KEESLER AIR FORCE BASE BILOXI, MS
REPAIR WELL #9 CASING, DROP PIPE, PUMP, INSTRUMENTATION, AND CONTROLS
MAHG231034 FA301026R0012 Attachment 3

ISSUE DATE: MARCH 2025

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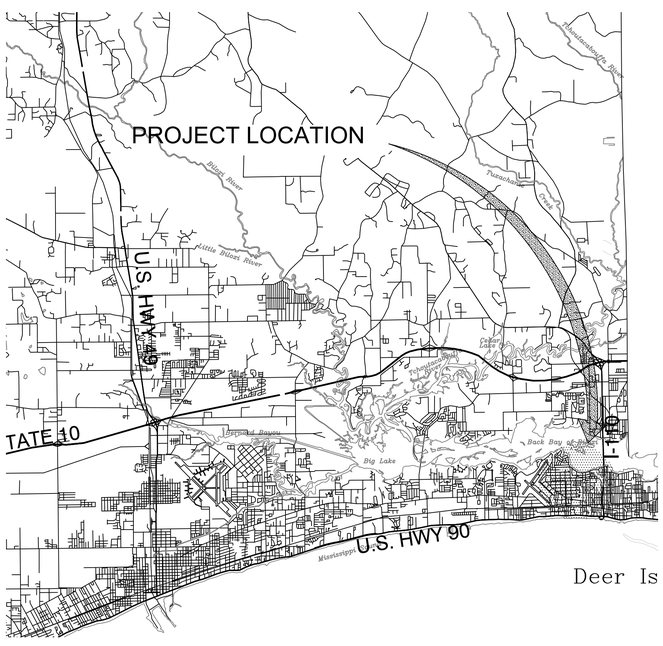
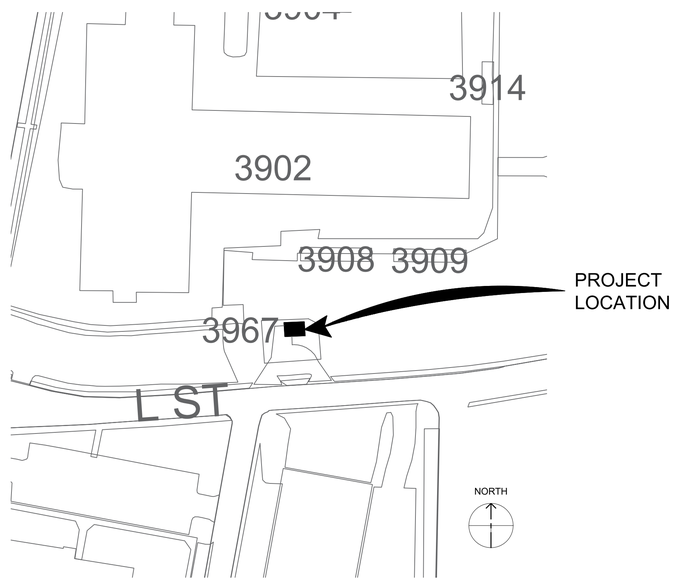




DATE
MARK DESCRIPTION

ISSUE DATE: MARCH 2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: K. KEALHOFER
DRAWN BY: Z. COOMES
CHECKED BY:
SUBMITTED BY:
SIZE: ARCH D

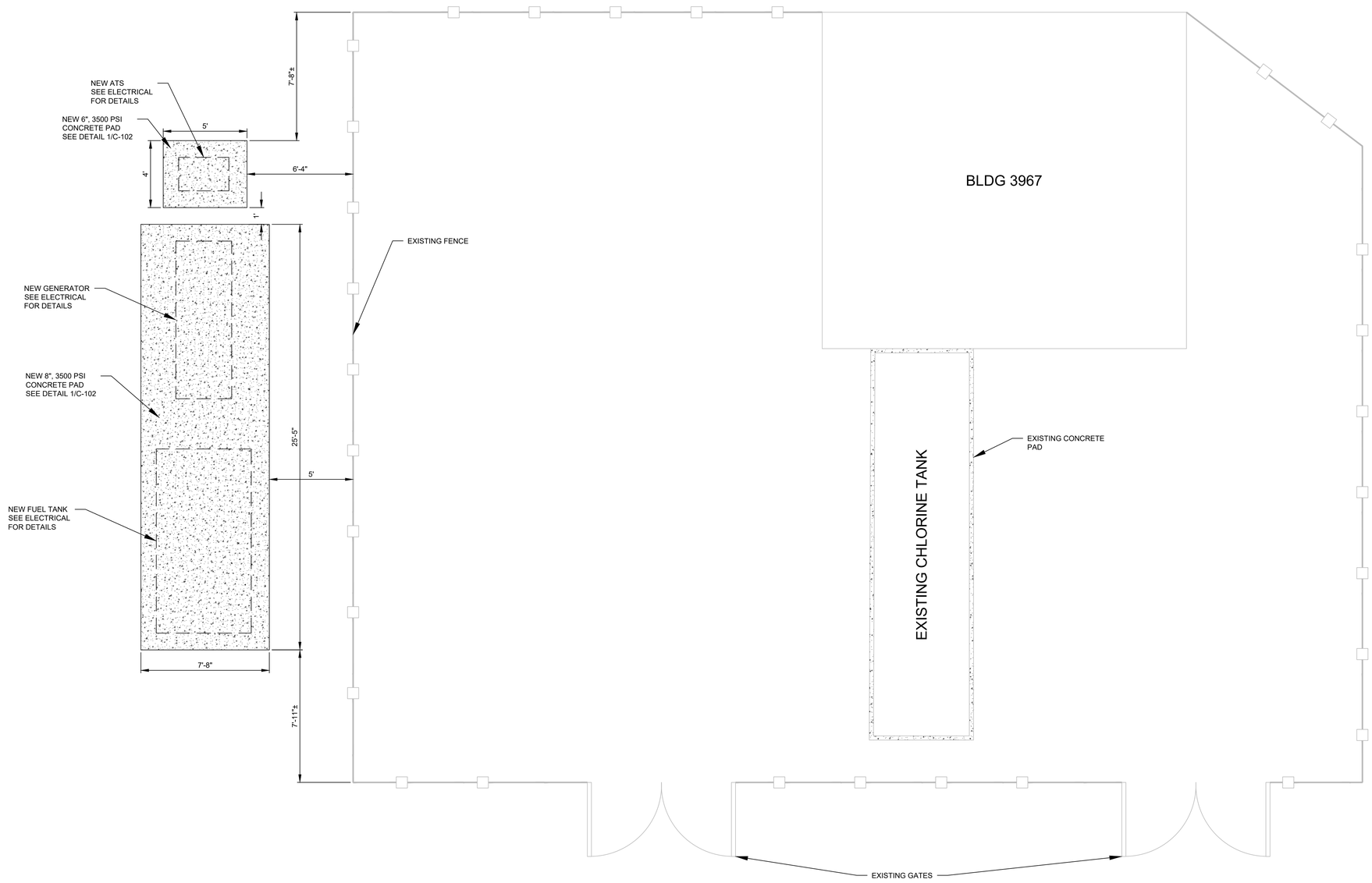
81ST CIVIL ENGINEER SQUADRON
508 L STREET, BUILDING 4705
BILOXI, MS 39534

KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP, INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034

COVER SHEET

SHEET ID
G-001

100% DESIGN



1 CONCRETE PAD PLAN VIEW
SCALE: 1:40

PLAN
NORTH

81st TRAINING WING

MARK	DESCRIPTION	DATE

DESIGNED BY: K KOHLHAAN
DRAWN BY: Z COOMES
CHECKED BY:
SUBMITTED BY:
SIZE: ARCH D
ISSUE DATE: MARCH 2025
SOLICITATION NO.:
CONTRACT NO.:

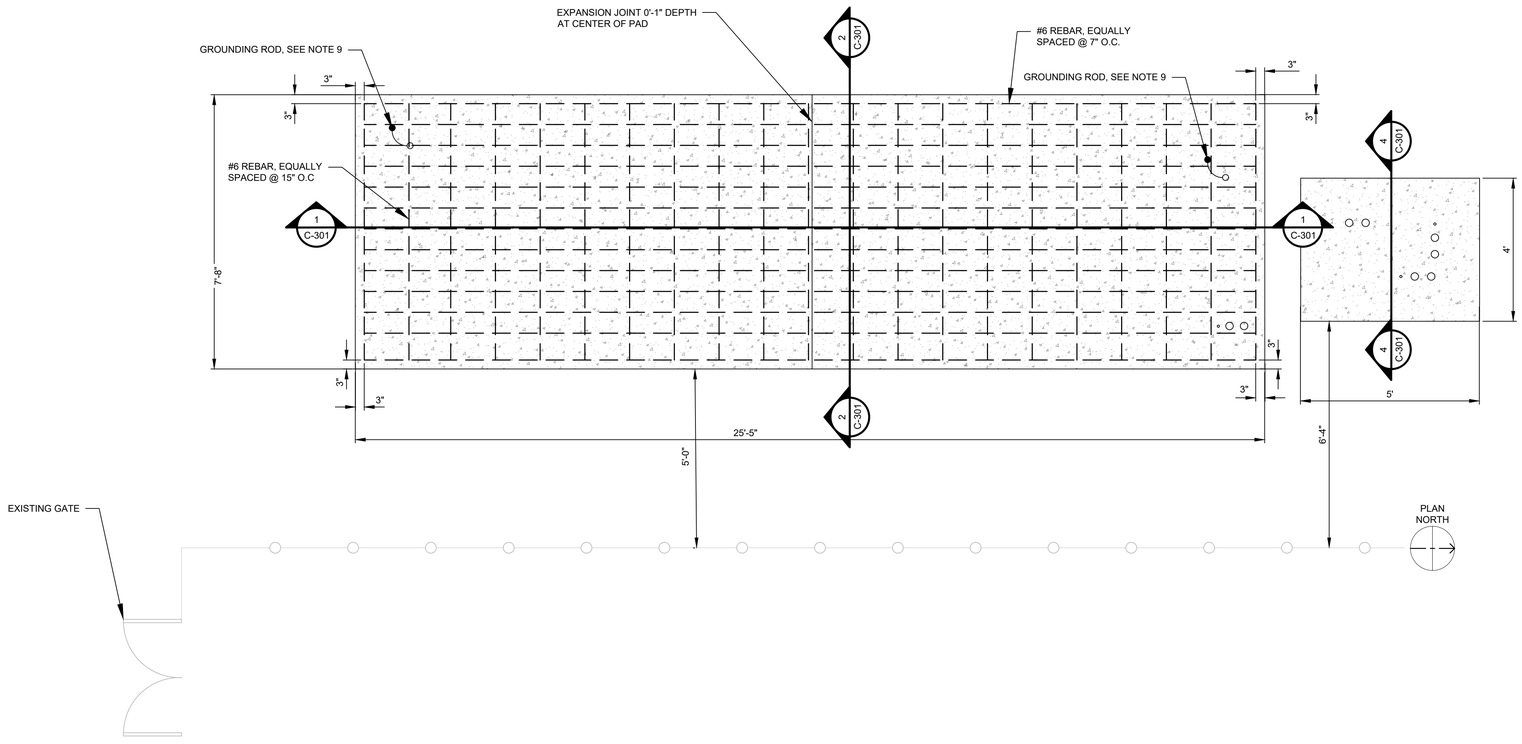
81ST CIVIL ENGINEER SQUADRON
508 L STREET, BUILDING 4705
BILOXI, MS 39534

KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP,
INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034

NEW CONSTRUCTION SITE PLAN

SHEET ID
C-101

100% DESIGN



1 CONCRETE PAD PLAN VIEW
SCALE: 1/2" = 1'-0"

GENERAL SHEET NOTES

1. THE TOP 12" OF SUBGRADE BENEATH THE SLAB SHALL BE THOROUGHLY COMPACTED TO 95% OF MAXIMUM DENSITY PER ASTM D698.
2. SLAB TO BE MADE OF FIBER REINFORCED POLYMER (FRP) CONCRETE WITH MINIMUM 28 DAY STRENGTH OF 3500 PSI WITH 2 INCH LENGTH OF MONOFILAMENT MACROSYNTHETIC FIBERS AT APPROXIMATELY 4 LB/YD^3 DOSAGE.ADD AIR-ENTRAINING ADMIXTURE CONFORMING TO ASTM C260/C260M.
3. TOP OF PAD TO BE SMOOTH, SLOPED, AND CLEARED OF ALL FRAMING MATERIAL AFTER CONCRETE SETS. SEE DETAIL 1/C-301.
4. NO WALLS SHALL BE BUILT AROUND GENERATOR, NOR CANOPIES ABOVE GENERATOR.
5. COORDINATE WITH CLP UTILITIES TO ALLOW ANY AND ALL INSPECTIONS BEFORE, DURING, AND AFTER CONSTRUCTION OF PAD.
6. REBAR SUPPORTS SHOULD BE USED TO KEEP THE REBAR IN PLACE. USE OF CONCRETE BRICKS AS SUBSTITUTE OF SUPPORTS IS NOT PERMITTED.
7. ALL REBAR SHOULD AT LEAST HAVE 3" COVER ON ALL SIDES UNLESS OTHERWISE NOTED.
8. REVIEW GENERATOR INSTALLATION INSTRUCTIONS BEFORE FORMING THE CONDUIT STUB UP AREA. PROVIDE AREA PER MANUFACTURER REQUIREMENTS.
9. BOND GROUNDING ROD TO REBAR IN SLAB AND TO GENERATOR FRAME. STUB ROD UP 6" ABOVE TOP OF CONCRETE PAD. SIZE BOND PER NEC 2550-66 REQUIREMENTS BASED ON PHASE CONDUCTOR SIZE. PROVIDE BRAIDED, BARE CU BOND CABLE FROM GROUND BAR TO PAD REINFORCING AND TO FRAME. LEAVE SUFFICIENT SLACK ABOVE PAD TO TIE TO GENSET FRAME. MINIMUM OF 24" COIL. THERE WILL BE TWO GROUNDING RODS. ONE FOR THE GENERATOR AND ONE FOR THE FUEL TANK.
10. CONTRACTOR TRADES TO COORDINATE INSTALLATION OF CONDUIT PENETRATIONS.

81st TRAINING WING

MARK	DESCRIPTION	DATE

ISSUE DATE: MARCH 2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: K.KOHLHAAS
DRAWN BY: Z.COOMES
CHECKED BY:
SUBMITTED BY:
SIZE: ARCH D

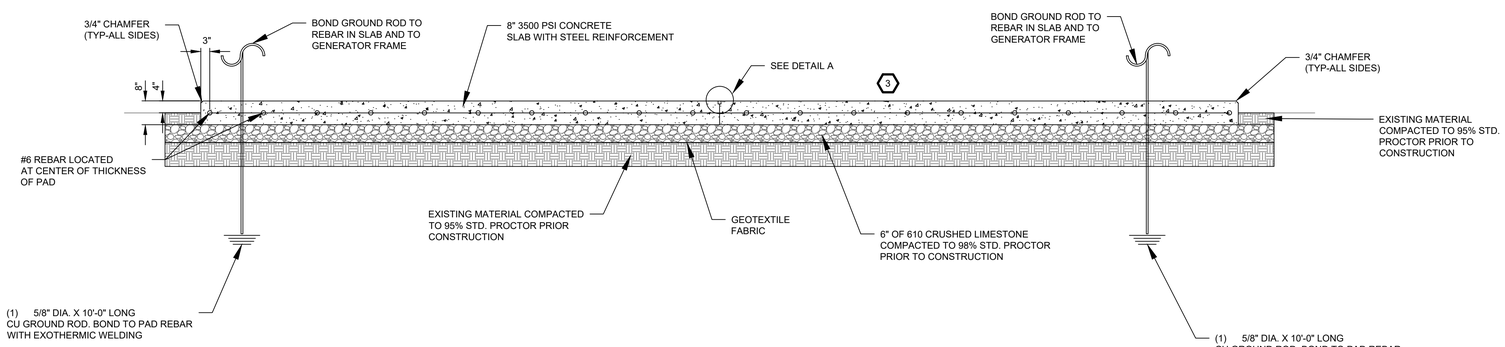
81ST CIVIL ENGINEER SQUADRON
508 L STREET, BUILDING 4705
BILOXI, MS 39534

KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP, INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034

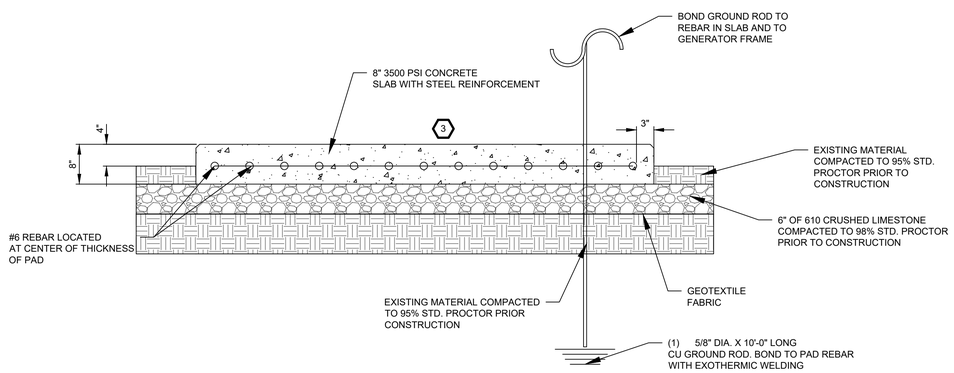
CONCRETE PAD SITE PLAN

SHEET ID
C-102

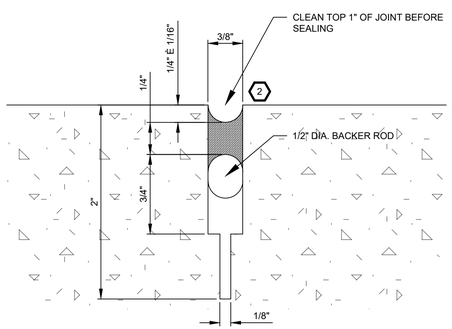
100% DESIGN



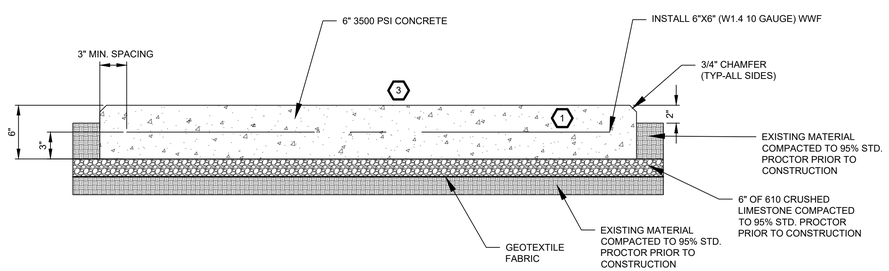
1 NEW GENERATOR AND FUEL TANK CONCRETE PAD
SCALE: NTS



2 NEW GENERATOR AND FUEL TANK CONCRETE PAD
SCALE: NTS



3 EXPANSION JOINT DETAIL
SCALE: NTS



4 ATS CONCRETE PAD SECTION
SCALE: NTS

GENERAL SHEET NOTES

1. THE TOP 12" OF SUBGRADE BENEATH THE SLAB SHALL BE THOROUGHLY COMPACTED TO 95% OF MAXIMUM DENSITY PER ASTM D698.
2. SLAB TO BE MADE OF FIBER REINFORCED POLYMER (FRP) CONCRETE WITH MINIMUM 28 DAY STRENGTH OF 3500 PSI WITH 2 INCH LENGTH OF MONOFILAMENT MACROSYNTHETIC FIBERS AT APPROXIMATELY 4 LB/YD^3 DOSAGE.ADD AIR-ENTRAINING ADMIXTURE CONFORMING TO ASTM C260/C260M.
3. TOP OF PAD TO BE SMOOTH, SLOPED, AND CLEARED OF ALL FRAMING MATERIAL AFTER CONCRETE SETS. SEE DETAIL 1.
4. NO WALLS SHALL BE BUILT AROUND GENERATOR, NOR CANOPIES ABOVE GENERATOR.
5. COORDINATE WITH CLP UTILITIES TO ALLOW ANY AND ALL INSPECTIONS BEFORE, DURING, AND AFTER CONSTRUCTION OF PAD.
6. REBAR SUPPORTS SHOULD BE USED TO KEEP THE REBAR AT PLACE. USE OF CONCRETE BRICKS AS SUBSTITUTE OF SUPPORTS IS NOT PERMITTED.
7. ALL REBAR SHOULD AT LEAST HAVE 3" COVER FROM THE SIDES UNLESS OTHERWISE NOTED.
8. REVIEW GENERATOR INSTALLATION INSTRUCTIONS BEFORE FORMING THE CONDUIT STUB UP AREA. PROVIDE AREA PER MANUFACTURER REQUIREMENTS.
9. BOND GROUNDING ROD TO REBAR IN SLAB AND TO GENERATOR FRAME. STUB ROD UP 6" ABOVE TOP OF CONCRETE PAD. SIZE BOND PER NEC 2550-66 REQUIREMENTS BASED ON PHASE CONDUCTOR SIZE. PROVIDE BRAIDED, BARE CU BOND CABLE FROM GROUND BAR TO PAD REINFORCING AND TO FRAME. LEAVE SUFFICIENT LACK ABOVE PAD TO TIE TO GENSET FRAME, MINIMUM OF 24" COIL. HERE WILL BE TWO GROUNDING RODS. ONE FOR THE GENERATOR AND ONE FOR THE FUEL TANK.

KEYNOTES

1. SEE E-301 FOR CONDUIT INSTALLATION DETAILS. CONTRACTOR TRADES TO COORDINATE INSTALLATION OF CONDUIT PENETRATIONS.
2. JOINTS SHALL BE SAWED
3. GENERATOR/FUEL TANK AND ATS SLABS TO HAVE A 2% SLOPE AWAY FROM THE FENCELINE.

MARK	DESCRIPTION	DATE

ISSUE DATE: MAR/2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: K.F.CHALVANA
DRAWN BY: Z.COOMES
CHECKED BY:
SUBMITTED BY:
SIZE: ARCH D

81ST CIVIL ENGINEER SQUADRON
508 L STREET, BUILDING 4705
BILOXI, MS 39534

KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP, INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034

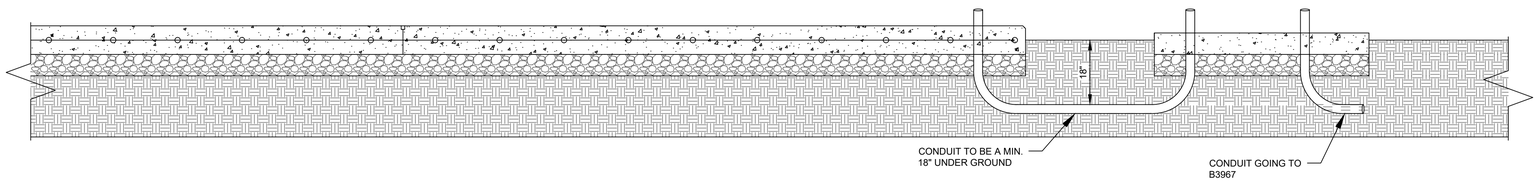
CONCRETE PAD SECTIONS AND EXPANSION JOINT DETAIL

SHEET ID
C-301

100% DESIGN

GENERAL SHEET NOTES

1. CONTRACTOR TRADES TO COORDINATE INSTALLATION OF CONDUIT PENETRATIONS.



1 TYP. CONDUIT INSTALLATION CROSS-SECTION
SCALE: 1:20

81st TRAINING WING

MARK	DESCRIPTION	DATE

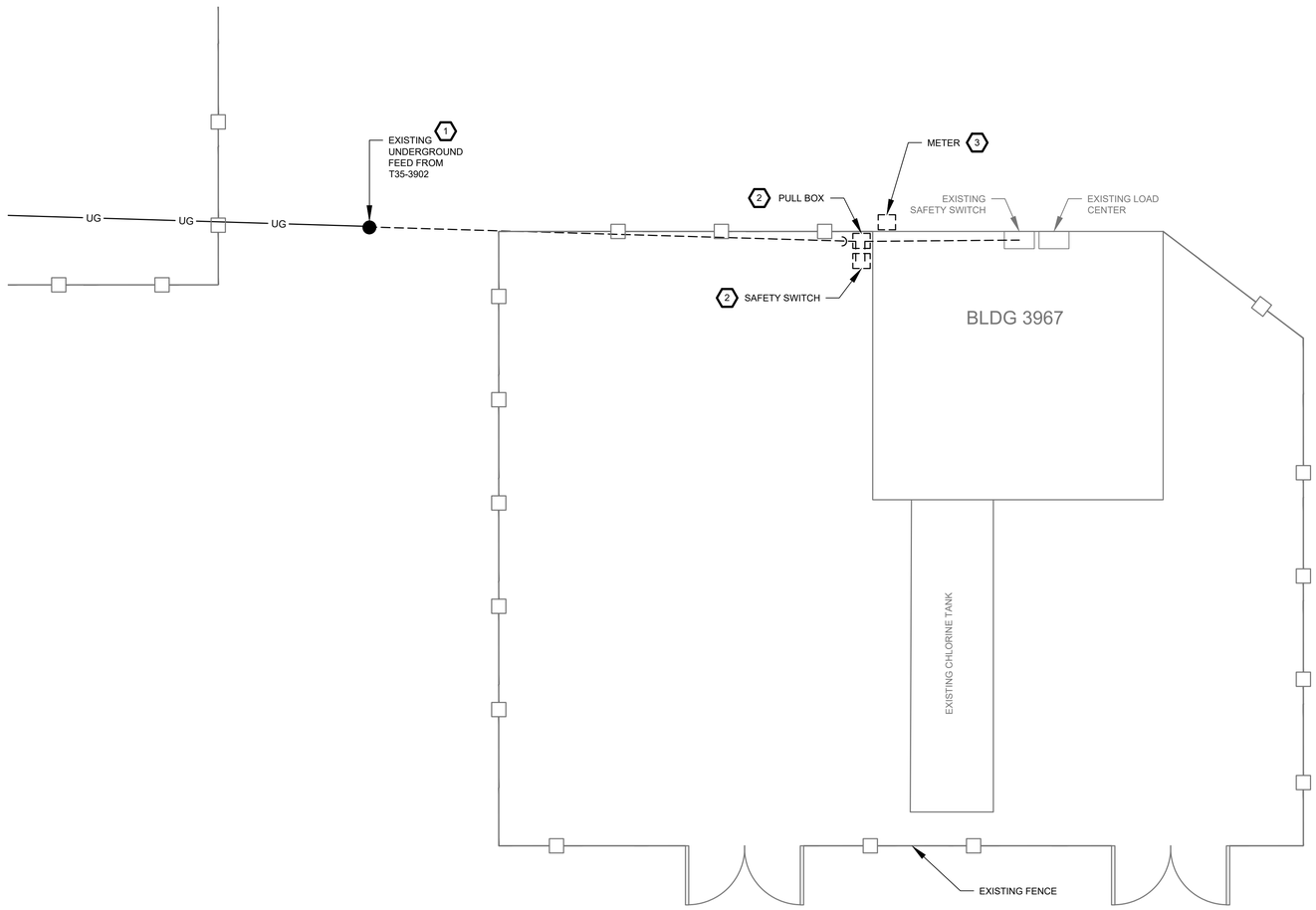
DESIGNED BY: K KOHLAVAN
DRAWN BY: Z COOMES
CHECKED BY:
SUBMITTED BY:
SIZE: ARCH D
ISSUE DATE: MARCH 2025
SOLICITATION NO.:
CONTRACT NO.:

81 ST CIVIL ENGINEER SQUADRON
508 L STREET, BUILDING 4705
BILOXI, MS 39534

KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP,
INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034
CONDUIT INSTALLATION
CROSS-SECTION

SHEET ID
C-302

100% DESIGN



1 ELECTRICAL DEMOLITION SITE POWER PLAN
SCALE: 1" = 5'-4"

PLAN NORTH

GENERAL SHEET NOTES

1. CALL 811 AND APPLY FOR DIG PERMIT WITH THE GOVERNMENT PRIOR TO ANY DIG WORK AND SHOULD ACCOUNT FOR PROCESSING TIME.
2. VERIFY ALL DIMENSIONS, CONNECTIONS, EXISTING EQUIPMENT, AND EXISTING CONDITIONS PRIOR TO ORDERING EQUIPMENT AND COMMENCING WORK.
3. SEE DRAWING E-601 FOR EXISTING ONE-LINE DIAGRAM.

KEYNOTES

1. INTERCEPT EXISTING UTILITY FEED. REMOVE CONDUIT AND CABLE FROM PULL BOX AND SAFETY SWITCH BACK TO NEW HAND HOLE AS SEEN ON DRAWING E-102.
2. REMOVE AND DISPOSE PULL BOX AND SAFETY SWITCH OUTSIDE OF BLDG 3967.
3. REMOVE AND DISPOSE OUT OF EXISTING METER.

LEGEND

—— UG ——	UNDERGROUND CONDUIT TO REMAIN
- - - - - - - -	CONDUIT, CABLES AND EQUIPMENT TO REMOVE AND DISPOSE
)	CONDUIT CHANGE FROM BELOW TO ABOVE GRADE

81st TRAINING WING

MARK	DESCRIPTION	DATE

DESIGNED BY: H. SANTIAGO
DRAWN BY: R. LANDGRAVE
CHECKED BY: E. CLEVELAND
SUBMITTED BY: K. KAHLHAN
SIZE: ARCH D
ISSUE DATE: MARCH 2025
SOLICITATION NO.:
CONTRACT NO.:

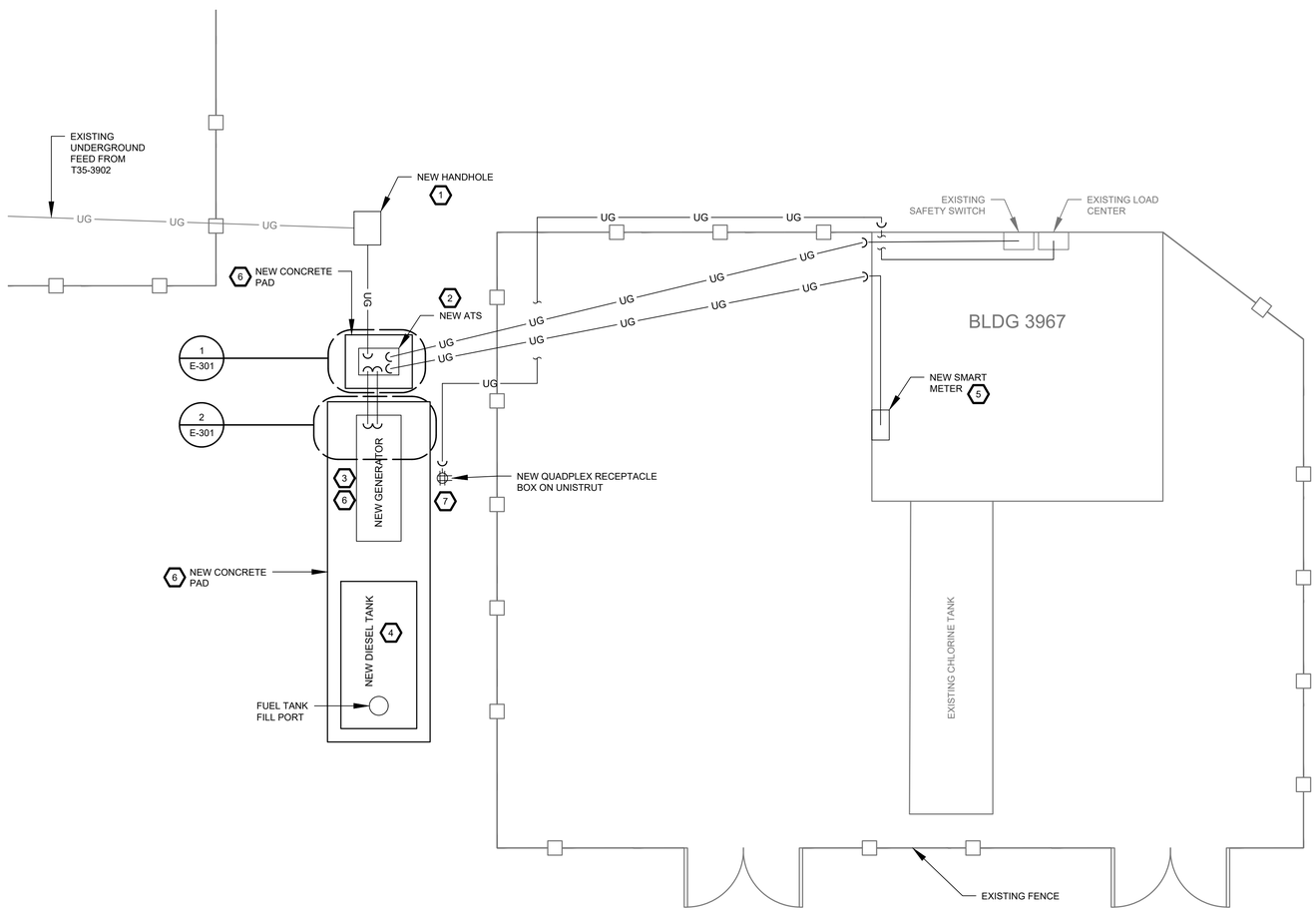
81ST CIVIL ENGINEER SQUADRON
508 L STREET, BUILDING 4705
BILOXI, MS 39534

KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP, INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034

ELECTRICAL DEMOLITION SITE POWER PLAN

SHEET ID
E-101

100% DESIGN



1 ELECTRICAL NEW SITE POWER PLAN
SCALE: 1" = 5'-4"

PLAN NORTH

GENERAL SHEET NOTES

1. CALL 811 AND APPLY FOR DIG PERMIT WITH THE GOVERNMENT PRIOR TO ANY DIG WORK AND ACCOUNT FOR PROCESSING TIME.
2. VERIFY ALL DIMENSIONS, CONNECTIONS, EXISTING EQUIPMENT, AND EXISTING CONDITIONS PRIOR TO ORDERING EQUIPMENT AND COMMENCING WORK.
3. SEE DRAWING E-602 FOR MORE DETAILED INFORMATION REGARDING NEW ELECTRICAL EQUIPMENT.
4. CONDUIT ROUTING FOR SCHEMATIC PURPOSES ONLY. VERIFY EXISTING CONDUIT ROUTING AND ROUTE NEW CONDUIT AS NEEDED.
5. UNDERGROUND CONDUITS SHALL BE MINIMUM 18" BELOW GRADE.
6. DRILL, BORE, PATCH AND WEATHER SEAL ANY NEW OR MODIFIED WALL PENETRATIONS.

KEYNOTES

1. INTERCEPT EXISTING UTILITY FEED. PROVIDE NEW HAND HOLE (24"X30"X24") AND SPLICE CABLE TO EXTEND FEED TO NEW ATS.
2. PROVIDE NEW AUTOMATIC TRANSFER SWITCH (ATS).
3. PROVIDE NEW PERMANENT STANDBY GENERATOR.
4. PROVIDE 1000 GALLON NEW DIESEL TANK CAPABLE OF PROVIDING GENERATOR WITH A RUNTIME OF 72 HOURS. TANK SHALL MATCH EXISTING BASE DIESEL TANKS (CORE ENGINEERED SOLUTIONS CONVAULT) OR APPROVED EQUAL.
5. PROVIDE NEW SMART METER. ROUTE NEW CONDUIT FROM ATS TO SMART METER.
6. REFER TO CIVIL DRAWINGS C-101 AND C-102 FOR CONCRETE PAD INFORMATION.
7. PROVIDE A NEW GFCI PROTECTED, HEAVY DUTY QUADPLEX RECEPTACLE IN WEATHERPOOF ENCLOSURES (HUBBLE RW58750 OR APPROVED EQUAL) FOR GENERATOR ACCESSORIES AND MAINTENANCE. COORDINATE LOCATION OF QUADPLEX WITH THE GOVERNMENT. RECEPTACLE TO BE MOUNTED ON UNISTRUT OUTSIDE OF THE NEW CONCRETE PAD.

LEGEND

UG	UNDERGROUND CONDUIT
	ABOVE GROUND CONDUIT
	QUADPLEX RECEPTACLE
# / #	DETAIL NUMBER / DETAIL CALLOUT / SHEET NUMBER
	BREAK LINE
	CONDUIT CHANGE FROM BELOW TO ABOVE GRADE

81st TRAINING WING

MARK	DESCRIPTION	DATE

ISSUE DATE: MARCH 2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: L. LANTIGUCO
DRAWN BY: R. LANDGRAVE
CHECKED BY: E. CLEVELAND
SUBMITTED BY: K. KHALAWAN
SIZE: ARCH D

81ST CIVIL ENGINEER SQUADRON
508 L STREET, BUILDING 4705
BILOXI, MS 39534

KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP, INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034

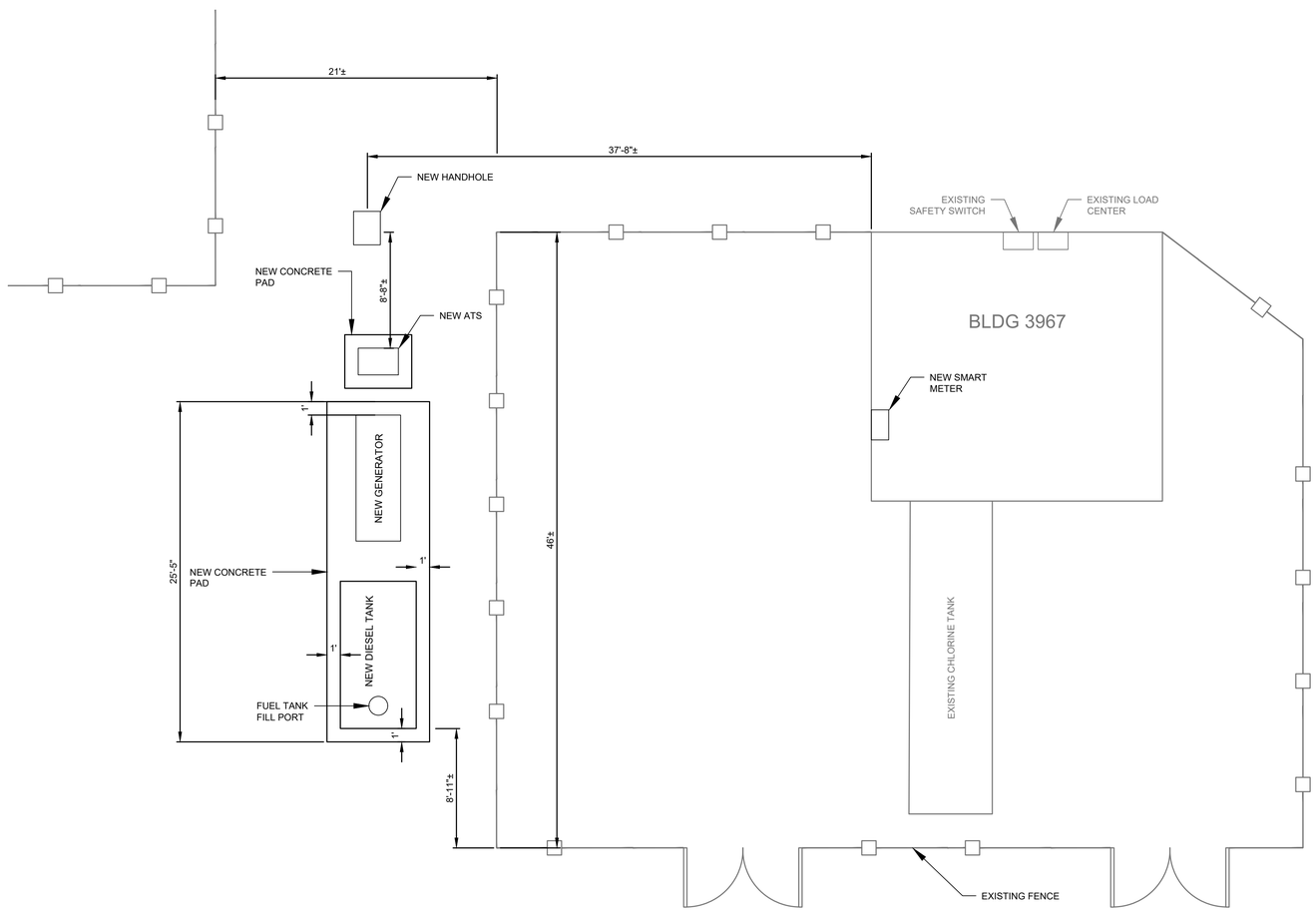
ELECTRICAL NEW SITE POWER PLAN

SHEET ID
E-102

100% DESIGN

GENERAL SHEET NOTES

1. CALL 811 AND APPLY FOR DIG PERMIT WITH THE GOVERNMENT PRIOR TO ANY DIG WORK AND ACCOUNT FOR PROCESSING TIME.
2. VERIFY ALL DIMENSIONS, CONNECTIONS, EXISTING EQUIPMENT, AND EXISTING CONDITIONS PRIOR TO ORDERING EQUIPMENT AND COMMENCING WORK.
3. SEE DRAWING E-602 FOR MORE DETAILED INFORMATION REGARDING NEW ELECTRICAL EQUIPMENT.



1 ELECTRICAL NEW SITE DIMENSIONS
SCALE: 1" = 5'-4"

PLAN NORTH

MARK	DESCRIPTION	DATE

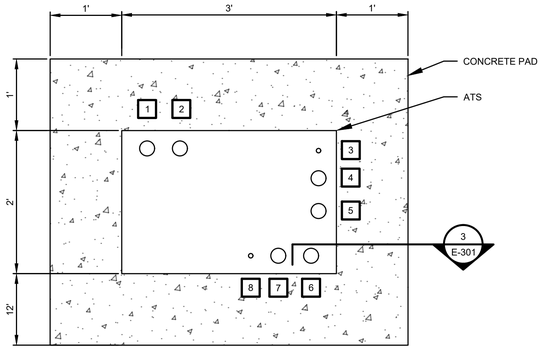
DESIGNED BY: H. SANTIAGO
DRAWN BY: R. LANDGRAVE
CHECKED BY: E. CLEVELAND
SUBMITTED BY: K. KAHLHAN
SIZE: ARCH D
ISSUE DATE: MARCH 2025
SOLICITATION NO.:
CONTRACT NO.:

81ST CIVIL ENGINEER SQUADRON
508 L STREET, BUILDING 4705
BILOXI, MS 39534

KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP, INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034
ELECTRICAL NEW SITE DIMENSIONS

SHEET ID
E-103

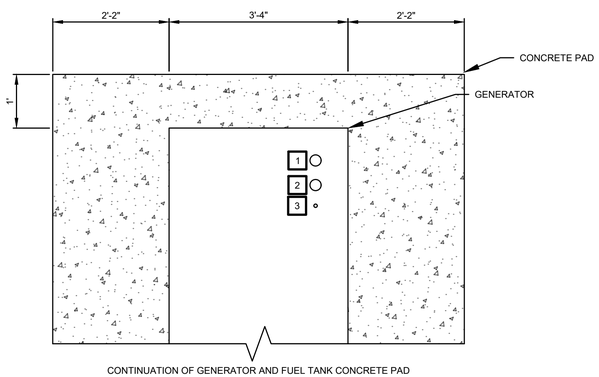
100% DESIGN



1 ATS CONCRETE PAD TOP ELEVATION

SCALE: 1" = 1'-0"

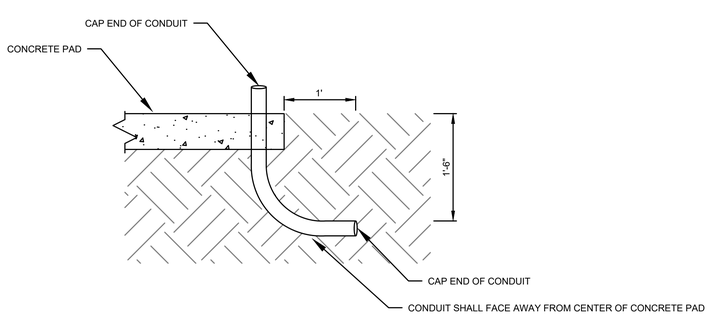
ATS CONDUITS		
ID	SIZE	ROUTE
1	2-1/2"	FROM TRANSFORMER T35-3902
2	2-1/2"	SPARE
3	3/4"	TO B3967 SMART METER
4	2-1/2"	TO B3967 SAFETY SWITCH
5	2-1/2"	SPARE
6	2-1/2"	SPARE
7	2-1/2"	FROM GENERATOR CIRCUIT BREAKER
8	3/4"	FROM GENERATOR CONTROL PANEL



2 GENERATOR CONCRETE PAD TOP ELEVATION

SCALE: 3/4" = 1'-0"

GENERATOR CONDUITS		
ID	SIZE	ROUTE
1	2-1/2"	TO ATS (EMERGENCY POWER)
2	2-1/2"	SPARE
3	3/4"	TO ATS (GENERATOR START/STOP)



3 SPARE CONDUIT DETAIL (TYP.)

SCALE: 1" = 1'-0"

GENERAL SHEET NOTES

1. CONDUITS SHALL HAVE MINIMUM 3" SPACING BETWEEN EACH CONDUIT AND INTERIOR OF NEW EQUIPMENT.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE CONDUIT STUB UP LOCATIONS WITH THE CIVIL CONTRACTOR PRIOR TO POURING CONCRETE.
3. MODIFY ARRANGEMENT OF CONDUITS BASED ON THE PURCHASED EQUIPMENT MANUFACTURER'S CABLE ENTRY RECOMMENDATIONS.

LEGEND

CONCRETE

SOIL

MARK	DESCRIPTION	DATE

ISSUE DATE:
MAR 2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY:
J.T. SANTIAGO
DRAWN BY:
R. LANDGRAVE
CHECKED BY:
E. CLEVELAND
SUBMITTED BY:
K. KAHALAWAI
SIZE:
ARCH D

8 ST CIVIL ENGINEER SQUADRON
598 L STREET, BUILDING 4705
BILOXI, MS 39534

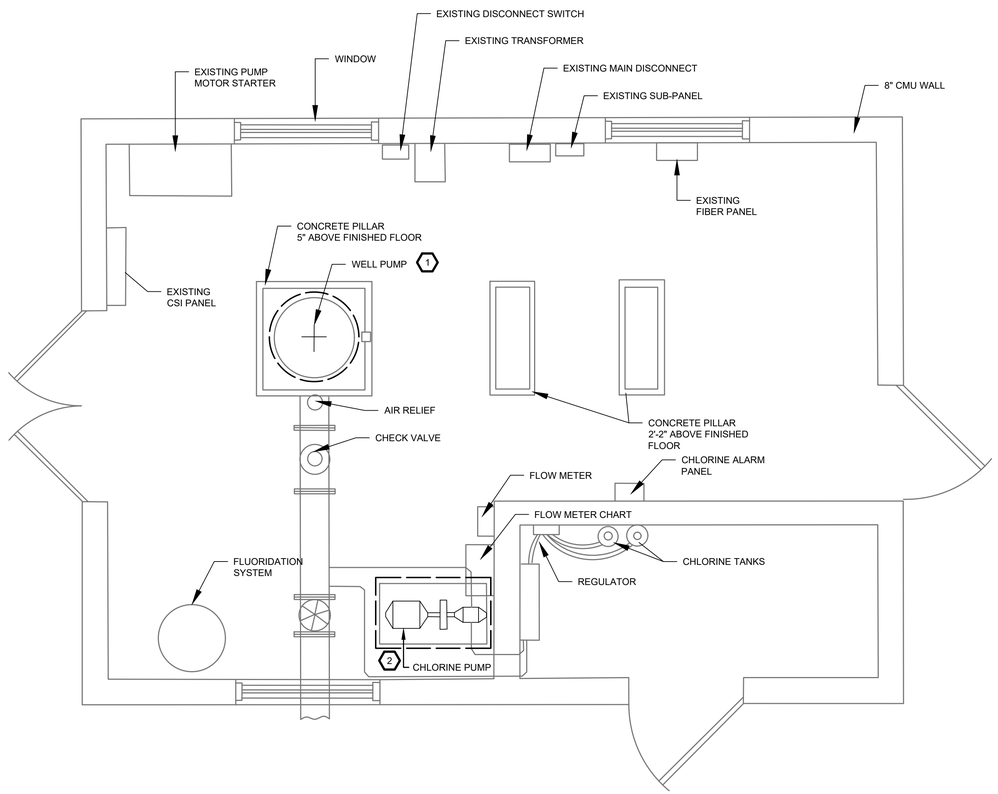
KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP, INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034

ELECTRICAL DETAILS

SHEET ID

E-301

100% DESIGN



1 ELECTRICAL DEMOLITION EQUIPMENT LAYOUT
SCALE: NOT TO SCALE

GENERAL SHEET NOTES

1. SEE DRAWING E-601 FOR EXISTING ONE-LINE DIAGRAM.

KEYNOTES

1. REMOVE EXISTING WELL PUMP.
2. REMOVE EXISTING CHLORINE PUMP.

LEGEND

DEMOLITION SCOPE

MARK	DESCRIPTION	DATE

DESIGNED BY: H. SANTIVICO
DRAWN BY: R. LANDGRAVE
CHECKED BY: E. CLEVELAND
SUBMITTED BY: K. PRATHAPAN
SIZE: ARCH D
ISSUE DATE: MARCH 2025
SOLICITATION NO.:
CONTRACT NO.:

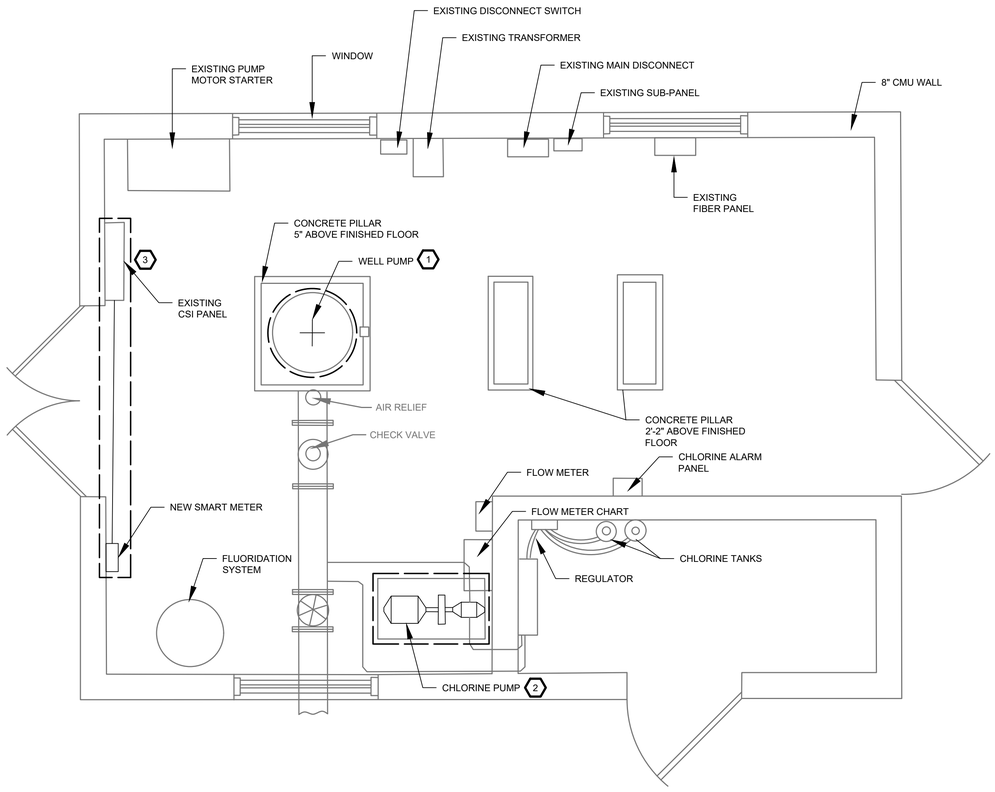
81st CIVIL ENGINEER SQUADRON
508 L STREET, BUILDING 4705
BILOXI, MS 39534

KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP, INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034

ELECTRICAL DEMOLITION EQUIPMENT LAYOUT

SHEET ID
E-401

100% DESIGN



1 ELECTRICAL NEW EQUIPMENT LAYOUT
SCALE: NOT TO SCALE

PLAN NORTH

GENERAL SHEET NOTES

1. VERIFY ALL DIMENSIONS, CONNECTIONS, EXISTING EQUIPMENT, AND EXISTING CONDITIONS PRIOR TO ORDERING EQUIPMENT AND COMMENCING WORK.
2. SEE DRAWING E-602 NEW ONE-LINE DIAGRAM FOR MORE DETAILED INFORMATION REGARDING NEW ELECTRICAL EQUIPMENT.
3. CONDUIT ROUTING FOR SCHEMATIC PURPOSES ONLY. ROUTE NEW CONDUIT AS NEEDED.

KEYNOTES

1. PROVIDE NEW REPLACEMENT WELL PUMP.
2. PROVIDE NEW REPLACEMENT CHLORINE PUMP.
3. PROVIDE NEW FIBER TO CAT6 MEDIA CONVERTER. CONNECT MEDIA CONVERTER TO EXISTING FIBER STRAND INSIDE CSI PANEL. RUN NEW CAT6 CABLE IN 3/4" EMT CONDUIT FROM MEDIA CONVERTER TO NEW SMART METER. COORDINATE WORK WITH 81 COMMS.

LEGEND

NEW WORK SCOPE

81st TRAINING WING

MARK	DESCRIPTION	DATE

ISSUE DATE: MARCH 2025
SOLICITATION NO.:
CONTRACT NO.:

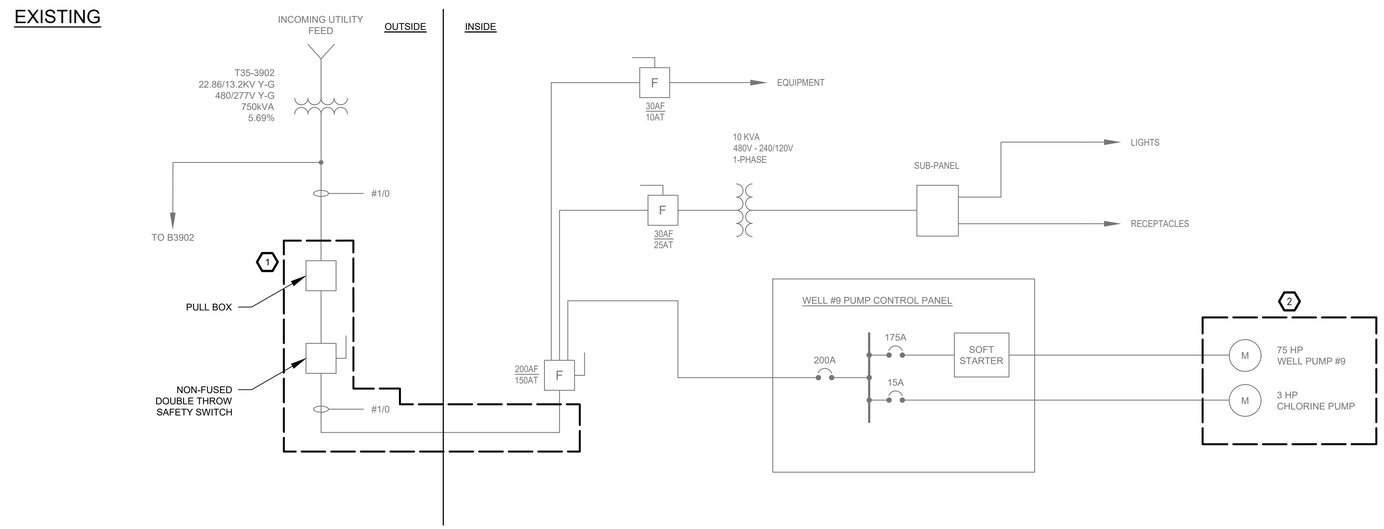
DESIGNED BY: L.H. CASTIGLIO
DRAWN BY: R. LANDGRAVE
CHECKED BY: E. CLEVELAND
SUBMITTED BY: K. KAHALAWAI
SIZE: ARCH D

81ST CIVIL ENGINEER SQUADRON
508 L STREET, BUILDING 4705
BILOXI, MS 39534

KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP, INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034
ELECTRICAL NEW EQUIPMENT LAYOUT

SHEET ID
E-402

100% DESIGN



1 ELECTRICAL DEMOLITION ONE-LINE DIAGRAM

GENERAL SHEET NOTES

1. VERIFY CIRCUITS FOR ANY DISCREPANCIES AND MISSING DATA AND PROVIDE REDLINES FOR A COMPLETE AND DETAILED RISER DIAGRAM.

KEYNOTES

1. REMOVE AND DISPOSE OF EXISTING PULL BOX AND SAFETY SWITCH. REMOVE CONDUITS AND CONDUCTORS FROM NEW SPLICE POINT TO EXISTING SAFETY SWITCH INSIDE THE BUILDING.
2. REMOVE AND DISPOSE OF EXISTING WELL PUMP AND CHLORINE PUMP.

LEGEND

	DEMOLITION SCOPE
	CIRCUIT BREAKER
M	MOTOR
SPD	SURGE PROTECTOR DEVICE
	TRANSFORMER
XXXAF / XXXAT F	FUSED SAFETY SWITCH XXXAF FRAME RATING XXXAT FUSE TRIP RATING

MARK	DESCRIPTION	DATE

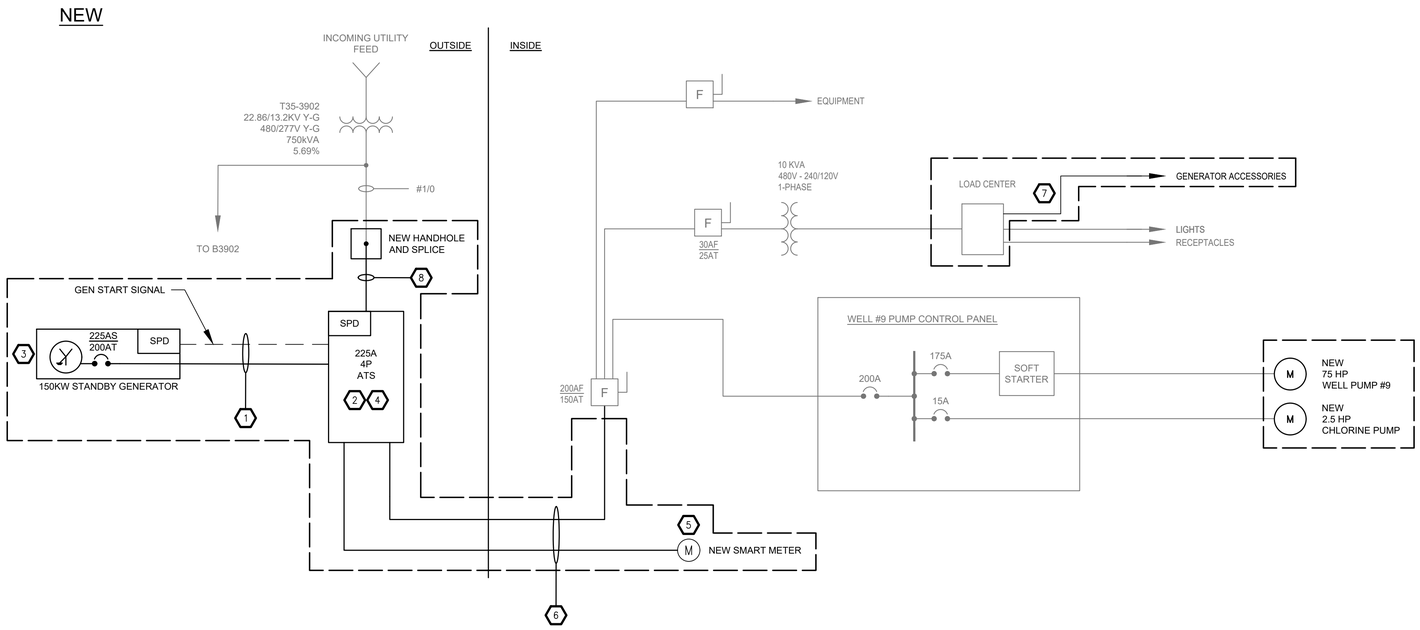
DESIGNED BY: H. H. SANTIAGO
DRAWN BY: R. LANDGRAVE
CHECKED BY: E. CLEVELAND
SUBMITTED BY: K. PAPILLAYAN
SIZE: ARCH D
ISSUE DATE: MARCH 2025
SOLICITATION NO.:
CONTRACT NO.:

81ST CIVIL ENGINEER SQUADRON
508 L STREET, BUILDING 4705
BILOXI, MS 39534

KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP, INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034
ELECTRICAL DEMOLITION ONE-LINE DIAGRAM

SHEET ID
E-601

100% DESIGN



1 ELECTRICAL NEW ONE-LINE DIAGRAM

LOCATION:	WELL 9 BUILDING							**VOLTAGE:**	240/120V - 1PH, 3W
FED FROM:	10 kVA TRANSFORMER							**MAIN BREAKER:**	MLO
MOUNTING:	SURFACE							**BUS AMPACITY:**	100 A
ACCESSORIES:								**LUGS:**	
								AIC:	

LOAD CENTER

LOAD DESCRIPTION	NOTE	CB	CKT.	PH	CKT.	CB	NOTE	LOAD DESCRIPTION
INCOMING LUG			1	A	2	15/1		CHLORINE ALARM AND RECEPTACLE
						20/1		GENERATOR QUAD RECEPTACLE
RTU POWER		20/1	3	B	4	15/1		LIGHTS AND FAN
LIGHT IN STORAGE ROOM		20/1	5	A	6	35/2		FLOW METER/RECORDER #6
FLOW METER/RECORDER #6		35/2	7	B	8			INCOMING LUG

Notes: Square D QO Load Center QO6-12L100RB

2 ELECTRICAL PANEL SCHEDULE

GENERAL SHEET NOTES

1. VERIFY CIRCUITS FOR ANY DISCREPANCIES AND MISSING DATA AND PROVIDE REDLINES FOR A COMPLETE AND DETAILED ONE-LINE DIAGRAM.
2. PROVIDE ALL CONDUIT, FITTINGS, WEATHER SEALING, CONDUCTORS, SEALANTS AND ACCESSORIES FOR A CODE COMPLIANT INSTALL.
3. ALL EQUIPMENT PROVIDED SHALL INCLUDE ALL ACCESSORIES AND PARTS NEEDED FOR A COMPLETE AND FUNCTIONAL SYSTEM
4. ALL BELOW GRADE CONDUIT SHALL BE PVC SCHEDULE 40 AND TRANSITION TO RIGID METAL CONDUIT (RMC) ABOVE GRADE.

KEYNOTES

1. PROVIDE NEW 4#4/0 CU, #2 GND IN 2.5" CONDUIT AND A SPARE 2.5" CONDUIT FOR POWER. PROVIDE A 3/4" CONDUIT FOR GENERATOR START SIGNAL CABLES FROM THE ATS. PROVIDE GENERATOR START SIGNAL CABLES AS REQUIRED BY THE ATS AND GENERATOR MANUFACTURER. PROVIDE PULL STRINGS AND CAP FOR EMPTY CONDUITS.
2. PROVIDE NEW CUMMINS (OR APPROVED EQUAL) AUTOMATIC TRANSFER SWITCH (ATS). ATS SHALL BE 480V 225A 3-PHASE WITH A SWITCHED NEUTRAL (4-POLE). ATS SHALL BE DELAYED TRANSITION AND HAVE BYPASS ISOLATION FOR MAINTENANCE. ATS SHALL BE SERVICE ENTRANCE RATED. ATS SHALL HAVE A 225AS/150AT BREAKER WITH ADJUSTABLE LONG TIME PICKUP AND INSTANTANEOUS SETTINGS ON THE INCOMING UTILITY SIDE. ATS SHALL BE MINIMUM NEMA 3R RATED FOR OUTDOOR USE. ATS SHALL HAVE A SURGE PROTECTOR DEVICE CONNECTED TO UTILITY SOURCE. SEE DRAWING E-301 FOR CONDUIT DETAIL.
3. PROVIDE NEW CUMMINS (OR APPROVED EQUAL) PERMANENT STANDBY GENERATOR. GENERATOR SHALL BE 150KW 480V 3-PHASE WYE GROUNDED CAPABLE OF HANDLING THE INRUSH CURRENT OF EXISTING AND NEW EQUIPMENT. GENERATOR SHALL BE MINIMUM NEMA 3R RATED FOR OUTDOOR USE. GENERATOR SHALL BE GROUNDED AS A SEPARATELY DERIVED SYSTEM. GENERATOR SHALL HAVE A SURGE PROTECTOR DEVICE. GENERATOR BREAKER SHALL HAVE AN ELECTRONIC LI TRIP UNIT WITH ADJUSTABLE LONG TIME AND INSTANTANEOUS SETTINGS. CONTRACTOR TO PROVIDE ALL NECESSARY GROUNDING, BONDING AND ACCESSORIES. GENERATOR SYSTEM SHALL COMPLY WITH AFI 32-1062 AND UFC 3-540-01.
4. PROVIDE AND INSTALL CURRENT TRANSFORMERS ON THE UTILITY SIDE INSIDE THE ATS.
5. PROVIDE NEW SCHNEIDER ELECTRIC ION 8650 SMART METER IN ENCLOSURE OR APPROVED EQUAL WITH CAT6 COMMUNICATION IN MINIMUM NEMA 1 ENCLOSURE. CONTRACTOR TO PROVIDE CURRENT TRANSFORMERS, I/O PORTS AND ALL NEEDED ACCESSORIES. COORDINATE WORK WITH 81 COMMS.
6. PROVIDE NEW 4#4/0 CU, #2 GND IN 2.5" CONDUIT FROM ATS TO EXISTING SAFETY SWITCH INSIDE THE BUILDING. PROVIDE A NEW 3/4" CONDUIT FROM THE ATS TO THE SMART METER. RE-USE EXISTING PENTRATIONS AND BORE OUT AS NEEDED.
7. PROVIDE NEW 3#12, #12 GND IN 3/4" CONDUIT FROM EXISTING LOAD CENTER TO GENERATOR RECEPTACLES FOR GENERATOR ACCESSORIES. SEE DRAWING E-603 FOR PANEL SCHEDULE.
8. PROVIDE NEW 4#1/0, #6 GND IN 2.5" CONDUIT FROM NEW SPLICE POINT IN NEW HANDHOLE TO NEW ATS.
9. REPLACE EXISTING BREAKER WITH NEW TANDEM MINI CIRCUIT BREAKER (SQUARE D QOT1520 OR APPROVED EQUAL).

LEGEND

	NEW WORK SCOPE
	CIRCUIT BREAKER
M	MOTOR
SPD	SURGE PROTECTOR DEVICE
	TRANSFORMER
--AF / --AT F	FUSED SAFETY SWITCH AF FRAME RATING AT FUSE TRIP RATING

81st TRAINING WING

MARK	DESCRIPTION	DATE

ISSUE DATE: MARCH 2025
SOLICITATION NO.:
CONTRACT NO.:

DESIGNED BY: L.T. LANTUCCO
DRAWN BY: R. LANDGRAVE
CHECKED BY: E. CLEVELAND
SUBMITTED BY: K. CHALAGAN
SIZE: ARCH D

81ST CIVIL ENGINEER SQUADRON
508 L STREET BUILDING 4705
BILOXI, MS 39534

KEESLER AIR FORCE BASE BILOXI, MISSISSIPPI
REPAIR WELL #9 CASING, DROP PIPE, PUMP, INSTRUMENTATION, AND CONTROLS
PROJECT NO. MAHG231034

ELECTRICAL NEW ONE-LINE DIAGRAM AND PANEL SCHEDULE

SHEET ID
E-602

100% DESIGN