



ST. TAMMANY PARISH

MICHAEL B. COOPER
PARISH PRESIDENT

March 1, 2021

Please find the following addendum to the below mentioned BID.

Addendum No.: 2

Bid#: 21-3-2

Project Name: Lake Front Pump Station Phase 3

Bid Due Date: Thursday, March 4, 2021

GENERAL INFORMATION:

1. In Section 01010, **DELETE** Paragraph 3.7.B.16 in its entirety.
2. **DELETE** Section 01025 – Measurement and Payment and **REPLACE** in its entirety with the attached **REVISED** Section 01025 – Measurement and Payment.

QUESTION AND ANSWER:

Question 1. Are we still pricing a new 350 hp motor? Specification 01010 3.7 Schedule of Values (B.16) "Furnish and Install New 350hp Electric Motor". If this is still required of the bid, please add a bid item for this item.

Answer 1. A new 350 HP motor is not part of this scope.

ATTACHMENTS:

1. REVISED Section 01025 – Measurement and Payment

End of Addendum # 2

SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 -- GENERAL

1.1 THE REQUIREMENT

- A.** Payment for the various items on the Bid Form, as further specified herein, will constitute all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the WORK all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).
- B.** No separate payment will be made for any item that is not specifically set forth in the Bid Schedule. Include all costs for the WORK within the prices named in the Bid Schedule for the various appurtenant items of work.

1.2 ACCURACY

- A.** The ENGINEER will utilize the accepted Schedule of Values for the purpose of estimating the value of WORK completed for the evaluation of requests for payment.
- B.** The terms "lump sum, each, or unit" when used as a unit of measure for payment will mean complete payment for the work described in the contract.

1.3 MOBILIZATION (Ref. No. 1)

- A. Measurement:** No Measurement will be made for this item.
- B. Payment:** Payment for mobilization will be made at the lump sum price on the Bid Form, or portions thereof, in accordance with the table below. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment and other services necessary for the completion of mobilization, all in accordance with the requirements of the Contract Documents.

Percent of Total Contract Amount Earned	Allowable Percent of Lump Sum Price for Mobilization
1 st Application for Payment	25
10	50
25	75
50	100

1.4 TEMPORARY SIGNS AND BARRICADES (Ref. No. 2)

- A. Measurement:** No Measurement will be made for this item.
- B. Payment:** Payment for mobilization will be made at the lump sum price on the Bid Form, or portions thereof, in accordance with the table below. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment, and other services necessary for the provision of temporary signs and barricades, inclusive of labor, materials, equipment and other services for traffic control and the provision, installation, and removal of the project sign, and all other items necessary for the provision of temporary signs and barricades all in accordance with the requirements of the Contract Documents.

Percent of Total Contract Amount Earned	Allowable Percent of Lump Sum Price for Temporary Signs and Barricades
1 st Application for Payment	15
10	25
25	75
50	100

1.5 CONSTRUCTION LAYOUT AND ELEVATION CERTIFICATE (REF. NO. 3)

- A. Measurement:** No Measurement will be made for this lump sum item.
- B. Payment:** Payment for this item will be made at the lump sum price on the Bid Form, or portions thereof, in accordance with the table below. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment and other services necessary for the completion of construction layout, inclusive of the elevation certificate, all in accordance with the requirements of the Contract Documents.

Percent of Total Contract Amount Earned	Allowable Percent of Lump Sum Price for Temporary Signs and Barricades
1 st Application for Payment	15
10	25
25	75
50	95 (Final 5% will be paid upon receipt of required elevation certificate)

1.6 REMOVE AND DELIVER EXISTING 54” PUMP MOTORS TO REPAIR FACILITY (Ref. No. 4)

- A. Measurement:** No Measurement will be made for this lump sum item.
- B. Payment:** Payment will be made at, on in portions thereof in proportion to the percentage of work acceptably completed, the lump sum bid price named in the Bid Form. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment, and services necessary for the removal and delivery of both existing 54” pump motors to an approved motor repair facility in accordance with the Contract Documents.

1.7 DISMANTLE EXISTING 54” PUMP MOTORS AT REPAIR FACILITY (Ref. No. 5)

- A. Measurement:** No Measurement will be made for this lump sum item.
- B. Payment:** Payment will be made at, on in portions thereof in proportion to the percentage of work acceptably completed, the lump sum bid price named in the Bid Form. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment, and services necessary for the dismantling of the existing 54” pump motors at an approved motor repair facility in accordance with the Contract Documents.

1.8 REPAIR OF 54” PUMP MOTOR (Ref. No. 6)

- A. Measurement:** No Measurement will be made for this lump sum item.
- B. Payment:** Payment will be made at, on in portions thereof in proportion to the percentage of work acceptably completed, the lump sum bid price named in the Bid Form. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment, and services necessary for the repair of one of the two existing motors at the motor repair facility, all in compliance with the requirements of the

1.9 REMOVE AND DELIVER 54" PUMPS TO REPAIR FACILITY (Ref. No.7)

- A. Measurement:** No Measurement will be made for this lump sum item.
- B. Payment:** Payment will be made at, on in portions thereof in proportion to the percentage of work acceptably completed, the lump sum bid price named in the Bid Form. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment, and services necessary for the removal and delivery of the existing 54" pumps to an approved repair shop in accordance with the Contract Documents.

1.10 DISMANTLE 54" PUMPS AT REPAIR FACILITY (Ref. No. 8)

- A. Measurement:** No Measurement will be made for this lump sum item.
- B. Payment:** Payment will be made at, on in portions thereof in proportion to the percentage of work acceptably completed, the lump sum bid price named in the Bid Form. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment, and services necessary for the dismantling of the existing 54" pumps at the approved repair shop in accordance with the requirements of the Contract Documents.

1.11 REBUILD, MODIFY, TEST AND INSTALL 54" DRAINAGE PUMP (Ref. No. 9)

- A. Measurement:** No Measurement will be made for this lump sum item.
- B. Payment:** Payment will be made at, on in portions thereof in proportion to the percentage of work acceptably completed, the lump sum bid price named in the Bid Form. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment, and services necessary for the modification, testing, and reinstallation of an existing 54" pump in accordance with the Contract Documents, including design and engineering services, materials, modifications, rehabilitation and fabrication of components, assembly of the modified pump, delivery of the modified pump to the site, installation of the modified pump, and startup of the modified pump, all in accordance with the requirements of the Contract Documents.

1.12 REMOVE AND DELIVER 20" PUMP TO REPAIR FACILITY (Ref. No. 10)

- A. Measurement:** No Measurement will be made for this lump sum item.
- B. Payment:** Payment will be made at, on in portions thereof in proportion to the percentage of work acceptably completed, the lump sum bid price named in the Bid Form. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment, and services necessary for the removal and delivery of the existing 20" pump to an approved repair shop in accordance with the requirements of the Contract Documents.

1.13 MODIFY, TEST, AND REINSTALL 20" PUMP (Ref. No. 11)

- A. Measurement:** No Measurement will be made for this lump sum item.
- B. Payment:** Payment will be made at, on in portions thereof in proportion to the percentage of work acceptably completed, the lump sum bid price named in the Bid Form. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment, and services necessary for the modification, testing, and reinstallation of an existing 20" pump in accordance with the Contract Documents, including design and engineering services, materials, modifications, fabrications of components, assembly of the modified pump, delivery of the modified pump to the site, installation of the modified pump, and startup of the modified pump, all in accordance with the requirements of the Contract Documents.

1.14 MODIFY STRUCTURAL STEEL PLATFORM FOR ELECTRICAL PANELS (Ref. No. 12)

- A. Measurement:** No Measurement will be made for this lump sum item.
- B. Payment:** Payment will be made at, on in portions thereof in proportion to the percentage of work acceptably completed, the lump sum bid price named in the Bid Form. The price listed in the Bid Form will constitute full compensation for all labor,

materials, equipment, and services necessary for the modification of the elevated electrical control panel structure for the installation of the electrical equipment and control panel racks in accordance with the Contract Documents including fabrication of components, installation, and all other work necessary to prepare the existing structure for installation of control and electrical panels all in accordance with the requirements of the Contract Documents.

1.15 ELECTRICAL WORK (Ref. No. 13)

- A. Measurement:** No Measurement will be made for this lump sum item.
- B. Payment:** Payment will be made at, on in portions thereof in proportion to the percentage of work acceptably completed, the lump sum bid price named in the Bid Form. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment, and services necessary for the installation of electrical and control components in accordance with the Contract Documents, including control panel fabrication, installation, raceway work, conductors, interconnections, and all electrical tests.

1.16 DELIVER UNREPAIRED 54" PUMP TO OWNER (Ref. No. 14)

- A. Measurement:** No Measurement will be made for this lump sum item. No payment will be made for this item until condition assessments of the existing motors have been made.
- B. Payment:** Payment will be made at, on in portions thereof in proportion to the percentage of work acceptably completed, the lump sum bid price named in the Bid Form. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment, and services necessary for the procurement and installation of a new 350 HP motor in accordance with the Contract Documents.

1.17 DELIVER UNREPAIRED 54" PUMP MOTOR TO OWNER (Ref. No. 15)

- A. Measurement:** No Measurement will be made for this lump sum item.
- B. Payment:** Payment will be made at, on in portions thereof in proportion to the percentage of work acceptably completed, the lump sum bid price named in the Bid Form. The price listed in the Bid Form will constitute full compensation for all labor, materials, equipment, and services necessary for the packaging and delivery of the unrepaired 54" pump components to the OWNER, all in accordance with the requirements of the Contract Documents.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

- END OF SECTION -



ST. TAMMANY PARISH

MICHAEL B. COOPER
PARISH PRESIDENT

February 10, 2021

Please find the following addendum to the below mentioned BID.

Addendum No.: 1

Bid#: 21-3-2

Project Name: Lake Front Pump Station Phase 3

Bid Due Date: Thursday, March 4, 2021

GENERAL INFORMATION:

PLANS:

DELETE the plans issued with the procurement package and REPLACE with the attached drawings. The plans issued with the procurement package had the signature inadvertently removed. (Attached)

SPECIFICATIONS:

Section 16100. DELETE Paragraph 2.5 B in its entirety and REPLACE with the following:

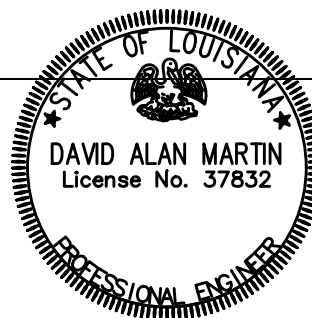
B. Manual Transfer Switches

1. Furnish and install 480-volt manual transfer switches between the meters (or current transformers) and control panels as indicated. Install 3 pole switches rated at the amperages shown. Provide NEMA 3R enclosures. Provide Cutler Hammer DTxxxURK or approved equal with Myers hub (Cutler Hammer DHSxxxHM or equal) for generator pass through. Modify existing MTS to be relocated with Myers hub for generator pass through.

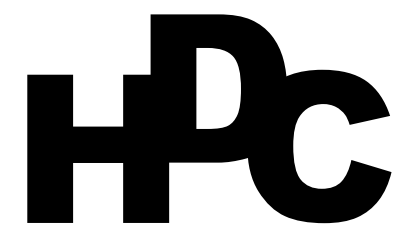
ATTACHMENTS:

1. Signed Plans.pdf

End of Addendum # 1



**CONTRACT DRAWINGS FOR
LAKEFRONT PUMP STATION, PHASE 3
FEDERAL EMERGENCY MANAGEMENT AGENCY P.W. #00872-V1
ST. TAMMANY PARISH, LOUISIANA
PARISH PROJECT No. EN14000002
HDCA PROJECT NO. 2016-13**



H. Davis Cole &
Associates, LLC
Consulting Engineers

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PROJECT LOCATION



PROJECT AREA

PROJECT LOCATION



PROJECT AERIAL

PREPARED FOR



ST. TAMMANY PARISH GOVERNMENT
DEPARTMENT OF PUBLIC WORKS
21454 KOOP DRIVE
MANDEVILLE, LA 70471

PARISH PRESIDENT
HON. MICHAEL COOPER

CHAIRMAN, PARISH COUNCIL
HON. MICHAEL LORINO, JR.

VICE-CHAIRMAN, PARISH COUNCIL
HON. RYKERT O. TOLEDANO, JR.

PARISH COUNCIL

HON. MARTY DEAN	DISTRICT 1
HON. DAVID R. FITZGERALD	DISTRICT 2
HON. MARTHA J. CAZAUBON	DISTRICT 3
HON. MICHAEL LORINO, JR.	DISTRICT 4
HON. RYKERT O. TOLEDANO, JR.	DISTRICT 5
HON. RICHARD E. TANNER	DISTRICT 6
HON. JAMES J. DAVIS	DISTRICT 7
HON. CHRIS CANULETTE	DISTRICT 8
HON. MIKE M. SMITH	DISTRICT 9
HON. MAUREEN "MO" O'BRIEN	DISTRICT 10
HON. STEVE STEFANCIK	DISTRICT 11
HON. JERRY BINDER	DISTRICT 12
HON. JAKE A. AIREY	DISTRICT 13
HON. THOMAS J. "T.J." SMITH	DISTRICT 14

ST. TAMMANY PARISH GOVERNMENT
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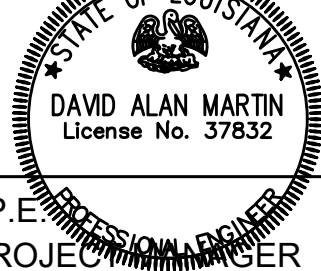
APPROXIMATE PROJECT SITE GPS COORDINATES

30° 12'42.05" N
89° 47'23.32" W

**RELEASED FOR BIDS & CONSTRUCTION
DECEMBER, 2020**

RECOMMENDED FOR APPROVAL:

H. DAVIS COLE & ASSOCIATES, LLC



DAVID A. MARTIN, P.E.
VICE - PRESIDENT/PROJECT MANAGER

37832

LICENSE No.

DATE

LIST OF DRAWINGS

COVER SHEET

CO-1 COVER SHEET

GENERAL

G1	LIST OF DRAWINGS
G2	GENERAL NOTES AND SPECIFICATIONS
G3	GENERAL NOTES AND SPECIFICATIONS
G4	DRAWINGS STANDARDS AND SYMBOLS
G5	ABBREVIATIONS
G6	PIPING SCHEDULE

DEMOLITION

01-D1 DEMOLITION DETAILS

CIVIL

01-C1	EXISTING SITE PLAN
01-C2	REHABILITATED SITE PLAN

STRUCTURAL

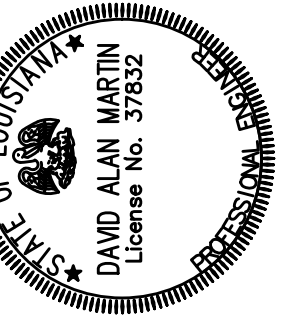
S1	STRUCTURAL DETAILS AND SECTIONS
01-S1	STRUCTURAL PLAN AND SECTIONS

MECHANICAL

01-M1	MECHANICAL PLAN
01-M2	MECHANICAL SECTIONS

ELECTRICAL

E1	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E2	ELECTRICAL DETAILS
E3	CABLE AND CONDUIT SCHEDULE/RACK ELEVATIONS
E4	RISER DIAGRAMS
E5	ONE LINE DIAGRAMS
01-E1	REHABILITATED ELECTRICAL SITE PLAN



37832
LICENSE NO.

DAVID A. MARTIN
PROJECT MANAGER



**H. Davis Cole &
Associates, LLC**
Consulting Engineers

NEW ORLEANS, LA

REVISION RECORD					
MARK	RELEASED FOR BIDS & CONSTRUCTION	DATE	BY	DAM	CHKD
-		MAR 2020			

DESIGNED BY:
DAM

DATE: DEC 2020

LAKEFRONT PUMP STATION, PHASE 3

LOUISIANA

ST TAMMANY PARISH GOVERNMENT
21451 KOOP DRIVE

LIST OF DRAWINGS

SHEET ID

G1

SHEET SET

2

OF

20

IMPACT ANCHORS SHALL BE AN EXPANSION TYPE ANCHOR IN WHICH A NAIL TYPE PIN IS DRIVEN TO PRODUCE THE EXPANSIVE FORCE. THE PIN SHALL HAVE A ZINC SLEEVE WITH A MUSHROOM STYLE HEAD AND STAINLESS STEEL NAIL PIN. ANCHORS SHALL BE METAL HIT ANCHORS, MANUFACTURED BY HILTI, INC., RAWL ZAMAC NAILIN, MANUFACTURED BY THE RAWLPLUG COMPANY; OR EQUAL.

18) STRUCTURAL STEEL SHALL BE FABRICATED IN ACCORDANCE WITH THE DRAWINGS, AISC SPECIFICATIONS, AND AS SHOWN ON THE SHOP DRAWINGS. MATERIALS SHALL BE PROPERLY MARKED AND MATCH MARKED FOR FIELD ASSEMBLY. WHERE FINISHING IS REQUIRED, ASSEMBLY SHALL BE COMPLETED INCLUDING BOLTING AND WELDING OF UNITS, BEFORE START OF FINISHING OPERATIONS. SHOP AND FIELD CONNECTIONS SHALL BE BOLTED OR WELDED AS INDICATED. ALL CONNECTIONS SHALL DEVELOP FULL STRENGTH OF MEMBERS JOINED AND SHALL CONFORM TO AISC STANDARD CONNECTIONS. UNLESS OTHERWISE INDICATED, WELDS SHALL CONFORM TO AISC LRFD SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.

19) WELDING SHALL BE BY THE METAL-ARC METHOD OR GAS-SHIELDED ARC METHOD AS DESCRIBED IN THE AMERICAN WELDING SOCIETY'S "WELDING HANDBOOK" AS SUPPLEMENTED BY OTHER PERTINENT STANDARDS OF THE AWS. QUALIFICATION OF WELDERS SHALL BE IN ACCORDANCE WITH THE AWS STANDARDS GOVERNING SAME. IN ASSEMBLY AND DURING WELDING, THE COMPONENT PARTS SHALL BE ADEQUATELY CLAMPED, SUPPORTED, AND RESTRAINED TO MINIMIZE DISTORTION AND FOR CONTROL OF DIMENSIONS. WELD REINFORCEMENT SHALL BE AS INDICATED BY THE AWS CODE. UPON COMPLETION OF WELDING, WELD SPATTER, FLUX, SLAG, AND BURRS LEFT BY ATTACHMENTS SHALL BE REMOVED. WELDS SHALL BE REPAIRED TO PRODUCE A WORKMANLIKE APPEARANCE, WITH UNIFORM WELD CONTOURS AND DIMENSIONS. SHARP CORNERS OF MATERIAL THAT IS TO BE PAINTED OR COATED SHALL BE GROUNDED TO A MINIMUM OF 1/32-INCH ON THE FLAT.

20) STRUCTURAL STEEL PLATES SHAPES, BARS, AND FABRICATED ASSEMBLIES REQUIRED TO BE GALVANIZED SHALL, AFTER THE STEEL HAS BEEN THOROUGHLY CLEANED OF RUST AND SCALE, BE GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A 123. ANY GALVANIZED PART THAT BECOMES WARPED DURING THE GALVANIZING OPERATION SHALL BE STRAIGHTENED. BOLTS, ANCHOR BOLTS, NUTS, AND SIMILAR THREADED FASTENERS, AFTER BEING PROPERLY CLEANED, SHALL BE GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A 153. FIELD REPAIRS TO DAMAGED GALVANIZING SHALL BE MADE BY PREPARING THE SURFACE AND APPLYING A COATING. SURFACE PREPARATION SHALL CONSIST OF REMOVING OIL, GREASE, SOIL, AND SOLUBLE MATERIAL BY CLEANING WITH WATER AND DETERGENT (SSPC SP1) FOLLOWED BY BRUSH OFF BLAST CLEANING (SSPC SP7), OVER AN AREA EXTENDING AT LEAST 4-INCHES INTO THE UNDAMAGED AREA. COATING SHALL BE APPLIED TO AT LEAST 3-MILS DRY FILM THICKNESS. USE ZINC-CLAD XI BY SHERWIN-WILLIAMS, GALVAX BY ALVIN PRODUCTS, OR GALVITE BY ZRC WORLDWIDE.

21) DRILLED ANCHORS AND REINFORCING BARS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. HOLES SHALL BE ROUGHENED WITH A BRUSH ON A POWER DRILL, CLEANED AND DRY. DRILLED ANCHORS SHALL NOT BE INSTALLED UNTIL THE CONCRETE HAS REACHED THE REQUIRED 28-DAY COMPRESSIVE STRENGTH. ADHESIVE ANCHORS SHALL NOT BE LOADED UNTIL THE ADHESIVE HAS REACHED ITS INDICATED STRENGTH IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

STRUCTURAL CONCRETE AND REINFORCEMENT

1) ALL STRUCTURAL CONCRETE SHALL BE CAST IN PLACE AND SHALL BE PER SECTION 03901. REINFORCING STEEL FOR CONCRETE SHALL COMPLY WITH THE FOLLOWING UNLESS OTHERWISE SPECIFIED:

2) REINFORCING STEEL USED IN STRUCTURES SHALL BE GRADE 60. BARS SMALLER THAN NO. 3 NEED NOT BE DEFORMED. ALL DEFORMED BARS SHALL COMPLY WITH ITEMS 1, 2, OR 3 BELOW. SIZE W 5 WIRE COMPLYING WITH ITEM 4 BELOW MAY BE USED IN LIEU OF BARS SMALLER THAN NO BILLET-STEEL DEFORMED AND PLAIN BARS SHALL COMPLY WITH ASTM 615 AND SHALL BE PRODUCED AT A MILL LISTED ON THE LDOTD AML (FORMERLY QPL 71). RAIL-STEEL AND AXLE-STEEL DEFORMED AND PLAIN BARS SHALL COMPLY WITH ASTM A 996. COLD-DRAWN STEEL WIRE SHALL COMPLY WITH ASTM A 1064 WITH THE FOLLOWING AMENDMENT: FOR MATERIAL TESTING OVER 110,000 PSI TENSILE STRENGTH IN HIGH STRENGTH APPLICATIONS SUCH AS SPIRALS AND TIES, THE 25 PERCENT MINIMUM REDUCTION IN AREA SHALL BE REDUCED 5 PERCENT FOR EACH 10,000 PSI INCREMENT OF TENSILE STRENGTH EXCEEDING 110,000 PSI. WELDED STEEL WIRE FABRIC SHALL CONFORM TO ASTM A 1064. EPOXY COATED REINFORCING STEEL AND PATCHING MATERIALS SHALL COMPLY WITH AASHTO M 284 AND SHALL BE LISTED ON THE LDOTD AML (FORMERLY QPL 51).

3) TOLERANCES IN PLACING REINFORCING SHALL BE:

± 3/8" FOR MEMBERS WITH THICKNESS <= 8"

± 1/2" FOR MEMBERS WITH THICKNESS > 8"

4) CONCRETE COVER SHALL BE AS FOLLOWS:

FOR CONCRETE PLACED AGAINST EARTH ----- 3"

FOR SURFACES IN CONTACT WITH WATER----- 2 1/2"

FOR FORMED SURFACES IN CONTACT WITH EARTH----- 2"

FOR UNDERSIDE OF SLABS OVER WATER, BEAMS,
AND COLUMNS NOT IN CONTACT WITH WATER OR EARTH --- 2"

FOR ALL OTHER SURFACES----- 2"

5) WALLS AND SLABS WITH A SINGLE LAYER OF REINFORCEMENT SHALL HAVE THAT REINFORCEMENT CENTERED, UNLESS NOTED OTHERWISE.

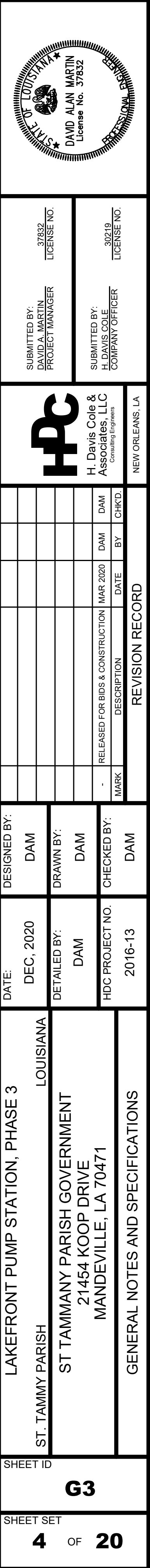
6) ALL JOINT SURFACES SHALL BE ROUGH AND THOROUGHLY CLEANED.

7) DOWELS, PIPES, WATERSTOPS, AND OTHER EMBEDDED MATERIALS SHALL BE HELD SECURELY IN POSITION WHILE CONCRETE IS BEING PLACED.

8) REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH ANY PIPE, PIPE FLANGE, METAL CONDUIT, OR OTHER METAL PARTS EMBEDDED IN CONCRETE. A MINIMUM OF 2 INCHES CLEARANCE SHALL BE PROVIDED IN ALL CASES

- 1) UNLESS NOTED OTHERWISE, GROUT SHALL BE NON - SHRINK GROUT HAVING A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI WHEN MIXED AT A FLUID CONSISTENCY. NON NON-SHRINK GROUT SHALL MEET THE REQUIREMENTS OF ASTM C 1107, GRADE B OR C, WHEN MIXED TO FLUID, FLOWABLE, AND PLASTIC CONSISTENCIES. NON-SHRINK GROUT SHALL BE MASTERFLOW 713 PLUS BY MBT-CHEMREX; FIVE STAR GROUT BY FIVE STAR PRODUCTS; SIKAGROUT 212 BY SIKA CORPORATION; PREMIER BY L&M CONSTRUCTION CHEMICALS; HIGH-FLOW GROUT BY EUCLID CHEMICAL COMPANY; CG 200 PC BY HILTI, OR EQUAL.
- 2) WHERE INDICATED, EPOXY GROUT SHALL BE UTILIZED. EPOXY GROUT SHALL BE A FLOWABLE, NON-SHRINK, 100 PERCENT SOLIDS SYSTEM. THE EPOXY GROUT SYSTEM SHALL HAVE 3 COMPONENTS: RESIN, HARDENER, AND SPECIALLY BLENDED AGGREGATE, EACH PRE-MEASURED AND PREPACKAGED. THE RESIN COMPONENT SHALL NOT CONTAIN ANY NON-REACTIVE DILUENTS. RESINS CONTAINING BUTYL GLYCIDYL ETHER (BGE) OR OTHER HIGHLY VOLATILE AND HAZARDOUS REACTIVE DILUENTS ARE NOT ACCEPTABLE. VARIATION OF COMPONENT RATIOS IS NOT PERMITTED UNLESS SPECIFICALLY RECOMMENDED BY THE MANUFACTURER. MANUFACTURER'S INSTRUCTIONS SHALL BE PRINTED ON EACH CONTAINER IN WHICH THE MATERIALS ARE PACKAGED. NON-SHRINK EPOXY GROUT SHALL BE FIVE STAR DP EPOXY GROUT BY FIVE STAR PRODUCTS, INC.; MASTERFLOW 648 CP PLUS BY MBT-CHEMREX; SIKADUR 42 GROUT-PAK BY SIKA CORPORATION; OR EQUAL.

- 1) THE CONTRACTOR SHALL PERFORM EARTHWORK INDICATED AND REQUIRED FOR CONSTRUCTION OF THE WORK, COMPLETE AND IN PLACE, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. EXCEPT WHEN SPECIFICALLY PROVIDED TO THE CONTRARY, EXCAVATION SHALL INCLUDE THE REMOVAL OF MATERIALS, INCLUDING OBSTRUCTIONS THAT WOULD INTERFERE WITH THE PROPER EXECUTION AND COMPLETION OF THE WORK. THE REMOVAL OF SUCH MATERIALS SHALL CONFORM TO THE LINES AND GRADES INDICATED OR ORDERED. UNLESS OTHERWISE INDICATED, THE ENTIRE SITE SHALL BE STRIPPED OF VEGETATION AND DEBRIS AND SHALL BE GRUBBED, AND SUCH MATERIAL SHALL BE REMOVED FROM THE SITE PRIOR TO PERFORMING ANY EXCAVATION OR PLACING ANY FILL.
- 2) THE CONTRACTOR SHALL FURNISH, PLACE, AND MAINTAIN SUPPORTS AND SHORING THAT MAY BE REQUIRED FOR THE SIDES OF EXCAVATIONS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STABILITY AND SAFETY OF ALL EXCAVATIONS. EXCAVATIONS SHALL BE SLOPED OR OTHERWISE SUPPORTED IN A SAFE MANNER IN ACCORDANCE WITH APPLICABLE STATE SAFETY REQUIREMENTS AND THE REQUIREMENTS OF OSHA SAFETY AND HEALTH STANDARDS FOR CONSTRUCTION (29CFR1926).
- 3) THE CONTRACTOR SHALL REMOVE AND EXCLUDE WATER, INCLUDING STORMWATER, GROUNDWATER, IRRIGATION WATER, AND WASTEWATER, FROM EXCAVATIONS. DEWATERING WELLS, WELL-POINTS, SUMP PUMPS, OR OTHER MEANS SHALL BE USED TO REMOVE WATER AND CONTINUOUSLY MAINTAIN GROUNDWATER AT A LEVEL AT LEAST 2 FEET BELOW THE BOTTOM OF EXCAVATIONS BEFORE THE EXCAVATION WORK BEGINS AT EACH LOCATION. WATER SHALL BE REMOVED AND EXCLUDED UNTIL BACKFILLING IS COMPLETE AND FIELD SOILS TESTING HAS BEEN COMPLETED.
- 4) SOILS WHICH DO NOT MEET LIQUID LIMIT OR PLASTICITY INDEX REQUIREMENTS SHALL NOT BE BLENDED TO REDUCE LIQUID LIMIT OR PLASTICITY INDEX. SOILS MAY BE TREATED WITH LIME TO REDUCE PLASTICITY INDEX ONLY WITH THE APPROVAL OF THE ENGINEER.



	CONCRETE (PLAN AND SECTION)
	GROUT OR SAND (PLAN OR SECTION)
	BRICK (PLAN AND SECTION)
	CMU (PLAN AND SECTION)
	STEEL/ METAL/ FRP (SMALL SCALE SECTION)
	STEEL/ GRATING/ FRP (SMALL SCALE SECTION)
	CHECKERPLATE (SECTION)
	GRATING (PLAN)
	GRATING OR SOLID FRP GRATING (SECTION)
	SAFETY GRATING (PLAN)
	SAFETY GRATING (PLAN)
	SAFETY GRATING (PLAN)
	WOOD (ELEVATION OR PLAN)
	LUMBER (NOMINAL)
	LUMBER (TRIMMED)
	GLULAM (SECTION)
	GLULAM (ELEVATION)
	PLYWOOD (SMALL SCALE)
	STRUCTURE OR FACILITY
	EXISTING STRUCTURE OR FACILITY
	FUTURE STRUCTURE OR FACILITY
	OPENING
	SPAN ARROW
	EARTH/ GRADE
	GRAVEL/ LIMESTONE/ AGGREGATE BASE
	CENTERLINE
CL	CENTERLINE
PL	PROPERTY LINE
R/W	RIGHT OF WAY
ESMT	EASEMENT
TEMP ESMT	TEMPORARY EASEMENT
— G —	UTILITY LINE (SEE DIRECTORY BELOW)
— G —	GAS LINE (SIZE NOTED WHERE LARGER THAN 3")
— HP GAS —	HIGH PRESSURE GAS
— 2" W —	WATER LINE (SIZE INDICATED)
— TEL —	UNDERGROUND TELEPHONE
— HVAC —	HIGH VOLTAGE AC POWER LINE
— 24" SS —	SANITARY SEWER (SIZE INDICATED)
— OHW —	OVERHEAD WIRES
— 24" SD —	STORM DRAIN (SIZE INDICATED)
— FOC —	FIBER OPTIC CABLE
— COMM —	COMMUNICATION CABLE
- x - x - x - x -	FENCE (NEW)
- x - x - x - x -	FENCE (EXISTING)
—	WATER COURSE
—	TRAIL OF DIRT ROAD
	MAJOR CONTOUR LINE (NEW)
— 125 —	MAJOR CONTOUR LINE (NEW)
— 125 —	MAJOR CONTOUR LINE (NEW)

	SUPPLY OR OUTSIDE AIR DUCT (FIRST DIMENSION, DUCT WIDTH)
	EXHAUST OR RETURN AIR DUCT (FIRST DIMENSION, DUCT WIDTH)
	CEILING SUPPLY DIFFUSER (SIZE IN INCHES)
	CEILING RETURN OR EXHAUST AIR GRILLE REGISTER (SIZE IN INCHES, WIDTH X HEIGHT)
	EXHAUST OR AIR GRILLE OR REGISTER (SIZE IN INCHES, WIDTH X HEIGHT)
	SUPPLY GRILLE OR REGISTER (SIZE IN INCHES, WIDTH X HEIGHT)
	AIR TURNING VANES IN DUCT
	DEFLECTING DAMPER
	FIRE HOSE CABINET
	FIRE EXTINGUISHER
	UNIT HEATER
	BALL VALVE
	DIAPHRAGM VALVE
	CHECK VALVE
	PRESSURE RELEASE VALVE
	BACK PRESSURE VALVE
	MOTOR OPERATOR FOR VALVE (M = ELECTRIC / P = PNEUMATIC)
	TEMPERATURE CONTROL VALVE
	SOLENOID VALVE
	MULTIPORT VALVE - 3WAYS
	MULTIPORT VALVE - 4WAYS
	FLOAT OPERATED VALVE
	NEEDLE VALVE
	PRESSURE RELIEF VALVE
	ANGLE VALVE
	HOSE BIBB (H/B)
	INJECTOR OR EDUCTOR
	AIR VACUUM AND AIR RELEASE ASSEMBLY
	PIPE ANCHOR
	POWER POLE
	PIPELINE (CIVIL SHEETS) 24" Ø AND LARGER
	PIPELINE (CIVIL SHEETS) 12" Ø TO 20" Ø
	PIPELINE (CIVIL SHEETS) 10" Ø AND SMALLER
	FLOW DIRECTION
	VEGETATION

	ISOLATION VAULT & MAJOR BLOWOFF VAULT (IN PLAN)
	CATHODIC TEST STATION (IN PROFILE)
	CATHODIC TEST STATION (IN PROFILE)
	<u>TYPES:</u> CTS CORROSION TEST STATION CATS CASING TEST STATION IJTS INSULATING JOINT TEST STATION FPTS FOREIGN PIPELINE TEST STATION CSTS CURRENT SPAN TEST STATION
	FIRE HYDRANT
	MANHOLE
	PRESSURE CLEANOUT TO GRADE
	CLEANOUT TO GRADE
	REDUCER OR INCREASER (PROVIDED SIZE)
	ELECTROLYSIS TEST STATION
	WALL CLEANOUT
	FLOOR CLEANOUT
	HUB DRAIN
	FLOOR DRAIN
	FLOOR SINK
	CHANGE IN PIPING MATERIAL
	BACKWATER VALVE
	BACKFLOW PREVENTER
	STOP GATE
	SLIDE GATE
	SLUICE GATE
	GATE VALVE, BURIED WITH VALVE BOX
	BUTTERFLY VALVE, BURIED WITH VALVE BOX
	ECCENTRIC PLUG VALVE, BURIED VALVE BOX
	LUBRICATED PLUG VALVE, BURIED WITH VALVE BOX
	GATE VALVE
	BUTTERFLY VALVE OR DAMPER
	ECCENTRIC PLUG VALVE
	LUBRICATED PLUG VALVE
	GLOBE VALVE
	BUBBLE LEVEL CONTROL
	CENTRIFUGAL OR TURBINE PUMP OR FAN
	METERING PUMP

	PROGRESSIVE CAVITY, POSITIVE DISPLACEMENT PUMP
	PROGRESSIVE CAVITY, POSITIVE DISPLACEMENT PUMP
	PRESSURE GAUGE
	PRESSURE GAUGE WITH DIAPHRAGM SEAL
	PRESSURE SWITCH
	PRESSURE SWITCH WITH DIAPHRAGM SEAL
	FLANGED FITTING
	MECHANICAL - TYPE FITTING (GROOVED)
	SCREWED, WELDED, SOCKET-WELD, BELL & SPIGOT OR HUBLESS FITTING
	SLEEVE TYPE COUPLING
	FLANGED ADAPTER - SET SCREW TYPE
	MECHANICAL - TYPE COUPLING
	FLEXIBLE COUPLING
	UNION
	QUICK DISCONNECT COUPLING
	CAPPED END OR PLUGGED END
	BLIND FLANGE
	REDUCER OR INCREASER
	STRAINER OR 45° WYE
	DRAIN
	FLOW TUBE
	MAGNETIC METER
	DENSITY METER
	PROPELLER METER
	ULTRASONIC METER
	ORIFACE PLATE FLANGES
	ROTAMETER
	CONDENSATE TRAP
	PIPE SUPPORT ON PLAN
	PULSATION DAMPENER
	EXPANSION CHAMBER WITH RUPTURE DISC
	RUPTURE DISC
	FLOW SIGHT GLASS

SECTION IDENTIFICATION

1) SECTION CUT ON DRAWING "S1"

2) SECTION IDENTIFIED IN DRAWING "S2"

SECTION
SCALE: N.T.S.

ELEVATION IDENTIFICATION

1) ELEVATION ON DRAWING "S1"

2) ELEVATION IDENTIFIED IN DRAWING "S2"

ELEVATION
SCALE: N.T.S.

STANDARD DETAIL IDENTIFICATION

(SEE DETAIL SHEETS)

SPECIAL DETAIL IDENTIFICATION

(SEE DETAIL SHEETS)

CALL OUT

DETAIL

EQUIPMENT, PIPING & VALVE IDENTIFICATION

TYPICAL EQUIPMENT DESIGNATION

TYPICAL PIPE DESIGNATION

TYPICAL VALVE DESIGNATION

VALVE TYPES

CV - CHECK VALVE

PV - PLUG VALVE

GV - GATE VALVE

BV - BUTTERFLY VALVE

ARV - AIR RELEASE VALVE

EQUIPMENT/ VALVE AREAS

01- GENERAL

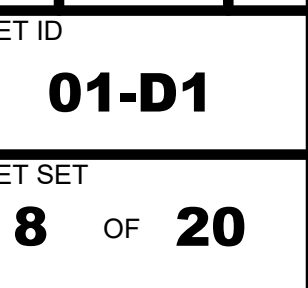
LAKEFRONT PUMP STATION, PHASE 3 ST. TAMMYPARISH LOUISIANA ST TAMMANY PARISH GOVERNMENT 21454 KOOP DRIVE, MANDEVILLE, LA 70471 DRAWINGS STANDARDS & SYMBOLS		SHEET ID G4	
DATE: DEC, 2020		DESIGNED BY: DAM	
DETAILED BY: DAM		DRAWN BY: DAM	
HDC PROJECT NO. 2016-13		CHECKED BY: DAM	
MARK -			
RELEASED FOR BIDS & CONSTRUCTION MAR 2020			
DESCRIPTION			
REVISION RECORD			
BY CHKD			
H. Davis Cole & Associates, LLC Consulting Engineers NEW ORLEANS, LA			
SUBMITTED BY: H. DAVIS COLE COMPANY OFFICER		30219 LICENSE NO.	
SUBMITTED BY: DAVIDA. MARTIN PROJECT MANAGER		37832 LICENSE NO.	
			

	FUNCTION	PIPING MATERIALS (SEE SCH AT RIGHT)				FIELD TEST REQUIREMENTS (SEE NOTE AND NOTE 4)			PIPE COLOR (EXPOSED PIPE)	PIPE MARKER (EXPOSED PIPE)	LETTER COLOR (EXPOSED PIPE)
		EXPOSED PIPING (SEE NOTE 14)		BURNED PIPING (SEE NOTE 13)		MINIMUM TEST PRESSURE PSI	TEST MEDIUM	LEAKAGE ALLOWANCE (SEE NOTE 2)			
		2" DIA AND SMALLER	2 1/2" DIA AND LARGER	2" DIA AND SMALLER	2 1/2" DIA AND LARGER						
A	AERATION	1,16,18	5,11,16,18	1,16,18	5,11,16,18	25	AIR	(A)(D)	NOTE 17	BLUE	WHITE
AW	AERATED WATER	16	11	16	11,32	25	AIR	(A)(D)	AQUA	BLUE	WHITE
BD	BOTTOM DRAIN	--	26	--	26	50	WATER	(A)	NOTE 17	GREEN	WHITE
BP	BYPASS	--	8	--	8	25	WATER	(A)	NOTE 17	GREEN	WHITE
BW	FILTER BACKWASH	--	8	--	8	75	WATER	(A)	NOTE 17	GREEN	WHITE
C	CONDENSATE	29*	29*	29*	29*	125	WATER	(A)	NOTE 17	YELLOW	BLACK
CAW	CHANNEL AGITATION WATER	16	16	16	16	25	WATER	(A)	NOTE 17	YELLOW	BLACK
CD	CHEMICAL DRAIN AND VENT	13,17,23	13,17,23	13,17,23	13,17,23	NOTE 7	--	--	NOTE 17	YELLOW	BLACK
CL	CHLORINE (GAS OR LIQUID STATE)	10	--	10	--	300	DRY AIR	(A)(D)	YELLOW	YELLOW	BLACK
CLS	CHLORINE SOLUTION	16	16	16	16	125	WATER	(A)	YELLOW	YELLOW	BLACK
CLV	CHLORINE GAS UNDER VACUUM	16	16	16	16	15 IN Hg	VACUUM	(A)(E)	YELLOW	YELLOW	BLACK
CN	CENTRATE	--	26	--	26	50	WATER	(A)	NOTE 17	GREEN	WHITE
CS	CAUSTIC SODA	6	6	6	6	125	WATER	(A)	YELLOW	YELLOW	BLACK
CSL	CIRCULATED SLUDGE	--	30	--	30	50	WATER	(A)	BROWN	YELLOW	BLACK
CV	CHLORINATOR VENT AND DETECTION LINE	16	16	16	16	NOTE 8	--	--	YELLOW	YELLOW	BLACK
DCS	DEFOAMING CHEMICAL SOLUTION	16	16	16	16	125	WATER	(A)	NOTE 17	GREEN	WHITE
DN	DECANT	--	26	--	26	50	WATER	(A)	NOTE 17	GREEN	WHITE
DSL	DIGESTED SLUDGE	--	30	--	30	50	WATER	(A)	BROWN	YELLOW	BLACK
DW	DEMINERALIZED WATER	16,18	16,18	16,18	16,18	125	WATER	(A)	NOTE 17	GREEN	WHITE
EE	ENGINE EXHAUST	14*	14*	14	14	NOTE 8	--	--	NOTE 17	YELLOW	BLACK
EWR	ENGINE COOLING WATER RETURN	1*	1*	1	1	125	WATER	(A)	NOTE 17	GREEN	WHITE
EWS	ENGINE COOLING WATER SUPPLY	1*	1*	1	1	125	WATER	(A)	NOTE 17	GREEN	WHITE
F	FROTH	30	30	30	30	50	WATER	(A)	NOTE 17	YELLOW	BLACK
FA	FOUL AIR	--	18	--	18	10	AIR	(A)(D)	NOTE 17	YELLOW	BLACK
FAW	FILTERED AIR WASH	16	11	16	11,32	25	AIR	(A)(D)	NOTE 17		
FE	FINAL EFFLUENT	--	8	--	8	50	WATER	(A)	NOTE 17	GREEN	WHITE
FIW	FINISHED WATER	16	11	16	11,32	25	WATER	(A)	BLUE	BLUE	WHITE
FLW	FILTERED WATER	16	11	16	11,32	25	WATER	(A)	AQUA	AQUA	WHITE
FM	FORCE MAIN	--	8,26	--	8,26	125	WATER	(A)	NOTE 17	YELLOW	BLACK
FOR	FUEL OIL RETURN	9	9	9	9	125	AIR	(A)(D)	NOTE 17	YELLOW	BLACK
FOS	FUEL OIL SUPPLY	9	9	9	9	125	AIR	(A)(D)	NOTE 17	YELLOW	BLACK
FS	FROTH SPRAY	2	2	2	2	125	WATER	(A)	NOTE 17	GREEN	WHITE
FSP	FIRE PROTECTION SPRINKLER SYSTEM	NOTE 10	NOTE 10	NOTE 10	NOTE 10	NOTE 9	WATER	--	RED	RED	WHITE
G	GRIT	--	26	--	26	50	WATER	(A)	BROWN	YELLOW	BLACK
H	HYPOCHLORITE	16	16	16	16	125	WATER	(A)	NOTE 17		
HR	HEATING WATER RETURN	1*	1*	1*	1*	125	WATER	(A)	NOTE 17	YELLOW	BLACK
HS	HEATING WATER SUPPLY	1*	1*	1*	1*	125	WATER	(A)	NOTE 17	YELLOW	BLACK
HWR	DOMESTIC HOT WATER RETURN	24*	2*	24*	2*	125	WATER	(A)	NOTE 17	YELLOW	BLACK
HWS	DOMESTIC HOT WATER SUPPLY	24*	2*	24*	2*	125	WATER	(A)	NOTE 17	YELLOW	BLACK
IA	INSTRUMENT AIR	24	2	24	2	125	AIR	(A)(D)	GREEN	BLUE	WHITE
IE	INTERMEDIATE EFFLUENT	--	8	--	8,28	50	WATER	8(A)28(B)	NOTE 17	GREEN	WHITE
LA	LIQUID ALUM	16	16	16	16	125	WATER	(A)	ORANGE	YELLOW	BLACK
LO	LUBE OIL	9	9	9	9	125	AIR	(A)(D)	RED	YELLOW	BLACK
LPG	LIQUEFIED PETROLEUM GAS	3	3	3	3	NOTE 7	AIR	--	RED	YELLOW	BLACK
LS	LIME SLURRY	NOTE 15	NOTE 15	NOTE 15	NOTE 15	NOTE 8	--	--	LIGHT GREEN	YELLOW	BLACK
LSP	LANDSCAPING SPRINKLER SYSTEM	2,16	2,16	2,16	2,16	NOTE 7	--	--	NOTE 17	GREEN	WHITE
ML	MIXED LIQUOR	2	2,8,26,28	2	2,8,26,28	50	WATER	2,3,26(A) 28(B)	BROWN	YELLOW	BLACK
MG	NATURAL GAS	9	9	9	9	NOTE 7	AIR	--	RED	YELLOW	BLACK
OF	OVERFLOW	--	8	--	8	25	WATER	2,8(A)12,28(B) 22(C)	NOTE 17	GREEN	WHITE
PA	PLANT AIR	7	7	7	7	300	AIR	(A)	GREEN	BLUE	WHITE
PD	PLANT DRAIN	2	8,12	2	8,12,22,28	NOTE 6	WATER	(A)	NOTE 17	GREEN	WHITE
PEA	POLYMER - ANIONIC	16	16	16	16	125	WATER	(A)	GREEN	GREEN	WHITE
PEC	POLYMER - CATIONIC	16	16	16	16	125	WATER	(A)	GREEN	GREEN	WHITE
PEF	PRIMARY EFFLUENT	--	8,26	--	8,26	25	WATER	(B)	NOTE 17	YELLOW	BLACK
PEN	POLYMER - NONIONIC	16	16	16	16	125	WATER	(A)	GREEN	GREEN	WHITE
PI	PLANT INFLEUENT	--	21,26	--	21,26	NOTE 6	WATER	(B)	NOTE 17	YELLOW	BLACK
PO	PLANT OVERFLOW	2	8	2	8,28	NOTE 6	WATER	2,8(A) 28(B)	NOTE 17	GREEN	WHITE
PTW	PRE-TREATED WATER	16	11	16	11,32	25	WATER	(A)	AQUA		
PW	POTABLE WATER	2,24	2	2,24	2,11,19	125	WATER	2,11,24(A) 19(B)	BLUE	GREEN	WHITE
RAS	RETURN ACTIVATED SLUDGE	--	26	--	26	50	WATER	(A)	BROWN	YELLOW	BLACK
REW	RECLAIMED WATER	--	8	--	8	75	WATER	(A)	PURPLE	PURPLE	WHITE
RSL	RAW SLUDGE	--	30	--	30	50	WATER	(A)	BROWN	YELLOW	BLACK
RW	RAW WATER	2	8	2	8,28	125	WATER	2,8(A) 28(B)	GREEN	GREEN	WHITE
RWL	RAINWATER LEADER	4,12	4,12	12	12	NOTE 7	--	--	NOTE 17	GREEN	WHITE
S	SCUM	--	30	--	26	50	WATER	(A)	NOTE 17	YELLOW	BLACK
SA	SAMPLE LINE (SEE LIST AT RIGHT)	16,18,24	--	16,18,24	--	125	WATER	(A)	NOTE 17	YELLOW	BLACK
SC	SPARE CHEMICAL	16	16	16	16	125	WATER	(A)	NOTE 17	YELLOW	BLACK
SD	SANITARY DRAIN AND VENT	4,12	12	12	12,21	NOTE 7	--	--	BLACK	YELLOW	BLACK
SDR	STORM DRAIN	--	8	--	22,28	NOTE 6	WATER	8,(A)28(B)22(C)	BLACK	GREEN	WHITE
SE	SECONDARY EFFLUENT	--	8,26	--	8,26	50	WATER	(A)	NOTE 17	YELLOW	BLACK
SF	SLUDGE FILTRATE	--	26	--	26	50	WATER	(A)	BROWN	YELLOW	BLACK
SG	SLUDGE GAS	31	31	31	31	15	AIR	(A)(D)	BROWN	YELLOW	BLACK
SI	SODIUM SILICATE	6,16	6,16	6,16	6,16	125	WATER	(A)	NOTE 17	YELLOW	BLACK
SN	SUPERNATANT	--	26	--	26	50	WATER	(A)	NOTE 17	YELLOW	BLACK
SO	SULFUR DIOXIDE (GAS OR LIQUID STATE)	10	--	10	--	300	DRY AIR	(A)(D)	NOTE 17	YELLOW	BLACK
SOA	SULFURIC ACID	25	25	--	--	125	AIR	(A)(D)	YELLOW	RED	BLACK
SOS	SULFUR DIOXIDE SOLUTION	16	16	16	16	125	WATER	(A)	LIGHT GREEN	YELLOW	BLACK
SOV	SULFUR DIOXIDE GAS UNDER VACUUM	16	16	16	16	15 IN Hg	VACUUM	(A)(E)	LIGHT GREEN	YELLOW	BLACK
SPD	SUMP PUMP DISCHARGE	2	26	2	26	50	WATER	(A)	NOTE 17	GREEN	WHITE
SS	SANITARY SEWER	--	12	--	12,21	NOTE 7	00	--	BLACK	YELLOW	BLACK
ST	STEAM (LOW PRESSURE TO 10 PSI)	29*	29*	29*	29*	125	WATER	(A)	NOTE 17	YELLOW	BLACK
SU	STRUCTURE UNDERDRAIN	--	--	--	20	NO TEST	REQUIRED		NOTE 17	GREEN	WHITE
SUC	STRUCTURE UNDERDRAIN COLLECTOR	--	12	--	12,21	NOTE 6	WATER	(C)	NOTE 17	GREEN	WHITE
SW	FILTER SURFACE WASHWATER	14,16,18	8,14,15,16,18	2,16,18	2,8,15,16,18	125	WATER	(A)	NOTE 17	GREEN	WHITE
TPR	THICKENER PRESSURIZED RECYCLE	--	26	--	26	50	WATER	(A)	NOTE 17	NOTE 17	NOTE 17
TS	THICKENER SUBNATANT	--	26	--	26	50	WATER	(A)	NOTE 17	NOTE 17	NOTE 17
TSL	THICKENED SLUDGE	--	30	--	30	50	WATER	(A)	BROWN	YELLOW	BLACK
TSO	THICKENER SUBNATANT OVERFLOW	--	26	--	26	50	WATER	(A)	NOTE 17	YELLOW	BLACK
UW	UTILITY WATER (NON-POTABLE WATER)	2,24	2,11	2,24	2,11,19	125	WATER	2,11,24(A) 19(B)	PURPLE	YELLOW	BLACK
V	VACUUM	24	2	24	2	15 IN Hg	VACUUM	(A)(E)	NOTE 17	BLUE	WHITE
WAS	WASTE ACTIVATED SLUDGE	--	26	--	26	50	WATER	(A)	BROWN	YELLOW	BLACK
WLO	WASTE LUBE OIL	9	9	9	9	50	AIR	(A)(D)	RED	YELLOW	BLACK
WW	FILTER WASTE WASHWATER	--	8	--	8	NOTE 6	WATER	(A)	NOTE17	YELLOW	BLACK

PIPING MATERIAL SCHEDULE (SEE NOTE 14)		
GROUP No.	PIPING (SEE NOTE 13)	FITTINGS
1	STEEL, ASTM A53, SCH 40, BLACK WELDED	2 1/2" AND SMALLER, MALLEABLE IRON, ANSI B16.3, THREADED, BANDED, BLACK, 15 PSI OR STEEL, ANSI B16.9, BUTT-WELDED. 3"AND LARGER, CAST IRON, ANSI B16.1, 125 PSI FLGD OR MECH CPLG
2	STEEL, ASTM A53, SCH 40, BLACK WELDED, GALVANIZED	2 1/2" AND SMALLER, MALLEABLE IRON, ANSI B16.3, THREADED, BANDED, GALVANIZED 150 PSI. 3" AND LARGER, CAST IRON, ANSI B16.1, 125 PSI FLGD OR MECH CPLG
3	STEEL, ASTM A106 OR A53, SCH 80, SEAMLESS, BLACK	FORGED STEEL, ANSI B16.11, SOCKET WELDED OR THREADED, BLACK, 2000 PSI, OR STEEL, ANSI B16.9, BUTT-WELDED, SCH 80
4	SAME AS GROUP 1	CAST IRON, ASNI B16.12, THREADED, DRAINAGE PATTERN
5	WELDED STEEL, AWWA C200, UNLINED	WELDED STEEL, FABRICATED, AWWA C200, UNLINED
6	STEEL, ASTM A106, OR A53, SCH 40, SEAMLESS, BLACK	STEEL, ANSI B16.9, BUTT-WELDED, CAST IRON, ANSI B16.1, 125 PSI, FLGD, FORGED STEEL, SOCKET WELDED. ANSI B16.11, 2000 PSI OR STEEL, ANSI B16.5, 150 PSI FLGD
7	SAME AS GROUP NO. 2	MALLEABLE IRON, ANSI B16.3, THREADED, BANDED, GALVANIZED, 300 PSI
8	WELDED STEEL, AWWA C200	WELDED STEEL, AWWA C200, FABRICATED
9	SAME AS GROUP NO. 1	2 1/2" AND SMALLER, MALLEABLE IRON, ANSI B16.3, THREADED, BANDED, BLACK, 150 PSI. 3" AND LARGER, STEEL, ANSI B16.9, BUTT-WELDED
10	SAME AS GROUP NO. 3	1 1/4" AND SMALLER, FORGED STEEL, ANSI B16.11, THREADED OR SOCKET WELDED, BLACK, 3000 PSI, WITH FLGD AMMONIA UNIONS, 1 1/2" AND LARGER, STEEL, ANSI B16.9, BUTT-WELDED OR FLGD, SCH 80
11	DUCTILE IRON, ANSI A21.51, (AWWA C151), 150 PSI, BELL AND SPIGOT, MECH JTS. MECH CPLG, OR 125 PSI FLGD (TYPICAL SERVICE- WATER LINES)	DUCTILE IRON OR CAST IRON, ANSI A21.10, OR AWWA C110, BELL AND SPIGOT, MECH CPLG, FLGD OR MECH JTS. 250 PSI, (PRESSURE RATING)12" AND SMALLER, 150 PSI, (PRESSURE RATING)14" AND LARGER, WITH 125 PSI ANSI B16.1 FLANGES
12	CAST IRON SOIL, ANSI/ASTM A-74, SERVICE WEIGHT, BELL AND SPIGOT OR HUBLESS. AT THE OPTION OF THE CONTRACTOR, DUCTILE IRON (GROUP NO.11) MAY BE SUBSTITUTED	CAST IRON SOIL, ANSI/ASTM A-74, SERVICE WEIGHT, BELL AND SPIGOT OR HUBLESS. AT THE OPTION OF THE CONTRACTOR, DUCTILE IRON (GROUP NO.11) MAY BE SUBSTITUTED
13	CORROSION RESISTANT (HIGH SILICON CONTENT) CAST IRON, SERVICE WEIGHT, BELL AND SPIGOT OR HUBLESS	CORROSION RESISTANT (HIGH SILICON CONTENT) CAST IRON, SERVICE WEIGHT, BELL AND SPIGOT OR HUBLESS
14	STAINLESS STEEL, TYPE 316, ASTM A 312, SCH 40S	STAINLESS STEEL, TYPE 316 ANSI B16.3, SCREWED, 150 PSI ANSI B16.9, BUTT-WELDED, SCH 40S, OR 150 PSI FLGD
15	STAINLESS STEEL, TYPE 316, ASTM A 312, SCH 10S	STAINLESS STEEL, TYPE 316 ANSI B16.9 BUTT-WELDED SCH 150 PSI FLGD
16	POLYVINYL CHLORIDE, SCH 80, NORMAL IMPACT. ASTM D1785	POLYVINYL CHLORIDE, SCH 80, NORMAL IMPACT, SOCKET SOLVENT WELD JTS, ASTM D2467
17	POLYPROPYLENE, ASTM D2146, SCH 40, WITH HEAT FUSED JTS	POLYPROPYLENE, SCH 40, DRAINAGE TYPE WITH HEAT FUSED SOCKET JTS
18	FIBERGLASS REINFORCED PLASTIC, ASTM D2996, FILAMENT-WOUND, SOCKET AND SPIGOT ENDS, ADHESIVE BONDED. SEE SPECIFICATION 15860	FIBERGLASS REINFORCED PLASTIC, FILAMENT-WOUND, SOCKET ENDS, ADHESIVE BONDED, OR FIBERGLASS FLGD
19	POLYVINYL CHLORIDE PRESSURE PIPE ASTM D2241 WITH BELL AND SPIGOT JTS	CAST IRON, 150 PSI, FOR POLYVINYL CHLORIDE PIPE, AWWA C110 CEMENT MORTAR LINED, AWWA C104
20	VITRIFIED CLAY, PERFORATED, ASTM C 700, EXTRA STRENGTH, FLEXIBLE COMPRESSION JTS FOR BELL AND SPIGOT PIPE OR PLAIN END WITH MECH COMPRESSION JTS	VITRIFIED CLAY, ASTM C700, FLEXIBLE JTS FOR BELL AND SPIGOT PIPE OR PLAIN END WITH MECH COMPRESSION JTS
21	VITRIFIED CLAY, ASTM C700, EXTRA STRENGTH, FLEXIBLE COMPRESSION JTS FOR BELL AND SPIGOT PIPE OR PLAIN END WITH MECH COMPRESSION JTS	VITRIFIED CLAY, ASTM C700, FLEXIBLE JTS FOR BELL AND SPIGOT PIPE OR PLAIN END WITH MECH COMPRESSION JTS
22	REINFORCED CONCRETE, ASTM C76, T&G JTS. (TYPICAL SERVICE-CULVERTS)	SAME AS GROUP NO. 8
23	TEMPERED GLASS (ARMORED WHERE BURIED) ANSI/ASTM C599	TEMPERED GLASS DRAINAGE TYPE WITH COMPRESSION COUPLING & TEFLON JTS, ANSI/ASTM C599
24	COPPER, ASTM B88, TYPE K, SOFT TEMPERED WHERE BURIED, HARD TEMPERED WHERE EXPOSED	EXISTING
25	STEEL, ASTM A106 OR A53, SCH 40, SEAMLESS, BLACK, SARAN OR POLYPROPYLENE-LINED	STEEL, ANSI B16.5, 150 PSI FLGD, SARAN OR POLYPROPYLENE-LINED
26	SAME AS GROUP NO. 11 (TYPICAL SERVICE-SLUDGE AND SEWAGE LINES)	SAME AS GROUP NO. 11
27	POLYVINYL CHLORIDE GRAVITY SEWER PIPE, ASTM D3034, BELL AND SPIGOT	POLYVINYL CHLORIDE, ANSI/ASTM D3034, BELL AND/OR SPIGOT
28	REINFORCED CONCRETE, AWWA C302, CLASS-SEE DRAWINGS. (TYPICAL SERVICE-PRESSURE PIPELINES)	SAME AS GROUP NO. 8
29	SAME AS GROUP NO.1	2" AND SMALLER, MALLEABLE IRON, ANSI B16.3, THREADED, BANDED, BLACK, 150 PSI. 2 1/2" AND LARGER, STEEL ANSI B16.9, BUTT-WELDED
30	SAME AS GROUP NO. 11, GLASS-LINED OR STEEL ASTM A53, SCH 40, GLASS LINED	SAME AS GROUP NO. 11, GLASS-LINED OR STEEL, ANSI B16.9, SCH 40, GROOVED WITH MECH CPLG, GLASS-LINED
31	2-2/1" AND SMALLER, STEEL, ASTM A106 OR A53, SCH 80, SEAMLESS, BLACK. 3" AND LARGER DUCTILE IRON, ANSI A21.51 (AWWA C151), OR CAST IRON ANSI A21.6 OR 21.8 MECH CPLG OR 125 PSI FLGD	2 1/2" AND SMALLER, FORGED STEEL, ANSI B16.11, SOCKET WELDED OR THREADED, BLACK 2000 PSI, OR STEEL ANSI B16.9 BUTT-WELDED SCH 80 3" AND LARGER, DUCTILE IRON OR CAST IRON, ANSI A21.20 AWWA C110, MECH COUPLING OR 125 PSI FLGD
32	12" AND SMALLER, AWWA C-900 WITH RESTRAINED JOINTS, DR 18, 14" AND LARGER, AWWA C-905 WITH RESTRAINED JOINTS, DR 25	SAME AS GROUP NO. 11
33	HIGH DENSITY POLYETHYLENE, DUCTILE IRON PIPE (DIPS), DR 11 AWWA C-906, FUSION BUTT WELDED JOINTS AND FULLY RESTRAINED FITTINGS	SAME AS GROUP NO. 11
34	POLYETHYLENE SERVICE TUBE, PE 4710, COPPER TUBE SIZE ASTM, D2737, PRESSURE CLASS 250, DR9	--
35	CHLORINATED POLYVINYL CHLORIDE PRESSURE PIPE, ASTM F441, SCHEDULE 40 WITH SOLVENT WELDED JOINTS PER ASTM F493, SCREWED OR FLANGED JOINTS	SOLVENT WELDED: ASTM F439, SCHEDULE 80. THREADED FITTINGS: ASTM F437, SCHEDULE 80. FLANGED FITTINGS: ANSI / ASME B16.5
36	REINFORCED CONCRETE PIPE ARCH, LDOTD AML, ASTM C506 AS MODIFIED, RUBBER GASKETED JOINTS	--
37	PLASTIC DRAINAGE PIPE, RIBBED POLYVINYL CHLORIDE DRAINAGE PIPE, ASTM F794 OR F949 SERIES 46 WITH UV INHIBITORS, RUBBER GASKETED JOINTS	--
38	BITUMINOUS COATED CORRUGATED STEEL PIPE AND PIPE ARCH, AASHTO M196, RUBBER GASKETED JOINTS WITH COUPLING BANDS	--
39	CORRUGATED ALUMINUM PIPE AND PIPE ARCH PER AASHTO M196, RUBBER GASKETED JOINTS WITH COUPLING BANDS	--



01-D1	REMOVE EXISTING PUMP MOTOR, JUNCTION BOX, CONDUIT, AND APPURTENANCES. RETAIN FOR RE-INSTALLATION.
01-D2	REMOVE EXISTING 54" DRAINAGE PUMP AND MOTOR. MODIFY AND REHABILITATE ONE PUMP AND ONE MOTOR AND RETURN UNREPAIRED ITEMS TO OWNER
01-D3	MODIFY 20" PUMP COLUMN PER MECHANICAL DRAWINGS AND RE-INSTALL.
01-D4	REMOVE EXISTING CONTROL PANEL, DISCONNECT, METER, AND SWITCH. RELOCATE AS ILLUSTRATED ON ELECTRICAL PLANS.
01-D5	DEMOLISH AND DISPOSE OF EXISTING CHECK VALVE AND FLANGE AND EXISTING 6" NPT CAP.



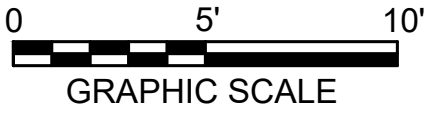


EXISTING SITE PLAN

SCALE : 1" = 10'-0" (22" x 34" SHEET)

- NOTES BY SYMBOL:
- A EXISTING LAKEFRONT PUMP STATION (TO BE REHABILITATED)
 - B EXISTING CANAL (NO WORK - TO REMAIN)
 - C CLECO SUBSTATION (NO WORK - TO REMAIN)
 - D EXISTING SERVICE POINT AND CONTROL PANEL (EQUIPMENT TO BE RELOCATED TO ELEVATED PLATFORM)
 - E EXISTING ELEVATED PLATFORM

- GENERAL NOTES:
- AERIAL IMAGE COURTESY OF GOOGLE EARTH. AERIAL IS FOR REFERENCE OF GENERAL LOCATION ONLY. SURFACE AND BELOW SURFACE FEATURE LOCATIONS SHALL BE FIELD VERIFIED.

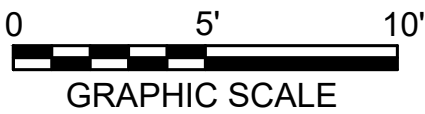


SUBMITTED BY: PROJECT MANAGER 37832 LICENSE NO.	SUBMITTED BY: COMPANY OFFICER 37832 LICENSE NO.		
 H. Davis Cole & Associates, LLC Consulting Engineers NEW ORLEANS, LA			
REVISION RECORD			
MARK	DATE	BY	CHKD
-	RELEASED FOR BIDS & CONSTRUCTION	MAR 2020	DAM
DESCRIPTION		DATE	BY
DESIGNED BY:		DAM	
DRAWN BY:		DAM	
CHECKED BY:		DAM	
DATE:		DEC, 2020	
DETAILED BY:		DAM	
HDC PROJECT NO.		2016-13	
ST. TAMMY PARISH LOUISIANA			
ST TAMMANY PARISH GOVERNMENT 21454 KOOP DRIVE MANDEVILLE, LA 70471			
EXISTING & PROPOSED SITE PLAN			
SHEET ID			
01-C1			
SHEET SET			
9 OF 20			



REHABILITATED SITE PLAN

SCALE : 1" = 10'-0" (22" x 34" SHEET)



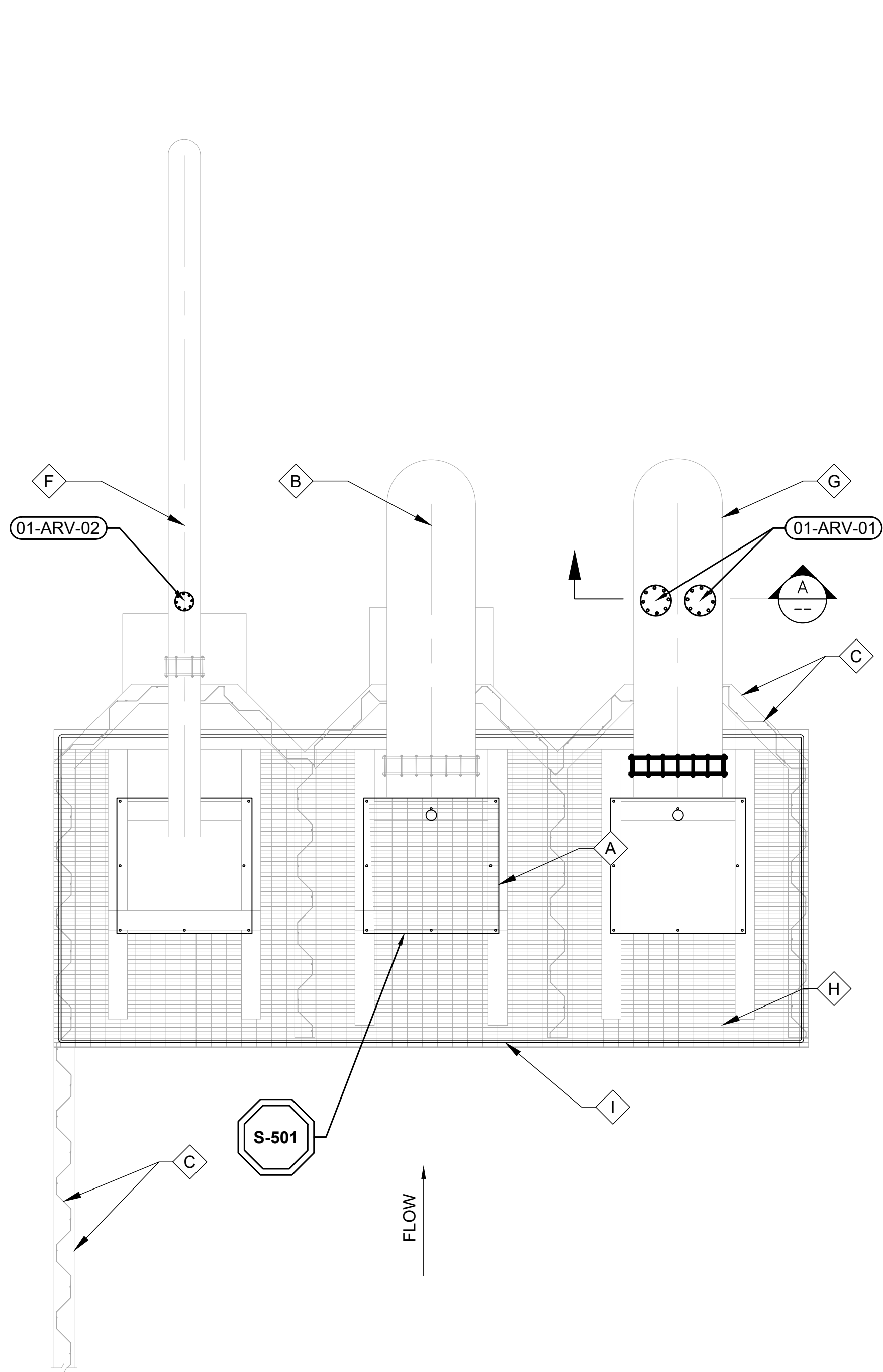
GENERAL NOTES:

1. AERIAL IMAGE COURTESY OF GOOGLE EARTH. AERIAL IS FOR REFERENCE OF GENERAL LOCATION ONLY. SURFACE AND BELOW SURFACE FEATURE LOCATIONS SHALL BE FIELD VERIFIED.

NOTES BY SYMBOL:

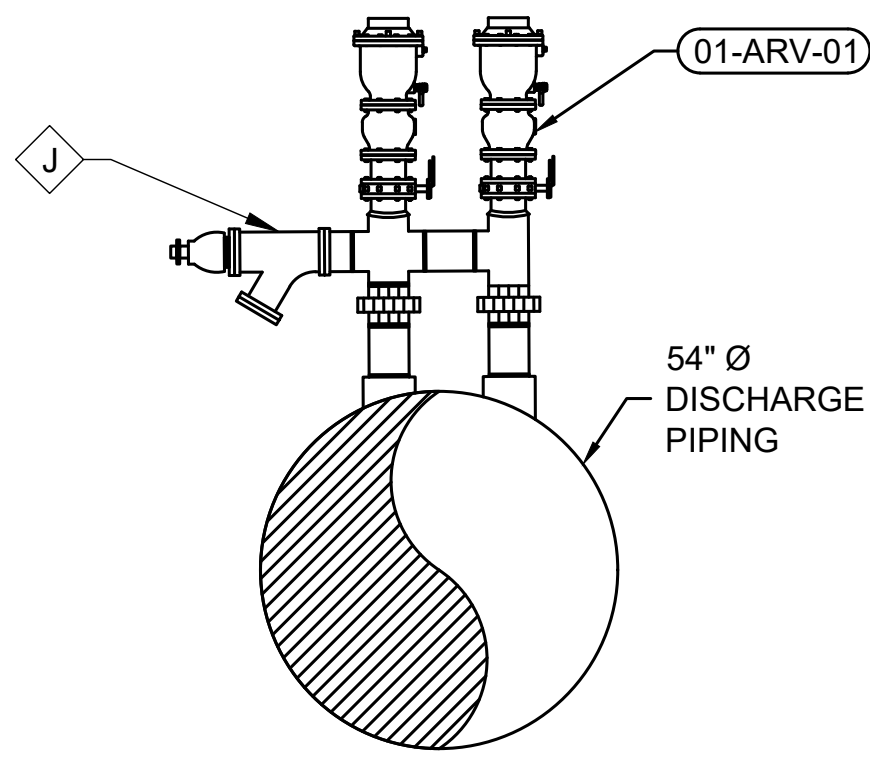
- A** EXISTING LAKEFRONT PUMP STATION (TO BE REHABILITATED)
- B** EXISTING CANAL (NO WORK - TO REMAIN)
- C** CLECO SUBSTATION (NO WORK - TO REMAIN)
- D** RELOCATED SERVICE POLE FOR 75HP PUMP
- E** CONTROL AND POWER DISTRIBUTION EQUIPMENT FOR 75HP PUMP (RELOCATE EXISTING CONTROL PANEL, LOAD BREAK DISCONNECT, LINE BREAK DISCONNECT, AND METER TO NEW RACK ON ELEVATED PLATFORM.
- F** NEW SERVICE POLE FOR 350 HP PUMP
- G** CONTROL AND POWER DISTRIBUTION EQUIPMENT FOR 350 HP PUMP (SEE ELECTRICAL FOR LOCATIONS AND REQUIRMENTS)

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REVISION RECORD				
MARK	DESCRIPTION	DATE	BY	CHKD
	RELEASED FOR BIDS & CONSTRUCTION	MAR 2020	DAM	DAM
DESIGNED BY: DAM				
DRAWN BY: DAM				
CHECKED BY: DAM				
DATE: DEC, 2020	DETAILED BY: DAM	HDC PROJECT NO. 2016-13		
LAKEFRONT PUMP STATION, PHASE 3		LOUISIANA		
ST. TAMMY PARISH		ST. TAMMANY PARISH GOVERNMENT		
		21454 KOOP DRIVE		
		MANDEVILLE, LA 70471		
		REHABILITATED SITE PLAN		
SHEET ID 01-C2				
SHEET SET 10 OF 20				



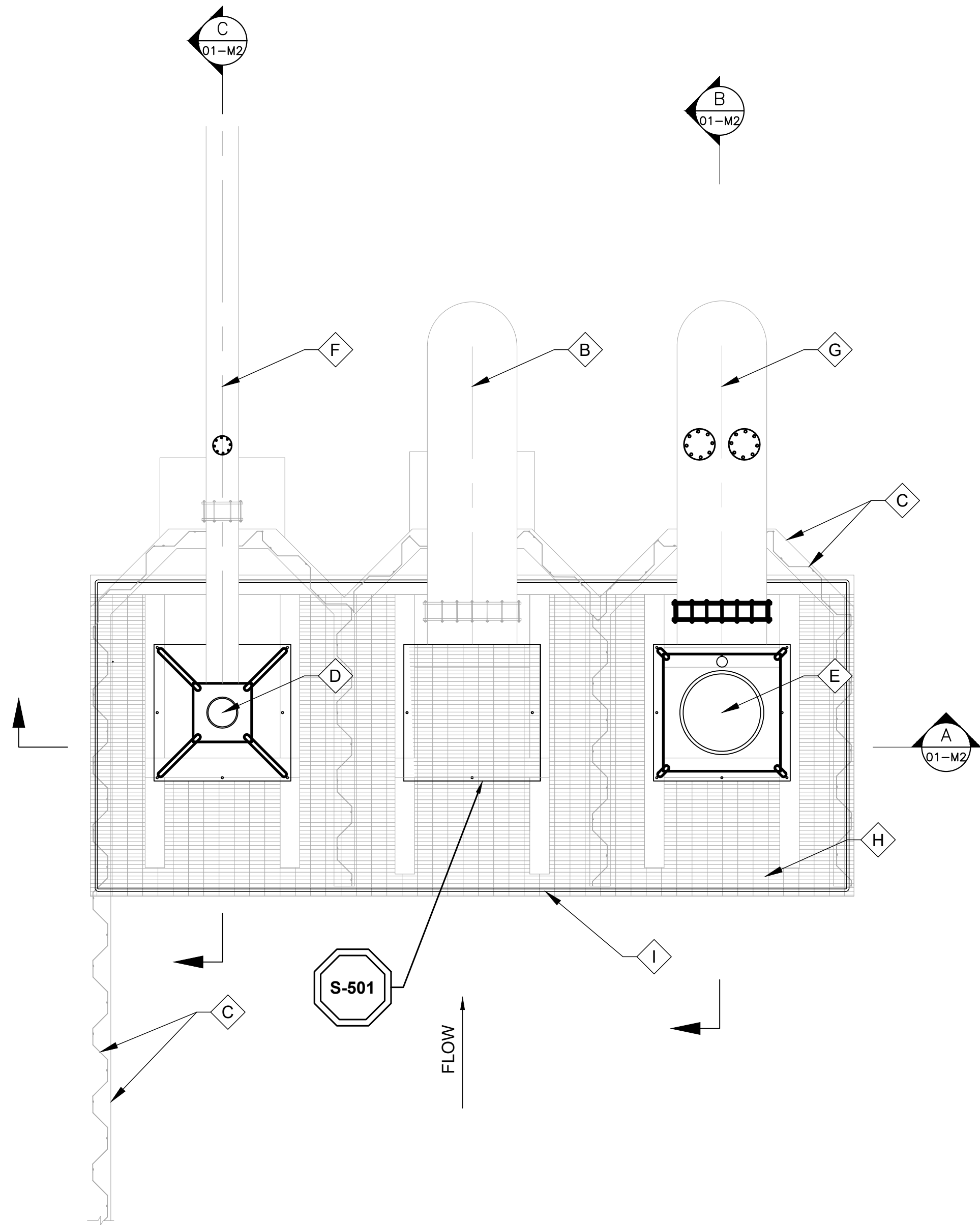
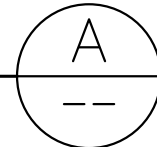
MECHANICAL PLAN @ EL 4.32 (ABOVE BASE PLATES)

SCALE: 1" = 5'-0" (22" x 34" SHEET)



SECTION

SCALE: N.T.S.



MECHANICAL PLAN @ EL 13.00 (ABOVE ELEVATED MOTORS)

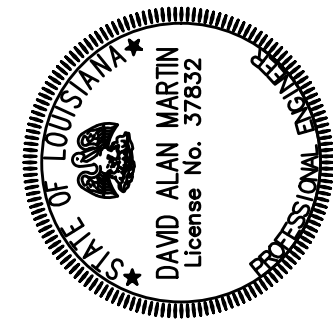
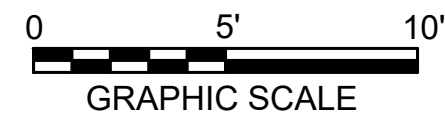
SCALE: 1" = 5'-0" (22" x 34" SHEET)

VALVE SCHEDULE

VALVE DESIGNATION	DESCRIPTION	AREA	QUANTITY	DIAMETER	SPECIFICATIONS SECTION	REMARKS
01-ARV-01	WELL SERVICE AIR RELEASE VALVE	LAKEFRONT PUMP STATION	2	8"	15200	PROVIDE TAPPED BLIND FLANGE AND SCHEDULE 40 STEEL NIPPLE TO CONNECT TO EXISTING NPT PIPING.
01-ARV-02	WELL SERVICE AIR RELEASE VALVE	LAKEFRONT PUMP STATION	1	4"	15200	PROVIDE TAPPED BLIND FLANGE AND SCHEDULE 40 STEEL NIPPLE TO CONNECT TO EXISTING NPT PIPING.

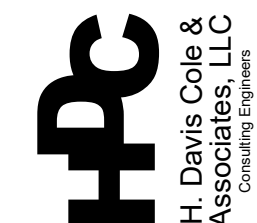
NOTES BY SYMBOL:

- A** PUMP REMOVED - EXISTING OPENING TO BE COVERED WITH GRATING (SEE STRUCTURAL DETAILS FOR GRATING DETAIL)
- B** EXISTING DISCHARGE PIPING TO REMAIN - WELD 54" BLIND FLANGE TO EXISTING PUMP DISCHARGE PER SECTION 11178.
- C** EXISTING STEEL SHEET PILE WALL AND CAP TO REMAIN. NO COATING REQUIRED.
- D** REHABILITATED ELEVATED PUMP MOTOR (75 HP) (PUMP MOTOR REHABILITATED IN PREVIOUS PROJECT), PUMP COLUMN AND SHAFT PER SECTION 11178 (**01-E1**).
- E** REHABILITATED ELEVATED PUMP MOTOR (350 HP), PUMP COLUMN AND SHAFT PER SECTION 11178 (**01-E2**). INSTALL NEW DISMANTLING JOINT ON PUMP DISCHARGE PER SECTION 11178.
- F** EXISTING DISCHARGE PIPE (TO REMAIN) (20" DIAMETER) TO BE COATED PER SECTION 09800.
- G** EXISTING DISCHARGE PIPE (TO REMAIN) (54" DIAMETER) TO BE COATED PER SECTION 09800.
- H** EXISTING GALVANIZED GRATING AND SUPPORT STEEL TO REMAIN. COAT ALL EXPOSED SURFACES PER SECTION 09800.
- I** EXISTING GALVANIZED STEEL HANDRAIL. COAT PER SECTION 09800.
- J** EXISTING MANUAL AIR RELEASE ASSEMBLY TO BE REMOVED AND REPLACED. (SEE VALVE SCHEDULE, THIS SHEET)



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PROJECT MANAGER
37832
LICENSE NO.

SUBMITTED BY:
COMPANY OFFICER
37832
LICENSE NO.



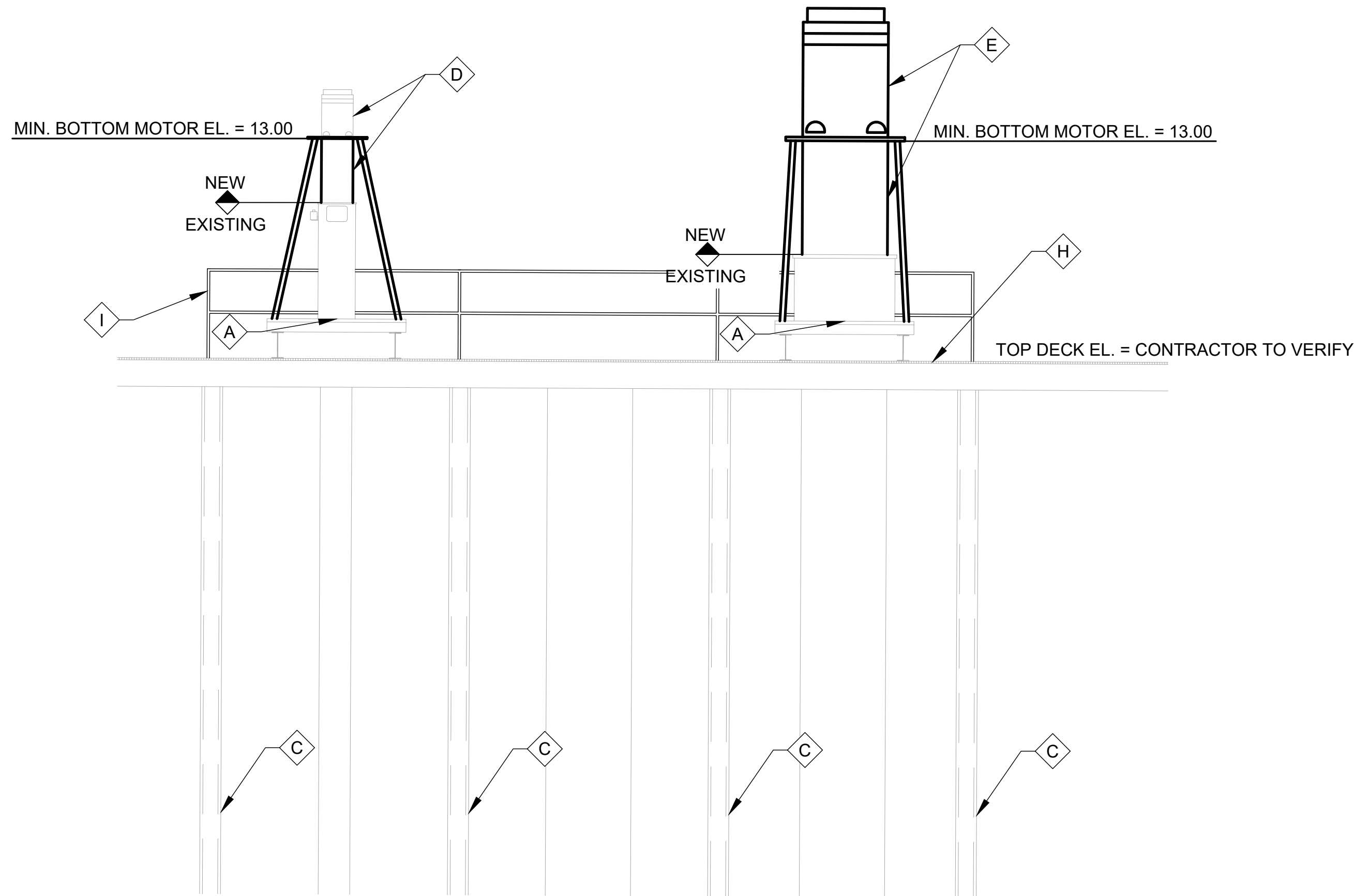
REVISION RECORD			
MARK	DESCRIPTION	DATE	BY
	RELEASED FOR BIDS & CONSTRUCTION	MAR 2020	DAM
			CHKD

DESIGNED BY:	DAM
DRAWN BY:	DAM
CHECKED BY:	DAM
DATE:	DEC. 2020
DETAILED BY:	DAM
HDC PROJECT NO.	2016-13

LAKEFRONT PUMP STATION, PHASE 3	LOUISIANA
ST. TAMMY PARISH	ST. TAMMANY PARISH GOVERNMENT
	21454 KOOP DRIVE
	MANDEVILLE, LA 70471
	MECHANICAL PLAN

SHEET ID
01-M1

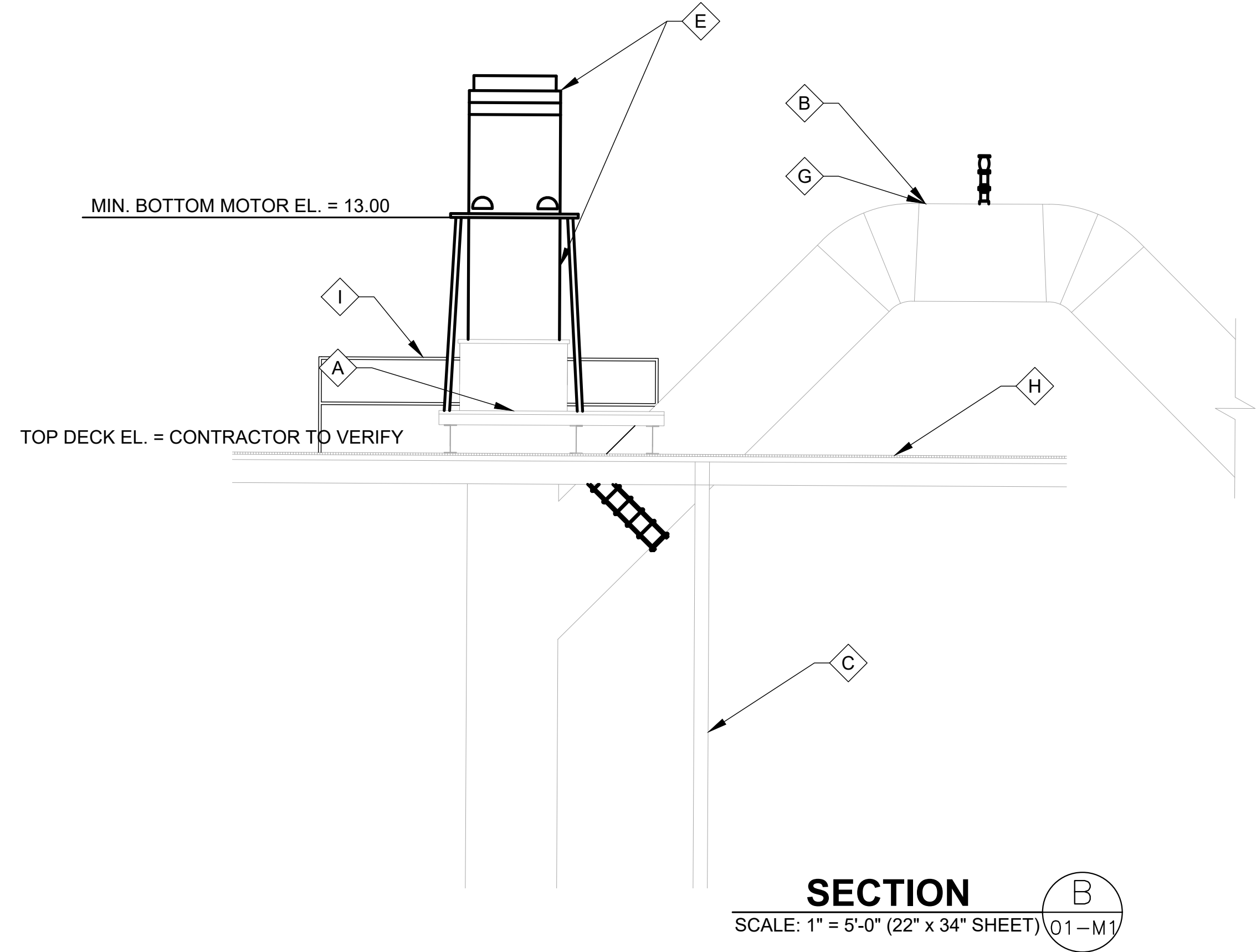
SHEET SET
13 OF **20**



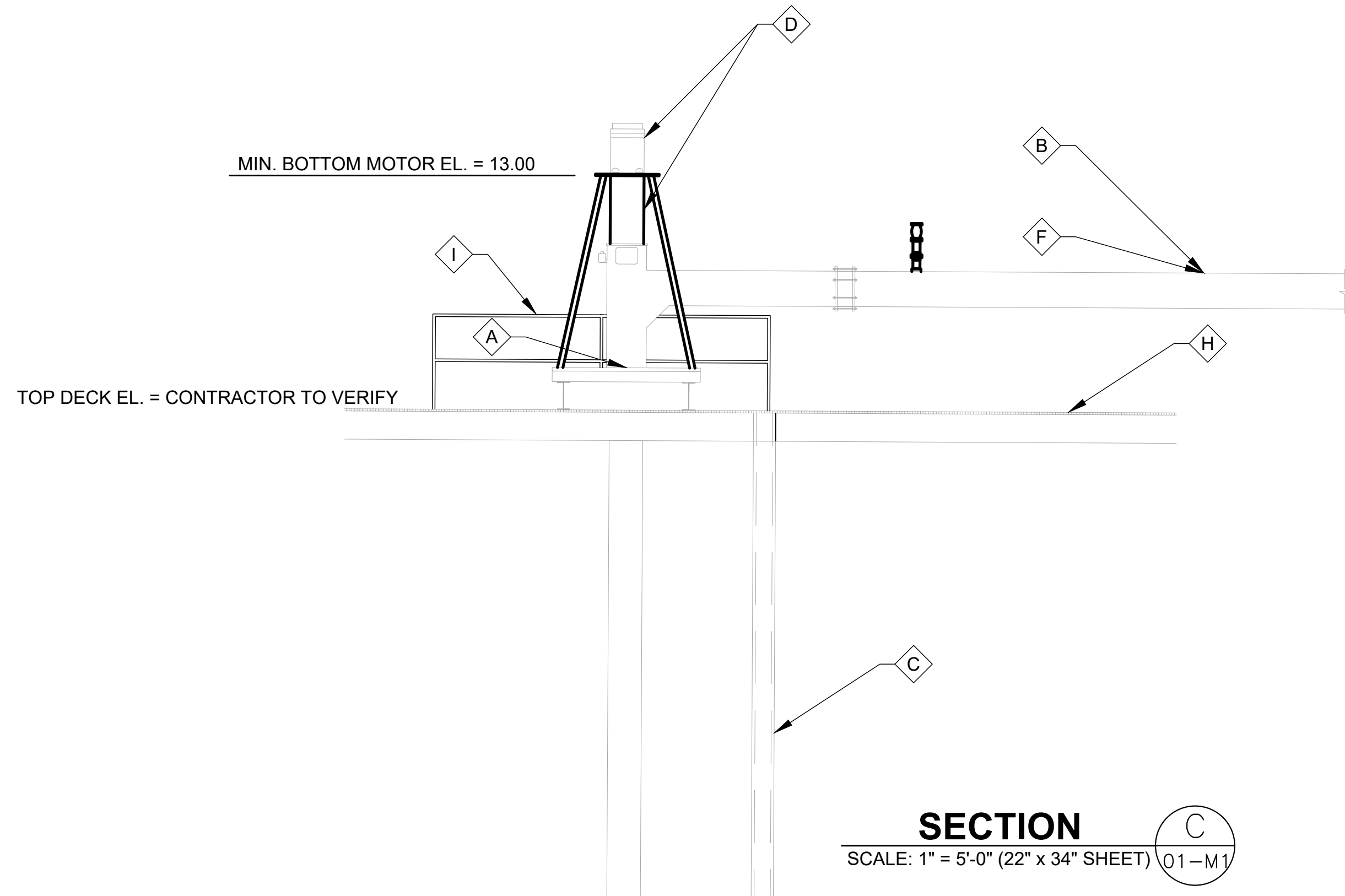
SECTION
SCALE: 1" = 5'-0" (22" x 34" SHEET) **A**
01-M1

NOTES BY SYMBOL:

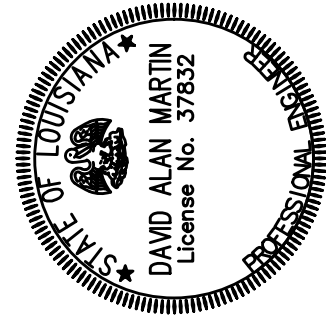
- A** EXISTING PUMP BASE PLATES TO BE BLASTED AND COATED PER SECTION 09800
- B** EXISTING DISCHARGE PIPING TO BE BLASTED AND COATED PER SECTION 09800
- C** EXISTING STEEL SHEET PILE WALL AND CAP TO REMAIN. NO COATING REQUIRED.
- D** REHABILITATED ELEVATED PUMP MOTOR (75 HP) (PUMP MOTOR REHABILITATED IN PREVIOUS PROJECT), PUMP COLUMN AND SHAFT PER SECTION 11178 ((**01-E1**)).
- E** REHABILITATED ELEVATED PUMP MOTOR (350 HP), PUMP COLUMN AND SHAFT PER SECTION 11178 ((**01-E2**)). PROVIDE NEW DISMANTLING JOINT PER SECTION 11178.
- F** EXISTING DISCHARGE PIPE (TO REMAIN) (20" DIAMETER) TO BE COATED PER SECTION 09800.
- G** EXISTING DISCHARGE PIPE (TO REMAIN) (54" DIAMETER) TO BE COATED PER SECTION 09800.
- H** EXISTING GALVANIZED GRATING AND SUPPORT STEEL TO REMAIN. COAT ALL EXPOSED SURFACES PER SECTION 09800.
- I** EXISTING GALVANIZED STEEL HANDRAIL. COAT PER SECTION 09800.



SECTION
SCALE: 1" = 5'-0" (22" x 34" SHEET) **B**
01-M1



SECTION
SCALE: 1" = 5'-0" (22" x 34" SHEET) **C**
01-M1



SUBMITTED BY:
PROJECT MANAGER
37832
LICENSE NO.

SUBMITTED BY:
H. DAVIS COLE
COMPANY OFFICER
3918
LICENSE NO.



REVISION RECORD			
MARK	DESCRIPTION	DATE	BY
	RELEASED FOR BIDS & CONSTRUCTION	MAR 2020	DAM
			CHKD

DESIGNED BY:	DAM
DATE:	DEC. 2020
DRAWN BY:	DAM
DETAILED BY:	DAM
CHECKED BY:	DAM
HDC PROJECT NO.	2016-13

LAKEFRONT PUMP STATION, PHASE 3

LOUISIANA

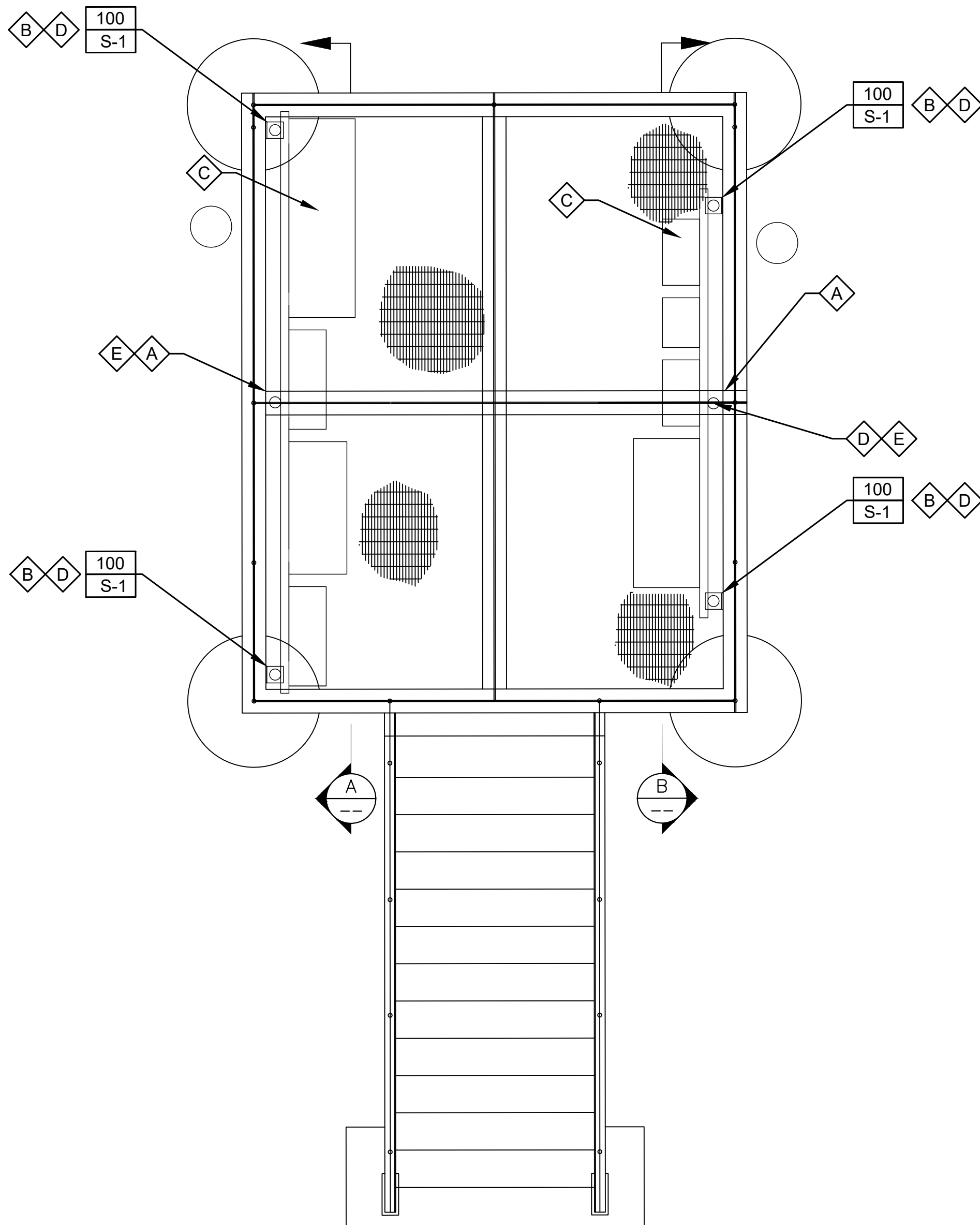
ST. TAMMY PARISH

ST TAMMANY PARISH GOVERNMENT
21454 KOOP DRIVE
MANDEVILLE, LA 70471

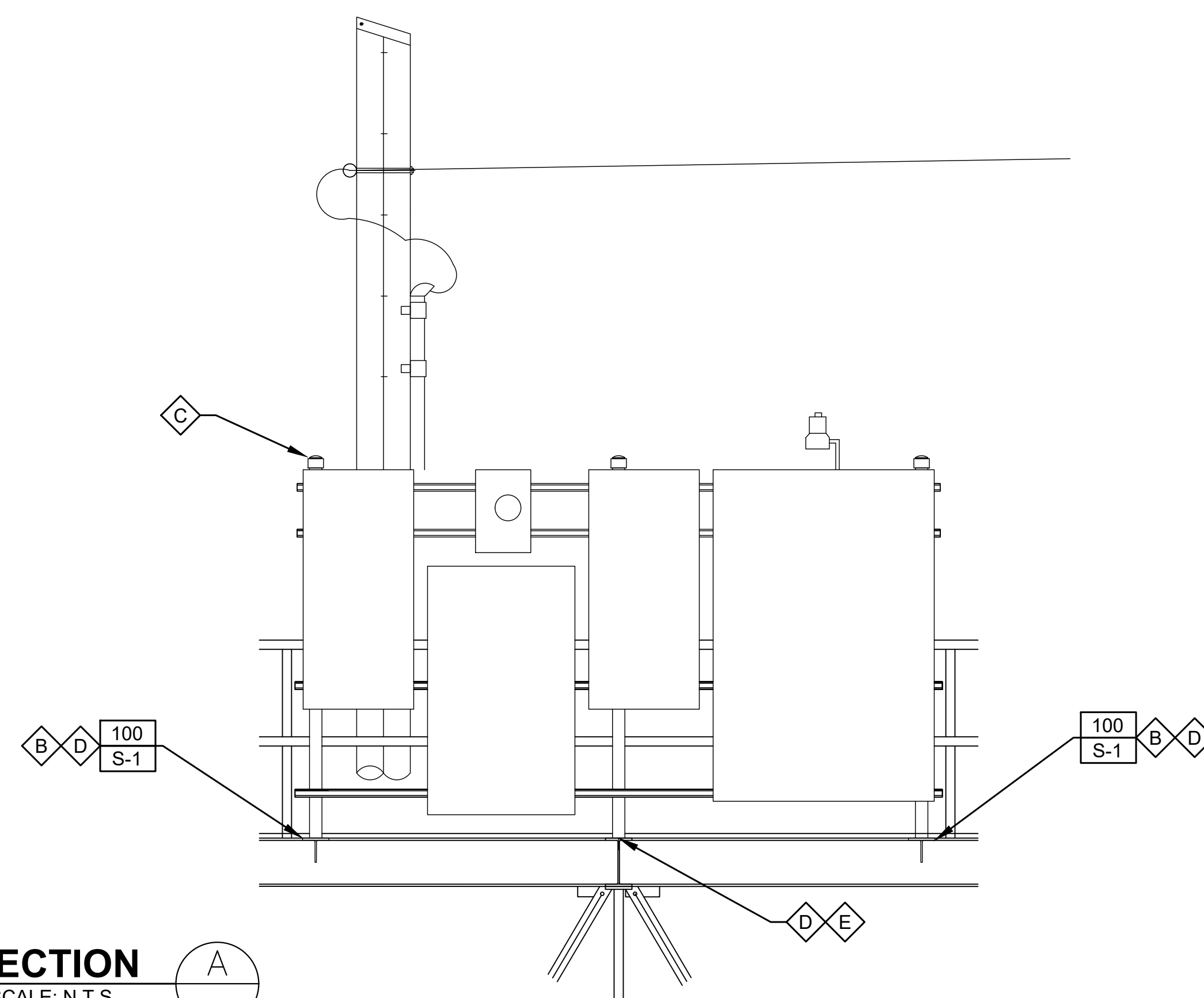
MECHANICAL SECTIONS

SHEET ID
01-M2

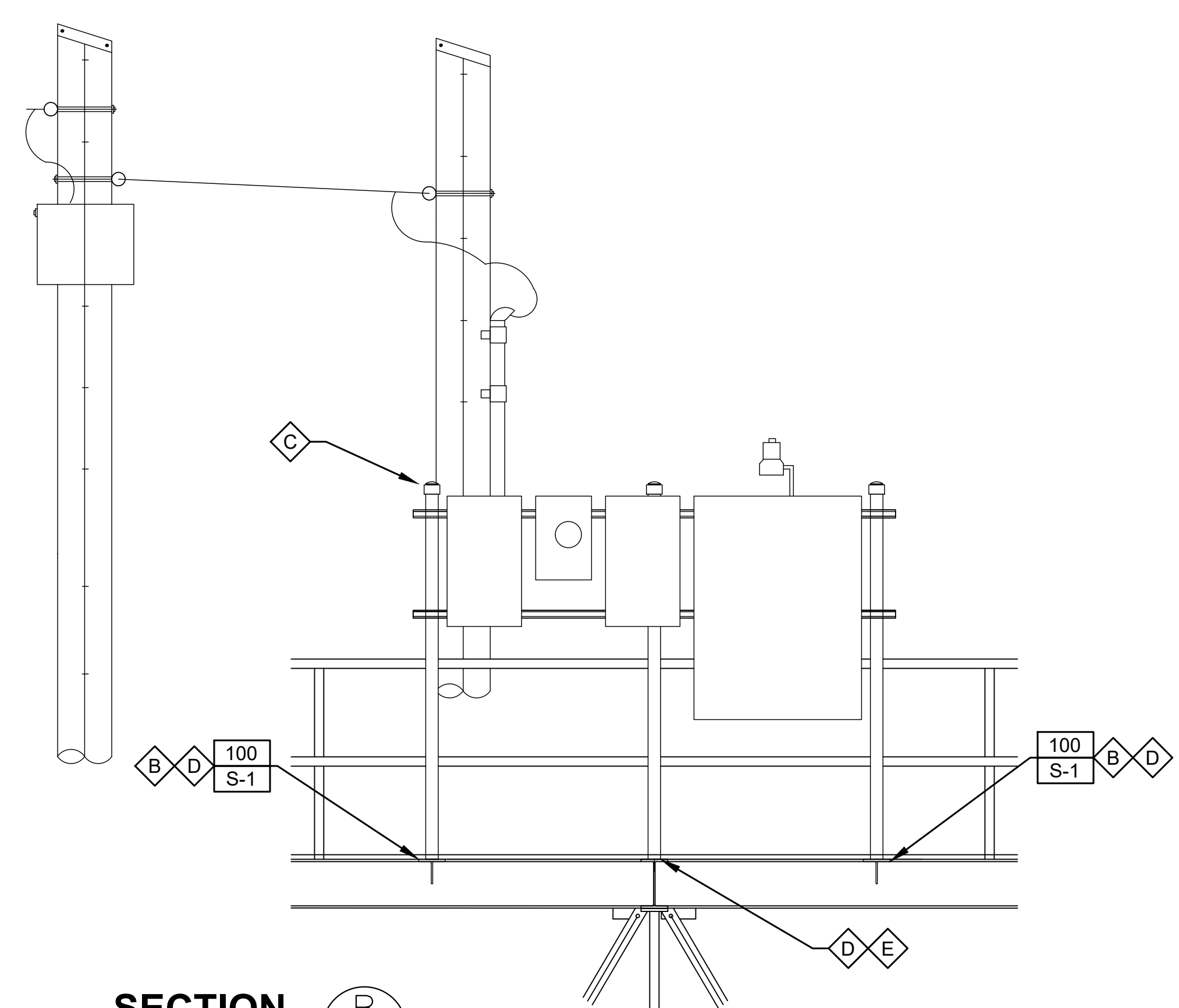
SHEET SET
14 OF **20**



STRUCTURAL MODIFICATIONS PLAN
SCALE : 1" = 10'-0" (22" x 34" SHEET)



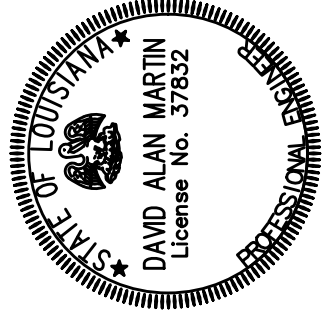
SECTION A
SCALE: N.T.S.



SECTION B
SCALE: N.T.S.

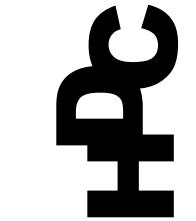
- GENERAL NOTES:**
- 1) SEE SECTION 05500 - MISCELLANEOUS METALWORK AND SECTION 09800 FOR FABRICATION AND COATING REQUIREMENTS.
 - 2) SEE MECHANICAL SHEETS FOR REQUIRED GRATING LOCATIONS.
 - 3) SEE ELECTRICAL SHEETS FOR EQUIPMENT AND RACK DETAILS.

- NOTES BY SYMBOL:**
- A** EXISTING PLATFORM STRUCTURAL STEEL BEAM (TO REMAIN)
 - B** FIELD WELD ELECTRICAL RACK PIPE SUPPORTS TO STANDOFF PLATE. REPAIR GALVANIZING DAMAGED BY WELDING.
 - C** ELECTRICAL EQUIPMENT AND RACK (SEE ELECTRICAL FOR EQUIPMENT AND RACK DETAILS)
 - D** FIELD CUT EXISTING GRATING TO ALLOW FOR INSTALLATION OF ELECTRICAL RACK
 - E** FIELD WELD ELECTRICAL RACK PIPE SUPPORTS TO EXISTING STEEL BEAM. REPAIR GALVANIZING DAMAGED BY WELDING.



SUBMITTED BY:
DAVID ALAN MARTIN
PROJECT MANAGER

SUBMITTED BY:
H. DAVIS COLE
COMPANY OFFICER



H. Davis Cole & Associates, LLC

Consulting Engineers

NEW ORLEANS, LA

REVISION RECORD			
MARK	DESCRIPTION	DATE	BY
	RELEASED FOR BIDS & CONSTRUCTION	MAR 2020	DAM
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DESIGNED BY:	DAM
DATE:	DEC. 2020
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DETAILED BY:	DAM
CHECKED BY:	DAM
HDC PROJECT NO.	2016-13

LAKEFRONT PUMP STATION, PHASE 3

LOUISIANA

ST. TAMMY PARISH

ST TAMMANY PARISH GOVERNMENT

21454 KOOP DRIVE

MANDEVILLE, LA 70471

STRUCTURAL PLAN AND SECTIONS

SHEET ID

01-S1

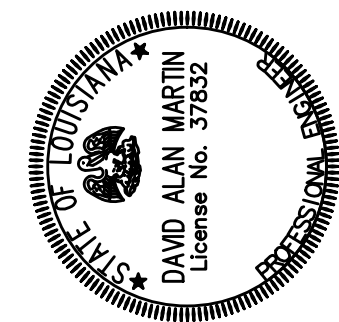
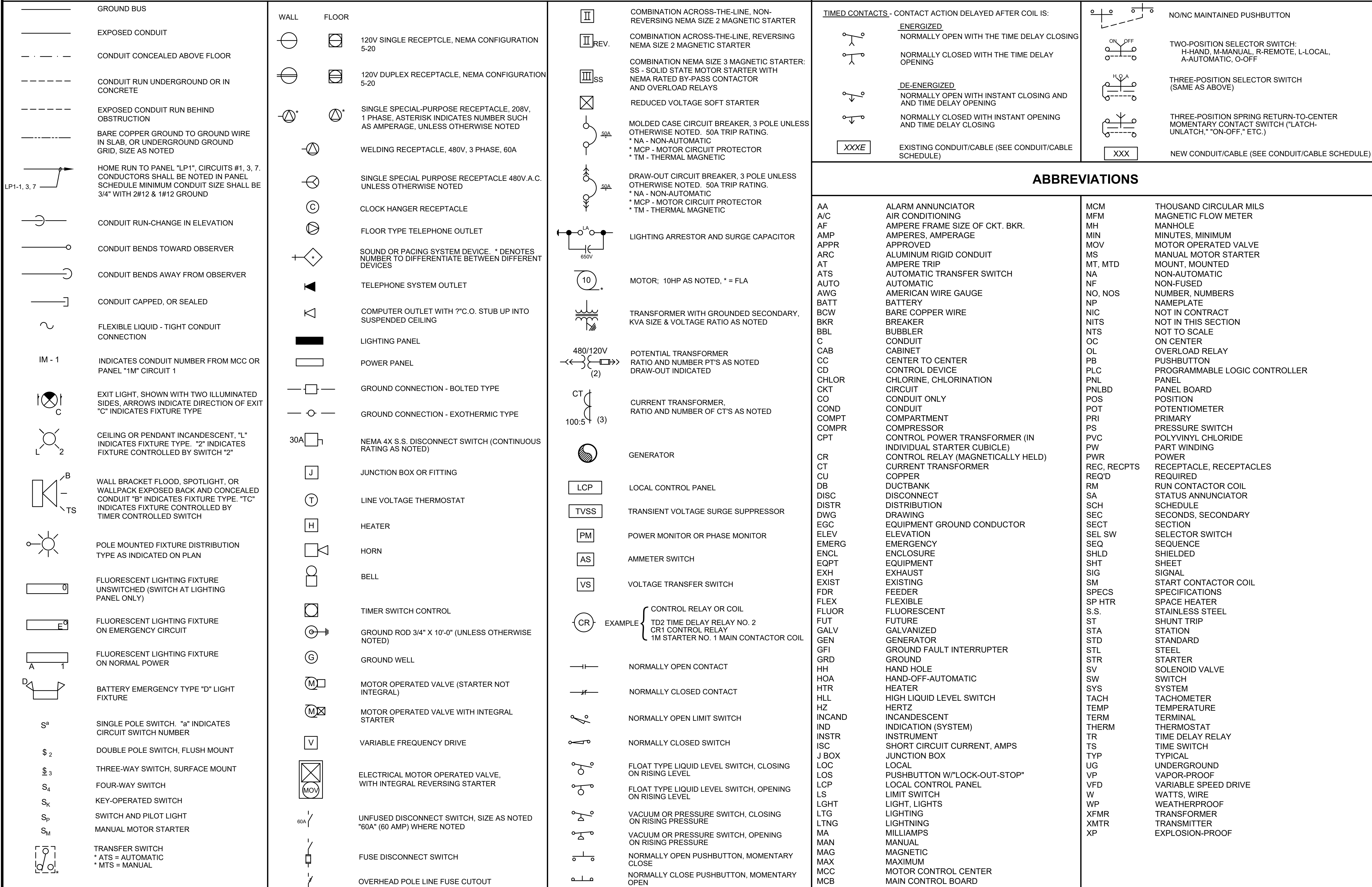
SHEET SET

12 OF **20**

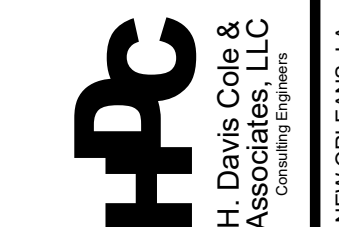
ELECTRICAL SYMBOLS

PLAN VIEW / ONE LINE DIAGRAM

ONE LINE DIAGRAM



SUBMITTED BY: DAVID A. MARTIN PROJECT MANAGER	37832 LICENSE NO.
SUBMITTED BY: H. DAVIS COLE COMPANY OFFICER	30219 LICENSE NO.

[illegible]

DATE:	DEC, 2020	DAM
DESIGNED BY:	DAM	
DETAILED BY:	DAM	
DRAWN BY:	DAM	
HDC PROJECT NO.	2016-13	CHECKED BY: DAM

LAKEFRONT PUMP STATION, PHASE 3

ST. TAMMY PARISH LOUISIANA

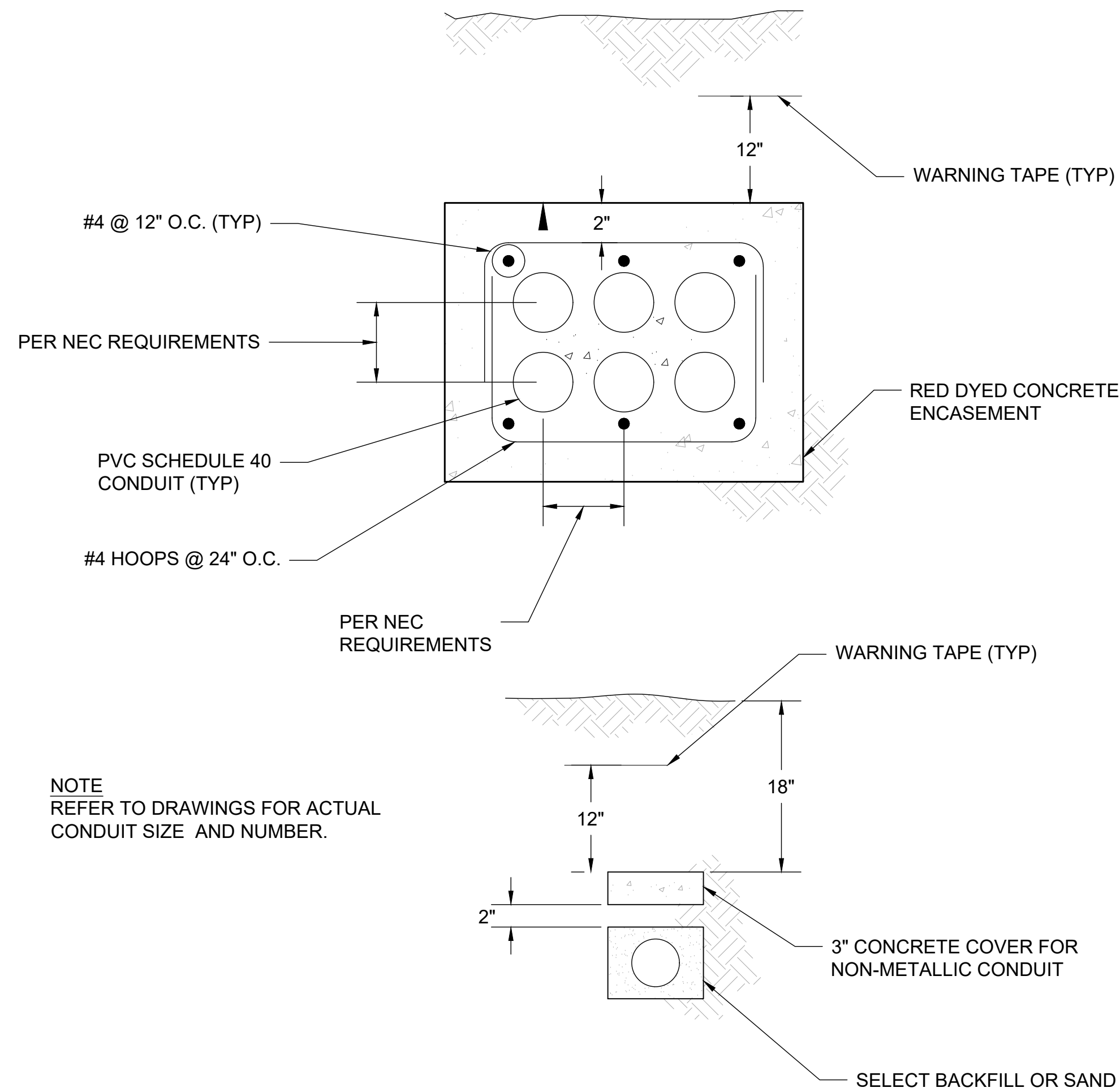
ST TAMMANY PARISH GOVERNMENT
21454 KOOP DRIVE
MANDEVILLE, LA 70471

ELECTRICAL SYMBOLS AND ABBREVIATIONS

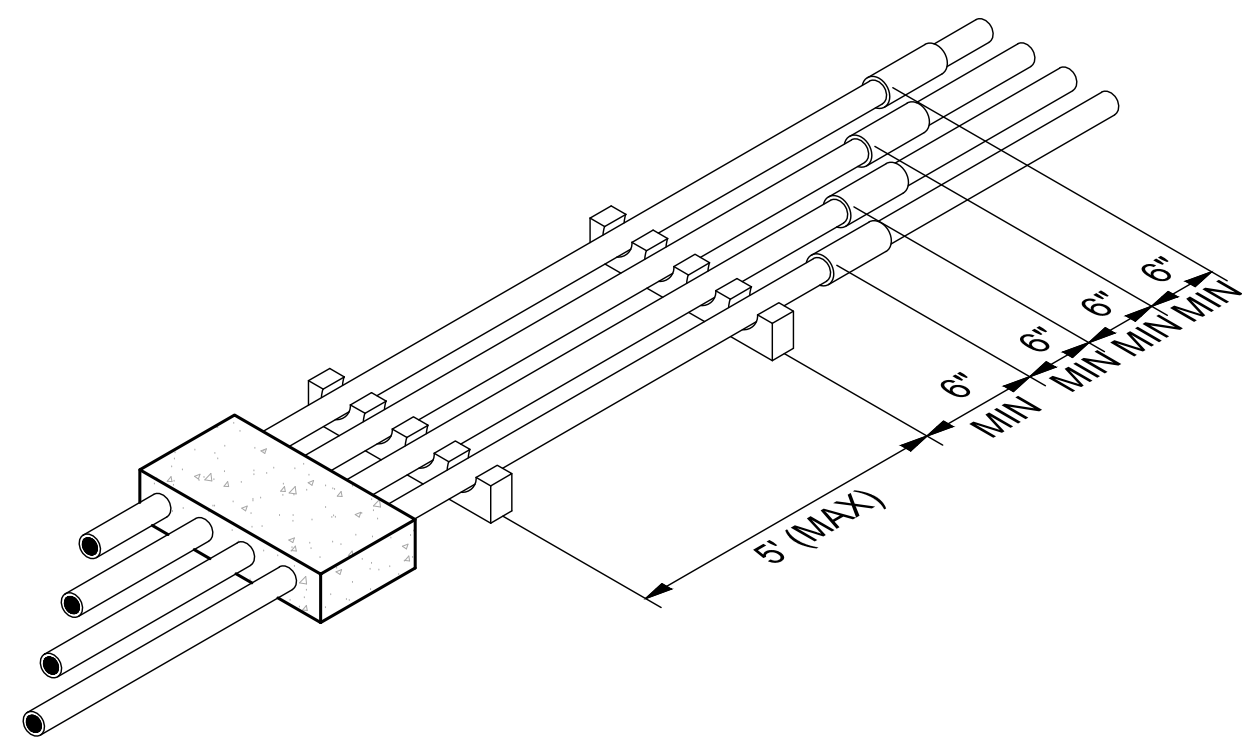
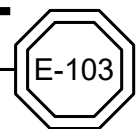
SHEET ID

E1

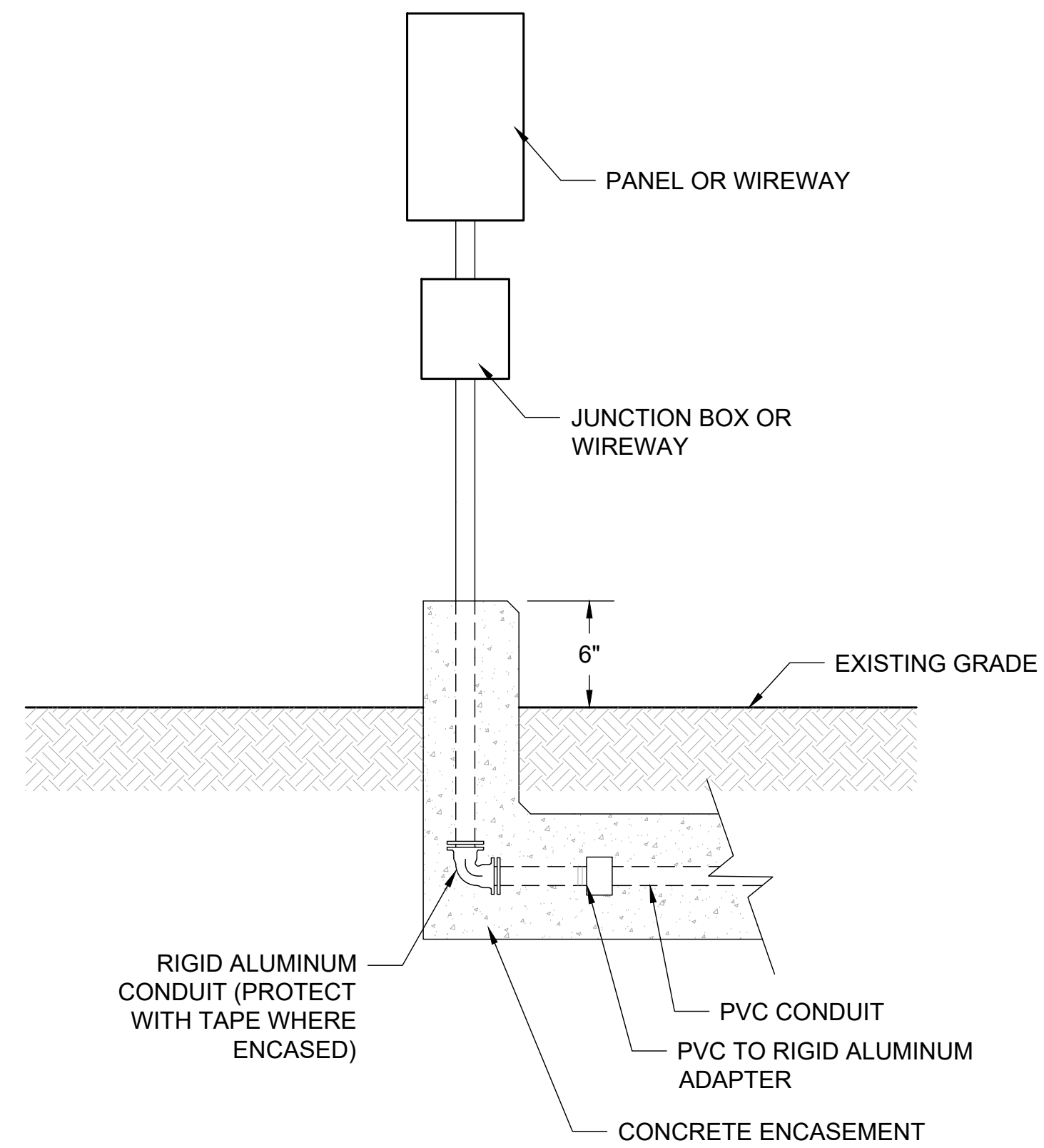
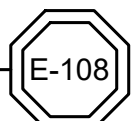
SHEET SET
15 OF **20**



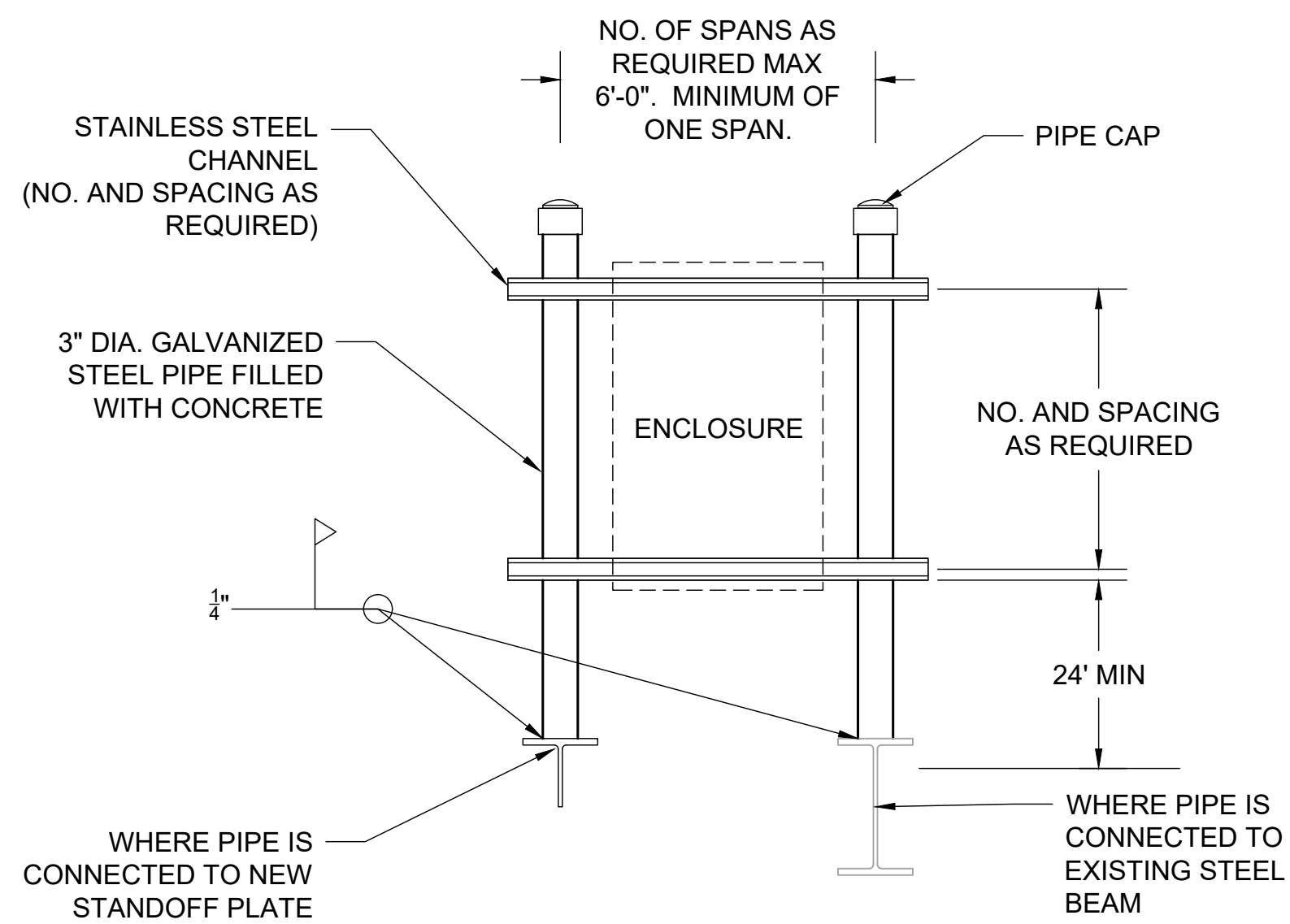
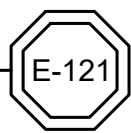
**TYP. DUCT BANK
ENCASEMENT/REINFORCEMENT**
SCALE: N.T.S. (22"x34" SHEET)



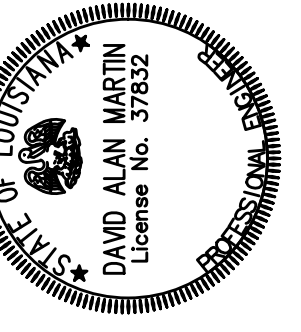
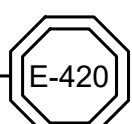
**TYP. DUCT BANK
JOINT/SUPPORT SPACING**
SCALE: N.T.S. (22"x34" SHEET)



ENTRANCE INTO PANEL
SCALE: N.T.S. (22"x34" SHEET)



ENCLOSURE MOUNTING STAND
SCALE: N.T.S. (22"x34" SHEET)



SUBMITTED BY:
DAVID ALAN MARTIN
PROJECT MANAGER
LICENSE NO.
37832

SUBMITTED BY:
H. DAVIS COLE
COMPANY OFFICER
LICENSE NO.
38218



REVISION RECORD			
MARK	DATE	BY	CHKD
	MAR 2020	DAM	DAM

DESIGNED BY:	DAM
DRAWN BY:	DAM
CHECKED BY:	DAM

DATE:	DEC, 2020
DETAILED BY:	DAM
HDC PROJECT NO.	2016-13

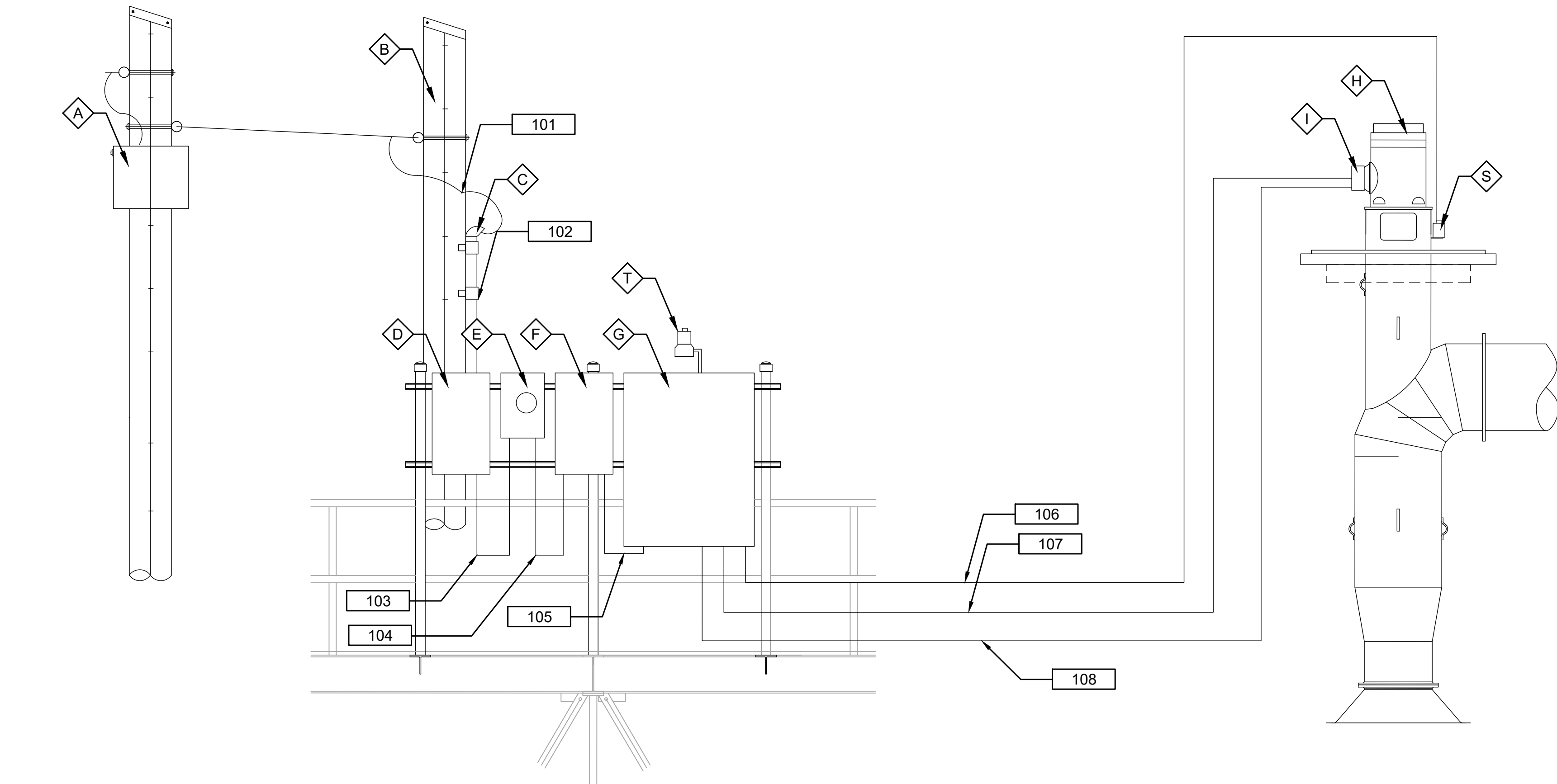
LAKEFRONT PUMP STATION, PHASE 3

LOUISIANA

ST. TAMMY PARISH

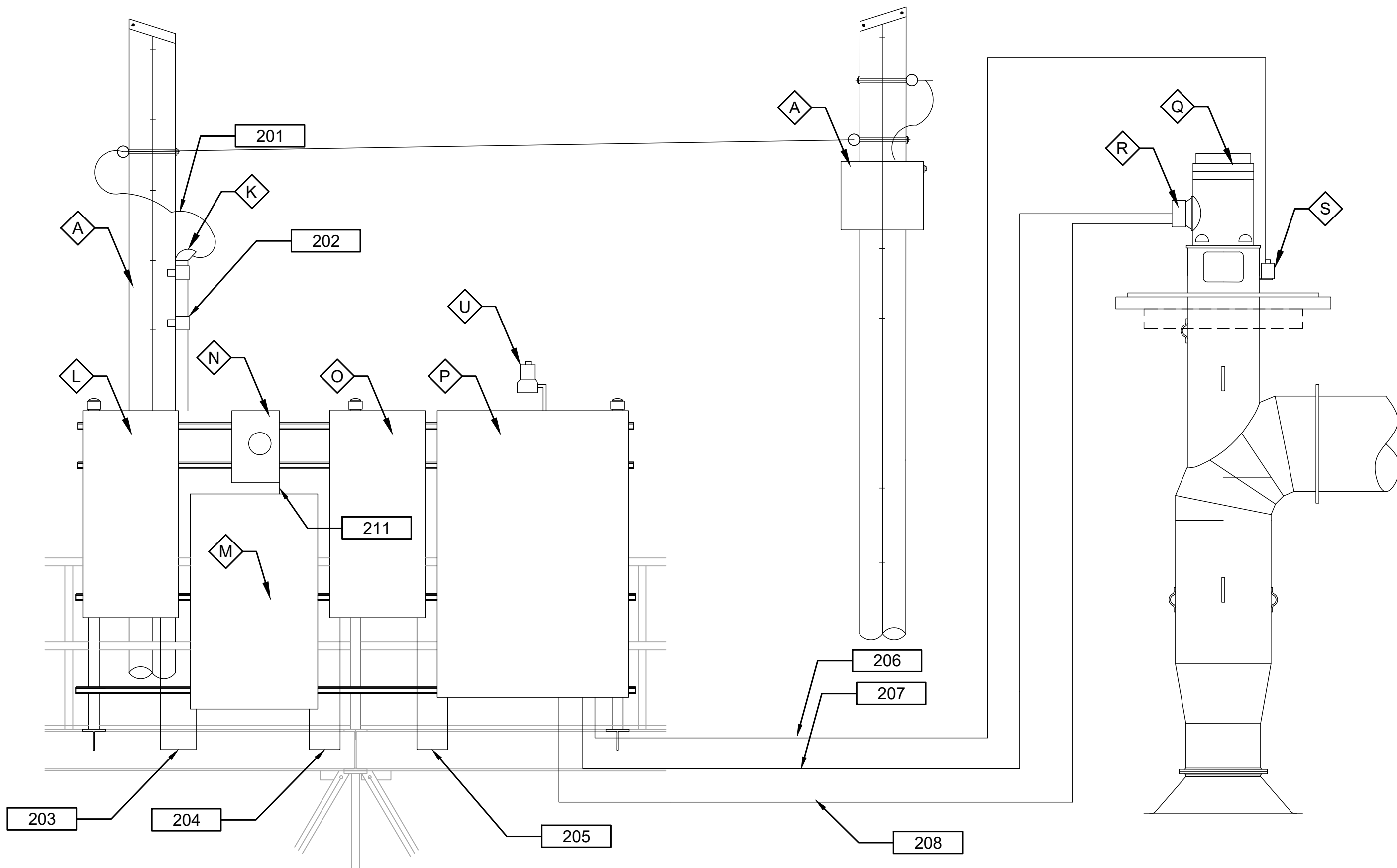
ST TAMMANY PARISH GOVERNMENT
21454 KOOP DRIVE
MANDEVILLE, LA 70471

ELECTRICAL DETAILS



75 HP PUMP RISER DIAGRAM

SCALE: N.T.S.



350 HP PUMP RISER DIAGRAM

SCALE: N.T.S.

RISER DIAGRAM GENERAL NOTES:

- 1) SEE SECTION 16100 FOR ADDITIONAL REQUIREMENTS
- 2) SEE SHEET E2 FOR CONDUIT AND CABLE SCHEDULE
- 3) SEE ONE LINE DIAGRAM, SHEET E4, FOR ADDITIONAL REQUIREMENTS

NOTES BY SYMBOL:

- A** POWER COMPANY POLE AND TRANSFORMER (FOR ILLUSTRATIVE PURPOSES ONLY)
- B** RELOCATED SERVICE POLE
- C** RELOCATED WEATHERHEAD
- D** RELOCATED LOAD SIDE DISCONNECT
- E** RELOCATED SELF - CONTAINED METER AND METER SOCKET
- F** RELOCATED LOAD SIDE DISCONNECT
- G** RELOCATED CONTROL PANEL
- H** 75 HP PUMP
- I** 75 HP PUMP MOTOR TERMINATION BOX
- J** NEW SERVICE POLE
- K** NEW WEATHERHEAD
- L** NEW LINE SIDE DISCONNECT
- M** NEW CURRENT TRANSFORMER CABINET
- N** NEW SELF CONTAINED METER SOCKET
- O** NEW LOAD SIDE DISCONNECT
- P** NEW PUMP CONTROL PANEL
- Q** 350 HP PUMP
- R** 350 HP PUMP MOTOR TERMINATION BOX
- S** OILER AND OILER SOLENOID
- T** RELOCATED LIGHT
- U** NEW LIGHT WITH PHOTOCELL PER SECTION 16100

SUBMITTED BY:
DAVID ALAN MARTIN
PROJECT MANAGER
LICENSE NO.
37832

SUBMITTED BY:
H. DAVIS COLE
COMPANY OFFICER
LICENSE NO.
39218

H. Davis Cole & Associates, LLC
Consulting Engineers
NEW ORLEANS, LA

REVISION RECORD				
MARK	DESCRIPTION	DATE	BY	CHKD

DATE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
DEC. 2020	DAM	DAM	DAM
DETAILED BY:	HDC PROJECT NO.	2016-13	
DAM	2016-13		

LAKEFRONT PUMP STATION, PHASE 3

LOUISIANA

ST. TAMMY PARISH

ST TAMMANY PARISH GOVERNMENT
21454 KOOP DRIVE
MANDEVILLE, LA 70471

RISER DIAGRAMS

SHEET ID

E4

SHEET SET

18 OF 20



ONE LINE DIAGRAM FOR 350 HP PUMP

19 OF **20**

