

FIBER OPTIC LOSS BUDGET

FROM DEVICE	TO DEVICE	RECOMMENDED TRANSCEIVER TYPE	FIBER OPTIC LINK LOSS											POWER MARGIN				
			ESTIMATED TRANSMISSION DISTANCE (Mi.)	FIBER TYPE	OPERATING WAVELENGTH (nm)	FIBER ATTENUATION (dB/km)	TOTAL FIBER ATTENUATION [INCLUDES 10% CONTINGENCY] (dB)	# OF CONNECTORS	CONNECTOR LOSS PER CONNECTOR (dB)	TOTAL CONNECTOR LOSS (dB)	# OF SPLICES	SPLICE LOSS PER SPLICE (dB)	TOTAL SPLICE LOSS (dB)	TOTAL LINK LOSS (dB)	RECEIVER SENSITIVITY (dBm)	TRANSMITTER OUTPUT (dBm)	DYNAMIC RANGE (dB)	LINK LOSS MARGIN (dB)
Local Hub #1	Local Hub #2	1000BASE-LX	1.240	SM	1310	0.35	0.77	4	0.5	2	2	0.1	0.2	2.97	-19	-11	8	5.03
Local Hub #2	Local Hub #3	1000BASE-LX	0.660	SM	1310	0.35	0.41	4	0.5	2	2	0.1	0.2	2.61	-19	-11	8	5.39
Local Hub #3	Local Hub #4	1000BASE-LX	0.302	SM	1310	0.35	0.19	4	0.5	2	2	0.1	0.2	2.39	-19	-11	8	5.61
Local Hub #4	Local Hub #5	1000BASE-LX	0.562	SM	1310	0.35	0.35	4	0.5	2	2	0.1	0.2	2.55	-19	-11	8	5.45
Local Hub #1	Auxilliary Cabinet #1	1000BASE-LX	0.643	SM	1310	0.35	0.40	2	0.5	1	0	0.1	0	1.40	-19	-11	8	6.60
Local Hub #2	Auxilliary Cabinet #2	1000BASE-LX	0.643	SM	1310	0.35	0.40	2	0.5	1	0	0.1	0	1.40	-19	-11	8	6.60
Local Hub #3	Auxilliary Cabinet #3	1000BASE-LX	0.229	SM	1310	0.35	0.14	2	0.5	1	0	0.1	0	1.14	-19	-11	8	6.86
Local Hub #5	Auxilliary Cabinet #4	1000BASE-LX	0.571	SM	1310	0.35	0.35	2	0.5	1	0	0.1	0	1.35	-19	-11	8	6.65

NOTES:

- EQUIPMENT PERFORMANCE PROVIDED IN THE TABLE ABOVE ARE BASED ON TYPICAL VALUES AND MAY VARY FROM MANUFACTURER TO MANUFACTURER.
- NUMBER OF SPLICES, CONNECTORS, AND FIBER OPTIC TRANSMISSION DISTANCE SHOULD BE CONSIDERED APPROXIMATE AND MAY VARY FROM INSTALLED VALUES DEPENDING ON INSTALLATION PROCEDURES AND FIELD CONDITIONS.
- THE TABLE ABOVE IS MEANT TO PROVIDE GUIDANCE IN SELECTING OPTICAL TRANSCEIVERS CAPABLE OF COMMUNICATION LINKS INDICATED IN THESE PLANS, AND AS A BASIS FOR POST INSTALLATION TESTING OF FIBER OPTIC LINKS. IF THE CONTRACTOR WOULD PREFER TO USE DIFFERENT OPTICAL TRANSCEIVERS THAN THOSE INDICATED IN THE TABLE ABOVE, ENSURE THAT THE TRANSCEIVERS ARE CAPABLE OF THE TRANSMISSION DISTANCES REQUIRED, ARE CONSISTENT WITH FDOT SPECIFICATIONS, COMPATIBLE WITH OTHER EQUIPMENT, AND PROVIDE EQUIVALENT DATA THROUGHPUT SPEEDS.

<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>DATE</th> <th>DESCRIPTION</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				DATE	DESCRIPTION	DATE	DESCRIPTION					<p>ALEXANDER TEAL MIMS, P.E. PE No. 77095 Traffic Engineering Data Solutions, Inc. 80 Spring Vista Drive Phone: 386.753.0558 DeBary, FL 32713 Fax: 386.753.0778 CERTIFICATION OF AUTHORIZATION # 27392</p>		<p>STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION</p> <table border="1"> <thead> <tr> <th>ROAD NO.</th> <th>COUNTY</th> <th>FINANCIAL PROJECT ID</th> </tr> </thead> <tbody> <tr> <td>SR 429</td> <td>SEMINOLE</td> <td>240200-2-52-01</td> </tr> </tbody> </table>			ROAD NO.	COUNTY	FINANCIAL PROJECT ID	SR 429	SEMINOLE	240200-2-52-01	<p>FIBER OPTIC LOSS BUDGET</p>		<p>SHEET NO. IT-62</p>
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