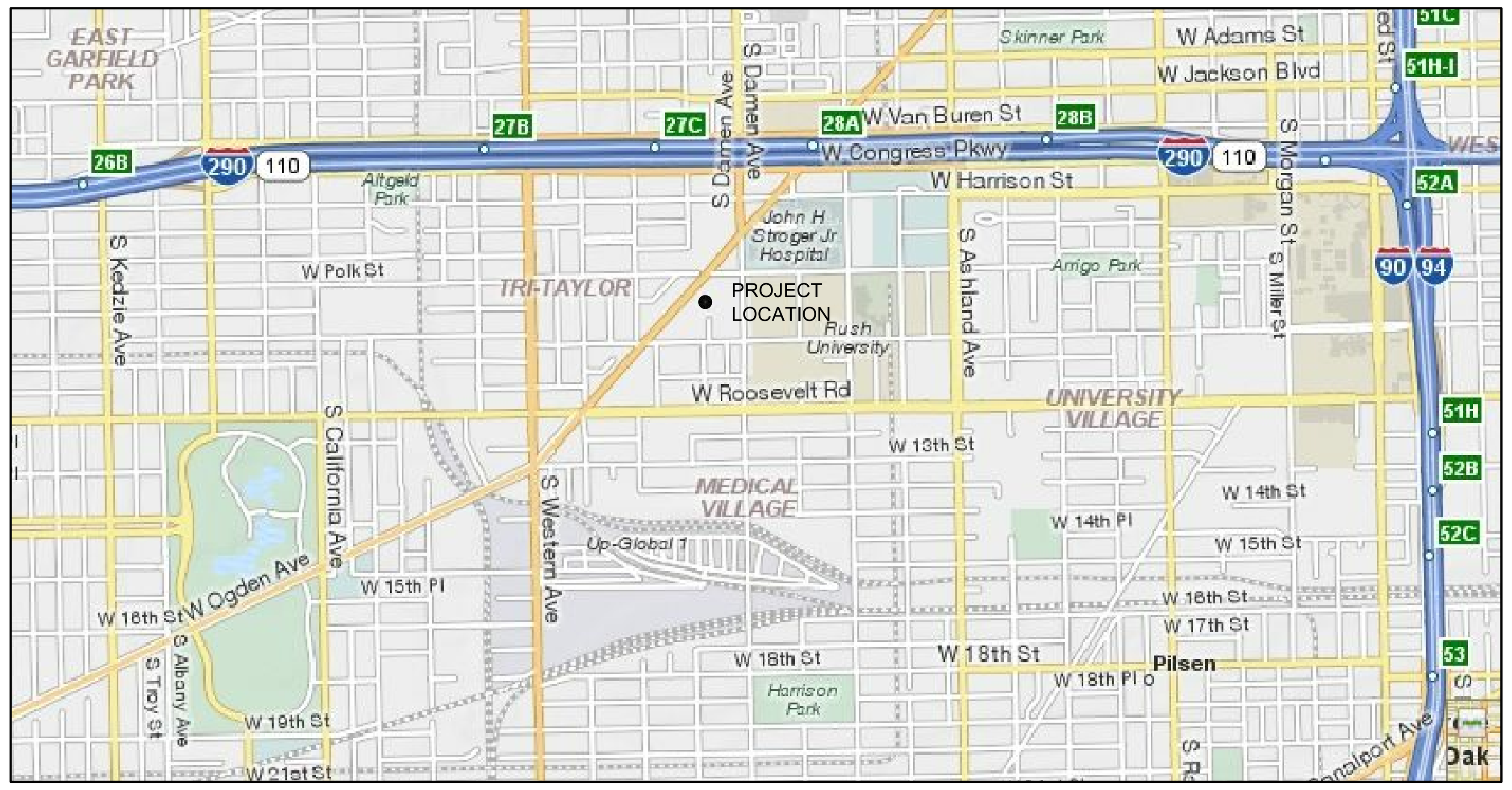
VA-537-12-122

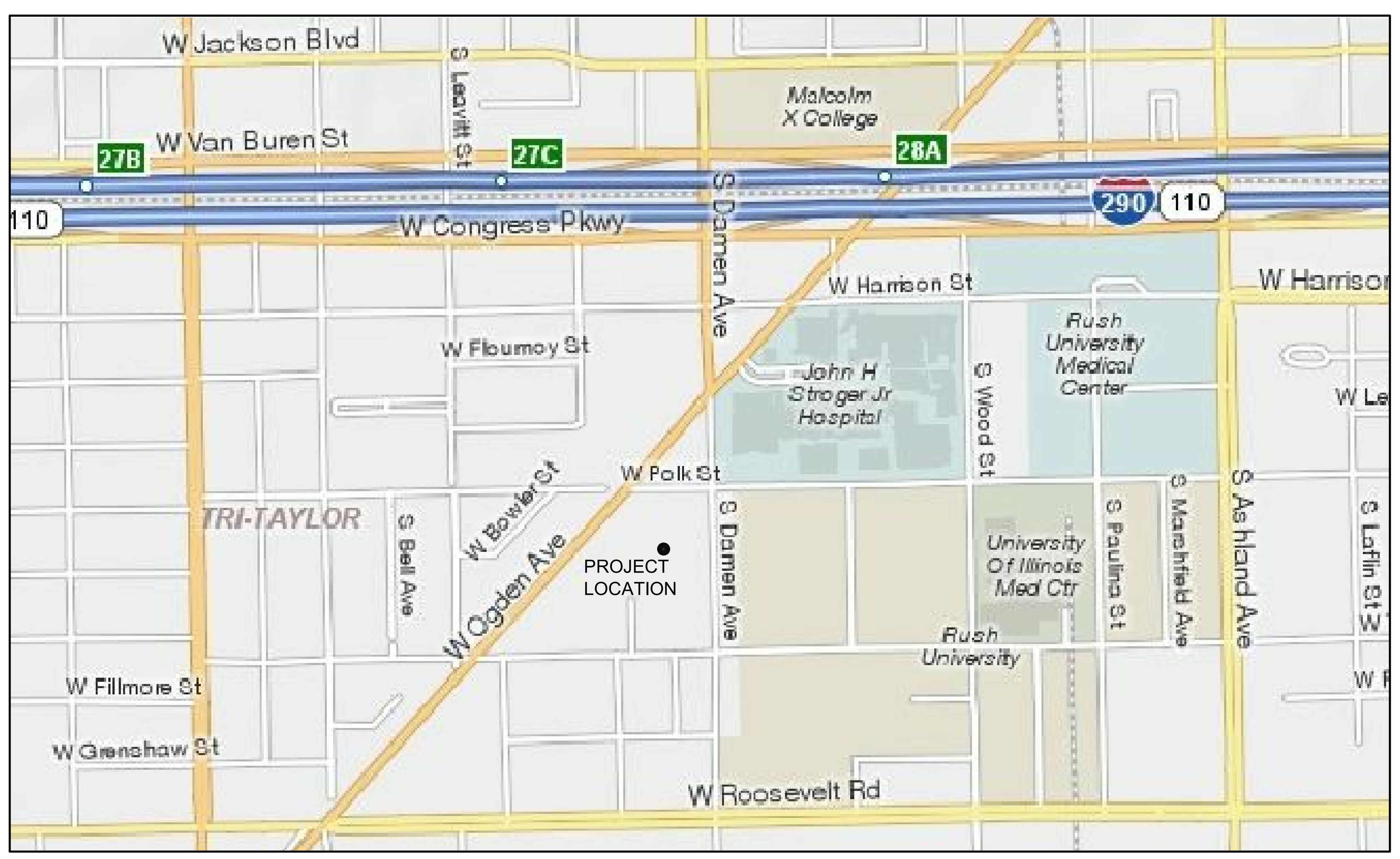
# Department of Veterans Affairs

JESSE BROWN VETERANS AFFAIRS MEDICAL CENTER
CHICAGO, ILLINOIS

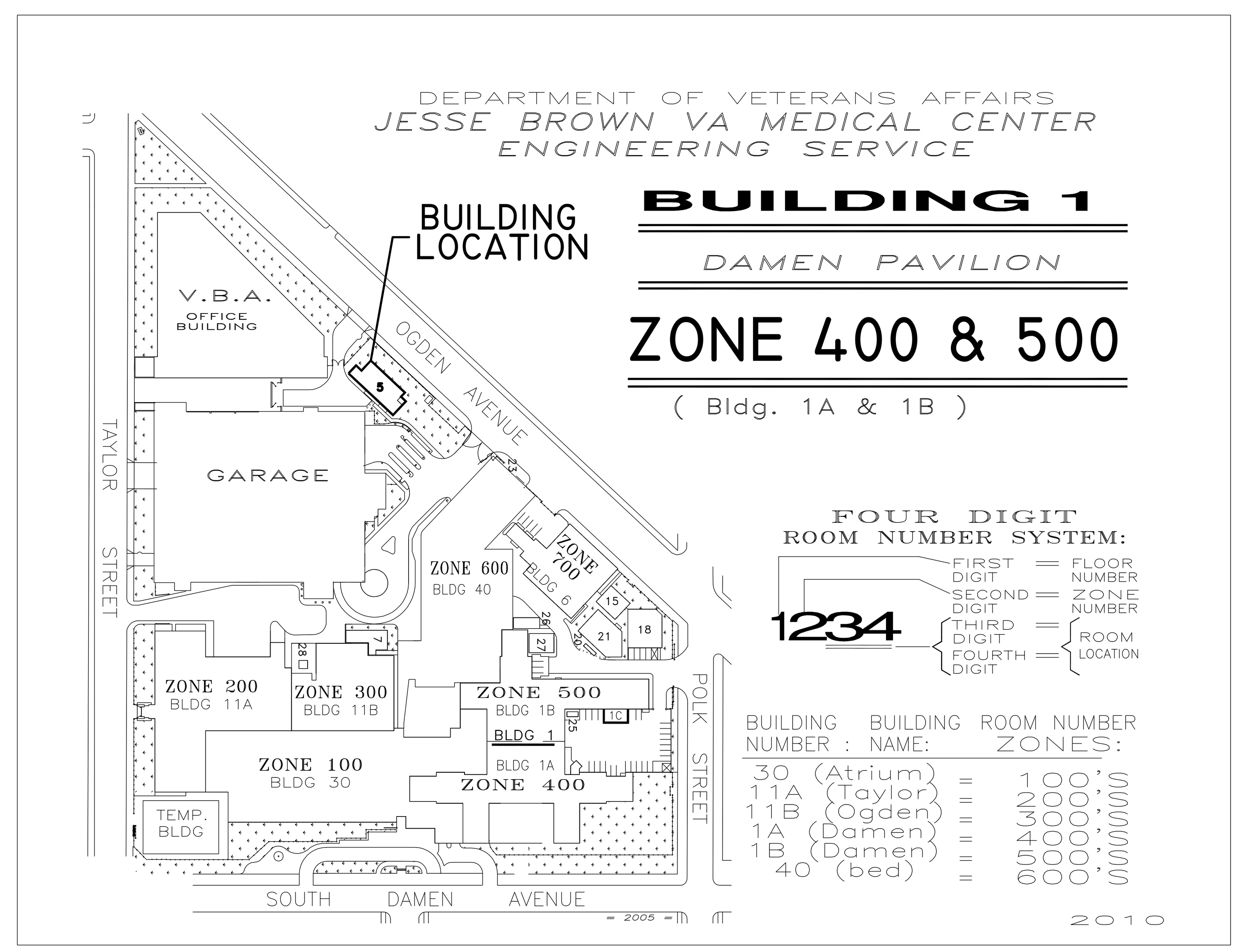
# ELECTRICAL SERVICE RELOCATION FOR BUILDING #5 CO "A" HVAC & ADA TOILETS




VICINITY MAP
north




LOCALITY MAP
north




FACILITY MAP
north

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## BUILDING CODE INFO:

BASIS OF DESIGN – VA TECHNICAL INFORMATION LIBRARY & CONSTRUCTION DESIGN GUIDES

DEFER TO 2009 IBC AS APPLICABLE

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| Field | Value |
|---|---|
| Drawing Title | TITLE SHEET & INDEX |
| Approved: Project Director | |
| Project Title | ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS |
| Location | JESSE BROWN V.A.M.C. |
| Date | FEBRUARY 13, 2013 |
| Checked | |
| Drawn | JJC |
| Project Number | 537-12-122 |
| Building Number | 5 |
| Drawing Number | 5 - GI - 001 |
| Dwg. | 1 of 16 |

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

## GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IN-FIELD DIMENSIONS.

2. THE CONTRACTOR'S RESPONSIBILITY FOR DAMAGES DURING CONSTRUCTION: THE CONTRACTOR WILL REPAIR AND/OR REPLACE DAMAGED MATERIAL THAT ARE FOUND TO HAVE BEEN MADE DURING THE COURSE OF THE WORK AND CLEAN-UP PROCEDURE. REPAIR SHALL MEAN THAT THE ITEMS ARE RETURNED TO THEIR ORIGINAL STATE, AS A MINIMUM, AS DETERMINED BY THE OWNER.

3. NOTES ON DRAWINGS SHALL APPLY TO SIMILAR CONDITIONS WHETHER THEY ARE REPEATED OR NOT, UNLESS OTHERWISE NOTED.

4. THE CONTRACTOR ALONE SHALL BE RESPONSIBLE FOR THE SAFETY AND ADEQUACY OF HIS PLANT, APPLIANCES AND METHODS. THE CONTRACTOR SHALL ERECT AND PROPERLY MAINTAIN AT ALL TIMES AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, PROPER SAFEGUARDS FOR THE PROTECTION OF WORKMEN, OWNER AND OWNERS PROPERTY, AND SHALL POST DANGER WARNINGS AGAINST HAZARDS CREATED BY THE CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL DESIGNATE A RESPONSIBLE MEMBER OF HIS ORGANIZATION ON THE WORK, WHOSE DUTY SHALL BE THE PREVENTION OF ACCIDENTS. IN ABSENCE OF NOTICE TO THE CONTRARY, FILED IN WRITING TO THE OWNER, THIS PERSON WOULD BE SUPERINTENDANT OF THE CONTRACTOR.

5. INSPECTION BY THE CONTRACTOR: THE CONTRACTOR ACKNOWLEDGES AND AGREES THAT HE HAS INDIVISIBLE AND A CONTRACTUAL OBLIGATION TO THE OWNER TO MAKE HIS OWN INSPECTIONS OF HIS OWN WORK AT EACH STAGE OF CONSTRUCTION; AND SHALL SUPERVISE PERFORMANCE OF WORK IN SUCH MANNER AS TO ENABLE HIM TO CERTIFY THAT THE WORK HAS BEEN EXECUTED STRICTLY IN ACCORANCE WITH THE METHODS AND REGULATIONS GOVERNING THE EXECUTION OF THE WORK.

6. CONTRACTOR SHALL NOT ALLOW HAZARDOUS CONDITIONS OR PUBLIC NUISANCES TO DEVELOP OR PERSIST IN THE PERFORMANCE OF THE WORK. CONTRACTOR SHALL INSTALL AND MAINTAIN APPROPRIATE SAFTEY BARRIERS OR TEMPORARY PARTITIONS AS REQUIRED BY GOVERNING AGENCIES AND AT LOCATIONS TO WHICH THE GENERAL PUBLIC MAY HAVE ACCESS OR COME IN CONTACT WITH THE PROJECT SITE LIMITS.

7. WHERE CUTTING AND PATCHING IS TO BE PERFORMED, CONTRACTOR SHALL VERIFY THAT SUCH WORK WILL NOT INTERFER WITH SERVICES AND UTILITIES SCHEDULED TO REMAIN. CONTRACTOR SHALL NOTIFY OF ALL UTILITIES WHICH WILL BE AFFECTED AND INDICATE HOW LONG SERVICE WILL BE INTERRUPTED PRIOR TO ANY CUTTING.

8. THE CONTRACTOR SHALL COORDINATE THE PROVISION OF, LOCATION OF, AND PLACEMENT OF INSERTS, HANGERS, PIPE SLEEVES, HOLES, PADS, ANCHOR BOLTS, ETC. WHICH ARE REQUIRED FOR THE INSTALLATION OF ITEMS.

9. CONTRACTOR SHALL PATCH AND REPAIR AREAS AFFECTED BY DEMOLITION AND NEW CONSTRUCTION TO MATCH EXISTING. NEW CONSTRUCTION AND PATCHED AREAS ARE TO RECEIVE FINISHES TO MATCH ADJACENT AREA. PATCH CEILINGS, FLOORS, WALLS AND BASES AS REQUIRED TO ACHIEVE A CONTINUOUS FINISHED APPEARANCE.

10. REFUSE AND DEBRIS SHALL BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF BY THE CONTRACTOR.

11. THE DOCUMENTS ARE BASED ON ORIGINAL DESIGN DRAWINGS AND CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF THE WORK.

12. PRIOR TO COMMENCEMENT OF DEMOLITION WORK, CONTRACTOR SHALL FIELD SURVEY THE SITE TO DETERMINE THE CONDITION OF THE EXISTING SITE AND TO DISTINGUISH CLEARLY BETWEEN ITEMS TO BE REMOVED, ITEMS TO REMAIN AND ITEMS TO BE SALVAGED. COORDINATE DEMOLITION WORK WITH OWNER'S REPRESENTATIVE.

13. THE ITEMS INDICATED TO BE REMOVED AND SALVAGED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE CLEANED AND DELIVERED TO THE OWNER'S DESIGNATED STORAGE PRIOR TO COMMENCEMENT OF THE DEMOLITION WORK.

14. THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES IN AREA OF WORK AND SHUT OFF, DISCONNECT AND CAP OR SEAL ALL UTILITIES AFFECTED BY THE DEMOLITION. THE FACILITIES WILL REMAIN IN OPERATION THROUGH OUT CONSTRUCTION. COORDINATE AND SCHEDULE INTERRUPTIONS IN UTILITY SERVICES WITH OWNER'S REPRESENTATIVE.

15. THE CONTRACTOR SHALL PROTECT EXISTING BUILDING ELEMENTS FROM DAMAGE DUE TO DEMOLITION AND CONSTRUCTION OPERATIONS AND REPAIR OR REPLACE ELEMENTS WHICH ARE TO REMAIN AND WHERE DAMAGED DURING THE WORK, TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.

16. THE CONTRACTOR SHALL ERECT TEMPORARY PROTECTION SUCH AS PARTITIONS, FENCES, BARRICADES, RAILINGS, SIGNS ETC., AND SHALL CONDUCT DEMOLITION OPERATION IN MANNER TO ENSURE MINIMUM INTERFERENCE WITH ADJACENT OCCUPIED FACILITIES.

17. WHERE PHASING OF THE NEW WORK IS REQUIRED, CONTRACTOR SHALL COORDINATE TEMPORARY CONSTRUCTION, DEMOLITION WORK AND NEW CONSTRUCTION IN MANNER TO ENSURE UNINTERRUPTED OPERATION.

18. THE CONTRACTOR SHALL PATCH AND REPAIR EXISTING AREAS AFFECTED BY DEMOLITION AND NEW CONSTRUCTION TO MATCH EXISTING FIRE RESISTIVE CONSTRUCTION. NEW CONSTRUCTION AND PATCHED AREAS ARE TO RECEIVE FINISHES TO MATCH ADJACENT AREA AND TO ACHIEVE A CONTINUOUS FINISHED APPEARANCE.

19. PENETRATIONS THROUGH EXISTING AND NEW FIRE RATED WALLS AND FLOOR/CEILING CONSTRUCTION TO RECEIVE FIRESTOP SYSTEM TO MAINTAIN INTEGRITY OF EXISTING OR NEW CONSTRUCTION RATED SYSTEM.

## ARCHITECTURAL ABBREVIATIONS

| | |
|---|---|
| @ | AT |
| ACOUST | ACOUSTICAL |
| AD | ACCESS DOOR |
| ADJ | ADJACENT, ADJUSTABLE |
| AFF | ABOVE FINISHED FLOOR |
| AGG | AGGREGATE |
| ALUM | ALUMINUM |
| ANCH | ANCHOR, ANCHORAGE |
| ANOD | ANODIZED |
| APP'D | APPROVED |
| ARCH | ARCHITECTURAL |
| ASSOC | ASSOCIATED |
| AUTO | AUTOMATIC |
| AUX | AUXILIARY |
| AVG | AVERAGE |
| BD | BOARD |
| BB | BALL BEARING |
| BF | BOTH FACES |
| BLDG | BUILDING |
| BLK | BLOCK |
| BM | BEAM |
| BOT | BOTTOM |
| B/ | BOTTOM OF |
| BP | BASE PLATE |
| BSMT | BASEMENT |
| BUR | BUILT-UP ROOFING |
| BW | BOTH WAYS |
| CAB | CABINET |
| C/C, C TO C | CENTER TO CENTER |
| CEM | CEMENT |
| CEMPL | CEMENT PLASTER |
| CER | CERAMIC |
| CHK'D | CHECKED |
| CJ | CONTROL JOINT |
| CL | CENTER LINE |
| CLG | CEILING |
| CLR | CLEAR |
| CLOS | CLOSET |
| CMU | CONCRETE MASONRY UNIT |
| COL | COLUMN |
| CONC | CONCRETE |
| CONST | CONSTRUCTION |
| CONT | CONTINUOUS |
| CONTR | CONTRACTOR |
| CPT | CARPET |
| CT | CERAMIC TILE |
| CTR | CENTER |
| CYL | CYLINDER |
| D | DEEP, DEPTH |
| DBL | DOUBLE |
| DEMO | DEMOLITION |
| DET | DETAIL |
| DF | DRINKING FOUNTAIN |
| DIA | DIAMETER |
| DIM | DIMENSION |
| DL | DEAD LOAD |
| DS | DOWNSPOUT |
| DN | DOWN |
| DO | DITTO |
| DR | DOOR |
| DWG(S) | DRAWING(S) |
| DWL | DOWEL |
| EA | EACH |
| EF | EACH FACE |
| EJ | EXPANSION JOINT |
| EL | ELEVATION |
| ELECT | ELECTRICAL |
| ELEV | ELEVATOR |
| EQ | EQUAL |
| EQUIP | EQUIPMENT |
| EW | EACH WAY |
| EXH | EXHAUST |
| EXIST | EXISTING |
| EXP | EXPANSION |
| EXT | EXTERIOR |
| FD | FLOOR DRAIN |
| FDN | FOUNDATION |
| FIN | FINISH |
| FLG | FLOORING |
| FLR | FLOOR |
| FRM | FRAME |
| FT(') | FEET (FOOT) |
| FTG | FOOTING |
| FURN | FURNITURE |
| FUT | FUTURE |

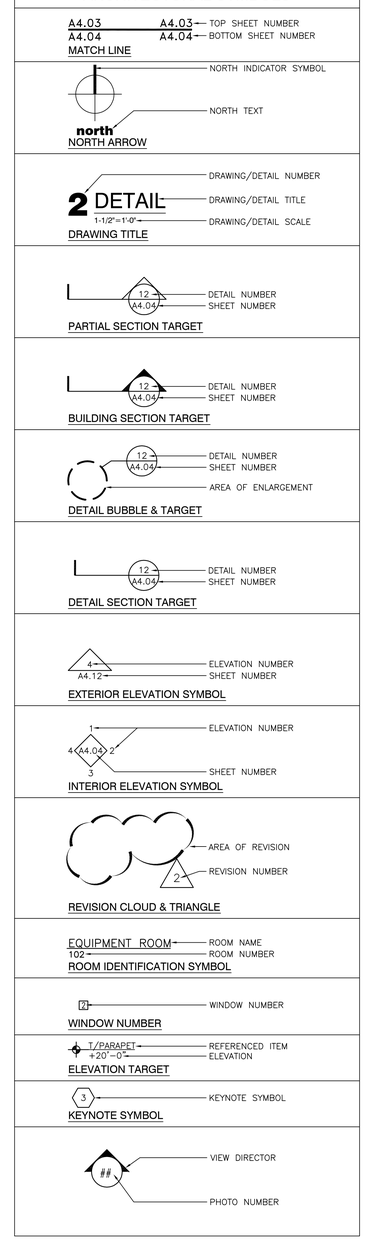
## ARCHITECTURAL ABBREVIATIONS

| | |
|---|---|
| GAL | GALLON |
| GALV | GALVANIZED |
| GC | GENERAL CONTRACTOR |
| GEN | GENERAL |
| GIR | GIRDER |
| GL | GLASS |
| GYP | GYPSUM |
| GYP.BD. | GYPSUM BOARD |
| H | HIGH |
| HC | HOLLOW CORE |
| HM | HOLLOW METAL |
| HDW | HARDWARE |
| HORIZ | HORIZONTAL |
| HP | HIGH POINT |
| HT(H) | HEIGHT |
| ID | INSIDE DIAMETER |
| IN(") | INCH |
| INFO | INFORMATION |
| INSUL | INSULATION |
| INT | INTERIOR |
| JAN | JANITOR |
| JST | JOIST |
| JT | JOINT |
| K | KIP (1000 LB.) |
| L | LENGTH |
| LAM | LAMINATE |
| LAV | LAVATORY |
| LH | LEFT HAND |
| L.L. | LOWER LEVEL |
| LTWT CONC | LIGHTWEIGHT CONCRETE |
| MATL | MATERIAL |
| MAX | MAXIMUM |
| MECH | MECHANICAL |
| MED | MEDIUM |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| MO | MASONRY OPENING |
| MTD | MOUNTED |
| MTG.HT. | MOUNTING HEIGHT |
| MTL | METAL |
| N/A | NOT APPLICABLE |
| NC | NO CHANGE |
| NIC | NOT IN CONTRACT |
| NTS | NOT TO SCALE |
| NO.# | NUMBER |
| NOM | NOMINAL |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER |
| OH | OVERHEAD |
| OPNG | OPENING |
| OPP | OPPOSITE |
| PART | PARTITION |
| PERP | PERPENDICULAR |
| PCC | PORTLAND CEMENT CONCRETE |
| PL | PLATE |
| PLAM | PLASTIC LAMINATE |
| PLAS | PLASTER |
| PR | PAIR |
| PSF | POUNDS/SQUARE FOOT |
| PSI | POUNDS/SQUARE INCH |
| PT | POINT |
| PVC | POLYVINYL CHLORIDE |
| PROJ | PROJECTION |
| QT | QUARRY TILE |
| R | RISER |
| R. | RADIUS |
| RD | ROOF DRAIN |
| REF | REFERENCE, REFER TO |
| REFL | REFLECTED |
| REINF | REINFORCEMENT |
| RELOC | RELOCATE, RELOCATED |
| REPL | REPLACE |
| REQ | REQUIRE, REQUIRED |
| REV | REVISE, REVISION |
| RFG | ROOFING |
| RH | RIGHT HAND |
| RO | ROUGH OPENING |

## ARCHITECTURAL ABBREVIATIONS

| | |
|---|---|
| SC | SOLID CORE |
| SCHED | SCHEDULE |
| SECT | SECTION |
| SHT | SHEET |
| SIM | SIMILAR |
| SLBB | SHORT LEG BACK TO BACK |
| SPEC(S) | SPECIFICATION |
| SQ | SQUARE |
| SS | STAINLESS STEEL |
| STD | STANDARD |
| STL | STEEL |
| STRUCT | STRUCTURAL (STRUCTURE) |
| SUSP | SUSPENDED |
| T | TOP, THICK |
| T/ | TOP OF |
| T&B | TOP AND BOTTOM |
| T&G | TONGUE & GROOVE |
| TEMP | TEMPORARY |
| TERR | TERRAZZO |
| THK | THICK, THICKNESS |
| THRU | THROUGH |
| TS | STRUCTURAL STEEL TUBE |
| TYP | TYPICAL |
| UL | UNDERWRITERS' LABORATORIES |
| U.L. | UPPER LEVEL |
| UNO | UNLES NOTED OTHERWISE |
| UR | URINAL |
| VB | VAPOR BARRIER |
| VCT | VINYL COMPOSITION TILE |
| VERT | VERTICAL |
| VIF | VERIFY IN FIELD |
| WT | WEIGHT |
| W | WIDTH, WIDE |
| W/ | WITH |
| W/I | WITHIN |
| WC | WATER CLOSET |
| WD | WOOD |
| W/O | WITHOUT |
| WP | WORKING POINT |
| WT | WEIGHT |
| WWF | WELDED WIRE FABRIC |

## ARCHITECTURAL SYMBOLS

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Drawing Title: **SYMBOLS & ABBREVIATIONS**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked: | Drawn: JJC

Project Number: 537-12-122

Building Number: 5

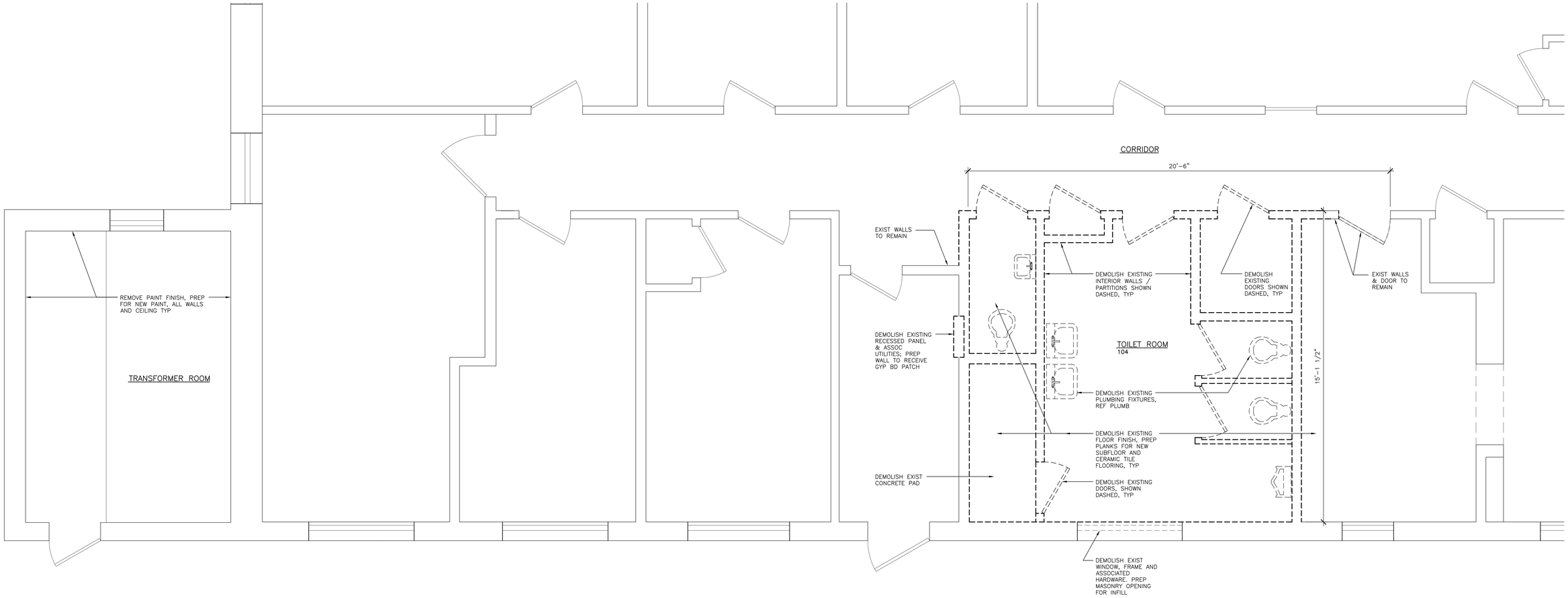
Drawing Number: **5 - GI - 002**

Dwg2 of 16

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231



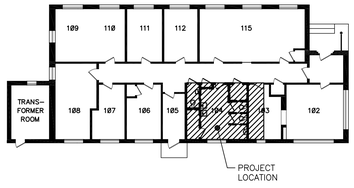

## 1 DEMOLITION PLAN - ENLARGED TOILET ROOM

1/2"=1'-0"

north

DEMOLITION FLOOR PLAN GENERAL NOTES

1. THIS CONTRACT INCLUDES ALL THE DEMOLITION ACTIVITIES THAT MAY BE REQUIRED FOR A FULL AND COMPLETE EXECUTION OF THE WORK.
2. ALL EXISTING CONSTRUCTION DAMAGED AS A RESULT OF DEMOLITION WORK SHALL BE REPLACED OR REPAIRED TO THE VA'S SATISFACTION AT THE CONSTRUCTOR'S EXPENSE.
3. ALL CONDITIONS SHOWN ARE TO BE FIELD VERIFIED. THE VA AND ARCHITECT ARE TO BE NOTIFIED OF ANY DISCREPANCIES IN WRITING PRIOR TO PROCEEDING WITH DEMOLITION.
4. REMOVE & DISCARD EXISTING GPY BD CEILING AND SOFFIT, ALL TOILET ROOM FIXTURES, ALL SOLID SURFACE SLABS AND CERAMIC TILE, ALL CEMENTITIOUS COATED PARTITIONS, ALL MECH & ELEC FIXTURES AND ALL ASSOCIATED FRAMING, ATTACHMENTS, ANCHORS AND ACCESSORIES. COORDINATE WORK W/ ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS
5. COORDINATE ALL DEMOLITION OF ELEC, MECH UTITLITES W/ NEW WORK.
6. DEMOLISH EXISTING CONC CURB / LANDING IN TOILET ROOM CLOSET.
7. DEMOLISH EXISTING FLOOR FINISH AND SETTING BED DOWN TO PLANK FLOOR. INFILL PLANK FLOOR AS REQUIRED AND PREP TO RECEIVE NEW 5/8" WOOD SUBFLOOR.
8. REMOVE EXISTING PAINT ON MASONRY / CONCRETE SURFACE @ INTERIOR OF TRANSFORMER ROOM. PREP SURFACE TO RECEIVE NEW PAINT FINISH.




KEY PLAN

north

COMPLETION ITEM NO. ____

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| | |
|---|---|
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Drawing Title: **DEMOLITION FLOOR PLAN**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013

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Drawn: MLC

Project Number: 537-12-122

Building Number: 5

Drawing Number: **5 - AD - 101**

Dwg5 of 16

Office of Construction and Facilities Management

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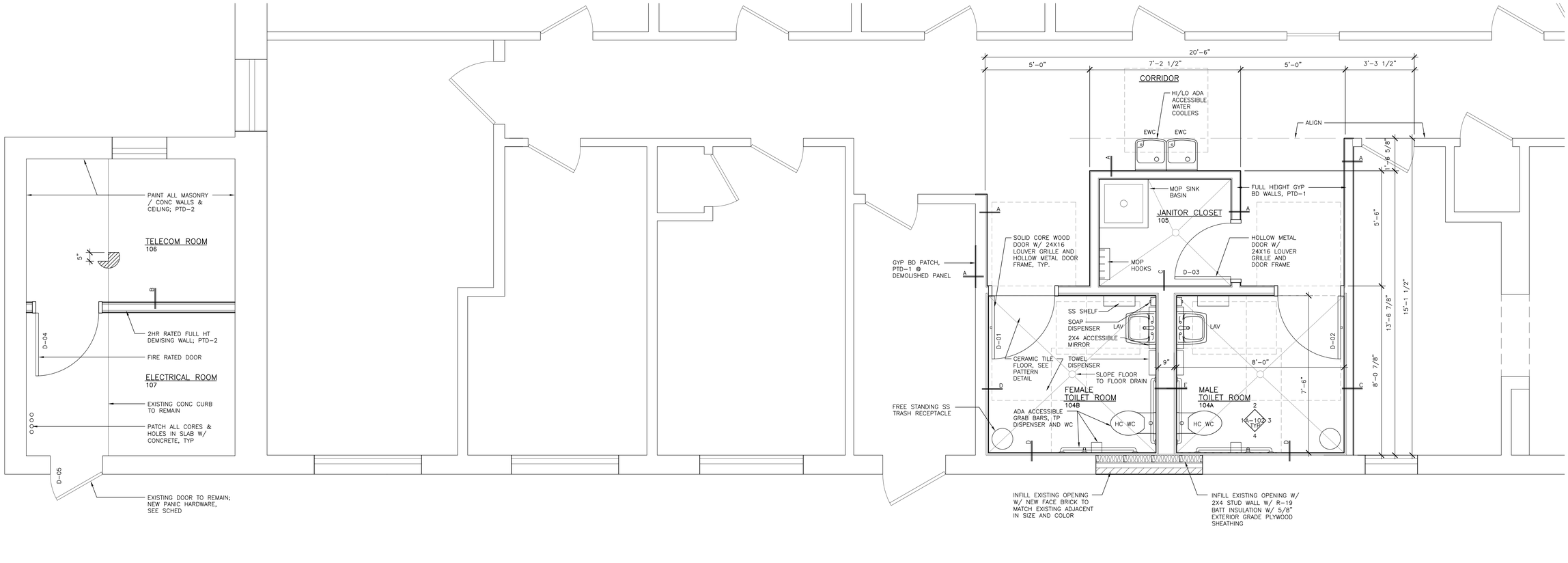



## 1 NEW PLAN - ENLARGED TOILET ROOM

1/2"=1'-0"

north

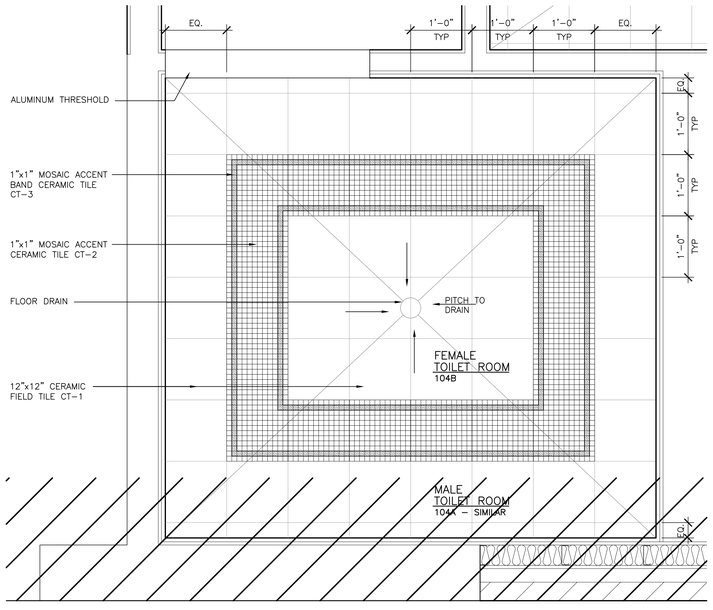
NEW FLOOR PLAN & RCP GENERAL NOTES

1. ALL TOILET ROOM FIXTURE AND CLEARANCES TO BE ADA ACCESSIBLE. CONTRACTOR RESPONSIBLE FOR MOUNTING HEIGHTS AND LOCATIONS; VERIFICATION OF ADA COMPLIANCE SUBJECT TO VA AND ARCHITECT APPROVAL; ANY MODIFICATIONS / RELOCATIONS TO BE DONE AT THE EXPENSE OF THE CONTRACTOR.
2. ALL WALLS WITHIN TOILET ROOMS TO RECEIVE CERAMIC TILE WAINSCOT FROM FINISH FLOOR UP TO 6'-0". MOISTURE RESISTANT PAINTED GYP BD WALLS FROM 6'-0" AFF TO BOTTOM OF DECK; TYPICAL UNO
3. PROVIDE AND INSTALL ALL NECESSARY STEEL / LT GA MTL BLOCKING REQUIRED TO SUPPORT ALL TOILET ROOM FIXTURES AND ACCESSORIES.
4. PROVIDE NEW 5/8" PLYWOOD SUBFLOOR IN ALL ROOMS TO RECEIVE CERAMIC TILE FLOORS.

DOOR & HARDWARE SCHEDULE

| | | DOOR | | FRAME | | | |
|---|---|---|---|---|---|---|---|
| NO. | SIZE | MATL | FIN | MATL | FIN | HDW SET | REMARKS |
| D-01 | 3'-0"x7'-0" | WD | STN | HM | PTD | H1 | AUTOMATIC DOOR OPERATOR, 24"x16" LOUVER GRILLE |
| D-02 | 3'-0"x7'-0" | WD | STN | HM | PTD | H1 | AUTOMATIC DOOR OPERATOR, 24"x16" LOUVER GRILLE |
| D-03 | 2'-8"x7'-0" | HM | PTD | HM | PTD | H2 | 24"x16" LOUVER GRILLE |
| D-04 | 3'-0"x7'-0" | HM | PTD | HM | PTD | H3 | 1.5HR FIRE RATED 'B' |
| D-05 | – | HM | PTD | HM | PTD | H3 | EXIST TO REMAIN |

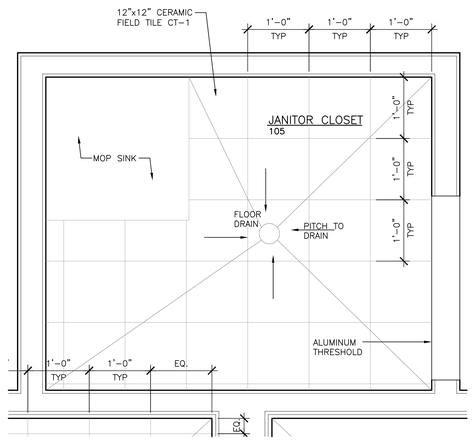
NOTE: PROVIDE DEDICATED CIRCUIT / POWER SUPPLY FOR AUTOMATIC DOOR OPERATORS




## 2 FLOOR PATTERN - TYP @ TOILET ROOMS

1"=1'-0"

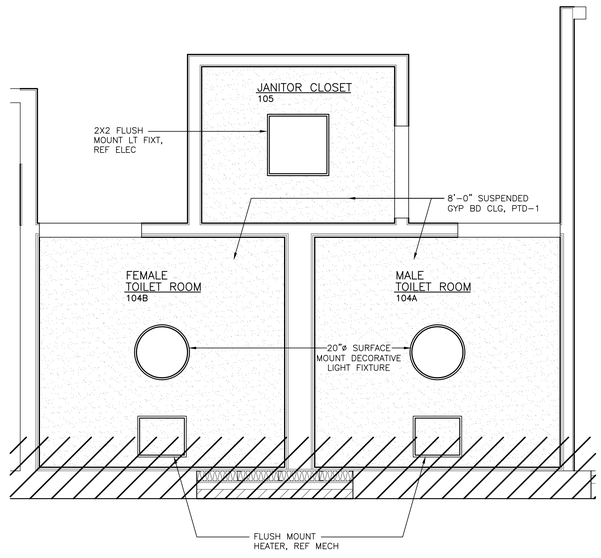
north




## 3 FLOOR PATTERN - TYP @ JANITOR CLOSET

1"=1'-0"

north




## 4 REFLECTED CEILING PLAN - ENLARGED TOILET ROOM

1/2"=1'-0"

north

COMPLETION ITEM NO. ___

NOT SPRINKLERED

| | |
|---|---|
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Drawing Title: **NEW FLOOR PLAN, REFLECTED CEILING PLAN & FLOOR PATTERN DETAIL**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked: | Drawn: MLC

Project Number: 537-12-122

Building Number: 5

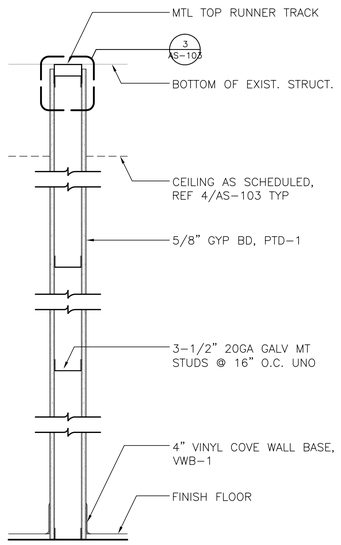
Drawing Number: **5 - AS - 102**

Dwg6 of 16

Office of Construction and Facilities Management

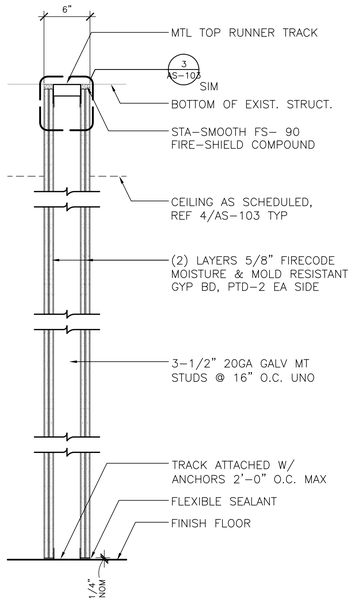
Department of Veterans Affairs

VA FORM 08-6231



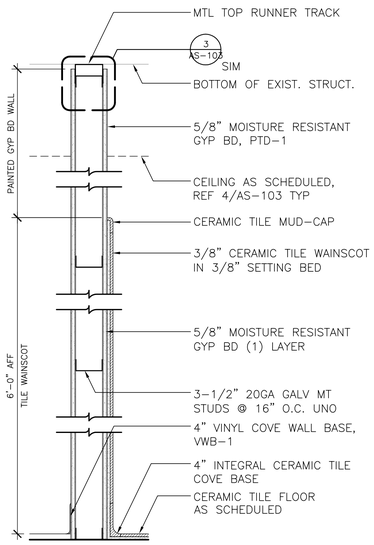

## TYPE A

A.1 – 6" 20 GA GALV MT STUDS @ 16" O.C. UNO




## TYPE B

2HR FIRE RATED
UL DESIGN NO. U301

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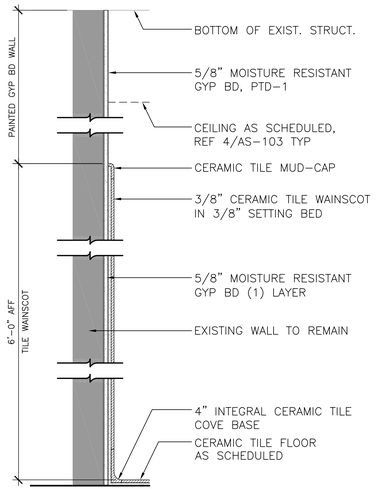
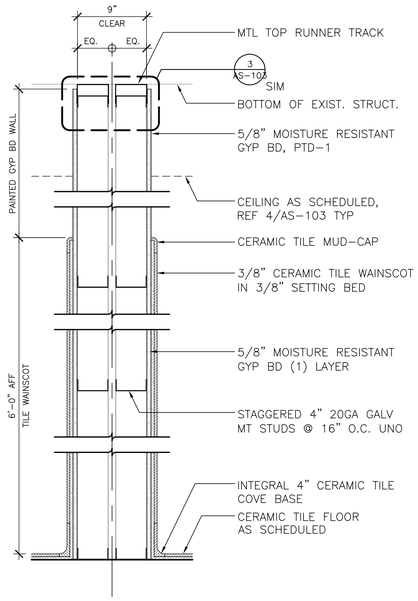



## TYPE D

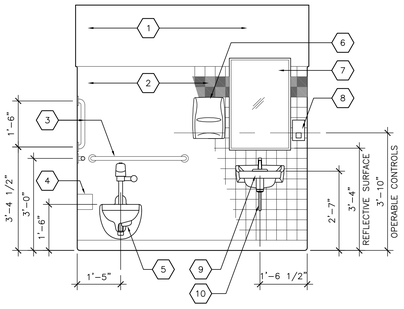



## TYPE E

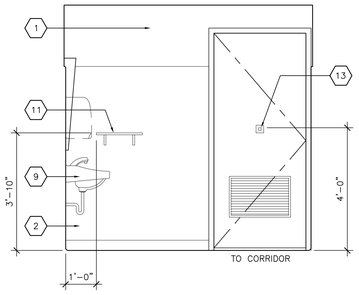
NOTE: FINISHES / CONSTRUCTION TYP OF EACH SIDE OF PLUMBING CHASE WET WALL

# 1 PARTITION TYPES

1-1/2"=1'-0"




1

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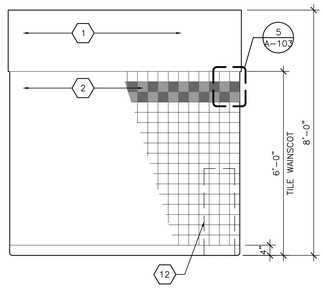


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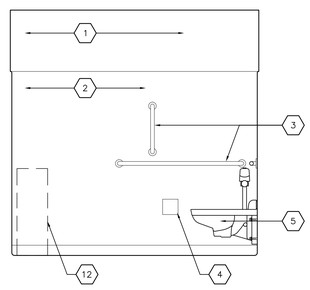
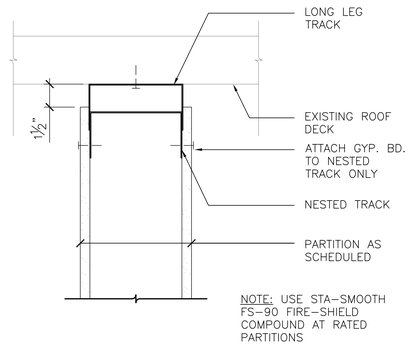


4

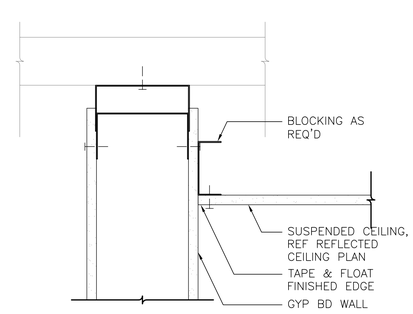
# 2 INTERIOR ELEVATIONS, TYPICAL

1/2"=1'-0"




# 3 PARTITION DETAILS

3"=1'-0"




# 4 PARTITION DETAILS

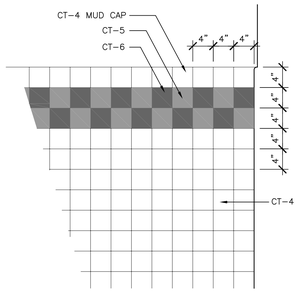
3"=1'-0"

INTERIOR ELEVATION KEY NOTES

1. MOISTURE RESISTANT GYP BD, PAINTED
2. CERAMIC TILE WAINSCOT CT-4 W/ ALT DETAIL BAND OF CT-5 & CT-6
3. ACCESSIBLE GRAB BARS
4. SURFACE MOUNTED TOILET PAPER DISPENSER
5. ACCESSIBLE WALL MOUNTED WATER CLOSET W/ SENSOR OPERATED FLUSH VALVE
6. SURFACE MOUNTED PAPER TOWEL DISPENSER
7. SURFACE MOUNTED FULLY POLISHED TILT MIRROR 24"(W) x 36"(H)
8. SURFACE MOUNTED SOAP DISPENSER
9. ACCESSIBLE SURFACE MOUNTED LAV W/ SENSOR OPERATED GOOSENECK FAUCET
10. HEAT SHIELDING PIPE WRAP
11. SURFACE MOUNTED STAINLESS STEEL SHELF 18"(L) x 6"(D)
12. FREE STANDING SS TRASH RECEPTACLE
13. SURFACE MOUNTED COAT HOOK

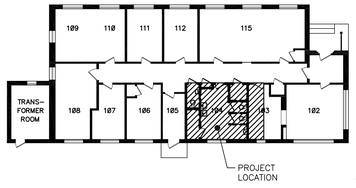
PARTITION TYPE GENERAL NOTES

1. WATER/MOLD RESISTANT GYPSUM BD. TO BE USED IN ALL AREAS UNLESS OTHERWISE NOTED.
2. ALL WALLS WITHIN TOILET ROOMS TO RECEIVE CERAMIC TILE WAINSCOT FROM FINISH FLOOR UP TO 6'-0". PAINTED GYP BD WALLS FROM 6'-0" AFF TO BOTTOM OF DECK; TYPICAL UNO
3. PROVIDE AND INSTALL ALL NECESSARY STEEL / LT GA MTL BLOCKING REQUIRED TO SUPPORT ALL TOILET ROOM FIXTURES AND ACCESSORIES.
4. CONFIRM EXISTING WALL CONDITIONS ONCE DEMO. IS COMPLETED. MINIMAL BUILDOUT FROM EXISTING WALL IS INTENDED TO PRESERVE AVAILABLE CLEARANCES. CONSTRUCT NEW WALL TO "IN-FILL" AT EXISTING MASONRY WALL OPENINGS. ALIGN EXISTING AND NEW WALLS TO CREATE A SEAMLESS TRANSITION FOR APPLICATION OF SURFACE FINISH MATERIALS. PROVIDE REQUIRED DEPTH FOR ACCESSORIES AND PIPE CHASE WITHIN WALL AS SPECIFIED.




# 5 TILE PATTERN DETAL, TYPICAL

1/2"=1'-0"




KEY PLAN

north

COMPLETION ITEM NO. ____

NOT SPRINKLERED

| | |
|---|---|
| ISSUED FOR SOLICITATION | 04/30/2013 |
| Revisions: | Date |

CONSULTANTS:

ARCHITECT/ENGINEERS:

TENG

TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
205 N. MICHIGAN AVE. CHICAGO, IL 60601
TELEPHONE: 312/616-0000

Drawing Title: **PARTITION TYPES & INTERIOR ELEVATIONS**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked: | Drawn: MLC

Project Number: 537-12-122

Building Number: 5

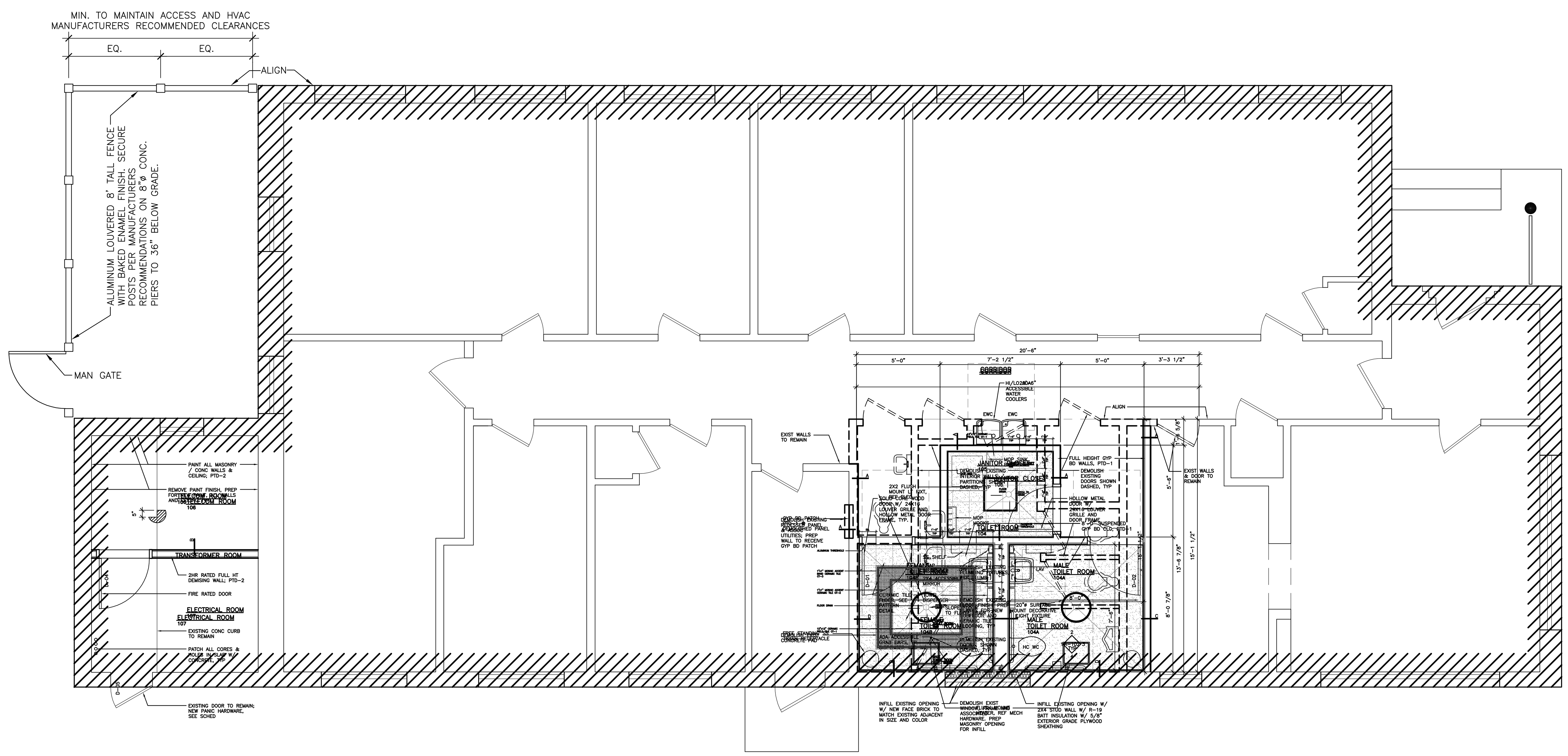
Drawing Number: **5 - AS - 103**

Dwg7 of 16

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231




**1** EXTERIOR IMPROVEMENT PLAN
1/2"=1'-0"

north

COMPLETION ITEM NO. ____
NOT SPRINKLERED

| | |
|---|---|
| ISSUED FOR SOLICITATION | 04/30/2013 |
| Revisions: | Date |

CONSULTANTS:

ARCHITECT/ENGINEERS:

**TENG**

TENG & ASSOCIATES, INC.
ENGINEERS/ARCHITECTS/PLANNERS
205 N. MICHIGAN AVE. CHICAGO, IL 60601
TELEPHONE: 312/616-0000

Drawing Title
**EXTERIOR SITE IMPROVEMENTS**

Approved: Project Director

Project Title
ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location
JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked: | Drawn: MLC

Project Number: 537-12-122

Building Number: 5

Drawing Number: **5 - AS - 104**

Dwg 6 of 16

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

## VENTILATING SYMBOL LIST

| SYMBOL | DESCRIPTION |
|---|---|
| | SUPPLY AIR DUCT (TOWARD) |
| | SUPPLY AIR DUCT (AWAY) |
| | RETURN OR OUTDOOR AIR DUCT (TOWARD) |
| | RETURN OR OUTDOOR AIR DUCT (AWAY) |
| 24/12 SUPPLY; 24/12 RETURN/EXHAUST | FIRST NUMBER IS SIDE SHOWN; SECOND NUMBER IS SIDE NOT SHOWN; ARROWS INDICATE DIRECTION OF FLOW |
| | TURNING VANES |
| | MANUAL VOLUME DAMPER |
| BD | BACKDRAFT DAMPER |
| M | MOTORIZED DAMPER |
| FD SD | FIRE DAMPER / SMOKE DAMPER |
| | FLEXIBLE DUCT CONNECTION |
| | FLEXIBLE DUCT |
| | ACCESS PANEL |
| R | INCLINED RISE (IN DIRECTION OF AIR FLOW) |
| D | INCLINED DROP (IN DIRECTION OF AIR FLOW) |
| SA | SUPPLY AIR |
| RA | RETURN AIR |
| OA | OUTDOOR AIR |
| EA | EXHAUST AIR |
| P | PRESSURE DROP |
| T | ROOM TEMPERATURE SENSOR |
| P | ROOM PRESSURE SENSOR |
| H | HUMIDISTAT |
| T | THERMOSTAT |
| | NEW CONNECTION TO EXISTING |

VENTILATING CONSTRUCTION NOTES

1. ALL DUCT WORK PENETRATIONS THRU FIRE OR SMOKE RATED WALLS MUST MAINTAIN THE RATING OF THE WALL. FIRE DAMPERS ARE REQ'D WHERE DUCTS PENETRATE WALLS HAVING A FIRE RESISTANCE RATING OF 1 HOUR OR 2 HOURS. FIRE DAMPERS USED FOR PROTECTION OF WALLS OR FLOORS W/ FIRE RESISTANCE RATINGS OF LESS THAN 3 HOURS SHALL HAVE A U.L. 1 1/2 HOUR FIRE PROTECTION RATING.
2. SEE ARCHITECTURAL SHEETS FOR LOCATION AND RATING OF FIRE AND SMOKE WALLS.
3. ALL SUPPLY AIR DIFFUSERS, RETURN AND EXHAUST GRILLES SHALL HAVE CONTROL DAMPERS IN THE DUCT RUNOUT. DIFFUSERS & GRILLES SHALL HAVE AN OPPOSED BLADE DAMPER LOCATED IN THE FACE OF THE DIFFUSER OR GRILLE.
4. REGARDLESS OF FLEX DUCT LENGTH SHOWN ON DRAWINGS. MAXIMUM LENGTH OF 48" AS SPECIFIED IN SPECIFICATION DIV 23 SHALL NOT BE EXCEEDED. FLEX DUCT INSTALLATION SHALL BE AT TERMINAL ENDS ONLY. CONNECTIONS AT VAV BOX INLETS MUST BE SOLID HARD DUCT. THE DUCTWORK AT ANY FIRE AND/OR SMOKE DAMPER MUST BE HARD DUCTWORK, NOT FLEX DUCT.
5. CONVERT ROUND DUCT DIMENSIONS LISTED TO FLAT OVAL OR RECTANGULAR AS REQUIRED.
6. ALL EXPOSED DUCTWORK SHALL BE RIGID. NO FLEXIBLE DUCT IS ALLOWED.

DIFFUSER TAKE-OFF AND FLEX DUCT SCHEDULE

| CFM | SIZE |
|---|---|
| ≤ 200 | 8"Ø |
| 201 - 325 | 10"Ø |
| 326 - 500 | 12"Ø |
| 501 - 800 | 14"Ø |
| ≥ 800 | SEE DRAWINGS |

LOW PRESSURE DUCT SCHEDULE

| MAX. CFM | DUCT SIZE |
|---|---|
| 500 | 10/10 |
| 1000 | 14/12 |
| 1500 | 20/12 |
| 2000 | 24/12 |
| 2500 | 30/12 |
| 3000 | 36/12 |

ABBREVIATIONS:

| | |
|---|---|
| TTBOS..... | TIGHT TO BOTTOM OF STEEL |
| RIJS..... | RISE INTO JOIST SPACE |
| R..... | RISE IN DIRECTION OF AIR FLOW |
| D..... | DROP IN DIRECTION OF AIR FLOW |
| FFB..... | FROM FLOOR BELOW |
| TFB..... | TO FLOOR BELOW |
| FFA..... | FROM FLOOR ABOVE |
| TFA..... | TO FLOOR ABOVE |
| IPS..... | INTO PLENUM SPACE |

## HEATING SYMBOL LIST

| SYMBOL | DESCRIPTION |
|---|---|
| HPS | HIGH PRESSURE STEAM SUPPLY PIPING |
| MPS | MEDIUM PRESSURE STEAM SUPPLY PIPING |
| LPS | LOW PRESSURE STEAM SUPPLY PIPING |
| HPR | HIGH PRESSURE STEAM RETURN PIPING |
| MPR | MEDIUM PRESSURE STEAM RETURN PIPING |
| LPR | LOW PRESSURE STEAM RETURN PIPING |
| CHS | CHILLED WATER SUPPLY |
| CHR | CHILLED WATER RETURN |
| HWS | HOT WATER SUPPLY |
| HWR | HOT WATER RETURN |
| SWS | BUILDING WATER SUPPLY |
| SWR | BUILDING WATER RETURN |
| D | DRAIN LINE |
| | BUTTERFLY VALVE |
| | GATE/BALL VALVE - AS NOTED |
| | CHECK VALVE |
| | CALIBRATED BALANCE VALVE |
| | AUTOMATIC TWO-WAY CONTROL VALVE (ELECTRIC) |
| | AUTOMATIC THREE-WAY CONTROL VALVE (ELECTRIC) |
| | GLOBE VALVE |
| | BALL VALVE |
| | RELIEF VALVE |
| T | THERMOSTAT |
| | PIPE ANCHOR |
| | THERMOMETER |
| | STEAM TRAP |
| | PRESSURE GAUGE |
| | MANUAL AIR VENT |
| | ELBOW TURNED UP |
| | ELBOW TURNED DOWN |
| | TEE - TOP OUTLET |
| | TEE - BOTTOM OUTLET |
| | SCREWED UNION |
| | FLANGED UNION |
| | PRESSURE REDUCING VALVE |
| | REDUCER |
| | STRAINER |
| | FLEXIBLE PUMP OR PIPE CONNECTION |
| | INLINE PUMP |
| | HIGH PRESSURE STEAM SUPPLY PIPING |
| | MEDIUM PRESSURE STEAM SUPPLY PIPING |
| | LOW PRESSURE STEAM SUPPLY PIPING |
| | HIGH PRESSURE STEAM RETURN PIPING |
| | MEDIUM PRESSURE STEAM RETURN PIPING |
| | LOW PRESSURE STEAM RETURN PIPING |
| | CONDENSATE PUMP DISCHARGE PIPING |
| V | VENT |
| | NEW CONNECTION TO EXISTING |

GENERAL DEMOLITION & NEW WORK NOTES:

1.) THIS CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AT THE PROJECT SITE BEFORE SUBMITTING COST PROPOSAL. CONTR IS ADVISED THAT ALL LOCATIONS ARE APPROXIMATE.

2.) AN ATTEMPT HAS BEEN MADE TO SHOW ALL PIPING, FIXTURES, DUCTWORK, AND OUTLETS. THIS CONTRACTOR SHALL VISIT THE SITE TO VERIFY COMPONENTS, LOCATIONS AND SIZES SHOWN OR NOT SHOWN. ALL COMPONENTS NEED TO BE REMOVED IN THE DEMOLITION AREA UNLESS NOTED ON THE DRAWINGS.

3.) IT IS MANDATORY THAT THE EXISTING BLDG. REMAIN IN CONTINUOUS & NON-INTERRUPTED OPERATION DURING REMODELING/ALTERING OF THE EXISTING BLDG. THE SPECIFIC AREA(S) BEING REMODELED/ALTERED AT ANY SCHEDULED TIME ARE OBVIOUSLY EXCLUSIVE OF THIS STATEMENT. SERVICES TO EXISTING BLDG. SHALL BE KEPT ON CONTINUOUS OPERATION INCLUDING DOMESTIC WATER, SANITARY, STORM, STEAM, HEATING, HOT WATER, HVAC SUPPLY, RETURN & EXHAUST, ETC. ANY ABSOLUTELY NECESSARY INTERRUPTION OF THESE SERVICES TO ACCOMPLISH PROJECT CONSTRUCTION, SHALL BE HELD TO, ARRANGED WITH THE OWNER THROUGH THE GENERAL CONTRACTOR, A MINIMUM OF TWO (2) WEEKS IN ADVANCE. TEMPORARY SERVICES SHALL BE FURNISHED AND INSTALLED WHERE NECESSARY TO ACCOMPLISH THIS PURPOSE. TEMPORARIES SHALL BE REMOVED ONLY AFTER NEW PERMANENT SERVICES ARE INSTALLED AND FULLY OPERATIONAL.

4.) THIS CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN DEMOLITION, REMOVAL, CAPPING, STORING, ABANDONING, DISCONNECTING, RELOCATING AND RECONNECTION OF EXISTING EQUIPMENT AND MATERIAL. ALL CUTTING, PATCHING, REPAIRING, REPLACEMENT AND REFINISHING, SHALL MATCH THE EXISTING CONSTRUCTION AS NEARLY AS POSSIBLE.

5.) EXCEPT WHERE OTHERWISE SHOWN OR NOTED ON DRWG. - "TO BE RETAINED, RELOCATED" OR HEREINAFTER NOTED. ALL EXISTING EQUIPMENT AND MATERIAL IN AREAS TO BE REMODELED/ALTERED SHALL BE REMOVED WHERE THEY INTERFERE WITH PROPOSED NEW CONSTRUCTION &/OR INTERFERE W/PROPOSED USAGE OF SPACE BY OWNER AS FOLLOWS:

(A) REMOVE ANY PIPES PROTRUDING ABOVE FINISHED FLOOR OR THROUGH WALL AND CAP AND FINISH OVER WITH MATERIAL TO MATCH EXISTING.

(B) REMOVE ALL FIXTURES, CARRIERS, SUPPLY & WASTE & VENT PIPING, STEAM, HEATING HOT WATER, HVAC SUPPLY, RETURN & EXHAUST AS NOTED. CAP AT NEAREST ACTIVE MAIN. SUPPLY & RETURN MAINS TO BE VALVED & CAPPED.

(C) IN REMODELED/ALTERED AREAS ANY PIPING OR DUCTWORK PASSING THROUGH THE REMODELED AREAS TO SERVE (OR BEING SERVED FROM EXISTING ADJACENT, REMOTE, OR SURROUNDING AREA THAT ARE TO REMAIN) SHALL BE RETAINED AND KEPT OPERATIONAL AND SHALL BE REROUTED IN ALL CASES WHERE THEY INTERFERE WITH ANY NEW WORK OR USAGE TO BE ACCOMPLISHED IN THE REMODELED AREA.

(D) PENETRATIONS THROUGH EXISTING WALLS AND FLOORS FORMERLY OCCUPIED BY REMOVED PIPING SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION.

6.) THIS CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS TO FAMILIARIZE HIMSELF WITH EXTENT OF ALTERATION/REMODELING WORK AND MORE SPECIFICALLY NOTE WHERE NEW PARTITIONING IS BEING INSTALLED, WHERE EXISTING PARTITIONING IS BEING REMOVED, WHERE CEILINGS ARE BEING REMOVED AND OR REPLACED, ETC.

7.) SEE SPECIFICATIONS & ARCHITECTURAL SHTS. FOR CONSTRUCTION PHASING REQUIREMENTS, DURING EACH PHASE, AS MUCH WORK AS POSSIBLE MUST BE PERFORMED WITHIN THE BOUNDARIES OF THAT PHASE.

## ABBREVIATION LIST

| | |
|---|---|
| AFF | ABOVE FINISHED FLOOR |
| ARCH | ARCHITECT, ARCHITECTURAL |
| BFP | BACK FLOW PREVENTER |
| BLDG | BUILDING |
| BOP | BOTTOM OF PIPE |
| CA | COMPRESSED AIR |
| CFH | CUBIC FEET PER HOUR |
| CFM | CUBIC FEET A MINUTE |
| CI | CAST IRON |
| CLG | CEILING |
| CMPR | COMPRESSED |
| CO | CLEAN OUT |
| COND | CONDENSATE |
| CONT | CONTINUED |
| CONTR | CONTRACTOR |
| CW | COLD WATER |
| DEG/ ° | DEGREES |
| DEPT | DEPARTMENT |
| DET | DETAIL |
| DIA | DIAMETER |
| DN | DOWN |
| DS | DOWNSPOUT |
| DWG | DRAWING |
| EA | EACH |
| EL | ELEVATION |
| EQUIP | EQUIPMENT |
| EWC | ELECTRIC WATER COOLER |
| EXIST | EXISTING |
| FCO | FLOOR CLEANOUT |
| LAV | LAVATORY |
| LBS | POUNDS |
| MATL | MATERIAL |
| MAX | MAXIMUM |
| MB | MOP BASIN |
| MECH | MECHANICAL |
| MED | MEDIUM |
| MFGR | MANUFACTURER |
| MIN | MINIMUM |
| MISC | MISCELLANEOUS |
| NC | NORMALLY CLOSED |
| NG | NATURAL GAS |
| NIC | NOT IN CONTRACT |
| NO | NORMALLY OPEN |
| NO. | NUMBER |
| NTS | NOT TO SCALE |
| N/A | NOT APPLICABLE |
| OD | OUTSIDE DIAMETER |
| OHD | OPEN HUB DRAIN |
| PLBG | PLUMBING |
| PRESS | PRESSURE |
| PRV | PRESSURE REDUCING VALVE |
| REQ | REQUIRE |
| REV | REVISION |
| RPM | REVOLUTIONS PER MINUTE |
| F | FARENHEIGHT |
| FBO | FURNISHED BY OTHERS |
| FCO | FLOOR CLEAN OUT |
| FD | FLOOR DRAIN |
| FFA | FLOOR FROM ABOVE |
| FFB | FLOOR FROM BELOW |
| FLEX | FLEXIBLE |
| FLTR | FILTER |
| FPM | FEET PER MINUTE |
| FPS | FEET PER SECOND |
| FT | FOOT OR FEET |
| FU | FIXTURE UNIT |
| GA | GAUGE |
| GAL | GALLONS |
| GALV | GALVANIZED |
| GC | GENERAL CONTRACTOR |
| GPH | GALLONS PER HOUR |
| GPM | GALLONS PER MINUTE |
| GW | GREASE WASTE |
| HB | HOSE BIB |
| HP | HORSEPOWER |
| HTG | HEATING |
| HTR | HEATER |
| HW | HOT WATER |
| HWR | HOT WATER RETURN |
| IE | INVERT ELEVATION |
| ID | INSIDE DIAMETER |
| IM | ICE MAKER |
| IN | INCH |
| INCL | INCLUDE |
| INST | INSTALLATION |
| IW | INDIRECT WASTE |
| SC | SILLCOCK |
| SH | SHOWER |
| SA | SHOCK ABSORBER |
| SAN | SANITARY |
| SK | SINK |
| SLV | SLEEVE |
| SPEC | SPECIFICATION |
| SQ FT | SQUARE FOOT |
| SS | SERVICE SINK |
| SSD | SUBSOIL DRAINAGE |
| SSTL | STAINLESS STEEL |
| ST | STORM WATER |
| TOP | TOP OF PIPE |
| TW | TEMPERED WATER |
| TYP | TYPICAL |
| UON | UNLESS OTHERWISE NOTED |
| UP | UP (PENETRATES FLOOR SLAB) |
| UR | URINAL |
| V | VENT |
| VAC | VACUUM |
| VB | VACUUM BREAKER |
| VTR | VENT THROUGH ROOF |
| W | WASTE |
| W/ | WITH |
| WC | WATER CLOSET |
| WH | WALL HYDRANT |
| WM | WASHING MACHINE |
| W/O | WITHOUT |
| WTR | WATER |

THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS DRAWING IS GENERAL AND ALL SYMBOLS AND ABBREVIATIONS MAY NOT APPLY TO THIS PROJECT.

## PLUMBING SYMBOL LIST

| SYMBOL | DESCRIPTION |
|---|---|
| | SANITARY LINE ABOVE FLOOR |
| | SANITARY LINE BELOW FLOOR |
| ST | STORM WATER PIPING |
| D | INDIRECT DRAIN |
| KW | KITCHEN WASTE |
| SAN | SANITARY WASTE |
| V | VENT PIPING |
| GW | GARAGE WASTE |
| DT | DRAIN TILE |
| | COLD WATER SUPPLY PIPING |
| | HOT WATER SUPPLY PIPING |
| | HOT WATER RECIRCULATION/ RETURN |
| TW | TEMPERED WATER SUPPLY PIPING |
| 180° | 180° HOT WATER SUPPLY/ RETURN |
| | HEAT TRACE PIPING W/ TEES & TERMINALS |
| G | GAS PIPING |
| DI | DEIONIZED WATER |
| V | VACUUM PIPING |
| O | OXYGEN PIPING |
| MA | MEDICAL AIR PIPING |
| NO | NITROUS OXIDE PIPING |
| N | NITROGEN PIPING |
| CA | INDUSTRIAL COMPRESSED AIR |
| | ELBOW TURNED UP |
| | ELBOW TURNED DOWN |
| | TEE - TOP OUTLET |
| | TEE - BOTTOM OUTLET |
| | VACUUM OUTLET |
| | OXYGEN OUTLET |
| | MEDICAL AIR OUTLET |
| | NITROUS OXIDE OUTLET |
| | NITROGEN OUTLET |
| | BALANCING VALVE |
| | GATE VALVE |
| | GLOBE VALVE |
| | BALL VALVE |
| | BUTTERFLY VALVE |
| | CHECK VALVE |
| | PRESSURE REDUCING VALVE |
| | TEMPERATURE & PRESSURE RELIEF VALVE |
| | BACKFLOW PREVENTER |
| | WALLPOST INDICATOR VALVE |
| | SCREWED UNION |
| | FLANGED UNION |
| HB | HOSE BIBB |
| WH | WALL HYDRANT |
| FD-1 | FLOOR DRAIN, DESIGNATION NUMBER |
| RD-1 | ROOF DRAIN, DESIGNATION NUMBER |
| FCO | CLEANOUT - FLOOR OR YARD |
| CO | CLEANOUT - PLUG TYPE |
| | MECHANICAL SHOCK ARRESTOR |
| | ZONE VALVE BOX |
| | ALARM PANEL |
| F-1 | FIXTURE DESIGNATION & NUMBER |
| | FLOW |
| | THERMOMETER |
| ORD | OVERFLOW ROOF DRAIN |
| FCO | FLOOR CLANOUT |
| | CONNECTION TO EXISTING |

## GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE APPLICABLE CODES AND ORDINANCES, LATEST EDITIONS

2. THIS CONTRACTOR PERFORMING WORK ON THE PROJECT MUST BE LICENSED TO PERFORM THE WORK. TRADESMEN SKILLED IN THE WORK TASK MUST PERFORM THE WORK.

3. THIS CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE WORK TO BE DONE UNDER DIVISIONS OF THE SPECIFICATION AND THEIR RELATED DRAWINGS AND SHALL SO COORDINATE AND SCHEDULE HIS WORK AS NOT TO CAUSE DELAYS OR INTERFERENCE WITH THE WORK OF OTHERS. SUCH COORDINATION AND SCHEDULING SHALL ACCOMPLISH THE INSTALLATION OF EQUIPMENT AND PIPING WITH A MINIMUM OF CUTTING THROUGH MASONRY AND OTHER ADJUSTMENTS.

4. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SIZE AND LOCATION OF ANCHORS, CHASES, RECESSES, OPENINGS, ETC., REQUIRED FOR THE PROPER INSTALLATION OF HIS WORK. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS. COORDINATE THE INSTALLATION OF REQUIRED SUPPORTING DEVICES AND SLEEVES IN STRUCTURAL COMPONENTS AS THEY ARE CONSTRUCTED. SEQUENCE, COORDINATE, AND INTEGRATE INSTALLATIONS OF MECHANICAL MATERIALS AND EQUIPMENT FOR EFFICIENT FLOW OF THE WORK.

5. INSTALL EQUIPMENT AND MATERIALS TO PROVIDE REQUIRED ACCESS FOR SERVICING AND MAINTENANCE. COORDINATE THE FINAL LOCATION OF CONCEALED EQUIPMENT AND DEVICES REQUIRING ACCESS WITH FINAL LOCATION AND SIZE OF REQUIRED ACCESS PANELS AND DOORS. ALLOW AMPLE SPACE FOR REMOVAL OF ACCESSIBLE LOCATION. INSTALL SERVICING EQUIPMENT TO FACILITATE MAINTENANCE AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH A MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS. PROVIDE THE MINIMUM MANUFACTURER'S RECOMMENDED AND CODE REQUIRED CLEARANCE.

6. VERIFY FINAL LOCATIONS FOR ROUGH-INS WITH FIELD MEASUREMENTS AND WITH THE REQUIREMENT OF THE ACTUAL EQUIPMENTS OF THE ACTUAL EQUIPMENT TO BE CONNECTED.

7. BEFORE SUBMITTING A BID, THIS CONTRACTOR SHALL VISIT THE JOB SITE TO FAMILIARIZE HIMSELF WITH CONSTRUCTION CONDITIONS. NO CONSIDERATION OR REMUNERATION WILL BE GIVEN FOR HIS FAILURE TO DO SO.

8. WHERE A DISCREPANCY EXISTS WITHIN THE SPECIFICATIONS, AMONG THE DRAWINGS, OR BETWEEN THE SPECIFICATIONS AND THE DRAWINGS, REFER TO SPECIFICATIONS.

9. THE DESIGN DRAWINGS, AS SUBMITTED, ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EXACT LOCATION OF EQUIPMENT, PIPING AND DUCTWORK UNLESS DIMENSIONS ARE GIVEN. DRAWINGS ARE NOT TO BE SCALED.

10. EQUIPMENT SHALL BE INSTALLED ALONG THE GENERAL ARRANGEMENT INDICATED ON THE DRAWINGS, AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

11. IF THIS CONTRACTOR PROPOSE TO INSTALL EQUIPMENT REQUIRING SPACE CONDITIONS OTHER THAN THOSE AS SPECIFIED AND/OR SHOWN ON THE DESIGN DRAWINGS, OR TO REARRANGE THE EQUIPMENT, HE SHALL ASSUME FILL RESPONSIBILITY FOR REARRANGEMENT OF THE SPACE AND SHALL OBTAIN THE FULL APPROVAL OF THE DESIGN PROFESSIONAL BEFORE PROCEEDING WITH THE WORK.

12. THIS CONTRACTOR SHALL PROVIDE AND INSTALL ALL PIPE SLEEVES ( 1-1/2 TIMES THE SIZE OF THE PIPE) AND SHALL BE OF SIMILAR MATERIAL TO PREVENT REACTION BETWEEN PIPE AND SLEEVE.

13. THIS CONTRACTOR SHALL PROVIDE AND INSTALL FIRE STOPPING IMMEDIATELY, AS TO COMPLETELY SEAL ALL NEW PENETRATION OF FIRE RATED ASSEMBLIES, WALLS AND CEILINGS CAUSED BY THIS TRADE. THE SYSTEM SHALL BE INSTALLED ACCORDING TO AN UNDERWRITER'S LABORATORIES APPROVED THROUGH PENETRATION FIRE STOPPING PROTECTION SYSTEM, HAVE BEEN TESTED IN ACCORDANCE WITH ASTM #E-814AND UL #1479, AND SHALL HAVE AN "F" RATING NOT LESS THAN THE REQUIRED RATING OF THE WALL PENETRATED. THE ANNULAR SPACE BETWEEN PIPE AND THE FIRE RATED ASSEMBLY SHALL BE FILLED WITH THE APPROVED MATERIAL SO AS TO MAINTAIN THE INTEGRITY OF THE FIRE RATING OF THE ASSEMBLY PENETRATED. INSULATION SHALL NOT PASS THROUGH FIRE RATED ASSEMBLIES.

14. THIS CONTRACTOR SHALL PROVIDE AND INSTALL ESCUTCHEONS ON PIPES PASSING THROUGH WALLS. CONTRACTOR SHALL PROVIDE CHROME PLATED ESCUTCHEONS FOR ALL PIPES AT FIXTURE SUPPLIES, TRAPS AND OTHER APPURENTACES PASSING THROUGH WALLS OF FINISHED AREAS.

15. WHERE CONNECTIONS ARE MADE BETWEEN DISSIMILAR MATERIALS, DIELECTRIC UNIONS AND FLANGES SHALL BE USED TO PREVENT ELECTROLYTIC REACTION.

16. ALL NEW DOMESTIC WATER PIPING WITHIN THE BUILDING SHALL BE INSULATED.

17. ALL PIPING SHALL BE SUSPENDED INDEPENDENTLY FROM BUILDING STRUCTURE. PIPING AND ACCESSORIES SHALL BE KEPT AS TIGHT TO BUILDING STRUCTURE AS POSSIBLE TO PROVIDE MAXIMUM CLEARANCE BELOW AND TO MINIMIZE ANY PIPE SWING AND INSTABILITY.

18. PIPE HANGERS SHALL BE CONSTRUCTED TO ALLOW FOR PROPER PITCH AND EXPANSION OF PIPES. HANGERS FOR INSULATED PIPING SHALL BE SUFFICIENT SIZE TO PERMIT INSULATION TO EXTEND THROUGH SAME. INSULATION PROTECTION SADDLE SHALL BE FURNISHED AND INSTALLED AT EACH HANGER.

19. WHERE A PIPE OR EQUIPMENT HANGER OCCURS BETWEEN THE BUILDING STRUCTURAL MEMBERS, CONTRACTOR SHALL PROVIDE SPECIAL STEEL ANGLE, CHANNEL OR UNISTRUT MEMBERS FOR SUPPORT OF SUCH HANGER, WELDED OR BOLTED TO STEEL FRAMING OR ANCHORED TO CONCRETE AND APPROVED BY STRUCTURAL ENGINEER.

20. HANGERS OR SUPPORTS FOR COPPER PIPE SHALL BE COPPER PLATED AT POINTS OF CONTACT WITH COPPER, TO BE FREE FROM ELECTROLYSIS.

21. VERTICAL PIPES SHALL BE SUPPORTED AT LEAST ONCE EACH STORY HEIGHT. RISER CLAMPS AND BASE OF RISER SHALL BE SO CONSTRUCTED AS TO ALLOW FOR PROPER PITCH AND EXPANSION OF PIPES.

22. THIS CONTRACTOR SHALL LABEL PIPING SYSTEMS WITH MANUFACTURED LABELS DESIGNATING THE PIPING SYSTEM USING AN APPROVED COLOR CODE.

23. THIS CONTRACTOR SHALL PRESSURE TEST ALL PLUMBING PIPING IN THE PRESENCE OF A MUNICIPAL PLUMBING INSPECTOR AS REQUIRED BY THE GOVERNING AUTHORITIES.

24. THIS CONTRACTOR SHALL DISINFECT ALL DOMESTIC WATER SUPPLY PIPING IN ACCORDANCE WITH THE BUILDING CODE AND AS DIRECTED BY THE WATER UTILITY.

25. THIS CONTRACTOR SHALL PROVIDE CLEAN OUTS ON SANITARY AND STORM PIPING RUNS, AT EVERY CHANGE IN DIRECTION, MAXIMUM OF 5'-0" ON CENTER IN STRAIGHT RUNS, AT THE END OF LINES, WITHIN 5'-0" OF EXITING THE BUILDING,AND WHERE REQUIRED BY CODE. CONTRACTOR SHALL ANGLE CLEAN OUTS SO THEY OCCUR NEXT TO WALLS AND NOT IN TRAFFIC AREAS.

26. THIS CONTRACTOR SHALL PROVIDE AT EACH FIXTURE SUPPLY CONNECTION, BOTH HOT AND COLD WATER, AN AIR CHAMBER NOT LESS THAN 12 INCHES LONG, ONE SIZE LARGER THAN THE FIXTURE SUPPLY. PROVIDE AN AIR CHAMBER AT OTHER LOCATIONS NOT LESS THAN 18 INCHES LONG, ONE PIPE SIZE LARGER THAN PIPES ON WHICH THEY ARE INSTALLED.

27. THIS CONTRACTOR SHALL PROVIDE AN ELEVATED VACUUM BREAKER FOR EACH CONNECTION TO PLUMBING FIXTURE OR ITEM OF EQUIPMENT HAVING SUBMERGED INLET OR HOSE END.

28. HOT AND COLD WATER LINES SHALL HAVE STOPS INSTALLED AT THE SERVICE CONNECTION OF EACH FIXTURE AND PIECE OF EQUIPMENT TO ALLOW SHUTOFF WITHOUT DISTURBING OTHER FIXTURES OR EQUIPMENT.

29. THIS CONTRACTOR SHALL INCLUDE INCIDENTAL DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER INSTALLATION AND OPERATION OF THE INSTALLED SYSTEMS.

30. CONTRACTOR SHALL INSTALL ALL FLOOR DRAINS, AREA DRAINS OR TRENCH DRAINS AT LOW POINTS IN FLOOR. SEE ARCHITECTURAL DRAWINGS FOR FLOOR PITCHES AND EXACT LOCATIONS.

31. ANY QUESTIONABLE INFORMATION IN THE DESIGN DOCUMENTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH FABRICATION OR ERECTION OF PARTS AFFECTED. IF, IN THE OPINION OF THE CONTRACTOR, ANY ADDITIONAL DETAIL DRAWINGS ARE NECESSARY, CONTRACTOR SHALL PREPARE THEM AT HIS OWN EXPENSE, TOGETHER WITH THE BILL OF MATERIALS.

32. ANY EXISTING DOWNSPOUTS, SOIL, VENT, OR WATER PIPING FOUND TO BE IN DETERIORATED ( UNLESS SPECIFICALLY NOTED TO BE REPLACED) CONDITION SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER WHO SHALL DETERMINE IF SAID PIPING SHOULD BE REPLACED AND TO WHAT EXTENT.

COMPLETION ITEM NO. ____

NOT SPRINKLERED

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|---|---|
| ISSUED FOR SOLICITATION | 04/30/2013 |
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Drawing Title: **PLUMBING, MECHANICAL SYMBOLS, ABBREVIATIONS & NOTES**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked | Drawn

Project Number: 537-12-122

Building Number: 5

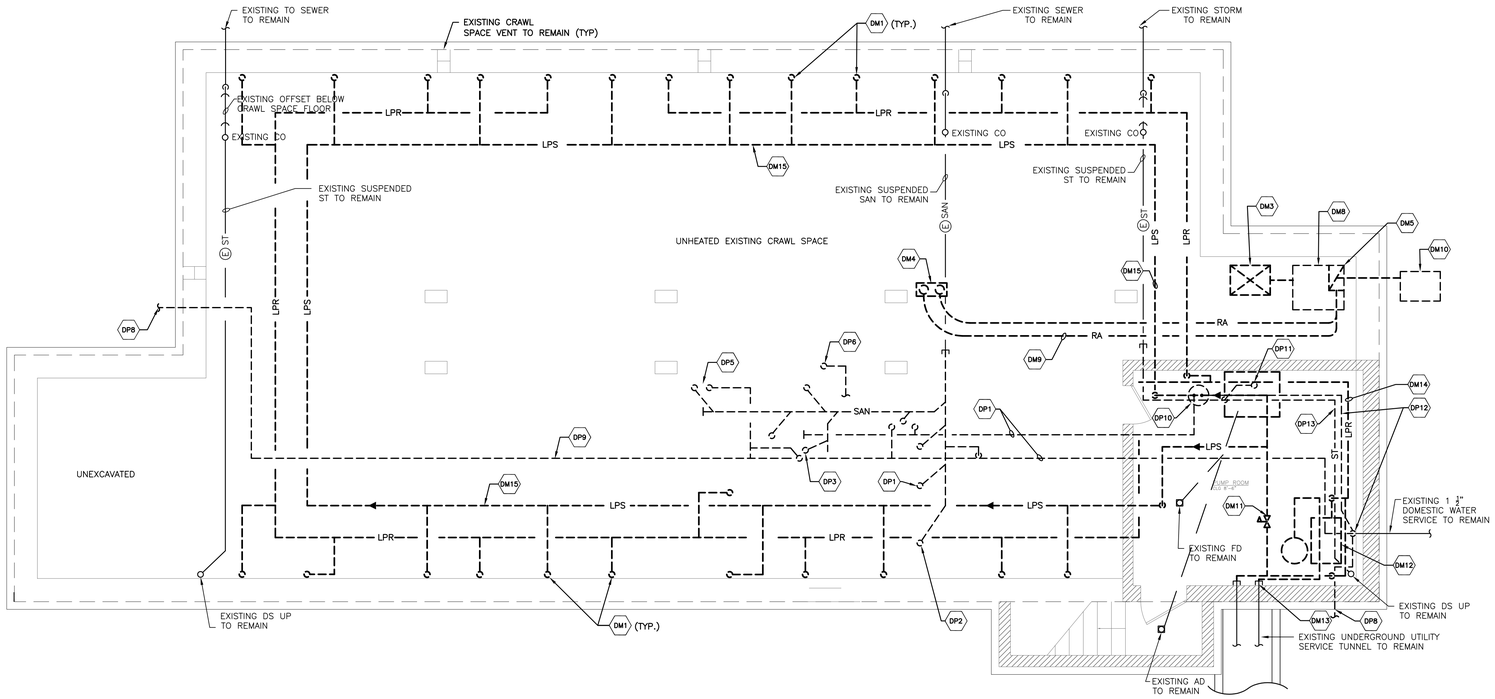
Drawing Number: **5-PM-001**

Dwg. 6 of 16

Office of Construction and Facilities Management

Department of Veterans Affairs

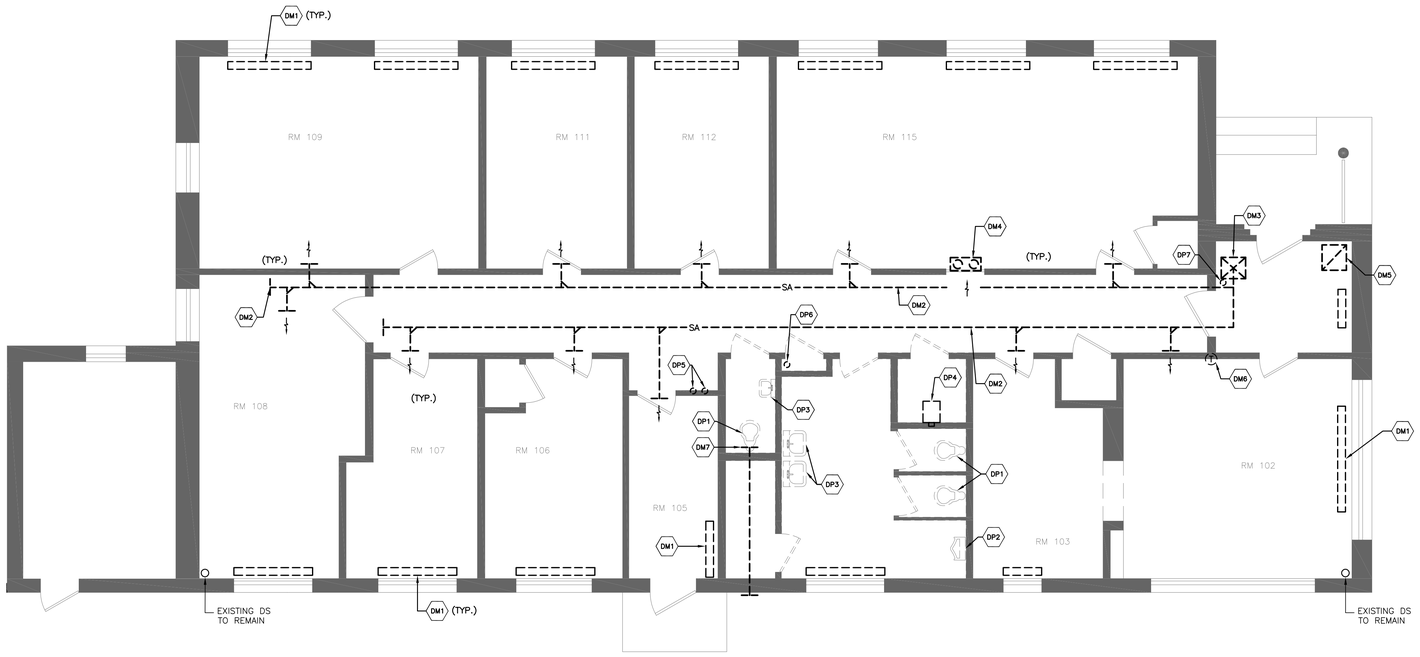
VA FORM 08-6231




## 1 BASEMENT LEVEL DEMO PLAN - HVAC AND PLUMBING

1/4"=1'-0"

north




## 2 FIRST FLOOR LEVEL DEMO PLAN - HVAC AND PLUMBING

1/4"=1'-0"

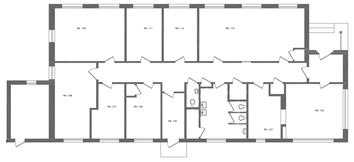
north

## HVAC DEMOLITION NOTES:

- DM1 DISCONNECT AND REMOVE CAST IRON RADIATOR, INCLUDING PERTINENT DEVICES AND BRANCH STEAM AND CONDENSATE PIPING, HANGERS, ETC. TO MAINS IN CRAWL SPACE.
- DM2 DISCONNECT AND REMOVE SUPPLY DUCT, INCLUDING ALL SUPPORTS, SUPPLY REGISTERS, BRANCH DUCTWORK THROUGH WALLS, ETC. AS REQUIRED TO MEET FIELD CONDITIONS.
- DM3 REMOVE SUPPLY DUCTWORK DOWN THROUGH FLOOR TO CRAWL SPACE BELOW.
- DM4 DISCONNECT AND REMOVE RETURN AIR PLENUM, INCLUDING DUCTWORK THROUGH FLOOR, WALL, REGISTER AND ALL PERTINENT SUPPORT AND DEVICES.
- DM5 REMOVE CAPPED RETURN AIR DUCTWORK THROUGH FLOOR TO CRAWL SPACE BELOW.
- DM6 DISCONNECT AND REMOVE WALL MOUNTED THERMOSTAT, INCLUDING ALL TEMPERATURE CONTROL WIRING BACK TO FURNACE UNIT LOCATED IN CRAWL SPACE BELOW.
- DM7 REMOVE WALL EXHAUST FAN, INCLUDING ALL CONTROLS, DUCTWORK, SUPPORT AND PERTINENT DEVICES AS REQUIRED THROUGH WALL AND CAP WALL OPENING AIR/WATER TIGHT.
- DM8 DISCONNECT AND REMOVE SUSPENDED ELECTRIC FURNACE UNIT, INCLUDING ALL SUPPORTS, COILS, FILTERS, CONTROLS AND PERTINENT SYSTEM DEVICES.
- DM9 REMOVE ALL SUSPENDED RETURN AIR DUCTWORK, INCLUDING ALL SUPPORTS AND PERTINENT SYSTEM DEVICES.
- DM10 DISCONNECT AND REMOVE AIR COOLED CONDENSING UNIT AT GRADE, INCLUDING CONCRETE PAD AND PERTINENT REFRIGERATION PIPING AND CONTROLS TO FURNACE UNIT.
- DM11 DISCONNECT AND REMOVE STEAM PRESSURE REDUCING VALVE STATION, INCLUDING ALL PERTINENT DEVICES, SUPPORTS INSULATION, PIPING WITHIN BASEMENT PUMP ROOM, ETC TO MEET FIELD CONDITIONS.
- DM12 DISCONNECT AND REMOVE CONDENSATE PUMP AND RECEIVER SET, INCLUDING ALL PERTINENT CONDENSATE RETURN PIPING WITHIN PUMP ROOM, DISCHARGE PIPING TO EXISTING UTILITY SERVICES TUNNEL, VENT PIPING, SUPPORTS AND PERTINENT SYSTEM DEVICES. REMOVE CONCRETE MOUNTING PAD DOWN TO FINISHED FLOOR LEVEL.
- DM13 REMOVE ALL HIGH PRESSURE STEAM AND CONDENSATE PIPING TO UTILITY PIPE TUNNEL, INCLUDING INSULATION, SUPPORTS AND CAP PIPING AT TUNNEL.
- DM14 REMOVE ALL CONDENSATE RETURN PIPING WITHIN PUMP ROOM, INCLUDING ALL INSULATION, SUPPORT, TRAPS AND ALL PERTINENT SYSTEM DEVICES.
- DM15 REMOVE ALL SYSTEM AND CONDENSATE DISTRIBUTION PIPING WITHIN CRAWL SPACE, INCLUDING ALL SUPPORTS, INSULATION, TRAPS AND PERTINENT SYSTEM DEVICES.

## PLUMBING DEMOLITION NOTES:

- DP1 DISCONNECT AND REMOVE FLOOR MOUNTED WATER CLOSET INCLUDING ALL WASTE, VENT, WATER PIPING AND PERTINENT FIXTURE DEVICES.
- DP2 DISCONNECT AND REMOVE FLOOR MOUNTED URINAL, INCLUDING ALL WATER, VENT, WATER PIPING AND PERTINENT FIXTURE DEVICES. PATCH HOLE AT FLOOR TO MEET FIELD CONDITIONS.
- DP3 DISCONNECT AND REMOVE WALL HUNG LAVATORY, INCLUDING ALL WASTE, VENT, WATER PIPING, SUPPORTS AND PERTINENT FIXTURE DEVICES DOWN TO CRAWL SPACE BELOW.
- DP4 DISCONNECT AND REMOVE SERVICE SINK, INCLUDING WASTE, VENT, WATER PIPING, SUPPORT AND PERTINENT FIXTURE DEVICES DOWN TO CRAWL SPACE BELOW.
- DP5 REMOVE WASTE, VENT AND WATER PIPING IN WALL, CEILING, SUPPORTS AND PERTINENT DEVICES DOWN TO CRAWL SPACE BELOW.
- DP6 DISCONNECT AND REMOVE FIRE STANDPIPE PIPING DOWN TO CRAWL SPACE BELOW.
- DP7 DISCONNECT AND REMOVE WALL MOUNTED ALARM BELL ASSEMBLY, INCLUDING ALL ACTIVATION WIRING AND CONDUIT.
- DP8 DISCONNECT AND REMOVE WALL HYDRANT ASSEMBLY, INCLUDING PERTINENT SUPPLY COLD WATER PIPING.
- DP9 REMOVE COLD AND HOT WATER DISTRIBUTION PIPING, INCLUDING INSULATION, SUPPORT AND ALL PERTINENT SYSTEM DEVICES.
- DP10 DISCONNECT AND REMOVE ELECTRIC HOT WATER HEATER ASSEMBLY, INCLUDING ALL PERTINENT WATER AND SYSTEM DEVICES.
- DP11 DISCONNECT AND REMOVE SUMP PUMP ASSEMBLY INCLUDING ALL CONTROLS, DISCHARGE PIPING, SUMP COVER AND ALL PERTINENT SYSTEM DEVICES.
- DP12 DISCONNECT AND REMOVE INCOMING COLD WATER SERVICE PIPING AT EXISTING WALL ENTRANCE, INCLUDING REMOVAL OF ALL COLD WATER DISTRIBUTION PIPING, INSULATION, SUPPORTS AND PERTINENT DEVICES WITHIN PUMP ROOM.
- DP13 DISCONNECT AND REMOVE PORTION OF EXISTING SUSPENDED STORM PIPING WITHIN PUMP ROOM FOR REPLACEMENT BETWEEN DOWN SPOUT RISER AND CONNECTION POINT IN CRAWL SPACE AREA.



KEY PLAN

north

one quarter inch = one foot
0 4 8

COMPLETION ITEM NO. ____
NOT SPRINKLERED

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| ISSUED FOR SOLICITATION | 04/30/2013 |
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Drawing Title: **PLUMBING AND MECHANICAL DEMOLITION**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked | Drawn

Project Number: 537-12-122

Building Number: 5

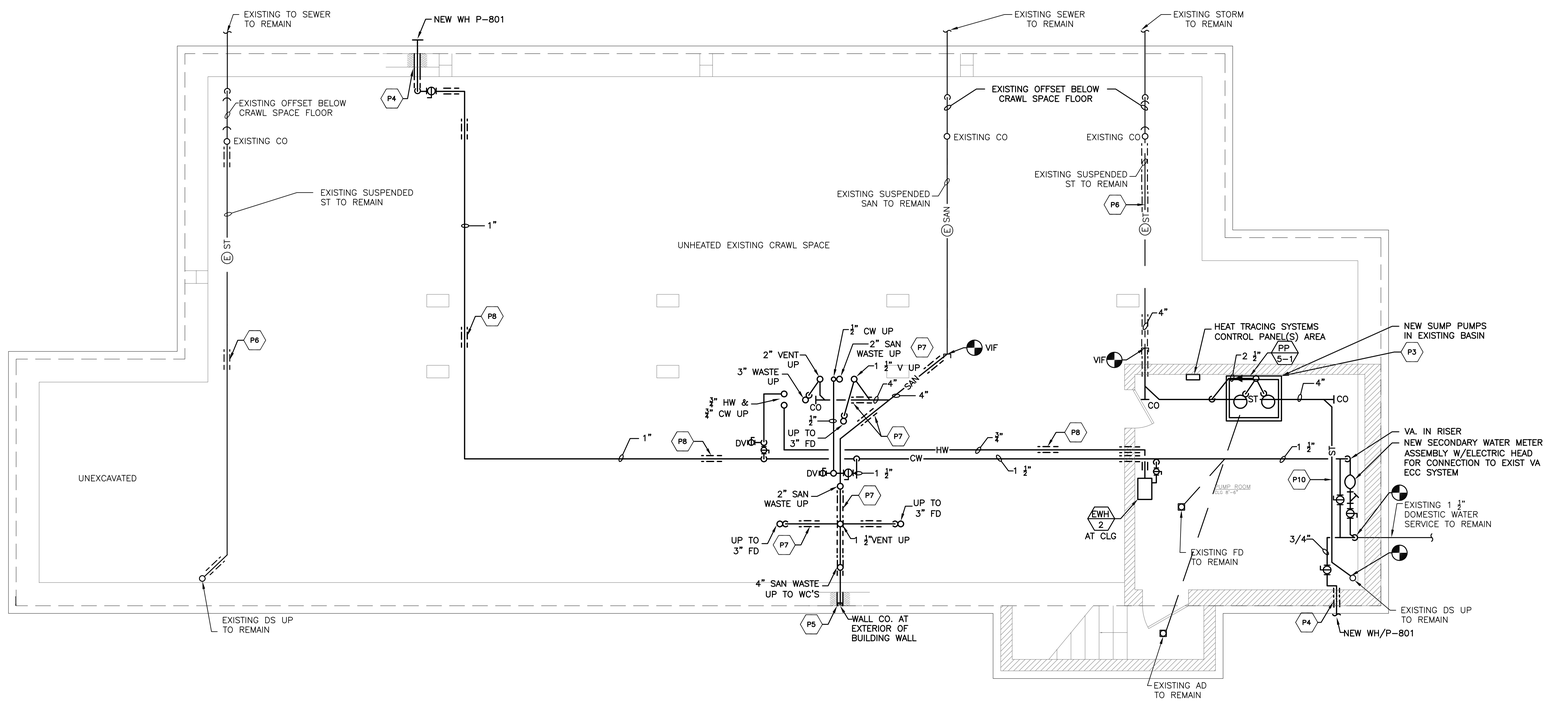
Drawing Number: **5-PMD-101**

Dwg. 7 of 16

Office of Construction and Facilities Management

Department of Veterans Affairs

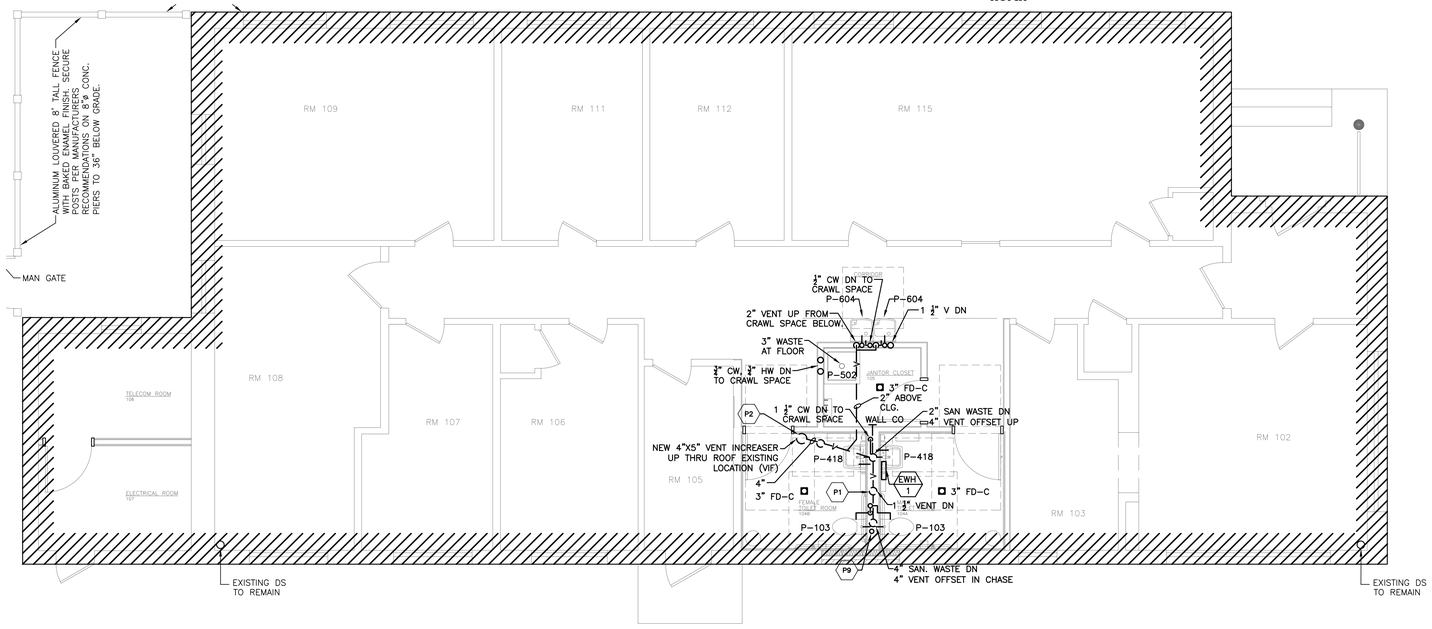
VA FORM 08-6231




## 1 PLUMBING NEW WORK PLAN - BASEMENT LEVEL

1/4"=1'-0"

north




## 2 PLUMBING NEW WORK PLAN - FIRST FLOOR LEVEL

1/4"=1'-0"

north

## PLUMBING NEW WORK NOTES:

P1 INSTALL NEW SANITARY WASTE, COLD WATER PIPING VERTICALLY THROUGH FLOOR WITH ALL HORIZONTAL WASTE, VENT AND INSULATED CW PIPING KEPT WITHIN DESIGNATED CHASE CONSTRUCTION.

P2 EXTEND NEW VENT PIPING TO LOCATION OF EXISTING REMOVED VENT TERMINAL ROOF AND EXTEND NEW 4"X5" VENT INCREASER TO THROUGH ROOF WITH NEW FLASHING COMPATIBLE TO MEET EXISTING ROOFING MATERIAL.

P3 INSTALL NEW SUMP PUMPS IN EXISTING FLOOR BASIN, INCLUDING ALL NEW CONTROLS, PANEL, WATER LEVEL SENSORS, BASIN COVER WITH ALL OPENINGS, DISCHARGE PIPING WITH CHECK VALVE, GATE VALVE AND FLEXIBLE PIPE CONNECTIONS WITH RECONNECTION TO OVER HEAD PIPING.

P4 INSTALL NEW WALL HYDRANT ASSEMBLY IN EXISTING WALL CONSTRUCTION. PROVIDE ALL REQUIRED MODIFICATIONS TO EXISTING CONSTRUCTION AND SEAL ASSEMBLY WATER TIGHT.

P5 INSTALL NEW SAN. WASTE CLEANOUT ASSEMBLY AS REQUIRED THROUGH EXISTING EXTERIOR WALL CONSTRUCTION, INCLUDING CORED HOLE, SEALING OPENING WATER TIGHT WITH INSTALLATION OF WALL CLEANOUT ACCESS BOX COVER ASSEMBLY.

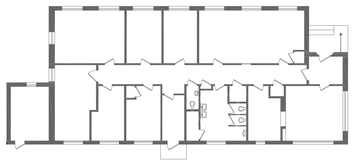
P6 VERIFY EXISTING PIPE SIZE, INSULATE AND HEAT TRACE SUSPENDED STORM PIPING, FITTINGS, ETC. IN UNHEATED CRAWL SPACE FROM VERTICAL DOWNSPOUT LEADER TO OFFSET DROP POINT INTO CRAWL SPACE FLOOR. PROVIDE ALL REQUIRED SYSTEM CONTROLS FOR AUTOMATIC OPERATION.

P7 INSULATE AND HEAT TRACE ALL NEW AND EXISTING SAN. WASTE PIPING, INCLUDING TRAPS, ETC. WITHIN UNHEATED CRAWL SPACE TO A POINT WHERE EXISTING SAN. WASTE DROPS INTO CRAWL SPACE FLOOR. PROVIDE ALL REQUIRED SYSTEM CONTROLS FOR AUTOMATIC OPERATION. ALL POWER WIRING PROVIDED UNDER DIV. 26.

P8 INSULATE AND HEAT TRACE ALL NEW COLD WATER (CW) AND HOT WATER (HW) PIPING, FITTING, ETC. INSULATED IN UNHEATED CRAWL SPACE. PROVIDE ALL REQUIRED SYSTEM CONTROLS FOR AUTOMATIC OPERATION. ALL POWER WIRING PROVIDED UNDER DIV. 26.

P9 PROVIDE VERTICAL OFFSET TYPE WALL HUNG WATER CLOSET CHAIR CARRIER COMPACT TYPE FITTING (J.R. SMITH SERIES 0400) WITH NEW FLOOR OPENING AS REQUIRED TO MEET EXISTING CONSTRUCTION CONDITIONS.

P10 PROVIDE NEW SUSPENDED STORM PIPING OF SIZE TO MATCH EXISTING FROM EXISTING VERTICAL DOWNSPOUT TO POINT OF RECONNECTION WITHIN UNHEATED CRAWL SPACE. SEAL PIPE PENETRATION THROUGH PUMP ROOM WALL CONSTRUCTION.



KEY PLAN

one quarter inch = one foot

north

COMPLETION ITEM NO. ____

NOT SPRINKLERED

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Drawing Title: **PLUMBING FLOOR PLANS**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked | Drawn

Project Number: 537-12-122

Building Number: 5

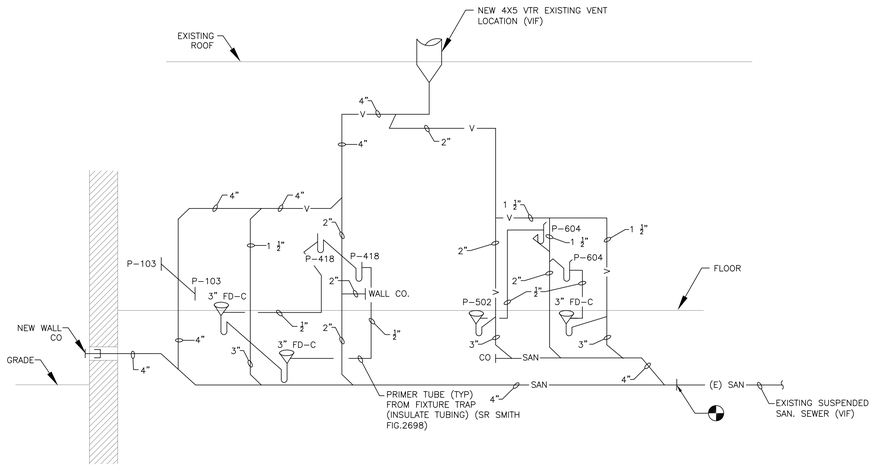
Drawing Number: **5-PL-101**

Dwg. 8 of 16

Office of Construction and Facilities Management

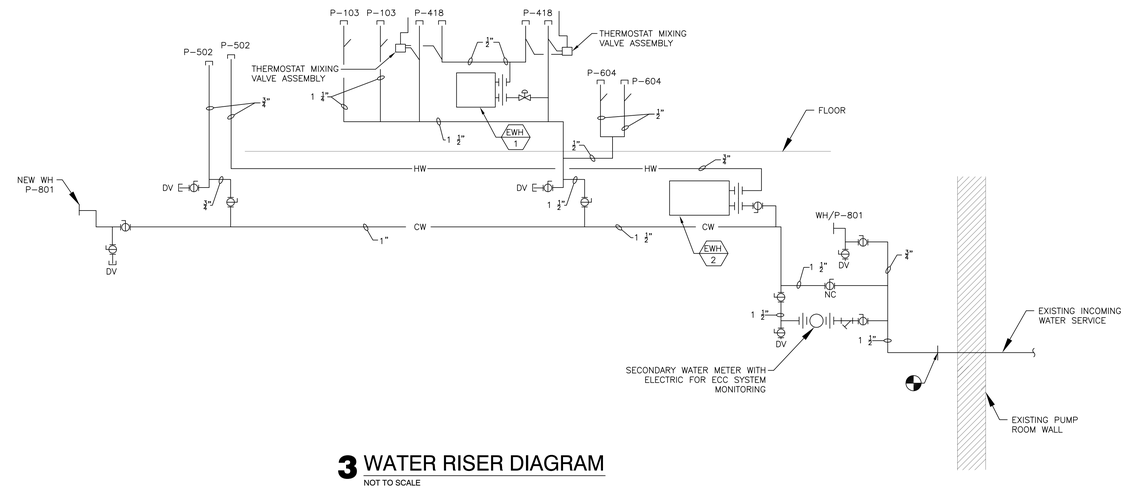
Department of Veterans Affairs

VA FORM 08-6231



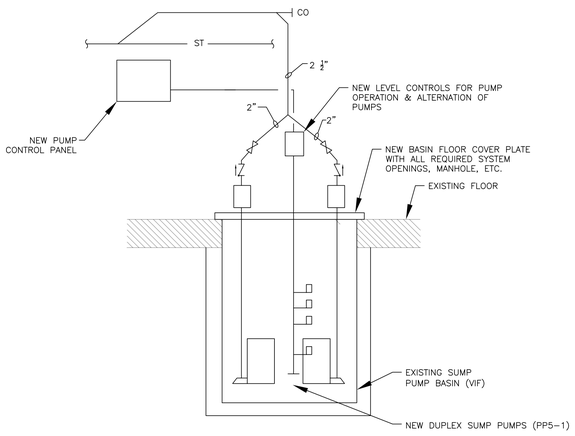

## 1 SANITARY AND VENT RISER DIAGRAM

NOT TO SCALE




## 3 WATER RISER DIAGRAM

NOT TO SCALE




## 2 SUMP PUMP DIAGRAM

NOT TO SCALE

### WATER DISTRIBUTION PIPING

| MATERIAL | STANDARD |
|---|---|
| COPPER OR COPPER ALLOY TUBING (TYPE L) | ASTM 75; ASTM B88; ASTM B251; ASME B16.18; |
| WITH PRESSURE FITTINGS | ASME B16.22; ASTM B32; MSS SP-69 |

### ABOVE GROUND SANITORY, STORM, DRAINAGE AND VENT PIPING

| MATERIAL | STANDARD |
|---|---|
| CAST IRON SOIL PIPE, NO HUB | CISPI 301; CISPI 301 |
| COPPER OR COPPER ALLOY TUBING (TYPE M) | ASTM 75; ASTM B 88; ASME B 16.23; ASME B16.29 |

### FIXTURE CONNECTION SCHEDULE

| ITEM # | DESCRIPTION | WASTE | TRAP | VENT | CW | HW | DESIGN BASIS | REMARKS |
|---|---|---|---|---|---|---|---|---|
| P-103 | WALL HUNG WATER CLOSET, ELONGATED BOWL, WHITE WITH HANDS FREE FLUSH VALVE | 4" | 4" | 2" | 1" | - | REFER TO FIXTURE SPECIFICATIONS FOR REQUIRMENTS | REFER TO ARCH. ELEVATIONS FOR ROOM MOUNTING HEIGHT |
| P-418 | WALL HUNG LAV WITH HANDS FREE FAUCET OPERATION | 2" | 1-1/4" | 2" | 1/2" | 1/2" | REFER TO FIXTURE SPECIFICATIONS FOR REQUIRMENTS | REFER TO ARCH. ELEVATIONS FOR ROOM MOUNTING HEIGHT NOTE 1,2 |
| P-502 | FLOOR MOUNTED SERVICE SINK/NOP RECEPTOR WITH MANUAL FAUCET TRIM AND VACUUM BREAKER | 3" | 3" | 2" | 1/2" | 1/2" | REFER TO FIXTURE SPECIFICATIONS FOR REQUIRMENTS | |
| P-801 | EXTERIOR WALL HYDRANT WITH INTEGRAL VACUUM BREAKER, 3/4" NPT HOSE END | - | - | - | 3/4" | - | REFER TO FIXTURE SPECIFICATIONS FOR REQUIRMENTS | |
| P-604 | WALL MOUNTED ELETRIC WATER COOLER ASSEMBLY WITH WALL CHAIR CARRIER | 1-1/2" | 1-1/4" | 1-1/2" | 1/2" | - | REFER TO FIXTURE SPECIFICATIONS FOR REQUIRMENTS | REFER TO ARCH. ELEVATIONS FOR ROOM MOUNTING HEIGHT |
| FD-C | FLOOR DRAIN | 3" | 3" | 1-1/2" | - | - | REFER TO FIXTURE SPECIFICATIONS FOR REQUIRMENTS | NOTE 3 |

NOTES:
1. PROVIDE UNDER THE LAV ELECTRIC INCLINE HW HEATER ASSEMBLY
2. PROVIDE UNDER THE LAV WASTE, WATER HANDICAPPED PIPING PROTECTION ENCLOSURE.
3. FLOOR DRAIN PROVIDED WITH MANUAL/ AUTOMATIC DRAINING CONNECT FOR TRAP PRIMER PIPING SYSTEM.

### SUMP PUMP SCHEDULE

| QUANTITY | PUMP TAG | LOCATION | DESCRIPTION | GPM EACH | TDH FEET | MOTOR V/PH/Hz | MOTOR HP | MOTOR RPM | DESIGN BASIS MANUFACTURER & MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PP5-1 | PUMP ROOM | DUPLEX SUBMERSIBLE WASTE WATER PUMPS, 2" NPT DISCHARGE | (2) 25 | 25 | 460/3/60 | (2) 1/2" | 1750 | WELL PUMP CO MODEL 1410 | 1,2,3,4 |
| | | | | | | | | | | |

NOTES:
1. CAST IRON CONSTRUCTION, STAINLESS STEEL HARDWARE, STAINLESS LIFTING CABLE, SEMI-OPEN IMPELLER.
2. DUPLEX OPERATION NEMA-4 CENTRAL PANEL, UL LISTED, MODEL 8101E WITH ALL PERTINENT DEVICES, LIGHTS, RELAYS, HOUR METER, CONTROLS/STARTERS/DISC SWITCH, CONTROL TRANSFORMERS, ETC FOR PRESSURE DIAPHRAM CONTROLS.
3. NEW FLOOR MOUNTED BASIN ENCLOSURE PLATE TO FIT EXISTING BASIN SIZE WITH MANHOLE, PUMP DISCHARGE OPENING AND CONTROL SWITCH CORDS AND PERTINENT DEVICES FOR INTERFACING WITH TC/ECC MONITORING SYSTEM.
4. PROVIDE MODEL 8220 PRESSURE DIAPHARM FOR DUPLEX OPERATION FOR OFF/STOP, LEAD/START, LAG/STANDBY, HIGH WATER ALARM.

### DOMESTIC WATER HEATER SCHEDULE - ELECTRIC

| QUANTITY | TAG | HEATER TYPE | LOCATION | STORAGE (GALLONS) | TEMP. RISE RECOVERY (GPM @ Deg F | BTU/HR | KW | ELECTRICAL POWER | SYSTEM TEMPERATURE | DESING BASIS MANUFACTURER & MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EWH-1 | INLINE INSTANT-TEMP LOW FLOW | TOILET ROOM 104A | INSTANTANEOUS | 54 F | - | 8 | 208 V/ 1 PH | 104 F | CHRONOMITE E-80FLLP/208 | 1,2 |
| 1 | EWH-2 | INLINE INSTANT FLOW MICRO STANDARD FLOW | BASEMENT PUMP ROOM | INSTANTANEOUS | 57 F | - | 8.3 | 208 V/ 1 PH | 120 F | CHRONOMITE M-50/208 | 3 |

NOTES:
1. FACTORY PRESET, LOW FLOW AT 0.5 GPM, SATIN STAINLESS STEEL, 40 AMP BREAKER AMPS, UL LISTED.
2. 2 LAVATORY BACK TO BACK INSTALLATION.
3. 1.0 GPM FLO RATE, UL LISTED.

COMPLETION ITEM NO. ____
NOT SPRINKLERED

| | |
|---|---|
| ISSUED FOR SOLICITATION | 04/30/2013 |
| Revisions: | Date |

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Drawing Title: **PLUMBING SCHEDULES AND DETAILS**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked | Drawn

Project Number: 537-12-122

Building Number: 5

Drawing Number: **5-PL-102**

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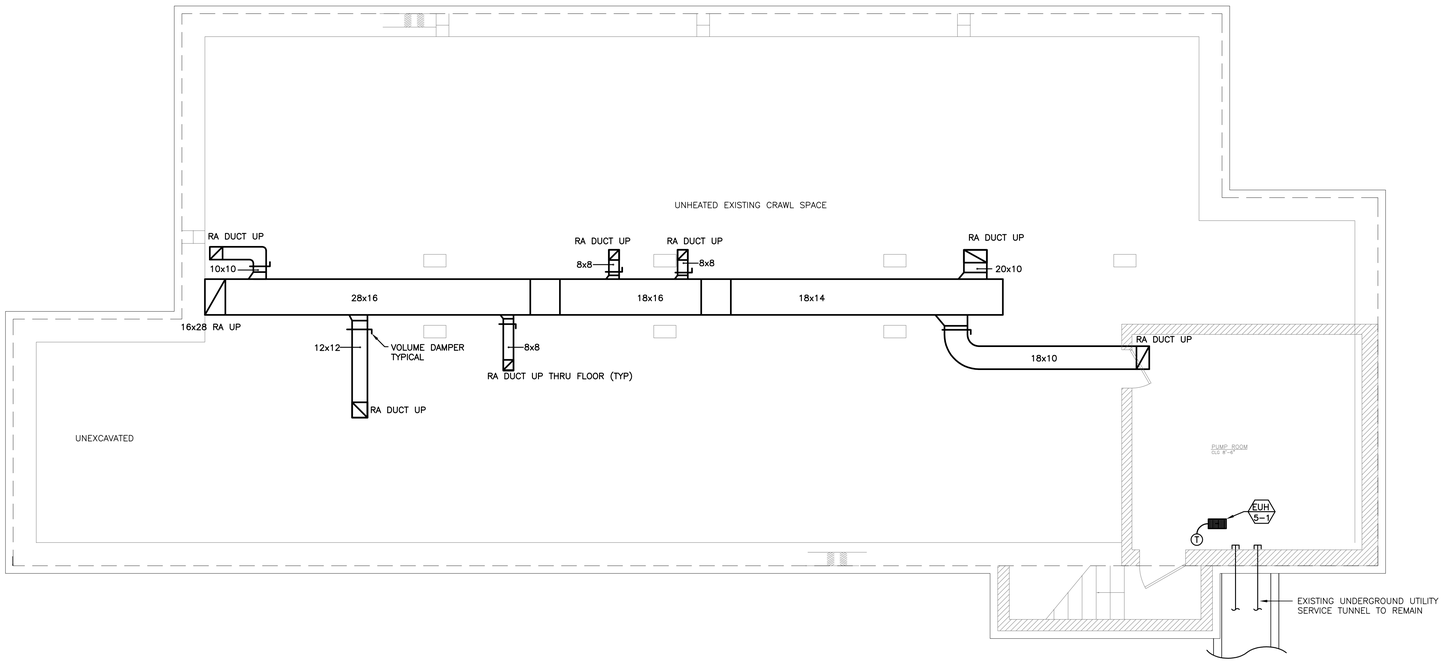
Office of Construction and Facilities Management

Department of Veterans Affairs

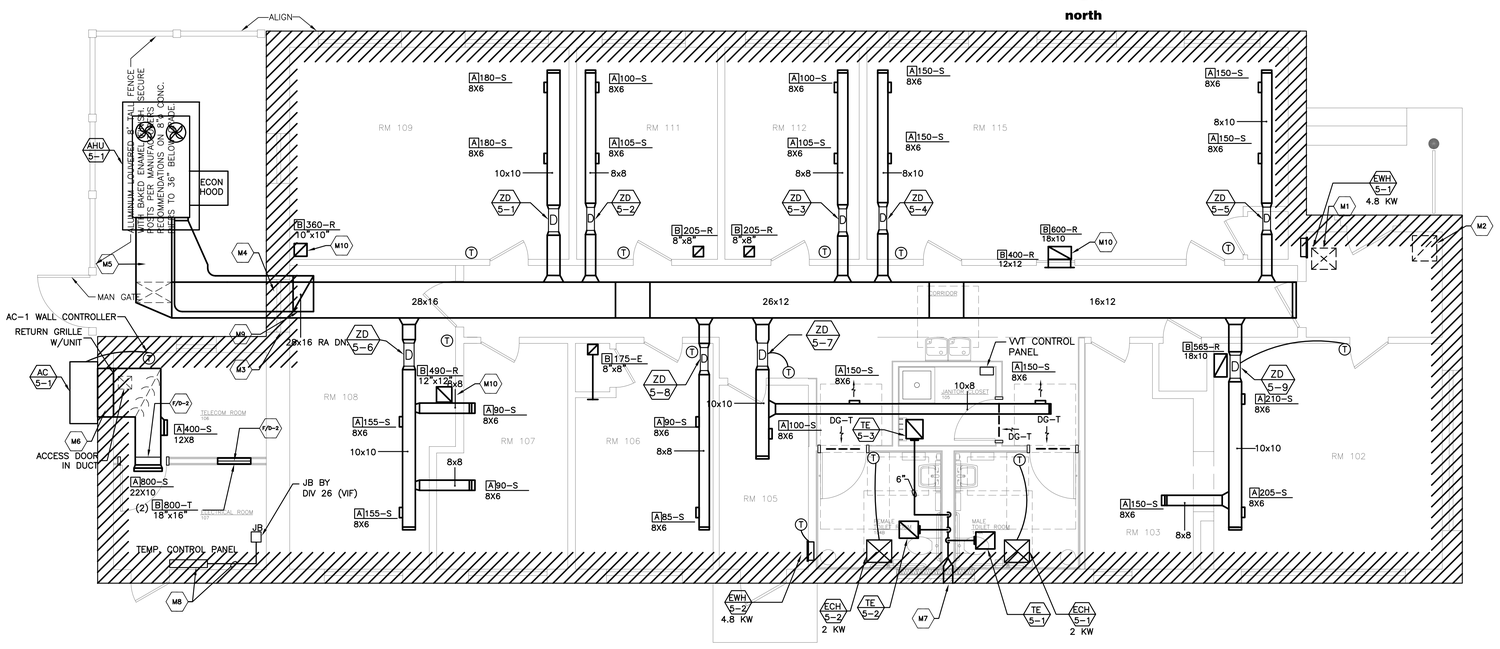
VA FORM 08-6231




## 1 HVAC NEW WORK PLAN - BASEMENT LEVEL

1/4"=1'-0"

north




## 2 HVAC NEW WORK PLAN - FIRST FLOOR LEVEL

1/4"=1'-0"

north

## HVAC NEWWORK NOTES:

M1 REPAIR/PATCH FLOOR OPENINING AT REMOVED SUPPLY AIR DUCTWORK OF MATCHING MATERIALS AND SHALL BE REPLACED CONTIGUOUS TO ADJACENT FLOOR SURFACE.

M2 REPAIR/PATCH FLOOR OPENING AT REMOVAL RETURN AIR DUCTWORK OF MATCHING MATERIALS AND SHALL BE REPLACED CONTIGUOUS TO ADJACENT FLOOR SURFACE.

M3 REMOVE EXISTING WINDOW FOR INSTALLATION OF NEW INSULATED SUPPLY AND RETURN AIR DUCTWORK. EXPAND OPENING AS REQUIRED FOR DUCTWORK INSTALLATION. REPLACE/PATCH REMAINING WALL OPENING AS REQUIRED TO MATCH EXISTING MATERIALS AND SHALL BE CONTIGUOUS TO ADJACENT WALL SURFACES.

M4 EXTENT NEW SUPPLY AND RETURN AIR DUCTWORK THROUGH NEW SLEEVED WALL OPENINGS. PROVIDE WEATHER TIGHT INSTALLATION WITH EXTERIOR FLANGES (4 SIDES) WITH CAULKING/SEALANT TO FINISHED WALL SURFACES.

M5 EXTERNALLY INSULATE SUPPLY AND RETURN AIR DUCTWORK (REFER TO SPECIFICATION SECTION) WITH WEATHER PROOF EXTERIOR FINISHING JACKETS/COVERING. INSULATION SHALL EXTENT THROUGH NEW WALL SLEEVES.

M6 CUT NEW SUPPLY AND RETURN AIR OPENING IN EXISTING WALL CONSTRUCTION FOR NEW WALL MOUNTED AC UNIT AND EXTEND WALL SLEEVES THROUGH OPENING TO FIT UNIT CONNECTION SIZES AND SEAL/CAILK UNIT WATER TIGHT.

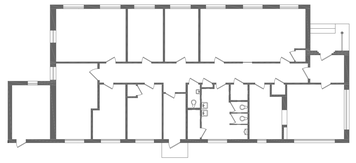
M7 INSTALL NEW TOILET EXHAUST VENT MODULES IN NEW CONSTRUCTION. STACK UNITS WITH INDIVIDUAL PLENUMS WITH RIGID DUCTWORK CONNECTION EXTEND BACK TO EACH RESPECTIVE CEILING FAN. UNIT INSTALLATION SHALL BE SEALED/CAULKED WATER TIGHT.

M8 NEW TEMPERATURE CONTROL PANEL, EXTEND NEW CONTROLS TO NEW EQUIPMENT AND INTERFACING WITH EXISTING ECC (JOHNSON CONTROLS, METASYS) SYSTEM LOCATED IN EXISTING BUILDING LOCATION, VERIFY IN THE FIELD.

1. EXTEND AND CONNECT CABLING TO THE POINT IN BUILDING 5 PROVIDED UNDER DIV 26.
2. DIVISION 26 CONTRACTOR TO PROVIDE CONDUIT AND AND CABLING (CAT 5) FROM BUILDING 5 TO BASEMENT OF BUILDING 40.
3. TC CONTRACTOR SHALL PROVIDE EXTENSION FROM BUILDING 40 TERMINATION POINT AND EXTEND TO EXISTING ECC LOCATION, PROVIDING FOR ALL REQUIRED UPDATES FOR BUILDING 5 REQUIREMENTS.

M9 CROSS CONNECT SUPPLY AND RETURN AIR BY-PASSS DUCT FOR SYSTEM VVT OPERATION. PROVIDE ALL SYSTEM COMPONENTS FOR COMPLETE OPERATION PER SYSTEM MANUFACTURER'S REQUIREMENTS.

M10 TYPICAL: EXTEND DUCTWORK UP TO 7'-6" ABOVE FINISHED FLOOR. LOCATE EXHAUST REGISTER AT TOP OF DUCT ORIENTATED FACING ROOM.



KEY PLAN

north

one quarter inch = one foot
0 4 8

COMPLETION ITEM NO. ____
NOT SPRINKLERED

| | |
|---|---|
| ISSUED FOR SOLICITATION | 04/30/2013 |
| Revisions: | Date |

CONSULTANTS:

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Drawing Title: **MECHANICAL FLOOR PLANS**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked | Drawn

Project Number: 537-12-122

Building Number: 5

Drawing Number: **5-MH-101**

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Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

## ELECTRIC UNIT HEATER SCHEDULE

| TAG | LOCATION | FAN/MOTOR DATA | | | | | ELECTRICAL DATA | | | DESING BASIS MANUFACTURER AND MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | KW | CFM | AMP | RPM | WEIGHT LBS. | V | PH | FLA | | |
| EWH 5-1 | SEE PLAN | 4.8 | 300 | 11.6 | - | - | 208/240 | 3 | - | QMARK AWH-45043 | 1,3 |
| EWH5-2 | SEE PLAN | 4.8 | 300 | 11.6 | - | - | 208/240 | 3 | - | QMARK AWH-45043 | 1,3 |
| EUH5-1 | SEE PLAN | 5.0 | 350 | 18 | - | 27 | 208/240 | 3 | - | Q MARK MUH-05-21 | 2 |
| ECH5-1 | SEE PLAN | 2.0 | - | 8.3 | - | | 208/240 | 1 | - | MARLEY F-2004 | 4 |
| ECH5-2 | SEE PLAN | 2.0 | | 8.3 | - | | 208/240 | 1 | - | MARLEY F-2004 | 4 |

NOTES:
1. FURNISH WITH TRIM KIT, ARCHITECTURAL STEEL GRILLES, INTEGRAL 24 VOLT THERMOSTAT & CONTROLS, FUSED DISCONNECT SWITCH. CHOICE OF COLOR PER ARCHITECT.
2. FURNISH WITH UNIVERSAL WALL & CEILING BRACKET & CONTROLS , 24 VOLT TRANSFORMER & CONTROLS, 24 VOLTS REMOTE WALL MOUNTED THERMOSTAT, DISCONNECT SWITCH.
3. FURNISH WITH RECESS MOUNTING ENCLOSURE.
4. MOUNT ON THE CEILING.

## ZONE DAMPER/ELECTRIC DUCT HEATER SCHEDULE

| TAG | MAX CFM | MIN CFM | SIZE | SAT | KW ELECT | STAGE | VOLTAGE | DESING BASIS MANUFACTURER AND MODEL |
|---|---|---|---|---|---|---|---|---|
| ZD-5-1 | 360 | 108 | 8" | 55 | 6.0 | 3 | 460/3 | CARRIER 33ZCDR08 |
| ZD-5-2 | 205 | 62 | 6" | 55 | 3.6 | 2 | 460/3 | CARRIER 33ZCDR06 |
| ZD-5-3 | 205 | 62 | 6" | 55 | 3.6 | 2 | 460/3 | CARRIER 33ZCDR06 |
| ZD-5-4 | 300 | 90 | 8 | 55 | 6.2 | 3 | 460/3 | CARRIER 33ZCDR08 |
| ZD-5-5 | 300 | 90 | 8 | 55 | 6.2 | 3 | 460/3 | CARRIER 33ZCDR08 |
| ZD-5-6 | 490 | 147 | 10 | 55 | 8.2 | 4 | 460/3 | CARRIER 33ZCDR10 |
| ZD-5-7 | 400 | 120 | 8 | 55 | 6.8 | 3 | 460/3 | CARRIER 33ZCDR08 |
| ZD-5-8 | 175 | 53 | 6" | 55 | 3.0 | 2 | 460/3 | CARRIER 33ZCDR06 |
| ZD-5-9 | 565 | 170 | 10 | 55 | 9.2 | 4 | 460/3 | CARRIER 33ZCDR10 |

NOTES:
1. ELECTRIC COIL SHALL BE COODINATED WITH ZONE DAMPER UNIT WITH ALL STEP CONTROLLER FOR STAGES INDICATED.
2. COIL SHALL HAVE AIR FLOW SWITCH, CONTROL PANEL, TRANSFORMERS AND DISCONNECT SWITCH.
3. THERMOSTAT SHALL BE COMPITIBLE FOR BOTH VVT DAMPER AND ELECTRIC COIL.

## DIFFUSER AND REGISTER SCHEDULE

| TAG | SERVICE | TYPE | | | MODULE SIZE (IN) | NECK SIZE | O.B.D. | MATERIAL | FINISH | MANUFACTURER AND MODEL DESIGN BASIS | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LINEAR | LAY-IN | REGISTER | | | Y/N | | | | |
| A | SUPPLY | - | - | - | - | SEE PLAN | Y | ALUMINUM | - | TITUS 272-FS | 1 |
| B | RETURN | - | - | - | - | SEE PLAN | Y | ALUMINUM | - | TITUS 350FL | |

NOTES:
1. PROVIDE VOLUME CONTROL DAMPER IN EACH GRILLE/DIFFUSER.

## EXHAUST FAN SCHEDULE

| UNIT NO. | LOCATION | DESCRIPTION | CFM STANDARD AIR | S.P. (IN. WG) | TYPE | FAN RPM | DRIVE | VOLTS/ @ 60 HZ | WATT | MOTOR RPM | FULL LOAD AMPS | MOTOR STARTER Y/N | DISC. SWITCH Y/N | P'WIRED Y/N | INTER-LOCKED WITH | REMOTE CONTROL DEVICES | DESIGN BASIS MANUFACTURER & MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TE5-1 | SEE PLAN | CEILING | 100 | 0.25 | CEN. | 950 | DIRECT | 115 | 80 | - | 1.14 | Y | Y | Y | | | GREENHECK SP-B110 | 1 |
| TE5-2 | SEE PLAN | CEILING | 100 | 0.25 | CEN. | 950 | DIRECT | 115 | 80 | - | 1.14 | Y | Y | Y | | | GREENHECK SP-B110 | 1 |
| TE5-3 | SEE PLAN | CEILING | 75 | 0.25 | CEN. | 700 | DIRECT | 115 | 50 | - | 0.65 | Y | Y | Y | | | GREENHECK SP-B90 | 1 |

NOTES:
1. CEILING MOUNTED FAN. FURNISH WITH INTEGRAL GRILLE, BACK DRAFT DAMPER AND WALL SWITCH.
2. FAN SHALL INTERCONNECTED TO OPERATE WITH ROOM LIGHT SWITCH/TIMER AS PROVIDED UNDER DIV 26.

## TEMPERATURE CONTROL POINT SCHEDULE

| SYSTEM COMPONENT | POINT | | POINT LEGEND | | | SYSTEM OUTPUTS | | | | | | SYSTEM INPUTS | | | | | | | | | | | | | | | SYSTEM SOFTWARE/CONTROL | | | | | | | | | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | BINARY | | | ANALOG | | | BINARY | | | | | | ANALOG | | | | | | | | | ALARM PROCESSING | | | | | | | APPLICATION/FUNCTION | | | | | | | | | | | |
| | EXISTING | NEW | POINT ID | ABBREVIATION | PRIORITY/ADD - ALTERNATE | ELECTRIC DEVICE | START/STOP | OPEN/CLOSE | SPEED COMMAND | VALVE POSITION | DAMPER POSITION | STATUS | ALARM | PRESSURE | HIGH HUMIDITY | HIGH STATIC PRESSURE | LOW TEMPERATURE | TEMPERATURE (TI) | PRESSURE | POSITION | FLOW | PERCENT | STATIC PRESSURE | CARBON MONOXIDE | HUMIDITY | VACUUM | LOCAL ALARM PANEL | ARE ALARM PANEL | MASTER ALARM PANEL | HIGH LIMIT | LOW LIMIT | SCHEDULE START/STOP | FUNCTION | DUTY CYCLE | TEMPERATURE ECONOMIZER | ENTHALPY ECONOMIZER | TEMPERATURE RESET | DEMAND LIMITING | TEMPERATURE OVERRIDE | STATIC PRESSURE RESET | PRESSURE/VOLUEM CONTROL | FAILURE MODE | SPACE TEMP. CONTROL | FULL COMMUNICATION | TRENDING | |
| SYSTEM AHU5-1 | | | | TBD | | | X | | | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | X | | X | X | NOTE 1 |
| OUT DOOR AIR TEMERATURE | | X | | TBD | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUPPLY AIR TEMPERATURE | | X | | TBD | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RETURN AIR TEMPERATURE | | X | | TBD | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ELECTRIC HEAT OPERATION | | X | | TBD | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| THERMOSTAT OPERATION/SETTING | | X | | TBD | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | |
| FILTER | | X | | TBD | | | | | | | | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SA SMOKE DETECTOR | | X | | TBD | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RA SMOKE DETECTOR | | X | | TBD | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECONOMIZER | | X | | TBD | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CO2 | | X | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UNIT MANUFACTURER CONTROLLER | | X | | TBD | | | | | | | | X | X | | | | | | | | | | | | | | | | | X | X | | | | X | | | | | | | | | | |
| PHASE MONITOR | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FREEZE SWITCH | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HIGH PRESSURE SWITCH | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOSS OF CHARGE | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DDC CONTROL POINTS | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DEFROST CYCLE | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COMPRESSOR OVER TEMPERATURE | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COMPRESSSOR OVER CURRENT | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SYSTEM STATIC PRESSURE | | X | | TBD | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| SPACE HUMIDITY | | X | | TBD | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SYSTEM AC5-1 | | | | TBD | | | X | | | | | | | | | | X | | | | | | | | | | | | | | | X | | | | | | | | | X | | | X | NOTE 1 |
| OUT DOOR AIR TEMERATURE | | X | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SUPPLY AIR TEMPERATURE | | X | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ROOM AIR TEMPERATURE | | X | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FILTER | | X | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UNIT MANUFACTURER CONTROLLER | | X | | TBD | | | | | | | | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ON/OFF | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FAULT HISTORY DATA | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ECONOMIZER | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COOLING STAGE OPERATION | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UNIT SAFTIES | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | TBD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BASEMENT PUMP ROOM TEMERATURE | | X | | TBD | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | NOTE 1 |
| CRAWL SPACE TEMPERATURE | | X | | TBD | | | | | | | | | | | | | | X | | | | | | | | | | | | X | X | | | | | | | | | | | | | NOTE 1 |
| ROOM TEMPERATURE - EACH ZONE | | X | | TBD | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | X | | NOTE 1 |
| ZONE DAMPER | | X | | TBD | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | NOTE 1 |
| ELECTRIC ZONE COIL | | X | | TBD | | | | | | | | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | NOTE 1 |

NOTE:
1. CONTRACTOR SHALL VERIFY AND CONFIRM EXISTING ECC SYSTEM AT EXISTING BUILDING LOCATION AND SYSTEM FOR BUILDING 5 SHALL BE COMPITIBLE WITH ALL UPGRADES PROVIDED TO EXISTING ECC SYSTEM.

## SINGLE PACKAGED AIR CONDITIONER HEAT PUMP SCHEDULE

| MARK | LOCATION | AREA AND/OR BLDG SERVED | TYPE | TOTAL SUPPLY AIR FLOW | MIN. OUTSIDE AIR FLOW | EXT. STATIC PRESSURE | COOLING CAPACITY | | | | | HEATING CAPACITY | | | ELECTRICAL DATA | | | | OPER. WEIGHT | DESIGN BASIS MANUFACTURER AND MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | MIN. TOTAL CAPACITY | MIN. SENS CAPACITY | MIN EER | EAT DB | EAT WB | MIN. HEATING CAPACITY | EAT | LAT | MCA | MAX FUSE SIZE | PHASE | VOLT | | | |
| | | | | CFM | CFM | IN | MBH | MBH | | DEG. F | DEG. F | KW | DEG. F | DEG. F | | | | | LBS | | |
| AC5-1 | OUTDOOR | BLDG 5 | WALL HUNG | 1,200 | 0 | 0.250 | 36 | 26 | 11.2 | 80.00 | 67.00 | 6.0 | - | - | 19.1 | 20.0 | 3 | 460 | | MARVAIR HVPA 36 HPD | 1,2,3,4 |

**NOTES:**
1. PROVIDE AIR ECONOMIZER.
2. PROVIDE MERV 11 (60% EFFICIENT), 2" THICK THROW AWAY FILTER.
3. UNIT WITH PROGAMMABLE CONTROLLER, DIGITAL, 7 DAY - COMMSTAT-4 FOR ECC INTERFACING, ALUMINIUM RETURN GRILLE, STARTERS, CONTROLS, PREWIRED FOR AUTOMATIC OPERATION.
4. SINGLE POINT ELECTRICAL , 6KW HEATER.

## PACKAGED AIR HANDLING UNIT SCHEDULE

| TAG | LOCATION | SERVING | CAV | VAV | OUTSIDE AIR MIN. | OUTSIDE AIR MAX. | FAN SECTION CFM | FAN SECTION TOTAL ESP (IN.) | HEATING SECTION EAT °F | HEATING SECTION LAT °F | HEATING SECTION CAP MBH | COOLING SECTION ENT. AIR DB | ENT. AIR WB | LVG. AIR DB | LVG. AIR WB | GPM | EWT °F | LWT °F | MAX APD (IN) | MAX WATER P.D. (FT.) | CAP MBH | SENSIBLE MBH | SQ. FT. | VEL. FPM | ROWS | TYPE | VOLT/ PH @60 HZ | BHP | HP | MOTOR RPM | MCA | MOCP | FLA | LRA | MOTOR STARTER Y/N | DISC. SWITCH Y/N | PRE-WIRED Y/N | INTER-LOCKED WITH | REMOTE CONTROL DEVICES | DESIGN BASIS MANUFACTURER AND MODEL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AHU-5-1 | Outdoor | First floor | x | - | 450 CFM | 3000 CFM | 3000 | 1.2 | 54 | 70 | 52.1 | 78 | 60 | 56 | 55 | - | - | - | - | - | 90.1 | 68.1 | - | - | 4/15 FPI | DX | 460/3 | 1.39 | 2.8 | 830 | 46.7 | 50 | 45 | 149 | Y | Y | Y | - | - | CARRIER 50HQD08 | 1,2,3,4 |

NOTES:
1. PROVIDE 24" HIGH ROOF CURB FOR INSTALLATION ON CONCRETE PAD.
2. UNIT SHALL HAVE PREWIRED INTEGRAL CONVIENCE OUTLET, 2 REFRIGERATION CIRCUITS, 2 SCROLL COMPRESSORS, 50/100 CAPCITY, HIGH STATIC MOTOR, 2: MERV 11 FILERS.
3. CONTROL PANEL SHALL HAVE BACNET COMPATIBLE FOR CONNECTIONS AND EXTENSION TO EXISTING ECC SYSTEM BY TEMPERATURE CONTROL CONTRACTOR.
4. SINGLE POINT ELECTRICAL CONNECTION, RA AND SA SMOKE DETECTOR, CO2 SENSOR.

COMPLETION ITEM NO. ____
NOT SPRINKLERED

| | |
|---|---|
| ISSUED FOR SOLICITATION | 04/30/2013 |
| Revisions: | Date |

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Drawing Title: **MECHANICAL SCHEDULES AND DETAILS**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked | Drawn

Project Number: 537-12-122

Building Number: 5

Drawing Number: **5-MH-102**

Dwg. 11 of 16

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

## ABBREVIATIONS

| ABBREV. | DESCRIPTION |
|---|---|
| AFCI | ARC FAULT CIRCUIT INTERRUPTER |
| AFD | ADJUSTABLE FREQUENCY DRIVE |
| AFF | ABOVE FINISHED FLOOR |
| ACL | ACROSS THE LINE |
| AC | ALTERNATING CURRENT |
| A/AMP | AMPERE |
| AIC | AMPERES INTERRUPTING CAPACITY |
| AL | ALUMINUM |
| ATS | AUTOMATIC TRANSFER SWITCH |
| AWG | AMERICAN WIRE GAUGE |
| BAL | BALLAST |
| BH | BASEBOARD HEATER |
| BPS | BOLTED PRESSURE SWITCH |
| BR | BRANCH |
| BRKR | BREAKER |
| CAB | CABINET |
| CATV | CABLE TELEVISION |
| C.B. | CIRCUIT BREAKER |
| CCT | CIRCUIT |
| CCTV | CLOSED CIRCUIT TELEVISION |
| CEC | CHICAGO ELECTRICAL CODE |
| COAX | COAXIAL |
| C.U. | COEFFICIENT OF UTILIZATION |
| CR | CARD READER |
| CRI | COLOR RENDERING INDEX |
| C | CONDUIT |
| CONN | CONNECTION |
| CU | COPPER |
| CUH | CABINET UNIT HEATER |
| CT | CURRENT TRANSFORMER |
| HZ | HERTZ (CYCLES/SECOND) |
| DC | DIRECT CURRENT |
| DISC | DISCONNECT SWITCH |
| DPDT | DOUBLE POLE DOUBLE THROW |
| DPST | DOUBLE POLE SINGLE THROW |
| DT | DUST TIGHT |
| EF | EXHAUST FAN |
| ELEC | ELECTRIC |
| EWC | ELECTRIC WATER COOLER |
| EWH | ELECTRIC WATER HEATER |
| EM | EMERGENCY |
| EMT | ELECTRIC METALLIC TUBING (THIN WALL CONDUIT) |
| EQ | EQUIPMENT |
| EUH | ELECTRIC UNIT HEATER |
| EP | EXPLOSION PROOF |
| FPB | FAN POWERED BOX |
| FA | FIRE ALARM |
| FB | FLOOR BOX |
| FLUOR | FLUORESCENT |
| F | FUSE |
| F.S. | FUSED SWITCH |
| GRD/G | GROUND |
| GFCI/GFI | GROUND FAULT CIRCUIT INTERRUPTER |
| GHW/HWC | GALVANIZED HEAVY WALL STEEL CONDUIT |
| HV | HIGH VOLTAGE |
| HP | HORSE POWER |
| INCAND | INCANDESCENT |
| IC | INTERRUPTING CAPACITY |
| IG | ISOLATED GROUND |
| IMC | INTERMEDIATE GRADE CONDUIT |
| JB | JUNCTION BOX |
| K | KELVIN TEMPERATURE |
| KCMIL | THOUSAND CIRCULAR MILS |
| KW | KILOWATT |
| KWH | KILOWATT–HOUR |
| KVA | KILOWATT–AMPERE |
| LTG | LIGHTING |
| LV | LOW VOLTAGE |
| MH | MANHOLE |
| MC | MOMENTARY CONTACT |
| MFR | MANUFACTURER |
| MV | MULTI VAPOR |
| MERC. | MERCURY VAPOR |
| MTR | MOTOR |
| MCC | MOTOR CONTROL CENTER |
| MTD | MOUNTED |
| NEC | NATIONAL ELECTRICAL CODE |
| NEUT | NEUTRAL |
| NC | NORMALLY CLOSED |
| NF | NON–FUSED |
| NO | NORMALLY OPEN |
| NIC | NOT IN CONTRACT |
| NTS | NOT TO SCALE |
| PF | POWER FACTOR |
| PNL | PANEL |
| PH | PHASE |
| PT | POTENTIAL TRANSFORMER |
| PWR | POWER |
| PRI | PRIMARY |
| PB | PULL BOX |
| RECP | RECEPTACLE |
| SCR | SHORT CIRCUIT RATING |
| SEC | SECONDARY |
| SC | SHORT CIRCUIT |
| SP | SINGLE POLE |
| SPST | SINGLE POLE SINGLE THROW |
| SPDT | SINGLE POLE DOUBLE THROW |
| SPEC | SPECIFICATION |
| SS | STAINLESS STEEL |
| STA | STATION |
| SW | SWITCH |
| SWBD | SWITCHBOARD |
| SWGR | SWITCHGEAR |
| SYM | SYMMETRICAL |
| SYS | SYSTEM |
| T | THERMAL OVERLOAD |
| TC | TERMINAL CABINET |
| TTC | TELEPHONE TERMINAL CABINET |
| TYP | TYPICAL |
| TL | TWIST LOCK |
| UL | UNDERWRITER'S LABORATORIES |
| UH | UNIT HEATER |
| UNO | UNLESS NOTED OTHERWISE |
| UPS | UNINTERRUPTED POWER SUPPLY |
| VFD | VARIABLE FREQUENCY DRIVE |
| VP | VAPORPROOF |
| VT | VAPORTIGHT |
| V | VOLT |
| VA | VOLT–AMPERE |
| WT | WATERTIGHT |
| W | WATT |
| WP | WEATHERPROOF |
| XFMR | TRANSFORMER |

## FIRE ALARM

- AUDIBLE GENERAL ALARM DEVICE
- AUDIBLE GENERAL ALARM DEVICE WITH VISUAL ALARM DEVICE
- PRE–SIGNAL ALARM DEVICE
- PRESIGNAL ALARM WITH VISUAL ALARM DEVICE
- VOICE COMMUNICATION SPEAKER
- VOICE COMMUNICATION SPEAKER WITH VISUAL ALARM DEVICE
- VOICE COMMUNICATION TELEPHONE
- VISUAL ALARM DEVICE
- REMOTE ANNUNCIATOR LAMP FOR SELECTED DEVICES
- REMOTE ALARM AND TEST STATION
- HEAT DETECTOR (135 DEG FIXED TEMP/RATE–OF–RISE), IF DIFFERENT TEMPERATURE THEN AS NOTED
- SYSTEM SMOKE DETECTOR
- SYSTEM SMOKE DETECTOR WITH INTEGRAL HORN
- SINGLE STATION SMOKE DETECTOR
- DUCT SMOKE DETECTOR
- BEAM SYSTEM SMOKE DETECTOR TRANSMITTER
- BEAM SYSTEM SMOKE DETECTOR RECEIVER
- MANUAL PULL STATION
- SPRINKLER WATERFLOW INDICATOR
- SPRINKLER ALARM VALVE ATTACHMENT
- SPRINKLER PRESSURE SWITCH
- HALON EXTINGUISHING SYSTEM
- DRY CHEMICAL EXTINGUISHING SYSTEM
- WET CHEMICAL EXTINGUISHING SYSTEM
- GASEOUS EXTINGUISHING SYSTEM
- MAGNETIC/ELECTRONIC DOOR HOLD OPEN DEVICE
- ELECTRIC DOOR LOCK
- VSS SPRINKLER VALVE SUPERVISORY (TAMPER) SWITCH
- CBT CITY FIRE ALARM BOX TIE AND DISCONNECT PANEL
- FA CITY FIRE ALARM BOX
- CST CENTRAL STATION TIE AND DISCONNECT
- TB TROUBLE BELL W/TEST AND SILENCE SWITCH W/LAMP
- FAA FIRE ALARM ANNUNCIATOR PANEL
- SSA STATUS SUPERVISION ANNUNCIATOR PANEL
- FCP FIRE ALARM CONTROL PANEL
- VCP VOICE COMMUNICATION CONTROL PANEL
- RCP RELEASING CONTROL PANEL/RELAY FOR CONTROL OF DIFFERENT EQUIPMENT CONNECTED TO THE SYSTEM
- ECP ELEVATOR STATUS/CONTROL PANEL
- D HVAC DUCT FIRE DAMPER CONTROL
- FPC FIRE PUMP CONTROLLER
- DGP DATA GATHERING PANEL (TRANSPONDER) FOR MULTIPLEX SIGNAL GATHERING AND TRANSMISSION
- DTU DATA TRANSMISSION UNIT (ADDRESSABLE/MULTIPLEX) FOR CONNECTION TO DUMB DEVICES FOR REPORTING FUNCTIONS OF ALARM OR STATUS
- PSR POWER SUPERVISORY RELAY TO MONITOR POWER TO ALARM DEVICES
- CD CARBON MONOXIDE DETECTOR
- FSR FIRE SHUTDOWN RELAY

## LIGHTING CONTROL

- LIGHT SWITCH, SINGLE POLE UNLESS NOTED OTHERWISE:
  - "3a" CIRCUIT AND SWITCH LEG
  - "K" KEY OPERATED
  - "MC" MOMENTARY CONTACT
  - "PL" PILOT LIGHT
  - "WP" WEATHERPROOF
  - "2P" TWO POLE
  - "3P" THREE POLE
  - "3W" THREE–WAY
  - "4W" FOUR–WAY
- D DIMMER SWITCH
- LC A LIGHTING CONTROL STATIONS: LIGHTING CONTROL STATIONS WITH LOW–VOLTAGE WIRING BACK TO LIGHTING CONTROL SYSTEM. SUBSCRIPT "A" INDICATES CONTROL IDENTIFICATION. REFER TO LIGHTING CONTROL DETAILS FOR FUNCTION OF LIGHTING CONTROL STATION.
- OS LIGHTING OCCUPANCY SENSORS: DUAL TECHNOLOGY UNLESS OTHERWISE NOTED.
  - "IR" INDICATES INFRARED TECHNOLOGY ONLY
  - "UT" INDICATES ULTRASONIC TECHNOLOGY ONLY
- TC TIME CLOCK
- TS TIME SWITCH
- PC PHOTOCELL

## GENERAL ELECTRICAL

- CONDUIT RUN CONCEALED IN CEILING OR WALL
- CONDUIT RUN CONCEALED IN OR BELOW FLOOR
- CONDUIT RUN EXPOSED ON CEILING OR WALL

(ARROWHEAD DENOTES HOMERUN TO PANELBOARD. SLASH LINES INDICATE QUANTITY OF WIRE; NEUTRAL WIRE SHOWN AS A LONG LINE, PHASE WIRES AND SWITCH LEGS SHOWN AS SHORT LINES, AND GROUND WIRE SHOWN AS A LONG LINE WITH A DOT.)

- 1P–120V HOMERUN
- 1P–277V HOMERUN
- 2P–208V HOMERUN
- 2P–480V HOMERUN
- 3P–208V HOMERUN
- 3P–480V HOMERUN
- CONDUIT, WHERE X IS THE TYPE OR FUNCTION OF CONDUIT.
  - "C" CLOCK
  - "CO" CONDUIT ONLY
  - "CCTV" CCTV
  - "D" DATA
  - "FA" FIRE ALARM
  - "FO" FIBER OPTIC
  - "I" INTERCOM
  - "LP" LIGHTNING PROTECTION
  - "LV" LOW VOLTAGE
  - "NC" NURSE CALL
  - "S" SOUND
  - "T" TELEPHONE
  - "TV" TELEVISION
  - "TVA" TELEVISION ANTENNA
  - "TVC" CABLE TELEVISION
- CONDUIT ENCASED IN CONCRETE
- CONDUIT STUBBED IN
- CONDUIT STUBBED UP
- CONDUIT STUBBED DOWN
- FLEXIBLE CONDUIT
- CONDUIT TERMINATION:
  - "CS" CAP AND STAKE
  - "GB" GROUNDING BUSHING
  - "IB" INSULATING BUSHING
  - "TB" TERMINAL BUSHING
- CONDUIT SEAL
- MULTI–OUTLET ASSEMBLY
- WIREWAY
- CABLE TRAY
- BUSWAY (BUSDUCT)
- CTB CABLE TAP BOX
- UNDERGROUND DUCTBANK
- UNDERGROUND DIRECT BURIAL CABLE
- UNDERFLOOR DUCT SYSTEM:
  - INDICATES POWER DUCT
  - INDICATES TELEPHONE DUCT
  - INDICATES SYSTEM DUCT
- VARIOUS SYMBOLS IDENTIFY LOCATION OF DIFFERENT TYPES OF OUTLETS OR CONNECTIONS TO UNDERFLOOR DUCT SYSTEM
  - "P" PRESET DEVICE
  - "A" AFTERSET DEVICE
- MH MANHOLE
- HH HANDHOLE
- PB PULL BOX
- J JUNCTION BOX – EXPOSED OR IN CEILING
- J JUNCTION BOX – WALL MOUNTED
- J JUNCTION BOX WITH FLEXIBLE CONDUIT AND FINAL CONNECTION TO EQUIPMENT

## MISCELLANEOUS

- 1 1 SEE KEY NOTE #1
- X X STANDARD DETAIL NUMBER DESIGNATION
- PANEL DEMARCATION LINES

## SYMBOL TAGS

"X" EXISTING TO REMAIN
"R" TO REMOVE
"XR" EXISTING TO BE RELOCATED
"RX" NEW LOCATION FOR EXISTING

- NEW WORK
- EXISTING WORK TO REMAIN (EXCEPT AS OTHERWISE NOTED)
- EXISTING WORK TO BE REMOVED (EXCEPT AS OTHERWISE NOTED)

## SIGNAL/SECURITY

| | WALL | FLOOR BOX | POKE–THRU | COUNTER TOP | CEILING |
|---|---|---|---|---|---|
| TELEPHONE OUTLET | | | | | |
| DUPLEX TELEPHONE OUTLET | | | | | |
| DATA SYSTEMS OUTLET | | | | | |
| DUPLEX DATA SYSTEMS OUTLET | | | | | |
| COMBINATION TELEPHONE/DATA SYSTEMS OUTLET | | | | | |
| COMBINATION TV–TELEPHONE/DATA SYSTEMS OUTLET | | | TV | | TV |

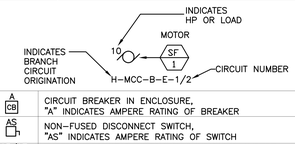
SUBSCRIPT INDICATES THE FOLLOWING FOR BELOW WALL MOUNTED OUTLETS, (U.N.O.):
"H" HANDICAP MOUNTED AT 48" A.F.F.
"P" PAY PHONE MOUNTED AT 54" A.F.F.
"W" WALL MOUNTED AT 54" A.F.F.

- TV TELEVISION OUTLET
- BUZZER
- BELL
- DOOR BELL PUSH BUTTON STATION

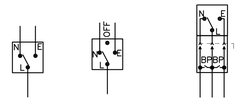
## POWER

| | WALL | FLOOR BOX | POKE–THRU | COUNTER TOP | CEILING |
|---|---|---|---|---|---|
| DUPLEX RECEPTACLE | | | | | |
| DOUBLE DUPLEX RECEPTACLE | | | | | |
| DUPLEX RECEPTACLE – SPLIT WIRED | | | | | |
| SINGLE RECEPTACLE | | | | | |
| COMBINATION DUPLEX RECEPTACLE TELEPHONE/ DATA SYSTEMS OUTLET | | | | | |
| COMBINATION DOUBLE DUPLEX RECEPTACLE TELEPHONE/ DATA SYSTEMS OUTLET | | | | | |
| SPECIAL RECEPTACLE–NEMA TYPE AS INDICATED | | | | | |
| JUNCTION BOX WITH FLEXIBLE CONDUIT AND FINAL CONNECTION TO FURNITURE | | | | | |

- WP 3a ADJACENT LETTERS IN THE SYMBOLS ABOVE INDICATE THE FOLLOWING:
  - "AFCI" ARC FAULT CIRCUIT INTERRUPTER
  - "EM" FED BY EMERGENCY CIRCUIT
  - "EP" EXPLOSION PROOF
  - "EWC" SERVES ELECTRIC WATER COOLER (GFCI)
  - "GFCI" GROUND FAULT CIRCUIT INTERRUPTER
  - "IG" ISOLATED GROUND
  - "SS" SURGE SUPPRESSION DEVICE
  - "TR" TAMPER RESISTANT (SAFETY TYPE)
  - "TVSS" TRANSIENT VOLTAGE SURGE SUPPRESSION
  - "WP" WEATHER RESISTANT (WHILE IN USE)
  - "XX" CIRCUIT NUMBER
- CLOCK OUTLET RECEPTACLE
- CLOCK OUTLET AND CLOCK FOR INTEGRATED CLOCK SYSTEM
- STATION WITH ONE BUTTON
- STATION WITH TWO BUTTONS
- STATION WITH TWO BUTTONS AND A PILOT LIGHT
- STATION WITH THREE BUTTONS
- KR KEY RESET CONTROL STATION
- S/L STOP–LOCK STATION
- EPO EMERGENCY POWER OFF MUSHROOM CONTROL STATION
- XX T MANUAL MOTOR CONTROL
  - "K" KEY OPERATED
  - "M" LOCKOUT MOTOR SWITCH
  - "P" PILOT LIGHT
  - "RD" USER REMOTE DISCONNECT SWITCH
  - "T" THERMAL OVERLOAD PROTECTION
  - "XX" CIRCUIT NUMBER
  - "2P" 2 POLE SWITCH
  - "3P" 3 POLE SWITCH
- LIGHTNING PROTECTION AIR TERMINAL
- GROUNDING ROD
  - "GW" GROUNDWELL
  - "GTS" GROUND TEST STATION




- A CB CIRCUIT BREAKER IN ENCLOSURE, "A" INDICATES AMPERE RATING OF BREAKER
- AS NON–FUSED DISCONNECT SWITCH, "AS" INDICATES AMPERE RATING OF SWITCH
- AS/AF FUSED DISCONNECT SWITCH "AS" INDICATES AMPERE RATING OF SWITCH AND "AF" INDICATES AMPERE RATING OF FUSE
- MAGNETIC MOTOR STARTER – NEMA SIZE AS INDICATED
- AT CB COMBINATION MOTOR STARTER AND CIRCUIT BREAKER "AT" INDICATES AMPERE RATING OF BREAKER
- AS COMBINATION MOTOR STARTER AND NON–FUSED DISCONNECT, "AS" INDICATES AMPERE RATING OF SWITCH
- AS/AF COMBINATION MOTOR STARTER AND FUSED DISCONNECT "AS" INDICATES AMPERE RATING OF SWITCH AND "AF" INDICATES AMPERE RATING OF FUSE
- C CONTACTOR
- 45 600V CLASS DRY TYPE TRANSFORMER NUMBER INDICATES KVA RATING
- FINAL CONNECTION TO EQUIPMENT
  - "AC" AIR CONDITIONER
  - "CUH" CABINET UNIT HEATER
  - "EWH" ELECTRICAL WATER HEATER
  - "RP" RECIRCULATION PUMP
  - "UH" UNIT HEATER
  - "WH" WATER HEATER
- PDQ 13 EQUIPMENT IDENTIFICATION TAG
- M UTILITY ELECTRIC METER




AUTOMATIC TRANSFER SWITCH — AUTOMATIC TRANSFER SWITCH WITH CENTER OFF POSITION — AUTOMATIC TRANSFER SWITCH WITH BY–PASS ISOLATION SWITCH

- SURFACE MOUNTED DISTRIBUTION PANELBOARD
- SURFACE MOUNTED BRANCH CIRCUIT PANELBOARD
- RECESSED MOUNTED BRANCH CIRCUIT PANELBOARD

## LIGHTING

- F1 3a 2' X 4' FLUORESCENT LIGHTING FIXTURE
- F1 3a 2' X 2' FLUORESCENT LIGHTING FIXTURE
- F1 3a 1' X 4' FLUORESCENT LIGHTING FIXTURE
- F1 3a FLUORESCENT STRIP/WRAPAROUND/TASK LIGHTING FIXTURE–LENGTH AS INDICATED
- F1 3a FLUORESCENT WALL BRACKET – LENGTH AS INDICATED
- F1 3a VERTICAL MOUNTED FLUORESCENT STRIP LIGHT FIXTURE
- F1 3a PENDANT OR DOWNLIGHT LIGHTING FIXTURE
- F1 3a WALL MOUNTED LIGHTING FIXTURE
- F1 3a WALL WASHER
- F1 3a ADJUSTABLE LIGHTING FIXTURE, ARROW DENOTES AIMING ORIENTATION
- F1 3a TRACK LIGHTING
- F1 3a DOCK LIGHT WITH ARTICULATED ARM
- S1 3a STANDARD – SINGLE HEAD, POLE MOUNTED
- S1 3a STANDARD – DOUBLE HEAD, POLE MOUNTED
- S1 3a STANDARD – TRIPLE HEAD, POLE MOUNTED
- S1 3a STANDARD–QUADRUPLE HEAD, POLE MOUNTED
- S1 3a STANDARD–TYPICAL POST–TOP LUMINARIES
- S1 3a FLOODLIGHT, AIM AS INDICATED
- S1 3a BOLLARD

NOTES:
- F1 – FIXTURE TYPE, REFER TO LIGHTING FIXTURE SCHEDULE FOR DESCRIPTION AND MOUNTING
- "3" – CIRCUIT NUMBER
- "a" – SWITCH CONTROL
- (F1) – ALL FIXTURES WITHIN THE ROOM TO BE TYPE F1

## EMERGENCY LIGHTING

- F1 3 LIGHTING FIXTURE ON EMERGENCY CIRCUITRY
- F1 3
- F1 3
- F1 3
- F1 3
- X3 X3 EXIT SIGNS: DIRECTIONAL SIGN NUMBERS INDICATE INSCRIPTION, ARROWS, AND SINGLE OR DOUBLE FACED AS SHOWN IN THE FOLLOWING SCHEDULE:

| SINGLE FACE | | DOUBLE FACE | |
|---|---|---|---|
| "#1" | FIRE ESCAPE | "#13" | EXIT – RECESSED |
| "#2" | STAIRS | "#14" | TRIANGLE |
| "#3" | EXIT | "#15" | ELEVATOR |
| "#4" | FIRE ESCAPE | "#16" | FIRE ESCAPE |
| "#5" | STAIRS | "#17" | STAIRS |
| "#6" | EXIT | "#18" | EXIT |
| "#7" | FIRE ESCAPE | "#19" | FIRE ESCAPE |
| "#8" | STAIRS | "#20" | STAIRS |
| "#9" | EXIT | "#21" | EXIT |
| "#10" | FIRE ESCAPE | "#22" | FIRE ESCAPE |
| "#11" | STAIRS | "#23" | STAIRS |
| "#12" | EXIT | "#24" | EXIT |

- BATTERY PACK FIXTURES WITH NUMBER OF HEADS SHOWN
- SINGLE REMOTE HEAD
- DOUBLE REMOTE HEAD

## EQUIPMENT IDENTIFICATION

A–B–C–D

THE NOMENCLATURE ON THE EQUIPMENT IDENTIFICATION SHALL BE AS FOLLOWS:

"A" = VOLTAGE
- (BLANK) = 120/208 VOLTS
- H = 277/480 VOLTS

"B" = EQUIPMENT TYPE
- DP = DISTRIBUTION PANEL
- LP = LIGHTING PANEL
- LRP = LIGHTING RELAY PANEL
- MCC = MOTOR CONTROL CENTER
- MSP = MOTOR STARTER PANEL
- PP = POWER PANEL
- SWBD = SWITCHBOARD
- TR = TRANSFORMER
- UPS = UNINTERRUPTABLE POWER SOURCE

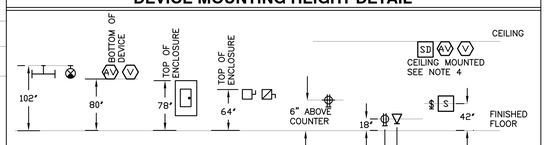
"C" = BUILDING FLOOR DESIGNATION (NUMBER) ON WHICH THE LABELED EQUIPMENT IS LOCATED

"D" = QUANTITY SEQUENCE OF LIKE EQUIPMENT
- 1 = FIRST
- 2 = SECOND
- 3 = THIRD
- 4 = FOURTH
- A = A–SIDE
- B = B–SIDE
- N = NORTH
- S = SOUTH

## SINGLE LINE DIAGRAM

- INCOMING LINE (CABLE LUGS)
- POLY PHASE TRANSFORMER
- 3 PHASE WYE OR STAR UNGROUNDED
- 3 PHASE WYE, GROUNDED NEUTRAL
- MPR MICROPROCESSOR MOTOR PROTECTION DEVICE
- POTENTIAL TRANSFORMER
- MOTOR OVERLOAD
- CURRENT TRANSFORMER
- MMD MICROPROCESSOR METERING DEVICE
- GROUND
- A AMMETER
- MOLDED CASE CIRCUIT BREAKER
- V VOLTMETER
- CONTACTOR
- KWH KILOWATT HOUR METER
- SINGLE THROW SWITCH
- AS AMMETER SWITCH
- DOUBLE THROW SWITCH
- VS VOLTMETER SWITCH
- CIRCUIT BREAKER
- DRAWOUT POWER CIRCUIT BREAKER
- FUSE
- FUSIBLE DRAWOUT MOTOR STARTER
- FUSIBLE ELEMENT
- CIRCUIT BREAKER DRAWOUT MOTOR STARTER
- SURGE ARRESTOR
- K 1 KEY INTERLOCK DEVICE, NUMBER INDICATES POSITION
- BASIC RELAY
- GFI GROUND FAULT PROTECTION
- 3 PHASE DELTA CONNECTION
- 0000NC FEEDER TAG
- 3 PHASE, 3 WIRE, DELTA GROUNDED
- GEN GENERATOR

## DEVICE MOUNTING HEIGHT DETAIL




GENERAL NOTES:
1. HEIGHTS SHOWN ARE TYPICAL TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE. ALL DUPLEX RECEPTACLES SHALL BE MOUNTED HORIZONTALLY, GROUND TO THE RIGHT.
2. WHEREVER DEVICES ARE INDICATED TO BE MOUNTED ABOVE DOORS, DEVICE SHALL BE CENTERED BETWEEN TOP OF DOOR TRIM AND CEILING LINE.
3. MOUNTING HEIGHTS SHOWN ON ARCHITECTURAL ELEVATIONS, ELECTRICAL PLANS OR ELSEWHERE, SHALL GOVERN OVER THOSE SHOWN ABOVE.
4. LOCATE CEILING MOUNTED APPLIANCES ON BOTTOM OF BEAMS OR JOISTS, WITH CLEAR LINE OF SIGHT IN ALL DIRECTIONS, NO GREATER THAN 30 FT. A.F.F.

COMcheck Software Version 3.9.1

### Interior Lighting Compliance Certificate

**2009 IECC**

**Section 1: Project Information**

Project Type: **Alteration**
Project Title : Jesse Brown VA Building 5

Construction Site: Owner/Agent: Designer/Contractor:

**Section 2: Interior Lighting and Power Calculation**

| A Area Category | B Floor Area (ft2) | C Allowed Watts / ft2 | D Allowed Watts (B x C) |
|---|---|---|---|
| RESTROOMS (Hospital) | 120 | 1.2 | 144 |
| | | Total Allowed Watts = | 144 |

**Section 3: Interior Lighting Fixture Schedule**

| A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps/ Fixture | C # of Fixtures | D Fixture Watt. | E (C X D) |
|---|---|---|---|---|
| RESTROOMS ( Hospital 120 sq.ft.) | | | | |
| Linear Fluorescent 1 : 24" T8 17W / Electronic | 2 | 2 | 53 | 106 |
| | | | Total Proposed Watts = | 106 |

**Section 4: Requirements Checklist**

**Lighting Wattage:**

- ☐ 1. Total proposed watts must be less than or equal to total allowed watts.

| Allowed Watts | Proposed Watts | Complies |
|---|---|---|
| 144 | 106 | Passes |

**Controls, Switching, and Wiring:**

- ☐ 2. Daylight zones under skylights more than 15 feet from the perimeter have lighting controls separate from daylight zones adjacent to vertical fenestration.
- ☐ 3. Daylight zones have individual lighting controls independent from that of the general area lighting.

*Exceptions:*
- ☐ Contiguous daylight zones spanning no more than two orientations are allowed to be controlled by a single controlling device.
- ☐ Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.

- ☐ 4. Independent controls for each space (switch/occupancy sensor).

*Exceptions:*
- ☐ Areas designated as security or emergency areas that must be continuously illuminated.
- ☐ Lighting in stairways or corridors that are elements of the means of egress.

- ☐ 5. Master switch at entry to hotel/motel guest room.
- ☐ 6. Individual dwelling units separately metered.

Project Title: Jesse Brown VA Building 5 — Report date: 12/18/12
Data filename: Untitled.cok — Page 1 of

COMPLETION ITEM NO. ____
NOT SPRINKLERED

| | |
|---|---|
| ISSUED FOR SOLICITATION | 04/30/2013 |
| Revisions: | Date |

CONSULTANTS:

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TELEPHONE: 312/616–0000

| | | | |
|---|---|---|---|
| Drawing Title: ELECTRICAL SYMBOLS AND GENERAL NOTES | Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS | Project Number: 537-12-122 | Office of Construction and Facilities Management |
| | | Building Number: 5 | |
| Approved: Project Director | Location: JESSE BROWN V.A.M.C. | Drawing Number: 5-EGI-000 | Department of Veterans Affairs |
| | Date: FEBRUARY 13, 2013 — Checked: MS — Drawn: JC | Dwg. 11 of 16 | |

VA FORM 08–6231

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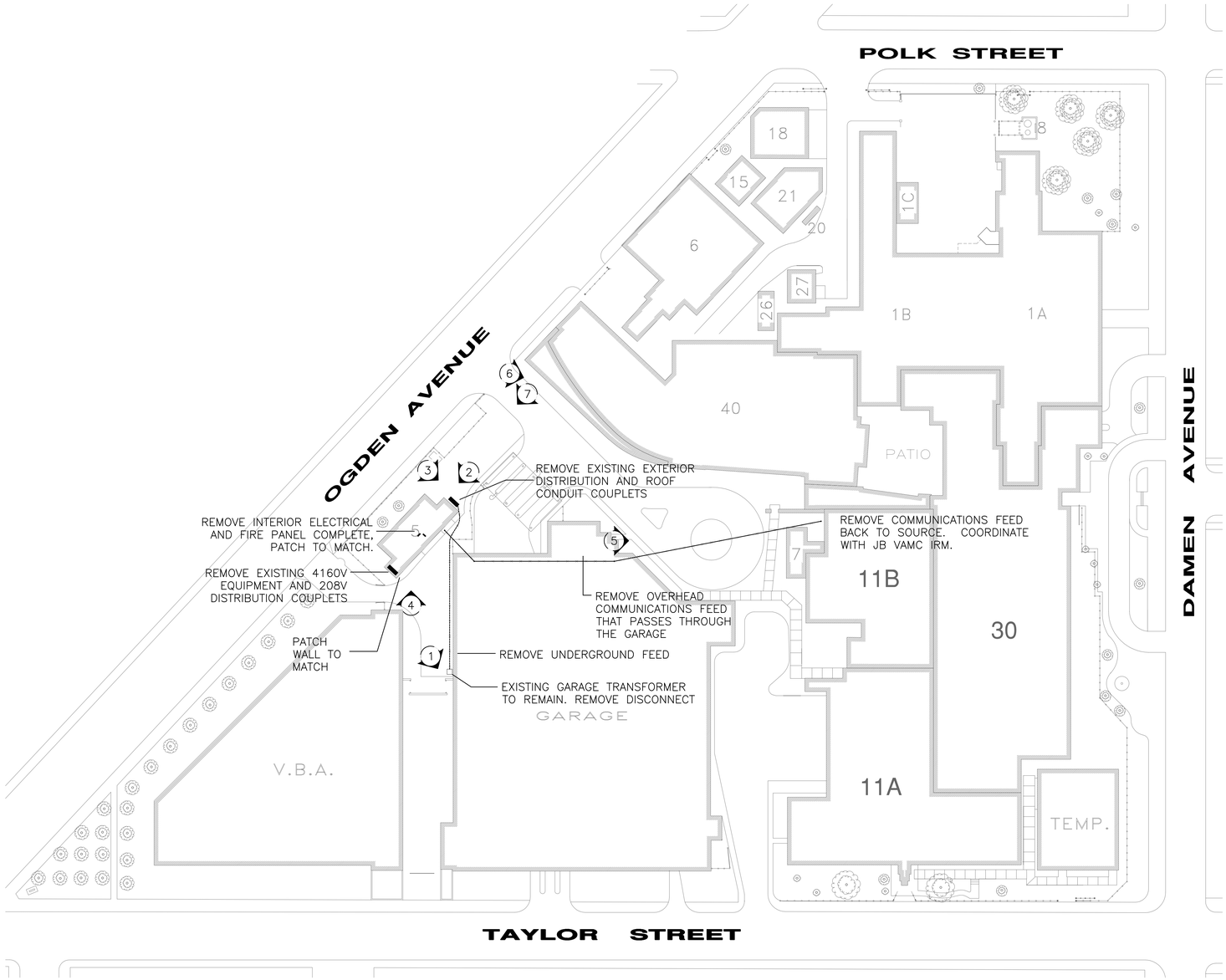



**1** DEMOLITION ELECTRICAL SITE PLAN
1" = 50'-0"

1 EXISTING GARAGE TRANSFORMER, REMOVE DISCONNECT AND SUB-FEED

2 REMOVE EXISTING EXTERIOR DISTRIBUTION AND REPAIR LANDSCAPE TO MATCH

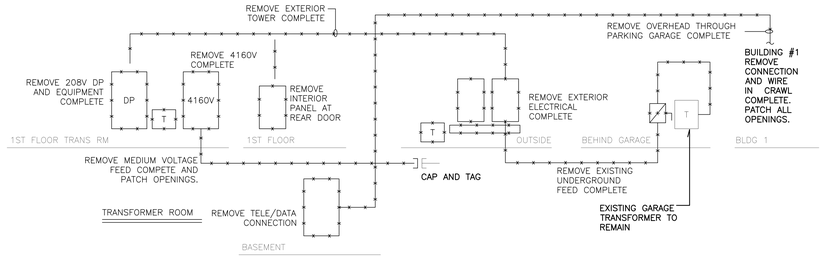
3 ADDITIONAL VIEW OF THE EXISTING EXTERIOR DISTRIBUTION

4 REMOVE EXISTING EXTERIOR CONDUIT AND PATCH EXTERIOR WALL PENETRATIONS

5 REMOVE OVERHEAD COMMUNICATIONS CABLING AND PATCH EXTERIOR WALL PENETRATIONS

6 VIEW LOOKING TOWARD BUILDING 40
NOTICE THE PLANTERS, SIDEWALK, CURB, SIGNS AND ILLUMINATED BOLLARDS

6 VIEW LOOKING TOWARD BUILDING 5
NOTICE THE FLAGPOLES, STREET LIGHTING, SIGNS, FLOWER AREA WITH LIGHTING, CURB, SIDEWALK AND GRASS AREAS




**2** BUILDING #5 DEMO RISER
SCALE: NONE

COMPLETION ITEM NO. ____
NOT SPRINKLERED

| | |
|---|---|
| ISSUED FOR SOLICITATION | 04/30/2013 |
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Drawing Title: **DEMOLITION ELECTRICAL SITE PLAN**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked: | Drawn: JJC

Project Number: 537-12-122

Building Number: 5

Drawing Number: **5 - ED - 100**

Dwg2 of 16

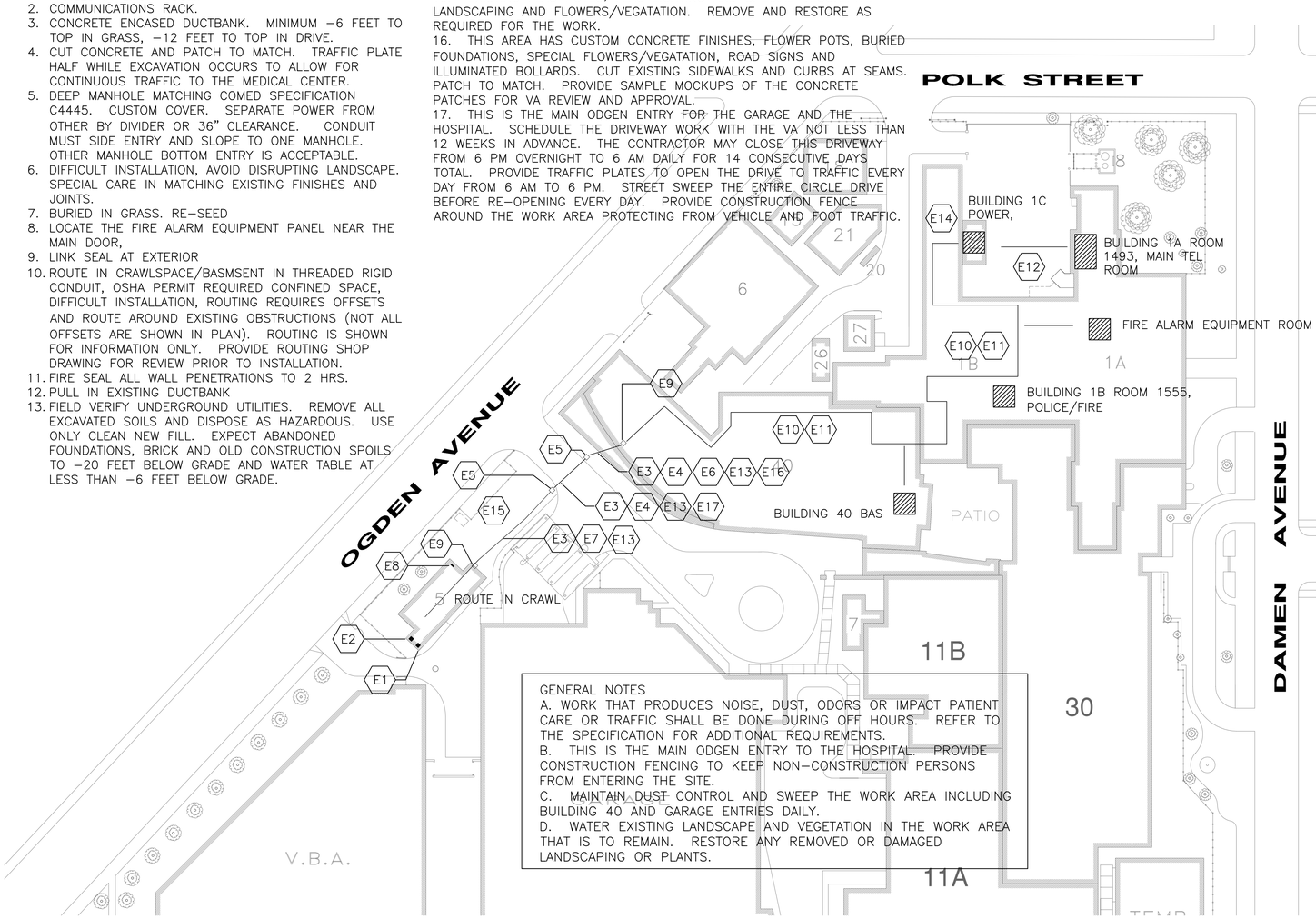
Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

## KEY NOTES

1. 480V AND 208/120V ELECTRICAL DISTRIBUTION AND PANELS IN BACK ROOM.
2. COMMUNICATIONS RACK.
3. CONCRETE ENCASED DUCTBANK. MINIMUM –6 FEET TO TOP IN GRASS, –12 FEET TO TOP IN DRIVE.
4. CUT CONCRETE AND PATCH TO MATCH. TRAFFIC PLATE HALF WHILE EXCAVATION OCCURS TO ALLOW FOR CONTINUOUS TRAFFIC TO THE MEDICAL CENTER.
5. DEEP MANHOLE MATCHING COMED SPECIFICATION C4445. CUSTOM COVER. SEPARATE POWER FROM OTHER BY DIVIDER OR 36" CLEARANCE. CONDUIT MUST SIDE ENTRY AND SLOPE TO ONE MANHOLE. OTHER MANHOLE BOTTOM ENTRY IS ACCEPTABLE.
6. DIFFICULT INSTALLATION, AVOID DISRUPTING LANDSCAPE. SPECIAL CARE IN MATCHING EXISTING FINISHES AND JOINTS.
7. BURIED IN GRASS. RE–SEED
8. LOCATE THE FIRE ALARM EQUIPMENT PANEL NEAR THE MAIN DOOR,
9. LINK SEAL AT EXTERIOR
10. ROUTE IN CRAWLSPACE/BASMSENT IN THREADED RIGID CONDUIT, OSHA PERMIT REQUIRED CONFINED SPACE, DIFFICULT INSTALLATION, ROUTING REQUIRES OFFSETS AND ROUTE AROUND EXISTING OBSTRUCTIONS (NOT ALL OFFSETS ARE SHOWN IN PLAN). ROUTING IS SHOWN FOR INFORMATION ONLY. PROVIDE ROUTING SHOP DRAWING FOR REVIEW PRIOR TO INSTALLATION.
11. FIRE SEAL ALL WALL PENETRATIONS TO 2 HRS.
12. PULL IN EXISTING DUCTBANK
13. FIELD VERIFY UNDERGROUND UTILITIES. REMOVE ALL EXCAVATED SOILS AND DISPOSE AS HAZARDOUS. USE ONLY CLEAN NEW FILL. EXPECT ABANDONED FOUNDATIONS, BRICK AND OLD CONSTRUCTION SPOILS TO –20 FEET BELOW GRADE AND WATER TABLE AT LESS THAN –6 FEET BELOW GRADE.
14. REFER TO EXISTING JB VAMC PROJECTS 537–11–144, 537–11–145, AND 537–11–139 FOR RECORD DOCUMENTATION OF BUILDING 1C.
15. EXISTING FLAG POLES, FLAG LIGHTING AND SPECIAL DECORATIVE LANDSCAPING AND FLOWERS/VEGATATION. REMOVE AND RESTORE AS REQUIRED FOR THE WORK.
16. THIS AREA HAS CUSTOM CONCRETE FINISHES, FLOWER POTS, BURIED FOUNDATIONS, SPECIAL FLOWERS/VEGATATION, ROAD SIGNS AND ILLUMINATED BOLLARDS. CUT EXISTING SIDEWALKS AND CURBS AT SEAMS. PATCH TO MATCH. PROVIDE SAMPLE MOCKUPS OF THE CONCRETE PATCHES FOR VA REVIEW AND APPROVAL.
17. THIS IS THE MAIN ODGEN ENTRY FOR THE GARAGE AND THE HOSPITAL. SCHEDULE THE DRIVEWAY WORK WITH THE VA NOT LESS THAN 12 WEEKS IN ADVANCE. THE CONTRACTOR MAY CLOSE THIS DRIVEWAY FROM 6 PM OVERNIGHT TO 6 AM DAILY FOR 14 CONSECUTIVE DAYS TOTAL. PROVIDE TRAFFIC PLATES TO OPEN THE DRIVE TO TRAFFIC EVERY DAY FROM 6 AM TO 6 PM. STREET SWEEP THE ENTIRE CIRCLE DRIVE BEFORE RE–OPENING EVERY DAY. PROVIDE CONSTRUCTION FENCE AROUND THE WORK AREA PROTECTING FROM VEHICLE AND FOOT TRAFFIC.




GENERAL NOTES

A. WORK THAT PRODUCES NOISE, DUST, ODORS OR IMPACT PATIENT CARE OR TRAFFIC SHALL BE DONE DURING OFF HOURS. REFER TO THE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

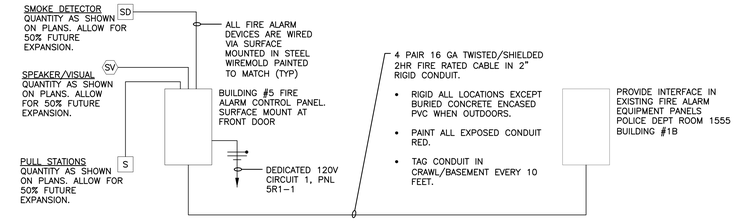
B. THIS IS THE MAIN ODGEN ENTRY TO THE HOSPITAL. PROVIDE CONSTRUCTION FENCING TO KEEP NON–CONSTRUCTION PERSONS FROM ENTERING THE SITE.

C. MAINTAIN DUST CONTROL AND SWEEP THE WORK AREA INCLUDING BUILDING 40 AND GARAGE ENTRIES DAILY.

D. WATER EXISTING LANDSCAPE AND VEGETATION IN THE WORK AREA THAT IS TO REMAIN. RESTORE ANY REMOVED OR DAMAGED LANDSCAPING OR PLANTS.

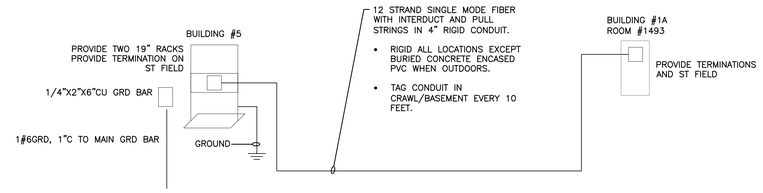
## 1 PROPOSED SITE PLAN

SCALE: 1" = 50'-0"



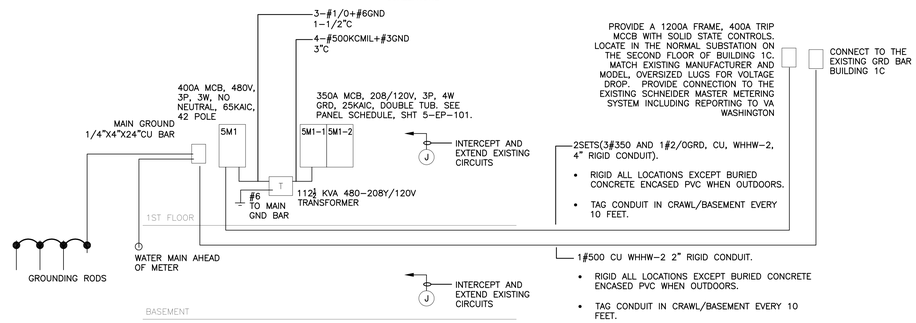

## 5 FIRE ALARM RISER DIAGRAM

SCALE: NONE



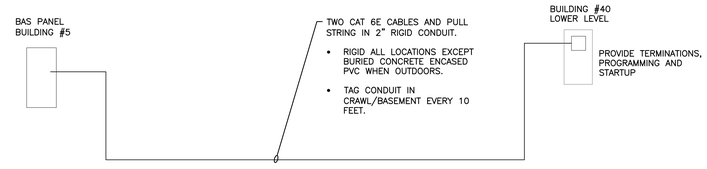

## 6 VOICE /DATA RISER DIAGRAM

SCALE: NONE



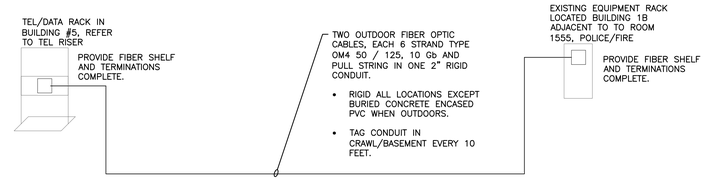

## 7 BUILDING POWER RISER

SCALE: NONE



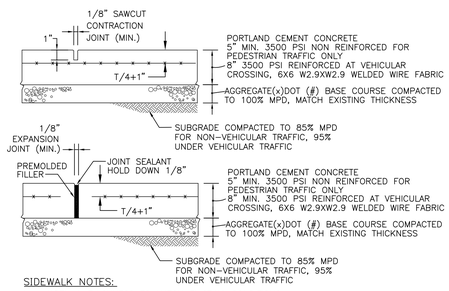

## 8 BUILDING AUTOMATION (BAS) RISER DIAGRAM

SCALE: NONE




## 9 VIDEO SURVELIENCE/CARD ACCESS RISER DIAGRAM

SCALE: NONE

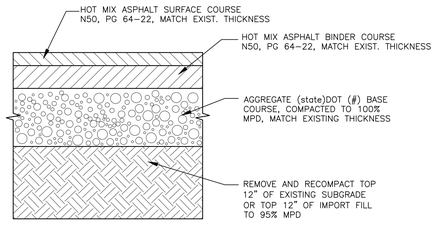



SIDEWALK NOTES:

1. WIDTH & THICKNESS TO MATCH EXISTING CONDITIONS.
2. MAXIMUM TRAVEL SLOPE SHALL NOT EXCEED 5% (20:1).
3. MAXIMUM CROSS SLOPE & AT LANDINGS SHALL BE 2% (50:1).
4. AGGREGATE BASE COURSE SHALL BE MECHANICALLY COMPACTED.
5. SIDEWALK SHALL BE PROMPTLY BACKFILLED AND PROTECTED FROM DAMAGE.
6. SIDEWALK SHALL HAVE A BROOM FINISH.
7. UNLESS OTHERWISE NOTED, CONTRACTION JOINTS TO BE 5' O.C.
8. UNLESS OTHERWISE NOTED, EXPANSION JOINTS TO BE 50' O.C., ABUTTING CURB, OTHER WALKS OR STRUCTURES, AND CHANGES OF DIRECTION.

## 2 SIDEWALK PATCH DETAIL

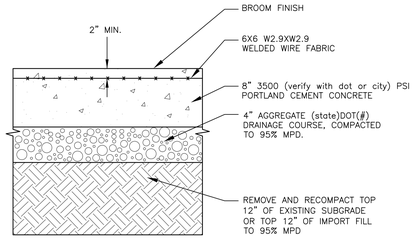
N.T.S.




1. BASE COARSE 3" OR GREATER USE 25.0
2. CHANGE PG64–22 TO PG 58–22 IF RECYCLED ASPHALT (RAP) EXCEED 20%

## 3 FLEXIBLE PAVEMENT PATCH DETAIL

N.T.S.




## 4 RIGID PAVEMENT PATCH DETAIL

N.T.S.

COMPLETION ITEM NO. ____

NOT SPRINKLERED

| | |
|---|---|
| ISSUED FOR SOLICITATION | 04/30/2013 |
| Revisions: | Date |

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Drawing Title: **ELECTRICAL SITE PLAN**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked: | Drawn: JJC

Project Number: 537-12-122

Building Number: 5

Drawing Number: 5 - ES - 100

Dwg2 of 16

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08–6231

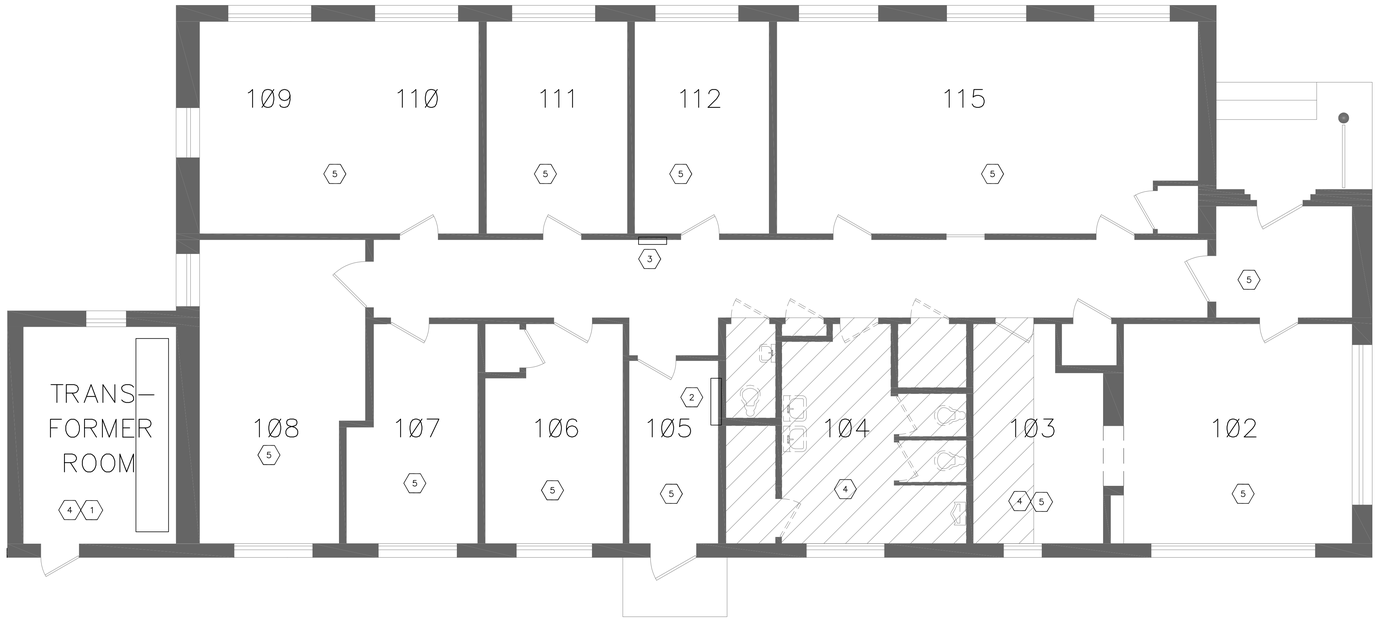
## 1 BASEMENT LEVEL DEMO PLAN

1/4"=1'-0"

north

## DEMOLITION NOTES:

1. REMOVE EXISTING MEDIUM VOLTAGE EQUIPMENT COMPLETE. REMOVE EXISTING PERMANENT AND TEMPORARY POWER FEEDS COMPLETE.
2. REMOVE POWER PANEL AND PARCH
3. REMOVE FIRE ALARM AND ALL DEVICES COMPLETE. REDIRECT ANY CIRCUITS TO REMAIN TO NEW PANEL
4. REMOVE ALL POWER, LIGHTING, FEEDERS, PULLBOXES, CONTROLS, VOICE/DATA, TERMINATIONS, ABANDONED WIRE OR CONDUIT, ETC.
5. MAINTAIN SERVICES IN ALL AREAS THAT ARE TO REMAIN.




## 2 FIRST FLOOR LEVEL DEMO PLAN

1/4"=1'-0"

north

COMPLETION ITEM NO. ___

NOT SPRINKLERED

| | |
|---|---|
| ISSUED FOR SOLICITATION | 04/30/2013 |
| Revisions: | Date |

CONSULTANTS:

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TELEPHONE: 312/616-0000

Drawing Title: **DEMOLITION ELECTRICAL FLOOR PLAN**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked: | Drawn: MLC

Project Number: 537-12-122

Building Number: 5

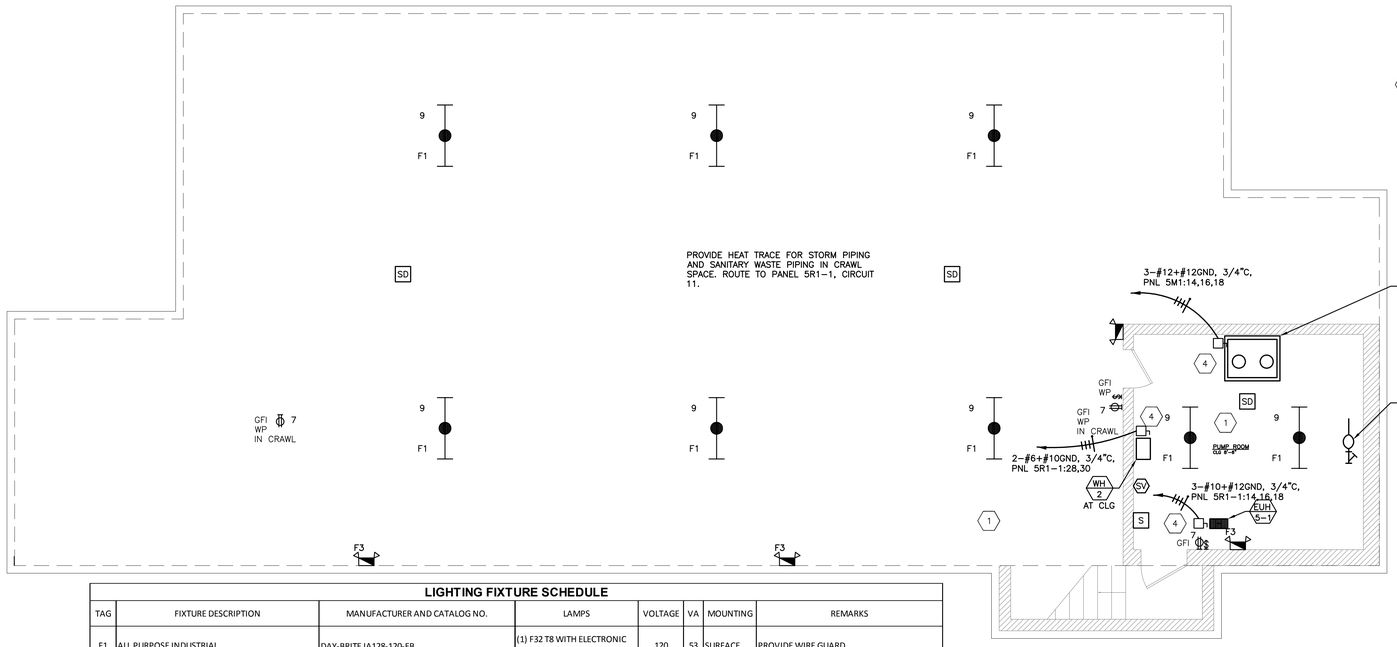
Drawing Number: 5-EDP-101

DwgXX of 16

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231




## 1 BASEMENT LEVEL ELECT PLAN

1/4"=1'-0"

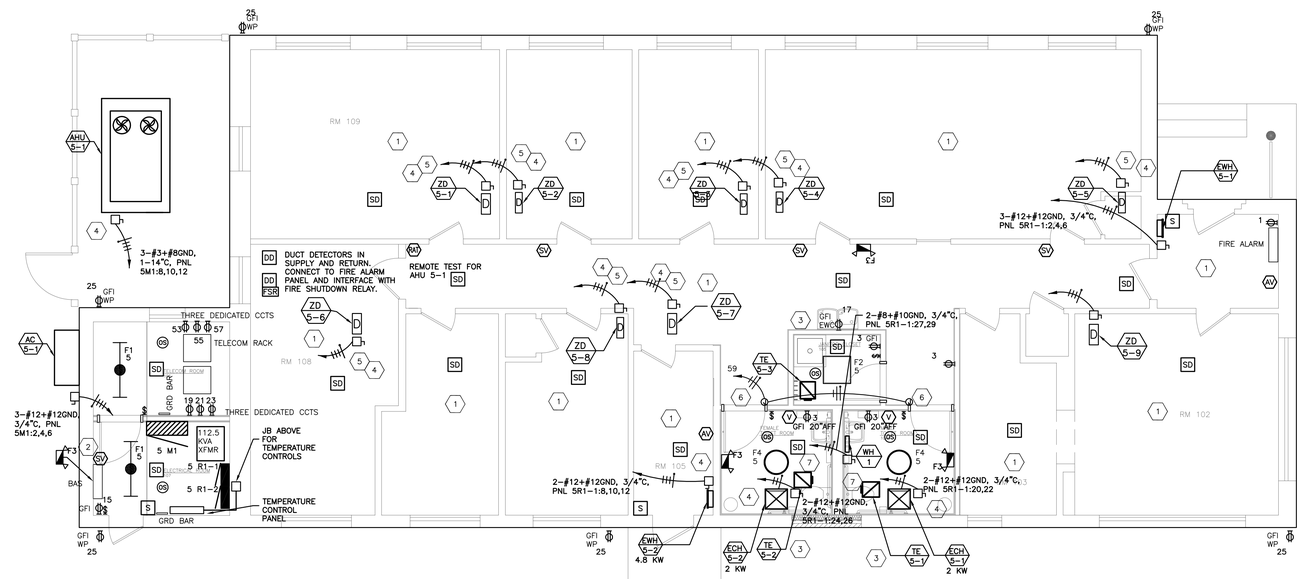
### NOTES:

1. REDIRECT ALL CIRCUITS TO REMAIN TO THE NEW PANELS.
2. EXTEND THE EXISTING (20A-2P) 208V ROADWAY SIGN CIRCUITS. PROVIDE ASTRO TIME CLOCK WITH PHOTOCELL CONTROL.
3. INTERLOCK EXHAUST FAN WITH ROOM LIGHT.
4. DISCONNECT SWITCH BY MECHANICAL CONTRACTOR. (TYP)
5. ROUTE 3-#12+#12GND, 3/4"C TO PANEL 5M1.
6. PROVIDE POWER TO NEW POWER-ASSIST RESTROOM DOORS. WIRE TO PUSH BUTTONS ON THE INSIDE AND OUTSIDE WALLS.
7. PROVIDE NURSE CALL SYSTEM FOR TWO TOILET ROOMS. INCLUDE 1 PULL CHAIN DEVICE IN EACH TOILET ROOM. PROVIDE MASTER STATION WITH AUDIBLE AND VISUAL INDICATION. PROVIDE DOME LIGHTS TO INDICATE ALARM CONDITIONS. PROVIDE POWER AND CONTROL WIRING, POWER SUPPLIES, RESETS, AND ACCESSORIES FOR A COMPLETE FUNCTIONING SYSTEM.

### LIGHTING FIXTURE SCHEDULE

| TAG | FIXTURE DESCRIPTION | MANUFACTURER AND CATALOG NO. | LAMPS | VOLTAGE | VA | MOUNTING | REMARKS |
|---|---|---|---|---|---|---|---|
| F1 | ALL PURPOSE INDUSTRIAL | DAY-BRITE IA128-120-EB OTHER MFG: LITHONIA, METALUX | (1) F32 T8 WITH ELECTRONIC BALLAST | 120 | 53 | SURFACE | PROVIDE WIRE GUARD |
| F2 | 2' BY 2' SURFACE MOUNTED FLUORESCENT FIXTURE | DAY-BRITE 2SM217-FS12-120-EB OTHER MFG: LITHONIA, METALUX | (2) F17 T8 WITH ELECTRONIC BALLAST | 120 | 53 | SURFACE | |
| F3 | BATTERY PACK | DAY-BRITE CTX SERIES OTHER MFG: LITHONIA, METALUX | (2) 12W HALOGEN | 120 | 24 | SURFACE | CONNECT TO LIGHTING CIRCUIT AHEAD OF SWITCH. |
| F4 | ROUND SURFACE MOUNT LOW PROFILE FIXTURE | DAY-BRITE SL20-2/27BX-DRA-CM OTHER MFG: LITHONIA, METALUX | (2) 27BX | 120 | 54 | SURFACE | |

NOTES:
1. EXISITNG LIGHTING CONTROL SYSTEM IS THE LCVR48S WATT STOPPER SYSTEM. THIS CONTRACTOR SHALL UPDATE AND REPROGRAM THE SYSTEM AND UPDATE SCHEDULES AS REQUIRED.
2. CONTRACTOR SHALL COORDINATE NEW LIGHTING COMPONENTS TO ENSURE THAT THEY PHYSICALLY FIT WITHIN EXISTING LUMINAIRES AND EXIT SIGNS.




## 2 FIRST FLOOR LEVEL ELECT PLAN

1/4"=1'-0"

### PANELBOARD SCHEDULE — BUILDING 5 M1

LOCATION: FLOOR, ROOM
SERVICE: 480V-3PH-3W — 480 V
MAIN BUS/ BREAKER: 400A MCB
MAIN BUS TYPE: COPPER
INTERRUPT RATING: 65,000 AIC
FED FROM: BLDG 1C, 400A CB
NEUTRAL BUS: 100%
GROUND BUS: STANDARD
MOUNTING: SURFACE

| T | N | DESCRIPTION | CCT. NO. | CIRCUIT BREAKER | CIRCUIT LOAD | CONNECTED LOAD (VA) A | B | C | CIRCUIT LOAD | CIRCUIT BREAKER | CCT. NO. | T | N | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | | | 1 | | 17800 | 20500 | | | 2700 | | 2 | M | | |
| L | | 112.5KVA TRANSFORMER | 2 | 150A-3P | 25375 | | 28075 | | 2700 | 20A-3P | 4 | M | | ACS-1 |
| L | | | 3 | | 24375 | | | 27075 | 2700 | | 6 | M | | |
| H | | | 5 | | 2000 | 19000 | | | 17000 | | 8 | M | | |
| H | | DUCT HEATER ZD-5-1 | 7 | 20A-3P | 2000 | | 19000 | | 17000 | 50A-3P | 10 | M | | AHU-5-1 |
| H | | | 9 | | 2000 | | | 19000 | 17000 | | 12 | M | | |
| | | | 11 | | 1200 | 1900 | | | 700 | | 14 | M | | |
| H | | DUCT HEATER ZD-5-2 | 13 | 20A-3P | 1200 | | 1900 | | 700 | 20A-3P | 16 | M | | SUMP PUMPS |
| H | | | 15 | | 1200 | | | 1900 | 700 | | 18 | M | | |
| H | | | 17 | | 1200 | 3500 | | | 2300 | | 20 | H | | |
| H | | DUCT HEATER ZD-5-3 | 19 | 20A-3P | 1200 | | 3500 | | 2300 | 20A-3P | 22 | H | | DUCT HEATER ZD5-7 |
| H | | | 21 | | 1200 | | | 3500 | 2300 | | 24 | H | | |
| H | | | 23 | | 2100 | 3100 | | | 1000 | | 26 | H | | |
| H | | DUCT HEATER ZD-5-4 | 25 | 20A-3P | 2100 | | 3100 | | 1000 | 20A-3P | 28 | H | | DUCT HEATER ZD5-8 |
| H | | | 27 | | 2100 | | | 3100 | 1000 | | 30 | H | | |
| H | | | 29 | | 2100 | 5200 | | | 3100 | | 32 | H | | |
| H | | DUCT HEATER ZD-5-5 | 31 | 20A-3P | 2100 | | 5200 | | 3100 | 20A-3P | 34 | H | | DUCT HEATER ZD5-9 |
| H | | | 33 | | 2100 | | | 5200 | 3100 | | 36 | H | | |
| H | | | 35 | | 2800 | 2800 | | | | | 38 | | | |
| H | | DUCT HEATER ZD-5-6 | 37 | 20A-3P | 2800 | | 2800 | | | 20A-3P | 40 | | | SPARE |
| H | | | 39 | | 2800 | | | 2800 | | | 42 | | | |
| | | | | | | 56000 | 63575 | 62575 | | | | | | |

TOTAL VA PER PHASE

| | CONNECTED LOAD | DEMAND FACTOR | DEMAND LOAD |
|---|---|---|---|
| L LIGHTING | 67.55 KVA | 1.25 | 84.44 KVA |
| R RECEPTACLES | 0.00 KVA | 1.00 | 0.00 KVA |
| M MOTOR / EQUIP. | 61.20 KVA | 1.00 | 61.20 KVA |
| H ELECTRIC HEAT | 53.40 KVA | 1.00 | 53.40 KVA |
| S SPARE | 0.00 KVA | 0.50 | 0.00 KVA |
| X SPACE | 0.00 KVA | 0.25 | 0.00 KVA |
| TOTAL CONNECTED LOAD: | 182.15 KVA | TOTAL DEMAND LOAD: | 199.04 KVA |
| | | TOTAL DEMAND CURRENT: | 239.41 AMPS |

### PANELBOARD SCHEDULE — BLDG 5 R1-1

LOCATION: FLOOR, ROOM
SERVICE: 208Y/120V-3PH-4W — 208 V
MAIN BUS/ BREAKER: 350A MCB
MAIN BUS TYPE: COPPER
INTERRUPT RATING: 25,000 AIC
FED FROM: PANEL R1-1 VIA 112.5KVA XFMR
NEUTRAL BUS: 100%
GROUND BUS: STANDARD
MOUNTING: SURFACE

| T | N | DESCRIPTION | CCT. NO. | CIRCUIT BREAKER | CIRCUIT LOAD | CONNECTED LOAD (VA) A | B | C | CIRCUIT LOAD | CIRCUIT BREAKER | CCT. NO. | T | N | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | | FIRE ALARM PANEL | 1 | 20A-1P | 400 | 1800 | | | 1400 | | 2 | H | | |
| R | | RESTROOM REC | 3 | 20A-1P | 400 | | 1800 | | 1400 | 20A-3P | 4 | H | | EWH5-1 |
| L | | RESTROOM LTG | 5 | 20A-1P | 400 | | | 1800 | 1400 | | 6 | H | | |
| R | | BASEMENT REC | 7 | 20A-1P | 600 | 2000 | | | 1400 | | 8 | H | | |
| L | | BASEMENT LTG | 9 | 20A-1P | 600 | | 2000 | | 1400 | 20A-3P | 10 | H | | EWH5-2 |
| R | | BSMT HEAT TRACE | 11 | 20A-1P | 1200 | | | 2600 | 1400 | | 12 | H | | |
| R | | TEMP CONTROL PNL | 13 | 20A-1P | 400 | 2600 | | | 2200 | | 14 | H | | |
| R | | BAS PANEL | 15 | 20A-1P | 400 | | 2600 | | 2200 | 30A-3P | 16 | H | | EUH5-1 |
| R | | EWC | 17 | 20A-1P | 400 | | | 2600 | 2200 | | 18 | H | | |
| R | | TELECOM REC | 19 | 20A-1P | 200 | 2000 | | | 1800 | 20A-2P | 20 | H | | ECH5-1 |
| R | | TELECOM REC | 21 | 20A-1P | 200 | | 2000 | | 1800 | | 22 | H | | |
| R | | TELECOM REC | 23 | 20A-1P | 200 | | | 2000 | 1800 | 20A-2P | 24 | H | | ECH5-2 |
| R | | OUTDOOR GFI REC | 25 | 20A-1P | 1200 | 3000 | | | 1800 | | 26 | H | | |
| H | | INSTANT WATER HTR | 27 | 40A-2P | 4000 | | 10575 | | 6575 | 50A-2P | 28 | H | | INSTANT WATER HTR |
| H | | WH-1 | 29 | | 4000 | | | 10575 | 6575 | | 30 | H | | WH-2 |
| | | | | | | 11400 | 18975 | 19575 | | | | | | 3 |

TOTAL VA PER PHASE

| | CONNECTED LOAD | DEMAND FACTOR | DEMAND LOAD |
|---|---|---|---|
| L LIGHTING | 1.00 KVA | 1.25 | 1.25 KVA |
| R RECEPTACLES | 5.60 KVA | 1.00 | 5.60 KVA |
| M MOTOR / EQUIP. | 0.00 KVA | 1.00 | 0.00 KVA |
| H ELECTRIC HEAT | 43.35 KVA | 1.00 | 43.35 KVA |
| S SPARE | 0.00 KVA | 0.50 | 0.00 KVA |
| X SPACE | 0.00 KVA | 0.25 | 0.00 KVA |
| TOTAL CONNECTED LOAD: | 49.95 KVA | TOTAL DEMAND LOAD: | 50.20 KVA |
| | | TOTAL DEMAND CURRENT: | 139.35 AMPS |

### PANELBOARD SCHEDULE — BLDG 5 R1-2

LOCATION: FLOOR, ROOM
SERVICE: 208Y/120V-3PH-4W — 208 V
MAIN BUS/ BREAKER: 225A MLO
MAIN BUS TYPE: COPPER
INTERRUPT RATING: 42,000 AIC
FED FROM: PANEL
NEUTRAL BUS: 100%
GROUND BUS: STANDARD
MOUNTING: SURFACE
MANUFACTURER / MODEL: EATON CUTLER-HAMMER PRL1A

| T | N | DESCRIPTION | CCT. NO. | CIRCUIT BREAKER | CIRCUIT LOAD | CONNECTED LOAD (VA) A | B | C | CIRCUIT LOAD | CIRCUIT BREAKER | CCT. NO. | T | N | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R | | RELOCATED CKT | 31 | 20A-1P | 800 | 1600 | | | 800 | 20A-1P | 32 | L | | RELOCATED CKT |
| R | | RELOCATED CKT | 33 | 20A-1P | 800 | | 1600 | | 800 | 20A-1P | 34 | L | | RELOCATED CKT |
| R | | RELOCATED CKT | 35 | 20A-1P | 800 | | | 1600 | 800 | 20A-1P | 36 | L | | RELOCATED CKT |
| R | | RELOCATED CKT | 37 | 20A-1P | 800 | 1600 | | | 800 | 20A-1P | 38 | L | | RELOCATED CKT |
| R | | RELOCATED CKT | 39 | 20A-1P | 800 | | 1600 | | 800 | 20A-1P | 40 | L | | RELOCATED CKT |
| R | | RELOCATED CKT | 41 | 20A-1P | 800 | | | 1600 | 800 | 20A-1P | 42 | L | | RELOCATED CKT |
| R | | RELOCATED CKT | 43 | 20A-1P | 800 | 1600 | | | 800 | 20A-1P | 44 | L | | RELOCATED CKT |
| R | | RELOCATED CKT | 45 | 20A-1P | 800 | | 1600 | | 800 | 20A-1P | 46 | L | | RELOCATED CKT |
| R | | RELOCATED CKT | 47 | 20A-1P | 800 | | | 1600 | 800 | 20A-1P | 48 | L | | RELOCATED CKT |
| R | | RELOCATED CKT | 49 | 20A-1P | 800 | 1600 | | | 800 | 20A-1P | 50 | L | | RELOCATED CKT |
| R | | RELOCATED CKT | 51 | 20A-1P | 800 | | 1600 | | 800 | 20A-1P | 52 | L | | RELOCATED CKT |
| R | | TELECOM REC | 53 | 20A-1P | 200 | | | 200 | | 20A-1P | 54 | | | SPARE |
| R | | TELECOM REC | 55 | 20A-1P | 200 | 200 | | | | 20A-1P | 56 | | | SPARE |
| R | | TELECOM REC | 57 | 20A-1P | 200 | | 200 | | | 20A-1P | 58 | | | SPARE |
| R | | AUTOMATIC DOOR OP | 59 | 20A-1P | 1000 | | | 1000 | | 20A-1P | 60 | | | SPARE |
| | | | | | | 6600 | 6900 | 6000 | | | | | | |

TOTAL VA PER PHASE

| | CONNECTED LOAD | DEMAND FACTOR | DEMAND LOAD |
|---|---|---|---|
| L LIGHTING | 8.80 KVA | 1.25 | 11.00 KVA |
| R RECEPTACLES | 10.40 KVA | 1.00 | 10.40 KVA |
| M MOTOR / EQUIP. | 0.00 KVA | 1.00 | 0.00 KVA |
| H ELECTRIC HEAT | 0.00 KVA | 1.00 | 0.00 KVA |
| S SPARE | 0.00 KVA | 0.50 | 0.00 KVA |
| X SPACE | 0.00 KVA | 0.25 | 0.00 KVA |
| TOTAL CONNECTED LOAD: | 19.20 KVA | TOTAL DEMAND LOAD: | 21.40 KVA |
| | | TOTAL DEMAND CURRENT: | 59.40 AMPS |

NOTES:
1. EXISTING LOADS ARE BASED ON EXISTING TYPED OR HANDWRITTEN PANEL SCHEDULES. LOAD SIZES ARE ESTIMATED.

COMPLETION ITEM NO. ____

NOT SPRINKLERED

| | |
|---|---|
| ISSUED FOR SOLICITATION | 04/30/2013 |
| Revisions: | Date |

CONSULTANTS:

ARCHITECT/ENGINEERS:

TENG

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Drawing Title: **ELECTRICAL FLOOR PLAN**

Approved: Project Director

Project Title: ELECTRICAL SERVICE RELOCATION FOR BLDG #5 CO "A" HVAC & ADA TOILETS

Location: JESSE BROWN V.A.M.C.

Date: FEBRUARY 13, 2013 | Checked | Drawn: MLC

Project Number: 537-12-122

Building Number: 5

Drawing Number: 5-EP-101

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Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231