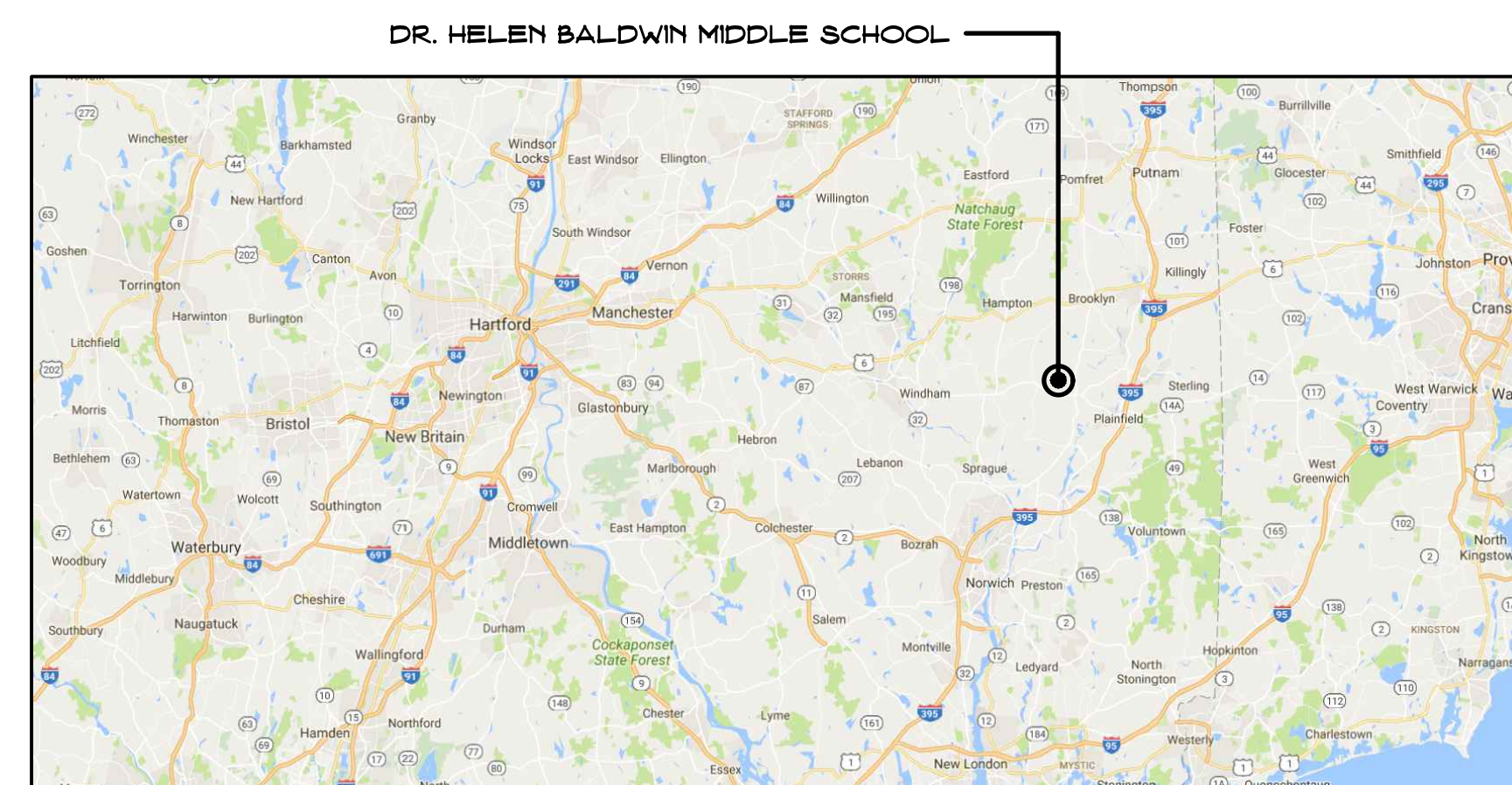
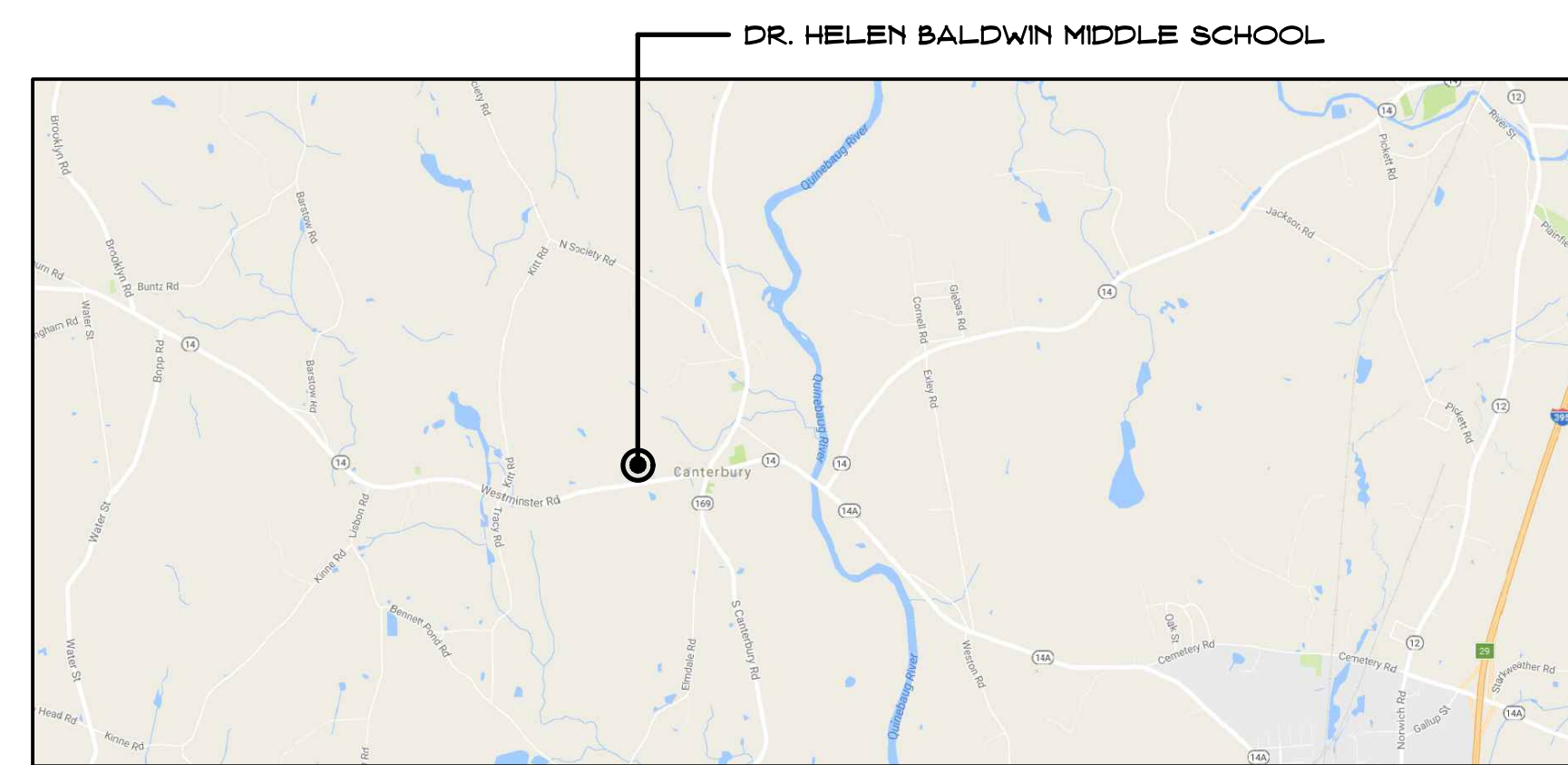


Roof Replacement For:  
**Town Of Canterbury**  
Canterbury Public Schools  
45 Westminster Road, Canterbury, Connecticut. 06331-1538  
**Dr. Helen Baldwin Middle School**  
45 Westminster Road, Canterbury, Connecticut. 06331-1538



VICINITY MAP  
SCALE: NONE  
NORTH



SITE LOCATION MAP  
SCALE: NONE  
NORTH



DRAWING LIST:

- Cover Sheet
- C1 - Code Information
- A1 - Roof Plan
- A2 - PART "A"  
Partial Roof Plan "A" &  
General Information
- A3 - PART "B"  
Partial Roof Plan "B" &  
General Information
- A4 - PART "C"  
Partial Roof Plan "C" &  
General Information
- A5 - Roof Details
- A6 - Roof Details
- HM-01 - Hazardous Materials  
Abatement Plan



SILVER / PETRUCELLI + ASSOCIATES  
*Architects / Engineers / Interior Designers*

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State Project Number: 022-0016 RR

SP+A Project Number: 16.081

15<sup>th</sup> MAY, 2017

Issued for Bid: 21<sup>st</sup> June, 2018



## GENERAL NOTES:

- SEE PROJECT MANUAL FOR ALLOWANCES AND/OR UNIT PRICES.
- CONTRACTOR ASSUMES ALL RESPONSIBILITY DURING PROJECT & WILL REPLACE ANY & ALL DAMAGED EQUIPMENT W/NO ADDITIONAL COST TO OWNER.
- CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS & PERFORM TEST CUTS • EACH ROOF PRIOR TO BID.
- CONTRACTOR IS TO SURVEY THE EXISTING ROOF DECKS W/A LEVEL (AFTER DEMOLITION) TO VERIFY IF DECK IS SLOPED AS INDICATED ON DRAWINGS OR FLAT. IF ANY DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT IMMEDIATELY OF THE CHANGES PRIOR TO PERFORMING ANY ADDITIONAL ROOFING OPERATIONS.
- CONTRACTOR IS TO INSPECT THE UNDERSIDE OF ALL ROOF DECKS PRIOR TO ROOFING OPERATIONS TO INSURE THAT NO INTERIOR MATERIALS, EQUIPMENT, FINISHES OR OBJECTS WILL BE PERCED OR DAMAGED.
- CONTRACTOR IS RESPONSIBLE TO MAKE ROOF WATER TIGHT, WHICH INCLUDES EVERYTHING THAT IS LOCATED AND/OR PENETRATES THE ROOF • THE END OF EACH WORK DAY.
- ALL MATERIALS ARE NEW UNLESS OTHERWISE NOTED 'EXISTING'.
- ALL WOOD BLOCKING PLYWOOD & NAILS TO BE FIRE TREATED (P.T.). SEE PROJECT MANUAL FOR FASTENING REQUIREMENTS.
- ALL WOOD BLOCKING INDICATED IN DETAILS ON DRAWING TO BE ANCHORED TO EXISTING STRUCTURE - SEE PROJECT MANUAL.
- ALL ROOFS TO RECEIVE ¼" PER FOOT TAPERED RIGID INSULATION MINIMUM UNLESS OTHERWISE NOTED.
- NEW INSULATION TO BE A MINIMUM 2" • ALL EXISTING & NEW ROOF DRAINS.
- ALL CRICKETS ARE TO BE SLOPED • A MINIMUM OF ¼" PER FOOT UNLESS OTHERWISE NOTED.
- COORDINATION OF CRICKETS AROUND EXISTING HVAC UNITS IS REQUIRED TO AVOID PONDING.
- ALL MEMBRANE FLASHING INDICATED IN DETAILS ON DRAWINGS IS TO EXTEND A MINIMUM OF 8" (VERTICAL AND/OR HORIZONTAL) OR WHAT IS REQUIRED BY MANUFACTURER ONTO THE FLAT PORTION OF THE ROOF.
- ALL EQUIPMENT INDICATED IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS.
- CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL & REINSTALLATION OF ALL HVAC UNITS (MIN. OF 8") INCLUDING ALL ELECTRICAL OR MECHANICAL CONNECTIONS. THIS MAY INCLUDE THE EXTENSION OF EXISTING ELECTRICAL, WIRING, PIPING, & DUCTWORK SYSTEMS TO ACCOMMODATE NEW MECHANICAL UNIT CURBING & NEW ROOFING SYSTEM HEIGHTS. DUCTWORK MAY NEED TO BE CUT, REMOVED, LIFTED, & RE-INSTALLED TO MAINTAIN MANUFACTURER'S 8" MIN. FLASHING HEIGHT. VERIFY WORK PRIOR TO BID.
- ALL DRAIN PIPING IS INSTALLED W/INSULATION ABOVE THE EXISTING CEILINGS. WHEN PIPING PENETRATES ANY WALLS, A FIRESTOPPING SYSTEM MUST BE INSTALLED. THE EXACT PIPING ROUTE WILL BE DETERMINED IN THE FIELD. VERIFY PROPOSED DRAIN PIPING LAYOUT PRIOR TO BID. MAKE MINOR ADJUSTMENTS IN THE ROUTE • NO ADDITIONAL COST TO THE OWNER OF THE BUILDING.
- SNAKE/CLEAN OUT ALL EXISTING VERTICAL & HORIZONTAL LEADERS TO NEAREST MANHOLE OUTSIDE.
- SNAKE/CLEAN OUT ALL EXISTING VENT STACKS PRIOR TO INSTALLING METAL SLEEVES.
- ALL ANTENNAE, LIGHTNING PROTECTION, CONDUITS, & ANY OTHER OBJECTS TO REMAIN ON NEW ROOF, AFFECTED BY THE SCOPE OF WORK, ARE TO BE REMOVED & REINSTALLED.
- CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR CLEAN UP OF ROOFING MATERIALS & DEBRIS THAT PENETRATE THE INTERIOR ENVELOPE OF THE BUILDING W/NO ADDITIONAL COST TO THE OWNER.
- SITE AREAS DISTURBED SHALL BE CLEANED & RE-LEVELLED, W/LAWN AREAS MAGNETICALLY RAKED TO REMOVE ANY METAL DEBRIS & RE-SEEDING IS REQUIRED TO MATCH ADJACENT CONDITIONS.
- CONTRACTOR ASSUMES THE RESPONSIBILITY THAT ALL SECONDARY DRAIN PIPING TOPS ARE A MAXIMUM HEIGHT OF 6" ABOVE LOWEST POINT OF THE ROOF & DO NOT EXCEED THE HEIGHT OF THE ROOF EDGE. PIPE TOPS TO BE LASER VERIFIED AFTER INSTALLATION A MAXIMUM OF 6". THOSE HIGHER NEED METAL SCUPPERS INSTALLED. CONTACT ARCHITECT IF EDGE IS ABOVE 6".
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF EXIST. MECH. UNITS & ALARM SYSTEMS DISCONNECTS & RECONNECTS EACH DAY DURING INSTALLATION OF ROOFING SYSTEM. COORDINATE W/OWNER & ARCHITECT FOR SCHEDULING PRIOR TO DAY OF WORK. PROVIDE PROTECTION FROM FUMES, GASES, & DUST FROM PENETRATING DUCTWORK & INTERIOR SPACES OF BUILDING. RECONNECT ALL UNITS TO BE FULLY OPERATIONAL BY THE END OF THE WORK DAY, UNLESS DIRECTED OTHERWISE BY OWNER.

## CODE INFORMATION:

USE GROUP: E & A  
CONSTRUCTION CLASS: 2B  
BASIC WIND SPEED: 110 MPH  
RISK CATEGORY: #3  
WIND SPEED: 140 M.P.H.

FACTORY MUTUAL, ENGINEERING & RESEARCH CORPORATION (FM GLOBAL); ROOF ASSEMBLY CLASSIFICATION OF NON-RESISTIBLE CONSTRUCTION WIND UPLIFT REQUIREMENT OF 140 FOR FIELD, 160 FOR PERIMETER, & 140 FOR CORNERS IN ACCORDANCE W/FM LOSS PREVENTION DATA SHEETS 1-28

IMC GUARD RAILS • APPLIANCES, EQUIPMENT, FANS OR OTHER COMPONENTS THAT REQUIRE SERVICE

## ENERGY CONSERVATION:

IECC CODE REQUIREMENT R-VALUE TOTAL  
CONNECTICUT CLIMATE ZONE: 5A  
IECC REQUIREMENT: U: 0.40 OR LESS  
R-25 OR MORE  
(R & U ARE BASED ON THE ROOFING ASSEMBLY)

## ROOFS: "A", "C", "K", &

"Q", "I", "T"

OUTSIDE AIR  
(1) PLY TPO MEMBRANE  
3/4" PERLITE BOARD  
BASE: 4" POLYISO INSUL.  
1 1/2" METAL DECKING  
INSIDE AIR

R TOTAL: 27.02  
U TOTAL: 0.037

## ROOF: "M"-P"

OUTSIDE AIR  
(1) PLY TPO MEMBRANE  
3/4" PERLITE BOARD  
BASE: 4" POLYISO INSUL.  
1" WOOD DECK  
INSIDE AIR

## ROOF: "B" & "S"

OUTSIDE AIR  
METAL ROOFING  
15# BUILDING PAPER  
BASE: 4" POLYISO INSUL.  
4" OSB BOARD  
1/4" METAL DECKING  
INSIDE AIR

## ROOF: "L"

OUTSIDE AIR  
METAL ROOFING  
15# BUILDING PAPER  
BASE: 4" POLYISO INSUL.  
4" OSB BOARD  
1" WOOD DECK  
INSIDE AIR

OUTSIDE AIR  
(1) PLY TPO MEMBRANE  
3/4" PERLITE BOARD  
BASE: 4" POLYISO INSUL.  
1 1/2" METAL DECKING  
INSIDE AIR

R TOTAL: 27.02  
U TOTAL: 0.037

THE ABOVE INFORMATION IS BASED ON LIMITED FIELD INVESTIGATION. ALL ROOFING, FLASHING & WOOD BLOCKING IS TO BE REMOVED LEAVING AN EXPOSED DECK.

## DEMOLITION NOTES <-\*

- AT ROOFS 'A', 'C', 'K', & 'M'-P' - REMOVE ALL OF THE FOLLOWING:
  - STONE BALLAST
  - (1) LAYER OF 2-PLY BUILT-UP ROOFING
  - RIGID INSULATION
  - ROOF DRAINS, SUMPS, & ALL INDICATED SCUPPERS
  - WOOD BLOCKING (PERIMETER & CURBS) UNLESS OTHERWISE NOTED
  - ROOF FLASHING MATERIAL
  - VENT STACK FLASHINGS
  - CANT STRIPS & TAPERED EDGE STRIPS
  - EXIST. MECH. UNIT CURBS
  - PERIMETER METAL FASCIA/CAP FLASHINGS UNLESS OTHERWISE NOTED
  - E.J. FLASHING
- AT ROOF 'M' - REMOVE ALL OF THE FOLLOWING:
  - STONE BALLAST
  - (1) LAYER OF SINGLE PLY TPO MEMBRANE
  - RIGID INSULATION
  - ROOF DRAINS, SUMPS, & ALL INDICATED SCUPPERS
  - WOOD BLOCKING (PERIMETER & CURBS) UNLESS OTHERWISE NOTED
  - ROOF FLASHING MATERIAL
  - MEMBRANE VENTS
  - CANT STRIPS & TAPERED EDGE STRIPS
  - EXIST. MECH. UNIT CURBS
  - PERIMETER METAL FASCIA/CAP FLASHINGS UNLESS OTHERWISE NOTED
  - TRANSITION BOOTS
- AT ROOF 'B', 'L', & 'S' - REMOVE ALL OF THE FOLLOWING:
  - ASPHALT SHINGLES
  - BUILDING PAPER
  - ICE & WATER SHIELD
  - METAL DRIP EDGES AT EAVES AND RAKES
  - ROOF FLASHING MATERIAL
  - PERIMETER METAL FASCIA/CAP FLASHINGS UNLESS OTHERWISE NOTED
  - METAL GUTTERS & HANGERS
  - METAL DOWNSPOUTS, SUPPORTS & DISCARD
- CONTRACTOR TO REMOVE ATTIC EXHAUST UNITS & DISCARD
- CONTRACTOR TO REMOVE MEMBRANE VENT & DISCARD

## CODE INFORMATION

|                               |      |
|-------------------------------|------|
| DATE OF ORIGINAL CONSTRUCTION | 1947 |
| DATE OF ADDITION 1            |      |
| DATE OF ADDITION 2            | 1962 |
| DATE OF ADDITION 3            |      |
| DATE OF ADDITION 4            | 1991 |

1. GROUP CLASSIFICATION (Chapter 3)  
(Primary) E-EDUCATIONAL  
(Incidental) A3-ASSEMBLY

2. CONSTRUCTION TYPE (Chapter 6)  
Minimum Type Required 3B/5B  
Actual Type Provided (existing) ---  
(new) 2C/3B

3. BUILDING HEIGHT (Chapter 5)  
Allowable Height (story/feet) 3/75'-0"  
Actual Height (story/feet) 2/31'-6"  
(Stories Above Grade) 2

### 4.A. BUILDING AREA (Chapter 5) ROOF STATE PROJECT # TMP-022-XXX

|                          |        |        |
|--------------------------|--------|--------|
| a) Building Area (first) | 54,620 | sq.ft. |
| Existing construction    | NA     | sq.ft. |
| New construction         | NA     | sq.ft. |
| Total floor              | 54,620 | sq.ft. |

|                           |        |        |
|---------------------------|--------|--------|
| b) Building Area (second) | 21,395 | sq.ft. |
| Existing construction     | 21,395 | sq.ft. |
| New construction          | NA     | sq.ft. |
| Total floor               | 21,395 | sq.ft. |

|                          |    |        |
|--------------------------|----|--------|
| c) Building Area (third) | NA | sq.ft. |
| Existing construction    | NA | sq.ft. |
| New construction         | NA | sq.ft. |
| Total floor              | NA | sq.ft. |

TOTAL (ALL FLOORS) 76,015 sq.ft.

### 5. AREA MODIFICATIONS TO TABLE 503 (for each separate building as defined by fire walls and/or exterior walls)

|    |  |
|----|--|
| NA |  |
|----|--|

### 6. CASE 1 - SINGLE OCCUPANCY OR NONSEPARATED USES (302.3.1)

|                        |    |
|------------------------|----|
| (Allowable Area 506.4) | NA |
|------------------------|----|

### 7. CASE 2 - MIXED OCCUPANCY SEPARATED USES (302.3.2)

|                        |    |
|------------------------|----|
| (Allowable Area 506.4) | NA |
|------------------------|----|

### 8. FIRE-RESISTANCE RATED REQUIREMENTS FOR BUILDING ELEMENTS

(Table 601, See Code Plans for specific designations)

|                                                             |     |       |
|-------------------------------------------------------------|-----|-------|
| 1. Structural frame: including columns, girders, trusses    | 0   | Hr(s) |
| 2. Bearing walls: Exterior (Table 602)                      | 0/1 | Hr(s) |
| Interior                                                    | 0   | Hr(s) |
| 3. Nonbearing walls & partitions Exterior (Table 602)       | 0/1 | Hr(s) |
| Interior                                                    | 0   | Hr(s) |
| 4. Nonbearing walls & partitions Interior                   | 0   | Hr(s) |
| 5. Floor Construction (including supporting beams & joists) | 0   | Hr(s) |
| 6. Roof Construction (including supporting beams & joists)  | 0   | Hr(s) |

### 9. OCCUPANCY LOAD

|                                     |    |
|-------------------------------------|----|
| Design Total for Basement           | NA |
| Total Exit Capacity for Basement    | NA |
| Design Total for First Floor        | NA |
| Total Exit Capacity for First Floor | NA |
| Design Total for Building           | NA |
| Total Exit Capacity for Building    | NA |

### 10. MODIFICATIONS

|  |          |              |
|--|----------|--------------|
|  | Approved | Not Approved |
|  |          |              |
|  | Approved | Not Approved |
|  |          |              |
|  | Approved | Not Approved |
|  |          |              |

### 11. ACCESSIBLE BUILDING

|                |   |
|----------------|---|
| Designated     | X |
| Non Designated |   |

### 12. MINIMUM PLUMBING FIXTURE COUNT (I.P.C. Chapter 4)

For each type of occupancy per entire facility

|                                         | Required | Provided |
|-----------------------------------------|----------|----------|
| W/C Male                                | NA       | NA       |
| W/C Female                              | NA       | NA       |
| Lavs                                    | NA       | NA       |
| D/F                                     | NA       | NA       |
| W/C Unisex                              | NA       | NA       |
| Lavs Unisex                             | NA       | NA       |
| Group "A3" occupancy (Design Load = NA) |          |          |
| W/C                                     | NA       | NA       |
| Lavs                                    | NA       | NA       |
| D/F                                     | NA       | NA       |
| Group "E" occupancy, (Design Load = NA) |          |          |
| W/C                                     | NA       | NA       |
| Lavs                                    | NA       | NA       |
| D/F                                     | NA       | NA       |

(Total Design Load for entire facility = NA )

### 13. ENTIRE BUILDINGS SPRINKLERED

|     |    |
|-----|----|
| Yes | No |
|     | X  |

### 14. THRESHOLD BUILDING CONDITIONS

|     |    |
|-----|----|
| Yes | No |
|     | X  |

### 15. CODES TO WHICH THIS PROJECT WAS DESIGNED

|                                  |              |
|----------------------------------|--------------|
| State Building Code w/Supplement | MOST CURRENT |
| State Building Code w/Supplement | MOST CURRENT |
| State Fire Code w/Supplement     | MOST CURRENT |
| State Fire Code w/Supplement     | MOST CURRENT |
| State Health Code                | MOST CURRENT |
| OSHA                             | MOST CURRENT |
| Section 504                      | MOST CURRENT |
| ADA                              | MOST CURRENT |

### 16.A. BUILDING AREAS FOR GRANT CALCULATION (ENTIRE FACILITY)

ROOF STATE PROJECT # TMP-022-XXX

(measured to inside face of exterior walls)

|                                   |        |        |
|-----------------------------------|--------|--------|
| Existing unrenovated construction | 0      | sq.ft. |
| Existing renovated construction   | 0      | sq.ft. |
| Existing being demolished         | 0      | sq.ft. |
| Total existing construction       | 73,983 | sq.ft. |
| Total new construction            | 0      | sq.ft. |
| Total facility                    | 73,983 | sq.ft. |

Open Areas (not included in total facility)

|    |   |        |
|----|---|--------|
| NA | 0 | sq.ft. |
|----|---|--------|

### 16.B. BUILDING AREAS FOR GRANT CALCULATION (ENTIRE FACILITY)

SOLAR PANEL STATE PROJECT #

|                                             |    |        |
|---------------------------------------------|----|--------|
| (measured to inside face of exterior walls) | NA | sq.ft. |
| Existing unrenovated construction           | NA | sq.ft. |
| Existing renovated construction             | NA | sq.ft. |
| Existing being demolished                   | NA | sq.ft. |
| Total existing construction                 | NA | sq.ft. |
| Total new construction                      | NA | sq.ft. |
| Total facility                              | NA | sq.ft. |

Open Areas (not included in total facility)

|    |    |        |
|----|----|--------|
| NA | NA | sq.ft. |
|----|----|--------|

### 17. TOTAL CONSTRUCTED BUILDING AREA

(outside face of exterior walls including open areas above)

|    |    |        |
|----|----|--------|
| NA | NA | sq.ft. |
|----|----|--------|

### FIRE SAFETY CODE DATA:

- CLASSIFICATION OF OCCUPANCY EDUCATIONAL/ASSEMBLY
- MINIMUM CONSTRUCTION REQUIRED 5B
- ACTUAL CONSTRUCTION PROVIDED 2B
- NOTIFICATION / ALARMS (GFSC 2005, NFPA 72, NATIONAL FIRE ALARM CODE 2002) YES X NO
- DETECTION (GFSC 2005, NFPA 72, NATIONAL FIRE ALARM CODE 2002) YES X NO
- EXTINGUISHMENT REQUIREMENTS (NFPA 13, 2002) YES X NO

### MEANS OF EGRESS

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT IBC TABLE 1004.1.2

| USE                                               | FLOOR AREA IN S.F. PER OCCUPANT |
|---------------------------------------------------|---------------------------------|
| 1. CLASSROOMS                                     | 20 S.F. NET                     |
| 2. SHOPS & VOCATIONAL                             | 50 S.F. NET                     |
| 3. ASSEMBLY WITHOUT FIXED SEATS TABLES AND CHAIRS | 7 S.F. NET                      |
| 4. PLATFORMS                                      | 15 S.F. NET                     |
| 5. LIBRARY                                        | 50 S.F. NET                     |
| READING ROOMS                                     | 100 S.F. GROSS                  |
| STACK AREA                                        | 50 S.F. GROSS                   |
| 6. LOCKER ROOMS                                   | 300 S.F. GROSS                  |
| 7. MECHANICAL AREAS                               | 300 S.F. GROSS                  |
| 8. STORAGE                                        | 100 S.F. GROSS                  |
| 9. BUSINESS AREAS                                 | 15 S.F. NET                     |
| 10. Courtyards                                    | 250 FEET                        |

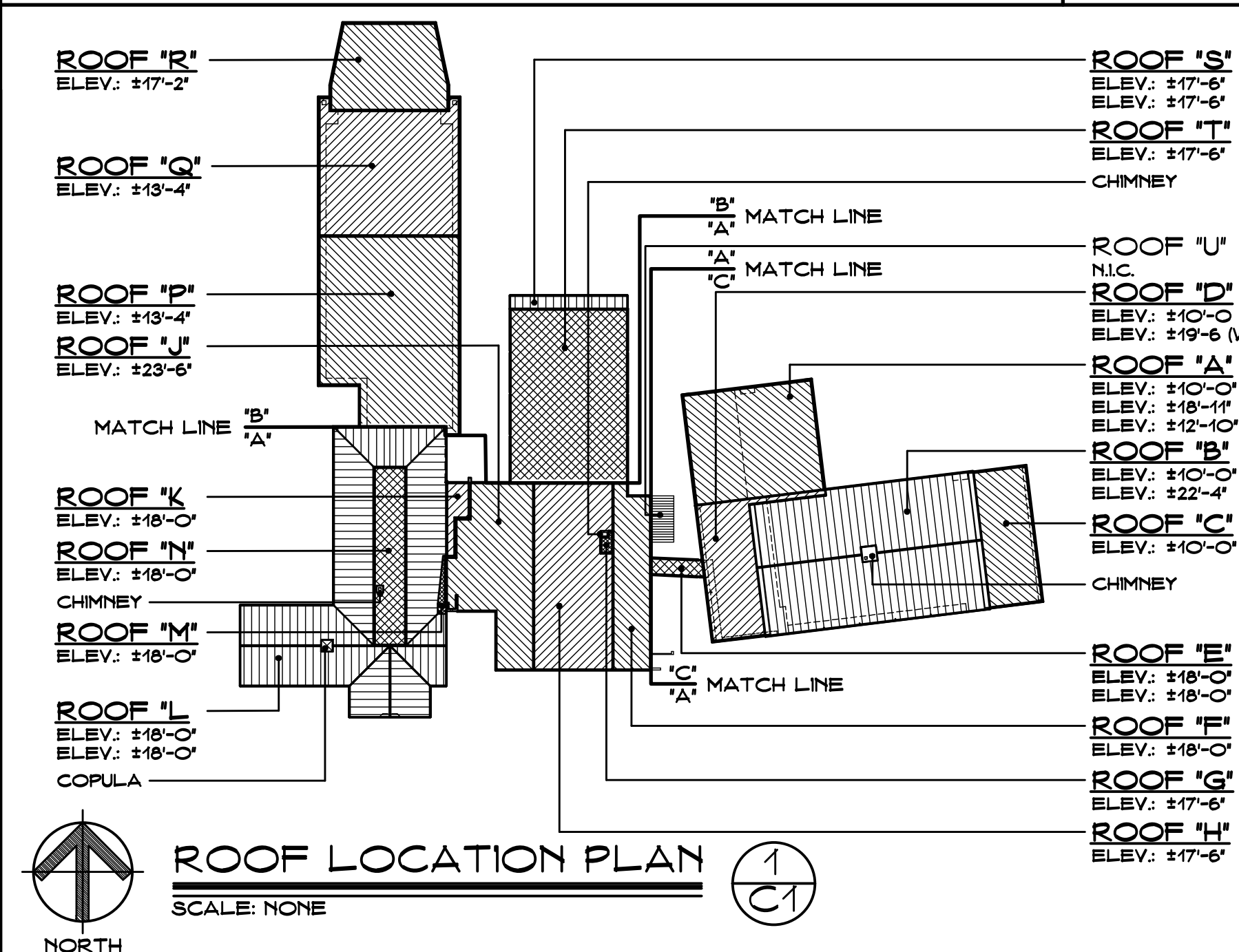
MAXIMUM LENGTH OF EXIT TRAVEL

- I.B.C. TABLE 1015.1



## CONSTRUCTION NOTES <-\*

- FOR ROOF DRAIN TYPE I DETAIL • ALL METAL WOOD DECKS - SEE DETAIL - (D/A5)
- FOR ROOF DRAIN DETAIL SECONDARY DRAINAGE SYSTEM • ALL METAL DECK - SEE DETAIL - (E/A5)
- FOR ROOF DRAIN & END WALL DETAIL SECONDARY DRAINAGE SYSTEM • ALL METAL DECK - SEE DETAIL - (G/A5)
- FOR COLLECTION BOX DETAIL • ALL METAL DECK - SEE DETAIL - (H/A5)
- FOR END DRAIN DETAIL • ALL METAL DECKS - SEE DETAIL - (J/A5)
- FOR SCUPPER DETAIL • ALL METAL DECKS - SEE DETAIL - (K/A5)
- FOR MECH. UNIT TYPE I DETAIL • ALL METAL WOOD DECKS - SEE DETAIL - (L/A5)
- FOR MECH. UNIT TYPE II DETAIL • ALL METAL WOOD DECKS - SEE DETAIL - (M/A5)
- FOR MECH. UNIT TYPE III DETAIL • ALL METAL WOOD DECKS - SEE DETAIL - (N/A5)
- FOR MECH. UNIT TYPE IV DETAIL • ALL METAL WOOD DECKS - SEE DETAIL - (O/A5)
- FOR VENT STACK DETAIL • ALL METAL WOOD DECKS - SEE DETAIL - (P/A5)
- FOR PITCH POCKET DETAIL • ALL METAL DECK - SEE DETAIL - (Q/A5)
- FOR EXPANSION JOINT TYPE I DETAIL • ALL METAL DECK - SEE DETAIL - (R/A5)
- FOR EXPANSION JOINT TYPE II DETAIL • ALL METAL DECK - SEE DETAIL - (S/A5)
- FOR MECH. UNIT CURB DETAIL • ALL METAL DECK - SEE DETAIL - (T/A5)
- FOR ROOF HATCH DETAIL • ALL METAL DECK - SEE DETAIL - (U/A5)
- FOR SMOKE HATCH DETAIL • ALL METAL DECK - SEE DETAIL - (V/A5)
- FOR ROOF REGLET DETAIL • ALL METAL DECK - SEE DETAIL - (W/A5)
- FOR THRU WALL FLASHING DETAIL • ALL METAL DECK - SEE DETAIL - (X/A5)
- FOR INTERIOR LADDER DETAIL • ALL WOOD DECK - SEE DETAIL - (Y/A5)
- FOR ROOF LADDER DETAIL • ALL METAL DECK - SEE DETAIL - (Z/A5)
- FOR TYPICAL GUARDRAIL DETAILS • ALL METAL DECK - SEE DETAIL - (AA/A5)
- HORIZONTAL ROOF LEADER (MATCH DIAMETER OF EXIST.) ABOVE CEILING SLOPED • ¼" / FT. MIN. VERTICAL LEADERS INTO EXIST. PIPING AS REQD. SEAL ALL PENETRATIONS THROUGH WALLS W/FIRE PUTTY AS REQUIRED BY CODE. PATCH & REPAIR ALL AREAS DAMAGED BY INSTALLATION OF NEW PIPING
- EXISTING HORIZONTAL ROOF LEADERS TO REMAIN. CONTRACTOR TO TIE NEW ROOF DRAIN & NEW 4" CAST IRON VERTICAL ROOF LEADER INTO EXIST. - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- INSTALL SCUPPERS IF REQD. AVOID WINDOWS BELOW
- CONCRETE SPLASH BLOCKS WHERE REQD. - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- TEMPORARILY REMOVE & REINSTALL EXIST. MECH. UNIT. REMOVE EXIST. CURB. INSTALL NEW INSULATED CURBS. PATCH & REPAIR ANY DAMAGE TO DUCTWORK - SEE DETAIL G/A4.
- FOR MECH. UNIT CURBS THAT CANNOT BE REMOVED - SEE DETAILS K/A6, L/A6, & M/A6
- CONTRACTOR TO INSTALL INSULATED CURBS FASTENED TO DECK TO MEET SEISMIC CODE REQUIREMENTS. INSTALL AS REQD. TO ALLOW FOR WATER FLOW & PREVENT PONDING. SEE DETAIL R/A4
- CONTRACTOR TO INSTALL NEW P.T. WOOD BLOCKING 8" TO MEET MANUFACTURER'S MIN. FLASHING HEIGHT
- CONTRACTOR TO PROVIDE NEW ROOF HATCH. INSTALL LADDER UP SAFETY POST & HATCH SAFETY RAIL SYSTEM - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- CONTRACTOR SHALL REPLACE ALL OR PROVIDE NEW ROOF TOP EQUIPMENT DISCONNECT SWITCHES IN THIS PROJECT SCOPE. NEW SWITCHES SHALL BE NON-FUSED, NEMA 3R RATED & SHALL MATCH THE VOLTAGE & CURRENT RATINGS OF THE EQUIPMENT SERVED. NEW DISCONNECT SWITCHES SHALL BE MOUNTED TO A NON-REMOVABLE PANEL ON THE EQUIPMENT SERVED OR THE CONTRACTOR SHALL PROVIDE A SUITABLE UN-STRUT SUPPORT FOR PROPER MOUNTING. IN ALL CASES, THE NEW DISCONNECT SWITCH SHALL BE W/IN VIEW OF THE EQUIPMENT SERVED. MODIFY & EXTEND BRANCH CIRCUIT WIRING AS REQD. FOR INSTALLATION OF THE DISCONNECT SWITCH. NEW SWITCH MATERIALS & INSTALLATION SHALL BE COMPLIANT W/APPLICABLE REQUIREMENTS OF THE CURRENT NEC ARTICLES & APPLICABLE REQUIREMENTS OF THE CURRENT NEC ARTICLES & APPLICABLE REQUIREMENTS OF THE CURRENT NEC 424.19, 430.1X & 440 PART II
- CONTRACTOR SHALL PROVIDE NEW GFCI RECEPTACLES IN WATERPROOF BOXES W/IN 25'-0" OF ALL HVAC EQUIPMENT PER NEC 210.63. TIE RECEPTACLE INTO EXIST. GENERAL PURPOSE RECEPTACLE CIRCUIT SERVING THE SPACE BELOW
- REPLACE EXIST. AIR TERMINALS AS REQD. & USE EXIST. GROUNDING WIRES, ADDING &/OR REPLACING DAMAGED LENGTHS AS REQUIRED
- CONTRACTOR TO INSTALL NEW WALL USING 2X 8" F.T. WOOD & 1/2" F.T. PLYWOOD. THE WALL SHALL IN-CLOSE OVERHANG OF NEW METAL ROOFING SYSTEM W/ GUTTER & EXTEND BACK FROM EXIST. WALL. RUN TPO MEMBRANE UP FRONT FACE OF NEW WALL & ON TOP OF EXIST. SLOPED ROOF BEFORE INSTALLING METAL ROOFING SYSTEM
- CONTRACTOR TO BRUSH ON 'YELLOW' LIQUID ROOFING MEMBRANE TO INDICATE LOCATION OF NEW INSTALLED PIPING FOR FUTURE WORK
- CONTRACTOR TO INSTALL TPO MEMBRANE FROM ROOF 'H' LOW UP VERTICAL WALL OF ROOF 'G' & FASTEN TO BLOCKING HIGH ROOF 'G'.
- CONTRACTOR TO PURCHASE & INSTALL METAL PRE FABRICATED CUPOLA. INCLUDE BASE EXTENSION & AIR TERMINAL TIED INTO EXIST. LIGHTNING PROTECTION SYSTEM. MATCH EXIST. HISTORICAL UNIT AS POSSIBLE. STYLE & COLOR TO BE APPROVED BY OWNER
- CONTRACTOR TO PATCH & REPAIR SIDING BEHIND REMOVED GUTTER AS REQD. PAINT AREA TO MATCH



## SYMBOL LEGEND:

- PLAN SECTION DETAIL OR ELEVATION NUMBER/SHEET NUMBER
- OUTLINE OF NEW ROOF
- OUTLINE OF EXISTING ROOFS N.I.C.
- EXISTING OUTLINE OF BUILDING
- INDICATES TAPERED INSULATION DIRECTION
- INDICATES PITCHED ROOF DECKING - EXISTING PITCH WILL NOT BE CHANGED
- SLOPE REQUIREMENTS OF TAPERED INSULATION SYSTEM
- TAPERED INSULATION CRICKET SLOPED 8" / 4" PER FOOT
- NEW ROOF DRAIN & SUMP • EXIST. LOCATION - SEE DETAIL D/A5 & CONSTRUCTION NOTES #23 & #24
- NEW ROOF DRAIN & SUMP • NEW LOCATION - SEE DETAIL D/A5 & CONSTRUCTION NOTES #23 & #24
- NEW ROOF DRAIN OVER FLOW SYSTEM & NEW LOCATION - SEE DETAIL E/A5 & F/A5
- COLLECTION BOX 1 - SEE DETAIL G/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- WALL END DRAIN - SEE DETAIL F/A5, H/A5, & CONSTRUCTION NOTE #25
- METAL SCUPPER - SEE DETAIL H/A5, J/A5, & CONSTRUCTION NOTE #25
- EXISTING ROOF DRAIN TO BE REMOVED & LEADER TO BE USED - CONSTRUCTION NOTES #22 & #23
- NEW HORIZONTAL ROOF DRAIN LEADER - SEE CONSTRUCTION NOTES #22 & #23
- METAL STORM GUTTER - SLOPE GUTTER AS INDICATED
- DOWN SPOUT - TIE INTO NEW OR EXISTING ROOF GUTTER
- UNDERGROUND STORM WATER SYSTEM AS REQD. - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- SPLASH BLOCK - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- EXISTING ROOF TOP MECHANICAL UNIT TO REMAIN - SEE DETAILS R/A5 & S/A5 & CONSTRUCTION NOTES #27, THRU #32
- DASHED LINES REPRESENT MECH. UNIT ABOVE
- VENT STACK - SEE DETAIL P/A5
- PITCH POCKET - SEE DETAIL Q/A5
- EXPANSION JOINT - SEE DETAILS R/A5 & S/A5
- MECH. UNIT CURB - SEE DETAIL T/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- SMOKE HATCH - SEE DETAIL V/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- ROOF HATCH - SEE DETAIL U/A5 & CONSTRUCTION NOTE #31 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- INTERIOR ROOF LADDER - SEE DETAIL C/A6 & CONSTRUCTION NOTE #31 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- HEIGHT DIFFERENCE BETWEEN ROOFS FOR EACH LADDER - SEE ABOVE
- EXTERIOR ROOF LADDER - SEE DETAIL D/A6 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- HEIGHT DIFFERENCE BETWEEN ROOFS FOR EACH LADDER - SEE ABOVE
- METAL SAFETY GUARD RAIL - SEE DETAIL E/A6 & PROJECT MANUAL FOR ADDITIONAL INFORMATION. CENTER RAIL ON MECH. UNIT
- ANTENNA ANCHOR
- EXIST. AIR TERMINAL - SEE CONSTRUCTION #34
- WALKWAY PADS - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION

## ROOF AREAS:

### BASE RIZ.

- ROOFS - (1) PLY TPO

|          |          |
|----------|----------|
| ROOF 'A' | 3,966 SF |
| ROOF 'B' | 2,177 SF |
| ROOF 'C' | 2,310 SF |
| ROOF 'D' | 249 SF   |
| ROOF 'E' | 1,666 SF |
| ROOF 'F' | 62 SF    |
| ROOF 'G' | 4,029 SF |
| ROOF 'H' | 81 SF    |
| ROOF 'I' | 3,28     |



ROOF "R" 2648 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1½" METAL DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

ROOF "Q" 4917 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1½" METAL DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

ROOF "P" 6940 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1" WOOD DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

ROOF "L" 10042 S.F.  
ROOF SYSTEM: STANDING SEAM  
METAL PANELS  
(COLOR: BLUE)  
EXISTING DECK: ± 1" WOOD DECK  
FASTENING SYSTEM: MECH. FASTENED

ROOF "K" 234 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1½" METAL DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

ROOF "N" 1537 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± ¾" WOOD DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

CHIMNEY

ROOF "M" 81 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± ¾" WOOD DECK  
INSULATION: 4" FLAT BASE  
FASTENING SYSTEM: MECH. FASTENED

ROOF "L" 10042 S.F.  
ROOF SYSTEM: STANDING SEAM  
METAL PANELS  
(COLOR: BLUE)  
EXISTING DECK: ± 1" WOOD DECK  
FASTENING SYSTEM: MECH. FASTENED

CUPOLA

ROOF "J" 3287 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1½" METAL DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

ROOF "H" 4029 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1½" METAL DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

ROOF "S" 806 S.F.  
ROOF SYSTEM: ARCHITECTURAL  
ASPHALT SHINGLES  
EXISTING DECK: ± 1½" METAL DECK  
FASTENING SYSTEM: MECH. FASTENED

ROOF "T" 5597 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1½" METAL DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

ROOF "U"  
N.I.C.

ROOF "D" 2310 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1½" METAL DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

ROOF "A" 3966 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1½" METAL DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

ROOF "C" 2177 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1½" METAL DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

ROOF "B" 8598 S.F.  
ROOF SYSTEM: STANDING SEAM  
METAL PANELS  
(COLOR: BLUE)  
EXISTING DECK: ± 1½" METAL DECK  
FASTENING SYSTEM: MECH. FASTENED

ROOF "E" 249 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1½" METAL DECK  
INSULATION: 4" FLAT BASE  
FASTENING SYSTEM: MECH. FASTENED

ROOF "F" 1866 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1½" METAL DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

ROOF "G" 62 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE  
(COLOR: WHITE)  
EXISTING DECK: ± 1½" METAL DECK  
INSULATION: 4" FLAT BASE  
4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

CHIMNEY



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

1  
A1



SILVER / PETRUCELLI + ASSOCIATES  
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| Revision | Description | Date | Revised By |
|----------|-------------|------|------------|
|          |             |      |            |
|          |             |      |            |
|          |             |      |            |
|          |             |      |            |

Drawing Title:  
ROOF PLAN

STATE PROJECT NO. 022-0016 RR

Date:  
15<sup>th</sup> MAY, 2017  
Scale:  
1/8" = 1'-0"  
Drawn By:  
162  
Project Number:  
15.099

Drawing Number:

A1



## GENERAL NOTES:

- SEE PROJECT MANUAL FOR ALLOWANCES AND/OR UNIT PRICES.
- CONTRACTOR ASSUMES ALL RESPONSIBILITY DURING PROJECT & WILL REPLACE ANY & ALL DAMAGED EQUIPMENT W/NO ADDITIONAL COST TO OWNER.
- CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS & PERFORM TEST CUTS & EACH ROOF PRIOR TO BID.
- CONTRACTOR IS TO SURVEY THE EXISTING ROOF DECKS W/A LEVEL (AFTER DEMOLITION) TO VERIFY IF DECK IS SLOPED AS INDICATED ON DRAWINGS OR FLAT. IF ANY DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT IMMEDIATELY OF THE CHANGES PRIOR TO PERFORMING ANY ADDITIONAL ROOFING OPERATIONS.
- CONTRACTOR IS TO INSPECT THE UNDERSIDE OF ALL ROOF DECKS PRIOR TO ROOFING OPERATIONS TO INSURE THAT NO INTERIOR MATERIALS, EQUIPMENT, FINISHES OR OBJECTS WILL BE PERCED OR DAMAGED.
- CONTRACTOR IS RESPONSIBLE TO MAKE ROOF WATER TIGHT, WHICH INCLUDES EVERYTHING THAT IS LOCATED AND/OR PENETRATES THE ROOF & THE END OF EACH WORK DAY.
- ALL MATERIALS ARE NEW UNLESS OTHERWISE NOTED 'EXISTING'.
- ALL WOOD BLOCKING, PLYWOOD & NAILERS TO BE FIRST INSTALLED (P.T.). SEE PROJECT MANUAL FOR FASTENING REQUIREMENTS.
- ALL WOOD BLOCKING INDICATED IN DETAILS ON DRAWING IS TO BE ANCHORED TO EXISTING STRUCTURE - SEE PROJECT MANUAL.
- ALL ROOFS TO RECEIVE 1/4" PER FOOT TAPERED RIGID INSULATION MINIMUM UNLESS OTHERWISE NOTED.
- NEW INSULATION TO BE A MINIMUM 2" & ALL EXISTING & NEW ROOF DRAINS.
- ALL CRICKETS ARE TO BE SLOPED & A MINIMUM OF 1/4" PER FOOT UNLESS OTHERWISE NOTED.
- COORDINATION OF CRICKETS AROUND EXISTING HVAC UNITS IS REQUIRED TO AVOID PONDING.
- ALL MEMBRANE FLASHING INDICATED IN DETAILS ON DRAWINGS IS TO EXTEND A MINIMUM OF 8" (VERTICAL AND/OR HORIZONTAL) OR WHAT IS REQUIRED BY MANUFACTURER ONTO THE FLAT PORTION OF THE ROOF.
- ALL EQUIPMENT INDICATED IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS.
- CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL & REINSTALLATION OF ALL HVAC UNITS (MIN. OF 8") INCLUDING ALL ELECTRICAL OR MECHANICAL CONNECTIONS. THIS MAY INCLUDE THE EXTENSION OF EXISTING ELECTRICAL, WIRING, PIPING, & DUCTWORK SYSTEMS TO ACCOMMODATE NEW MECHANICAL UNIT CURBING & NEW ROOFING SYSTEM HEIGHTS. DUCTWORK MAY NEED TO BE CUT, REMOVED, LIFTED, & RE-INSTALLED TO MAINTAIN MANUFACTURER'S 8" MIN. FLASHING HEIGHT. VERIFY WORK PRIOR TO BID.
- ALL DRAIN PIPING IS INSTALLED W/INSULATION ABOVE THE EXISTING CEILING. WHEN PIPING PENETRATES ANY WALLS, A FIRESTOPPING SYSTEM MUST BE INSTALLED. THE EXACT PIPING ROUTE WILL BE DETERMINED IN THE FIELD. VERIFY PROPOSED DRAIN PIPING LAYOUT PRIOR TO BID. MAKE MINOR ADJUSTMENTS IN THE ROUTE & NO ADDITIONAL COST TO THE OWNER OF THE BUILDING.
- SLAKE/CLEAN OUT ALL EXISTING VERTICAL & HORIZONTAL LEADERS TO NEAREST MANHOLE OUTSIDE.
- SLAKE/CLEAN OUT ALL EXISTING VENT STACKS PRIOR TO INSTALLING METAL SLEEVES.
- ALL ANTENNAE, LIGHTNING PROTECTION, CONDUITS, & ANY OTHER OBJECTS TO REMAIN ON NEW ROOF, AFFECTED BY THE SCOPE OF WORK, ARE TO BE REMOVED & REINSTALLED.
- CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR CLEAN UP OF ROOFING MATERIALS & DEBRIS THAT PENETRATE THE INTERIOR ENVELOPE OF THE BUILDING W/NO ADDITIONAL COST TO THE OWNER.
- SITE AREAS DISTURBED SHALL BE CLEANED & RE-LEVELLED, W/LAWN AREAS MAGNETICALLY RAKED TO REMOVE ANY METAL DEBRIS & RE-SEEDING IS REQUIRED TO MATCH ADJACENT CONDITIONS.
- CONTRACTOR IS RESPONSIBLE THAT ALL SECONDARY DRAIN PIPING TOPS ARE A MAXIMUM HEIGHT OF 6" ABOVE LOWEST POINT OF THE ROOF & DO NOT EXCEED THE HEIGHT OF THE ROOF EDGE. PIPE TOPS TO BE LASER VERIFIED AFTER INSTALLATION A MAXIMUM OF 6". THOSE HIGHER NEED METAL SCUPPERS INSTALLED. CONTACT ARCHITECT IF EDGE IS ABOVE 6".
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING PHASING OF EXIST. MECH. UNITS & ALARM SYSTEMS DISCONNECTS & RECONNECTS EACH DAY DURING INSTALLATION OF ROOFING SYSTEM. COORDINATE W/OWNER & ARCHITECT FOR SCHEDULING PRIOR TO DAY OF WORK. PROVIDE PROTECTION FROM FUMES, GASES, & DUST FROM PENETRATING DUCTWORK & INTERIOR SPACES OF BUILDING. RECONNECT ALL UNITS TO BE FULLY OPERATIONAL BY THE END OF THE WORK DAY, UNLESS DIRECTED OTHERWISE BY OWNER.

## CODE INFORMATION:

USE GROUP: E & A  
CONSTRUCTION CLASS: 2B  
BASIC WIND SPEED: 110 MPH  
RISK CATEGORY: #3  
WIND SPEED: 140 MPH.

FACTORY MUTUAL ENGINEERING & RESEARCH CORPORATION (FM GLOBAL) ROOF ASSEMBLY CLASSIFICATION OF NON-CONSUMABLE CONSTRUCTION W/NO LIFT REQUIREMENT OF 140 FOR FIELD, 190 FOR PERIMETER, & 140 FOR CORNERS IN ACCORDANCE W/FM LOSS PREVENTION DATA SHEETS 1-28

IMC GUARD RAILS & APPLIANCES, EQUIPMENT, FANS OR OTHER COMPONENTS THAT REQUIRE SERVICE

## ENERGY CONSERVATION:

IECC CODE REQUIREMENT R-VALUE TOTAL  
CONNECTICUT CLIMATE ZONE: 5A  
IECC REQUIREMENT: U: 0.40 OR LESS  
R-25 OR MORE  
(R & U ARE BASED ON THE ROOFING ASSEMBLY)

## ROOFS: "A", "C", "K", &

"Q", "I", "T"

OUTSIDE AIR: 0.17  
(1) PLY TPO MEMBRANE 0.63  
3/4" PERLITE BOARD 2.0  
BASE: 4" POLYISO INSUL. 23.6  
1/4" METAL DECKING 0.01  
INSIDE AIR: 0.01  
R TOTAL: 27.02  
U TOTAL: 0.037

## ROOF: "M"-P"

OUTSIDE AIR: 0.17  
(1) PLY TPO MEMBRANE 0.63  
3/4" PERLITE BOARD 2.0  
BASE: 4" POLYISO INSUL. 23.6  
1/4" WOOD DECK 0.01  
INSIDE AIR: 0.01  
R TOTAL: 27.98  
U TOTAL: 0.036

## ROOF: "B" & "S"

OUTSIDE AIR: 0.17  
METAL ROOFING 0.01  
15# BUILDING PAPER 0.06  
BASE: 4" POLYISO INSUL. 23.6  
1/4" OSB BOARD 0.74  
1/4" WOOD DECK 0.01  
INSIDE AIR: 0.01  
R TOTAL: 25.19  
U TOTAL: 0.041

## ROOF: "L"

OUTSIDE AIR: 0.17  
METAL ROOFING 0.01  
15# BUILDING PAPER 0.06  
BASE: 4" POLYISO INSUL. 23.6  
1/4" OSB BOARD 0.74  
1/4" WOOD DECK 0.01  
INSIDE AIR: 0.01  
R TOTAL: 25.13  
U TOTAL: 0.038

5. CONTRACTOR REMOVE EXIST. WOOD DECK TO INSTALL NEW ROOF HATCH. SEE DETAIL B/A5 TO INSTALL ROOF OPENING AS REQD.  
6. CONTRACTOR REMOVE EXIST. WOOD CUPOLA & WOOD BLOCKING AS REQD.  
7. CONTRACTOR REMOVE EXIST. METAL GUTTER & DISCARD

THE ABOVE INFORMATION IS BASED ON LIMITED FIELD INVESTIGATION. ALL ROOFING, FLASHING & WOOD BLOCKING IS TO BE REMOVED LEAVING AN EXPOSED DECK.

## DEMOLITION NOTES <-\*

- AT ROOFS 'A', 'C', 'K', & 'M'-P' - REMOVE ALL OF THE FOLLOWING:  
- STONE BALLAST  
- (1) LAYER OF 2-PLY BUILT-UP ROOFING  
- RIGID INSULATION  
- ROOF DRAINS, Sumps, & ALL INDICATED SCUPPERS  
- WOOD BLOCKING (PERIMETER & CURBS) UNLESS OTHERWISE NOTED  
- ROOF FLASHING MATERIAL  
- VENT STACK FLASHINGS  
- CANT STRIPS & TAPERED EDGE STRIPS  
- EXIST. MECH. UNIT CURBS  
- PERIMETER METAL FASCIA/CAP FLASHINGS UNLESS OTHERWISE NOTED  
- E.J. FLASHING
- AT ROOF 'T' - REMOVE ALL OF THE FOLLOWING:  
- STONE BALLAST  
- (1) LAYER OF SINGLE PLY TPO MEMBRANE  
- RIGID INSULATION  
- ROOF DRAINS, Sumps, & ALL INDICATED SCUPPERS  
- WOOD BLOCKING (PERIMETER & CURBS) UNLESS OTHERWISE NOTED  
- BUILDING PAPER  
- MEMBRANE VENTS  
- CANT STRIPS & TAPERED EDGE STRIPS  
- EXIST. MECH. UNIT CURBS  
- PERIMETER METAL FASCIA/CAP FLASHINGS UNLESS OTHERWISE NOTED  
- METAL GUTTERS & HANGERS  
- METAL DOWNSPOUTS, SUPPORTS & TRANSITION BOOTS
- AT ROOF 'B', 'L', & 'S' - REMOVE ALL OF THE FOLLOWING:  
- ASPHALT SHINGLES  
- ICE & WATER SHIELD  
- METAL DRIP EDGES AT EAVES AND RAKES  
- METAL FLASHING MATERIAL  
- PERIMETER METAL FASCIA/CAP FLASHINGS UNLESS OTHERWISE NOTED  
- METAL GUTTERS & HANGERS  
- METAL DOWNSPOUTS, SUPPORTS & TRANSITION BOOTS
- CONTRACTOR TO REMOVE ATTIC EXHAUST UNITS & DISCARD
- CONTRACTOR TO REMOVE MEMBRANE VENT & DISCARD

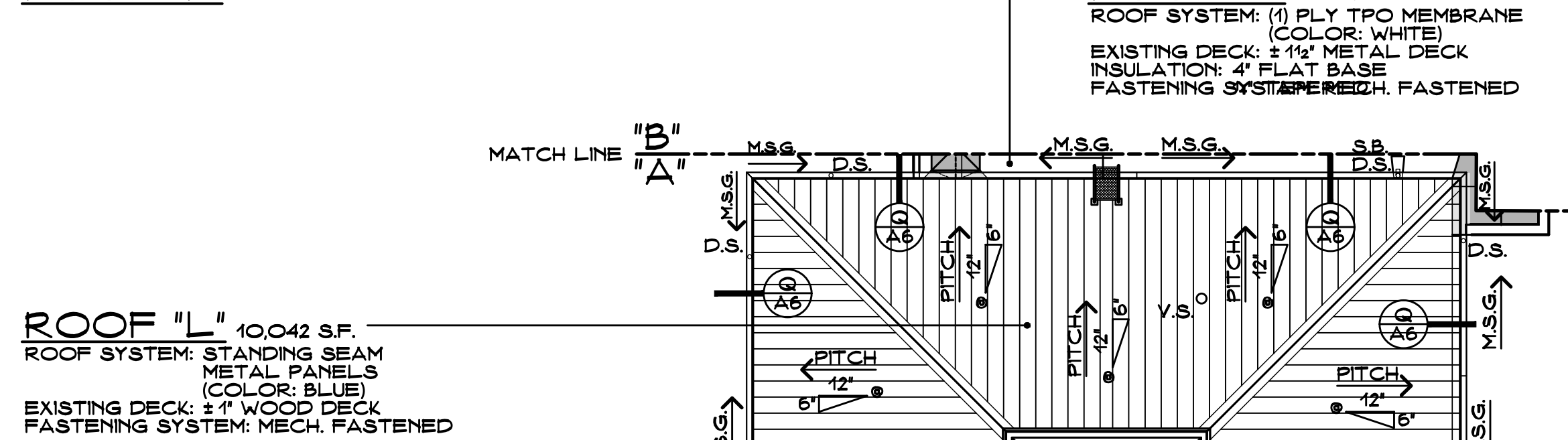
## CONSTRUCTION NOTES <-\*

- FOR ROOF DRAIN TYPE I DETAIL & ALL METAL DECKS - SEE DETAIL - (D/A5)
- FOR ROOF DRAIN DETAIL SECONDARY DRAINAGE SYSTEM & ALL METAL DECK - SEE DETAIL - (E/A5)
- FOR ROOF DRAIN & END WALL DETAIL SECONDARY DRAINAGE SYSTEM & ALL METAL DECK - SEE DETAIL - (F/A5)
- FOR COLLECTION BOX DETAIL & ALL METAL DECK - SEE DETAIL - (G/A5)
- FOR END DRAIN DETAIL & ALL METAL DECKS - SEE DETAIL - (H/A5)
- FOR SCUPPER DETAIL & ALL METAL DECKS - SEE DETAIL - (J/A5)
- FOR MECH. UNIT TYPE I DETAIL & ALL METAL DECKS - SEE DETAIL - (K/A5)
- FOR MECH. UNIT TYPE II DETAIL & ALL METAL DECKS - SEE DETAIL - (L/A5)
- FOR MECH. UNIT TYPE III DETAIL & ALL METAL DECKS - SEE DETAIL - (M/A5)
- FOR MECH. UNIT TYPE IV DETAIL & ALL METAL DECKS - SEE DETAIL - (N/A5)
- FOR VENT STACK DETAIL & ALL WOOD DECKS - SEE DETAIL - (P/A5)
- FOR PITCH POCKET DETAIL & ALL METAL DECK - SEE DETAIL - (Q/A5)
- FOR EXPANSION JOINT TYPE I DETAIL & ALL METAL DECK - SEE DETAIL - (R/A5)
- FOR EXPANSION JOINT TYPE II DETAIL & ALL METAL DECK - SEE DETAIL - (S/A5)
- FOR MECH. UNIT CURB DETAIL & ALL METAL DECK - SEE DETAIL - (T/A5)
- FOR ROOF HATCH DETAIL & ALL METAL DECK - SEE DETAIL - (U/A5)
- FOR SMOKE HATCH DETAIL & ALL METAL DECK - SEE DETAIL - (V/A5)
- FOR ROOF REGLET DETAIL & ALL METAL DECK - SEE DETAIL - (W/A5)
- FOR THRU WALL FLASHING DETAIL & ALL METAL DECK - SEE DETAIL - (X/A5)
- FOR INTERIOR LADDER DETAIL & ALL WOOD DECK - SEE DETAIL - (C/A5)
- FOR ROOF LADDER DETAIL & ALL METAL DECK - SEE DETAIL - (D/A5)
- FOR TYPICAL GUARDRAIL DETAILS & ALL METAL DECK - SEE DETAIL - (E/A5)
- HORIZONTAL ROOF LEADER (MATCH DIAMETER OF EXIST.) ABOVE CEILING SLOPED @ 1/4" FT. MIN. VERTICAL LEADERS INTO EXIST. PIPING AS REQD. SEAL ALL PENETRATIONS THROUGH WALLS W/FIRE PUTTY AS REQUIRED BY CODE. PATCH & REPAIR ALL AREAS DAMAGED BY INSTALLATION OF NEW PIPING.
- EXISTING HORIZONTAL ROOF LEADERS TO REMAIN. CONTRACTOR TO TIE NEW ROOF DRAIN & NEW 4" CAST IRON VERTICAL ROOF LEADER INTO EXIST. - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION.
- INSTALL SCUPPERS IF REQD. AVOID WINDOWS BELOW
- INSTALL CONCRETE SPLASH BLOCKS WHERE REQD. - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION.
- TEMPORARILY REMOVE & REINSTALL EXIST. MECH. UNIT. REMOVE EXIST. CURB. INSTALL NEW INSULATED CURBS. PATCH & REPAIR ANY DAMAGE TO DUCTWORK - SEE DETAIL G/A4.
- FOR MECH. UNIT CURBS THAT CANNOT BE REMOVED - SEE DETAILS K/A6, L/A6, & M/A6
- CONTRACTOR TO INSTALL INSULATED CURBS FASTENED TO DECK TO MEET SEISMIC CODE REQUIREMENTS. INSTALL AS REQD. TO ALLOW FOR WATER FLOW & PREVENT PONDING. SEE DETAIL R/A4
- CONTRACTOR TO INSTALL NEW R.T. WOOD BLOCKING 6" TO MEET MANUFACTURER'S MIN. FLASHING HEIGHT
- CONTRACTOR TO PROVIDE NEW ROOF HATCH. INSTALL LADDER UP SAFETY POST & HATCH SAFETY RAIL SYSTEM - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- CONTRACTOR SHALL REPLACE ALL OR PROVIDE NEW ROOF TOP EQUIPMENT DISCONNECT SWITCHES IN THIS PROJECT SCOPE. NEW SWITCHES SHALL BE NON-FUSED, NEMA 3R RATED & SHALL MATCH THE VOLTAGE & CURRENT RATINGS OF THE EQUIPMENT SERVED. NEW DISCONNECT SWITCHES SHALL BE MOUNTED TO A NON-REMOVABLE PANEL ON THE EQUIPMENT SERVED OR THE CONTRACTOR SHALL PROVIDE A SUITABLE UN-STRUT SUPPORT FOR PROPER MOUNTING. IN ALL CASES, THE NEW DISCONNECT SWITCH SHALL BE W/IN VIEW OF THE EQUIPMENT SERVED. MODIFY & EXTEND BRANCH CIRCUIT WIRING AS REQD. FOR INSTALLATION OF THE DISCONNECT SWITCH. NEW SWITCH MATERIALS & INSTALLATION SHALL BE COMPLIANT W/APPLICABLE REQUIREMENTS OF THE CURRENT NEC ARTICLES & APPLICABLE REQUIREMENTS OF THE CURRENT NEC 424.19, 430 IX & 440 PART II
- CONTRACTOR SHALL PROVIDE NEW GFCI RECEPTACLES IN WATERPROOF BOXES W/IN 25'-0" OF ALL HVAC EQUIPMENT PER NEC 210.63. TIE RECEPTACLE INTO EXIST. GENERAL PURPOSE RECEPTACLE CIRCUIT SERVING THE SPACE BELOW
- REPLACE EXIST. AIR TERMINALS AS REQD. & USE EXIST. GROUNDING WIRES, ADDING &/OR REPLACING DAMAGED LENGTHS AS REQUIRED
- CONTRACTOR TO INSTALL NEW WALL USING 2X 8" WOOD & 3/4" E.T. PLYWOOD. THE WALL SHALL IN-CLOSE OVERHANG OF NEW METAL ROOFING SYSTEM W/ GUTTER & EXTEND BACK FROM EXIST. WALL. RUN TPO MEMBRANE UP FRONT FACE OF NEW WALL & ON TOP OF EXIST. SLOPED ROOF BEFORE NEW METAL ROOFING SYSTEM
- CONTRACTOR TO BRUSH ON 'YELLOW' LIQUID ROOFING MEMBRANE TO INDICATE LOCATION OF NEW INSTALLED PIPING FOR FUTURE WORK
- CONTRACTOR TO INSTALL TPO MEMBRANE FROM ROOF 'H' LOW UP VERTICAL WALL OF ROOF 'G' & FASTEN TO BLOCKING HIGH ROOF 'G'. INSTALL 1/2" E.T. PLYWOOD AS REQD.
- CONTRACTOR TO PURCHASE & INSTALL METAL PRE FABRICATED CUPOLA. INCLUDE BASE EXTENSION & AIR TERMINAL TIED INTO EXIST. LIGHTNING PROTECTION SYSTEM. MATCH EXIST. HISTORICAL UNIT AS POSSIBLE. STYLE & COLOR TO BE APPROVED BY OWNER
- CONTRACTOR TO PATCH & REPAIR SIDING BEHIND REMOVED GUTTER AS REQD. PAINT AREA TO MATCH

## SYMBOL LEGEND:

- PLAN SECTION DETAIL OR ELEVATION NUMBER/SHEET
- OUTLINE OF NEW ROOF
- OUTLINE OF EXISTING ROOFS N.I.C.
- EXISTING OUTLINE OF BUILDING
- INDICATES TAPERED INSULATION DIRECTION
- INDICATES PITCHED ROOF DECKING - EXISTING PITCH WILL NOT IMPACT OF SLOPE REQUIREMENTS OF TAPERED INSULATION SYSTEM
- TAPERED INSULATION CRICKET SLOPED @ 1/4" PER FOOT
- NEW ROOF DRAIN & SUMP & EXIST. LOCATION - SEE DETAIL D/A5 & CONSTRUCTION NOTES #23 & #24
- NEW ROOF DRAIN & SUMP & NEW LOCATION - SEE DETAIL D/A5 & CONSTRUCTION NOTES #23 & #24
- NEW ROOF DRAIN OVER FLOW SYSTEM & NEW LOCATION - SEE DETAIL E/A5 & F/A5
- COLLECTION BOX 1 - SEE DETAIL G/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- WALL END DRAIN - SEE DETAIL F/A5, H/A5, & CONSTRUCTION NOTE #25
- METAL SCUPPER - SEE DETAIL H/A5, J/A5, & CONSTRUCTION NOTE #25
- EXISTING ROOF DRAIN TO BE REMOVED & LEADER TO BE USED - SEE CONSTRUCTION NOTES #22 & #23
- NEW HORIZONTAL ROOF DRAIN SAEAD - SEE CONSTRUCTION NOTES #22 & #23
- METAL STORM GUTTER - SLOPE GUTTER AS INDICATED
- DOWN SPOUT - TIE INTO NEW OR EXISTING ROOF GUTTER
- UNDERGROUND STORM WATER SYSTEM AS REQD. - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- SPLASH BLOCK - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- EXISTING ROOF TOP MECHANICAL UNIT TO REMAIN - SEE DETAILS K/A6, L/A6, M/A6, & CONSTRUCTION NOTES #27, THRU #32
- DASHED LINES REPRESENT MECH. UNIT ABOVE
- VENT STACK - SEE DETAIL P/A5
- PITCH POCKET - SEE DETAIL Q/A5
- EXPANSION JOINT - SEE DETAILS R/A5 & S/A5
- MECH. UNIT CURB - SEE DETAIL T/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- SMOKE HATCH - SEE DETAIL V/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- ROOF HATCH - SEE DETAIL U/A5 & CONSTRUCTION NOTE #31 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- INTERIOR ROOF LADDER - SEE DETAIL C/A6 & CONSTRUCTION NOTE #31 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- HEIGHT DIFFERENCE BETWEEN ROOFS FOR EACH LADDER - SEE ABOVE
- EXTERIOR ROOF LADDER - SEE DETAIL D/A6 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- HEIGHT DIFFERENCE BETWEEN ROOFS FOR EACH LADDER - SEE ABOVE
- METAL SAFETY GUARD RAIL - SEE DETAIL E/A6 & PROJECT MANUAL FOR ADDITIONAL INFORMATION. CENTER RAIL ON MECH. UNIT
- ANTENNA ANCHOR
- EXIST. AIR TERMINAL - SEE CONSTRUCTION #34
- WALKWAY PADS - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION

## ROOF "P"

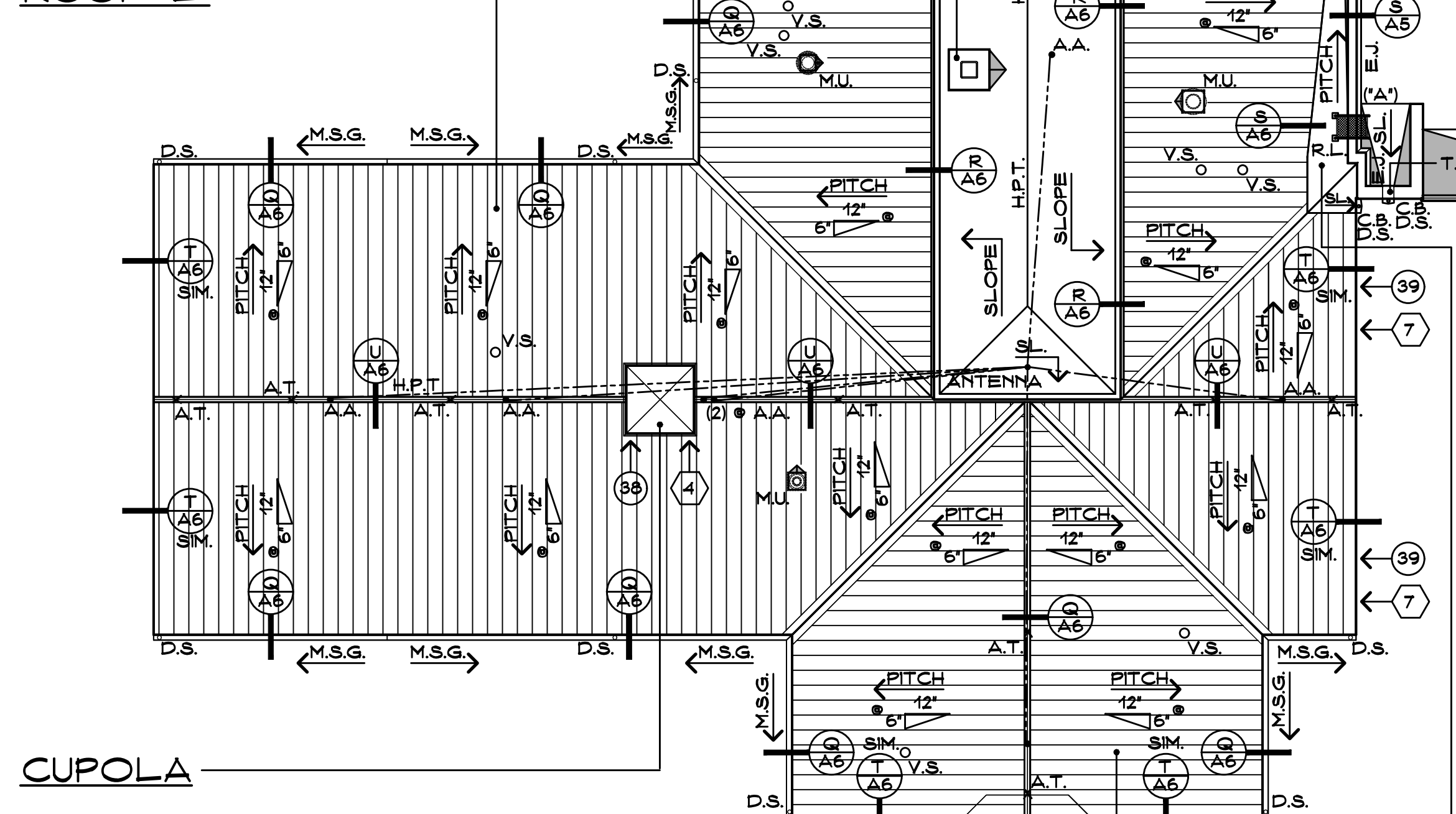


## ROOF "N"

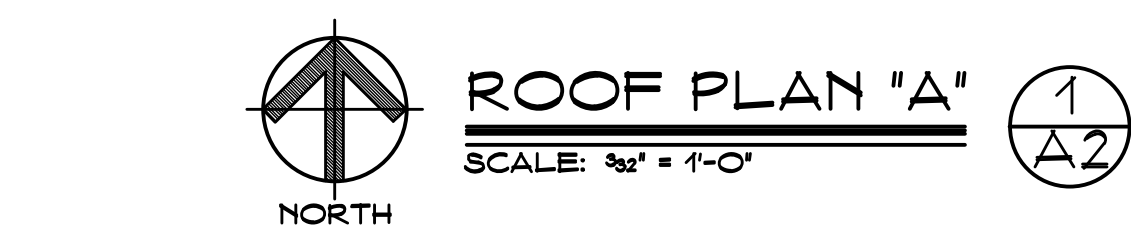
1537 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE (COLOR: WHITE)  
EXISTING DECK: 1/4" METAL DECK  
INSULATION: 4" FLAT BASE  
FASTENING SYSTEM: MECH. FASTENED

## CHIMNEY

## ROOF "L"



## CUPOLA



Project Title:  
ROOF REPLACEMENT FOR:  
TOWN OF CANTERBURY  
CANTERBURY PUBLIC SCHOOLS  
45 WESTMINSTER ROAD, CANTERBURY, CONNECTICUT. 06331-1538  
DR. HELEN BALDWIN MIDDLE SCHOOL  
45 WESTMINSTER ROAD,  
CANTERBURY, CONNECTICUT. 06331-1538

SILVER / PETRUCELLI + ASSOCIATES  
Architects / Engineers / Interior Designers

3190 Whitney Avenue, Hamden, CT 06518-2340  
Tel. 203 230 9007 Fax. 203 230 8247  
silverpetrucelli.com

Revision: Description: Date: Revised By:



PART "A"  
PARTIAL ROOF PLAN "A" &  
GENERAL INFORMATION

STATE PROJECT NO. 022-0016 RR

Date: 15th MAY, 2017  
Scale: 3/8\"/>

A2



## GENERAL NOTES:

- SEE PROJECT MANUAL FOR ALLOWANCES AND/OR UNIT PRICES.
- CONTRACTOR ASSUMES ALL RESPONSIBILITY DURING PROJECT & WILL REPLACE ANY & ALL DAMAGED EQUIPMENT W/NO ADDITIONAL COST TO OWNER.
- CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS & PERFORM TEST CUTS & EACH ROOF PRIOR TO BID.
- CONTRACTOR IS TO SURVEY THE EXISTING ROOF DECKS W/A LEVEL (AFTER DEMOLITION) TO VERIFY IF DECK IS SLOPED AS INDICATED ON DRAWINGS OR FLAT. IF ANY DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT IMMEDIATELY OF THE CHANGES PRIOR TO PERFORMING ANY ADDITIONAL ROOFING OPERATIONS.
- CONTRACTOR IS TO INSPECT THE UNDERSIDE OF ALL ROOF DECKS PRIOR TO ROOFING OPERATIONS TO INSURE THAT NO INTERIOR MATERIALS, EQUIPMENT, FINISHES OR OBJECTS WILL BE PIERCED OR DAMAGED.
- CONTRACTOR IS RESPONSIBLE TO MAKE ROOF WATER TIGHT, WHICH INCLUDES EVERYTHING THAT IS LOCATED AND/OR PENETRATES THE ROOF & THE END OF EACH WORK DAY.
- ALL MATERIALS ARE NEW UNLESS OTHERWISE NOTED 'EXISTING'.
- ALL WOOD BLOCKING, PLYWOOD & NAILERS TO BE FIRE TREATED (I.P.T.). SEE PROJECT MANUAL FOR FASTENING REQUIREMENTS.
- ALL WOOD BLOCKING INDICATED IN DETAILS ON DRAWING TO BE ANCHORED TO EXISTING STRUCTURE - SEE PROJECT MANUAL.
- ALL ROOFS TO RECEIVE 1/4" PER FOOT TAPERED RIGID INSULATION MINIMUM UNLESS OTHERWISE NOTED.
- NEW INSULATION TO BE A MINIMUM 2" & ALL EXISTING & NEW ROOF DRAINS.
- ALL CRICKETS ARE TO BE SLOPED & A MINIMUM OF 1/4" PER FOOT UNLESS OTHERWISE NOTED.
- COORDINATION OF CRICKETS AROUND EXISTING HVAC UNITS IS REQUIRED TO AVOID PONDING.
- ALL MEMBRANE FLASHING INDICATED IN DETAILS ON DRAWINGS IS TO EXTEND A MINIMUM OF 8" (VERTICAL AND/OR HORIZONTAL) OR WHAT IS REQUIRED BY MANUFACTURER ONTO THE FLAT PORTION OF THE ROOF.
- ALL EQUIPMENT INDICATED IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS.
- CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL & REINSTALLATION OF ALL HVAC UNITS (MIN. OF 8") INCLUDING ALL ELECTRICAL OR MECHANICAL CONNECTIONS. THIS MAY INCLUDE THE EXTENSION OF EXISTING ELECTRICAL, WIRING, PIPING, & DUCTWORK SYSTEMS TO ACCOMMODATE NEW MECHANICAL UNIT CURBING & NEW ROOFING SYSTEM HEIGHTS. DUCTWORK MAY NEED TO BE CUT, REMOVED, LIFTED, & RE-INSTALLED TO MAINTAIN MANUFACTURER'S 8" MIN. FLASHING HEIGHT. VERIFY WORK PRIOR TO BID.
- ALL DRAIN PIPING IS INSTALLED W/INSULATION ABOVE THE EXISTING CEILING. WHEN PIPING PENETRATES ANY WALLS, A FIRESTOPPING SYSTEM MUST BE INSTALLED. THE EXACT PIPING ROUTE WILL BE DETERMINED IN THE FIELD. VERIFY PROPOSED DRAIN PIPING LAYOUT PRIOR TO BID. MAKE MINOR ADJUSTMENTS IN THE ROUTE & NO ADDITIONAL COST TO THE OWNER OF THE BUILDING.
- SHAKE/CLEAN OUT ALL EXISTING VERTICAL & HORIZONTAL LEADERS TO NEAREST MANHOLE OUTSIDE.
- SHAKE/CLEAN OUT ALL EXISTING VENT STACKS PRIOR TO INSTALLING METAL SLEEVES.
- ALL ANTENNAE, LIGHTNING PROTECTION, CONDUITS, & ANY OTHER OBJECTS TO REMAIN ON NEW ROOF, AFFECTED BY THE SCOPE OF WORK, ARE TO BE REMOVED & REINSTALLED.
- CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR CLEAN UP OF ROOFING MATERIALS & DEBRIS THAT PENETRATE THE INTERIOR ENVELOPE OF THE BUILDING W/NO ADDITIONAL COST TO THE OWNER.
- SITE AREAS DISTURBED SHALL BE CLEANED & RE-LEVELLED. W/LAWN AREAS MAGNETICALLY RAKED TO REMOVE ANY METAL DEBRIS & RE-SEEDING AS REQUIRED TO MATCH ADJACENT CONDITIONS.
- CONTRACTOR ASSUMES THE RESPONSIBILITY THAT ALL SECONDARY DRAIN PIPING TOPS ARE A MAXIMUM HEIGHT OF 6" ABOVE LOWEST POINT OF THE ROOF & DO NOT EXCEED THE HEIGHT OF THE ROOF EDGE. PIPE TOPS TO BE LASER VERIFIED AFTER INSTALLATION A MAXIMUM OF 6". THOSE HIGHER NEED METAL SCUPPERS INSTALLED. CONTACT ARCHITECT IF EDGE IS ABOVE 6".
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING PHASING OF EXIST. MECH. UNITS & ALARM SYSTEMS DISCONNECTS & RECONNECTS EACH DAY DURING INSTALLATION OF ROOFING SYSTEM. COORDINATE W/OWNER & ARCHITECT FOR SCHEDULING PRIOR TO DAY OF WORK. PROVIDE PROTECTION FROM FUMES, GASES, & DUST FROM PENETRATING DUCTWORK & INTERIOR SPACES OF BUILDING. RECONNECT ALL UNITS TO BE FULLY OPERATIONAL BY THE END OF THE WORK DAY UNLESS DIRECTED OTHERWISE BY OWNER.

## CODE INFORMATION:

USE GROUP: E & A  
CONSTRUCTION CLASS: 2B  
BASIC WIND SPEED: 110 MPH  
RISK CATEGORY: #3  
WIND SPEED: 140 M.P.H.

FACTORY MUTUAL ENGINEERING & RESEARCH CORPORATION (FM GLOBAL) ROOF ASSEMBLY SPECIFICATION OF NO. CONSULTABLE CONSTRUCTION WIND UPLIFT REQUIREMENT OF 140 FOR FIELD, 160 FOR PERIMETER & 1/20 FOR CORNERS IN ACCORDANCE W/FM LOSS PREVENTION DATA SHEETS 1-28

IMC GUARD RAILS & APPLIANCES, EQUIPMENT, FANS OR OTHER COMPONENTS THAT REQUIRE SERVICE

## ENERGY CONSERVATION:

IECC CODE REQUIREMENT R-VALUE TOTAL  
CONNECTICUT CLIMATE ZONE: 5A  
IECC REQUIREMENT: U' .040 OR LESS  
R-25 OR MORE  
(R & U' ARE BASED ON THE ROOFING ASSEMBLY)

## ROOFS: "A", "C", "K", & "Q"

OUTSIDE AIR: 0.17  
(1) PLY TPO MEMBRANE: 0.63  
3/4" PERLITE BOARD: 2.0  
BASE: 4" POLYISO INSUL.: 23.6  
1/4" METAL DECKING: 0.01  
INSIDE AIR: 0.61  
R TOTAL: 27.02  
U' TOTAL: 0.037

## ROOF: "M"-P

OUTSIDE AIR: 0.17  
(1) PLY TPO MEMBRANE: 0.63  
3/4" PERLITE BOARD: 2.0  
BASE: 4" POLYISO INSUL.: 23.6  
1/4" WOOD DECK: 0.95  
INSIDE AIR: 0.61  
R TOTAL: 27.02  
U' TOTAL: 0.036

## ROOF: "B" & "S"

OUTSIDE AIR: 0.17  
METAL ROOFING: 0.01  
15# BUILDING PAPER: 0.06  
BASE: 4" POLYISO INSUL.: 23.6  
1/4" OSB BOARD: 0.74  
1/4" WOOD DECK: 0.95  
INSIDE AIR: 0.61  
R TOTAL: 25.19  
U' TOTAL: 0.041

## ROOF: "L"

OUTSIDE AIR: 0.17  
METAL ROOFING: 0.01  
15# BUILDING PAPER: 0.06  
BASE: 4" POLYISO INSUL.: 23.6  
1/4" OSB BOARD: 0.74  
1/4" WOOD DECK: 0.95  
INSIDE AIR: 0.61  
R TOTAL: 25.13  
U' TOTAL: 0.038

- CONTRACTOR REMOVE EXIST. WOOD DECK TO INSTALL NEW ROOF HATCH. SEE DETAIL B/A5 TO INSTALL ROOF OPENING AS REQD.
- CONTRACTOR REMOVE EXIST. WOOD CUPOLA & DISCARD
- CONTRACTOR REMOVE EXIST. METAL GUTTER & DISCARD

THE ABOVE INFORMATION IS BASED ON LIMITED FIELD INVESTIGATION. ALL ROOFING, FLASHING & WOOD BLOCKING IS TO BE REMOVED LEAVING AN EXPOSED DECK

## DEMOLITION NOTES <-\*

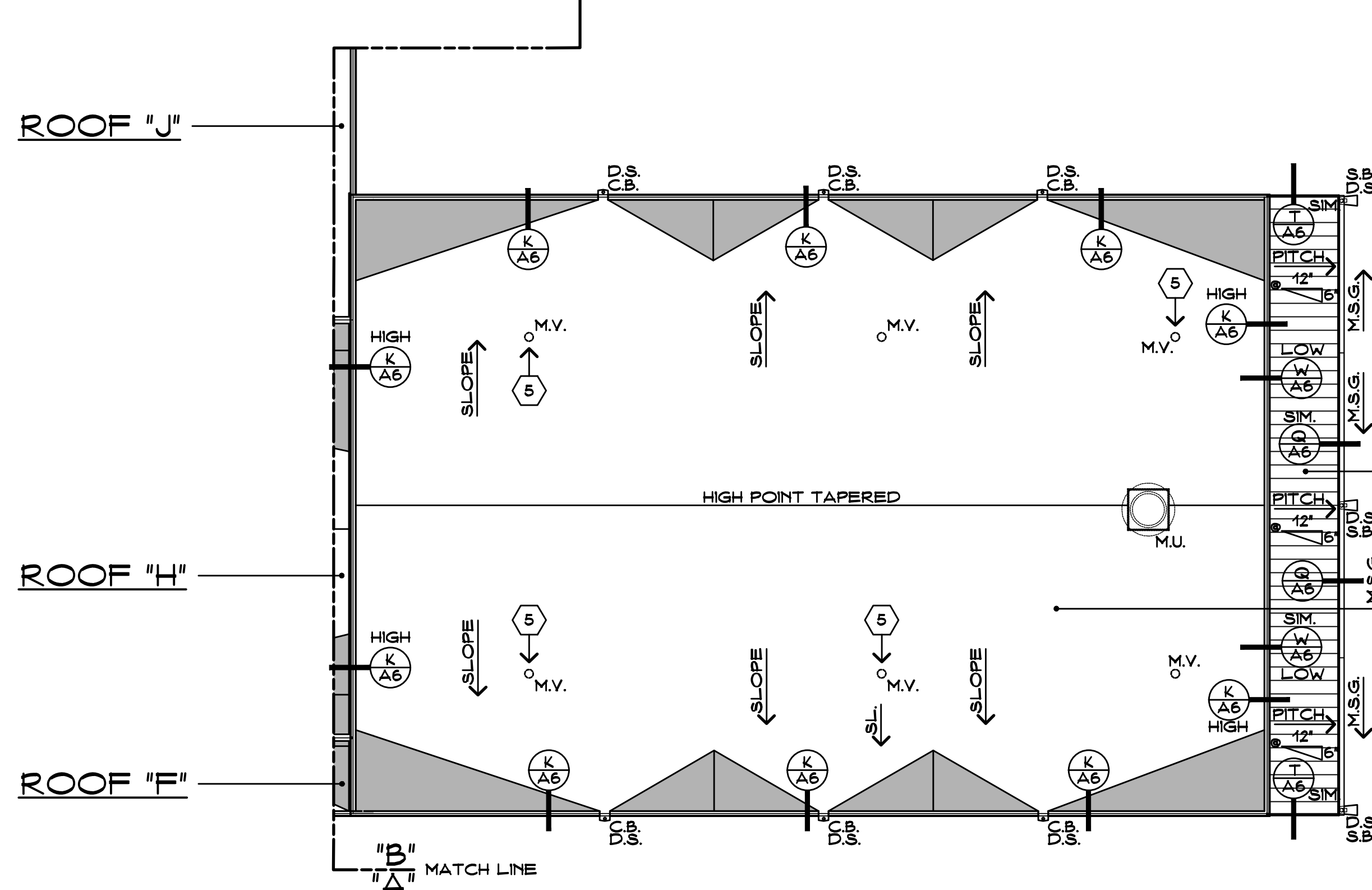
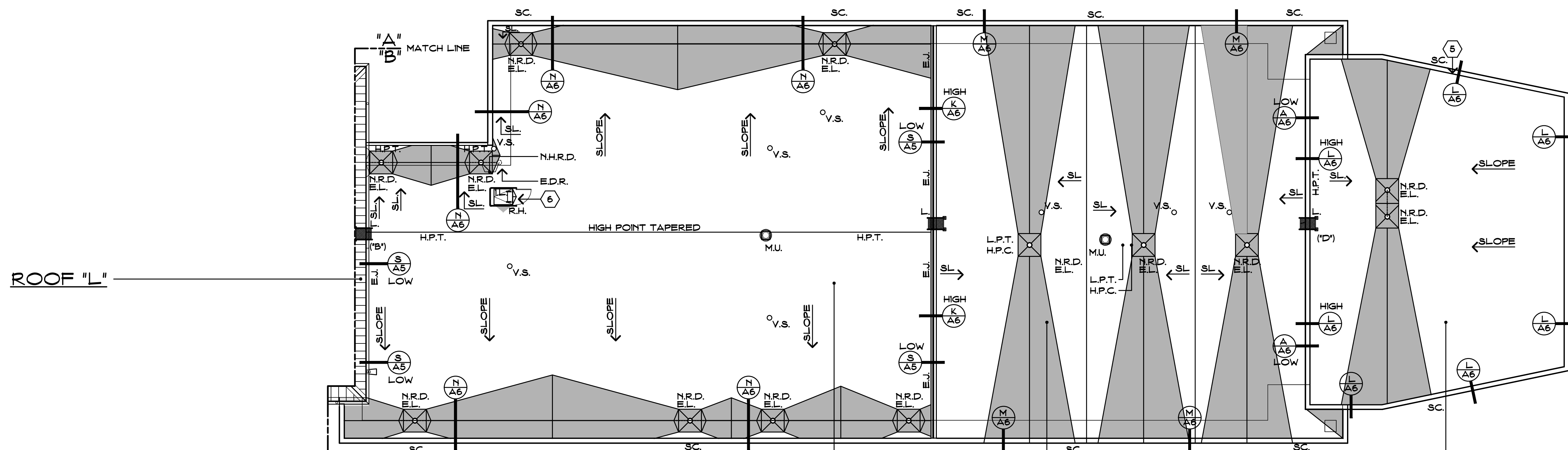
- AT ROOFS 'A', 'C', 'K', & 'M'-P' - REMOVE ALL OF THE FOLLOWING:  
- STONE BALLAST  
- (1) LAYER OF 2-PLY BUILT-UP ROOFING  
- RIGID INSULATION  
- ROOF DRAINS, SUMPS, & ALL INDICATED SCUPPERS  
- WOOD BLOCKING (PERIMETER & CURBS) UNLESS OTHERWISE NOTED  
- ROOF FLASHING MATERIAL  
- VENT STACK FLASHINGS  
- CANT STRIPS & TAPERED EDGE STRIPS  
- EXIST. MECH. UNIT CURBS  
- PERIMETER METAL FASCIA/CAP  
- FLASHINGS UNLESS OTHERWISE NOTED  
- E.J. FLASHING
- AT ROOF 'M' - REMOVE ALL OF THE FOLLOWING:  
- STONE BALLAST  
- (1) LAYER OF SINGLE PLY TPO MEMBRANE  
- RIGID INSULATION  
- ROOF DRAINS, SUMPS, & ALL INDICATED SCUPPERS  
- WOOD BLOCKING (PERIMETER & CURBS) UNLESS OTHERWISE NOTED  
- ROOF FLASHING MATERIAL  
- MEMBRANE VENTS  
- CANT STRIPS & TAPERED EDGE STRIPS  
- EXIST. MECH. UNIT CURBS  
- PERIMETER METAL FASCIA/CAP  
- FLASHINGS UNLESS OTHERWISE NOTED  
- TRANSITION BOOTS
- AT ROOF 'B', 'L', & 'S' - REMOVE ALL OF THE FOLLOWING:  
- ASPHALT SHINGLES  
- ICE & WATER SHIELD  
- BUILDING PAPER  
- METAL DRAIN EDGES AT EAVES AND RAKES  
- ROOF FLASHING MATERIAL  
- PERIMETER METAL FASCIA/CAP  
- FLASHINGS UNLESS OTHERWISE NOTED  
- METAL GUTTERS & HANGERS  
- METAL DOWNSPOUTS, SUPPORTS & TRANSITION BOOTS
- CONTRACTOR TO REMOVE ATTIC EXHAUST UNITS & DISCARD
- CONTRACTOR TO REMOVE MEMBRANE VENT & DISCARD

## CONSTRUCTION NOTES <-\*

- FOR ROOF DRAIN TYPE I DETAIL & ALL METAL WOOD DECKS - SEE DETAIL - (D/A5)
- FOR ROOF DRAIN DETAIL SECONDARY DRAINAGE SYSTEM & ALL METAL DECK - SEE DETAIL - (E/A5)
- FOR ROOF DRAIN & END WALL DETAIL SECONDARY DRAINAGE SYSTEM & ALL METAL DECK - SEE DETAIL - (F/A5)
- FOR COLLECTION BOX DETAIL & ALL METAL DECK - SEE DETAIL - (G/A5)
- FOR END DRAIN DETAIL & ALL METAL DECKS - SEE DETAIL - (H/A5)
- FOR SCUPPER DETAIL & ALL WOOD DECKS - SEE DETAIL - (J/A5)
- FOR MECH. UNIT TYPE I DETAIL & ALL METAL WOOD DECKS - SEE DETAIL - (K/A5)
- FOR MECH. UNIT TYPE II DETAIL & ALL METAL WOOD DECKS - SEE DETAIL - (L/A5)
- FOR MECH. UNIT TYPE III DETAIL & ALL METAL WOOD DECKS - SEE DETAIL - (M/A5)
- FOR MECH. UNIT TYPE IV DETAIL & ALL METAL WOOD DECKS - SEE DETAIL - (N/A5)
- FOR VENT STACK DETAIL & ALL WOOD DECKS - SEE DETAIL - (P/A5)
- FOR PITCH POCKET DETAIL & ALL METAL DECK - SEE DETAIL - (Q/A5)
- FOR EXPANSION JOINT TYPE I DETAIL & ALL METAL DECK - SEE DETAIL - (R/A5)
- FOR EXPANSION JOINT TYPE II DETAIL & ALL METAL DECK - SEE DETAIL - (S/A5)
- FOR MECH. UNIT CURB DETAIL & ALL METAL DECK - SEE DETAIL - (T/A5)
- FOR ROOF HATCH DETAIL & ALL METAL DECK - SEE DETAIL - (U/A5)
- FOR SMOKE HATCH DETAIL & ALL METAL DECK - SEE DETAIL - (V/A5)
- FOR ROOF REGLET DETAIL & ALL METAL DECK - SEE DETAIL - (W/A5)
- FOR THRU WALL FLASHING DETAIL & ALL METAL DECK - SEE DETAIL - (X/A5)
- FOR INTERIOR LADDER DETAIL & ALL WOOD DECK - SEE DETAIL - (C/A5)
- FOR ROOF LADDER DETAIL & ALL METAL DECK - SEE DETAIL - (D/A5)
- FOR TYPICAL GUARDRAIL DETAILS & ALL METAL DECK - SEE DETAIL - (E/A5)
- HORIZONTAL ROOF LEADER (MATCH DIAMETER OF EXIST.) ABOVE CEILING SLOPED @ 1/4" FT. MIN. VERTICAL LEADERS INTO EXIST. PIPING AS REQD. SEAL ALL PENETRATIONS THROUGH WALLS W/FIRE PUTTY AS REQUIRED BY CODE. PATCH & REPAIR ALL AREAS DAMAGED BY INSTALLATION OF NEW PIPING
- EXISTING HORIZONTAL ROOF LEADERS TO REMAIN. CONTRACTOR TO TIE NEW ROOF DRAIN & NEW 4" CAST IRON VERTICAL ROOF LEADER INTO EXIST. - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- INSTALL SCUPPERS IF REQD. AVOID WINDOWS BELOW
- INSTALL CONCRETE FLASH BLOCKS WHERE REQD. - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- TEMPORARILY REMOVE & REINSTALL EXIST. MECH. UNIT. REMOVE EXIST. CURB. INSTALL NEW INSULATED CURBS, PATCH & REPAIR ANY DAMAGE TO DUCTWORK - SEE DETAIL G/A4
- FOR MECH. UNIT CURBS THAT CANNOT BE REMOVED - SEE DETAILS K/A6, L/A6, & M/A6
- CONTRACTOR TO INSTALL INSULATED CURBS FASTENED TO DECK TO MEET SEISMIC CODE REQUIREMENTS. INSTALL AS REQD. TO ALLOW FOR WATER FLOW & PREVENT PONDING. SEE DETAIL R/A4
- CONTRACTOR TO INSTALL NEW R.T. WOOD BLOCKING 8" TO MEET MANUFACTURER'S MIN. FLASHING HEIGHT
- CONTRACTOR TO PROVIDE NEW ROOF HATCH. INSTALL LADDER UP SAFETY POST & HATCH SAFETY RAIL SYSTEM - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- CONTRACTOR SHALL REPLACE ALL OR PROVIDE NEW ROOF TOP EQUIPMENT DISCONNECT SWITCHES IN THIS PROJECT SCOPE. NEW SWITCHES SHALL BE NON-FUSED, NEMA 3R RATED & SHALL MATCH THE VOLTAGE & CURRENT RATINGS OF THE EQUIPMENT SERVED. NEW DISCONNECT SWITCHES SHALL BE MOUNTED TO A NON-REMOVABLE PANEL ON THE EQUIPMENT SERVED OR THE CONTRACTOR SHALL PROVIDE A SUITABLE UN-STRUT SUPPORT FOR PROPER MOUNTING. IN ALL CASES, THE NEW DISCONNECT SWITCH SHALL BE W/I/V OF THE EQUIPMENT SERVED. WOOLLY & EXTEND BRANCH CIRCUIT WIRING AS REQD. NEW INSTALLATION OF THE DISCONNECT SWITCH. NEW SWITCH MATERIALS & INSTALLATION SHALL BE COMPLIANT W/APPLICABLE REQUIREMENTS OF THE CURRENT NEC ARTICLES & APPLICABLE REQUIREMENTS OF THE CURRENT NEC 424.19, 430.1X & 440 PART II
- CONTRACTOR SHALL PROVIDE NEW GFCI RECEPTACLES IN WATERPROOF BOXES W/I/V 25'-0" OF ALL HVAC EQUIPMENT PER NEC 210.63. TIE RECEPTACLE INTO EXIST. GENERAL PURPOSE RECEPTACLE CIRCUIT SERVING THE SPACE BELOW
- REPLACE EXIST. AIR TERMINALS AS REQD. & USE EXIST. GROUNDING WIRES, ADDING &/OR REPLACING DAMAGED LENGTHS AS REQUIRED
- CONTRACTOR TO INSTALL NEW WALL USING 2X 8" WOOD & 3/4" E.T. PLYWOOD. THE WALL SHALL IN-CLOSE OVERHANG OF NEW METAL ROOFING SYSTEM W/ GUTTER & EXTEND BACK FROM EXIST. WALL. RUN TPO MEMBRANE UP FRONT FACE OF NEW WALL & ON TOP OF EXIST. SLOPED ROOF BEFORE INSTALLING METAL ROOFING SYSTEM
- CONTRACTOR TO BRUSH ON 'YELLOW' LIQUID ROOFING MEMBRANE TO INDICATE LOCATION OF NEW INSTALLED PIPING FOR FUTURE WORK
- CONTRACTOR TO INSTALL TPO MEMBRANE FROM ROOF 'H' LOW, UP VERTICAL WALL OF ROOF 'G', & FASTEN TO BLOCKING HIGH ROOF 'G'. INSTALL 1/2" PLYWOOD AS REQD.
- CONTRACTOR TO PURCHASE & INSTALL METAL PRE FABRICATED CUPOLA. INCLUDE BASE EXTENSION & AIR TERMINAL TIED INTO EXIST. LIGHTNING PROTECTION SYSTEM. MATCH EXIST. HISTORICAL UNIT AS POSSIBLE. STYLE & COLOR TO BE APPROVED BY OWNER
- CONTRACTOR TO PATCH & REPAIR SIDING BEHIND REMOVED GUTTER AS REQD. PAINT AREA TO MATCH

## SYMBOL LEGEND:

- PLAN SECTION DETAIL OR ELEVATION NUMBER/SHEET NUMBER
- OUTLINE OF NEW ROOF
- OUTLINE OF EXISTING ROOFS N.I.C.
- EXISTING OUTLINE OF BUILDING
- INDICATES TAPERED INSULATION DIRECTION
- INDICATES PITCHED ROOF DECKING - EXISTING PITCH WILL NOT EXCEED 8" PER FOOT
- INDICATES SLOPE REQUIREMENTS OF TAPERED INSULATION SYSTEM
- TAPERED INSULATION CRICKET SLOPED @ 1/4" PER FOOT
- NEW ROOF DRAIN & SUMP & EXIST. LOCATION - SEE DETAIL D/A5 & CONSTRUCTION NOTES #23 & #24
- NEW ROOF DRAIN & SUMP & NEW LOCATION - SEE DETAIL D/A5 & CONSTRUCTION NOTES #23 & #24
- NEW ROOF DRAIN, OVER FLOW SYSTEM & NEW LOCATION - SEE DETAIL E/A5 & F/A5
- COLLECTION BOX 1 - SEE DETAIL G/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- WALL END DRAIN - SEE DETAIL F/A5, H/A5, & CONSTRUCTION NOTE #25
- METAL SCUPPER - SEE DETAIL H/A5, J/A5, & CONSTRUCTION NOTE #25
- EXISTING ROOF DRAIN TO BE REMOVED & LEADER TO BE USED - CONSTRUCTION NOTES #22 & #23
- NEW HORIZONTAL ROOF DRAIN SAEAD - SEE CONSTRUCTION NOTES #22 & #23
- METAL STORM GUTTER - SLOPE GUTTER AS INDICATED
- DOWN SPOUT - TIE INTO NEW OR EXIST. DOWN SPOUT GUTTER
- UNDERGROUND STORM WATER SYSTEM AS REQD. - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- SPLASH BLOCK - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- EXISTING ROOF TOP MECHANICAL UNIT TO REMAIN - SEE DETAILS K/A6, L/A6, & M/A6 & CONSTRUCTION NOTES #27, THRU #32
- DASHED LINES REPRESENT MECH. UNIT ABOVE
- VENT STACK - SEE DETAIL P/A5
- PITCH POCKET - SEE DETAIL Q/A5
- EXPANSION JOINT - SEE DETAILS R/A5 & S/A5
- MECH. UNIT CURB - SEE DETAIL T/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- SMOKE HATCH - SEE DETAIL V/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- ROOF HATCH - SEE DETAIL U/A5 & CONSTRUCTION NOTE #31 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- INTERIOR ROOF LADDER - SEE DETAIL C/A6 & CONSTRUCTION NOTE #31 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- HEIGHT DIFFERENCE BETWEEN ROOFS FOR EACH LADDER - SEE ABOVE
- EXTERIOR ROOF LADDER - SEE DETAIL D/A6 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- HEIGHT DIFFERENCE BETWEEN ROOFS FOR EACH LADDER - SEE ABOVE
- METAL SAFETY GUARD RAIL - SEE DETAIL E/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION. CENTER RAIL ON MECH. UNIT
- ANTENNA ANCHOR
- EXIST. AIR TERMINAL - SEE CONSTRUCTION #34
- WALKWAY PADS - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION



ROOF PLAN "B"  
SCALE: 3/8" = 1'-0"  
PLAN ROTATED 90 DEG. CLOCK-WISE

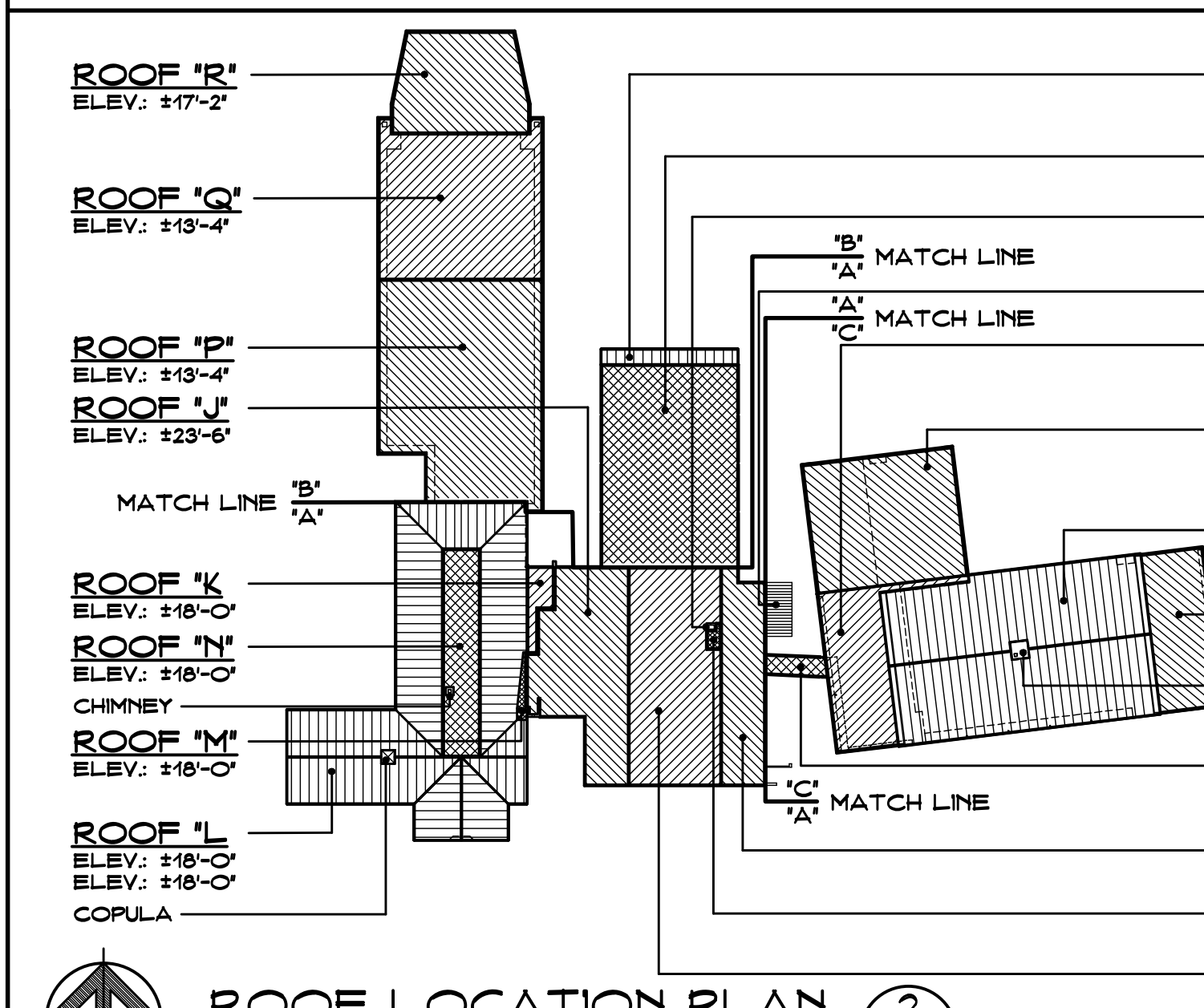
ROOF "R" 6,648 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE (COLOR: WHITE)  
EXISTING DECK: 1/4" METAL DECK  
INSULATION: 4" FLAT BASE  
FASTENING SYSTEM: MECH. FASTENED

ROOF "Q" 4,917 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE (COLOR: WHITE)  
EXISTING DECK: 1/4" METAL DECK  
INSULATION: 4" FLAT BASE  
FASTENING SYSTEM: MECH. FASTENED

ROOF "P" 6,940 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE (COLOR: WHITE)  
EXISTING DECK: 1/4" METAL DECK  
INSULATION: 4" FLAT BASE  
FASTENING SYSTEM: MECH. FASTENED

ROOF "S" 506 S.F.  
ROOF SYSTEM: STANDING SEAM METAL PANELS (COLOR: BLUE)  
EXISTING DECK: 1/4" WOOD DECK  
FASTENING SYSTEM: MECH. FASTENED

ROOF "T" 5,597 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE (COLOR: WHITE)  
EXISTING DECK: 1/4" METAL DECK  
INSULATION: 4" FLAT BASE  
FASTENING SYSTEM: MECH. FASTENED



ROOF LOCATION PLAN  
SCALE: NONE

## ROOF AREAS:

| BASE BID:             |           |
|-----------------------|-----------|
| - ROOFS - (1) PLY TPO |           |
| ROOF "A"              | 3,966 SF  |
| ROOF "B"              | 3,177 SF  |
| ROOF "C"              | 2,310 SF  |
| ROOF "D"              | 249 SF    |
| ROOF "E"              | 1,666 SF  |
| ROOF "F"              | 62 SF     |
| ROOF "G"              | 4,029 SF  |
| ROOF "H"              | 3,287 SF  |
| ROOF "I"              | 234 SF    |
| ROOF "J"              | 1,537 SF  |
| ROOF "K"              | 6,940 SF  |
| ROOF "L"              | 4,917 SF  |
| ROOF "M"              | 2,649 SF  |
| ROOF "N"              | 5,597 SF  |
| TOTAL:                | 39,900 SF |

- ROOFS - METAL

|          |           |
|----------|-----------|
| ROOF "B" | 8,598 SF  |
| ROOF "L" | 10,042 SF |
| ROOF "S" | 506 SF    |
| TOTAL:   | 19,146 SF |

- ROOFS - TOTAL JOB

|             |           |
|-------------|-----------|
| (1) PLY TPO | 39,900 SF |
| METAL       | 19,146 SF |
| TOTAL:      | 59,046 SF |

NOTE: THIS AREA IS APPROXIMATE - CONTRACTOR TO FIELD VERIFY.





## GENERAL NOTES:

- SEE PROJECT MANUAL FOR ALLOWANCES AND/OR UNIT PRICES.
- CONTRACTOR ASSUMES ALL RESPONSIBILITY DURING PROJECT & WILL REPLACE ANY & ALL DAMAGED EQUIPMENT W/NO ADDITIONAL COST TO OWNER.
- CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS & PERFORM TEST CUTS • EACH ROOF PRIOR TO BID.
- CONTRACTOR IS TO SURVEY THE EXISTING ROOF DECKS W/A LEVEL (AFTER DEMOLITION) TO VERIFY IF DECK IS SLOPED AS INDICATED ON DRAWINGS OR FLAT. IF ANY DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT IMMEDIATELY OF THE CHANGES PRIOR TO PERFORMING ANY ADDITIONAL ROOFING OPERATIONS.
- CONTRACTOR IS TO INSPECT THE UNDERSIDE OF ALL ROOF DECKS PRIOR TO ROOFING OPERATIONS TO INSURE THAT NO INTERIOR MATERIALS, EQUIPMENT, FINISHES OR OBJECTS WILL BE PERCED OR DAMAGED.
- CONTRACTOR IS RESPONSIBLE TO MAKE ROOF WATER TIGHT, WHICH INCLUDES EVERYTHING THAT IS LOCATED AND/OR PENETRATES THE ROOF • THE END OF EACH WORK DAY.
- ALL MATERIALS ARE NEW UNLESS OTHERWISE NOTED 'EXISTING'.
- ALL WOOD BLOCKING, PLYWOOD & NAILERS TO BE FIRE TREATED (F.T.). SEE PROJECT MANUAL FOR FASTENING REQUIREMENTS.
- ALL WOOD BLOCKING INDICATED IN DETAILS ON DRAWING IS TO BE ANCHORED TO EXISTING STRUCTURE - SEE PROJECT MANUAL.
- ALL ROOFS TO RECEIVE 1/4" PER FOOT TAPERED RIGID INSULATION MINIMUM UNLESS OTHERWISE NOTED.
- NEW INSULATION TO BE A MINIMUM 2" • ALL EXISTING & NEW ROOF DRAINS.
- ALL CRICKETS ARE TO BE SLOPED • A MINIMUM OF 1/4" PER FOOT UNLESS OTHERWISE NOTED.
- COORDINATION OF CRICKETS AROUND EXISTING HVAC UNITS IS REQUIRED TO AVOID PONDING.
- ALL MEMBRANE FLASHING INDICATED IN DETAILS ON DRAWINGS IS TO EXTEND A MINIMUM OF 8" (VERTICAL AND/OR HORIZONTAL) OR WHAT IS REQUIRED BY MANUFACTURER ONTO THE FLAT PORTION OF THE ROOF.
- ALL EQUIPMENT INDICATED IS APPROXIMATE. CONTRACTOR TO FIELD VERIFY EXACT LOCATIONS.
- CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL & REINSTALLATION OF ALL HVAC UNITS (MIN. OF 8") INCLUDING ALL ELECTRICAL OR MECHANICAL CONNECTIONS. THIS MAY INCLUDE THE EXTENSION OF EXISTING ELECTRICAL, WIRING, PIPING, & DUCTWORK SYSTEMS TO ACCOMMODATE NEW MECHANICAL UNIT CURBING & NEW ROOFING SYSTEM HEIGHTS. DUCTWORK MAY NEED TO BE CUT, REMOVED, LIFTED, & RE-INSTALLED TO MAINTAIN MANUFACTURER'S 8" MIN. FLASHING HEIGHT. VERIFY WORK PRIOR TO BID.
- ALL DRAIN PIPING IS INSTALLED W/INSULATION ABOVE THE EXISTING CEILING. WHEN PIPING PENETRATES ANY WALLS, A FIRESTOPPING SYSTEM MUST BE INSTALLED. THE EXACT PIPING ROUTE WILL BE DETERMINED IN THE FIELD. VERIFY PROPOSED DRAIN PIPING LAYOUT PRIOR TO BID. MAKE MINOR ADJUSTMENTS IN THE ROUTE • NO ADDITIONAL COST TO THE OWNER OF THE BUILDING.
- SHAKE/CLEAN OUT ALL EXISTING VERTICAL & HORIZONTAL LEADERS TO NEAREST MAJOR HOLE OUTSIDE.
- SHAKE/CLEAN OUT ALL EXISTING VENT STACKS PRIOR TO INSTALLING METAL SLEEVES.
- ALL ANTENNAE, LIGHTNING PROTECTION, CONDUITS, & ANY OTHER OBJECTS TO REMAIN ON NEW ROOF, AFFECTED BY THE SCOPE OF WORK, ARE TO BE REMOVED & REINSTALLED.
- CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR CLEAN UP OF ROOFING MATERIALS & DEBRIS THAT PENETRATE THE INTERIOR ENVELOPE OF THE BUILDING W/NO ADDITIONAL COST TO THE OWNER.
- SITE AREAS DISTURBED SHALL BE CLEANED & RE-LEVELLED, W/LAWN AREAS MAGNETICALLY RAKED TO REMOVE ANY METAL DEBRIS & RE-SEEDED AS REQUIRED TO MATCH ADJACENT CONDITIONS.
- CONTRACTOR ASSUMES THE RESPONSIBILITY THAT ALL SECONDARY DRAIN PIPING TOPS ARE A MAXIMUM HEIGHT OF 6" ABOVE LOWEST POINT OF THE ROOF & DO NOT EXCEED THE HEIGHT OF THE ROOF EDGE. PIPE TOPS TO BE LASER VERIFIED AFTER INSTALLATION A MAXIMUM OF 6". THOSE HIGHER NEED METAL SCUPPERS INSTALLED. CONTACT ARCHITECT IF EDGE IS ABOVE 6".
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING PHASING EXIST. MECH. UNITS & ALARM SYSTEMS DISCONNECTS • RECONNECTS EACH DAY DURING INSTALLATION OF ROOFING SYSTEM. COORDINATE W/OWNER & ARCHITECT FOR SCHEDULING PRIOR TO DAY OF WORK. PROVIDE PROTECTION FROM FUMES, GASES, & DUST FROM PENETRATING DUCTWORK & INTERIOR SPACES OF BUILDING. RECONNECT ALL UNITS TO BE FULLY OPERATIONAL BY THE END OF THE WORK DAY, UNLESS DIRECTED OTHERWISE BY OWNER.

## CODE INFORMATION:

USE GROUP: E & A  
CONSTRUCTION CLASS: 2B  
BASIC WIND SPEED: 110 MPH  
RISK CATEGORY: #3  
WIND SPEED: 140 MPH.

FACTORY MUTUAL ENGINEERING & RESEARCH CORPORATION (FM GLOBAL); ROOF ASSEMBLY ASSOCIATION OF NON-CONSUMABLE CONSTRUCTION; WIND UPLIFT REQUIREMENT OF 140 FOR PERIMETER, & 140 FOR CORNERS, IN ACCORDANCE W/FM LOSS PREVENTION DATA SHEETS 1-28

IMC GUARD RAILS • APPLIANCES, EQUIPMENT, FANS OR OTHER COMPONENTS THAT REQUIRE SERVICE

## ENERGY CONSERVATION:

IECC CODE REQUIREMENT R-VALUE TOTAL  
CONNECTICUT CLIMATE ZONE: 5A  
IECC REQUIREMENT: U: 0.40 OR LESS  
R-25 OR MORE  
(R & U ARE BASED ON THE ROOFING ASSEMBLY)

## ROOFS: "A", "C", "K", & "Q"

OUTSIDE AIR  
(1) PLY TPO MEMBRANE  
3/4" PERLITE BOARD  
BASE: 4" POLYISO INSUL.  
1/4" METAL DECKING  
INSIDE AIR  
R TOTAL: 27.02  
U TOTAL: 0.037

OUTSIDE AIR  
(1) PLY TPO MEMBRANE  
3/4" PERLITE BOARD  
BASE: 4" POLYISO INSUL.  
1/4" METAL DECK  
INSIDE AIR  
R TOTAL: 27.96  
U TOTAL: 0.036

## ROOF: "B" & "S"

OUTSIDE AIR  
METAL ROOFING  
15# BUILDING PAPER  
BASE: 4" POLYISO INSUL.  
4" OSB BOARD  
1/4" METAL DECKING  
INSIDE AIR  
R TOTAL: 25.19  
U TOTAL: 0.041

## ROOF: "L"

OUTSIDE AIR  
METAL ROOFING  
15# BUILDING PAPER  
BASE: 4" POLYISO INSUL.  
4" OSB BOARD  
1/4" METAL DECK  
INSIDE AIR  
R TOTAL: 26.13  
U TOTAL: 0.038

- CONTRACTOR REMOVE EXIST. WOOD DECK TO INSTALL NEW ROOF HATCH. SEE DETAIL B/A5 TO INSTALL ROOF OPENING AS REQD.
- CONTRACTOR REMOVE EXIST. WOOD CUPOLA & DISCARD
- CONTRACTOR REMOVE EXIST. METAL GUTTER & DISCARD

THE ABOVE INFORMATION IS BASED ON LIMITED FIELD INVESTIGATION. ALL ROOFING, FLASHING & WOOD BLOCKING IS TO BE REMOVED LEAVING AN EXPOSED DECK

## DEMOLITION NOTES <-\*

- AT ROOFS 'A', 'C', 'K', & 'M' - REMOVE ALL OF THE FOLLOWING:  
- STONE BALLAST  
- (1) LAYER OF 2-PLY BUILT-UP ROOFING  
- RIGID INSULATION  
- ROOF DRAINS, SUMPS, & ALL INDICATED SCUPPERS  
- WOOD BLOCKING (PERIMETER & CURBS) UNLESS OTHERWISE NOTED  
- ROOF FLASHING MATERIAL  
- VENT STACK FLASHINGS  
- CANT STRIPS & TAPERED EDGE STRIPS  
- EXIST. MECH. UNIT CURBS  
- PERIMETER METAL FASCIA/CAP  
- FLASHINGS UNLESS OTHERWISE NOTED  
- E.J. FLASHING
- AT ROOF 'M' - REMOVE ALL OF THE FOLLOWING:  
- STONE BALLAST  
- (1) LAYER OF SINGLE PLY TPO MEMBRANE  
- RIGID INSULATION  
- ROOF DRAINS, SUMPS, & ALL INDICATED SCUPPERS  
- WOOD BLOCKING (PERIMETER & CURBS) UNLESS OTHERWISE NOTED  
- ROOF FLASHING MATERIAL  
- MEMBRANE VENTS  
- CANT STRIPS & TAPERED EDGE STRIPS  
- EXIST. MECH. UNIT CURBS  
- PERIMETER METAL FASCIA/CAP  
- FLASHINGS UNLESS OTHERWISE NOTED  
- E.J. FLASHING
- AT ROOF 'B', 'L', & 'S' - REMOVE ALL OF THE FOLLOWING:  
- ASPHALT SHINGLES  
- BUILDING PAPER  
- ICE & WATER SHIELD  
- METAL DRIP EDGES AT EAVES AND RAKES  
- ROOF FLASHING MATERIAL  
- PERIMETER METAL FASCIA/CAP  
- FLASHINGS UNLESS OTHERWISE NOTED  
- METAL GUTTERS & HANGERS  
- METAL DOWNSPOUTS, SUPPORTS & TRANSITION BOOTS
- CONTRACTOR TO REMOVE ATTIC EXHAUST UNITS & DISCARD
- CONTRACTOR TO REMOVE MEMBRANE VENT & DISCARD

## CONSTRUCTION NOTES <-\*

- FOR ROOF DRAIN TYPE I DETAIL • ALL METAL WOOD DECKS - SEE DETAIL - (D/A5)
- FOR ROOF DRAIN DETAIL SECONDARY DRAINAGE SYSTEM • ALL METAL DECK - SEE DETAIL - (E/A5)
- FOR ROOF DRAIN & END WALL DETAIL SECONDARY DRAINAGE SYSTEM • ALL METAL DECK - SEE DETAIL - (G/A5)
- FOR COLLECTION BOX DETAIL • ALL METAL DECK - SEE DETAIL - (J/A5)
- FOR SCUPER DETAIL • ALL METAL DECKS - SEE DETAIL - (K/A5)
- FOR MECH. UNIT TYPE I DETAIL • ALL METAL WOOD DECKS - SEE DETAIL - (L/A5)
- FOR MECH. UNIT TYPE II DETAIL • ALL METAL WOOD DECKS - SEE DETAIL - (M/A5)
- FOR MECH. UNIT TYPE III DETAIL • ALL METAL WOOD DECKS - SEE DETAIL - (N/A5)
- FOR MECH. UNIT TYPE IV DETAIL • ALL METAL WOOD DECKS - SEE DETAIL - (P/A5)
- FOR VENT STACK DETAIL • ALL WOOD DECKS - SEE DETAIL - (Q/A5)
- FOR PITCH POCKET DETAIL • ALL METAL DECK - SEE DETAIL - (R/A5)
- FOR EXPANSION JOINT TYPE I DETAIL • ALL METAL DECK - SEE DETAIL - (S/A5)
- FOR EXPANSION JOINT TYPE II DETAIL • ALL METAL DECK - SEE DETAIL - (T/A5)
- FOR ROOF HATCH DETAIL • ALL METAL DECK - SEE DETAIL - (U/A5)
- FOR SMOKE HATCH DETAIL • ALL METAL DECK - SEE DETAIL - (V/A5)
- FOR ROOF REGLET DETAIL • ALL METAL DECK - SEE DETAIL - (W/A5)
- FOR THRU WALL FLASHING DETAIL • ALL METAL DECK - SEE DETAIL - (B/A6)
- FOR INTERIOR LADDER DETAIL • ALL WOOD DECK - SEE DETAIL - (C/A6)
- FOR ROOF LADDER DETAIL • ALL METAL DECK - SEE DETAIL - (D/A6)
- FOR TYPICAL GUARDRAIL DETAILS • ALL METAL DECK - SEE DETAIL - (E/A6)
- HORIZONTAL ROOF LEADER (MATCH DIAMETER OF EXIST.) ABOVE CEILING SLOPED • 1/4" MIN. VERTICAL LEADERS TO EXIST. PIPING AS REQD. SEAL ALL PENETRATIONS THROUGH WALLS W/FIRE PUTTY AS REQUIRED BY CODE. PATCH & REPAIR ALL AREAS DAMAGED BY INSTALLATION OF NEW PIPING
- EXISTING HORIZONTAL ROOF LEADERS TO REMAIN. CONTRACTOR TO TIE NEW ROOF DRAIN & NEW 4" CAST IRON VERTICAL ROOF LEADER INTO EXIST. - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- INSTALL SCUPPERS IF REQD. AVOID WINDOWS BELOW
- INSTALL CONCRETE SPLASH BLOCKS WHERE REQD. - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- TEMPORARILY REMOVE & REINSTALL EXIST. MECH. UNIT. REMOVE EXIST. CURB. INSTALL NEW INSULATED CURBS. PATCH & REPAIR ANY DAMAGE TO DUCTWORK - SEE DETAIL G/A4.
- FOR MECH. UNIT CURBS THAT CANNOT BE REMOVED - SEE DETAILS K/A6, L/A6, & M/A6
- CONTRACTOR TO INSTALL INSULATED CURBS FASTENED TO DECK TO MEET SEISMIC CODE REQUIREMENTS. INSTALL AS REQD. TO ALLOW FOR WATER FLOW & PREVENT PONDING. SEE DETAIL R/A4
- CONTRACTOR TO INSTALL NEW F.T. WOOD BLOCKING 8" TO MEET MANUFACTURER'S MIN. FLASHING HEIGHT
- CONTRACTOR TO PROVIDE NEW ROOF HATCH. INSTALL LADDER UP SAFETY POST & HATCH SAFETY RAIL SYSTEM - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- CONTRACTOR SHALL REPLACE ALL OR PROVIDE NEW ROOF TOP EQUIPMENT DISCONNECT SWITCHES IN THIS PROJECT SCOPE. NEW SWITCHES SHALL BE NON-FUSED, NEMA 3R RATED & SHALL MATCH THE VOLTAGE & CURRENT RATINGS OF THE EQUIPMENT SERVED. NEW DISCONNECT SWITCHES SHALL BE MOUNTED TO A NON-REMOVABLE PANEL ON THE EQUIPMENT SERVED OR THE CONTRACTOR SHALL PROVIDE A SUITABLE UN-STRUT SUPPORT FOR PROPER MOUNTING. IN ALL CASES, THE NEW DISCONNECT SWITCH SHALL BE W/I VIEW OF THE EQUIPMENT SERVED. MODIFY & EXTEND BRANCH CIRCUIT WIRING AS REQD. FOR INSTALLATION OF THE DISCONNECT SWITCH. NEW SWITCH MATERIALS & INSTALLATION SHALL BE COMPLIANT W/APPLICABLE REQUIREMENTS OF THE CURRENT NEC ARTICLES & APPLICABLE REQUIREMENTS OF THE CURRENT NEC 424.19, 430.1X & 440 PART II
- CONTRACTOR SHALL PROVIDE NEW GFCI RECEPTACLES IN WATERPROOF BOXES W/I 25'-0" OF ALL HVAC EQUIPMENT PER NEC 210.63. TIE RECEPTACLE INTO EXIST. GENERAL PURPOSE RECEPTACLE CIRCUIT SERVING THE SPACE BELOW
- REPLACE EXIST. AIR TERMINALS AS REQD. & USE EXIST. GROUNDING WIRES, ADDING &/OR REPLACING DAMAGED LENGTHS AS REQUIRED
- CONTRACTOR TO INSTALL NEW WALL USING 2X 8" WOOD & 3/4" F.T. PLYWOOD. THE WALL SHALL IN-CLOSE OVERHANG OF NEW METAL ROOFING SYSTEM W/ GUTTER & EXTEND BACK FROM EXIST. WALL. RUN TPO MEMBRANE UP FRONT FACE OF NEW WALL & ON TOP OF EXIST. SLOPED ROOF BEFORE INSTALL NEW METAL ROOFING SYSTEM
- CONTRACTOR TO BRUSH ON 'YELLOW' LIQUID ROOFING MEMBRANE TO INDICATE LOCATION OF NEW INSTALLED PIPING FOR FUTURE WORK
- CONTRACTOR TO INSTALL TPO MEMBRANE FROM ROOF 'H' LOW, UP VERTICAL WALL OF ROOF 'G', & FASTEN TO BLOCKING HIGH ROOF 'G'.
- CONTRACTOR TO PURCHASE & INSTALL METAL PRE FABRICATED CUPOLA. INCLUDE BASE EXTENSION & AIR TERMINAL TIED INTO EXIST. LIGHTNING PROTECTION SYSTEM. MATCH EXIST. HISTORICAL UNIT AS POSSIBLE. STYLE & COLOR TO BE APPROVED BY OWNER
- CONTRACTOR TO PATCH & REPAIR SIDING BEHIND REMOVED GUTTER AS REQD. PAINT AREA TO MATCH

## SYMBOL LEGEND:

- PLAN SECTION DETAIL OR ELEVATION NUMBER
- OUTLINE OF NEW ROOF
- OUTLINE OF EXISTING ROOFS N.I.C.
- EXISTING OUTLINE OF BUILDING
- INDICATES TAPERED INSULATION DIRECTION
- INDICATES PITCHED ROOF DECKING - EXISTING PITCH WILL NOT EXCEED 8" PER FOOT
- SLOPE REQUIREMENTS OF TAPERED INSULATION SYSTEM
- TAPERED INSULATION CRICKET SLOPED 8" PER FOOT
- NEW ROOF DRAIN & SUMP • EXIST. LOCATION - SEE DETAIL D/A5 & CONSTRUCTION NOTES #23 & #24
- NEW ROOF DRAIN & SUMP • NEW LOCATION - SEE DETAIL D/A5 & CONSTRUCTION NOTES #23 & #24
- NEW ROOF DRAIN OVER FLOW SYSTEM & NEW LOCATION - SEE DETAIL E/A5 & F/A5
- COLLECTION BOX 1 - SEE DETAIL G/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- WALL END DRAIN - SEE DETAIL F/A5, H/A5, & CONSTRUCTION NOTE #25
- METAL SCUPPER - SEE DETAIL H/A5, J/A5, & CONSTRUCTION NOTE #25
- EXISTING ROOF DRAIN TO BE REMOVED & LEADER TO BE USED - CONSTRUCTION NOTES #22 & #23
- NEW HORIZONTAL ROOF DRAIN SAEAD - SEE CONSTRUCTION NOTES #27, THRU #32
- METAL STORM GUTTER - SLOPE GUTTER AS INDICATED
- DOWN SPOUT - TIE INTO NEW OR EXIST. ROOF GUTTER
- UNDERGROUND STORM WATER SYSTEM AS REQD. - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- SPLASH BLOCK - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION
- EXISTING ROOF TOP MECHANICAL UNIT TO REMAIN - SEE DETAILS K/A6, L/A6, M/A6, N/A6, & CONSTRUCTION NOTES #27, THRU #32
- DASHED LINES REPRESENT MECH. UNIT ABOVE
- VENT STACK - SEE DETAIL P/A5
- PITCH POCKET - SEE DETAIL Q/A5
- EXPANSION JOINT - SEE DETAILS R/A5 & S/A5
- MECH. UNIT CURB - SEE DETAIL T/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- SMOKE HATCH - SEE DETAIL V/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- ROOF HATCH - SEE DETAIL U/A5 & CONSTRUCTION NOTE #31 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- INTERIOR ROOF LADDER - SEE DETAIL C/A6 & CONSTRUCTION NOTE #31 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- HEIGHT DIFFERENCE BETWEEN ROOFS FOR EACH LADDER - SEE ABOVE
- EXTERIOR ROOF LADDER - SEE DETAIL D/A6 & PROJECT MANUAL FOR ADDITIONAL INFORMATION
- HEIGHT DIFFERENCE BETWEEN ROOFS FOR EACH LADDER - SEE ABOVE
- METAL SAFETY GUARD RAIL - SEE DETAIL E/A5 & PROJECT MANUAL FOR ADDITIONAL INFORMATION. CENTER RAIL ON MECH. UNIT
- ANTENNA ANCHOR
- EXIST. AIR TERMINAL - SEE CONSTRUCTION #34
- WALKWAY PADS - SEE PROJECT MANUAL FOR ADDITIONAL INFORMATION

ROOF "A" 3,966 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE (COLOR: WHITE)  
EXISTING DECK: 1/4" METAL DECK  
INSULATION: 4" FLAT BASE  
FASTENING SYSTEM: MECH. FASTENED

ROOF "U" N.I.C.

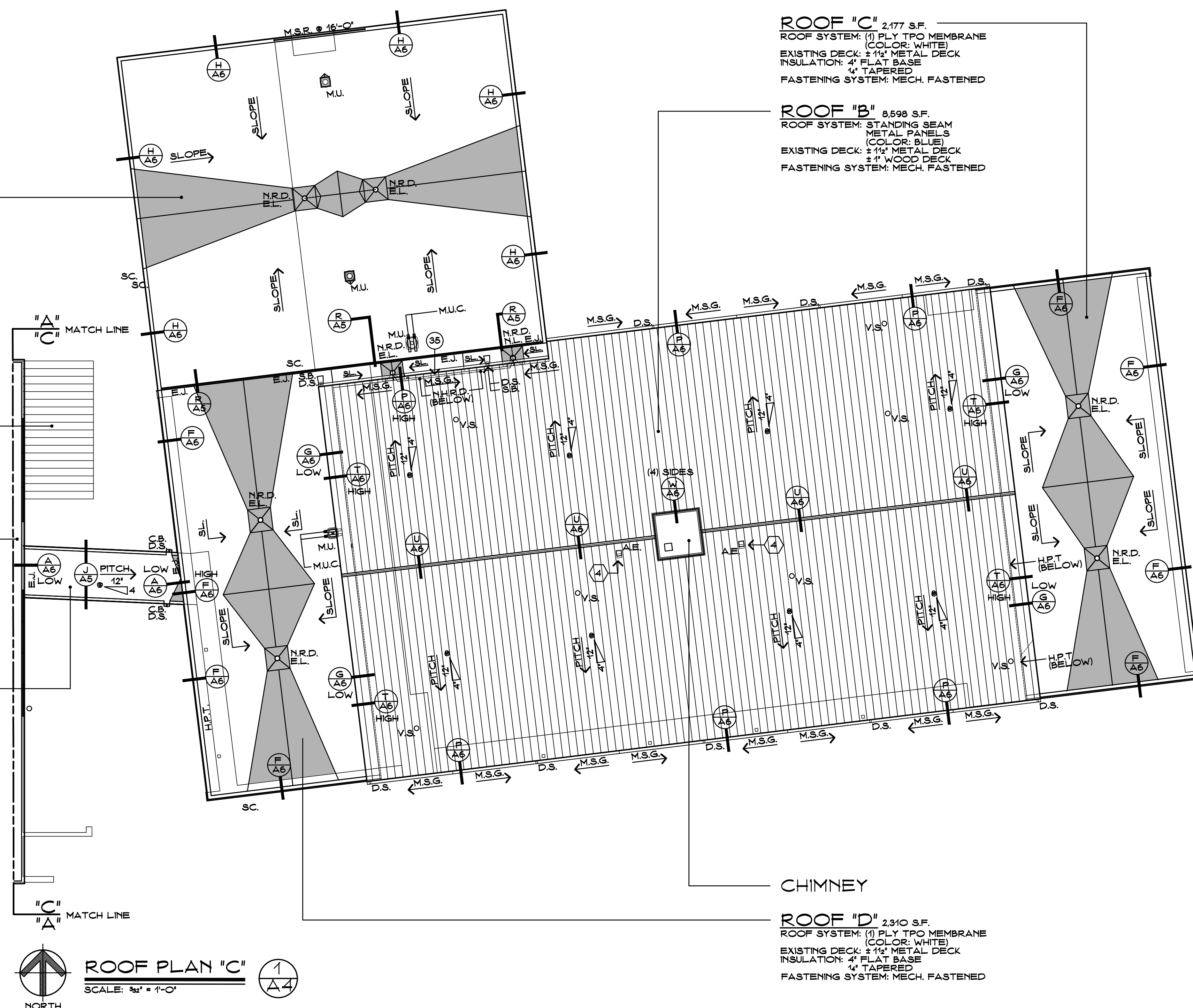
ROOF "F"

ROOF "E" 249 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE (COLOR: WHITE)  
EXISTING DECK: 1/4" METAL DECK  
INSULATION: 4" FLAT BASE  
FASTENING SYSTEM: MECH. FASTENED

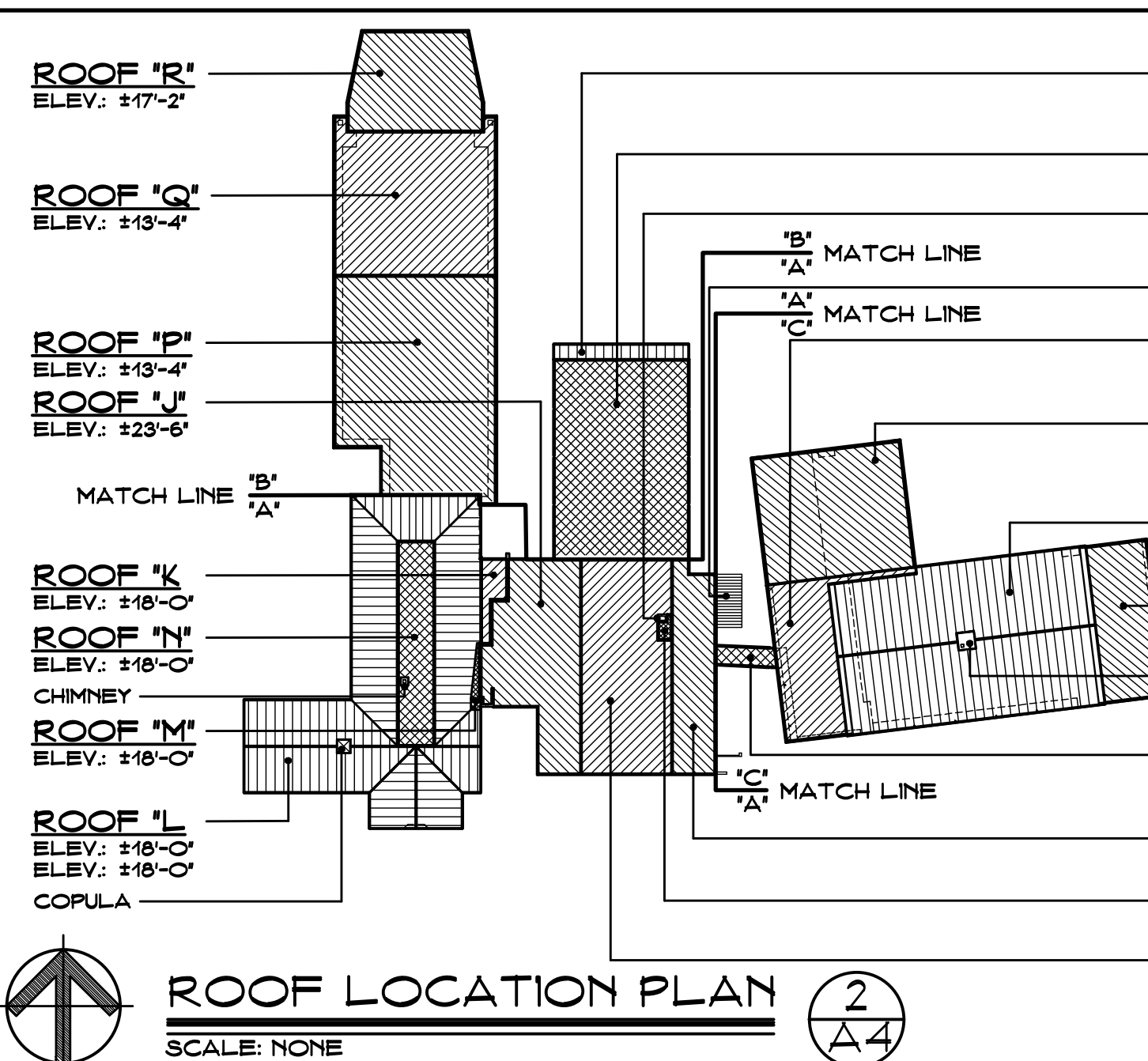
ROOF "C" 2,177 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE (COLOR: WHITE)  
EXISTING DECK: 1/4" METAL DECK  
INSULATION: 4" FLAT BASE  
FASTENING SYSTEM: MECH. FASTENED

ROOF "B" 8,598 S.F.  
ROOF SYSTEM: STANDING SEAM METAL PANELS (COLOR: BLUE)  
EXISTING DECK: 1/4" METAL DECK  
INSULATION: 4" TAPERED  
FASTENING SYSTEM: MECH. FASTENED

ROOF "D" 2,310 S.F.  
ROOF SYSTEM: (1) PLY TPO MEMBRANE (COLOR: WHITE)  
EXISTING DECK: 1/4" METAL DECK  
INSULATION: 4" FLAT BASE  
FASTENING SYSTEM: MECH. FASTENED



ROOF PLAN "C"  
SCALE: 1/4" = 1'-0"



ROOF LOCATION PLAN  
SCALE: NONE

## ROOF AREAS:

| BASE BID:             |           |
|-----------------------|-----------|
| - ROOFS - (1) PLY TPO |           |
| ROOF "A"              | 3,966 SF  |
| ROOF "B"              | 2,177 SF  |
| ROOF "C"              | 2,310 SF  |
| ROOF "D"              | 249 SF    |
| ROOF "E"              | 1,666 SF  |
| ROOF "F"              | 62 SF     |
| ROOF "G"              | 4,029 SF  |
| ROOF "H"              | 81 SF     |
| ROOF "I"              | 3,287 SF  |
| ROOF "J"              | 234 SF    |
| ROOF "K"              | 4,029 SF  |
| ROOF "L"              | 1,537 SF  |
| ROOF "M"              | 5,940 SF  |
| ROOF "N"              | 4,917 SF  |
| ROOF "O"              | 2,649 SF  |
| ROOF "P"              | 5,597 SF  |
| TOTAL                 | 39,900 SF |
| - ROOFS - METAL       |           |
| ROOF "B"              | 8,598 SF  |
| ROOF "L"              | 10,042 SF |
| ROOF "S"              | 506 SF    |
| TOTAL                 | 19,146 SF |
| - ROOFS - TOTAL JOB   |           |
| (1) PLY TPO           | 39,900 SF |
| METAL                 | 19,146 SF |
| TOTAL                 | 59,046 SF |

NOTE:  
THIS AREA IS APPROXIMATE - CONTRACTOR TO FIELD VERIFY.









