ADDENDUM

IMPORTANT DOCUMENT – INVITATION TO NEOTIATE ADDENDUM

ITN NUMBER: 2021-25MCSA OPENING DATE & TIME: 7/15/22

ITN TITLE: MASTER CONTROL AND/OR TRAFFIC SERVICES

ADDENDUM NUMBER: 1 ADDENDUM DATE: 7/7/22

The purpose of this addendum is to:

- Extend the due date to 7/19/22 at 3:00PM.
- Answer questions asked during the open q/a period.

PLEASE ACKNOWLEDGE RECEIPT OF THIS ADDENDUM AND RETURN IT WITH YOUR BID. FAILURE TO SIGN AND RETURN WITH YOUR BID COULD RESULT IN REJECTION OF YOUR BID.

_____ _____

BIDDERS SIGNATURE PRINT OR TYPE BIDDERS NAME

_____ _____

COMPANY NAME EMAIL ADDRESS

1. Vendor Question: Understanding that "University of Central Florida Procurement Services uses a Bonfire portal for accepting and evaluating proposals", Sec. 1-3 of General Conditions seem to apply to a physical bid: Is there any physical bid submission required?

   UCF Answer: No. Bids are to be submitted electronically via the Bonfire web portal listed on the cover page and attachment 4 of the bid document.

2. Vendor Question: What form should the bid submission follow?
   - Should the ITB be submitted as-is with all the elements filled out?
   - Is only the Bid Sheet required, with appropriate vendor identifying information?
   - Is the respondent free to submit a response in any form that they choose?

   UCF Answer: Submittal requirements include all required signatures/acknowledgements, mandatory requirements and pricing on the bid sheet.

3. Vendor Question: How would UCF prefer the respondents to submit comments/issues regarding contract terms included in the ITB as part of a bid?

   UCF Answer: Exceptions to contract terms can be included with your bid submittal.

4. Vendor Question: Sec 14 (METHOD OF ORDERING)—Please clarify ordering procedure. Media Management provides PMM Managed Service for set term period as contracted; no orders, per se, should be placed.

   UCF Answer: A UCF purchase order(s) will be issued to the awardee before services shall begin. The vendor will reference the PO# on all invoices submitted for payment.

5. Vendor Question: Bid Sheet Line Item 4, CALM Act - How is WUCF currently managing compliance with CALM Act provisions?

   UCF Answer: *Currently CALM monitoring and compliance is the responsibility of the DCA master control provider. They have a Miranda KS-910 located in the spoke rack for each program service.*

6. Vendor Question: Bid Sheet Line Item 7, "...technology center...to sustain...operation...during...disasters" - Clarify scope of disaster recovery scenario where playout is maintained.

7. *UCF Answer: WUCF expects that the winning vendor will have the staffing, infrastructure, and redundancy to sustain uninterrupted broadcast operations during major natural or man-made events.*

8. Vendor Question: Bid Sheet Line Item 10, "Automated disaster recovery capability for main PBS channel..."- Clarify scope of disaster recovery scenario.

   UCF Answer: Currently WUCF uses a Nevion Virtuoso for failover switching. It is set to fail over to our local satellite dishes receiving network feeds.

9. Vendor Question: Bid Sheet Line Item 15, EAS - What EAS equipment is WUCF currently using?

   UCF Answer: Sage

10. Vender Question: Bid Sheet Line Item 18, "...contribution encoder...[for]...live production...to...master control..." - The PMM system includes the capability for live production to be routed through the PMM system at will. Please provide further details on encoder specification and use case.

    UCF Answer: If the PMM solution provides the ability for WUCF to go live on any of our managed program services then PMM meets the requirement.

11. Vendor Question: Bid Sheet Line Item 19, "FTP...for manual transfer of media files" - PMM distributed content is available for manual acquisition from Sony Ci. Local storage arrays will be accessible via FTP for the transfer of local material into the PMM system. Please provide details regarding Vantage workflow.

    UCF Answer: Vantage system located at WUCF Production/Office is connected with private network to our current DCA master control hub. Coding and watch folder naming conventions in our Vantage system allow for WUCF to drop files into appropriate watch folders for importing into the remote master control playback system. System is also used internally to process files in other media formats for web and audio only distribution.

12. Vendor Question: Bid Sheet Line Item 24, "...video delivery to YouTube TV" - How is WUCF video currently delivered to YouTube?

    UCF Answer: WUCF is pending a change from live over the air capture by YouTube TV that has been provided free for the first two years. YouTube TV is transitioning to direct internet connection to DCA hub for its members at no charge.

13. Vendor Question: Bid Sheet Line Item 26, "...integrate...program stream from WTGL..." - Where do the current WUCF encoders reside?

    UCF Answer: All spoke operations for WUCF TV take place at our TV tower building.

14. Vendor Question: Bid Sheet Line Item 28, "...TV transmitter site...interconnectivity..." - PMM services include provision of a "Node", a rack of hardware and software that integrates with the existing facility in the signal chain just before signal delivery to the encoders. A determination will need to be made where that system will ultimately reside. To that end,
    Will the "...secondary point to point fiber connectivity from...Studio/Office...to the TV transmitter site..." continue to operate in the new master control scenario?

    The spoke system will reside at our TV tower.

    The secondary fiber will remain in place at first but with our new STL we have the ability to extend IP networks over STL. We will be moving to that in the future.

    - Will the current "...firewalls...to/from Hub..." continue to operate and be available in the new master control services scenario?

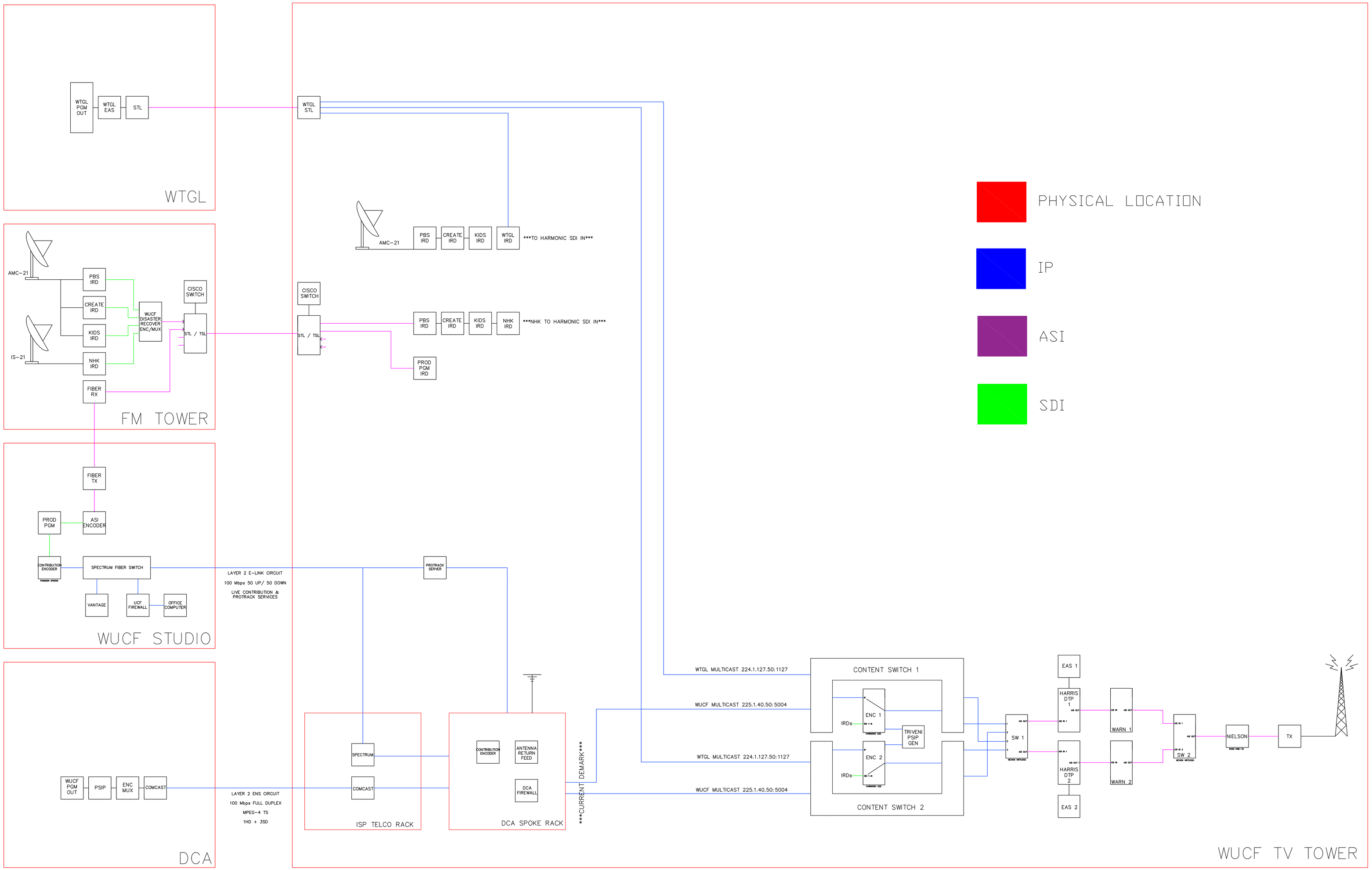
      No. The winning vendor will be expected to deploy a parallel solution to deliver the content to our TV transmitter building.

    - When is the "...future connection from the WUCF Studio/Office..." expected to be available?

    UCF Answer: No timeline has been established. The winning vendor should expect to use the existing fiber path.

15. Vendor Question: Are drawings of existing audio/visual systems immediately available to prospective vendors as a reference for technical integration purposes.

    UCF Answer: Yes, see drawings on pg. 5 of this addendum (below) followed by a "signal path narrative".



WUCF-TV PBS 24	NAME MICHAEL HERRING	SHEET TITLE: WUCF TV HIGH LEVEL	PROJECT NO. WUCF DRAWING NO. AIR CHAIN

WUCF SIGNAL PATH NARRATIVE

The drawing is very high level and is intended to represent WUCF-TV's signal path from a functional perspective. All site locations are represented and the signal path flows generally left to right. Please refer to the color legend on the drawing for signal type.

FIBER CIRCUITS

CIRCUIT 1 – Comcast fiber circuit connecting DCA to the WUCF TV Tower building. Layer 2 ENS 100 Mbps Full Duplex.

CIRCUIT 2 – Spectrum fiber circuit connecting WUCF Studio and WUCF TV Tower building and is used to extend circuit 1 to the WUCF Studio. Layer 2 E-Link 100Mbps 50 up / 50 down.

SOURCES FEEDING WUCF TV TOWER

DCA – The DCA provides an MPEG 4-TS comprised of 1HD +3SD at 19.3Mbps using a Harmonic X2S encoder. No statmux is being done at DCA. All programs streams are CBR with the HD encoded at 8Mbps and the subs encoded at 3Mbps.

WUCF STUDIO – WUCF Production program content (1920 x 1080i) with embedded audio and CC are encoded into MPEG 4 using a Thomson CP6000. This content is delivered to DCA. A second path through the FM Tower to the TV Tower is in the works. It is shown on this drawing but is not yet functional. The vendor should plan on using the existing Spectrum fiber circuit for connectivity to the WUCF Studio.

FM TOWER – WUCF uses our FM Tower site as a diversity site for satellite network feeds. There are two dishes and an STL link to the TV Tower. One dish is Ku 5m aimed at AMC-21 for PBS net feeds and the second is C/Ku 4.3m steerable currently aimed at IS-21 for NHK. The receivers connected to these dishes provide baseband feeds for PBS, Create, Kids, & NHK to an encoder. This encoded ASI signal is fed to the TV tower via STL and then decoded back to baseband as available disaster recovery sources.

WTGL – WTGL is our channel share partner. WTGL provides a 720p MPEG 4 multicast via STL to the WUCF TV Tower. This MPEG 4 multicast is also decoded into baseband for local disaster solution. EAS services for WTGL are managed at their studio and included in the incoming program service.

WUCF TV TOWER / TECH CORE LOCATION

SATELLITE DISH - There is a 5m fixed satellite dish aimed at AMC-21 at this location. It is connected to Ericsson receivers providing PBS, Create, & Kids for the local disaster recovery solution. NHK is received from the FM Tower.

DISASTER RECOVERY SOLUTION– In the event of losing programming from DCA, WUCF automatically fails over to local satellite dishes providing net feeds.

ENCODERS - WUCF has two Harmonic X2S encoders used to mux WUCF and WTGL. The Harmonic encoders have IP inputs and baseband inputs. IP inputs are used to subscribe to WUCF's and WTGL's multicast. Baseband inputs are used to encode the disaster recover feeds listed above. The Harmonic X2S has eight SDI inputs (drawing shows 1 to keep drawing it a little cleaner). Our normal operating configuration is Harmonic 1 set to IP sources and Harmonic 2 set to SDI sources. The Harmonics are set to Statmux with bitrate minimums and maximums set as follows:

24.1 2-18Mbps
24.2 .5-8Mbps
24.3 .5-8Mbps
24.2 .5-8Mbps
45.1 2-18Mbps

NEVION VIRTUOSO SWITCH 1

- Used for automatic fail over switching, IP to ASI conversion, and MPEG-4 to MPEG-2 conversion.
- Comprised of four IP inputs providing redundancy across content switches and Harmonic encoders.
- Input 1 is connected to encoder 1 /switch 1.
- Input 2 is connected to encoder 1 / switch 2.
- Input 3 is connected to encoder 2 / switch 1.
- Input 4 is connected to encoder 2 / switch 2.
- Configured as an automatic failover switch to our local disaster solution.
- Failover criteria is based on video bitrate for the 24.1 PBS feed received from DCA. If the video bitrate for 24.1 PBS dips below 1Mbps, the Nevion switch will fail over sequentially to the next available input. It will return to previous inputs as bitrates are restored. (Nevion Switch Input Priority 1=highest, 4= lowest)

EMERGENCY ALERT SYSTEM - WUCF uses Sage Alerting Systems for EAS alerting and Imaging Communications DTP to encode EAS messaging into the ASI domain. EAS services are enabled across all program services except for WTGL which inserts their EAS messages back at their studio. WUCF has redundant EAS paths.

NEVION VIRTUOSO SWITCH 2– WUCF uses this switch to select between EAS path 1 or EAS path 2. The switch is set for manual operation.

WARN ENCODING – WUCF currently used the second generation WARN equipment for ASI signal paths. WUCF has redundant WARN paths.

NIELSON ENCODING – WUCF uses the Ross NWE-TS which inserts Nielson coding across our program services.

PSIP – WUCF / WTGL share a Triveni Guidebuilder located at the WUCF TV Tower site.

NOT SHOWN – The DCA spoke rack has ATSC tuners for monitoring WUCF's RF output and to backhaul off air feeds to DCA using Grass Valley Edgevision. The DCA spoke rack also uses one Miranda KS-910 per program service for CALM act monitoring and compliance.