

REQUEST FOR QUOTATION	TROY SCHOOL DISTRICT 1140 RANKIN, TROY, MICHIGAN 48083 248-823-4052 FAX: 248-823-4077	REQUISITION
No. 9655		
DUE DATE 2-11-10 NO LATER THAN 3 p.m.		DATE 1-28-10

REQUEST FOR QUOTE - NOT AN ORDER

THIS FORM MUST BE UTILIZED WHEN RESPONDING TO THIS REQUEST
BID ENVELOPE ENCLOSED

THE RFQ NUMBER MUST APPEAR ON ALL QUOTATIONS AND RELATED CORRESPONDENCE, THIS IS NOT AN ORDER

Quantity	DESCRIPTION	UNIT PRICE	AMOUNT
	<p>Please supply us with your bid to furnish the Troy School District with VIOLINS FOR MORSE ELEMENTARY</p> <p style="text-align: center;">Copies of the bid are available at:</p> <p style="text-align: center;">www.troy.k12.mi.us/purchasing/items_out_for_bid.htm (left column)</p> <p style="text-align: center;">Bid recaps will be available at:</p> <p style="text-align: center;">www.troy.k12.mi.us/purchasing/items_out_for_bid.htm (right column)</p> <p style="text-align: center;"><u>FACSIMILE BID IS NOT ACCEPTABLE</u></p> <p>Bids will not be accepted if submitted after the deadline specified (local time) in the advertisement to bid or in the information to bidders. The late submission of a bid makes the bid nonrepsonsive and is a material defect which shall not be waived by the Board of Education. Delays in the mail will not be considered. All Late bids in the mail will be returned to the bidder unopened.</p> <p>Proposal for the submission of alternatives by vendors will be accepted and reviewed. However, if any substitution or departure is not clearly noted and described, it will be understood that the bid intends to exactly meet the specifications.</p> <p>The Board of Education shall be the sole judge as to whether the proposed goods are "equal" or "approved". Quotations must be mailed or delivered to the Purchasing Office, 1140 Rankin, Troy, MI 48083 no later than 3 p.m. on the date shown above. Michigan State Sales and Use Taxes and Federal Excise Taxes do not apply unless otherwise indicated. Exemption certificates will be furnished when necessary. This request imposes no obligations on the buyer. The Board of Education reserves the right to accept or reject any or all bids or to split awards by items or to accept bids, which will best serve the Board of Education.</p>		

THIS AREA MUST BE FILLED IN

DELIVERY TIME	PRICES FIRM FOR	NAME OF COMPANY	TELEPHONE NO.
TERMS		NO. & STREET	FAX #
FOB DELIVERED	ALL DELIVERY CHARGES MUST BE INCLUDED IN PRICES SHOWN	CITY, STATE & ZIP CODE	E-MAIL
CONTACT PERSON (PLEASE PRINT)		SIGNATURE	DATE

**Troy School District
Violins – Morse Elementary
Bid 9655**

SPECIFICATIONS

Elementary Level Violins – 70 total units required

<u>Qty.</u>	<u>Size</u>	<u>Unit Price</u>	<u>Total Price</u>
5	1/4	_____	_____
40	1/2	_____	_____
25	3/4	_____	_____
	Delivery Charges		_____
	TOTAL		_____

MAKE/MODEL of Violin Proposed*: _____

*NOTE: Make and model of violins MUST conform to the standards and specifications of the American String Teachers Association, Music Educators National Conference and National Orchestra Association (see attached)

Delivery Address:

Morse Elementary
475 Cherry
Troy, MI 48083

COMPANY: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

The Complete String Guide:

Standards, Programs,
Purchase, and
Maintenance



A joint publication of:
American String Teachers Association
Music Educators National Conference
National School Orchestra Association

CONSTRUCTION FEATURES OF INSTRUMENTS

Almost all stringed instruments are made of maple and spruce. Differences in quality are the result of the choice of materials, the construction method, and the quality of workmanship applied in the making of an instrument.

Basic maple and spruce student violins may have a pressed top and back, since pressing is the least time-consuming manufacturing method. Purfling (a decorated border) is often painted, not inlaid. If well adjusted, such instruments are acceptable for beginners only.

Other student instruments have carved tops and backs sculpted from a board 3/4" thick. This method, although more time consuming, usually results in better sounding instruments. These instruments also are usually equipped with a genuine inlaid purfling, which gives additional protection against cracking. If well adjusted, these make highly recommended student instruments.

Better grade or "step-up" instruments should be made of at least five-year-old loft-seasoned tops and backs and should always be carved and graduated. They also should be purfled and adjusted for best tonal results and easy playing.

Pegs

Pegs are of two major types: friction pegs and tension pegs.

Friction pegs are the traditional pegs that have been used for centuries on all kinds of musical instruments and rely on the friction between the peg box of the scroll and the peg itself to stay tight. Proper and precise fitting is essential. The taper of the peg and the taper of the hole in the peg box have to be a perfect match, and both the hole and the peg have to be perfectly round. Special tools are needed to achieve the perfect fit. Peg compound should be applied to the contact areas for smooth turning and secure holding of the pegs. There are compounds that will accommodate both needs. Since most stringed instruments are made abroad and shipped, some time should be allowed for the wood to settle and adjust to the climate in the United States before doing any work on them. When constructed abroad, the hole in the peg box as well as the peg frequently "get out of round" (become egg shaped) and should be drilled or reshaped here.

When peg holes are drilled, care should be taken in alignment so the strings wound on the upper pegs do not touch the lower pegs. Enough clearance between the back of the peg box and the pegs is important so that strings wind freely on the peg and do not rub against the back. Poorly fitted pegs can result in peg box cracks, which necessitate difficult repairs. If friction pegs are selected, insist on a good-quality ebony peg. Ebonized pegs, hardwood pegs,

or plastic pegs do not provide satisfactory results and should be avoided. Some better instruments are fitted with rosewood or boxwood pegs, which are decorative and usually costly. They do not function any better, however, than a well-fitted ebony peg.

Tension pegs (those with mechanical features like screws) were invented to make tuning easier. Extreme care should be taken, however, when choosing tension pegs. Few tension pegs really do what they were intended to do. A good tension peg should enable students to be able to learn to tune their instruments sooner. The peg should not stick in high humidity or slip in low humidity. Tension pegs should also be maintenance free. Only the best tension pegs really give you these features. Poorly designed tension pegs will usually fail. Beware of tension pegs that “expand.”

Fingerboard

The fingerboard should be made of ebony. Some ebony used on less expensive instruments may be striped (black-brown), which is acceptable. So-called “ebonized fingerboards” are stained hardwood and are too soft. They wear out quickly and lose their shape. The shape of the fingerboard and neck is of great importance since it affects the playing of the instrument. The fingerboard should be fitted to the neck so that there are no edges or ridges. The curve of the fingerboard should be such that it matches the curve of the bridge. In its entire length, the fingerboard should be slightly concave, free of ripples, warpage, or twisting.

On violas and cellos, fingerboards are made with or without the “C” bevel. Both shapes are acceptable, and the choice is a matter of personal preference.

The distance from the end of the fingerboard to the top of the instrument should be as follows:

	Minimum		Maximum
4/4 violin	19.0mm	–	21mm
4/4 viola	23.0mm	–	25mm
4/4 cello	62.0mm	–	65mm
Standard bass	9.5cm	–	11cm

The fingerboard should be aligned with the neck and with the center line of the instrument.

String nut

The string nut at the upper end of the fingerboard should be made of ebony. On the violin and viola, it should be shaped so that the strings are slightly above the fingerboard (about the thickness of a business card). The space will be proportionally higher for the cello and bass. The string grooves should be just deep enough to hold the strings in place (about one-third the diameter of the string) and should be smooth so that they do not pinch or bind the string.

The approximate spacing of the strings from center to center should be:

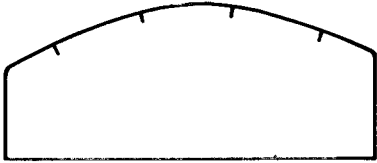
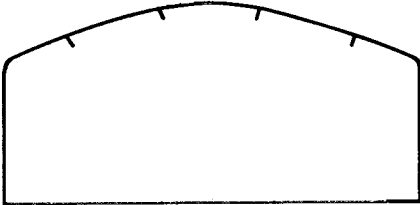
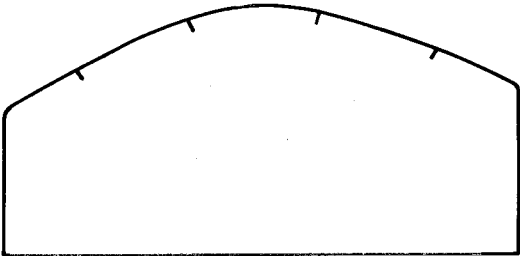
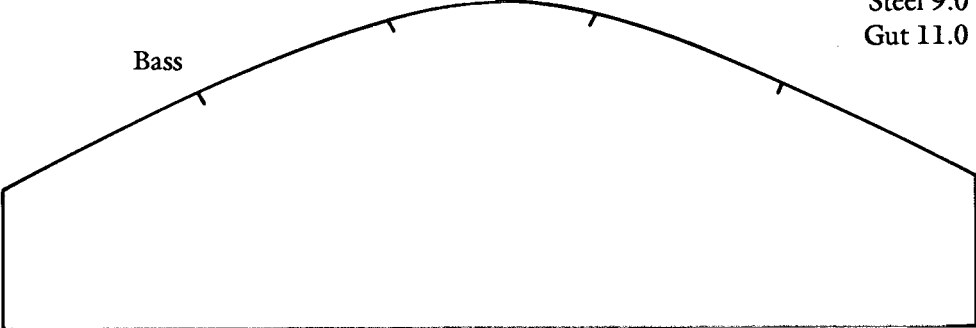
4/4 violin	6.0mm
4/4 viola	6.5mm
4/4 cello	8.0mm
Standard bass	10.0mm

Bridge

The bridge should be carved out of quartered maple and should be fitted to the instrument. Adjustable bridges with movable feet are acceptable *if fitted and adjusted* as a carved bridge. The feet should be fitted properly to the belly of the instrument, and the curvature of the bridge should be adjusted to match the fingerboard so that the strings have proper clearance. The string grooves should be spaced properly, be smooth, and be just deep enough to hold strings in place (one-half the diameter of the string). The side of the bridge facing the fingerboard should be slightly rounded (have a belly). All bridges should be thinned at the top to match the thickness of the heaviest string. The feet should be fitted in a way that the back of the bridge (facing the tailpiece) forms a 90-degree angle with the top of the instrument. On student instruments, bridges with a rounder curvature are preferable, since this makes it easier to bow one string at a time. The spacing of the strings (from center to center) should be:

4/4 violin	12mm
4/4 viola	13mm
4/4 cello	16mm
Standard bass	25mm

BRIDGE CURVATURES AND STRING HEIGHTS

	Distance in millimeters between strings		String height in millimeters at end of fingerboard	
	Bridge	Nut	E	G
<p>Violin</p> 	12.0	6.0	Steel 2.5 Gut 3.5	4.0 5.0
<p>Viola</p> 	13.0	6.5	A Steel 3.5 Gut 4.5	C 5.0 6.5
<p>Cello</p> 	16.0	8.0	A Steel 4.5 Gut 6.0	C 6.0 8.0
<p>Bass</p> 	25.0	10.0	G Steel 9.0 Gut 11.0	E 11.0 16.0

Drawings courtesy of Glaesel String Division of the Selmer Company

String height above the end of the fingerboard should be:*

Instrument	String	Steel strings	Wound-on-gut and perlon strings
4/4 violin	E	2.5mm	
	G		4.0mm
	E		3.5mm
	G		5.0mm
4/4 viola	A	3.5mm	
	C		5.0mm
	A		4.5mm
	C		6.5mm
4/4 cello	A	4.5mm	
	C		6.0mm
	A		6.0mm
	C		8.0mm
Standard bass	G	9.0mm	
	E		11.0mm
	G		11.0mm
	E		16.0mm

Bridges with adjustable feet are acceptable on all instruments, providing the height of the bridge is adjusted to give the right string height at the end of the fingerboard. Since humidity changes can influence the string height on basses, they should be equipped with bridges with height adjustment wheels for ease of playing.

Soundpost

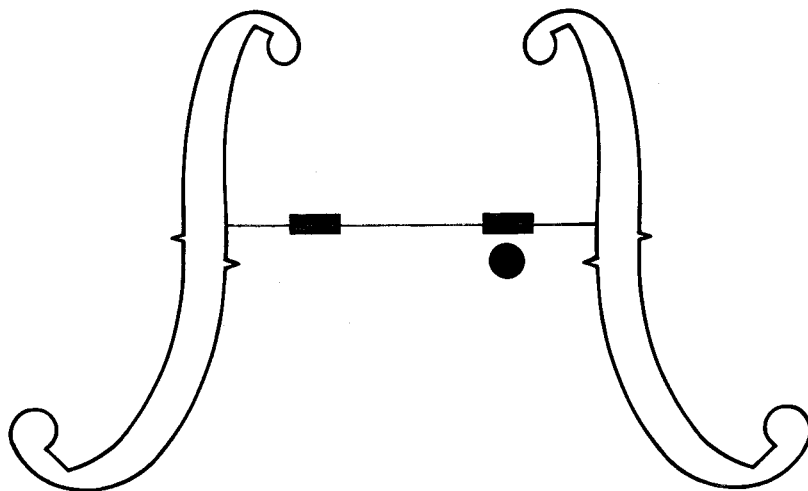
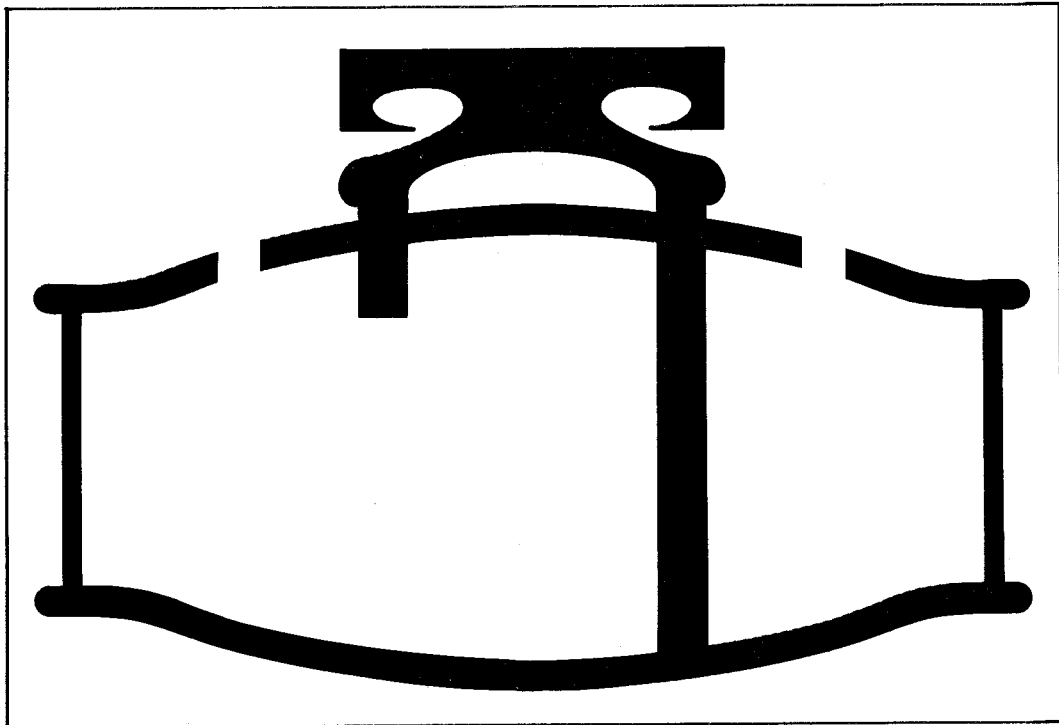
The soundpost should be a round piece of even-grained, quartered spruce. It should be of the correct size for the instrument and should fit snugly against the top and back. The soundpost position and length greatly influence the sound of the instrument. Because it may need to be adjusted or changed, the soundpost should *never* be glued down. The soundpost position is behind the bridge foot under the highest string of the instrument (see figure 1). The diameters for the soundpost are:

4/4 violin	6.25mm
4/4 viola	7.00mm
4/4 cello	11.00mm
Standard bass	19.00 to 21.00mm

Saddle

The saddle should be made of ebony. It should be fitted into the top, and it must be high enough so that it will not touch the top when the tailpiece is fitted properly.

*The height should be lower for steel strings than for wound-on-gut or perlon strings.



Note: The proper position of the bridge on the instrument is for the bridge to be evenly spaced between the F-holes and the F-notches pointing to the center of the bridge feet.

Figure 1.

Drawings courtesy of Glaesel String Division of the Selmer Company

Tailpiece and the tailpiece hanger

The tailpiece should be of ebony. Hardwood or plastic tailpieces are unacceptable. Good-quality metal tailpieces with built-in adjusters are acceptable for instruments equipped with four steel strings. If four steel strings are used with ebony tailpieces, they should be fitted with four individual fine tuners.

The tailhanger should be made of nylon or perlon with threaded ends and brass nuts for easy fitting and adjusting.

Bass tailhangers should be made of brass wire one-eighth inch in diameter, threaded on both ends, and secured with capnuts.

Note: On basses, hardwood tailpieces are acceptable in order to save weight.

The tailhanger should be fitted so that the tailpiece, even under full string tension, almost touches the saddle.

Endpin

The endpin should be made of ebony or metal. It is about eighteen inches long on standard cellos and about fifteen inches long on small-size cellos. On a standard bass, the endpin is usually fifteen inches to eighteen inches. Shorter endpins on either instruments should not be accepted.

Strings

The strings should be of good quality, precision made, and matched. Bare metal, metal-wound-on-metal, metal-wound-on-gut, metal-wound-on-perlon, or nylon strings are being used. Metal and metal-wound-on-metal strings are usually more brilliant sounding than strings of wound-on gut or perlon, which usually have a mellower sound.

It is advisable to start beginning students on instruments equipped with chromium steel strings and four fine tuners on the tailpiece. Steel strings are not influenced by humidity and require less retuning. Quite often the tuning of the instrument is done by the teacher at the beginning of the lesson, and if the student uses anything other than a chromium steel string, he will probably practice between lessons on an out-of-tune instrument. After the student has learned to tune his own instrument, it may be advisable to switch to metal-wound-on-gut or metal-wound-on-perlon strings.

Chromium steel strings are available for violin, viola, cello, and bass and are usually supplied in fractional sizes for smaller instruments. The violin E string is usually a solid steel wire; all other steel strings are usually wound with a flat chromium steel band. Some brands also offer steel strings in three gauges such as soft, medium, and hard. Medium strings should be used on student instruments. String gauges for violin, viola, and cello are listed in table 1.

Chin rests

Chin rests are available in ebony, rosewood, boxwood, and various plastic materials. Student violins are usually equipped with plastic chin rests to make them less expensive. A chin rest should be comfortable and free of sharp edges and ridges. Cork or leather must be attached to both the clamp and plate at the points of contact with the instrument.

Adjusters

Adjusters or fine tuners should be used with all steel strings. Tailpieces with built-in adjusters are available for young students. Wound-on-gut and wound-on-perlon strings should not have fine tuners because of the limited tuning range with these strings. Since string basses come equipped with brass machine heads, fine tuners are not needed.

Table 1

Wound-on-gut strings are available in a wide variety of gauges. The following is a list of medium string gauges. The gauges are given in three standard measurements. PM(Pirastro Measure™) is an internationally accepted gauging system for strings.

Instrument	String	PM*	Diameter (mm)	Inch	Materials used
Violin	E	5.25	0.26	.0104	chrome steel, goldplated steel, aluminum wound on steel
	A	13.50	0.675	.027	aluminum wound on gut, aluminum wound on perlon
	D	17.00	0.85	.034	aluminum wound on gut, aluminum wound on perlon
	G	16.00	0.80	.032	silver wound on gut, silver wound on perlon
Viola	A	14.00	0.70	.028	aluminum wound on gut, aluminum wound on perlon
	D	17.00	0.85	.034	aluminum wound on gut, aluminum wound on perlon
	G	16.00	0.80	.032	silver wound on gut, silver wound on perlon
	C	21.50	1.08	.043	silver wound on gut, silver wound on perlon
Cello	A	20.00	1.00	.040	aluminum wound on gut, aluminum wound on perlon
	D	27.00	1.35	.054	aluminum wound on gut, aluminum wound on perlon
	G	26.00	1.30	.052	silver wound on gut, silverplated copper wound on gut, silver wound on perlon, flat chrome wound on perlon
	C	36.00	1.80	.072	silver wound on gut, silverplated copper wound on gut, silver wound on perlon, chrome wound on perlon

*1 PM = .05mm = .002"

Shoulder pads

Shoulder pads can increase a player's comfort and technical facility. There are many types of pads available, and one should be selected to accommodate the physical characteristics of the student. Not all students, however, require a shoulder pad, nor do all teachers recommend their use.

Bows

Bows are available in a wide range of choices. The basic three types of materials used in bows are fiberglass, brazilwood, and pernambuco.

Pernambuco bows are available in a wide price range. Pernambuco wood is the most desirable material in bow sticks. Pernambuco bows, suitable for the advanced student, are equipped with ebony frogs with nickel silver trim and unbleached horsehair. Higher grade pernambuco bows may have silver and gold trim and cost as much as several thousand dollars.

Fiberglass bows are manufactured in all sizes for all instruments and are available with synthetic hair, genuine horsehair, plastic grips, and wire grips. They keep their shape better than do most inexpensive wood bows. Because of their outstanding durability under rugged school conditions and low cost, fiberglass bows are suggested for the beginning student. Synthetic hair may also be used with beginners because of its durability and low cost, but it does not wear as well as horsehair.

Brazilwood bows are considered student bows. Usually brazilwood bows come equipped with ebony frogs, nickel silver trim, and horsehair. They are acceptable for beginning students; however, because of the nature of the material, these bows lose their shape easily if left in the case with tightened hair. (In fact, this applies to all wooden bows.)

Cherry and beech bows may be of extremely poor quality and are not acceptable for student use.

Cases

Cases should be of proper size and made out of either vacuum-molded thermoplastic material with aluminum extrusion or laminated (plywood) veneer with keratol covering and weatherstripping or screw-attached cordura covering with three heavy-duty hinges, two drawback latches, and a sturdy, molded handle riveted to aluminum extrusion.* Thermoplastic cases should be reinforced with polyurethane foam. All cases should be plush lined.

All cases should be made to fit the size of the instrument and bow in order to give maximum protection. Instrument cases should be able to withstand at least 150 pounds of pressure. Cello cases are also available in polyshell and thermoplastic construction.

*Applies only to vacuum-molded cases.

**Troy School District
Violins - Morse Elementary
Bid 9655**

	MAKE/MODEL	Size 1/4	Qty = 5	Size 1/2	Qty = 40	Size 3/4	Qty = 25	Delivery	TOTAL
		Unit Price	Total	Unit Price	Total	Unit Price	Total		
Washington Music Center	Knilling 112VN	\$ 112.75	\$ 563.75	\$ 112.75	\$ 4,510.00	\$ 112.75	\$ 2,818.75	\$ -	\$ 7,892.50
Taylor Music	Knilling 112VN14/12/34	124.00	620.00	124.00	4,960.00	124.00	3,100.00	-	8,680.00
Shar Products Co.	Franz Hoffmann HV-100 S1	128.00	640.00	128.00	5,120.00	128.00	3,200.00	-	8,960.00
National Educational Music Co.	International Strings Pfretzschnr 2900	138.00	690.00	138.00	5520.00	138.00	3450.00	-	9,660.00
Anderson Music Co.	Juilliard VL350	139.00	695.00	139.00	5560.00	139.00	3475.00	-	9,730.00
Southwest Strings	Klaus Mueller Prelude	139.80	699.00	139.80	5592.00	139.80	3495.00	-	9,786.00
Brook Mays Music	Jacob Horst	150.00	750.00	150.00	6000.00	150.00	3750.00	-	10,500.00
Wilson Fine Violins	K Suno Bello	155.00	775.00	155.00	6200.00	155.00	3875.00	-	10,850.00
Taylor Music	Knilling Sinfonia	159.00	795.00	159.00	6360.00	159.00	3975.00	-	11,130.00
National Educational Music Co.	Scherl & Roth R-101	166.00	830.00	166.00	6640.00	166.00	4150.00	-	11,620.00
Nick Rail Music	Core Academy 10	169.00	845.00	169.00	6760.00	169.00	4225.00	-	11,830.00
Marshall Music Co.	Eastman VL80	178.00	890.00	178.00	7120.00	178.00	4450.00	-	12,460.00

A & G Central Music: No Response

Garza Violins: No Response

Guarneri House: No Response

K & S Music: No Response

McCourt's String Shop: No Response