DROP INVESTMENT

BURIED DROP

VOICE INVESTMENT - BURIED		SOURCE:
(1) Twisted Wire-Price per foot	$0.14	Vendor Catalog
(2) Length-Feet	175	Dover Engineering
(3) Material Price	$24.50	Ln (1) * Ln (2)
(4) Twisted wire-splicing .5 hr @ $50.91/hr.	$25.46	Outside Plant Estimate
(5) Drop Placing Assigned to Voice	$23.60	See Notes below
(6) Total Voice Buried (45C) Investment:	$73.55	Ln(3) + Ln (4) + Ln (5)
(7) % Buried Drops	33.00%	Engineering Estimate
(8) Total Voice Buried (45C) Invest./Home Passed	$24.27	Ln (~~8~~) * Ln (~~8~~)
		6 7

VIDEO INVESTMENT - BURIED		
(1) Coax-Price per foot	$0.10	Vendor Quote
(2) Drop Duct-($.27/ft-$.14/ft for twisted wire)	$0.13	OSP Product Selection
(3) Length-Feet	175	Dover Engineering
(4) Material Price	$40.25	<Ln (1) + Ln (2)>* Ln (3)
(5) Coax - splicing .25 hr @ $50.91/hr.	$12.73	Outside Plant Estimate
(6) Drop Placement Assigned to Voice	$38.77	See Notes below
(7) Total Video Buried (45C) Investment:	$91.74	Ln(3) + Ln (4) + Ln (5)
(8) % Buried Drops	33.00%	Engineering Estimate
(9) Total Video Buried (45C) Invest./Home Passed	$30.28	Ln (~~8~~) * Ln (~~8~~)
		1 3

.OTES:

- The buried drop duct contains a 5x twisted wire used for voice only and a coax wire used for video only, the ratio of material investments, as shown below, was used to apportion the composite drop placing investments.

		SOURCE:
(1) Twisted wire-Price Per Foot (Voice)	$0.14	Dover Engineering
(2) Coax-Price per foot (Video)	$0.23	<$.10 (coax) + $.13 (drop duct)> Dover
(3) Allocation of Labor Costs to Voice	37.84%	Ln (1)/(Ln (1) + Ln (2))
(4) Allocation of Labor Costs to Video	62.16%	Ln (2)/(Ln (1) + Ln (2))
(5) Drop Placing (Total) .007 hr/ft*175 ft @ $50.91/	$62.36	Outside Plant Estimate
(6) Drop Placing Assigned to Voice	$23.60	Ln (5) * Ln (3)
(7) Drop Placing Assigned to Video	$38.77	Ln (5) * Ln (4)

TRENCHING COSTS FOR BURIED DROPS:

Assumptions (from Dover Engineering Group)

(1) Street Width (feet)	40
(2) Street trench crossing per ONU	1
(3) % of potential subscribers requiring street crossing	50%
(4) Potential subscribers per ONU	6.7
(5) Service Trench Length (feet)	55
(6) % of main trenches that serve 2 homes	28.5%
(7) Drop Length (feet)	175

Length Calculations:

Main Trench Length per potential subscriber (feet)=	
Ln (7) - Ln (5)=	120
Street Trench Length per potential subscriber (feet)=	
<Ln (1) * Ln (3)>/Ln (4)=	2.99
Remaining Trench Length per potential subscriber (feet)=	
120 ft. - 2.99 ft.	117.01
Trench length serving two homes (feet)=	
117.01 ft * Ln (6)=	33.35
Length per potential subscriber (feet)=	
33.35 ft /2=	16.67
Trench length serving one home (feet)=	
Remaining Tr. Lgth (117.01)-Lgth serv. 2 homes(33.35)	83.67
Main trench lgth per pot. sub.=Street trnch+two home trnch+one home trnch=	
2.99 ft. + 16.67 ft. + 83.66 ft.=	103.33

Trenching costs per potential subscriber:

- 30% of main trenches are coventional (back hoe) trenches @ $3.00 per ft, while 70% are "trenchless" (high pressure water) @ $5.60 per foot, yielding an average of $4.82 per foot.
- 38% of service trenches are conventonal @ $1.50 per foot, while 62% are "trenchless" @ $4.50 per foot, yielding an average of $3.36 per foot.

Cost for main trench per potential subscriber:	
103.33 feet * $4.82 per ft	$498.03
Cost for service trench per potential subscriber:	
55 feet * $3.36 per ft.	$184.80
TOTAL:	$682.83

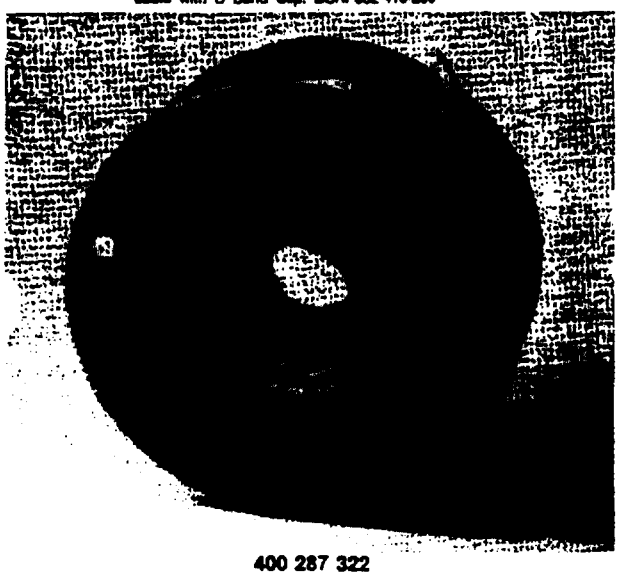
- The trenching costs presented include ONU Cabinet placement (@$196.93 per ONU or $196.93/6.7= $29.39 p subscriber), which is already included in the ONU part of this study, as well as placing costs of $62.37, which is already included in the buried drop costs. These figures are substracted from the total trenching cost to avoid double counting:

Revised Total:	$682.83-$29.39-$62.37	$591.07

- Trenching cost per potential subscriber applies only in the buried environment, or 33% of build area

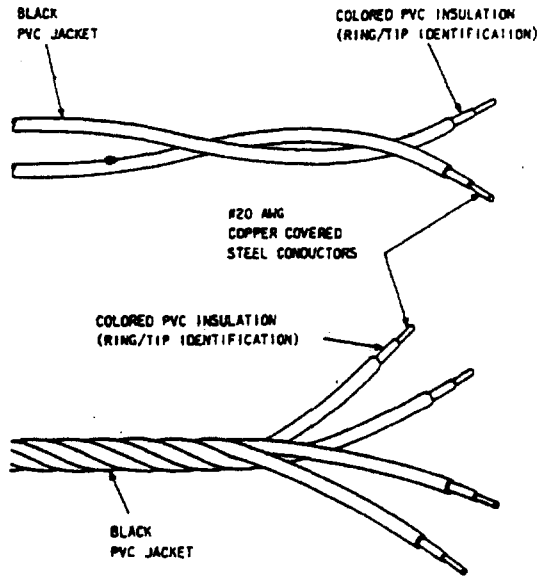
TOTAL per potential subscriber trenching cost=		
	$591.07*33%	$195.05

ITEM ID	DESCRIPTION	SP	PRICE	UN	PA
700 216 024	WIRE AER SVC 2PR 22GA 750FT DISP	750	[redacted]	Ft	81
★ CHANGE ★ C	ASH-STOCK PSC-STOCK YNG-STOCK Replaces Wire ASW 2pr. 22ga. Item ID 103867628.				
.0 225 897	WIRE AER SVC 6PR 22GA FBGLS 3500FT	3500	.14228	Ft	81
★ CHANGE ★ C	ASH-STOCK PSC-STOCK YNG-STOCK				
700 223 072	WIRE AER SVC 6PR 22GA FBGLS 400FT	400	.1445	Ft	81
★ CHANGE ★ C	ASH-STOCK PSC-STOCK YNG-STOCK				
103 867 851	WIRE AER SVC 6PR 22GA 3500FT/RL	3500	.14281	Ft	81
	ASH-STOCK PSC-STOCK YNG-STOCK This item to be discontinued when stock depleted				
700 214 860	WIRE AER SVC 6PR 22GA 400FT COIL	400	.13675	Ft	81
	ASH-STOCK PSC-STOCK YNG-STOCK This item to be discontinued when stock depleted				
400 287 322	WIRE APPLIANCE B CA08315 50FT/SL	6	[redacted]	Sl	86
	ASH-STOCK PSC-STOCK YNG-STOCK 14 gauge stranded wire. Used to make bonds in cable with B Bond Clip. BCRP632-410-200				



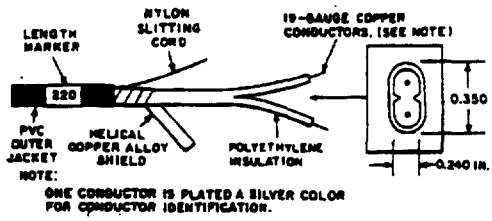
400 287 322

ITEM ID	DESCRIPTION	SP	PRICE	UN	PA
400 292 124	WIRE BLOCK E PR CA08100	2400	[redacted]	Ft	81
	ASH-STOCK PSC-STOCK YNG-STOCK Used for block distribution. BCRP462-030-100				



E Block Wire
400 292 124

ITEM ID	DESCRIPTION	SP	PRICE	UN	PA
401 689 153	WIRE BLOCK E QUAD CA08100	250	[redacted]	Ft	81
	ASH-STOCK PSC-STOCK YNG-STOCK Replaces: Wire, Block E, Triple - CA-8100.				
900 520 479	WIRE BTC3-22-0G-2DS	500	[redacted]	Ft	81
★ CHANGE ★ F	ASH-3-WEEK PSC-STOCK YNG-STOCK				
103 867 677	WIRE BURIED DIST 1PR 19GA 1200FT/RL	1200	[redacted]	Ft	81
★ CHANGE ★ C F	ASH-3-WEEK PSC-3-WEEK YNG-STOCK				
103 867 669	WIRE BURIED DIST 1PR 19GA 12000FT/RL		[redacted]	Ft	81
★ CHANGE ★ C F	ASH-3-WEEK PSC-3-WEEK YNG-STOCK One pair buried service wire used when loop length greater than 700 ft to prevent crosstalk. Wire has a bronze tape layer which is rodent resistant. BCRP 462-260-202.				



BDW-1/19 GRE (E Buried Wire)
103 867 669

ITEM ID	DESCRIPTION	SP	PRICE	UN	PA
103 867 685	WIRE BURIED DIST 2PR 19GA 7000FT/RL	7000	[redacted]	Ft	84
GE ★	ASH-STOCK PSC-3-WEEK YNG-STOCK				
.0 372	WIRE BURIED SERV 2PR 22GA 1200FT/RL	1200	[redacted]		81
NGE ★	ASH-STOCK PSC-STOCK YNG-STOCK				
	WIRE BURIED SERV 2PR 22GA 800FT/RL	800	[redacted]	t	81
	ASH-STOCK PSC-STOCK YNG-STOCK				

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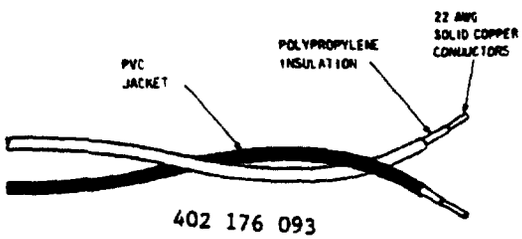
WIRE

ITEM ID	DESCRIPTION	SP	PRICE	UN	PA
700 220 375 ★ CHANGE ★ C	WIRE BURIED SERV 2PR 22GA 8000FT/RL ASH-STOCK PSC-3-WEEK YNG-3-WEEK	8000	[redacted]	Ft	81
700 220 374 ★ CHANGE ★ C	WIRE BURIED SERV 5PR 22GA 5000FT/RL ASH-STOCK PSC-STOCK YNG-STOCK	5000	.14329	Ft	81
700 220 373 ★ CHANGE ★ C	WIRE BURIED SERV 5PR 22GA 800FT/RL ASH-STOCK PSC-STOCK YNG-STOCK	800	.14719	Ft	81
814 615 621 ★ CHANGE ★ F	WIRE BURIED 24G SINGLE P46A562 ASH-3-WEEK PSC-STOCK YNG-3-WEEK	4750	[redacted]	Ft	84
814 615 639 ★ CHANGE ★ F	WIRE BURIED 24G SINGLE P46A563 ASH-3-WEEK PSC-STOCK YNG-3-WEEK	4750	[redacted]	Ft	84
814 615 662 ★ CHANGE ★ F	WIRE BURIED 24G SINGLE P46A566 ASH-3-WEEK PSC-STOCK YNG-3-WEEK	4750	[redacted]	Ft	84
814 615 670 ★ CHANGE ★ F	WIRE BURIED 24G SINGLE P46A567 ASH-3-WEEK PSC-STOCK YNG-3-WEEK	4750	[redacted]	Ft	84
814 251 759 ★ CHANGE ★ B F	WIRE BURIED 24GA PR BLK/WHT P42C175 ASH-3-WEEK PSC-3-WEEK YNG-STOCK	1890	[redacted]	Ft	84
402 176 093 ★ CHANGE ★ C	WIRE CONNECTING CROSS G CA08458 ASH-STOCK PSC-STOCK YNG-STOCK Replaces: Wire Conn Crs G Pr CA-8450. For use with binding post hardware used in outside cross connect terminals. A22 gauge double insulated wire.	400	[redacted]	Ft	86

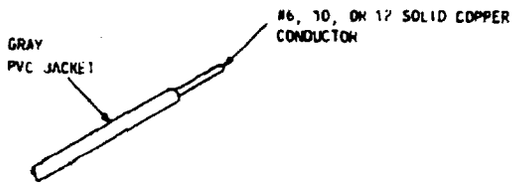


402 176 093

G Cross-Connecting Wire

402 176 093

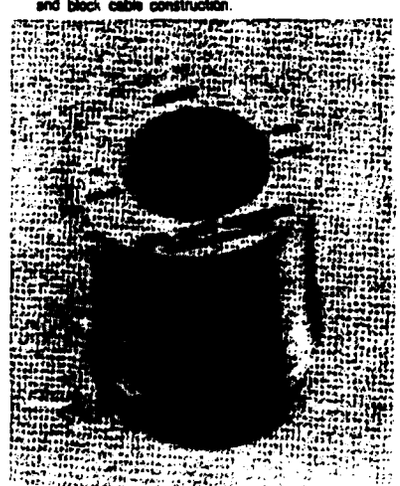
ITEM ID	DESCRIPTION	SP	PRICE	UN	PA
400 287 355	WIRE CONSTRUCTION STEEL .109 12BWG ASH-STOCK PSC-3-WEEK YNG-3-WEEK Not to be used as line wire. Approx. 32 Ft per pound. For duct threading and for serving end of guy strand	75	[redacted]	Lb	86
400 287 363 ★ CHANGE ★ F	WIRE CONSTRUCTION STEEL .134 10BWG ASH-3-WEEK PSC-STOCK YNG-STOCK Approx. 21 Ft per pound.	75	[redacted]	Lb	86
842 691 222 ★ CHANGE ★ C	WIRE CROSS CONNECT F CA08442 ASH-STOCK PSC-STOCK YNG-STOCK	800	[redacted]	Ft	86
	OCS MISCELLANEOUS EQUIP				
401 697 038	WIRE GRIPPER .109 CA7625 ASH-STOCK PSC-STOCK YNG-STOCK	5	[redacted]	Ea	81
400 292 207 ★ CHANGE ★ C	WIRE GROUND 10 INSULATED 200FT ASH-STOCK PSC-STOCK YNG-STOCK	200	[redacted]	Ft	81
400 292 231 ★ CHANGE ★ C	WIRE GROUND 6 BARE 4000FT ASH-STOCK PSC-STOCK YNG-STOCK Bare No. 6 AWG wire. For bonding and grounding in the communication zone on poles and for upgrading Power Company grounds.	4000	[redacted]	Ft	81
700 222 244 ★ CHANGE ★ C F	WIRE GROUND 6 BARE 600FT/RL ASH-3-WEEK PSC-STOCK YNG-STOCK	600	[redacted]	Ft	81
400 292 199 ★ CHANGE ★ C F	WIRE GROUND 6 INSULATED 4000FT/RL ASH-3-WEEK PSC-STOCK YNG-3-WEEK Single annealed solid copper conductor with thermoplastic insulation. Used for bonding and ground connections to protected cable terminals or protector mountings. Order by foot. BCRP480-100-400 BCRP631-400-102	4000	[redacted]	Ft	81



Ground Wire

400 292 199

ITEM ID	DESCRIPTION	SP	PRICE	UN	PA
401 172 341 ★ CHANGE ★ C	WIRE GROUND 6 INSULATED 600FT/RL ASH-STOCK PSC-STOCK YNG-STOCK	600	[redacted]	Ft	81
401 169 644 ★ CHANGE ★ F	WIRE LASHING CABLE HUB 6070 ASH-3-WEEK PSC-STOCK YNG-3-WEEK 150 Ft Coil. Wire used with ZB Cable Lasher. BCRP627-310-205	25	[redacted]	Ea	86
400 292 249 ★ CHANGE ★ C	WIRE LASHING COPPER SP CA06157 ASH-STOCK PSC-STOCK YNG-STOCK Used for supporting aerial cable splices and for other permanent ties used in aerial and block cable construction.	2	[redacted]	Lb	86



400 292 249

ITEM ID	DESCRIPTION	SP	PRICE	UN	PA
400 287 579	WIRE LASHING LEAD 1-1/2LB SP CA06834 ASH-STOCK PSC-STOCK YNG-STOCK Used for lashing lead covered cables in manholes. 22 AWG tinned bronze wire core coated with a lead alloy. Each spool approx. 90 ft. in length.	2	[redacted]	Sl	86

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BACKGROUND

Product Selection Notice PR-I92-051, issued 4-27-92, introduced Drop-on-Duct™, manufactured by Integral Corp. This product is a 1/2" polyethylene duct with an attached five pair buried service wire. The contract for the product was awarded for one year. This PSN announces the replacement contract and a new supplier.

Drop-on-Duct™ is a trademark of Integral Corp.

PRODUCT INFORMATION

DuraLine Piggy Back™ drop duct is now the standard product for use in Bell Atlantic. This product is identifiable by an orange jacket over the service wire and orange striping on the duct.

The DuraLine product is equipped with ALCATEL five pair buried service wire. The duct size is .840" OD and .688" ID with a wall thickness of .076". All drop duct is furnished with a 1/4" poly pull string.

This product offers several advantages:

The service wire can be separated from the duct without the use of tools.

The cost has been reduced to .27 per foot, a savings of .067 per foot.

The new product is more flexible, especially in cold weather and has a tighter minimum bending radius.

The orange jacket over the service wire makes the product more visible and identifiable as telephone plant.

The ordering interval has been reduced from 25 days to 10 days.

Piggy Back™ is a trademark of DuraLine Corp.

PRODUCT USAGE

There is no change in the recommended usage of drop duct.

Drop duct is primarily intended for use in buried residential applications, both new construction and rehabilitation, single or multi family construction. Use of the product should be limited to those applications where the total length from the pedestal to the dwelling is less than 500'. This is the expected limitation on drop length for fiber-to-the-curb deployment.

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ANDREWS OFFICE PRODUCTS CAPITOL HEIGHTS, MD (K)

H

Quad Current Limiter Location

Product Description	Units Needed	Unit Price	Total Material Price	Maximum Service Capacity	Utilization
ad Current Limiter (QCL) Bay	1	[redacted]	[redacted]	428.8	90%
Quad Current Limiter (QCL) Shelf Assembly ONU CURRENT LMTR SHELF	1	[redacted]	[redacted]	428.8	90%
Quad Current Limiter (QCL) Card QCL CARD	16	[redacted]	[redacted]	428.8	90%
Converter ONU POWER SUPPLY	5	[redacted]	[redacted]	428.8	90%
Quad Current Limiter (QCL) Cabling ONU POWER CABLE KIT	1	[redacted]	[redacted]	428.8	90%

	Labor Hours	Job Function Code	Labor Rate	Labor Inv.	Material Plus Labor Inv.	Investment per Pot Sub	Utilized Investment per Pot Sub
Quad Current Limiter (QCL)	2	3250	$54.66	$109.32	[redacted]	[redacted]	[redacted]
Quad Current Limiter (QCL)	2	3250	$54.66	$109.32	[redacted]	[redacted]	[redacted]
	4	4220	$50.91	$203.64			
Quad Current Limiter (QCL)	1	3250	$54.66	$54.66	[redacted]	[redacted]	[redacted]
	2	4220	$50.91	$101.82			
Converter	1	3250	$54.66	$54.66	[redacted]	[redacted]	[redacted]
	2	4220	$50.91	$101.82			
Quad Current Limiter (QCL)	2	3250	$54.66	$109.32	[redacted]	[redacted]	[redacted]
	4	4220	$50.91	$203.64			
					Total:	$27.30	$30.33

Note:
Each Quad Current Limiter (QCL) can support sixty-four Optical Network Units (ONUs). Each ONU delivers six circuits. The QCL therefore supports 384 circuits. QCLs are engineered at 90% ojective utilization.

Network Interface Location: Video Plus Dial Tone

Product Description	Units Needed	Unit Price	Total Material Price	Maximum Service Capacity	Utilization
ıetwork Interface Device (NID):					
Coax Drop Passives					
F Connectors	5	[redacted]	[redacted]	1	100%
Shrink Tubing/Misc.	1			1	100%
Grounding Block	1			1	100%
Grnd Blk/W 4 Way Splitter	1			1	100%
Ground Rod	1			1	100%
Wall Plate	1			1	100%
Copper Wire Clamps	1			1	100%
Waterproofing	1			1	100%

	Labor Hours	Job Function Code	Labor Rate	Labor Inv.	Material Plus Labor Inv.	Investment per Pot Sub	Utilized Investment per Pot Sub
Network Interface Device (NID)							
Coax Drop Passives	0.5	4220	$50.91	$25.46	$35.14	$35.14	$35.14

Note:
To provide one video signal of three television channels, the required equipment is listed above. This equipment is in addition to what would ordinarily be required for dial tone service.

ANDREWS OFFICE PRODUCTS CAPITOL HEIGHTS, MD (K)

NK EQUIPMENT

Product Description	Units Needed	Unit Price	Total Material Price *	Maximum Service Capacity	Utilization
Deo Distribution Office Equipment: Narrowcast					
Supertrunk Shelf Assembly ST SHELF ASSY	28	[redacted]	[redacted]	32566	79%
Fan Assembly 19" 115 VAC FAN PACK	7	[redacted]	[redacted]	32566	79%
Supertrunk Dual DS3 Input (DDI) Card ST DUAL DS3 INPUT CARD	224	[redacted]	[redacted]	32566	79%
Supertrunk Transmitter (STT) Card ST16 MUX/TX CARD-4TX	28	[redacted]	[redacted]	32566	79%
Supertrunk Rack STRR (W/4 TX)	7	[redacted]	[redacted]	32566	79%
Supertrunk Alarm STRR ALARM	7	[redacted]	[redacted]	32566	79%
Supertrunk Power Supply STRR PSU	28	[redacted]	[redacted]	32566	79%
Supertrunk Card Cage STRR CARD CAGE	28	[redacted]	[redacted]	32566	79%

	Labor Hours	Job Function Code	Labor Rate	Labor Inv.	Material Plus Labor Inv.	Investment per Pot Sub	Utililized Investment per Pot Sub
Supertrunk Shelf Assembly	7	3250	$54.66	$2,520.84	[redacted]	[redacted]	[redacted]
	42	4220	$50.91				
Fan Assembly	7	3250	$54.66	$2,520.84	[redacted]	[redacted]	[redacted]
	42	4220	$50.91				
Supertrunk Dual DS3 Input (DDI) Card	7	3250	$54.66	$2,520.84	[redacted]	[redacted]	[redacted]
	42	4220	$50.91				
Supertrunk Transmitter (STT) Card	7	3250	$54.66	$2,520.84	[redacted]	[redacted]	[redacted]
	42	4220	$50.91				
pertrunk Rack	7	3250	$54.66	$2,520.84	[redacted]	[redacted]	[redacted]
	42	4220	$50.91				
Supertrunk Alarm	7	3250	$54.66	$2,520.84	[redacted]	[redacted]	[redacted]
	42	4220	$50.91				
Supertrunk Power Supply	7	3250	$54.66	$2,520.84	[redacted]	[redacted]	[redacted]
	42	4220	$50.91				
Supertrunk Card Cage	7	3250	$54.66	$2,520.84	[redacted]	[redacted]	[redacted]
	42	4220	$50.91				
				Total Investment per Service:		$14.90	$18.95

*TAB N

VIDEO DISTRIBUTION OFFICE EQUIPMENT
NARROWCAST CHANNELS
ACCESS CONNECTION (COAX) (257C)

		SOURCE:
(1) Coax Material - Price per Foot	[redacted]	Engineering Estimate
(2) Length - Feet	[redacted]	Engineering Estimate
(3) Material Price	$57.50	Ln (1)*Ln(2)
(4) STT Access Points	448	
(5) Total	$25,760.00	Ln (3)*Ln (4)
(6) Potential Subscribers	38319	
(7) Investment per Potential Subscriber Ln (5)/Ln (6	$0.6723	

ATM (EDGE) DEVICE (257C)

(1) Vendor Material (16x16 or 32 port device)	$369,825.00	* (Below)
(2) Potential Subscribers	38319	
(3) Investment per Potential Subscriber Ln (1)/Ln(2)	$9.65	
(4) Capacity Expansion Required	4	** (Below)
(5) Investment per Potential Subscriber Ln (3)*Ln (4	$38.60	

* ATM MUX VENDOR QUOTE: (AT&T)

Hardware	[redacted]
Spares	
Installation	
Engineering	
TOTAL:	$369,825.00

**At the time study was conducted, pricing information was unavailable for a 64x64 (or 128 port) Edge device, therefore, the 32 port machine was used as a surrogate to calculate the investment per potential subscriber. This is a conservative approach, since it assumes that one machine with four times the capacity of a smaller machine will cost four times as much as that machine. In general, one can expect that use of the one larger machine will provide greater pricing economies.

ANDREWS OFFICE PRODUCTS CAPITOL HEIGHTS, MD (K)

VIDEO SERVING OFFICE EQUIPMENT

Narrowcast Video Path: Telephone Company Central Office with Protection Switching

Product Description	Units Needed	Unit Price	Total Material Price *	Maximum Service Capacity	Utilization
Lightguide Terminating Equipment: Equipment Side AT&T LGX	1	[redacted]	[redacted]	586192.32	85%
Lightguide Terminating Equipment: Facility Side AT&T LGX	1	[redacted]	[redacted]	753675.84	85%
Protection Select Switch FIBERCELL	1	[redacted]	[redacted]	38319	85%
Fiber Optic Signal Splitter 1:8 Splitter	3	[redacted]	[redacted]	148874	21%

	Labor Hours	Job Function Code	Labor Rate	Labor Inv.	Material Plus Labor Inv.	Investment per Unit of Service	Utilized Investment per Service
Lightguide Term. Eq.: Equipment Side AT&T LGX	10	3170	$68.16	$681.60	[redacted]	[redacted]	[redacted]
Lightguide Term. Eq.: Facility Side AT&T LGX	10	3170	$68.16	$681.60	[redacted]	[redacted]	[redacted]
Protection Select Switch FIBERCELL	2	3170	$68.16	$136.32	[redacted]	[redacted]	[redacted]
Fiber Optic Signal Splitter 1:8 Splitter	2	3170	$68.16	$136.32	[redacted]	[redacted]	[redacted]

Total Investment per BBT Video Service Unit: $0.88

* Vendor Quote

Narrowcast Video Path Assumptions:

Telephone Company Central Office with Protection Switching

Product Description	Units Needed	Labor Hours	Job Description
Lightguide Terminating Equipment: Equipment Side AT&T LGX	1	10	Engineer
Lightguide Terminating Equipment: Facility Side AT&T LGX	1	10	Engineer
Protection Select Switch FIBERCELL	1	2	Engineer
Fiber Optic Signal Splitter 1:8 Splitter	3	2	Engineer

.Notes:

On average, narrowcast video service for four Host Distribution Terminals (HDTs) will be provided over one fiber.
If one HDT serves 290 subscribers, four fibers can serve 1163 subscribers.
The equipment side of the AT&T LGX terminates 504 fibers and can therefore theoretically serve 508,032 subscribers with narrowcast video service.
The facility side of the AT&T LGX terminates 648 fibers and can therefore theoretically serve 653,184 subscribers with narrowcast video service.
Modular splitters are used which do not require splicing labor.
Fiber jumpers used in optical equipment is included as exempt material in the 257C account.

ANDREWS OFFICE PRODUCTS CAPITOL HEIGHTS, MD (K)

BROADCAST CHANNEL
LAND, BUILDING, POWER AND COMMON EQUIPMENT INVESTMENTS

The investments related to land, building, power and common equipment are determined by applying the associated factors by network investments located in company buildings.

FACTORS:

-LAND	0.0101
-BUILDING	0.1315
-POWER+COMMON EQUIP	0.0603

For the Video Dialtone Only portion of the network, investments located in company buildings are as follows:

Category		Investment	
(1) VDO Equipment		$40.07	
(2) VSO Equipment		$0.85	
(3)	SUBTOTAL:	$40.92	
(4) VAM		$19.78	Note: Investment includes powering
(5)	TOTAL:	$60.70	

LAND:	$0.61	Ln (5) * Land factor
BUILDING:	$7.98	Ln (5) * Bldg. factor
POWR+COM. EQUIP:	$2.47	Ln (3) *P+CE factor

For the integrated portion of the network, investments located in company buildings are as follows:

Category		Investment In COs	Investment Not In COs	
(1) HDT	Bay	[redacted]	[redacted]	Note: 9.62% of HDTs are in COs
	Common Shelf	$69.57	$69.57	90.38% of HDTs are not in COs
	Subscrib. Shelf	$280.20	$280.20	
	Voice Path	$0.00	$94.52	
	Video Path	[redacted]	[redacted]	
	Term. Equip	[redacted]	[redacted]	
(2) Quad Current Limiter		$30.33	$30.33	
	TOTALS:	[redacted]	[redacted]	
(3) Weighted total- CO located invest:		$38.60		

LAND:	$0.39	Ln (3) * Land factor
BUILDING:	$5.08	Ln (3) * Bldg. factor
POWR+COM. EQUIP:	$2.33	Ln (3) *P+CE factor

NARROWCAST CHANNEL
LAND, BUILDING, POWER AND COMMON EQUIPMENT INVESTMENTS

The investments related to land, building, power and common equipment are determined by applying the associated factors by network investments located in company buildings.

FACTORS:

-LAND	0.0101
-BUILDING	0.1315
-POWER+COMMON EQUIP	0.0603

For the Video Dialtone Only portion of the network, investments located in company buildings are as follows:

Category		Investment	
(1) VDO Equipment		$58.22	
(2) VSO Equipment		$0.88	
(3)	SUBTOTAL:	$59.10	
(4) VAM		$19.78	Note: Investment includes powering
(5)	TOTAL:	$78.88	

LAND:	$0.80	Ln (5) * Land factor
BUILDING:	$10.37	Ln (5) * Bldg. factor
POWR+COM. EQUIP:	$3.56	Ln (3) *P+CE factor

For the integrated portion of the network, investments located in company buildings are as follows:

Category		Investment In COs	Investment Not In COs	
(1) HDT	Bay	[redacted]	[redacted]	Note: 9.62% of HDTs are in COs
	Common Shelf	$69.57	$69.57	90.38% of HDTs are not in COs
	Subscrib. Shelf	$280.20	$280.20	
	Voice Path	$0.00	$94.52	
	Video Path	[redacted]	[redacted]	
	Term. Equip			
(2) Quad Current Limiter		$30.33	$30.33	
	TOTALS:	[redacted]	[redacted]	
(3) Weighted total- CO located invest:		$38.60		

LAND:	$0.39	Ln (3) * Land factor
BUILDING:	$5.08	Ln (3) * Bldg. factor
POWR+COM. EQUIP:	$2.33	Ln (3) *P+CE factor

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ANDREWS OFFICE PRODUCTS CAPITOL HEIGHTS, MD (K)

BROADCAST AND NARROWCAST CHANNELS
SOFTWARE EXPENSE

Software Expense	A Material	B Capacity	C Unit Cost
Source:	Note (1)	Note (2)	A/B
(1) VAM	[redacted]	290.77	[redacted]
(2) VAM Labor	$156.48	290.77	$0.54
(3) ATM Edge Device	[redacted]	38319	[redacted]
(4) Total			$22.13
(5) Monthly Payment @ 11.42%/yr, over 5 yrs.			0.485895
(6) Number of Channels			383
(7) Monthly Expense per channel	Ln (5)/Ln (6)		0.0013

NOTES

(1) Vendor Pricing- VAM Software (See Tab M), Edge Device quote comes from AT&T RFQ response - ATM switch pricing

(2) Engineering design , VAM Labor = 1 hour (JFC 3250) @ $54.66 and 2 hours (JFC 4220) @ $50.91.

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Product Number	Product Description		CLEI Code	CPR Code	ECI Code	Category	Unit Price	SYSTEM PRICE
HDT BAY EQUIPMENT								
MANU700000201	BB MANUAL SET	x 1	not required	not required	not required	2	[redacted]	[redacted]
ASSY700008101	FUSE PANEL SET	x 1	not required	not required	not required	2	[redacted]	[redacted]
ASSY700012001	FAN ASSY	x 1	not required	099999	not required	2	[redacted]	[redacted]
HDT-COMMON SHELF								
ASSY700000801	CS ASSY	x 1	FNMM3041	460345	not required	2	[redacted]	[redacted]
ASSY700001302	MTC CARD	x 1	FNPQA091AA	582281	681284	2	[redacted]	[redacted]
ASSY700001502	TSI/CP 1100 CARD	x 2	FNPQAAB1AA	A70393	681286	2	[redacted]	[redacted]
ASSY700001703	PSU 1100 CARD	x 5	FNPQAAD1AA	582282	681288	1	[redacted]	[redacted]
ASSY700001802	ALARM CARD	x 1	FNPQAAF1AA	582283	681290	2	[redacted]	[redacted]
CABX700003201	ALARM INTERFACE CABLE	x 1	not required	not required	not required	2	[redacted]	[redacted]
CABX700003101	SUBSCRIBER SHELF CABLE KIT	x 1	not required	not required	not required	2	[redacted]	[redacted]
ASSY700002401	TVC CARD	x 1	LFPQAAAAAA	970654	674664	2	[redacted]	[redacted]
ASSY700007001	BB CS FACE PLATE KIT	x 1	not required	not required	not required	2	[redacted]	[redacted]
CABX700002901	DS1 INTERFACE CABLE	x 2	not required	not required	not required	2	[redacted]	[redacted]
CABX700001902	BBI CABLE ASSY. 27.5"	x 4	not required	not required	not required	2	[redacted]	[redacted]
ASSY700002701	ST16 RCVR/DEMUX CARD	x 4	LFDCBSA1AA	970656	674666	2	[redacted]	[redacted]
ASSY700001902	DTI CARD	x 8	FNPQAAG1AA	A70396	681291	1	[redacted]	[redacted]
HDT-SUBSCRIBER SHELF								
ASSY700000901	SS ASSY	x 4	FNMM1101	460346	not required	2	[redacted]	[redacted]
ASSY700001402	INBI 1000 CARD	12 x [redacted]	FNPQAAA1AA	A70392	681285	1	[redacted]	[redacted]
ASSY700003502	BBI 1100 CARD	x 12	LFIUAA11AA	570000	686035	1	[redacted]	[redacted]
ASSY700003601	BBL CARD	51 x [redacted]	LFDCCFB1AA	970662	674673	2	[redacted]	[redacted]
ASSY700001601	INB LINECARD	x 51	FNPQ1031AA	870272	686083	1	[redacted]	[redacted]
ASSY700007101	IBB SS FACE PLATE KIT	x 4	not required	not required	not required	2	[redacted]	[redacted]
CABX700001901	BBI CABLE ASSY. 9"	x 4	not required	not required	not required	2	[redacted]	[redacted]
ONU								
ASSY700007501	INB CONTROLLER CARD	x 1	FNPQAAN1AA	870633	686916	2	[redacted]	[redacted]
ASSY700007601	IBBC CARD	x 1	LFDCDGE1AA	970665	686912	1	[redacted]	[redacted]
ASSY700005804	SP SDM 1002 CARD	x 4	LFIUCD21AA	870001	686913	1	[redacted]	[redacted]
ASSY700008002	PST 1100 CARD	x 1	FNPQAAM1AA	A70397	686914	1	[redacted]	[redacted]
Above Ground								
ASSY700005101	10" PEDESTAL ASSY	x 1	not required	099999	not required	2	[redacted]	[redacted]
ASSY700008701	PED ELECTRONICS MODULE	x 1	FNMM2001	163051	not required	2	[redacted]	[redacted]
ASSY700009102	BACK-TO-BACK PED MTG KIT	x 1	not required	099999	not required	2	[redacted]	[redacted]
ASSY700010001	CABLE ACCESS ENCLOSURE	x 1	not required	not required	not required	2	[redacted]	[redacted]
CABX700002001	2 FIBER DIB FCPC JUMPER CABLE	x 1	not required	not required	not required	2	[redacted]	[redacted]
ASSY700009901	FIBRLOK SPLICE TRAY	x 1	not required	not required	not required	2	[redacted]	[redacted]
ASSY700006201	PROTECTOR BLOCK - GT	x 1	not required	067202	not required	2	[redacted]	[redacted]
ASSY700010102	VIDEO TERM KIT W/O SPLICE	x 1	not required	not required	not required	2	[redacted]	[redacted]

Product Number	Product Description		CLEI Code	CPR Code	ECI Code	Category	Unit Price	SYSTEM PRICE
POWER FEED								
ASSY700002901	ONU POWER SUPPLY	x5	not required	460349	not required	2	[redacted]	[redacted]
ASSY700004401	ONU CURRENT LMTR SHELF	x1	not required	460350	not required	2	[redacted]	[redacted]
ASSY700004501	OCL CARD	x16	FNPO1071AA	870274	666092	2	[redacted]	[redacted]
CABX700000501	ONU POWER CABLE KIT	x1	not required	not required	not required	2	[redacted]	[redacted]
VIDEO ONLY EQUIPMENT								
HEADEND EQUIPMENT								
ASSY700002501	ST SHELF ASSY	x4	not required	106107	not required	2	[redacted]	[redacted]
ASSY700013101	19" 115 VAC FAN PACK	x1	not required	not required	not required	2	[redacted]	[redacted]
ASSY700002501	ST DUAL TV ENCODER CARD	x32	LFIUB001AA	970655	674665	2	[redacted]	[redacted]
ASSY700003101	ST16 MUX/TX CARD-1TX		LFOCAAD1AA	970657	686042	2	[redacted]	
ASSY700003102	ST16 MUX/TX CARD-2TX		LFOCAB01AA	970658	686043	2	[redacted]	
ASSY700003103	ST16 MUX/TX CARD-3TX		LFOCAC01AA	970659	686044	2	[redacted]	
ASSY700003104	ST16 MUX/TX CARD-4TX	x4	LFOCADD1AA	970660	686045	2	[redacted]	[redacted]
PREMISE EQUIPMENT								
ASSY700003701	DVT 2 CH FF	x1	NCPQAAR8AA	970663	674674	1	[redacted]	[redacted]
ASSY700003801	DVT 1 CH FF	x1	NCPQAAS8AA	970664	674675	1	[redacted]	[redacted]
ASSY50004601	REMOTE CONTROL	x1	TBD	TBD	TBD	1	[redacted]	[redacted]

NOTE: The following tier pricing applies per the volumes noted:

		0 -		VOLUME COMMITMENT
ASSY700003801	DVT 1 CH FF	[redacted]	[redacted]	[redacted]
ASSY700003701	DVT 2 CH FF	[redacted]	[redacted]	[redacted]
TBD	DVT 1 CH UPGRADE TO 2 CH	[redacted]	[redacted]	[redacted]

[redacted]

EMI Compliant Equipment - New FLX System Pricing and Part Numbers

Product Number	Product Description		CLEI CODE Availability	CPR CODE Availability	ECI CODE Availability	Category	Unit Price	SYSTEM PRICE
HDT BAY EQUIPMENT								
ASSY700008102	FUSE PANEL 1101	x 1	3/93	3/93	3/93	2	[redacted]	[redacted]
ASSY700012002	HDT FAN 1100 SHELF ASSY	x 1	3/93	3/93	3/93	2	[redacted]	[redacted]
HDT-COMMON SHELF							TOTAL	[redacted]
ASSY700000802	CS 1101 SHELF	x1	3/93	3/93	3/93	2	[redacted]	[redacted]
ASSY700001303	MTC 1101 CARD	x1	3/93	3/93	3/93	2	[redacted]	[redacted]
ASSY700001503	TSI/CP 1101 CARD	x2	3/93	3/93	3/93	2	[redacted]	[redacted]
ASSY700001705	PSU 1101 CARD	x5	3/93	3/93	3/93	1	[redacted]	[redacted]
ASSY700001803	ALARM 1101 CARD	x1	3/93	3/93	3/93	2	[redacted]	[redacted]
ASSY700001903	DTI 1001 CARD	x8	3/93	3/93	3/93	1	[redacted]	[redacted]
CABX700003202	ALARM INTERFACE CABLE	x1	not required	not required	not required	2	[redacted]	[redacted]
CABX700003102	SUBSCRIBER SHELF CABLE KIT	x1	not required	not required	not required	2	[redacted]	[redacted]
CABX700002902	DS1 INTERFACE CABLE	x2	not required	not required	not required	2	[redacted]	[redacted]
ASSY700002403	TVC 1101 CARD	x1	3/93	3/93	3/93	2	[redacted]	[redacted]
ASSY700002703	STR 1101 CARD	x4	3/93	3/93	3/93	2	[redacted]	[redacted]
ASSY700007002	FLX 1101 CS AIR FLOW KIT	x1	3/93	3/93	3/93	2	[redacted]	[redacted]
							TOTAL	[redacted]
HDT-SUBSCRIBER SHELF								
	PSU 1101 CARD	x18	(3 SHELVES)				[redacted]	[redacted]
ASSY700000902	SS 1101 SHELF	x 4	3/93	3/93	3/93	2	[redacted]	[redacted]
ASSY700001403	NBI 1101 CARD	x 3	3/93	3/93	3/93	1	[redacted]	[redacted]
ASSY700015402	RMUI 1001 CARD	x 1	3/93	3/93	3/93	2	[redacted]	[redacted]
ASSY700003503	BBI 1101 CARD	x 12	3/93	3/93	3/93	1	[redacted]	[redacted]
ASSY700016601	BBL 1101 CARD	x 48	3/93	3/93	3/93	1	[redacted]	[redacted]
ASSY700007102	FLX 1101 SS AIR FLOW KIT	x 4	3/93	3/93	3/93	2	[redacted]	[redacted]
CABX700001903	BBI CABLE ASSY	x 8	not required			2	[redacted]	[redacted]
							TOTAL	[redacted]
ONU								
ONU Plug-In Equipment								
ASSY700007601	BBC CARD	x 1	LFCCDGE1AA	970665	656912	1	[redacted]	[redacted]
ASSY700008002	PST 1100 CARD	x 1	FNPQAAM1AA	A70397	686914	1	[redacted]	[redacted]
ASSY700005804	SP SDM 1002 CARD	x 3	LFIUCD21AA	B70001	686913	1	[redacted]	[redacted]
ASSY700010503	SDM 1012 UVG CARD		3/93	3/93	3/93	2	[redacted]	
ASSY700010601	SDM 1020 COIN CARD		LFIUCD21AA	A70564	686921	2	[redacted]	
ASSY700010701	SDM 1030 DDS CARD		9/93	9/93	9/93	2	[redacted]	
ASSY700010801	SDM 1040 4-WIRE CARD		9/93	9/93	9/93	2	[redacted]	
ASSY700015901	SDM 1013 DID CARD		9/93	9/93	9/93	2	[redacted]	
ASSY700016201	SDM 1050 ISDN CARD		12/93	12/93	12/93	2	[redacted]	
							TOTAL	[redacted]
Above Ground								
ASSY700005152	FLX 1100 AG PEDESTAL ASSY		5/93	5/93	5/93	2	[redacted]	[redacted]
includes	PEDESTAL ASSY							
	PEDESTAL ELECTRONICS MODULE							
	MOUNTING KIT							
	CABLE ACCESS ENCLOSURE							
	2 FIBER DIB FCPC JUMPER CABLE							
	FIBERLOK SPLICE TRAY							
	TERMINAL BLOCK							
	VIDEO TERM KIT W/O SPLICE						TOTAL	[redacted]

APPENDIX A

EMI Compliant Equipment - New FLX System Pricing and Part Numbers

Product Number	Product Description	CLEI CODE Availability	CPR CODE Availability	ECI CODE Availability	Category	Unit Price	System Price
Aerial							
ASSY700015302	FLX POLE MOUNT ASSY	FNMM4201RA	106343	075445	2	[redacted]	[redacted]
	with stub cable/unprotected						
includes	POLE MOUNT ONU ASSY						
	PEDESTAL ELECTRONICS MODULE						
	CABLE ACCESS ENCLOSURE						
	2 FIBER DIB FCPC JUMPER CABLE						
	FIBERLOK SPLICE TRAY						
	TERMINAL BLOCK						
	VIDEO TERM KIT W/O SPLICE						
	MOUNTING KIT						
						TOTAL	[redacted]
FLX SOFTWARE							
	FLX SYSTEM SOFTWARE						
SFTW700000101	HDT System Software 2.41	not required	not required	not required		[redacted]	[redacted]
SFTW700000201	HDT System Software 2.51-3.11	not required	not required	not required		[redacted]	
SFTW700000231	HDT System Software 2.41-3.11	not required	not required	not required		[redacted]	
SFTW700000251	VAM Features Software 2.51-3.11	not required	not required	not required		[redacted]	[redacted]
	NOTE: VAM features software priced on a per HDT basis.						
						TOTAL	[redacted]
NETWORK MANAGEMENT HARDWARE							
	ONE UNIT PER B.N.D.T.						
	OSS Mediation Device (MICOM)	TBD	TBD	TBD	2	[redacted]	[redacted]
	NOTE: Price will be confirmed upon agreement with OEM Supplier.						
	VAM Mediation Device (AI)	TBD	TBD	TBD	2	TBD	
	NOTE: Hardware to be determined upon agreement by BA/BST technical team on technical specifications.						
	Price confirmed upon agreement with OEM vendor.						
						TOTAL	[redacted]
VIDEO ONLY EQUIPMENT							
HEADEND EQUIPMENT							
ASSY700002501	ST SHELF ASSY x 4	not required	106107	not required	2	[redacted]	[redacted]
ASSY700013101	19" 115 VAC FAN PACK *	not required	not required	not required	2	[redacted]	[redacted]
ASSY700002601	ST DUAL TV ENCODER CARD x 52	LFIUB001AA	970655	674665	2	[redacted]	
ASSY700003101	ST16 MUX/TX CARD-1TX	LFOCAAD1AA	970657	686042	2	[redacted]	
ASSY700003102	ST16 MUX/TX CARD-2TX	LFOCAB01AA	970658	686043	2	[redacted]	
ASSY700003103	ST16 MUX/TX CARD-3TX	LFOCAC01AA	970659	686044	2	[redacted]	
ASSY700003104	ST16 MUX/TX CARD-4TX x 4	LFOCADD1AA	970660	686046	2	[redacted]	[redacted]
						TOTAL	
	ST REGENERATOR						
3/93	STRR (W/1 TX)	6/93	6/93	6/93	2	[redacted]	
3/93	STRR (W/4 TX)	6/93	6/93	6/93	2	[redacted]	
3/93	STRR ALARM	6/93	6/93	6/93	2	[redacted]	
3/93	STRR PSU	6/93	6/93	6/93	2	[redacted]	
3/93	STRR CARD CAGE	6/93	6/93	6/93	3	[redacted]	

* ~~ONE FAN PER 4 DTNE~~