



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
DEFK9013

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT
304-558-2544

RFQ COPY
TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIV ENGINEERING & FACILITIES
ARMORY BOARD SECTION

1707 COONSKIN DRIVE
CHARLESTON, WV
25311-1099 304-341-6368

| DATE PRINTED | TERMS OF SALE | SHIP VIA | F.O.B | FREIGHT TERMS |
|-------------------|---------------|----------|-------|---------------|
| 05/12/2009 | | | | |

BID OPENING DATE: **05/28/2009** BID OPENING TIME **01:30PM**

| LINE | QUANTITY | UOP | CAT. NO | ITEM NUMBER | UNIT PRICE | AMOUNT |
|---|----------|-----------|---------|---------------|------------|--------|
| ADDENDUM #02 | | | | | | |
| <p>THIS ADDENDUM IS ISSUED TO MODIFY, CLARIFY, AND ADD TO THE ORIGINAL REQUEST FOR QUOTATION SPECIFICATIONS; AND TO ANSWER VENDOR QUESTIONS PER THE ATTACHED DOCUMENTATION. THE BID OPENING IS EXTENDED TO 5/28/2009; 1:30 PM</p> <p>REVISED BID OPENING DATE: 5/28/2009; 1:30 PM</p> | | | | | | |
| 0001 | 1 | LS | | 031-06 | | |
| BUILDING & HVAC RENOVATION | | | | | | |
| ***** THIS IS THE END OF RFQ DEFK9013 ***** TOTAL: _____ | | | | | | |

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

| | | |
|-----------|-----------|-----------------------------------|
| SIGNATURE | TELEPHONE | DATE |
| TITLE | FEIN | ADDRESS CHANGES TO BE NOTED ABOVE |

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130

**Charleston Armory HVAC Renovations
And Architectural Improvements
DEFK - 9013**

Addendum No.: 2
Issue Date: May 12, 2009
Architects Project No.: 115063
Bid Opening: 1:30 p.m. May 20, 2009

From: **Michael Baker Jr., Inc.**
5088 Washington Street, West
Charleston, West Virginia 25313

To: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the original Contract Documents dated **March 13, 2009** as noted below. Acknowledge receipt of this Addendum by inserting the number and issue date of this addendum in the blank space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of **6 pages** and the attached documents:

- A2.1 – Drawing A2.1– Revised Detail 3 - 1 page
- A2.2 – Drawing A3.1 – Revised Detail 11 - 1 page
- A2.3 – Drawing A3.2 – Revised Details 1 & 2 - 1 page
- A2.4 – New Elevation Drawing - 1 page
- A2.5 – New Elevation Drawing – New Detail - 1 page
- A2.6 – Drawing M1.2 – Revised Drawing - 1 page
- A2.7 – Drawing M1.2 – Revised Drawing - 1 page
- A2.8 – Drawing M1.2 – Revised Drawing - 1 page
- A2.9 – Drawing M1.2 – Revised Drawing - 1 page
- A2.10 – Drawing M0.1 – Revised Schedules - 1 page
- A2.11 – Drawing M1.1 – Mailroom Revision - 1 page
- A2.12 – Drawing M1.2 – Lobby Duct Revision - 1 page
- A2.13 – Drawing E1.2 – Revised Lighting Layout - 1 page
- A2.14 – Drawing M1.2 – Revised Drawing - 1 page

CHANGES TO BIDDING REQUIREMENTS:

1. CLARIFICATION to ALL BIDDERS. Addendum is transmitted by the West Virginia State Purchasing Division to all that attended the mandatory Pre-Bid meeting only. Any sub-contractors or suppliers should be notified by the prime bidder that attended the Pre-Bid meeting of addenda. The Owner or Architect/Engineer shall be responsible for sending addendum to sub-contractors and suppliers.

CHANGES TO CONDITIONS OF THE CONTRACT (DIVISION 1):

2. ADD Paragraph 1.3.A.7, 8 and 9. to Section 01311 as follows:

7. Contractor shall coordinate with the Owner for scheduling of all demolition work as follows:
 - a. Heavy Demolition work inside the facility shall be done in evenings or on weekends.
 - b. Light Demolition work inside the facility shall be reviewed on a case by case basis and the Contractor shall coordinate with the Owner to schedule this work.
 - c. Exterior Demolition work may be done during normal work day hours but the Contractor shall coordinate with the Owner to schedule this work.
8. The Owner has scheduled for asbestos removal from selected areas of the building. This work is scheduled to be completed prior to this work commencing. The Contractor shall inform the Owner/Architect if any additional suspect hazardous materials are discovered and the Owner will schedule further removal.
9. The Owner will remove and reinstall any loose furniture, banner flags in the War Room that may be required for construction purposes. The Contractor shall carefully remove and reinstall all fixed equipment, fixtures, etc. required for construction purposes.

CHANGES TO ADDENDUM 1

10. CLARIFICATION TO Sketch A1.9 in Addendum 1:
Loop piping does not require insulation.

CHANGES TO SPECIFICATIONS (DIVISIONS 2 THRU 16):

11. ADD paragraph 3.15.E to specification section 04810 Unit Masonry Assemblies as follows:
 - E. Contractor shall repair all openings through masonry walls where heating units, return air grilles, transfer grilles, through wall supply diffusers, piping, etc. are removed. Toothing of masonry is not required. Contractor shall finish and strike masonry joints to match existing adjacent conditions.
12. ADD paragraphs 3.5.C & D to specification section 09901 "Painting" as follows:
 - C. Concrete Unit Masonry: Provide the following finish systems over interior concrete masonry: Provide one coat of block filler above acoustical tile ceilings, extending to bottom of roof or floor deck.
 1. Semi gloss Acrylic-Enamel Finish: Two finish coats over block filler.
 - a. Block Filler: Concrete unit masonry block filler.
 - b. Finish Coats: Interior semi gloss acrylic enamel.
 - D. Contractor shall paint newly patched areas in existing exposed surfaces, to the nearest corner of the existing wall surface. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Contractor shall match existing colors and finishes adjacent.

13. DELETE paragraph 1.7.A.3 specification section 15745 entirely.
14. DELETE paragraph 15181.3.1. D in specification section 15181. reference to type K cooper for 6" pipe.
15. ADD to specification 15900.1.2.B

Alternate manufactures.
 Andover
 Automated Logic

CHANGES TO DRAWINGS:

16. REVISE notes on the Overall Site Plan on Drawing S1.1 reading "Underground Electrical (See Electrical Drawings for Type and Size) 6/S1.1" to read as follows:
 "Underground Electrical shall be routed in existing conduits from existing 4x4 Junction Boxes to existing Switch Board. Contractor shall test and verify the existing conduits are free of obstructions and shall route new underground electrical as required. – See Electrical for Type and Size" DELETE the tag reference 6/S1.1 in both locations.
17. ADD note number 11 to the "General Notes" on Drawing S1.1 as follows:
 11. Access to the Parking and Driveway in the rear (west side) of the facility shall be maintained at all times during the construction. Contractor shall provide appropriate and safe methods for maintaining the access and shall obtain approval for such methods by the Architect/Engineer prior to implementation.
18. ADD the following note 1 to detail 3 on Drawing S1.1 as follows:
 1. This detail is to be utilized for the patching the existing paved trench area only. Detail 6/S1.1 shall be used for all areas of paving within parking or driveway situations.
19. REVISE the tag on Partial Site Plan A on Drawing S1.2 reading 3/S1.1 to read "6/S1.1".
20. REVISE the tag on Partial Site Plan B on Drawing S1.2 reading 2/S1.1 to read 2/S2.1.
21. REVISE to the existing note 23 General and Coded Notes on Drawing A2.1 adding the following sentence:

“Contractor may option to replace ceiling grids and tiles in corridors and offices in lieu of videoing and replacing existing.”

22. ADD notes 24 & 25 to the General and Coded Notes on Drawing A2.1 as follows:

24. Contractor may leave the ceiling tiles out of the ceilings during the construction and provided temporary lighting, in corridor and office areas except in the TAG wing 2nd floor. All ceilings on the 2nd floor of the TAG wing must be reinstalled on a daily basis after working in the area the evening or weekend before.

25. Contractor shall provide Building Perimeter Trim and Extension at the storefront entrance in the Lobby Area 122 to achieve the ceiling height specified. See 3/A2.1 for location and 6/A3.1 for detail.

23. REVISE tags on drawing A2.1 - both reading 8/A3.1 to read as follows: Tag for bracing detail over Storage Rooms shall read “2/A3.2” and Tag for beam detail over the Corridor shall read “1/A3.2”.

24. ADD note numbers 31 & 32 to the “General Demolition Notes” on Drawing D1.1 as follows:

31. Contractor shall remove all unused HVAC through wall diffusers, return air grilles, transfer grilles, and piping where accessible and patch walls with masonry.

32. Contractor shall remove all unused steam water lines where exposed in rooms, offices, corridors, etc. and where existing ceilings have been removed for access to install equipment, piping, wiring etc. Piping in un-accessible areas, such as in chases, in walls, above ceilings that are not removed, etc., shall be abandoned in place.

25. REVISE Detail 11 on Drawing A3.1 as per attachment “A2.2”. This attachment was inadvertently omitted from addendum 1 (attachment “A1.8”).

26. REVISE Details title tags on drawing A3.2 to read 1/A3.2 “Soffit and HVAC Support Wall A Detail” and 2/A3.2 Soffit and HVAC Support Wall B Detail”. REVISE curb flashing on both details as per attachment “A2.3”.

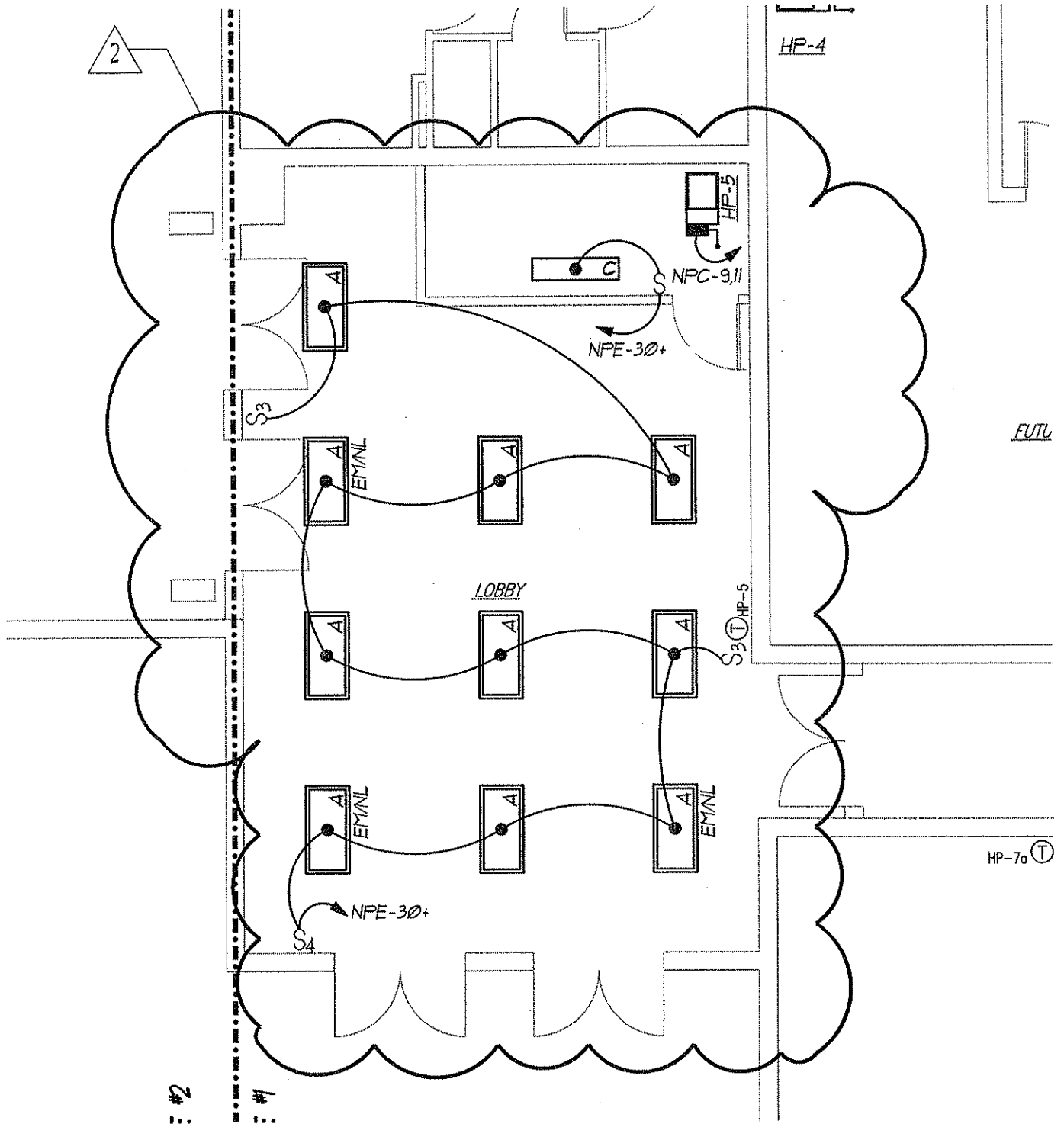
27. REVISE note on Demolition – Enlarged Mechanical Room (Alternate #1 & Alternate #2) on Drawing D2.1 reading “Existing Panel to be removed” to read as follows: Existing Panel to be reused as Panel NPE (Alternate) for Alternate # 2 work. Contractor shall remove all existing breakers and wiring necessary for use as the revised panel.

28. ADD note on drawings M1.1 – M1.4 as follows:

- Add ½" ductliner to all exposed rectangular supply and outside air ductwork. Duct sizes shown are clear inside dimensions. Increase duct sizes for liner.
29. REVISE notes in the Drill Hall on Mechanical – First Floor Partial HVAC Plan on Drawing M1.1 reading "Double Wall Insulated Spiral Duct Factory Painted Color selected by Owner" to read: "Single Spiral Duct Factory Painted Color selected by Owner".
 30. CLARIFICATION to Drawing ME1.1 - The roof top units RTU-1 and RTU-2 on the roof are for Alternate 2 construction. All work for these units including the structural support below shall be considered in Alternate 2.
 31. ADD the following note to Mechanical – Enlarged Mechanical Room (Alternate #1) - drawing ME1.4:
Connect 3" and 1 ¼" gas lines from roof to main gas line inside mechanical room. Include ball valves as required.
 32. CLARIFICATION Drawing ME1.4 - The 6" round supply and return piping to FC-1 shall penetrate the Mechanical room wall a minimum of 36" below grade. Provide water tight sleeve and seal perpendicular to exterior wall.
 33. CLARIFICATION Drawing ME1.4:
Provide pre-insulated steel pipe and fittings from mechanical room wall to fluid cooler.
 34. ADD New Elevation View of the Drill Hall looking west toward the RTU Wall penetration per attachment "A2.4".
 35. ADD New Detail supplementing the Elevation listed in Item 34 above. This drawing is titled "DETAIL DUCT RAIL" and is attachment "A2.5".
 36. ADD the following general note to drawings M1.1 – M1.4. Add ½" ductliner to all exposed rectangular supply and outside air ductwork from Heat Pumps and ERV's. Duct sizes shown are clear inside dimensions. Increase duct sizes for liner.
 37. REVISE Drawing M1.1 per attachment A2.6. Revise duct configuration and size of ERV-5
 38. REVISE Drawing M1.2 per attachment A2.7. Omit HP-3 and associated ductwork, piping & electrical components. Revise layout, ERV size and components accordingly.
 39. REVISE Drawing M1.2 per attachment A2.8. Revise and relocate HP-12 into ceiling space and add ERV-6 and associated ductwork, piping, electrical and components.
 40. REVISE Drawing M1.2 per attachment A2.9. Drawing is a continuation of sketch A2.8
 41. REVISE schedules on M0.1 per attachment A2.10.

42. REVISE Drawing M1.1 as per Attachment A2.11. This drawing is titled "Mail Room Revision."
43. REVISE Drawing M1.2 as per Attachment A2.12. This drawing is titled "Lobby Duct Revision."
44. REVISE Drawing E1.2 as per Attachment A2.13. This drawing includes a revision of the Lighting Layout.
45. ADD the following notes to the below referenced Mechanical Drawings:
 1. Wall heaters "WH-1" and "WH-2" are located on sheet M1.3. Provide a circuit for each. See panel schedules for conduit and wiring.
 2. Wall heater "WH-3" is located on sheet M1.4. Provide a circuit. See panel schedules for conduit and wiring.
 3. Wall heater "WH-4" is located on sheet M1.4 provide conduit and wiring identical to "WH-3" from spaces within PANEL "NPB/(BASE BID) 31 & 33. Provide conduit and wiring identical to "WH-3" from spaces within PANEL "NPB (ALTERNATE) 18 & 20.
 4. Wall heater "WH-5" is located on sheet M1.1, provide a circuit. See panel schedules for conduit and wiring.
 5. Wall heater "WH-6" are located on sheet M1.2, provide a circuit for each. See panel schedules for conduit and wiring.
 6. Wall heaters "WH-7" and "WH-8" are located on sheet M1.2, provide a circuit for each. Provide conduit and wiring identical to "WH-6" from spaces 21 & 23 (WH-7) and spaces 22 & 24 (WH-8) within PANEL "NPE" (ALTERNATE).
 7. Wall heaters "WH-9" and "WH-10" are located on sheet M1.4, provide a circuit for each. Provide conduit and wiring identical to "WH-6" from spaces 25 & 27 (WH-9) and spaces 26 & 28 (WH-10) within PANEL "NPE" (ALTERNATE).
 8. Electric duct heater illustrated within addendum #1 shall be power from BASE BID PANEL "NPB" or ALTERNATE PANEL "NPB/. See panel schedule for conduit and conductors.
 9. All secondary drain pans shall be drained into the condensate pump with the primary drains.
 10. The intake louver with the motorized damper shall be 12x12. See EXHAUST FAN CONTROL SCHEMATIC for EF-1 for operation and see sheet M1.2 for location.

END OF ADDENDUM

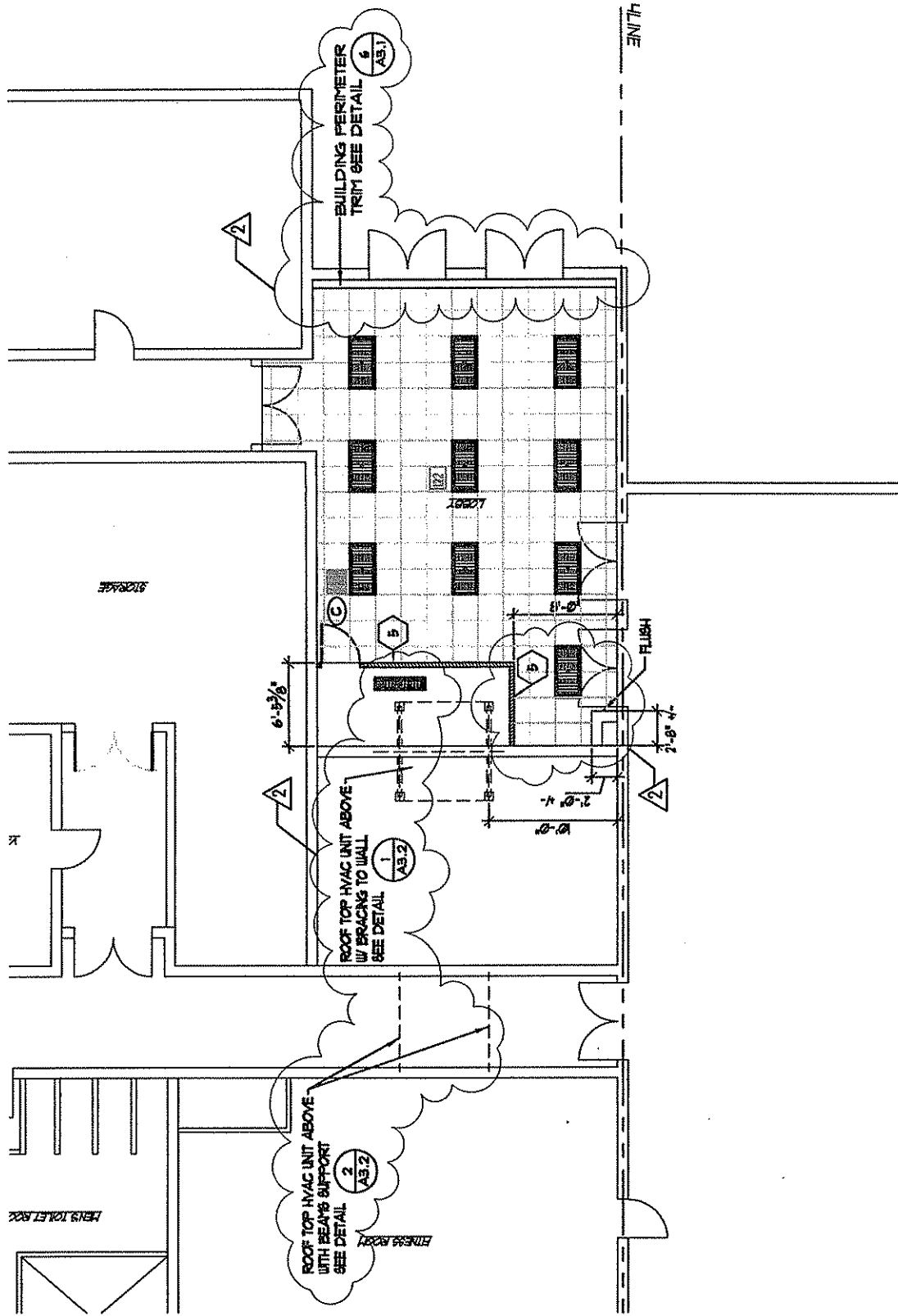


ELECTRICAL - FIRST FLOOR PARTIAL LIGHTING & POWER PLAN

Baker
 Michael Baker Jr., Inc.
 5088 West Washington St.
 Charleston, West Virginia
 25313
 BAKER & ASSOCIATES (304) 769-0821
 A unit of Michael Baker Corporation

| | |
|---|------------------------|
| Drawing Title: 1ST. FLOOR LIGHTING & POWER | Date: 5/11/09 |
| Project: CHARLESTON ARMORY | Project No.: 115063 |
| Revision Description: REVISIONS | Scale: NTS |

Drawing Number:
E1.2
 Sheet 1 of 1



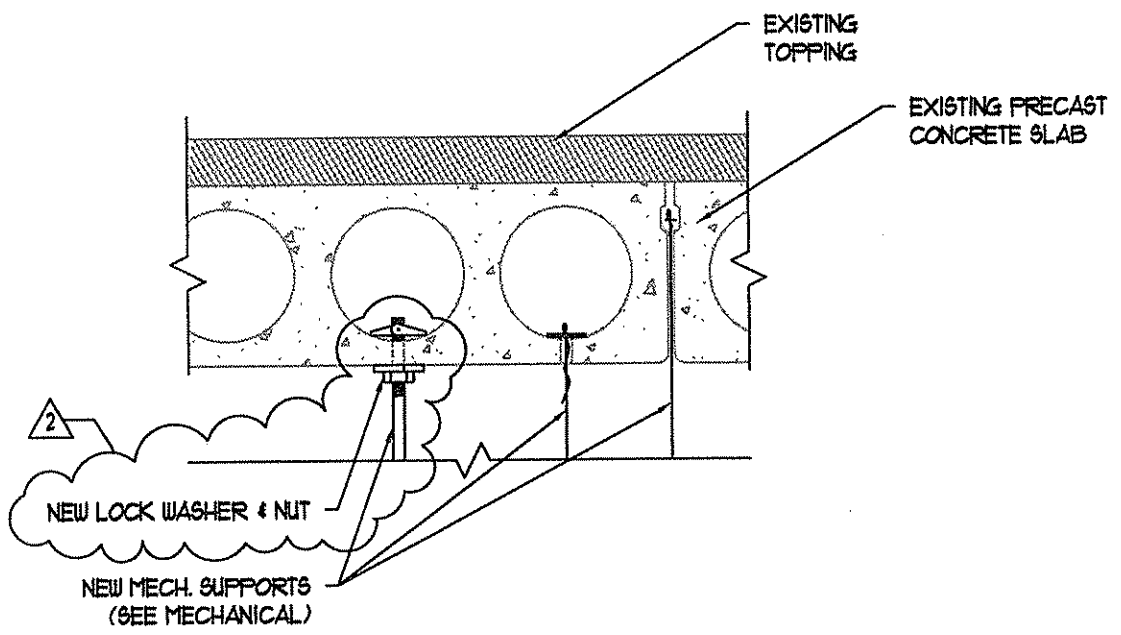
Baker
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 5088 West Washington St.
 Charleston, West Virginia
 25313
 (304) 769-0821

| | |
|-----------------------|----------------------|
| Drawing Title: | LAYOUT/LIGHTING PLAN |
| Project: | CHARLESTON ARMORY |
| Revision Description: | REVISIONS |

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| Date: | 5/08/09 |
| Project No.: | 115063 |
| Scale: | NTS |

Drawing Number:
A2.1
 Sheet 1 of 1



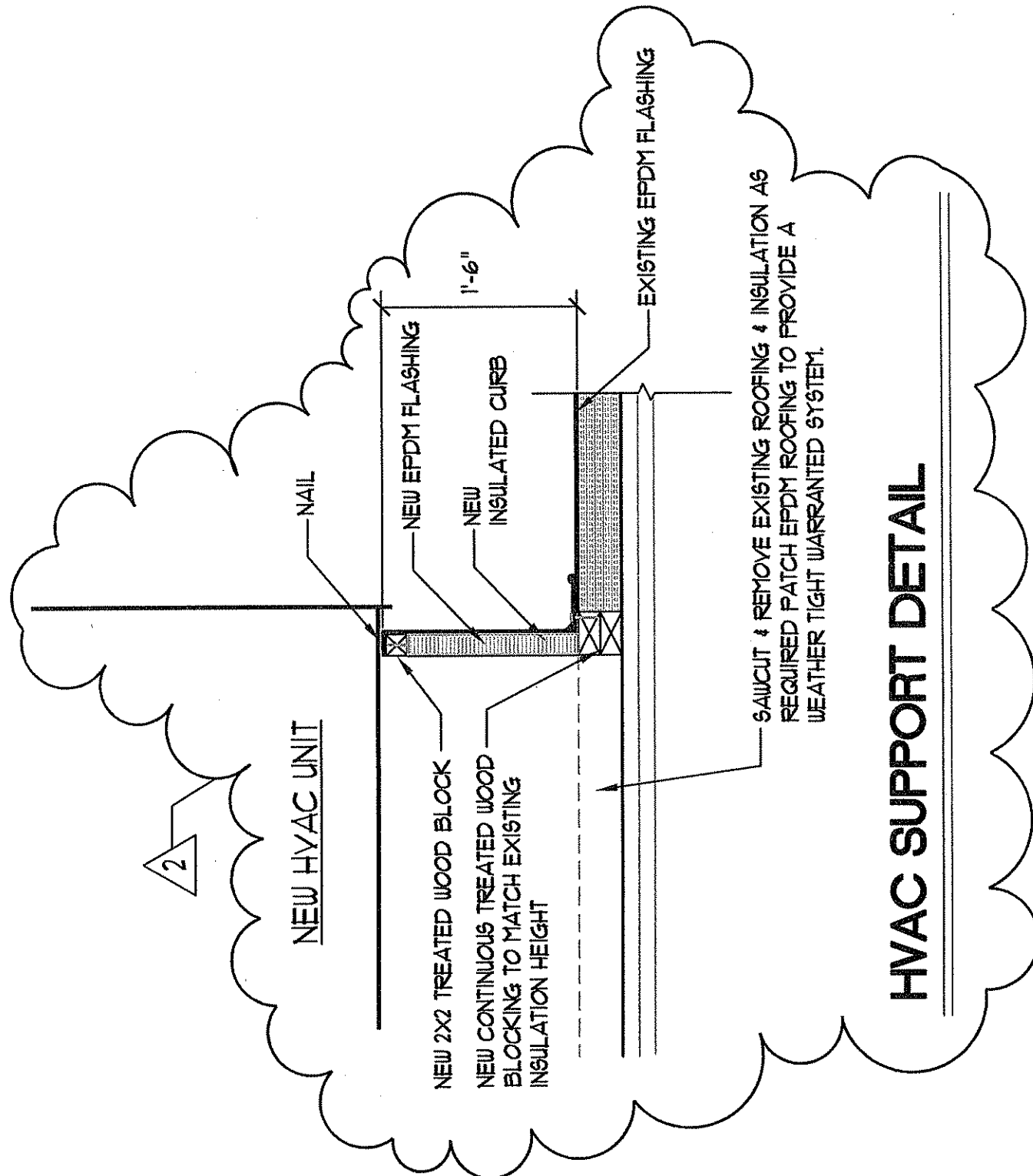
II **MECHANICAL SUPPORT DETAIL (TYPICAL)**
 A3.1 SCALE: NOT TO SCALE

Baker
 BAKER & ASSOCIATES
 A unit of Michael Baker Corporation

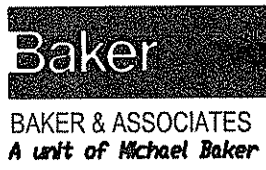
Michael Baker Jr., Inc.
 5088 West Washington St.
 Charleston, West Virginia
 25313
 (304) 769-0821

| | | | |
|-----------------------|--------------------|--------------|---------|
| Drawing Title: | MECHANICAL SUPPORT | Date: | 5/01/09 |
| Project: | CHARLESTON ARMORY | Project No.: | 115063 |
| Revision Description: | NEW SUPPORT | Scale: | NTS |

Drawing Number:
A3.1
 Sheet 1 of 1



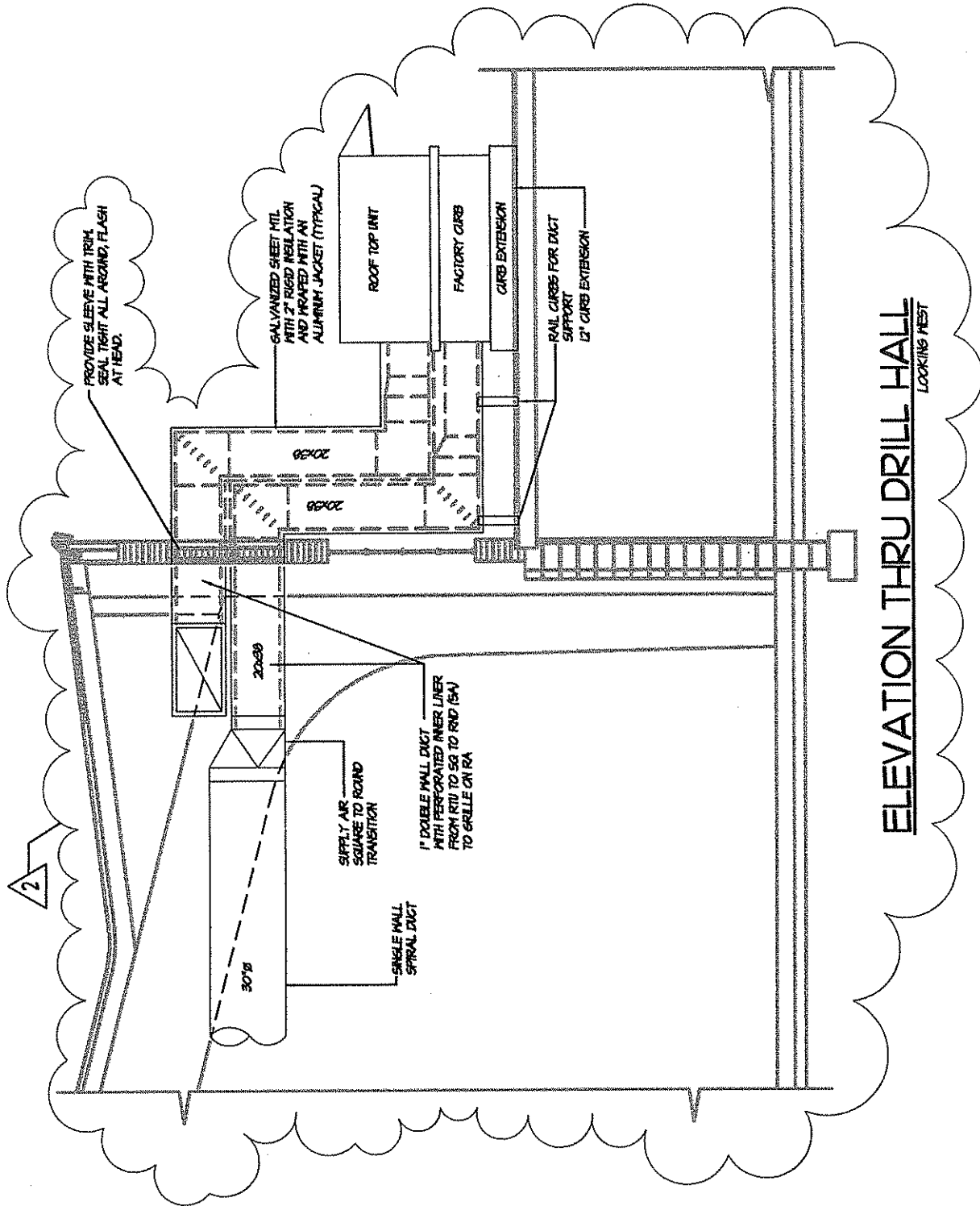
HVAC SUPPORT DETAIL



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| | |
|--|-------------------------------|
| Drawing Title: HVAC SUPPORT DETAIL | |
| Project: CHARLESTON ARMORY | Date: 5/08/09 |
| Revision Description: REVISIONS | Project No.: 115063 |
| | Scale: NTS |

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|--------------------------------|
| Drawing Number: A3.2 |
| Sheet 1 of 1 |



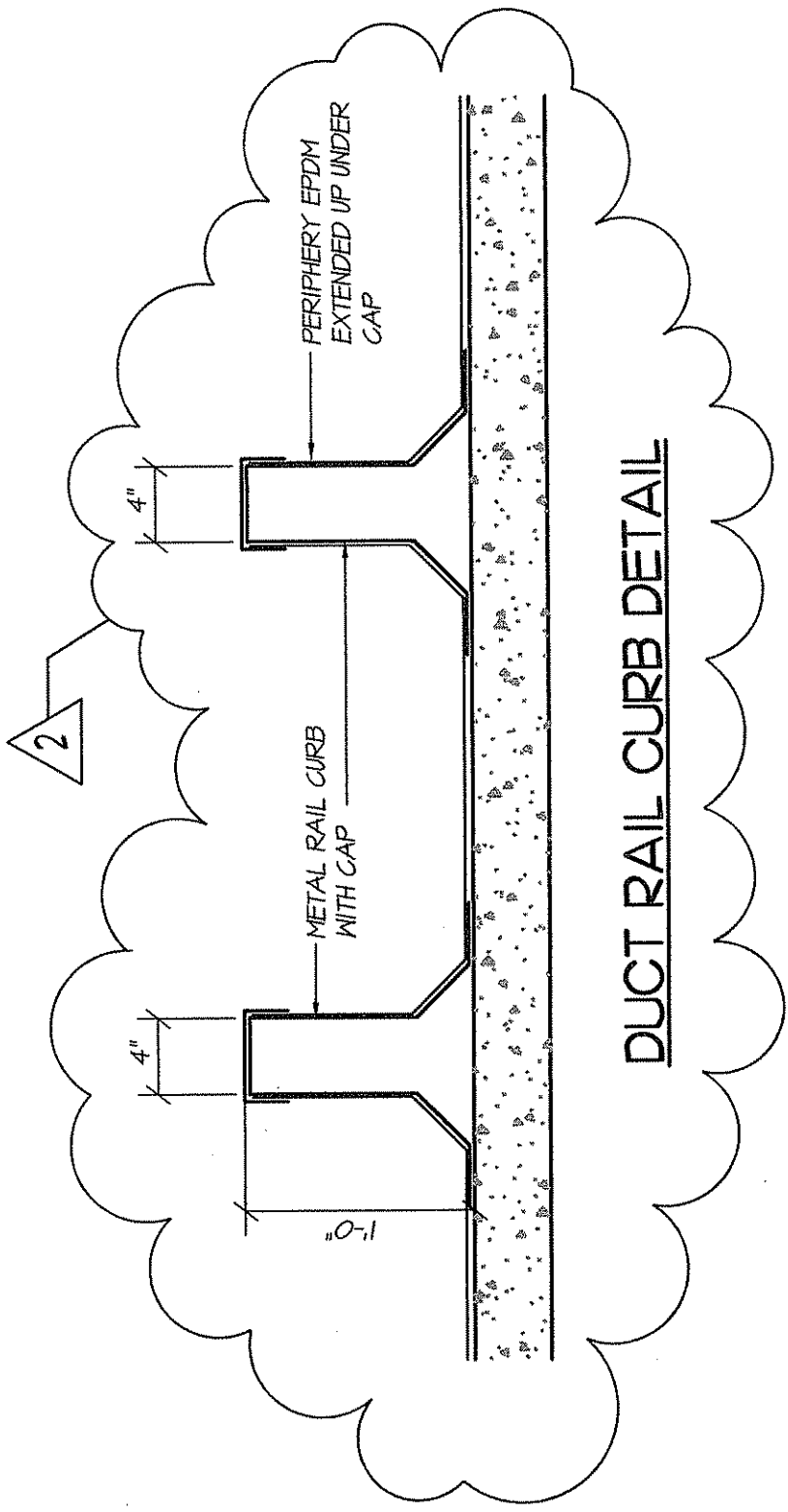
ELEVATION THRU DRILL HALL
LOOKING WEST

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25313
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| | | | |
|-----------------------|-------------------|--------------|---------|
| Drawing Title: | RTU SECTION | Date: | 5/11/09 |
| Project: | CHARLESTON ARMORY | Project No.: | 115063 |
| Revision Description: | REVISIONS | Scale: | NTS |

Drawing Number:
A3.2
Sheet 1 of 1

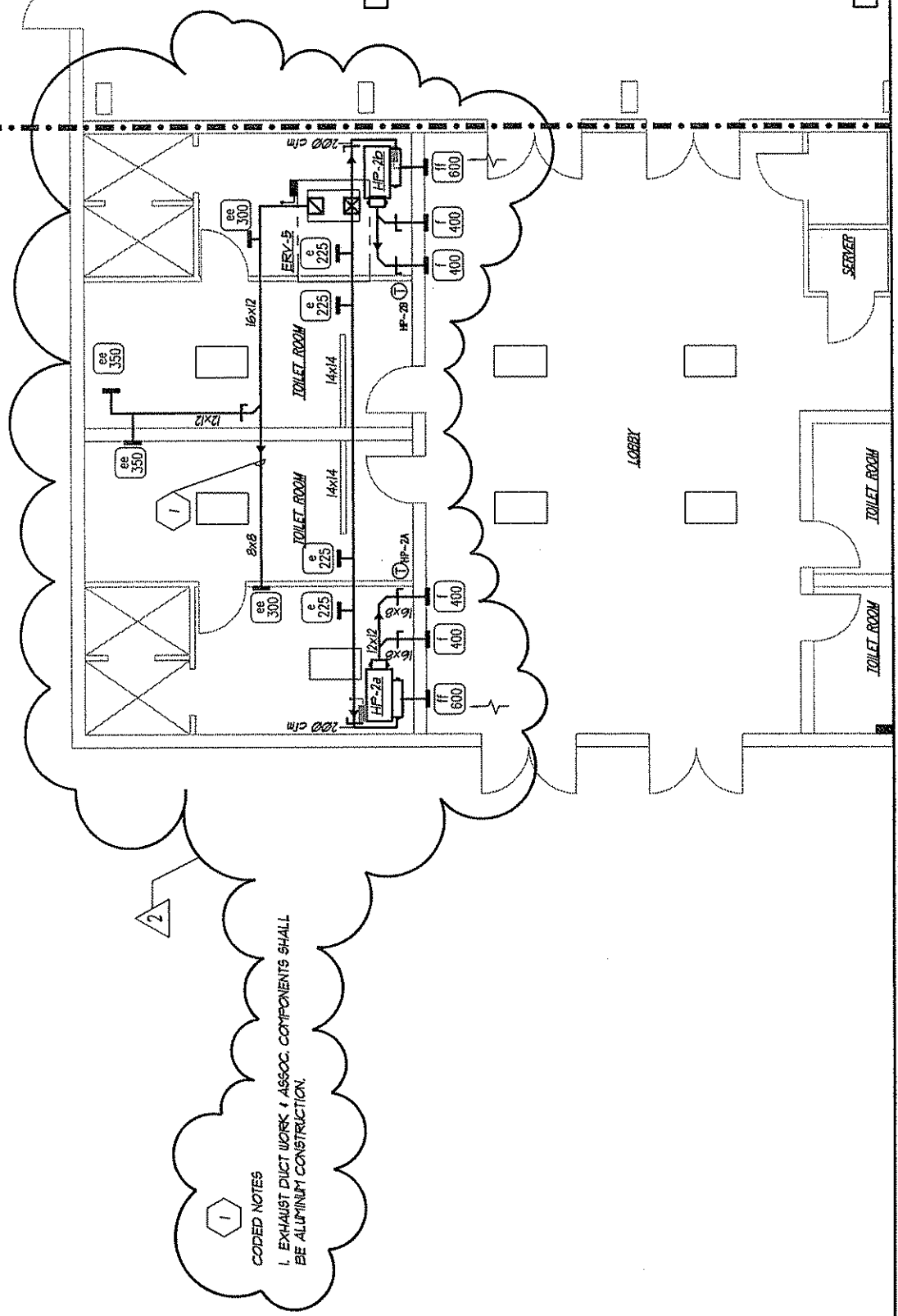


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| Drawing Title: DUCT RAIL CURB DETAIL | Date: 5/11/09 |
| Project: CHARLESTON ARMORY | Project No.: 115063 |
| Revision Description: REVISIONS | Scale: NTS |

Drawing Number:
A3.2
 Sheet 1 of 1



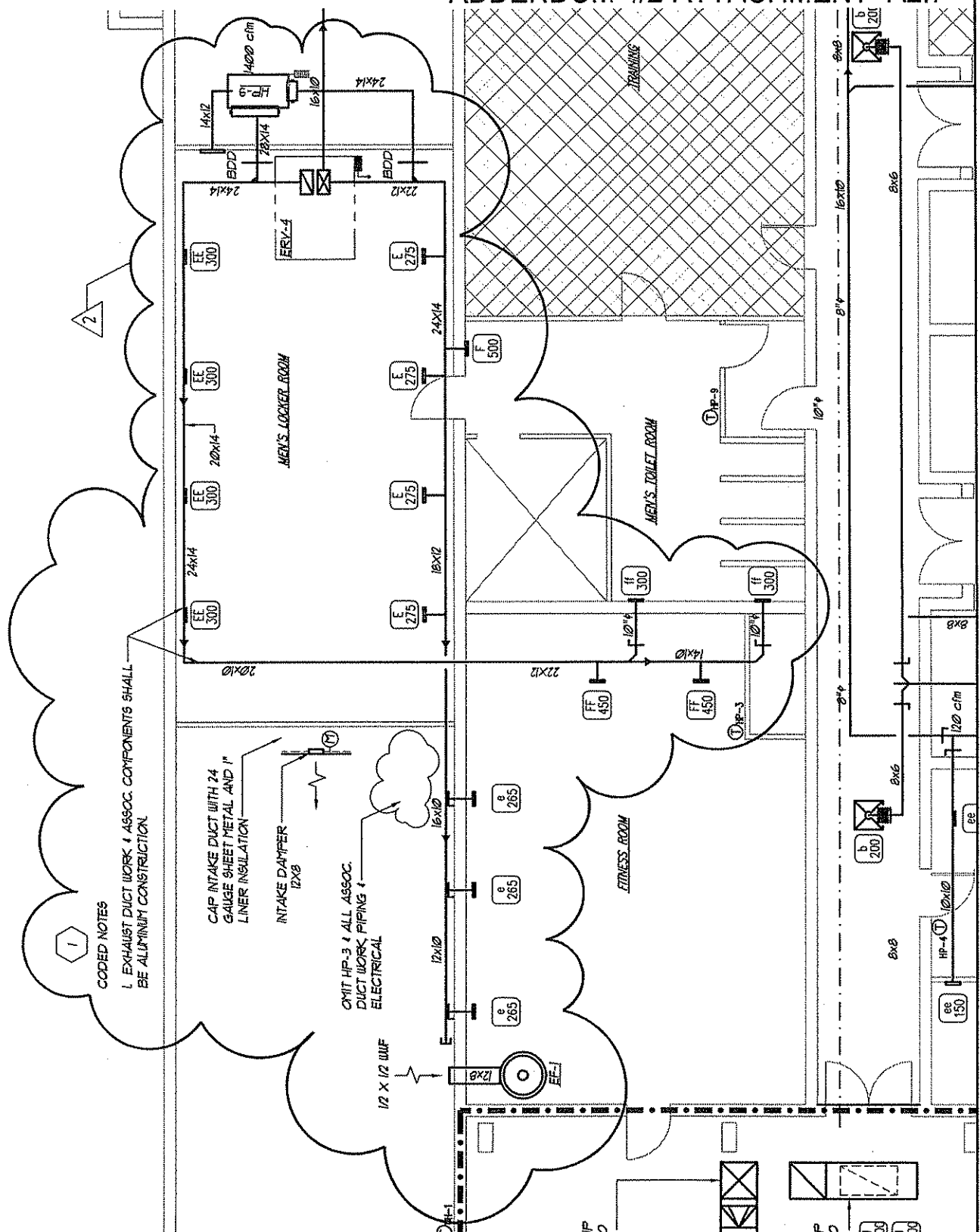
1
 CODED NOTES
 1. EXHAUST DUCT WORK & ASSOC. COMPONENTS SHALL
 BE ALUMINUM CONSTRUCTION.

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|--|-------------------------------|
| Drawing Title: 1ST. FLOOR HVAC PLANS | Date: 5/11/09 |
| Project: CHARLESTON ARMORY | Project No.: 115063 |
| Revision Description: REVISIONS | Scale: NTS |

Drawing Number:
M1.2
 Sheet 1 of 1

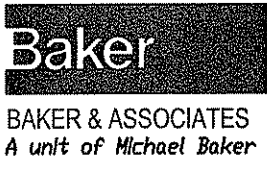


1
 CODED NOTES
 1. EXHAUST DUCT WORK & ASSOC. COMPONENTS SHALL BE ALUMINUM CONSTRUCTION.

CAP INTAKE DUCT WITH 24 GAUGE SHEET METAL AND 1" LINER INSULATION
 INTAKE DAMPER 12x8

OMIT HP-3 & ALL ASSOC. DUCT WORK, PIPING & ELECTRICAL

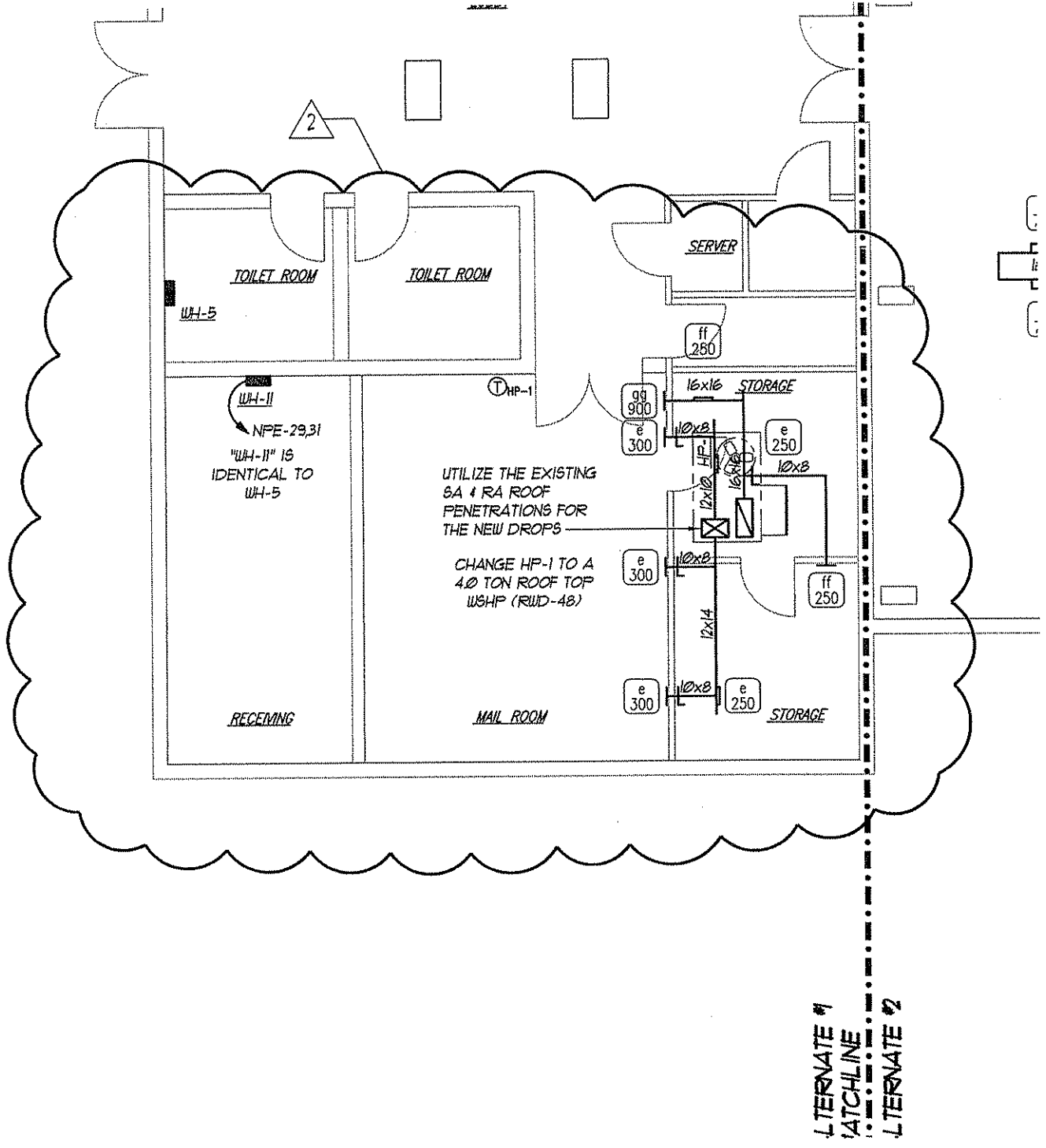
12 X 1/2 WUF




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 Charleston, West Virginia 25313
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| | | |
|--|--|-------------------------------|
| Drawing Title: 1ST. FLOOR HVAC PLANS | | Date: 5/11/09 |
| Project: CHARLESTON ARMORY | | Project No.: 115063 |
| Revision Description: REVISIONS | | Scale: NTS |

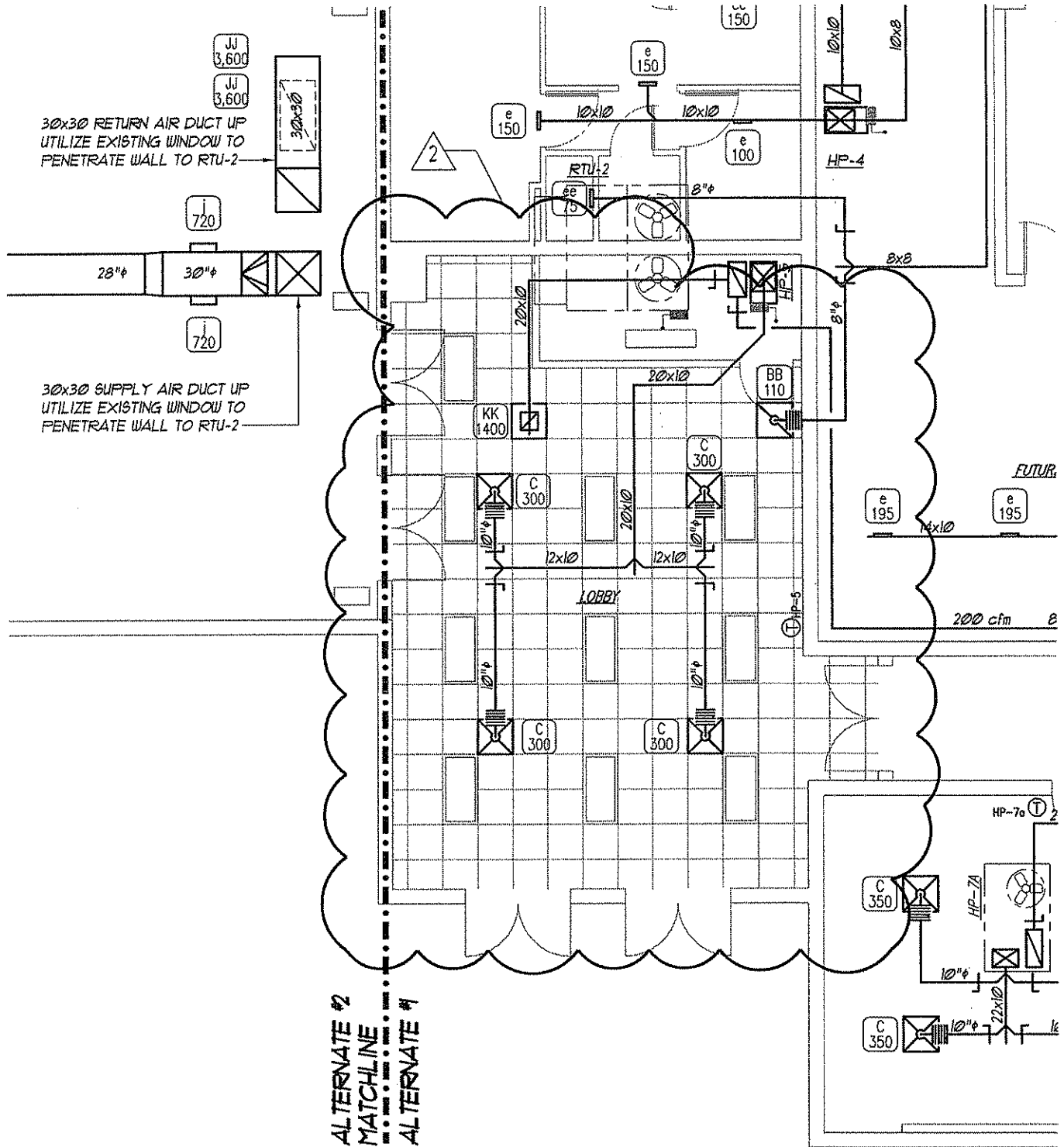
Drawing Number:
M1.2
 Sheet 1 of 1




MECHANICAL - FIRST FLOOR PARTIAL HVAC PLAN

| | | | | |
|--|--|---|---------------------------------|---|
|  <p>Baker BAKER & ASSOCIATES A unit of Michael Baker Corporation</p> | <p>Michael Baker Jr., Inc. 5088 West Washington St. Charleston, West Virginia 25313 (304) 769-0821</p> | <p>Drawing Title: 1ST. FLOOR PARTIAL HVAC PLAN</p> | <p>Date: 5/11/09</p> | <p>Drawing Number: M1.1 Sheet 1 of 1</p> |
| | <p>Project: CHARLESTON ARMORY</p> | <p>Project No.: 115063</p> | | |
| | <p>Revision Description: REVISIONS</p> | <p>Scale: NTS</p> | | |

ADDENDUM #2-ATTACHMENT "A2.12" ¹⁷



MECHANICAL - FIRST FLOOR PARTIAL HVAC PLAN

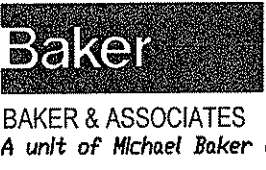
| | | | |
|---|--|--------------------------------|---|
|  <p>Michael Baker Jr., Inc. 5088 West Washington St. Charleston, West Virginia 25313 BAKER & ASSOCIATES (304) 769-0821 A unit of Michael Baker Corporation</p> | <p>Drawing Title: 1ST. FLOOR PARTIAL HVAC PLAN</p> | <p>Date: 5/11/09</p> | <p>Drawing Number: M1.2 Sheet 1 of 1</p> |
| | <p>Project: CHARLESTON ARMORY</p> | <p>Project No.: 115063</p> | |
| | <p>Revision Description: REVISIONS</p> | <p>Scale: NTS</p> | |

WATER SOURCE HEAT PUMP SCHEDULE (HP)

| MARK | MAKE | TYPE | MODEL | HTG SECTION | | COOLING SECTION | | | | TOTAL | | | REMARKS | | | |
|--------|----------|---------|----------|----------------|----------------|-----------------|----|------|------|-----------|------|------------|---------|-----|------|--------|
| | | | | CAPACITY (MBH) | CAPACITY (MBH) | ENTERING DB | WB | TTL | SC | WATER gpm | CFM | VOLT PHASE | | MCA | MOCP | HEIGHT |
| HP-1 | McQUAY | AHU | WCCH2048 | 10 | 10 | 70 | 61 | 38.0 | 31.2 | 12.3 | 1400 | 208-1P | 341 | 50 | 23" | 1 |
| HP-2a | McQUAY | AHU | WCCH2036 | 10 | 10 | 70 | 64 | 25.0 | 24.8 | 9.0 | 800 | 208-1P | 232 | 35 | 20" | 1 |
| HP-2b | McQUAY | AHU | WCCH2036 | 10 | 10 | 70 | 64 | 25.0 | 24.8 | 9.0 | 800 | 208-1P | 232 | 35 | 20" | 1 |
| HP-3 | GMIT | | | | | | | | | | | | | | | |
| HP-4 | McQUAY | AHU | WCCH2024 | 4 | 4 | 70 | 64 | 20.0 | 19.8 | 6.2 | 600 | 208-1P | 146 | 20 | 19" | 1 |
| HP-5 | McQUAY | AHU-VER | WFCV1048 | 12 | 12 | 70 | 61 | 34.7 | 33.9 | 12.3 | 1200 | 208-1P | 341 | 50 | NA | 1 |
| HP-6 | McQUAY | AHU-VER | WFCV1048 | 4 | 4 | 70 | 64 | 35.6 | 33.7 | 12.3 | 1200 | 208-1P | 341 | 50 | NA | 1 |
| HP-7a | McQUAY | AHU | RUD-048 | 12 | 12 | 70 | 64 | 36.3 | 31.4 | 12.3 | 1400 | 208-1P | 214 | 45 | NA | 1 |
| HP-7b | McQUAY | AHU | RUD-048 | 12 | 12 | 70 | 64 | 36.3 | 31.4 | 12.3 | 1400 | 208-1P | 214 | 45 | NA | 1 |
| HP-7c | McQUAY | AHU | RUD-048 | 12 | 12 | 70 | 64 | 36.3 | 31.4 | 12.3 | 1400 | 208-1P | 214 | 45 | NA | 1 |
| HP-8 | McQUAY | RTU | RUD-048 | 10 | 10 | 70 | 61 | 36.3 | 31.4 | 12.3 | 1400 | 208-1P | 214 | 45 | NA | 1 |
| HP-9 | McQUAY | AHU | WCCH2048 | 10 | 10 | 70 | 61 | 38.0 | 37.2 | 12.3 | 1400 | 208-1P | 341 | 50 | 23" | 1 |
| HP-10 | NOT USED | | | | | | | | | | | | | | | |
| HP-11 | McQUAY | CONSOLE | UP190201 | 2 | 2 | 70 | 64 | 51 | 4.6 | 13 | 200 | 208-1P | 3.8 | 15 | NA | 1 |
| HP-12 | McQUAY | AHU | WCCH2036 | 12 | 12 | 70 | 64 | 31.4 | 25.2 | 9.0 | 1000 | 208-1P | 232 | 35 | 20" | 1 |
| HP-13 | McQUAY | AHU | WCCH2036 | 12 | 12 | 70 | 64 | 31.4 | 25.2 | 9.0 | 1000 | 208-1P | 232 | 35 | 20" | 1 |
| HP-14a | McQUAY | AHU | WCCH2042 | 12 | 12 | 70 | 64 | 36.1 | 28 | 10.7 | 1200 | 208-1P | 214 | 45 | 23" | 1 |
| HP-14b | McQUAY | AHU | WCCH2042 | 12 | 12 | 70 | 64 | 36.1 | 28 | 10.7 | 1200 | 208-1P | 214 | 45 | 23" | 1 |
| HP-15 | McQUAY | AHU | WCCH2024 | 5 | 5 | 70 | 64 | 19.7 | 19.7 | 6.2 | 600 | 208-1P | 146 | 20 | 19" | 1 |

ENERGY RECOVERY VENTILATOR SCHEDULE (ERV)

| MARK | MAKE | MODEL | EXHAUST AIR CFM @0.75 ESP | SUPPLY AIR CFM @0.75 ESP | SUPPLY AIR | | VOLTAGE | MCA | MOCP | REMARKS |
|-------|----------|---------------|---------------------------|--------------------------|-------------|-------------|---------|------|------|--------------|
| | | | | | SUMMER db F | WINTER db F | | | | |
| ERV-1 | GREENECK | ERV-2071-15 | 1000 | 1200 | 70.5 | 65.1 | 208-1P | 166A | 20A | BASE BID |
| ERV-2 | GREENECK | ERV-2516-20-B | 450 | 500 | 70.5 | 65.5 | 208-1P | 98A | 15A | BASE BID |
| ERV-3 | GREENECK | ERV-2071-15 | 1300 | 1500 | 70.5 | 65.0 | 208-1P | 203A | 25A | ALTERNATE #1 |
| ERV-4 | GREENECK | ERV-2516-20-B | 2450 | 2700 | 70.5 | 65.3 | 208-1P | 248A | 35A | ALTERNATE #1 |
| ERV-5 | GREENECK | ERV-2071-15 | 1300 | 1500 | 70.5 | 65.1 | 208-1P | 203A | 25A | ALTERNATE #1 |
| ERV-6 | GREENECK | ERV-2516-20-B | 600 | 605 | 70.5 | 65.5 | 208-1P | 98A | 15A | BASE BID |

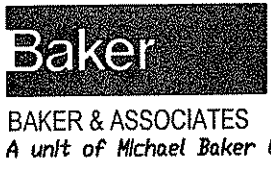
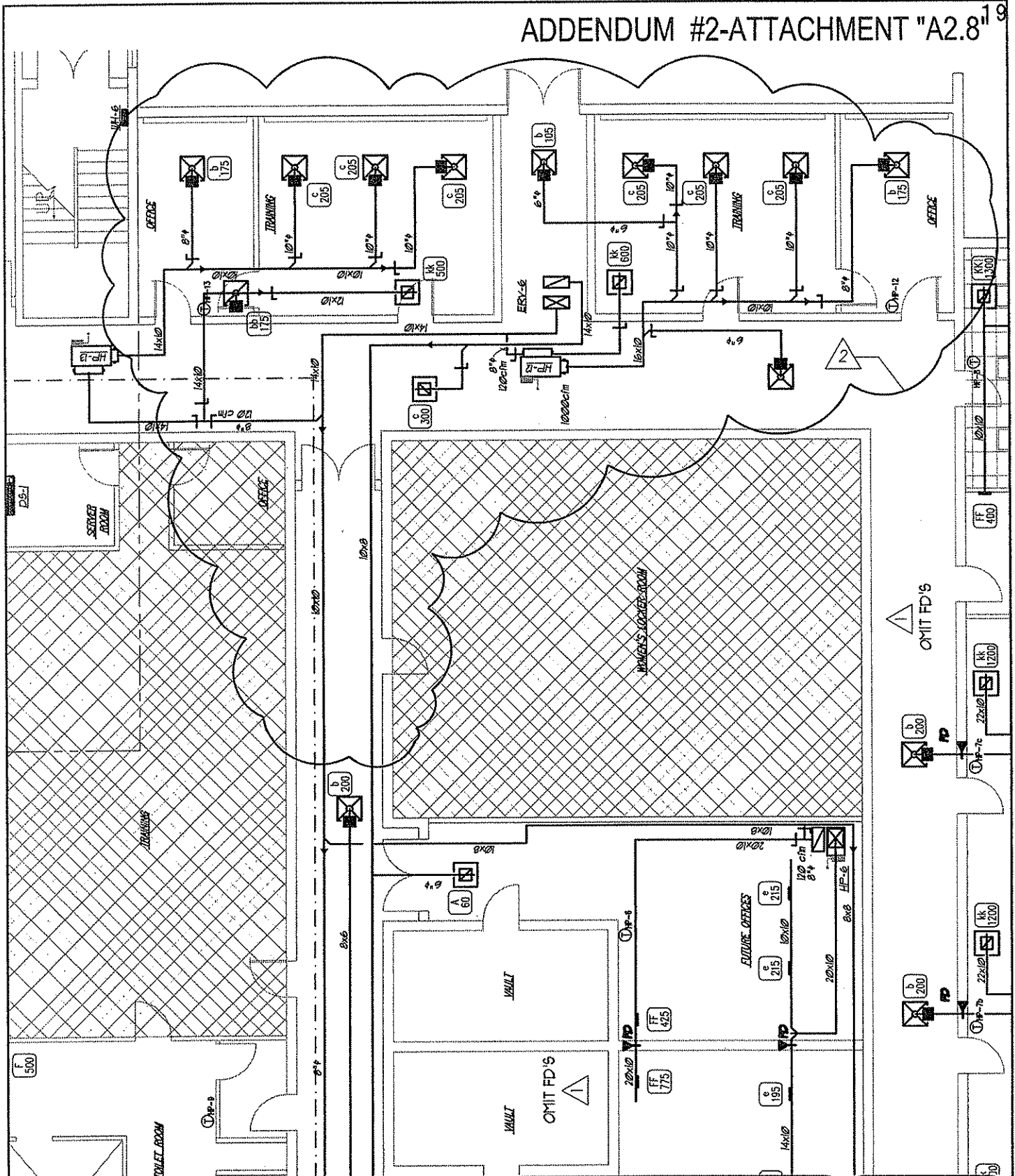


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A unit of Michael Baker Corporation

Drawing Title:
MECH. SCHEDULE
Project
CHARLESTON ARMORY
Revision Description:
REVISIONS

Date:
5/11/09
Project No.:
115063
Scale:
NTS

Drawing Number:
MO.1
Sheet 1 of 1



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1ST. FLOOR HVAC PLANS

Project
CHARLESTON ARMORY

Revision Description:
REVISIONS

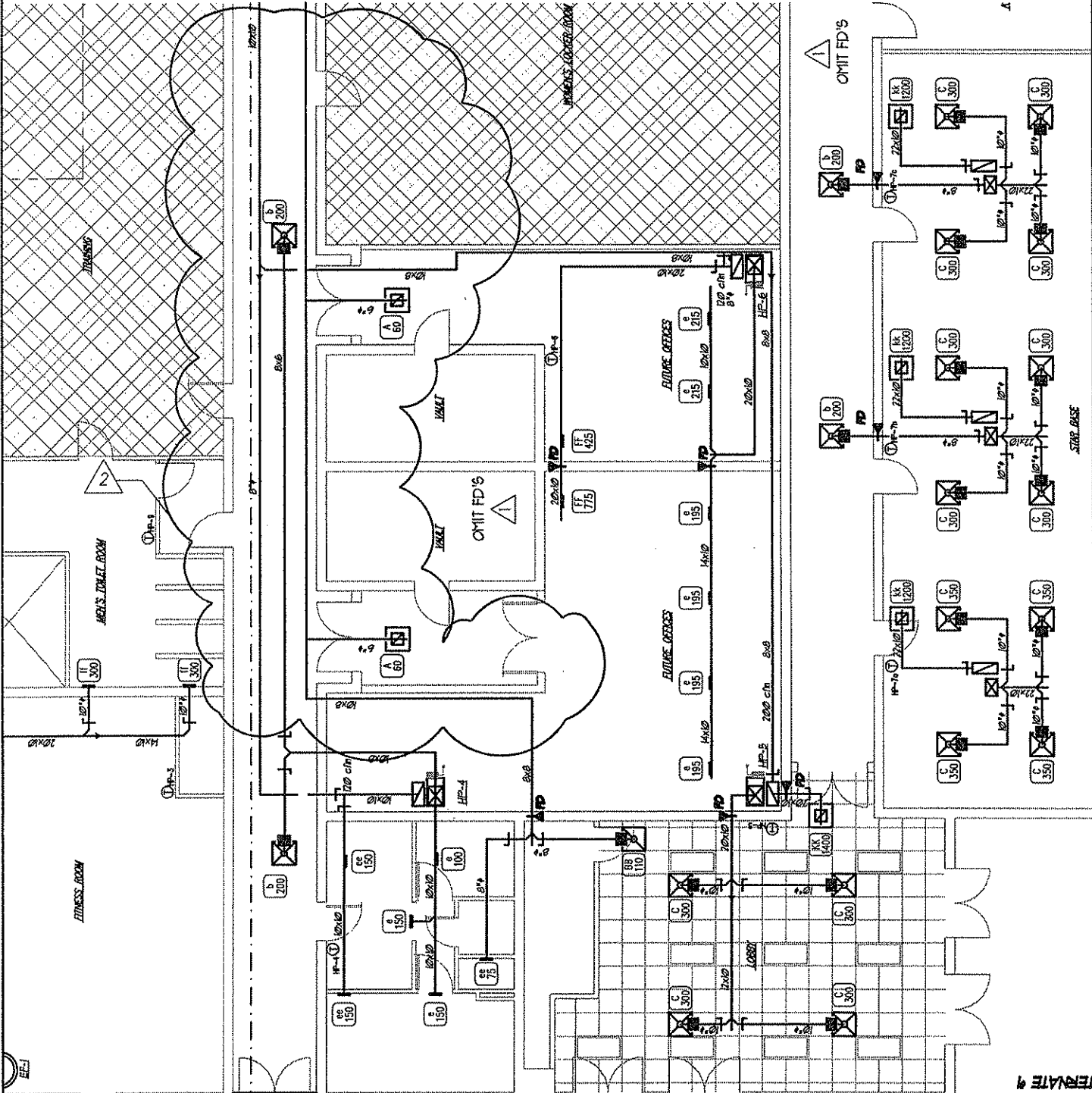
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5/11/09

Project No.:
115063

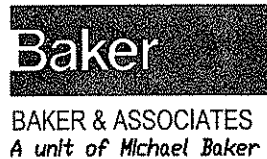
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Drawing Number:
M1.2

Sheet 1 of 1



TERMINATE 4
TERMINATE 2
TERMINATE 1



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