

REPAIR OF STORMWATER PUMP STATION NW 25 ST AND NW 39 AVE

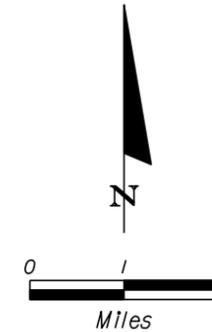
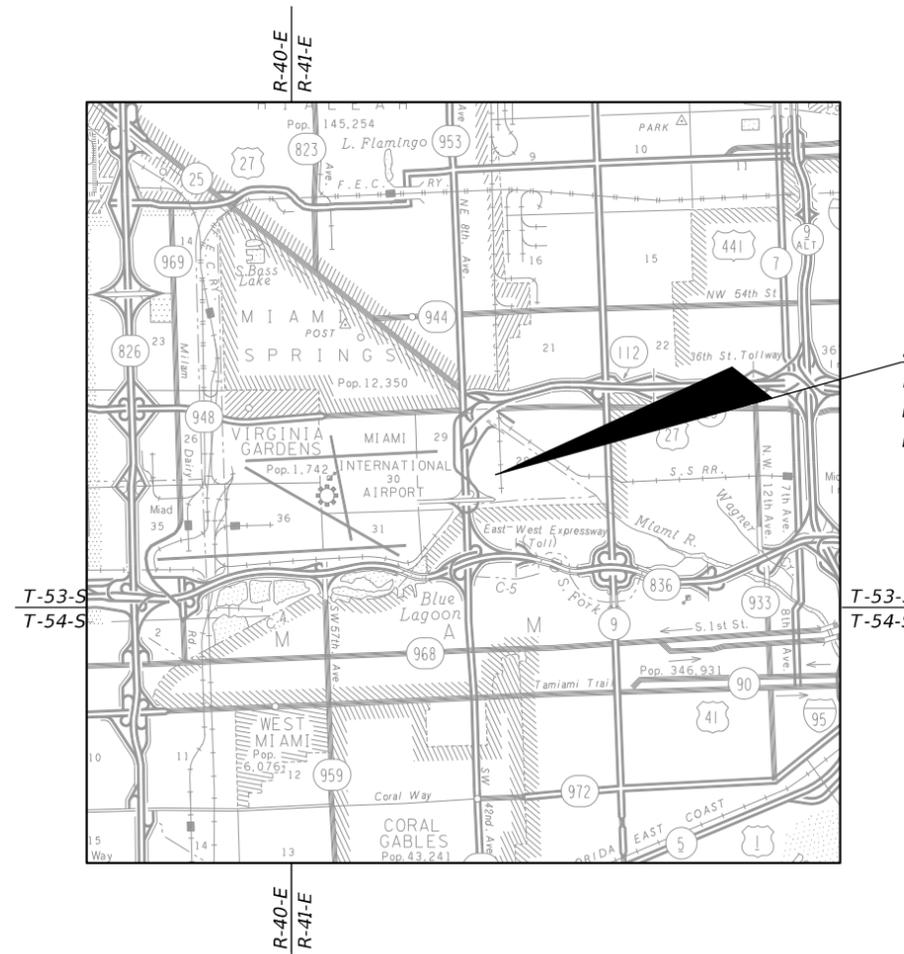
MIAMI-DADE COUNTY PROJECT No. 20200316

NOTE:
ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

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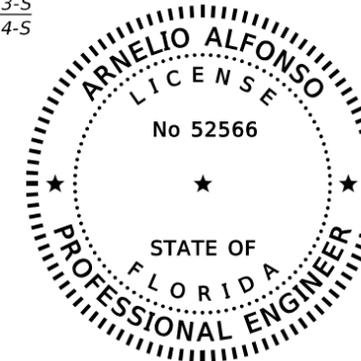
THESE PLAN SHEETS
ARE NOT PART
OF THIS CONTRACT



STORMWATER
PUMP STATION
NW 25th ST AND
NW 39 AVE.

PUMP STATION SHOP DRAWINGS
TO BE SUBMITTED TO:

ARNELIO ALFONSO, PE
8935 N.W. 35TH LANE, SUITE 200
DORAL, FL 33172
(305) 592-7283



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Arnelio Alfonso
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PUMP STATION PLANS
ENGINEER OF RECORD: ARNELIO ALFONSO, P.E.
P.E. No.: 52566

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH AND ARE GOVERNED BY THE MIAMI-DADE COUNTY PUBLIC WORKS DEPARTMENT STANDARDS AND SPECIFICATIONS PARTS 1, 2 AND 3. THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS. THE FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS, AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AS AMENDED BY CONTRACT DOCUMENTS.

BY



MIAMI-DADE COUNTY TRANSPORTATION
AND PUBLIC WORKS DEPARTMENT
HIGHWAY DIVISION

STEPHEN P. CLARK
CENTER
111 NW 1 ST
MIAMI, FLORIDA 33128



CA No.: EB-0007797
8935 NW 35LN STREET, SUITE 200
MIAMI, FL 33172
305-592-7283
WWW.APCTE.COM

SHEET
No.
1

APPROVED _____
COUNTY ENGINEER
RECOMMENDED _____
ASSISTANT DIRECTOR
SUBMITTED _____
HIGHWAY DIVISION

Always call 811 two full business days before you dig

Date	Time	Stamp	Trade	Exam. Name
3/16/2021	11:25:10 AM	[Stamp]	ELC	Approved
2/25/2021	10:14:14 AM	[Stamp]	ELC	Approved
3/1/2021	4:14:17 PM	[Stamp]	FIRE	Approved
2/25/2021	12:13:05 PM	[Stamp]	ZNPR	Approved

Miami Dade County
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GENERAL NOTES:

- B.M. DATA IS NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD-29).
- ALL PUBLIC LAND CORNERS AND SURVEY CONTROL MONUMENTS WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED BY CONTRACTOR AS FOLLOWS: CORNERS AND MONUMENTS IN CONFLICT WITH THE WORK AND IN DANGER OF BEING DAMAGED, DESTROYED OR COVERED SHALL BE PROPERLY REFERENCED BY A REGISTERED-LAND SURVEYOR IN ACCORDANCE WITH THE MINIMUM TECHNICAL STANDARDS OF THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYOR PRIOR TO BEGINNING WORK AT THAT SITE. THE CONTRACTOR SHALL RETAIN THE LAND SURVEYOR TO REFERENCE, AND RESTORE UPON COMPLETION OF THE WORK, ALL SUCH CORNERS AND MONUMENTS AND SHALL FURNISH TO THE DISTRICT LOCATION ENGINEER A SIGNED AND SEALED COPY OF THE LAND SURVEYOR'S REFERENCE DRAWING. INCLUDE ALL COST OF REFERENCING, RESTORING AND PRESERVING IN THE BID PRICE FOR MOBILIZATION.
- ALL EXCESS MATERIAL AS DESIGNATED BY THE ENGINEER IS TO BE DISPOSED BY THE CONTRACTOR IN AREAS PROVIDED BY HIM WITHIN 72 HOURS OF BEING DEPOSITED IN THE CONSTRUCTION AREA AND AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL USE A STREET SWEEPER (USING WATER) OR THE OTHER EQUIPMENT CAPABLE OF CONTROLLING AND REMOVING DUST. APPROVAL OF THE USE OF SUCH EQUIPMENT IS CONTINGENT UPON ITS DEMONSTRATED ABILITY TO DO THE WORK. CLEANING AND SWEEPING IS TO BE INCLUDED IN THE COST OF MAINTENANCE OF TRAFFIC.
- THE CONTRACTOR SHALL PAINT ALL STATIONS WITH STENCILED NUMBERS ON THE FACE OF THE CURB.
 - FROM THE BEGINNING OF THE PROJECT WHERE THE CURB IS TO REMAIN.
 - AT NEW CURB NOT LATER THAN 72 HOURS AFTER BEING POURED.
 - WHERE CURB DOES NOT EXIST AND SHALL NOT BE CONSTRUCTED THE CONTRACTOR SHALL MAINTAIN STATIONING WITH SURVEYING STAKES. THE CONTRACTOR SHALL MAINTAIN THE STATION MARKS VISIBLE UNTIL FINAL INSPECTION. COST TO BE INCLUDED IN MAINTENANCE OF TRAFFIC.
- COMMERCIAL MATERIAL INCLUDED FOR DRIVEWAYS MAINTENANCE AND SAFE ACCESS TO RESIDENTIAL AND BUSINESS PROPERTIES AFFECTED BY CONSTRUCTION SHALL BE PAID ONLY ONCE PER ACCESS. IF THE MATERIAL IS REMOVED DURING SUBSEQUENT CONSTRUCTION OPERATIONS, IT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. QUANTITY FOR THIS ITEM MAY BE INCREASED, DECREASED OR OMITTED AS DIRECTED BY THE DEPARTMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE DEWATERING PERMIT. COST OF PERMIT AND DEWATERING SHALL BE INCLUDED IN THE RELATED BID ITEM FOR THE WORK BEING DONE.
- THE CONTRACTOR IS RESPONSIBLE FOR KEEPING EXISTING AND NEW INLETS CLEAN OF MILLING MATERIAL, LIMEROCK, DEBRIS, ETC. DURING THE CONSTRUCTION AT NO ADDITIONAL COST.
- EXISTING UTILITIES ARE BACKFILLED WITH FLOWABLE FILL. LARGE CHUNKS OF EXCAVATED MATERIAL SHALL BE REPLACED WITH SUITABLE MATERIAL OR PROCESSED TO MAKE THEM SUITABLE FOR BACKFILLING OR EMBANKMENT CONSTRUCTION. COST TO BE INCLUDED IN RELATED BID ITEMS.
- CLEARING AND GRUBBING, GRADING AND OTHER INCIDENTAL WORK NECESSARY FOR HARMONIZATION OUTSIDE R/W SHALL BE INCLUDED IN RELATED BID ITEMS (ASPHALT, SOD, CONCRETE, BRICKS, ETC.)
- THE CONTRACTOR SHALL PERFORM SELECTIVE CLEARING AND GRUBBING FOR THE WORK BEING DONE. COST TO BE INCLUDED IN CLEARING AND GRUBBING.
- IF SHEETING, TREMIE SEAL, SHORING, OR DEWATERING, INCLUDING WELL POINTS ARE NECESSARY, THE CONTRACTOR MUST MONITOR AND CONTROL ALL WORK THAT MAY CAUSE CRACKING TO ANY ADJACENT BUILDING, STRUCTURE OR PROPERTY AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES CAUSED BY THESE OPERATIONS. COST OF SHEETING, SHORING, OR DEWATERING, INCLUDING WELL POINTS, AND ALL MONITORING COST SHALL BE INCLUDED IN THE RELATED BID ITEMS FOR THE WORK BEING DONE.
- INSTALLATION OF NEW PULL BOXES SHALL BE PERFORMED BY QUALIFIED ELECTRICAL CONTRACTOR. WHEN NEW PULL BOX IS REPLACING EXISTING PULL BOX, THE CONTRACTOR SHALL ADJUST CONDUITS AND CABLES TO FIT THE NEW PULL BOX ELEVATION. COST OF ADJUSTMENTS IS INCLUDED IN THE PULL BOX PAY ITEM.
- THERE IS AN EXISTING DEWATERING MASTER PERMIT FOR ALL THE MIC ROADWAY PROJECTS. CONTRACTOR IS RESPONSIBLE FOR UPDATING MASTER PERMIT AS NEEDED.

ENVIRONMENTAL NOTES:

- ANY MATERIAL TO BE STOCKPILED FOR PERIODS GREATER THAN 24 HOURS SHALL BE PROTECTED BY APPROPRIATE EROSION CONTROL DEVICES. COST TO BE INCLUDED IN THE RELATED BID ITEM.
- THE CONTRACTOR SHALL COMPLY WITH THE CONDITIONS OF ANY ENVIRONMENTAL PERMITS OBTAINED FOR THE PROJECT.
- ALL STOCKPILED MATERIALS SHALL BE STORED IN SUCH A MANNER AS TO PREVENT THEIR DISPERSAL INTO SURROUNDING ENVIRONMENTALLY SENSITIVE AREAS (I.E., CANALS AND ADJACENT PUBLICLY-OWNED LANDS).

UTILITIES NOTES:

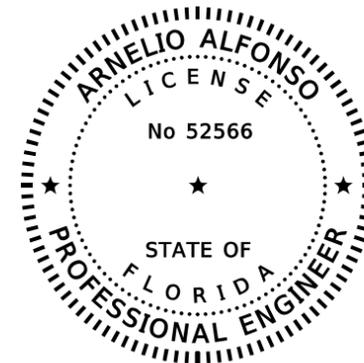
- FOR UTILITY ADJUSTMENT SYMBOLS, SEE FDOT STANDARD INDEX NO. 002.
- ALL EXISTING UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED.
- TWO FULL BUSINESS DAYS PRIOR TO DIGGING THE CONTRACTOR SHALL CALL SUNSHINE STATE ONE CALL OF FLORIDA, TELEPHONE NUMBER 811, AND THE UTILITY OWNER AND REQUEST UTILITY LOCATIONS. A CONTRACTOR'S REPRESENTATIVE MUST BE PRESENT WHEN UTILITY COMPANIES LOCATE THEIR FACILITIES.
- THE CONTRACTOR IS ADVISED THAT PROPERTIES ADJACENT TO THE PROJECT HAVE ELECTRIC, TELEPHONE, GAS, WATER AND/OR SEWER SERVICE LATERALS WHICH MAY NOT BE SHOWN IN PLANS. THE CONTRACTOR MUST REQUEST THE LOCATION OF THESE LATERAL SERVICES FROM THE UTILITY COMPANIES. THE ADDITIONAL COST OF EXCAVATING, INSTALLING, BACKFILLING AND COMPACTING AROUND THESE LATERAL SERVICES MUST BE INCLUDED IN THE BID RELATED ITEM FOR THE WORK BEING DONE.
- PRE-TRENCHING IN THE ALIGNMENT AND GRADE OF PROPOSED PIPES STRUCTURES, FRENCH DRAINS, SLAB COVERED TRENCHES, CONDUITS, POLE FOUNDATIONS AND/OR SUB-GRADE SHALL BE PERFORMED SEVEN DAYS IN ADVANCE OF ITS CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE UNDERGROUND UTILITY OWNERS AND THE DEPARTMENT WITH A SEVEN DAYS ADVANCE NOTICE OF ANY CONFLICT WITH PROPOSED CONSTRUCTION. THIS NOTIFICATION SHALL PROVIDE SURVEY INFORMATION ABOUT EXISTING UTILITY ALIGNMENT, GRADE AND POSSIBLE CONFLICTS. PAYMENT FOR PRE-TRENCHING, SURVEY AND BACKFILLING SHALL BE INCLUDED IN THE COST OF THE RELATED BID ITEM FOR THE WORK BEING DONE.
- UTILITY OWNER:

COMPANY		
FLORIDA CITY GAS (AGL RESOURCES)	GUSTAVO PEÑA	(305) 835-3624
DADE COUNTY PUBLIC WORKS & TRAFFIC	OCTAVIO VIDAL	(305) 412-0891
FLORIDA POWER & LIGHT	EDGAR AGUILAR	(386) 586-6403
AT&T/ DISTRIBUTION	DINO FARRUGIO	(561) 683-2729
M-D WATER & SEWER DEPARTMENT	LAZARO GUERRA	(786) 268-5273
COMCAST CABLE	KYLE NICOLAY	(305) 433-0880
MASTEC INC	IBRAIN FONT	(786) 267-4697



DRAINAGE NOTES:

- EXISTING STORM SEWERS (PIPES, FRENCH DRAINS AND/OR SLAB COVERED TRENCHES) MAY REMAIN IN PLACE IF NOT IN CONFLICT WITH PROPOSED CONSTRUCTION. PLUG OPEN ENDS WHERE NEEDED WITH MISCELLANEOUS CONCRETE UNLESS OTHERWISE STATED ON PLANS.
- THERE SHALL BE NO MORE THAN THREE LATERAL DRAINAGE INSTALLATIONS WITHOUT BACKFILLING. BACKFILLING OF LATERAL DRAINAGE SHALL NOT LAG MORE THAN 72 HOURS BEHIND THE START OF EXCAVATION.
- ALL EXCESS MATERIAL AS DESIGNATED BY THE ENGINEER IS TO BE DISPOSED BY THE CONTRACTOR IN AREAS PROVIDED BY HIM WITHIN 72 HOURS OF BEING DEPOSITED IN THE CONSTRUCTION AREA AND AT THE CONTRACTOR'S EXPENSE.

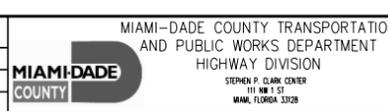


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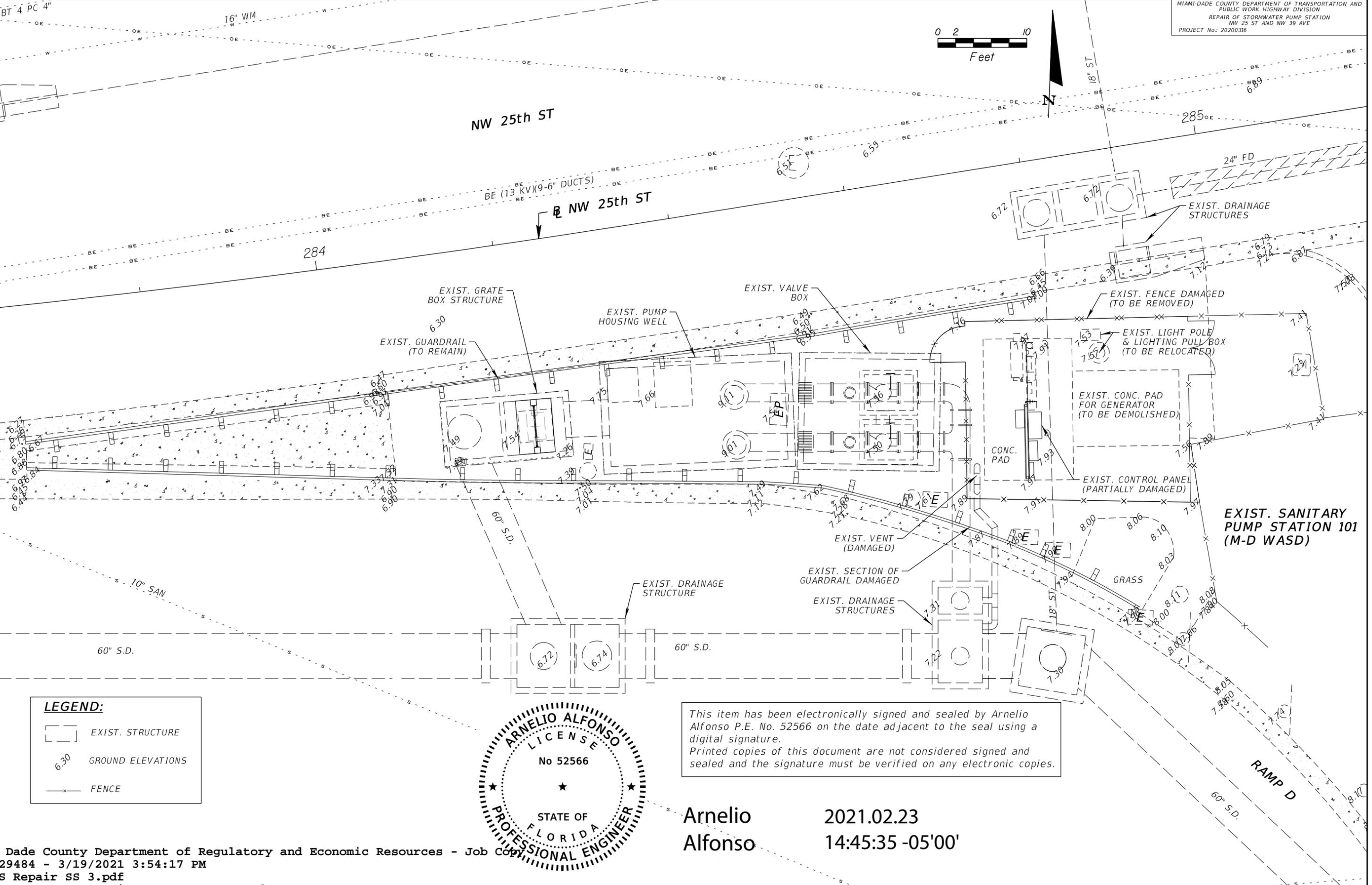
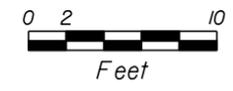
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Examined	DATE	TIME	BY	DESCRIPTION
PETERS, RONALD	2/25/2021	10:15:18 AM	ELEC	Approved

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SUPERVISED BY:					



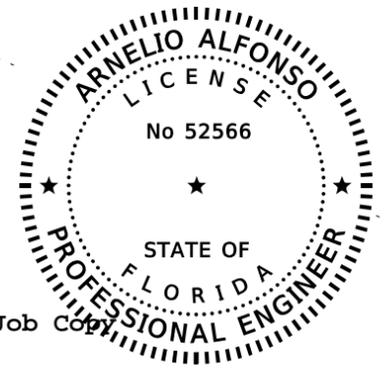
MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT
 HIGHWAY DIVISION
 STEPHEN P. CLARK CENTER
 111 NW 1 ST
 MIAMI, FLORIDA 33128

GENERAL NOTES



LEGEND:

	EXIST. STRUCTURE
6.30	GROUND ELEVATIONS
	FENCE



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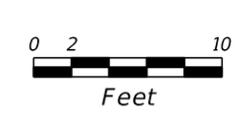
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Examiner	Date Time Stamp	Trade Stamp Name	REVISIONS	DATE	BY	DESCRIPTION
PETERS, RONALD	2/25/2021 10:15:39 AM	ELEC Approved				
AQUIT, SUYIN	3/1/2021 4:03:10 PM	FIRE Reference Only.				

ARNELIO ALFONSO, PE
 PE LICENSE No. 52566
 A&P CONSULTING TRANSPORTATION ENGINEERS CORP.
 8935 N.W. 35TH LANE, SUITE 200
 DORAL, FL 33172
 CERTIFICATE OF AUTHORIZATION EB-0007797

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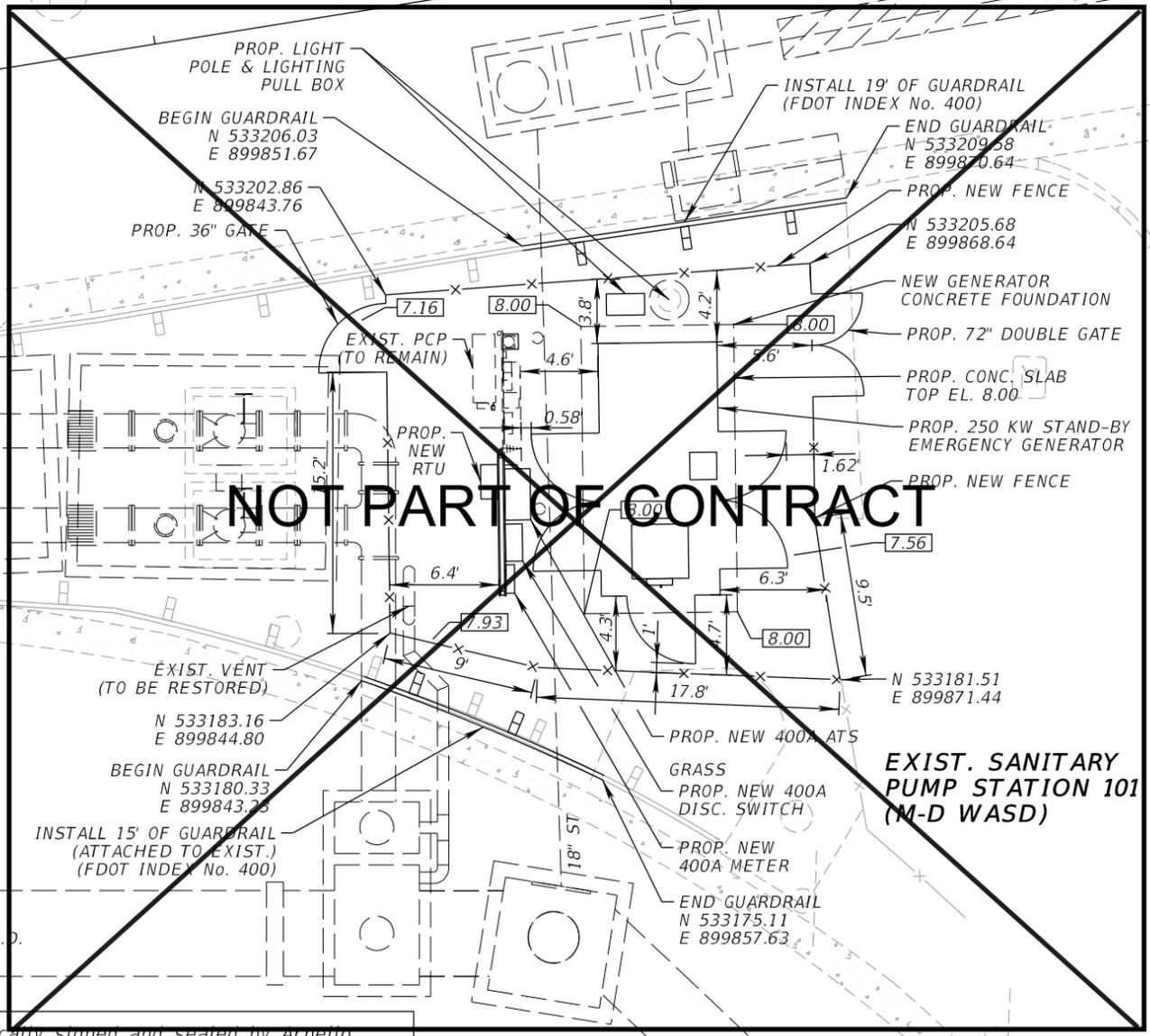
MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT
 HIGHWAY DIVISION
 STEPHEN P. CLARK CENTER
 111 NW 1 ST
 MIAMI, FLORIDA 33128



SCOPE OF WORK:
 1- EXISTING STRUCTURE GRATE BOX TO BE MODIFIED WITH A NEW ALUMINUM BAR GRATE OF 56" X 90" AND A NEW ALUMINUM HATCH (H-20) OF 48" X 72" WITH AUTOMATIC HOLD OPEN ARM & SLAM LOCK.
 2- NEW GENERATOR CONCRETE SLAB OF 16.75' X 9' X 1.5' WITH A TOP ELEVATION OF 8.0' NGVD.
 3- INSTALL 34- FEET OF GUARDRAIL.
 4- FOR ELECTRICAL SCOPE OF WORK REFER TO SHEET NO. 10.

NW 25th ST

NW 25th ST



PROP. NEW TRASH RACK W/A 72"x48" HATCH

EXIST. GUARDRAIL (TO REMAIN)

EXIST. EL. 7.50 (TO REMAIN)

EXIST. GUARDRAIL (TO REMAIN)

60" S.D.

60" S.D.

60" S.D.

RAMP D

EXIST. SANITARY PUMP STATION 101 (M-D WASD)

LEGEND:

	EXIST. STRUCTURE
	GUARDRAIL
	FENCE



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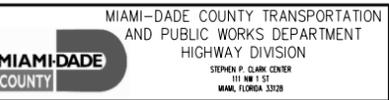
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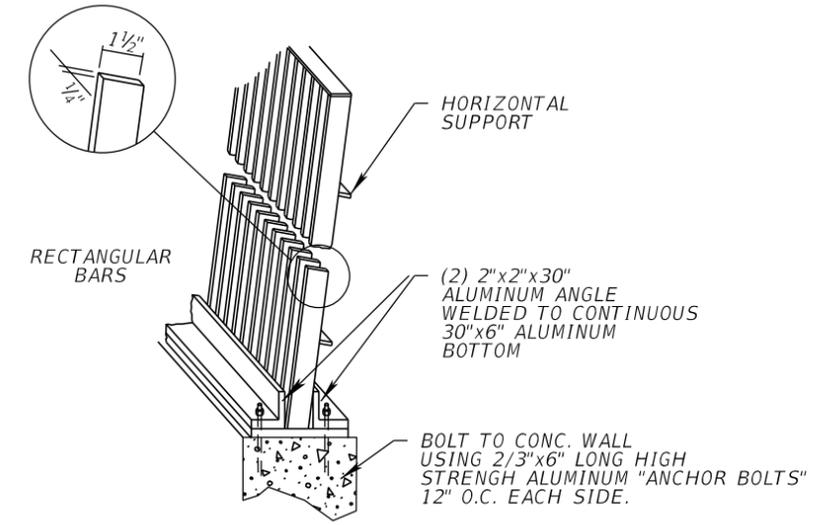
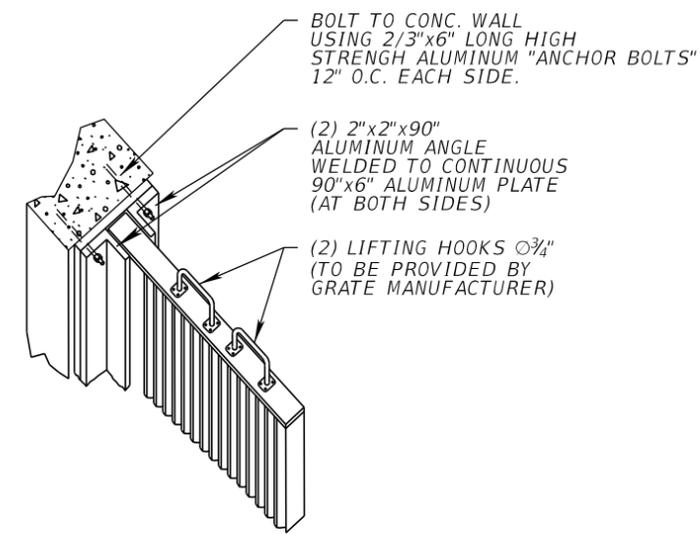
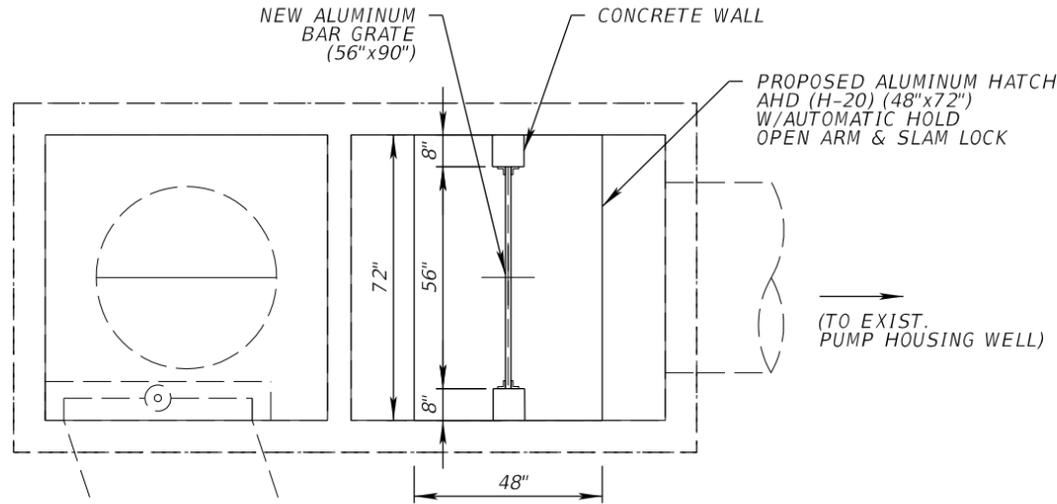
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FEBLES, NOEL	2/25/2021	11:52:03 AM	DERM	Approved
PETERS, RONALD	2/25/2021	10:16:42 AM	ELEC	Approved
AQUITA, SUYIN	3/1/2021	4:07:53 PM	FIRE	Approved
BORBOLLA, JOSE	2/25/2021	12:13:35 PM	ZNPR	Approved As Noted

ARNELIO ALFONSO, PE
 PE LICENSE No. 52566
 ASP CONSULTING TRANSPORTATION ENGINEERS CORP.
 8935 N.W. 35TH LANE, SUITE 200
 DORAL, FL 33172
 CERTIFICATE OF AUTHORIZATION: EB-0007797

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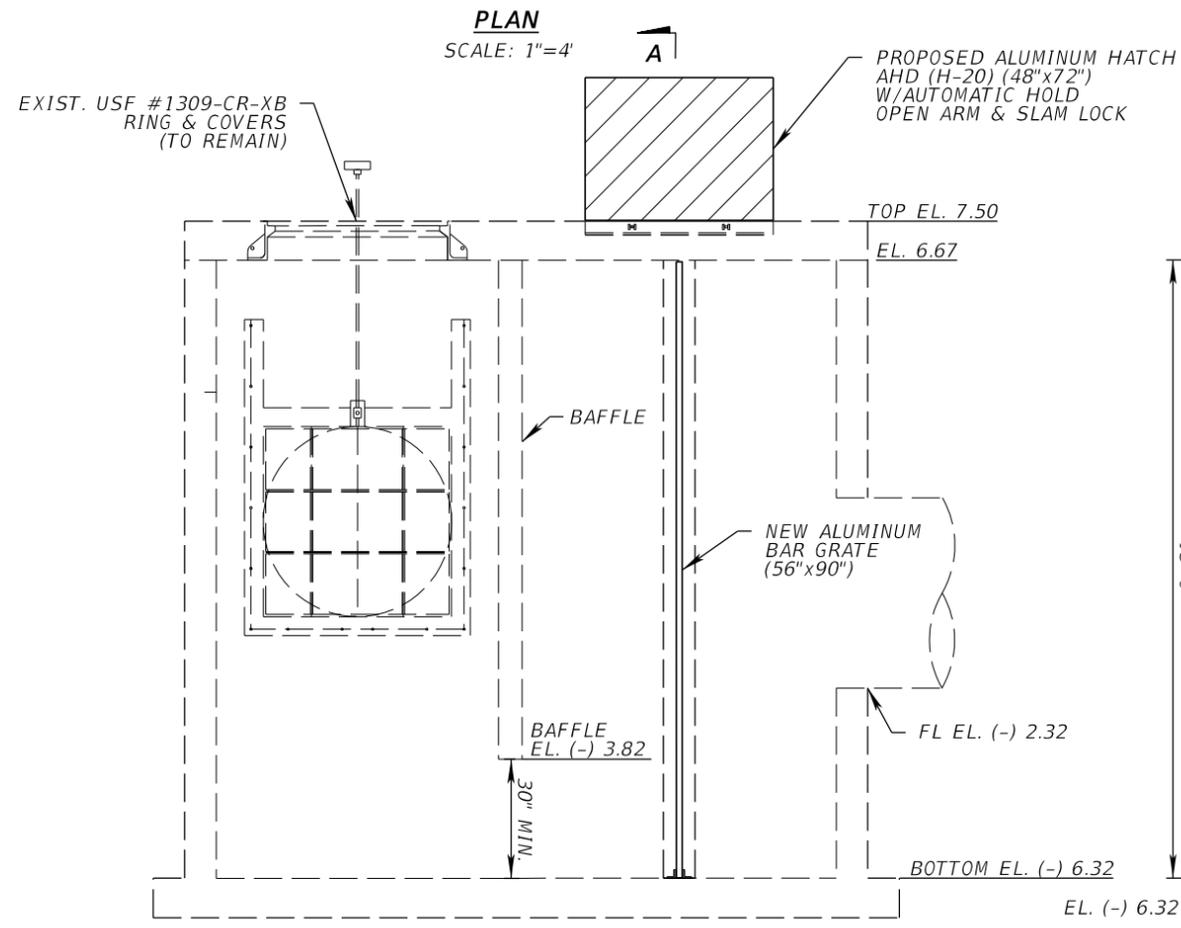




**GRATE FLOOR SUPPORT
 DETAIL B**
 N.T.S.

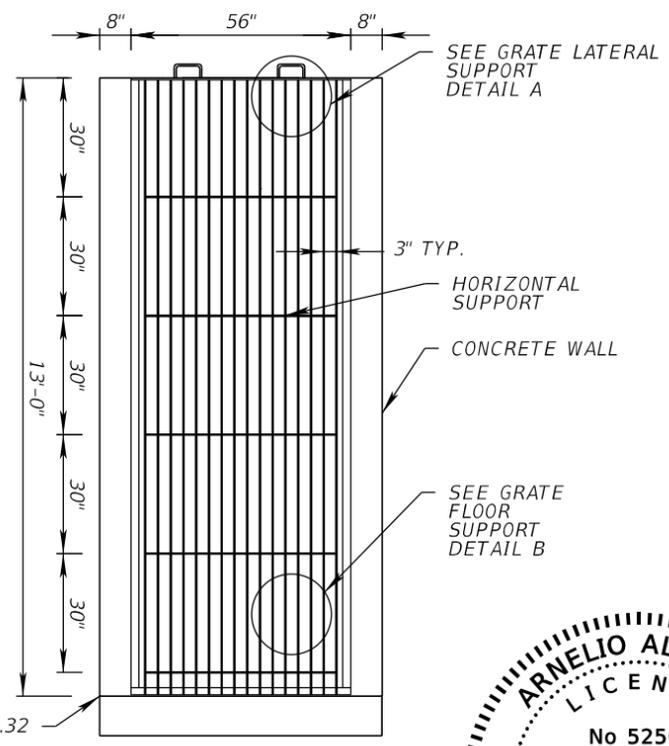
**GRATE LATERAL SUPPORT
 DETAIL A**
 N.T.S.

ALUMINUM BAR GRATE DETAILS
 N.T.S.



ELEVATION
 SCALE: 1"=4'

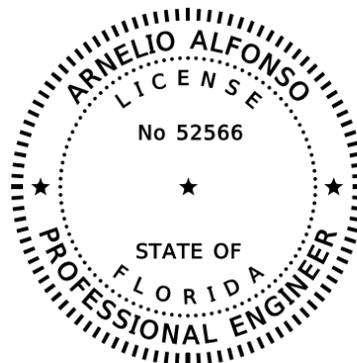
EXIST. STRUCTURE (GRATE BOX) (TO BE MODIFIED)



SECTION A-A
 SCALE: 1"=4'

NOTES

- 1- THE CONTRACTOR MUST SUPPLY SHOP DRAWINGS FOR APPROVAL, PREVIOUS TO THE PURCHASE OF MATERIALS OR DOING ANY WORK.
- 2- COST OF ALUM. BAR GRATE AND ALL COMPONENTS REQUIRED FOR THE INSTALLATION ARE TO BE INCLUDED IN THE COST OF THE REPAIR WORK.



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2/25/2021	10:17:41 AM	ELEC	Approved									

ARNELIO ALFONSO, PE
 PE LICENSE No. 52566
 A&P CONSULTING TRANSPORTATION
 ENGINEERS CORP.
 8935 N.W. 35TH LANE, SUITE 200
 DORAL, FL 33172
 CERTIFICATE OF AUTHORIZATION EB-0007797

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MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT
 HIGHWAY DIVISION
 STEPHEN P. CLARK CENTER
 111 NW 1 ST.
 MIAMI, FLORIDA 33128

**TRASH RACK
 MODIFICATION DETAILS**

SHEET NO.
 5

STRUCTURAL NOTES:

1. GENERAL:

- A. ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH THE FLORIDA BUILDING CODE, 2020 (7TH EDITION, ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS, THE ACI 318-14 BUILDING CODE, AND ALL APPLICABLE FEDERAL, STATE AND LOCAL ORDINANCES.
- B. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS OF EXISTING STRUCTURES AFFECTING NEW CONSTRUCTION BEFORE COMMENCING ANY WORK. ANY VARIATIONS IN ACTUAL FIELD CONDITIONS/DIMENSIONS FROM THOSE SHOWN IN THE CONTRACT DRAWINGS SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR DETERMINING THE NEED OF REDESIGN PRIOR TO CONTRACTOR'S SUBMITTAL OF SHOP WORKING DRAWINGS FOR REVIEW.
- D. WHEN PERFORMING WORK BELOW GRADE, CARE SHALL BE TAKEN TO AVOID DAMAGING ANY EXISTING UTILITIES. ALL UNKNOWN UTILITIES DISCOVERED DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE REPORTED TO ALL AFFECTED PARTIES, INCLUDING THE ARCHITECT/ENGINEER.
- E. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING HIS CONSTRUCTION DOCUMENTS WITH THE REVISED DRAWINGS AND SPECIFICATIONS, FIELD ORDERS, CHANGE ORDERS AND CLARIFICATION SKETCHES ISSUED DURING THE COURSE OF CONSTRUCTION.
- F. TYPICAL DETAILS AND NOTES ON THESE DRAWINGS SHALL APPLY UNLESS SPECIFICALLY NOTED OTHERWISE. CONSTRUCTION DETAILS AND SECTIONS NOT COMPLETELY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS AND SECTIONS SHOWN OR NOTED FOR SIMILAR CONDITIONS.
- G. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT.
- H. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL ACCUMULATED WATER FROM EXCAVATIONS AND DEWATERING OPERATIONS IN SUCH A WAY AS TO NOT CAUSE INCONVENIENCE TO THE WORK AND DAMAGE TO THE STRUCTURAL ELEMENTS.
- I. REINFORCING STEEL SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST STRUCTURAL DRAWINGS.
- J. THE CONTRACTOR SHALL SUPPLY THE ENGINEER THREE COPIES OF SHOP DRAWINGS A MINIMUM OF ONE WEEK PRIOR TO PLACEMENT. THE REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS ONLY FOR GENERAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS. THE REVIEW DOES NOT GUARANTEE IN ANY WAY THAT THE SHOP DRAWINGS ARE CORRECT NOR DOES IT INFER THAT THEY SUPERSEDE THE STRUCTURAL DRAWINGS.

K. SUBMITTALS TO EOR:

- I. CONCRETE TEST REPORT FOR CAST IN PLACE CONCRETE.
- II. REINFORCING STEEL SHOP DRAWINGS
- III. STRUCTURAL STEEL AND ANCHOR BOLTS SHOP DRAWINGS
- IV. ELECTRIC GENERATOR (FUEL TANK AND ENCLOSURE)

2. CONCRETE:

- A. ALL CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318-14 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."
- B. PROVIDE STRUCTURAL CONCRETE WITH A MINIMUM COMPRESSIVE DESIGN STRENGTH AT 28 DAYS AS FOLLOWS:.....5000 PSI
- C. FORMWORK SHALL COMPLY WITH ACI 347-04, "RECOMMENDED PRACTICE FOR CONCRETE WORK."
- D. NO WATER SHALL BE ADDED TO THE CONCRETE AT THE JOB SITE.
- E. THE OWNER SHALL CONTRACT AN INDEPENDENT TESTING LABORATORY TO PERFORM CONCRETE CYLINDER TESTS AS FOLLOWS: FOUR CYLINDER TESTS FOR ANY 50 CUBIC YARDS OF CONCRETE POURED, OR THREE CYLINDER TESTS PER ANY DAY'S POUR LESS THAN 50 CUBIC YARDS. ONE CYLINDER SHALL BE TESTED AT 7 DAYS AND TWO AT 28 DAYS.
- F. TRANSPORTING, PLACING, CURING AND DEPOSITING OF CONCRETE SHALL COMPLY WITH ACI 301-96.

3. REINFORCING STEEL:

- A. REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH FBC 2020 (7TH EDITION).
- B. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A 615-2010(S1) GRADE 60.
- C. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185-94.
- D. REINFORCING SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES DURING PLACING OF CONCRETE.
- E. ALL TOP REINFORCING SHALL TERMINATE WITH STANDARD HOOKS AT DISCONTINUOUS EDGES OR ENDS.
- F. ALL BOTTOM BARS SHALL BEAR 6" MINIMUM OVER SUPPORTS, U.O.N.
- G. ALL REINFORCING BARS MARKED CONTINUOUS SHALL BE LAPPED 30 DIA. AT SPLICES AND CORNERS UNLESS OTHERWISE NOTED. LAP CONTINUOUS TOP BARS AT CENTER BETWEEN SUPPORTS AS REQUIRED. TERMINATE CONTINUOUS BARS AT NON-CONTINUOUS ENDS WITH STANDARD HOOKS, U.O.N.
- H. MINIMUM CONCRETE COVER FOR REINFORCEMENT: CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH OR WATER.....3"

4. STRUCTURAL STEEL:

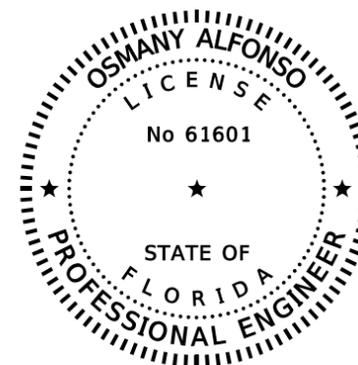
- A. STRUCTURAL STEEL SHALL COMPLY WITH AISC 360 "SPECIFICATIONS FOR DESIGN, FABRICATION AND ERECTION FOR STRUCTURAL STEEL BUILDINGS. LAST EDITION 2020 (7TH EDITION).
- B. STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO ASTM A709 GRADE 50.
- C. STRUCTURAL STEEL TUBES SHALL CONFORM TO ASTM A500, GRADE B, Fy=46 KSI.
- D. STRUCTURAL STEEL PIPES SHALL CONFORM TO ASTM A53, TYPE S, GRADE B, FY=35 KSI
- E. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 55.
- F. FRAMING BOLTS SHALL CONFORM TO ASTM 325, WITH HARDENED WASHERS AND HEX NUTS.
- G. REFER TO ARCH DRAWINGS FOR PAINTING AND FIREPROOFING OF STRUCTURAL STEEL. PROVIDE A MINIMUM OF ONE SHOP COAT OF PAINT FOR EXPOSED STRUCTURAL STEEL U.N.O. STEEL EXPOSED TO THE ATMOSPHERE OR ELEMENTS SHALL RECEIVE A SECOND SHOP COAT OF PAINT OR OTHER APPROVED COATING COMPATIBLE WITH THE SHOP COAT. DO NOT PAINT STEEL SURFACES IN CONTACT WITH FIREPROOFING OR EMBEDDED IN CONCRETE. STEEL ELEMENTS THAT ARE HOT-DIPPED GALVANIZED DO NOT REQUIRE SHOP AND FIELD PAINTING.
- H. ALL RODS AND NUTS MUST BE HOT-DIPPED GALVANIZED.

5. WELDING:

- A. WELDING SHALL BE DONE WITH E-70 ELECTRODES.
- B. WELDERS SHALL BE AWS-CERTIFIED.

6. DESIGN CRITERIA:

TRUCK DL: 16KIP FLOOR LL: 100PSF
 WIND LOAD: ASCE 7-16
 WIND VELOCITY: 175 MPH
 EXPOSURE "C" KD=.85



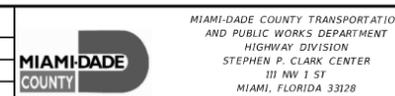
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Osmany Alfonso

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 Osmany Alfonso
 Date: 2021.02.23
 15:09:37 -05'00'

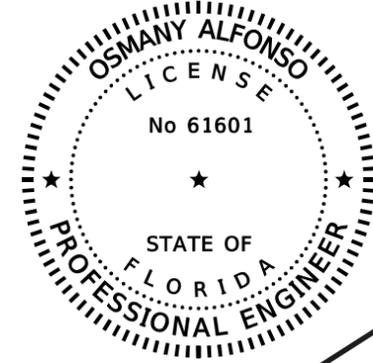
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3/19/2021	ASIF	3:31:37	PM	STRU		Approved					

OSMANY ALFONSO, PE PE LICENSE No. 61601 A&P CONSULTING TRANSPORTATION ENGINEERS CORP. 8935 N.W. 35TH LANE, SUITE 200 DORAL, FL 33172 CERTIFICATE OF AUTHORIZATION EB-0007797	DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE	CHECKED BY	NAME	DATE	SUPERVISED BY
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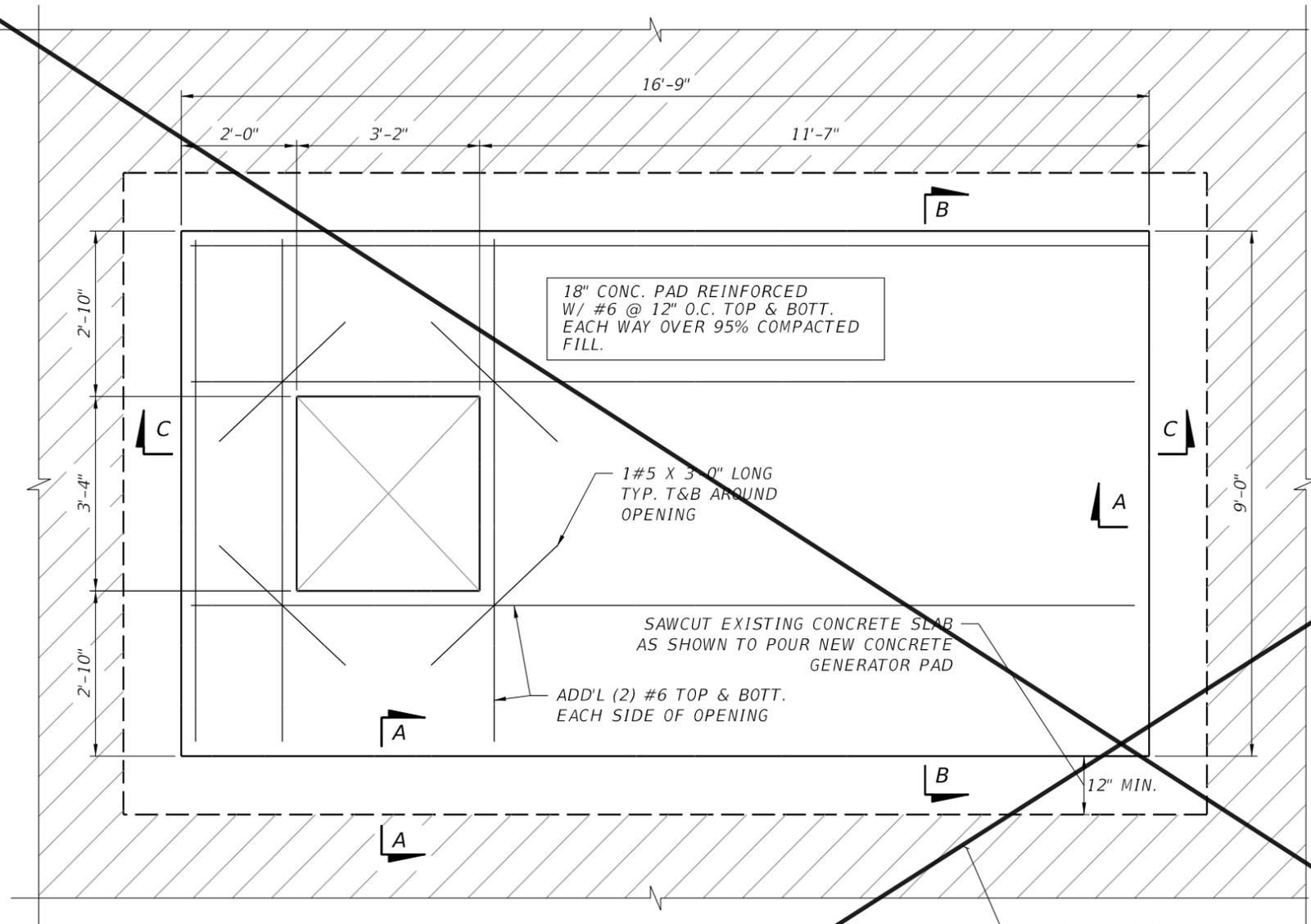
MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT
 HIGHWAY DIVISION
 STEPHEN P. CLARK CENTER
 311 NW 1 ST
 MIAMI, FLORIDA 33128

STRUCTURAL NOTES



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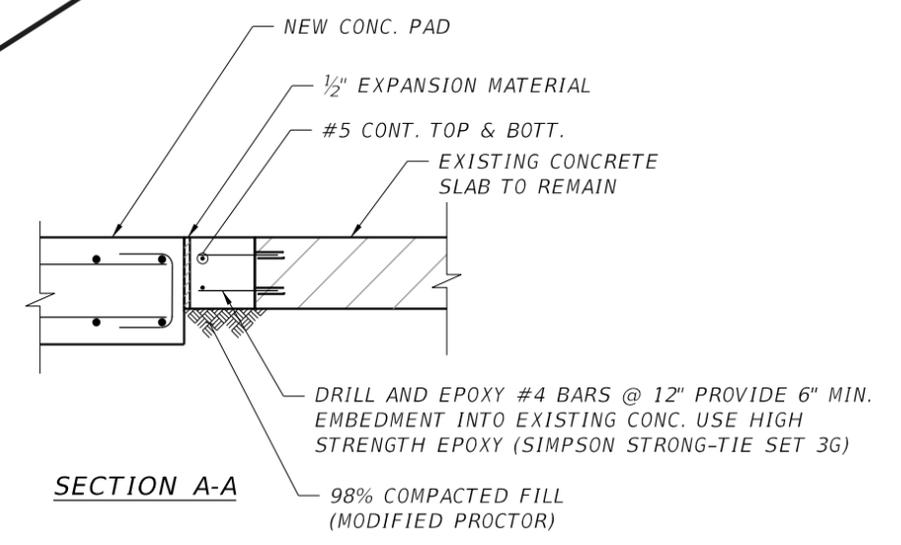
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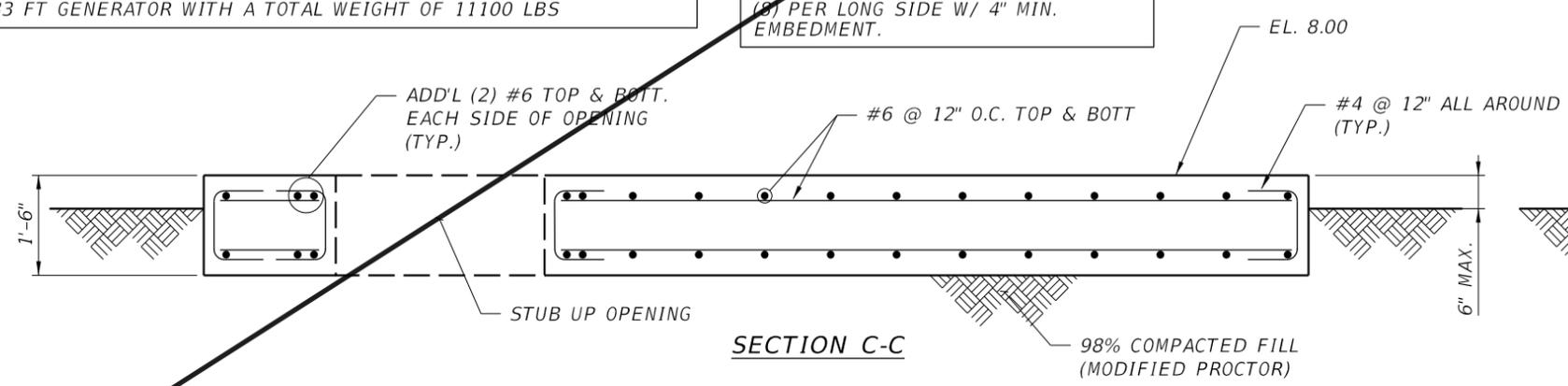
PLAN VIEW (605 GALLONS GENERATOR CONCRETE PAD)

NOTE: THIS FOUNDATION HAS BEEN DESIGNED FOR 14.75 FT X 7.00 FT X 8.33 FT GENERATOR WITH A TOTAL WEIGHT OF 11100 LBS

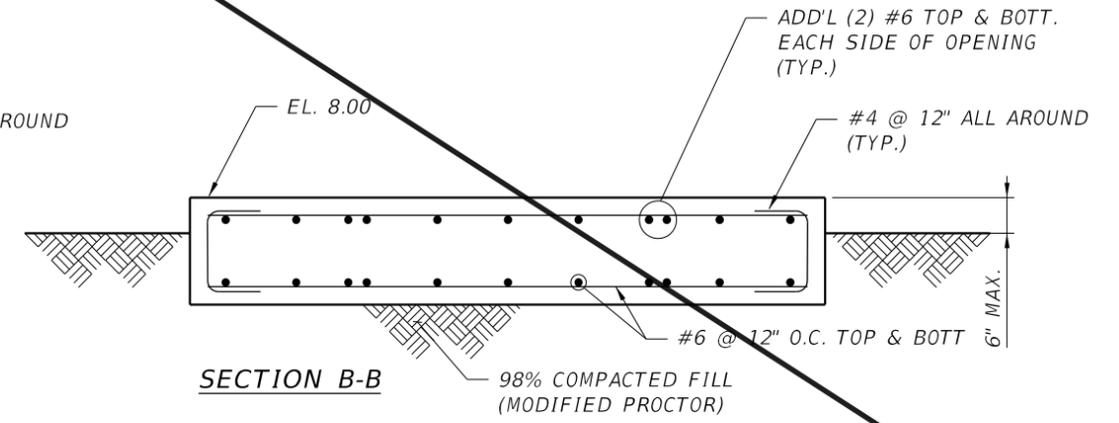
PROVIDE (16) 3/4" Ø ANCHOR BOLTS PER MANUFACTURER RECOMMENDATION (8) PER LONG SIDE W/ 4" MIN. EMBEDMENT.



SECTION A-A



SECTION C-C



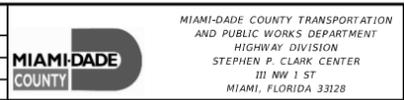
SECTION B-B

NOT PART OF CONTRACT

Examiner	Date Time Stamp	Trade Stamp Name
PETER SATRONALD	2/25/2021 10:20:22 AM	ELEC Approved
BAWANEY, ASIF	3/19/2021 3:31:27 PM	STRU Approved

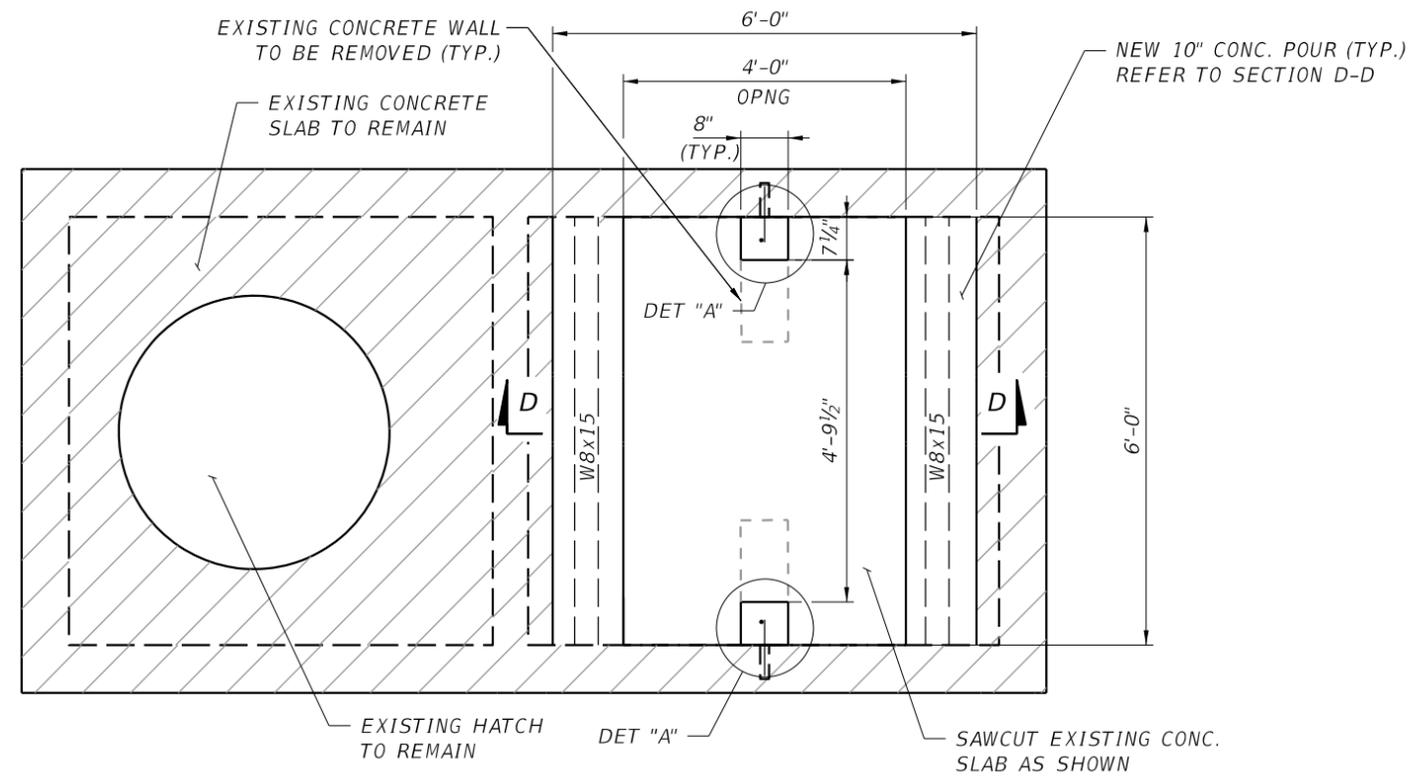
OSMANY ALFONSO, PE
 PE LICENSE No. 61601
 ASP CONSULTING TRANSPORTATION ENGINEERS CORP.
 8935 N.W. 35TH LANE, SUITE 200
 DORAL, FL 33172
 CERTIFICATE OF AUTHORIZATION EB-007797

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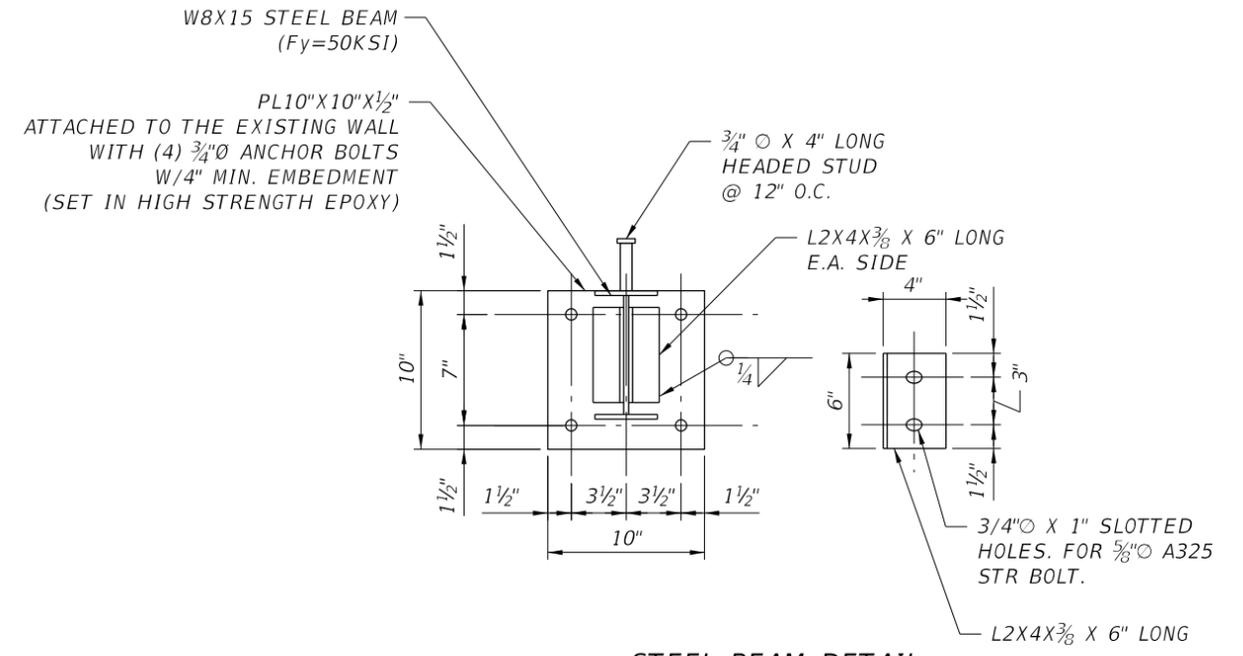


MIAMI-DADE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS DIVISION
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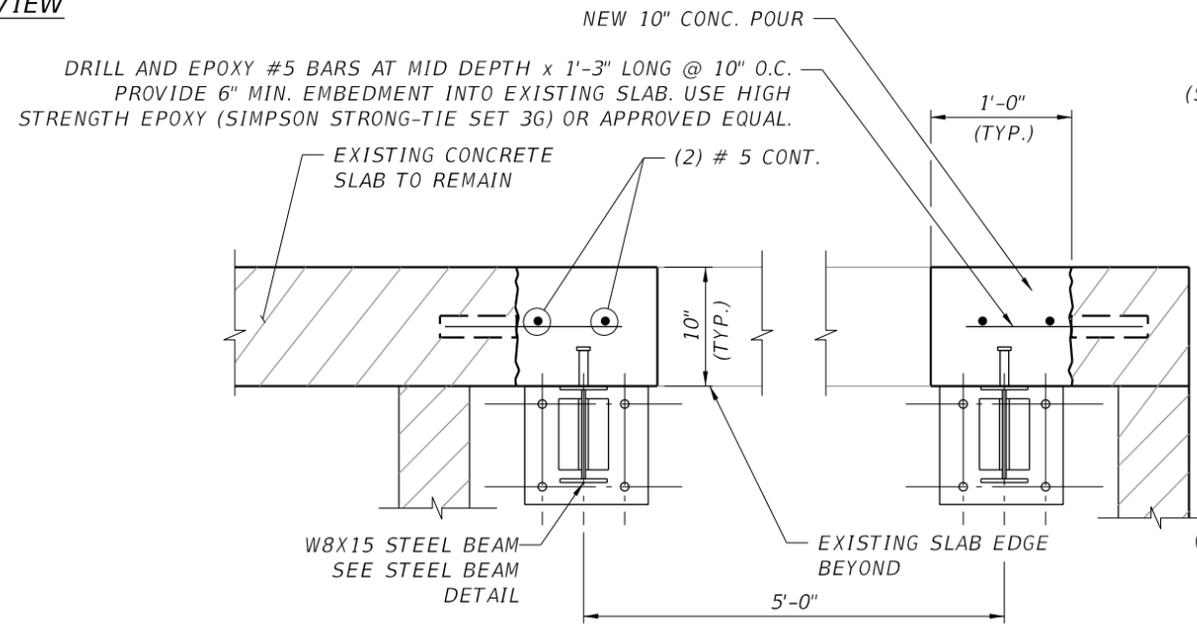
**GENERATOR PAD
 FOUNDATION & DETAILS**



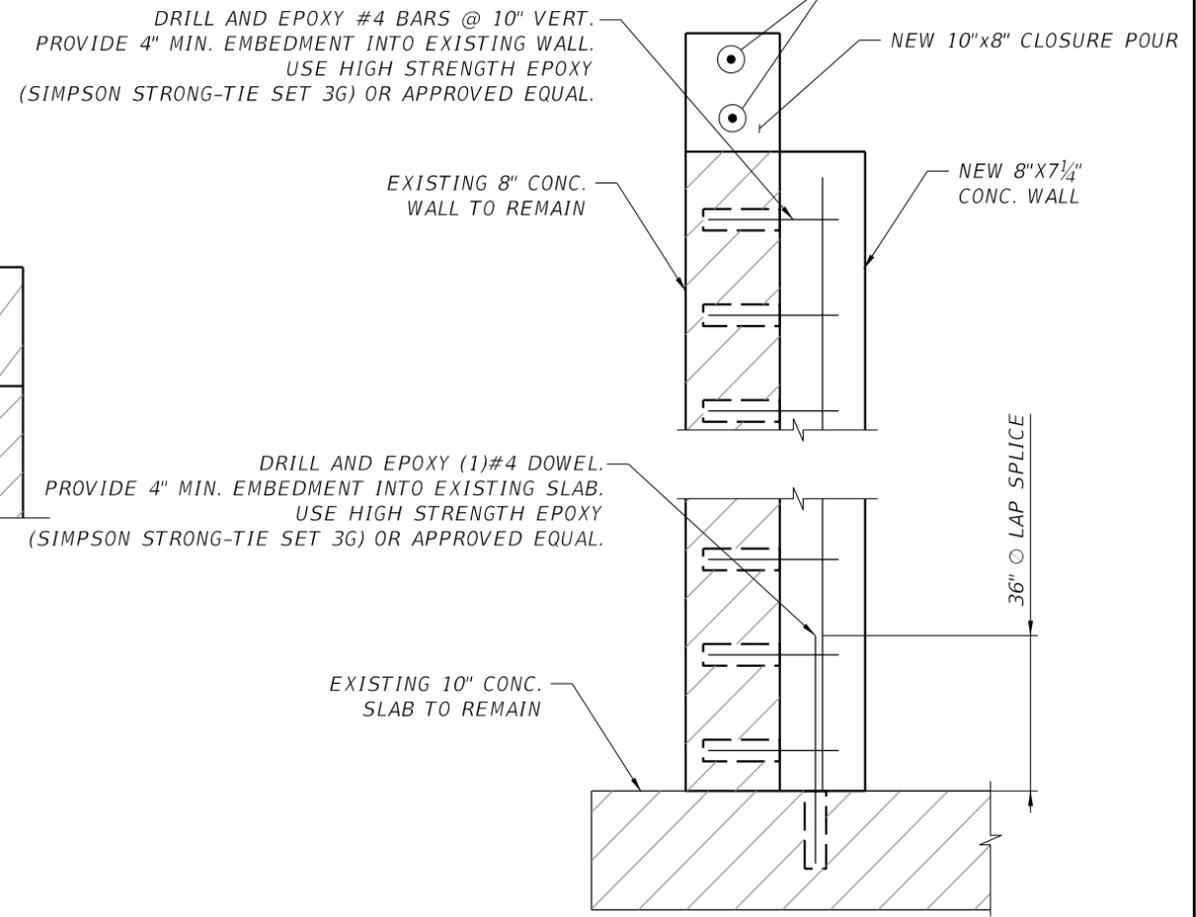
EXISTING GRATE BOX PLAN VIEW



STEEL BEAM DETAIL



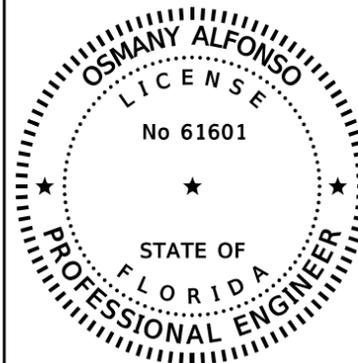
SECTION D-D

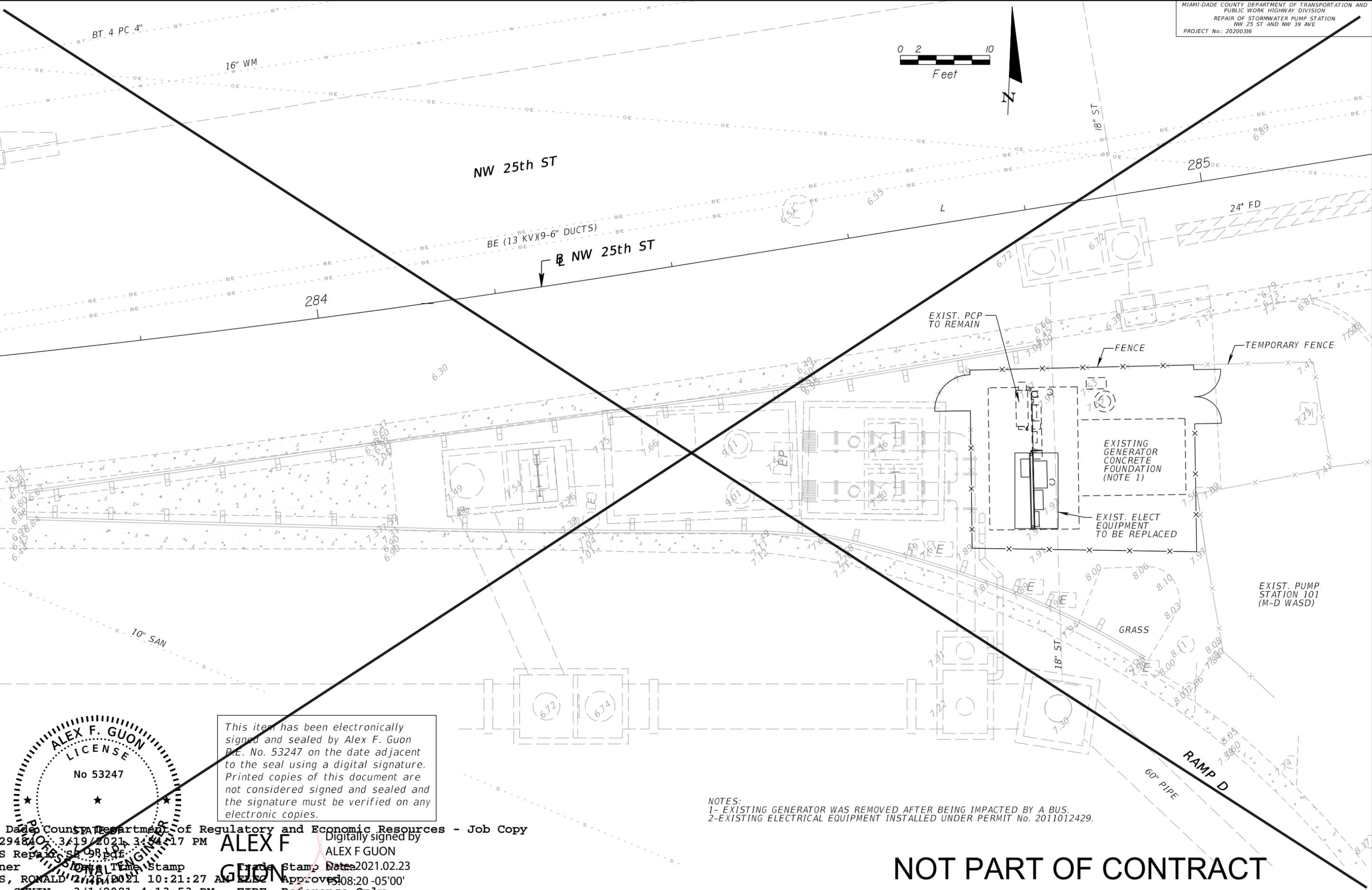
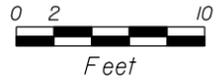


DETAIL "A"

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- NOTES:
 1- EXISTING GENERATOR WAS REMOVED AFTER BEING IMPACTED BY A BUS.
 2- EXISTING ELECTRICAL EQUIPMENT INSTALLED UNDER PERMIT No. 2011012429.

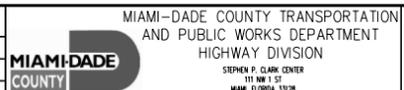
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2/25/2021	2:01:23 PM	STRU	Approved
2/25/2021	4:13:53 PM	FIRE	Reference Only
2/25/2021	10:21:27 AM	ELSC	Approved
3/1/2021	4:13:53 PM	FIRE	Reference Only
3/1/2021	10:21:27 AM	ELSC	Approved

ALEX F. GUON, PE
 PE LICENSE No. 53247
 A&P CONSULTING TRANSPORTATION ENGINEERS CORP.
 8935 N.W. 35TH LANE, SUITE 200
 DORAL, FL 33172
 CERTIFICATE OF AUTHORIZATION EB-0007797

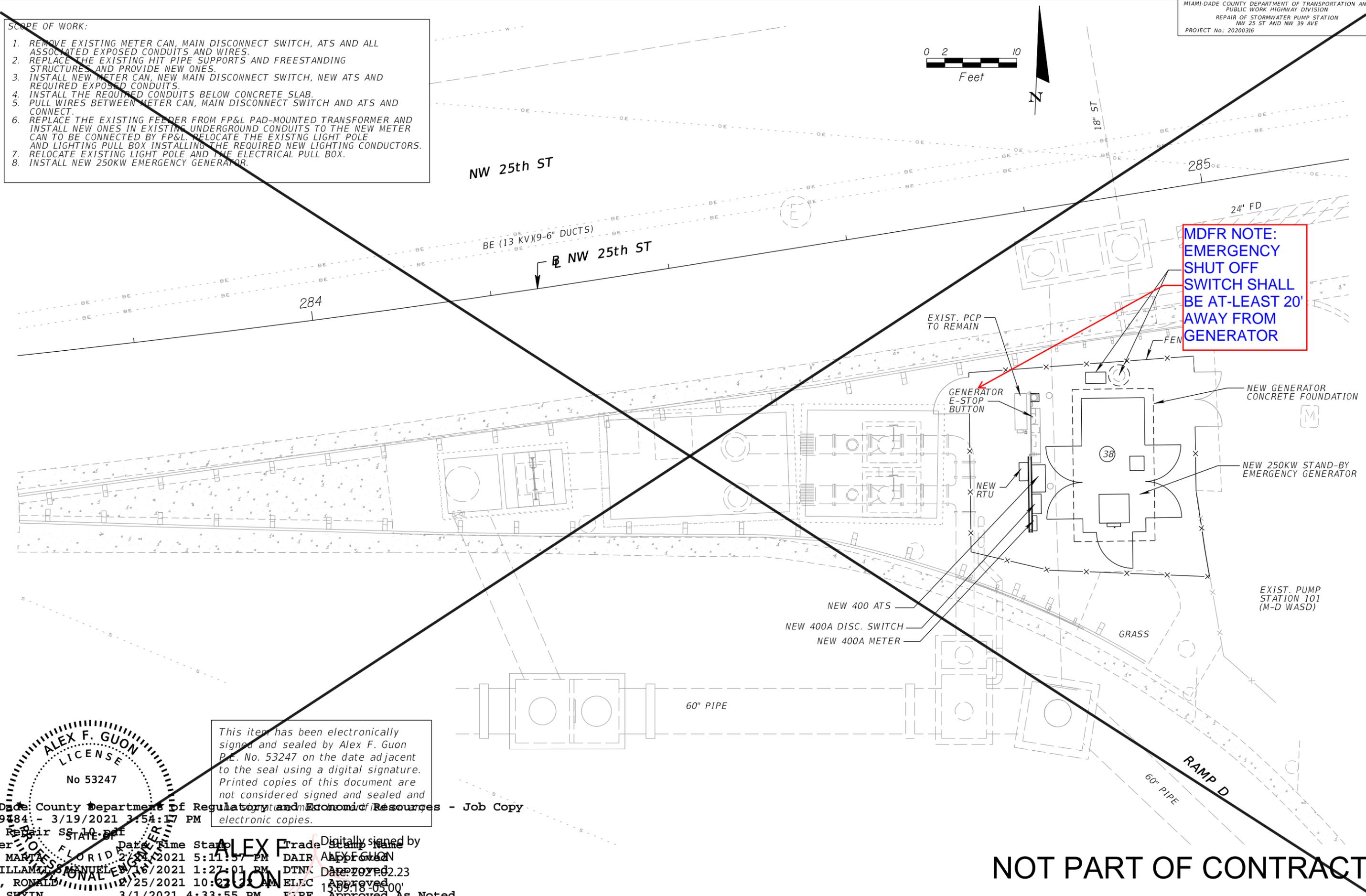
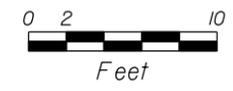
DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
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CHECKED BY	AFG	02/12/2021	CHECKED BY	AFG	02/12/2021



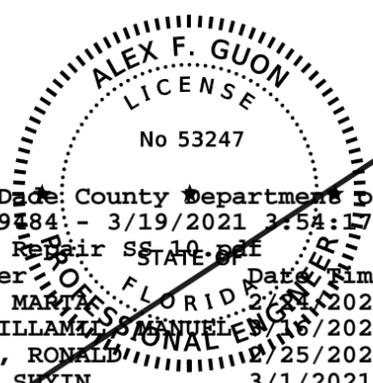
EXISTING ELECTRICAL SITE PLAN

SHEET NO. 9

- SCOPE OF WORK:**
1. REMOVE EXISTING METER CAN, MAIN DISCONNECT SWITCH, ATS AND ALL ASSOCIATED EXPOSED CONDUITS AND WIRES.
 2. REPLACE THE EXISTING HIT PIPE SUPPORTS AND FREESTANDING STRUCTURE AND PROVIDE NEW ONES.
 3. INSTALL NEW METER CAN, NEW MAIN DISCONNECT SWITCH, NEW ATS AND REQUIRED EXPOSED CONDUITS.
 4. INSTALL THE REQUIRED CONDUITS BELOW CONCRETE SLAB.
 5. PULL WIRES BETWEEN METER CAN, MAIN DISCONNECT SWITCH AND ATS AND CONNECT.
 6. REPLACE THE EXISTING FEEDER FROM FP&L PAD-MOUNTED TRANSFORMER AND INSTALL NEW ONES IN EXISTING UNDERGROUND CONDUITS TO THE NEW METER CAN TO BE CONNECTED BY FP&L. RELOCATE THE EXISTING LIGHT POLE AND LIGHTING PULL BOX INSTALLING THE REQUIRED NEW LIGHTING CONDUCTORS.
 7. RELOCATE EXISTING LIGHT POLE AND THE ELECTRICAL PULL BOX.
 8. INSTALL NEW 250KW EMERGENCY GENERATOR.



MDFR NOTE:
 EMERGENCY SHUT OFF SWITCH SHALL BE AT-LEAST 20' AWAY FROM GENERATOR



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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
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2/25/2021	12:10:48 PM	ZNPR	Approved		

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 ASP CONSULTING TRANSPORTATION ENGINEERS CORP.
 8935 N.W. 35TH LANE, SUITE 200
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 CERTIFICATE OF AUTHORIZATION EB-0007797

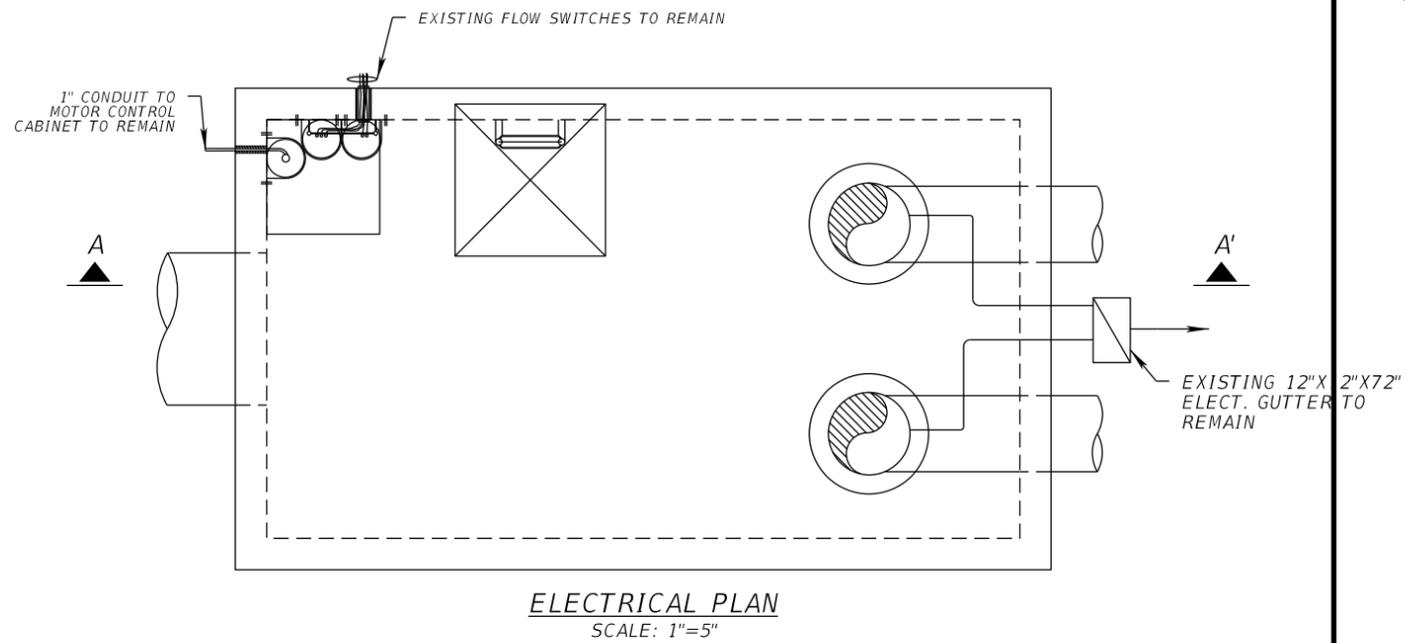
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CHECKED BY	AFG	02/12/2021	CHECKED BY	AFG	02/12/2021

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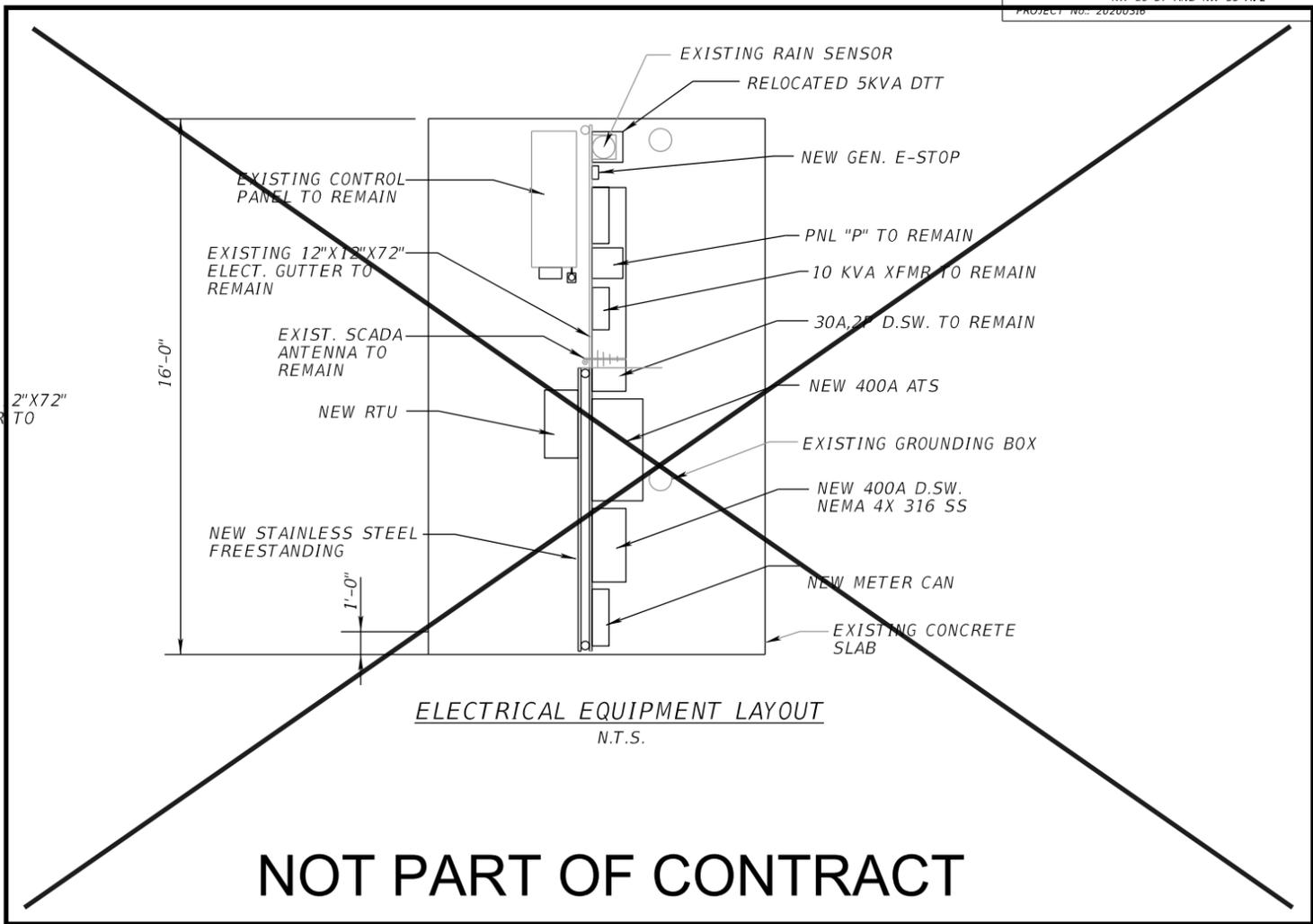
PROPOSED ELECTRICAL SITE PLAN

SHEET NO. 10

NOT PART OF CONTRACT

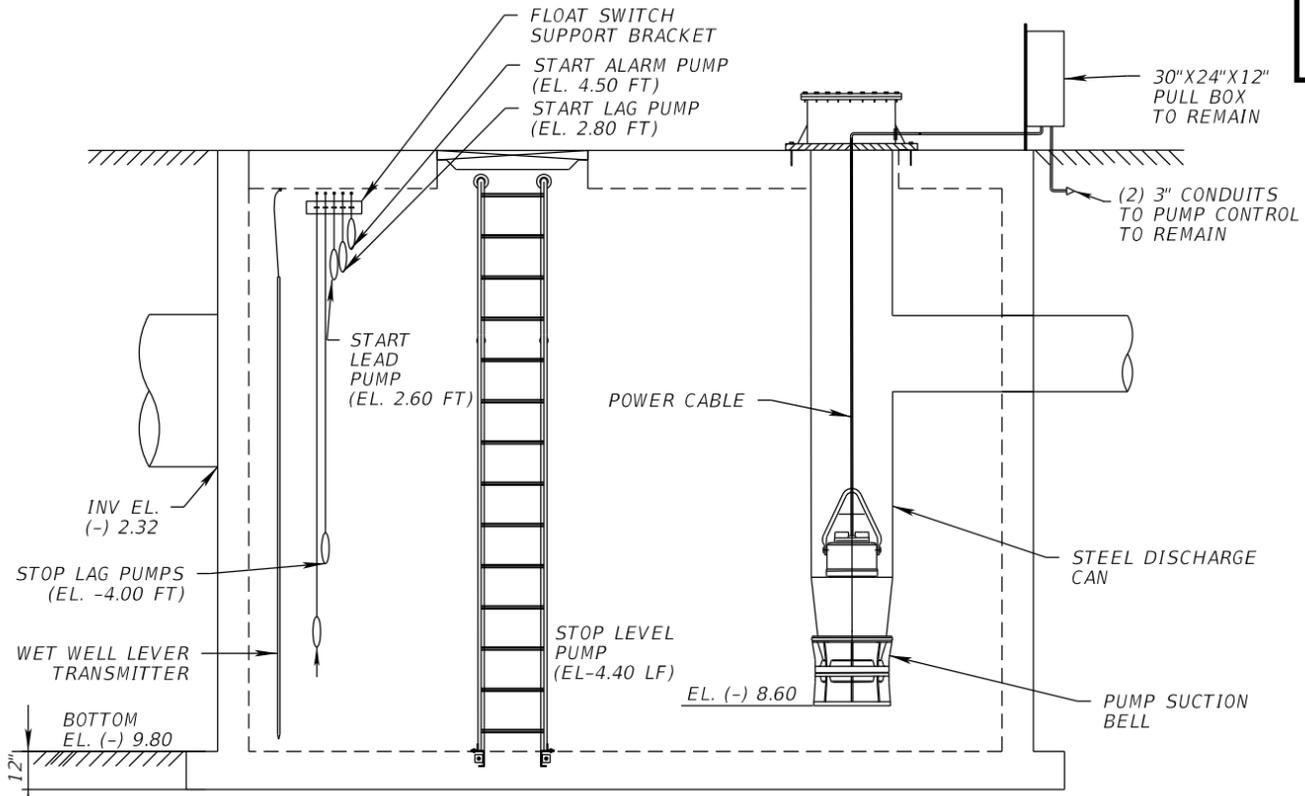


ELECTRICAL PLAN
 SCALE: 1"=5"

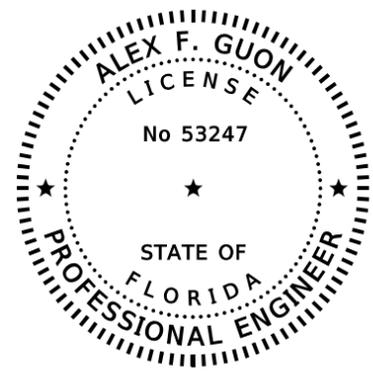


ELECTRICAL EQUIPMENT LAYOUT
 N.T.S.

NOT PART OF CONTRACT



SECTION A-A'
 N.T.S.



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 Digitally signed by ALEX F GUON
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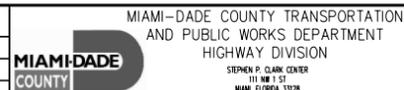
Miami Dade County Department of Regulatory and Economic Resources - Job Copy
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MIC PS Repair SS 11.pdf

DATE	BY	DATE	BY	DATE	BY	DESCRIPTION
2/25/2021 10:23:57 AM	PETERS, RONALD	2/25/2021 10:23:57 AM	ELEC	Approved		

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 PE LICENSE No. 53247
 ASP CONSULTING TRANSPORTATION ENGINEERS CORP.
 8935 N.W. 35TH LANE, SUITE 200
 DORAL, FL 33172
 CERTIFICATE OF AUTHORIZATION EB-0007797

DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
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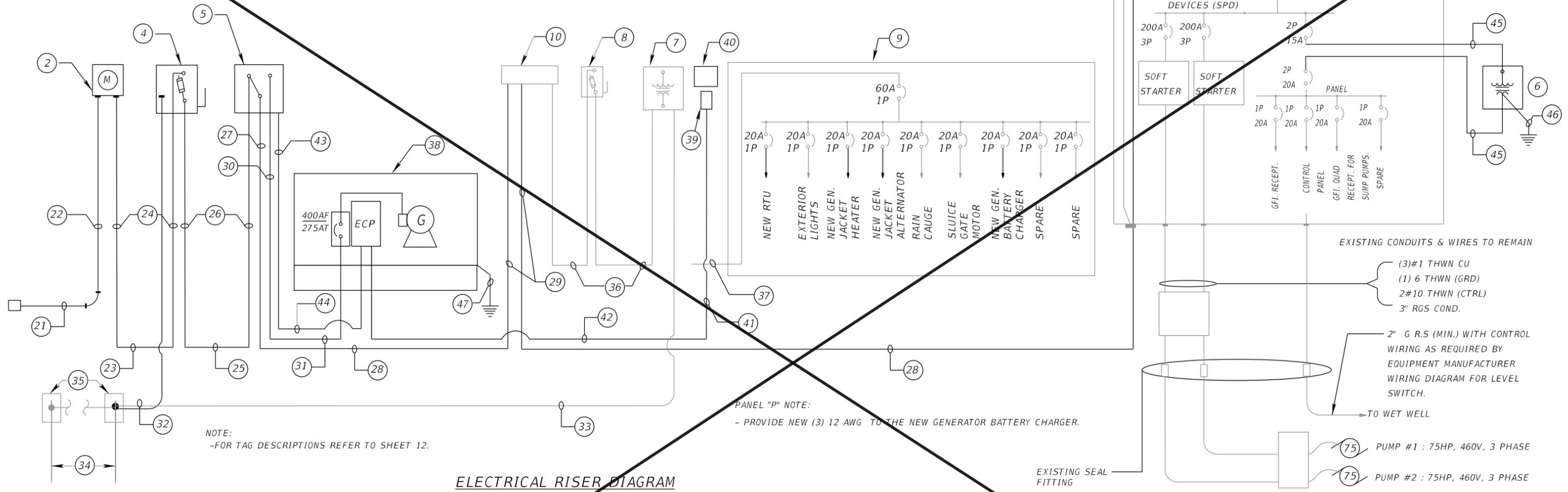
MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT
 HIGHWAY DIVISION
 STEPHEN P. CLARK CENTER
 111 NW 1 ST
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ELECTRICAL EQUIPMENT AND COND. PLAN

SHEET NO. 11

LEGEND

— DENOTES EXISTING TO REMAIN
 — DENOTES NEW OR RELOCATED



NOTE:
 -FOR TAG DESCRIPTIONS REFER TO SHEET 12.

PANEL "P" NOTE:
 - PROVIDE NEW (3) 12 AWG TO THE NEW GENERATOR BATTERY CHARGER.

OPERATION OF PUMPS WATER LEVEL CONTROLS

	ON	OFF
# 5 START ALARM PUMP	4.50 FT	
# 4 START LAG PUMP	2.80 FT	
# 3 START LEAD PUMP	2.60 FT	
# 2 STOP LAD PUMP		-4.00 FT
# 1 STOP LEAD PUMP		-4.40 FT

THE OPERATION IS CONTROLLED BY THE FLOAT SWITCH LEVEL.

- A) SEQUENCE OF OPERATION
- 1.- WATER REACHES LEVEL #3 - START LEAD PUMP. LEAD PUMP WILL WORK FOR 4 MINUTES (AVERAGE CYCLE).
 - 2.- WATER REACHES LEVEL #4 - START LAG PUMP. LAG PUMP WILL WORK FOR 4 MINUTES CYCLE (AVERAGE CYCLE).
- B) PUMPS SHUT-OFF OCCUR AS FOLLOWS:
- 1.- WATER LEVEL REACHES FLOAT SWITCH LEVEL #2 LAG PUMP SHUT OFF.
 - 2.- WATER LEVEL REACHES FLOAT SWITCH LEVEL #1 LEAD PUMP SHUT OFF.

NOTES:

- 1.- VERIFY EXACT LOCATION OF THE SERVICE POINT.
- 2.- CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL EQUIPMENT TO REPLACE.
- 3.- FOR TAG DESCRIPTION REFER TO RISER DIAGRAM AND EQUIPMENT ELEVATION - REFERENCE NOTES ON SHEET 11.
- 4.- FOR MOUNTING DETAIL OF ELECTRICAL EQUIPMENT REFER TO SHEET 11

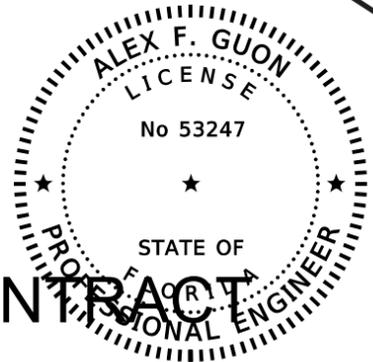
CONDUIT THROUGH CHAMBER WALL TO 6"X6"X4" JUNCTION BOX NEMA 4X. SEAL WATERTIGHT AROUND CHAMBER PENETRATION

MOUNTING BRACKET WITH WIRE GROMMETS. MOUNT ON CHAMBER SIDEWALL, (STAINLESS STEEL BRACKET AND HARDWARE)

- #5 START ALARM PUMP
- #4 START LAG PUMP
- #3 START LEAD PUMP

STILL WELLS
 12" PVC SLOTTED PIPES

- #2 STOP LAG PUMP
- #1 STOP LEAD PUMP



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 MIC PS Repair SS 12.pdf
 Date Time Stamp Trade Stamp Name

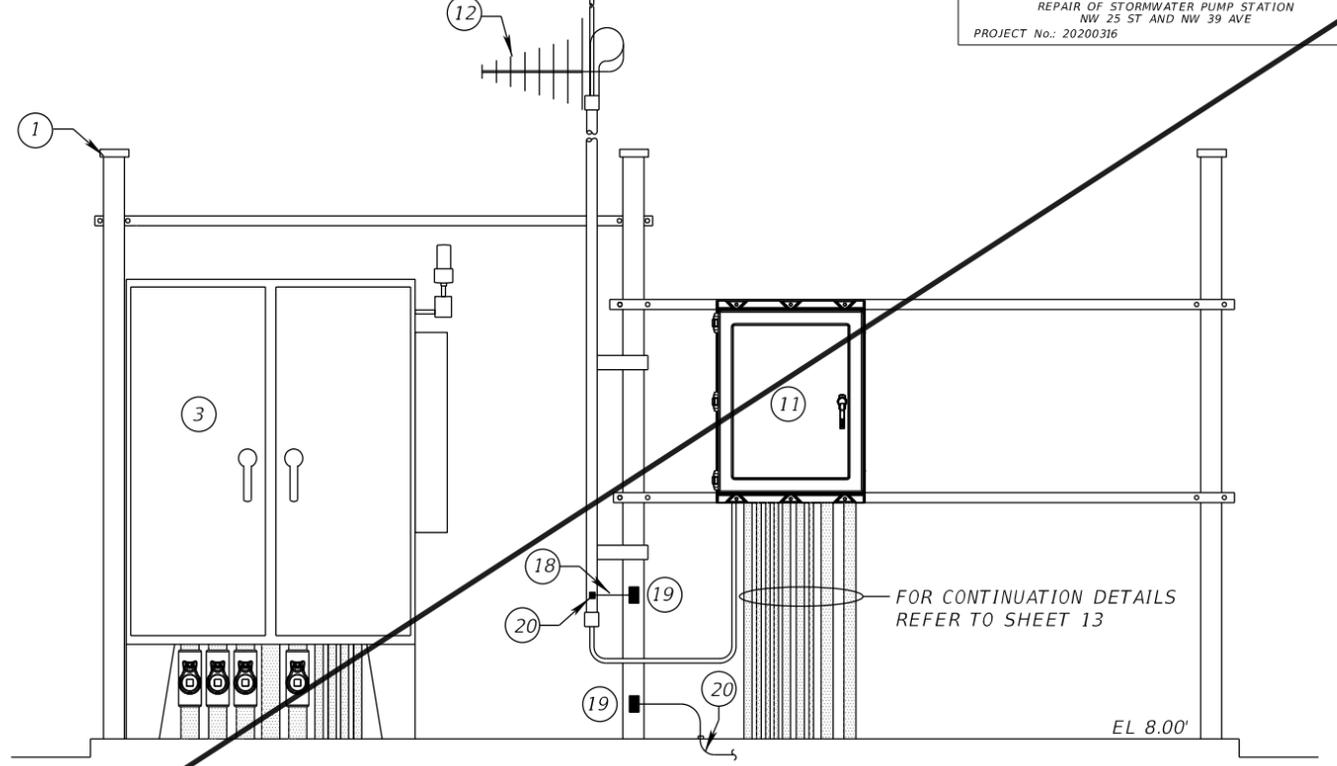
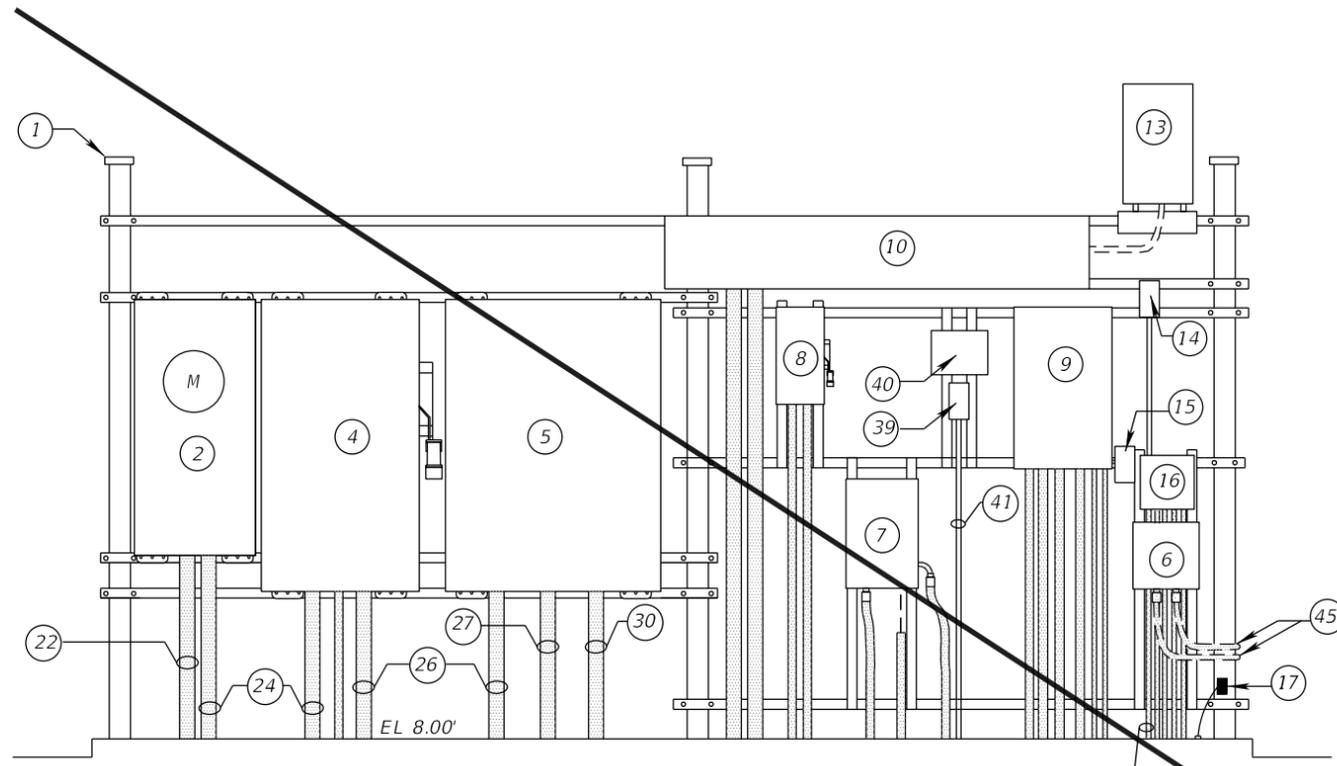
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2	2/19/2021	8:47:09 AM	Default				

DESIGNED BY	LMS	DATE	02/09/2021	DRAWN BY	ER	DATE	02/10/2021
CHECKED BY	AFG	DATE	02/12/2021	CHECKED BY	AFG	DATE	02/12/2021
SUPERVISED BY							

MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT HIGHWAY DIVISION	STEPHEN P. CLARK CENTER 111 NW 1 ST MIAMI, FLORIDA 33138
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ELECTRICAL RISER DIAGRAM

SHEET NO. 12



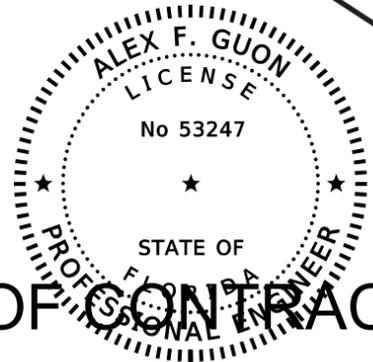
BACK VIEW (EAST SIDE)
N.T.S.

FROM VIEW MOUNTING DETAIL (WEST SIDE)

NOTE:
PCP AND ELECTRICAL EQUIPMENT BOTTOMS TO BE MOUNTED 1 FOOT ABOVE FLOOD ELEVATION

ELECTRICAL RISER DIAGRAM AND EQUIPMENT ELEVATION - REFERENCE NOTES

- ① NEW STAINLESS STEEL FRAME TO ACCOMMODATE THE METER CAN, AND THE CONTROL PANEL. DIMENSIONS TO BE DETERMINED ACCORDING TO EQUIPMENT.
- ② NEW 400A, 480V, 3 PHASE, 4 WIRE KILOWATT-HOUR METER IN NEMA 4X ENCLOSURE. MANUFACTURER AND TYPE TO BE ACCEPTABLE FOR POWER CO. (METER HOUSING).
- ③ 60"x48"x16" CONTROL PANEL IN NEMA 4X ENCLOSURE, TO REMAIN INCLUDING DEVICES, MOUNTING HARDWARE, CONDUITS, COND SEALS, FLOAT SWITCHES AND ALL FEATURES SHOWN ON DRAWINGS.
- ④ NEW 400 AMP., 3P, 600V HEAVY DUTY. NEMA 4X SAFETY DISCONNECT SWITCH WITH (3) 250 AMP. RK-1 FUSES FOR 42KA MIN.
- ⑤ ASCO SERIE 300SE, XXX AMP AUTOMATIC SERVICE ENTRANCE POWER TRANSFER SWITCH, 3 POLE, SOLID NEUTRAL, 480 VOLTS A.C. IN NEMA 4X 316SS ENCLOSURE, PROVIDE REQUIRED POWER AND MONITORING CONTROL MODULES COMPATIBLE WITH EMERSON RTU.
- ⑥ RELOCATED SQUARE "D" CLASS 7400 SEALED STAINLESS STEEL ENCLOSED 5KVA DRY TYPE TRANSFORMER, 480V PRIMARY, 120/240V SECONDARY.
- ⑦ EXISTING SQUARE "D" CLASS 7400 SEALED STAINLESS STEEL ENCLOSED 10KVA TRANSFORMER, 480V PRIMARY 120/240V SECONDARY TO REMAIN.
- ⑧ EXISTING 30 AMP., 2P, 600V HEAVY DUTY. NEMA 4X SAFETY DISCONNECT SWITCH WITH (2) 30A RK-1 FUSES TO REMAIN.
- ⑨ EXISTING PANEL P. TO REMAIN. FOR MAIN AND BRANCH CIRCUIT REVISIONS.
- ⑩ EXISTING 12"x 12"x 72" NEMA 3R AUXILIARY GUTTER TO REMAIN.
- ⑪ NEW 36"x30"x13.25" SCADA RTU ENCLOSURE PROVIDED AND INSTALLED BY EMERSON
- ⑫ EXISTING SCADA ANTENA TO REMAIN
- ⑬ EXISTING RAIN SENSOR TO REMAIN
- ⑭ EXISTING PHOTOCELL CONTROL FOR EXTERIOR LIGHT OF PUMP STATION SITE TO REMAIN.
- ⑮ EXISTING RECEPTACLE IN NEMA 3R ENCLOSURE TO REMAIN
- ⑯ EXISTING LIGHTING CONTACTOR IN NEMA 3R ENCLOSURE TO REMAIN
- ⑰ EXISTING CADWELD CONNECTION TO THE STAINLESS STEEL FRAME TO REMAIN.
- ⑱ NEW BONDING CONNECTION BETWEEN ANTENNA MAST AND THE STAINLESS STEEL FRAME.
- ⑲ NEW CADWELD CONNECTION TO THE STAINLESS STEEL FRAME.
- ⑳ NEW CADWELD CONNECTION TO THE ANTENNA MAST
- ㉑ NEW (4) 250 KCM THHW CU IN EXISTING 3" CONDUIT FROM FPL PAD-MOUNTED TRANSFORMER TO THE METER FOR SERVICE FEEDER.
- ㉒ NEW (4) 250 KCM THHW CU IN NEW 3" EXPOSED RGS CONDUIT FOR SERVICE FEEDER.
- ㉓ NEW (4) 250 KCM THHW CU FROM METER TO THE MAIN DISCONNECT SWITCH IN EXISTING 3" CONDUIT BELOW CONCRETE SLAB.
- ㉔ NEW (4) 250 KCM THHW CU FROM METER TO THE MAIN DISCONNECT SWITCH IN NEW 3" EXPOSED CONDUIT.
- ㉕ NEW (4) 250 KCM +(1) 4/0 AWG (G) FROM MAIN DISCONNECT SWITCH TO THE ATS IN EXISTING 3" CONDUIT BELOW CONCRETE SLAB.
- ㉖ NEW (4) 250 KCM +(1) 4/0 AWG (G) FROM MAIN DISCONNECT SWITCH TO THE ATS IN NEW 3" EXPOSED CONDUIT.
- ㉗ NEW (4) 250 KCM +(1) 4/0 AWG (G) FROM ATS TO THE EXISTING PUMP CONTROL PANEL THROUGH THE ELECTRICAL GUTTER IN NEW 3" EXPOSED CONDUIT.
- ㉘ NEW (4) 250 KCM +(1) 4/0 AWG (G) FROM ATS TO THE EXISTING PUMP CONTROL PANEL THROUGH THE ELECTRICAL GUTTER IN EXISTING 3" CONDUIT BELOW CONCRETE SLAB.
- ㉙ NEW (4) 250 KCM +(1) 4/0 AWG (G) FROM ATS TO THE EXISTING PUMP CONTROL PANEL THROUGH THE ELECTRICAL GUTTER IN EXISTING 3" CONDUIT EXPOSED CONDUIT.
- ㉚ NEW (4) 250 KCM FROM METER TO THE NEW EMERGENCY GENERATOR IN NEW 3" EXPOSED CONDUIT.
- ㉛ NEW (4) 250 KCM FROM ATS TO THE NEW EMERGENCY GENERATOR IN NEW 3" CONDUIT BELOW CONCRETE SLAB.
- ㉜ EXISTING (1)#2 AWG THHW CU (G) IN 3/4" RGS COND.
- ㉝ EXISTING (1)#6 AWG THHW CU (G) IN 3/4" RGS COND.
- ㉞ EXISTING 5#8" DIAM. x 20' LONG COPPER CLAP STEEL GROUND ROD TO REMAIN.



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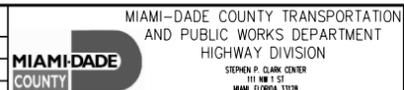
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ALEX F. GUON, PE
 PE LICENSE No. 53247
 ASP CONSULTING TRANSPORTATION ENGINEERS CORP.
 8935 N.W. 35TH LANE, SUITE 200
 DORAL, FL 33172
 CERTIFICATE OF AUTHORIZATION EB-0007797

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CHECKED BY	AFG	02/12/2021	CHECKED BY	AFG	02/12/2021



MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT HIGHWAY DIVISION
 STEPHEN P. CLARK CENTER
 111 NW 1 ST
 MIAMI, FLORIDA 33138

ELECTRICAL EQUIPMENT MOUNTING DETAIL
 SHEET NO. 13

SERVICE LOAD CALCULATION	
LOAD DESCRIPTION	VA
2-75 HP WELL PUMPS	159552
5 KVA TRANSFORMER	5000
10 KVA TRANS FORMER	7415
25% LARGEST MOTOR	19944
TOTAL	191911

SERVICE VOLTAGE: 480Y/277V, 3Ø, 4W = 231.0 AMPS

REFERENCE NOTES (CONTINUATION)

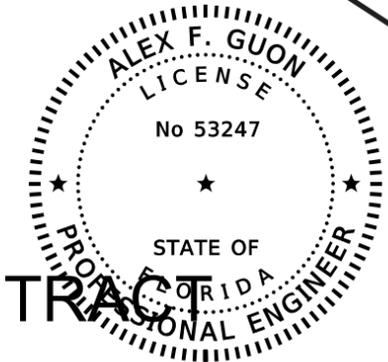
- 35 EXISTING GROUNDING INSPECTION HOUSE WITH COVER MARKED "GROUND" TO REMAIN.
- 36 EXISTING 2#6 & 1#8 (G) IN 1" C.
- 37 EXISTING 3#6 THHW & 1#8 CU (G) IN 1" C
- 38 NEW 250KW EMERGENCY STANDBY GENERATOR FROM CUMMINS MANUFACTURER "NOT A SEPARATELY DERIVED SYSTEM". OUTPUT VOLTAGE 480Y/277V, 3Ø, 4W, LEVEL 1, TYPE 10 IN A WEATHERPROOF AND IMPACT RATED ENCLOSURE CALCULATED FOR 186 MPH WIND LOAD AND LEVEL 1 SOUND ATTENUATION FOAM WITH SILENCER MOUNTED ABOVE A 500 GALLON SUB-BASE FUEL TANK. FUEL TANK CAPACITY SHALL COMPLY WITH A MINIMUM OF 24 HOUR CONTINUOUSLY GENERATOR OPERATION AT FULL LOAD (CLASS 25.5).
- 39 NEW STAND-BY EMERGENCY GENERATOR E-STOP IN A NEMA 4X ENCLOSURE
- 40 E-STOP LABEL
- 41 NEW (2)12 AWG IN 3/4" NEW EXPOSED CONDUIT
- 42 NEW (2)12 AWG IN 3/4" NEW CONDUIT BELOW CONCRETE SLAB
- 43 NEW (4)12 AWG IN 3/4" NEW EXPOSED CONDUIT
- 44 NEW (4)12 AWG IN 3/4" NEW CONDUIT BELOW CONCRETE SLAB
- 45 NEW (3)12 AWG IN 3/4" LIQUIDTIGHT FLEXIBLE CONDUIT
- 46 NEW(1)8 AWG THHW CU (G) IN 3/4" RGS COND. CONNECT AT NEAR EXISTING GROUNDING BOX.
- 47 NEW(1)1/0 AWG THHW CU (G) IN 3/4" RGS COND.

TYPE: SQ D													
PANEL "P"							MAIN BUS: 125 AMPS						
VOLTAGE: 120/240V., 1Ø, 3W							NEUTRAL: 125 AMPS						
MOUNTING: SURFACE							MAINS: 60 AMP. CIRC. BREAKER						
							LOCATION: CONTROL ROOM						
CIR. NO.	POLES	TRIP	WIRE	COND	VOLT AMPS	DESCRIPTION	CIR. NO.	POLES	TRIP	WIRE	COND	VOLT AMPS	DESCRIPTION
1	2	20	12	3/4	870	SLUICE GATE MOTOR	2	1	20	12	3/4	1200	EXTERIOR LIGHTS
3	—	—	↓	—	870		4				3/4	1500	GEN. JACKET HEATER *
5	1	20	12	3/4	300	GEN. BATTERY CHAR.	6				3/4	300	ALTERNATOR HEATER *
7				—	200	SPARE	8				3/4	600	RTU PANEL TELEMETRY
9				3/4	100	RAIN GAUGE	10				—	—	SPARE
11						SPACE	12						SPACE
13						SPACE	14						SPACE
15						SPACE	16						SPACE
17						SPACE	18						SPACE
19						SPACE	20						SPACE
21						SPACE	22						SPACE
23						SPACE	24						SPACE

CONNECTED LOAD : 2540 VA + 1.25 X 3900 VA
 DEMAND LOAD : 7415 VA = 31.0 AMP.

FEEDER : 3#6 THHN & 1#8 CU (G) IN 1" C
 DEMAND LOAD : FED FROM 2P-60A DISCONNECT SWITCH THRU 10 KVA TRANSFORMER

* INSTALL NEW FEEDERS TO THE NEW 250KW EMERGENCY GENERATOR STUB-UP CONDUIT LOCATION TO FEED THE DEVICES AS INDICATED



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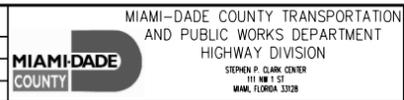
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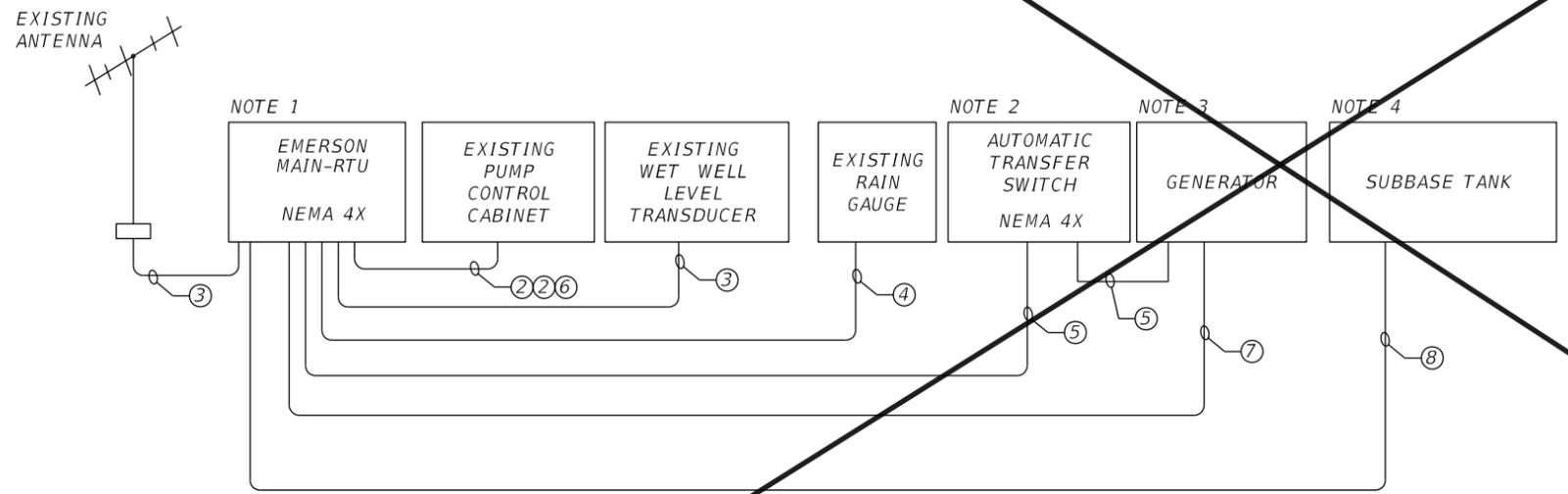
MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT
 HIGHWAY DIVISION
 STEPHEN P. CLARK CENTER
 111 NW 1 ST
 MIAMI, FLORIDA 33128

LOAD CALCULATION AND PANEL SCHEDULE

SHEET NO. 14

NOTES :

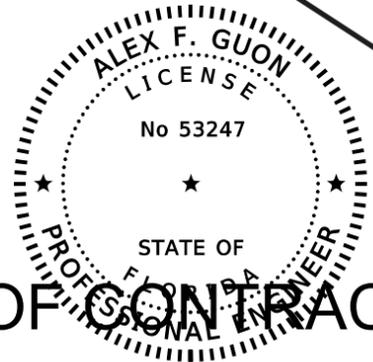
- ① MAIN RTU ENCLOSURE, NEMA 4X, STAINLESS STEEL, FURNISHED BY EMERSON PROCESS MANAGEMENT WITH ALL COMPONENTS AND BILL OF MATERIALS TO BE DETERMINED BY MIAMI-DADE PUBLIC WORKS DEPARTMENT AND EMERSON PROCESS MANAGEMENT. IT SHALL BE THE SYSTEM INTEGRATOR, EMERSON PROCESS MANAGEMENT, TO ENSURE THAT ALL COMPONENTS OF THE SYSTEM ARE INCLUDED AND ALL THE INFORMATION REQUIRED BY THE ELECTRICAL CONTRACTOR IS DELIVERED ON A TIMELY BASIS FOR A SUCCESSFUL INSTALLATION.
- ② 400 AMP AUTOMATIC TRANSFER SWITCH, 3 POLE, SOLID NEUTRAL, 480V VOLTS A.C. IN NEMA 3R ENCLOSURE.
- ③ EMERGENCY STANDBY GENERATOR IN WEATHERPROOF ENCLOSURE.
- ④ SUBBASE TANK WITH FUEL LEVEL TRANSMITTER.
- ⑤ IT SHALL BE THE SYSTEM INTEGRATORS RESPONSIBILITY TO PROVIDE INFORMATION TO CONTRACTOR ABOUT ANY AND ALL CABLES, CONDUCTORS, WIRING, TERMINATIONS, LABELING AND ALL OTHE REQUIREMENTS TO PROVIDE CONNECTIVITY BETWEEN ALL THE PUMP STATION COMPONENTS THAT PROVIDE INPUTS TO THEIR MAIN RTU CABINET AND COMPONENTS. CONTRACTOR SHALL SIZE ALL CONDUITS WITH AMPLE CROSS-SECTION TO PREVENT DAMAGE TO CABLES, CONDUCTORS, WIRING THAT WILL BE INSTALLED INSIDE THESE CONDUITS. PROVIDE PULL BOXES AS REQUIRED TO AVOID MORE THAN (2) 90 DEGREE BENDS OR RUNS IN EXCESS OF 100 LINEAR FEET.



CABLE AND CONDUIT SCHEDULE:

- ① EXISTING 1/2" COAXIAL CABLE
- ② 28#14 + 1#14G IN 1" CONDUIT
- ③ LEVEL TRANSDUCER CABLE IN 3/4" CONDUIT
- ④ RAIN SENSOR CABLE IN 3/4" CONDUIT
- ⑤ 4#14 + 1#14G IN 3/4" CONDUIT
- ⑥ 2#16 TPS IN 1" CONDUIT
- ⑦ 10#14 + 1#14G IN 1" CONDUIT
- ⑧ 1#16 TPS IN 1" CONDUIT

**RTU-SCADA BLOCK DIAGRAM
 N.T.S.**



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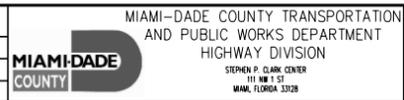
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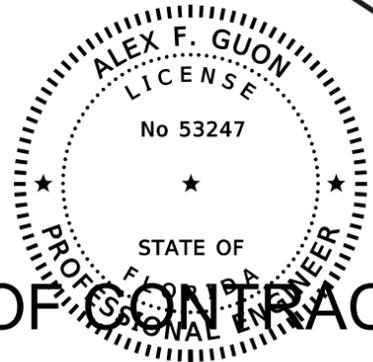
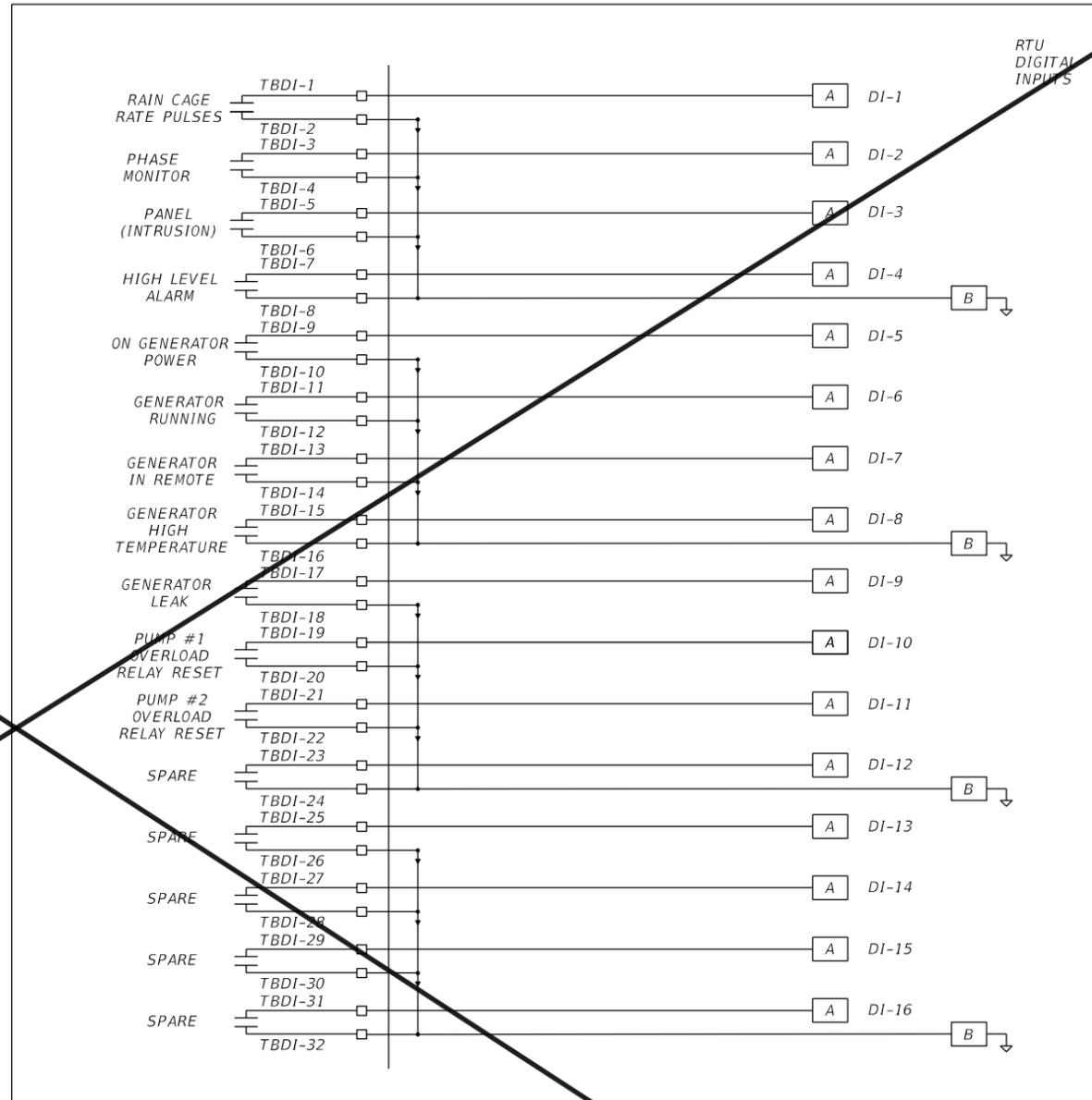
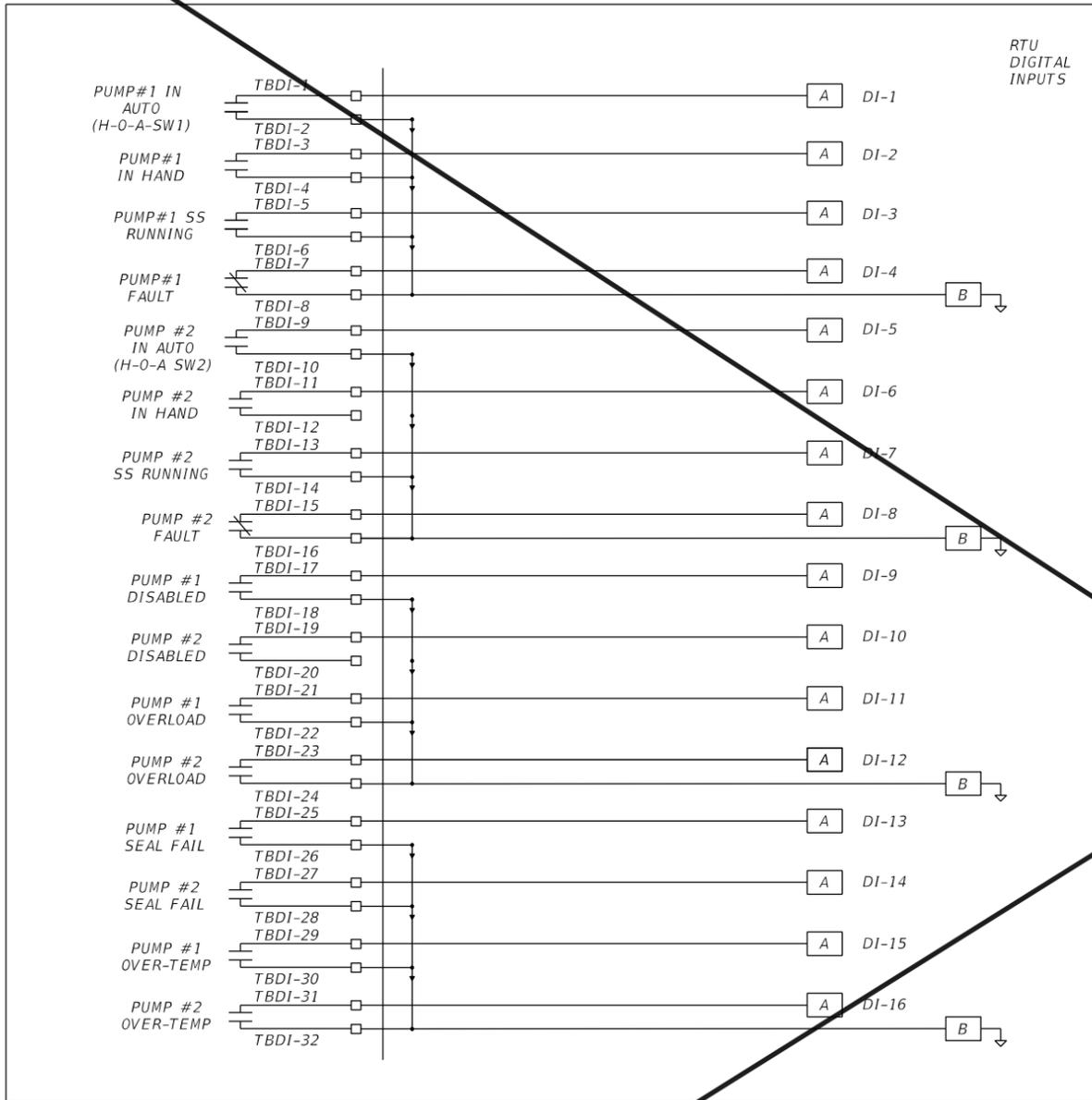
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LMS	LMS	02/09/2021	ER	ER	02/10/2021
CHECKED BY	AFG	02/12/2021	CHECKED BY	AFG	02/12/2021



MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT
 HIGHWAY DIVISION
**RTU SCADA BLOCK
 DIAGRAM AND NOTES**
 SHEET NO. 15



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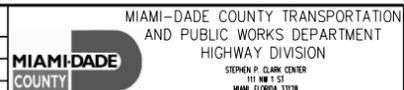
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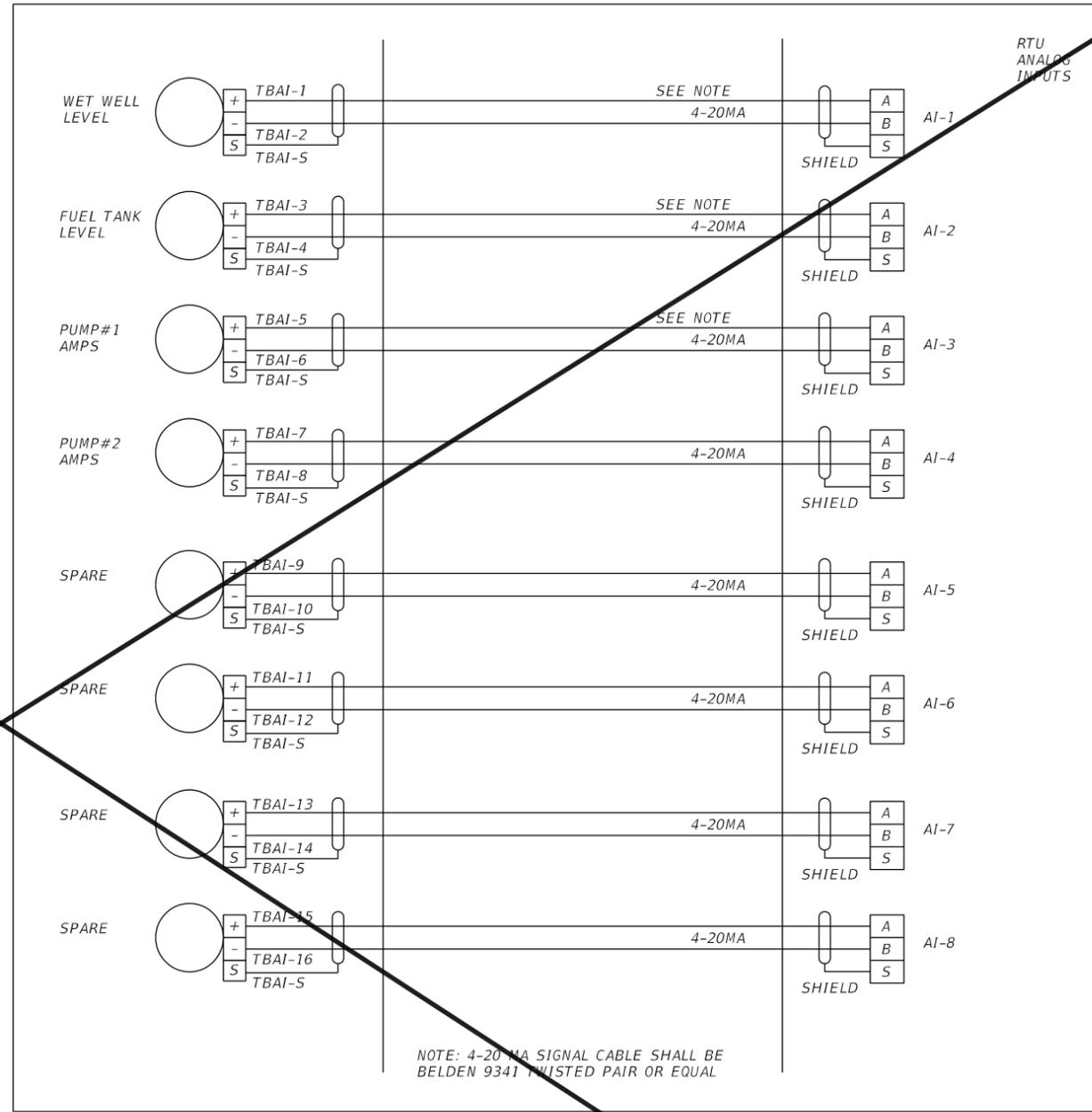
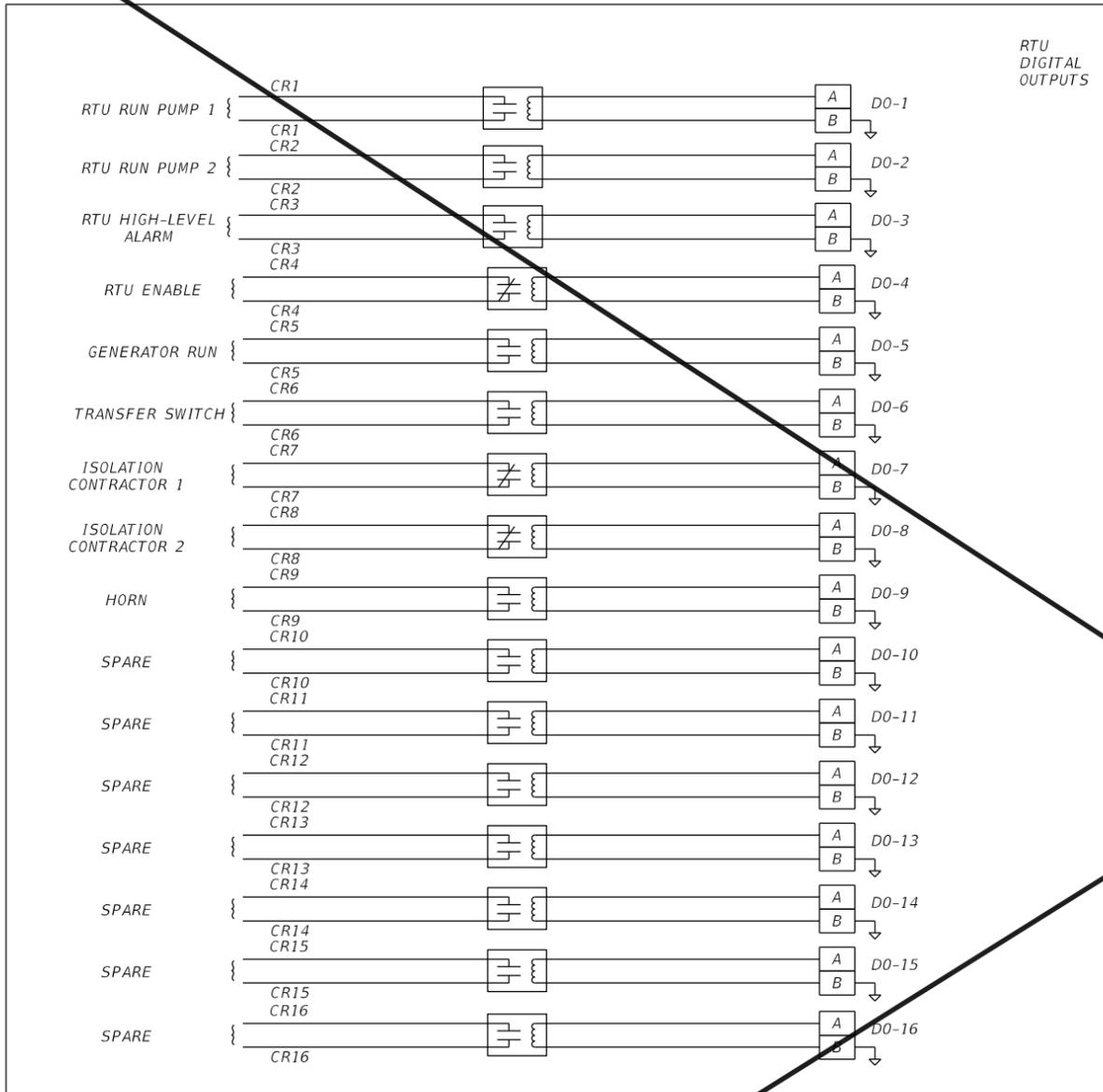
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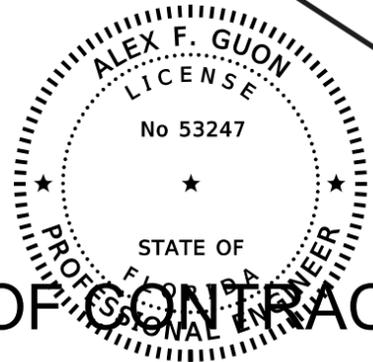
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LMS		02/09/2021	ER		02/10/2021
CHECKED BY	AFG	02/12/2021	CHECKED BY	AFG	02/12/2021





NOTE: 4-20 MA SIGNAL CABLE SHALL BE BELDEN 9341 TWISTED PAIR OR EQUAL

NOTE:
 CONTROL SCHEMATIC INDICATES MINIMUM REQUIREMENTS AND IT SHALL BE REVISED AND SUPPLEMENTED
 BY MANUFACTURER TO PROVIDE ALL NECESSARY FEATURES FOR A COMPLETE PUMP MOTOR SYSTEM.



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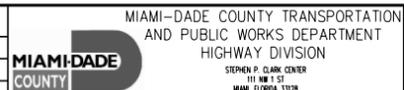
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RTU WIRING DIAGRAM
SHEET 2

SHEET NO.
 17

1.0 BASIC ELECTRICAL REQUIREMENTS

1.1 SCOPE OF WORK

- A. FOR PURPOSE OF LEGIBILITY, DRAWINGS ARE DIAGRAMMATIC AND ALTHOUGH LOCATION OF EQUIPMENT IS SHOWN TO SCALE, THE CONTRACTOR SHALL VERIFY ALL INFORMATION AT THE SITE BEFORE BIDDING THE JOB.
- B. WHEN DRAWINGS, NOTES, SPECIFICATIONS, CODES AND THESE REQUIREMENTS ARE IN CONFLICT, THE MOST STRINGENT CONDITION SHALL APPLY UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- C. THE WORK CONSISTS OF ALL SUPERVISION, LABOR, MATERIALS, EQUIPMENT AND INSTALLATION REQUIRED FOR THE COMPLETE ELECTRICAL SYSTEMS AS SHOWN ON THE DRAWINGS OR CALLED FOR IN THESE REQUIREMENTS.
- D. FURNISH, INSTALL AND MAINTAIN TEMPORARY ELECTRICAL POWER AND LIGHTING REQUIRED FOR ALL TRADES.
- E. CONNECT ELECTRICAL EQUIPMENT FURNISHED BY OTHER TRADES EVEN IF NOT SHOWN ON ELECTRICAL DRAWINGS.

1.2 CODES AND STANDARDS

- A. PERFORM WORK AND FURNISH EQUIPMENT COMPLYING WITH THE FOLLOWING CODES:
 - 1) NATIONAL ELECTRICAL CODE (NEC)
 - 2) NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
 - 3) UNDERWRITERS' LABORATORIES (UL)
 - 4) NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
 - 5) AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
 - 6) INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)
 - 7) FLORIDA BUILDING CODE (FBC)
 - 8) INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
 - 9) FLORIDA FIRE PREVENTION CODE 101:9.1.2 (6TH EDITION)

1.3 SHOP DRAWINGS

- A. WITHIN 30 DAYS AFTER THE DATE OF THE AWARD OF THE CONTRACT AND BEFORE ANY MATERIAL OR EQUIPMENT IS PURCHASED, SUBMIT THE ENGINEER FOR APPROVAL, A COMPLETE LIST IN QUINTUPLICATION OF ELECTRICAL MATERIALS, AND EQUIPMENT TO BE INCORPORATED IN THE WORK. INCLUDE CATALOG NUMBER, DIMENSIONS, INTERCONNECTION DIAGRAMS AND INSTALLATION INSTRUCTIONS.

1.4 OPERATION AND MAINTENANCE MANUALS

- A. O & M MAINTENANCE MANUALS MUST CONTAIN BUT ARE NOT LIMITED TO THE FOLLOWING:
 - 1) SYSTEM DESCRIPTION, AND OPERATING AND MAINTENANCE INSTRUCTIONS.
 - 2) MANUFACTURER'S NAME AND MODEL NUMBER OF ALL COMPONENTS.
 - 3) CONTROL AND WIRING DIAGRAMS WITH SEQUENCE OF OPERATION.
 - 4) LIST OF RECOMMENDED SPARE PARTS.

1.5 AS BUILT DRAWINGS

- A. AFTER FINAL INSPECTION, FURNISH A SET OF REPRODUCIBLE "AS BUILT DRAWINGS" SHOWING DEPTHS AND ROUTING OF CONCEALED ELECTRICAL BELOW GRADE INSTALLATIONS AND ALL VARIATIONS BETWEEN THE ACTUAL WORK AND AS IT WAS SHOWN ON THE CONTRACT DRAWINGS.

AN ELECTRONIC FILE OF ALL AS-BUILT DRAWINGS SHALL ALSO BE PROVIDED

1.6 MATERIALS

- A. FURNISH EQUIPMENT AND MATERIALS THAT ARE NEW AND LATEST DESIGN OF STANDARD PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH EQUIPMENT.
- B. ALL MATERIALS SHALL BEAR THE LABEL OF UNDERWRITER'S LABORATORY FOR THE INTENDED USE.
- C. EQUIPMENT ENCLOSURES SHALL BE NEMA 4X (316 STAINLESS STEEL) OR 3R
- D. FURNISH LIGHTING FIXTURES WITH LAMPS AND 10 PERCENT (TWO MINIMUM) SPARE LAMPS OF EACH TYPE.
- E. FURNISH FUSIBLE EQUIPMENT WITH FUSES AND 10 PERCENT (THREE MINIMUM) OF SPARE FUSES OF EACH TYPE.

1.7 INSTALLATION

- A. INSTALL EQUIPMENT AT THE LOCATIONS SHOWN ON THE DRAWINGS FOLLOWING THE MANUFACTURER'S RECOMMENDATIONS.
- B. COORDINATE INSTALLATION OF UNDERGROUND DUCTS AND CONDUITS WITH EXISTING UNDERGROUND UTILITIES. FIELD VERIFY ROUTING AND BURIAL DEPTH. DRAIN DUCTS AWAY FROM BUILDINGS TOWARD MANHOLES. LOW POINTS IN DUCT BANK RUNS ARE NOT ACCEPTABLE.
- C. INSTALL FLOOR MOUNTED SELF SUPPORTED EQUIPMENT ON 4-INCHES HIGH CONCRETE PADS WITH STEEL REINFORCING. USE REQUIRED BOLTS, ANCHORS, INSERTS AND CONDUIT SLEEVES, OR AS SHOWN ON STRUCTURAL DRAWINGS.
- D. MAKE OPENINGS THROUGH WALLS, CEILINGS, ROADWAYS, FLOOR SLABS, ETC. REQUIRED FOR THE INSTALLATION OF ELECTRICAL EQUIPMENT, BUT CUTTING, WELDING, OR OTHER WEAKENING OF BUILDING STRUCTURE TO SIMPLIFY ELECTRICAL EQUIPMENT AND MATERIALS' INSTALLATION ARE NOT PERMITTED. WHERE EXISTING WALLS, CEILINGS OR FLOOR SLABS ARE TO BE CUT, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER BEFORE MAKING SUCH CUTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE WHILE PROVIDING SUCH OPENINGS AND SHALL PATCH THE SURFACE TO MATCH ADJACENT MATERIALS AND FINISHES.
- E. CONDUITS, SLEEVES, PIPES OR ANY OTHER ITEM SHALL BE EMBEDDED IN CONCRETE ALONG OR THROUGH ANY BEAM, COLUMN, FOOTING, GRADE BEAM, SLAB, WALL OR ANY OTHER STRUCTURAL MEMBER WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

1.8 TESTING

- A. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL ENERGIZE, START-UP AND TEST OPERATE ALL THE SYSTEMS AND EQUIPMENT IN THE PRESENCE OF THE ENGINEER. INSULATION RESISTANCE TESTS SHALL BE MADE ON EACH 480 AND 240 VOLT FEEDER WITH A 500 VOLT DC MEGGER. DEFECTS FOUND SHALL BE CORRECTED.

2.0 RACEWAYS

2.1 RIGID CONDUIT

- A. STEEL: HOT DIPPED ZINC COATED, GALVANIZED, THREADED RIGID STEEL CONFORMING TO ANSI C80, AND FED. SPEC WW-C-581. USE THREADED GALVANIZED STEEL FITTINGS.
- B. ALUMINUM: CONTAINING LESS THAN 0.1 PERCENT COPPER AND CONFORMING TO FEDERAL SPECIFICATION WW-C-540C. USE THREADED ALUMINUM FITTINGS.

- C. PLASTIC: RIGID, SCHEDULE 40, 90 DEGREES C., UL RATED, PVC PLASTIC CONFORMING TO UL 651, FED. SPEC. W-C-1094 AND NEMA TC-2. FITTINGS TO CONFORM WITH UL3 514 AND NEMA TC-3.

2.2 FLEXIBLE METAL CONDUIT

LIQUID-TIGHT: FLEXIBLE ZINC COATED CONFORMING TO UL 1 TYPE WITH LIQUID-TIGHT FLEXIBLE PLASTIC SHEATH, CONFORMING TO UL 360 STANDARD. SUNLIGHT RATED WHEN USE OUTDOORS. FITTINGS, PER FED. SPEC. W-R-406B AND UL 514.

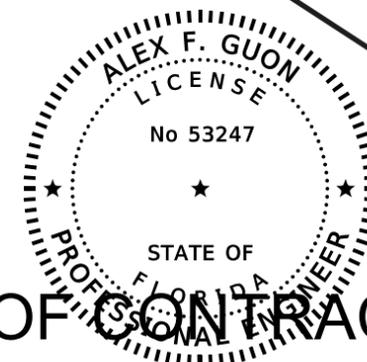
2.3 LOCATION AND USE OF EACH TYPE OF CONDUIT

- A. USE RIGID ALUMINUM CONDUIT FOR ABOVE GROUND EXPOSED INSTALLATIONS EXCEPT IN CORROSIVE AREAS WHERE PVC COATED RIGID GALVANIZED STEEL SHALL BE USED.
- B. USE GALVANIZED THREADED RIGID STEEL CONDUIT AS FOLLOWS:
 - 1) WHEREVER SPECIFICALLY CALLED FOR ON DRAWINGS.
 - 2) WHERE RACEWAY ELBOWS FROM DUCT BANKS STUB-UP.
 - 3) FOR UNDERGROUND WORK BEYOND BUILDINGS WHERE CONCRETE ENCASED PLASTIC CONDUITS HAVE NOT BEEN SPECIFIED. COAT BURIED GALVANIZED STEEL CONDUITS AND FITTINGS WITH TWO COATS OF CARBOLINE'S BITUMASTIC NO. 50 OR EQUAL.
- C. USE PLASTIC CONDUIT AS FOLLOWS:
 - 1) WHEN INSTALLED IN POURED CONCRETE SLABS OR WALLS.
 - 2) FOR UNDERGROUND WORK UNDER SLABS.
 - 3) IN DUCT BANKS OR, IF SPECIFICALLY CALLED FOR, IN TRENCHES. BACK-FILL TRENCHES WITH STRUCTURAL FILL 90 % COMPACTED (PROCTOR DENSITY) AND RESOD TO ORIGINAL CONDITION.
- D. USE FLEXIBLE METAL CONDUIT (24 TO 60 INCHES LONG) FOR CONNECTIONS TO ROTATING OR VIBRATING EQUIPMENT.

2.4 INSTALLATION

- A. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL BENDS, FITTINGS, BOXES, AND SPECIALTIES WHICH MAY BE REQUIRED OR THE EXACT LOCATION OF CONDUITS. EXAMINE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING ALL OF THE WORK AND PLAN IT ACCORDINGLY, FURNISHING SUCH FITTINGS AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. ARRANGE CONDUIT RUNS TO CLEAR BEAMS, PIPES AND OTHER OBSTRUCTIONS AND AVOID INTERFERENCES WITH OTHER TRADES WORK. ANY CHANGES FROM LOCATIONS SHOWN ON THE DRAWINGS MUST BE APPROVED BY THE ENGINEER.

INSTALLATION OF GENERATOR SHALL BE IN ACCORDANCE WITH NFPA 110.



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Examiner	Date Time Stamp	Trade Stamp Name	REVISIONS	DATE	BY	DESCRIPTION
PETERS, RONALD	2/25/2021 10:26:56 AM	ELEC Approved				
AQUIT, SUYIN	3/1/2021 4:22:21 PM	FIRE Approved As Noted				

ALEX F. GUON, PE
 PE LICENSE No. 53247
 ASP CONSULTING TRANSPORTATION ENGINEERS CORP.
 8935 N.W. 35TH LANE, SUITE 200
 DORAL, FL 33172
 CERTIFICATE OF AUTHORIZATION EB-0007797

DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
	LMS	02/09/2021		ER	02/10/2021
CHECKED BY	AFG	02/12/2021	CHECKED BY	AFG	02/12/2021

MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT
 HIGHWAY DIVISION
 STEPHEN P. CLARK CENTER
 111 NW 1 ST
 MIAMI, FLORIDA 33128

- B. INSTALL RACEWAYS PARALLEL OR PERPENDICULAR TO WALLS, STRUCTURAL MEMBERS, OR INTERSECTIONS OF VERTICAL PLANES AND CEILINGS. INSTALL HORIZONTAL RACEWAYS CLOSE TO CEILING OR CEILING BEAMS, AND ABOVE PIPES AND DUCTS.
- C. SIZE RACEWAY ACCORDING TO NEC, BUT IN NO CASE SHALL BE LESS THAN INDICATED ON DRAWINGS. MINIMUM SIZE SHALL BE 3/4-INCH.
- D. INSTALL CONDUITS PASSING THROUGH WALLS AND SLABS IN PVC SLEEVES. EXTEND SLEEVES THROUGH FULL CONCRETE THICKNESS AND PROVIDE 1/2- INCH CLEARANCE AROUND CONDUITS TO FACILITATE SEALING.
- E. SEAL ANY OPENING MADE IN SLABS OR WALLS TO PREVENT SMOKE OR FIRE SPREAD AND THE PASSAGE OF WATER. USE SEALING COMPOUND APPROVED FOR THE PURPOSE.
- F. USE EXPANSION FITTINGS WHEN CONDUITS CROSS STRUCTURAL EXPANSION JOINTS.
- G. EXCEPT WHERE BOXES, PANELS AND OTHER EQUIPMENT HAVE THREADED OPENINGS, MAKE CONDUIT CONNECTIONS AS FOLLOWS:
 - 1) DOUBLE LOCKNUTS, ONE INSIDE AND ONE OUTSIDE.
 - 2) PROVIDE MALLEABLE, IRON OR STEEL BUSHING WITH BAKELITE LINER MOLDED AND BONDED INTO THE BUSHING.
 - 3) PLACE GROUNDING BUSHING ON END OF CONDUIT IN ADDITION TO LOCKNUTS.

2.5 SUPPORT OF RACEWAY

- A. INSTALL WALL MOUNTED ELECTRICAL EQUIPMENT, WIRING TROUGH, JUNCTION BOXES AND GROUPS OF TWO OR MORE CONDUITS ON A SYSTEM OF EXTRUDED, GAUGE 12, 1-5/8 INCHES WIDE, ALUMINUM CHANNELS. ATTACH CHANNELS TO WALL WITH STAINLESS STEEL MACHINE BOLTS AND EXPANSION SHIELDS. CHANNELS TO BE SERIES P-1000 WITH COMPATIBLE HARDWARE AND FITTINGS AS MANUFACTURED BY UNISTRUT MFG. CO. OR EQUAL.
- B. FASTEN VERTICAL AND HORIZONTAL RUNS OF RACEWAYS AT INTERVALS OF NOT MORE THAN EIGHT FEET AND WITHIN 3 FEET OF BENDS, OUTLETS AND JUNCTION BOXES.
- C. SUPPORT SINGLE CONDUITS NOT LARGER THAN 1-1/2 INCHES IN DIAMETER BY MEANS OF TWO-HOLE PIPE STRAPS OR INDIVIDUAL PIPE HANGERS. FOR CONDUITS LARGER THAN 1-1/2 INCHES IN DIAMETER USE INDIVIDUAL PIPE HANGERS.
- D. SPACE CONDUITS INSTALLED AGAINST CONCRETE SURFACES NOT LESS THAN 1/4 INCH AWAY FROM THE SURFACES BY CLAMP BACKS OR OTHER APPROVED MEANS.
- E. FURNISH HANGER RODS MADE OF GALVANIZED STEEL OF NOT LESS THAN 1/4 INCH IN DIAMETER. WHEN CONCEALED ABOVE A SUSPENDED CEILING, GALVANIZED PERFORATED STEEL STRAPPING IS ACCEPTABLE 3.0 CONDUCTORS (600 VOLTS).

3.1 MATERIAL

- A. FURNISH CONDUCTORS OF 98% ANNEALED COPPER, 600 VOLT CLASS B, HEAT AND MOISTURE RESISTANT, THERMOPLASTIC TYPE THHN/THHW (SIZED BY THW RATING), WITH A POLYVINYL CHLORIDE INSULATION STANDARD 83.
- B. CONDUCTORS TO BE STRANDED; #8 THROUGH #2 SHALL BE 7 STRAND; #1 THROUGH 4/0, 19 STRAND AND 250 MCM THROUGH 500 MCM, 37 STRAND.

3.2 IDENTIFICATION

- A. COLOR CODE POWER CONDUCTORS AS FOLLOWS:
 - 1) 120/240 VOLT SYSTEM: WHITE-NEUTRAL, BLACK-PHASE A, BLUE-PHASE B, RED-PHASE C.
 - 2) 277/480 VOLT SYSTEM: GRAY-NEUTRAL, YELLOW-PHASE A, BROWN-PHASE B, ORANGE-PHASE C.
 - 3) BONDING CONDUCTOR GREEN.
- B. IDENTIFY FEEDERS, BRANCH CIRCUITS AND INSTRUMENTATION AND CONTROL WIRES AT TERMINATIONS, JUNCTION AND PULL BOXES.

3.3 INSTALLATION

- A. DO NOT USE CONDUCTORS SMALLER THAN AWG #12 FOR POWER AND #14 FOR CONTROL.
- B. DO NOT PULL CONDUCTORS INTO CONDUITS UNTIL THE MECHANICAL WORK HAS BEEN COMPLETED.
- C. GROUP AND LOOSELY TIE CONDUCTORS IN PANEL BOARDS, JUNCTION BOXES, PULL BOXES, ETC., FOR A NEAT AND ORDERLY APPEARANCE.
- D. USE CONNECTORS, TERMINALS AND SPLICES THAT ARE DESIGNED AND APPROVED FOR THE SPECIFIC TYPE AND SIZE OF THE CONDUCTORS BEING CONNECTED.
- E. FIREPROOF FEEDERS WHERE NOT PROTECTED BY CONDUITS LIKE IN MANHOLES, SWITCH GEARS, ETC.

4.0 OUTLET, PULL AND JUNCTION BOXES

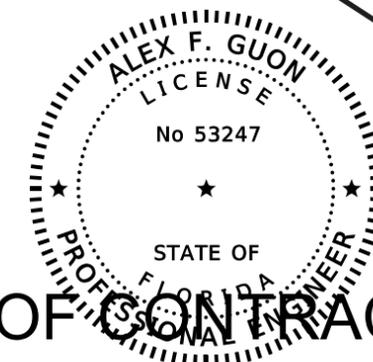
- A. EXTERIOR OUTLET BOXES, BOXES AND FITTINGS EMBEDDED IN CONCRETE, AND BOXES FOR EXPOSED CONDUIT RUNS SHALL BE CAST OF RUST RESISTING METAL, WITH FULL THREADED HUBS, AND SCREW TYPE RUBBER GASKET COVERS.
- B. PULL AND JUNCTION BOXES SHALL BE OF 12 GAUGE WELDED ALUMINUM WITH HINGED COVER. NEMA 12 FOR INDOOR USE AND NEMA 4X FOR OUTDOOR USE. MINIMUM DIMENSIONS SHALL BE 12" X 12" X 6".
- C. IN CORROSIVE AREAS OR WHERE CALLED FOR ON DRAWINGS, FURNISH PULL AND JUNCTION BOXES OF 14 GAUGE STAINLESS STEEL.
- D. WHEN SPLICING CONTROL CONDUCTORS IN BOXES USE SCREW TYPE TERMINAL STRIP BLOCKS CLASS 9080 (G) AS MANUFACTURED BY PROVIDE SPADE TYPE LUGS FOR TERMINATION.
- E. PROVIDE PULL AND JUNCTION BOXES WHERE REQUIRED TO REDUCE LENGTH OF CABLE PULL OR REDUCE NUMBER OF ELBOWS BETWEEN OUTLETS.

5.0 PANEL BOARDS

- A. PROVIDE DEAD FRONT CIRCUIT BREAKER TYPE PANEL BOARDS WITH COPPER BUS AND AS SCHEDULED ON DRAWINGS. EACH PANEL BOARD SHALL BE PROVIDED WITH A SEPARATE GROUND BUS IN ADDITION TO THE NEUTRAL BUS. CIRCUIT BREAKERS SHALL BE BOLT-ON AND HAVE A MINIMUM INTERRUPTING RATING OF 10,000 AMPERES AT 120 VOLTS, AND 14,000 AMPERES AT 277 VOLTS. A TYPEWRITTEN DIRECTORY SHALL CLEARLY IDENTIFY THE LOAD SERVED BY EACH CIRCUIT AND SHALL BE MOUNTED INSIDE THE DOOR IN A METAL FRAME WITH PLASTIC COVER. CIRCUIT NUMBERS SHALL BE PERMANENTLY INDICATED ADJACENT TO EACH CIRCUIT BREAKER.

6.0 GROUNDING

- A. INSTALL GROUNDING AS SHOWN ON DRAWINGS. WHERE NOT INDICATED, INSTALL IN COMPLIANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE. DO NOT USE CONDUCTORS SMALLER THAN SIZE AWG #12.
- B. INACCESSIBLE CONNECTIONS SHALL BE MADE WITH THE EXOTHERMIC WELDING PROCESS USING EQUIPMENT MANUFACTURED BY BURNDY OR ERICO PRODUCTS OR EQUAL.
- C. ACCESSIBLE CONNECTIONS SHALL BE MADE WITH BURNDY, MULTIPLE BOLT CONNECTORS SPECIFICALLY APPROVED FOR THE APPLICATION.
- D. TO ASSURE ELECTRICAL CONTINUITY, INSTALL JUMPERS ACROSS METAL PARTS SEPARATED BY NON-CONDUCTING MATERIALS OR ATTACHED TOGETHER BY HIGH RESISTANCE JOINTS.
- E. DO NOT EMBED GROUNDING CABLES DIRECTLY IN CONCRETE. USE SLEEVES WHEN PASSING CABLES THROUGH CONCRETE. BARE COPPER CABLES BURIED IN EARTH SHALL BE TINNED.
- F. MAXIMUM RESISTANCE TO GROUND IS LIMITED TO 25 OHMS. ADDITIONAL GROUND RODS SHALL BE DRIVEN IF REQUIRED TO MAINTAIN THIS LEVEL.
- G. PARTS TO BE GROUNDED: SWITCH GEAR AND PANEL BOARD FRAMES, FIXTURES AND DEVICES, CABLE SHEATHS, NEUTRAL OF TRANSFORMERS, BOXES AND RACEWAYS, MOTOR FRAMES, GENERATOR FRAME, SUBBASE FUEL TANK, STREET LIGHTS, NON-CURRENT CARRYING PARTS OF APPLIANCES AND DEVICES, AND ALL OTHER PARTS AND EQUIPMENT AS REQUIRED BY NEC.
- H. BOND EQUIPMENT WITH CONDUCTORS INSTALLED IN SAME CIRCUIT RACEWAY AND SIZED AS FOLLOWS:
 - 1) EQUIPMENT RATED 50 AMPERES OR UNDER WITH ONE AWG #8.
 - 2) EQUIPMENT RATED 50 TO 125 AMPERES WITH ONE AWG #6.
 - 3) EQUIPMENT RATED OVER 125 AMPERES WITH ONE AWG #6 AND ONE# 1/0 IN 3/4 INCH CONDUIT TO BUILDING GROUND LOOP OR GROUND ROD. RECEPTACLE WITH A GREEN GROUNDING CONDUCTOR OF THE SAME SIZE AND TYPE AS THE PHASE CONDUCTOR AND RUNNING IN THE SAME CONDUIT.
- J. MAKE BONDING TO EQUIPMENT WITH APPROVED SOLDERLESS CONNECTOR. CONTACT SURFACE SHALL BE UNPAINTED AND THOROUGHLY CLEANED BEFORE CONNECTION IS MADE TO INSURE A GOOD METAL CONTACT.



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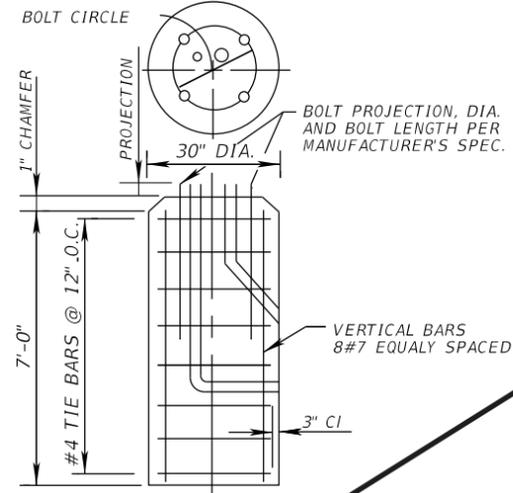
ALEX F GUON
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NOT PART OF CONTRACT

DATE	BY	DATE	BY	DATE	BY	DESCRIPTION	NAME	DATE	NAME	DATE	MIAMI-DADE COUNTY	SHEET NO.		
2/25/2021	RONALD PETERS	10:27:13 AM	ELEC	Approved			ALEX F. GUON, PE PE LICENSE No. 53247 ASP CONSULTING TRANSPORTATION ENGINEERS CORP. 8935 N.W. 35TH LANE, SUITE 200 DORAL, FL 33172 CERTIFICATE OF AUTHORIZATION EB-0007797	DESIGNED BY: LMS 02/09/2021	DRAWN BY: ER 02/10/2021	CHECKED BY: AFG 02/12/2021	CHECKED BY: AFG 02/12/2021	MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT HIGHWAY DIVISION STEPHEN P. CLARK CENTER 111 NW 1 ST MIAMI, FLORIDA 33128	ELECTRICAL NOTES SHEET 2	19

BALLAST MODULE SHALL BE FACTORY PRE-WIRED WITH QUICK-DISCONNECT PLUGS.
 48"
 250 WATTS METAL HALIDE FIXTURE (ISO 9001 STANDARD)
 CAST ALUMINUM END CAP

POLE ALUMINUM ALLOY 6063-T6



30" DIA. CONCRETE FOUNDATION

FOUNDATION MATERIALS:
 REFER TO FOOT 2017-2018 STANDARD INDEX 17515

HAND HOLE COVER TO BE SECURED TO THE BASE BY TAMPER PROOF MECHANISM AND IN ADDITION ATTACHED TO THE BASE WITH LONG AIRCRAFT CABLE.

BASE CAST ALUMINUM ALLOY 356

BREAKWAY FRANGIBLE STAINLESS STEEL COUPLING

DISTRIBUTION BLOCK (RED) WITH 10 AMP FNO TYPE FUSE

GALV. STEEL ANCHOR BOLT WITH NUTS AND WASHERS

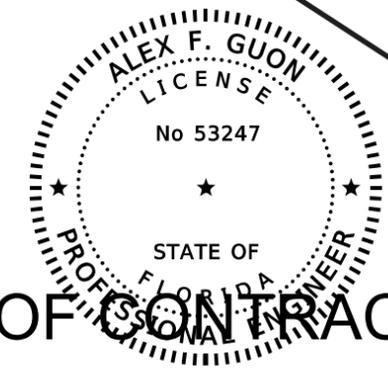
POWER CABLE IN 2" CONDUIT

SURGE ARRESTOR MOLDED PLUG AND CONNECTORE (RED)
 THERMOWELD CONNECTION

24" X 13" X 12" PULL BOX
 12" BED OF PEAROCK OR CRUSHED STONE FOR DRAINAGE
 5/8" DIA. 20' LONG GRD ROD

P.V.C. COUPLER
 1#12 GRD IN 3/4" DIA. CONDUIT

POLE DETAIL
 N.T.S.



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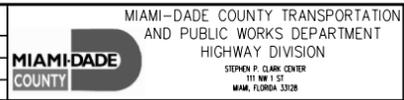
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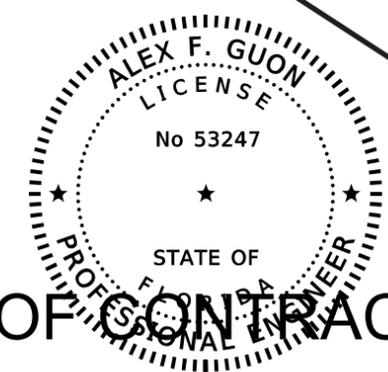
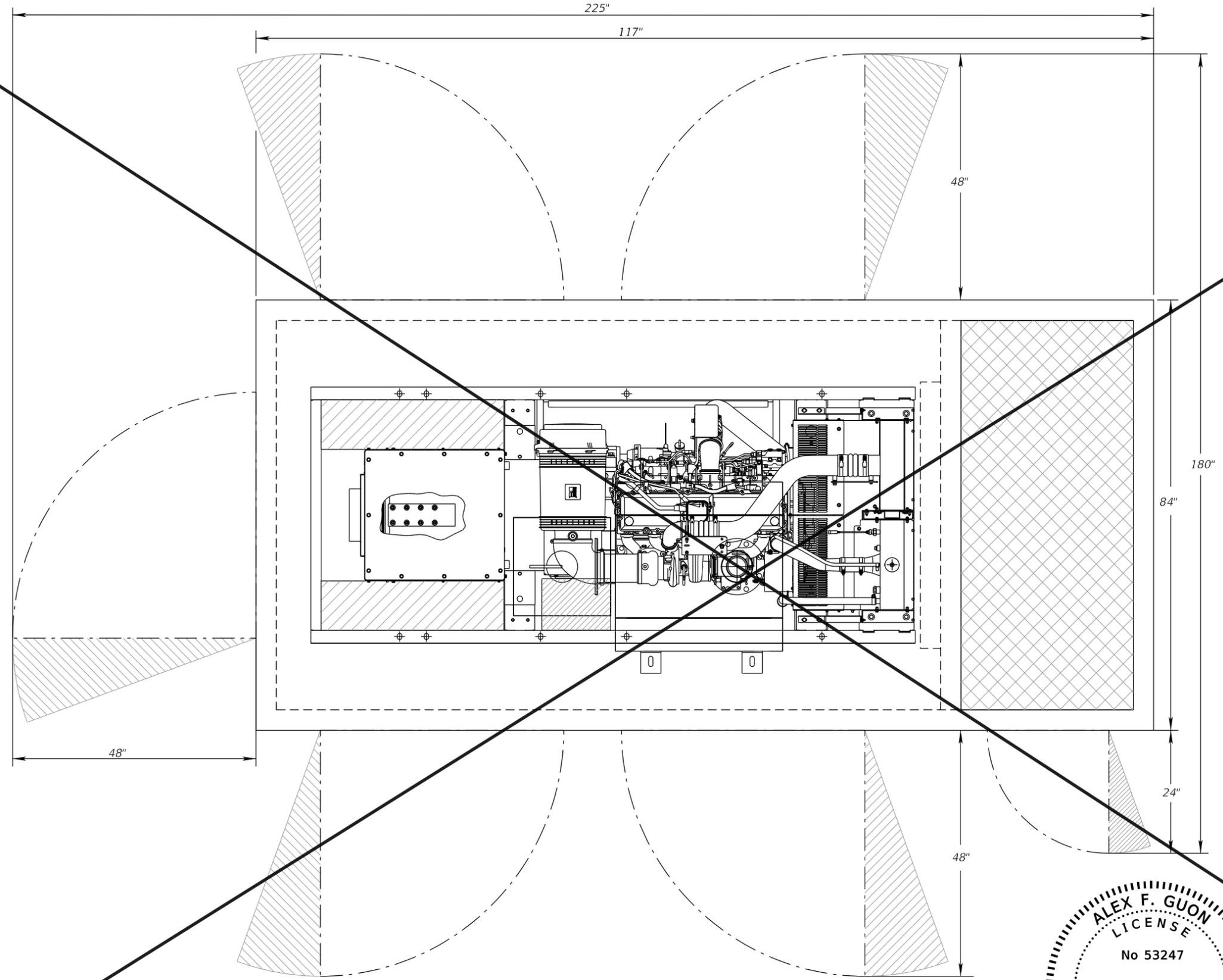
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DATE	BY	DATE	BY	DATE	BY	DESCRIPTION
2/25/2021 10:27:38 AM	ELEC	Approved				

ALEX F. GUON, PE
 PE LICENSE No. 53247
 A&P CONSULTING TRANSPORTATION ENGINEERS CORP.
 8935 N.W. 35TH LANE, SUITE 200
 DORAL, FL 33172
 CERTIFICATE OF AUTHORIZATION EB-0007797

DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
LMS		02/09/2021	ER		02/10/2021
CHECKED BY	AFG	02/12/2021	CHECKED BY	AFG	02/12/2021





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Examiner	Date Time Stamp	Trade Stamp Name	REVISIONS
PETERS, RONALD	2/25/2021 10:28:05 AM	ELEC Approved	
AQUIT, SUYIN	3/1/2021 4:36:04 PM	FIRE Reference Only.	

ALEX F. GUON, PE
 PE LICENSE No. 53247
 ASP CONSULTING TRANSPORTATION ENGINEERS CORP.
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 DORAL, FL 33172
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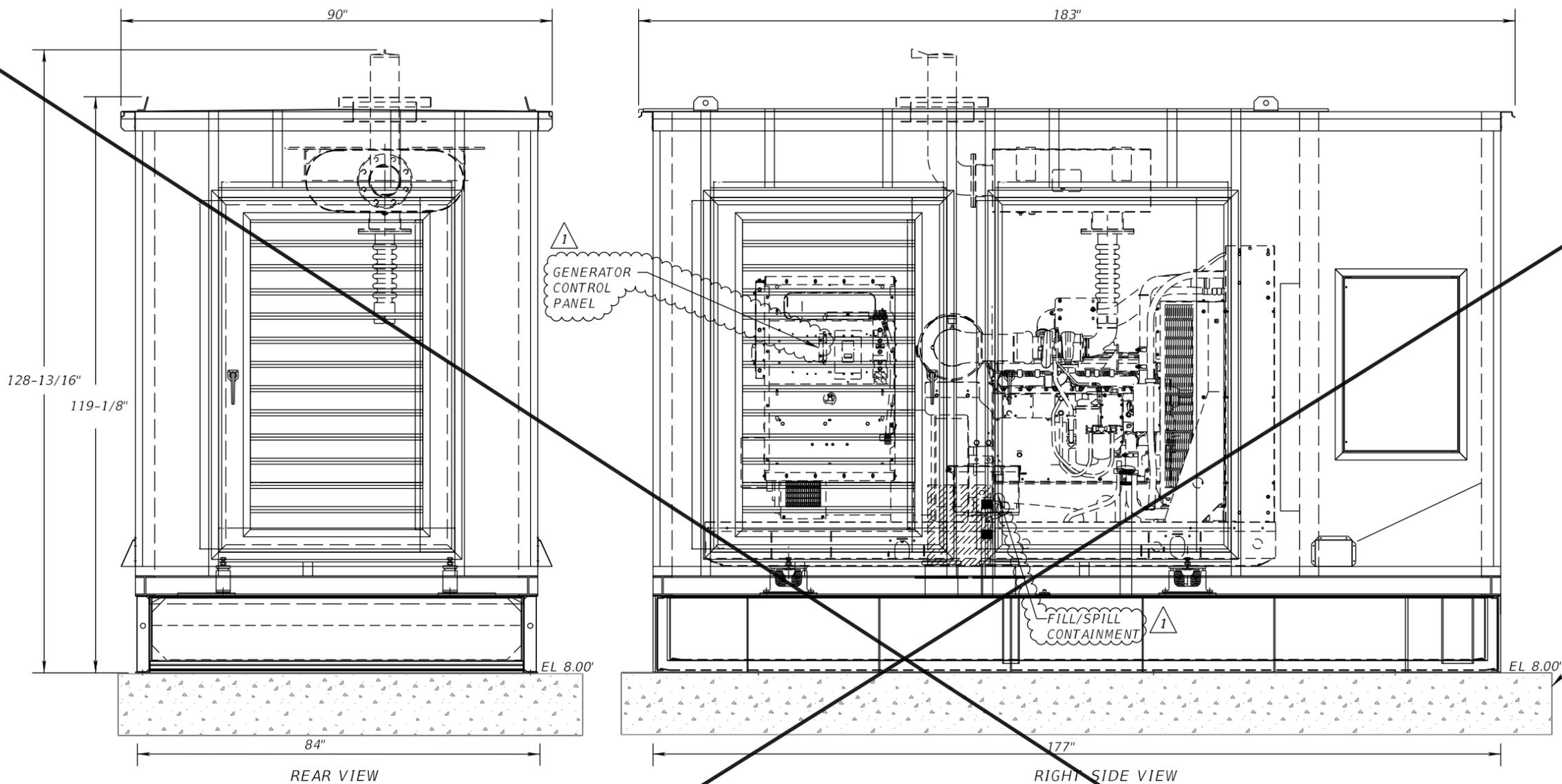
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LMS	LMS	02/09/2021	ER	ER	02/10/2021
CHECKED BY	AFG	02/12/2021	CHECKED BY	AFG	02/12/2021

MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT HIGHWAY DIVISION

 STEPHEN P. CLARK CENTER
 111 NW 1 ST
 MIAMI, FLORIDA 33128

STAND-BY GENERATOR ENCLOSURE PLAN

SHEET NO. 21

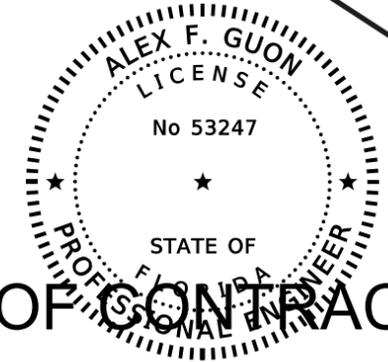


GENERAL NOTES

- 1- ALL GENERATOR CONDITIONS ARE MONITORED.
- 2- VISUAL AND AUDIBLE INDICATION SET AT 95% OF OVERFILL TANK CAPACITY, ANNUNCIATOR PANEL LOCATED IN GENERATOR CONTROL PANEL
- 3- OVER SPILL CONTAINMENT BOX AT THE FILL PORT.
- 4- VISUAL AND AUDIBLE ALARM TO MONITORING INTERSTITIAL SPACE FUEL BETWEEN DIESEL FUEL SUB-BASE TANK PRIMARY AND SECONDARY WALLS. LOCATE MONITORING PANEL AT GENERATOR CONTROL PANEL.

GENERATOR ENCLOSURE REQUIREMENTS:

- 1- ENCLOSURE FOR SOUND ATTENUATION SHALL BE PROVIDED, AND SHALL INCLUDE WEATHER PROOF ENCLOSURE CONSTRUCTED OF HEAVY GAUGE ALUMINUM WITH FIXED STORM PROOF PANELS DESIGNED FOR 186 MPH WIND LOAD RATING AND ENCLOSURE W/AIR EXHAUST SCOOP. ENCLOSURE CONSISTS OF A BOLTED AND WELDED CONSTRUCTION WITH PRE-MOUNTED INTERNAL MUFFLER CALMPS AND BRACKETS INCLUDED. DOUBLE-DOOR ACCESS ON BOTH SIDES OF THE ENCLOSURE. DOORS SHALL BE LOCKABLE. MULTIPLE BAFFLES TO BE PROVIDED ON AIR INTAKES. SOUND ATTENUATED FOAM SHALL BE INSTALLED ON BAFFLES AND ENCLOSURE WALLS.
- 2- GENERATOR EXHAUST OUTLET SHALL BE NO LESS THAN 10 FT TO ANY BUILDING OPENING.
- 3- HOUSING SHALL BE SOUND ATTENUATED WITH FOAM, ATTENUATION: 72 DBA @ 23'.
- 4- LARGE MISSILE IMPACT RATED PER HVHZ FBC SEC. 1620-SEC.1626 AND CHAPTER 2, 2017 FBC, FLORIDA PRODUCT APPROVAL NUMBERS:
- 5- ENCLOSURE SHALL BE PROVIDED W/4-POINT LIFTING LUGS



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EXAMINER	DATE TIME STAMP	REVISIONS	TRADE STAMP NAME
DIAZ-VILLAMIL, MANUEL	3/19/2021 3:30:51 PM	1	Approved
BAWANEY, ASH	3/19/2021 3:30:51 PM	2	Approved

DESIGNED BY	NAME	DATE	DRAWN BY	NAME	DATE
LMS	LMS	02/09/2021	ER	ER	02/10/2021
CHECKED BY	AFG	02/12/2021	CHECKED BY	AFG	02/12/2021

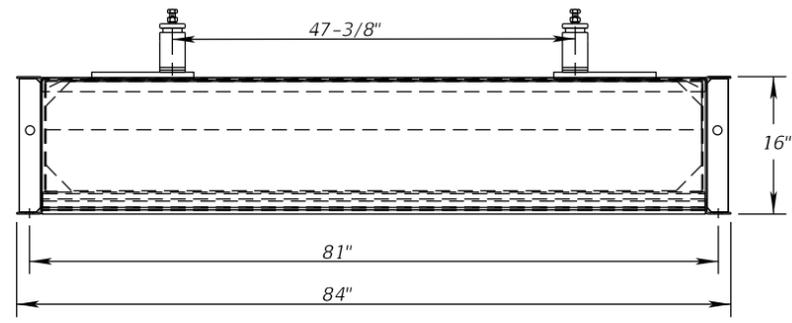
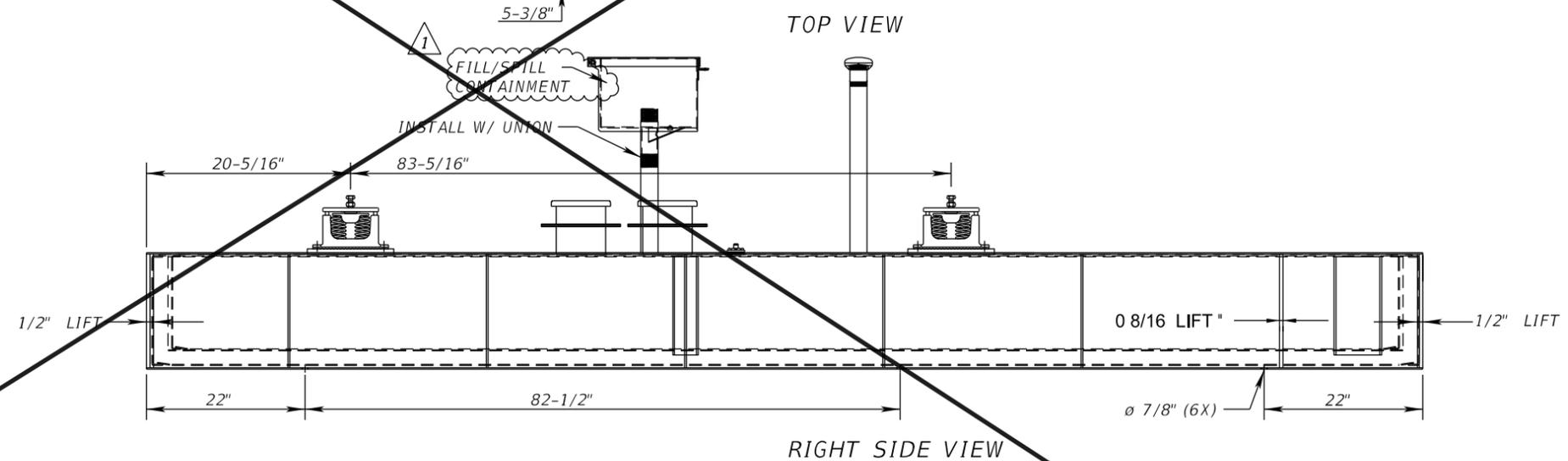
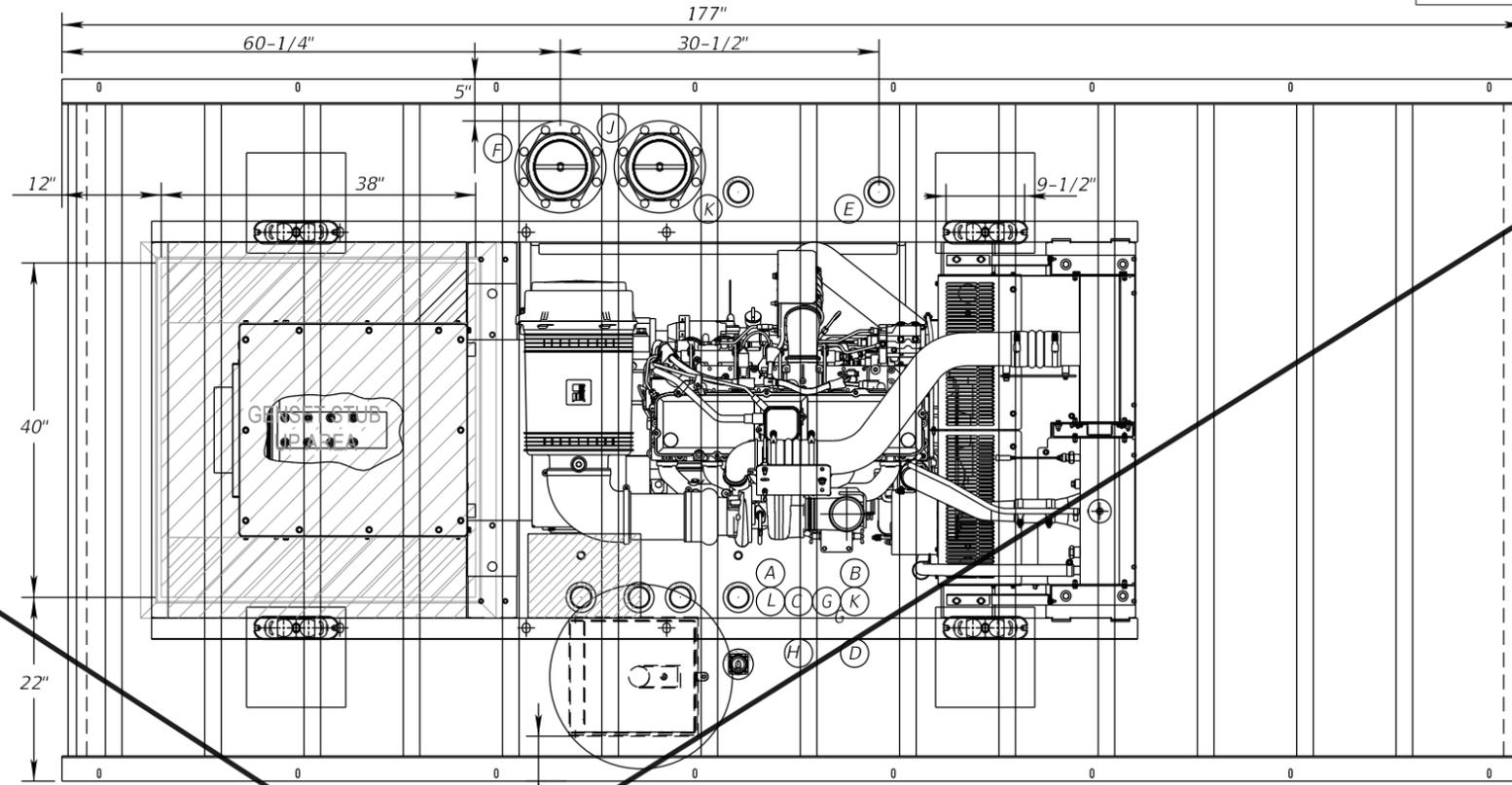
MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT
 HIGHWAY DIVISION
 STEPHEN P. CLARK CENTER
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 MIAMI, FLORIDA 33128

STAND-BY GENERATOR ENCLOSURE ASSEMBLY

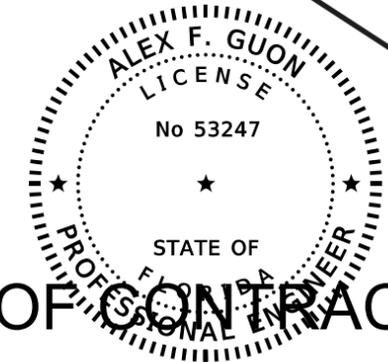
SHEET NO. 22

FITTING	DESCRIPTION	LENGTH
A	1/2" NPT FUEL SUPPLY DROP TUBE	14"
B	1/2" NPT FUEL RETURN DROP TUBE	14"
C	2" NPT LOW FUEL SWITCH AT 25%	9-3/8"
D	1-1/2" NPT FUEL GAUGE	11-1/2"
E	2" NPT NORMAL VENT	
F	6" ANSI FLANGE EMERGENCY VENT (PRIMARY)	
G	2" NPT TOP MOUNT LEAK DETECTION SWITCH & DRAIN PORT	
H	2" NPT 7-1/2 GALLON FILL SPILL BUCKET	
J	6" ANSI FLANGE EMERGENCY VENT (SECONDARY)	
K	2" NPT SPARE FITTINGS (QTY 2)	
L	2" NPT HIGH FUEL SWITCH AT 90%	1-1/4"

FDEP INFORMATION	
1	UL 142 TANK EQ# 497
2	FILL/SPILL CONTAINMENT EQ# 778
3	HIGH FUEL SWITCH AND LEAK DETECTION SWITCH EQ# 817
4	ROCHESTER FUEL LEVEL GAUGE EQ# 901



- FUEL TANK REQUIREMENTS:**
- TANK TO BE DESIGNED TO SUPPORT GENSET .
 - TANK TO SHALL BE DESIGNED INSTALLED IN ACCORDANCE WITH AFFIXED LABELING, THE FLAMMABLE AND COMBUSTIBLE LIQUID CODES, NFPA 30 AND ANY OTHER PREVAILING CODES.
 - TANK TO SHALL BE DESIGNED AS SECONDARY CONTAINMENT, DOUBLE WALLED.
 - VENDOR TO SUPPLY THE FITTINGS WITH REMOVABLE PLUGS.
 - FUEL FOR TANK SHALL BE DIESEL FUEL D#2.
 - TANK MATERIAL SHALL BE STEEL AS PER UL 142, "STEEL ABOVEGROUND TANKS FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS".
 - HIGH FUEL AND LEAK DETECTION SWITCHES SHALL BE PROVIDED FOR FUEL MANAGEMENT PURPOSES.
 - NOT USED
 - LOW FUEL LEVEL ALARM SWITCH SET @10% REMAINING LEVEL WIRED TO CONTROL PANEL.
 - LEAK DETECTION SWITCH WIRED TO CONTROL PANEL TERMINAL STRIP.
 - CABLE STUB UP OPENING UNDER CIRCUIT BREAKER.
 - FUEL LEVEL GAUGE VISIBLE AT FUEL PORT.
 - HIGH/LOW/LEAK DETECTION SWITCHES CONNECTED VIA ELECTRICAL WIRES TO THE GENERATOR CONTROL PANEL.
 - ALL APPLICABLE EQUIPMENT SHALL BE APPROVED BY FDEP AND AUTHORITY HAVING JURISDICTION
 - IT IS THE RESPONSIBILITY OF THE TANK SUPPLIER TO DESIGN & FABRICATE THE TANK PER THE ABOVE NOTES AND FUEL TANK CODE REQUIREMENTS. IT IS ALSO THE TANK SUPPLIES RESPONSIBILITY TO SUPPLY ALL NECESSARY COMPONENTS TO MEET THE REQUIREMENTS OF THE SPECIAL FUEL TANK CODE.



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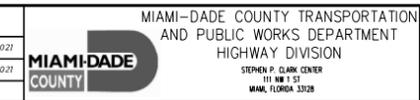
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EXAMINER	DATE TIME STAMP	REVISIONS	TRADE STAMP NAME
DIAZ-VILLANUEVA, MANUEL	3/16/2021 2:58 PM	1	Approved
BAWANEY, ASHLEY	3/19/2021 3:30:46 PM	1	Approved

NAME	DATE	NAME	DATE
DESIGNED BY: LMS	02/09/2021	DRAWN BY: ER	02/10/2021
CHECKED BY: AFG	02/12/2021	CHECKED BY: AFG	02/12/2021



MIAMI-DADE COUNTY TRANSPORTATION AND PUBLIC WORKS DEPARTMENT
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FUEL TANK DETAILS

SHEET NO.
23