Town of Windsor Request for Proposal 110 Addison Road Data Cabling

1.0 Overview

This Request for Proposals (RFP) is for technical services to install copper category 6A, fiber, and HDMI structure cabling systems at the Town of Windsor's Public Safety facility located at 110 Addison Road, Windsor, CT.

The purpose of this document is to request proposals from contractors interested in providing the complete and operational structured cabling systems (including labor, materials, transportation, equipment, miscellaneous services, etc., required to accomplish this result). Anything that may be reasonably construed as a necessary part complete installation is to be included, whether or not specifically shown or mentioned. The vendor is responsible for providing all necessary working/building permits required under this contract, which includes, local, state, or federal permits, as needed. All work done by the contractor and materials supplied by the contractor shall comply with the applicable sections of the following codes for installation of telecommunications cabling:

- Uniform Building Code (UBC)
- National Electrical Code (NEC/NFPA 70)
- National electrical Safety Code (NESC IEEE C 2)
- Local Codes, amendments, and ordinances

2.0 Submission, Questions, Schedule and Deadlines

2.1 Submission – Deadline February 17, 2020, 10:00 AM.

One original and two (2) copies of the proposal shall be placed in a sealed envelope, bearing the name and address of the vendor and clearly marked with the words, RFP 110 Addison Road Data Network Cabling. Proposals should also be emailed to information@townofwindsorct.com with RFP110 Addison Road Data Network Cabling as the subject.

Proposals should be delivered to:

Town of Windsor, Connecticut
James Bourke - Finance Director
Town of Windsor
275 Broad Street - Windsor, CT 06095
All proposals will be opened publicly and recorded as received. There will be no public reading of proposals or viewing of proposals.

2.2 Questions

Questions should be submitted to <u>information@townofwindsorct.com</u> prior to 5:00 PM January 30, 2020. Answers if appropriate, will be addressed in an addendum published on the town's website (https://townofwindsorct.com/bid-list/).

2.3 Schedule

Request for Proposal Published January 14, 2020 Register By January 21, 2020

Mandatory Site Inspection January 29, 2020, 9:00 AM

Last Day for Vender Question January 30, 2020

Proposals Due Date February 17, 2020, 10:00 AM

Awarded March 3, 2020
Tentative Start Date March 10, 2020
Completed By March 26, 2020

There will be a **mandatory on-site inspection** for prospective bidders, scheduled at 9:00 AM on day Wednesday, January 29, 2020 at 110 Addison Road, Windsor, CT. This on-site inspection will allow for briefing on and specific questions about the project. No exceptions to this scheduling are available, and no individual appointments will be made. Email information@townofwindsorct.com your intent and contact information to register for the inspection.

2.4 Site Location

110 Addison Road, Windsor, CT. On Google Maps use 100 Addison Road for directions to the site. The facility is an active construction site and coordination with other trades at times will be necessary.

2.5 References

Provide descriptions of relevant experience and training in the design, purchase, and installation of similar cabling systems. A list of names, titles, organizations, addresses, and telephone numbers of four references that can provide information about your work on similar projects. These references should also include the dates of association, and a complete description of the responsibilities of your firm for each project.

2.6 Proposal

The proposal should include an itemized bid sheet with a quantities, lengths, materials, labor costs and payment schedule. This is a <u>prevailing wage project</u>. Document entitled <u>Prevailing Wage Rates</u> available at https://townofwindsorct.com/bid-list/ Under the project's Supplemental Information.

3.0 Scope of Services

3.1 Design

It is the responsibility of the contractor to ensure that all cabling complies with applicable standards. While the Town will provide preliminary locations for jacks, racks and a general overview, the contractor will be responsible for final design that will meet standards and accomplish the intended purposes.

3.2 Purchase

The contractor shall be responsible for the purchase of all necessary materials and equipment (unless otherwise specified) for the installation and testing of the structured cabling system specified in this RFP.

3.3 Installation

- 1. Vendor is responsible for recommending the optimum cable and it must meet the appropriate building code requirements.
- 2. Cables should be neatly dressed and supported in the racks by the cable management system supplied by the contractor attached to the rack(s) and/or patch panels.
- 3. Cables should be in available cable tray if cable tray is not available suspended every 4 feet in drop ceilings using J or D style. Cable runs must avoid any sources of electrical or mechanical interference.
- 4. The work performed under this specification shall be of good quality and performed in a workmanlike manner. In this context, "good quality" means the work shall meet industry technical standards and quality of appearance. The Town reserves the right to reject all or a portion of the work performed, either on technical or aesthetic grounds.
- 5. During the contract period the vendor will abide by all fire and safety regulations. District/School Security Policies must be observed at all times.
- 6. Upon completion of any repair, replacement or installation activity, the vendor must provide evidence of the completion with a successful test on said system with results provided to owner in owner specified format (s).
- 7. The vendor will be responsible for the prompt correction of all defects in the system.
- 8. The vendor must leave the premises clean and neat including having all ceiling tiles in place after each work session.
- 9. Bidder is responsible for inspecting all existing structures, cableways, IDF/MDFs, Data Centers and infrastructure to determine if they are adequate for the purpose. Cableways must be utilized where available.
- 10. The cabling systems installed shall be eligible for coverage by a manufacturer's Limited Lifetime Warranty to the end user.
- 11. Installer/Integrator shall provide labor, materials, and documentation in accordance with the manufacturer's requirements necessary to ensure that the Owner will be furnished Manufacturer's Warranty.
- 12. Installer shall ensure that the Owner receives the manufacturer issued project warranty certificate within 60 calendar days of warranty registration.
- 13. Test Reports shall be delivered to Owner within 30 days upon completion of project. One hard copy and one electronic copy on via e-mail or a USB flash

drive shall of color test reports for individual cable tests shall be delivered. Summary sheets are not acceptable.

14. As-Built Drawings shall be delivered to Owner within 30 days upon project completion. Provide (1) hard copies to owner and (1) electronic copy in PDF format via e-mail or a USB flash drive. Drawings shall include all cable pathway routes and work area outlets nomenclature. Provide a laminated copy for each closet Work Area Space. Install the laminated copy in each MDF closet.

4.0 There are three (3) projects associated with this RFP

- 4.1 Copper Category 6A Data Cabling Purchase & Installation
- **4.2** Fiber Cabling Purchase & Installation
- **4.3** Coax Cabling Purchase & Installation

4.1 Copper Category 6A Data Cabling Purchase & Installation Outcome: 432 data drops and 32 as positioned in Communication Plan E1.03.

- **4.1.1** The contractor is responsible for the following:
 - 1. MUST be certified installer.
 - 2. Provide and install horizontal and vertical wiring runs to provide connections for all drop locations to the Data Center (DC) per **Communication Plan E1.03.**
 - 3. Blue jacket four (4) pair Category 6A UTP, Solid copper cable, **Belden PN 10GX12 preferred**.
 - 4. UTP cables from DC location to all work areas are to be in approved raceways for each location.
 - 5. All four (4) pairs of each cable are to be terminated at the patch panel and at the workstation jacks.
 - 6. Provide and install Category 6A flat patch panels for communication rack. Accepted manufacturers include **Hubbell**, **Belden or Panduit**.
 - 7. Provide a minimum 6' slack loop at the rack prior to termination.
 - 8. Contractor will provide and install **two Panduit communication racks with cable management and grounded to the building in the Data Center.**Contractor will also install a wall mounted rack with hinged pull away in the Warehouse.

Rack Specifications

R2P	19" Standard Rack
RGRKCBNJY	Rack Grounding Kit
WMPVHCF45E	Front Vertical Management
WMPVV45ERTW	Top Rack Trough
NREPB1	End Panel
NMF2	Horizontal Cable Managers
	RGRKCBNJY WMPVHCF45E WMPVV45ERTW NREPB1

9. Provide and install Category 6A, 8-pin modular (RJ45) jacks and faceplates to accommodate all drop locations. Accepted manufacturers include Hubbell, Leviton or Panduit. It is the Town's intention for all faceplates to be mounted flush with the wall surface unless specifically authorized by the Town (no surface mounted raceways or jack modules). The Town will provide drop locations for each office location and reserves the right to move or adjust drop locations or

make alternate suggestions where necessary prior to installation. Each data connection to the workstation wall jack must be terminated using a white 8-pin T568B modular RJ45 jack, mounted in white faceplates. Wiring terminations will use a T568B pin-out.

- 10. Provide and install corresponding ceiling and wall conduit sleeves to allow cabling to pass through the Data Center, drop ceiling and other wall penetrations (as needed. All penetrations of fire-rated walls will also require sufficient sealing in order to meet existing fire regulations.
- 11. Wire twists for all pairs must be maintained up to the point of termination (within 13 mm or 0.5 in for Category 6A installations).
- 12. There must be a minimum bend radius of four (4) times the cable diameter for 4-pair cable.
- 13. Cable length from punch block to wall plate should not exceed 100 meters. It is the intention of the Town that the installed cabling system is routed for optimal paths from punch block to wall plate in order to eliminate exceeding Category 6A cable length specifications. If the Contractor determines a run is more than 100 meters, Contractor will notify Town contact so other options can be explored.
- 14. Faceplate jacks and patch panels need to be labeled. Hand written labels are not acceptable on the patch panels and faceplates. Jack and patch panel labels should be machine printed black-on-white opaque tape. The font should be at least one- fourth inch (1/4") in height, block characters, and legible. If Town authorized surface.
- 15. Each cable needs to be permanently labeled on the cable jacket at each endpoint (faceplate and at the patch panel) so that each individual cable can be identified from end to end. Cable numbers need to match the jack and patch panel numbering scheme.
- 16. The network will use T568B pin wiring standard for all termination points.
- 17. The contractor should complete the installation of cabling in accordance with the Category 6A TIA 568.C.2 (10GBase-T) standards. Installation practices should be consistent with those entailed in the BICSI (Building Industry Consulting Services International) Telecommunications Distribution Methods Manual

4.1.2 Testing

Testing Unit

The UL Level 4 testing unit should be capable of testing the installed cables at Category 6A - TIA 568.C.2 or better, Commercial Building Telecommunications Cabling Standards, Category 6A (10GBase-T) specifications. Fluke DTX, and IDEAL LanTEK II are examples of this type of testing unit.

Tests

The objective of cable testing is to certify the installed cable to current Category 6A

(10GBase-T) for data cables standards. For this installation the definition of "channel" will include the horizontal cable from the patch panel to the work area terminating jack. The patch cables used for testing should be manufacturer supplied and meet Category 6A (10GBase-T) specifications.

At a minimum the following tests should be conducted on each cable and included in the final certification report:

- 1. Wire Map The wire map test checks the twisted-pair cabling to verify correct wiring. The status should be PASS/FAIL. All cables should achieve a PASS rating in the final certification report.
- 2. Propagation Delay Propagation delay, or delay, is a measure of the time required for a signal to propagate from one end of the circuit to the other. Delay is measured in nanoseconds (nS). Typical delay for Category 6A UTP is a bit less than 5 nS per meter (worst case allowed is 5.7 nS/m).
- **3. Delay Skew** Propagation (skew) is the difference between the propagation delay on the fastest and slowest pairs in a UTP cable. Some cable constructions employ different types of insulation materials on different pairs. This effect contributes to unique twist ratios per pair and to skew.
- 4. Near End Crosstalk (NEXT) NEXT is a measure of the amount of signal which "leaks" from the station's/hub's transmitter to its own receiver. NEXT should be reported on a worst pair basis, and must be tested from both ends (Data Center and work area) to ensure line integrity.
- **5. Attenuation or Insertion Loss** Attenuation measures the amount of signal loss in decibels (dB) on twisted-pair cable.
- 6. Attenuation to Crosstalk Ratio (ACR) ACR reports the difference between NEXT and attenuation on the network. This measurement shows how much larger the received signal of a pair is compared to the noise on the same pair. The reported measurement should represent the cable's worst pair.
- 7. Cable Length Length should show the overall distance (in feet) covered by the horizontal segment. All measurements should be reported on Fluke DTX printouts (or equivalent) or on a "Certification Report", and should conform to the testing standards as specified in the (TIA/EIA, 2001), Commercial Building Telecommunications Cabling Standard, Part 1 General Requirements.
- 8. Warranty The contractor, any sub-contractors, and/or any hired staff by the contractor shall be bonded and shall pay for any damage to other Town work or facilities (walls, carpet, tiles, other wiring, etc.) that occurs during the installation of the cabling system, and appears within a period of one year from the date of acceptance of work. The contractor shall provide a one-year warranty of the installed system against defects in material and workmanship. Within the warranty period, all labor and materials shall be provided at no

expense to the Town during normal working hours, and the contractor must provide a next business day response time. The warranty period shall begin on the date of acceptance by the Town.

9. Acceptance Town acceptance of the structured cabling system shall be based on the results of testing, functionality, inspection and approval of Town Building Department, and the receipt of documentation. With regard to testing, all cables must meet the specifications included in this RFP. The contractor shall be responsible for the testing of one hundred percent (100%) of the installed segments/cables at the Town location (see Appendix C – Certification Reports). Any segment that does not meet the specifications included in this RFP shall be repaired/replaced, at no labor/materials cost to the Town, by the contractor to the satisfaction of the Town.

4.2 Fiber Cabling Purchase & Installation

Outcome: The first fiber run will be approximately 1800 feet of single mode 12 strand dark fiber optic able meeting the specifications described in the Revision of Section 614 of CDOT Standard Specifications form the 110 Addison Road data center to the DPW cell tower. Conduit has been run.

The second fiber run will be approximately 2000 feet of single mode 6 strand dark fiber optic cable meeting the specifications described in the Revision of Section 614 of CDOT Standard Specifications form the 110 Addison Road data center to the DPW cell tower, then to the DPW data closet. Conduit to the cell tower has been run, the final run to the data closet is indoors and will be shown at the vendor meeting.

- 1. LC single mode 6 strand couplers
- 2. LC single mode 12 strand couplers
- 3. CCH01U fiber rack mount enclosures 1
- 4. DCH02P wall mount fiber enclosure 2

4.2.1 The contractor is responsible for the following:

- 1. Provide a Corning fiber optic cable system installation, connection, testing, trouble-shooting, and documentation.
- 2. MUST be Corning certified.
- 3. Each strand shall be tested for end to end dB loss and continuity using a Single mode light source and power meter@ 1310nm and 1550nm.
- 4. Optical fiber end-to-end link tests shall be performed in accordance with TIA/EIA-568- B.1 and TIA/EIA-568-B.3. 8.
- 5. Strands shall meet current EIA/TIA-568 specifications.
- 6. Attenuation test results shall be less than that calculated according to equation in TIA/EIA-568-B.1.
- 7. Mount access points.
- 8. The Contractor shall correct any fiber strands that demonstrate excessive attenuation due to breaks, bends, bad splices, defective connectors and bad installation practices.

- 9. The Owner will direct the Contractor on how to proceed about the fiber spans that do not meet specification for OTDR splice attenuation, link loss or other short falls.
- 10. The Contractor shall submit test result in electronic format and in hard copy for acceptance and sign off.

4.3 Coax Cabling Purchase & Installation

Outcome: Coax cabling to designated rooms as positioned in **Communication Plan E1.03.** All **30** coax runs will be emanated from the communications room A152, where cable service provider will have its service demark point. Each designated room needs to have one RG6 (coax) cable, 30 total.

5. **EVALUATION OF PROPOSALS**

The following criteria are expected to be among those used in the selection process. They are presented as a guide for the Vendor in understanding the Towns' requirements and expectations for this project and are not necessarily all inclusive or presented in order of importance.

- Completeness and clarity of response to this Request for Proposal
- Training and experience in similar projects
- Responses from references
- Cost

6. **AWARD**

The Towns intend to award a contract to one Vendor, but recognizes that subcontractors may be utilized to complete certain phases or components of the project or system.

7. RIGHTS RESERVED TO THE TOWN

The Town reserves the right to award in whole or in part, or to reject any and all proposals in whole or in part for misrepresentation or if the Vendor is in default of any prior contract with any of the Towns, or if the proposal limits or modifies any of the terms and conditions and/or specifications of the RFP. The Towns also reserve the right to waive technical defects, irregularities and omissions if, in its judgment, the best interest of the Towns will be served.

The Towns reserve the right to correct inaccurate awards resulting from its clerical errors. This may include, in extreme circumstances, revoking the awarding of a contract already made to a Vendor and subsequently awarding the contract to another Vendor. Such action on the part of the Towns shall not constitute a breach of contract on the part of the Towns, as the contract with the initial Vendor is deemed to be invalid from the outset and of no effect, as if no contract ever existed between the Towns and the Vendor.

While cost is a consideration, the Towns reserve the right to select a proposal or proposals in whole or in part, which the Towns deems best meets the goals of this RFP regardless of cost.

8. **INSURANCE AND INDEMNIFICATION**

A. Insurance

The selected Vendor shall be required to furnish a Certificate of Insurance evidencing the following insurance coverage within five (5) days of receipt of Notice of Selection. Failure to maintain insurance coverage as required and to name the Town of Windsor, Coventry or Windham as the Additional Insured will be grounds for termination of the contract.

i. Commercial General Liability Insurance

The Vendor shall provide Commercial General Liability (CGL) insurance with a combined single limit of \$1,000,000 per occurrence, \$1,000,000 aggregate for bodily injury and property damage.

The CGL shall be written on ISO occurrence form CG 00 01 10 93 (or a substitute form providing equivalent coverage) and shall cover liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another assumed in a business contract).

ii. Commercial Automobile Liability Insurance.

The Vendor shall provide Commercial Automobile Liability insurance with a combined single limit of \$1,000,000 per occurrence, \$1,000,000 aggregate, and shall include coverage for all owned, hired, and nonowned vehicles.

iii. Worker's Compensation Insurance.

The Vendor shall provide Worker's Compensation Insurance in the required amount as applies to the State of Connecticut and Employers Liability Insurance as follows:

Bodily Injury by Accident - \$100,000 each accident

Bodily Injury by Disease - \$500,000 policy limit

Bodily Injury by Disease - \$100,000 each employee

iv. Umbrella Liability Insurance.

The Vendor shall provide Commercial Umbrella Liability insurance with a combined single limit of \$1,000,000 per occurrence, \$1,000,000 aggregate for bodily injury and property damage.

v. Professional Liability Insurance.

The Vendor shall provide Professional Liability insurance with a combined single limit of \$1,000,000 per occurrence, \$1,000,000 aggregate.

Each Policy of Insurance, with the exception of Professional Liability and Worker's Compensation Policies shall include a waiver of subrogation in favor of the Towns of Windsor, Coventry and Windham and shall provide no less than

thirty (30) days notice to the Town in the event of a cancellation or change in conditions or amounts of coverage. The Commercial General Liability, Automobile and Umbrella Liability shall name the Towns of Windsor, Coventry and Windham as an additional insured.

Certificates of Insurance, acceptable to the Town of Windsor, Coventry or Windham shall be delivered to the Town prior to the commencement of the work and kept in force throughout the term hereof.

The above insurance requirements shall also apply to all Subcontractors and the Vendor shall not allow any Subcontractor to commence work until the Subcontractor's insurance has been so obtained and approved.

B. Indemnification:

The Vendor shall indemnify and hold harmless the Towns of Windsor, Coventry and Windham, their agents and employees from and against all claims, damages, losses and expenses, including attorney's fees arising out of, or resulting from the performance of the work.

C. Additional Terms and Conditions:

The Vendor shall provide services as set forth in the proposal and in accordance with the terms identified herein.

- i. Invoices. The Towns of Windsor, Coventry and Windham will pay the Vendor for services performed in accordance with the signed Agreements. Invoices will be submitted periodically or upon completion of services rendered. The Towns reserve the right to request substantiating information on any bill submitted. The Towns will, within 30 days of an approved invoice, pay the amount to the Vendor.
- ii. Court Litigation and Waiver of Jury Trial. Notwithstanding the existence of any provision for arbitration of disputes in the contract or any legislation providing for arbitration, any dispute arising under this contract shall not be submitted to arbitration and the parties shall be left to the remedies at law. It is further expressly agreed that both parties waive and relinquish their right to a trial by jury of any dispute arising out of this contract. The intent of the parties is not to have a jury decide any aspect of any dispute which may arise under this contract.
- iii. Mediation. All claims, disputes or other matters in question between the parties to these Agreements arising out of or relating to these Agreements or breach thereof shall be submitted to non-binding mediation. On the written notice of either party to the other of the election to submit any dispute under these Agreements to mediation, each party shall designate its representative and shall meet at the specific Town Hall within ten (10) days after the service of notice. The parties themselves shall then attempt to resolve the dispute within ten (10) days of meeting.

Should the parties themselves be unable to agree on a resolution of this dispute, and then the parties shall appoint a third party, who shall be a competent and impartial party and who shall be acceptable to each party, the acceptable third party may mediate the dispute. Each party shall pay


the fees and expenses of the party mediator and such costs shall be borne equally by both parties. Upon agreement of the parties, either party may waive the first step in the mediation process and appoint a mutually acceptable mediator.

Any third party mediator designated to serve in accordance with the provisions of the Agreements shall be disinterested and shall be qualified to evaluate the performance of both parties.

This process shall be considered as a condition precedent to moving to court.

iv.

Equitable Relief. Nothing herein shall prevent either party from obtaining a court order enforcing the mediation process or such other temporary or equitable relief until such time that the dispute is settled or finally adjudicated.



Room #	Room Description	Data Count	AP	Coax	Notes
A101	Vestibule			Coun	
A102	Lobby	4		2	
A103	Corridor		1	_	
A104	Corridor		1		
A105	Corridor		2		
A106	Corridor		1		
A107	Corridor		3		
A108	Corridor				
A109	Vest.				
A110	Corridor				
A111	Corridor		3		
A112	Corridor		1		
A113	Corridor		1		
A114	Corridor				
A115	Corridor		1		
A116	Vest.				
A117	Interview	3			
A118	Explorer	7	1	1	
A119	Mens Toilet				
A120	Womens Toilet				
A121	Training EOC/MTG	54	1	3	
A122	Coats				
A123	Kitchen				
A124	Switch Gear	2			
A125	Passage				
A126	AV Storage				
A127	T & S Storeage	2			
A128	Passage				
A129	Conference Room	6	1	2	
A130	Weapons Cleaning	4			
A131	Mech/Electrical	2			
A132	Fireams Simulator	2	1		
A133	Control Room	4			
A134	Storage				
A135	Vehicle Storage - Can't see #	2	1		
A136	Supplies		1		
A137	Compressor				
A138	Armorer	2			
A139	Armory	2			
A140	Mech\Electrical	4			
A142	Union Office	3			
A143	Patrol Storage	2			
A144	Break Room	3		1	
A145	Oxygen & Med Storage				
A146	Passage				
A147	Dispatch	52	1	7	
A148	Desk Officer	2			
A149	Lockers				
A150	Toilet				
A151	Break Room				
A152	Data Center	~			
A153	IT Work	4		1	
A154	Report Writing	12	1		
A155	Interview	3			
A156	Evidence Process	7			

Room #	Room Description	Data Count	AP	Coax	Notes
A157	Evidence Officer	5			
A158	Evidence Storage	5	1		
A159	Drugs				
A160	Evidence Rec	5			
A161	Storage				
A162	Cust.				
A163	Admin SGT	5			
A164	Passage		1		
A165	Conference	8		1	
A166	Lieutenant	7		1	
A167	Lieutenant	7		1	
A168	Captain	7		1	
A169	Chief	11		1	
A170	Admin Assistant	9		-	
A171	Work/File	6			
A172	Admin Office	3			
A173	Records Supervisor	7		1	
A174	Records	20		1	
A174	Files	20			
A175		3			
A176 A177	Quartermaster Toilet	3			
A178	Toilet	2			
A179	Interview	3			
A180	Archive Storage	3			
A181	Patrol SGTS	23		1	
A182	Roll Call	20		2	
A183	Passage	TBD			
A184	Mens Tiolet/Shower				
A185	Mens Lockers	2	1		
A186	Passage				
A187	Womens Toilet/Shower				
A188	Womens Locker	2	1		
A189	Passage	2			
A190	Linen Closet				
A191	Processing	18	1		
A192	Corridor				
A193	Passage				
A194	Cell 4				
A195	Cell 3				
A196	Passage				
A197	Cell 2				
A198	Cell 1				
A199	Laundry				
A200	Interview	2			
A201	Sally Port	4	2		Interior and exterior AP
A202	Impound	4	1		
A203	Storage				
A204	Bulk Evidence	2			
A205	Storage	2			
A206	Bulk Evidence	2			
A207	Temp Hold	2			
A208	Corridor	 			
A209	Man Trap	+			
A210	Int. Room	2			
A211	Corridor	-			<u> </u>

Room #	Room Description	Data Count	AP	Coax	Notes
A212	Cust				
A213	Decon				
A214	Passage				
A215	Cell 8				
A216	Cell 7				
A217	Passage				
A218	Cell 6				
A219	Cell 5				
A220	Fitness	7	1	3	
A221	DD	23	1	1	
A222	Interview	3			
A223	Work	5			
A224	DD SGT	5			
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	Segment totals	432	32	30	
	Total cabling	464			

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