

DENMAR CORRECTIONAL CENTER

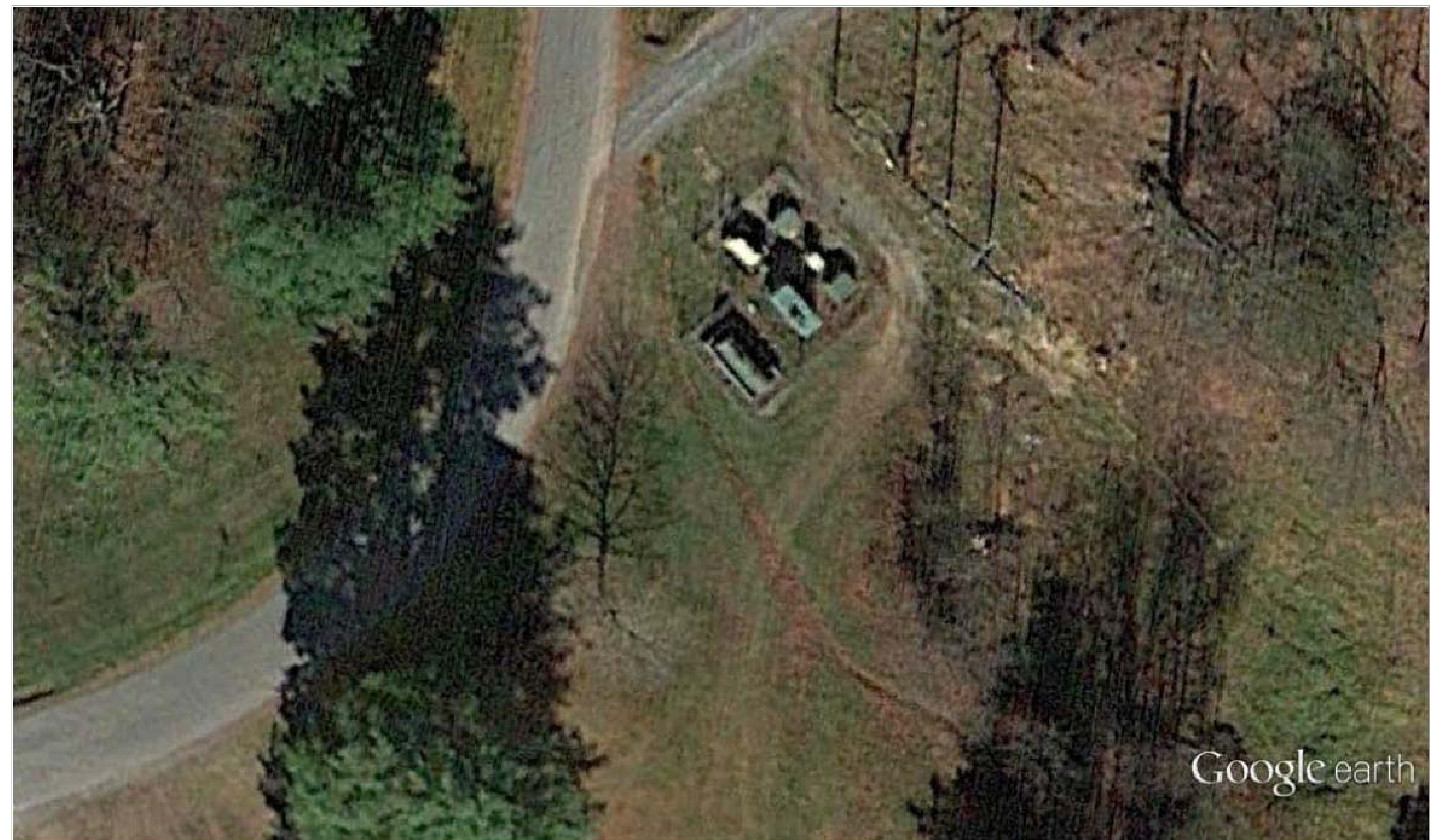
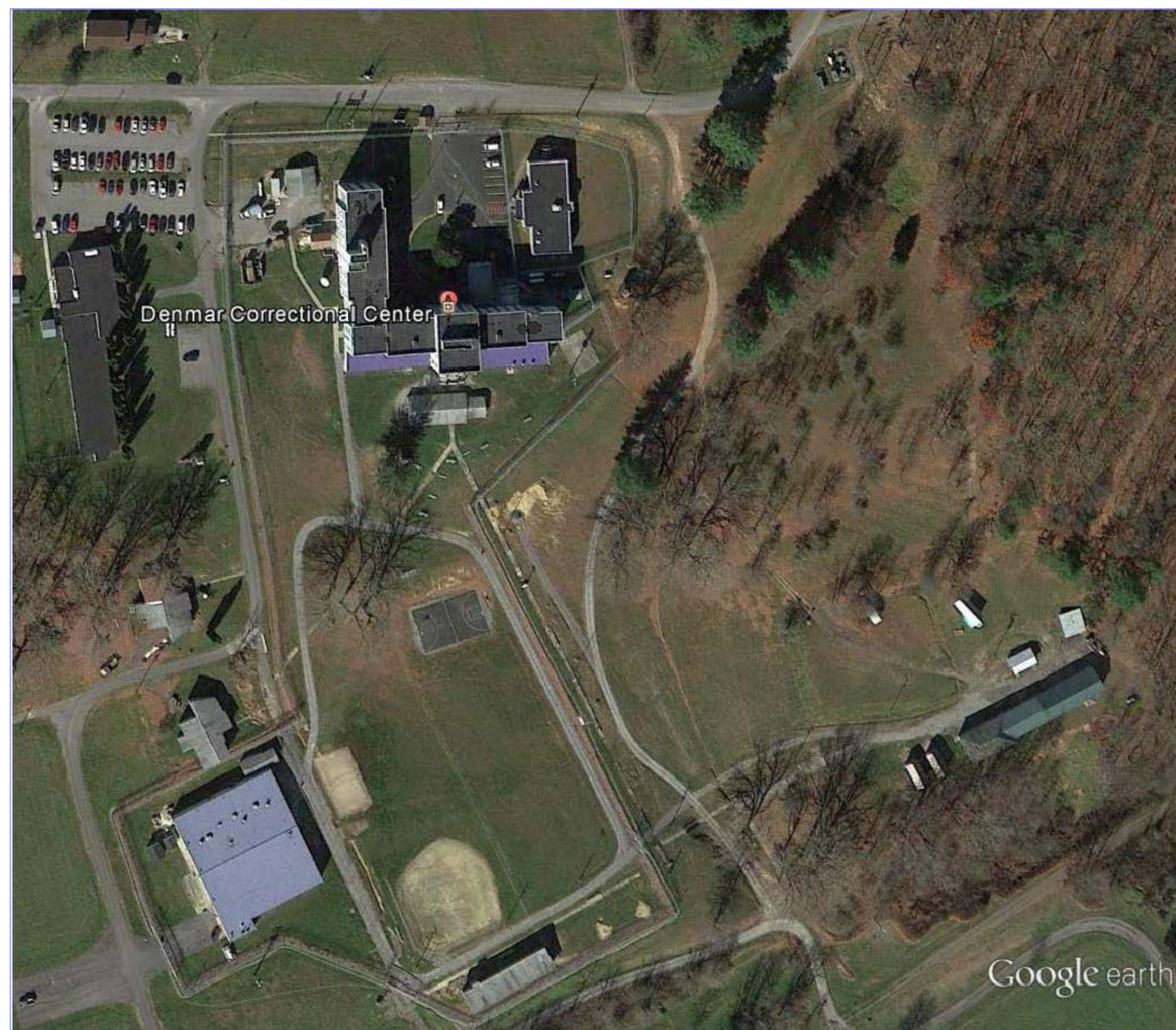
DENMAR, WEST VIRGINIA

EMERGENCY POWER SYSTEMS PROJECT

CONSTRUCTION DOCUMENTS: MARCH 17, 2014

EARL RAY TOMBLIN:
JOSEPH THORNTON:
JAMES RUBENSTEIN:
JAMES IELAPI:
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GOVERNOR
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General Notes

No.	Revision/Issue	Date

Firm Name and Address
 West Virginia Division of Corrections
 1409 Greenbrier Street
 Charleston, WV 25311

Project Name and Address
 Emergency Power System Project
 Denmar Correctional Complex
 4319 Denmar Road
 Hillsboro, WV 24946-8509

<small>Project</small> COR61603	<small>Sheet</small> A1-1
<small>Date</small> March 17, 2014	
<small>Scale</small>	

- ① EXISTING GENERATOR, 300 KILOWATTS, 208/120 VOLT, 3-PHASE.
- ② EXISTING AUTOMATIC TRANSFER SWITCH, 1,200 AMP, 240/120 VOLT, 3-PHASE.
- ③ EXISTING PAD MOUNTED TRANSFORMER, 12.47 VOLT, 3-PHASE ON PRIMARY SIDE AND 208/120 VOLT, 3-PHASE ON SECONDARY SIDE.
- ④ EXISTING PAD MOUNTED TRANSFORMER, 208/120 VOLT, 3-PHASE ON PRIMARY SIDE AND 12.47 VOLT, 3-PHASE ON SECONDARY SIDE.
- ⑤ EXISTING FUEL TANK, SINGLE WALLED, 500 GALLON.
- ⑥ EXISTING FUEL TANK, SINGLE WALLED, 2,000 GALLON.
- ⑦ EXISTING CMU FUEL TANK BASIN.
- ⑧ EXISTING CHAIN LINK FENCING WITH GATES.
- ⑨ POWER POLE OWNED BY MON POWER
- ⑩ DOC POWER POLE, METER IS LOCATED ON POWER POLE.
- ⑪ DOC POWER POLE, ELECTRICAL LINES GOES FROM POWER POLE UNDERGROUND TO 12.47 KILOVOLT, 3-PHASE STEP DOWN TRANSFORMER.
- ⑫ DOC POLE, ELECTRICAL LINES GOES FROM 208/120 VOLT, 3-PHASE STEP UP TRANSFORMER TO POWER POLE.
- ⑬ ELECTRICAL CABLES FROM MON POWER.
- ⑭ ELECTRICAL CABLES GOING TO METER BASE.
- ⑮ ELECTRICAL CABLES BETWEEN METER BASE POWER POLE AND POWER POLE GOING TO 12.47 KILOVOLT, 3-PHASE STEP DOWN TRANSFORMER.
- ⑯ ELECTRICAL CABLES GOING BETWEEN POLE AND 12.47 KILVOLT, 3-PHASE STEP DOWN TRANSFORMER.
- ⑰ ELECTRICAL CABLES GOING BETWEEN 12.47 KILOVOLT, 3-PHASE TRANSFORMER AND THE AUTOMATIC TRANSFER SWITCH.
- ⑱ ELECTRICAL CABLES GOING BETWEEN AUTOMATIC TRANSFER SWITCH AND GENERATOR.
- ⑲ ELECTRICAL CABLES GOING BETWEEN AUTOMATIC TRANSFER SWITCH AND 208/120 VOLT, 3-PHASE STEPUP TRANSFORMER.
- ⑳ ELECTRICAL CABLES GOING BETWEEN 208/120 VOLT, 3-PHASE STEP UP TRANSFORMER AND THE POWER POLE.
- ㉑ ELECTRICAL CABLES THAT DISTRIBUTES POWER TO THE FACILITY.
- ㉒ ELECTRICAL CABLES THAT BYPASSES THE EXISTING EMERGENCY POWER SYSTEM.

KEY NOTES

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- ① NEW ONE PIECE GENERATOR WITH 1,800 GALLON DIESEL TANK ON BOTTOM, 300 KILOWATTS, 208/120 VOLT, 3-PHASE.
- ② NEW AUTOMATIC TRANSFER SWITCH, 1,600 AMP, 208/120 VOLT, 3-PHASE.
- ③ NEW 750 KVA PAD MOUNTED STEP DOWN TRANSFORMER, 12.47 VOLT, 3-PHASE ON PRIMARY SIDE AND 208/120 VOLT, 3-PHASE ON SECONDARY SIDE.
- ④ NEW 750 KVA PAD MOUNTED STEP UP TRANSFORMER, 208/120 VOLT, 3-PHASE ON PRIMARY SIDE AND 12.47 VOLT, 3-PHASE ON SECONDARY SIDE.
- ⑤ NEW LOCATION FOR EMERGENCY POWER SYSTEM.
- ⑥ INSTALL NEW CONCRETE PADS FOR NEW EQUIPMENT.
- ⑦ INSTALL NEW 15 KILOVOLT CABLES BETWEEN EXISTING POWER POLE AND NEW STEP DOWN TRANSFORMER.
- ⑧ INSTALL NEW 600 VOLT CABLES BETWEEN NEW STEP DOWN TRANSFORMER AND NEW AUTOMATIC TRANSFER SWITCH.
- ⑨ INSTALL NEW 600 VOLT CABLES BETWEEN AUTOMATIC TRANSFER SWITCH AND GENERATOR.
- ⑩ INSTALL NEW 600 VOLT CABLES BETWEEN AUTOMATIC TRANSFER SWITCH AND NEW STEP UP TRANSFORMER.
- ⑪ INSTALL NEW 15 KILOVOLT CABLES BETWEEN STEP UP TRANSFORMER AND THE EXISTING POWER POLE.
- ⑫ ALL NEW CABLES MUST BE INSTALLED AT LEAST THREE (3') FEET BELOW GROUND IN FOUR (4") INCH ELECTRICAL PVC CONDUIT ENCASED IN CONCRETE.
- ⑬ NEW CHAIN LINK FENCING WITH 3' GATE.
- ⑭ POWER POLE OWNED BY MON POWER
- ⑮ DOC POWER POLE, METER IS LOCATED ON POWER POLE.
- ⑯ DOC POWER POLE, ELECTRICAL LINES GOES FROM POLE UNDERGROUND TO 12.47 KILOVOLT, 3-PHASE STEP DOWN TRANSFORMER.
- ⑰ DOC POWER POLE, ELECTRICAL LINES GOES FROM 208/120 VOLT, 3-PHASE STEP UP TRANSFORMER TO POWER POLE.
- ⑱ ELECTRICAL CABLES FROM MON POWER.
- ⑲ ELECTRICAL CABLES GOING TO METER BASE.
- ⑳ ELECTRICAL CABLES GOING BETWEEN METER BASE POWER POLE AND POWER POLE THAT GOES TO 12.47 KILOVOLT, 3-PHASE STEP DOWN TRANSFORMER.
- ㉑ ELECTRICAL CABLES THAT DISTRIBUTES POWER TO THE FACILITY.
- ㉒ ELECTRICAL CABLES THAT BYPASSES THE EMERGENCY POWER SYSTEM.
- ㉓ ONE RUN OF 4" SCHEDULE 40 PVC CONDUIT WITH PHASE SIZE 1/0 AWG WITH THREE (3) CABLES.
- ㉔ FOUR PARALLEL RUNS OF 4" SCHEDULE 40 PVC CONDUIT WITH PHASE/NEUTRAL SIZE 600 KCMIL AND GROUND 3 AWG.
- ㉕ NEW GRAVEL ROAD.
- ㉖ CONCRETE BOLLARDS.

KEY NOTES

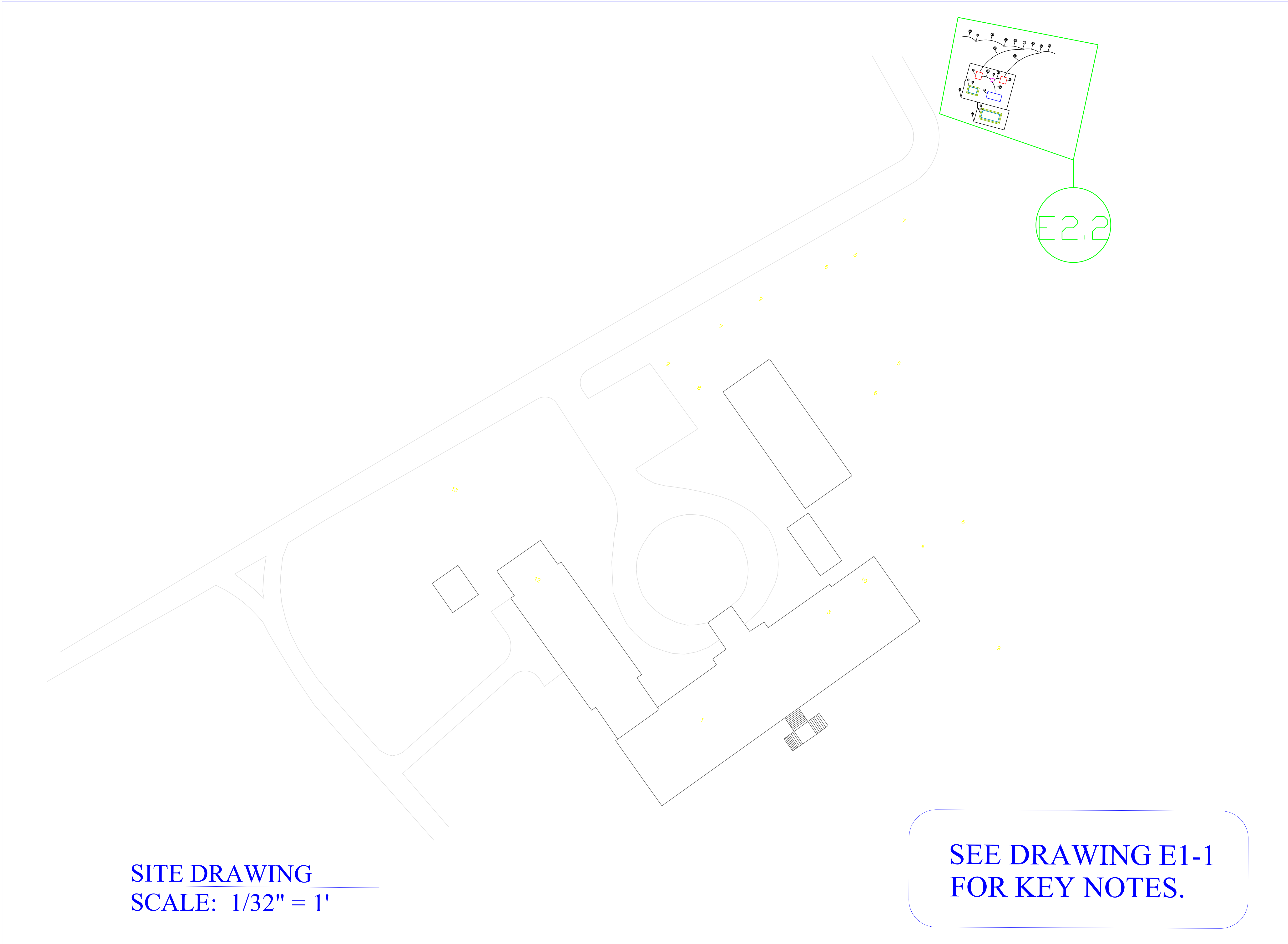
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<small>Project</small> COR61603	<small>Sheet</small> E1-2
<small>Date</small> March 17, 2014	
<small>Scale</small>	



SITE DRAWING
SCALE: 1/32" = 1'

**SEE DRAWING E1-1
 FOR KEY NOTES.**

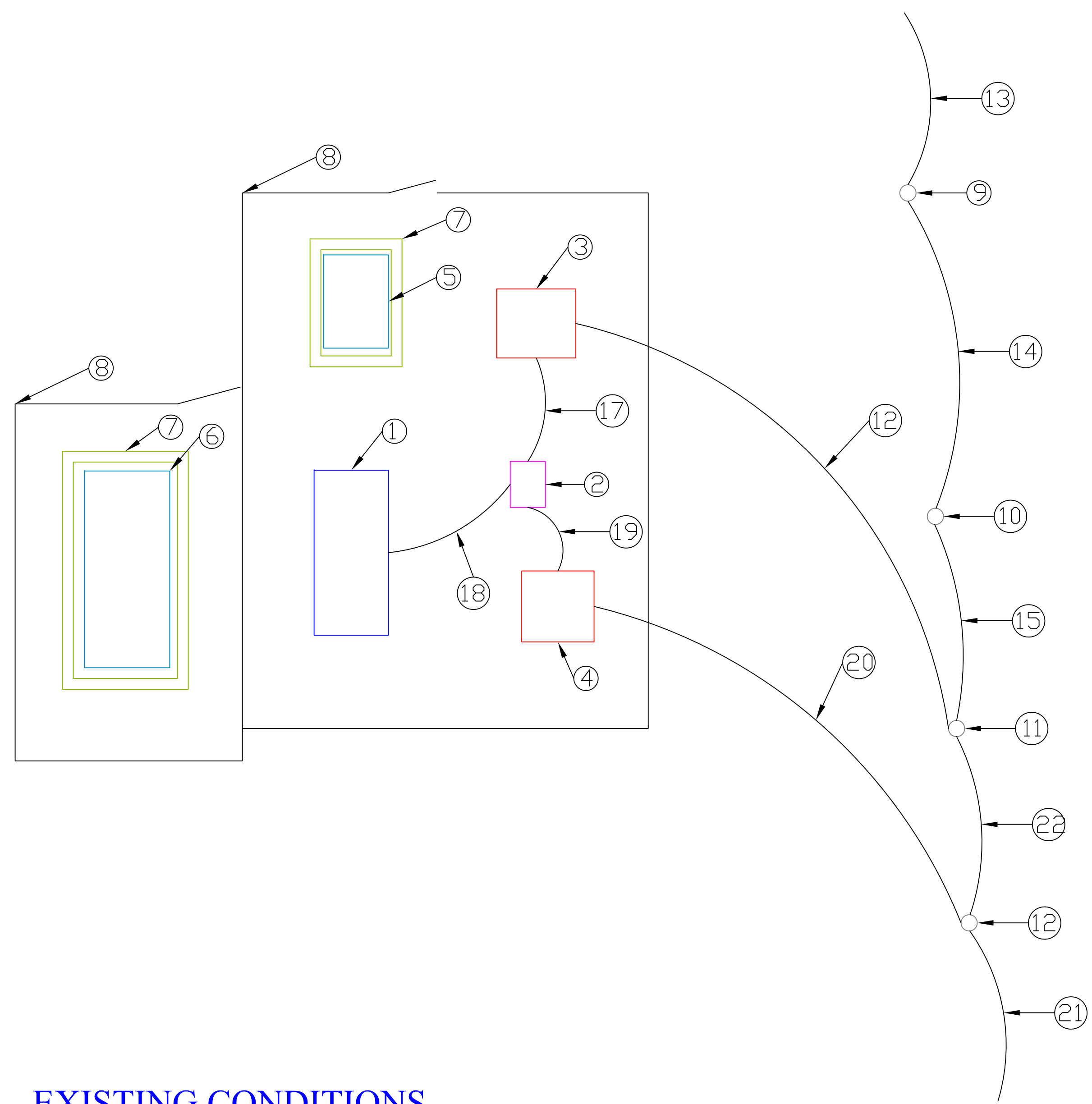
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<small>Date</small> March 17, 2014	
<small>Scale</small> 1/32" = 1'	



EXISTING CONDITIONS
SCALE: 3/16" = 1'

**SEE DRAWING E1-1
 FOR KEY NOTES.**

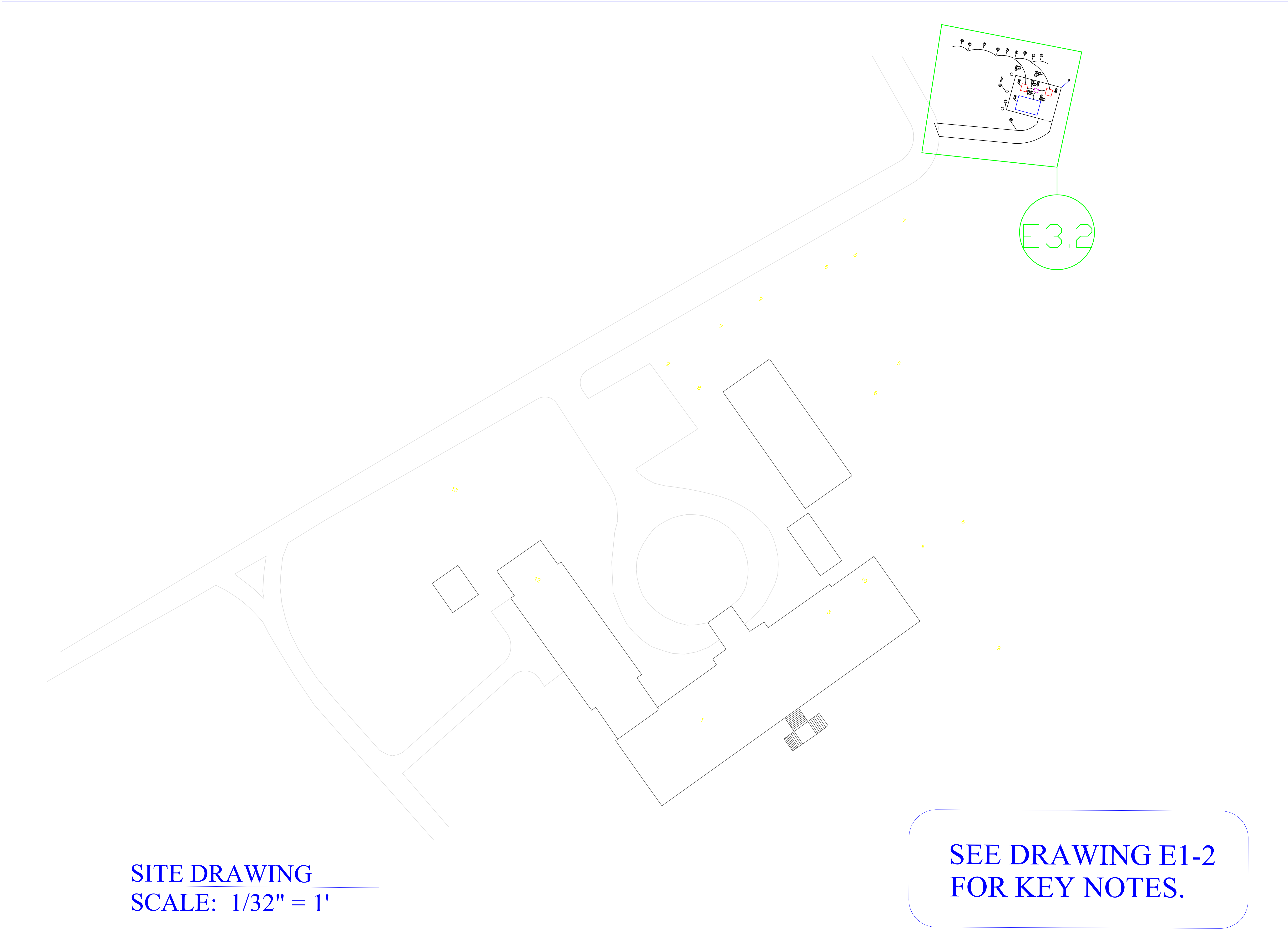
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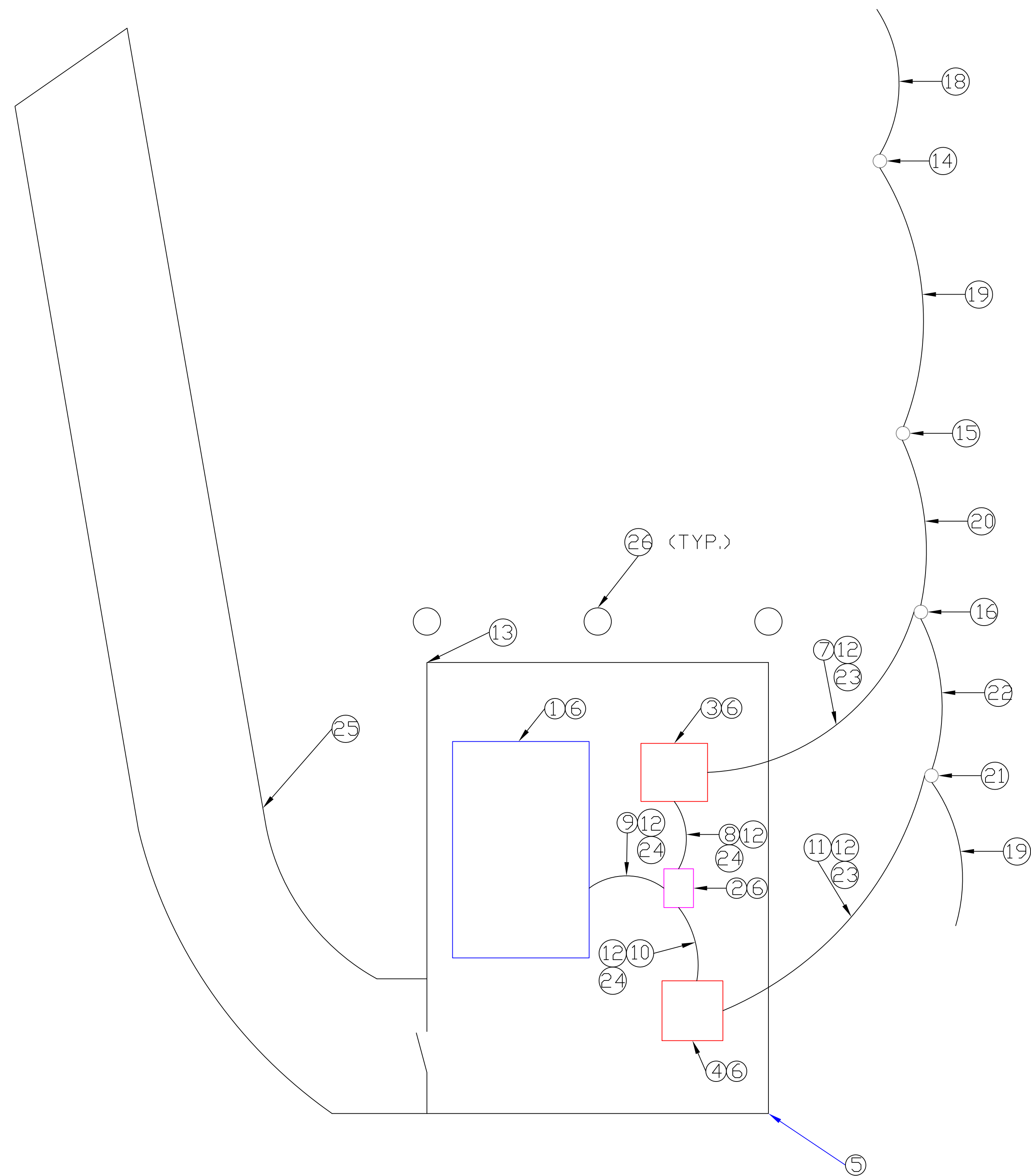
Project	COR61603	Sheet	E2-2
Date	March 17, 2014		
Scale	3/16" = 1'		



SITE DRAWING
SCALE: 1/32" = 1'

**SEE DRAWING E1-2
 FOR KEY NOTES.**

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<small>Project Name and Address</small> Emergency Power System Project Denmar Correctional Complex 4319 Denmar Road Hillsboro, WV 24946-8509		
Project	COR61603	Sheet
Date	March 17, 2014	E3-1
Scale	1/32" = 1'	



NEW EMERGENCY POWER SYSTEM
SCALE: 3/16" = 1'

**SEE DRAWING E1-2
 FOR KEY NOTES.**

General Notes

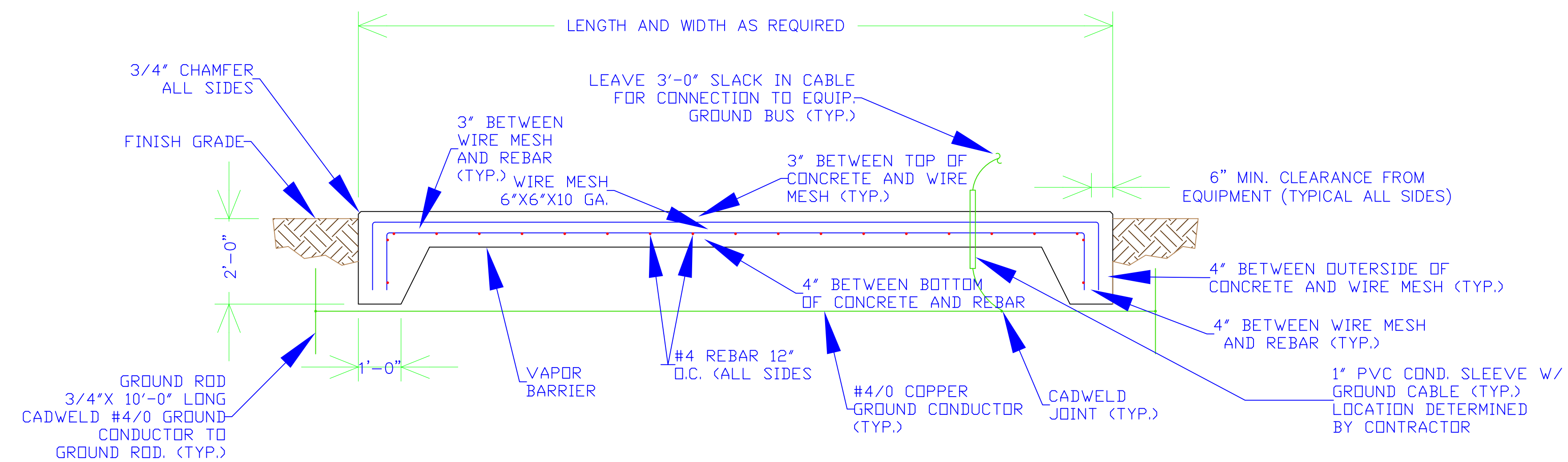
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Project COR61603	Sheet E3-2
Date March 17, 2014	
Scale 3/16" = 1'	

GENERAL NOTES	
1.	FINISH TOP SMOOTH AND LEVEL.
2.	VERIFY ALL PAD DIMENSIONS WITH GENERATOR SUPPLIER.
3.	CONCRETE FINE AFFREGATE WITH MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS.



GENERATOR PAD DETAIL
N. T. S.

No.	Revision/Issue	Date

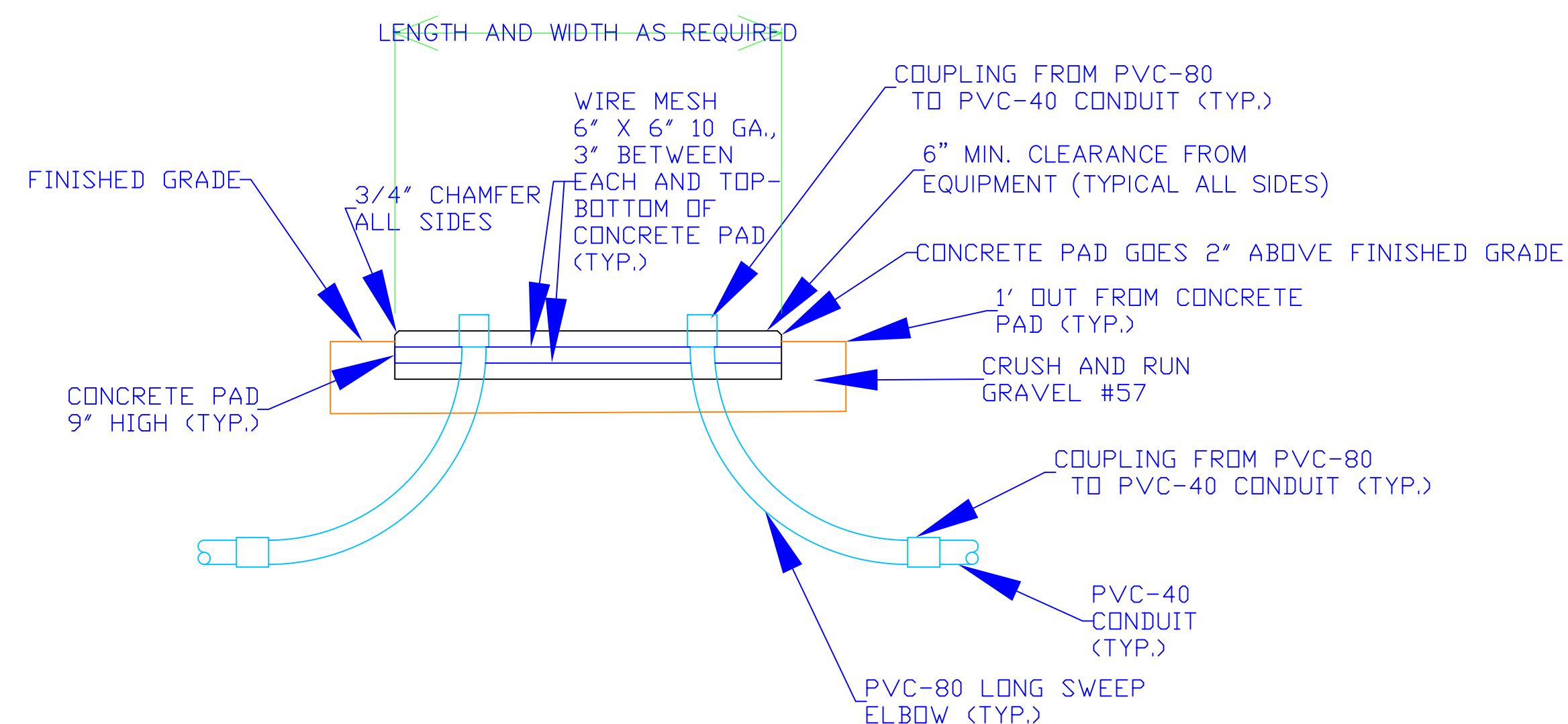
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Project	COR61603	Sheet	E3-3
Date	March 17, 2014		
Scale	N. T. S.		

GENERAL NOTES

1. FINISH TOP SMOOTH AND LEVEL.
2. VERIFY ALL PAD DIMENSIONS WITH AUTOMATIC TRANSFER SWITCH SUPPLIER.
3. CONCRETE FINE AFFREGATE WITH MINIMUM COMPRESSIVE STRENGTH OF 8,000 PSI IN 28 DAYS.



AUTOMATIC TRANSFER SWITCH PAD DETAIL
N. T. S.

No.	Revision/Issue	Date

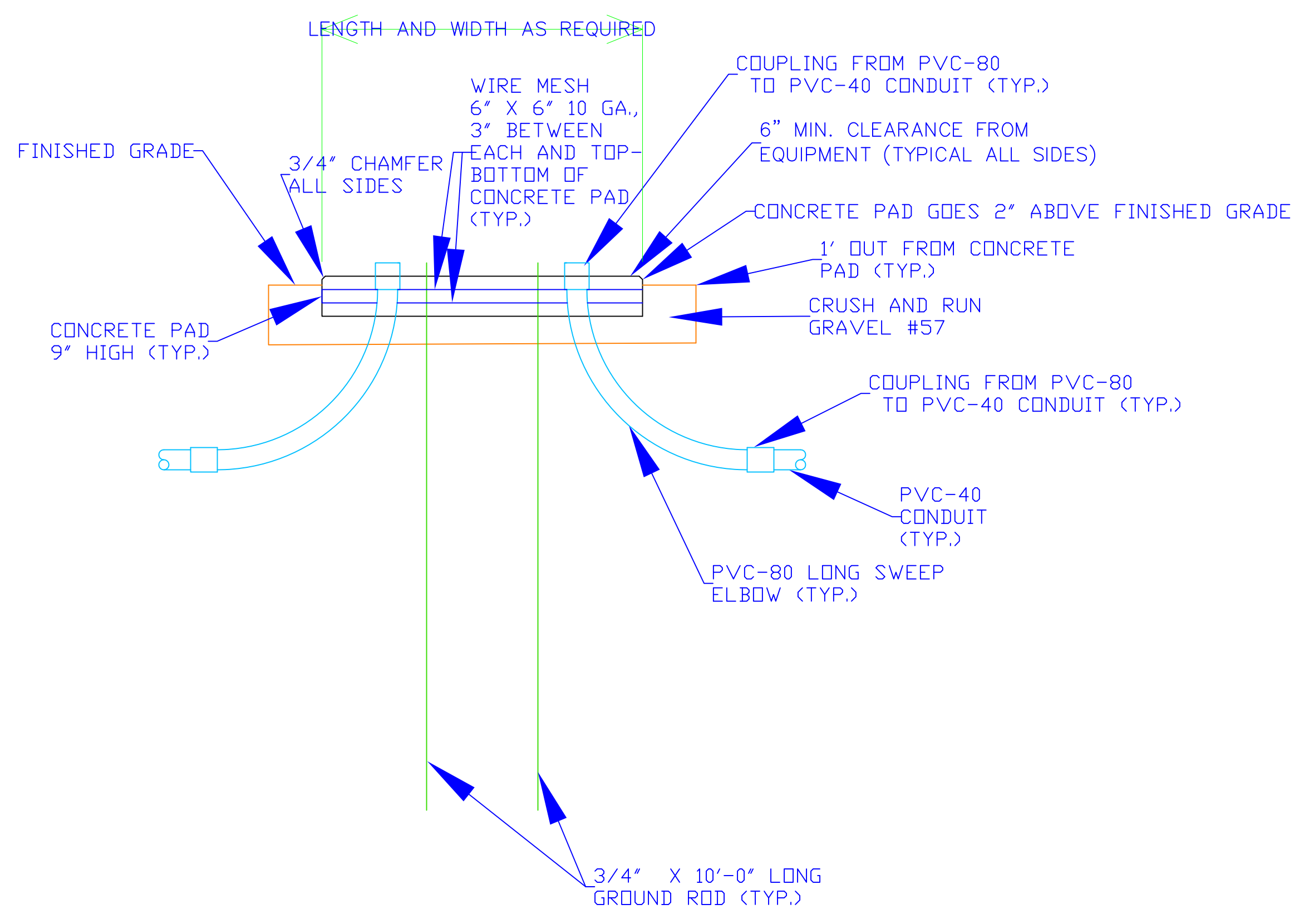
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Project	COR61603	Sheet	E3-4
Date	March 17, 2014		
Scale	N. T. S.		

GENERAL NOTES
1. FINISH TOP SMOOTH AND LEVEL.
2. VERIFY ALL PAD DIMENSIONS WITH TRANSFORMER SUPPLIER.
3. CONCRETE FINE AFFREGATE WITH MINIMUM COMPRESSIVE STRENGTH OF 8,000 PSI IN 28 DAYS.

CODED NOTES
A. SECONDARY DUCTS SHOULD NOT EXTEND MORE THAN 2" ABOVE THE TOP OF FOUNDATION. PRIMARY DUCT SHOULD BE CUR OFF 2" BELOW THE TOP OF THE FOUNDATION TO ALLOW FOR TERMINATING THE CABLES.
B. EXTEND GROUND RODS 2" ABOVE THE TOP OF THE FOUNDATION SO THAT A GROUNDING JUMPER MAY BE ATTACHED.



PAD MOUNTED TRANSFORMER PAD DETAIL
N. T. S.

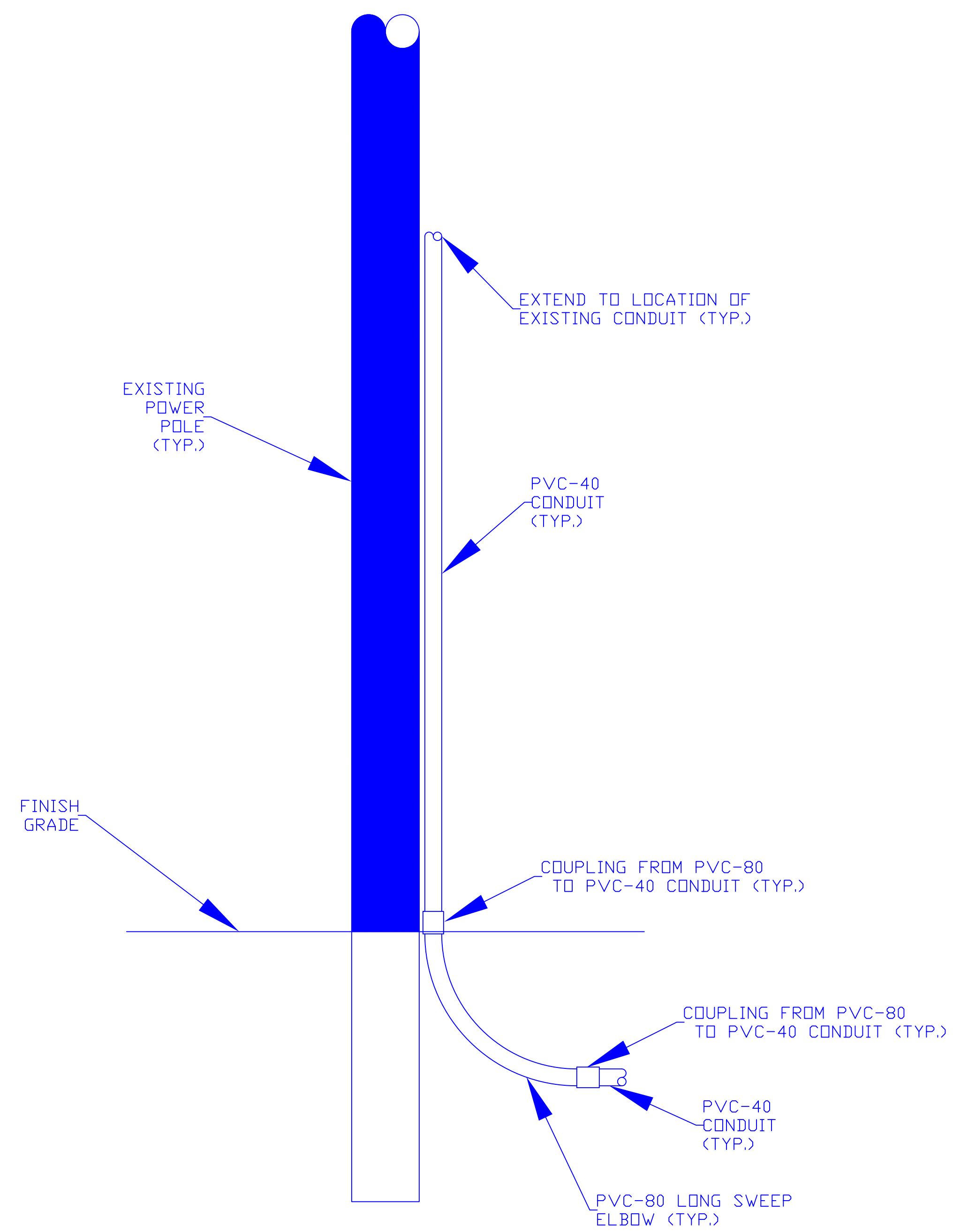
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Project	COR61603	Sheet	E3-5
Date	March 17, 2014	Scale	
Scale	N. T. S.		



UTILITY POWER POLE DETAIL
N. T. S.

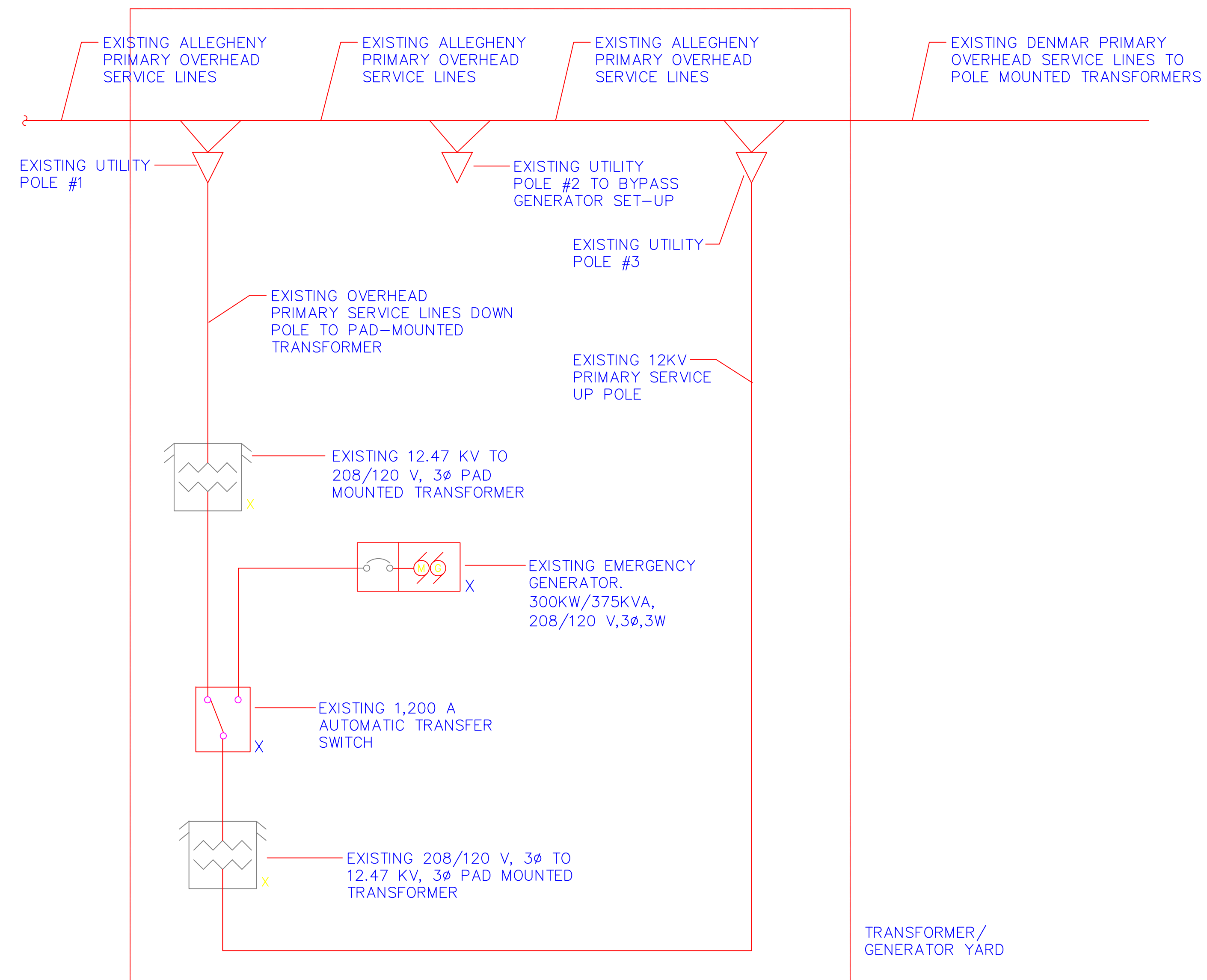
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Project	COR61603	Sheet	E3-6
Date	March 17, 2014		
Scale	N. T. S.		



EXISTING ONE-LINE DIAGRAM
N. T. S.

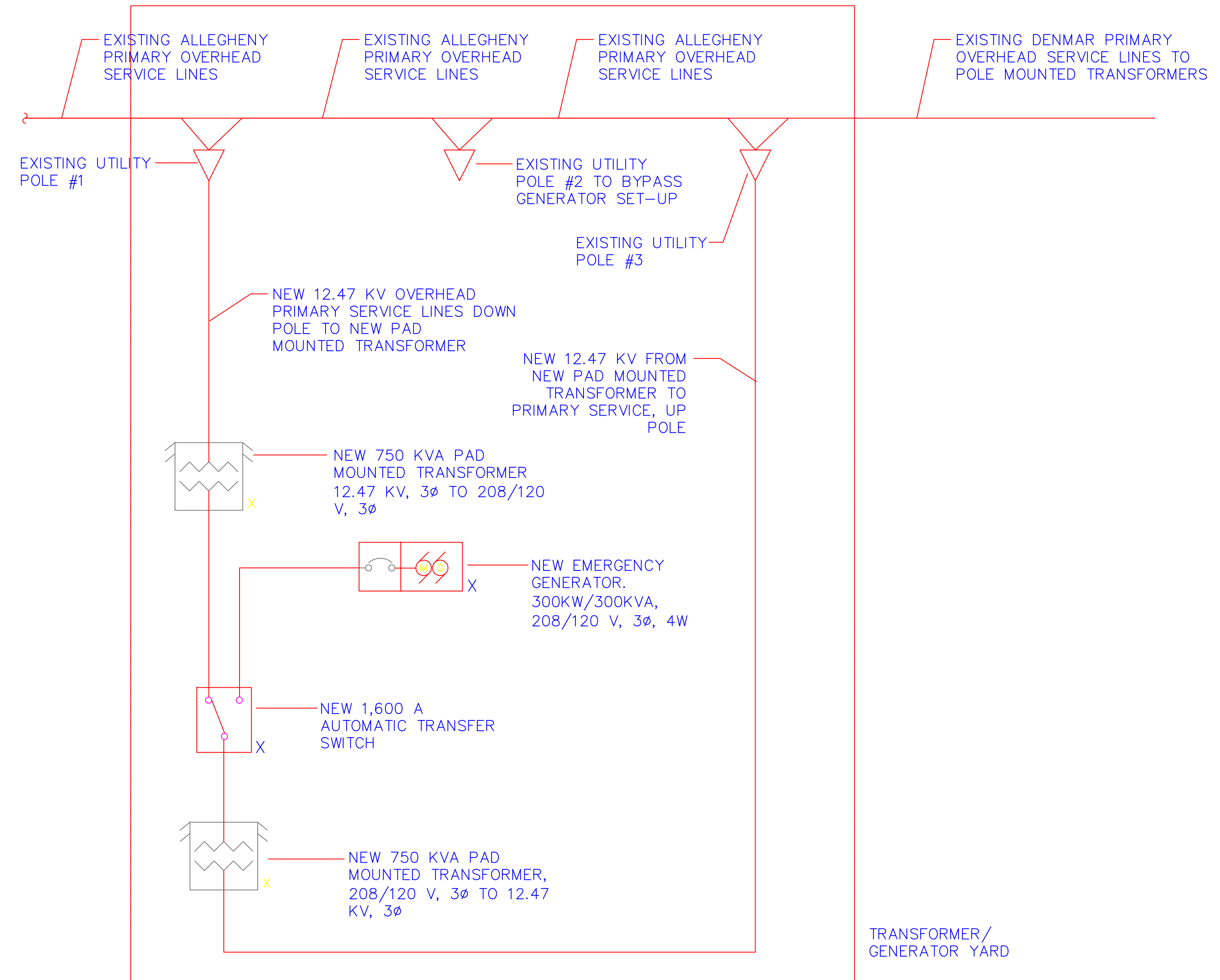
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Project	COR61603	Sheet	E4-1
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NEW ONE-LINE DIAGRAM
N. T. S.

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