



PROJECT NARRATIVE

Lewis Sound & Video Professionals

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NAME OF PROJECT: Horlick Field Exterior Sound System

Official Notice #10-2020; Contract 20200046

PROJECT OWNER: City of Racine

PROJECT ADDRESS: 1648 N. Memorial Drive

CITY: Racine COUNTY: Racine STATE: Wisconsin

Project Narrative

Horlick Field Exterior Sound System
City of Racine

Following is the Project Narrative of Lewis Sound & Video Professionals, regarding the system and possible options for the above named project and their respective cost, time and feature limitations or constraints.

Project Scope as presented to Lewis Sound

We are being requested to provide a design/build proposal for the installation of a new working sound system for the City of Racine's historic Horlick Field. In reviewing the Request for Proposal documents and taking into consideration an on-site inspection of the facility and verbal guidance with Robert Rafel with the City of Racine, we present the following proposed work:

Loudspeaker Systems

We worked with David Howden of Community Professional Loudspeakers on the system design to ensure we are providing accurate intelligible audio to the stadiums home and visitor seating areas as well as providing coverage to the public areas that support the field. Mr. Howden is the industry's leading expert on outdoor sports venues and we have worked with David on many very successful system implementations.

We will install two Community R.5 – 96 MAX series loudspeakers will serve the main Home bleachers. One will be attached to the north home-side lighting pole and the other to the south home-side lighting pole using professional rated loudspeaker pole mounting products and installation practices using straps in accordance with the plans and specifications.

We will install two Community R2 – 52 MAX series loudspeakers will serve the main Visitor bleachers. One will be attached to the north home-side lighting pole and the other to the south home-side lighting pole using professional rated loudspeaker pole mounting products and installation practices using straps in accordance with the plans and specifications. These loudspeakers will be mounted in the same locations as the Home speakers in order to create a significant savings in materials and labor over installing them onto the light poles on the Visitor side.

We will install three Community small format R3.5 – 3896 horn loaded speakers these will be mounted to the face of the existing press box on the Home side in order to provide coverage to the center section of the bleachers that will be shaded from direct coverage of the main speakers serving the Home bleacher seating.

We also offer as an option, the installation of two Atlas AH – SUB15 - BSG subwoofer speakers to serve the Home bleacher seating and related hardware to secure them to the ground.

A total of eight small format Community R.25 – 94TZ speakers will be surface mounted to the Concession building and the Restroom buildings to provide coverage to the public areas, concessions area and the field entry.

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Electronics

The heart of the system will be based on QSC's Core 110 digital signal processor which will provide ample inputs and outputs for current needs as well as any potential future expansion. We will install a QSC Core 110 will provide audio mixing, as well as routing and tuning for the speakers.

We will install a simple to operate QSC C-1, hard-wired button style remote volume control is provided and located with the sound system electronics.

We will install two Crown CDI 4/1200 power amplifiers will serve the four main bleacher speakers and the optional subwoofer speakers.

We will install one Crown CDI 4/300 power amplifier will serve the three fill speakers mounted to the Press Box, and the eight speakers serving the public grounds areas.

We will install two Shure SLXD-series wireless belt-pack systems with rugged weather resistant Shure SM-35 head worn mics are provided for on-field use by the referees for announcements.

We will install a Shure wireless antenna combiner and two high gain antenna paddles to ensure excellent reception for the wireless microphone users. The high gain antenna paddles will be located on the exterior of the Press Box.

The electronic head end will be housed in a basic steel equipment enclosure with locking front and rear doors and a caster base to allow the rack to be serviced and for staff to safely clean the area from dust and debris as needed.

We will install two microphone receptacles will be provided in two locations in the Press Box as approved by the owners.

We will provide two handheld Shure microphones with built-in on/off switches and a desk stand for use in the press box for announcements.

We will offer a media player device as an option to allow the owner a vehicle to play back music via CD, SD, USB drive or via Blue Tooth access.

Assisted Listening System

We worked with Daryl Dankert, the chief designer for Williams AV's Tech Blue team who guided us to proper solution for the need. Daryl also provided design guidance for many NFL and major university stadiums including Denver's Mile High Stadium. Based on the seating, ADA would require a total of 72 belt-pack receivers with ear sets, and 18 neck loop adapters. A total of six PPA R37 PRO bundles would provide the adequate number of required receivers and provide charging and storage needs to meet ADA regulations.

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We will install one Williams AV large area FM T55 FM transmitter.

We will install one high gain coaxial antenna to the exterior of the building.

We will provide one Williams AV PPA R37 PRO Bundle which includes 12 PPA belt-pack receivers with ear sets, four telecoil neck loop adapters, a 12-station charging dock, 12 sets of rechargeable NIMH batteries with an all-weather storage case.

We will provide to the owner a total of ten ADA Assisted Hearing Device Available signage, unbranded as requested.

Miscellaneous

We will provide system tuning and commissioning of the sound system to provide clear, intelligible, and articulate speech and excellent music playback.

We will provide and install a complete working sound system per the plans and specifications provided to us by the City of Racine, Official Notice #10-2020 on Contract 20200046.

We acknowledge all requirements for safety and materials handling and storage.

We will provide one system training to the owner's authorized personnel upon completion of our installation work.

We will provide system documentation as required in the plans and specifications.

System Total Installed – Base Bid **\$52,523**

Option #2 – Optional Subwoofer Systems

Addition of two Atlas AHSUB12 subwoofers to enhance the music playback in the sound system. The subwoofers would have no appreciable effect on speech intelligibility, these are for music reproduction.

Total Installed **\$ 7,025**

Option #3 – Optional Media Player

We will install one Denon DN-300Z media player for use with pre-recorded music.

Total Installed **\$475**

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Materials Listing

Main System - Football Field Sound				
Amt.	#	Mfg.	Item	Description
1.00	ea	QSC	CORE 110f	Unified Core with 24 local audio I/O channels, 128x128 network I/O channels, dual LAN ports, POTS and VoIP telephony, 16x16 GPIO, 16 next-generation AEC processors, 1RU.
1.00	ea	QSC	c1	Single gang US, IP Wall Controller, PoE (includes white and black faceplates)
1.00	ea	DLK	DGS-1008P	D-Link PoE Switch, 8 Port Ethernet Gigabit Unmanaged Desktop Switch with 4 PoE Ports 68W Budget
1.00	ea	CRO	CDi4x1200	1200 watts per channel 4 channel amplifier, 70/100V, 4/8 ohm, digital signal processing, networked, front panel interface.
1.00	ea	CRO	CDi4x300	Analog input, 4 channel, 300W per output channel, Amplifier
2.00	ea	ATM	PM-MOUNT-6UP	Pole mount base
2.00	ea	ATM	PM-SAFETY-6DSS	Pole mount safety point
8.00	ea	ATM	PM-BAND-30-90	Banding straps
1.00	ea	ATM	PM-DA-48-G	Cross Bar
4.00	ea	LSI	Custom	Safety Cables to length
1.00	ea	MAA	EWR-12-22	12Sp/22D Econo Wallrk Bk
1.00	ea	MAA	LVFD-12	12Sp Large Perf Fr Door
1.00	ea	FUR	CN-1800	15A Standard Power Conditioner W/Power Sequencing, 9 Outlets, 1RU, 10Ft Cord
1.00	ea	FUR	RS-2	System Control Panel, Momentary Key Switch, No Limit Per System
2.00	ea	ATL	DMS7E	Drum Miking Stand 9 inch-12" (Table to Top of Threads) Height Adjustment - Ebony
2.00	ea	SHU	SM48S-LC	Cardioid Dynamic, On-Off Switch
2.00	ea	SHU	PA805SWB	Passive Directional Antenna (470-952 MHz) Includes 10' BNC/BNC Cable

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1.00	ea	SHU	SLXD14D-J52	Dual Combo System with (2) SLXD1 Bodypacks and SLXD4D Receiver
2.00	ea	SHU	SM35-TQG	Headset Cardioid Condenser Mic with Snap-fit Windscreen and TA4F (TQG) Connector
1.00	ea	WIL	FM T55	NEW! FM Plus - Large-area Dual FM and Wi-Fi base transmitter with network control, OLED display, DSP audio processing, analog XLR input and line output. Includes: (1) ANT 025 antenna, (1) TFP 048 power supply, (1) WCA 013 audio cable, (1) WLC 004 line cord. FM operates in the 72-76 MHz band. Replaces PPA T45 / PPA T45 NET
6.00	ea	WIL	PPA R37-12 PRO	FM receiver kit. Includes: (12) PPA R37N FM receivers, (12) EAR 022 surround earphones, (1) CHG 3512 PRO drop-in charger with case, (12) BAT 026-2 AA rechargeable NiMH batteries.
18.00	ea	WIL	NKL 001	Neck loop. 18" cord. 3.5mm mono plug. For use with all FM, IR and Dig Wave body pack receivers.
1.00	ea	LSI	LSI Prof Services	System Tuning & Commissioning
1.00	ea	WIL	ANT 005	Remote coaxial antenna for use with large-area FM transmitters. RG-59 with F-connector
10.00	ea	LSI	Custom	Unbranded ADA Sign, 6" x 6" Acrylic
2.00	ea	COM	R.5-96MAX	Full-Range 2-Way 12-Inch High Output 90 X 60 Grey
1.00	ea	COM	R2-52	Dual 12-inch High Output, High Performance Three-Way
2.00	ea	COM	R.35-3896	8-inch Ultra-Compact Horn-Loaded Triaxial Three-Way
8.00	ea	COM	R.25-94TZ	Compact Full-Range Horn-Loaded Two-Way with 200W, 70V autoformer
1	lot	LSI	Miscellaneous	Hardware & Connectors
1	lot	WPW	AQ226BK1000	1P 14G STRD UNSHLD WBLOCK
1	lot	WPW	AQ227BK1000	1P 12G STRD UNSHLD WBLOCK
1	ea	WPW	AQC806BK0500	RG/6 18G SLD BC 95% W-BLK

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OPTION #2 – Optional Subwoofers				
Amt.	#	Mfg.	Item	Description
1.00	ea	CRO	CDi4x1200	1200 watts per channel 4 channel amplifier, 70/100V, 4/8 ohm, digital signal processing, networked, front panel interface.
2.00	ea	ATL	AHSUB15-BSG	15" AH Series Stadium Subwoofer System - Battle Ship Grey
2.00	ea	ATL	AHSUBSTAND	Optional Stand for Concrete Slab Mounting for AHSUB15S/AHSUB15-BSG
1	lot	LSI	Miscellaneous	Hardware & Connectors

OPTION #3 – Media Player				
Amt.	#	Mfg.	Item	Description
1.00	ea	DEN	DN-300Z	Digital Media Player, supports SD, USB, BT and CD media
1	lot	LSI	Miscellaneous	Hardware & Connectors

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ACCEPTED:

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Representative:

BY: _____

DATE: _____

APPROVED:

LEWIS SOUND & VIDEO PROFESSIONALS

BY: _____

DATE: _____