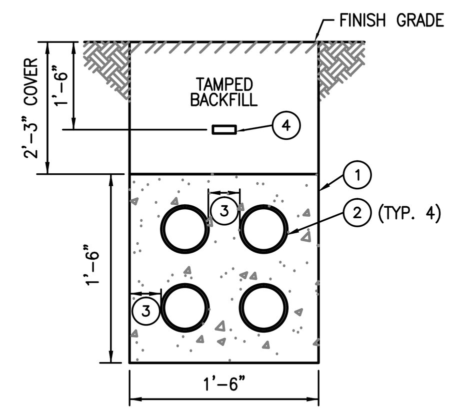
○ DETAIL NOTES

1. 3000 LB. CONCRETE ENCASEMENT. 3" MIN. FROM OUTSIDE OF DUCT.
2. 4" I.D. DUCTS, SCHEDULE 40 PVC.
3. MIN. 3" SPACING BETWEEN CONDUITS AND MIN. 3" ENCASEMENT (TYPICAL). PROVIDE CONDUIT SPACERS 6'-0" O.C.
4. YELLOW MARKER TAPE ON COMPACTED FILL.



UNDERGROUND DUCTS (A / ES0.1)
SCALE: NONE

○ DETAIL NOTES

1. 3000 LB. CONCRETE ENCASEMENT. 3" MIN. FROM OUTSIDE OF DUCT.
2. 4" I.D. DUCTS, SCHEDULE 40 PVC.
3. MIN. 3" SPACING BETWEEN CONDUITS AND MIN. 3" ENCASEMENT (TYPICAL). PROVIDE CONDUIT SPACERS 6'-0" O.C.
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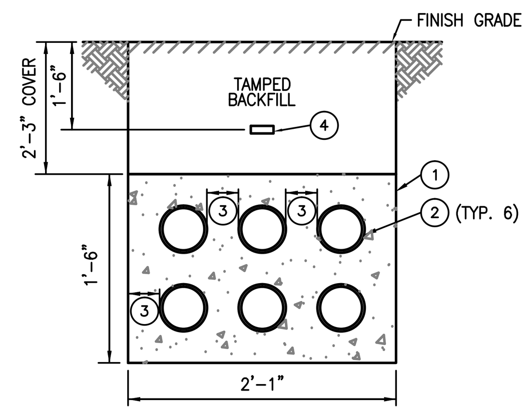
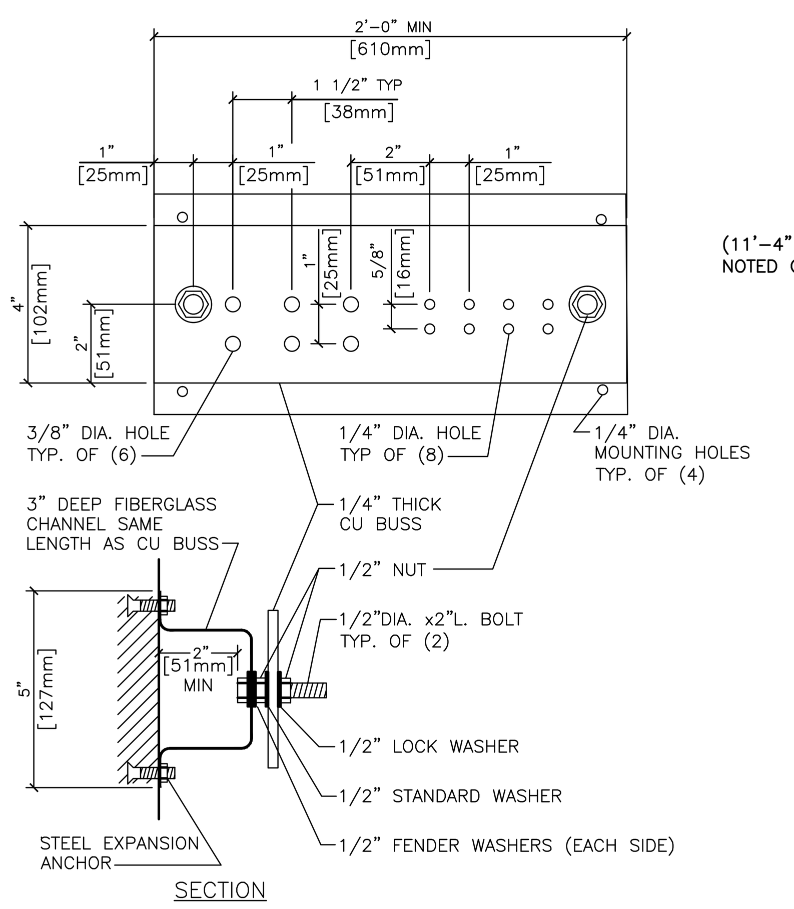
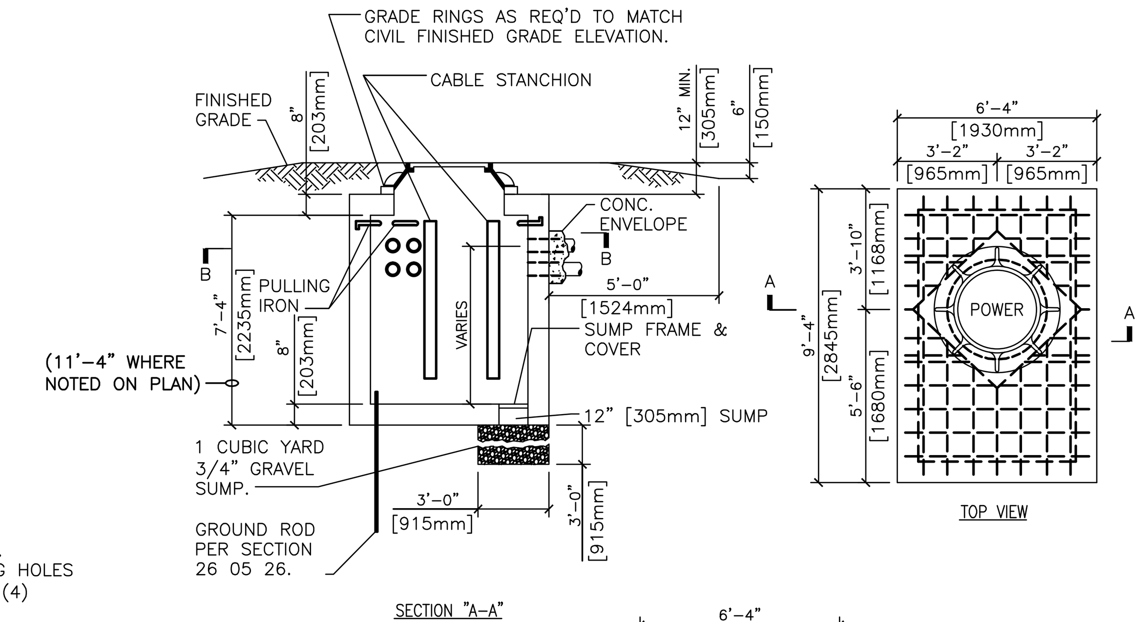


UNDERGROUND DUCTS (B / ES0.1)
SCALE: NONE

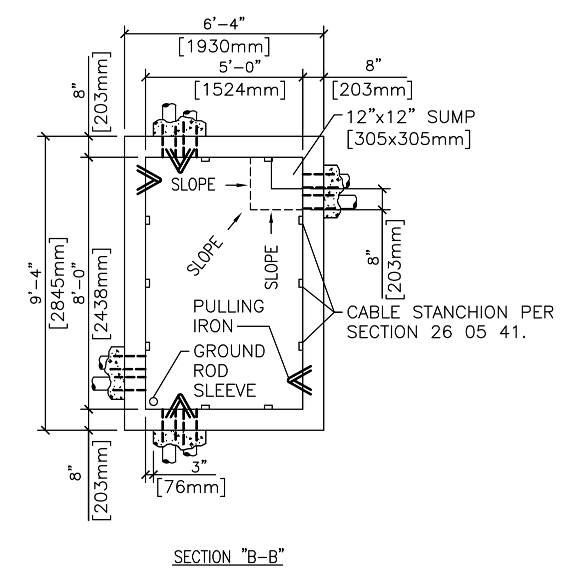


GENERAL NOTES
1. ALL HARDWARE SHOWN SHALL BE STAINLESS STEEL.
2. PROVIDE 1 MOUNTING POINT PER 12" OF BAR LENGTH.
3. HOLES MAY BE ADDED IF REQUIRED.

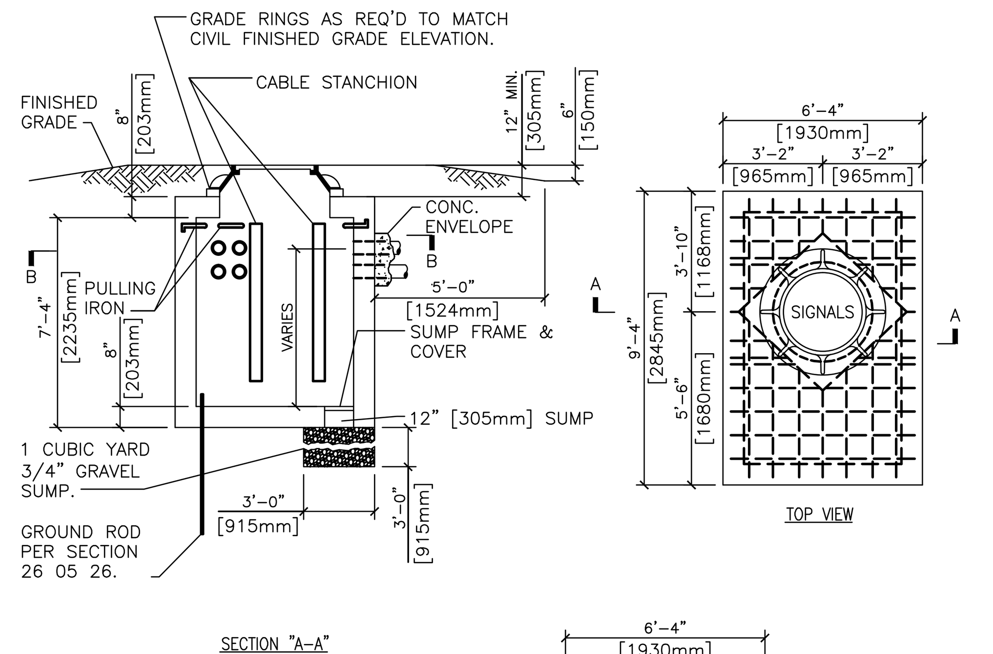
GROUND BAR DETAIL (C / ES0.1)
SCALE: NONE



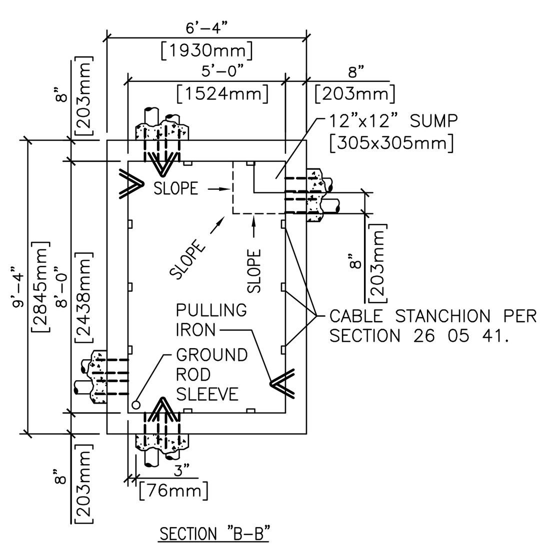
GENERAL NOTES:
1. INCLUDE ALUMINUM LADDER (NOT SHOWN FOR CLARITY)



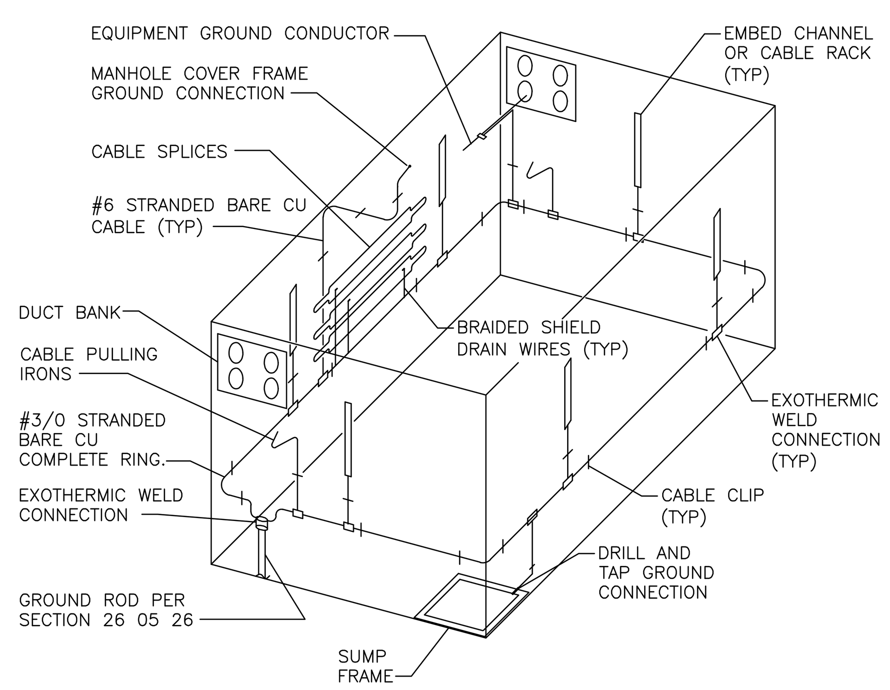
POWER MANHOLE DETAIL (D / ES0.1)
SCALE: NONE



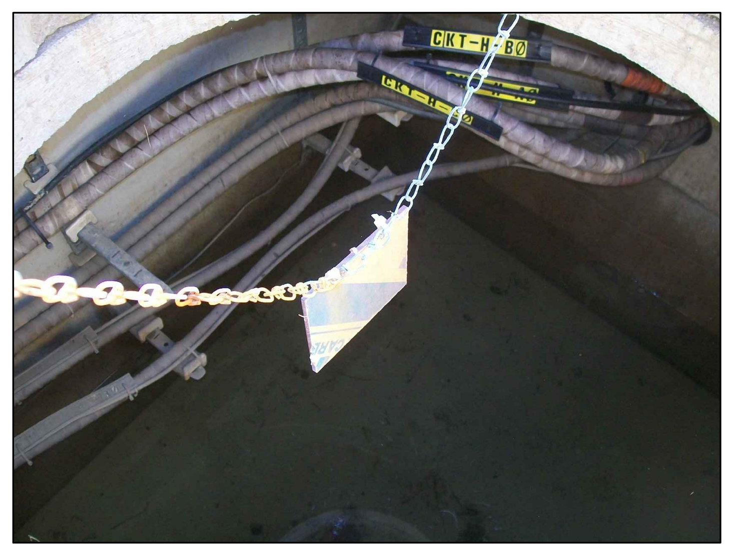
GENERAL NOTES:
1. INCLUDE ALUMINUM LADDER (NOT SHOWN FOR CLARITY)



SIGNALS MANHOLE (F / ES0.1)
SCALE: NONE



MANHOLE GROUNDING DETAIL (E / ES0.1)
SCALE: NONE



EXIST. MH#25
SITE PHOTOGRAPH (G / ES0.1)
SCALE: NONE

EXIST. PMH "E"/T-13
SITE PHOTOGRAPH (H / ES0.1)
SCALE: NONE

EXIST. PMH "E" LINE CONNECTIONS
SITE PHOTOGRAPH (I / ES0.1)
SCALE: NONE

GENERAL NOTES

- A THESE NOTES APPLY EQUALLY TO THE FULL SET OF DOCUMENTS.
- B SITE VISIT(S) SHALL BE AS OUTLINED IN PROJECT SPECIFICATIONS.
- C THE NOTES AND SYMBOLS SET DOWN ON THESE DRAWINGS ARE FOR THE GUIDANCE OF ALL TRADES INVOLVED IN THE PROJECT AND MUST BE FOLLOWED TO EXECUTE THE WORK AS INTENDED.
- D THE CONTRACTORS SHALL REFER TO ALL SPECIFICATION SECTIONS, AND ELECTRICAL DRAWINGS FOR DETAILS OF BUILDING CONSTRUCTION TO ENSURE SPACE AND SATISFACTORY ARRANGEMENT FOR THEIR WORK. THE VARIOUS DRAWINGS COMPRISING THE SET ARE INTERDEPENDENT AND MUST BE USED JOINTLY AT ALL TIMES. EACH CONTRACTOR SHOULD REFER TO THE GENERAL REQUIREMENTS OF THE CONTRACT. THESE NOTES AND SYMBOLS SET DOWN ON THE DRAWINGS ARE FOR THE GUIDANCE OF ALL TRADES INVOLVED IN THE PROJECT AND MUST BE FOLLOWED TO EXECUTE THE WORK AS INTENDED. IF DISCREPANCIES OCCUR, CONTACT THE PROJECT ENGINEER (COR) THRU THE CONTRACTING OFFICER FOR CLARIFICATION BEFORE PROCEEDING.
- F ALL WORK MUST BE COORDINATED WITH THE CONTRACTING OFFICER'S TECHNICAL REPRESENTATIVE (COR) TO MAINTAIN OPERATION OF THE EXISTING FACILITY.
- G FIELD VERIFY DIMENSIONAL INFORMATION PRIOR TO ORDERING EQUIPMENT. DO NOT SCALE DRAWINGS.
- H TITLES, CAPTIONS, HEADINGS, ETC. ARE INTENDED FOR GENERAL REFERENCE AND ARE NOT INTENDED TO LIMIT THE WORK REQUIRED IN ANY WAY.
- J ALL WORK SHALL BE PERFORMED IN COMPLETE COMPLIANCE WITH ALL GOVERNING CODES AND STANDARDS.
- M PROPER PERSONNEL PROTECTION EQUIPMENT SHALL BE UTILIZED PER OSHA AND VA REQUIREMENTS WITH VAMC COR AND SAFETY OFFICER.
- N FIRESTOPPING ASSEMBLIES SHALL BE PROVIDED AT PENETRATIONS OF CONDUITS AND OTHER ELECTRICAL ITEMS THRU FIRE RATED FLOORS, FIRE RATED WALLS AND PARTITIONS AND FIRE RATED SHAFT WALLS AND PARTITIONS. ALL PENETRATIONS THROUGH 0-HOUR RATED WALLS SHALL BE CAULKED SMOKE-TIGHT. REFER TO SPECIFICATION SECTION 07 84 00.
- O REMOVE EXISTING ELECTRICAL/COMMUNICATIONS SYSTEMS CABLING IN BUILDINGS WHICH ARE MADE SUPERFLUOUS WHEN NEW SYSTEMS ARE INSTALLED INCLUDING ALL ASSOCIATED WIRING AND DEVICES. ALL ABANDON RACEWAY, CONDUIT AND BOXES SHALL BE REMOVED.
- P IDENTIFY EACH COMMUNICATIONS CABLE PASSING THROUGH EACH NEW AND EXISTING MANHOLE WITH A LAMINATED PHENOLIC NAMEPLATE TAG SECURED TO CABLE WITH PERMANENT STRAP OR BAND. NAMEPLATES SHALL BE 0.125" THICK, RED WITH A WHITE CORE, LETTERING SHALL BE 0.25" MINIMUM HEIGHT. SUBMIT SAMPLE DURING SHOP DRAWING REVIEW.
- Q PROVIDE #14 AWG INSULATED TRACER WIRE WITH ALL UNDERGROUND CONDUITS CONTAINING ONLY NON-METALLIC CABLES. LABEL "TRACER" AT ALL ACCESSIBLE MANHOLES.
- R REFER TO SPECIFICATION SECTION 01 00 00 GENERAL REQUIREMENTS FOR STATEMENT OF BID ITEM(S).

SEQUENCE OF CONSTRUCTION

GENERAL NOTES:

A. SEQUENCE OF CONSTRUCTION INDICATED BELOW IS ONE POSSIBLE SOLUTION TO MINIMIZE DOWNTIME OF THE CAMPUS ELECTRICAL/TELECOMMUNICATIONS SYSTEM. CONTRACTOR IS REQUIRED TO SUBMIT A DETAILED SEQUENCE OF OPERATIONS TO THE COR AT THE BEGINNING OF THE PROJECT. DEVIATIONS FROM THE FOLLOWING PROPOSED SEQUENCE OF CONSTRUCTION WILL BE REVIEWED, BUT WILL NOT BE GROUNDS FOR ADDITIONAL COST TO THE GOVERNMENT.

B. ALL CUTOVER WORK REQUIRING PRIMARY ELECTRICAL/TELECOMMUNICATIONS SYSTEMS DOWNTIME SHALL BE DONE OUTSIDE OF NORMAL WORKING HOURS (NIGHTS/WEEKENDS) AND SHALL BE COORDINATED WITH COR 21 DAYS IN ADVANCE.

C. PHASE NUMBERS INDICATED BELOW ARE FOR REFERENCE ONLY AND DO NOT CORRELATE TO PROJECT PHASES. THESE ARE USED TO SCHEMATICALLY INDICATE THE ELECTRICAL/TELECOMMUNICATIONS CONSTRUCTION PROGRESSION. PHASE E1-E7/C1-C5 SHALL HAPPEN DURING PROJECT PHASE 1.

PHASE E1: ALL EXISTING UNDERGROUND UTILITIES ARE TO BE MARKED AND DEPTH LOCATED IN AREAS WHERE NEW DUCTBANKS ARE TO CROSS OR EQUIPMENT IS LOCATED. THE AREAS AROUND BUILDING PENETRATIONS AND STEAM TUNNEL CROSSINGS ARE TO BE EXCAVATED TO REVEAL THE EXACT LOCATION/DEPTH. THE PROPOSED DUCTBANK PROFILES CAN THEN BE FINALIZED. PROVIDE STEEL COVER OVER EXCAVATION UNTIL DUCTBANK IS READY FOR CONSTRUCTION. CONTRACTOR SHALL THEN SUBMIT A REVISED DETAILED SEQUENCE OF CONSTRUCTION PLAN INDICATING ESTIMATED CUTOVER DATES, AND PROJECT MILESTONES.

PHASE E2: ALL CONCRETE ENCASED DUCTBANKS, MANHOLES AND ALL CONDUITS WITHIN BUILDING ARE TO BE CONSTRUCTED. CUTTING AND PATCHING ACROSS ROADWAYS, PARKING LOTS AND SIDEWALKS SHALL BE COMPLETED AS EXPEDITIOUSLY AS POSSIBLE. ROADWAY/PARKING LOT WORK THAT REQUIRES TRAFFIC DIVERSION SHALL PERFORMED ON WEEKENDS WITH TRAFFIC GRADE STEEL PLATING COVERING TRENCH SUITABLE FOR LARGE BUS LOAD. SHUTDOWNS OF ANY ROADWAY/PARKING LOT SHALL BE COORDINATED WITH COR 21 DAYS IN ADVANCE.

PHASE E3: PULL NEW MEDIUM VOLTAGE CABLE FROM MANHOLE #25 TO MANHOLE #26 AND LEAVE ENOUGH FREE END TO COMPLETE CIRCUITS TO EACH PAD MOUNTED PMH SWITCH. MAKE PRIMARY SELECTIVE PAIR READY FOR CUTOVER.

PHASE E4: ONCE APPROVAL IS GIVEN FROM COR AND ELECTRIC SHOP, TRANSFER ALL BUILDINGS ON PRIMARY SELECTIVE PAIR TO FEEDER "E" AND DE-ENERGIZE "H" AT MAIN SUBSTATION SWITCHGEAR ROOM. SEPARATE DEAD-BREAK CONNECTION IN THREE WAY TERMINATION CABINET AND PROVIDE CAP ON CABLES (NO PARKING STANDS EXIST). RE-ENERGIZE FEEDER "H", TRANSFER ALL BUILDINGS TO FEEDER "H". DE-ENERGIZE "E" AT MAIN SUBSTATION SWITCHGEAR ROOM. SEPARATE DEAD-BREAK CONNECTION IN THREE WAY TERMINATION CABINET AND PROVIDE CAP ON CABLES (NO PARKING STANDS EXIST). RE-ENERGIZE FEEDER "E". THIS WORK REQUIRES MULTIPLE CREWS OPERATING SIMULTANEOULSY AND SHALL BE COMPLETED IN NO MORE THAN 1.5 HOURS BEGINNING 0500 ON A SATURDAY MORNING.

PHASE E5: REMOVE PRIMARY SELECTIVE PAIR FEEDERS FROM PMH "D" AND "E" BACK TO MANHOLE. PULL NEW FEEDERS IN AND INSTALL MEDIUM VOLTAGE TERMINATIONS. TEST EACH CABLE PER SPECIFICATION AND TERMINATE TO PMH "D" AND "E". CLEAN UP AND CLOSE UP PMH SWITCHES. THIS WORK REQUIRES MULTIPLE CREWS OPERATING SIMULTANEOULSY AND SHALL BE COMPLETED IN NO MORE THAN 12 HOURS IMMEDIATELY FOLLOWING PREVIOUS PHASE WORK.

PHASE E6: ONCE APPROVAL IS GIVEN FROM COR AND ELECTRIC SHOP, TRANSFER ALL BUILDINGS ON PRIMARY SELECTIVE PAIR TO FEEDER "E" AND DE-ENERGIZE "H" AT MAIN SUBSTATION SWITCHGEAR ROOM. RECREATE DEAD-BREAK CONNECTION IN THREE WAY TERMINATION CABINET. RE-ENERGIZE FEEDER "H", TRANSFER ALL BUILDINGS TO FEEDER "H". DE-ENERGIZE "E" AT MAIN SUBSTATION SWITCHGEAR ROOM. RECREATE DEAD-BREAK CONNECTION IN THREE WAY TERMINATION CABINET. RE-ENERGIZE FEEDER "E". THIS WORK REQUIRES MULTIPLE CREWS OPERATING SIMULTANEOULSY AND SHALL BE COMPLETED IN NO MORE THAN 1.5 HOURS IMMEDIATELY FOLLOWING PREVIOUS PHASE WORK. ALL BUILDINGS SHALL BE RE-ENERGIZED AT THIS POINT.

PHASE E7: REMOVE REMAINING EXISTING PRIMARY SELECTIVE PAIR FEEDERS, CONCRETE ENCASED DUCTBANK, MANHOLES, ETC.

PHASE C1: PREPARATION AND PATHWAYS CONSTRUCT NEW DUCT BANK AND MANHOLE SYSTEM INCLUDING DUCT BANK FROM EXISTING MANHOLES 2A & 4 TO BUILDING 408, DUCT BANK FROM EXISTING MANHOLE 15 TO BUILDING 408, AND CONDUIT AND PULL BOX SYSTEM IN CRAWLSPACE OF BUILDING 408. REVIEW AND CROSS-REFERENCE EXISTING CONDITIONS INCLUDING CABLE ROUTES, TYPES, AND CONDITIONS WITH PROJECT DOCUMENTS. COORDINATE WITH VA TO IDENTIFY ACTIVE PAIRS/STRANDS IN EXISTING CABLES, PREPARE CUT-OVER PLANS IDENTIFYING EXISTING ACTIVE CABLE PAIRS/STRANDS AND ASSIGNMENT TO NEW FEEDER CABLE PAIRS/STRANDS.

PHASE C2: FIBER REPLACEMENT PROVIDE NEW FIBER OPTIC BACKBONE CABLES FROM MAIN HOSPITAL 9TH FLOOR DATA CENTER, THROUGH NEW DUCT BANK SYSTEM TO BUILDINGS 408 (TERMINATE IN 1ST FLOOR TECH ROOM 103B) AND BUILDING 126 (TERMINATE IN 1ST FLOOR TECH ROOM 100B). TERMINATE EACH IN NEW FIBER DISTRIBUTION EQUIPMENT ADJACENT TO THE EXISTING FIBER DISTRIBUTION EQUIPMENT. PROVIDE A NEW FIBER BACKBONE FOR FIRE ALARM FROM BUILDING 305, THROUGH EXISTING AND NEW DUCT BANKS TO BUILDING 408 AND TERMINATE IN EXISTING FIBER PANEL NEXT TO FIRE ALARM PANEL IN MAIN LOBBY.

PHASE C3: COPPER REPLACEMENT PROVIDE NEW COPPER VOICE BACKBONE CABLES FROM EXISTING ENTRANCE PROTECTOR RACKS IN BUILDING 321 PHONE ROOM, THROUGH EXISTING AND NEW DUCT BANK SYSTEM TO BUILDINGS 408 (TERMINATE ON NEW BACKBOARD IN CRAWLSPACE), EXISTING MANHOLE XX (TERMINATE IN NEW RE-ENTERABLE SPLICE CASE), AND EXISTING MANHOLE 15 (TERMINATE IN NEW RE-ENTERABLE SPLICE CASE). PREP CABLE ENDS FOR CUT-OVERS. PROVIDE NEW DIRECTIONAL COUPLER AND 0.500" HARDLINE COAX FROM NEW PULL BOX ABOVE CEILING IN BASEMENT OF MAIN HOSPITAL (LINEN SERVICES), THROUGH EXISTING AND NEW DUCT BANK SYSTEM, TO CRAWLSPACE IN BUILDING 408. PROVIDE DIRECTIONAL COUPLER WITH EXTENSION OF 0.500" HARDLINE THROUGH REMAINDER OF NEW DUCT BANK SYSTEM TO EXISTING MANHOLE 15. PROVIDE NEW GENERATOR CONTROL CABLING FROM NEW PULL BOX ABOVE CEILING IN BASEMENT OF MAIN HOSPITAL (LINEN SERVICES), THROUGH EXISTING AND NEW DUCT BANK SYSTEM EXISTING PULL BOX IN BASEMENT OF BUILDING 147.

PHASE C4: SYSTEM CUT-OVERS SWITCH FIBER JUMPERS ON BOTH ENDS ONTO NEW FIBER CABLES AS IDENTIFIED IN THE CUT-OVER PLAN. CUT-OVER COPPER CABLE PAIRS TO THE NEW FEEDER CABLES AS IDENTIFIED IN THE CUT-OVER PLAN. CUT-OVER IN BUILDING 408 WILL HAPPEN ON THE EXISTING SERVICE ENTRANCE BACKBOARD IN THE CRAWL SPACE. CUT-OVER IN MANHOLES XX AND 15 WILL HAPPEN IN THE NEW AND EXISTING SPLICE CASES IN THE MANHOLES. CUT AND TERMINATE EXISTING 0.500" HARDLINE CABLE ABOVE CEILING IN MAIN HOSPITAL AND CONNECT TO NEW DIRECTIONAL COUPLER FEEDING NEW CABLE. SWITCH EXISTING DIRECTIONAL COUPLER IN MANHOLE 15 FROM OLD TO NEW CABLE. SPLICE NEW GENERATOR CONTROL CABLING INTO EXISTING CONTROL CABLING IN NEW PULL BOX IN MAIN HOSPITAL (ABOVE BASEMENT CEILING IN LINEN SERVICES) AND IN EXISTING PULL BOX IN BASEMENT OF BUILDING 147.

PHASE C5: CABLING DEMOLITION REMOVE EXISTING COPPER AND FIBER CABLES BACK TO LAST ACTIVE MANHOLE/BUILDING ON EACH END. CABLES SHALL BE SEALED AND PROTECTED AND LABELED AT LAST ACCESSIBLE POINT.

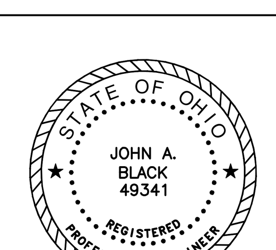
Sheet List Table

Sheet Number	Sheet Title
ES0.1	ELECTRICAL DETAILS
ES0.2	ELECTRICAL SINGLE-LINE
ES0.3	SIGNALS DETAILS
ES0.4	COPPER CABLING DIAGRAM – DEMO
ES0.5	COPPER CABLING DIAGRAM – NEW
ES0.6	FIBER CABLING DIAGRAM – DEMO
ES0.7	FIBER CABLING DIAGRAM – NEW
ES1.1	ELECTRICAL SITE PLAN
ES1.2	SIGNALS SITE PLAN – DEMO
ES1.3	SIGNALS NEW WORK – SITE PLAN
ES1.4	SIGNALS NEW WORK – SITE PLAN
ES5.1	COMMUNICATIONS–BUILDING 408
ES5.2	COMMUNICATIONS–BUILDING 330
ES5.3	COMMUNICATIONS–BUILDING 305
ES5.4	COMMUNICATIONS–BUILDING 410
ES5.5	COMMUNICATIONS–BUILDING 126_321
ES5.6	COMMUNICATIONS–BUILDING 147

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
Heapy Project Number: 2012-04039 Firm License: 01528

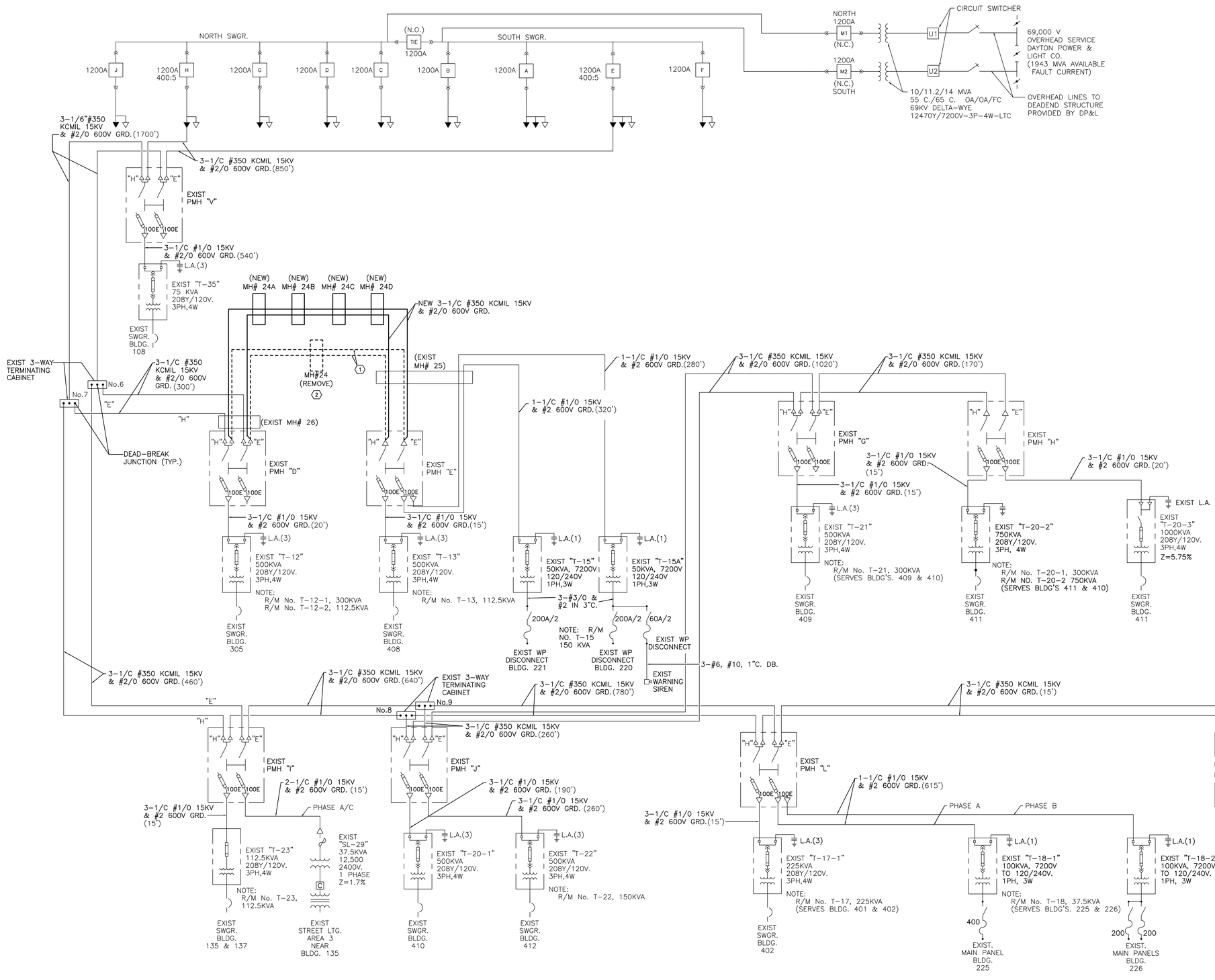


Revised By:

Drawing Title: ELECTRICAL DETAILS
Project Title: SITE PREP FOR CT SCANNER
Date: 01-31-2013
Project No.: 552-CSI-333
Approved: Project Manager: RANDI FIORINA
Building Number: 335
Checked: MSG
Drawn: MSG
Drawing No.: ES0.1
Approved: Service Chief: GARY ABREU
Location: 4100 WEST THIRD STREET DAYTON, OH 45428
VAMC, DAYTON
VA Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
PLOTTED BY: JDKRILE
PLOT/EDIT DATE: January 29, 2013



GENERAL NOTES

A. LIGHT LINEWEIGHT INDICATE EXISTING EQUIPMENT TO REMAIN. DARK SOLID LINEWEIGHT INDICATES NEW EQUIPMENT. DARK DASHED LINEWEIGHT INDICATES EQUIPMENT TO BE REMOVED. LIGHT DASHED LINEWEIGHT INDICATES FUTURE EQUIPMENT.

PLAN NOTES

1. REMOVE PRIMARY CONDUCTORS ONCE BACKFEED IS COMPLETE.
2. REMOVE PRIMARY MANHOLE ONCE BACKFEED IS COMPLETE.

SYMBOL LEGEND

- MEDIUM VOLTAGE TERMINATION
- MEDIUM VOLTAGE TERMINATION
- MEDIUM VOLTAGE SWITCH/FUSE
- LOW VOLTAGE CIRCUIT BREAKER
- MEDIUM VOLTAGE DRAWOUT CIRCUIT BREAKER
- TRANSFORMER
- GROUND CONNECTION
- LIGHTING ARRESROR
- LOW VOLTAGE SWITCH/FUSE
- FUSIBLE CUTOUT
- LOAD BREAK ELBOW
- TERMINATING CABINET

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

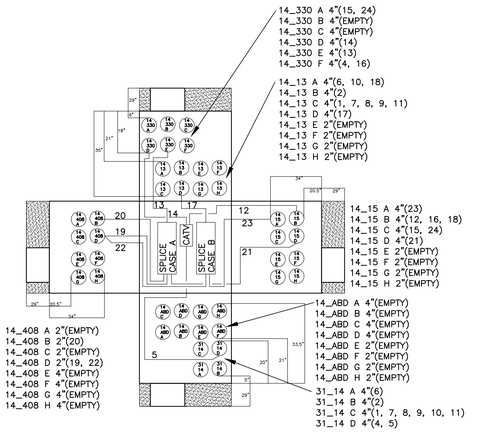
Revised By:

Drawing Title	ELECTRICAL SINGLE-LINE
Project Title	SITE PREP FOR CT SCANNER
Date	01-31-2013
Project No.	552-CSI-333
Approved: Project Manager	RANDI FIORINA
Building Number	335
Checked	MSG
Drawn	MSG
Approved: Service Chief	GARY ABREU
Location	4100 WEST THIRD STREET DAYTON, OH 45428
Drawing No.	ES0.2

VAMC, DAYTON — Department of Veterans Affairs

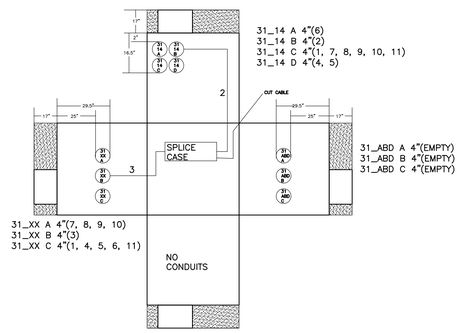
VA FORM 08-6231, OCT 1978

PROJECT NO. 2012-04039 PLOTTED BY: JDKNOLE
HEAPY ENGINEERING DATE: JANUARY 29, 2013
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY



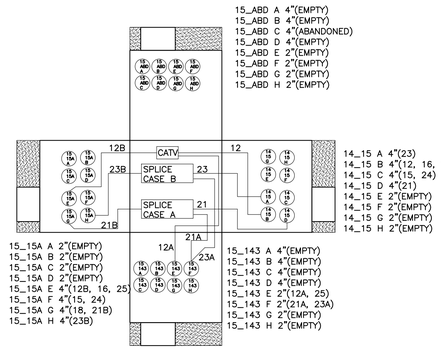
MANHOLE #14

SCALE: NONE



MANHOLE #31

SCALE: NONE

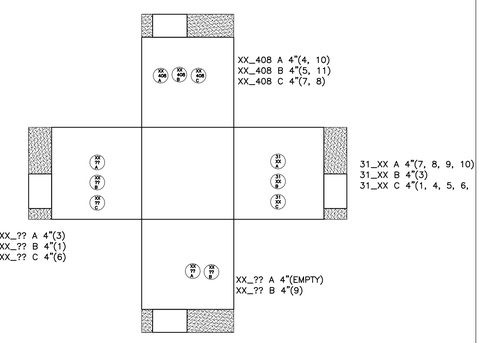


MANHOLE #15

SCALE: NONE

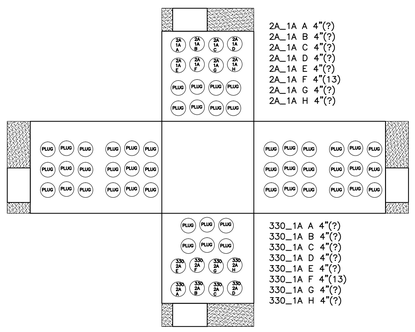
SIGNALS DETAILS - LEGEND

SPLICE CASE_B	EXISTING COPPER SPLICE CASE
CATV	EXISTING CATV DIRECTIONAL COUPLER/TAP
12	EXISTING COMMUNICATIONS CABLE. NUMERAL INDICATES REFERENCE TO CABLE INFORMATION IN THE CABLE DESCRIPTION TABLES, THIS SHEET
14_15 A 4"(23)	MANHOLE DUCT CALL OUT. XX_YY INDICATES SOURCE AND DESTINATION MANHOLE IDENTIFIER OF IDENTIFIED DUCT. LETTER IS A SPECIFIC DUCT IDENTIFIER, X" INDICATES SIZE OF DUCT, (INFORMATION IN PARAN. INDICATES SPECIFIC CABLES INSTALLED IN DUCT).
14 / 15 / C	EXISTING DUCT, TOP NUMERAL INDICATES SOURCE MANHOLE IDENTIFIED, MIDDLE NUMERAL INDICATES DESTINATION MANHOLE IDENTIFIER, LETTER INDICATES SPECIFIC DUCT IDENTIFIER.



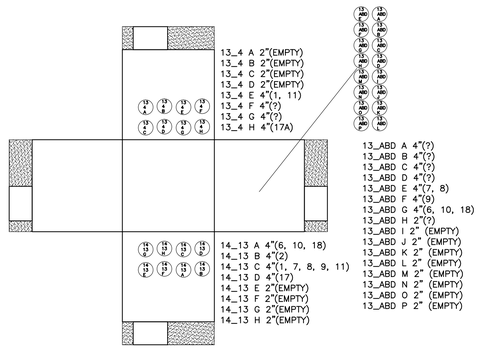
MANHOLE #XX

SCALE: NONE



MANHOLE #2A

SCALE: NONE



MANHOLE #13

SCALE: NONE

TABLE GENERAL NOTES

A. THE INFORMATION PROVIDED IS FOR BIDDING PURPOSES ONLY AND SHALL BE FIELD VERIFIED PRIOR TO DEMOLITION WORK.
B. NO CABLING SHALL BE DISCONNECTED OR REMOVED WITHOUT AN APPROVED PLAN FOR CABLE CUT-OVER.
C. CABLES WHICH ARE ABLE TO BE SPLICED BETWEEN MANHOLES MAY NOT SHOW FINAL SOURCE/DESTINATION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING OUTAGES WITH VA PRIOR TO ANY CUT-OVER.

ID	Description	Pairs/Strands	Source	Destination	Manholes/buildings pass thru
1	copper	4C-#16	Unverified	Unverified	Unverified, 6, 5, 4, 13, 14, 31, XX, unverified
2	copper	900	MH13 splice case A	MH31 splice case	13, 14, 31
3	copper	400pr	MH31 splice case into cable 2	Unverified	31, XX, Unverified
4	Fiber	12, OM1	Building 330	408 LIU in Crawlspace	Unverified, B330, 13, 31, xx, B408
5	Hardline Coax	NA	Tap in MH14	Abondoned in 408	14, 31, XX
6	Fiber	12, OM1	Abandoned	Unverified	13, 14, 31, XX, unverified
7	Copper	3C#16	Abandoned	Building 408	Unverified, 13, 14, 31, xx, B408
8	Copper	3C#16	Abandoned	Building 408	Unverified, 13, 14, 31, xx, B408
9	Copper	25pr	Abandoned	House 221	13, 14, 31, xx, B221
10	Fiber	12, OM1	Abandoned	Building 408 (room 103B)	13, 14, 31, xx, B408
11	Fiber	6 strand OM1	Building 305	Building 408 (FA pnl)	B305, 6, 5, 4, 13, 14, 31, xx, B408
12	Hardline Coax	NA	Tap in MH14	Tap in MH15	14, 15
12A	Hardline Coax	NA	Tap in MH15 to cable 12	Unverified	15, 15A, 15B, 15C, 15D, 15E, 15F, unverified
12B	Hardline Coax	NA	Tap in MH15 to cable 12	Building 143	15, B143
13	Copper	1200	Building 321	MH14 splice Case A	14, B330, 2a, 1a, 1, B321
14	Hardline Coax	NA	Building 330	Tap in MH14	Unverified, B330, 14
15	Generator Alarm Wiring	16#12	Building 330	Boiler House 147	B330, 31, 14, 15, 15A, 15B, 15C, 15D, 15E, 15F, B147
16	Fiber, Alpha Net	12, OS1	Building 330 (9th floor data center	Building 126	B330, 14, 15, 15A, 15B, 15C, 15D, 16, B126
17	Copper	1200	MH13 splice case B	MH14 splice case B	13, 14
17A	Copper	600	Building 410	MH13 splice case B	13, 4, 5, 6, B410

ID	Description	Pairs/Strands	Source	Destination	Manholes/buildings pass thru
18	Fiber	12, OS1	Abandoned	Unverified	13, 14, 15, 15A,, 15B, 15C, 15D, 15E, 15F, unverified
19	Copper	100	MH14 splice case A	Building 408	14, B408
20	Copper	300	MH14 splice case A	Abondoned in 408	14, B408
21	Copper	300	MH14 splice case A	MH15 splice case A	14, 15
21A	Copper	100	MH15 splice case A	Building 143	15, B143
21B	Copper	300	MH15 splice case A	Unverified	15, 15A, 15B, 15C, 15D, 15E, 15F, unverified
22	Copper	50	MH14 splice case B	Building 408 splice	14, B408
23	Copper	300	MH14 splice case B	MH15 Splice case B	14, 15
23A	Copper	100	MH15 Splice case B	Building 143	15, B143
23B	Copper	300	MH15 Splice case B	Unverified	15, 15A, 15B, 15C, 15D, 15E, 15F, unverified
24	Copper - 7 cable bundle	7 - 4#12	Building 330	Boiler House	B330, 14, 15, 15a, 15b, 15c, 15d, 15e, 15f

CABLE DESCRIPTION TABLES

SCALE: NONE

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

Revised By:

Drawing Title: SIGNALS DETAILS

Project Title: SITE PREP FOR CT SCANNER

Date: 01-31-2013

Project No. 552-CSI-333

Approved: Project Manager: RANDI FIORINA

Building Number: 335 | Checked: NTL | Drawn: JDK

Approved: Service Chief: GARY ABREU

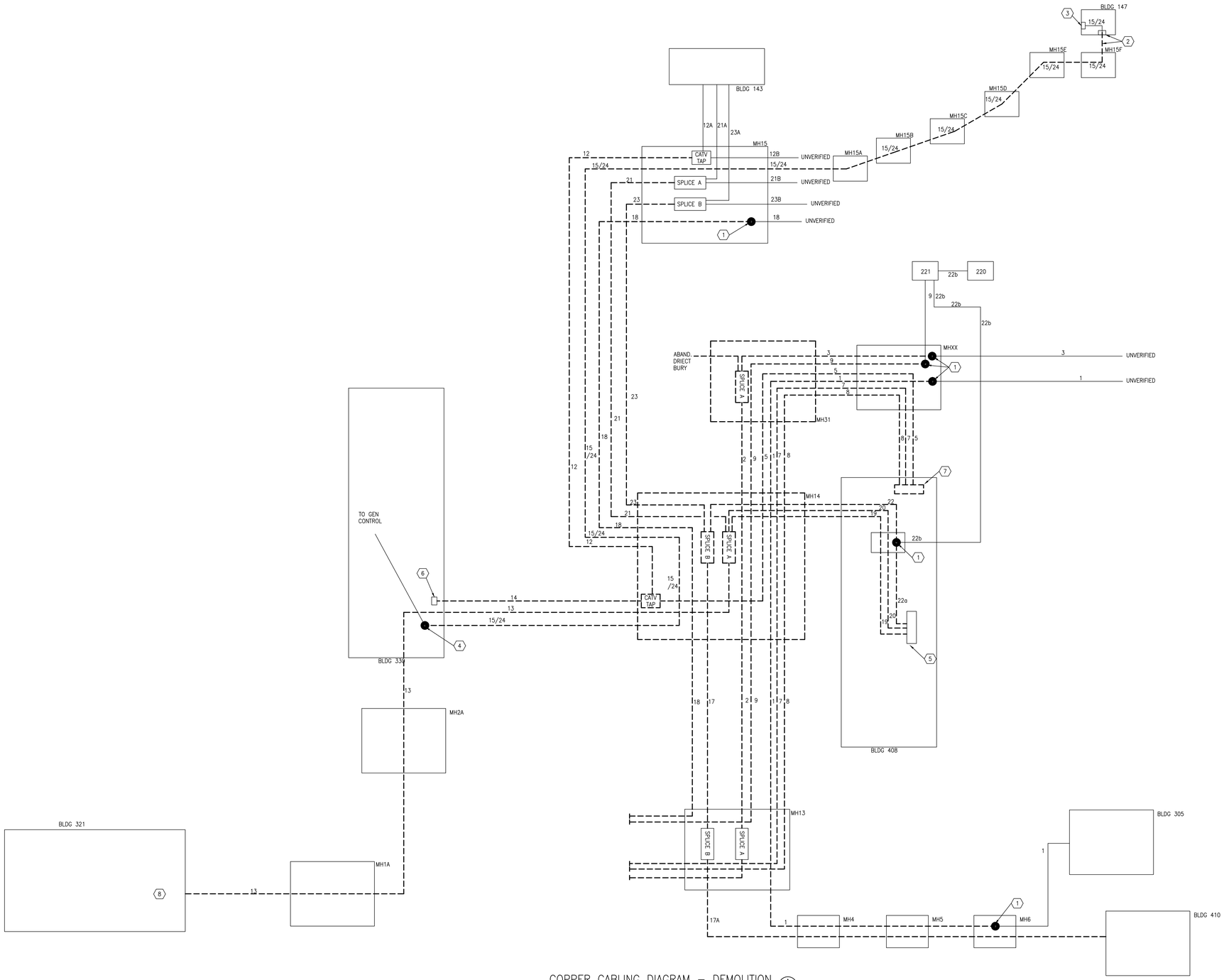
Location: 4100 WEST THIRD STREET DAYTON, OH 45428

Drawing No. ES0.3

VAMC, DAYTON — Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
PLOTTED BY: JDKRILE
PLOTTED DATE: January 29, 2013



GENERAL NOTES

A. LIGHT LINEWEIGHT INDICATE EXISTING EQUIPMENT TO REMAIN.
DARK SOLID LINEWEIGHT INDICATES NEW EQUIPMENT.
DARK DASHED LINEWEIGHT INDICATES EQUIPMENT TO BE REMOVED.

PLAN NOTES

1. EXISTING CABLE TO BE CUT AND PREPPED FOR RE-TERMINATION IN NEW SPLICE CASE. PROTECT CABLE ENDS DURING CONSTRUCTION.
2. REMOVE CABLE BUNDLE INTO PULLBOX IN BASEMENT OF BUILDING. CUT EXISTING CABLES AND PREPARE FOR SPLICE/EXTENSION ONTO NEW OSP CABLES.
3. EXISTING GENERATOR ALARM/ANNUNCIATOR/CONTROL SYSTEM.
4. CUT EXISTING CONDUIT ABOVE CEILING AT BASEMENT LEVEL, PROVIDE NEW PULL BOX, PREP CABLES FOR SPLICE ONTO NEW.
5. EXISTING VOICE UL PROTECTOR PANELS AND TERMINATION FIELD.
6. EXISTING BROADBAND 0.500" HARDLINE CABLE COUPLER.
7. EXISTING MECHANICAL SPLICES ON FLOOR OF CRAWLSPACE TO BE REMOVED. EXISTING CABLING TO REMAIN TO BE TAGGED AND CAPPED.
8. EXISTING CABLING IS TERMINATED IN SPLICE CASE IN TELEPHONE ROOM WITH 100 PAIR TAILES EXTENDED TO PROTECTOR TERMINATION FRAMES. REMOVE ALL EXISTING CABLING INCLUDING SPLICE CASE AND TAILS AFTER NEW CABLING HAS BEEN INSTALLED AND CUT-OVER.

COPPER CABLING DIAGRAM – DEMOLITION (A / ES.04)
SCALE: NONE

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

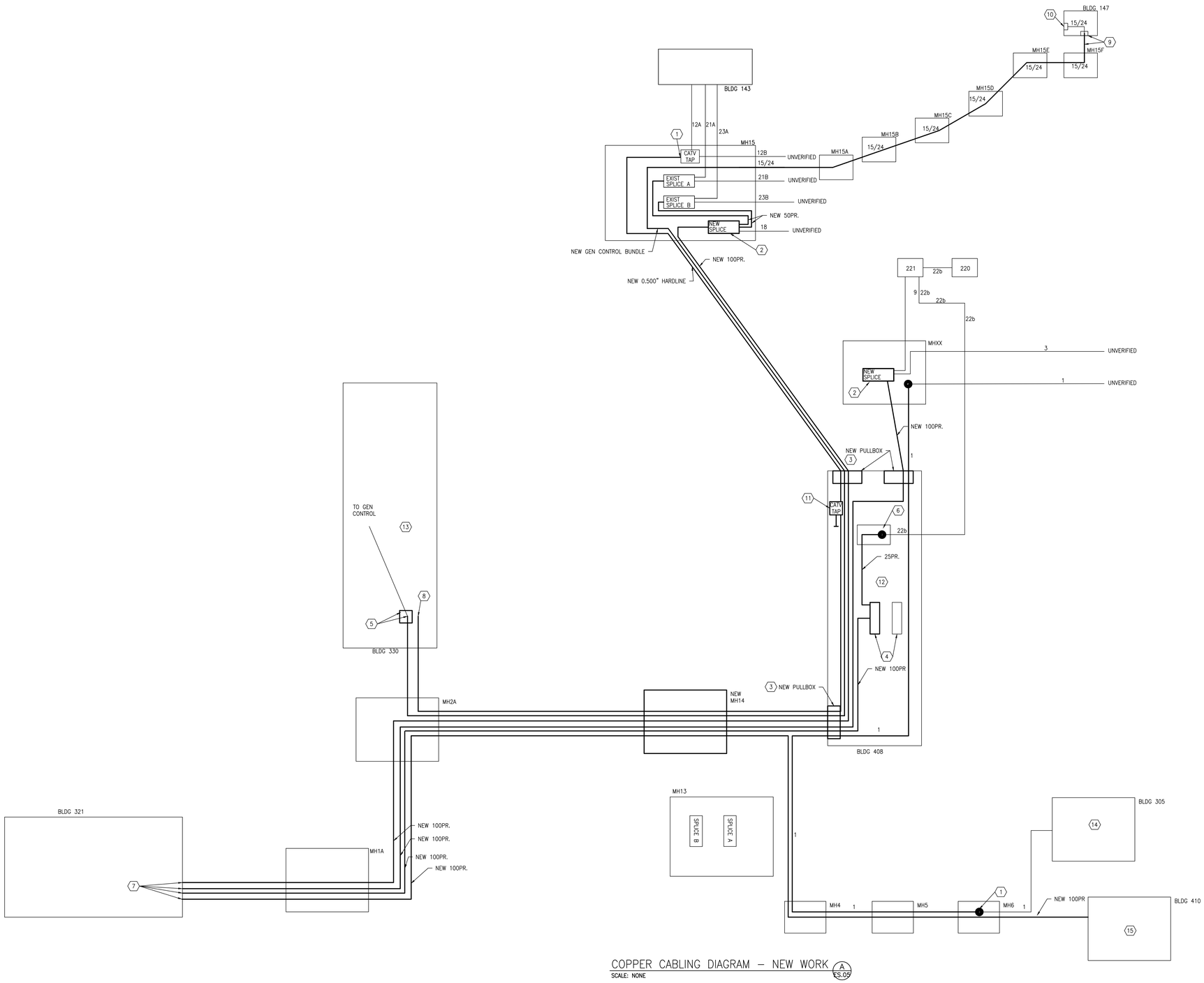
Revised By:

Drawing Title	Project Title	Date
COPPER CABLING DIAGRAM – DEMO	SITE PREP FOR CT SCANNER	01-31-2013
Approved: Project Manager: RANDI FIORINA	Building Number: 335	Checked: NTL / Drawn: JDK
Approved: Service Chief: GARY ABREU	Location: 4100 WEST THIRD STREET DAYTON, OH 45428	Project No. 552-CSI-333 / Drawing No. ES0.4

VAMC DAYTON — VA Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
PLOTTED BY: JDKOALE
DATE: January 29, 2013



COPPER CABLING DIAGRAM – NEW WORK (A / ES.05)

SCALE: NONE

GENERAL NOTES

A. LIGHT LINEWEIGHT INDICATE EXISTING EQUIPMENT TO REMAIN.
DARK SOLID LINEWEIGHT INDICATES NEW EQUIPMENT.
DARK DASHED LINEWEIGHT INDICATES EQUIPMENT TO BE REMOVED.
LIGHT DASHED LINEWEIGHT INDICATES FUTURE EQUIPMENT.

PLAN NOTES

1. CONNECT NEW CATV 0.500" HARDLINE CABLE TO EXISTING DIRECTIONAL COUPLER PORT IN MANHOLE.
2. PROVIDE NEW SEALED SPLICE CASE (METALLIC) IN MANHOLE AND SPLICE NEW FEEDER ONTO EXISTING. COORDINATE PAIR ASSIGNMENTS WITH VA FOR ACTIVE PAIRS.
3. NEW PULLBOX IN BASEMENT CRAWLSPACE.
4. PROVIDE NEW UL PRIMARY PROTECTOR ADJACENT TO EXISTING. PROVIDE CROSS-CONNECT TO EXISTING HOUSE CABLING AND INTER-BUILDING FEEDERS AS COORDINATED WITH VA.
5. SPLICE AND EXTEND EXISTING GENERATOR CONTROL CABLE BUNDLE IN NEW PULL BOX ABOVE CEILING IN BASEMENT LEVEL.
6. CONNECT NEW CABLE INTO EXISTING CABLE SPLICE IN PULLBOX IN CRAWLSPACE.
7. PROVIDE NEW UL PRIMARY PROTECTORS ON EXISTING TERMINATION FRAMES IN PHONE ROOM. TERMINATE NEW OSP SERVICE CABLES TO NEW UL PROTECTORS. COORDINATE ARRANGEMENT AND TERMINATIONS WITH VA PRIOR TO INSTALLATION.
8. INTERCEPT EXISTING CATV FEEDER ABOVE CEILING IN BASEMENT AND COUPLE INTO NEW CABLE SEGMENT.
9. SPLICE NEW GENERATOR CONTORL CABLE BUNDLE ONTO EXISTING IN EXISTING PULLBOX IN BASEMENT.
10. EXISTING GENERATOR CONTROL/ANNUNCIATOR.
11. PROVIDE NEW DIRECTIONAL COUPLER WITH TERMINATED TAP TO SERVE FUTURE CATV IN BUILDING 408.
12. REFER TO SHEET ES5.1 FOR ADDITIONAL DETAIL.
13. REFER TO SHEET ES5.2 FOR ADDITIONAL DETAIL.
14. REFER TO SHEET ES5.3 FOR ADDITIONAL DETAIL.
15. REFER TO SHEET ES5.4 FOR ADDITIONAL DETAIL.

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO JOHN A. BLACK 49341 REGISTERED PROFESSIONAL ENGINEER

Revised By:

Drawing Title	COPPER CABLING DIAGRAM – NEW
Project Title	SITE PREP FOR CT SCANNER
Date	01-31-2013
Project No.	552-CSI-333
Approved: Project Manager	RANDI FIORINA
Building Number	335
Checked	NTL
Drawn	JDK
Drawing No.	ES0.5
Approved: Service Chief	GARY ABREU
Location	4100 WEST THIRD STREET DAYTON, OH 45428

VAMC, DAYTON

VA Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

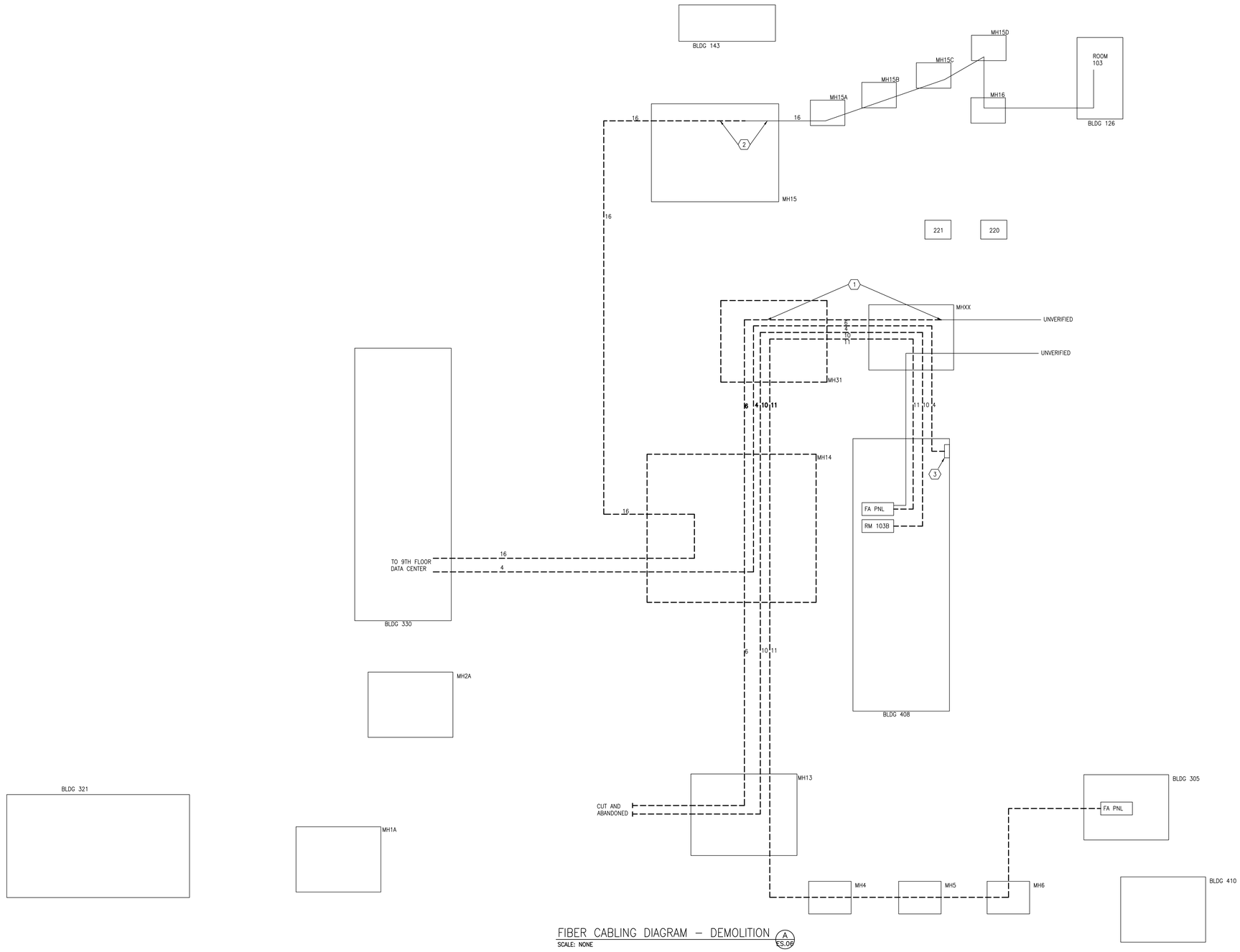
PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
PLOTTED BY: JDKRILE
PLOT/EDIT DATE: January 29, 2013

GENERAL NOTES

A. LIGHT LINEWEIGHT INDICATE EXISTING EQUIPMENT TO REMAIN.
DARK SOLID LINEWEIGHT INDICATES NEW EQUIPMENT.
DARK DASHED LINEWEIGHT INDICATES EQUIPMENT TO BE REMOVED.
LIGHT DASHED LINEWEIGHT INDICATES FUTURE EQUIPMENT.

PLAN NOTES

1. PULL SEGMENT OF FIBER CABLE FROM MANHOLE 31 BEING REMOVED BACK INTO THIS MANHOLE WITH SUFFICIENT SLACK TO RE-ROUTE TO BUILDING 408. PROTECT END OF CABLE DURING CONSTRUCTION.
2. PULL SECTION OF FIBER FROM EXISTING MANHOLE 14 BACK AND PREP END FOR STORAGE IN NEW SPLICE CASE.
3. EXISTING FIBER TERMINATION PANEL, WALL MOUNTED IN CRAWLSPACE TO BE MAINTAINED.



FIBER CABLING DIAGRAM – DEMOLITION (A / ES.06)
SCALE: NONE

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

Revised By:

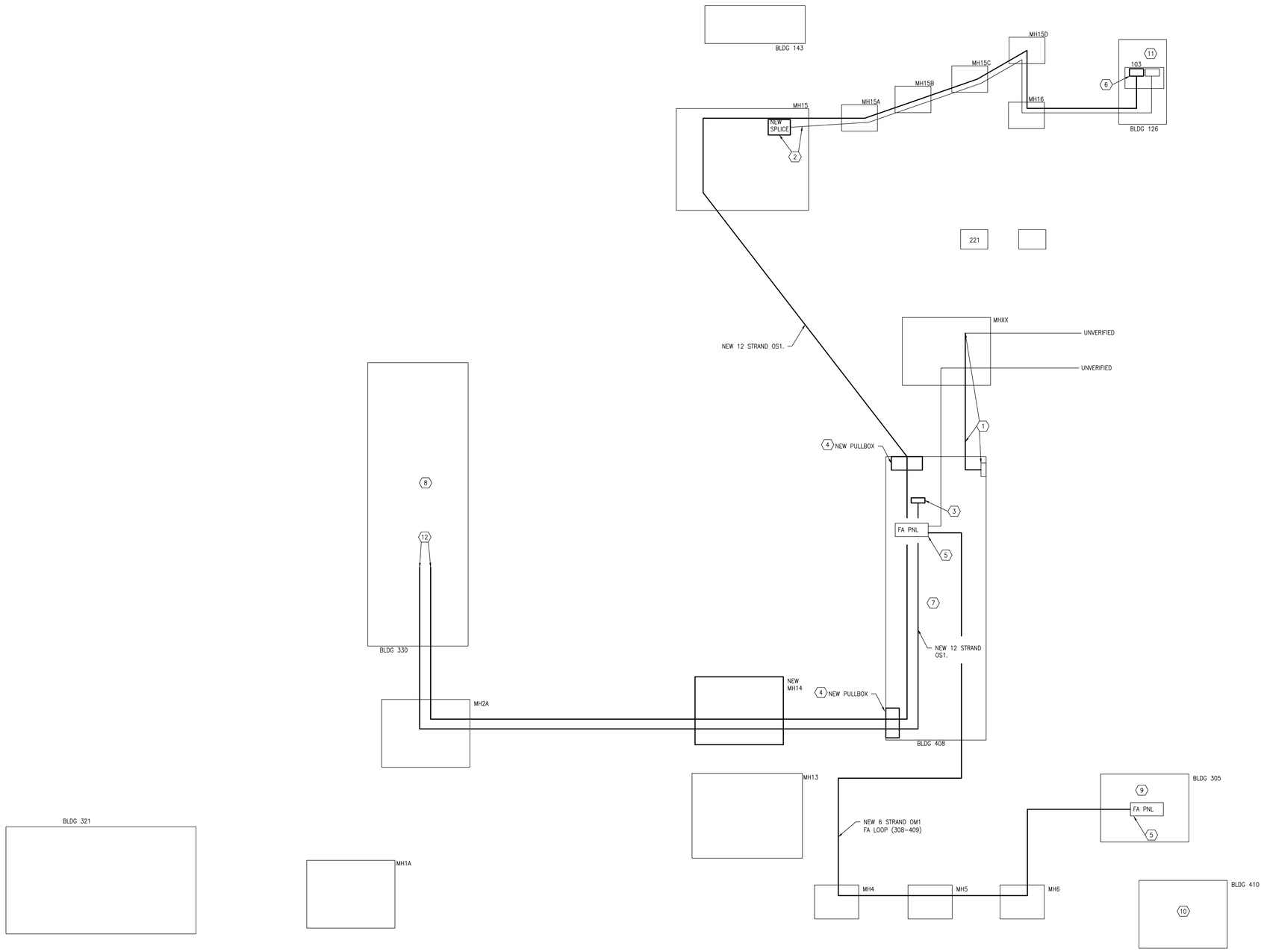
Drawing Title	FIBER CABLING DIAGRAM – DEMO
Project Title	SITE PREP FOR CT SCANNER
Date	01-31-2013
Project No.	552-CSI-333
Approved: Project Manager	RANDI FIORINA
Building Number	335
Checked	NTL
Drawn	JDK
Drawing No.	ES0.6
Approved: Service Chief	GARY ABREU
Location	4100 WEST THIRD STREET DAYTON, OH 45428

VAMC, DAYTON

VA Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
PLOTTED BY: JDKRILE
PLOT/EDIT DATE: January 29, 2013



FIBER CABLING DIAGRAM – NEW WORK (A / ES.07)

SCALE: NONE

GENERAL NOTES

A. LIGHT LINEWEIGHT INDICATE EXISTING EQUIPMENT TO REMAIN.
DARK SOLID LINEWEIGHT INDICATES NEW EQUIPMENT.
DARK DASHED LINEWEIGHT INDICATES EQUIPMENT TO BE REMOVED.
LIGHT DASHED LINEWEIGHT INDICATES FUTURE EQUIPMENT.

PLAN NOTES

1. RE-PULL SEGMENT OF EXISTING FIBER CABLE FROM MANHOLE INTO CRAWLSPACE OF BUILDING AND TERMINATE WITH NEW BULKHEADS IN EXISTING WALL MOUNTED LIU.
2. SEAL CABLE ENDS IN NEW SPLICE CASE FOR FUTURE USE.
3. PROVIDE NEW WALL MOUNTED LIU IN TECH ROOM 103B AND TERMINATE NEW FIBER FEEDER.
4. NEW PULLBOX IN BASEMENT CRAWLSPACE.
5. TERMINATE NEW FIBER IN EXISTING FIBER TERMINATION PANEL LOCATED ADJACENT TO FIRE ALARM PANEL.
6. TERMINATE IN NEW WALL MOUNTED FIBER TERMINATION PANEL TO BE LOCATED IN INDICATED TECH ROOM ADJACENT TO EXISTING.
7. REFER TO SHEET ES5.1 FOR ADDITIONAL DETAIL.
8. REFER TO SHEET ES5.2 FOR ADDITIONAL DETAIL.
9. REFER TO SHEET ES5.3 FOR ADDITIONAL DETAIL.
10. REFER TO SHEET ES5.4 FOR ADDITIONAL DETAIL.
11. REFER TO SHEET ES5.5 FOR ADDITIONAL DETAIL.
12. CABLES TO BE ROUTED IN INNERDUCT UTILIZING EXISTING CABLE MANAGEMENT SYSTEMS ABOVE CEILINGS AND NEW CONDUIT SLEEVES THROUGH FLOOR UP TO 9TH FLOOR DATA CENTER. TERMINATE CABLES IN NEW RACK MOUNTED FIBER TERMINATION PANEL.

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

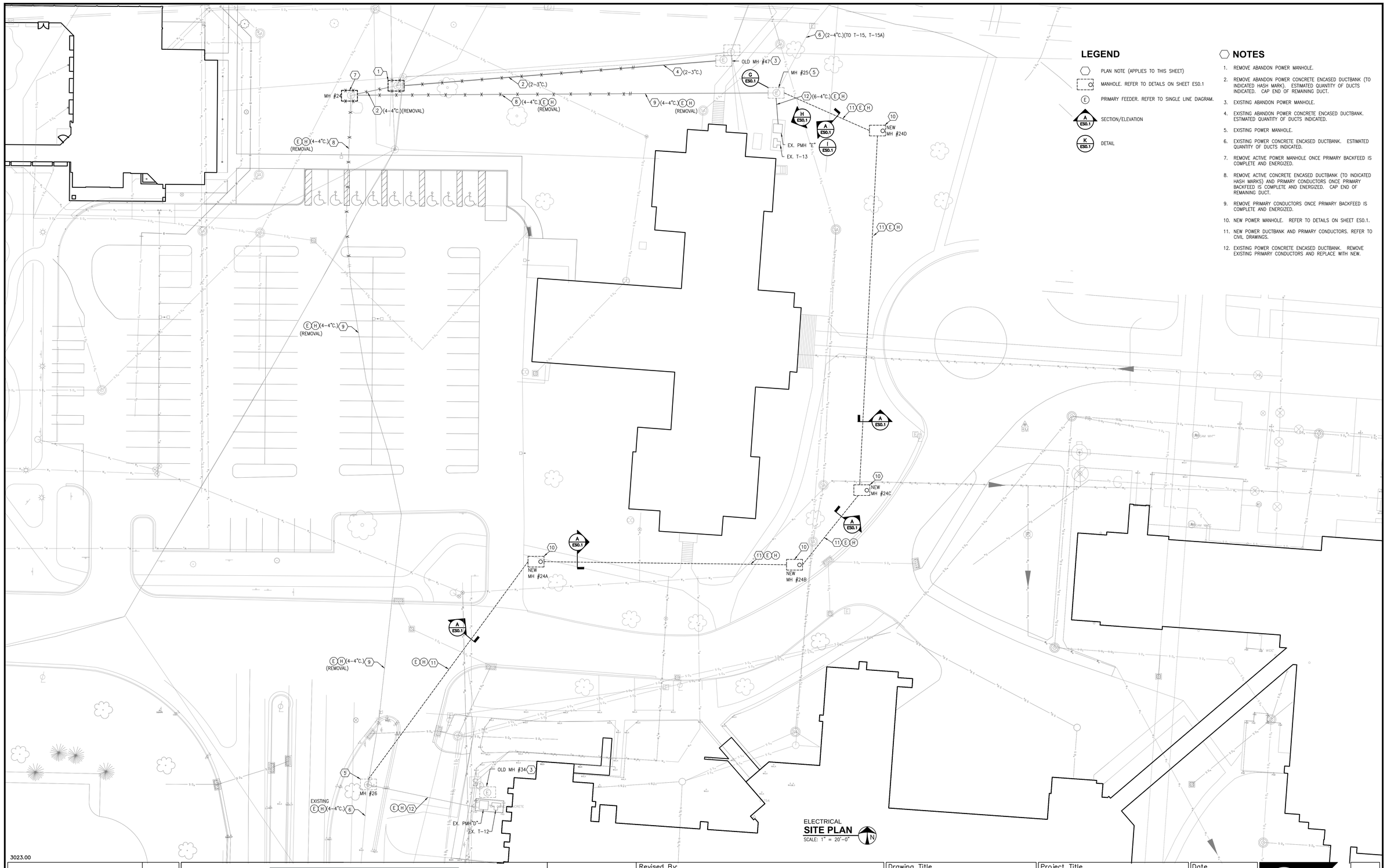
Revised By:

Drawing Title	Project Title	Date
FIBER CABLING DIAGRAM – NEW	SITE PREP FOR CT SCANNER	01-31-2013
		Project No. 552-CSI-333
Approved: Project Manager: RANDI FIORINA	Building Number: 335	Checked: NTL / Drawn: JDK
Approved: Service Chief: GARY ABREU	Location: 4100 WEST THIRD STREET DAYTON, OH 45428	Drawing No. ES0.7

VAMC, DAYTON — VA Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

PROJECT NO. 2012-04039 — HEAPY ENGINEERING — DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA — MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY — PLOTTED BY: JDKRULE — DATE: JANUARY 29, 2013



LEGEND

- PLAN NOTE (APPLIES TO THIS SHEET)
- MANHOLE. REFER TO DETAILS ON SHEET ES0.1
- E — PRIMARY FEEDER. REFER TO SINGLE LINE DIAGRAM.
- A ES0.1 — SECTION/ELEVATION
- K ES0.1 — DETAIL

NOTES

1. REMOVE ABANDON POWER MANHOLE.
2. REMOVE ABANDON POWER CONCRETE ENCASED DUCTBANK (TO INDICATED HASH MARK). ESTIMATED QUANTITY OF DUCTS INDICATED. CAP END OF REMAINING DUCT.
3. EXISTING ABANDON POWER MANHOLE.
4. EXISTING ABANDON POWER CONCRETE ENCASED DUCTBANK. ESTIMATED QUANTITY OF DUCTS INDICATED.
5. EXISTING POWER MANHOLE.
6. EXISTING POWER CONCRETE ENCASED DUCTBANK. ESTIMATED QUANTITY OF DUCTS INDICATED.
7. REMOVE ACTIVE POWER MANHOLE ONCE PRIMARY BACKFEED IS COMPLETE AND ENERGIZED.
8. REMOVE ACTIVE CONCRETE ENCASED DUCTBANK (TO INDICATED HASH MARKS) AND PRIMARY CONDUCTORS ONCE PRIMARY BACKFEED IS COMPLETE AND ENERGIZED. CAP END OF REMAINING DUCT.
9. REMOVE PRIMARY CONDUCTORS ONCE PRIMARY BACKFEED IS COMPLETE AND ENERGIZED.
10. NEW POWER MANHOLE. REFER TO DETAILS ON SHEET ES0.1.
11. NEW POWER DUCTBANK AND PRIMARY CONDUCTORS. REFER TO CIVIL DRAWINGS.
12. EXISTING POWER CONCRETE ENCASED DUCTBANK. REMOVE EXISTING PRIMARY CONDUCTORS AND REPLACE WITH NEW.

ELECTRICAL
SITE PLAN
SCALE: 1" = 20'-0"

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

Revised By:

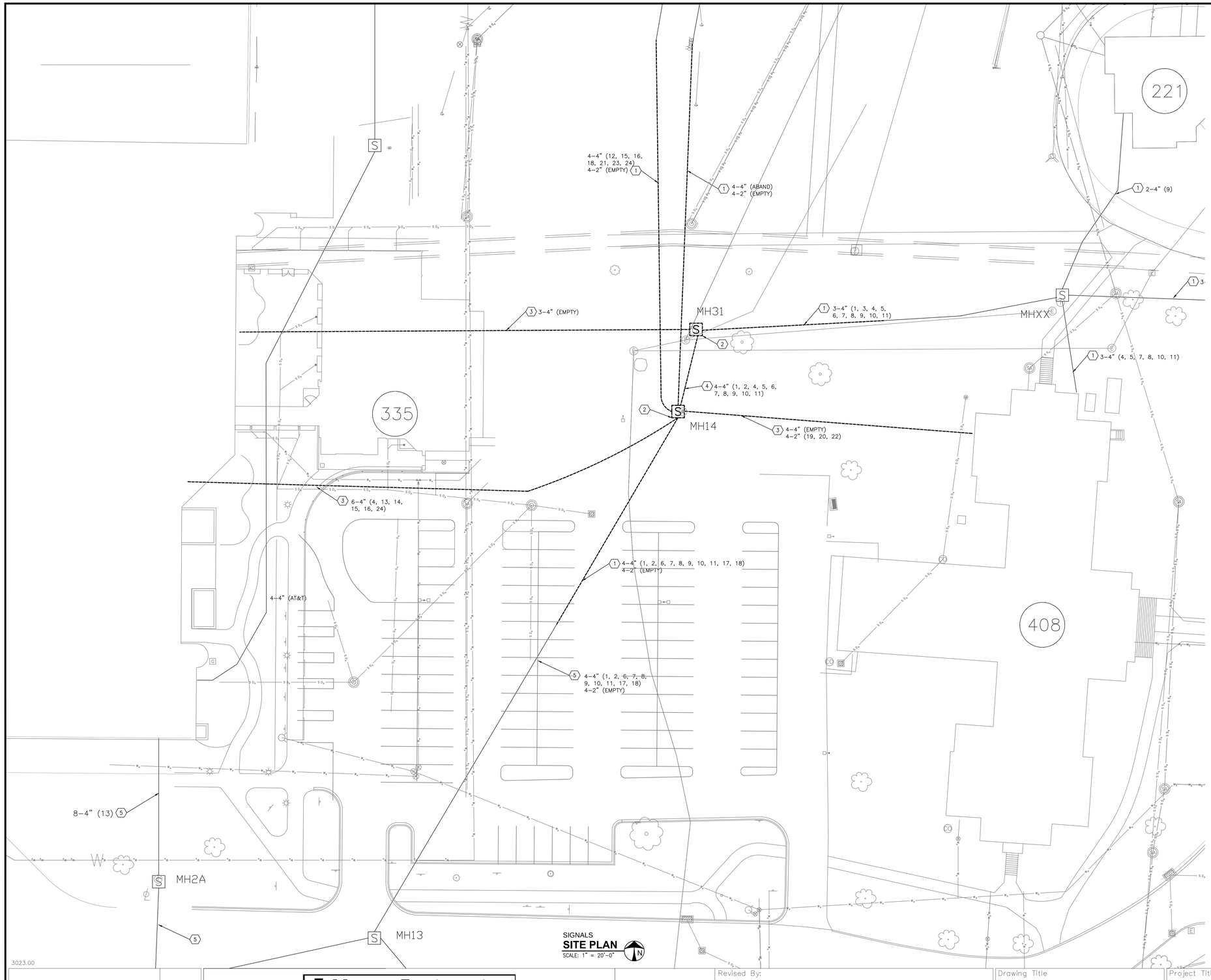
Drawing Title	ELECTRICAL SITE PLAN
Project Title	SITE PREP FOR CT SCANNER
Date	01-31-2013
Project No.	552-CSI-333
Approved: Project Manager	RANDI FIORINA
Building Number	335
Checked	MSG
Drawn	MSG
Drawing No.	ES1.1
Approved: Service Chief	GARY ABREU
Location	4100 WEST THIRD STREET DAYTON, OH 45428

VAMC, DAYTON

VA Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
PLOTTED BY: JDKRILE
PLOT/EDIT DATE: January 29, 2013



SIGNALS
SITE PLAN
SCALE: 1" = 20'-0"

PLAN NOTE (APPLIES TO THIS SHEET)

MANHOLE. REFER TO DETAILS ON SHEET ES0.1

(1, 2, 3) COMMUNICATIONS CABLE, REFER TO CABLE DESCRIPTION TABLE.

B/E2 SECTION/ELEVATION

B/E2 DETAIL

GENERAL NOTES

A. REFER TO CABLING DIAGRAMS FOR SPECIFIC DETAILS ON CABLES TO BE INSTALLED THROUGH DUCTBANK/MANHOLE SYSTEM.

PLAN NOTES

1. EXISTING UNDERGROUND CONCRETE ENCASED DUCT BANK TO BE REMOVED TO FACILITATE NEW CONSTRUCTION. REMOVE DUCTBANK BACK TO LIMITS OF CONSTRUCTION AND CAP OFF BELOW GRADE. REFER TO SEQUENCE OF CONSTRUCTION NOTES.
2. EXISTING CONCRETE COMMUNICATIONS MANHOLE TO BE REMOVED. REFER TO SEQUENCE OF CONSTRUCTION NOTES.
3. EXISTING UNDERGROUND CONCRETE ENCASED DUCT BANK TO BE REMOVED TO FACILITATE NEW CONSTRUCTION. REMOVE DUCTBANK BACK TO EXISTING BUILDING AND CAP OFF AND SEAL WATERTIGHT CONDUIT PENETRATIONS THROUGH EXISTING BUILDING. REFER TO SEQUENCE OF CONSTRUCTION NOTES.
4. EXISTING UNDERGROUND CONCRETE ENCASED DUCT BANK TO BE REMOVED TO FACILITATE NEW CONSTRUCTION. REMOVE DUCTBANK BACK TO EXISTING MANHOLE AND CAP OFF AND SEAL WATERTIGHT CONDUIT PENETRATIONS THROUGH MANHOLE. REFER TO SEQUENCE OF CONSTRUCTION NOTES.
5. EXISTING UNDERGROUND DUCT BANK.

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
Mechanical Electrical Commissioning Technology
Nationally Recognized Leader in Sustainability / LEED
1400 W Dorothy Lane, Dayton OH 45409-1310
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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO JOHN A. BLACK 49341 REGISTERED PROFESSIONAL ENGINEER

Revised By:

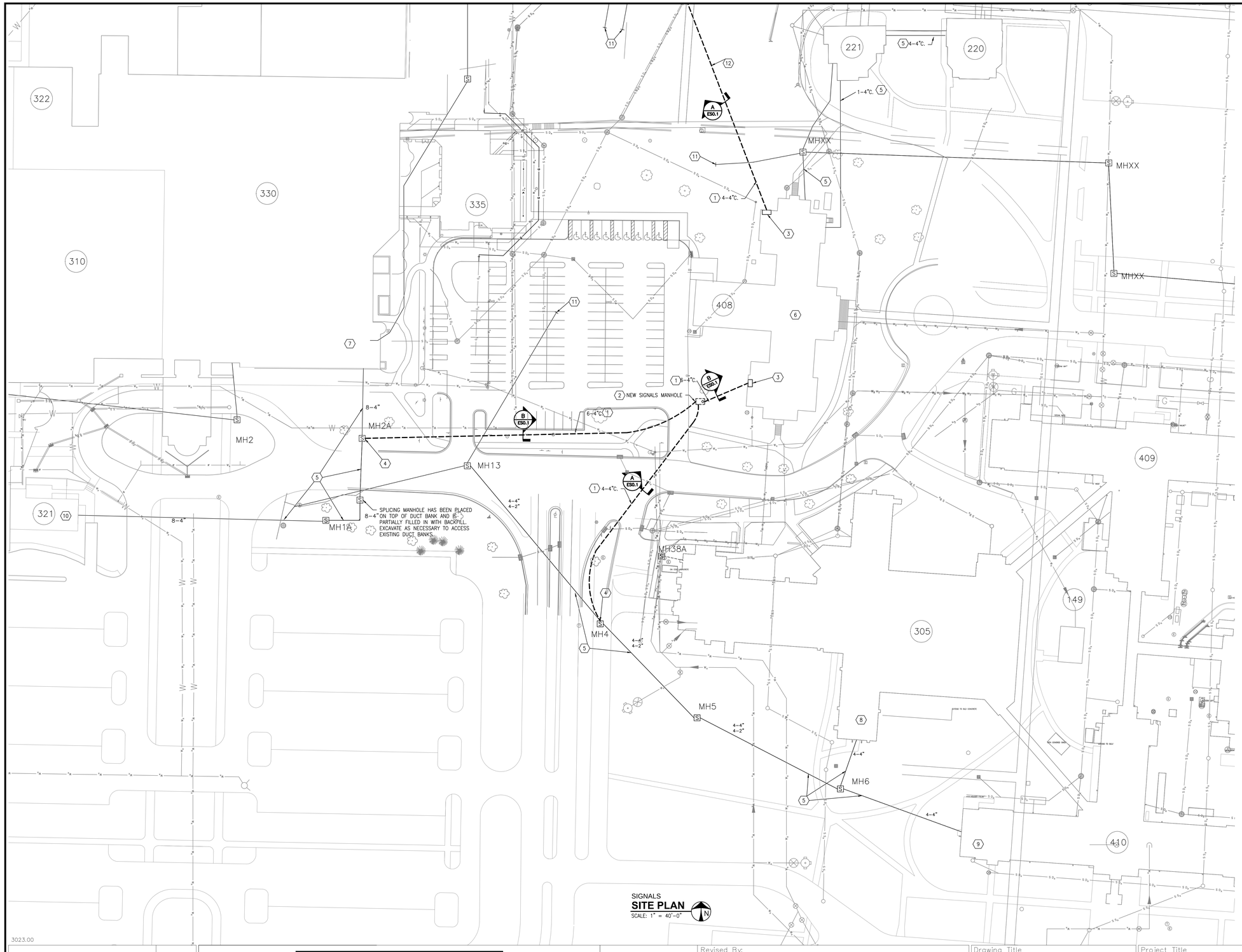
Drawing Title: SIGNALS SITE PLAN – DEMO	Project Title: SITE PREP FOR CT SCANNER		Date: 01-31-2013
			Project No.: 552-CSI-333
Approved: Project Manager: RANDI FIORINA	Building Number: 335	Checked: NTL / Drawn: JDK	Drawing No.: ES1.2
Approved: Service Chief: GARY ABREU	Location: 4100 WEST THIRD STREET DAYTON, OH 45428		

VAMC, DAYTON

VA Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
PLOTTED BY: JDKRILE
PLOT/EDIT DATE: January 29, 2013



SIGNALS
SITE PLAN
SCALE: 1" = 40'-0"

LEGEND

PLAN NOTE (APPLIES TO THIS SHEET)

MANHOLE. REFER TO DETAILS ON SHEET ES0.1

COMMUNICATIONS CABLE, REFER TO CABLE DESCRIPTION TABLE.

SECTION/ELEVATION

DETAIL

GENERAL NOTES

A. REFER TO CABLING DIAGRAMS FOR SPECIFIC DETAILS ON CABLES TO BE INSTALLED THROUGH DUCTBANK/MANHOLE SYSTEM.

PLAN NOTES

1. NEW COMMUNICATIONS DUCTBAK FOR ROUTING OF NEW FIBER/COPPER/COAX/CONTROL CABLING. REFER TO SYSTEM DIAGRAMS FOR CABLING REQUIREMENTS.
2. NEW COMMUNICATIONS MANHOLE. EXACT SITE LOCATION TO BE FIELD VERIFIED AND COORDINATED WITH NEW AND EXISTING UTILITIES. ADDITIONAL APPROVAL REQUIRED BY VA IN ACCORDANCE WITH HISTORICAL PROVISIONS FOR BUILDING 408.
3. PROVIDE PULLBOX IN BASEMENT CRAWLSPACE FOR TRANSITION OF EXTERIOR CONDUITS.
4. NEW DUCT BANK TO TIE INTO EXISTING MANHOLE.
5. UTILIZE EXISTING DUCTBANK FOR ROUTING OF NEW CABLES BACK INTO EXISTING MANHOLE.
6. REFER TO SHEET ES5.1 FOR CONTINUATION.
7. REFER TO SHEET ES5.2 FOR CONTINUATION.
8. REFER TO SHEET ES5.3 FOR CONTINUATION.
9. REFER TO SHEET ES5.4 FOR CONTINUATION.
10. REFER TO SHEET ES5.5 FOR CONTINUATION.
11. DUCT BANK CAPPED AND ABANDONED BELOW GRADE. PROVIDE FLUSH GRADE LOCATING PIN.
12. REFER TO SHEET ES1.4 FOR CONTINUATION.

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO
JOHN A. BLACK
49341
REGISTERED PROFESSIONAL ENGINEER

Revised By:

Drawing Title	SIGNALS NEW WORK - SITE PLAN
Project Title	SITE PREP FOR CT SCANNER
Date	01-31-2013
Project No.	552-CSI-333
Approved: Project Manager	RANDI FIORINA
Building Number	335
Checked	NTL
Drawn	JDK
Approved: Service Chief	GARY ABREU
Location	4100 WEST THIRD STREET DAYTON, OH 45428
Drawing No.	ES1.3

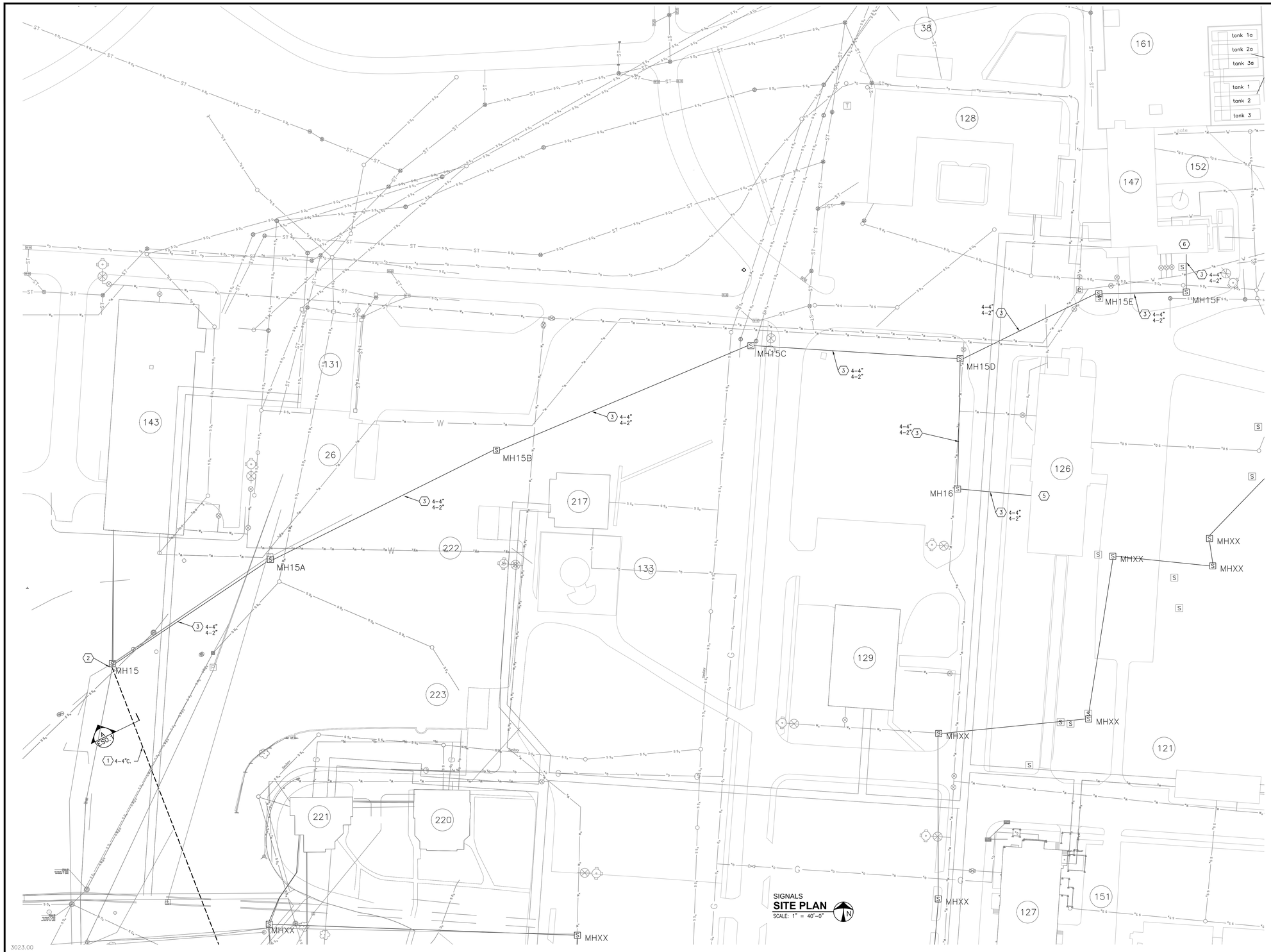
VAMC, DAYTON
VA Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY

PLOTTED BY: JDKBLE
PLOT DATE: January 29, 2013

three inches = one foot
one and one half inches = one foot
one inch = one foot
three quarters inch = one foot
one half inch = one foot
three eighths inch = one foot
one quarter inch = one foot
one eighth inch = one foot



LEGEND

PLAN NOTE (APPLIES TO THIS SHEET)

MANHOLE. REFER TO DETAILS ON SHEET ES0.1

COMMUNICATIONS CABLE, REFER TO CABLE DESCRIPTION TABLE.

SECTION/ELEVATION

DETAIL

GENERAL NOTES

A. REFER TO CBLING DIAGRAMS FOR SPECIFIC DETAILS ON CABLES TO BE INSTALLED THROUGH DUCTBANK/MANHOLE SYSTEM.

PLAN NOTES

1. NEW COMMUNICATIONS DUCTBAK FOR ROUTING OF NEW FIBER/COPPER/COAX/CONTROL CABLING. REFER TO SYSTEM DIAGRAMS FOR CABLING REQUIREMENTS.
2. NEW DUCT BANK TO TIE INTO EXISTING MANHOLE.
3. UTILIZE EXISTING DUCTBANK FOR ROUTING OF NEW CABLES BACK INTO EXISTING MANHOLE.
4. REFER TO SHEET ES5.1 FOR CONTINUATION.
5. REFER TO SHEET ES5.5 FOR CONTINUATION.
6. REFER TO SHEET ES5.6 FOR CONTINUATION.

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

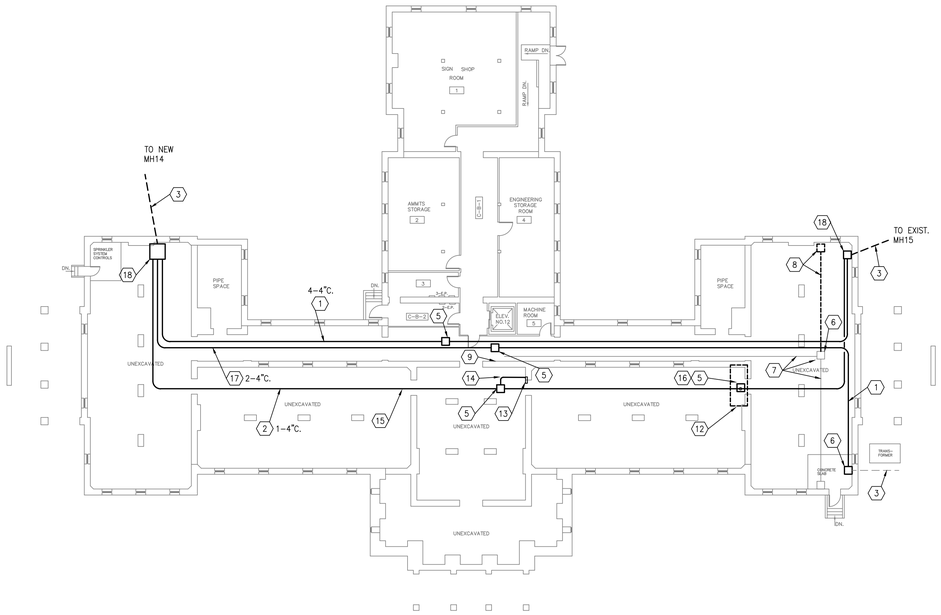
Revised By:

Drawing Title	SIGNALS NEW WORK – SITE PLAN
Project Title	SITE PREP FOR CT SCANNER
Date	01-31-2013
Project No.	552-CSI-333
Approved: Project Manager	RANDI FIORINA
Building Number	335
Checked	NTL
Drawn	JDK
Approved: Service Chief	GARY ABREU
Location	4100 WEST THIRD STREET DAYTON, OH 45428
Drawing No.	ES1.4

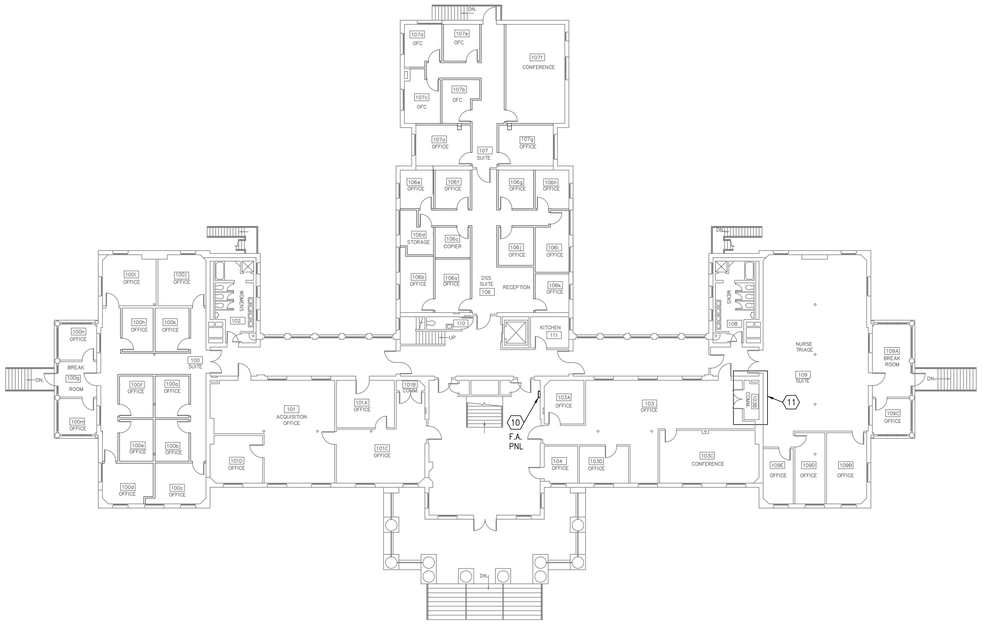
VAMC, DAYTON — VA Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
PLOTTED BY JDKBLE
PLOTTED DATE: January 29, 2013



BASEMENT FLOOR PLAN
SCALE: 1/16" = 1'-0"



FIRST FLOOR PLAN
SCALE: 1/16" = 1'-0"

PLAN NOTES

1. EXTEND RIGID GALVANIZED CONDUITS WITH COPPER MULTI-PAIR CABLING, GENERATOR CONTROL CABLING, AND CATV CABLING THROUGH CRAWL SPACE TO PASS THROUGH BUILDING.
2. EXTEND RIGID GALVANIZED CONDUIT WITH NEW FIBER CABLING FOR FIRE ALARM AND DATA
3. REFER TO SHEET ES1.3 FOR CONTINUATION
4. REFER TO SHEET ES1.4 FOR CONTINUATION.
5. NEW PULLBOX
6. REUSE EXISTING PULLBOX TO TRANSITION NEW OVERHEAD CABLING AND CONDUIT INTO EXISTING UNDERGROUND CONDUIT SYSTEM FEEDING EXISTING MANHOLE XX.
7. RE-USE EXISTING 4" CONDUITS.
8. EXISTING PULLBOX AND CONDUIT SECTION TO BE REMOVED.
9. PROVIDE NEW WALL MOUNTED BACKBOARD AND UL PRIMARY PROTECTORS ADJACENT TO EXISTING FOR NEW SERVICE CABLES. PROVIDE CROSS-CONNECTIONS PER CUT-OVER SCHEDULE FROM NEW SERVICE CABLES TO EXISTING TERMINATIONS.
10. EXISTING FIRE ALARM PANEL AND ADJACENT FIBER TERMINATION CABINET. TERMINATE NEW FIBER IN EXISTING CABINET AND SWITCH OVER FROM EXISTING FIBER TO NEW. REMOVE EXISTING FIBER AFTER NEW CONNECTION IS MADE AND SYSTEM IS ONLINE.
11. TERMINATE NEW INCOMING FIBER INTO NEW WALL MOUNTED FIBER TERMINATION CABINET ADJACENT TO EXISTING. REMOVE EXISTING FIBER AFTER NEW FIBER HAS BEEN PATCHED OVER AND IS OPERATIONAL.
12. EXISTING TR ABOVE
13. EXISTING FA PANEL AND FIBER CABINET ABOVE
14. EXTEND 1" CONDUIT WITH NEW FIRE ALARM FIBER FROM NEW PULLBOX, UP THROUGH FLOOR (PROVIDE CORE DRILL) AND EXTEND TO EXISTING FIBER TERMINATION CABINET.
15. EXTEND 4" CONDUIT WITH NEW FIRE ALARM AND DATA LOOP FIBER FEEDERS.
16. EXTEND NEW 1" CONDUIT FROM PULLBOX, UP THROUGH FLOOR (PROVIDE CORE DRILL WITH SLEEVE) INTO TR ABOVE AND EXTEND NEW FIBER FEEDER TO NEW WALL MOUNTED FIBER TERMINATION PANEL. FIRESTOP OPENING AND CONDUIT.
17. EXTEND RIGID GALVANIZED CONDUITS WITH COPPER MULTI-PAIR CABLING THROUGH CRAWL TO SERVE BUILDING 408, 221, 220, AND MHXX.
18. PROVIDE PULLBOX, TO TRANSITION INCOMING UNDERGROUND CABLE TO OVERHEAD CONDUIT RUNS.

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO JOHN A. BLACK 49341 REGISTERED PROFESSIONAL ENGINEER

Revised By:

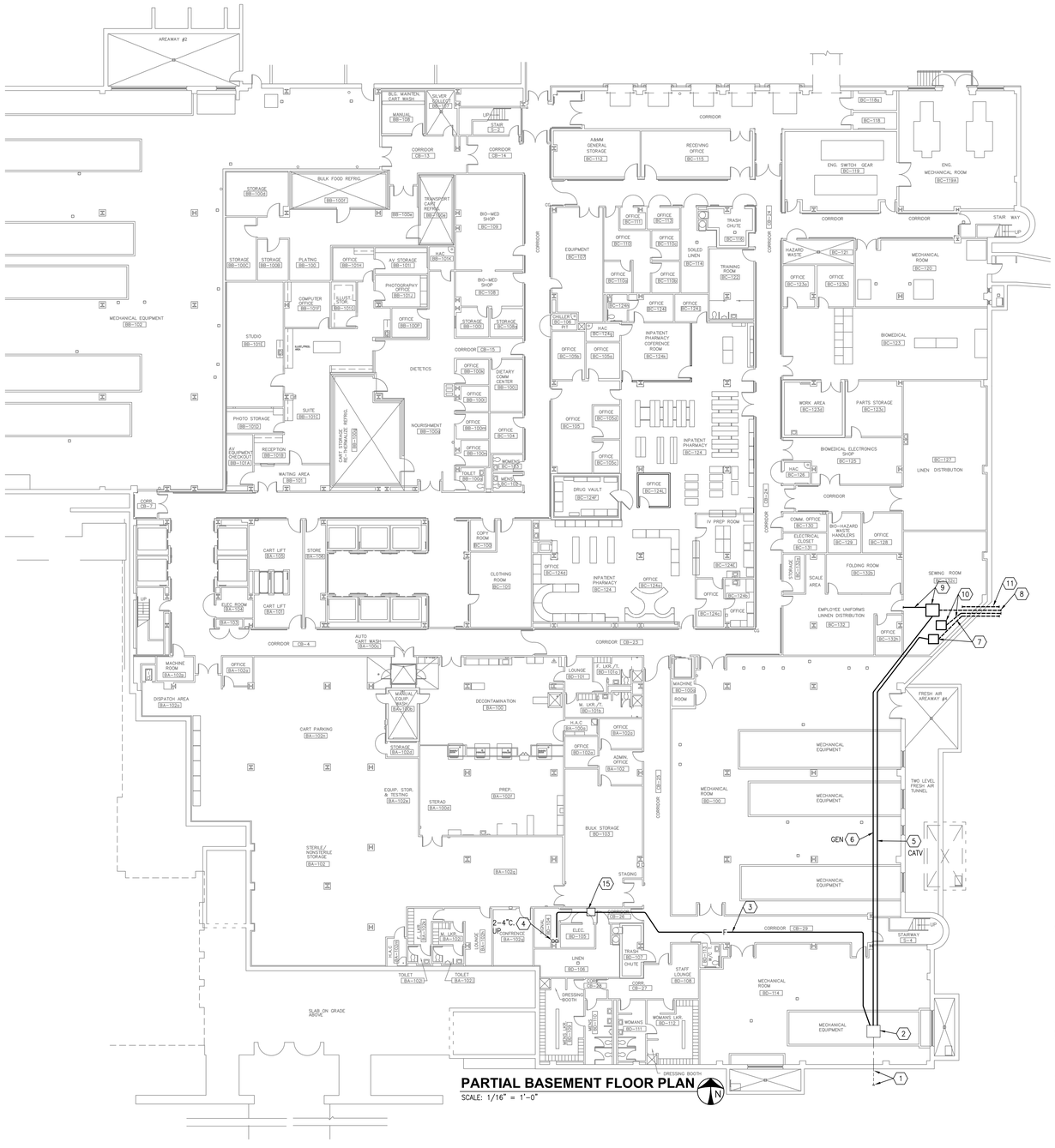
Drawing Title	COMMUNICATIONS-BUILDING 408
Project Title	SITE PREP FOR CT SCANNER
Date	01-31-2013
Project No.	552-CSI-333
Approved: Project Manager	RANDI FIORINA
Building Number	335
Checked	NTL
Drawn	JDK
Drawing No.	ES5.1
Approved: Service Chief	GARY ABREU
Location	4100 WEST THIRD STREET DAYTON, OH 45428

VAMC, DAYTON

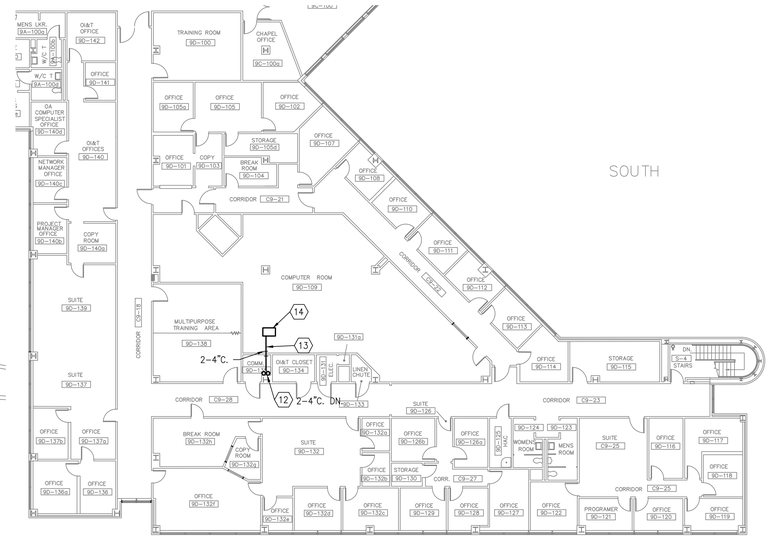
VA Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

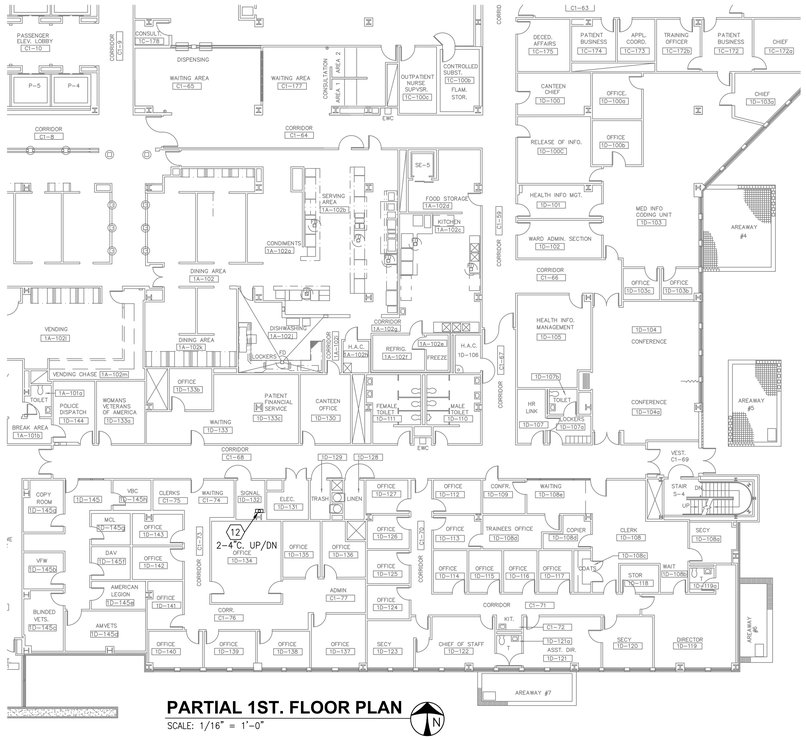
PROJECT NO. 2012-04039
PLOTTED BY: JDKRILE
PLOT/EDIT DATE: January 29, 2013
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY



PARTIAL BASEMENT FLOOR PLAN
SCALE: 1/16" = 1'-0"



PARTIAL 9TH FLOOR PLAN
SCALE: 1/16" = 1'-0"



PARTIAL 1ST. FLOOR PLAN
SCALE: 1/16" = 1'-0"

PLAN NOTES

1. UTILIZE EXISTING CONDUITS OUT TO EXISTING MANHOLE, REFER TO SHEET ES1.3 FOR CONTINUATION.
2. RE-USE EXISTING PULLBOX LOCATED UP AT STRUCTURE LEVEL.
3. ROUTE NEW FIBER FEEDERS IN 1-4" CONDUIT WITH 3-1.25" INNERDUCT THROUGH CEILING SPACE, REFER TO SYSTEM DIAGRAMS SHEET ES0.7 FOR NEW FIBER REQUIREMENTS.
4. PROVIDE NEW 2-4" CONDUIT RISERS UP THROUGH STACKED SIGNALS CLOSETS TO RISE UP NEW FIBER FEEDERS IN INNERDUCT. PROVIDE CABLE SUPPORTS ON EACH FLOOR AS REQUIRED. COORDINATE LOCATION ON EACH FLOOR WITH EXISTING SITE CONDITIONS. RISER LOCATIONS MAY BE OFF SET FLOOR-TO-FLOOR BASED UPON EXISTING CONDITIONS. COORDINATE WITH COTR PRIOR TO INSTALLATION.
5. EXTEND 0.500" HARDLINE COAX CABLE IN 1-2" CONDUIT THROUGH CEILING SPACE. TRANSITION TO OSP RATED CABLE WITH SUITABLE GROUNDED PROTECTOR AT EXISTING PULLBOX IN MECHANICAL ROOM.
6. EXTEND NEW GENERATOR CONTROL CABLING IN 1-4" CONDUIT FROM NEW SPLICE, THROUGH EXISTING PULLBOX IN MECHANICAL ROOM AND EXTEND THROUGH DUCTBANK SYSTEM TO BUILDING 147.
7. EXISTING CATV 0.500" HARDLINE CABLE COUPLER, REMOVE EXISTING OSP CABLE SEGMENT AND EXTEND NEW CABLING AT THIS LOCATION.
8. EXISTING GENERATOR CONTROL CABLING BEING REMOVED. PROVIDE NEW SPLICE BOX ABOVE CEILING FOR EXTENSION OF CABLING THROUGH NEW PATHWAYS.
9. INTERCEPT EXISTING GENERATOR CONTROL CABLING WITH NEW SPLICE BOX ABOVE CEILING AND SPLICE/EXTEND CABLING THROUGH NEW PATHWAYS.
10. EXISTING VOICE BACKBONE CABLING TO BE REMOVED INTO EXISTING SPLICE CASE LOCATED ABOVE CEILING. SPLICE CAE TO REMAIN.
11. EXISTING FIBER FEEDERS TO BE REMOVED BACK INTO BUILDING, CAPPED AND COILED ABOVE CEILING FOR FUTURE USE.
12. NEW CONDUIT RISER IN EXISTING SIGNALS CLOSET TO BE PLACED ON 1, 2, 3, 4, 5, 6, 7, AND 8TH FLOORS. EXTEND NEW FIBER BACKBONES IN INNER DUCT UP THROUGH NEW RISERS, PROVIDE VERTICAL CABLE SUPPORTS AS REQUIRED.
13. PROVIDE 2-4" CONDUIT SLEEVES THROUGH WALL INTO RAISED FLOOR ACCESS SPACE. EXTEND FEW FIBER FEEDERS IN INNERDUCT TO BELOW RAISED FLOOR OF DATA CENTER TO LOCATION OF EXISTING FIBER CABINET.
14. PROVIDE NEW FIBER TERMINATION PANEL IN EXISTING FIBER

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

Revised By:

Drawing Title	COMMUNICATIONS-BUILDING 330
Project Title	SITE PREP FOR CT SCANNER
Date	01-31-2013
Project No.	552-CSI-333
Approved: Project Manager	RANDI FIORINA
Building Number	335
Checked	NTL
Drawn	JDK
Approved: Service Chief	GARY ABREU
Location	4100 WEST THIRD STREET DAYTON, OH 45428
Drawing No.	ES5.2

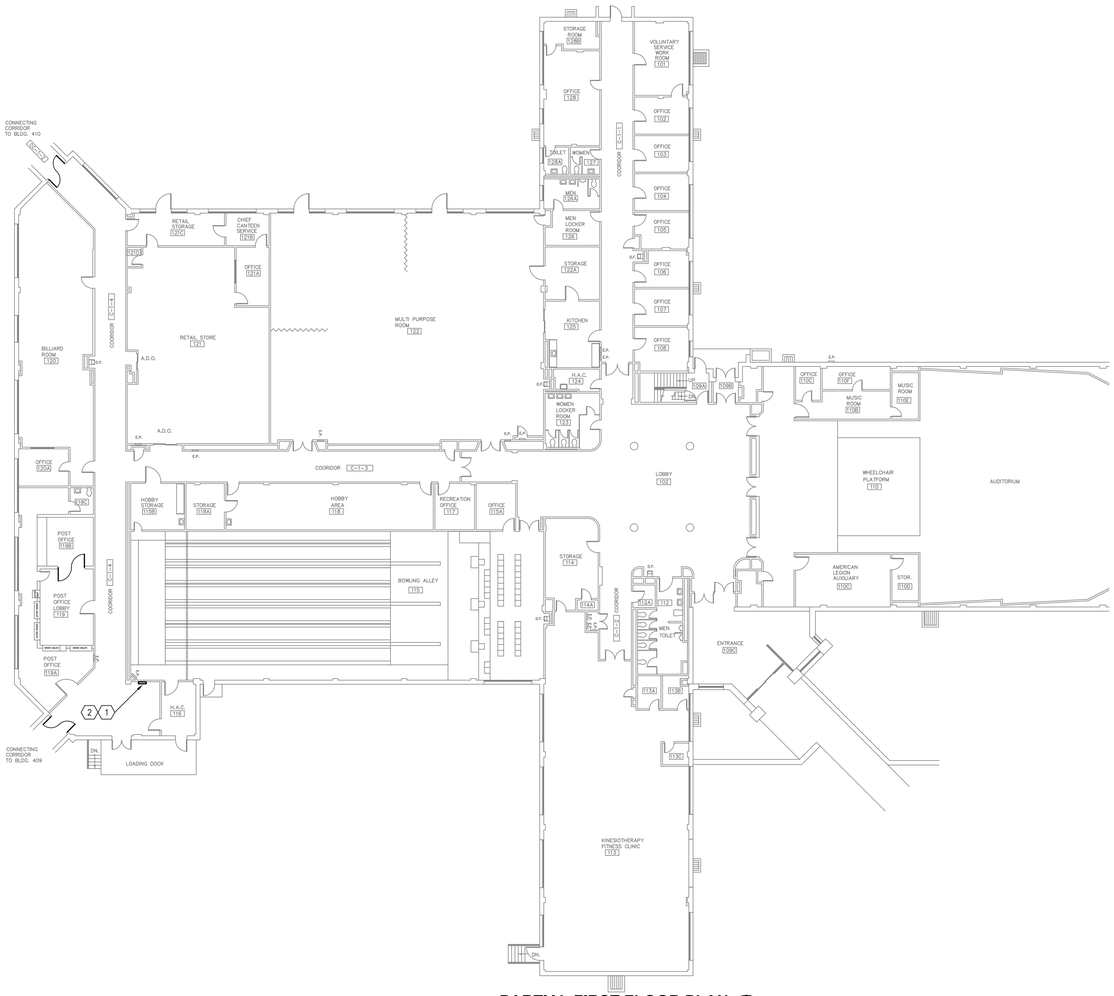
VAMC, DAYTON — VA Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

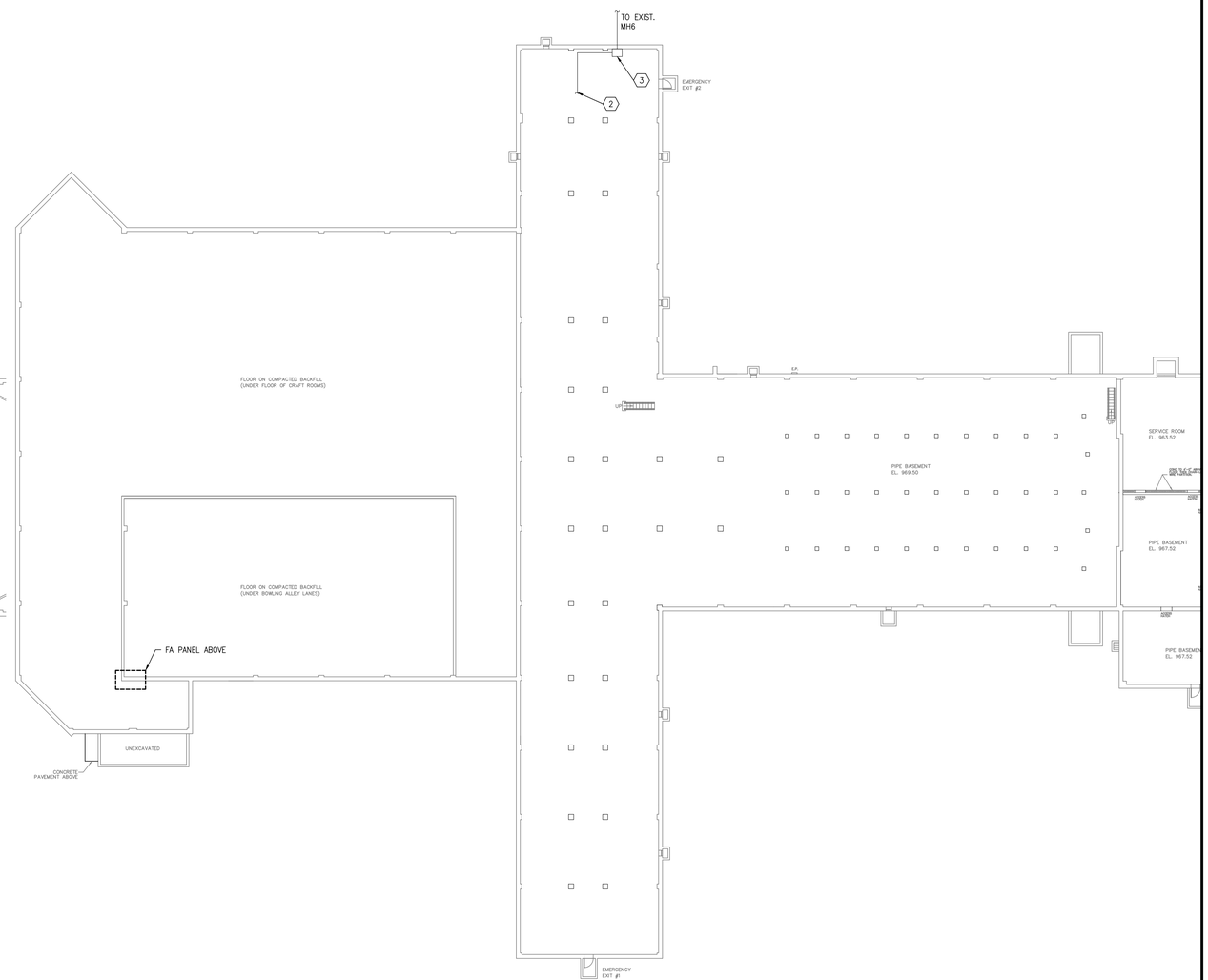
PROJECT NO. 2012-04039 — HEAPY ENGINEERING — DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA — MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY — PLOTTED BY JDKBLE — PLOTTED DATE: January 29, 2013

PLAN NOTES

1. EXISTING FIRE ALARM PANEL AND ADJACENT FIBER TERMINATION CABINET. TERMINATE NEW FIBER IN EXISTING CABINET AND SWITCH OVER FROM EXISTING FIBER TO NEW. REMOVE EXISTING FIBER AFTER NEW CONNECTION IS MADE AND SYSTEM IS ONLINE.
2. UTILIZE EXISTING FIBER CONDUIT FROM PULLBOX TO FA PANEL TO PULL IN NEW FIBER FEED. REMOVE EXISTING ABANDONED FIBER FEED ONCE SYSTEM HAS BEEN CUT-OVER.
3. EXISTING PULLBOX AND INCOMING UNDERGROUND CONDUIT FEED FROM EXISTING MANHOLE.



PARTIAL FIRST FLOOR PLAN
SCALE: 1/16" = 1'-0"



PARTIAL BASEMENT FLOOR PLAN
SCALE: 1/16" = 1'-0"

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
Mechanical Electrical Commissioning Technology
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1400 W Dorothy Lane, Dayton OH 45409-1310
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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

Revised By:

Drawing Title	COMMUNICATIONS-BUILDING 305
Project Title	SITE PREP FOR CT SCANNER
Date	01-31-2013
Project No.	552-CSI-333
Approved: Project Manager	RANDI FIORINA
Building Number	335
Checked	NTL
Drawn	JDK
Approved: Service Chief	GARY ABREU
Location	4100 WEST THIRD STREET DAYTON, OH 45428
Drawing No.	ES5.3

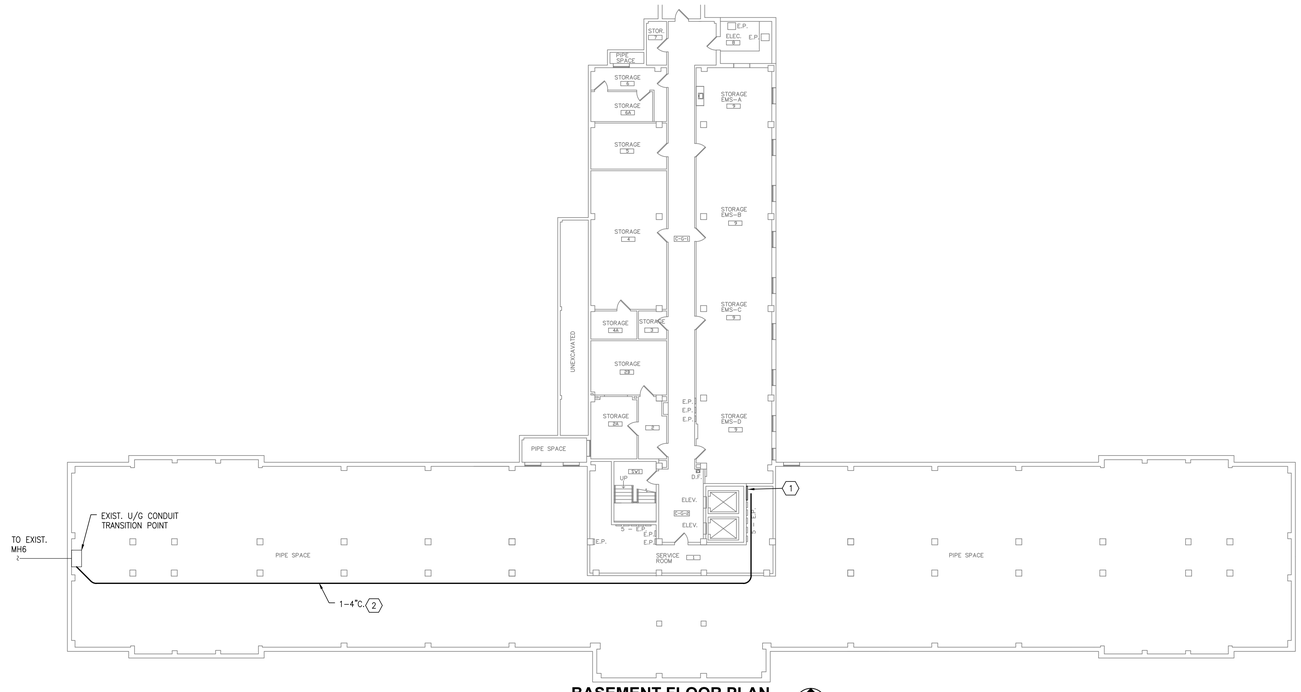
VAMC, DAYTON — VA Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

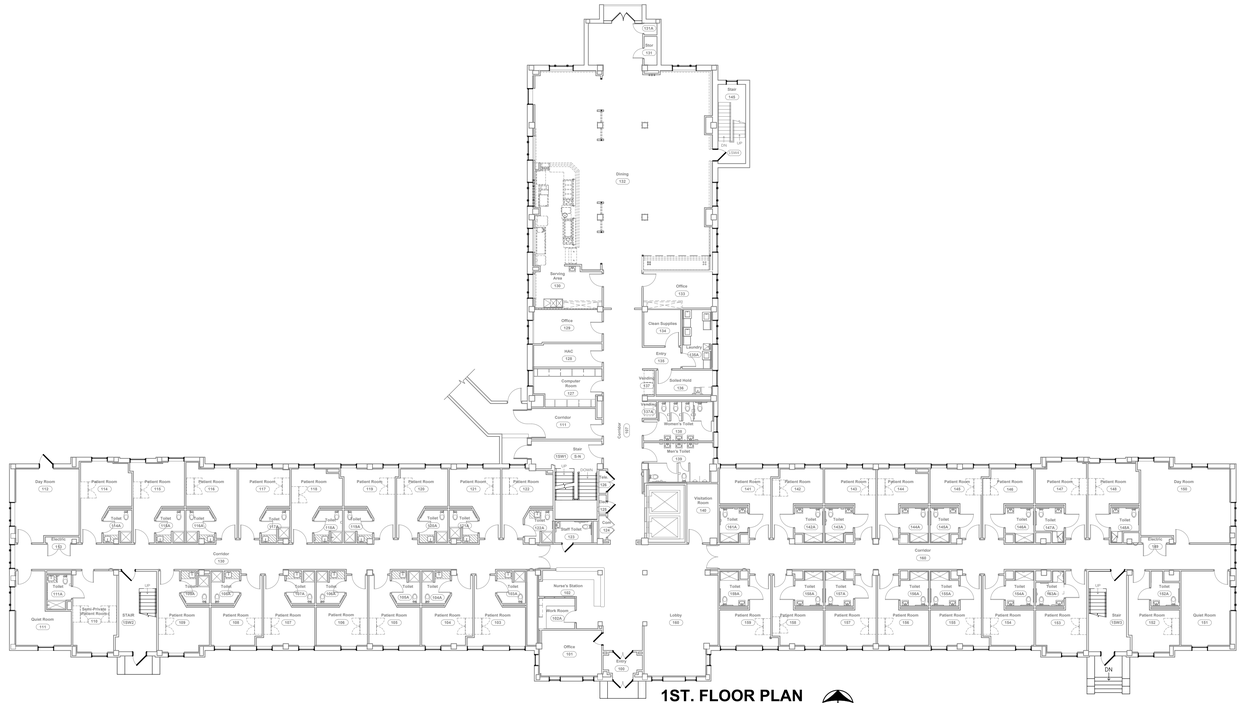
PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
PLOTTED BY: JDHRis
PLOT DATE: January 29, 2013

PLAN NOTES

1. TERMINATE NEW COPPER SERVICE CABLE ON NEW BACKBAORD MOUNTED UL PRIMARY PROTECTOR ADJACENT TO EXISTING. CUT-OVER NEW CABLE PAIRS ONTO EXISTING CABLING.
2. ROUTE NEW CABLE FROM U/G ENTRANCE, THROUGH NEW CONDUIT TO LOCATION OF EXISTING UL PRIMARY PROTECTORS.



BASEMENT FLOOR PLAN
SCALE: 1/16" = 1'-0"



1ST. FLOOR PLAN
SCALE: 1/16" = 1'-0"

3023.00

Revisions	Date
ISSUED FOR BIDDING	01-31-2013

Heapy Engineering
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1400 W Dorothy Lane, Dayton OH 45409-1310
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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

Revised By:

Drawing Title	Project Title	Date
COMMUNICATIONS-BUILDING 410	SITE PREP FOR CT SCANNER	01-31-2013
Approved: Project Manager: RANDI FIORINA	Building Number: 335	Checked: NTL / Drawn: JDK
Approved: Service Chief: GARY ABREU	Location: 4100 WEST THIRD STREET DAYTON, OH 45428	Project No. 552-CSI-333
		Drawing No. ES5.4

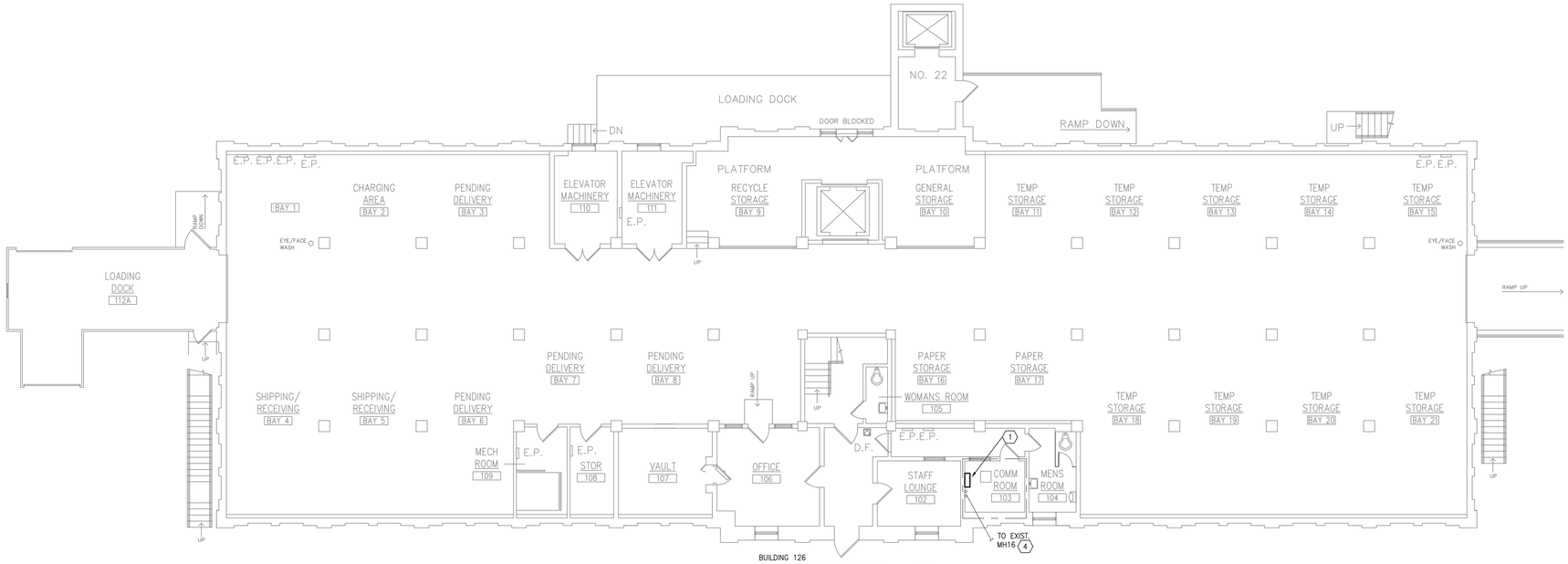
VAMC DAYTON — Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

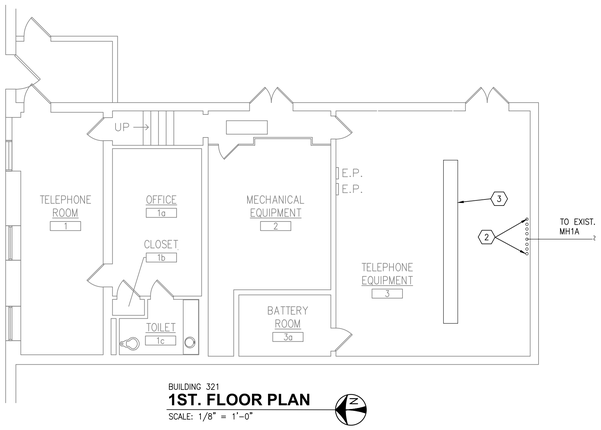
PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
PLOTTED BY: JDKNOLE
DATE: January 29, 2013

PLAN NOTES

1. EXISTING BACKBOARD. PROVIDE NEW FIBER TERMINATION CABINET ADJACENT TO EXISTING FOR TERMINATION OF NEW FIBER SERVICE CABLE.
2. UTILIZE EXISTING CONDUITS OUT TO EXISTING MANHOLE, REFER TO SHEET ES1.2/ES1.3 FOR CONTINUATION.
3. TERMINATE NEW SERVICE CABLING ON EXISTING PROTECTOR FRAMES. REMOVE EXISTING CABLING ONCE NEW CABLING SYSTEM IS CUT-OVER.
4. UTILIZE EXISTING U/G SERVICE ENTRANCE CONDUITS FROM MANHOLE FOR NEW FIBER CABLING.



BUILDING 126
1ST. FLOOR PLAN
SCALE: 1/8" = 1'-0"



BUILDING 321
1ST. FLOOR PLAN
SCALE: 1/8" = 1'-0"

3023.00

ISSUED FOR BIDDING	01-31-2013
Revisions	Date

Heapy Engineering
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1400 W Dorothy Lane, Dayton OH 45409-1310
Ph: 937-224-0861 Fax: 937-224-5777 www.heapy.com
Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

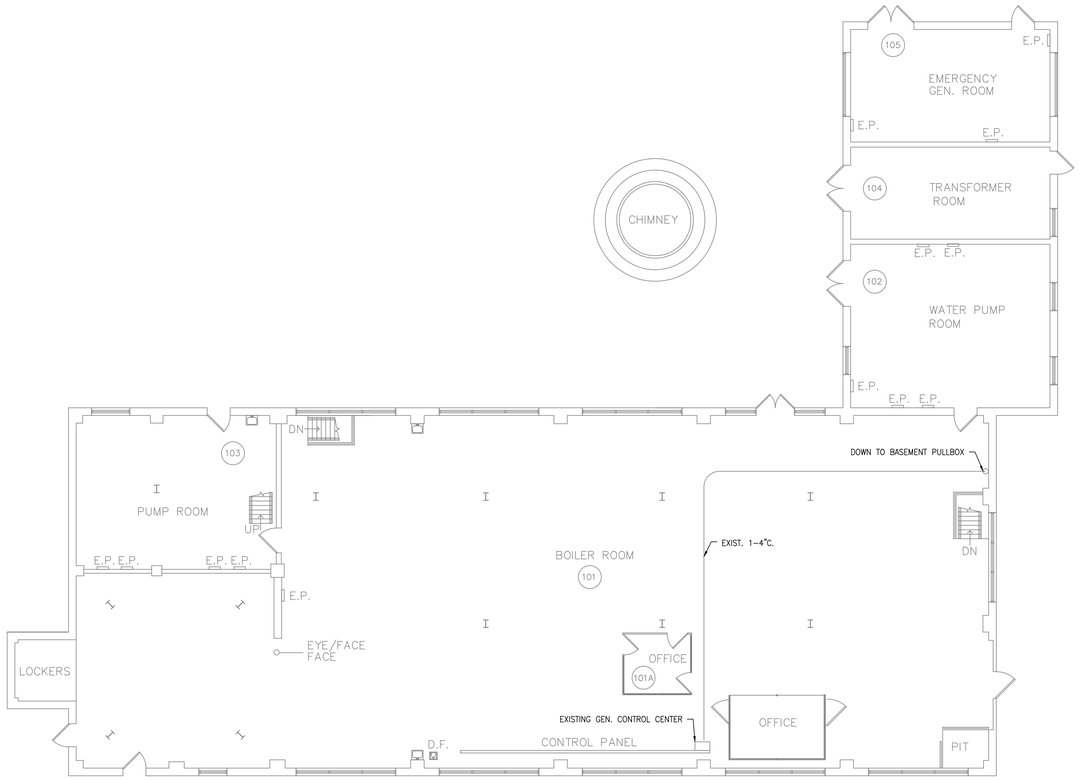
Revised By:

Drawing Title	COMMUNICATIONS-BUILDING 126_321
Project Title	SITE PREP FOR CT SCANNER
Date	01-31-2013
Project No.	552-CSI-333
Approved: Project Manager	RANDI FIORINA
Building Number	335
Checked	NTL
Drawn	JDK
Approved: Service Chief	GARY ABREU
Location	4100 WEST THIRD STREET DAYTON, OH 45428
Drawing No.	ES5.5

VAMC, DAYTON
Department of Veterans Affairs

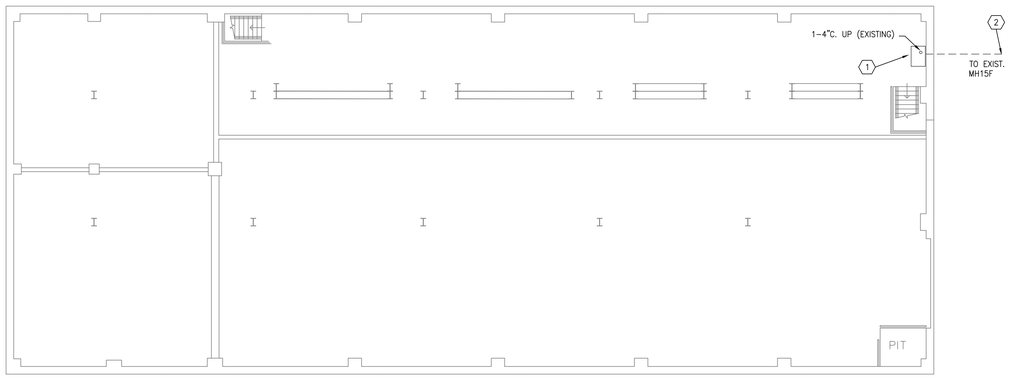
VA FORM 08-6231, OCT 1978

PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
PLOTTED BY: JDKOALE
DATE: JANUARY 29, 2013



1ST. FLOOR PLAN

SCALE: 1/8" = 1'-0"



BASEMENT FLOOR PLAN

SCALE: 1/8" = 1'-0"

PLAN NOTES

1. EXISTING PULLBOX. UTILIZE TO SPLICE IN NEW GENERATOR CONTROL CABLING.
2. REFER TO SHEET ES1.4 FOR CONTINUATION.

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Revisions	Date
ISSUED FOR BIDDING	01-31-2013

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Heapy Project Number: 2012-04039 Firm License: 01528

STATE OF OHIO — JOHN A. BLACK 49341 — REGISTERED PROFESSIONAL ENGINEER

Revised By:

Drawing Title: COMMUNICATIONS-BUILDING 147
Project Title: SITE PREP FOR CT SCANNER
Date: 01-31-2013
Project No. 552-CSI-333
Approved: Project Manager: RANDI FIORINA
Building Number: 335
Checked: NTL
Drawn: JDK
Approved: Service Chief: GARY ABREU
Location: 4100 WEST THIRD STREET DAYTON, OH 45428
Drawing No. ES5.6

VAMC DAYTON
Department of Veterans Affairs

VA FORM 08-6231, OCT 1978

PROJECT NO. 2012-04039
HEAPY ENGINEERING
DAYTON/COLUMBUS, OHIO & INDIANAPOLIS, INDIANA
MECHANICAL ELECTRICAL COMMISSIONING TECHNOLOGY
PLOTTED BY: JDKOALE
DATE: JANUARY 29, 2013