McKnight Crossings Church of Christ

Assessment of Worship Environment

Evaluation of
Physical and On-Line
Worship

November 2021

Prepared by:
Bret Blackford

To the elders of:
McKnight Crossings Church of Christ
2515 South McKnight Road, St. Louis, MO 63124

The following individuals contributed to the information contained herein:
Jeff Kryder, Senior Minister
Jeremy Picker, Family & Worship Minster
Jeannie Britzmann, Associate Minister
Jeff McGlawn, past involvement and technical advisor

Contents

Background: The Senior Minister, Jeff Kryder, and the Family & Worship Minister, Jeremy Picker, have shared ideas on how to improve the Sunday morning worship experience. Initial focus from the Senior Minister was the on-line worship experience but the Worship Minister also had ideas to improve the physical on-site worship experience.

Recommendations: The following are the recommendations of Bret Blackford based on current understanding of project goals. This list will probably need to be adjusted after further evaluation of the project and discussion with key stakeholders (Jeff Kryder and Jeremy Picker). The following is in order of operation, based on what should be done first, not necessarily in order of importance.

1. Lighting: The first project should be the auditorium lighting, which has two (2) components:
    a. Update the lighting controls: Replace the old 70s era push knobs with modern digital controls. This will make it easier for the untrained to run lights (e.g., funerals, wedding, etc.)
    b. Add Stage lighting: Per discussions with Jeremy and Jeff the house lights are adequate (not great but they work[1]). What is needed is additional stage specific lighting connected with the digital lighting controls mentioned above. Two types of stage lighting were recommended by contractors:
        i. Track Lighting (preferred): This will be the easiest to install and require the least amount of additional rework of drywall and existing ceiling fixtures.
        ii. Add/replace some existing ceiling lights (not recommended): The existing can lights above the stage are not properly angled nor do they have the correct lumens.
    c. Obtain new bids specific to this phase of the auditorium project.

2. Stage & Backdrop Repair/Replace: The stage and backdrop are showing age and no longer work well with our worship aesthetic. However, no one has a clear vision of what the replacement stage and auditorium should look like.
    a. Create a team to consider design options.
    b. Design team makes recommendation to shepherds
    c. Design selected
    d. Contractor bid requested/accepted (or build using in-house labor)

3. Audio: The current audio system is analog and is operated on Sunday be a skilled church member. A digital sound/mixing board would better ensure reproducible sound and allow more members of the congregation the ability to run sound on a Sunday. This will also make it easier to support special events like funerals and weddings.

4. Video Streaming: This is important but should be talked later in the update process. The current streaming will be improved with lighting discussed at 1 above. Additional cameras and associated video equipment will aid the ease of production and video quality but can be addressed later, not an immediate pain point. This will also allow the leadership to discuss how we want o address on-line vs in-person worship (discussed later in this document).

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[1] Jeff Earnhart and Dave Arnold replaced the auditorium lights with 150W LEDs back in 2018. At this time they dropped the lights slightly inside the can cylinders which provided slightly better house lighting.

Current Pain-Points[2] (not in order of importance):

1. Outdated Auditorium Lighting Controls
   As noted in **Exhibit A**, the lighting controls for the auditorium are a set of old, mid-70s analog push-activated control knobs. These controls are hard to understand, hard to operate, and when they eventually fail will be difficult and time consuming to fix.

2. Dim Auditorium Lighting
   Many members have commented that the auditorium lights, even at maximum, are still dim.

3. Dim/Inadequate Stage Lighting
   Current overhead lighting is inadequate for on-line video. Video results (without any additional floor spot lamps) is poor and does not reflect the worship experience well.

4. Extensive Worship Set-up
   Prior to worship the audio and video system need to be brought on-line, checked, and calibrated/set.

5. Several Single Points of Failure
   Like many congregations, MX relies on specific key people to make the Sunday worship operate smoothly.
   - The current soundboard needs a skilled technician and operating it is a learned skill (requires an apprenticeship).
   - Video recording: usually performed by the same individual (not a deep bench if someone unavailable)
   - Streaming set-up: usually performed by the same individual (not a deep bench if someone unavailable)

6. Auditorium Stage and Back Wall Showing Age
   The backwall needs maintenance and paint. May be a good time to revisit the current stage and backwall and rebuild so it compliments the in-person and on-line worship.

Current Pain-Points[2] (not in order of importance):

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[2] List summarized by Bret Blackford based on review of several different documents and conversations. List still needs to be formally accepted by Jeff Kryder and Jeremy Picker to ensure it reflects their thoughts.

Goal/Requirements:

To be determined (TBD) [3]

It is important for the successful analysis and execution of the project that clear goals and objectives are obtained and documented. These goals should document current pain points and things we would like to do but currently cannot. There should be objective goals that can be measured at the end of the project to determine if project was successful or not.

Along with these goals will be the identification of project owners and key stakeholders. Before vendors are selected or any physical work begins the elders need to understand and agree to the various goals of the project. Elders should consider …

- Do we want to be an on-line focused church?
- Are we happy/content with the on-line experience or do we need to expend some of our resources on improving?
- Are we happy with current worship aesthetic or do we want to change lighting, back wall, remove pews, etc.? All or in part?
- Do we want on spend resources on the Sunday audio system?

Bids Received to Date:

These are helpful in understanding ballpark dollars but need to be revisited based on specifics of desired work, and that the project will be performed in phases and not bid as a single job. Bids are difficult to read in this report and included to maintain completeness of documentation.

- **Exhibit E** - Advanced Audio & Lighting Systems, Inc
- **Exhibit F** - Arch City Audio Visual Services
- **Exhibit G** - Elite Enterprises
- **Exhibit H** - HD Media

Other Documents:

- **Exhibit A.1** – Auditoium Lighting Control
- **Exhibit A.2** - Auditorium Light Map
- **Exhibit B** – MX Auditorium Remodel memo, with goal. Author unknown
- **Exhibit C** - MX Auditorium Remodel- Bid Analysis. With goal. Author unknown
- **Exhibit D** – Auditorium Lighting and Electrical Upgrades. Email from Jeff Earnhart to Jeff McGlawn.

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[3] Above text in purple a placeholder. Comments are by Bret Blackford and will be replaced when more project information obtained from Jeff Kryder, Jeremy Picker, and the elders.

Considerations of In-Person and On-Line Worship:

As the shepherds consider the "auditorium Project" and worship we need to consider how we congregate. Historically we have always considered our Sunday worship as a joint in-person experience. With the advent of real-time on-line worship we need to consider what are short and long-term goals are for worship.

Some related questions for MX:

1. If McKnight Crossings wants to provide an on-line worship experience is this something we will encourage (or do we prefer in-person)?

2. If McKnight Crossings want to pursue an on-line real-time worship will that be emphasized over in-person worship? That is, do we build out the auditorium to accommodate the on-line worship possibly even to the detriment of in-person worship? An example would be lighting – would we want lighting, boom mics, screens, and cameras that look awkward in-person but improve the on-line experience? Do we spend our time and money focusing on on-line ministry over in-person?

3. If McKnight Crossings pursues on-line worship how do we engage those members who worship remotely? How do we provide a sense of community? [4]

4. If McKnight Crossings wants to pursue an on-line worship experience how "professional" do we expect this to be? Are we looking at a functional alternative to in-person or do we want to spend resources (time and money) to provide something polished?

Below are just a few of the various articles written about the shift to on-line worship:

- **N-PERSON ATTENDANCE V. ONLINE ATTENDANCE AND THE EMERGING TRAP OF DOING NOTHING WELL**
  HTTPS://CAREYNIEUWHOF.COM/IN-PERSON-SERVICES-V-ONLINE-SERVICES-AND-THE-EMERGING-TRAP-OF-DOING-NOTHING-WELL/

- **IS "ONLINE CHURCH" REALLY CHURCH? THE CHURCH AS GOD'S TEMPLE**
  HTTPS://WWW.THEGOSPELCOALITION.ORG/THEMELIOS/ARTICLE/IS-ONLINE-CHURCH-REALLY-CHURCH-THE-CHURCH-AS-GODS-TEMPLE/

- **NO PEW? NO PROBLEM. ONLINE CHURCH IS REVITALIZING CONGREGATIONS.**
  HTTPS://WWW.CSMONITOR.COM/USA/SOCIETY/2021/0209/NO-PEW-NO-PROBLEM.-ONLINE-CHURCH-IS-REVITALIZING-CONGREGATIONS

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[4] This is also a valid concern for in-person worship. What do the shepherds expect of the congregation regarding fellowship, attendance of classes and mid-week small groups, etc.? In-person worship is no different that on-line worship if members leave immediately after service.

Exhibit A.1 – MX Auditorium Light Controls

MX Auditorium Light Controls

Below are the analog rotary dials that are used to turn on/off the various lights in the auditorium. As you can see from the diagram the process is not readily intuitive and prone to mistakes. Also, this is an older mid-70s style switch that might be difficult to replace when it starts malfunctioning.
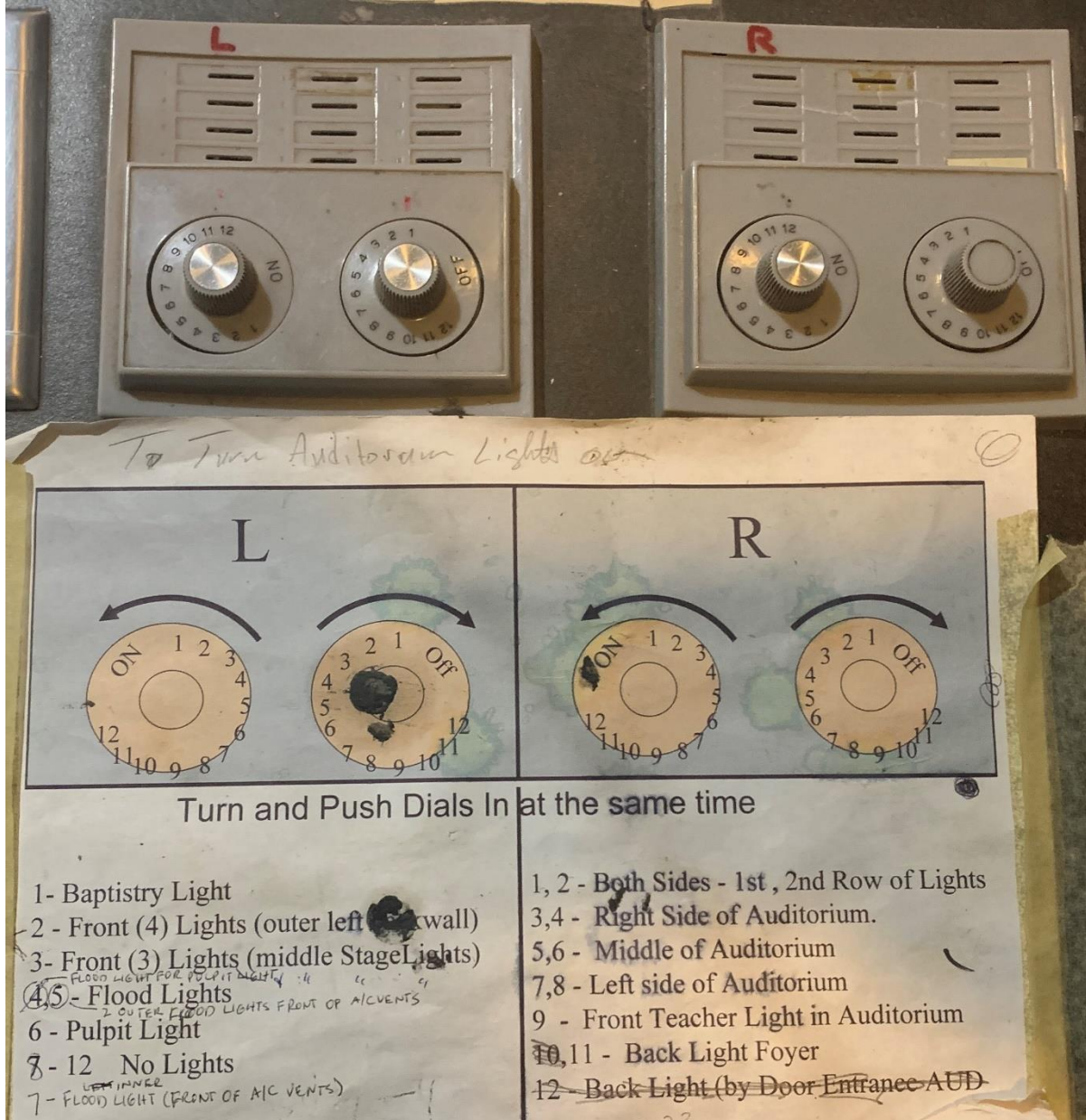
MX Auditorium Light Diagram

Numbers below represent the switch setting that operates the light or series of lights. Example: R-1: indicates that these lights are switched using setting 1 on the R dial/knob.
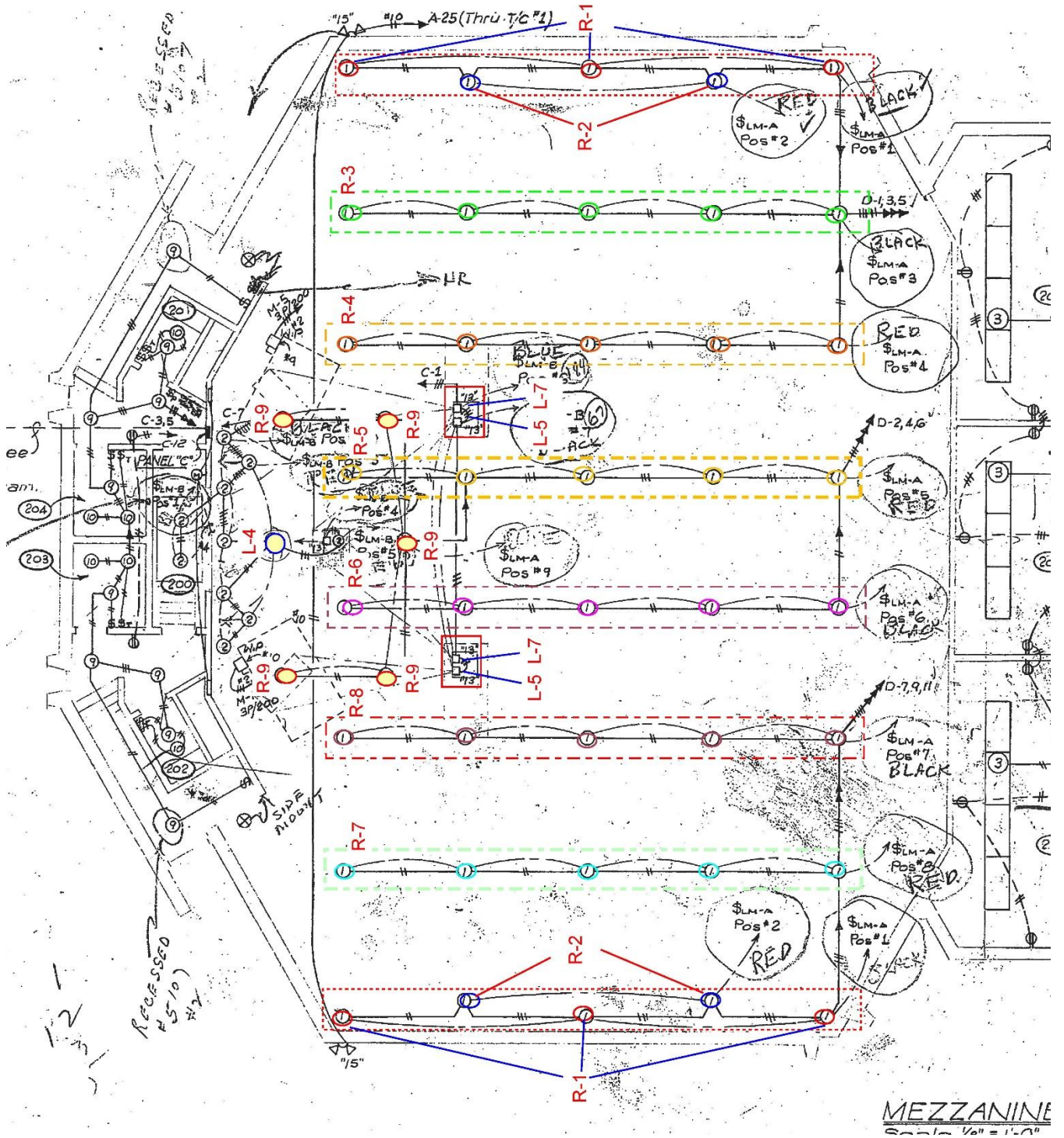
Exhibit B – Scope document obtained from Jeannie Britzmann

Scope document obtained from Jeannie Britzmann

McKnight Crossings Church of Christ   **Sept 27, 2021**
2515 S. McKnight Road
St. Louis, MO 63124

Re: MX Auditorium Remodel

MX leadership has recommended the auditorium to be evaluated to determine if it should be remodeled.

Goal:
To evaluate and implement necessary changes (sound, light, décor, space, etc.) to bring our online worship experience to the next level.

Currently MX produces a weekly online experience that is adequate for individuals to participate in Sunday worship. It is desired for the experienced to be improved through better sound and visual experience, while at the same time improving the simplicity and efficiency for the current MX online production team. i.e. don't intend to hire a full time technical person.

Jeff K and Jeannie met with Jeff E (Elite Technology Solutions) and Aaron (HD Media Systems) last week to introduce them to our auditorium renovation goals. We expect to receive bids from both of them later this week or early next week.

 It is anticipated the following key areas would need to be improved:

1) <u>House Lighting</u>
   Update electrical board
   Inset light fixture and possible increase in fixtures

2) <u>Audio/Video System</u>
   Speaker systems- multi zone
   Hidden integration
   Acoustic Treatments
   Projection system- hi-definition, properly calibrated (equalization, delay, level balancing, crossovers, processors)
   Stage Lighting-enhance online viewing

3) <u>Tech Center</u>
   Combine or separate sound/video control center (communication if separated)
   Automation(presets) of regular weekly presentations (lights, camera, sound, keyboards, etc.) through software.

4) <u>Space</u>
   Build out the stage
   Change backdrop

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Take pews out

Conclusion:

Both consultants agreed that house lighting (1970's centralized lighting) is the first priority. How to economically increase brightness and keep dimming capabilities will depend on the current wiring -we sent links to our building's blueprints.

Both seem to vision the same for our audio/video system changes.
- We have good acoustics and our current speakers seem to be adequate.
- Stage lighting will need to be increased
- Update projector- possibly change from our current front projector system to a short throw projector which is cheaper, less special needs, and just as powerful

Both seem to vision the same for tech center
- Use Software- turns computer into AV mixer, upgrade sound board to allow for overrides as desired, otherwise use presets.
- Could separate sound/video control center if desired

Changing the space, both the stage and backdrop could be done by MX volunteers. Jeff E works with a consultant who could help with design and diffusion boards. We think it would be wise to take advantage of the consultant's expertise mainly for speed of results.

Both Jeff E and Aaron have agreed to price out the major divisions of need, although it is difficult to see addressing the audio/visual needs without addressing the space concerns. Based upon our discussions we think our overall cost might be in the $140,000 range. We should have a better fine-tuned estimate by next week.

Summary (by Bret Blackford) of key items from above:

MX leadership *has recommended the auditorium to be evaluated to determine if it should be remodeled.*
Goal:
*To evaluate and implement necessary changes (sound, light, décor, space, etc.) to bring our **online** **worship experience t**o the next level.*

Currently MX produces a weekly online experience that is adequate for individuals to participate in Sunday worship. ***It is desired for the [on-line] experienced to be improved*** *through better sound and visual experience, while at the same time improving the simplicity and efficiency for the current MX online production team. i.e. don't intend to hire a full time technical person.*

Exhibit C

Exhibit C – Project summary analysis obtained from Jeannie Britzmann

Below is a summary analysis obtained from Jeannie Britzmann

McKnight Crossings Church of Christ   November 1, 2021
2515 S. McKnight Road
St. Louis, MO 63124

Re: MX Auditorium Remodel- Bid Analysis

MX has received bids from Jeff E (Elite Technology Solutions) and Aaron (HD Media Systems) for technical system upgrades (lighting, audio/video, tech center, physical stage/backdrop).

Goal: To evaluate both bids, choose which company to engage, implement necessary changes to bring our online/in person worship experience to the next level.

Conclusion: Jeff K and Jeannie B would engage Elite to upgrade our outdated systems.

The major difference between the two bids is the new house lighting system. Elite will use high-quality LED recessed fixtures that run on low-voltage and high-quality DMX controlled power supplies. Elite is experienced in DMX lighting and states they can integrate the new system with our audio/visual controls for an easy-to-use reliable system for our volunteers without needing to add any additional lights in our ceiling. This reduces cost and ultimate construction risks.

Elite Projected Costs:

1) Sound system Upgrades-$16,000
Highlights-Install digital signal processor for mixing control, and loudspeaker management.
Install programmable control processors (iPad).

2) House lighting-$60,000
Highlights-Low voltage LED replacement fixtures, DMX controlled power supplies

3) Streaming Camera System-$15,000
Highlights-3 HD broadcast quality PTZ cameras, 4-Ch HDMI A/V streaming mixer

4) Projector and Screen-$39,000
Highlights- 1 High-quality laser based projector, HD resolution with 8000 lumens, I throw lens, 1 High-quality motorized projection screen, tab-tensioned ALR screen material 138"by 75"tall

5) Stage lighting-$10,000

6) Stage Backdrop- $10,000

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Exhibit D – Project summarization by Jeff Earnhart

Below project summary per Jeff Earnhart – 12/16/2018

M Gmail   Jeff Earnhart <jeffmarionearnhart@gmail.com>

Auditorium lighting and electrical upgrades
1 message

Jeff Earnhart <jeffmarionearnhart@gmail.com>   Sun, Dec 16, 2018 at 11:05 PM
To: Jeff McGlawn <jeffbeatamcglawn@yahoo.com>, Jeff McGlawn <jeffmcglawn@gmail.com>

Jeff,

Here are my thoughts and observations on the lighting and electrical quotes we have for the auditorium:

Advanced Audio and Lighting Systems
Their "total sanctuary lighting solution" seems like a great package. It's designed to solve the stage lighting issues, upgrade the outdated control room, and provide dimmable LED lights & fixtures for the auditorium. Unfortunately, at over $146,000, I don't see this as realistic to do all the work "in one bite".
In looking at just the stage lighting and the control room (which are the two higher priorities in my mind), I don't think we have an accurate quote for the third-party electrical contractor's portion. It almost certainly has to be less than $25,250, since this cost includes installing 60 new fixtures in the auditorium, which wouldn't be part of the scaled-down staging lighting work. I think this might be as simple as a call or email to Mark to clarify this. I suspect including the third-party electrical portion will increase the quote from $53,322 to over $65,000 (but shouldn't add the entire $25,250).

Arch City:
This quote looks like it only addresses the stage lighting and doesn't include the old control room. Maybe I misunderstood the scope, but either Michael misunderstood our request, they aren't interested or capable in re-doing the control room, or I am missing something in all of this.
As for what they quoted, it looks somewhat similar in scope to what Advanced Audio & Lighting quoted and is probably less expensive (depending on Advanced Audio's third-party electrician's costs). However, I am hesitant to change out the stage lighting without doing major upgrades to the control room. If Arch City in unable to upgrade thew control room or is uninterested in that portion, that could eliminate them from consideration.

Suggestions:
1) seek clarity on the third-party electrician's cost as it relates to Advanced Audio's quote for the stage lighting and control room work.
2) seek clarity from Arch City to determine if they could include the control room upgrade as part of their quote. And if so, what would be their timeline to provide this quote to us?

Let me know if you'd like to meet to discuss this, and if you'd like me to contact Michael and Mark to move this forward. I could work to make contact with them in hopes of getting responses in early January.

I am available to discuss this at your convenience before the 23rd or after the 28th.

Jeff Earnhart

Once we have this feedback, I'd say we get a sketch of the Arch City design to show others what the pipes will look like. Same with Advanced Audio, to the extent there are "visible pieces" of equipment or support structures.

Exhibit E – Bid from Advanced Audio & Lighting Systems

Bid from Advanced Audio & Lighting Systems, Inc

Advanced Audio & Lighting Systems, Inc.
6707 N. Sheridan Rd.
Peoria, IL 61614
(309) 691-7105

ADVANCED
AND LIGHTING

Estimate

Date	Estimate #
7/16/2018	ES-988562

Bill To
McKnight Crossings Church of Christ
2515 S. McKnight Road
St. Louis, MO 63124

Account #	Terms	Rep	P.O. Number	Project
		MA		

Description	QTY	U/M	Each	Total
ETC ERn2-RM-120 Unison® ERn External Control Enclosure single processor, Rack mount 120v	1	ea	1,183.00	1,183.00
ETC P-ACP Unison Paradigm architectural lighting control processor	1	ea	2,535.00	2,535.00
ETC P-SPM Unison Paradigm station power supply	1	ea	845.00	845.00
ETC, UH10010 1G 10 Button Assy	3		295.75	887.25
B. Unison Paradigm Control Station (Model P-TS7-PE) to consist of: 1 7184A1532 P-TS7-PE - Paradigm 7" Ethernet Portable Touchscreen Station to include: - 7" Black Portable Touchscreen - 10' Ethercon to RJ-45 cable			3,188.90	3,188.90
ETC ERP24-FT12 Echo Relay Panel Feedthrough 24-way panel with 12 relays • Echo, sACN, DMX-512, TimeClock, or stand-alone control • Rugged steel wall-mount enclosure • Full compliance with UL, cUL and FCC regulations	1	ea	2,184.00	2,184.00
ETC ERP-SMD Echo Relay Panel, 120V Surface mount Metal Door	1	ea	209.30	209.30
ETC RSN-TERM Response 4 Port DMX/RDM Gateway - 4 Terminal Connectors	2	ea	854.10	1,708.20
ETC N3GA-RM Gateway Rack Mount Kit Supports up to 2 Gateways, includes a blanking plate for one gateway.	1	ea	45.00	45.00

Subtotal	
Sales Tax (0.00)	
Total	

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6707 N. Sheridan Rd.
Peoria, IL 61614
(309) 691-7105

ADVANCED
AND LIGHTING

Estimate

Date	Estimate #
7/16/2018	ES-988562

Bill To
McKnight Crossings Church of Christ
2515 S. McKnight Road
St. Louis, MO 63124

Account #	Terms	Rep		P.O. Number	Project
		MA			

Description	QTY	U/M	Each	Total
Middle Atlantic DWR-18-22 Sectional wall mount equipment rack 18U space, 20" useable depth	1	ea	915.00	915.00
Middle Atlantic BR1 1 space (1-3/4") brushed grommet panel	1	ea	68.00	68.00
Middle Atlantic BL1 1 rack space 16-gauge aluminum flanged design. Easy to machine, black brushed and anodized	2	ea	25.00	50.00
Middle Atlantic BL2 2 rack space 16-gauge aluminum flanged design. Easy to machine, black brushed and anodized	2	ea	51.73	103.46
Middle Atlantic UPS-1000R Rackmount UPS 1000VA/750w with Energy Saver design	1		1,458.95	1,458.95
Middle Atlantic PD-915R 120 Volt Rackmount Power Strips, 8 rear 1 front outlet, 9' power cable	1	ea	151.00	151.00
Transition Networks SM16TAT2SA Smart Managed PoE+ Switch 16 Port Gigabit PoE+ 2 Port 100/1000 SFP	1	ea	650.51	650.51
Panduit CP24BLY Mini-Com All Metal Shielded Modular Patch Panels 24 ports, 1RU, 19" rack mount	1	ea	55.64	55.64
Panduit TX6 PLUS UTP Jack Module, Category 6, RJ45, 8-position, 8-wire universal module, White	16		12.33	197.28
Panduit MINI-COM blank module, black, 10 pack	1		4.52	4.52
ETC ECPB DMXOUT Plug-in station	3	ea	100.80	302.40
ETC ECPB PB1 1-gang, 2.5" deep back box, surface mount	3	ea	42.00	126.00
ETC ECPB U-Bolt Kit	3	ea	21.00	63.00
West Penn 225 16/2 Stranded bare copper conductors, unshielded with overall jacket +14AWG THHN	500	ft	0.36248	181.24

Subtotal		
Sales Tax (0.00)		
Total		

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Date	Estimate #
7/16/2018	ES-988562

Bill To

McKnight Crossings Church of Christ
2515 S. McKnight Road
St. Louis, MO 63124

Account #	Terms	Rep	P.O. Number	Project
		MA		

Description	QTY	U/M	Each	Total
West Penn 4246 CAT6 23 AWG. - 4 PAIR Solid bare copper conductors, unshielded with an overall jacket	200	ft	0.18375	36.75
West Penn DA2401 Single Pair 24 Awg. Stranded tinned copper conductors, individually shielded with an overall jacket.	1,000	ft	0.21738	217.38
System installation - Demo of existing control equipment	8	hr	98.00	784.00
System installation - Equipment racks & panels	16	hr	98.00	1,568.00
System installation - Low voltage cable pulls	12	hr	98.00	1,176.00
System installation - Low voltage termination & testing	12	hr	98.00	1,176.00
Lighting Programming	12	hr	98.00	1,176.00
End user training of installed equipment	4	hr	98.00	392.00
System documentation and 'As Built' drawings			1,000.00	1,000.00
Reimbursement for travel and work expenses			500.00	500.00
Pre sales tax total				25,138.78

Subtotal	
Sales Tax (0.00)	
Total	

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Date	Estimate #
7/16/2018	ES-988562

Bill To
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2515 S. McKnight Road
St. Louis, MO 63124

Account #	Terms	Rep
		MA

P.O. Number	Project

Description	QTY	U/M	Each	Total
The Light Source RL100W52-30ETR Recessed 120V LED fixture - White trim ring - 52 degree beam angle - 3000K color temperature - Terminal screw data connection - 11" diameter rough in	60	ea	1051.45833	63,087.50
The Light Source MICR40W90-30ETR 40W Recessed 120V LED fixture - White trim ring - 90 degree beam angle - 3000K color temperature - Terminal screw data connection - 6" diameter rough in				
West Penn DA2401 Single Pair 24 Awg. Stranded tinned copper conductors, individually shielded with an overall jacket.	2,000	ft	0.22832	456.64
*** EC mounts fixtures & terminates hi voltage ***				
System installation - Low voltage cable pulls	20	hr	98.00	1,960.00
System installation - Final termination & verification	18	hr	98.00	1,764.00
Misc. Hardware			1,000.00	1,000.00
Pre sales tax total				68,268.14
Baton Pipes			1,000.00	1,000.00

	Subtotal	
	Sales Tax (0.00)	
	Total	

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6707 N. Sheridan Rd.
Peoria, IL 61614
(309) 691-7105

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Date	Estimate #
7/16/2018	ES-988562

Bill To

McKnight Crossings Church of Christ
2515 S. McKnight Road
St. Louis, MO 63124

Account #	Terms	Rep		P.O. Number	Project
		MA			

Description	QTY	U/M	Each	Total
The Light Source MQSB Mega-Quick Pipe Splice sched 40, Black Finish, Safe Vertical Working Load: 600 Pounds	4	ea	13.75	55.00
The Light Source MBATB, Mega-Baton Clamp, Black Finish. Fits 1 1/2 " pipe	36	ea	13.50	486.00
System installation - Mounting of baton pipes	36	hr	95.00	3,420.00
Pre sales tax total				4,961.00
ETC SELD40HI-0 Selador Desire Series D40 Studio HD LED fixture - White	14	ea	1,493.70	20,911.80
ETC 400SC Safety Cable 32'	14	ea	8.45	118.30
ETC 400BD barn doors for Source Four fixture - White	4		70.98	283.92
Lex DMX-5P-10 5 Pin DMX Extension 2 Pair Shielded Cable, Neutrik Black/Gold Connectors 10'	14	ea	31.655	443.17
Lex DMX5P-TERM 5 Pin DMX Terminator	3	ea	18.24	54.72
System installation - Prep, mounting & focus of lighting fixtures	10	hr	95.00	950.00
Pre sales tax total				22,761.91

Subtotal		$121,129.83
Sales Tax (0.00)		$0.00
Total		$121,129.83

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Thank you for the opportunity to partner in your church's environmental vision. Our proposed stage lighting as designed will not only to illuminate the stage but also to provide a wide range control for live viewing as well as video production. The house lighting retrofit will provide general illumination and add to the inviting worship space. The ETC products specified are internationally known for quality for performance and longevity. All the lighting fixtures are of the LED design and are inherently energy efficient. I have included links in the document to the high visibility items in the project. This does not include a exhaustive list of all the included components necessary for systems function, however those peripherals have been included in the quote. High voltage work will require a certified electrician. Our team will work closely with the electrical contractor, minimizing their time requirement.

Total Sanctuary Lighting Solution

Description

- ETC SELD40HI-0 Selador Desire Series D40 Studio HD LED - White (14)
- The Light Source RL100W52-30ETR Recessed 120v LED fixture- 3000K color temperature- 52 degree beam (50)
- The Light Source MICR40W90-30ETR 40W Recessed 120V LED fixture- 3000K color temperature- 90 degree beam (10)
- ETC 400BD barn doors for Source Four fixture - White (4), Unison® ERn External Control Enclosure single processor, Unison Paradigm architectural lighting control processor, Unison Paradigm station power supply, ETC, UH100010 1G 10 Button Assy 3, Unison Paradigm Control Station, Paradigm 7" Ethernet Portable Touchscreen Station, Echo Relay Panel Feedthrough 24-way panel (12) relays, ETC ERP-SMD Echo Relay Panel, Middle Atlantic wall mount equipment rack(s), Baton Pipes

- Labor Overview
Demo of existing control equipment, Mounting of baton pipes, Install Equipment racks & panels, System installation – Prep, mounting & focus of lighting fixtures Final termination & verification, Low voltage cable pulls, System documentation and 'As Built' drawings, Lighting Programming, End user training of installed equipment
- *** Electrical Contractor mounts fixtures & terminates high voltage ***

Selador Desire D40 Studio
RL100w52
MICR40W90
Touch Screen
Button Stations

Total Sanctuary Lighting Solution	$121,129.83

Pyramid Electrical Contractors (Total Sanctuary Lighting Solution)

Description

1. Install (60) new lighting fixtures in the same locations as existing; light fixtures and lamps are furnished by Advanced Audio and Lighting
2. Furnish and install power to (3) new batons; batons are furnished and installed by Advanced Audio and Lighting.
3. Installation of DMX cabling in daisy chained configuration; DMX cabling is furnished by Advanced Audio and Lighting.
4. Installation of (3) entry button stations; entry button stations are furnished by Advanced Audio and Lighting.
5. Utilization of existing switchgear and breakers to remain.
6. Utilization of MC cable.
7. Permit fee.

Option-1 Total Base Package	$25,250.00

Option 1-Base Package Stage Lighting and Control of Existing House Lighting

Description

• ETC SELD40HI-0 Selador Desire Series D40 Studio HD LED fixture - White (14), Power Control System, Unison Dimming Rack, Paradigm Architectural Control Processor, Paradigm Station Power Module - Relay Module (12 Relays), Electronic Reverse Phase Module (12 Dimmers), Architectural Control System, Unison Heritage Control Station 10 - Select Switches, Unison Paradigm Control Station, Paradigm 7" Ethernet Portable Touchscreen Station, 7" Black Portable Touchscreen, Transition Networks Smart Managed PoE, Middle Atlantic wall mount equipment rack(s), Baton Pipes

• See Above Labor Overview

Selador Desire D40 Studio
Touch Screen
Button Stations

Option-1 Total Base Package	$53,322.38

mcknight crossings / church of Christ

Advanced Audio & Lighting Systems, Inc.
6707 N. Sheridan Rd.
Peoria, IL 61614
(309) 691-7105

ADVANCED
AND LIGHTING

Estimate

Date	Estimate #
7/16/2018	ES-988561

Bill To
McKnight Crossings Church of Christ
2515 S. McKnight Road
St. Louis, MO 63124

Account #	Terms	Rep		P.O. Number	Project
		MA			

Description	QTY	U/M	Each	Total
I. Power Control System to consist of:			15,600.00	15,600.00
A. Unison Dimming Rack to consist of:				
1 7183A1001 DRD12-24-120 - DRd12 100-120V Rack Enclosure - Designed for 3 phase 4 wire with ground operation at a maximum of 200A				
1 7180A1007 P-DRD-TK - DRd Paradigm Termination Kit - Required for DRd with Paradigm processor				
1 7180A1009 P-ACP2 - Paradigm Architectural Control Processor				
1 7182A1001 P-SPM - Paradigm Station Power Module - supports 32 stations and (1) 500m wire segment				
6 7083A1085 R20 - Dual 20A 120V Relay Module (12 Relays)				
6 7183A1017 ELV10 - Dual 10A Electronic Reverse Phase Module (12 Dimmers)				
II. Architectural Control System to consist of:				
A. Unison Heritage Control Station (Model UH10010-XXF) to consist of:				
3 QUOTE-20009 UH10010-_Z - Standard Color (Color TBD)1-gang faceplate assembly to include the following:				
10 - Select Switches				
Custom nomenclature to be determined				
3 7181B2008 UH10010 - 1-gang, 10-button electronics assembly w/IR Port				

	Subtotal	
	Sales Tax (0.00)	
www.advaudio.com	**Total**	

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Peoria, IL 61614
(309) 691-7105

ADVANCED AND LIGHTING

Estimate

Date	Estimate #
7/16/2018	ES-988561

Bill To

McKnight Crossings Church of Christ
2515 S. McKnight Road
St. Louis, MO 63124

Account #	Terms	Rep		P.O. Number	Project	
		MA				

Description	QTY	U/M	Each	Total
B. Unison Paradigm Control Station (Model P-TS7-PE) to consist of: 1 7184A1532 P-TS7-PE - Paradigm 7" Ethernet Portable Touchscreen Station to include: - 7" Black Portable Touchscreen - 10' Ethercon to RJ-45 cable			3,188.90	3,188.90
ETC RSN-TERM Response 4 Port DMX/RDM Gateway - 4 Terminal Connectors	1	ea	854.10	854.10
ETC N3GA-RM Gateway Rack Mount Kit Supports up to 2 Gateways, includes a blanking plate for one gateway.	1	ea	45.00	45.00
Middle Atlantic PPM-8-18 8RU Pivoting panel mount, 18" depth	1	ea	203.00	203.00
Middle Atlantic PPM-LID18 Top cover for use with 18" deep PPM series enclosures	1	ea	79.80	79.80
Transition Networks SM16TAT2SA Smart Managed PoE+ Switch 16 Port Gigabit PoE+ 2 Port 100/1000 SFP	1	ea	650.51	650.51
Panduit CP24BLY Mini-Com All Metal Shielded Modular Patch Panels 24 ports, 1RU, 19" rack mount	1	ea	55.64	55.64
Panduit TX6 PLUS UTP Jack Module, Category 6, RJ45, 8-position, 8-wire universal module, White	8		12.33	98.64
Panduit MINI-COM blank module, black, 10 pack	2		4.515	9.03
ETC ECPB DMXOUT Plug-in station	3	ea	100.80	302.40
ETC ECPB PB1 1-gang, 2.5" deep back box, surface mount	3	ea	42.00	126.00
ETC ECPB U-Bolt Kit	3	ea	21.00	63.00

	Subtotal	
	Sales Tax (0.00)	
	Total	

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Peoria, IL 61614
(309) 691-7105

ADVANCED AND LIGHTING

Estimate

Date	Estimate #
7/16/2018	ES-988561

Bill To

McKnight Crossings Church of Christ
2515 S. McKnight Road
St. Louis, MO 63124

Account #	Terms	Rep	P.O. Number	Project
		MA		

Description	QTY	U/M	Each	Total
West Penn 225 16/2 Stranded bare copper conductors, unshielded with overall jacket +14AWG THHN	500	ft	0.36248	181.24
West Penn 4246 CAT6 23 AWG. - 4 PAIR Solid bare copper conductors, unshielded with an overall jacket	200	ft	0.18375	36.75
West Penn DA2401 Single Pair 24 Awg. Stranded tinned copper conductors, individually shielded with an overall jacket.	1,000	ft	0.21738	217.38
System installation - Low voltage cable pulls	12	hr	95.00	1,140.00
System installation - Low voltage termination & testing	12	hr	95.00	1,140.00
End user training of installed equipment	4	hr	98.00	392.00
System documentation and 'As Built' drawings			1,000.00	1,000.00
Reimbursement for travel and work expenses			500.00	500.00
Pre sales tax total				25,883.39
Baton Pipes			1,000.00	1,000.00
The Light Source MQSB Mega-Quick Pipe Splice sched 40, Black Finish, Safe Vertical Working Load: 600 Pounds	4	ea	13.75	55.00
The Light Source MBATB, Mega-Baton Clamp, Black Finish. Fits 1 1/2 " pipe	36	ea	13.50	486.00
System installation - Mounting of baton pipes	36	hr	95.00	3,420.00
Pre sales tax total				4,961.00

Subtotal	
Sales Tax (0.00)	
Total	

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6707 N. Sheridan Rd.
Peoria, IL 61614
(309) 691-7105

ADVANCED
AND LIGHTING

Estimate

Date	Estimate #
7/16/2018	ES-988561

Bill To

McKnight Crossings Church of Christ
2515 S. McKnight Road
St. Louis, MO 63124

Account #	Terms	Rep		P.O. Number	Project
		MA			

Description	QTY	U/M	Each	Total
ETC SELD40HI-0 Selador Desire Series D40 Studio HD LED fixture - White	14	ea	1,493.70	20,911.80
ETC 400SC Safety Cable 32'	14	ea	8.45	118.30
Lex DMX-5P-10 5 Pin DMX Extension 2 Pair Shielded Cable, Neutrik Black/Gold Connectors 10'	14	ea	31.655	443.17
Lex DMX5P-TERM 5 Pin DMX Terminator	3	ea	18.24	54.72
System installation - Prep, mounting & focus of lighting fixtures	10	hr	95.00	950.00
Pre sales tax total				22,477.99

Subtotal	$53,322.38
Sales Tax (0.00)	$0.00
Total	**$53,322.38**

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Exhibit F – Bid from Arch City Audio Visual Services

Bid from Arch City Audio Visual Services

Arch City Audio Visual Services
5021 Fyler Ave.
SAINT LOUIS, MO 63139
(314) 329-1805
robert@archcityav.com

ESTIMATE

ADDRESS	SHIP TO	
McNight Crossings Church of Christ	McNight Crossings Church of Christ	**ESTIMATE #** 1934
2515 S McNight Rd	2515 S McNight Rd	**DATE** 08/29/2018
St. Louis, MO 631234	St. Louis, MO 631234	

ACTIVITY	QTY	RATE	AMOUNT
Product OVATIONE160WW Ovation E-160WW Includes: Light Engine Only, powerCON Power Cord - NO LENS	5	879.00	4,395.00
Product OHDLENS19 19 Degree Ovation Ellipsoidal HD Lens Tube	5	199.00	995.00
Product OVATIONE910FC Ovation E-910FC Includes: Light Engine Only, powerCON Power Cord - NO LENS	6	1,199.00	7,194.00
Product OHDLENS19 19 Degree Ovation Ellipsoidal HD Lens Tube	6	199.00	1,194.00
Product OVATIONE160WW Ovation E-160WW Includes: Light Engine Only, powerCON Power Cord - NO LENS	4	879.00	3,516.00
Product OHDLENS19 19 Degree Ovation Ellipsoidal HD Lens Tube	4	199.00	796.00
Product CHAMQUICKQ10 Lighting Console	1	1,650.00	1,650.00
Product DMX5P5FT 5-Pin 5' DMX Cable	15	15.00	225.00
Product RDMXSPLITTER8 RDMX Splitter 8 RDM/DMX Opto-Splitter Includes: IEC power cable	1	399.00	399.00
Product POWERCONEXT5FT powerCON Extension, 5 ft (3x14awg cable)	15	43.99	659.85
Product SC07 Professional Safety Cable	15	4.69	70.35
Product CLP-15N Narrow Half Coupler	15	12.40	186.00
Equipment Rental:Lift Scissor lift rental including drop off and pick up. One week	1	750.00	750.00

ACTIVITY	QTY	RATE	AMOUNT
use for electricians and Arch City AV			
Service Labor charge to hang and focus lights on new pipes, program console. Based on two techs one day. All rigging and electrical and date wiring to be preformed by licensed and qualified electrician and is not reflected on this estimate.	1	800.00	800.00
Service Labor charge and materials for Brda Electric to install wire and power	1	5,700.00	5,700.00

Here is an estimate for the services and/or products you requested.

SUBTOTAL	28,530.20
DISCOUNT 10%	-2,853.02
TOTAL	**$25,677.18**

Accepted By   Accepted Date

M Gmail

RE: McKnight Crossings Church Lighting

Michael Barton <michael@archcityav.com>   Fri, Aug 31, 2018 at 1:21 PM
To: Jeff McGlawn <jeffmcglawn@gmail.com>
Cc: Jeff Earnhart <jeffmarionearnhart@gmail.com>

Hello Jeff,

Attached is a quote for new stage lighting. Thank you again for your patience as we have been buried with ongoing projects.

We didn't include work to be performed by an electrician including labor, power, rigging and data runs. This will need to be bid out separately. If you like the solution we came up with we can move to the next step and I can get our preferred electrician to come out for a site survey.

Also, if this looks like something you may want to move forward with we can order some demo fixtures for you to see.

Here's the break down on product by positon with links below to main products minus cables, clamps, etc.

Front Position:

Qty 5 of the Ovation E160WW

Side Position:

Qty 6 of the Ovation E910FC - 3 per side

Banner/Mural Lights:

Qty 4 of the Ovation E160WW-2 per side

CONTROL:

(1) ChamSys QuickQ10 lighting conosle

(1) RDMXSPLITTER8 dmx splitter

https://www.chauvetprofessional.com/products/ovation-e-160ww/ For sides and mural lights

https://www.chauvetprofessional.com/products/ovation-e-910fc/ For front positon lights

http://www.chamsysquickq.com/quickq-10/ lighting console

https://www.chauvetprofessional.com/products/rdmx-splitter-8/ Data splitter

Please let us know if you have any questions. Thank you again for the chance to perform this project with you!

Sincerely,

Michael Barton

Arch City Audio Visual Services LLC

5021 Fyler Ave.

Saint Louis, MO 63139

314.329.1805 wrk

314.583.0635 cell

Like us on Facebook!

From: Jeff McGlawn [mailto:jeffmcglawn@gmail.com]

Exhibit G – Bid from Elite Enterprises

Bid from Elite Enterprises

10/15/2021

McKnight Crossings Church
2515 S. McKnight Road
Saint Louis, MO 63124

Technical Systems Upgrades: Rough pricing by category

Based on several visits to your facility and discussions with staff/members, Elite is providing the following estimated prices for these systems to assist in your initial budgeting decisions. These are ballpark numbers that reflect our experience designing and installing these types of systems for Churches for over 30 years. As a design/build technology company with expertise in multiple areas, we are uniquely positioned to help you get the right systems to meet your needs. We hope these figures are helpful. The next step will be specific designs with accurate costs once we know which direction you would like to go and where your priorities are.

Projector and Screen: This estimate assumes that we will be utilizing the latest in screen technology, allowing for higher black levels, better contrast, and more saturated colors in higher ambient lighting applications, avoiding the typical washed-out, front projection look.

-1 High-quality, laser based projector, HD resolution with 8000 lumens
-1 appropriate long throw lens (maintain current screen and projector locations)
-1 High-quality, motorized projection screen, tab-tensioned, ALR screen material (ambient light rejecting), screen size approximately 138" wide by 75" to 77" tall image, 16:9 aspect ratio

-Estimated installed price: $20,000.00
-Upgrade to a 4K projector: add $9,000.00

Streaming Camera System: System based on using a software based A/V mixing solution that you are currently using (PC running OBS).

-3 HD (1080P) broadcast quality PTZ (pan/tilt/zoom) cameras with 30 X zoom and NDI network video
-3 standard camera mounts
-1 Joystick/Keyboard camera controller
-1 PoE network switch
-Bulk cable, hardware, cables etc. for installation

-Estimated installed price: $12,000.00
-Add a 4-CH. HDMI A/V streaming mixer and remove NDI option on cameras: add $1,500.00
-Add hardware encoder, single stream: add $800.00

<u>Sound System Upgrades:</u> Based on an analysis of your current system and a discussion of your needs.

-Use existing loudspeakers, including powered floor monitors
-Using existing wireless microphones with new antenna/power distribution
-Install DSP (digital signal processor) for mixing, control, and loudspeaker management
-Commission system to maximize performance in the auditorium for local sound
-Install a programable control processor with custom programming to include simplified manual control of the system with a separate mix for the monitors and the on-line stream. System will include presets and other customizable features to assure reliable, repeatable results with less tec-savvy operators.
-Controls via iPad and a wall or table mounted color touch screen
-Install DSP, wireless mics, and other electronics in an equipment rack

Please note that this quote includes using a good quality used control processor and touch screen. The included processor will also be used to automate/control the video projection system.

Estimated installed price: $16,000.00

<u>New House Lighting System:</u> Instead of installing a new high-voltage lighting system with new high-voltage wiring (old wiring will not support phase dimming), new high-voltage phase dimming our design is based on using high-quality LED recessed fixtures that run on low-voltage wiring. High-quality, DMX controlled power supplies are used that power the lights and provide all control. There are no power supplies or drivers in each fixture (failure points) and no service is required at the LED fixtures. Low-voltage cable (Class 2) does not require conduit and is cheaper and easier to install. Elite is experienced in DMX lighting control and can integrate the new lighting system with your audio and video controls to create an easy-to-use and reliable system for volunteers.

-66 Low-voltage LED replacement fixtures (8"), lumen output will vary from 1200 to 5200 depending on fixture location, 3500 K (Color Temperature-warm), CRI 90+
-DMX controlled power supplies
-DMX decoder
-Equipment rack
-4 control keypad
-low-voltage cable

Estimated installed price: $55,000.00

Please note that before the new lighting can be installed, the existing high-voltage fixtures and dimming system will need to be removed and the wiring properly capped by a licensed electrician. Elite partners with an experienced contractor for these types of projects or we can work with your electrician. <u>The cost for the electrical contractor is not included in this price. A rough estimate for this work is 3-5K.</u>

<u>Stage Lighting:</u> Once the House Lighting is completed, much of the stage will be taken care of. I would budget an additional 6-10K to replace the current 4 spots and possibly add some additional spots to properly light the stage.

Thank you for the opportunity to be of service. We look forward to working with the staff and membership of McKnight Crossings Church to grow your ministry.

---

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Exhibit H – Bid from HD Media

Bid from HD Media

Blackford, M. Bret

From:	M Bret Blackford <bret_blackford@yahoo.com>
Sent:	Friday, November 5, 2021 12:33 PM
To:	Bret Blackford; Blackford, M. Bret
Subject:	10.15.2021: Church Lighting, Electrical, Low Voltage, and AV Budgets
Attachments:	HD Media Bid-Auditorium Renovation.docx

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

MEMO to FiLE: Bid response from HD Media

----- Forwarded Message -----
From: Jeannie Britzmann <jbritzmann@mcknightcrossings.org>
To: Bret Blackford <bret_blackford@yahoo.com>
Sent: Wednesday, November 3, 2021, 02:40:42 PM CDT
Subject: Fwd: Church Lighting, Electrical, Low Voltage, and AV Budgets

Forwarded to you........

---------- Forwarded message ---------
From: **Aaron Schneider** <aschneider@hd-mediasystems.com>
Date: Fri, **Oct 15, 2021** at 12:44 PM
Subject: **Church Lighting, Electrical, Low Voltage, and AV Budgets**
To: Jeannie Britzmann <jbritzmann@mcknightcrossings.org>

Jeannie

Good afternoon

So first off, I want to Thank you and the church for thinking about us for your project!! I think it could be a really fun one to be involved with

That being said - I think once you all meet with an Architect or a Design firm and drill down on the Final Design of the Church, Front Wall , AV (Mixer) Locations, Camera Locations - we can really drill down on the Costs associated with the Sub systems

So here is my Run Down:

1.) **Lighting Control** - need to replace the old GE System
a.) I would replace this with a Vantage Centralized Lighting Panel - this would have the ability to Dim and Control about 30-40 Loads of Lighting
b.) Remember a load of lighting can be 1 single light or it can be a Group of 6-10 Lights = a Load
c.) I have included the Following - 1 Housing, 4 Modules, Processor, Power Supply, and 4 Generic Keypads - this can be added too or subtracted
d.) This does not factory in High Voltage Electricians cost - I have several electricians we work with and can work on this number for you - I would guess it would be around **$4000 - $6000**
e.) The Lighting Panel, Modules, Processor and Programming from HD Media Systems will be around **$15,000**

2.) **House Can Lights**
a.) Currently have Par 38 in an Older Gotham Style Light Fixture
b.) Two Options here
a.) Option A - is just change the bulbs to a more higher Lumen output and Remove the Lens and Glass - the Glass Optics on the Old Fixtures are horrible
72 Lights x 45.00 (per Bulbs) = **$3,240** for the parts (then we need to discuss and Lift and Removing Pews so we could install them
The lights you currently have are 1200 Lumens, I can get some around 2000 Lumens
b.) Option B - replace the entire Fixture - I can get an 8" High Power LED Remodel Fixture for $200 per fixture = **$14,400**
This would be a 3500 Lumen Light and Way better Optics
But this involves an Electrical on each light
This option also involves Drywall repair
But this is the best option for more light in the space

3.) **Additional House Lights** - Track Light Option
A.) This could be 2 Set of 40' Long Track down the Center Isle -
B.) This could have upwards to 20 Lights per track
C.) Total Costs for the Parts, and Power supplies is around **$25,000-$30,000**
D.) I would need to meet with an electrician to get you cost on what the electrician would charge

4.) **DJ Lighting for the Stage**
A.) This would be 16 RGBWW Par Lights on the Upper Loft Area by Projector)
B.) This would be a DMX Controller and DMX Cable to the PC Area
C.) This would be around **$15,000** (this is including a rough installation cost, again we would need to meet final and hear what the final plan is for the Space and then we could drill down on Costs

5.) **32 Channel Digital Console with iPad** - **$6,500** - again this has labor for install, programming and training - but if we are moving the audio booth -, we need to factor in those costs and I would need a final layout

6.) **Multi Camera FB Streaming System**
a.) 3 PTZ Cameras on stand
b.) Camera Selector and Switcher System
c.) Rough Install and Training
d.) **$22,000 -$25,000**

7.) **New Projector and Screen**
a.) New 12,000 Lumen Laser Projector
b.) Special Lens for the Throw
c.) New Motorized 133" Screen
d.) Parts, Labor and Setup (with Rough install price) **$24,000 -$27,000**

When looking at my bid software and using the Highest Numbers in these sub groups - i'm around **$140,000**k for all of the Systems we Discussed

This doesn't included electricians costs

I would love to sit down and see the final design of the space, drawings, and maybe even partner with the Architect or Design team - so we can make sure we provide you all with the best Products for the space, and for the Budget.

I hope this covers all areas

Let me know if you have any questions or if you all want to meet again to drill down on these items more

Thanks,

Aaron Schneider
HD Media Systems
573-382-7596 -Cell Phone
Email: aschneider@hd-mediasystems.com

2800S Brentwood
St Louis, MO 63144
314.858.1156 Office

1606 North Kingshighway
Cape Girardeau MO 63701
573.803.1460 Office

www.hd-mediasystems.com www.stereoone.com

1

Exhibit I.1

Exhibit I – Jeff Kryder discussion on Auditorium Project

11/13/21, 6:05 AM   Yahoo Mail - rsp: 11.11.2021: MX Auditorium Project - Jeff Kryder

rsp: 11.11.2021: MX Auditorium Project - Jeff Kryder

From: M Bret Blackford (bret_blackford@yahoo.com)
To: bret_blackford@yahoo.com
Date: Saturday, November 13, 2021, 06:04 AM CST

MEMO to FILE: Jeff Kryder, Senior Minister discussing auditorium needs

---- Forwarded Message ----
From: Jeff Kryder <jkryder@mcknightcrossings.org>
To: M Bret Blackford <bret_blackford@yahoo.com>
Sent: Friday, November 12, 2021, 08:18:46 AM CST
Subject: Re: Fw: 11.11.2021: MX Auditorium Project - Jeff Kryder

Jeff,

Thanks you fort he detailed response. Most helpful. A couple follow up questions ...

- regarding on-line worship:
  - Does this need to be live or can it be uploaded later on Sunday? I'm guessing preference is live but do you feel that is necessary if it also carries with it extra cost and technical challenges. If we started with uploaded later on Sunday (not live) we will probably upset a couple people but can we live with that? Will we loose people?
  - Does it need to be the entire worship or just the sermon? Again, I'm sure preference is entire worship but if it saves cost and increases reliability is just sermon ok?
  - What do we need to start with and where do we want to be in 6-months to a a year?

A year ago, my view was that "live" would be expected for the community building aspect. Thus far, this has not been our experience. Possibly, because once we went back to the building and all staff resources were focused at the building and online became a derivative of the in-house. Also possible, is that creating online community is much more difficult than it first sounded. I think some of both are true. **For now, I believe we can accomplish 80% of our online goals by publishing the stream shortly after the live worship.**

I would build the system so that "live" is a future possibility.

I believe our worship, once the lighting and backdrop are fixed, is rather unique. Not many churches use the laity like we do - women, teens, black, and white, along with songs from our tradition, and contemporary music. This will not appeal to everyone. However, I believe others will find this multidimensional worship much richer than many of the more progressive growing churches. For this reason, I believe the entire worship service is important, as the preaching should fit within the whole of worship.

We start with lighting - foundational. We do the stage lighting while we are doing the house lighting for project convenience. We redo the stage and the front wall at the same time since we will need to be out of the auditorium during that time, meeting in the gym.

The cameras set in place might come next.

Then, next phase is to move to digital and integration of all the pieces (new or old) - projection, lighting, audio, to software with presets for ease of use.

I think not doing live will really take off a strain, and add some new demands immediately following church. I would set up the "livestream" person in the little room where they can adjust audio, and cameras, for the best livestream production.

I believe all this can be done in 6 months. Then, we assess, what is next? I really don't think we have yet tested the market for what could happen with a digital ministry focus. My hunch is that there are many people who will not come to church, for various reasons, pandemic or not, who want to connect with someone, why not us.

Thanks!

On Thu, Nov 11, 2021 at 5:07 PM **M Bret Blackford** <bret_blackford@yahoo.com> wrote:

Jeff,
Thanks you fort he detailed response. Most helpful. A couple follow up questions ...

- regarding on-line worship:

1/3

- Does this need to be live or can it be uploaded later on Sunday? I'm guessing preference is live but do you feel that is necessary if it also carries with it extra cost and technical challenges. If we started with uploaded later on Sunday (not live) we will probably upset a couple people but can we live with that? Will we loose people?
  - Does it need to be the entire worship or just the sermon? Again, I'm sure preference is entire worship but if it saves cost and increases reliability is just sermon ok?
  - What do we need to start with and where do we want to be in 6-months to a a year?
- regarding the stage:
  - I've heard from a couple people that the stage is not ideal and should be changed but no one has offered a vision for desired stage. Do you have an idea of what you would like the stage to look like or is this something where we should get a committee to discuss. (I do not think the stage has to be done in coordination with the other projects items with the exception of possibly lighting changes directly above the stage)

---- Bret

—— Forwarded Message ——
From: Jeff Kryder <jkryder@mcknightcrossings.org>
To: Blackford, M. Bret <mblackford@archrsc.com>
Cc: bblackford@mcknightcrossings.org <bblackford@mcknightcrossings.org>; bret_Blackford@Yahoo.com <bret_blackford@yahoo.com>
Sent: Thursday, November 11, 2021, 11:51:08 AM CST
Subject: Re: MX Auditorium Project – Jeff Kryder

Hi Bret,

Thanks for reaching out.

Q1: What problems are we currently experiencing that we hope to solve with this project?

- **Quality Online** - With online we started fast, but the technical issues (regardless of source) were highly frustrating to people, and their tolerance level was low. Often they would go to another church service, or just quit doing online. I heard this from multiple people, again for reasons we could control, and reasons we could not.
  - Some people will not come back to building, maybe ever. Betty Vaughn for instance doesn't feel like she can as long as Richard is at home. Louis West, Alice Ferry, Tiffany Henagean, WC and Virginia Conley, and others.
  - Others use the online during a sickness, or a child's sickness.
  - Others used the online later in the day as they worked on Sunday morning, or were traveling, etc.
  - We have some, Terri Correnti, tuned in online, but due to anxiety issues, will not come to Mcknight on a Sunday.
  - Others, Colleen, Tim and Mary Ann, were surfaced through the online effort.
  - I do not see online as a substitute for in-person. I believe the potential for building a real community of discipleship this way is not that high. However, the online will continue to have a place. Having it done well might be likened to having a website or doing effective social media outreach. It will not win the world, but it is difficult, in this day, to carry on without it.
  - A frequent mention by viewers - "We can only hear the praise team." "The lighting is terrible." "The wall behind the stage is bad." "Is this your main auditorium?" "The service went in and out." "I had to reboot several times." "I couldn't watch any longer." "Could we see the congregation?" (Especially important when congregation is making remarks)
  - I am thinking that 80% of what we would like to accomplish doesn't have to be real-time, but close to it.
  - Point - There will be a continued need for a quality online experience. I believe if the quality and ease of presentation was there, we can expand our outreach and promotion to attract new people. This is an untapped evangelsitic tool.
- **Lighting System** - Current system must get overhauled. Repeatedly we have been warned that one morning we will not have lights! Lighting output is currently inadequate for in-house worshippers, and for online worship.
- **Video** - The camera in the main aisle is not a good thing. Multiple camera views would enhance the viewing experience. This has been requested multiple times.
- **Stage Lighting** - While we are not a cutting edge church, having some basic stage lighting would add a great deal to the ambience. It will allow house lighting to be lowered when needed. We must understand that our leadership is mostly left-brained (and the Church of Christ as a whole) and a generation or two removed from the younger seeker. While this serves us in some capacities, we need to appreciate people who have been soaked in an experiential world. Aesthetics matter to many, though they may not matter much to you and me.
- **Video** - Our projector is on the last mile by today's standards. Of course, if we fixed the lighting, this would improve the visibility. Kay Heintz, as an example, has indicated that she cannot see the screen well. We may be able to defer this purchase if the lighting was right. On the other hand, I recently attended The Gathering. Their projection system made ours look like an antique from a generation or two ago. As a 61 year old minister, I didn't need the video effects. However, is this true for younger worshippers? Young couples and families? Or is better video simply a basic infrastructure expectation?
- **Stage Construction** - the front wall needs attention ASAP. The expansion of the stage seems like a logical complement while the front wall is redone.
- **Sound Board.** In general, our sound, is our current strength. However, I believe the benefit of digital is to remove the constant adjusting, setting, and resetting that takes place. Whenever someone besides Brian (Jeff M, Quain, Chris Jones, faces the board for that week, they often do not understand why things are the way they are. The current system additionally has the downside of having one of our technicians must be there for special events - weddings, funerals, Christmas eve, etc. Additionally, I really like the idea of having mics hanging down in the auditorium to pick up on congregational singing, a value of our tradition.
- Build out a simple clean **station in the back for the tech team**. The current system uses 3 different types of tables.
- I like the idea of digital presets that could set the stage for a Sunday or a funeral - lighting, mics, video, that a volunteer can handle.
- **Bottomline** - they all seem to go together with video possibly being able to wait a couple of years. 2ndly, we could get by with the current sound board, though Jeff the Vendor is a sound expert, and I believe can deliver to us a digital product that eliminates a bunch of the issues resulting from our current approach.

Thanks, Bret!

On Wed, Nov 10, 2021 at 7:13 AM Blackford, M. Bret <mblackford@archrsc.com> wrote:

2/3

Jeff,

I am glad you will soon be able to get some time to decompress. You need a couple months of sabbath.

Before you leave I was hoping to get your thoughts on the "auditorium project". As I dig in I find that the scope/requirements are not as clear as I would like and hoping the key stakeholders (you and Jeremy) can help me tighten things up. I met with Jeremy earlier this week (he still has some homework to get back to me) and now I'd like your thoughts on the project.

Can you respond with your answers to the questions below. I don't need answers today but sometime this week would be helpful.

Q1: What problems are we currently experiencing that we hope to solve with this project?

Q2: What can't we do currently that we hope we can accomplish after the project?

The project covers several areas: lighting, light controls, soundboard, video, stage construction, etc.

Q3: Is there a prioritization to the list of things hoped for with the project? Are they all equally important or if they could be phased in which areas are most important and which least important (nice to have but not necessary)?

Q4: How much of a priority is on-line worship? And how important is live streaming compared to sermon being available on-line sometime later on Sunday?

Jeff, let me know if you would add anything to the list below …

Current Pain-Points* (not in order of importance):

1. <u>Outdated Auditorium Lighting Controls</u>

   The lighting controls for the auditorium are a set of old, mid-70s analog push-activated control knobs. These controls are hard to understand, hard to operate, and when they eventually fail will be difficult and time consuming to fix

2. <u>Dim Auditorium Lighting</u>

   Many members have commented that the auditorium lights, even at maximum, are still dim.

3. <u>Dim/Inadequate Stage Lighting</u>

   Current overhead lighting is inadequate for on-line video. Video results (without any additional floor spot lamps) is poor and does not reflect the worship experience well.

4. <u>Extensive Worship Set-up</u>

   Prior to worship the audio and video system need to be brought on-line, checked, and calibrated/set.

5. <u>Several Single Points of Failure</u>

   Like many congregations, MX relies on specific key people to make the Sunday worship operate smoothly.

   - The current soundboard needs a skilled technician and operating it is a learned skill (requires an apprenticeship).
   - Video recording: usually performed by the same individual (not a deep bench if someone unavailable)
   - Streaming set-up: usually performed by the same individual (not a deep bench if someone unavailable)

6. <u>Auditorium Stage and Back Wall Showing Age</u>

   The backwall needs maintenance and paint. May be a good time to revisit the current stage and backwall and rebuild so it complements the in-person and on-line worship.

7. <u>Auditorium Lacks Flexibility</u>

   Current use of pews limits the use of the auditorium. Pews are heavy and fixed and cannot be adjusted to create a different mood. Desire for pews to be removed and replaced by individual chairs.

   _____

   [*] List summarized by Bret Blackford based on review of several different documents and conversations. List still needs to be formally accepted by Jeff Kryder and Jeremy Picker to ensure it reflects their thoughts.

Jeff Kryder
Senior Minister
McKnight Crossings Church of Christ

Exhibit J – Jeremy Picker discussion on Auditorium Project

11/13/21, 5:43 AM   Yahoo Mail - follow-up: MX Worship wish-list - jPicker

follow-up: MX Worship wish-list - jPicker

From: M Bret Blackford (bret_blackford@yahoo.com)

To: jeremypicker@gmail.com

Cc: bret_blackford@yahoo.com

Date: Thursday, November 11, 2021, 07:16 PM CST

Jeremy, thanks for the info.
As for your question re "*several singe points of failure*", I mean that we do not have a deep bench. If key players (you, Brian Hill, etc.) are unavailable are we able to manage no problem or do we need to scramble?

A couple follow-up questions.

1. **How important is on-line worship** (see **Q4**)?
    1. **Does it need to be live?**
    2. **If not live do we need the entire service or just the sermon uploaded to YouTube/facebook?**
    3. **How important is this to do now?**
    4. **How many people does this serve?** (20+ people watch live. If not live are people ok with uploaded sermon later in the day? If a few people upset is that ok as long as we provide an on-line worship service?)
2. **Do you have a prioritization for the various enhancements listed below (see Q3)?**

   ---- Bret

===

On Thursday, November 11, 2021, 05:11:43 PM CST, **Jeremy Picker** <jeremypicker@gmail.com> wrote:

Bret,

My thoughts in **RED**

Current Pain-Points[1] (not in order of importance):

1.   Outdated Auditorium Lighting Controls

As noted in **Exhibit A**, the lighting controls for the auditorium are a set of old, mid-70s analog push-activated control knobs. These controls are hard to understand, hard to operate, and when they eventually fail will be difficult and time consuming to fix

AGREE

2.   Dim Auditorium Lighting

Many members have commented that the auditorium lights, even at maximum, are still dim.

I agree that the lights are dim in some areas, but I don't care about that. The brightness is sufficient for what we use the room for.

1/4

3. Dim/Inadequate Stage Lighting

Current overhead lighting is inadequate for on-line video. Video results (without any additional floor spot lamps) is poor and does not reflect the worship experience well.

AGREE—the current stage lighting creates terrible shadows. Even if we have no video of the service, stage lighting would allow us to use the stage better on Sundays and for other events.

4. Extensive Worship Set-up

Prior to worship the audio and video system need to be brought on-line, checked, and calibrated/set.

AGREE—However, ANY A/V setup we use will need a routine for turning it on. Our current projector is finicky with turning on. Our Livestream (which we would use for recording the service even if we aren't live-streaming) does not provide a seamless video experience. This has nothing to do with failure of equipment, but rather the limitation of the software.

5. Several Single Points of Failure

Like many congregations, MX relies on specific key people to make the Sunday worship operate smoothly.

·   The current soundboard needs a skilled technician and operating it is a learned skill (requires an apprenticeship).

·   Video recording: usually performed by the same individual (not a deep bench if someone unavailable)

·   Streaming set-up: usually performed by the same individual (not a deep bench if someone unavailable)

MOSTLY AGREE—Streaming setup and video is done by the same person. I don't know what you mean by "Several Single Points of Failure", and then list people. Can you please explain that more?

6. Auditorium Stage and Back Wall Showing Age

The backwall needs maintenance and paint. May be a good time to revisit the current stage and backwall and rebuild so it compliments the in-person and on-line worship.

100% Agree

I think one area that might not be on your proposal is changing to seats in the auditorium from pews. I believe this is much needed change. I believe the projector we are using, and where it is set up (back of the auditorium) causes it to be difficult to see video or darker images on the screen. By moving the screens to the side and having them backlit, it takes that problem out. I am not worried about having a system to turn everything on…as long as it is easy and reliable. This is helpful in being able to train new people as well. Simple and reproducible is what I want our mantra to be. Moving the sound board to digital, lights to an easier to use light panel will allow us to use presets for different people and situations.

--
Jeremy Picker
jeremypicker@gmail.com
314.882.9782
Facebook
Instagram
On Nov 11, 2021, 4:28 PM -0600, M Bret Blackford <bret_blackford@yahoo.com>, wrote:

> Jeremy,
> A reminder I'd like your thoughts on this later today or tomorrow. Thanks!
>   ---- Bret
>
>
> On Monday, November 8, 2021, 12:18:55 PM CST, M Bret Blackford <bret_blackford@yahoo.com> wrote:

2/4

Jeremy,

Thanks again for taking the time to meet with me this morning. One of the main topics of discussion was the auditorium project. Instead of me summarizing what i thought I heard would you provide your responses. **Can you respond with your answers to the questions below.** I don't need answers today but **sometime this week** would be helpful.

> **Q1**: What problems are we currently experiencing that we hope to solve with this project?
> **Q2**: What can't we do currently that we hope we can accomplish after the project?
>
> The project covers several areas: lighting, light controls, soundboard, video, stage construction, etc.
> **Q3**: Is there a prioritization to the list of things hoped for with the project? Are they all equally important or if they could be phased in which areas are most important and which least important (nice to have but not necessary)?
> Q4: How much of a priority is on-line worship? And how important is live streaming compared to sermon being available on-line sometime later on Sunday?

Below is a section from the attached draft. I think the below is correct but please let me know if these points should be amended or if anything else needs added.

Current Pain-Points[1] (not in order of importance):

1. Outdated Auditorium Lighting Controls

   As noted in **Exhibit A**, the lighting controls for the auditorium are a set of old, mid-70s analog push-activated control knobs. These controls are hard to understand, hard to operate, and when they eventually fail will be difficult and time consuming to fix

   2. Dim Auditorium Lighting

   Many members have commented that the auditorium lights, even at maximum, are still dim.

   3. Dim/Inadequate Stage Lighting

   Current overhead lighting is inadequate for on-line video. Video results (without any additional floor spot lamps) is poor and does not reflect the worship experience well.

   4. Extensive Worship Set-up

   Prior to worship the audio and video system need to be brought on-line, checked, and calibrated/set.

   5. Several Single Points of Failure

   Like many congregations, MX relies on specific key people to make the Sunday worship operate smoothly.

   - The current soundboard needs a skilled technician and operating it is a learned skill (requires an apprenticeship).

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- Video recording: usually performed by the same individual (not a deep bench if someone unavailable)

- Streaming set-up: usually performed by the same individual (not a deep bench if someone unavailable)

6. Auditorium Stage and Back Wall Showing Age

The backwall needs maintenance and paint. May be a good time to revisit the current stage and backwall and rebuild so it compliments the in-person and on-line worship.

---

[1] List summarized by Bret Blackford based on review of several different documents and conversations. List still needs to be formally accepted by Jeff Kryder and Jeremy Picker to ensure it reflects their thoughts.

4/4

Exhibit K.1

Exhibit K – Jeremy Picker discussion on Auditorium Project – follow-up

Fw: follow-up: MX Worship wish-list - jPicker (answers)

From: M Bret Blackford (bret_blackford@yahoo.com)

To: mblackford@archcoal.com; bret_blackford@yahoo.com

Date: Saturday, November 13, 2021, 12:37 PM CST

MEMO to FILE: Q&A with Jeremy Picker

—— Forwarded Message ——
From: Jeremy Picker <jeremypicker@gmail.com>
To: Bret <bret_blackford@yahoo.com>
Sent: Saturday, November 13, 2021, 12:30:16 PM CST
Subject: Re: follow-up: MX Worship wish-list - jPicker

I'm sorry Bret, I missed these questions.

A couple follow-up questions.

1. **How important is on-line worship (see Q4)?**
    a. **Does it need to be live?**
    b. **If not live do we need the entire service or just the sermon uploaded to YouTube/facebook?**
    c. **How important is this to do now?**
    d. **How many people does this serve?** (20+ people watch live. If not live are people ok with uploaded sermon later in the day? If a few people upset is that ok as long as we provide an on-line worship service?)

I am a firm believer that live-streaming worship is good to do. Currently, it is literally a touch of a button. If we just do video for later upload or livestream, we are doing the exact same thing besides touching one button in the iPad. I don't think our current setup is the best, and I would change steaming to YouTube.

Over the weekend, a friend commented... If we had 20 people engaged every week in any other ministry, would we stop it or pour into it?

I don't know what the answers are.

Livestreaming is NEVER going to be 100% fool proof. Even the big churches have issues with it.

I'm not going to sweat whatever decision is made though. I realize that it isn't perfect. We're still using the same basic setup that I put together in March 2020 from Google searching and getting on discussion forums for worship ministers.

1. **Do you have a prioritization for the various enhancements listed below (see Q3)?**

3: Is there a prioritization to the list of things hoped for with the project? Are they all equally important or if they could be phased in which areas are most important and which least important (nice to have but not necessary)?

I believe that the upgrades we are looking into are all needs and not just wants. I think they are all eventually necessary...from lighting to projections to sound system to chairs instead of pews.

I would probably lean on the designers to see what they think...does it make more sense to do sound first, or get lighting done so they know how sound will bounce off of whatever is installed. I have no clue.

—
Jeremy Picker
jeremypicker@gmail.com
314.882.9782

Exhibit L

Exhibit K – summarized comments from Jeremy Picker and Jeff Kryder

Below attempts to summarize the comments of Jeff Kryder and Jeremy Picker from the various in-person and email discussions (see Exhibit J & Exhibit K)

Jeff Kryder project comments summary:

- **House lights** Jeff did not specifically address existing house lights. Jeff did agree that **Stage lighting**, is terrible and needs attention. Lighting output is currently inadequate for in-house worshippers, and for online worship.. Also, repeatedly warned that existing lighting controls will one day not work and will be difficult to repair. Lighting controls need to be updated to make operating the house lights and the desired new stage lighting easier.

- **Livestream is increasingly important.** With online we started fast, but the technical issues (regardless of source) were highly frustrating to people, and their tolerance level was low. Often they would go to another church service, or just quit doing online. I heard this from multiple people, again for reasons we could control, and reasons we could not.
    - Some people will not come back to building, maybe ever.
    - Others use the online during a sickness, or a child's sickness.
    - Others used the online later in the day as they worked on Sunday morning, or were traveling, etc.
    - We have some, Terri Correnti, tuned in online, but due to anxiety issues, will not come to Mcknight on a Sunday.
    - Others, Colleen, Tim and Mary Ann, were surfaced through the online effort.
    - I do not see online as a substitute for in-person. I believe the potential for building a real community of discipleship this way is not that high. However, the online will continue to have a place. Having it done well might be likened to having a website or doing effective social media outreach. It will not win the world, but it is difficult, in this day, to carry on without it.
    - I am thinking that 80% of what we would like to accomplish doesn't have to be real-time, but close to it.
- Point - **There will be a continued need for a quality online experience.** I believe if the quality and ease of presentation was there, we can expand our outreach and promotion to attract new people. This is an untapped evangelistic tool.
- Improve in-person worship video screen used to display songs, scripture verses, etc. Currently it is hard for several to read.
- Jeff feels current audio is good but wants to make sure it is easy to operate. The current system additionally has the downside that one of our technicians must be there for special events - weddings, funerals, Christmas eve, etc.
- Wants digital presents wherever available – audio, lighting, video streaming, etc.

Jeremy Picker project comments summary:

- **House lights** are a little dim but not bad. No compelling reason to update. **Stage lighting**, however, is terrible and needs attention. More light and less shadows is needed. Also, lighting controls need to be updated to make operating the house lights and the desired new stage lighting easier.
- **Prefers livestream over later upload.** Does not consider livestream significantly more challenging than record and upload later. Note: It is a given that livestream will occasionally have glitches. This is unavoidable, regardless of equipment, personnel, and money spent.
- Jeremy would like to **replace the pews with individual chairs**. Thinks this allows more functionality to the auditorium.
- **Reproducibility** is a key mantra for Jeremy. Lights, audio, streaming should be constant each Sunday and easy enough to allow several trained members to operate.
- **Stage and backdrop are bad**. A clean/modern stage and backdrop that also works well on video is very much needed.
- **All items of the "Auditorium Project" are needs and not wants**.