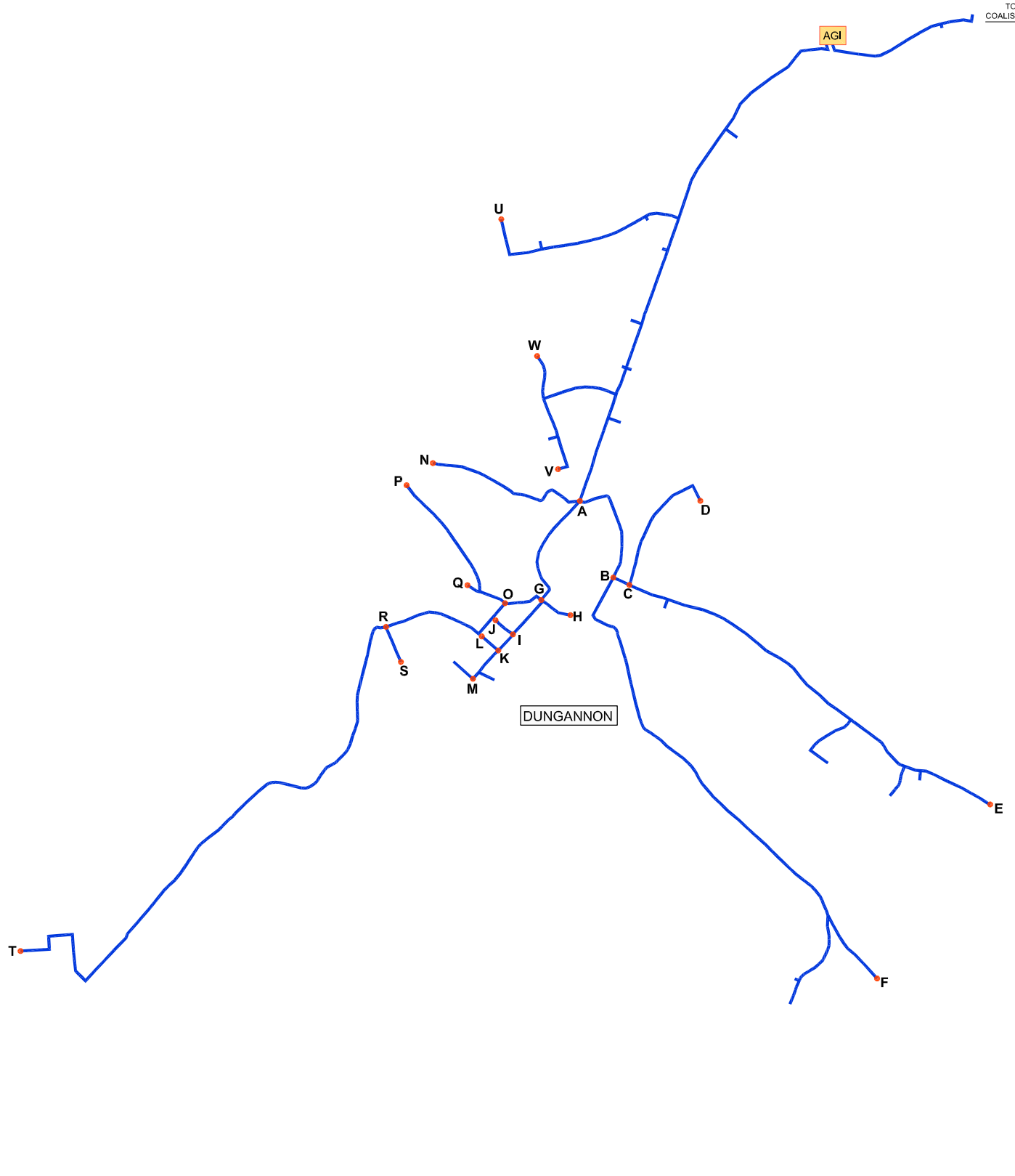


Appendix B1 - Dungannon Distribution Network Design Summary

Section	Description	Pipe Diameter (mm)	Length (m)	Load (SCMH)	Outlet Pressure (bar)	Pressure Drop (bar)	Velocity (m/s)
1	AGI to Node A	355	2,850	12,503	3.62	0.225	13.14
2	Node A to B	315	620	3,792	3.62	0.009	5.38
3	Node B to C	250	800	2,170	3.60	0.012	4.90
4	Node C to D	125	620	156	3.60	0.002	1.41
5	Node C to E	180	2,300	2,014	3.45	0.156	8.80
6	Node B to F	125	3,320	1,273	3.01	0.609	11.49
7	Node A to G	250	620	3,773	3.60	0.028	8.49
8	Node G to H	125	280	111	3.60	0.000	1.01
9	Node G to I	125	250	230	3.60	0.001	2.09
10	Node I to J	125	130	25	3.60	0.000	0.23
11	Node I to K	125	620	50	3.60	0.000	0.45
12	Node K to L	125	140	18	3.60	0.000	0.16
13	Node K to M	125	200	32	3.60	0.000	0.29
14	Node G to O	180	230	3,157	3.56	0.038	13.82
15	Node O to P	125	790	1,022	3.47	0.088	9.37
16	Node O to R	180	620	2,033	3.52	0.043	8.99
17	Node R to S	125	240	19	3.52	0.000	0.18
18	Node R to T	125	3,890	922	3.14	0.372	8.56
19	Node A to N	125	800	573	3.60	0.027	5.16
20	AGI to Node U	250	900	3,566	3.82	0.034	7.56
21	AGI to Node V	125	920	308	3.84	0.009	2.61
22	AGI to Node W	125	600	149	3.85	0.001	1.26
23	AGI to Node X	180	3,500	2,028	3.62	0.227	8.29



TO COALISLAND



- Legend:
- A ●Node
 - Proposed Distribution System
 - AGIPotential AGI Location

APPROVALS		REVISION	
A	ENGINEER	0	PRELIMINARY ISSUE
B	PROJECT MANAGER		
C	PROJECT DIRECTOR		
Revision		0	
REV	BY	DATE	DESCRIPTION
		APPROVED	

	10 Montgomery House Castleknock Business Park, 478 Castleknock Road, Belfield S15 8KQ, Tel: (0044)028 9040 2000 Fax No: (0044)028 9079 4144			
	Project N.I. GAS PIPELINES			
DUNGANNON - DISTRIBUTION SCHEMATIC				Scale NTS/A3
Drawing Number 858-DUN-SCHEMATIC				Status DRAFT
Sheet 1 of 1				

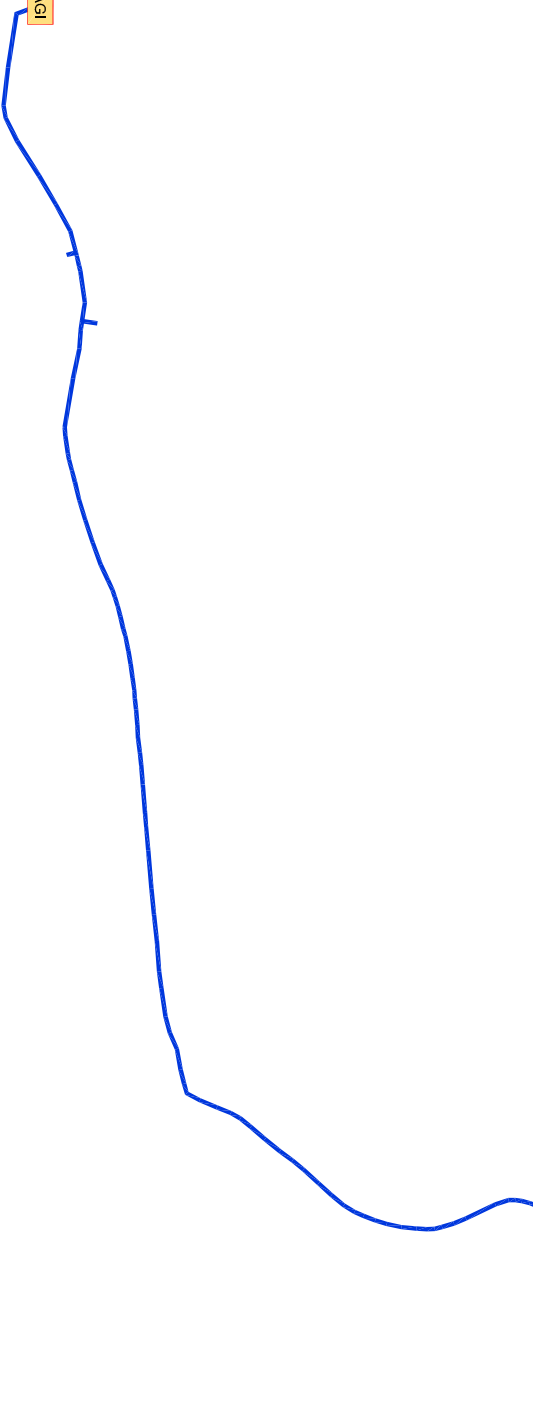


COALISLAND



TO
DUNGANNON

AGI



Legend:

A ●.....Node

— Proposed Distribution System

AGI Potential AGI Location

APPROVALS

A Engineer

B Project Manager

C Project Director

0

REV

0

REV

PRELIMINARY ISSUE

REVISION

DATE

BY

REVISED

A

B

C

100 Wellington Road,

 Belmont Hill, QLD 4000

 Ph: 07 5571 2000

 Fax: 07 5571 2001

 Email: info@etm.com.au

 Project #

Project

N.I. GAS PIPELINES

Scale

NTS/A3

Client's Number

888-COAL-SCHEMATIC

Sheet

1

of

1

DRAFT

A

Dungannon Distribution System Design

Section No.:		1		Description: AGI to Node A	
Inlet pressure	P'_1	=	3.85 bar gauge =	$385,000 \text{ N/m}^2$	Velocity Q = 0.871 m ³ /s A = 0.066 m ² Giving, v = 13.14 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.87 m ³ /s v = 11 m/s A = 0.079 m ² giving, d= 0.3175 m
Load	q'_h	=	12,503 SCMH =	$0.90 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0082		
Pipeline length	L_m	=	2.85 km =	2,850 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	355.0 mm =	355 OD	
Pipeline wall thickness	t	=	32.3 mm		
Outlet pressure	P'_2	=	3.62 bar gauge	$362,457 \text{ N/m}^2$	
Pressure Drop		=	0.225 bar	6% pressure drop	
Section No.:		2		Description: Node A to B	
Inlet pressure	P'_1	=	3.62 bar gauge =	$362,457 \text{ N/m}^2$	Velocity Q = 0.281 m ³ /s A = 0.052 Giving, v = 5.38 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.28 m ³ /s v = 11 m/s A = 0.026 m ² giving, d= 0.1802 m
Load	q'_h	=	3,792 SCMH =	$0.29 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0083		
Pipeline length	L_m	=	0.62 km =	620 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	315.0 mm =	315 OD	
Pipeline wall thickness	t	=	28.6 mm		
Outlet pressure	P'_2	=	3.62 bar gauge	$361,600 \text{ N/m}^2$	
Pressure Drop		=	0.009 bar	0% pressure drop	
Section No.:		3		Description: Node B to C	
Inlet pressure	P'_1	=	3.62 bar gauge =	$361,600 \text{ N/m}^2$	Velocity Q = 0.161 m ³ /s A = 0.033 Giving, v = 4.90 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.16 m ³ /s v = 11 m/s A = 0.015 m ² giving, d= 0.1365 m
Load	q'_h	=	2,170 SCMH =	$0.17 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0085		
Pipeline length	L_m	=	0.8 km =	800 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	250.0 mm =	250 OD	
Pipeline wall thickness	t	=	22.7 mm		
Outlet pressure	P'_2	=	3.60 bar gauge	$360,411 \text{ N/m}^2$	
Pressure Drop		=	0.012 bar	0% pressure drop	
Section No.:		4		Description: Node C to D	
Inlet pressure	P'_1	=	3.60 bar gauge =	$360,411 \text{ N/m}^2$	Velocity Q = 0.012 m ³ /s A = 0.008 Giving, v = 1.41 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.01 m ³ /s v = 11 m/s A = 0.001 m ² giving, d= 0.0367 m
Load	q'_h	=	156 SCMH =	$0.01 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0088		
Pipeline length	L_m	=	0.62 km =	620 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	125.0 mm =	125 OD	
Pipeline wall thickness	t	=	11.4 mm		
Outlet pressure	P'_2	=	3.60 bar gauge	$360,254 \text{ N/m}^2$	
Pressure Drop		=	0.002 bar	0% pressure drop	

Description: Node C to E				
Section No.:	5			
Inlet pressure	P'_1	=	3.60 bar gauge =	$360,411 \text{ N/m}^2$
Load	q'_h	=	2,014 SCMH =	$0.16 \text{ m}^3/\text{s}$
Pipe friction factor	f	=	0.0085	
Pipeline length	L_m	=	2.3 km =	2,300 m
Gas absolute temperature	T	=	278 Deg K =	5 °C
Specific Gravity	S_g	=	0.6392	
Pipeline outer diameter	D	=	180.0 mm =	180 OD
Pipeline wall thickness	t	=	16.4 mm	
Outlet pressure	P'_2	=	3.45 bar gauge	$344,842 \text{ N/m}^2$
Pressure Drop		=	0.156 bar	4% pressure drop
Velocity				
	Q	=		0.150 m ³ /s
	A	=		0.017 m ²
	Giving, v	=		8.80 m/s
Sizing pipe based on 11m/s:				
	Q	=		0.15 m ³ /s
	v	=		11 m/s
	A	=		0.014 m ²
	giving, d	=		0.1317 m
Description: Node B to F				
Section No.:	6			
Inlet pressure	P'_1	=	3.62 bar gauge =	$361,600 \text{ N/m}^2$
Load	q'_h	=	1,273 SCMH =	$0.10 \text{ m}^3/\text{s}$
Pipe friction factor	f	=	0.0088	
Pipeline length	L_m	=	3.32 km =	3,320 m
Gas absolute temperature	T	=	278 Deg K =	5 °C
Specific Gravity	S_g	=	0.6392	
Pipeline outer diameter	D	=	125.0 mm =	125 OD
Pipeline wall thickness	t	=	11.4 mm	
Outlet pressure	P'_2	=	3.01 bar gauge	$300,654 \text{ N/m}^2$
Pressure Drop		=	0.609 bar	17% pressure drop
Velocity				
	Q	=		0.094 m ³ /s
	A	=		0.008
	Giving, v	=		11.49 m/s
Sizing pipe based on 11m/s:				
	Q	=		0.09 m ³ /s
	v	=		11 m/s
	A	=		0.009 m ²
	giving, d	=		0.1045 m
Description: Node A to G				
Section No.:	7			
Inlet pressure	P'_1	=	3.62 bar gauge =	$362,457 \text{ N/m}^2$
Load	q'_h	=	3,773 SCMH =	$0.29 \text{ m}^3/\text{s}$
Pipe friction factor	f	=	0.0085	
Pipeline length	L_m	=	0.62 km =	620 m
Gas absolute temperature	T	=	278 Deg K =	5 °C
Specific Gravity	S_g	=	0.6392	
Pipeline outer diameter	D	=	250.0 mm =	250 OD
Pipeline wall thickness	t	=	22.7 mm	
Outlet pressure	P'_2	=	3.60 bar gauge	$359,673 \text{ N/m}^2$
Pressure Drop		=	0.028 bar	1% pressure drop
Velocity				
	Q	=		0.279 m ³ /s
	A	=		0.033
	Giving, v	=		8.49 m/s
Sizing pipe based on 11m/s:				
	Q	=		0.28 m ³ /s
	v	=		11 m/s
	A	=		0.025 m ²
	giving, d	=		0.1797 m
Description: Node G to H				
Section No.:	8			
Inlet pressure	P'_1	=	3.60 bar gauge =	$359,673 \text{ N/m}^2$
Load	q'_h	=	111 SCMH =	$0.01 \text{ m}^3/\text{s}$
Pipe friction factor	f	=	0.0088	
Pipeline length	L_m	=	0.28 km =	280 m
Gas absolute temperature	T	=	278 Deg K =	5 °C
Specific Gravity	S_g	=	0.6392	
Pipeline outer diameter	D	=	125.0 mm =	125 OD
Pipeline wall thickness	t	=	11.4 mm	
Outlet pressure	P'_2	=	3.60 bar gauge	$359,637 \text{ N/m}^2$
Pressure Drop		=	0.000 bar	0% pressure drop
Velocity				
	Q	=		0.008 m ³ /s
	A	=		0.008
	Giving, v	=		1.01 m/s
Sizing pipe based on 11m/s:				
	Q	=		0.01 m ³ /s
	v	=		11 m/s
	A	=		0.001 m ²
	giving, d	=		0.0309 m

Section No.: 9				Description: Node G to I	
Inlet pressure	P'_1	=	3.60 bar gauge =	$359,673 \text{ N/m}^2$	Velocity Q = 0.017 m ³ /s A = 0.008 Giving, v = 2.09 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.02 m ³ /s v = 11 m/s A = 0.002 m ² giving, d = 0.0445 m
Load	q'_h	=	230 SCMH =	$0.02 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0088		
Pipeline length	L_m	=	0.25 km =	250 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	125.0 mm =	125 OD	
Pipeline wall thickness	t	=	11.4 mm		
Outlet pressure	P'_2	=	3.60 bar gauge	$359,535 \text{ N/m}^2$	
Pressure Drop		=	0.001 bar	0% pressure drop	
Section No.: 10				Description: Node I to J	
Inlet pressure	P'_1	=	3.60 bar gauge =	$359,535 \text{ N/m}^2$	Velocity Q = 0.002 m ³ /s A = 0.008 Giving, v = 0.23 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.00 m ³ /s v = 11 m/s A = 0.000 m ² giving, d = 0.0147 m
Load	q'_h	=	25 SCMH =	$0.00 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0088		
Pipeline length	L_m	=	0.13 km =	130 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	125.0 mm =	125 OD	
Pipeline wall thickness	t	=	11.4 mm		
Outlet pressure	P'_2	=	3.60 bar gauge	$359,534 \text{ N/m}^2$	
Pressure Drop		=	0.000 bar	0% pressure drop	
Section No.: 11				Description: Node I to K	
Inlet pressure	P'_1	=	3.60 bar gauge =	$359,535 \text{ N/m}^2$	Velocity Q = 0.004 m ³ /s A = 0.008 Giving, v = 0.45 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.00 m ³ /s v = 11 m/s A = 0.000 m ² giving, d = 0.0208 m
Load	q'_h	=	50 SCMH =	$0.00 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0088		
Pipeline length	L_m	=	0.62 km =	620 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	125.0 mm =	125 OD	
Pipeline wall thickness	t	=	11.4 mm		
Outlet pressure	P'_2	=	3.60 bar gauge	$359,519 \text{ N/m}^2$	
Pressure Drop		=	0.000 bar	0% pressure drop	
Section No.: 12				Description: Node K to L	
Inlet pressure	P'_1	=	3.60 bar gauge =	$359,519 \text{ N/m}^2$	Velocity Q = 0.001 m ³ /s A = 0.008 Giving, v = 0.16 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.00 m ³ /s v = 11 m/s A = 0.000 m ² giving, d = 0.0125 m
Load	q'_h	=	18 SCMH =	$0.00 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0088		
Pipeline length	L_m	=	0.14 km =	140 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	125.0 mm =	125 OD	
Pipeline wall thickness	t	=	11.4 mm		
Outlet pressure	P'_2	=	3.60 bar gauge	$359,519 \text{ N/m}^2$	
Pressure Drop		=	0.000 bar	0% pressure drop	

Section No.:		13		Description: Node K to M	
Inlet pressure	P'_1	=	3.60 bar gauge =	$359,519 \text{ N/m}^2$	Velocity Q = 0.002 m ³ /s A = 0.008 Giving, v = 0.29 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.00 m ³ /s v = 11 m/s A = 0.000 m ² giving, d = 0.0166 m
Load	q'_h	=	32 SCMH =	$0.00 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0088		
Pipeline length	L_m	=	0.2 km =	200 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	125.0 mm =	125 OD	
Pipeline wall thickness	t	=	11.4 mm		
Outlet pressure	P'_2	=	3.60 bar gauge	$359,517 \text{ N/m}^2$	
Pressure Drop		=	0.000 bar	0% pressure drop	
Section No.:		14		Description: Node G to O	
Inlet pressure	P'_1	=	3.60 bar gauge =	$359,673 \text{ N/m}^2$	Velocity Q = 0.235 m ³ /s A = 0.017 Giving, v = 13.82 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.24 m ³ /s v = 11 m/s A = 0.021 m ² giving, d = 0.1651 m
Load	q'_h	=	3,157 SCMH =	$0.24 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0085		
Pipeline length	L_m	=	0.23 km =	230 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	180.0 mm =	180 OD	
Pipeline wall thickness	t	=	16.4 mm		
Outlet pressure	P'_2	=	3.56 bar gauge	$355,903 \text{ N/m}^2$	
Pressure Drop		=	0.038 bar	1% pressure drop	
Section No.:		15		Description: Node O to P	
Inlet pressure	P'_1	=	3.56 bar gauge =	$355,903 \text{ N/m}^2$	Velocity Q = 0.077 m ³ /s A = 0.008 Giving, v = 9.37 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.08 m ³ /s v = 11 m/s A = 0.007 m ² giving, d = 0.0944 m
Load	q'_h	=	1,022 SCMH =	$0.08 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0088		
Pipeline length	L_m	=	0.79 km =	790 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	125.0 mm =	125 OD	
Pipeline wall thickness	t	=	11.4 mm		
Outlet pressure	P'_2	=	3.47 bar gauge	$347,097 \text{ N/m}^2$	
Pressure Drop		=	0.088 bar	2% pressure drop	
Section No.:		16		Description: Node O to R	
Inlet pressure	P'_1	=	3.56 bar gauge =	$355,903 \text{ N/m}^2$	Velocity Q = 0.153 m ³ /s A = 0.017 Giving, v = 8.99 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.15 m ³ /s v = 11 m/s A = 0.014 m ² giving, d = 0.1331 m
Load	q'_h	=	2,033 SCMH =	$0.16 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0085		
Pipeline length	L_m	=	0.62 km =	620 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	180.0 mm =	180 OD	
Pipeline wall thickness	t	=	16.4 mm		
Outlet pressure	P'_2	=	3.52 bar gauge	$351,640 \text{ N/m}^2$	
Pressure Drop		=	0.043 bar	1% pressure drop	

Section No.:				Description: Node R to S			
Inlet pressure	P'_1	=	3.52 bar gauge =	$351,640 \text{ N/m}^2$		Velocity	
Load	q'_h	=	19 SCMH =	$0.00 \text{ m}^3/\text{s}$		Q =	0.001 m^3/s
Pipe friction factor	f	=	0.0088			A =	0.008
Pipeline length	L_m	=	0.24 km =	240 m		Giving, v =	0.18 m/s
Gas absolute temperature	T	=	278 Deg K =	5 °C		Sizing pipe based on 11m/s:	
Specific Gravity	S_g	=	0.6392			Q =	0.00 m^3/s
Pipeline outer diameter	D	=	125.0 mm =	125 OD		v =	11 m/s
Pipeline wall thickness	t	=	11.4 mm			A =	0.000 m^2
Outlet pressure	P'_2	=	3.52 bar gauge	$351,639 \text{ N/m}^2$		giving, d =	0.0129 m
Pressure Drop		=	0.000 bar	0% pressure drop			
Section No.:				Description: Node R to T			
Inlet pressure	P'_1	=	3.52 bar gauge =	$351,640 \text{ N/m}^2$		Velocity	
Load	q'_h	=	922 SCMH =	$0.07 \text{ m}^3/\text{s}$		Q =	0.070 m^3/s
Pipe friction factor	f	=	0.0088			A =	0.008
Pipeline length	L_m	=	3.89 km =	3,890 m		Giving, v =	8.56 m/s
Gas absolute temperature	T	=	278 Deg K =	5 °C		Sizing pipe based on 11m/s:	
Specific Gravity	S_g	=	0.6392			Q =	0.07 m^3/s
Pipeline outer diameter	D	=	125.0 mm =	125 OD		v =	11 m/s
Pipeline wall thickness	t	=	11.4 mm			A =	0.006 m^2
Outlet pressure	P'_2	=	3.14 bar gauge	$314,393 \text{ N/m}^2$		giving, d =	0.0902 m
Pressure Drop		=	0.372 bar	11% pressure drop			
Section No.:				Description: Node A to N			
Inlet pressure	P'_1	=	3.62 bar gauge =	$362,457 \text{ N/m}^2$		Velocity	
Load	q'_h	=	573 SCMH =	$0.04 \text{ m}^3/\text{s}$		Q =	0.042 m^3/s
Pipe friction factor	f	=	0.0088			A =	0.008
Pipeline length	L_m	=	0.8 km =	800 m		Giving, v =	5.16 m/s
Gas absolute temperature	T	=	278 Deg K =	5 °C		Sizing pipe based on 11m/s:	
Specific Gravity	S_g	=	0.6392			Q =	0.04 m^3/s
Pipeline outer diameter	D	=	125.0 mm =	125 OD		v =	11 m/s
Pipeline wall thickness	t	=	11.4 mm			A =	0.004 m^2
Outlet pressure	P'_2	=	3.60 bar gauge	$359,728 \text{ N/m}^2$		giving, d =	0.0700 m
Pressure Drop		=	0.027 bar	1% pressure drop			
Section No.:				Description: AGI to Node U			
Inlet pressure	P'_1	=	3.85 bar gauge =	$385,000 \text{ N/m}^2$		Velocity	
Load	q'_h	=	3,566 SCMH =	$0.26 \text{ m}^3/\text{s}$		Q =	0.248 m^3/s
Pipe friction factor	f	=	0.0085			A =	0.033
Pipeline length	L_m	=	0.9 km =	900 m		Giving, v =	7.56 m/s
Gas absolute temperature	T	=	278 Deg K =	5 °C		Sizing pipe based on 11m/s:	
Specific Gravity	S_g	=	0.6392			Q =	0.25 m^3/s
Pipeline outer diameter	D	=	250.0 mm =	250 OD		v =	11 m/s
Pipeline wall thickness	t	=	22.7 mm			A =	0.023 m^2
Outlet pressure	P'_2	=	3.82 bar gauge	$381,600 \text{ N/m}^2$		giving, d =	0.1695 m
Pressure Drop		=	0.034 bar	1% pressure drop			

Section No.:		21		Description: AGI to Node V	
Inlet pressure	P'_1	=	3.85 bar gauge =	$385,000 \text{ N/m}^2$	Velocity Q = 0.021 m ³ /s A = 0.008 Giving, v = 2.61 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.02 m ³ /s v = 11 m/s A = 0.002 m ² giving, d = 0.0498 m
Load	q'_h	=	308 SCMH =	$0.02 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0088		
Pipeline length	L_m	=	0.92 km =	920 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	125.0 mm =	125 OD	
Pipeline wall thickness	t	=	11.4 mm		
Outlet pressure	P'_2	=	3.84 bar gauge	$384,149 \text{ N/m}^2$	
Pressure Drop		=	0.009 bar	0% pressure drop	
Section No.:		22		Description: AGI to Node W	
Inlet pressure	P'_1	=	3.85 bar gauge =	$385,000 \text{ N/m}^2$	Velocity Q = 0.010 m ³ /s A = 0.008 Giving, v = 1.26 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.01 m ³ /s v = 11 m/s A = 0.001 m ² giving, d = 0.0347 m
Load	q'_h	=	149 SCMH =	$0.01 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0088		
Pipeline length	L_m	=	0.6 km =	600 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	125.0 mm =	125 OD	
Pipeline wall thickness	t	=	11.4 mm		
Outlet pressure	P'_2	=	3.85 bar gauge	$384,870 \text{ N/m}^2$	
Pressure Drop		=	0.001 bar	0% pressure drop	
Section No.:		23		Description: AGI to Node X (Coalisland)	
Inlet pressure	P'_1	=	3.85 bar gauge =	$385,000 \text{ N/m}^2$	Velocity Q = 0.141 m ³ /s A = 0.017 Giving, v = 8.29 m/s <i>Sizing pipe based on 11m/s:</i> Q = 0.14 m ³ /s v = 11 m/s A = 0.013 m ² giving, d = 0.1279 m
Load	q'_h	=	2,028 SCMH =	$0.15 \text{ m}^3/\text{s}$	
Pipe friction factor	f	=	0.0085		
Pipeline length	L_m	=	3.5 km =	3,500 m	
Gas absolute temperature	T	=	278 Deg K =	5 °C	
Specific Gravity	S_g	=	0.6392		
Pipeline outer diameter	D	=	180.0 mm =	180 OD	
Pipeline wall thickness	t	=	16.4 mm		
Outlet pressure	P'_2	=	3.62 bar gauge	$362,329 \text{ N/m}^2$	
Pressure Drop		=	0.227 bar	6% pressure drop	