

SECTION 08500

WINDOWS

PART 1 DESIGN DIRECTIVE

1.1 PROJECT INCLUDES

- A. Windows: Overall we want durable, high R value frame and glazing window products that are well detailed in a wall system to stop both air/water infiltration and surface condensation.
- B. Window choice shall be made in consultation with Mechanical Engineer and FOM Engineer and a payback analysis of highest R-value frames and glazing must be done. Payback analysis should include possible elimination of perimeter radiation.
- C. The window installation shall stop interior surface condensation at these minimum conditions - 0 degrees F exterior, 70 degrees F interior, 25% RH interior.

1.2 DESIGN CRITERIA

- A. Use of window screens shall be reviewed on a case by case basis.
- B. The window must be located in the plane of the facade such that the "warm side" window frame area is fully protected by the wall insulation for condensation avoidance. (This is where a visual would help)
- C. A practical and full detailed air-sealing strategy is required as part of the plans and specs. Practical means that the architect must understand the foam gun and backer-rod limitations. Also, the sealing strategy must include rough blocking to back-up wall systems. Full foam sealing of window frame to wall insulation/blocking is required.
- D. A thorough comparison of glazing options including; (1) spacer options; (2) triple-glazing; (3) Heat Mirror (single and double); and (4) no heat delivery at window area, should be part of the overall envelope and HVAC system options considered at the start of the project.
- E. Warrantees: The warranty offered by the window manufacturer shall be thoroughly reviewed and discussed with FPO and FOM before the windows are chosen for the project. It is critical that this be addressed early in the design process to assure that a change in the window of choice does not adversely impact the design phase or construction phase schedule. The choice of window may be a lengthy process. The architect is considered responsible to schedule this review into the design process early enough to avoid potential delays. The manufacturer shall be made liable to warrant the results of the modeling in the finished product. The architect shall require that the window supplier present all warranty requirements to the college before purchase agreements are established with the contractor.
- F. The DC project manager and DC Safety & Security shall review the building program for areas where bullet resistant glazing may be required. Safety & Security will make recommendations, and the project manager shall review these recommendations with the architect for inclusion in the construction documents.

PART 2 PRODUCTS

2.1 MATERIALS

- A. All window openings shall have compatible head, jamb and sill (pan) flashing with weeps for positive drainage.
- B. Aluminum clad wood frames - We have used Marvin and Eagle successfully to date on our large projects, but we don't have a long history with these products.
- C. Fiberglass frames should be considered for applicability.
- D. If aluminum windows are desired, the highest category thermal break technology available from Canadian manufacturers should be strongly considered.
- E. Steel frame windows are not acceptable.
- F. Window performance modeling using FRAME software shall be provided by the manufacturer and the predicted performance shall be part of the Warranty agreement. Window manufacturers must review and approve the installation detailing. General Contractor is responsible for meeting or exceeding all performance requirements of the installation detailing.

PART 3 EXECUTION

- 3.1 No special requirements.

END OF SECTION 08500