



BY RTU UNIT MANUFACTURER

1. RTU Base
2. SA/RA Unit Openings

BY ACOUSTICAL MANUFACTURER

3. Integral Curb Duct Supports
4. 2" Deflection Fully Assembled HUSH CURB™
5. HUSH SEALANT™ Acoustical Caulk at all Duct Drops, any penetrations within the curb, & curb perimeter
6. HUSHCORE® **DECK™** Model **DS-___** System - In-Curb Acoustical Treatment
7. HUSH DUCT™ SA/RA Rectangular Silencers

BY HVAC CONTRACTOR

8. Duct Work
9. Flex Connector
10. Roof Deck Flashed to within ¼" of all Duct Drops & penetrations, but not in contact with Duct Wall
11. Submit letter of certification from acoustical supplier following inspection.

BY GENERAL CONTRACTOR

12. Building Steel
13. Built-up Roof or Concrete
14. Insulation and Cant Strip
15. Curb Slope requirements where applicable

RTU NOISE REDUCTION SYSTEM

HUSHCORE® **PLUS™ "V"** Model **HIC-DS-___-V** System

a. ISOLATED CURB

1. The isolated curb shall be 2" deflection, fully adjustable and fully assembled **HIC-2** HUSH CURB™.
2. The HUSH CURB™ shall be completely isolated with top and bottom steel structural frames and shall have a continuous flexible weather-seal.
3. The HUSH CURB™ system shall be capable of serving as a blocking device during installation.
4. The HUSH CURB™ springs shall have built-in limit stops to snub out wind resistance.
5. Model **HIC-DS-53-E** System incorporates seismic construction (wind and seismic detailed connections, stamped by a licensed professional engineer).
6. The HUSH CURB™ system shall be ___ High and shipped completely assembled.
7. Factory Curbs with a secondary vibration isolation system **SHALL NOT** be acceptable.

b. IN-CURB SYSTEM

1. The HUSH CURB™ shall have a field installed in-curb **DECK™** Model **DS-___** (**DS-30, DS-38, DS-40, DS-41, DS-45, DS-49, DS-53, DS-55, DS-57, DS-60**) system sound package for radiated noise.
2. The **DECK™** system shall be a multi-layered acoustical composite for placement inside the HUSH CURB™.
3. The overall installed thickness of the composite panels shall be a maximum of 14" thick.
4. The composite panels shall get HUSH SEALANT™ model HSAC-100 acoustical grade caulk at seams and all perimeter edges inside the curb. Decking shall be maintained inside the RTU roof curb to a clearance of ¼" maximum around all duct drops but never contact the duct.
5. The mechanical contractor shall provide digital evidence of the in-curb acoustical treatment installation prior to lowering of the rooftop units to the acoustical manufacturer. The acoustical manufacturer shall issue a letter of certification stating that the products have been properly installed and sealed around all ductwork and drops to eliminate air gaps which can compromise performance.

c. SILENCERS

1. The HUSH CURB™ shall have a field installed HUSH DUCT™ acoustical silencers for in-stream SA and/or RA noise.
2. The HUSH DUCT™ acoustical silencers shall be placed under the curb at the SA/RA openings or in-duct at locations as required.
3. Overall pressure drop, including system effect, shall not exceed 0.30 in.wg.

Basis of Bid: BRD Noise and Vibration Control, Inc., Wind Gap, PA - (610) 863-6300, www.HUSHCORE.net.

PERFORMANCE

- a. To assure optimized aerodynamic and acoustic performance as well as proper integration and coordination of the final installation, the complete HUSHCORE® system shall be supplied by the rooftop unit manufacturer as part of a complete package.
- b. The HUSH CURB™ shall provide minimum 85% vibration isolation efficiency.
- c. HUSHCORE® **DECK™** Model **DS-___** System In-Curb Acoustical Treatment Performance shall be tested in accordance with procedure ASTM E-90-10 with material seams and layering present in the test specimen representing actual field contractor installed conditions. Pre-assembled test specimen data shall not be acceptable as it overstates performance that is not reproducible in field conditions. The in-curb composite panel assembly shall be rated with 1/3 octave performance values as listed below for sound radiation through the deck inside the curb.

HUSHCORE® In-Curb Composite - (Transmission Loss) in accordance with ASTM E-90-10																						
Freq. (Hz)	80	100	125	160	200	250	315	400	500	630	800	1K	1.25K	1.6K	2K	2.5K	3.15K	4K	5K	6.3K	8K	
Transmission Loss (dB)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

- d. For specific radiated noise contribution, in-duct noise contribution and duct break-out noise contribution, please consult with a BRD representative for specification compliance.
- e. The noise control supplier shall submit combined acoustical calculations to demonstrate resultant radiated, in-duct and duct break-out contributions to a given space will not exceed NC levels scheduled.