WILLIAM PATERSON UNIVERSITY

OFFICE OF CAPITAL PLANNING, DESIGN, AND CONSTRUCTION
300 POMPTON ROAD • WAYNE, NEW JERSEY 07470-2103
973.720.2548 FAX 973.720.2829 • WWW.WPUNJ.EDU

# ADDENDUM NO 2

TO: All Prospective Bidders
DATE: January 31, 2017
PROJECT: Hobart Hall RTUs & HVAC Controls (WP-16-06-03)

This Addendum No. 2 forms a part of the contract bidding documents and answers all questions submitted regarding the bidding documents. Please acknowledge receipt of this Addendum No. 2 on Bid Document Checklist (WPU01) and Bid Form (WPU03) included in the Bid Document package.

Clarifications and Update:

1. Drawings G1H, M1H and M2H have been revised (Rev. 1 dated 1/26/17) as part of this addendum and supersede earlier documents with the same designation.

2. Revised Bid Form is posted on CPDC website, with addition of Alternate Price #1 for Portable AC Units and an Allowance for repairing RTU screens.

3. The contractor is responsible for all changes in cost, design and permitting resulting from substitutions for basis of design for Roof Top Units.

Questions and Answers:

Q. The entire HVAC system(s) should be cleaned. Please provide ductwork as-built drawings so we can properly estimate the work.
A.: Ductwork drawings have been posted under Reference Documents.

Q. Please provide contact information for the company who currently services the fire alarm system.
A.: Simplex Contact is Umberto Bringas 201-294-5777.

Q. Is acoustical liner required on the new ductwork? Please specify size, if so.
A.: Yes, provide 1-Inch Thick Acoustical Lining In The Supply And Return Duct Of All Air Handling Units Up To 20-Feet from The Fan Discharge.

The duct sizes on the plan are internal clear dimensions, note 1 on M1H:

All Duct Sizes Stated On Plans Are Internal Clear Dimensions. Outer Dimensions Of Internally Lined Ductwork Shall Be Increased Accordingly.

## MISSION STATEMENT AND SCOPE

Project Mission Statement

1. The Project Consists of the Replacement Of Rooftop HVAC Units That Have Exceeded Their Useful Life.

   A. RTU Replacement System Overview: The Replacement Rooftop Unit(s) Plan Was Designed By DLB Associates Of Eatontown NJ, And Is Included As Page M1H Of This RFP. The Carrier Units Specified In The Design Plan Are 48A3W Models With An AHRI Certified Net Capacity Of 12.5-27 Tons And ASHRAE 90.1 Standard EER 10 Rated Efficiency. This Is The Preferred Unit, But If Significant Cost Savings For The Owner Might Be Available With A Different Manufacturer The Owner Will Consider This If The Unit Proposed Meets NJBPU's Requirements For The Maximum Energy Efficiency Incentive Offered By NJ Clean Energy Program.

   B. The Replacement BMS System Was Designed By DLB Associates Of Eatontown NJ, And Is Included As Pages M3H And M4H Of This RFP. The Existing Local Controls And Local BMS System Will Be Replaced By A New Automated Logic Building Management System.

Project Description

1. The Project Consists Of Mechanical, Electrical, And Structural Work At Hobart Hall Located On The William Paterson University Campus In Wayne, NJ.

2. This Is A Single Prime Mechanical Contract And It Will Be The Responsibility Of The Mechanical Contractor To Hire Licensed Subcontractors For The Related Work.

3. Hobart Hall is a 2 Story Building ( 1st And 2nd Floor ) Enclosing Approximately ~70,000 Sq. Ft.

Scope

The Following Is A Brief Scope Of The Work For This Project (Not Intended To Be All Inclusive):

1. Replace (12) Twelve Existing Mechanical Roof Top Units In Kind That Provide Conditioned And Ventilation Air To The Entire Building. The General Procedure For This Replacement Shall Include:

   A. Pre-ballance Each Existing RTU And Inspect Ductwork Connections To Verify Baseline Operating And Working Conditions

   B. Test Existing Electrical Feeders And Verify Condition And Operation.

   C. Disconnect And Remove Existing RTU, Set Any Additional Steel Required, Modify Ductwork As Required, Rig And Set New RTU

   D. Finalize Existing Ductwork Connections, Reconnect Electrical Feeders And New Gas Service

   E. Test And Balance RTU To Match Performance Of One That Was Replaced.

2. New Natural Gas Service Shall Be Provided To The Building By PSE & G, Contractor To Route and Connect To All Roof Top Units.

3. New Rooftop Units Shall Be Connected To The Existing Mechanical Ductwork And Distribution. All Modifications Must Be Made Prior To Setting New Units.

4. New Units Shall Be Connected To The Existing Electrical Infrastructure.

5. Modify Dunnage, Platforms, And Access Ladders To Accommodate New Units. All Modifications Shall Be Primed And Painted.

6. Provide A New Centralized BMS. Points To Be Monitored Include; Start/ Stop, OA/ RA/ EA Dampers, Cooling and Heating Modes, RA/ MA/ SA Temperatures Etc.

## SPECIAL EMPHASIS, CONCERNS & LIMITATIONS

1. Schedule Of Interruptions / Shutdowns Will Be Limited And Groups Of RTUs That Will Need To Be Shut Down, Replaced And Placed Back Into Operation Before Other RTU Units Are Shut Down. Coordinate With WPU On Schedule And Written Consent Shall Be Required Before Any Interruptions Are Permitted. The Dates For RTU Shutdown And Replacement Are:

   a) RTU 5,6,11 Start May 15th And Be Fully Operational By June 2nd
   b) RTU 3,7,8,8a Start June 5 And Be Fully Operational By June 23rd
   c) RTU 9,10 Start July 3rd And Be Fully Operational By July 21st
   d) RTU 1,2,4 Start July 21 And Be Fully Operational By August 11th

   △1

2. The Existing Roof Top Units Are Being Replaced In Kind.

3. Coordinate All Access Including Crane With WPU. Hobart Hall Is Only Available Outside Of Normal Business Hours And While Building Is Not Occupied.

4. WPU Will Retain 3rd Party Testing And Balancing Company For Final System Balancing After Units Are Installed. Contractor Responsible For Pre-Ballancing. Contractor Also Responsible To Working With The Universities Post Balancing Company To Make Any Adjustments Required.

5. Coordinate All Fire Alarm Work With Simplex, Contact Is Umberto Bringas (201) - 294 - 5777

   △1

## DESIGN CRITERIA AND ADDITIONAL PROJECT REQUIREMENTS

Applicable Codes And References

The Entire Installation Shall Comply With All Local And State Codes, Including Amendments To Said Codes, And Other Authorities Having Jurisdiction.

1. International Building Code, 2015 Edition
2. International Mechanical Code, 2015 Edition
3. National Standard Plumbing Code, 2015 Edition
4. National Electrical Code, 2014 Edition
5. ASHRAE 90.1 Energy Standards, 2013 Edition

Design Conditions (+/- 3 Deg. Tolerance)

| Summer Outdoor Design Conditions | Summer Indoor Design Conditions: |
|---|---|
| Dry Bulb: 95 Deg. F. | Dry Bulb: 75 Deg. F. |
| Wet Bulb: 75 Deg. F. | Relative Humidity 50% |
| Winter Outdoor Design Conditions | Winter Indoor Design Conditions |
| 0 Deg. F. Dry Bulb | 72 Deg. F. Dry Bulb |

Ventilation:
1. Outside Air Ventilation Design Air Quantity Will Be Provided As Required By International Mechanical Code

Filtration: 30% Filter

## KEY PARTICIPANTS & THEIR ROLES

Owner
William Paterson University
300 Pompton Road
Wayne, NJ 07470
Richard Stromber

PME
DLB Associates Consulting Engineers, PC - NJ
265 Industrial Way West
Eatontown, NJ 07724
Scot Gowers - Project Manager
Phone: (732) 927-5145

## ALLOWANCE

1. Contractor To Include An Allowance Of $ 250 Per RTU Units ( Total Of $ 3000 ) To Accommodate Any Acoustical Screening Repair Work That May Be Required.

PHOTO A - Typical Acoustical Screen

A Few OF the Existing Acoustical Panel Clips Have Failed And Are To be Reinstalled.

△1

## ADD ALTERNATES

1. Contractor To Provide Add Alternate Unit Prices To Replace A Typical 500, 1000 and 2000 CFM VAV Box In Kind Including All Accessory Work Including Ductwork Modification, Electrical Connections, Damper, Ceiling Removal And Replacement, Etc.

2. Contractor To Provide An Add Alternate Unit Price To Replace A Typical Electric Duct Mounted Reheat Coil Of 1.25kw 277v, 1.75kw 277v and 8.25kw 480v Including Ductwork Modification, Electrical Connections, Disconnect Switch, Ceiling Removal And Replacement, Etc.

   △1

3. Contractor To Provide Alternate Price In The Event That An Existing Feeder Does Not Pass Testing. The Existing Feeder Shall Be Removed And New Feeder Pulled In Utilizing Existing Conduits. Replacement Feeder Will Be 3# 1/0, #6G, 2"C. Utilizing Existing Conduits. Existing Main Breaker Would Also Need To Be Replaced.

4. Contractor To Provide Alternate Price To Provide Four Commercial 18,000 btu Portable AC Units ( Ocean Air Or Eq. ) Including All Installation Requirements / Materials ( Condensate, Hoses, Ducts, Etc. ). Alternate Price To Include Installation And Maintenance Of These Units During This Project To Provide Temporary Cooling In Classroom Spaces. Once Project is Complete Units And Accessories Shall Be Turned Over To WPU For Future Use.

   △1

DCA APPROVAL

| No. | Drawing Title | Issues / Revisions: Construction Set 1/13/2017 |
|---|---|---|
| **GENERAL INFORMATION FOR ALL TRADES** | | |
| G1H | GENERAL INFORMATION SHEET - 1 | X |
| G2H | GENERAL INFORMATION SHEET - 2 | X |
| **MECHANICAL** | | |
| M1H | ROOF PLAN | X |
| M2H | DETAILS AND RTU SCHEDULE | X |
| M3H | CONTROL POINT LIST AND VAV SCHEDULE | X |
| M4H | SCHEMATIC OVERVIEW PLAN | X |
| **ELECTRICAL** | | |
| E1H | ROOF PLAN | X |
| **STRUCTURAL** | | |
| S-101 | EXISTING ROOF PLATFORM FRAMING PLAN | X |
| S-102 | GENERAL NOTES, ENLARGED PLANS AND SECTIONS | X |

## DOCUMENT ORGANIZATION

**Drawings Organization**

1. General Information Sheets
2. Mechanical (M Series)
3. Electrical (E Series)
4. Structural ( S Series )

G#H
- Building (Hobart Hall)
- Unique ID
- Drawing Trade — G: General, M: Mechanical, E: Electrical, S: Structural

**Drawing Sequence**

Drawings Start With The General Information Sheet, The Planviews, Followed By All Other Pertinent Information. Where Effective, Supplemental Information Is Included Directly On The Planviews.

**How Notes Are Used**

1. General Notes - One Or More In List Form Which Are Not Indicated Specifically On A Plan, Section, Elevation, Or Detail.

2. Notes For This Drawing - General Notes Located Only On The Drawing That Applies.

3. Key Notes - Used In Lieu Of Standard Notes Where They Improve Readability, Key Notes Are Gathered Together And Listed Collectively On The Drawings On Which They Are Located.

**Addenda & Revisions**

1. Some Addenda And Revisions Are Identified On The Drawings Using A △1. The Number In The Triangle Links To The Revision Block In The Title Block Section.

2. Sometimes The Most Recent Change Is Clouded ☁ To Provide Increased Clarity.



24x36

| ITEM | DATE | ISSUE DESCRIPTION |
|---|---|---|
| 1 | 01/26/17 | REV 1 |

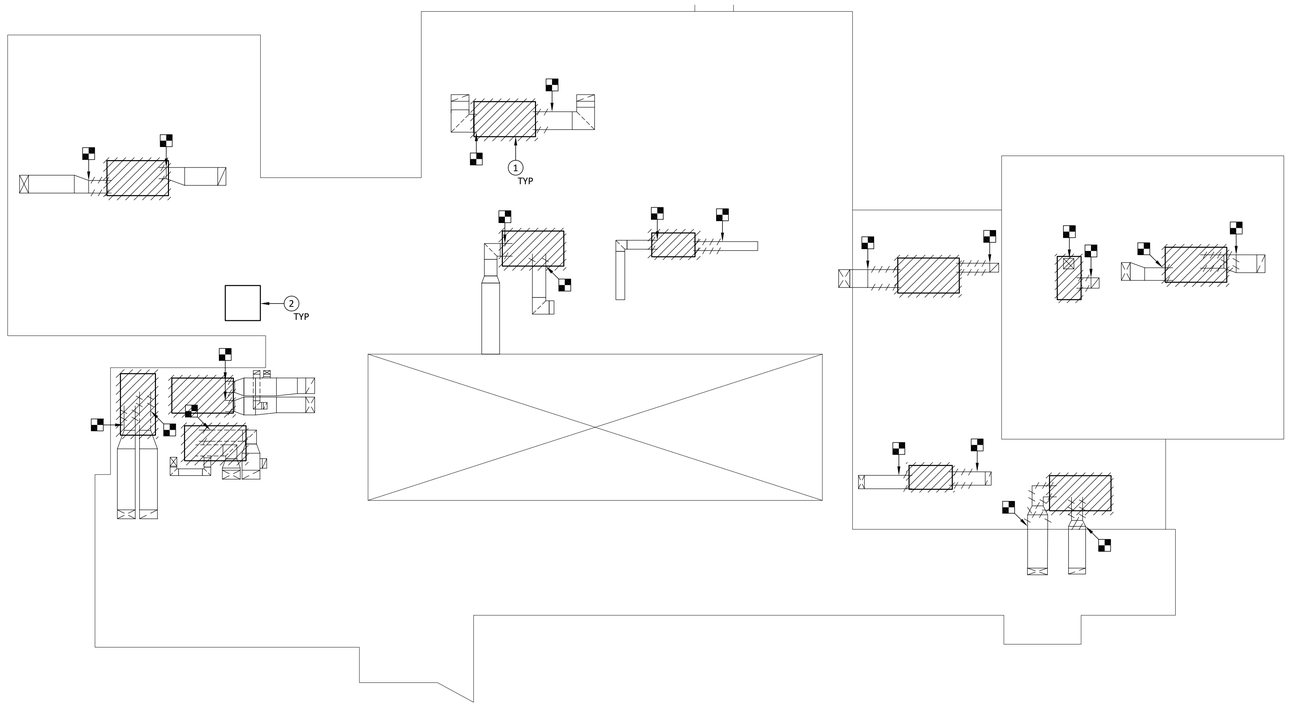
dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Scot Gowers
DLB Project ID: 47401 Phone: 732-927-5145

project
HOBART HALL HVAC
300 POMPTON ROAD
WAYNE, NJ, 07470

title
GENERAL INFORMATION SHEET-1

dwg. no.
G1H

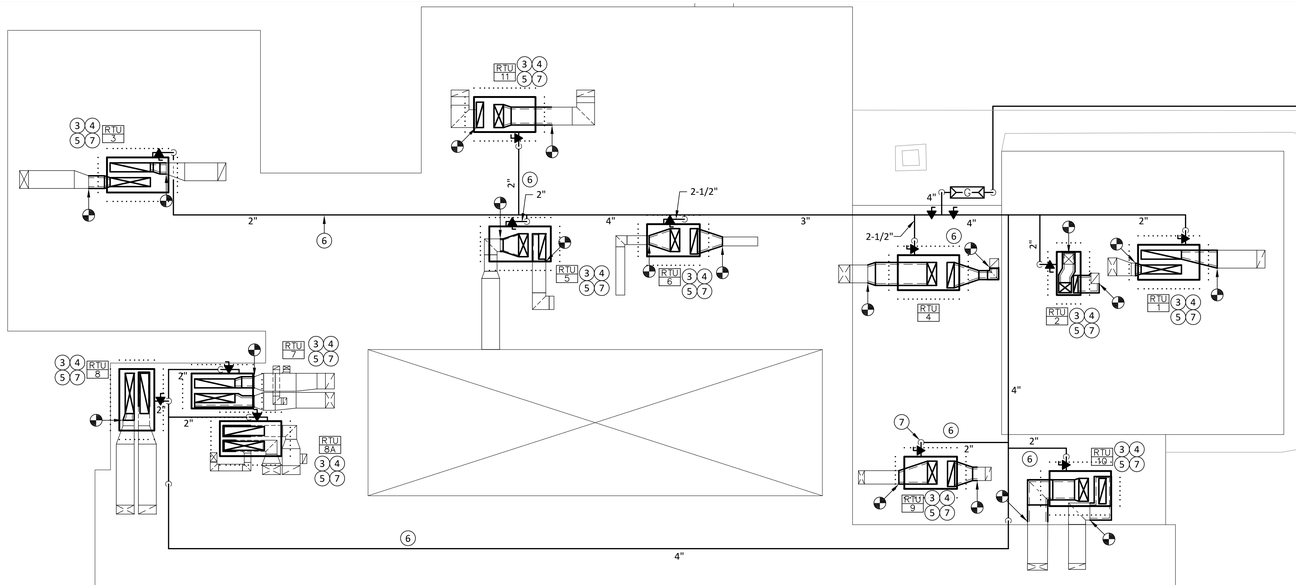
| scale | drawn by | checked by | date | filename |
|---|---|---|---|---|
| AS SHOWN | DR | SG | 03/08/2016 | 47401G1H |




DEMOLITION ROOF PLAN

Scale: 1/16"=1'-0"

Drawing: M1H
Detail: 01




NEW WORK ROOF PLAN

Scale: 1/16"=1'-0"

Drawing: M1H
Detail: 02

**KEY NOTES (SYMBOLS 1, 2, ETC.)**

1. Existing Roof Top Units and Ductwork On Roof To Be Removed and Properly Disposed Of By Contractor. Ducts Shall Be Left With One Foot Remaining Above Roof For Connection To New Units. Ends Of Existing Ducts To Be Sealed Weathertight Until Ready For Connection To New. Existing Ducts Shall Be Reinsulated After New Ductwork Is Installed. Typical.
2. Coordinate Demolition with Roof Top Equipment To Remain. Typical.
3. New Ductwork Shall Be Insulated, Weather Proofed, And Sealed Water Tight. See Detail For Additional Information. Typical.
4. Install New Roof Top Units On Existing Dunnage. See Structural Plans For Additional Information. Typical.
5. Modify Dunnage As Required And Provide Work Platforms. See S-101 And S-102 Drawings. Dunnage Shall Be Primed And Painted. Typical.
6. All Horizontal Gas Piping Indicated On Plan Shall Be Routed And Supported On Roof. Gas Piping On The Roof Shall Be Painted With Corrosion And UV Resistant Enamel Safety Yellow Paint. Typical.
7. Natural Gas Connections On The Roof Shall Be Provided With Dirt Leg, Regulator, And Gas Shutoff Valve. Typical.
8. New Incoming Gas Service And Meter By PSE&G. Contractor To Coordinate All Work And Connections To New Piping With PSE&G Work Order 80460620.

DCA APPROVAL

**GENERAL NOTES**

1. All Duct Sizes Stated On Plans Are Internal Clear Dimensions. Outer Dimensions Of Internally Lined Ductwork Shall Be Increased Accordingly.
2. Ducts Penetrating Fire Rated Walls Shall Have Fire Dampers And Access Doors As Necessary.
3. All Offsets And Transitions Necessary To Successfully Construct The Duct Distribution System Are Not Shown On These Plans, But Are Still Included In The Scope Of Work, Some Of These Areas Are Connections At Curbs, Fans, Equipment, And Offsets At Transition.

**PARTIAL SYMBOLS & ABBREVIATIONS**

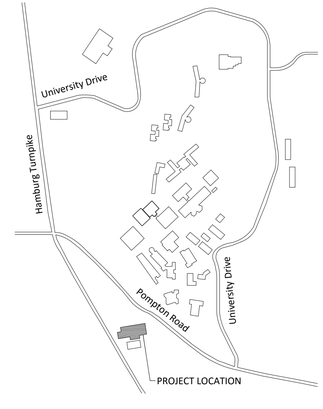
| Identifier | Description |
|---|---|
| | Disconnect From Existing |
| | Connect To Existing |
| | Existing Equipment |
| | New Equipment |
| XXX / XX | Equipment Type / Equipment Number |
| | New Ductwork |
| | New Internally Lined Ductwork |
| | Ductwork To Be Demolished |

| Identifier | Description |
|---|---|
| EF | Exhaust Fan |
| RTU | Roof Top Unit |

SERVICE NATURAL GAS PIPING SIZED BASED ON:
- IFGC TABLE 402.4(5)
- INLET PRESSURE: 1.0 PSI
- SYSTEM PRESSURE DROP: 0.3 PSI
- PIPING MATERIAL: SCHEDULE 40 METALLIC PIPE (ASTM A53)
- MINIMUM INLET PRESSURE AFTER REGULATOR: 7 IN. W.C.
- MAXIMUM DEVELOPED LENGTH: 350 FT
- TOTAL CONNECTED (NEW) LOAD: 7,000 CFH

PHOTO A - Rear Drive

New Gas Service From Central Ave To be Run Down Drive To Wall Adjacent To Transformer. Coordinate With Electrical Lines From Utility Pole To Transformer






24x36

| ITEM | DATE | ISSUE DESCRIPTION |
|---|---|---|
| 1 | 01/26/17 | REV 1 |

dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Scot Gowers
DLB Project ID: 47401 Phone: 732-927-5145

project
HOBART HALL HVAC
300 POMPTON ROAD
WAYNE, NJ, 07470

title
ROOF PLAN

| scale | drawn by | checked by | date | filename |
|---|---|---|---|---|
| AS SHOWN | DR | SG | 03/08/2016 | 47401M1H |

dwg. no.
M1H

## ROOFTOP UNIT SCHEDULE

| UNIT ID | MODEL NO. | AREA SERVED | SUPPLY FAN | | | | GAS HEAT SECTION | | | COOLING COIL | | | | CONDENSING SECTION | | FILTERS | | | | | ELECTRICAL | | | EFFICENCY | | SOUND | WEIGHT | NOTES | ACCESSORIES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | SUPPLY AIR (CFM) | OUTSIDE AIR (CFM) | ESP (IN WG) | MOTOR (HP) | INPUT (MBH) | OUTPUT (MBH) | # OF STAGES | TOTAL (MBH) | SENS (MBH) | EAT (DB / WB °F) | LAT (DB / WB °F) | # OF STAGES | FAN (QTY) | TYPE | SERVICE | QTY / SIZE (IN) | SERVICE | QTY / SIZE (IN) | VOLTAGE (V) | MCA (A) | MOCP (A) | EER | iEER | (dBA) | (LB) | | |
| RTU-1 | 48A3T035 | Class Rooms | 12,500 | 1,500 | 1.5 | 15 | 800 | 648 | 5 | 405.3 | 316.5 | 80 / 67 | 65.6 / 56.6 | Modulating | 2 | PLEATED - MERV 8 | MIXED AIR | 2" | OUTDOOR AIR | 2" | 460 | 100 | 110 | 9.8 | 12.7 | 62 | 5,371 | 1-5, 7-11, 13-20 | 1 THRU 4 |
| RTU-2 | 48LCF012 | Film Screening | 3,800 | 750 | 1.5 | 5 | 315 | 252 | 2 | 120.7 | 120.7 | 80 / 67 | 57.8 / 57 | 3 | 3 | PLEATED - MERV 8 | MIXED AIR | 2" | OUTDOOR AIR | 2" | 460 | 33 | 40 | 13.0 | 20.3 | 60 | 1,948 | 1-4, 6-10, 12-20 | 1 THRU 4 |
| RTU-3 | 48A3T035 | Radio / Audio | 12,700 | 1,300 | 1.5 | 15 | 800 | 648 | 5 | 405.9 | 319.1 | 80 / 67 | 56.7 / 56.7 | Modulating | 2 | PLEATED - MERV 8 | MIXED AIR | 2" | OUTDOOR AIR | 2" | 460 | 100 | 110 | 9.8 | 12.7 | 62 | 5,371 | 1-5, 7-11, 13-20 | 1 THRU 4 |
| RTU-4 | 48LCF024 | Film Production | 7,000 | 1,200 | 1.5 | 10 | 400 | 324 | 2 | 249.4 | 181.5 | 80 / 67 | 56 / 55.6 | 3 | 6 | PLEATED - MERV 8 | MIXED AIR | 2" | OUTDOOR AIR | 2" | 460 | 72.2 | 90 | 12.0 | 18.0 | 66 | 2,906 | 1-4, 6-10, 12-20 | 1 THRU 4 |
| RTU-5 | 48LCF024 | Conference Rooms | 7,000 | 2,500 | 1.5 | 10 | 400 | 324 | 2 | 249.4 | 181.5 | 80 / 67 | 56 / 55.6 | 3 | 6 | PLEATED - MERV 8 | MIXED AIR | 2" | OUTDOOR AIR | 2" | 460 | 72.2 | 90 | 12.0 | 18.0 | 66 | 2,906 | 1-4, 6-10, 12-20 | 1 THRU 4 |
| RTU-6 | 48LCF014 | Master Control | 5,000 | 500 | 1.5 | 10 | 400 | 324 | 2 | 179.9 | 128.4 | 80 / 67 | 56.2 / 55.5 | 3 | 4 | PLEATED - MERV 8 | MIXED AIR | 2" | OUTDOOR AIR | 2" | 460 | 53.3 | 60 | 12.5 | 18.4 | 66 | 2,650 | 1-4, 6-10, 12-20 | 1 THRU 4 |
| RTU-7 | 48A3T035 | TV Studio | 11,000 | 1,100 | 1.5 | 15 | 800 | 648 | 5 | 399.4 | 296.3 | 80 / 67 | 55.1 / 55.1 | Modulating | 2 | PLEATED - MERV 8 | MIXED AIR | 2" | OUTDOOR AIR | 2" | 460 | 100 | 110 | 9.8 | 12.7 | 62 | 5,371 | 1-5, 7-11, 13-20 | 1 THRU 4 |
| RTU-8 | 48A3T035 | TV Studio | 12,000 | 1,200 | 1.5 | 15 | 800 | 648 | 5 | 403.5 | 309.8 | 80 / 67 | 56.1 / 56.1 | Modulating | 2 | PLEATED - MERV 8 | MIXED AIR | 2" | OUTDOOR AIR | 2" | 460 | 100 | 110 | 9.8 | 12.7 | 62 | 5,371 | 1-5, 7-11, 13-20 | 1 THRU 4 |
| RTU-8A | 48A3T035 | TV Studio | 12,000 | 1,200 | 1.5 | 15 | 800 | 648 | 5 | 403.5 | 309.8 | 80 / 67 | 56.1 / 56.1 | Modulating | 2 | PLEATED - MERV 8 | MIXED AIR | 2" | OUTDOOR AIR | 2" | 460 | 100 | 110 | 9.8 | 12.7 | 62 | 5,371 | 1-5, 7-11, 13-20 | 1 THRU 4 |
| RTU-9 | 48LCF014 | 1st Floor Offices | 5,000 | 500 | 1.5 | 10 | 400 | 324 | 2 | 179.9 | 128.4 | 80 / 67 | 56.2 / 55.5 | 3 | 4 | PLEATED - MERV 8 | MIXED AIR | 2" | OUTDOOR AIR | 2" | 460 | 53.3 | 60 | 12.5 | 18.4 | 66 | 2,650 | 1-4, 6-10, 12-20 | 1 THRU 4 |
| RTU-10 | 48LCF026 | 2nd Floor Offices | 8,000 | 800 | 1.5 | 10 | 400 | 324 | 2 | 276.5 | 193.5 | 80 / 67 | 57.6 / 56.0 | 3 | 6 | PLEATED - MERV 8 | MIXED AIR | 2" | OUTDOOR AIR | 2" | 460 | 80.5 | 100 | 11.1 | 17.8 | 66 | 3,051 | 1-4, 6-10, 12-20 | 1 THRU 4 |
| RTU-11 | 48LCF026 | Student Lounge | 8,000 | 800 | 1.5 | 10 | 400 | 324 | 2 | 276.5 | 193.5 | 80 / 67 | 57.6 / 56.0 | 3 | 6 | PLEATED - MERV 8 | MIXED AIR | 2" | OUTDOOR AIR | 2" | 460 | 80.5 | 100 | 11.1 | 17.8 | 66 | 3,051 | 1-4, 6-10, 12-20 | 1 THRU 4 |

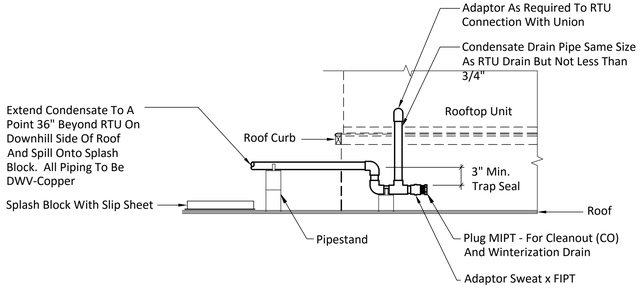
NOTES:

1. Selection Is Based On Package Rooftop Unit With DX Cooling Manufactured By Carrier.
2. Unit To Be Complete Package Including Microprocessor Based DDC Controls And Shall Be Suitable To Interface With Centralized Building Automation System.
3. Provide Variable Frequency Drive On Supply Fans.
4. Static Pressure Indicated Above Is The External Static Pressure Which Excludes Any P.D. Within The Unit.
5. Units Shall Be Of Double Wall Construction. Units Shall Be Complete With Side Outlet Drain, Access Doors And Lights, And Economizer With Power Exhaust.
6. Units Shall Be Of Single Wall Construction With Foil Faced Liner. Units Shall Be Complete With Side Outlet Drain, Access Doors And Lights, And Economizer With Power Exhaust.
7. Maximum Air Velocity Thru Cooling Coil Shall Not Exceed 500 Feet Per Min.
8. Electrical Connection To Be Single Point And To Be Through The Bottom Of The Unit. Provide Disconnect Switch And 115 Volt GFI Convenience Receptacle.
9. Unit Shall Have Hinged Access Doors.
10. Provide Differential Enthalpy 100% Economizer Functionality.
11. Unit Shall Have Modulating Digital Scroll Compressors.
12. Unit Shall Have Three Stage Digital Scroll Compressors.
13. Units Shall Have Full UL Listing.
14. Refrigerant - R410a.
15. Provide A "20 Seconds Between Stage" Delay Timer For Multiple Compressors.
16. Motor Efficiency Shall Match Premium Efficiency Table.
17. Unit Shall Have Interface To Fire Alarm System For Unit Shutdown.
18. Supply And Return Ducts Shall Be Bottom Discharge.
19. Units Shall Be Installed On Existing Steel Dunnage With Modifications Made As Directed By Structural Drawings. Provide Vibration Isolators On All Rooftop Units.
20. Sound Pressure Calculated With Unit Elevation At 30 Vertical Feet And A 50 Foot Distance Away.

ACCESSORIES:

1. 100% Differential Enthalpy Economizer With Powered Exhaust.
2. Provide Phase And Brownout Protection.
3. Variable Frequency Drive On Supply Fans.
4. Provide Access Catwalk And Ladder On Each RTU. See Structural Plan For Additional Information.

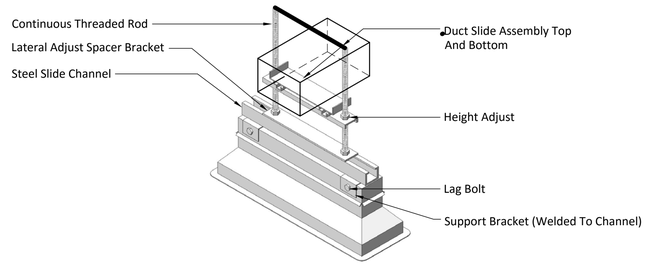
DCA APPROVAL

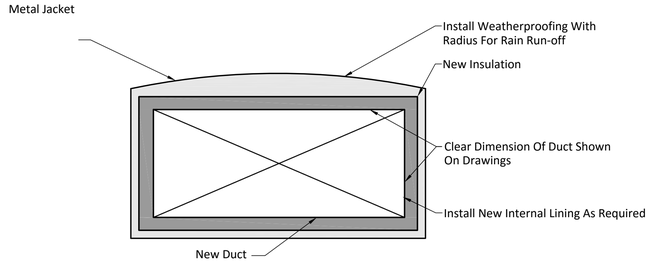



NOTES:

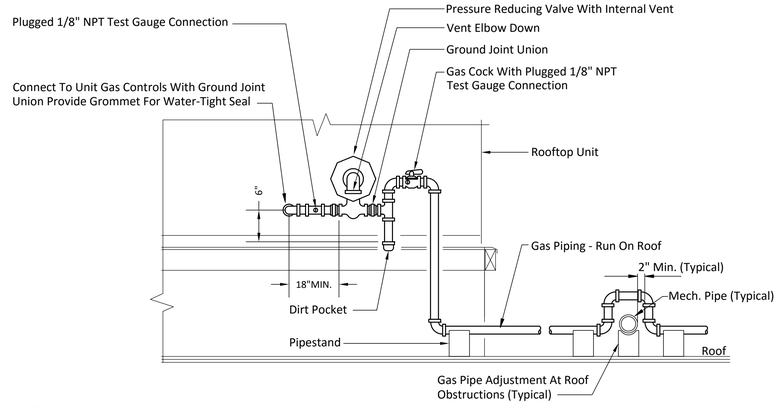
1. Trap Depth Must Exceed Static Pressure Of Fan. Check Nameplate Prior To Installing Trap.

**RTU CONDENSATE DRAIN DETAIL** — Scale: NTS — Drawing: M2H — Detail: 01




**EXTERIOR DUCT WATERPROOFING AND SUPPORT** — Scale: NTS — Drawing: M2H — Detail: 02




NOTE:

1. Contractor Shall Verify All Mechanical Gas Fired Equipment Connection Locations In The Field Prior To Installing Any Gas Pipe Mains Or Branches.

△1

**TYPICAL GAS PIPING CONNECTION DETAIL** — Scale: NTS — Drawing: M2H — Detail: 03

| ITEM | DATE | ISSUE DESCRIPTION | ITEM | DATE | ISSUE DESCRIPTION |
|---|---|---|---|---|---|

24x36


dlb associates
CONSULTING ENGINEERS, P.C.
265 Industrial Way West, Eatontown, N.J. 07724
Questions For DLB Call: Scot Gowers
DLB Project ID: 47401 Phone: 732-927-5145


project: HOBART HALL HVAC, 300 POMPTON ROAD, WAYNE, NJ, 07470

title: DETAILS AND ROOFTOP SCHEDULE

dwg. no.: M2H

| scale | drawn by | checked by | date | filename |
|---|---|---|---|---|
| AS SHOWN | DR | SG | 03/08/2016 | 47401M2H |