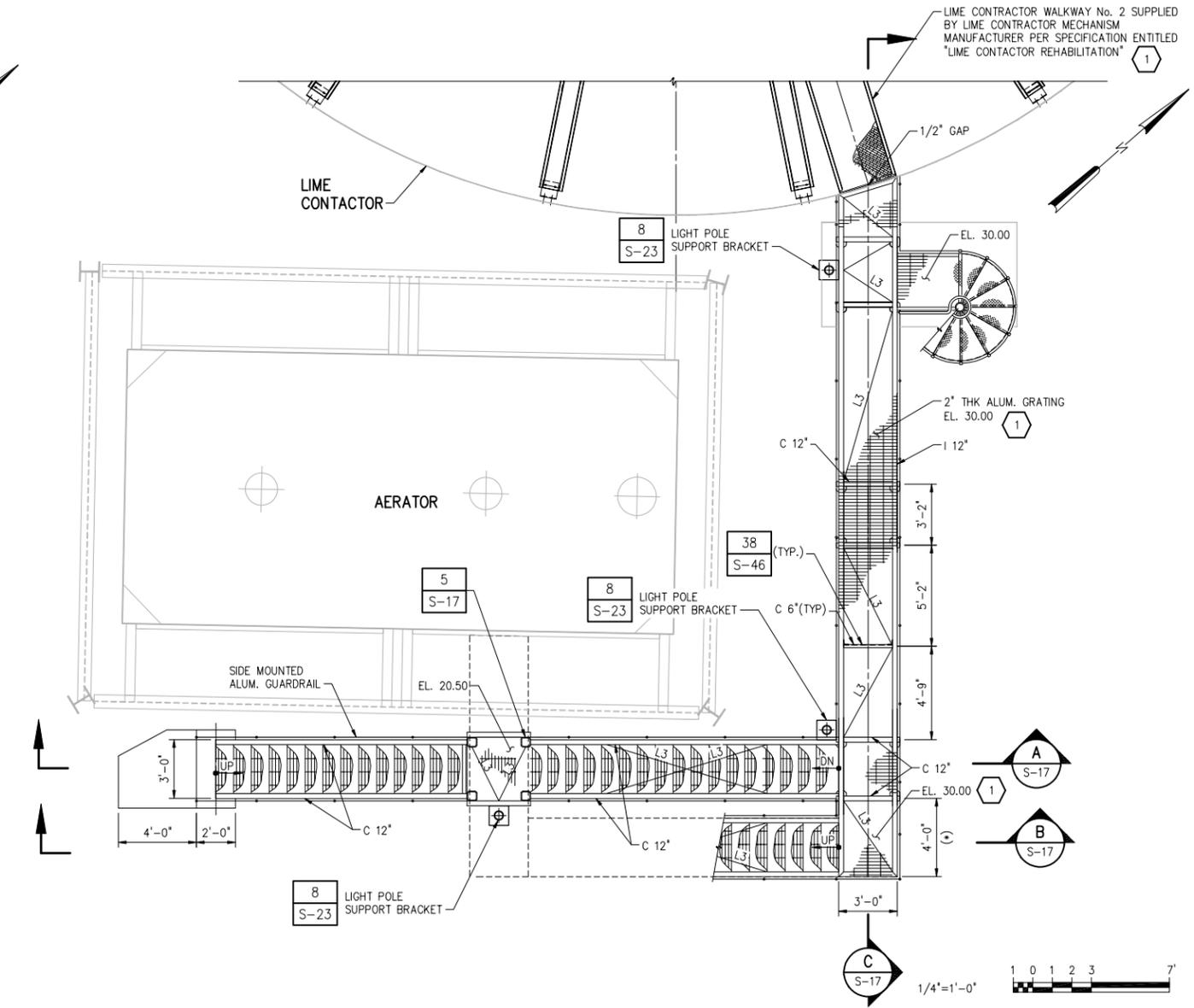
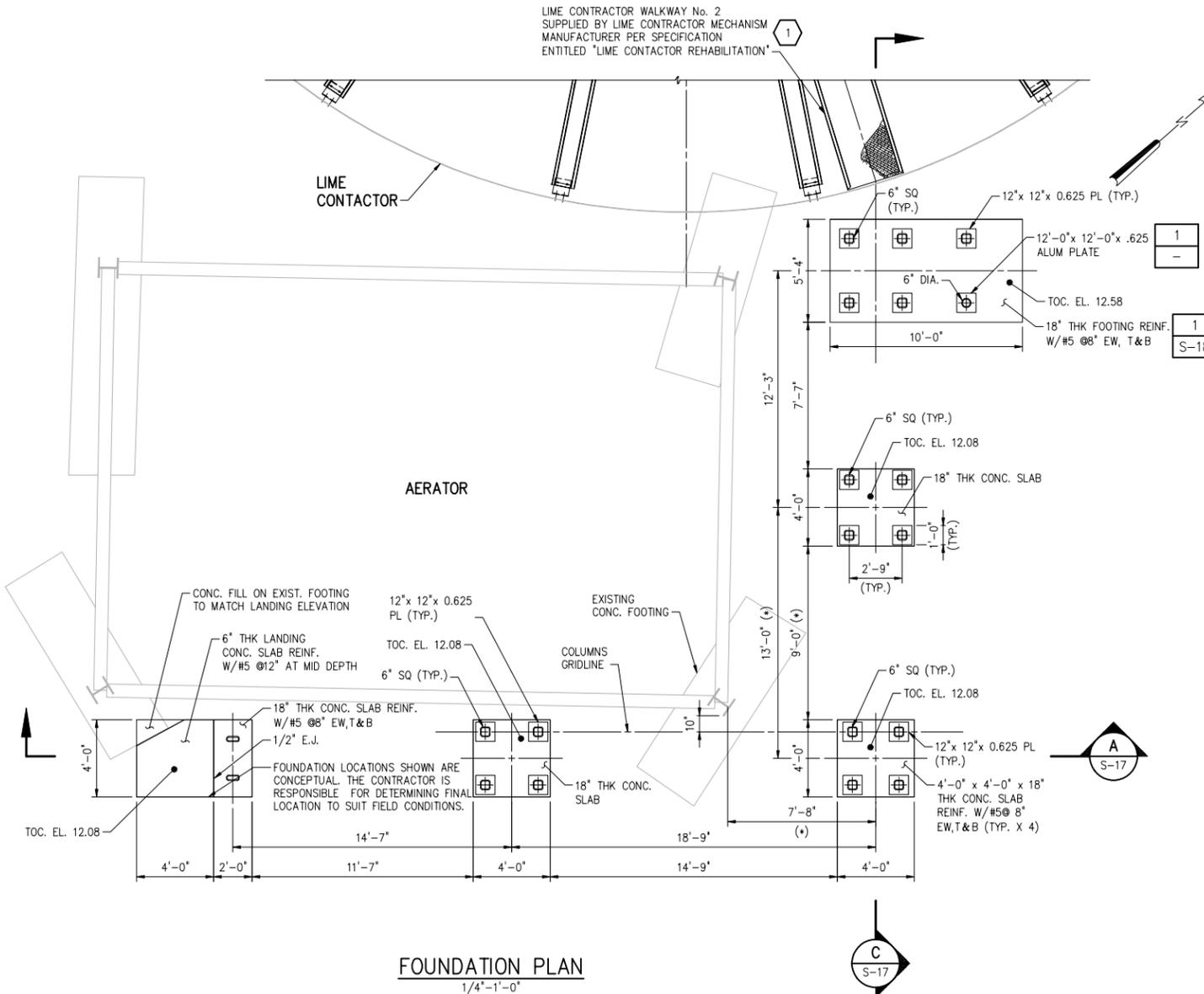
1 THE CONTRACTOR SHALL COORDINATE WITH THE SUPPLIER FOR THE SPECIFICATION ENTITLED "LIME CONTACTOR REHABILITATION" TO ENSURE THAT THE CENTERLINES AND TOP OF GRATING ELEVATION OF THE ACCESS STAIRS AND LIME CONTACTOR WALKWAY No.2 MATCH.

LEGEND:

- L3 DENOTES = L 3"x 3"x .375 ALUM.
- C12 DENOTES = C 12"x 7.41" ALUM.
- I 12 DENOTES = I 12"x 11.7" ALUM.
- 6"SQ DENOTES = 6"x .500 SQUARE TUBE ALUM.
- C6 DENOTES = C 6" x 2.83" ALUM.



LOCATION MAP



DESIGNED	J.P.S.
DRAWN	C.C.P.
CHECKED	A.H.
PROJ. ENGR.	J.P.S.

JEAN PAUL SILVA	P.E.
No. 66522	

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

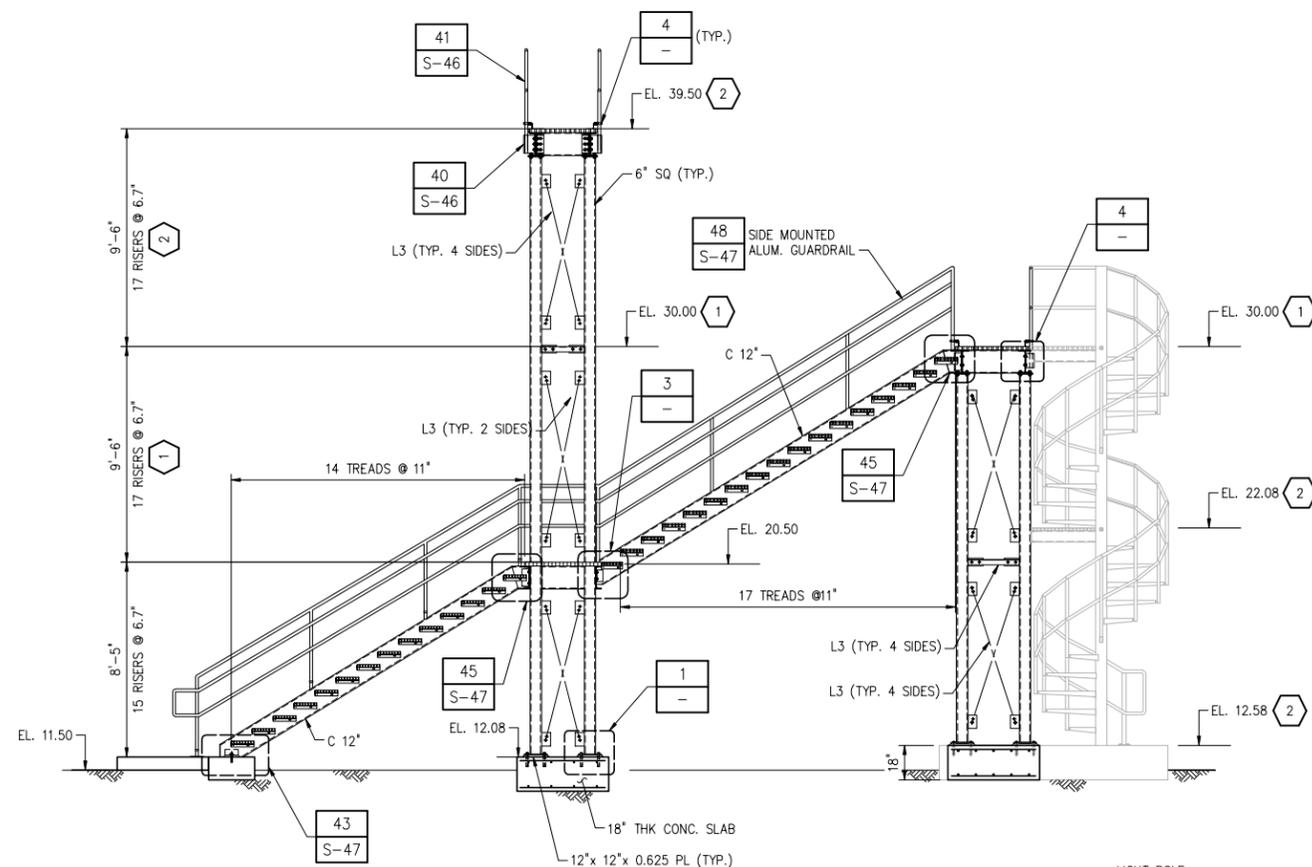
SCALE	1/4"=1'-0"
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S16

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

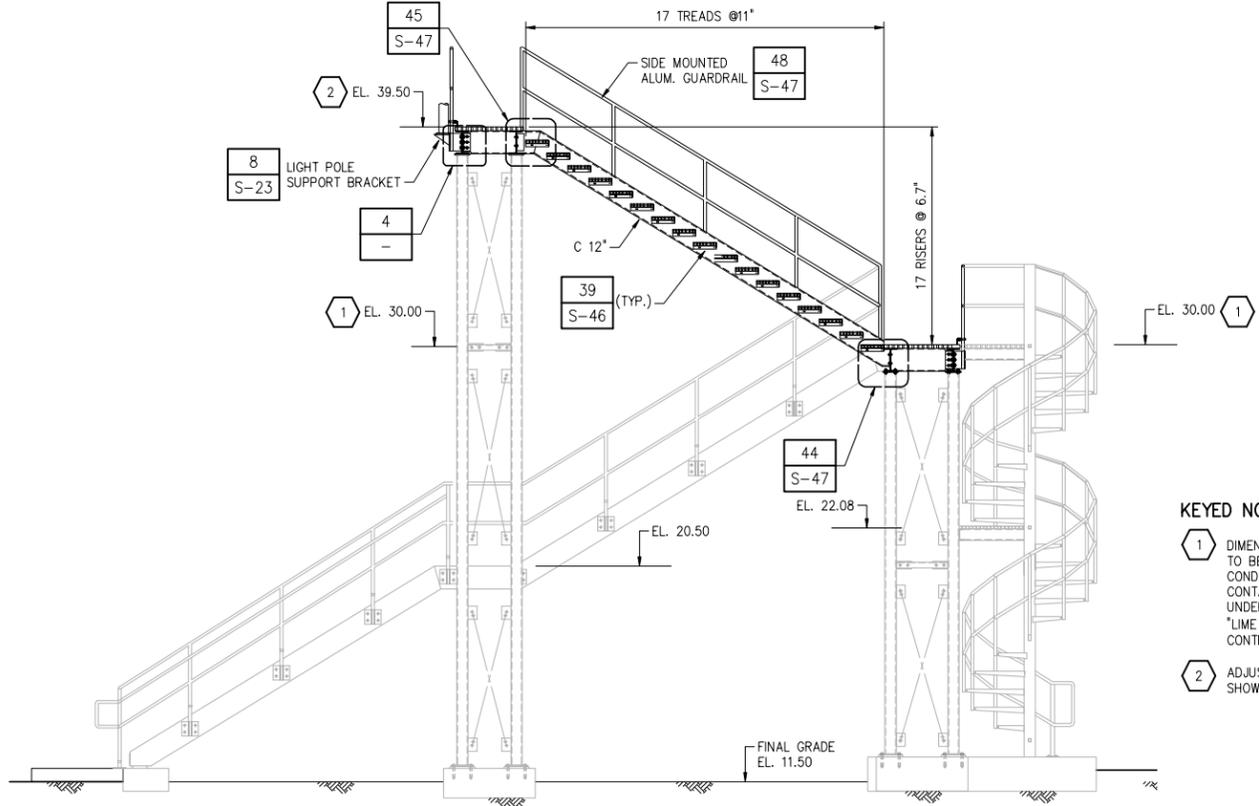
WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
AERATOR/LIME CONTACTOR ACCESS STAIRS
SECTIONS AND DETAILS - SHEET 1

DATE:	JULY 2015
SHEET:	156 OF 335
DRAWING:	S-16

PLOT DATE: 7/24/2015 5:04 PM BY: TBCCS



SECTION A
1/4" = 1'-0" S-16

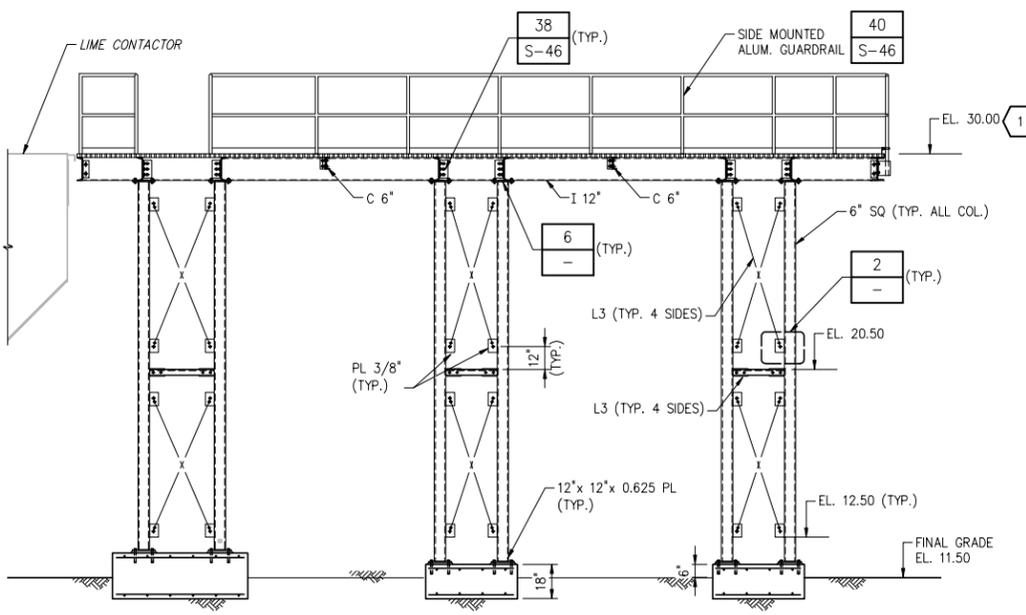


SECTION B
1/4" = 1'-0" S-16

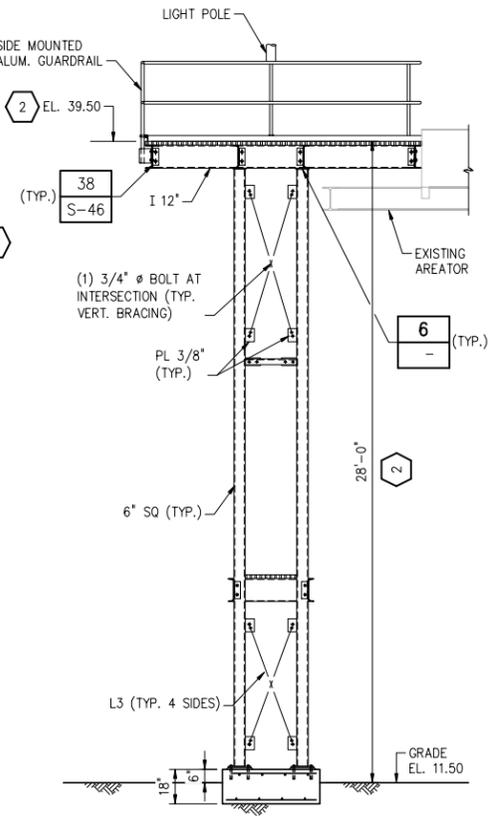
KEYED NOTE:

1 DIMENSION (OR ELEVATION) MAY NEED TO BE ADJUSTED TO SUIT FIELD CONDITIONS AND MATCH THE LIME CONTACTOR WALKWAY No.2 SUPPLIED UNDER THE SPECIFICATION ENTITLED "LIME CONTACTOR REHABILITATION". CONTRACTOR SHALL COORDINATE.

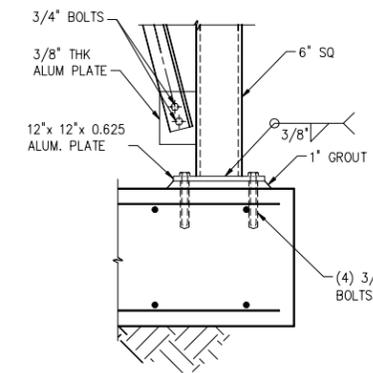
2 ADJUST THE DIMENSION (OR ELEVATION) SHOWN TO SUIT FIELD CONDITIONS.



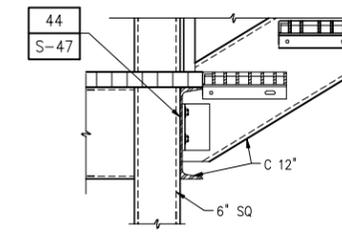
SECTION C
1/4" = 1'-0" S-16



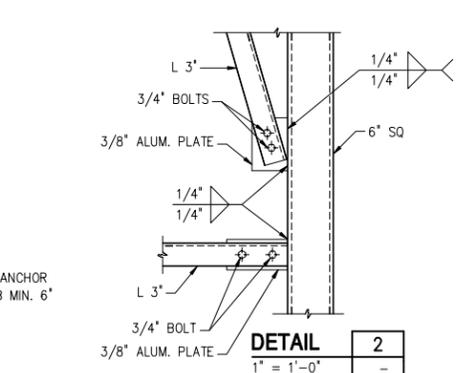
SECTION D
1/4" = 1'-0" S-16



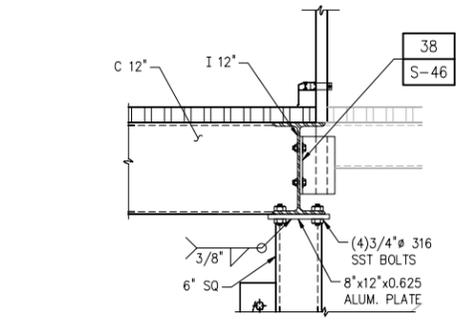
DETAIL 1
1" = 1'-0" S-16



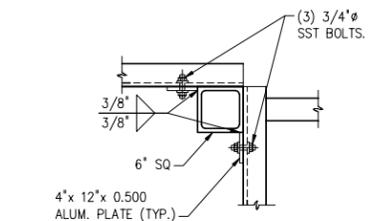
DETAIL 2
1" = 1'-0" S-16



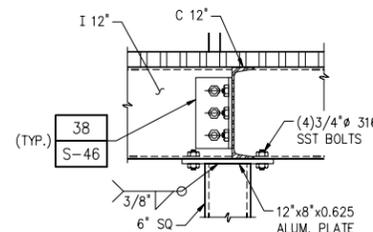
DETAIL 3
1" = 1'-0" S-16



DETAIL 4
1" = 1'-0" S-16



DETAIL 5
1" = 1'-0" S-16

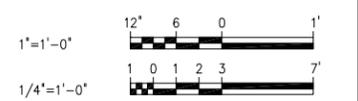


DETAIL 6
1" = 1'-0" S-16

LEGEND:

L3 DENOTES = L 3"x 3"x .375 ALUM.
 C12 DENOTES = C 12"x 7.41" ALUM.
 I12 DENOTES = I 12"x 11.7" ALUM.
 6"SQ DENOTES = 6" x .500 SQUARE TUBE
 C6 DENOTES = C6 x 2.83 ALUM.

ALL BOLTS AND ANCHOR BOLTS SHALL BE 316 SST



DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.	<p>HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771</p>
DRAWN	C.C.P.	
CHECKED	A.F.H.	
PROJ. ENGR.	G.A.B.	
JEAN PAUL SILVA No. 66522		P.E.

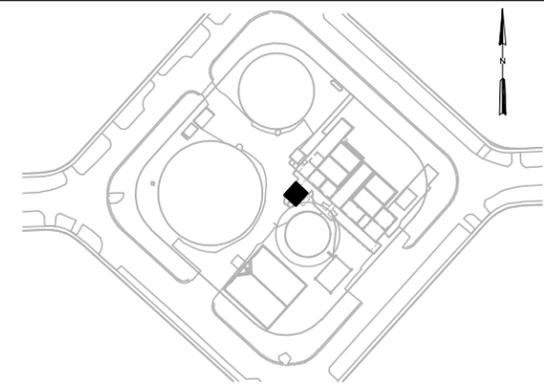
SCALE	AS NOTED
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S17

CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

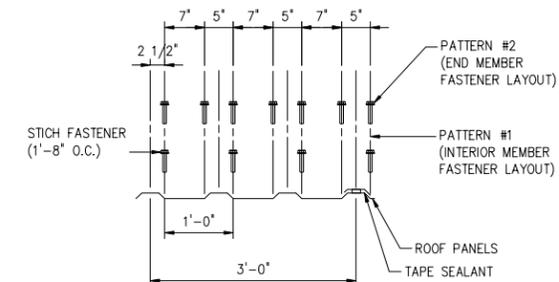
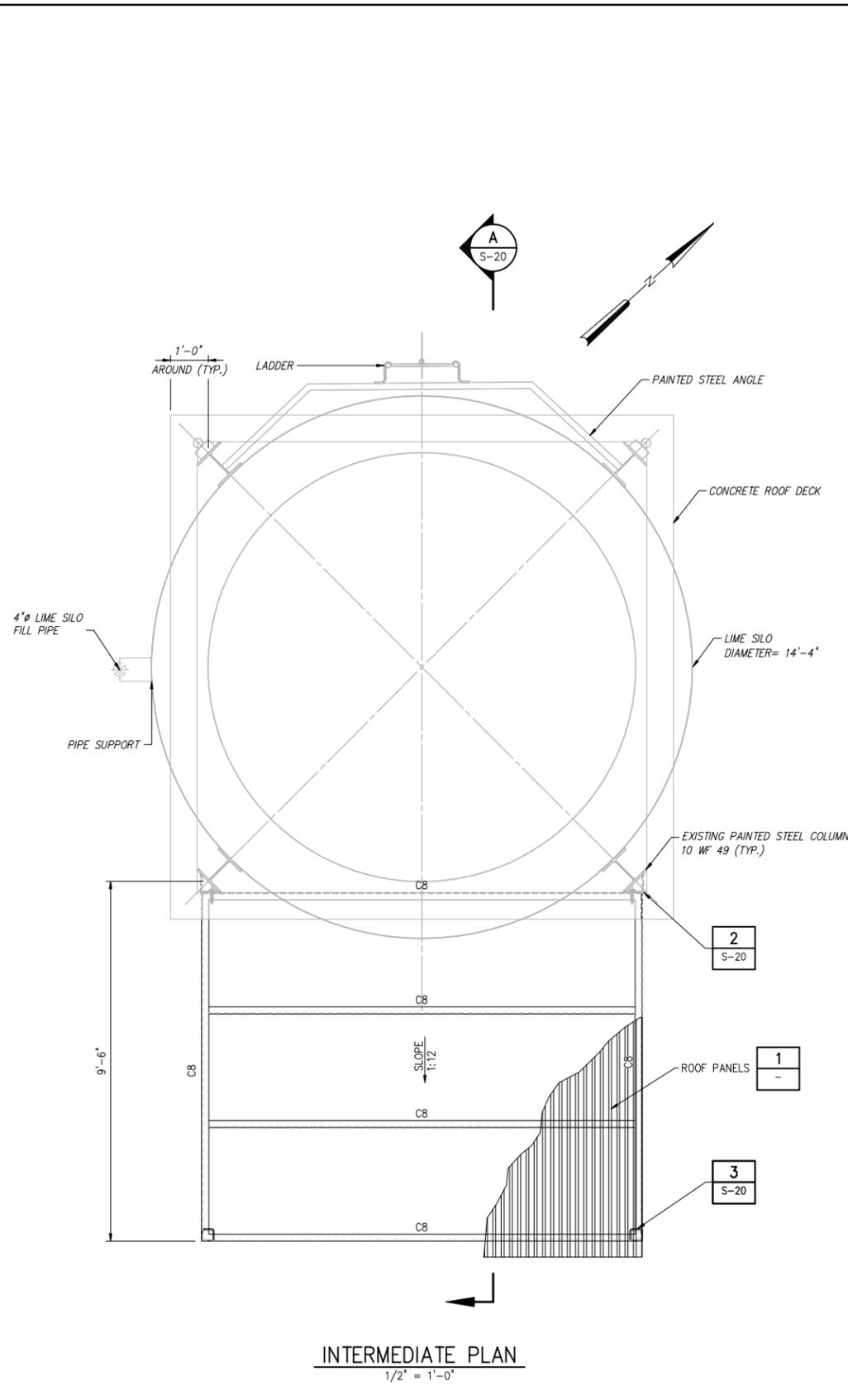
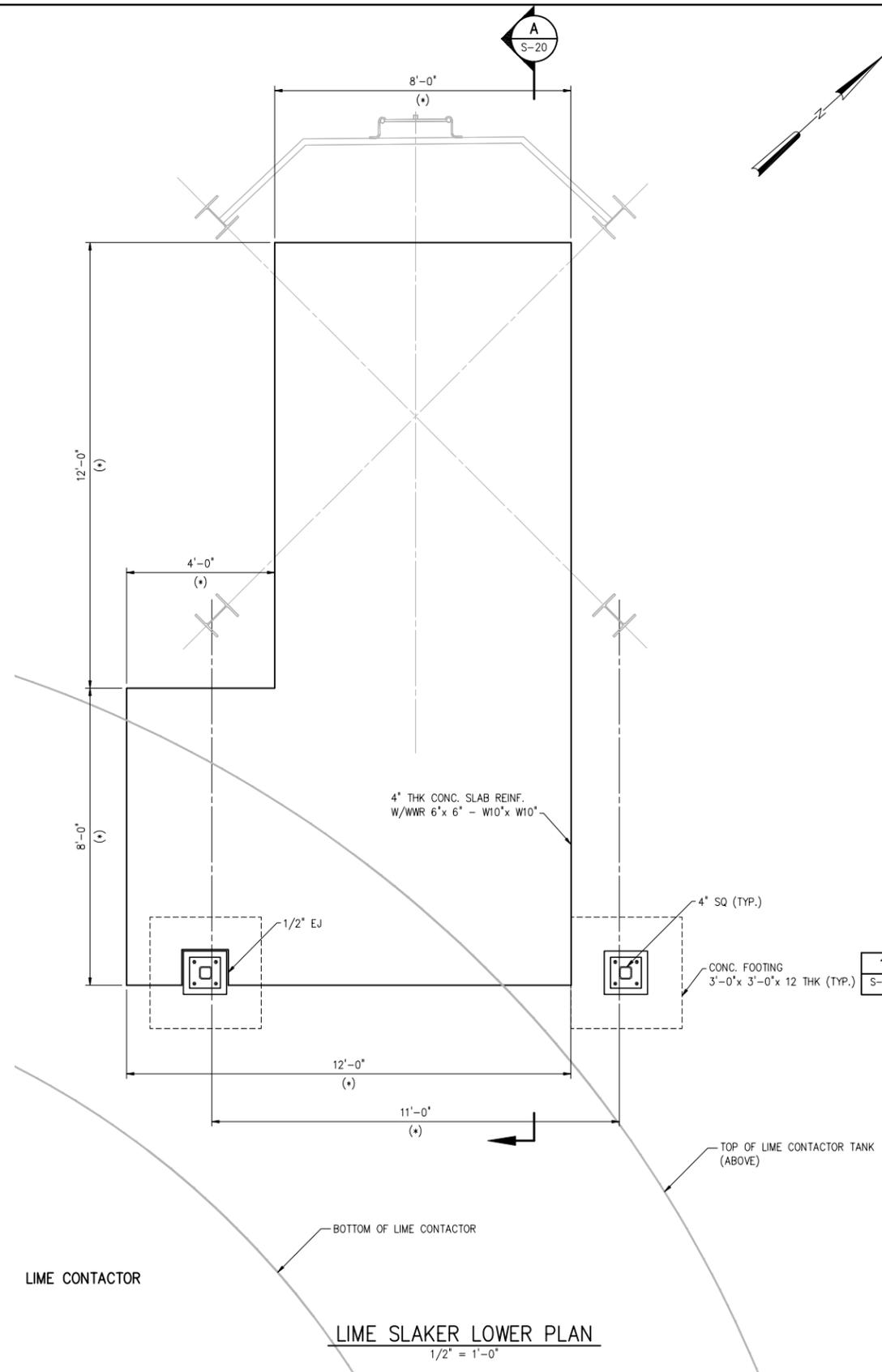
WINSON WATER TREATMENT PLANT
 RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
AERATOR/LIME CONTACTOR ACCESS STAIRS
 SECTIONS AND DETAILS - SHEET 2

DATE:	JULY 2015
SHEET:	157 OF 335
DRAWING:	S-17

REQUEST FOR PROPOSAL



LOCATION MAP



DETAIL 1
3/4" = 1'-0"

- NOTES:**
- ROOF PANELS SHALL HAVE AN UNDERWRITERS LABORATORIES UPLIFT RATING OF CLASS 90.
 - ROOF PANELS SHALL BE OF THE RIBBED TYPE WITH 1 1/4" RIB HEIGHT (MIN.) THE PANEL MATERIAL SHALL BE MIN. 24 GAGE STEEL CONFORMING TO ASTM A 525 WITH A MINIMUM YIELD OF 42,000 PSI. FINISH SHALL BE ZINC-ALUMINUM ALLOY COATED PER ASTM A 792. ROOF PANELS SHALL BE PBR RIBBED BY UNITED STRUCTURES OF AMERICA. BUTLERIB II ROOF SYSTEM BY BUTLER MANUFACTURING COMPANY, OR APPROVED EQUAL.
 - THE PANELS SHALL BE PRECISION ROLL-FRAMED TO PROVIDE WIDTH COVERAGE OF 2-FEET MINIMUM.

- LEGEND:**
- 4"SQ DENOTES = ALUM. 4" x 4" .500 SQUARE TUBE
- C8 DENOTES = C 8" x 2.29" ALUM.
- EXISTING
- PROPOSED



PLOT DATE: 7/24/2015 11:36 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	G.P.B.		
CHECKED	A.H.		
PROJ. ENGR.	J.P.S.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED **J.P.S.**

DRAWN **G.P.B.**

CHECKED **A.H.**

PROJ. ENGR. **J.P.S.**

JEAN PAUL SILVA
No. 66522

P.E.

HAZEN AND SAWYER
Environmental Engineers & Scientists

4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

SCALE
1/2" = 1'-0"

CLIENTS PROJECT: -

ENGINEERS PROJECT: 44238-004

CAD REFERENCE: 44238-004BP3-S19

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB

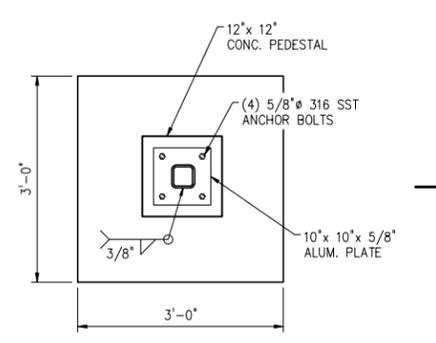
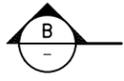
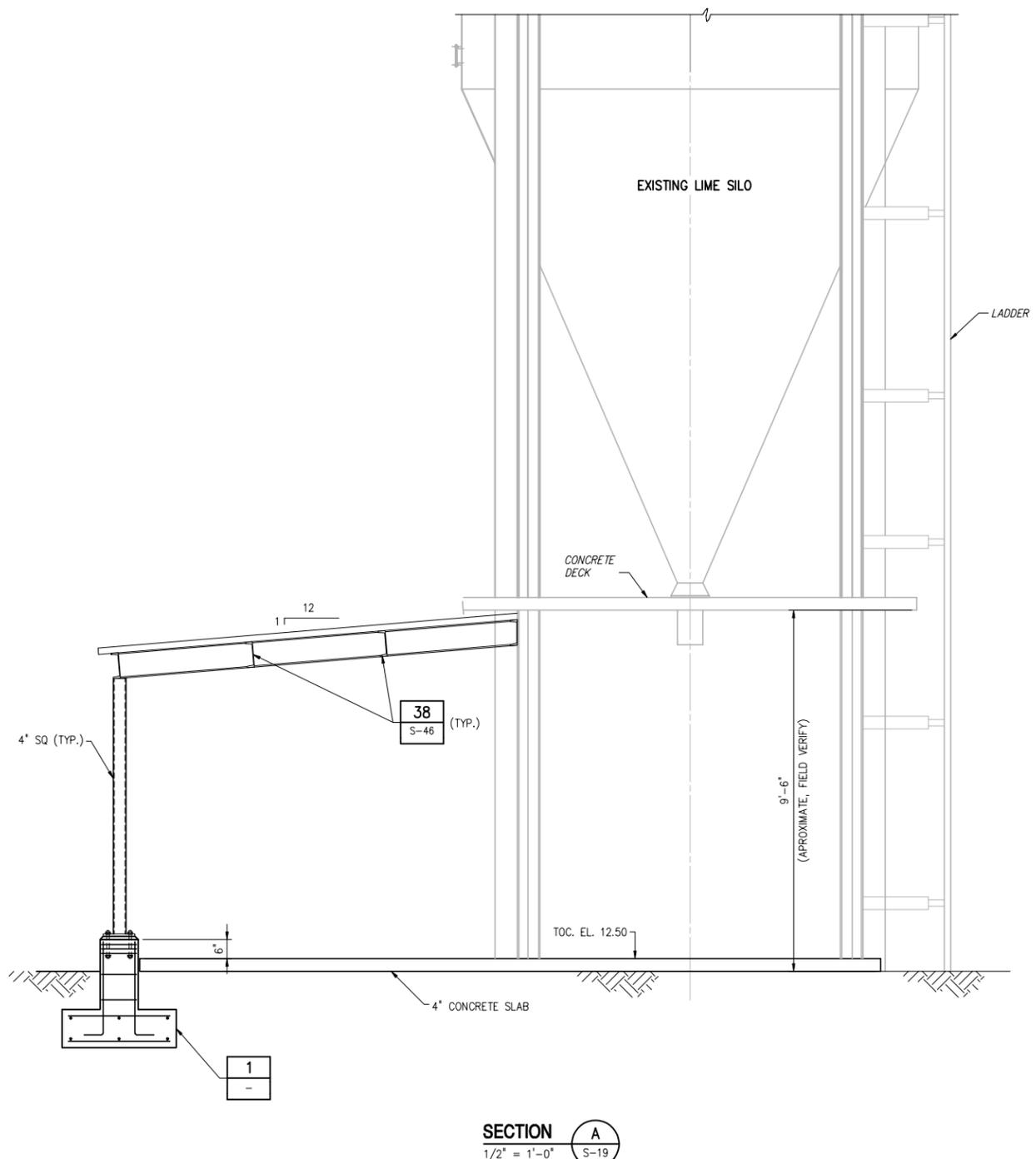
LIME SLAKER AND SILO MODIFICATIONS PLANS

DATE: **JULY 2015**

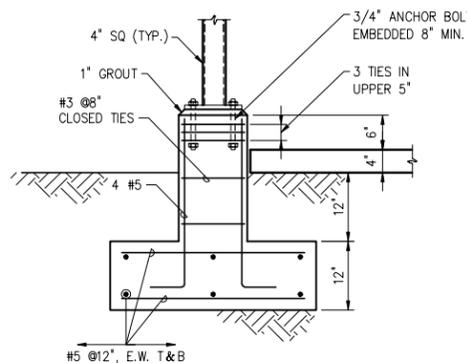
SHEET: **159** OF **335**

DRAWING: **S-19**

REQUEST FOR PROPOSAL

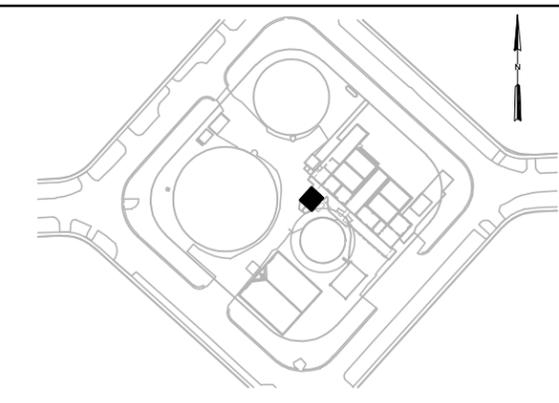


PLAN

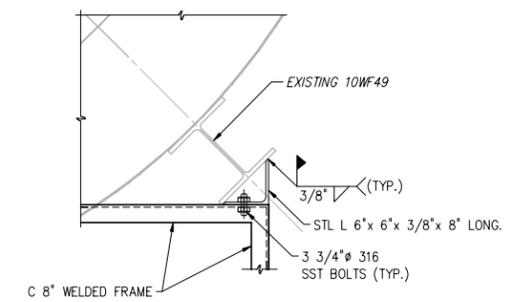


SECTION B

DETAIL	1
3/4\" = 1'-0"	S-19

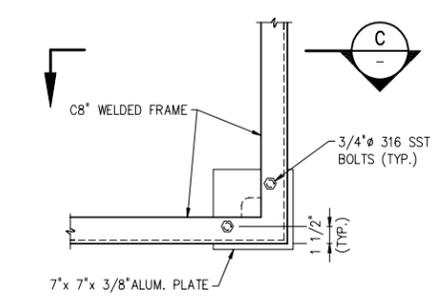


LOCATION MAP



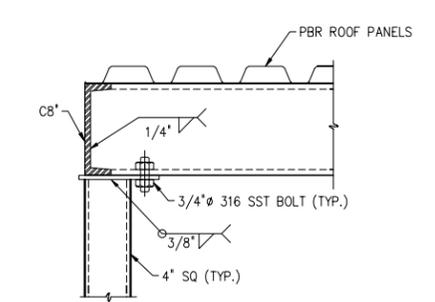
DETAIL	2
1\" = 1'-0"	S-19

NOTE:
STEEL ANGLE SHALL BE PAINTED AFTER WELDING. PLACE RUBBER GASKET BETWEEN STEEL ANGLE AND ALUMINUM FRAME.



PLAN

DETAIL	3
1 1/2\" = 1'-0"	S-19

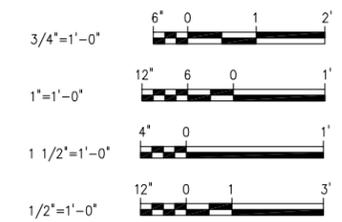


SECTION C

SECTION	A
1/2\" = 1'-0"	S-19

LEGEND:

- 4\"SQ DENOTES = ALUM. 4\" x 4\" x .500 SQUARE TUBE
- C8 DENOTES = C 8\" x 2.29\" ALUM.
- EXISTING
- PROPOSED



PLOT DATE: 7/24/2015 11:36 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	G.P.B.		
CHECKED	A.H.		
PROJ. ENGR.	J.P.S.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.
DRAWN	G.P.B.
CHECKED	A.H.
PROJ. ENGR.	J.P.S.
JEAN PAUL SILVA P.E. No. 66522	

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

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

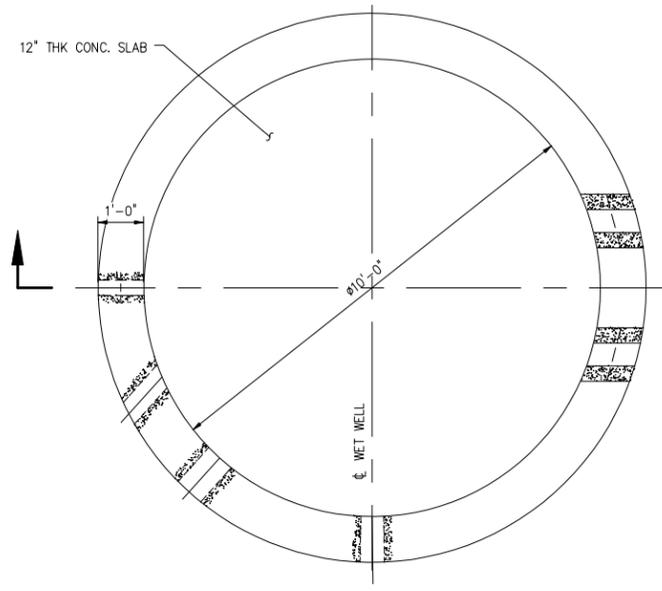
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S20

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

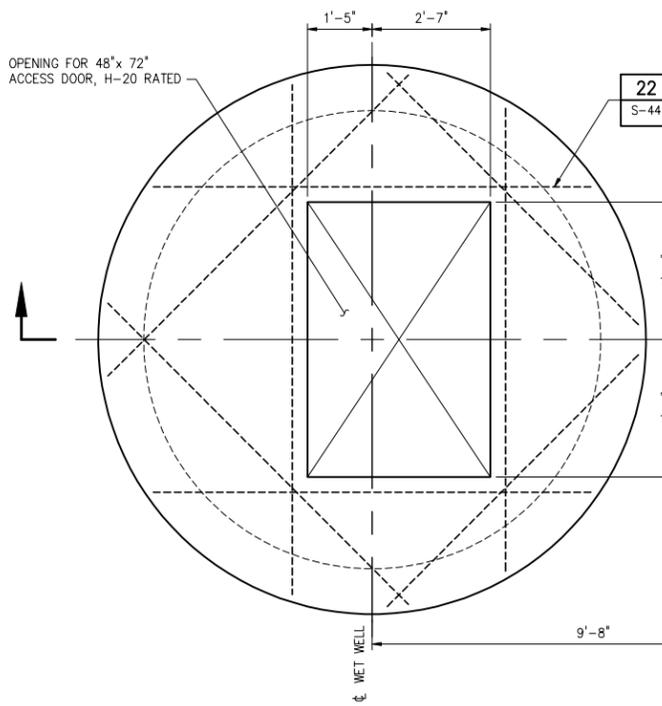
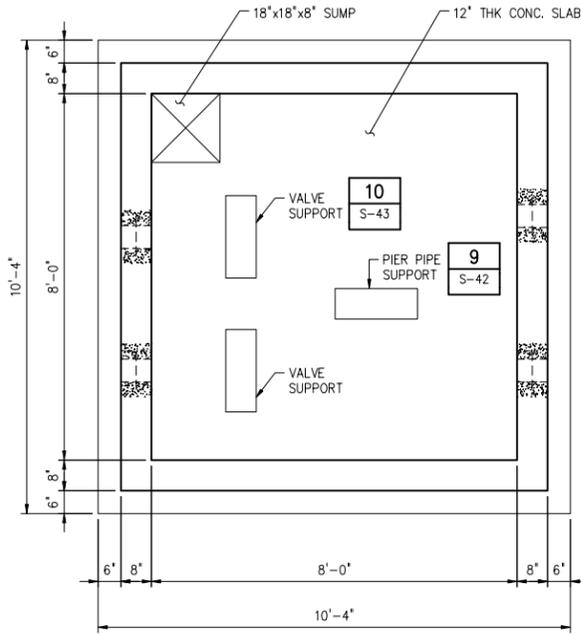
WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
LIME SLAKER AND SILO MODIFICATIONS SECTIONS AND DETAILS

DATE:	JULY 2015
SHEET:	160 OF 335
DRAWING:	S-20

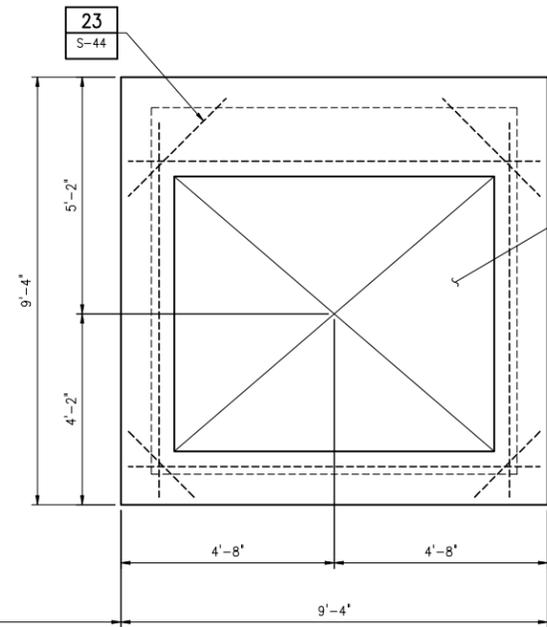
REQUEST FOR PROPOSAL



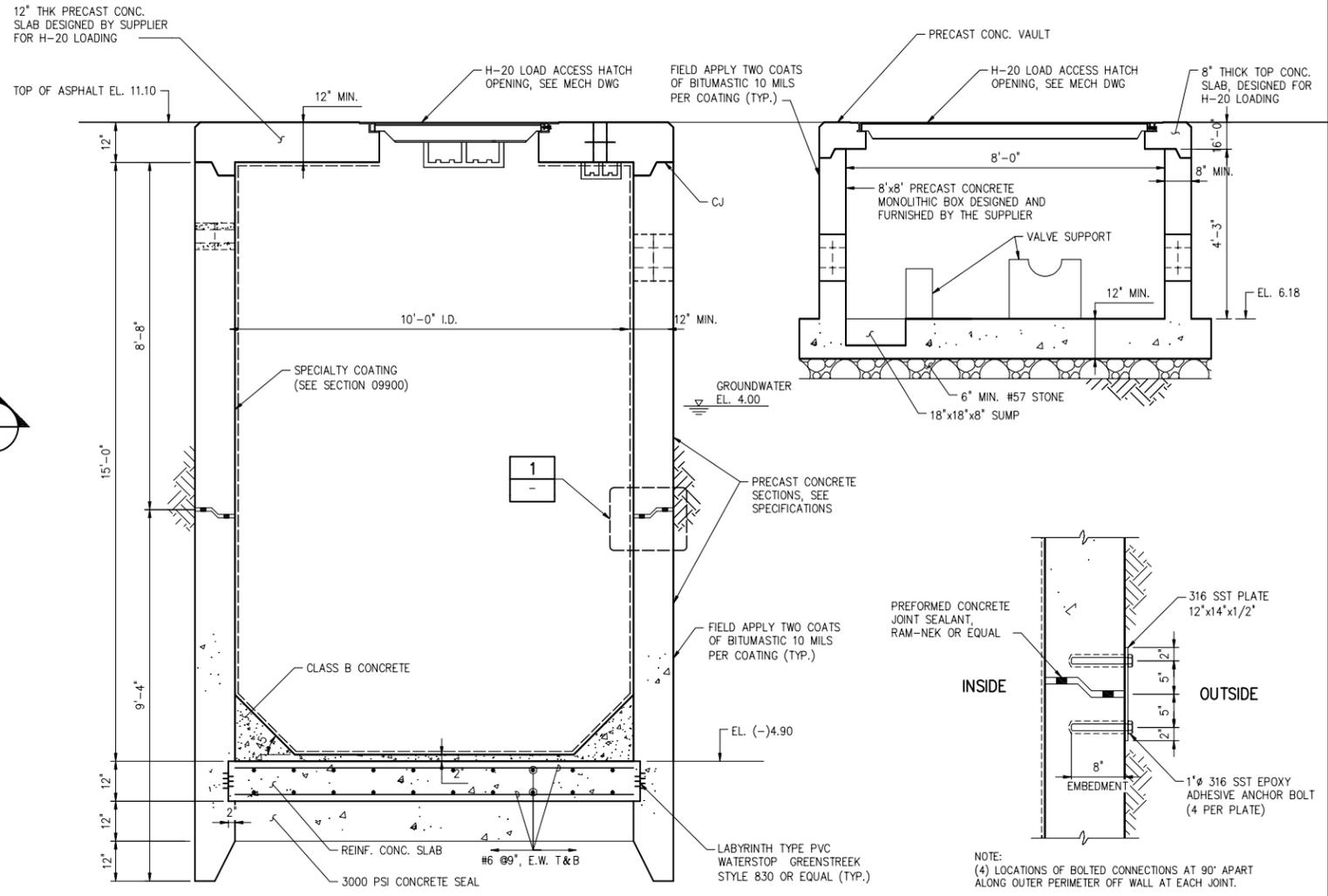
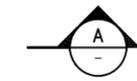
BOTTOM PLAN
1/2" = 1'-0"



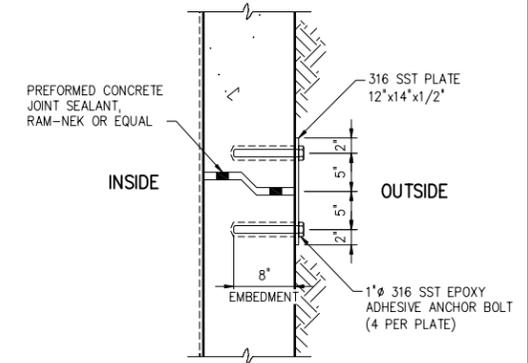
TOP PLAN
1/2" = 1'-0"



OPENING FOR 84" x 72" ACCESS DOOR, H-20 RATED



SECTION A-A
1/2" = 1'-0"



DETAIL 1
1" = 1'-0"

GENERAL NOTES:

1. ALL PRECAST CONCRETE SECTIONS SHALL CONFORM TO ASTM C478.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWING FOR ENGINEER'S REVIEW AND APPROVAL. SHOP DRAWING SHALL INCLUDE DESIGN CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
3. PRECAST CONCRETE SECTION SHALL BE DESIGNED FOR THE FOLLOWING LOADS:
 - a. LATERAL SOIL PRESSURE.
 - b. GROUNDWATER ELEVATION = 1.10
 - c. COMPACTION OF SOIL DURING BACKFILL.
 - d. ADDITIONAL STRESSES INDUCED BY TRANSPORTATION AND HANDLING DURING INSTALLATION.
 - e. LOADS PER NOTE G-4 OF DRAWING S-01
 - f. PIPE THRUST= 500 Lb.
4. SUGGESTED CONSTRUCTION SEQUENCE:
 - g. CLEAR AND GRUB AREA.
 - h. PLACE PRECAST CONCRETE SECTION ON SAND AND EXCAVATE WITHIN WALLS TO SINK SECTION.
 - i. PLACE ADDITIONAL PRECAST CONCRETE SECTION AND INSTALL CONNECTION PLATES EXCAVATE WITHIN WALL TO SINK ADDITIONAL SECTION, CONTINUE WITH ADDITIONAL PRECAST SECTIONS UNTIL FINAL POSITION IS REACHED.
 - j. PLACE SEAL CONCRETE WITHIN BOTTOM SECTION
 - k. ONCE SEAL CONCRETE REACHES DESIGN STRENGTH, PUMP STRUCTURE DRY.



PLOT DATE: 7/24/2015 11:36 AM BY: TBCCAS

DESIGNED	J.P.S.	DATE	07/24/15
DRAWN	G.P.B.	ISSUED FOR	REQUEST FOR PROPOSAL
CHECKED	A.F.H.	BY	G.A.B.
PROJ. ENGR.	G.A.B.		

HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771		SCALE 1/2" = 1'-0"
CLIENTS PROJECT: - ENGINEERS PROJECT: 44238-004 CAD REFERENCE: 44238-004BP3-S21		CITY OF NORTH MIAMI PUBLIC WORKS UTILITIES

DESIGNED: J.P.S. DRAWN: G.P.B. CHECKED: A.F.H. PROJ. ENGR.: G.A.B.	JEAN PAUL SILVA No. 66522 P.E.
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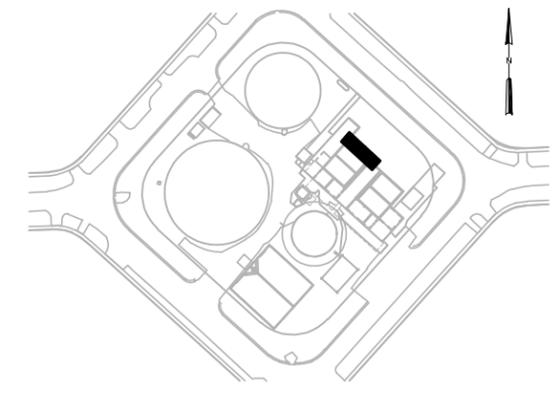
WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB		DATE: JULY 2015
WASTE LIME SLUDGE PUMP STATION PROPOSED PLAN, SECTIONS AND DETAILS		SHEET: 161 OF 335
		DRAWING: S-21

WASTE LIME SLUDGE PUMP STATION PROPOSED PLAN, SECTIONS AND DETAILS

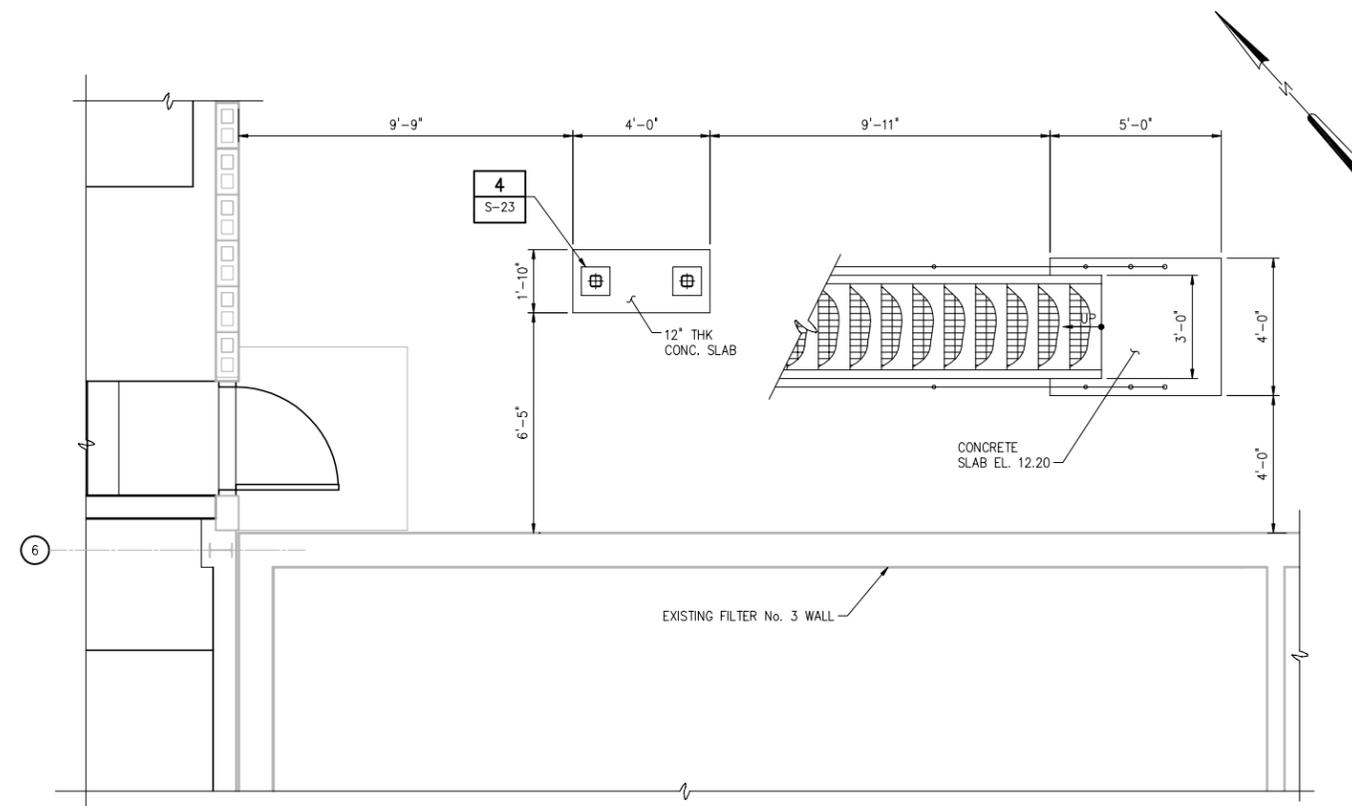
WASTE LIME SLUDGE PUMP STATION PROPOSED PLAN, SECTIONS AND DETAILS

DATE: JULY 2015 SHEET: 161 OF 335 DRAWING: S-21

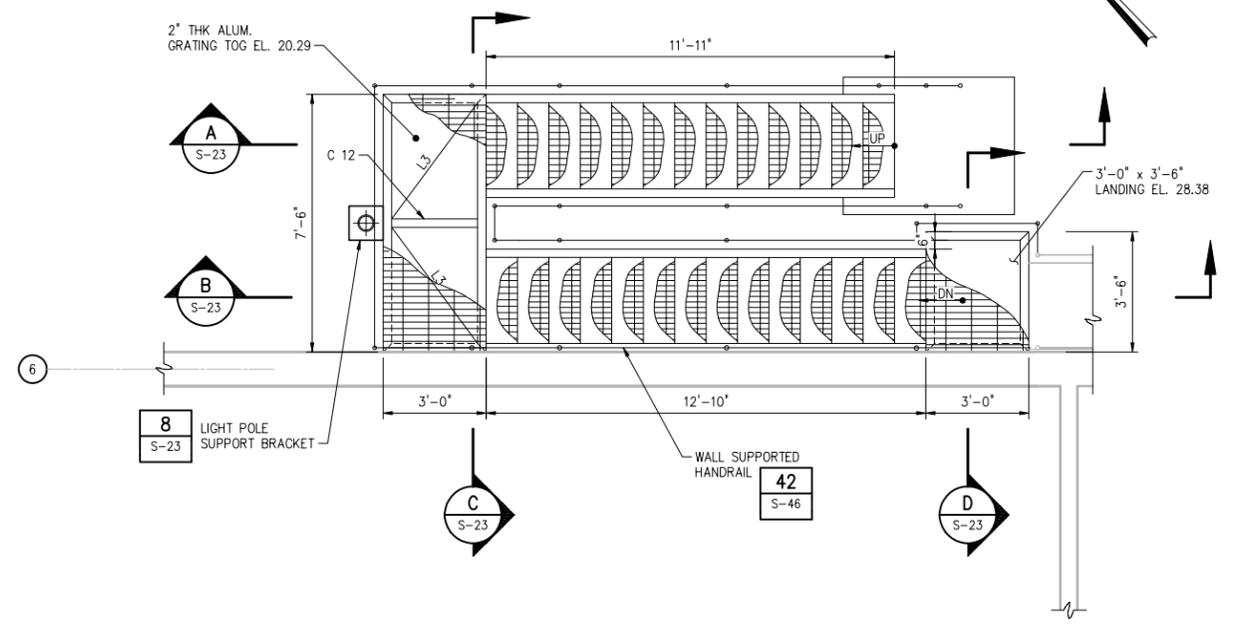
REQUEST FOR PROPOSAL



LOCATION MAP



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



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

LEGEND:

L3 DENOTES = L 3"x 3"x .375 ALUM.
 C12 DENOTES = C 12"x 7.41" ALUM.
 4'SQ DENOTES = 4"x .500 SQUARE TUBE ALUM.

----- EXISTING
 _____ PROPOSED



PLOT DATE: 7/24/2015 11:36 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

JEAN PAUL SILVA
 No. 66522
 P.E.

HAZEN AND SAWYER
 Environmental Engineers & Scientists
 4000 Hollywood Boulevard, Suite 750N
 Hollywood, Florida 33021
 Certificate of Authorization Number: 2771

SCALE
 3/8"=1'-0"

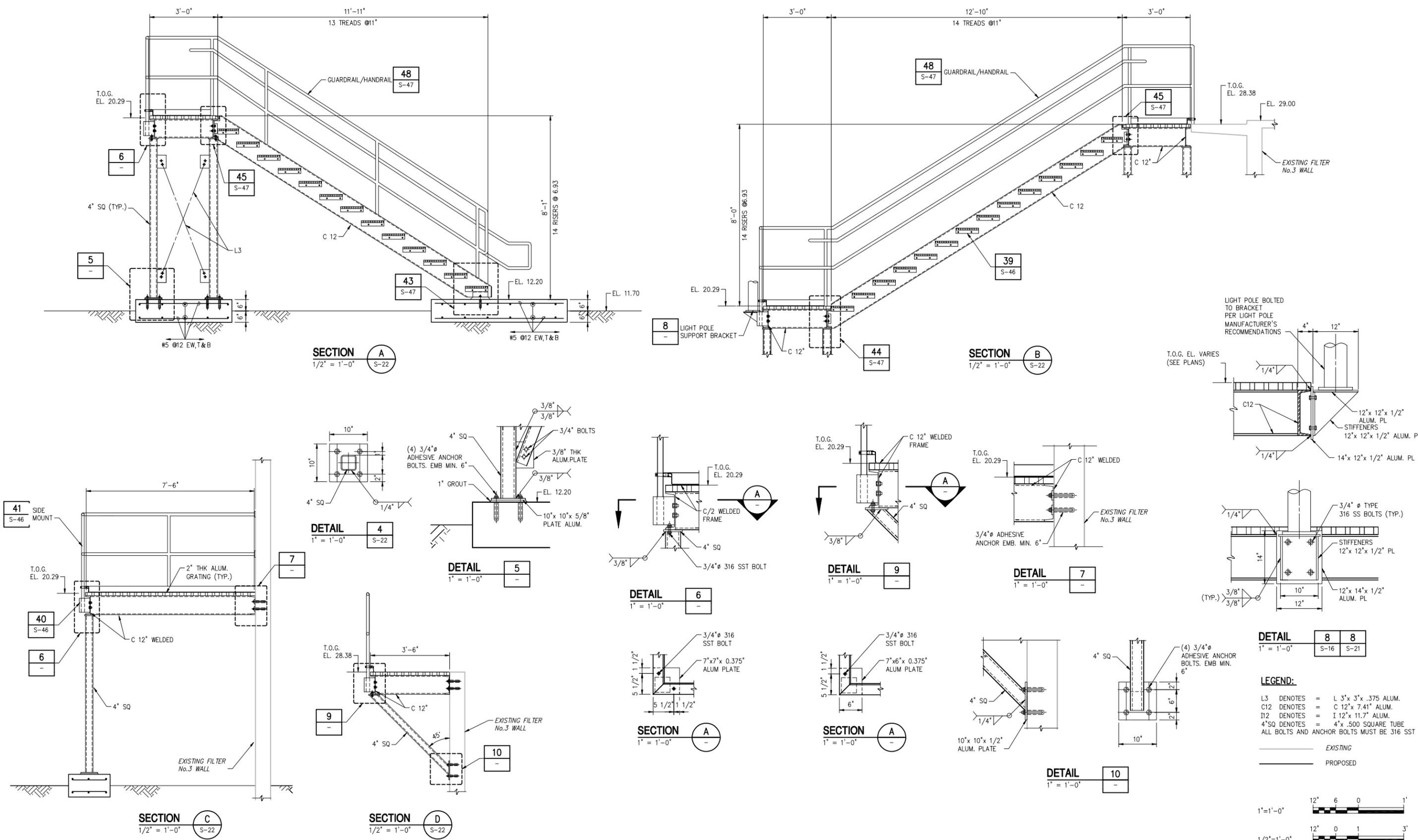
CLIENTS PROJECT: -
 ENGINEERS PROJECT: 44238-004
 CAD REFERENCE: 44238-004BP3-S22

CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
 RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
EXISTING FILTER CONTROL ROOM STAIRS PLAN

DATE: JULY 2015
 SHEET: 162 OF 335
 DRAWING: S-22

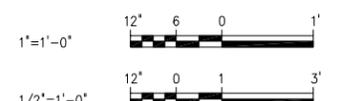
REQUEST FOR PROPOSAL



LEGEND:

L3 DENOTES = L 3"x 3"x .375 ALUM.
 C12 DENOTES = C 12"x 7.41" ALUM.
 I12 DENOTES = I 12"x 11.7" ALUM.
 4"SQ DENOTES = 4"x .500 SQUARE TUBE
 ALL BOLTS AND ANCHOR BOLTS MUST BE 316 SST

— EXISTING
 — PROPOSED



PLOT DATE: 7/24/2015 11:38 AM BY: TB/CAS

NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.
DRAWN	G.P.B.
CHECKED	A.F.H.
PROJ. ENGR.	G.A.B.

HAZEN AND SAWYER
 Environmental Engineers & Scientists
 4000 Hollywood Boulevard, Suite 750N
 Hollywood, Florida 33021
 Certificate of Authorization Number: 2771

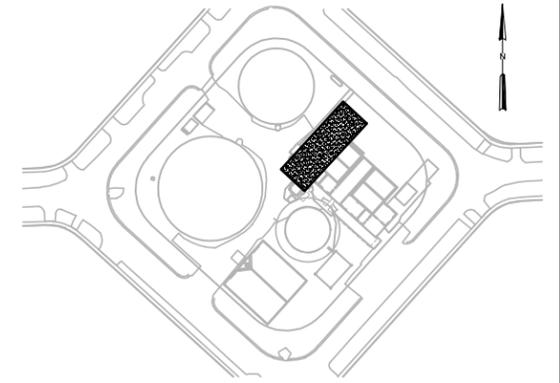
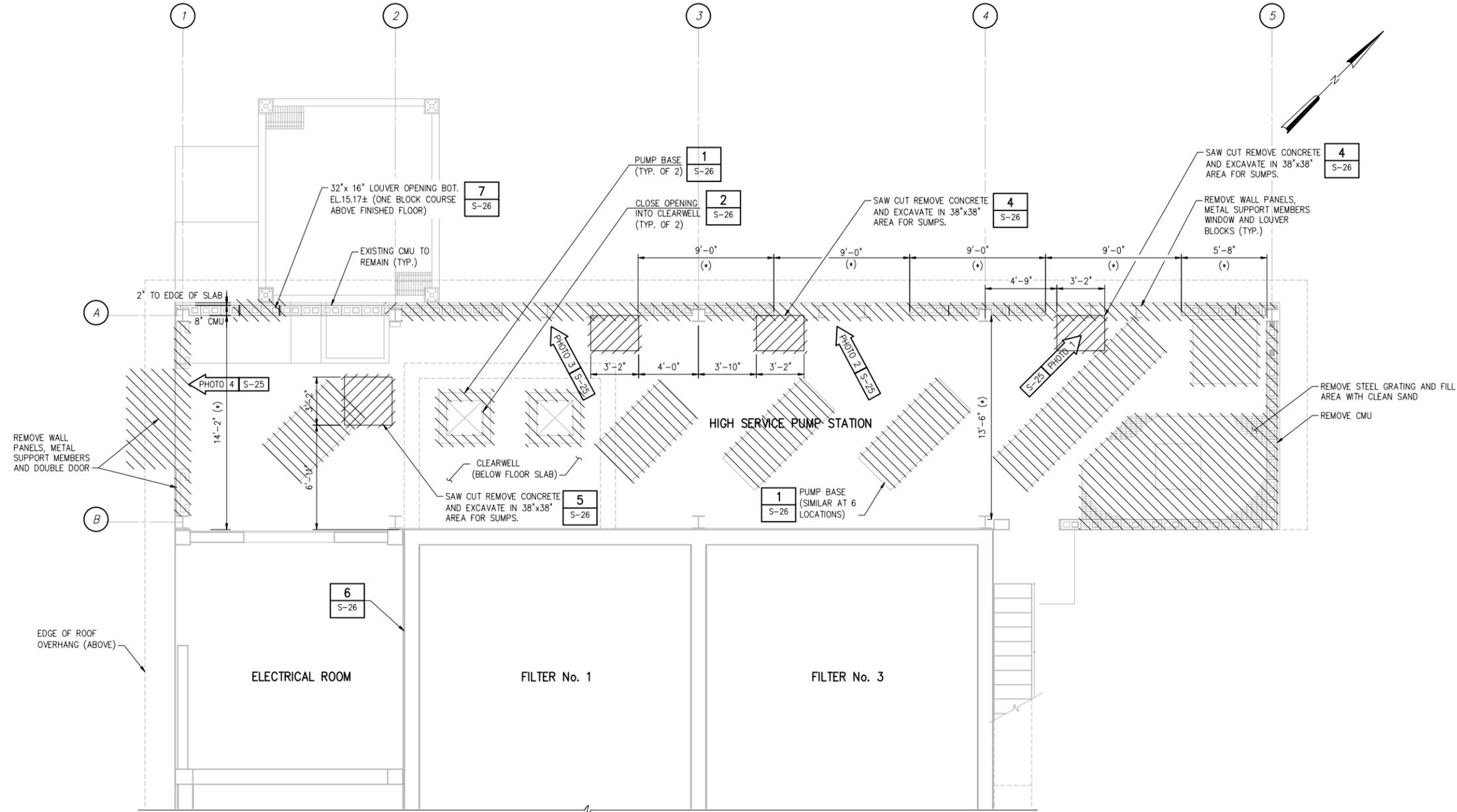
SCALE	AS NOTED
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S23

CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
 RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
FILTER/OPS BUILDINGS STAIRS
 ELEVATIONS AND DETAILS

DATE:	JULY 2015
SHEET:	163 OF 335
DRAWING:	S-23

REQUEST FOR PROPOSAL



LOCATION MAP

EXISTING PLAN
1/4"=1'-0"

GENERAL NOTES:

1. LIMITED RECORD DRAWINGS EXIST FOR THIS STRUCTURE AND/OR AREA. PHOTOS PROVIDED FOR GENERAL INFORMATION PURPOSES. RECORD DRAWINGS FOR INFORMATIONAL PURPOSES ONLY ARE AVAILABLE UPON REQUEST.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BID PER THE REQUIREMENTS OF DIVISION 1 OF THE SPECIFICATIONS.
3. CONTRACTOR RETAINS FULL RESPONSIBILITY FOR FIELD VERIFICATION OF ALL ABOVE GROUND IMPROVEMENTS TO BE REMOVED FOR THIS WORK. SUCH VERIFICATION SHALL INCLUDE: STRUCTURAL, ARCHITECTURAL, HVAC, PLUMBING, ELECTRICAL, IRRIGATION, CONTROLS, FREE STANDING EQUIPMENT, LANDSCAPING, AND ANY AND ALL OTHER EXISTING IMPROVEMENTS WITHIN THE BOUNDARY OF THE WORK WHETHER SHOWN HEREIN OR NOT.
4. FOR BELOW GRADE IMPROVEMENTS TO BE REMOVED REFERENCE APPLICABLE CIVIL AND ELECTRICAL DRAWINGS ACCORDINGLY.
5. REFER TO SPECIFICATIONS SECTION ENTITLED "DEMOLITION OF EXISTING FACILITIES".
6. PRE-BID ACCESS TO THE SITE SHALL BE COORDINATED BY THE CONTRACTOR UPON REQUEST THROUGH A CONTACT TO BE DETERMINATE AT THE CITY OF NORTH MIAMI.

LEGEND:

- PHOTO # - ARROW INDICATES DIRECTION AND POINT OF VIEW OF PHOTO
- EXISTING
- TO BE REMOVED



PLOT DATE: 7/24/2015 11:36 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	C.A.Z.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.	HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771
DRAWN	C.A.Z.	
CHECKED	A.F.H.	
PROJ. ENGR.	G.A.B.	
JEAN PAUL SILVA No. 66522		P.E.

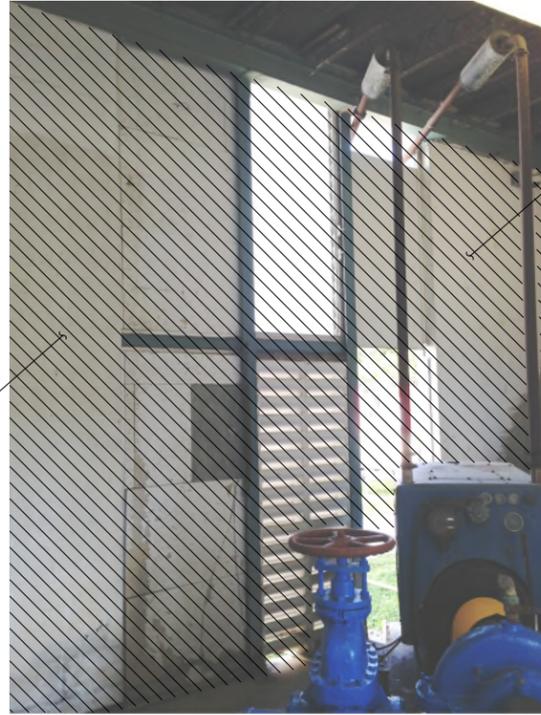
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CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S24

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
HIGH SERVICE PUMP STATION AND ELECTRICAL ROOM 1 STRUCTURAL MODIFICATIONS - SHEET 1

DATE:	JULY 2015
SHEET:	164 OF 335
DRAWING:	S-24

REQUEST FOR PROPOSAL



REMOVE EXISTING CMU WALL (TYP.)

REMOVE WALL PANELS, METAL SUPPORT MEMBERS WINDOW AND LOUVER BLOCKS (TYP.)

PHOTO 1
NTS



REMOVE EXISTING CMU WALL (TYP.)

REMOVE WALL PANELS, METAL SUPPORT MEMBERS WINDOW AND LOUVER BLOCKS (TYP.)

PHOTO 2
NTS



REMOVE WALL PANELS, METAL SUPPORT MEMBERS WINDOW AND LOUVER BLOCKS (TYP.)

REMOVE EXISTING CMU WALL (TYP.)

PHOTO 3
NTS



REMOVE WALL PANELS, METAL SUPPORT MEMBERS WINDOW AND LOUVER BLOCKS (TYP.)

PHOTO 4
NTS

GENERAL NOTES:
1. REFERENCE THE NOTES ON DRAWINGS S-01 AND S-24.

LEGEND:
[Hatched Box] TO BE REMOVED

PLT DATE: 7/24/2015 5:04 PM BY: TBCCS

DESIGNED	J.P.S.		
DRAWN	L.M.S.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

<p>HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771</p>	<p>SCALE NTS</p>	<p>CLIENTS PROJECT: - ENGINEERS PROJECT: 44238-004 CAD REFERENCE: 44238-004BP3-S25</p>	<p>CITY OF NORTH MIAMI PUBLIC WORKS UTILITIES</p>	<p>WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB HIGH SERVICE PUMP STATION AND ELECTRICAL ROOM 1 STRUCTURAL MODIFICATIONS - SHEET 2</p>	<p>DATE: JULY 2015 SHEET: 165 OF 335 DRAWING: S-25</p>
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<p>JEAN PAUL SILVA No. 66522</p>	<p>P.E.</p>
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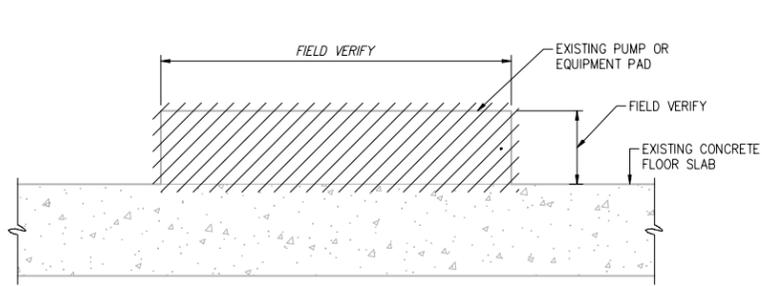
<p>HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771</p>
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<p>CITY OF NORTH MIAMI PUBLIC WORKS UTILITIES</p>

<p>WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB HIGH SERVICE PUMP STATION AND ELECTRICAL ROOM 1 STRUCTURAL MODIFICATIONS - SHEET 2</p>

<p>DATE: JULY 2015 SHEET: 165 OF 335 DRAWING: S-25</p>
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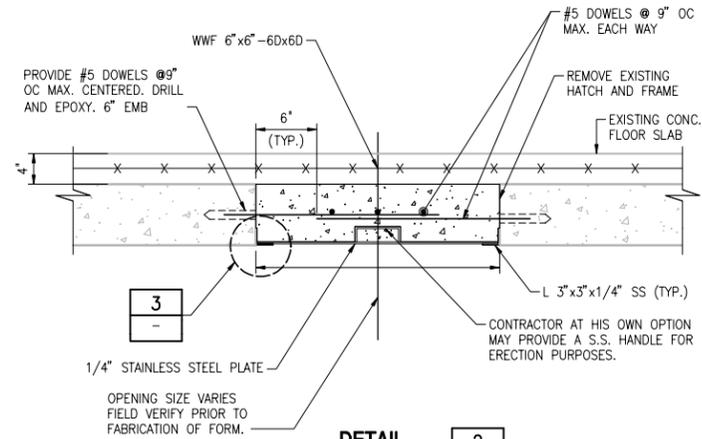
REQUEST FOR PROPOSAL



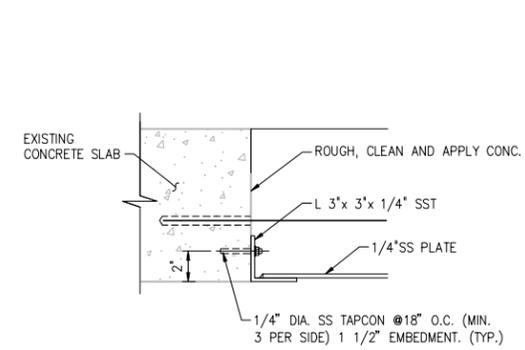
NOTES:

1. REINFORCING STEEL NOT SHOWN FOR CLARITY.
2. CUT AND REMOVE EMBEDDED VERTICAL REINFORCING BARS A MINIMUM OF 1-INCH BELOW THE SURFACE OF THE FLOOR SLAB.
3. AFTER REMOVAL OF THE EXISTING CONCRETE PAD RESTORE THE FLOOR SLAB TO A SMOOTH LEVEL SURFACE USING SIKATOP 122 PLUS, OR EQUAL.

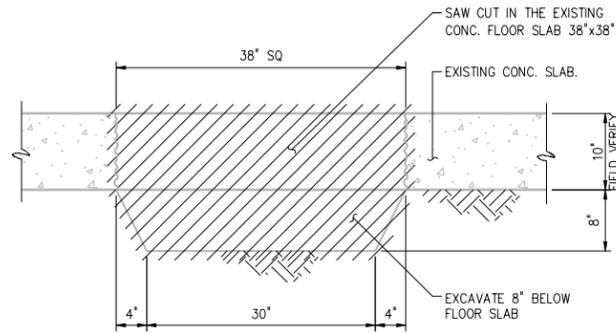
DETAIL 1
NTS S-24



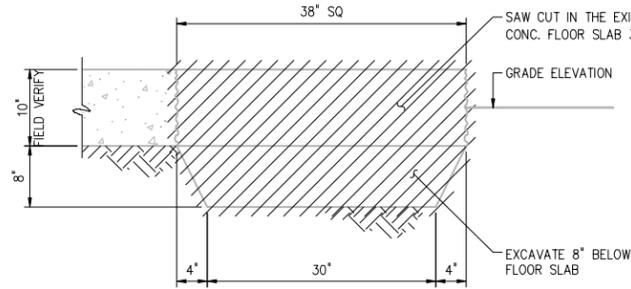
DETAIL 2
NTS S-24



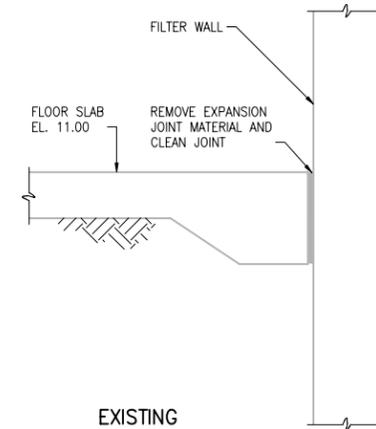
DETAIL 3
NTS



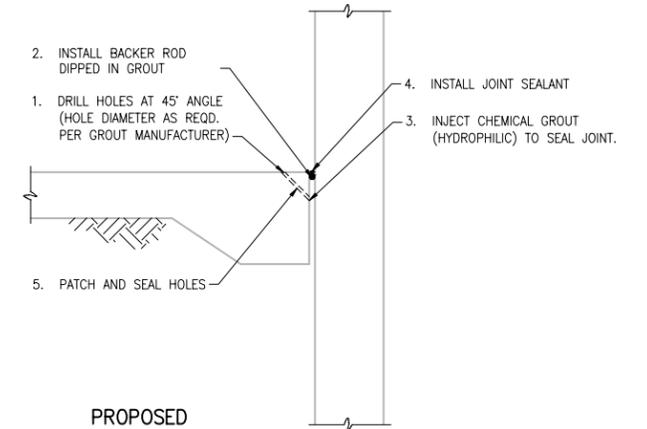
DETAIL 4
NTS S-24



DETAIL 5
NTS S-24

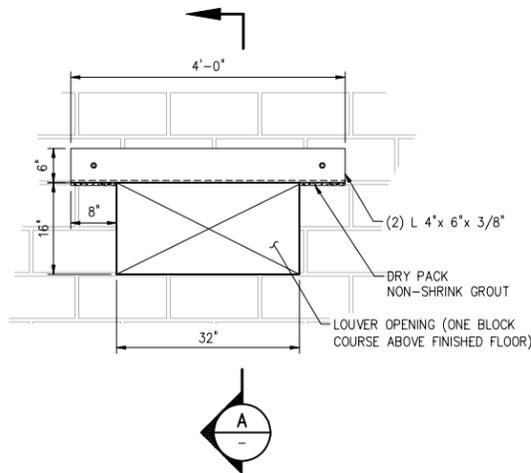


EXISTING



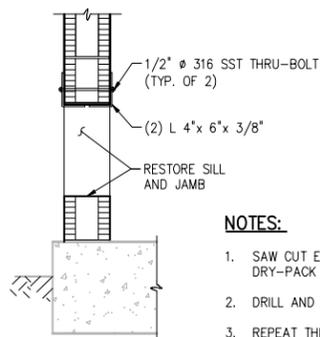
PROPOSED

DETAIL 6
NTS S-24



OPENING IN EXISTING WALL

DETAIL 7
NTS S-24



SECTION A

NOTES:

1. SAW CUT EXISTING MASONRY AND INSTALL ONE ANGLE DRY-PACK AT THE ENDS.
2. DRILL AND INSTALL BOLTS AND LOCK WASHERS.
3. REPEAT THE FIRST OPERATION FOR THE SECOND ANGLE.
4. TIGHTEN THE BOLTS USE LOCK WASHERS.
5. DEMOLISH EXISTING MASONRY WITHIN LIMITS SHOWN (MASONRY OPENING.)
6. FINISH WALL ON BOTH SIDES TO MATCH EXISTING ADJACENT WALL

LEGEND:

- EXISTING
- PROPOSED
- TO BE REMOVE

DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

<p>HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771</p>	<p>SCALE: NTS</p>	<p>CLIENTS PROJECT: -</p> <p>ENGINEERS PROJECT: 44238-004</p> <p>CAD REFERENCE: 44238-004BP3-S26</p>	<p>WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB HIGH SERVICE PUMP STATION AND ELECTRICAL ROOM 1 STRUCTURAL MODIFICATIONS - SHEET 3</p>	<p>DATE: JULY 2015</p> <p>SHEET: 166 OF 335</p> <p>DRAWING: S-26</p>
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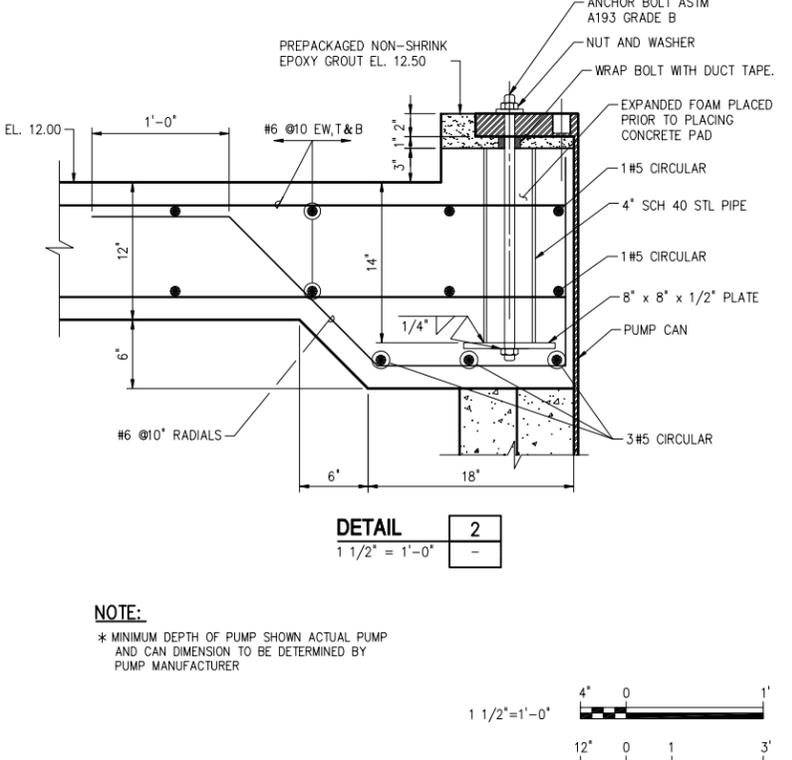
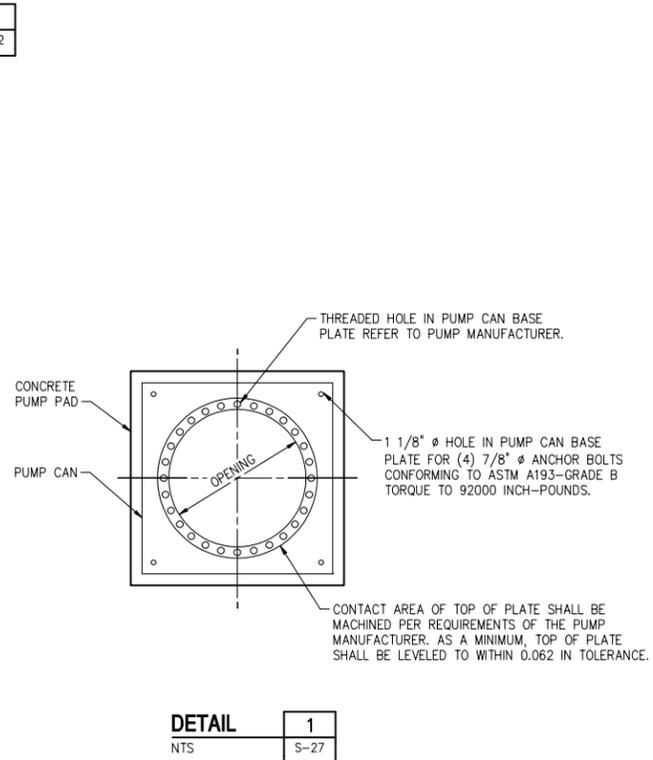
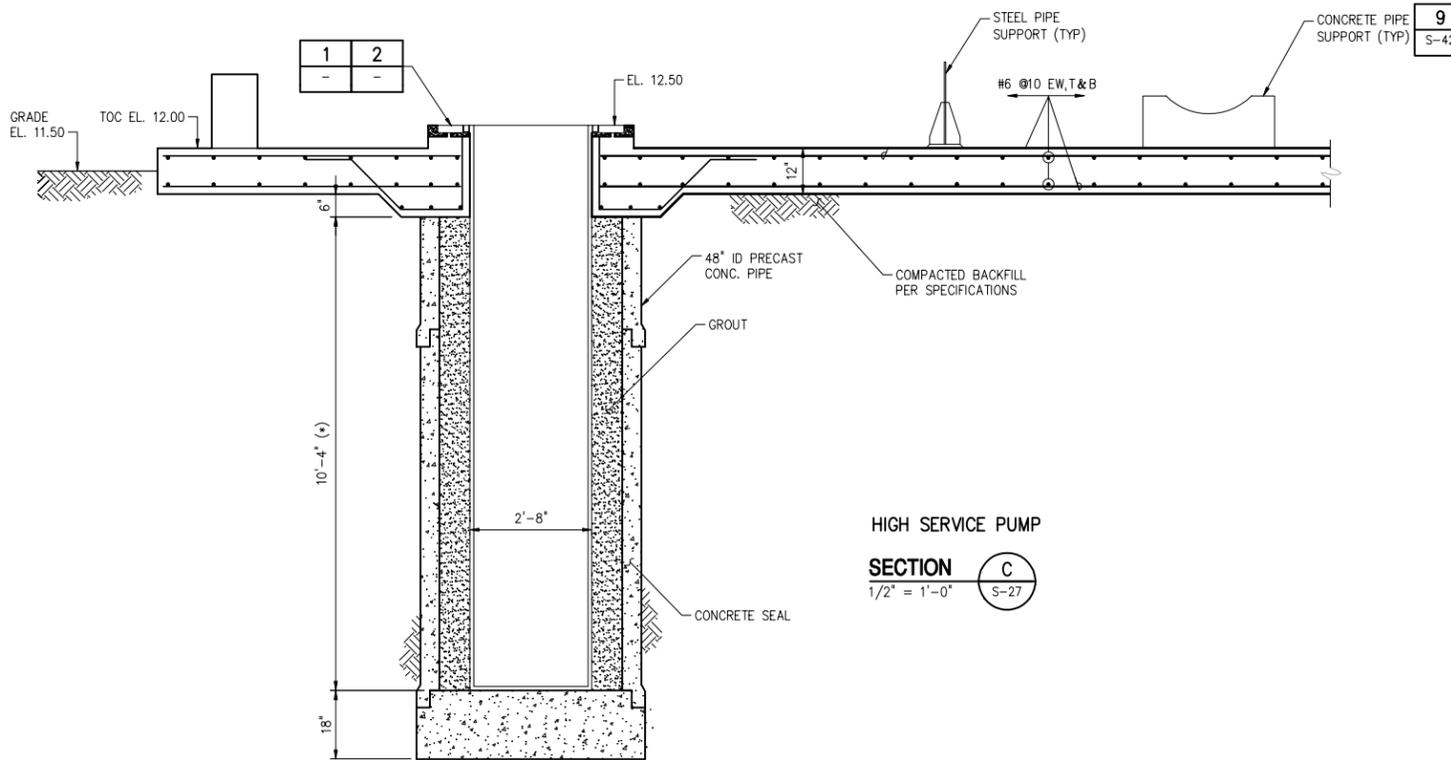
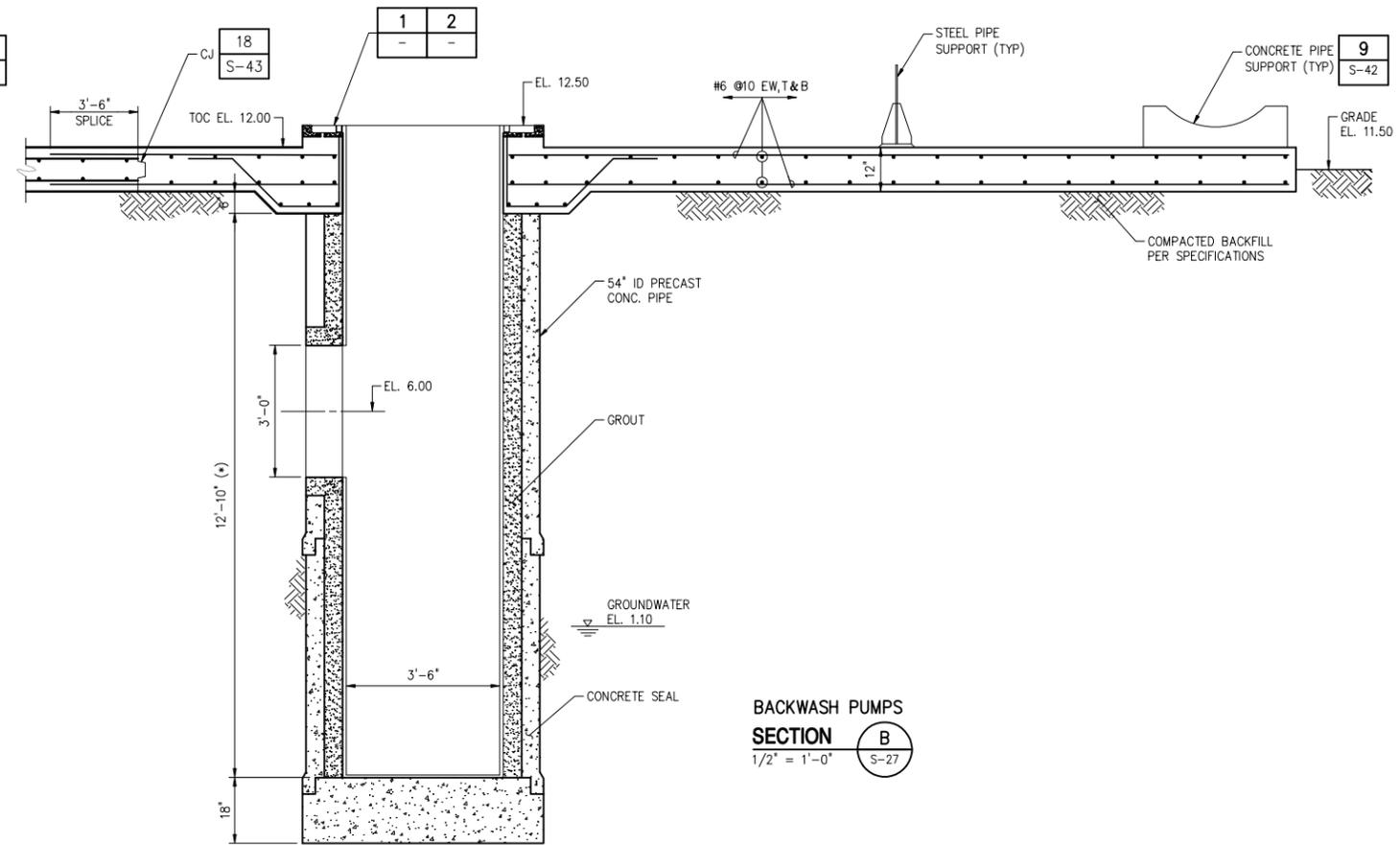
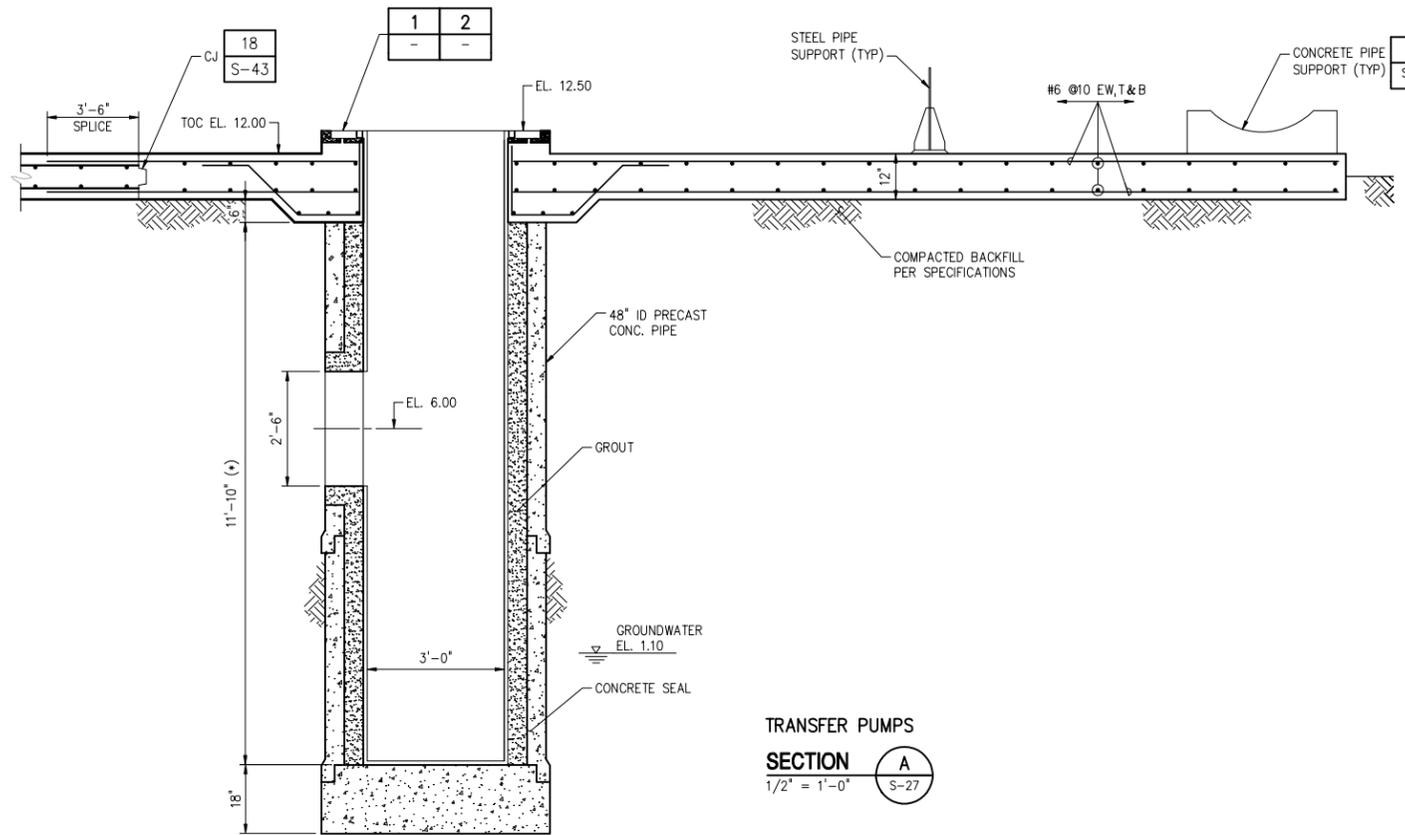
<p>DESIGNED: J.P.S.</p> <p>DRAWN: C.C.P.</p> <p>CHECKED: A.F.H.</p> <p>PROJ. ENGR.: G.A.B.</p>	<p>JEAN PAUL SILVA No. 66522</p>	<p>P.E.</p>
--	--------------------------------------	-------------

<p>HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771</p>	<p>SCALE: NTS</p>	<p>CLIENTS PROJECT: -</p> <p>ENGINEERS PROJECT: 44238-004</p> <p>CAD REFERENCE: 44238-004BP3-S26</p>
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<p>CITY OF NORTH MIAMI PUBLIC WORKS UTILITIES</p>
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<p>WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB HIGH SERVICE PUMP STATION AND ELECTRICAL ROOM 1 STRUCTURAL MODIFICATIONS - SHEET 3</p>

<p>DATE: JULY 2015</p> <p>SHEET: 166 OF 335</p> <p>DRAWING: S-26</p>
--



NOTE:
* MINIMUM DEPTH OF PUMP SHOWN ACTUAL PUMP AND CAN DIMENSION TO BE DETERMINED BY PUMP MANUFACTURER



PLOT DATE: 7/24/2015 11:57 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.	HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771
DRAWN	C.C.P.	
CHECKED	A.F.H.	
PROJ. ENGR.	G.A.B.	
JEAN PAUL SILVA		P.E.
No. 66522		

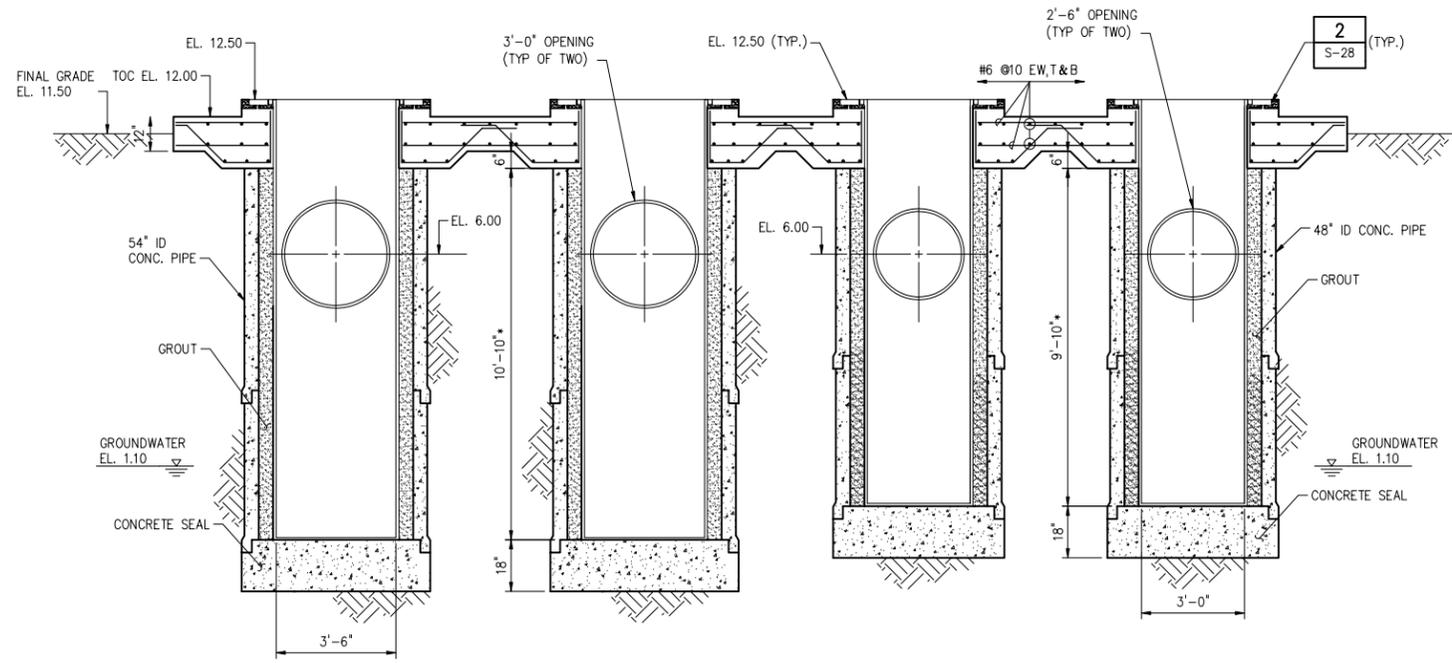
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CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S28


CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

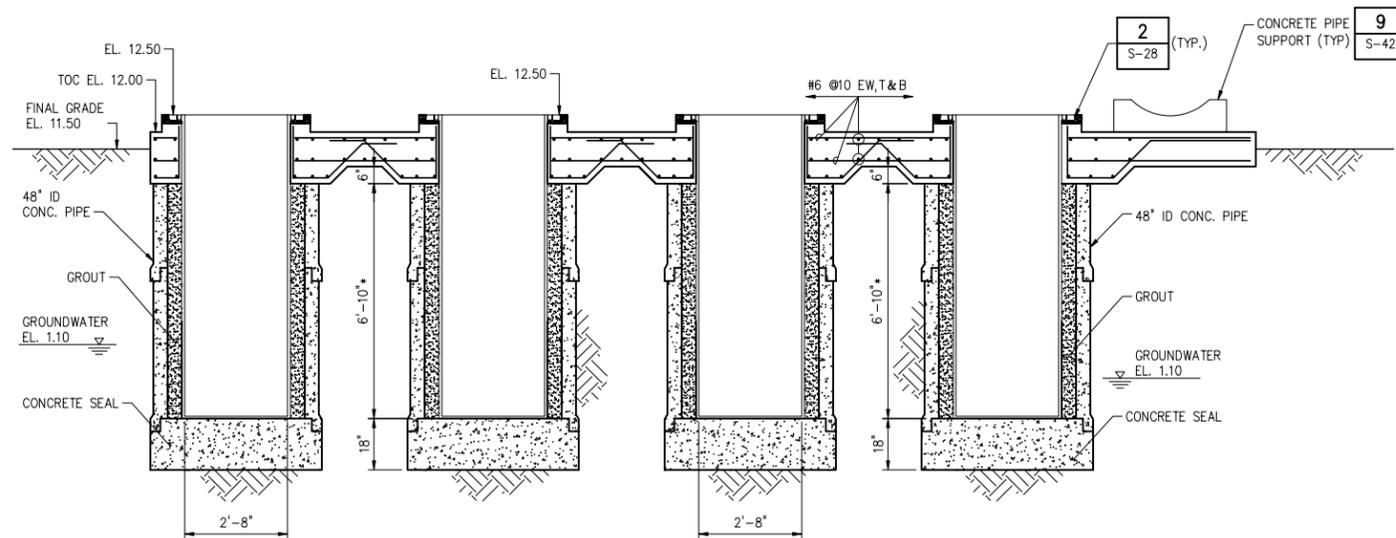
WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
MASTER PUMP STATION SECTIONS AND DETAILS

DATE:	JULY 2015
SHEET:	168 OF 335
DRAWING:	S-28

REQUEST FOR PROPOSAL



SECTION E
3/8" = 1'-0" S-27



SECTION F
3/8" = 1'-0" S-27

NOTE:
* MINIMUM DEPTH OF PUMP SHOWN ACTUAL PUMP AND CAN DIMENSION TO BE DETERMINED BY PUMP MANUFACTURER



PLOT DATE: 7/24/2015 11:37 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.
DRAWN	C.C.P.
CHECKED	A.F.H.
PROJ. ENGR.	G.A.B.

JEAN PAUL SILVA
No. 66522
P.E.

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

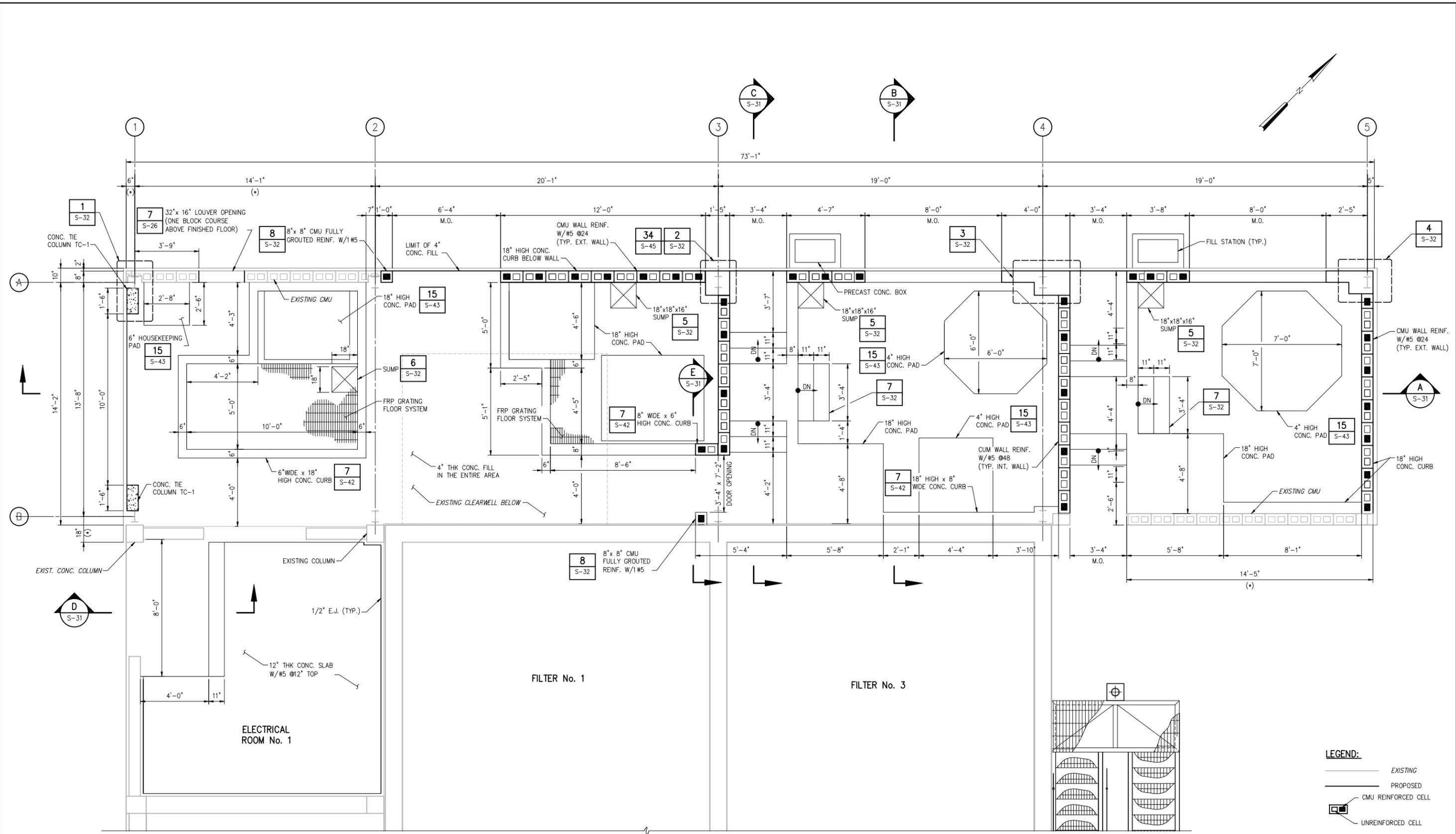
SCALE
AS NOTED
CLIENTS PROJECT: -
ENGINEERS PROJECT: 44238-004
CAD REFERENCE: 44238-004BP3-S29



WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
MASTER PUMP STATION SECTIONS

DATE:	JULY 2015
SHEET:	169 OF 335
DRAWING:	S-29

REQUEST FOR PROPOSAL



PLAN
3/8"=1'-0"

LEGEND:
 ——— EXISTING
 - - - - - PROPOSED
 CMU REINFORCED CELL
 UNREINFORCED CELL



PLOT DATE: 7/24/2015 11:37 AM BY: TBUCAS

NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.
DRAWN	C.C.P.
CHECKED	A.F.H.
PROJ. ENGR.	G.A.B.

JEAN PAUL SILVA
No. 66522
P.E.

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

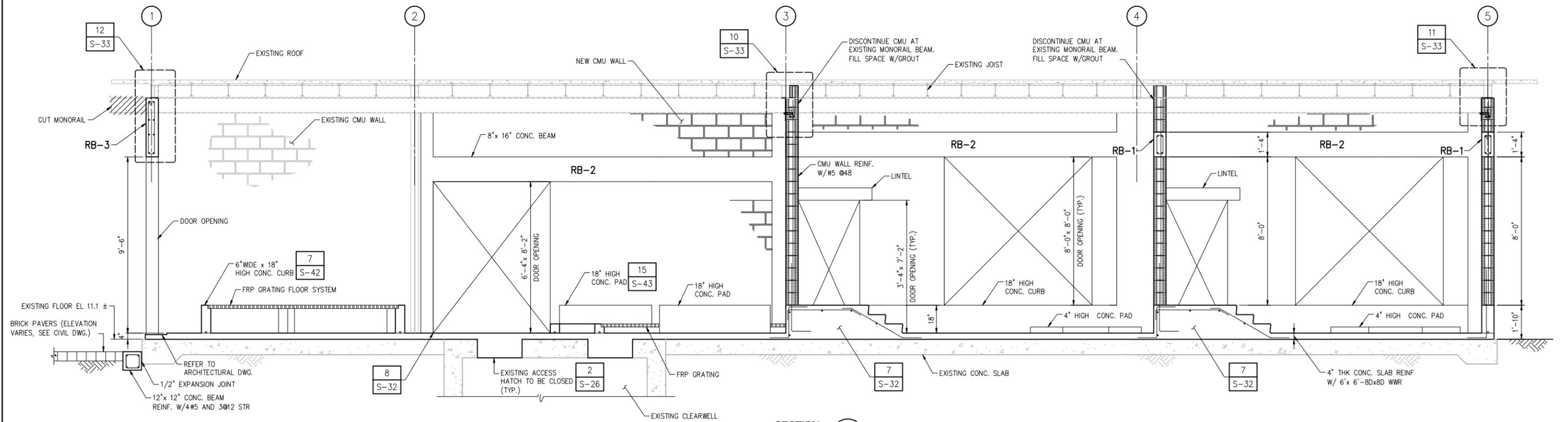
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3/8"=1'-0"
CLIENTS PROJECT: -
ENGINEERS PROJECT: 44238-004
CAD REFERENCE: 44238-004BP3-S30

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

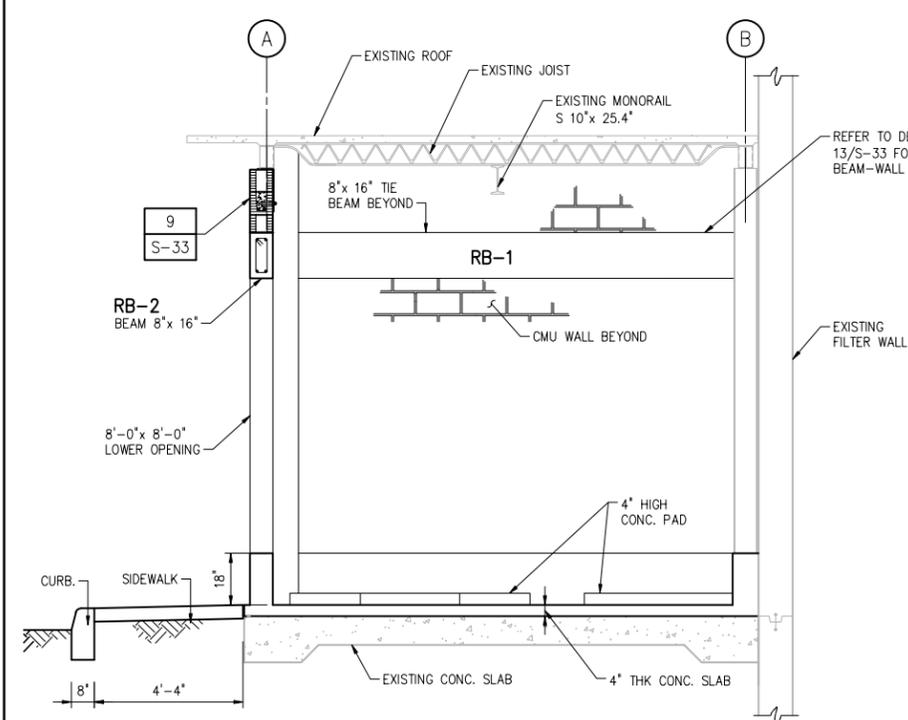
WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
CHEMICAL HANDLING FACILITY
PROPOSED PLAN

DATE: JULY 2015
SHEET: 170 OF 335
DRAWING: S-30

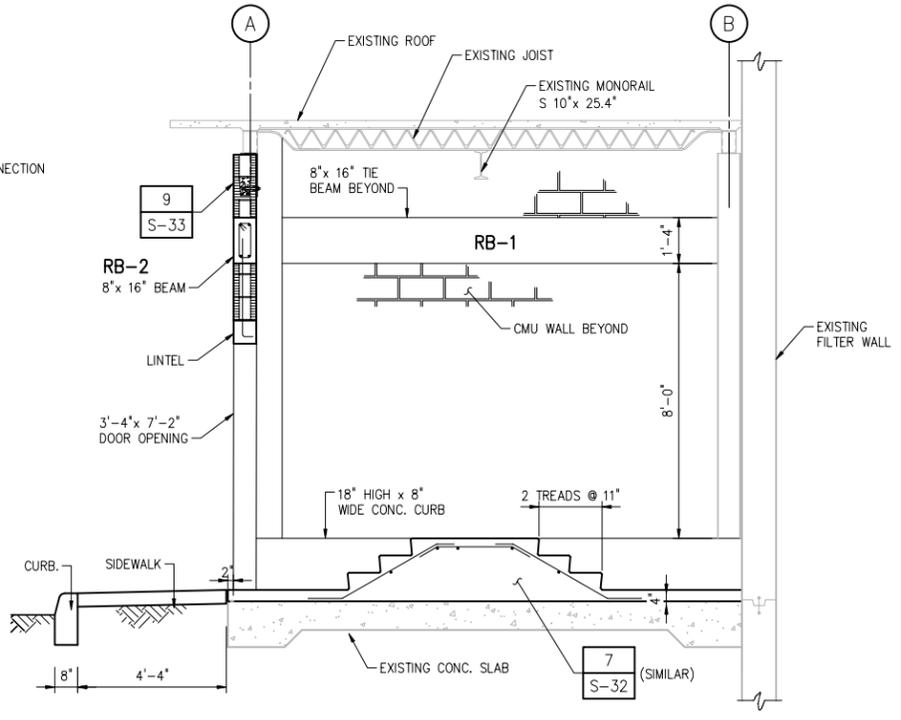
REQUEST FOR PROPOSAL



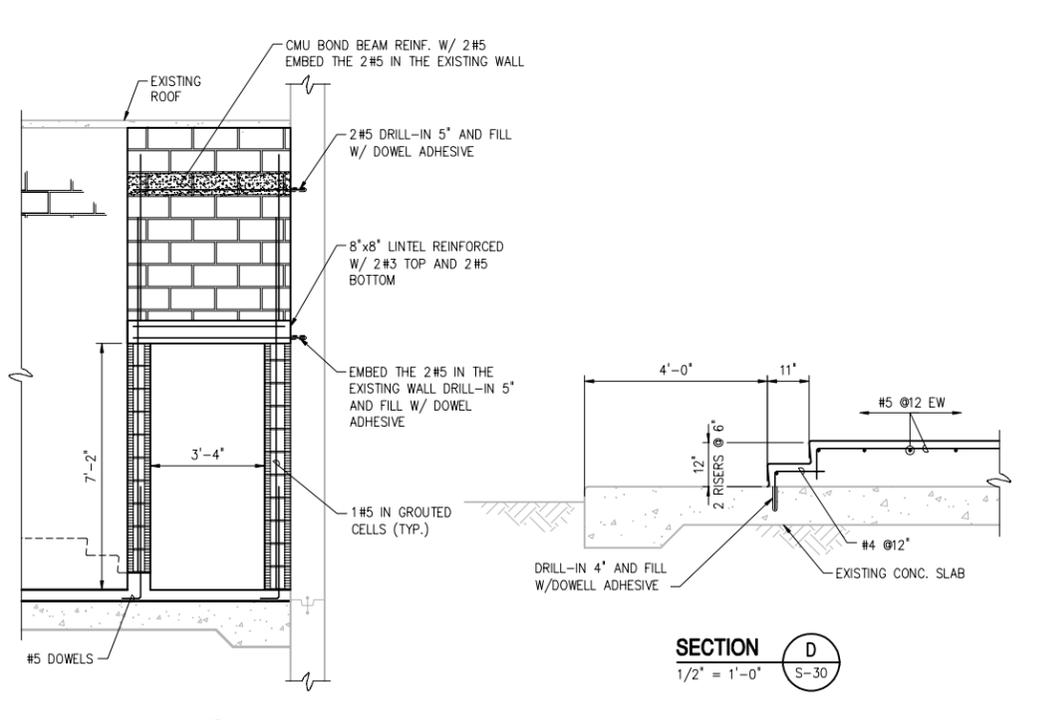
SECTION A
3/8" = 1'-0" S-30



SECTION B
3/8" = 1'-0" S-30

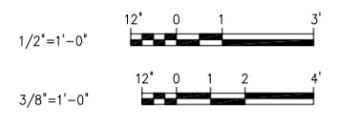


SECTION C
3/8" = 1'-0" S-30



SECTION D
1/2" = 1'-0" S-30

SECTION E
3/8" = 1'-0" S-30



PLOT DATE: 7/24/2015 11:37 AM BY: TBGAS

DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.	HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771
DRAWN	C.C.P.	
CHECKED	A.F.H.	
PROJ. ENGR.	G.A.B.	
SCALE	AS NOTED	
JEAN PAUL SILVA No. 66522 P.E.		

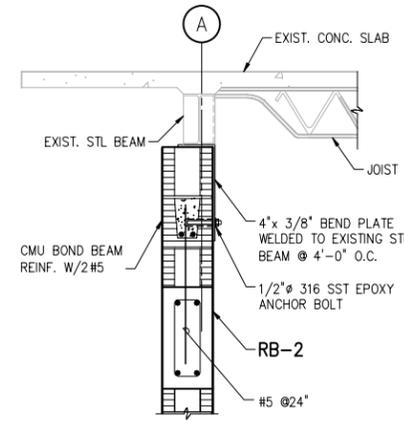
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ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S31

CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

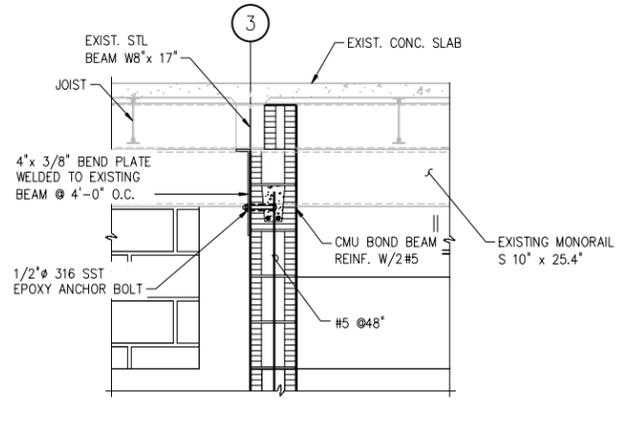
WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB	
CHEMICAL HANDLING FACILITY SECTIONS AND DETAILS SHEET 1	

DATE:	JULY 2015
SHEET:	171 OF 335
DRAWING:	S-31

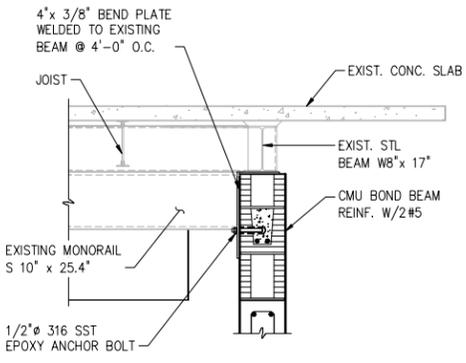
REQUEST FOR PROPOSAL



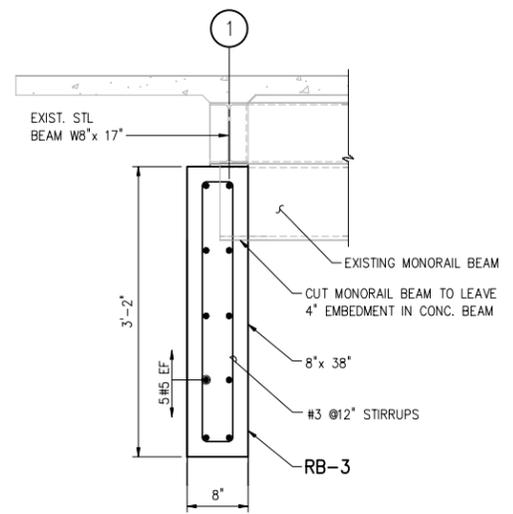
DETAIL 9
NTS S-31



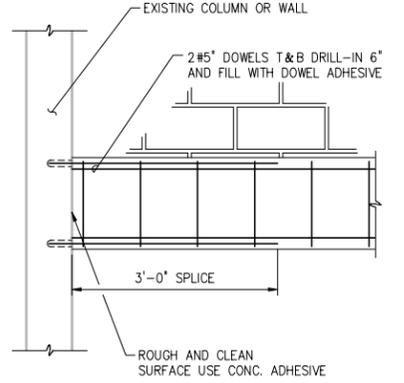
DETAIL 10
NTS S-31



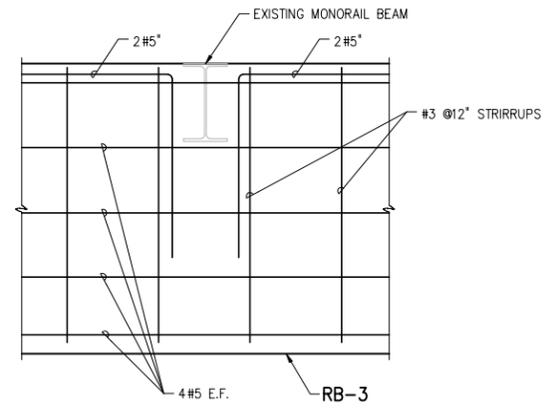
DETAIL 11
NTS S-31



DETAIL 12
NTS S-31



DETAIL 13
NTS S-31



SECTION A
NTS

BEAM SCHEDULE									
MARK	SPAN TYPE	SIZE		No. REQ'S	MAIN REINF.		STIRRUPS		REMARKS
		W"	D"		TOP	BOT.	SIZE	SPACING	
RB-1	SIMPLE	8"	16"	2	2#5	2#5	#3	@12	-
RB-2	SIMPLE	8"	16"	3	2#5	2#5	#3	@12	-
RB-3	SIMPLE	8"	16"	1	2#5	2#5	#3	@12	SEE DETAIL 12/S-33 SEE DETAIL A/S-33

SEE DETAIL 28/S-45 FOR BEAMS ELEVATIONS

PLOT DATE: 7/24/2015 11:57 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	C.C.P.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.	HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771
DRAWN	C.C.P.	
CHECKED	A.F.H.	
PROJ. ENGR.	G.A.B.	
JEAN PAUL SILVA P.E. No. 66522		

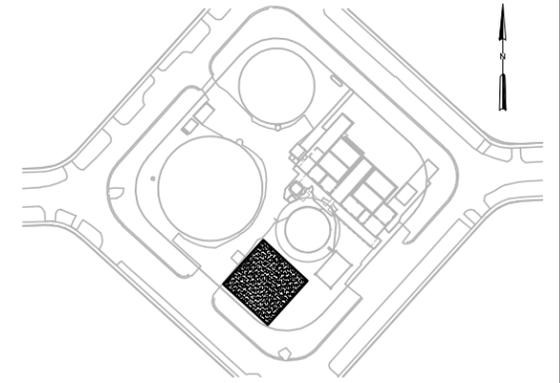
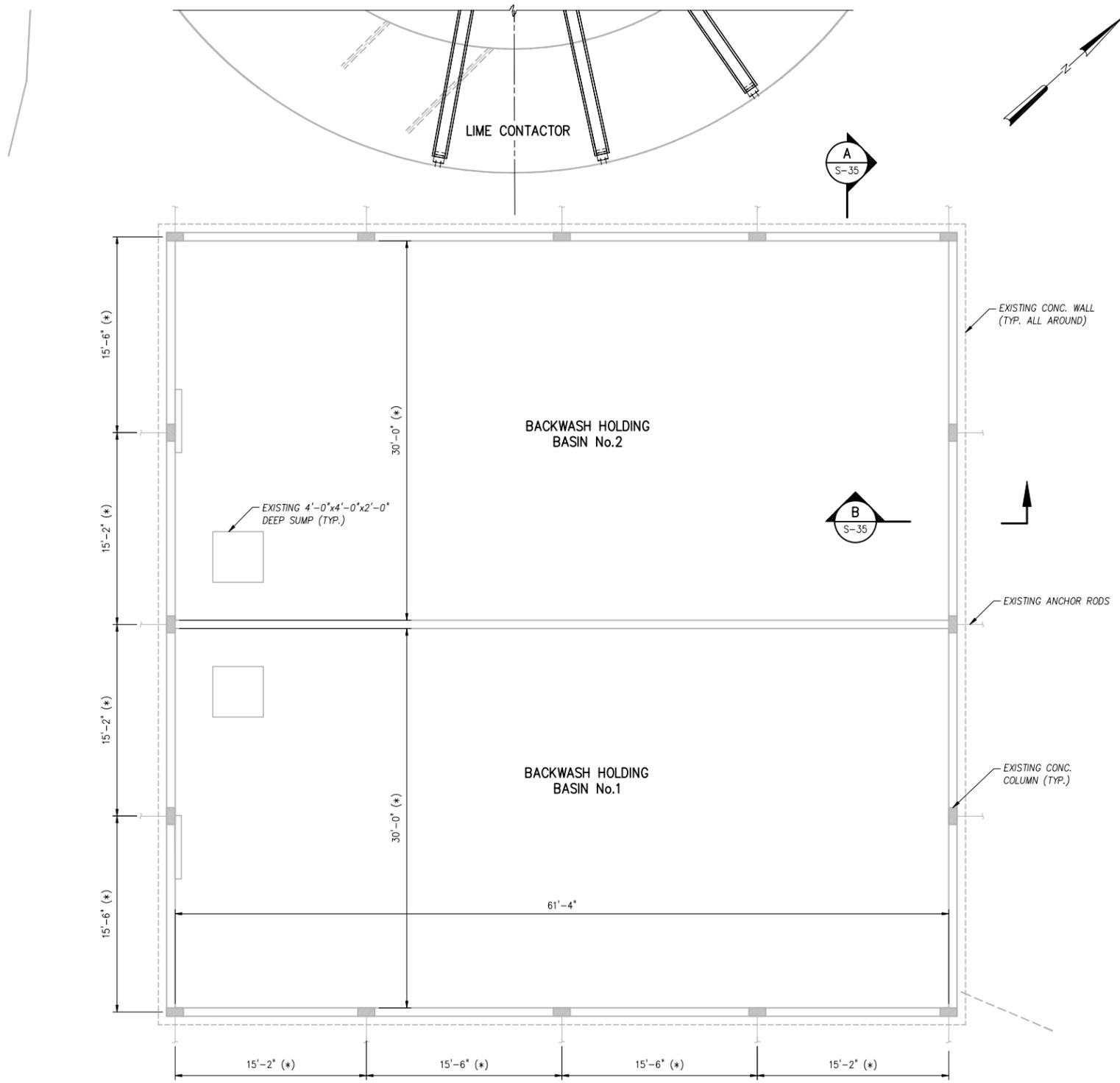
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CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S33


CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB	
CHEMICAL HANDLING FACILITY SECTIONS AND DETAILS SHEET 3	

DATE:	JULY 2015
SHEET:	173 OF 335
DRAWING:	S-33

REQUEST FOR PROPOSAL



LOCATION MAP

BACKWASH HOLDING BASIN PLAN
3/16" = 1'-0"

GENERAL NOTES:

1. REFURBISH THE INTERIOR OF THE BASINS PER SPECIFICATION 07161.
2. FOR CONSTRUCTION SEQUENCING RESTRICTIONS FOR THE WORK SHOWN ON THIS SHEET REFERENCE THE SPECIFICATION ENTITLED 'SUMMARY OF WORK'.

LEGEND:

- EXISTING
- PROPOSED



PLOT DATE: 7/24/2015 11:57 AM BY: TBKAS

DESIGNED	J.P.S.		
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CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

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JEAN PAUL SILVA No. 66522	
P.E.	

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

SCALE
3/16" = 1'-0"

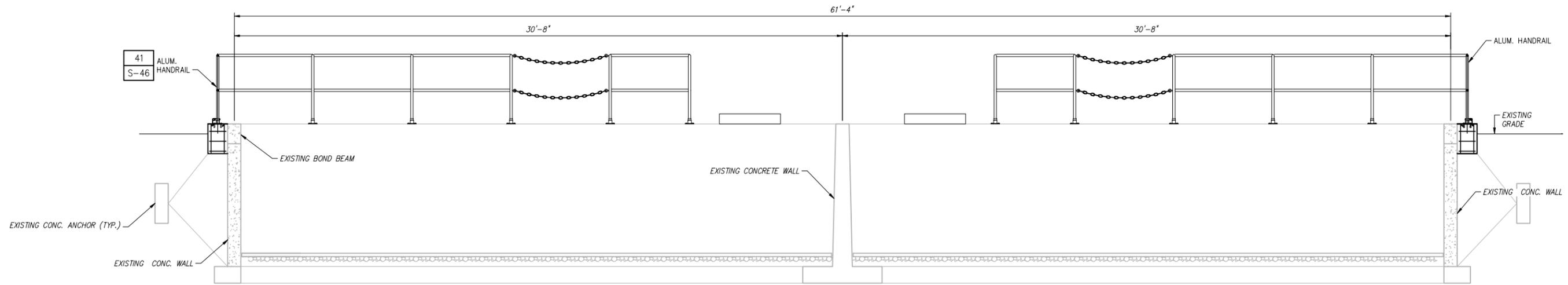
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CAD REFERENCE:	44238-004BP3-S34

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

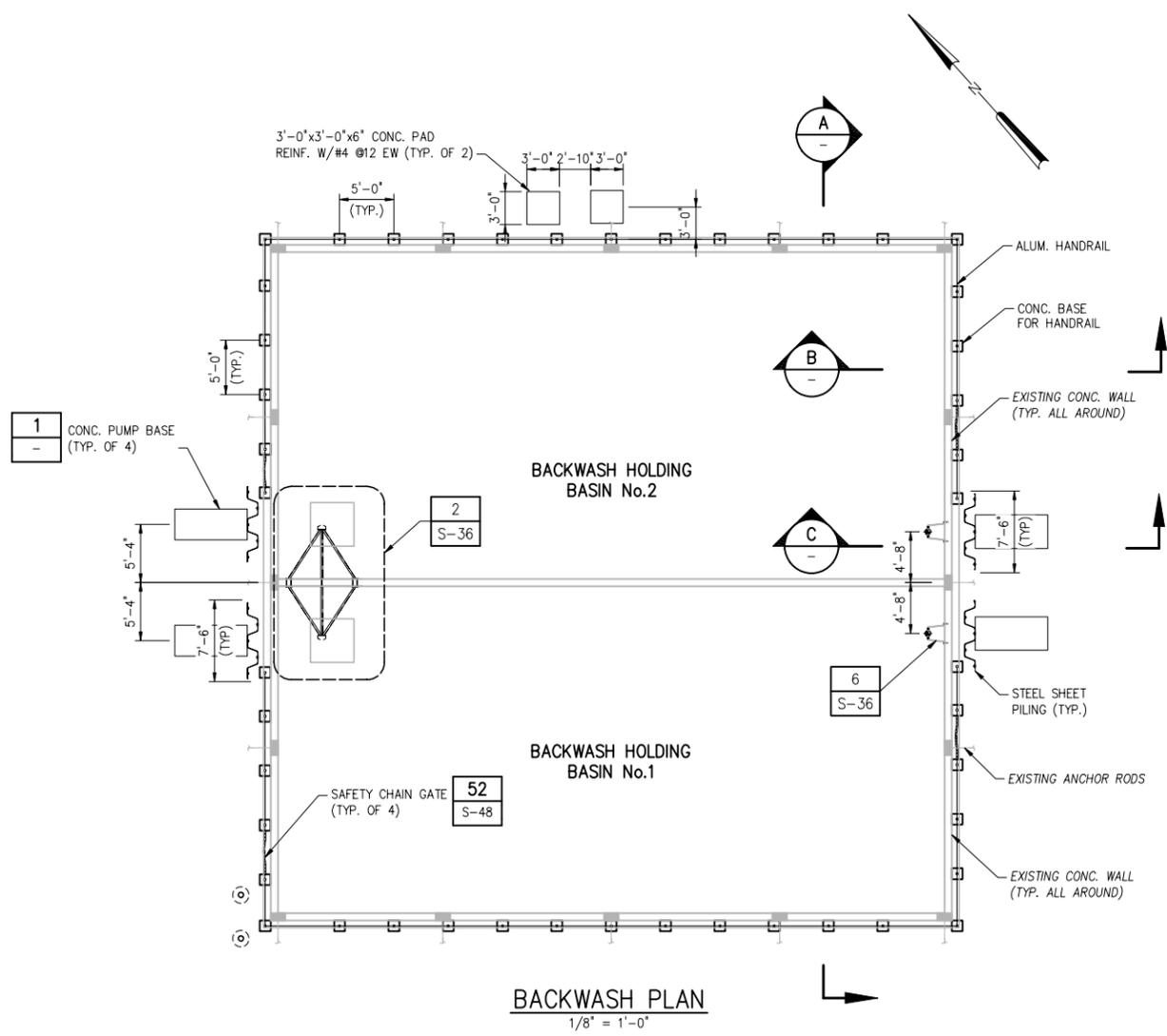
WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
BACKWASH HOLDING BASIN DEMOLITION PLAN

DATE:	JULY 2015
SHEET:	174 OF 335
DRAWING:	S-34

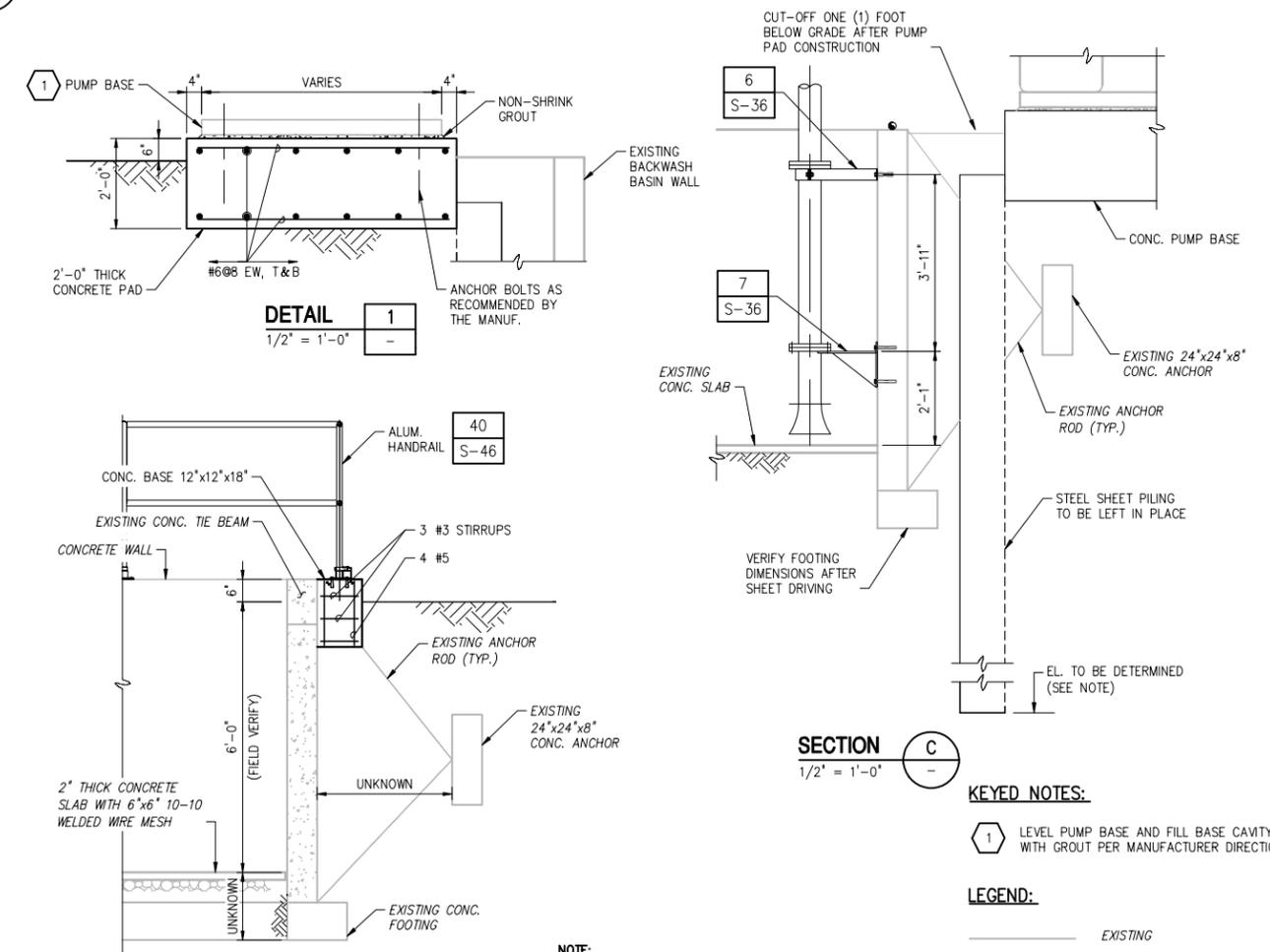
REQUEST FOR PROPOSAL



SECTION A
3/8" = 1'-0"



BACKWASH PLAN
1/8" = 1'-0"



SECTION B
1/2" = 1'-0"

SECTION C
1/2" = 1'-0"

KEYED NOTES:
1 LEVEL PUMP BASE AND FILL BASE CAVITY WITH GROUT PER MANUFACTURER DIRECTIONS.

LEGEND:
— EXISTING
— PROPOSED

8' 6' 4' 2' 0'
1/8" = 1'-0"

12' 0' 1' 3'
1/2" = 1'-0"

12' 0' 1' 2' 4'
3/8" = 1'-0"

NOTE:
INTERLOCKED PZ-27 STEEL SHEETING TO BE DRIVEN BEFORE EXCAVATION. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW SIGNED AND SEALED DESIGN CALCULATIONS SHADOWING SHEETING LAYOUT, SIZES, DEPTHS, BRACING, AS WELL AS DEFLECTION VALUES AT THE TOP OF THE SHEETING. SUBMITTAL SHALL ALSO INCLUDE THE PROPOSED SHEETING DRIVING METHODS, DRIVING EQUIPMENT AND VIBRATIONS LEVELS RESULTING FROM THE DRIVING OPERATION.

PLOT DATE: 7/24/2015 11:37 AM BY: TBUCAS

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PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

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PROJ. ENGR.	G.A.B.	
JEAN PAUL SILVA No. 66522		P.E.

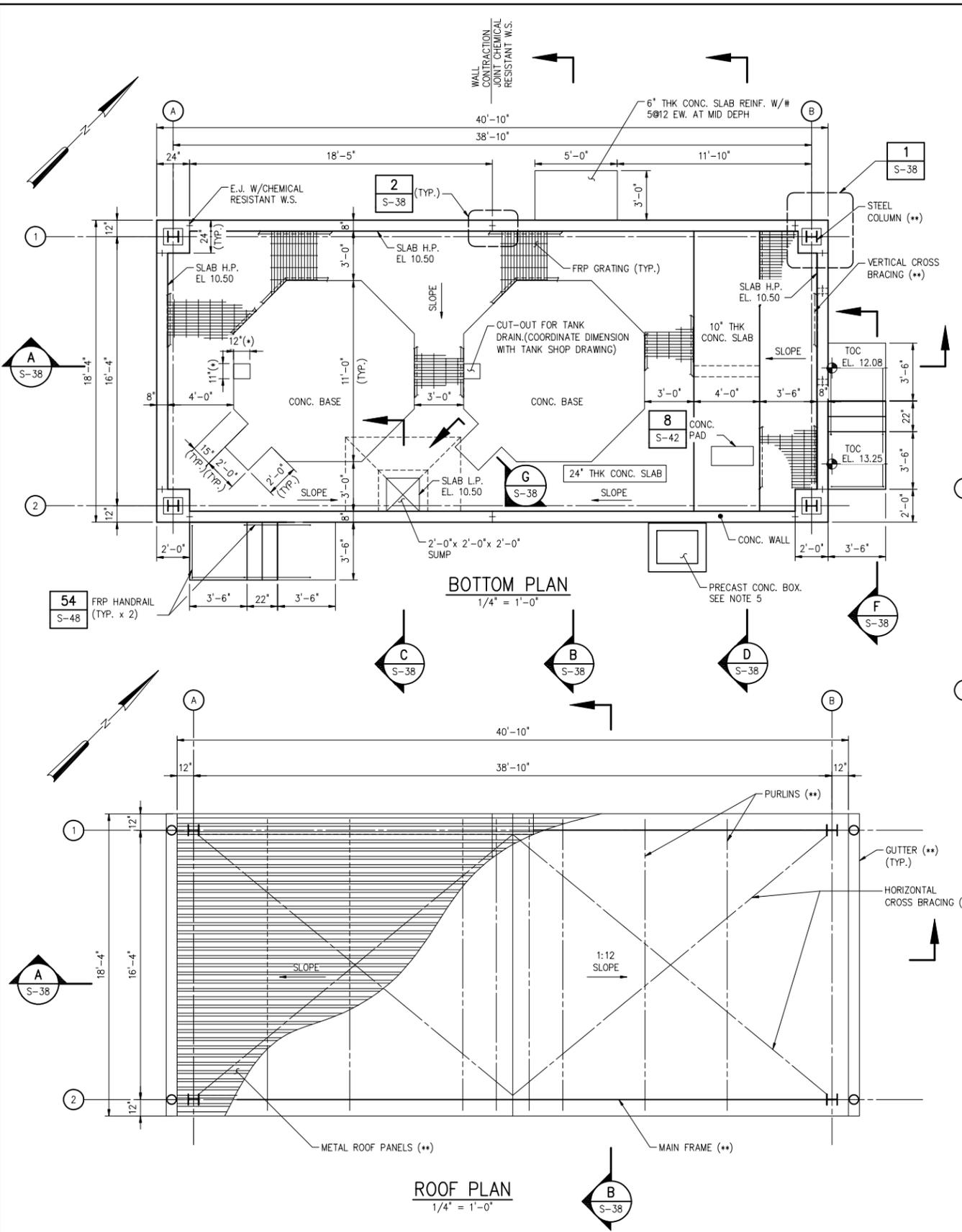
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CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S35

CITY OF NORTH MIAMI PUBLIC WORKS UTILITIES	
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WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB	
BACKWASH HOLDING BASIN REHABILITATION PLANS AND DETAILS	

DATE:	JULY 2015
SHEET:	175 OF 335
DRAWING:	S-35

REQUEST FOR PROPOSAL

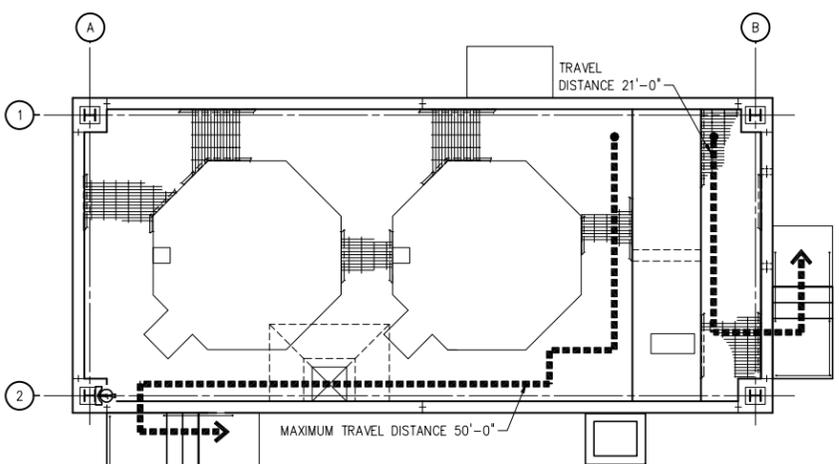


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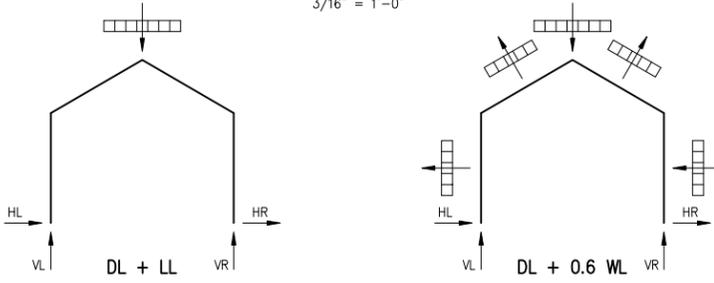
1. THE SODIUM HYPOCHLORITE FACILITY SHALL BE A PRE-ENGINEERED METAL BUILDING SYSTEM PER SPECIFICATION SECTION 13121. PRE-ENGINEERED METAL BUILDING SYSTEM DESIGN CALCULATIONS AND DETAILED DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
2. THE PRE-ENGINEERED METAL BUILDING FOUNDATION SHALL BE AS SHOWN ON THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL COORDINATE ANCHOR BOLT REQUIREMENTS WITH METAL BUILDING MANUFACTURER AND THE ENGINEER. THE ENGINEER SHALL VERIFY THE FOUNDATION CAPACITY FOR THE REACTIONS PROVIDED BY THE PRE-ENGINEERED METAL BUILDING MANUFACTURER. FOUNDATION DIMENSIONS SHOWN ARE FOR BIDDING PURPOSES AND MAY VARY DEPENDING ON MANUFACTURER SELECTED. FINAL DIMENSIONS SHALL BE VERIFIED AFTER PRE-ENGINEERED METAL BUILDING MANUFACTURER'S FINAL DESIGN HAS BEEN APPROVED.
3. PRE-ENGINEERED METAL BUILDING SYSTEM SHALL BE DESIGNED PER THE FLORIDA BUILDING CODE AND LIVE LOADS SHOWN ON DRAWING S-01.
4. ITEMS DESIGNATED WITH (**) SHALL BE PROVIDED BY THE PRE-ENGINEERED METAL BUILDING MANUFACTURER.
5. 6-INCH MINIMUM THICKNESS PRECAST CONCRETE BOX. REFER TO MECHANICAL DRAWINGS FOR DETAILS.

CHEMICAL STORAGE	
CHEMICAL NAME	12.5% SODIUM HYPOCHLORITE
FORMULA	NaOCL
CAS #	7681-52-9
NUMBER OF TANKS	2
STORAGE PER TANK	8,222 GALLONS
TOTAL STORAGE	16,444 GALLONS
CONTAINMENT VOLUME	9,591 GALLONS
TANK DIAMETER	10'-0"
TANK HEIGHT	15'-8"
HEALTH	2 MODERATE
FLAMMABILITY	0 NON-FLAMMABLE
STABILITY/REACTIVITY	1 SLIGHT
CONTACT	CORROSIVE
HAZARDOUS CLASSIFICATION	H-4

LIFE SAFETY ANALYSIS	
APPLICABLE CODES:	
FLORIDA BUILDING CODE, BUILDING 2010 EDITION	
FLORIDA BUILDING CODE, MECHANICAL 2010 EDITION	
FLORIDA BUILDING CODE, FUEL GAS 2010 EDITION	
FLORIDA BUILDING CODE, PLUMBING 2010 EDITION	
FLORIDA FIRE PREVENTION CODE 2010 EDITION	
OCCUPANCY CLASSIFICATION:	
GROUP H-4, STORAGE (PER FBC 307.6)	
LOW HAZARD CONTENTS (PER FFPC 6.2.2.2)	
SPECIAL PURPOSE INDUSTRIAL OCCUPANCY (PER FFPC 40.1.4.1.2)	
CONSTRUCTION TYPE:	
TYPE II-B (PER FBC 602.2)	
MAXIMUM NUMBER OF STORIES = 3 (PER FBC TABLE 503)	
ACTUAL NUMBER OF STORIES = 1	
MAXIMUM AREA (PER FLOOR) = 17,500 SF (PER FBC TABLE 503)	
ACTUAL AREA = 749 SF (PER FBC TABLE 503)	
MAXIMUM BUILDING HEIGHT = 55' (PER FBC TABLE 503)	
ACTUAL BUILDING HEIGHT = 26' < 55'	
OUTDOOR STORAGE:	
SEPARATION DISTANCE 20'-0" OR GREATER FFPC 64.2.2	
OCCUPANT LOAD:	
TOTAL OCCUPANT LOAD = 2	
MAX. ALLOWABLE OCCUPANT LOAD (FBC TABLE 1004.1.1) = 300 SF PER OCCUPANT	
FLOOR LEVEL 749 SF / 300 SF = 3 OCCUPANTS	
EGRESS CAPACITY:	
EGRESS CAPACITY EXCEEDS OCCUPANT LOAD. 0.2 INCHES	
PER OCCUPANT AT DOORS (FBC TABLE 1005.1) 0.3	
INCHES PER OCCUPANT AT STAIRS (FBC TABLE 1005.1)	
MINIMUM CORRIDOR WIDTH = 36" (FBC 1017.2, EXCEPTION 2) T	
MINIMUM STAIR WIDTH = 36" (FBC 1009.1 EXCEPTION 1)	
MINIMUM CLEAR OPENING OF EXIT DOORS = 32" (FBC 1008.1.1)	
EXIT ACCESS TRAVEL DISTANCE:	
TRAVEL DISTANCE TO EXIT = 175 FT. (PER FBC TABLE 1016.1)	
TRAVEL DISTANCE TO EXIT = 300 FT. (PER FFPC TABLE 40.2.6)	
EXIT ACCESS COMMON PATH OF TRAVEL:	
COMMON PATH OF EGRESS TRAVEL = 75 FT. (PER FBC 1014.3)	
COMMON PATH OF EGRESS TRAVEL = 50 FT. (PER FFPC TABLE 40.2.5)	
EXIT ACCESS SPACES WITH ONE MEANS OF EGRESS:	
SPACE MAXIMUM OCCUPANT LOAD = 10 PERSONS (PER FBC TABLE 1015.1)	
FIRE PROTECTION REQUIREMENTS:	
(PER FBC 2010, TABLE 601 AND TABLE 602)	
STRUCTURAL FRAME	0" HRS*
BEARING WALLS (EXT)	0" HRS*
BEARING WALLS (INT)	0" HRS*
NON-BEARING WALLS (EXT)	0" HRS* (FIRE SEPARATION DISTANCE > 20' PER TABLE 802)
NON-BEARING WALLS (INT)	0" HRS*
FLOOR CONSTRUCTION	0" HRS*
ROOF CONSTRUCTION	0" HRS*
FIRE EXTINGUISHER REQUIREMENTS:	
HAZARD CLASSIFICATION = LOW HAZARD PER NFPA 10-5.4.1.1	
OCCUPANCY HAZARD CLASSIFICATION = CLASS A,B PER NFPA 10-5.2.3	
FIRE EXTINGUISHER = 20LB/20A-120BC - DRY CHEMICAL	
DESIGN CRITERIA:	
CLASS A FIRE:	
MAXIMUM TRAVEL DISTANCE	= 75'
MAXIMUM FLOOR AREA	= 11250 SF
NUMBER OF EXTINGUISHERS REQUIRED	= GROUND FLOOR = 577 SF / 11250 SF = 0.05
CLASS B FIRE:	
MAXIMUM TRAVEL DISTANCE	= 50'

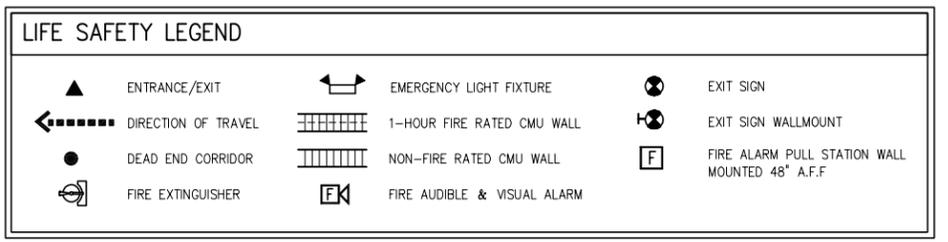


LIFE SAFETY PLAN
3/16" = 1'-0"



DL + 0.6 WL (KIPS)				
GRIDLINE	VL	HL	VR	HR
1	2.66	0.36	2.66	-0.36
2	2.66	0.36	2.66	-0.36

DL + LL (KIPS)				
GRIDLINE	VL	HL	VR	HR
1	8.03	1.13	8.03	-1.03
2	8.03	1.13	8.03	-1.03



PLOT DATE: 7/24/2015 11:38 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	A.B.C.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

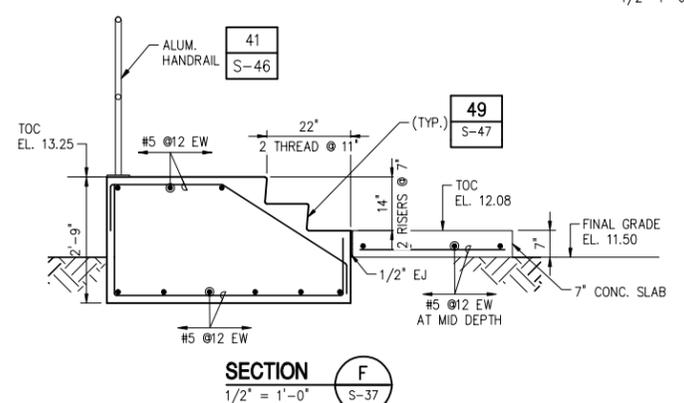
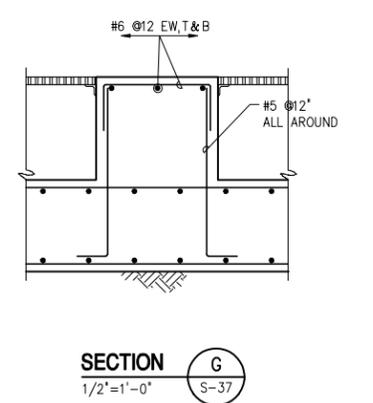
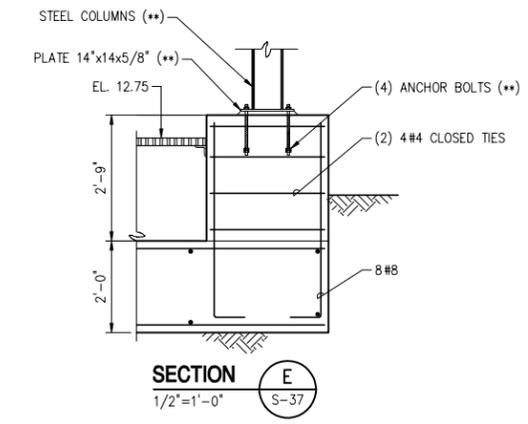
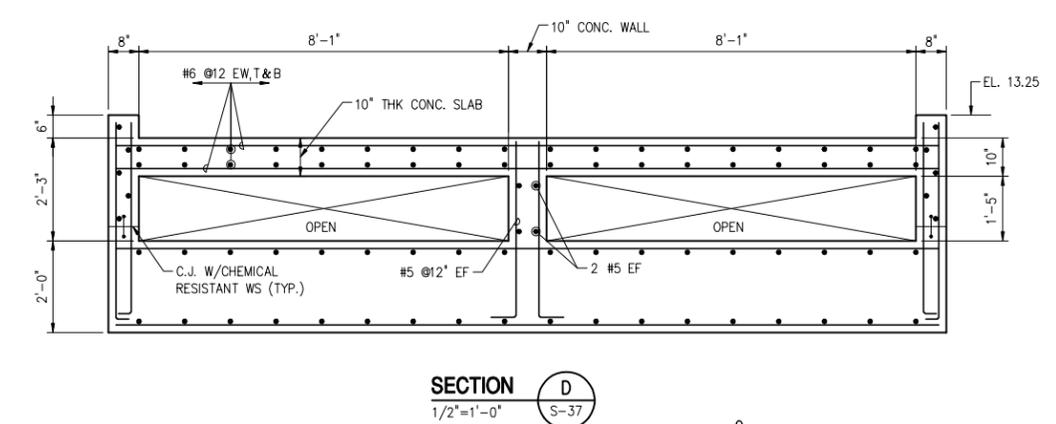
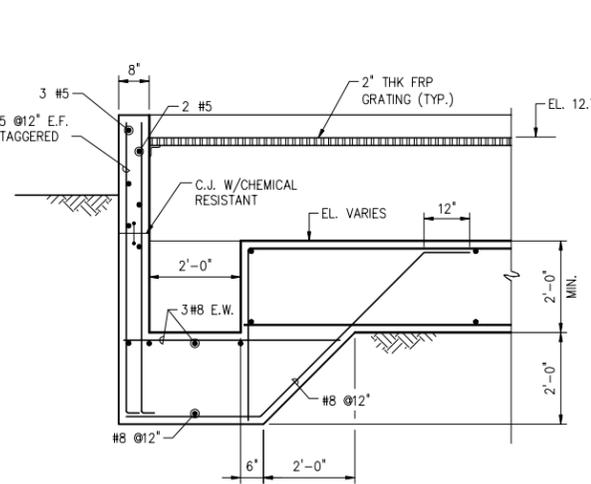
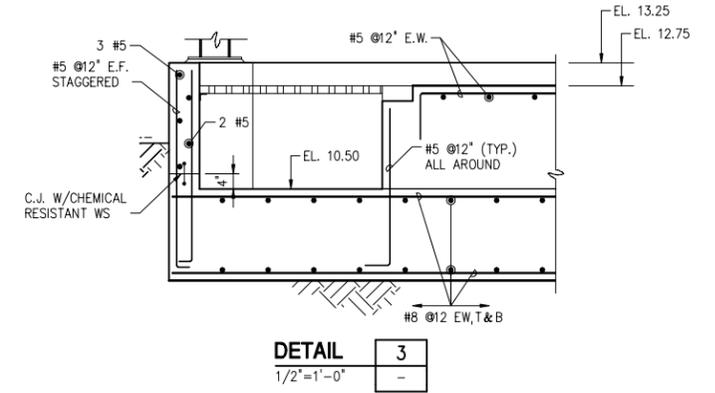
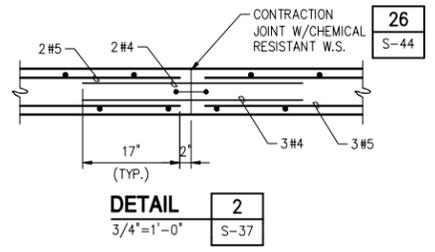
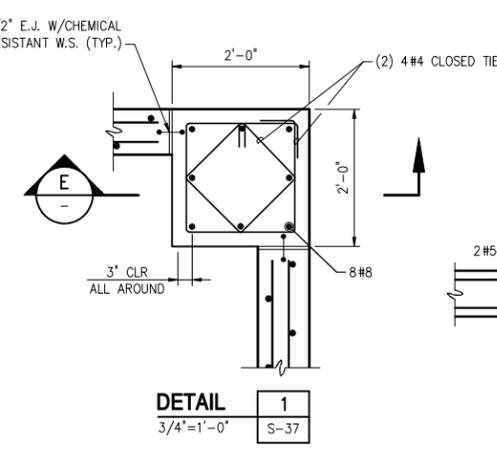
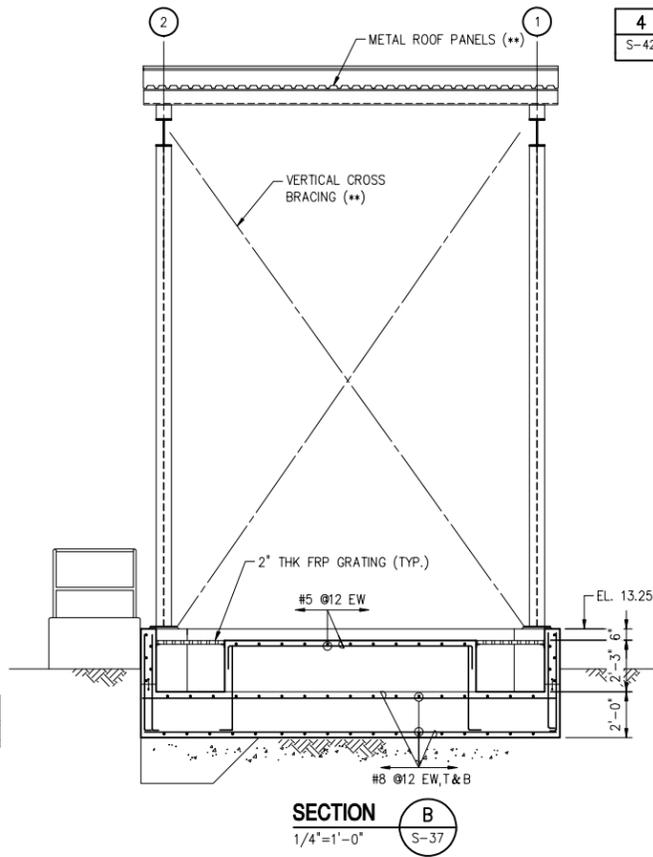
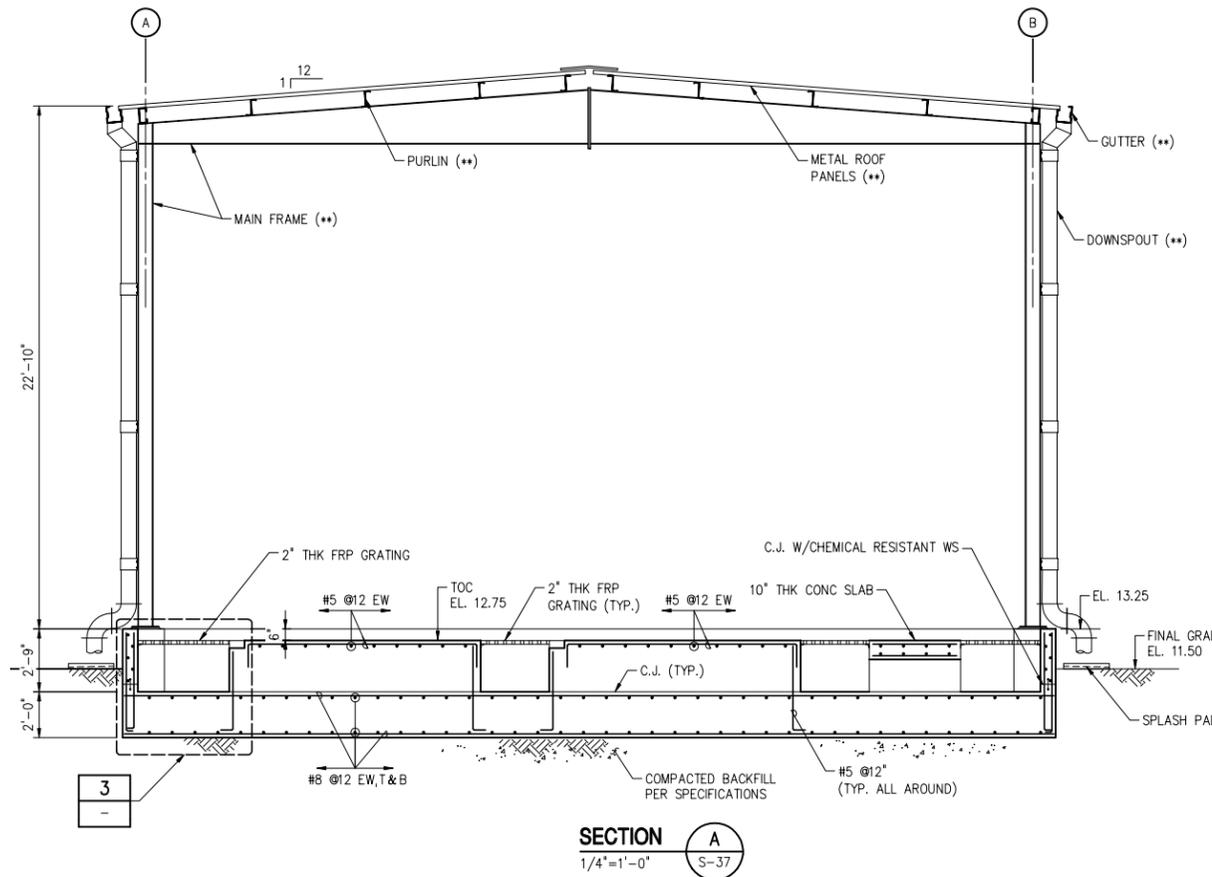
DESIGNED	J.P.S.	<p>HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771</p>	SCALE	1/4" = 1'-0"
DRAWN	A.B.C.		CLIENTS PROJECT:	-
CHECKED	A.F.H.		ENGINEERS PROJECT:	44238-004
PROJ. ENGR.	G.A.B.		CAD REFERENCE:	44238-004BP3-S37

<p>HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771</p>		<p>SCALE 1/4" = 1'-0"</p>	<p>CLIENTS PROJECT: -</p> <p>ENGINEERS PROJECT: 44238-004</p> <p>CAD REFERENCE: 44238-004BP3-S37</p>	<p>CITY OF NORTH MIAMI PUBLIC WORKS UTILITIES</p>
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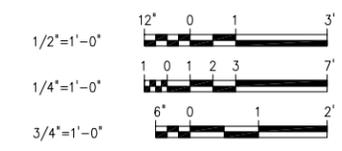
<p>CITY OF NORTH MIAMI PUBLIC WORKS UTILITIES</p>	<p>WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB</p>
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<p>SODIUM HYPOCHLORITE FACILITIES LIFE SAFETY AND PROPOSED PLANS</p>	<p>DATE: JULY 2015</p> <p>SHEET: 177 OF 335</p> <p>DRAWING: S-37</p>
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REQUEST FOR PROPOSAL



NOTE:
1. ITEMS DESIGNATED WITH (**) SHALL BE PROVIDED BY THE PRE-ENGINEERED METAL BUILDING MANUFACTURER



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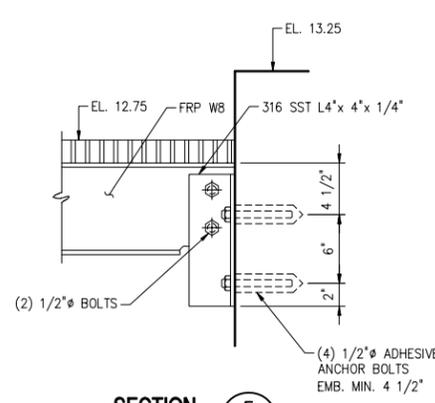
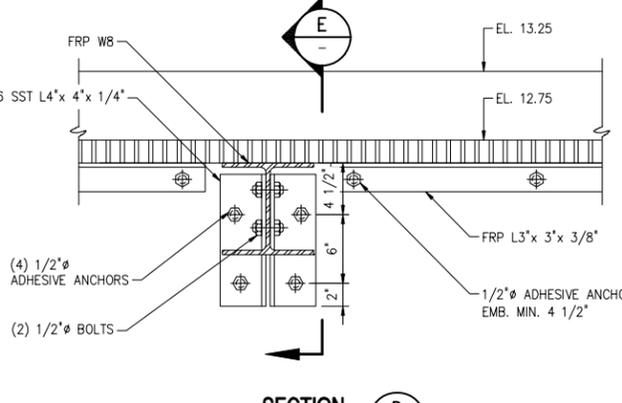
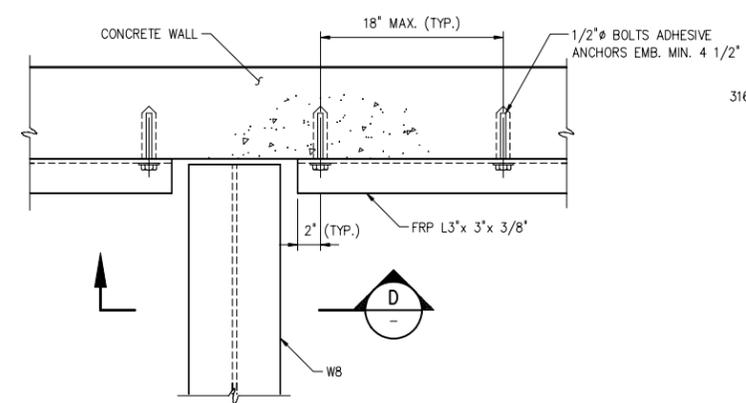
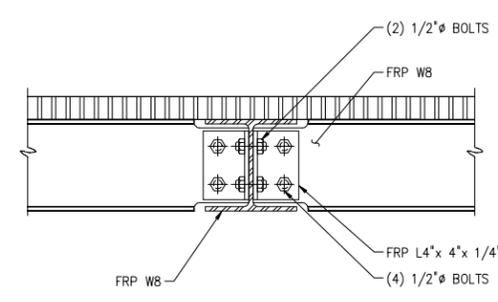
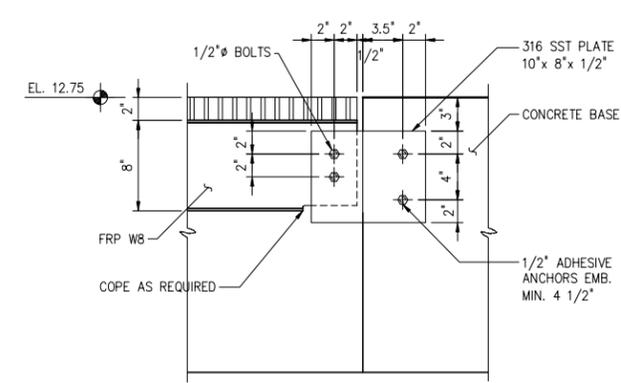
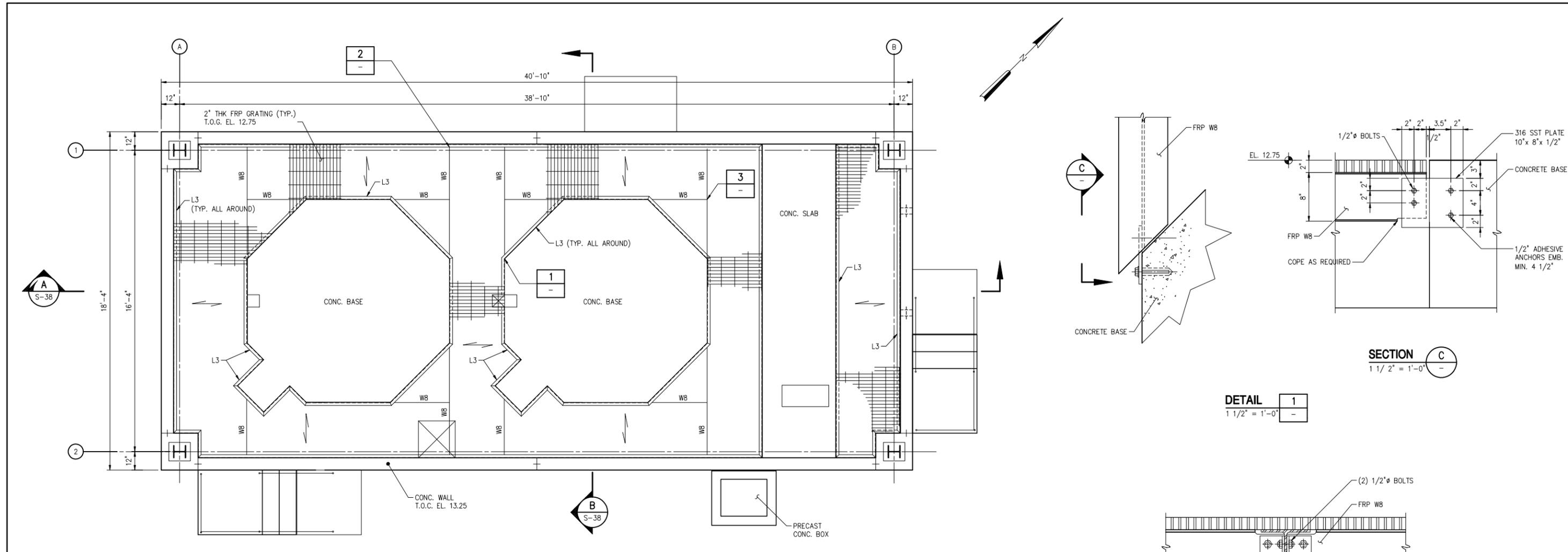
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CAD REFERENCE:	44238-004BP3-S38

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

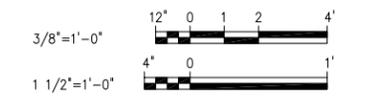
WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
SODIUM HYPOCHLORITE FACILITIES
SECTIONS AND DETAILS

DATE:	JULY 2015
SHEET:	178 OF 335
DRAWING:	S-38

REQUEST FOR PROPOSAL



- LEGEND:**
- WB MEANS WB"x 8"x 3/8" FRP
L3 MEANS L3"x 3"x 3/8" FRP
 - ALL BOLTS AND ANCHOR BOLTS SHALL BE 316 SST.
- NOTES:**
- PROVIDE THE REQUIRED OPENINGS FOR PIPES. REFER TO MECHANICAL DRAWINGS.
 - REFER TO SPECIFICATION SECTION 06610 FOR ADDITIONAL REQUIREMENTS.



PLOT DATE: 7/24/2015 11:38 AM BY: TBUCAS

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SCALE: AS NOTED

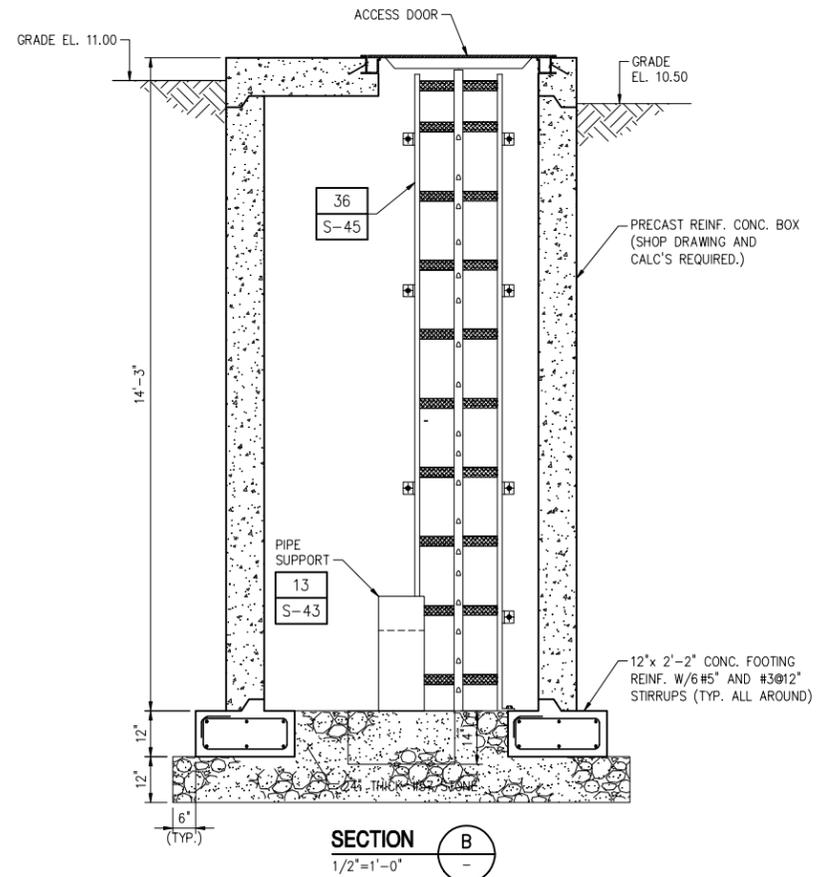
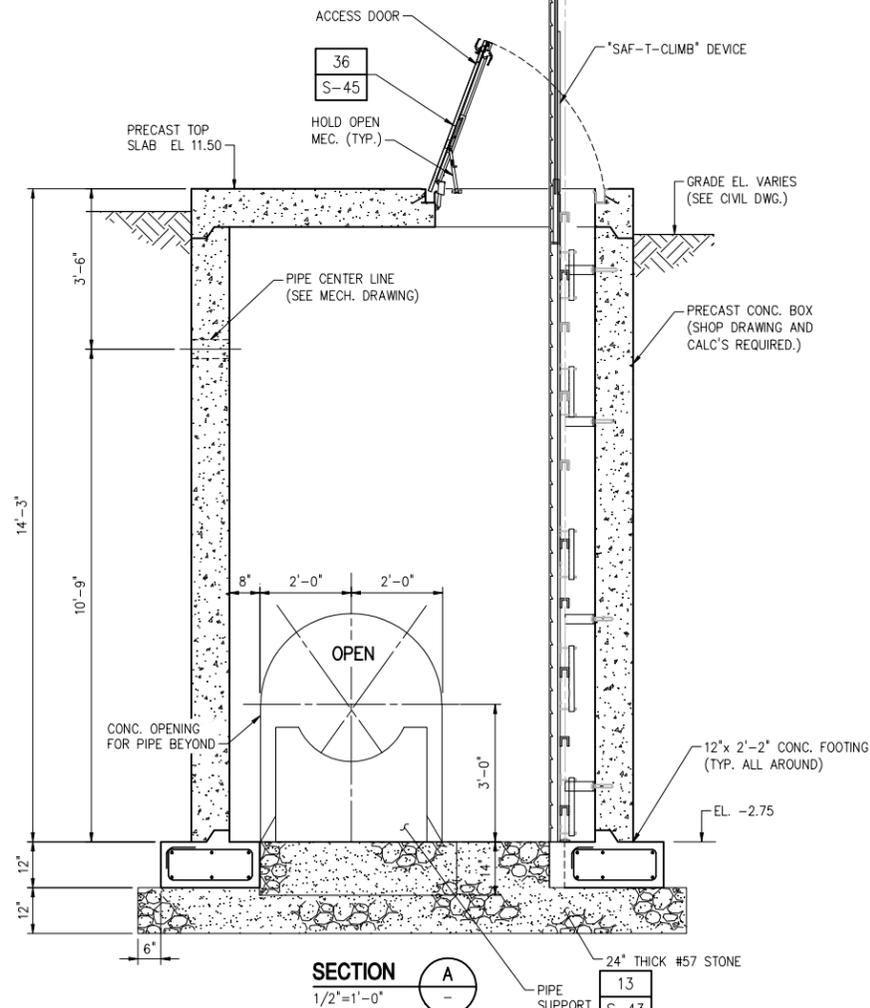
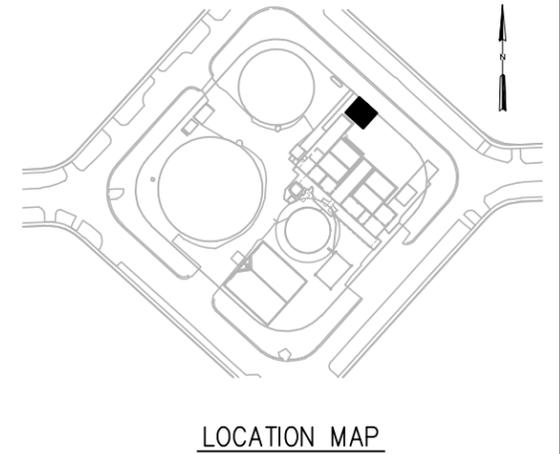
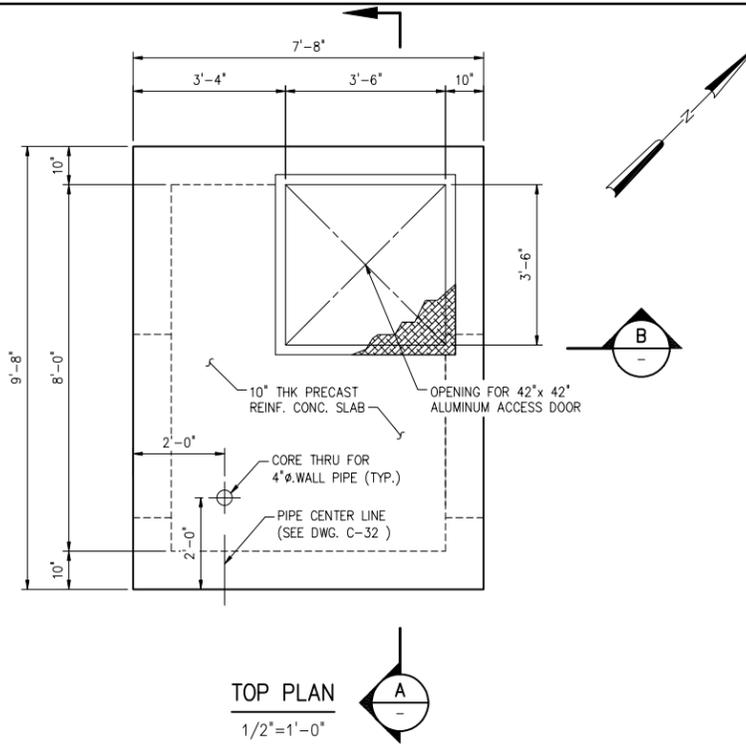
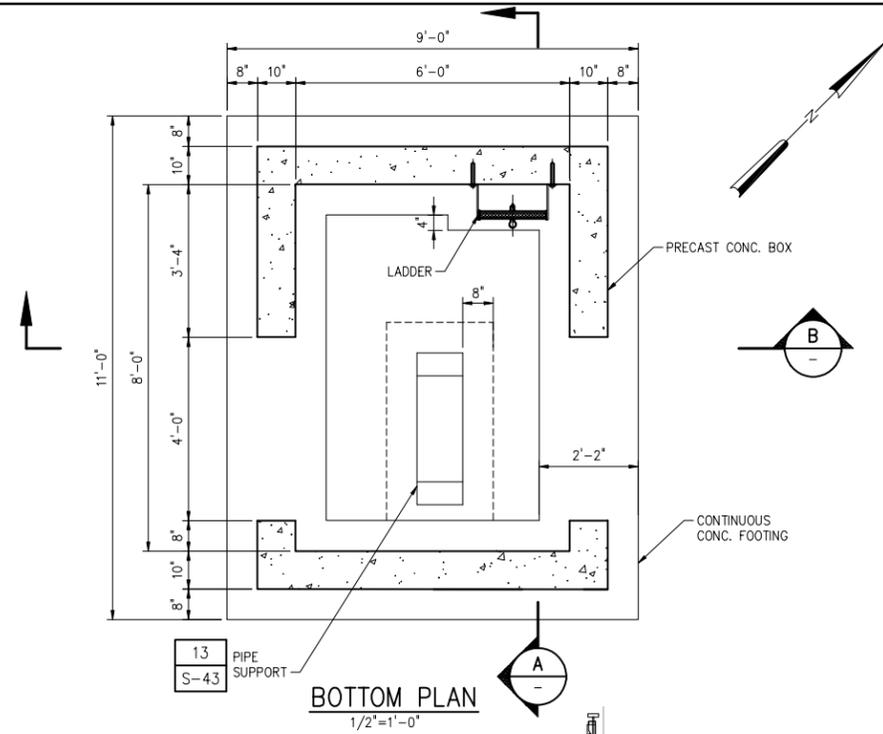
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ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S39

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
SODIUM HYPOCHLORITE FACILITIES GRATING
PLAN AND DETAILS

DATE:	JULY 2015
SHEET:	179 OF 335
DRAWING:	S-39

REQUEST FOR PROPOSAL



- NOTES:**
- "SAF-T-CLIMB" OR EQUAL TYPE DEVICE SHALL BE OF ALL TYPE 316 STAINLESS STEEL.
 - ALL FASTENERS SHALL BE OF TYPE 316 STAINLESS STEEL.
 - LADDER SHALL BE OF ALL TYPE 316 STAINLESS STEEL.
 - ALL ANCHOR SHALL BE OF TYPE 316 STAINLESS STEEL.



PLOT DATE: 7/24/2015 11:38 AM BY: TBUCAS

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CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
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1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

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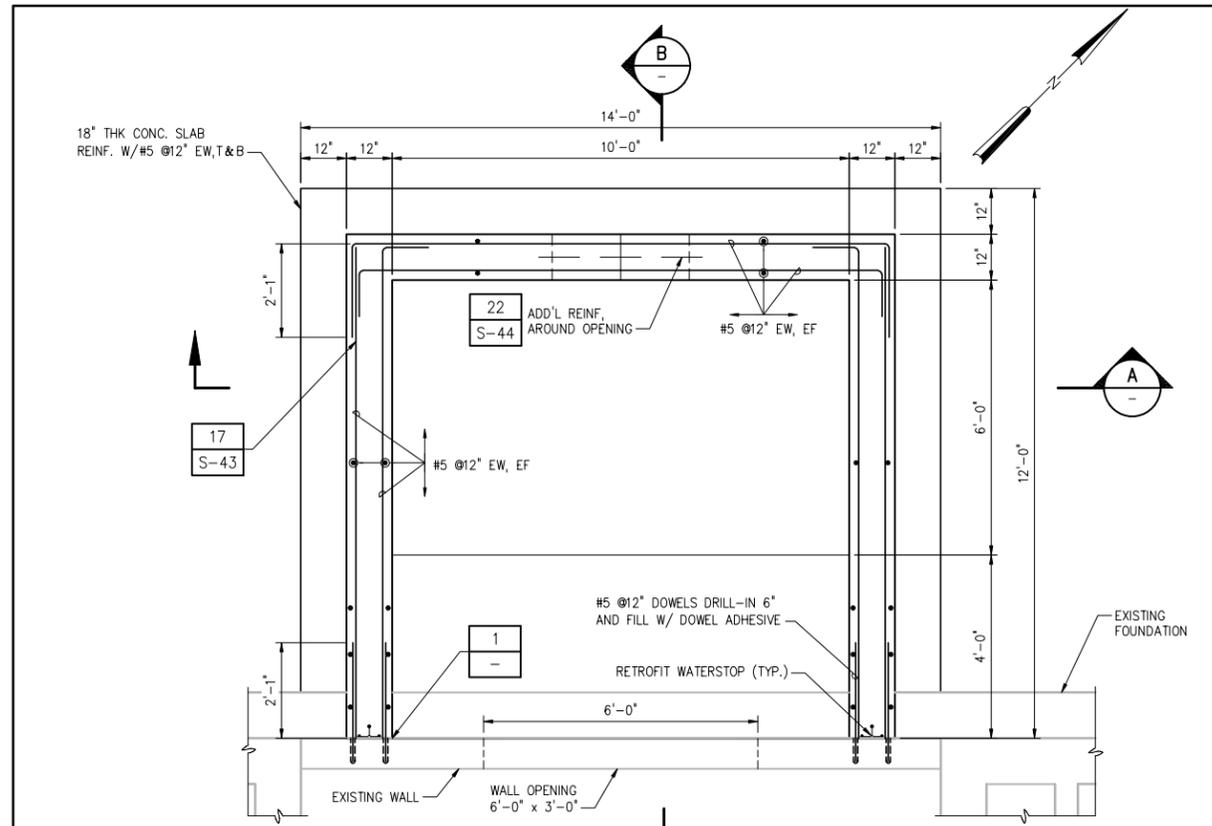
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ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S40

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

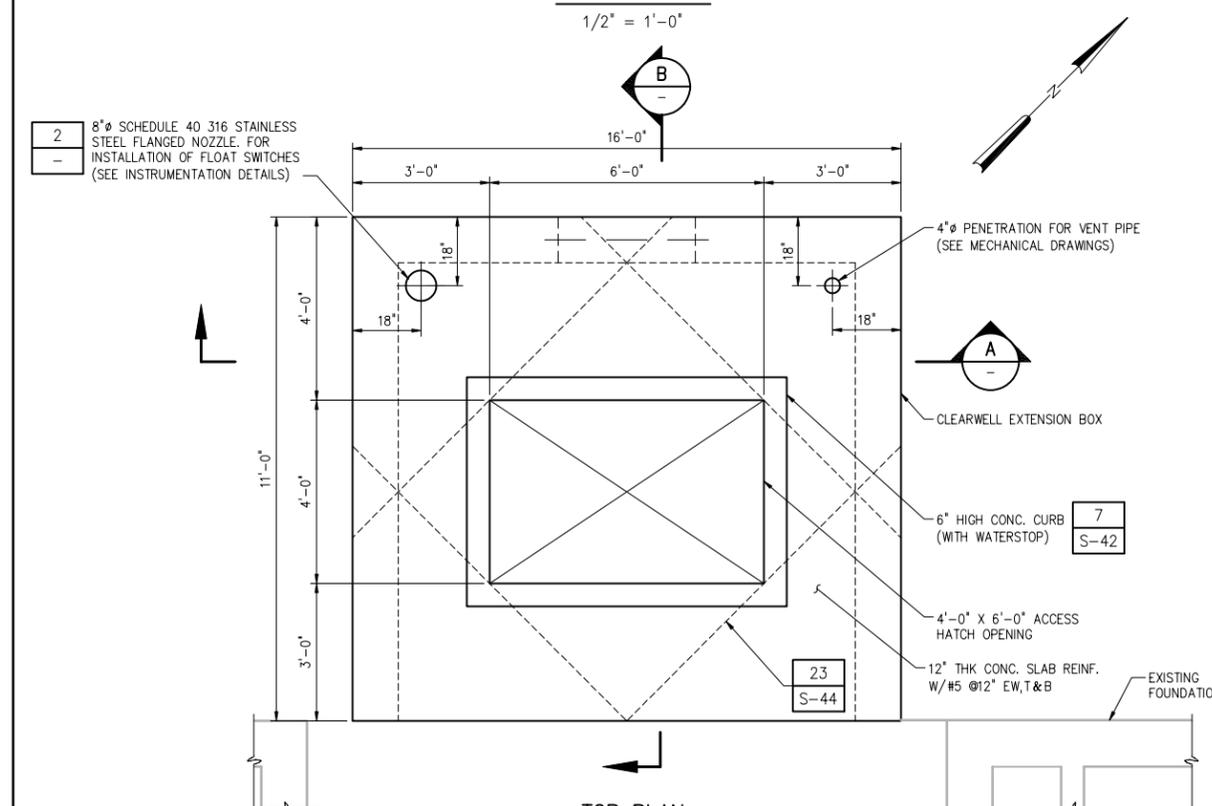
WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
CHEMICAL INJECTION VAULT PLAN AND SECTION

DATE:	JULY 2015
SHEET:	180 OF 335
DRAWING:	S-40

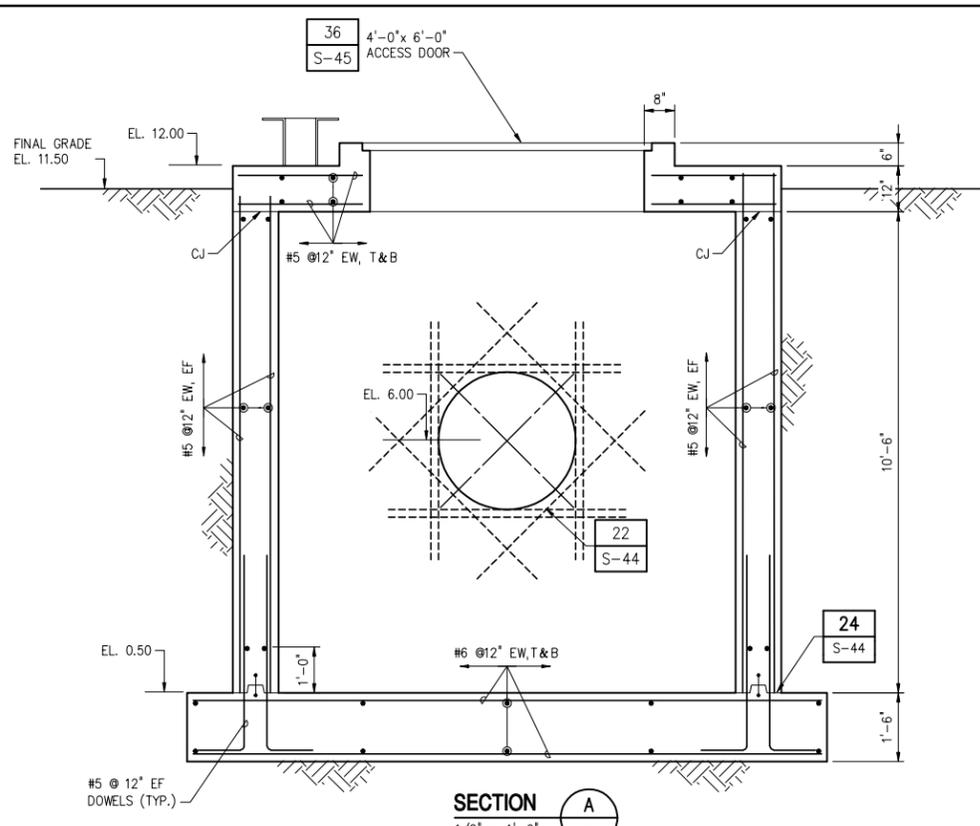
REQUEST FOR PROPOSAL



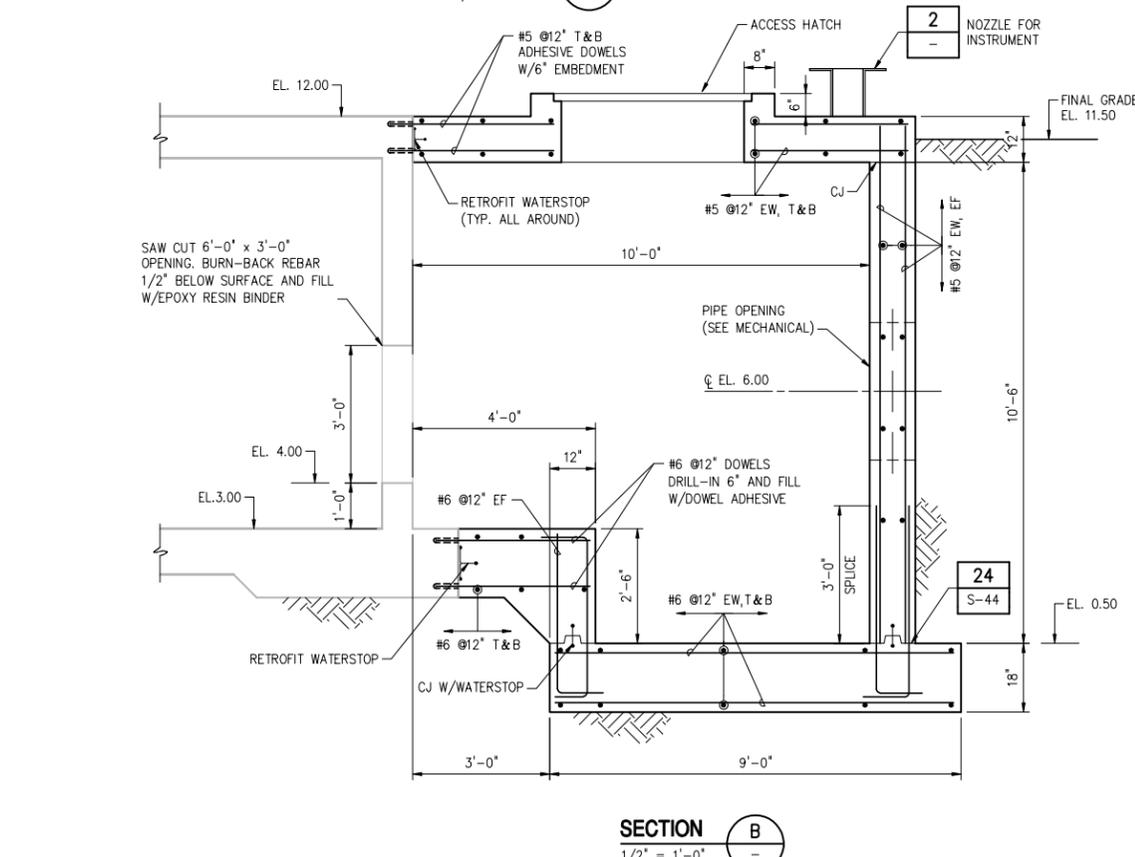
BOTTOM PLAN
1/2" = 1'-0"



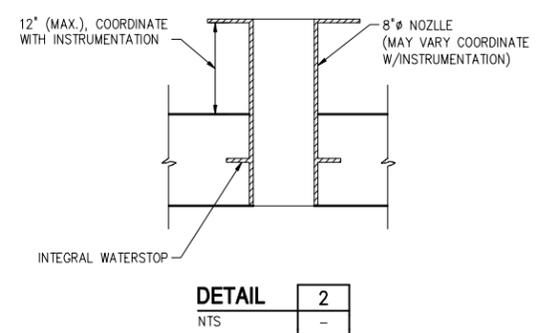
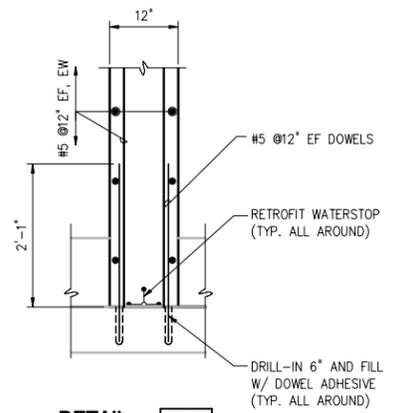
TOP PLAN
1/2" = 1'-0"



SECTION A
1/2" = 1'-0"



SECTION B
1/2" = 1'-0"



PLOT DATE: 7/24/2015 11:38 AM BY: TBUCAS

NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.
DRAWN	C.C.P.
CHECKED	A.F.H.
PROJ. ENGR.	G.A.B.

JEAN PAUL SILVA P.E.
No. 66522

HAZEN AND SAWYER
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4000 Hollywood Boulevard, Suite 750N
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Certificate of Authorization Number: 2771

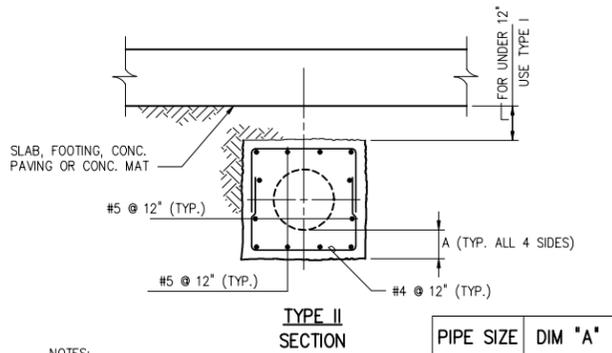
SCALE	AS NOTED
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S41

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
CLEARWELL EXTENSION PLAN AND SECTION

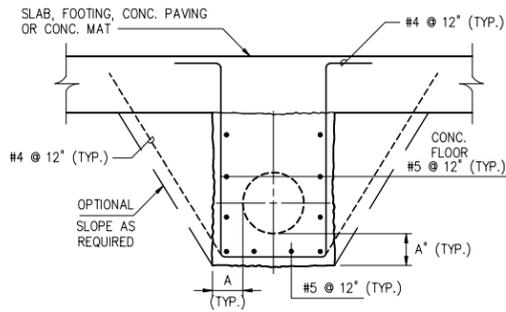
DATE:	JULY 2015
SHEET:	181 OF 335
DRAWING:	S-41

REQUEST FOR PROPOSAL

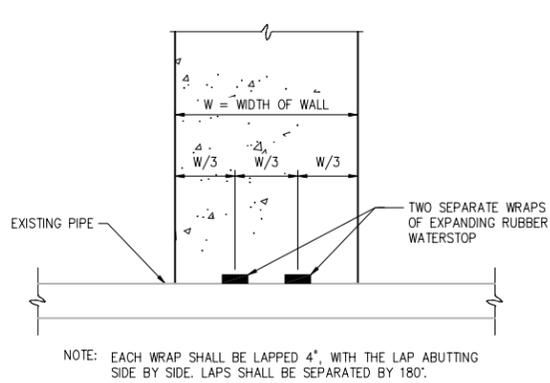


- NOTES:
- ALL PIPES, CONDUITS AND DUCTS BELOW REINFORCED CONC. ON GRADE, SHALL BE CONCRETE ENCASE.
 - EXTEND THE ENCASEMENT (MIN.) 6" BEYOND THE EDGE OF THE REINFORCED CONCRETE.

PIPE SIZE	DIM "A"
LESS THAN 8"	6"
8" - 24"	9"
24" - 60"	12"



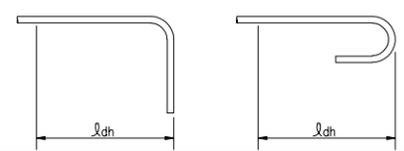
TYPE I SECTION
CONCRETE ENCASEMENT
DETAIL 1
NTS



WATERSTOP CONNECTION AROUND EXISTING PIPE
DETAIL 6
NTS

DEVELOPMENT LENGTH OF STANDARD HOOKS FOR BARS IN TENSION		
$f_y = 60,000 \text{ psi}$ $f_c' = 4000 \text{ psi OR GREATER}$		
BAR SIZE	DEVELOPMENT LENGTH, l_{dh}	
	BASIC	W/ CONC COVER *
#3	8"	6"
#4	10"	7"
#5	1'-0"	9"
#6	1'-3"	11"
#7	1'-5"	1'-0"
#8	1'-7"	1'-2"
#9	1'-10"	1'-4"
#10	2'-1"	1'-6"
#11	2'-3"	1'-7"

SIDE COVER NORMAL TO PLANE OF HOOK AT LEAST 2 1/2"; AND FOR 90° HOOK, END COVER BEYOND OUTSIDE END OF HOOK AT LEAST 2".

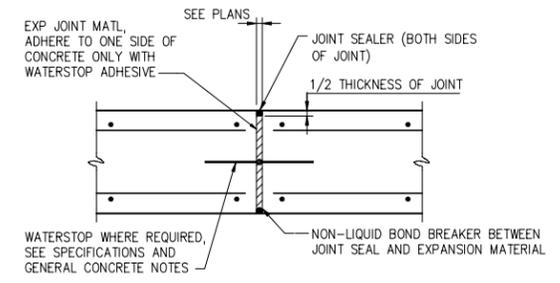


DETAIL 2
NTS

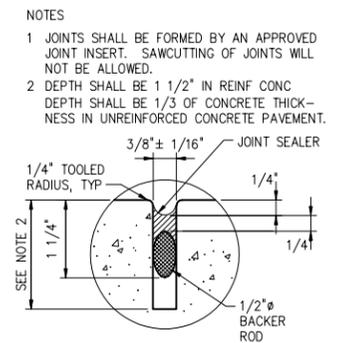
BASIC DEVELOPMENT LENGTH AND SPLICE LENGTH FOR BARS IN TENSION								
$f_y = 60,000 \text{ psi}$ $f_c' = 4000 \text{ psi OR GREATER}$ UNCOATED BARS NORMAL WEIGHT CONCRETE CLEAR COVER ≥ 1.5 INCHES								
BASIC DEVELOPMENT LENGTH l_{dh}			BAR SIZE	CLASS B SPLICE LENGTH $1.3 \times l_{dh}$				
CLEAR SPACING $\geq 3'$		CLEAR SPACING $< 3'$		CLEAR SPACING $\geq 3'$		CLEAR SPACING $< 3'$		
BASIC	TOP *	BASIC	TOP *	BASIC	TOP *			
1'-0"	1'-0"	1'-0"	1'-4"	#3	1'-0"	1'-3"	1'-4"	1'-8"
1'-0"	1'-3"	1'-7"	2'-1"	#4	1'-3"	1'-8"	2'-1"	2'-9"
1'-3"	1'-7"	2'-4"	3'-0"	#5	1'-7"	2'-0"	3'-0"	3'-11"
1'-6"	1'-11"	3'-1"	4'-0"	#6	1'-11"	2'-5"	4'-0"	5'-2"
2'-5"	3'-1"	4'-11"	6'-4"	#7	3'-1"	4'-0"	6'-4"	8'-3"
3'-0"	3'-11"	6'-0"	7'-9"	#8	3'-11"	5'-1"	7'-9"	10'-1"
3'-8"	4'-9"	6'-9"	8'-9"	#9	4'-9"	6'-3"	8'-9"	11'-4"
4'-6"	5'-10"	7'-7"	9'-10"	#10	5'-10"	7'-7"	9'-10"	12'-9"
5'-5"	7'-0"	8'-5"	10'-11"	#11	7'-0"	9'-1"	10'-11"	14'-2"

* TOP REINFORCEMENT IS HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.
** FOR MATERIALS OR CONDITIONS DIFFERENT FROM THOSE STATED, LENGTHS SHOWN IN CHART SHALL BE MODIFIED TO CONFORM TO THE PROVISIONS OF ACI 318, SECTION 12.2.

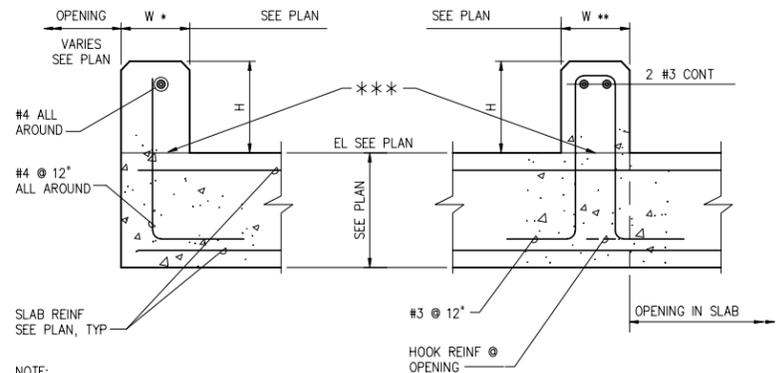
DETAIL 3
NTS



TYPICAL EXPANSION JOINT
DETAIL 4
NTS

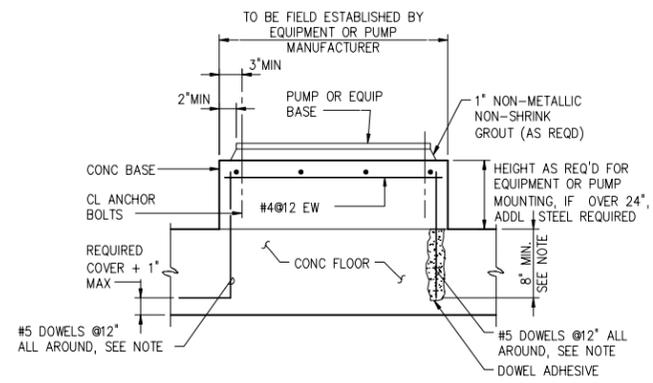


TYPICAL SEALED JOINT
DETAIL 5
NTS



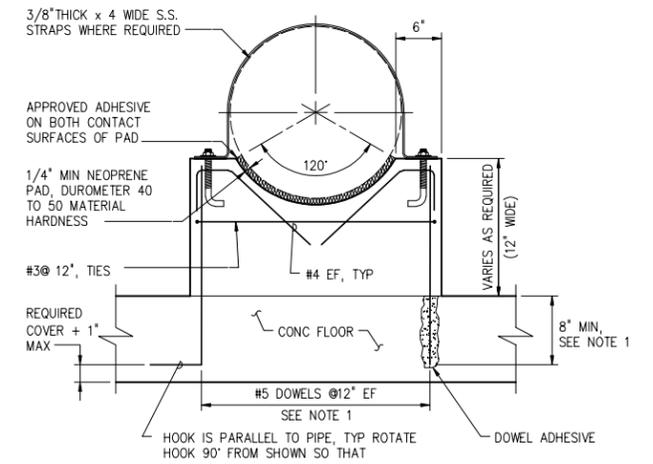
- NOTE:
- W* DENOTES CURBS LESS THAN 8"
 - W** DENOTES CURBS EQUAL TO OR GREATER THAN 8"
 - DOWELS MAY BE CAST IN OR ANCHORED WITH DOWEL ADHESIVE SYSTEM WITH A 6" MINIMUM EMBEDMENT.
 - *** INDICATES PROVIDE WATERSTOP FOR CONTAINMENT AREAS.

TYPICAL CONCRETE CURB
DETAIL 7
NTS



- NOTE: DOWELS MAY BE CAST IN WITH 90° HOOK OR ANCHORED WITH DOWEL ADHESIVE AT CONTRACTORS OPTION. WHERE FLOOR IS 8" THICK OR LESS, USE #4 DOWELS EMBEDDED TO WITHIN 2" OF BOTTOM OF FLOOR SLAB.

TYP PUMP OR EQUIP BASE
DETAIL 8
NTS



- NOTE: 1 DOWELS MAY BE CAST IN WITH 90° HOOK OR ANCHORED WITH DOWEL ADHESIVE AT CONTRACTORS OPTION. WHERE FLOOR IS 8" THICK OR LESS, USE #4 DOWELS EMBEDDED TO WITHIN 2" OF BOTTOM OF FLOOR SLAB.

CRADLE PIPE SUPPORT
DETAIL 9
NTS

PLOT DATE: 7/24/2015 11:38 AM BY: TBUCAS

DESIGNED	G.A.B.		
DRAWN	F.C.T.		
CHECKED	J.N.M.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	G.A.B.
DRAWN	F.C.T.
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JEAN PAUL SILVA
No. 66522
P.E.

HAZEN AND SAWYER
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4000 Hollywood Boulevard, Suite 750N
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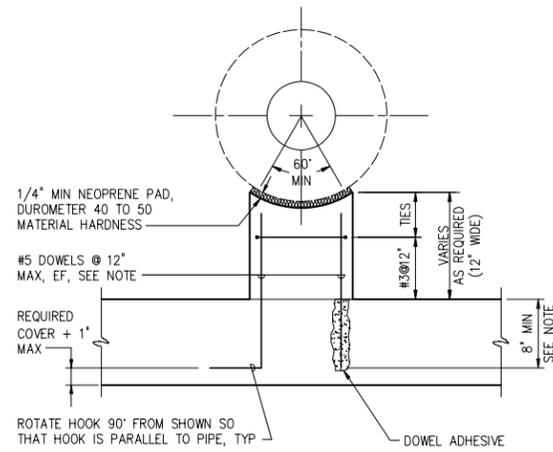
SCALE: NTS
CLIENTS PROJECT: -
ENGINEERS PROJECT: 44238-004
CAD REFERENCE: 44238-004BP3-S42

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

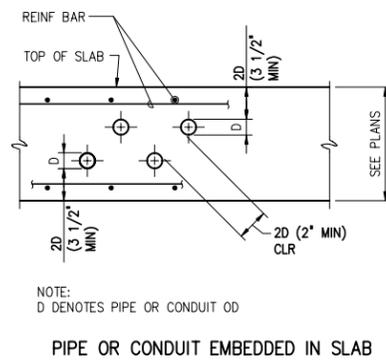
WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
STRUCTURAL DETAILS SHEET 1

DATE: JULY 2015
SHEET: 182 OF 335
DRAWING: S-42

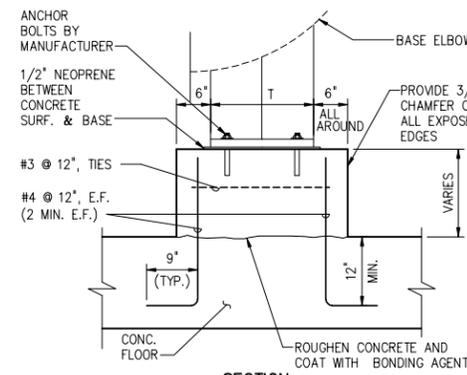
REQUEST FOR PROPOSAL



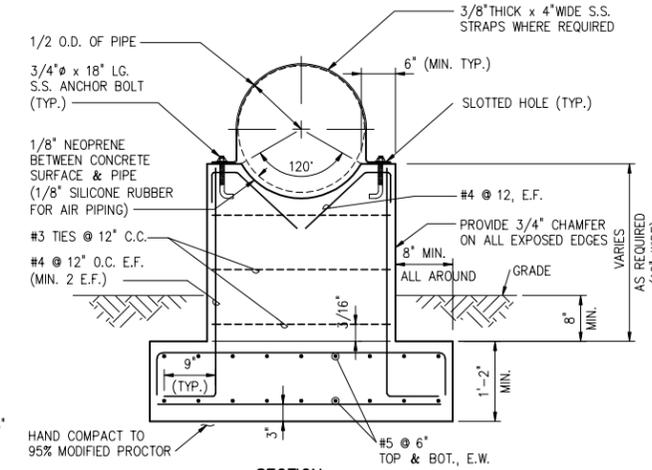
DETAIL 10
NTS



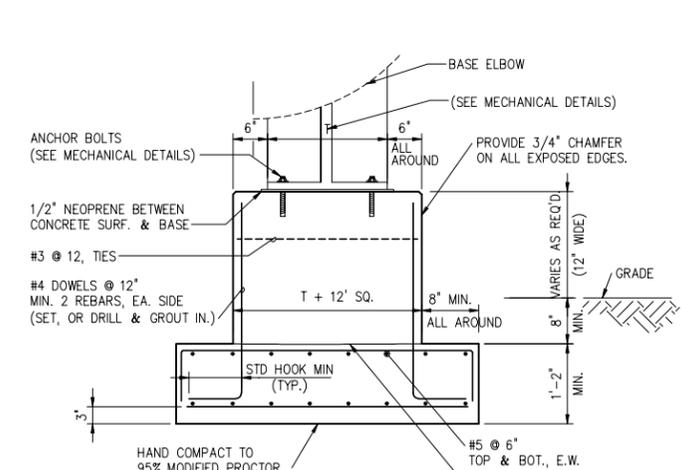
DETAIL 11
NTS



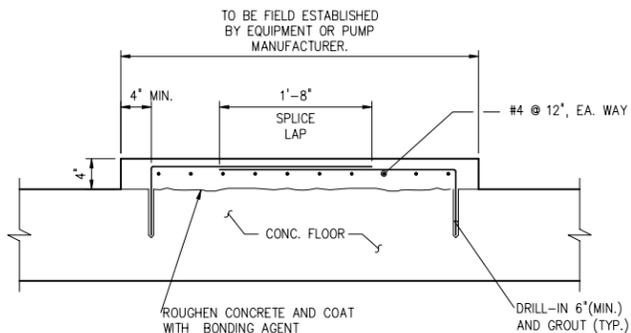
DETAIL 12
NTS



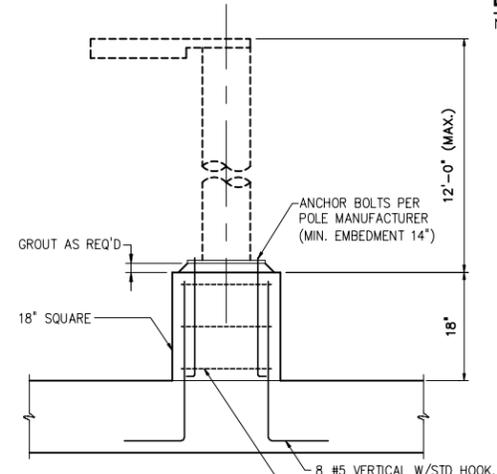
DETAIL 13
NTS



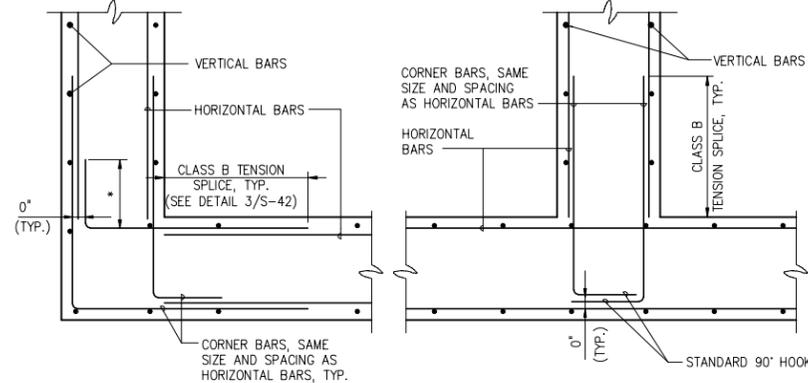
DETAIL 14
NTS



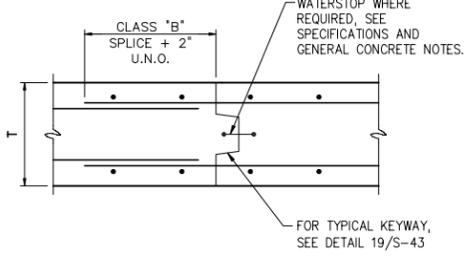
DETAIL 15
NTS



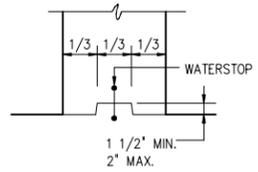
DETAIL 16
NTS



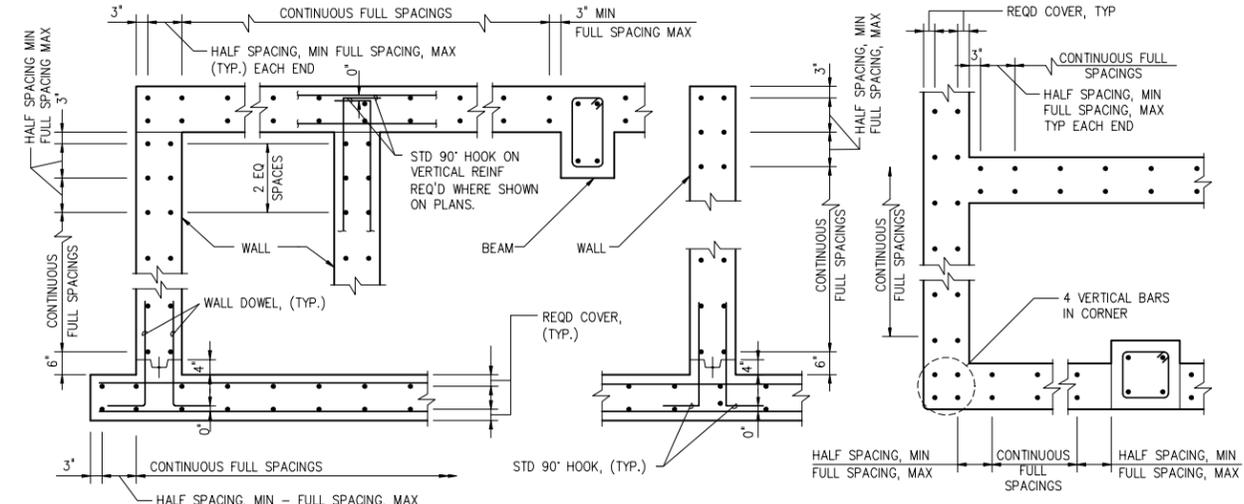
DETAIL 17
NTS



DETAIL 18
NTS

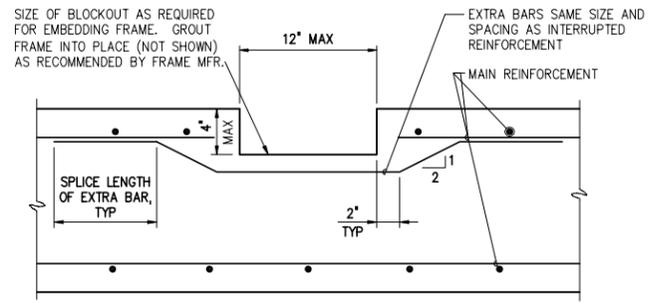


DETAIL 19
NTS



DETAIL 20
NTS

PLAN - WALLS
NOTES:
1. ORIENTATION OF OUTSIDE AND INSIDE LAYERS OF REINF SHALL BE AS SHOWN ON PLANS.
2. "FULL SPACING" IS BAR SPACING CALLED OUT ON PLANS.



DETAIL 21
NTS

PLOT DATE: 7/24/2015 11:38 AM BY: TBUCAS

DESIGNED	J.P.S.		
DRAWN	C.F.T.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.
DRAWN	C.F.T.
CHECKED	A.F.H.
PROJ. ENGR.	G.A.B.
JEAN PAUL SILVA	P.E.
No. 66522	

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Certificate of Authorization Number: 2771

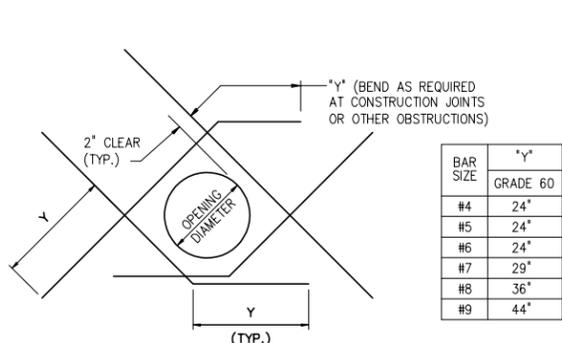
SCALE	CLIENTS PROJECT:	-
NTS	ENGINEERS PROJECT:	44238-004
	CAD REFERENCE:	44238-004BP3-S43

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
STRUCTURAL DETAILS SHEET 2

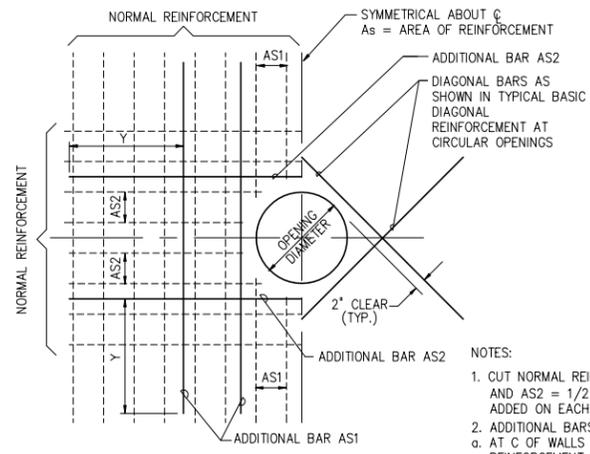
DATE:	JULY 2015
SHEET:	183 OF 335
DRAWING:	S-43

REQUEST FOR PROPOSAL



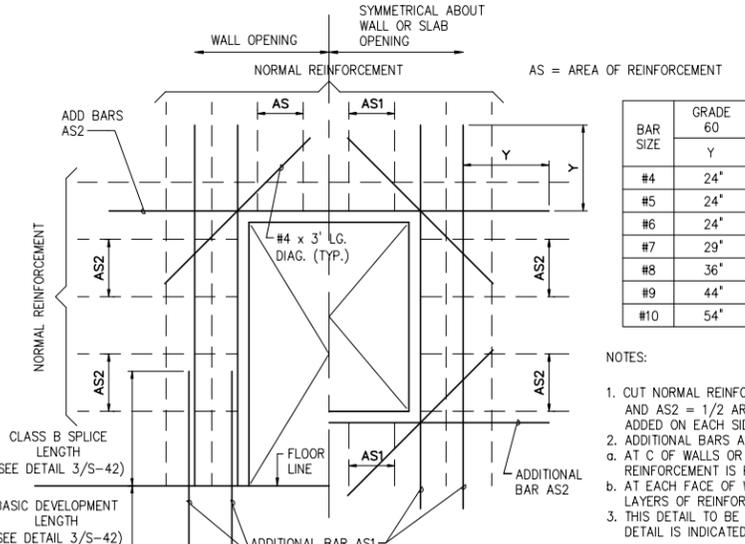
- NOTES:
- CUT NORMAL REINFORCEMENT CLEAR OF OPENING
 - DIAGONAL BARS TO BE PLACED:
 - AT EACH FACE OF WALL OR SLAB WHERE ONE LAYER OF REINFORCEMENT IS PROVIDED.
 - AT EACH FACE OF WALL OR SLAB WHERE TWO LAYERS OF REINFORCEMENT ARE PROVIDED.
 - UNLESS OTHERWISE NOTED SIZE OF DIAGONAL BARS SHALL BE THE SIZE OF THE LARGEST NORMAL REINF. BAR CUT.
 - THIS DETAIL TO BE USED ONLY WHEN NO OTHER DETAIL IS INDICATED ON THE DRAWING.

TYPICAL BASIC DIAGONAL REINFORCEMENT AT CIRCULAR OPENINGS



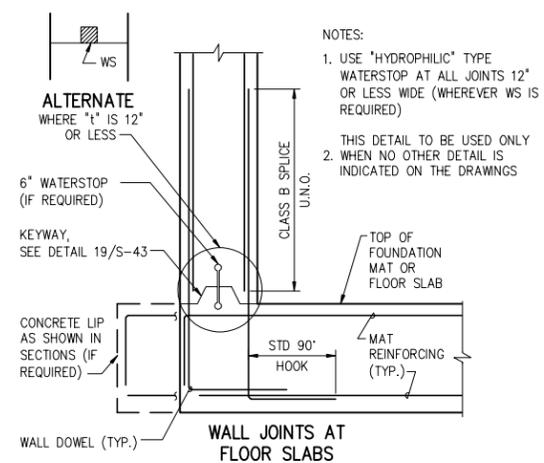
- NOTES:
- CUT NORMAL REINFORCEMENT AT OPENINGS. AS1 AND AS2 = 1/2 AREA OF CUT BARS TO BE ADDED ON EACH SIDE OF OPENING.
 - ADDITIONAL BARS AS1 AND AS2 TO BE PLACED:
 - AT C OF WALLS OR SLABS WHERE ONE LAYER OF REINFORCEMENT IS PROVIDED.
 - AT EACH FACE OF WALLS OR SLABS WHERE TWO LAYERS OF REINFORCEMENT ARE PROVIDED.
 - THIS DETAIL TO BE USED ONLY WHEN NO OTHER DETAIL IS INDICATED ON THE DRAWINGS.

TYPICAL ADDED REINFORCEMENT AT CIRCULAR OPENINGS



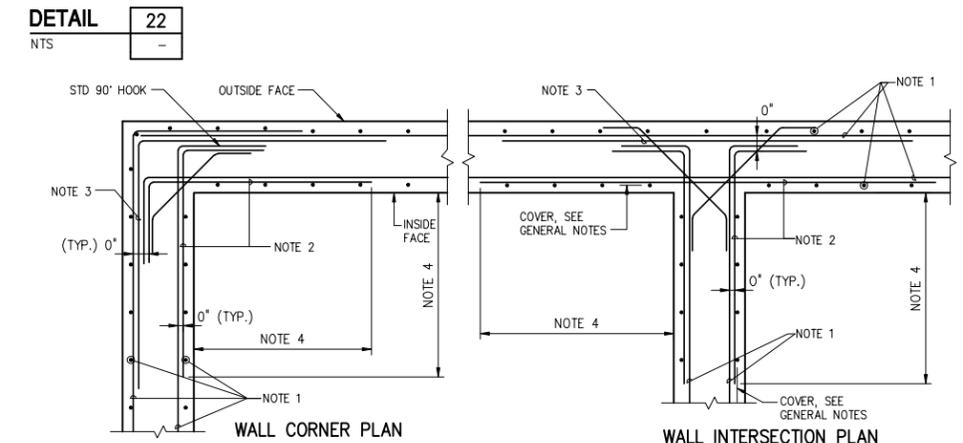
- NOTES:
- CUT NORMAL REINFORCEMENT AT OPENINGS. AS1 AND AS2 = 1/2 AREA OF CUT BARS TO BE ADDED ON EACH SIDE OF OPENING.
 - ADDITIONAL BARS AS1 AND AS2 TO BE PLACED:
 - AT C OF WALLS OR SLABS WHERE ONE LAYER OF REINFORCEMENT IS PROVIDED.
 - AT EACH FACE OF WALLS OR SLABS WHERE TWO LAYERS OF REINFORCEMENT ARE PROVIDED.
 - THIS DETAIL TO BE USED ONLY WHEN NO OTHER DETAIL IS INDICATED ON THE DRAWINGS.

ADDITIONAL REINFORCEMENT AT RECTANGULAR OPENINGS



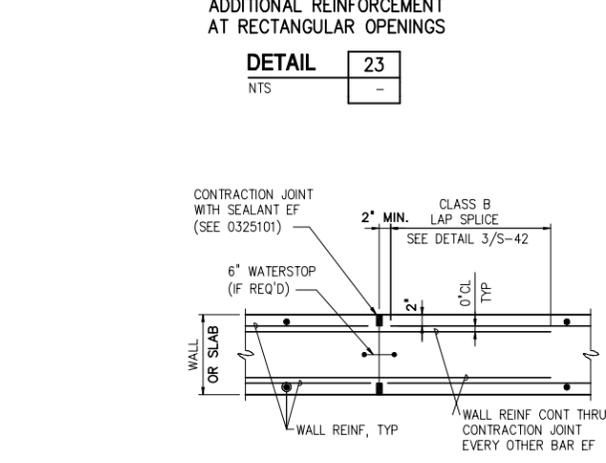
SECTION TYPICAL WALL TO SLAB/FOUNDATION CONSTRUCTION JOINT

DETAIL 24 NTS



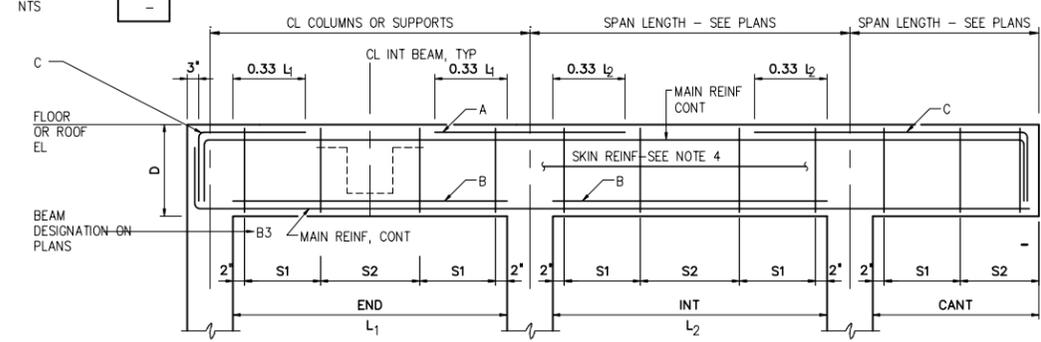
TYPICAL ADDED HORIZONTAL REINFORCEMENT AT WALL INTERSECTIONS

DETAIL 25 NTS



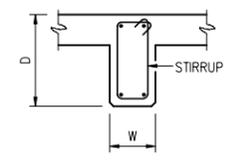
TYPICAL CONTRACTION JOINT

DETAIL 26 NTS

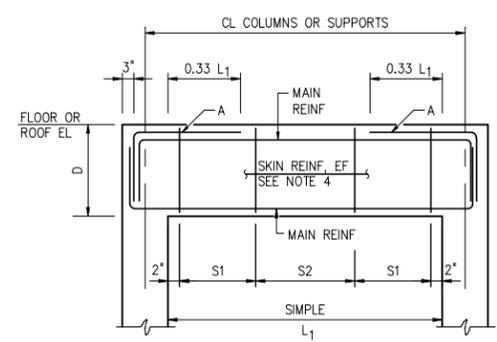


TYPICAL BEAM ELEVATIONS

DETAIL 28 NTS

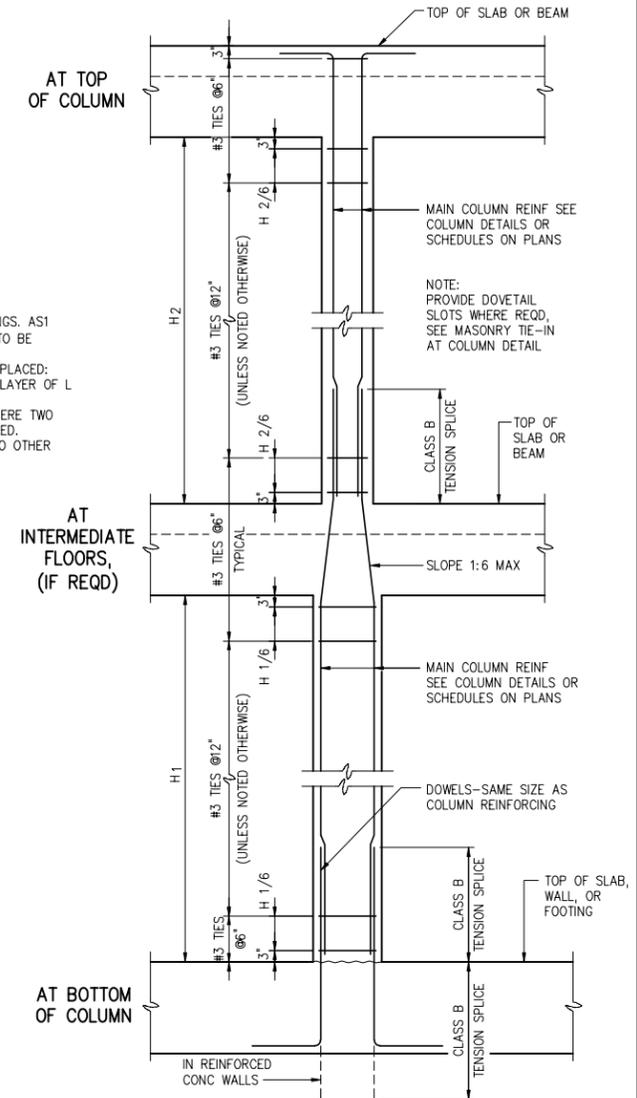


TYPICAL BEAM SECTION



TYPICAL COLUMN ELEVATION

DETAIL 27 NTS



- NOTES:
- WHERE BEAMS FRAME INTO CONCRETE WALLS, WALLS SHALL BE BLOCKED OUT FULL HEIGHT AND WIDTH OF BEAM TO PROVIDE A MINIMUM 8" SEAT FOR BEAM BEARING. WALL REINFORCEMENT SHALL NOT BE INTERRUPTED THROUGH BLOCKOUT.
 - S1 = 2x"D" FOR STIRRUP SPACING SEE BEAM SCHEDULE
 - CONTINUOUS BOTTOM BARS IN ALL BEAMS MAY BE SPLICED AT COLUMN CENTERLINES. CONTINUOUS TOP BARS MAY BE SPLICED AT MID-SPAN.
 - UNLESS NOTED OTHERWISE, PROVIDE SKIN REINFORCEMENT BETWEEN TOP AND BOTTOM MAIN REINFORCEMENT AS FOLLOWS:
FOR BEAMS 18" OR LESS IN DEPTH, NO SKIN REINFORCEMENT IS REQUIRED
FOR BEAMS >18" THRU 36" IN DEPTH, PROVIDE #5@12" EF
FOR BEAMS >36" THRU 84" IN DEPTH, PROVIDE #5@6" EF
FOR BEAMS >84" IN DEPTH, SEE REMARKS IN BEAM SCHEDULE.
 - ALL STIRRUPS SHALL BE CLOSED TIES, TYPE T1, (ACI 315) UNLESS NOTED OTHERWISE.
 - SEE DRAWINGS FOR BEAM ELEVATION DIAGRAMS SPECIFICALLY REFERRED TO IN THE BEAM SCHEDULES.
 - WHEN TWO LAYERS OF FLEXURAL REINFORCEMENT ARE REQUIRED THE SPACING BETWEEN THE LAYERS SHALL BE 3 INCHES.

DESIGNED	J.P.S.
DRAWN	C.F.T.
CHECKED	A.F.H.
PROJ. ENGR.	G.A.B.

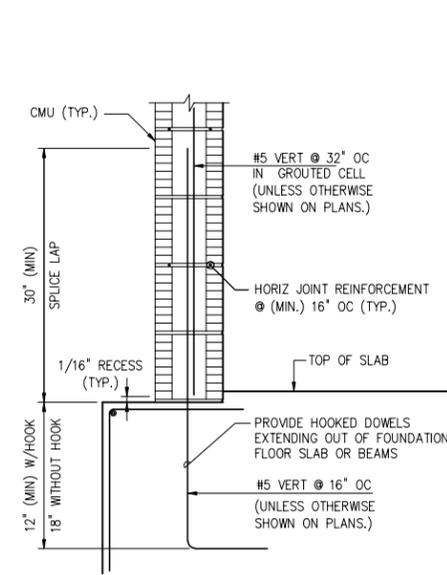
JEAN PAUL SILVA	P.E.
No. 66522	

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
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Certificate of Authorization Number: 2771

SCALE	CLIENTS PROJECT:	-
NTS	ENGINEERS PROJECT:	44238-004
	CAD REFERENCE:	44238-004BP3-S44

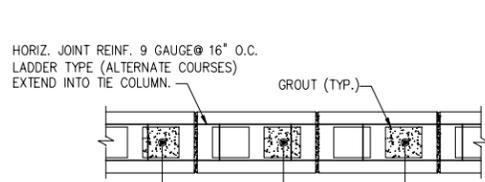
CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT	DATE: JULY 2015
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB	SHEET: 184 OF 335
STRUCTURAL DETAILS SHEET 3	DRAWING: S-44



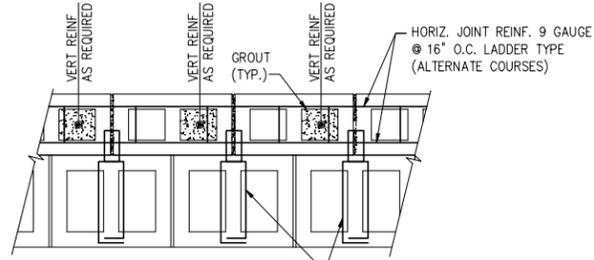
SECTION
TYPICAL VERTICAL REINFORCEMENT AT FLOOR

DETAIL 29
NTS



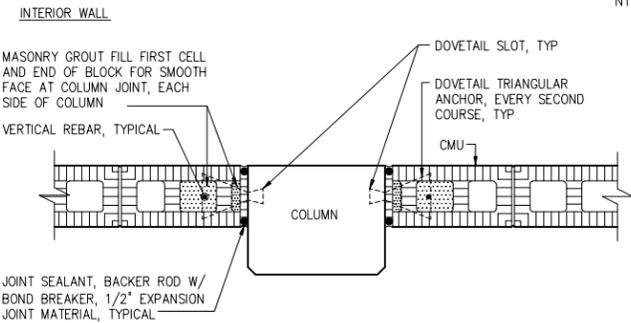
PLAN
TYPICAL SINGLE WYTHE BLOCK WALL REINFORCEMENT

DETAIL 30
NTS



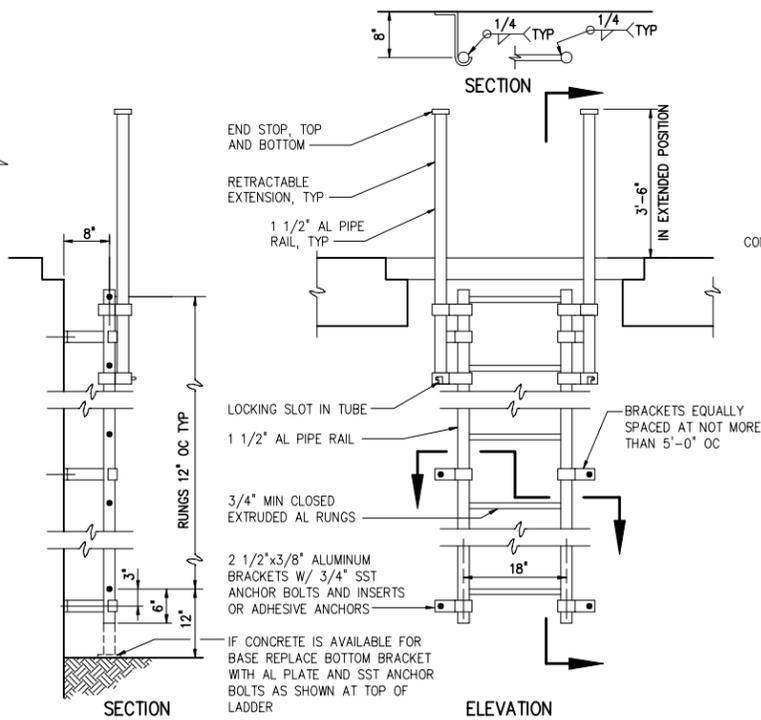
PLAN
TYPICAL DOUBLE WYTHE BLOCK WALL REINFORCEMENT

DETAIL 31A
NTS



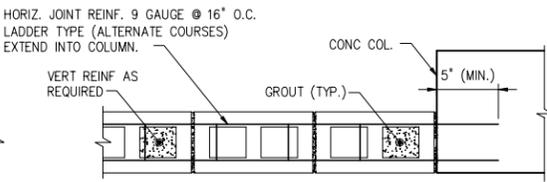
TYPICAL PARTITION WALL
MASONRY TIE-IN AT COLUMN

DETAIL 34
NTS



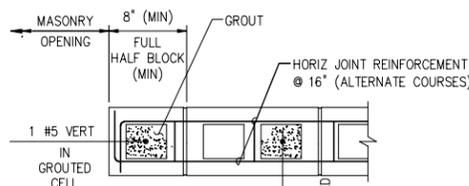
SECTION
ALUMINUM LADDER WITH RETRACTABLE EXTENSION

DETAIL 35
NTS



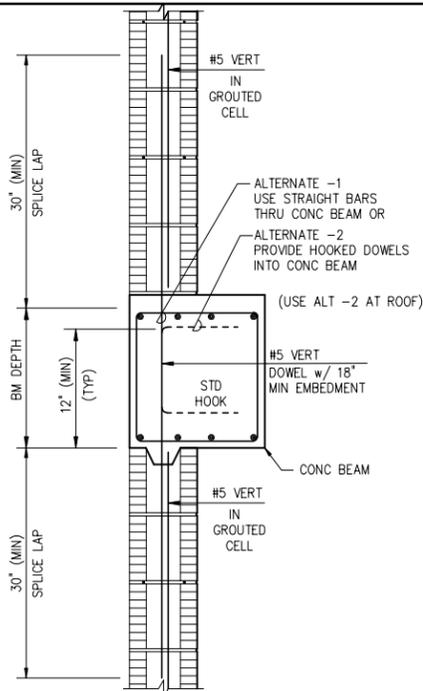
PLAN
TYPICAL LOAD BEARING MASONRY
HORIZONTAL REINFORCEMENT AT COLUMN

DETAIL 31
NTS



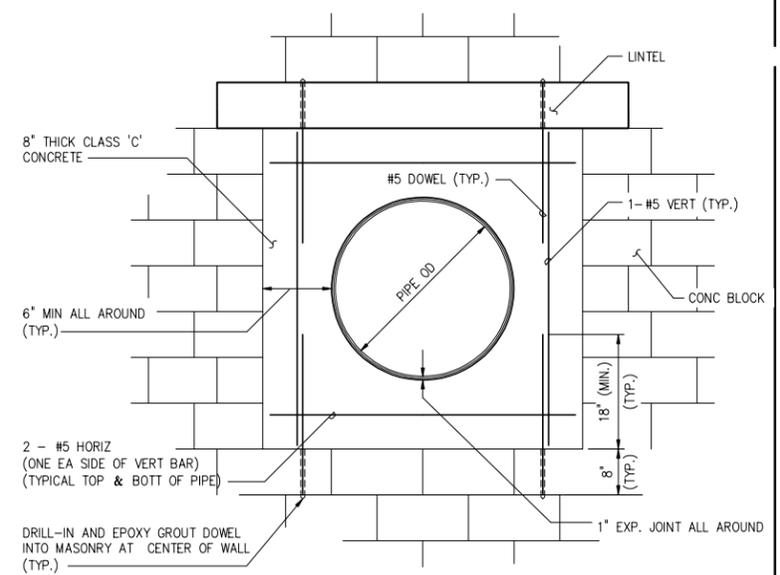
PLAN
TYPICAL MASONRY OPENING

DETAIL 32
NTS



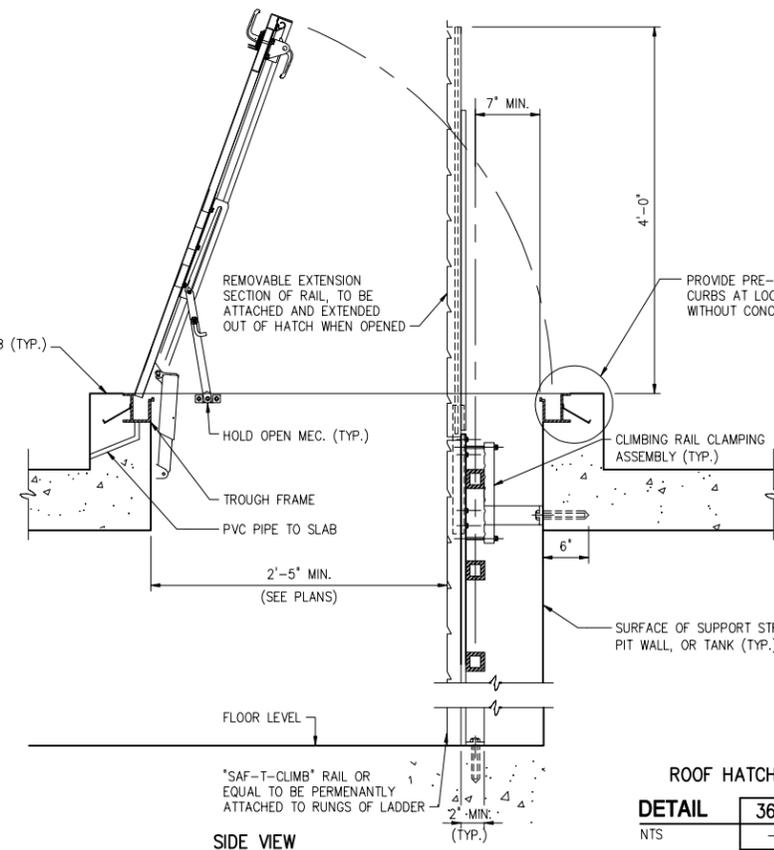
SECTION
TYPICAL VERTICAL REINFORCEMENT AT BEAM

DETAIL 32A
N.T.S.



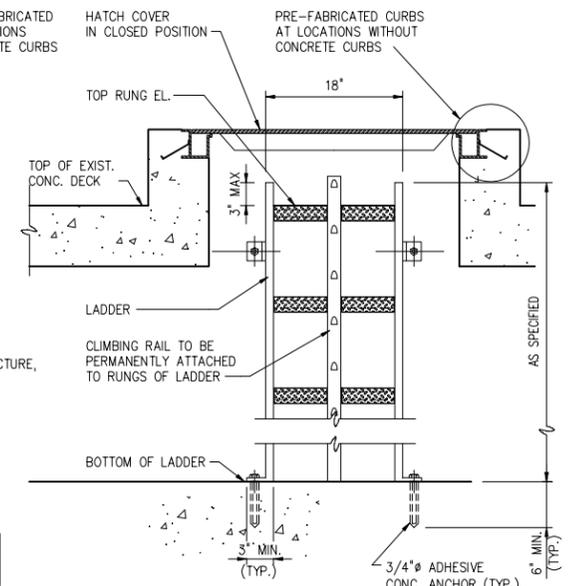
ELEVATION
PIPE PENETRATION THRU CONCRETE BLOCK WALLS

DETAIL 33
NTS



SIDE VIEW

ROOF HATCH
DETAIL 36
NTS



FRONT VIEW

NOTE:
1. ALL "SAF-T-Climb" OR EQUAL TYPE DEVICE SHALL BE TYPE 316 STAINLESS STEEL, ALL FASTENERS SHALL BE OF TYPE 316 STAINLESS STEEL.
2. ALL LADDER SHALL BE OF FIBERGLASS CONSTRUCTION ALL ANCHORS SHALL BE TYPE 316 STAINLESS STEEL.

DESIGNED	J.P.S.		
DRAWN	F.C.T.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.
DRAWN	F.C.T.
CHECKED	A.F.H.
PROJ. ENGR.	G.A.B.
JEAN PAUL SILVA	P.E.
No. 66522	

HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

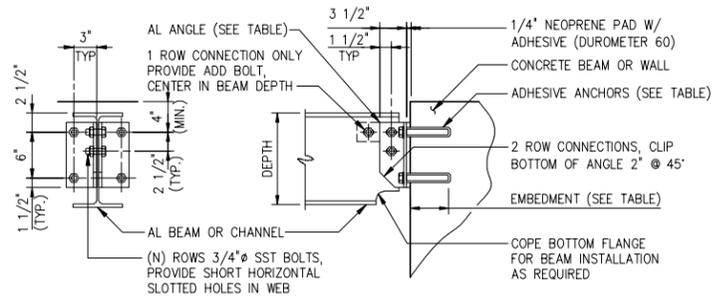
SCALE	CLIENTS PROJECT:	-
NTS	ENGINEERS PROJECT:	44238-004
	CAD REFERENCE:	44238-004BP3-S45

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT	
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB	
STRUCTURAL DETAILS SHEET 4	

DATE:	JULY 2015
SHEET:	185 OF 335
DRAWING:	S-45

AL MEMBER DEPTH	AL DOUBLE ANGLES	(N) ROWS	SST ADHESIVE ANCHORS	EMBEDMENT
4", 5", 6"	2-L6x4x3/8x0'-3" LONG	1	2-5/8" SST ADHESIVE ANCHORS	5", MIN
8"	2-L4x3 1/2x3/8x0'-9"	2	4-5/8" SST ADHESIVE ANCHORS	5", MIN
10", 12", 15"	2-L4x3 1/2x3/8x0'-9"	3	4-3/4" SST ADHESIVE ANCHORS	6 1/2", MIN

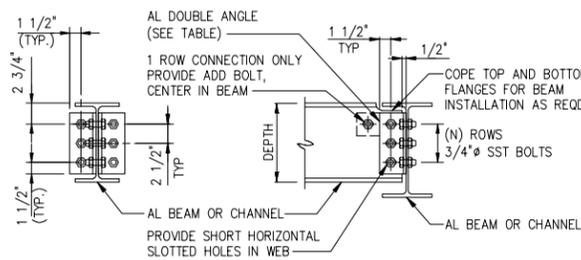


NOTE:
DURING INSTALLATION OF ADHESIVE ANCHORS BEAM TOP REINFORCEMENT SHALL NOT BE CUT. PRIOR TO FABRICATION FIELD LOCATE REINFORCEMENT AND LENGTHEN ANGLES AS REQUIRED LOWER ANCHORS TO CLEAR REINFORCEMENT.

ALUMINUM BEAM TO CONCRETE CONNECTION

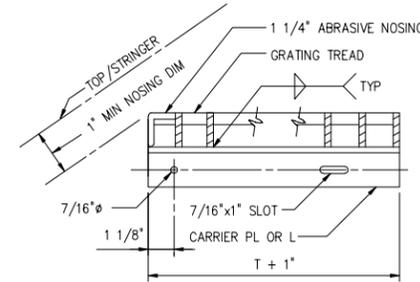
DETAIL	37
NTS	-

AL MEMBER DEPTH	AL DOUBLE ANGLES	(N) ROWS
4", 5", 6"	2-L6x4x3/8x0'-3" LONG	1
8"	2-L4x4x5/16x0'-5 1/2"	2
10", 12", 15"	2-L4x4x5/16x0'-8"	3



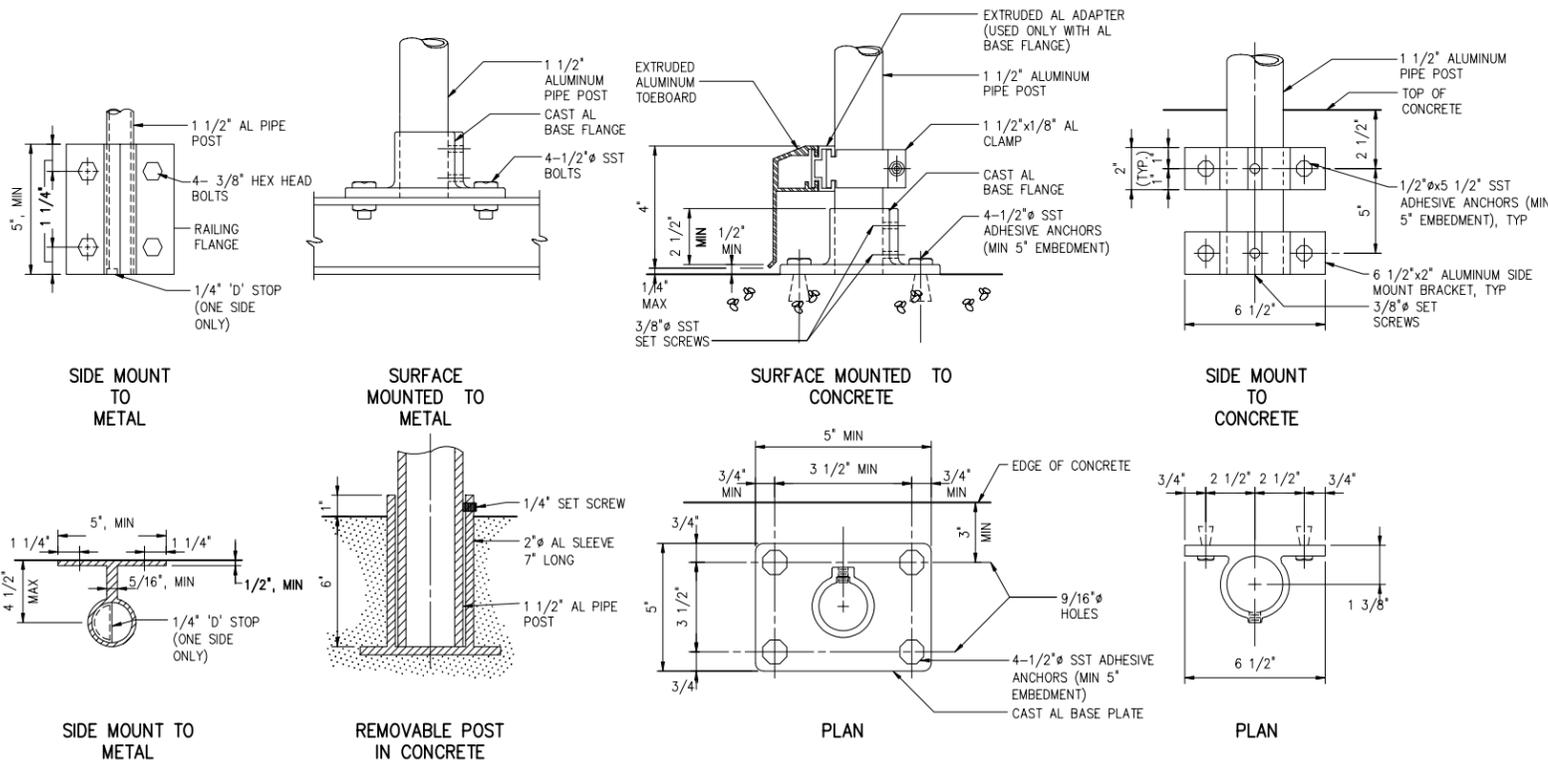
ALUMINUM FRAMING CONNECTION

DETAIL	38
NTS	-



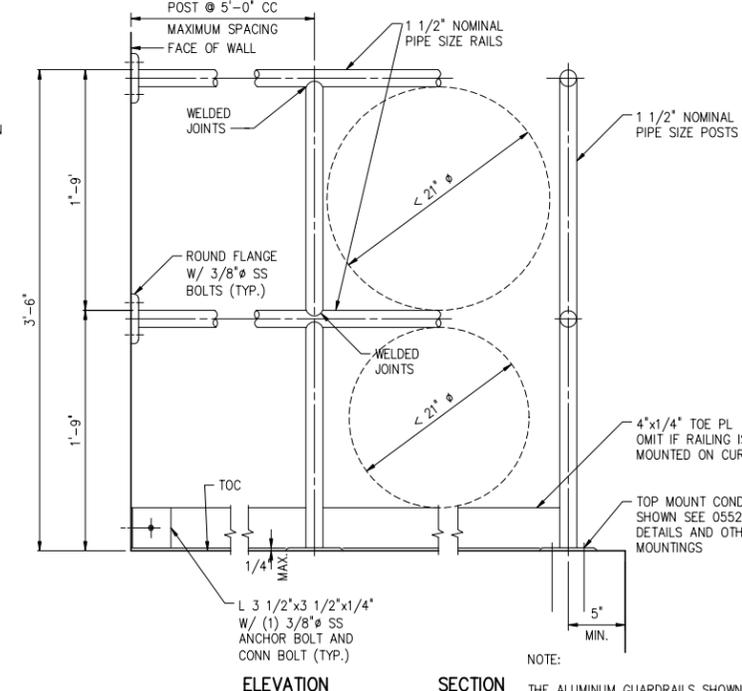
TYP TREAD DETAIL

DETAIL	39
NTS	-



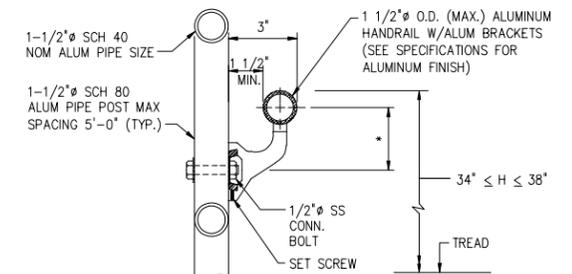
ALUMINUM HANDRAIL POST CONNECTIONS

DETAIL	40
NTS	-



TYPICAL GUARDRAIL AT LANDINGS AND WALKWAYS

DETAIL	41
NTS	-



HANDRAIL ATTACHMENT AT GUARDRAIL

DETAIL	42
NTS	-

DESIGNED	J.P.S.	PROJ. ENGR.	G.A.B.
DRAWN	C.C.P.	ISSUED FOR	REQUEST FOR PROPOSAL
CHECKED	A.F.H.	DATE	07/24/15
NO.	1	BY	G.A.B.

DATE	07/24/15
ISSUED FOR	REQUEST FOR PROPOSAL
BY	G.A.B.

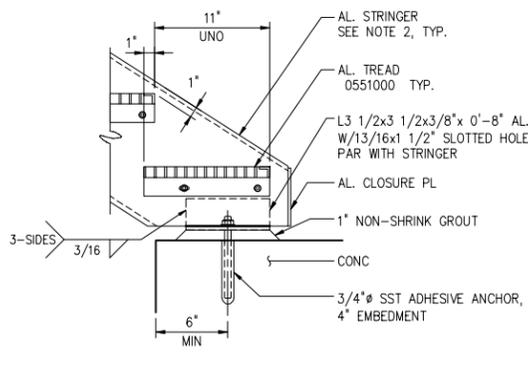
DESIGNED	J.P.S.	PROJ. ENGR.	G.A.B.
DRAWN	C.C.P.	ISSUED FOR	REQUEST FOR PROPOSAL
CHECKED	A.F.H.	DATE	07/24/15
NO.	1	BY	G.A.B.

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Hollywood, Florida 33021
Certificate of Authorization Number: 2771

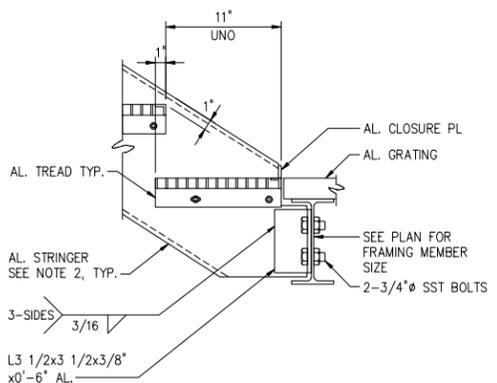
SCALE	CLIENTS PROJECT:	-
NTS	ENGINEERS PROJECT:	44238-004
	CAD REFERENCE:	44238-004BP3-S46

CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

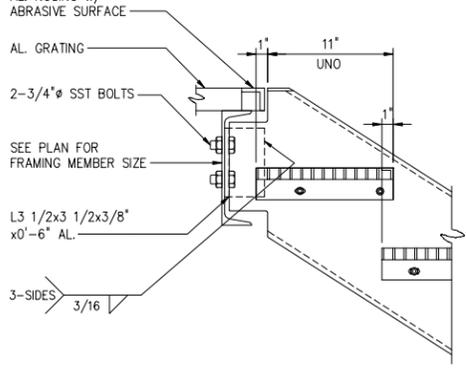
WINSON WATER TREATMENT PLANT	DATE:	JULY 2015
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB	SHEET:	186 OF 335
STRUCTURAL DETAILS SHEET 5	DRAWING:	S-46



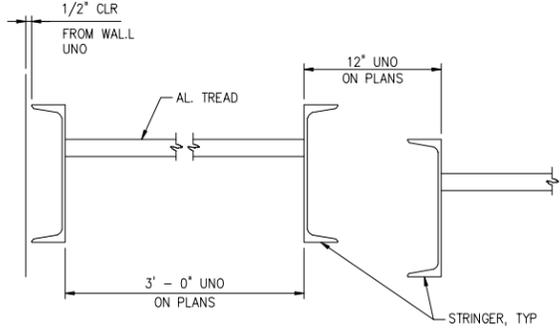
LOWER STRINGER CONNECTION TO CONCRETE SLAB
DETAIL 43
 NTS -



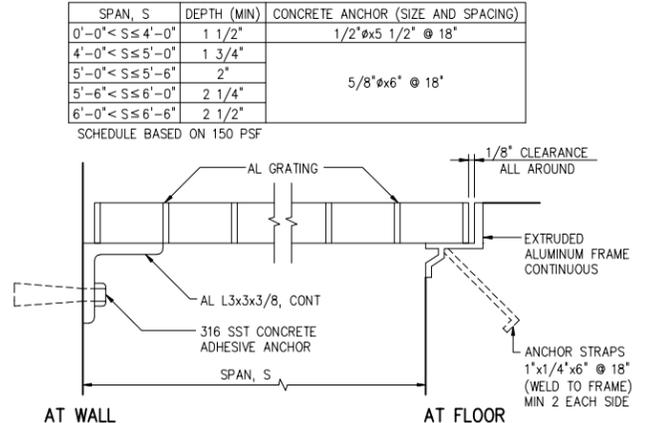
LOWER STRINGER CONNECTION TO FRAMING SLAB
DETAIL 44
 NTS -



UPPER STRINGER CONNECTION TO FRAMING MEMBER
DETAIL 45
 NTS -

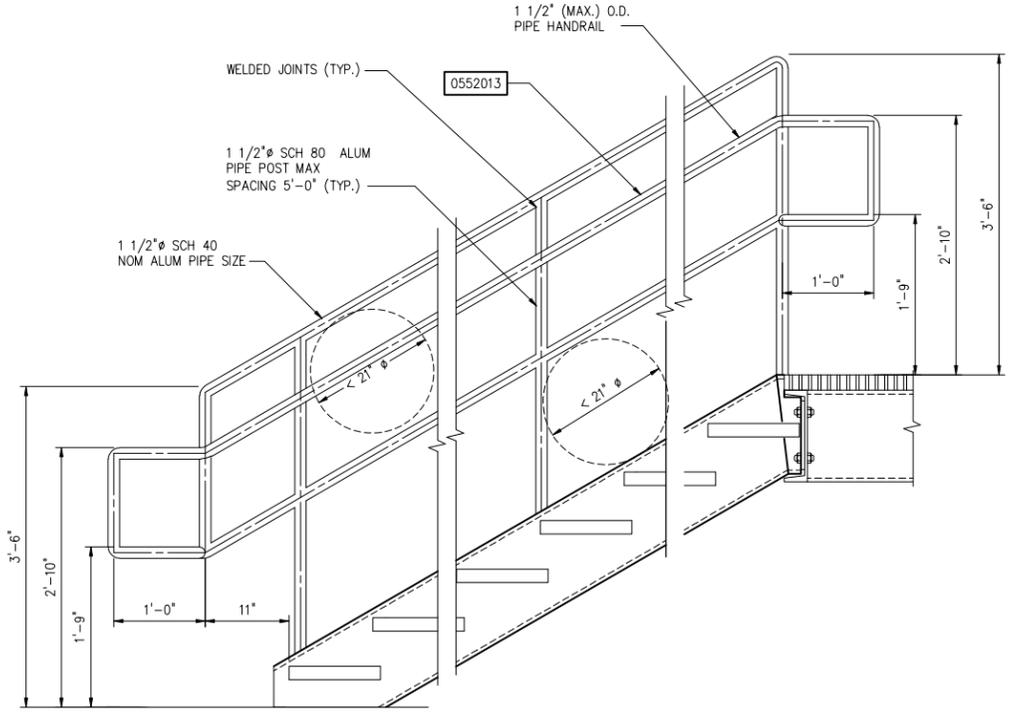


TYPICAL TREAD CROSS SECTION
DETAIL 46
 NTS -

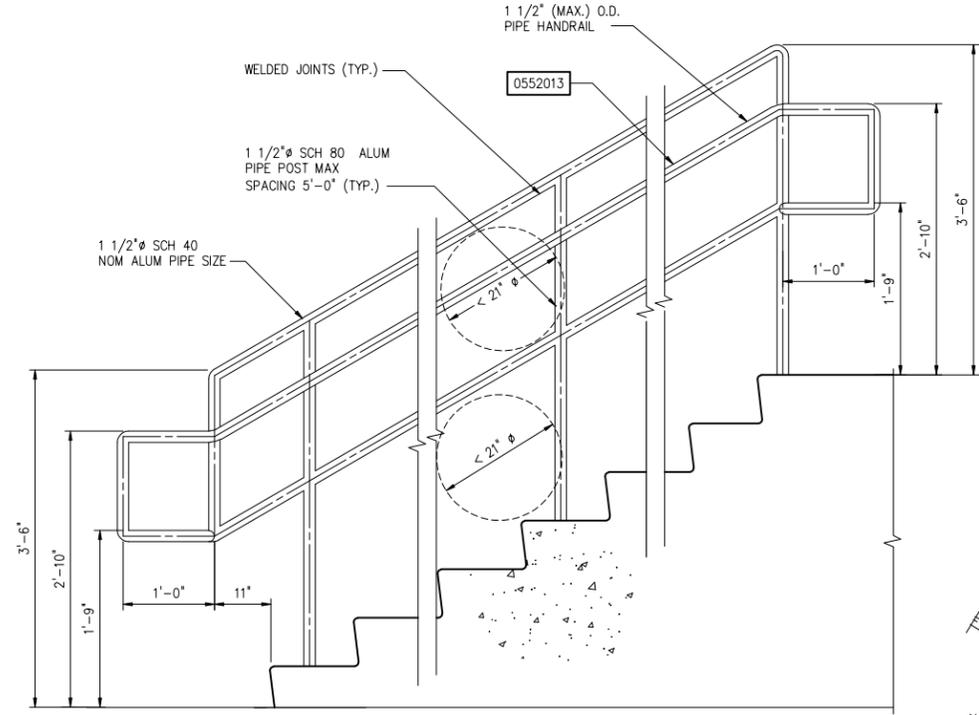


AT WALL
 ALUMINUM GRATING
DETAIL 47
 NTS -

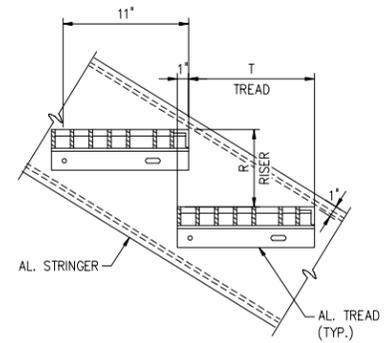
AT FLOOR
 ANCHOR STRAPS
 1" x 1/4" x 6" @ 18"
 (WELD TO FRAME)
 MIN 2 EACH SIDE



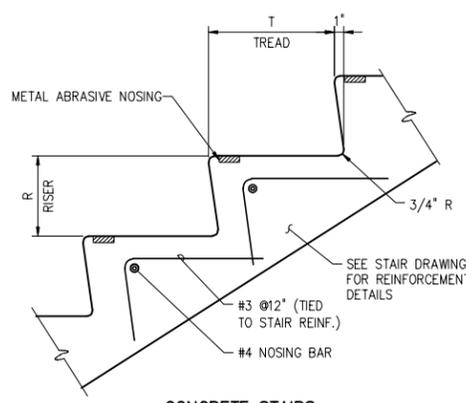
GUARDRAIL WITH HANDRAIL AT METAL STAIRS
DETAIL 48
 NTS -



GUARDRAIL WITH HANDRAIL AT CONCRETE STAIRS
DETAIL 48A
 NTS -



METAL STAIRS



CONCRETE STAIRS

TYPICAL STAIR STEP ELEVATION
DETAIL 49
 NTS -

PLOT DATE: 7/24/2015 11:38 AM BY: TBUCAS

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PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

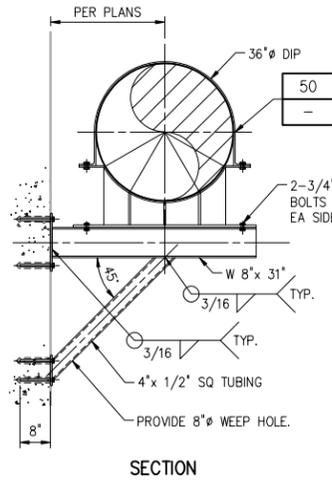
DESIGNED	J.P.S.	HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771
DRAWN	C.C.P.	
CHECKED	A.F.H.	
PROJ. ENGR.	G.A.B.	
DESIGNED BY	JEAN PAUL SILVA	P.E.
NO.	No. 66522	

SCALE	CLIENTS PROJECT:	-
NTS	ENGINEERS PROJECT:	44238-004
	CAD REFERENCE:	44238-004BP3-S47

CITY OF NORTH MIAMI
 PUBLIC WORKS UTILITIES

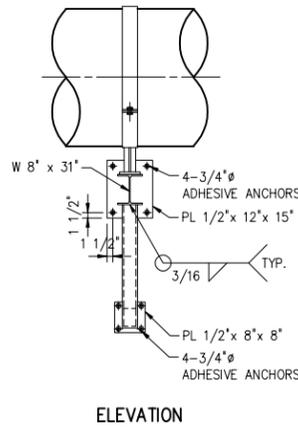
WINSON WATER TREATMENT PLANT	
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB	
STRUCTURAL DETAILS SHEET 6	

DATE:	JULY 2015
SHEET:	187 OF 335
DRAWING:	S-47

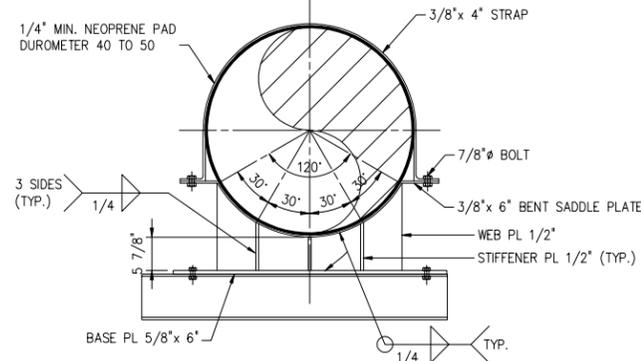


SECTION

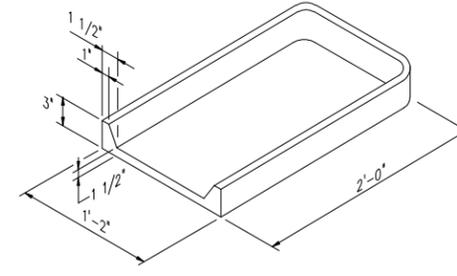
DETAIL	49
NTS	-



ELEVATION



DETAIL	50
NTS	-



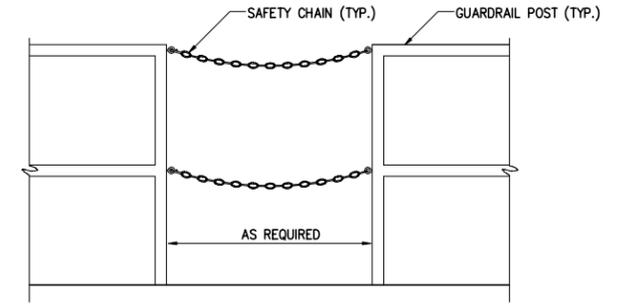
ELEVATION VIEW

NOTES:

- 1 REINFORCED W/16 GA. 1 1/2" HEX. WIRE MESH.
- 2 PRECAST PAD OF SIMILAR DESIGN MAY BE SUBSTITUTED WITH ENGINEERS APPROVAL.

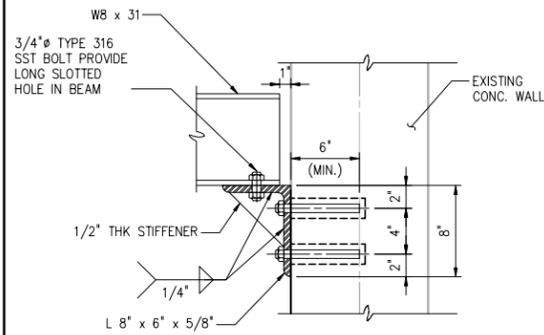
TYPICAL SPLASH PAD

DETAIL	51
NTS	-

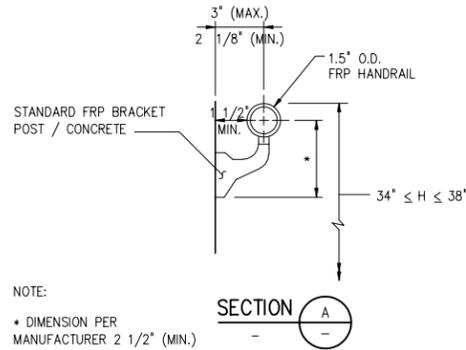


GUARDRAIL SAFETY CHAIN GATE
ELEVATION

DETAIL	52
NTS	-

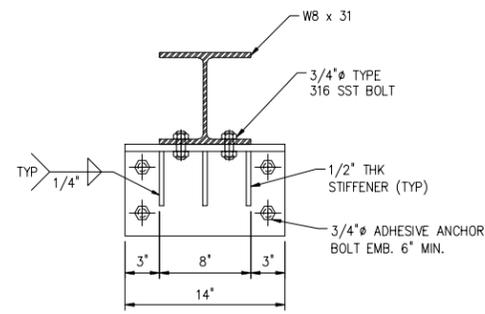


SIDE VIEW



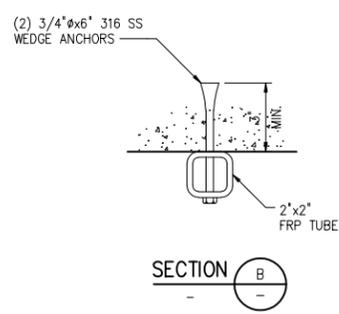
SECTION A

NOTE:
* DIMENSION PER MANUFACTURER 2 1/2" (MIN.)

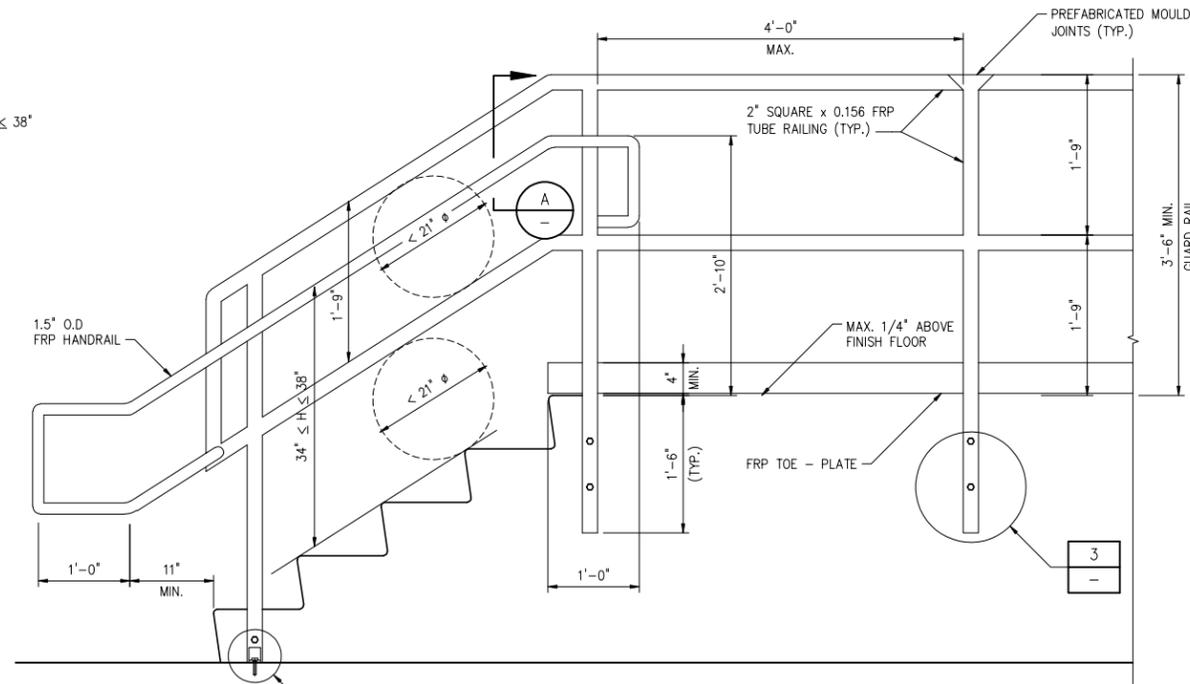


FRONT VIEW

DETAIL	53
NTS	-

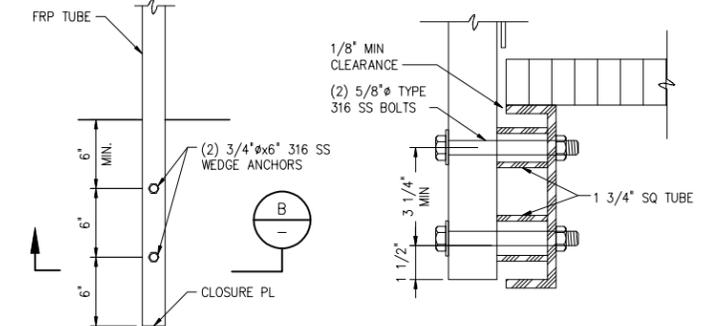


SECTION B



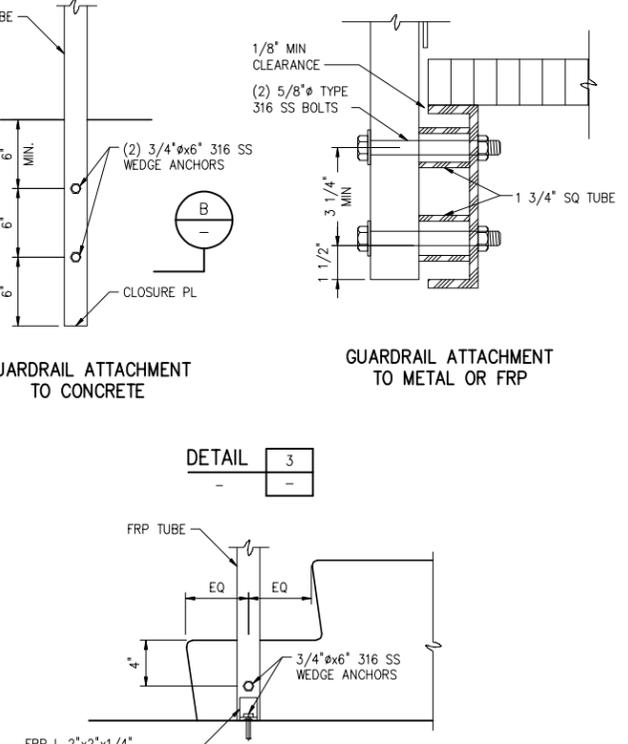
FRP HANDRAIL/RAILING SYSTEM

DETAIL	54
NTS	-



GUARDRAIL ATTACHMENT
TO CONCRETE

DETAIL	3
-	-



GUARDRAIL ATTACHMENT
TO METAL OR FRP

DETAIL	4
-	-

DESIGNED	J.P.S.	PROJ. ENGR.	G.A.B.
DRAWN	C.C.P.	ISSUED FOR	REQUEST FOR PROPOSAL
CHECKED	A.F.H.	DATE	07/24/15
NO.	1	BY	G.A.B.

DESIGNED	J.P.S.	PROJ. ENGR.	G.A.B.
DRAWN	C.C.P.	ISSUED FOR	REQUEST FOR PROPOSAL
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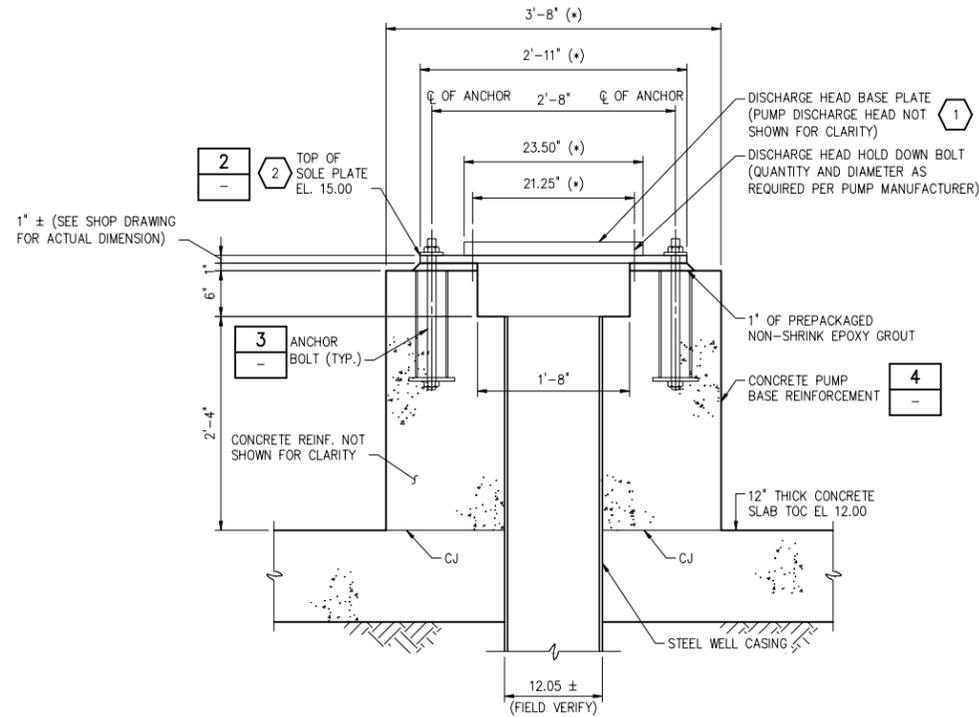
HAZEN AND SAWYER
Environmental Engineers & Scientists
4000 Hollywood Boulevard, Suite 750N
Hollywood, Florida 33021
Certificate of Authorization Number: 2771

SCALE	NTS
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S48

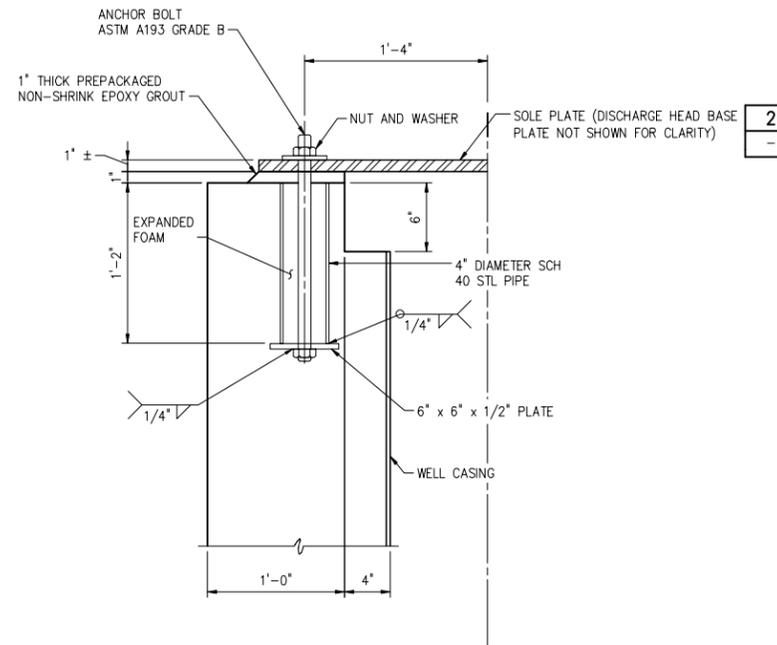
CITY OF NORTH MIAMI
PUBLIC WORKS UTILITIES

WINSON WATER TREATMENT PLANT
RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB
STRUCTURAL DETAILS SHEET 7

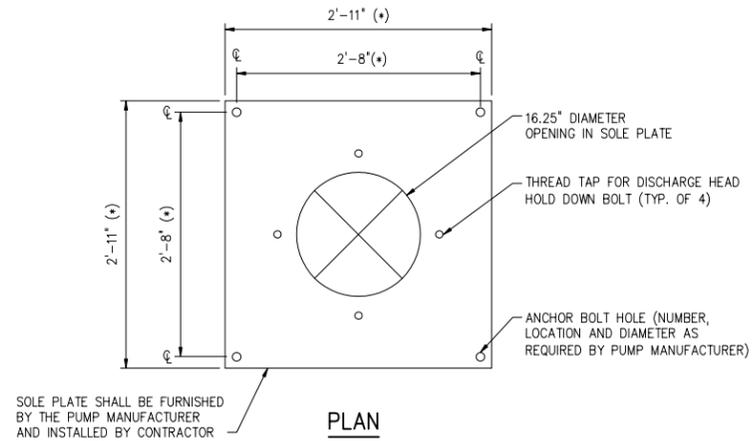
DATE:	JULY 2015
SHEET:	188 OF 335
DRAWING:	S-48



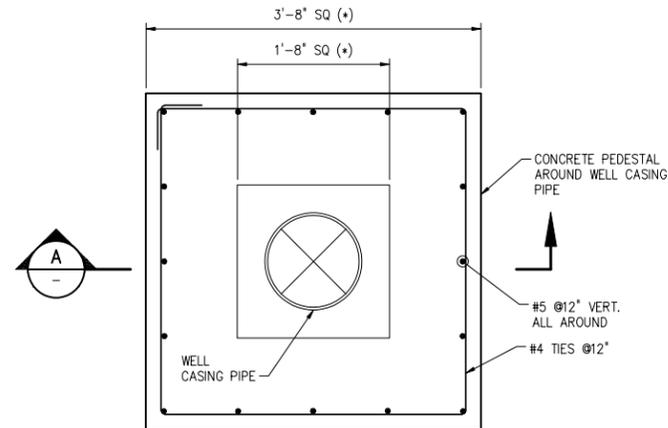
WELLHEAD SECTION
DETAIL 1
 1" = 1'-0" S-49



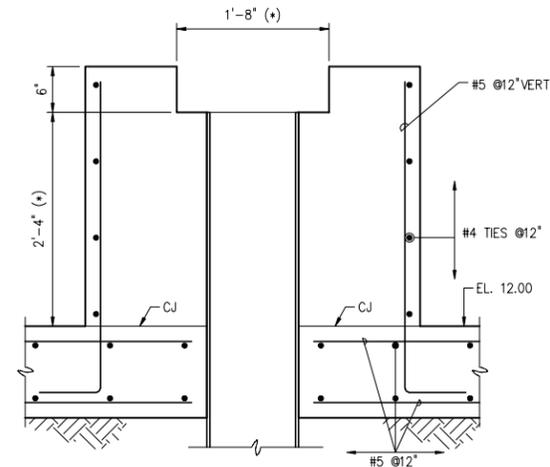
ANCHOR BOLT - SECTION
DETAIL 3
 1 1/2" = 1'-0" S-49



SOLE PLATE
DETAIL 2
 1" = 1'-0" S-49



PUMP BASE REINFORCEMENT
DETAIL 4
 1" = 1'-0" S-49



SECTION A

KEYED NOTES:

- 1 CONTACT AREA BETWEEN DISCHARGE HEAD BASE PLATE AND SOLE PLATE SHALL BE MACHINED PER THE PUMP MANUFACTURER'S REQUIREMENTS.
- 2 LEVEL SOLE PLATE TO MANUFACTURER'S RECOMMENDED TOLERANCE AS A MINIMUM.



PLOT DATE: 7/24/2015 11:38 AM BY: TBK/AS

DESIGNED	J.P.S.		
DRAWN	L.M.S.		
CHECKED	A.F.H.		
PROJ. ENGR.	G.A.B.		
NO.	DATE	ISSUED FOR	BY
1	07/24/15	REQUEST FOR PROPOSAL	G.A.B.

DESIGNED	J.P.S.	HAZEN AND SAWYER Environmental Engineers & Scientists 4000 Hollywood Boulevard, Suite 750N Hollywood, Florida 33021 Certificate of Authorization Number: 2771
DRAWN	L.M.S.	
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PROJ. ENGR.	G.A.B.	
JEAN PAUL SILVA No. 66522		P.E.

SCALE	AS NOTED
CLIENTS PROJECT:	-
ENGINEERS PROJECT:	44238-004
CAD REFERENCE:	44238-004BP3-S49

WINSON WATER TREATMENT PLANT RELIABILITY IMPROVEMENTS - VOLUME B: WTP REHAB	

DATE: JULY 2015 SHEET: 189 OF 335 DRAWING: S-49	
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STRUCTURAL DETAILS SHEET 8	
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DATE: JULY 2015 SHEET: 189 OF 335 DRAWING: S-49	
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REQUEST FOR PROPOSAL