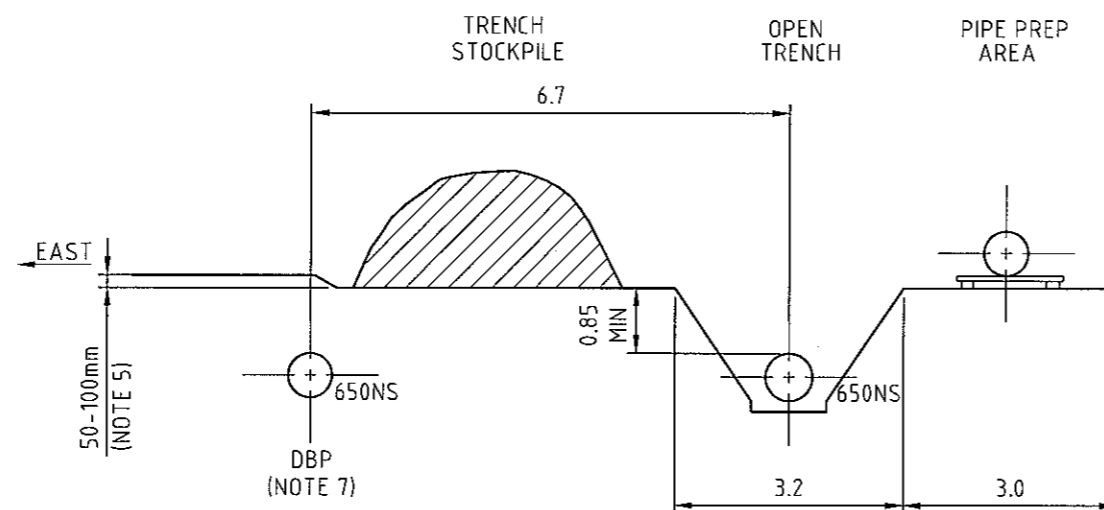
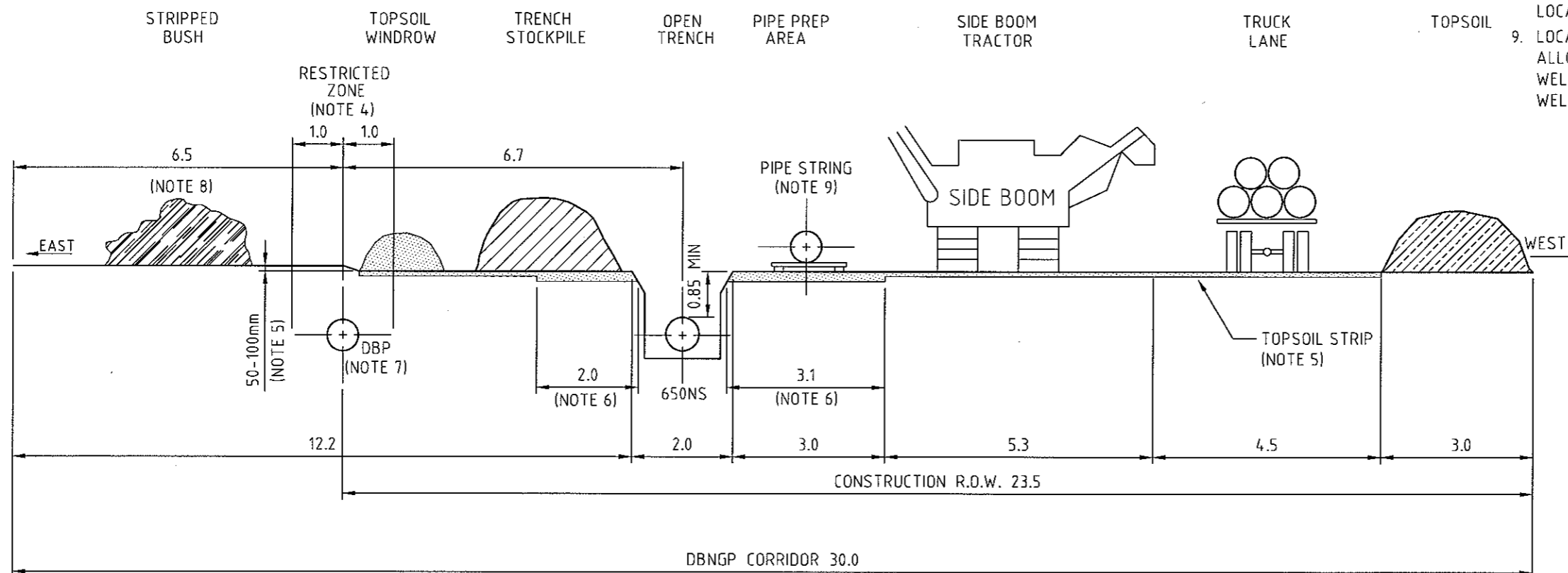


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DETAIL 1
(NOTE 3)



NOTE:

1. ALL DIMENSIONS ARE IN METRES U.N.O. AND ARE NOMINAL
2. THE SKETCH REPRESENTS TRENCHING IN FIRM STABLE GROUND
3. TRENCH WIDTH WILL INCREASE IN LOOSE SANDY GROUND. REFER DETAIL 1
4. HEAVY MACHINERY IS PROHIBITED FROM CROSSING THE DBNGP, UNLESS ISSUED WITH AN APPROPRIATE PERMIT TO WORK. NO EQUIPMENT OR GROUND CONTACT ALLOWED WITHIN RESTRICTED AREA UNLESS OTHERWISE APPROVED
5. SUBJECT TO THE EXTENT AND TYPE OF TOPSOIL THE R.O.W. WILL BE STRIPPED TO A DEPTH OF 50-100mm.
6. SUBJECT TO THE EXTENT AND TYPE OF TOPSOIL THE R.O.W. AND TRENCH BOX AREA WILL BE STRIPPED TO AN ADDITIONAL 50-100mm AS DIRECTED BY THE PRINCIPAL
7. CENTRELINE OF DBP WILL BE PEGGED BY PRINCIPAL
8. BRUSH STRIPPED OFF R.O.W. CAN BE STORED IN LOCATION INDICATED
9. LOCATION OF PIPE STRING TO BE BY CONTRACTOR TO ALLOW FOR CLEARANCE TO EITHER SIDE OF PIPE FOR WELDING WITH TRENCH IN SITU, OR TRENCHED AFTER WELDING.

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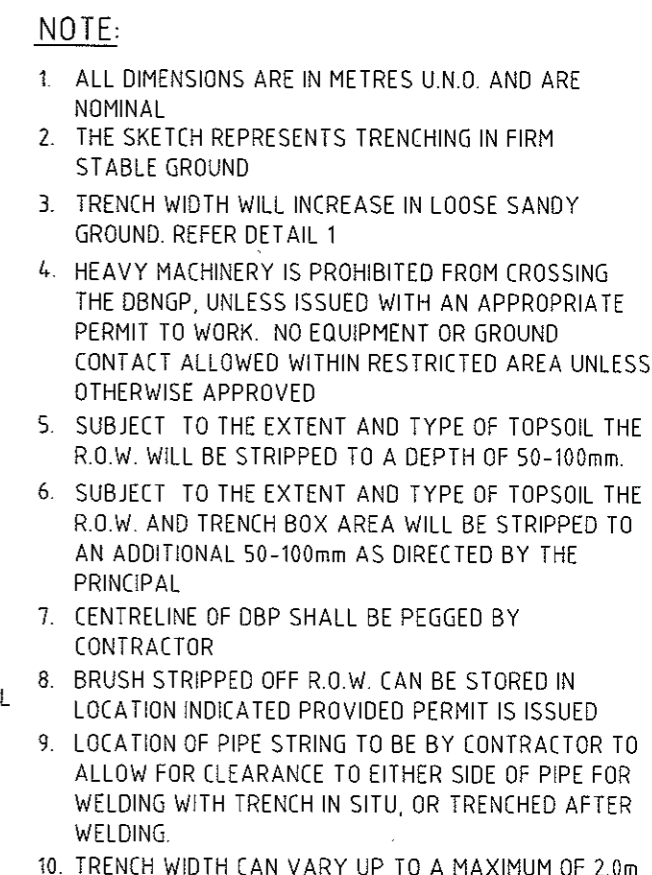
DAMPIER BUNBURY
NATURAL GAS PIPELINE
STAGE 5 LOOPING
MLV7-MLV10, LOOPS 1 TO 5 & LOOP 6 TO KP 915
TYPICAL PROPOSED AREA OF R.O.W. DISTURBANCE
R1 LOCATION CLASSIFICATION



WorleyParsons
resources & energy

LEVEL 6 QV1, 250 ST GEORGES TERRACE
PERTH, W.A. 6000
PH: +61 8 9278 8111 - FAX: +61 8 9278 8110
ACN 001 279 812

<div style="border-bottom: 1px solid black; width: 100%; height: 20px;"></div> MANAGER ENGINEERING		DRG. No. DBPL00-C-020-01		REV 2	
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CAD FILE NAME	DBPL00-C-020-01.dwg				

[illegible]

DAMPIER BUNBURY
NATURAL GAS PIPELINE
STAGE 5 LOOPING
MLV7-MLV10, LOOPS 1 TO 5 & LOOP 6 TO KP 915
TYPICAL PROPOSED AREA OF R.O.W. DISTURBANCE
R1 LOCATION CLASSIFICATION



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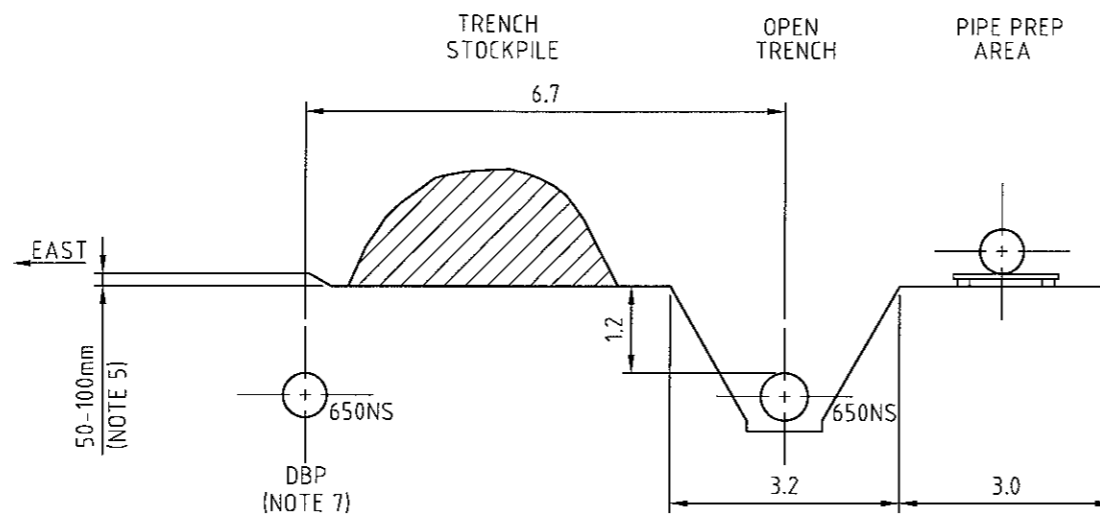
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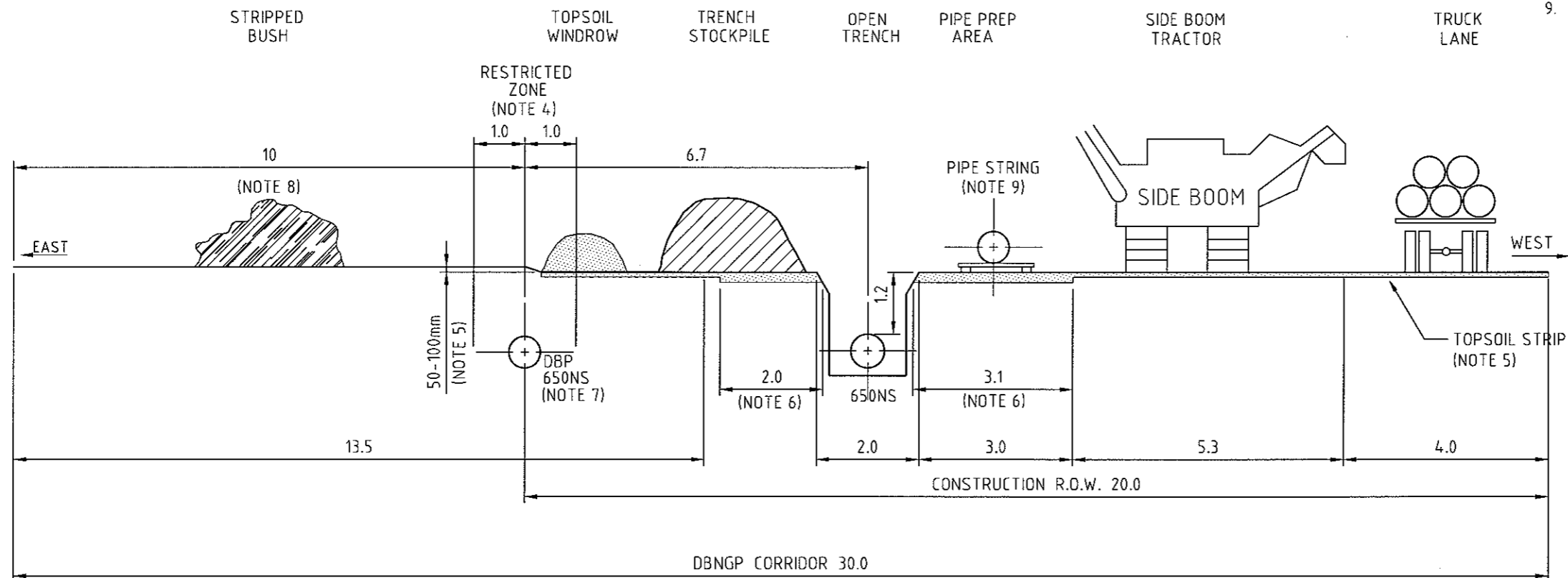
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NOTE:

1. ALL DIMENSIONS IN METRES U.N.O. AND ARE NOMINAL
2. THE SKETCH REPRESENTS TRENCHING IN FIRM STABLE GROUND
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7. CENTRELINE OF DBP WILL BE PEGGED BY PRINCIPAL
8. BRUSH STRIPPED OFF R.O.W. CAN BE STORED IN LOCATION INDICATED
9. LOCATION OF PIPE STRING TO BE BY CONTRACTOR TO ALLOW FOR CLEARANCE TO EITHER SIDE OF PIPE FOR WELDING WITH TRENCH IN SITU, OR TRENCHED AFTER WELDING



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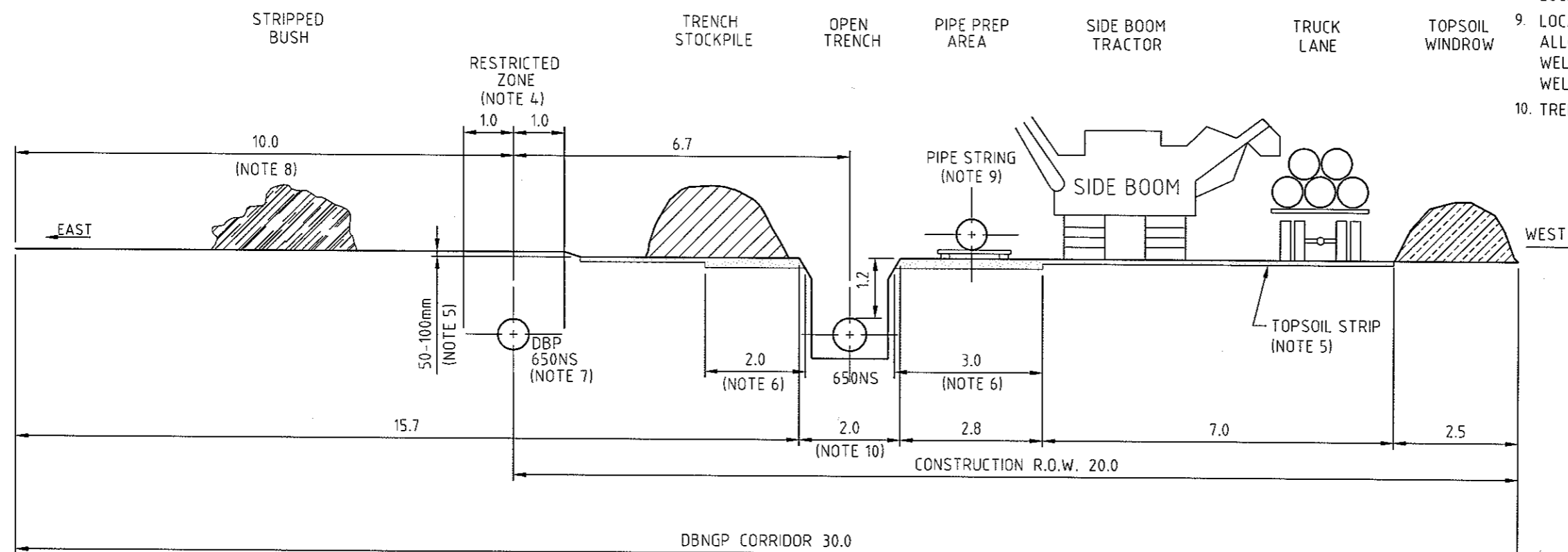
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SECONDARY SIGNATURES					
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1	07.06.06	ISSUED FOR INTERNAL REVIEW	KR		
REV	DATE	DESCRIPTION	DRAWN	CHK'D	R.O. MNGR

**DAMPIER BUNBURY
NATURAL GAS PIPELINE
STAGE 5 LOOPING**
LOOPS 6 FROM KP 915 ONWARD & LOOPS 7,8 & 9
TYPICAL PROPOSED AREA OF R.O.W. DISTURBANCE
ON 10 METRE OFFSET (EXISTING DBNGP)

MANAGER ENGINEERING		DRG. No. DBPL00-C-021-01	REV 2
DATE	SCALE 1:10 UNO	CONT'D ON SH	A3
CAD FILE NAME DBPL00-C-021-01.dwg			



1. ALL DIMENSIONS IN METRES U.N.O. AND ARE NOMINAL
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6. SUBJECT TO THE EXTENT AND TYPE OF TOPSOIL THE R.O.W. AND TRENCH BOX AREA WILL BE STRIPPED TO AN ADDITIONAL 50-100mm AS DIRECTED BY THE PRINCIPAL
7. CENTRELINER OF DBP SHALL BE PEGGED BY CONTRACTOR
8. BRUSH STRIPPED OFF R.O.W. CAN BE STORED IN LOCATION INDICATED PROVIDED PERMIT IS ISSUED
9. LOCATION OF PIPE STRING TO BE BY CONTRACTOR TO ALLOW FOR CLEARANCE TO EITHER SIDE OF PIPE FOR WELDING WITH TRENCH IN SITU, OR TRENCHED AFTER WELDING
10. TRENCH WIDTH CAN VARY UP TO A MAXIMUM OF 2.0m



								PRIMARY SIGNATURES	
								DRAFT, CHECK	
								RESP. OFFICER	
								SECTION HEAD	
								SECONDARY SIGNATURES	
3	04.07.06	ISSUED FOR TENDER	AR	770	SR				
2	19.06.06	ISSUED FOR SQUAD CHECK/CLIENT REVIEW	AF						
1	07.06.06	ISSUED FOR INTERNAL REVIEW	KR						
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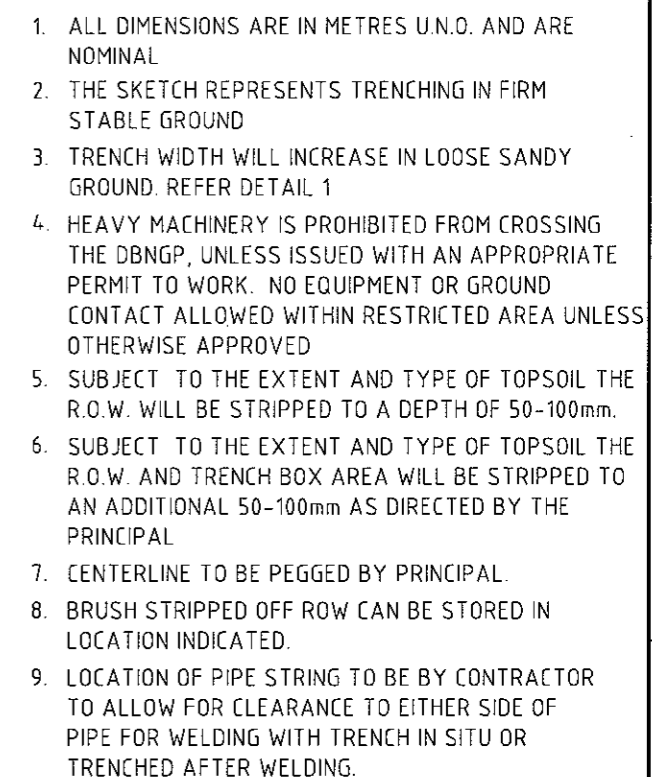
DAMPIER BUNBURY
NATURAL GAS PIPELINE
STAGE 5 LOOPING
LOOPS 6 FROM KP 915 ONWARD & LOOPS 7,8 & 9
TYPICAL PROPOSED AREA OF R.O.W. DISTURBANCE
ON 10 METRE OFFSET (EXISTING DBNGP)



WorleyParsons
resources & energy

LEVEL 6 QV1, 250 ST GEORGES TERRACE
PERTH, W.A. 6000
PH: +61 8 9278 8111 - FAX: +61 8 9278 8110
ACN 001 279 812

<div style="border-bottom: 1px solid black; width: 100%;"></div> MANAGER ENGINEERING		DRG. No. DBPL00-C-021-01		REV 3	
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CAD FILE NAME	DBPL00-C-021-01.dwg				



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										RESP. OFFICER	
										SECTION HEAD	
										SECONDARY SIGNATURES	
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1	07.06.06	ISSUED FOR INTERNAL REVIEW			KR						
REV	DATE	DESCRIPTION				DRAWN	CHK'D	R.O.	MNGR		

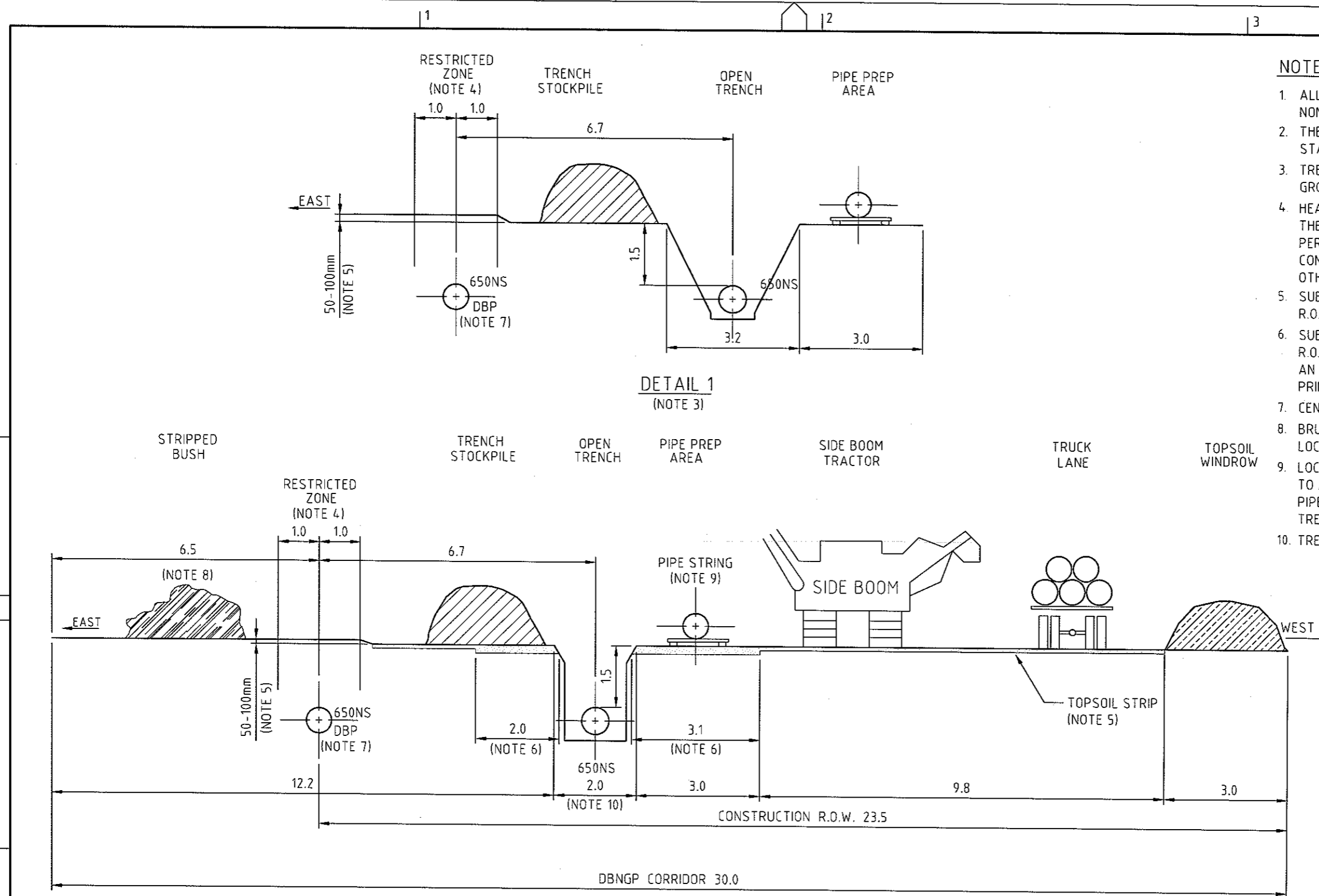
DAMPIER BUNBURY
NATURAL GAS PIPELINE
STAGE 5 LOOPING
LOOPS 10 & 11 km IN LOOP 9
TYP. PROPOSED AREA OF R.O.W. DISTURBANCE ON 6.5m
OFFSET (EXIST. DBNGP) IN AREAS T1 & R2 (1.5m DOC)



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LEVEL 6 QV1, 250 ST GEORGES TERRACE
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DATE		SCALE	1:10	CONT'D ON SH	-
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NOTE:

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7. CENTERLINE SHALL BE PEGGED BY CONTRACTOR.
8. BRUSH STRIPPED OFF ROW CAN BE STORED IN LOCATION INDICATED PROVIDED A PERMIT IS ISSUED
9. LOCATION OF PIPE STRING TO BE BY CONTRACTOR TO ALLOW FOR CLEARANCE TO EITHER SIDE OF PIPE FOR WELDING WITH TRENCH IN SITU OR TRENCHED AFTER WELDING.
10. TRENCH WIDTH CAN VARY UP TO A MAXIMUM OF 2.0m

REV	DATE	DESCRIPTION	DRAWN	CHK'D	R.O.	MNGR	PRIMARY SIGNATURES
							DRAFT. CHECK
							RESP. OFFICER
							SECTION HEAD
							SECONDARY SIGNATURES
3	04.07.06	ISSUED FOR TENDER	AR	PD	CL		
2	19.06.06	ISSUED FOR SQUAD CHECK/CLIENT REVIEW	AF				
1	07.06.06	ISSUED FOR INTERNAL REVIEW	KR				

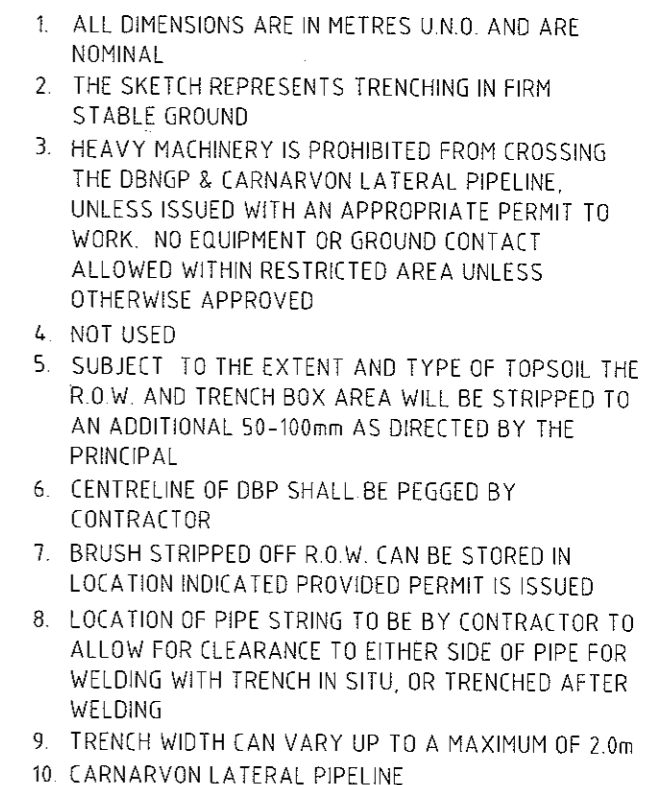
DAMPIER BUNBURY
NATURAL GAS PIPELINE
STAGE 5 LOOPING
LOOPS 10 & 11 km IN LOOP 9
TYP. PROPOSED AREA OF R.O.W. DISTURBANCE ON 6.5m
OFFSET (EXIST. DBNGP) IN AREAS T1 & R2 (1.5m DOC)



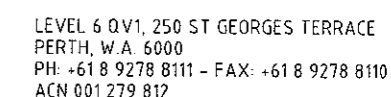
WorleyParsons
resources & energy

LEVEL 6 QV1, 250 ST GEORGES TERRACE
PERTH, W.A. 6000
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MANAGER ENGINEERING		DRG. No.	REV
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DATE	SCALE	1:10	CONT'D ON SH
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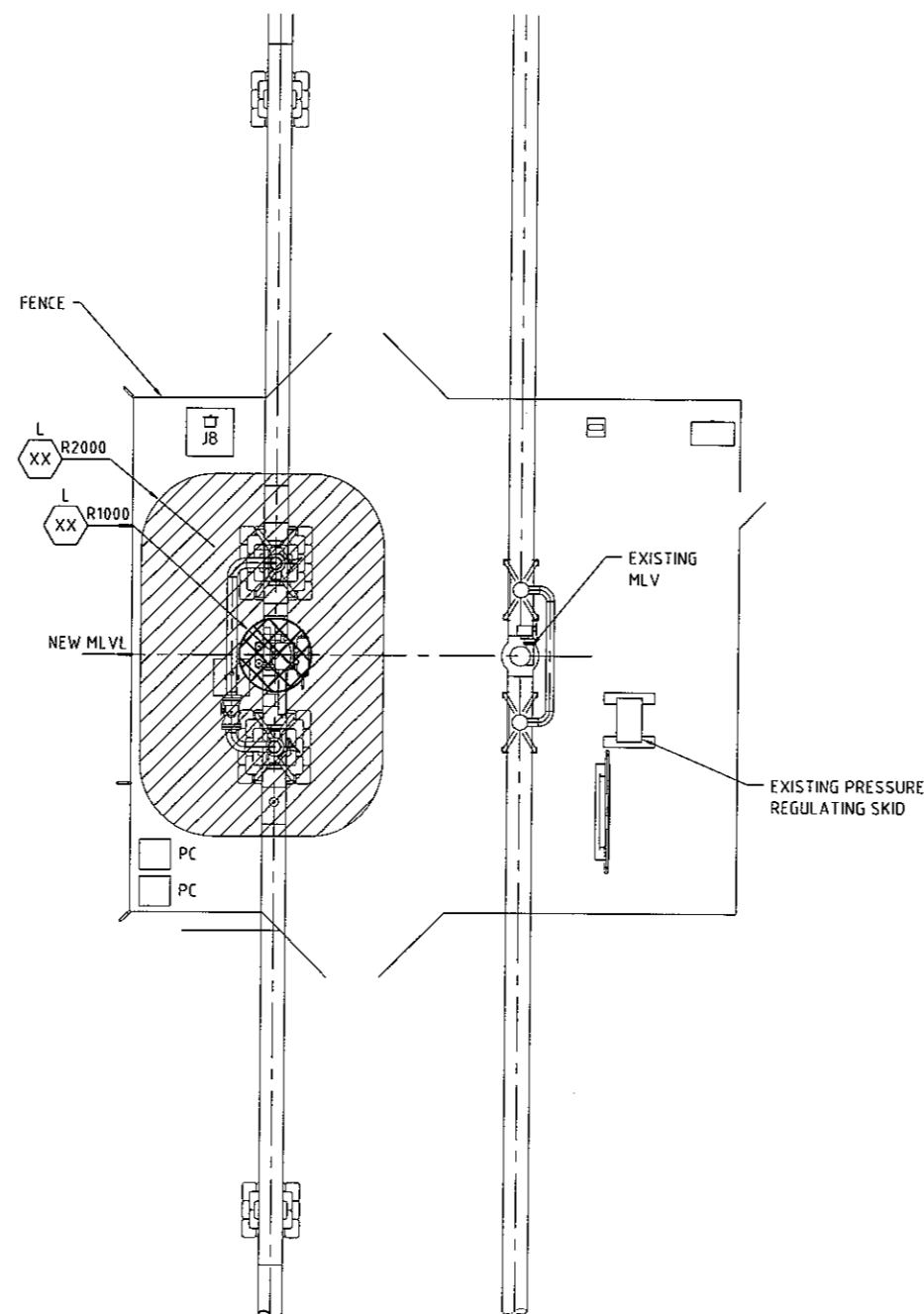
DAMPIER BUNBURY
NATURAL GAS PIPELINE
STAGE 5 LOOPING
TYPICAL PROPOSED AREA OF R.O.W. DISTURBANCE
R1 LOCATION CLASSIFICATION
LOOP 4-KP578 TO KP578.14
CARNARVON OFF-TAKE



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DATE		SCALE	1:10	CONT'D ON SH
CAD FILE NAME		DBPL00-C-023-01.dwg		



STATION
NORTH



PLAN
SCALE 1:100

STAGE 5A

LOOP NUMBER	SITE No.	EXISTING DWG No.
MLV 7	MLV 7	MLV007-E-005-01
MLV 7	MLV 9	P3-041-0093-01
LOOP 1	MLV 19	P3-041-0153-01
LOOP 2	MLV 33	P3-041-0273-01
LOOP 3	MLV 43	P3-041-0313-01
LOOP 4	MLV 55	P3-041-0393-01
LOOP 4	MLV 57	P3-041-0429-01
LOOP 5	MLV 69	P3-041-0533-01
LOOP 6	MLV 79	P3-041-0573-01
LOOP 7	MLV 91	P3-041-0653-01
LOOP 8	MLV 105	P3-041-0765-01
LOOP 9	MLV 115	P3-041-0833-01
LOOP 9	MLV 116	P3-041-0853-01
LOOP 9	MLV 142	P3-041-1031-01

STAGE 5B

LOOP NUMBER	SITE No.	
LOOP 1	MLV 21	P3-041-0193-01
LOOP 3	MLV 45	P3-041-0353-01
LOOP 6	MLV 81	P3-041-0610-01
LOOP 7	MLV 93	MLV93-E-002-02
LOOP 9	MLV 117	MLV117-E-002-01
LOOP 9	MLV 118	MLV118-E-002-01
LOOP 9	MLV 119	P3-041-0911-01

GENERAL NOTES

- HAZARDOUS AREA CLASSIFICATIONS DEFINED AS PER AS/NZS 2430.3.4. (2004), HAZARDOUS AREA CLASSIFICATION SCHEDULE AND PROJECT DESIGN BASIS DOCUMENT.

LEGEND

- ZONE 0, GROUP IIA, TEMP T2, HAZARDOUS AREA
- ZONE 1, GROUP IIA, TEMP T2, HAZARDOUS AREA
- ZONE 2, GROUP IIA, TEMP T2, HAZARDOUS AREA
- # HAZARDOUS AREA DESIGNATION
DENOTES PROJECT AND ASSOCIATED REFERENCE SCHEDULE:
L = STAGE 5 LOOPING, HAZARDOUS AREA SCHEDULE

EXISTING HAZARDOUS AREA LAYOUTS

HAZARDOUS AREA LAYOUTS FOR EXISTING PLANT ARE NOT SHOWN. REFER TO EXISTING HAZARDOUS AREA DRAWINGS FOR COMPLETE DETAILS OF THE EXISTING HAZARDOUS AREA SITE LAYOUT.



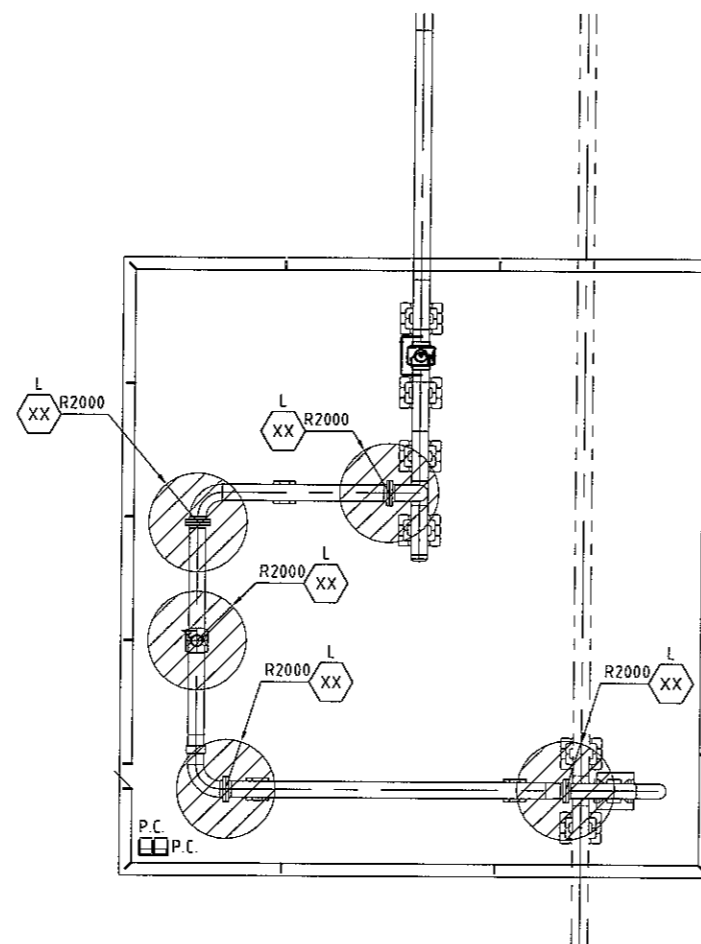
INFORMATION ONLY
NOT TO BE USED
FOR CONSTRUCTION



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TERRACE PERTH, W.A. 6000
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ACN 001 275 812

DAMPIER - BUNBURY NATURAL GAS PIPELINE STAGE 5 LOOPING TYPICAL MLV TYPE 1 HAZARDOUS AREA LAYOUT

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STATION
NORTH

PLAN
SCALE 1:150




STAGE 5A	
LOOP NUMBER	SITE No.
MLV 7	MLV 9
LOOP 1	MLV 20
LOOP 2	MLV 33
LOOP 3	MLV 44
LOOP 4	MLV 57
LOOP 5	MLV 69
LOOP 6	MLV 80
LOOP 7	MLV 92
LOOP 8	MLV 116
LOOP 9	MLV 162

STAGE 5B	
LOOP NUMBER	SITE No.
MLV 7	MLV 10
LOOP 1	MLV 22
LOOP 2	MLV 34
LOOP 3	MLV 45
LOOP 4	MLV 58
LOOP 5	MLV 70
LOOP 6	MLV 81
LOOP 7	MLV 93
LOOP 8	MLV 106
LOOP 9	MLV 119

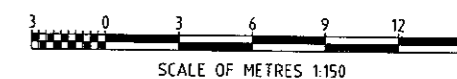
GENERAL NOTES

1. HAZARDOUS AREA CLASSIFICATIONS DEFINED AS PER AS/NZS 2430.3.4. (2004), HAZARDOUS AREA CLASSIFICATION SCHEDULE AND PROJECT DESIGN BASIS DOCUMENT.

LEGEND

-  ZONE 0, GROUP IIA, TEMP T2, AREA
 ZONE 1, GROUP IIA, TEMP T2, AREA
 ZONE 2, GROUP IIA, TEMP T2, AREA

HAZARDOUS AREA DESIGNATION
DENOTES PROJECT AND ASSOCIATED REFERENCE
SCHEDULE
L = STAGE 5 LOOPING, HAZARDOUS AREA
CLASSIFICATION SCHEDULE.



INFORMATION ONLY
NOT TO BE USED
FOR CONSTRUCTION



WorleyParsons
resources & energy

LEVEL 6 QV1, 250 ST GEORGE
TERRACE PERTH, W A. 6000
PH: +61 8 9278 8111
FAX: +61 8 9278 8110
ACN 001 279 812

DAMPIER - BUNBURY NATURAL GAS PIPELINE
STAGE 5 LOOPING
TYPICAL LOOP END
HAZARDOUS AREA LAYOUT

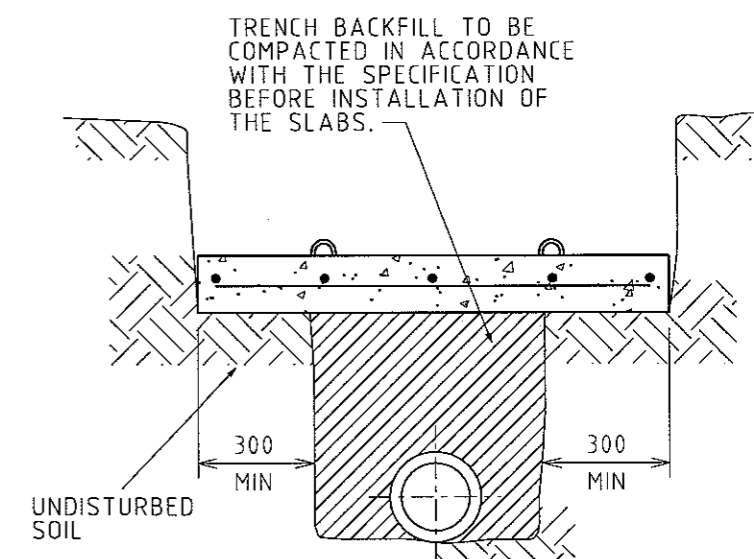
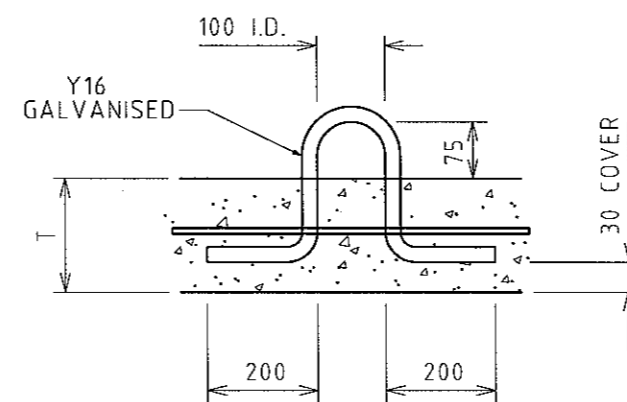
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		DRG. No.		REV	
----- MANAGER ENGINEERING		DBPL00-E-131-02		2	
DATE		SCALE		CONT'D ON CU	
CAD FILE NAME DBPL00-E-131-02.DWG		AS SHOWN			

CAD FILE: DBPLOG-E-131-02.dwg

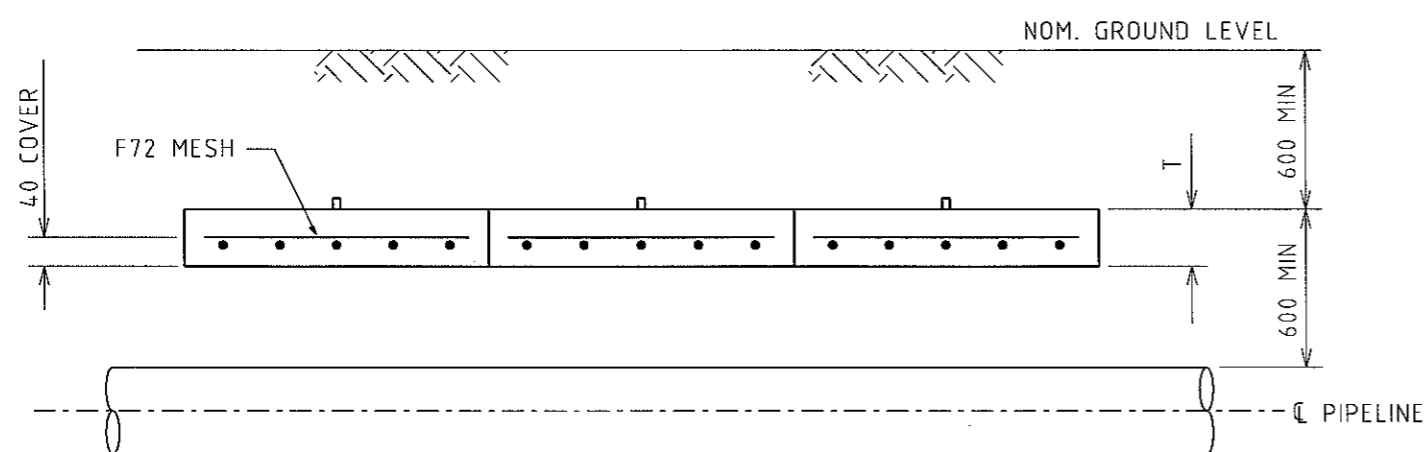
LOCATION H:\ANS\40000016\CAD\EL\SKY\

DATE & TIME 26.06.06 10:15 USER NAME U_AME

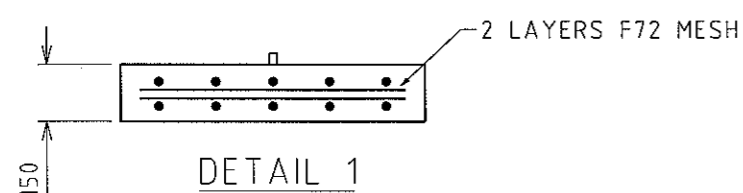


LIFTING HOOK DETAIL

TYPICAL SECTION



ELEVATION



"W" = 1800

PIPELINE DIAMETER	W	T	REMARKS
UP TO 300	1200	100	
UP TO 450	1500	100	
UP TO 600	1800	150	SEE DETAIL 1

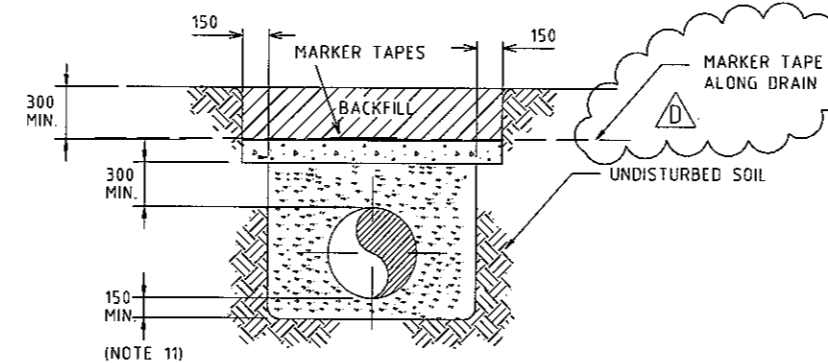
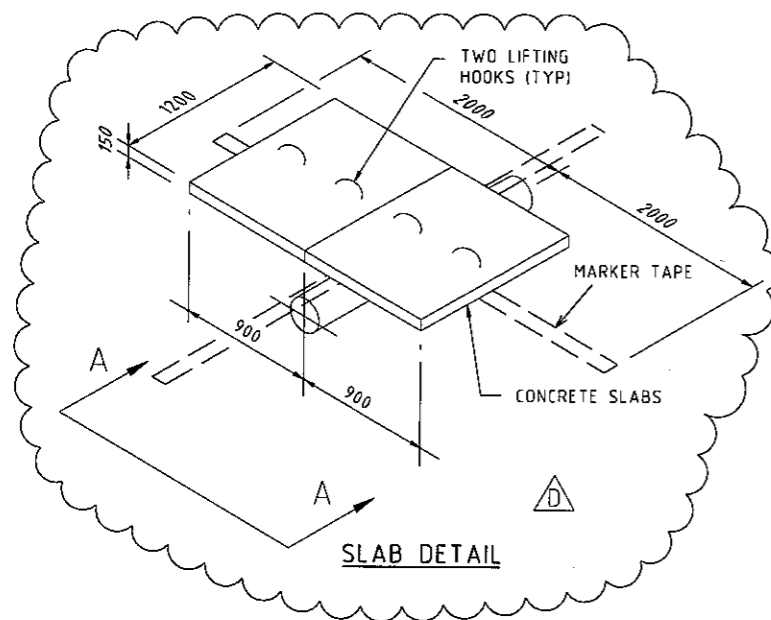
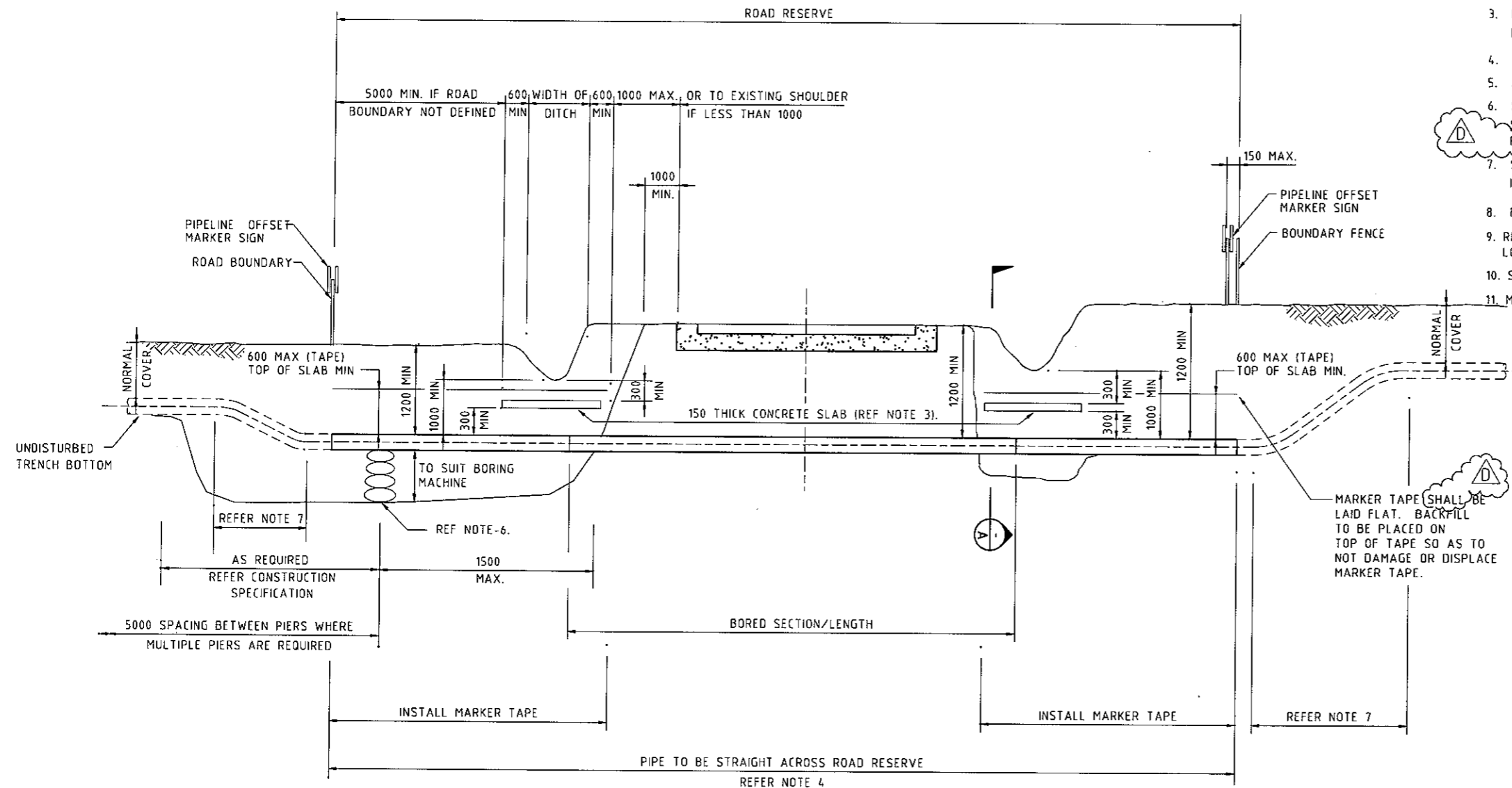
INFORMATION ONLY
NOT TO BE USED
FOR CONSTRUCTION

NOTES:

1. CONTRACTOR SHALL INSTALL PRECAST CONCRETE SLABS AS SHOWN ON CONSTRUCTION DRAWINGS OR AS DIRECTED BY SUPERINTENDANT.
2. FOR PRECAST CONCRETE SLABS, CONTRACTOR SHALL FURNISH ALL MATERIAL AND CAST SLABS.
3. THE WORDS "HIGH PRESSURE GAS PIPELINE" IN 50mm HIGH LETTERS SHALL BE CAST IN EACH SLAB.
4. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF F'C = 20 MPa AT 28 DAYS.
5. MINIMUM NUMBER OF SLABS SHALL BE THREE (3) OR AS DIRECTED BY SUPERINTENDANT OR AS SHOWN ON APPROPRIATE GA DRAWING.
6. PROVIDE 30mm MINIMUM COVER TO REINFORCEMENT.
7. CONTRACTOR MAY PROVIDE INSITU CONCRETE ALTERNATIVE TO PRECAST SLABS, INSITU SLABS SHALL BE 150 THICK UNREINFORCED.
8. ALL TRENCH EXCAVATION & BACKFILL SHALL BE IN ACCORDANCE WITH THE SPECIFICATION.
9. MINIMUM COVER OF PIPELINE SHALL BE AS SHOWN ON THE ALIGNMENT SHEET.

NOTES:

1. BORED SECTION OF PIPE TO BE STRAIGHT ACROSS ROAD RESERVE.
2. FOR JOINT COATINGS REFER TO CONSTRUCTION SPECIFICATION.
3. DRAWN AS IN SITU UNREINFORCED CONCRETE. SLAB 1000 mm WIDE. REF SLAB DETAIL FOR PRE-CAST ALTERNATIVE.
4. REFER RELEVANT ALIGNMENT SHEET FOR PIPE WALL THICKNESS.
5. ALL VOID SPACE TO BE PUMPED WITH SUITABLE GROUT.
6. SAND BAGS SHALL BE 0.015m³ VOLUME FILLED TO 40% CAPACITY WITH 16:1 MIX OF STABILISED SAND AND LAID ON CONSOLIDATED UNDISTURBED SOIL. SANDBAGS TO BE POLYPROPYLENE (NOT HESSIAN).
7. SAG BENDS AND OVER BENDS TO RESUME NORMAL PIPELINE DEPTH SHALL BE IN ACCORDANCE WITH APPLICABLE SECTION OF THE CONSTRUCTION SPECIFICATION.
8. FOR CONCRETE COATING REFER TO EPIC PIPING SPECIFICATION "C".
9. RE-INSTATEMENT OF EXCAVATED TRENCH TO BE IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS
10. SEALING OF ROAD SURFACE IS TO BE BY LOCAL AUTHORITY
11. MINIMUM 150mm THK CLEAN SAND AT 95% COMPACTION



SECTION A-A

WorleyParsons
resources & energy
LEVEL 6 DVI, 250 ST GEORGES TERRACE
PERTH, W.A. 6000
PH: +61 8 9278 8111 - FAX: +61 8 9278 8110
ACN 001 279 812

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Epic Energy (WA) Transmission Pty Ltd.
Engineering
DRG No. **GST-G-1011-01** REV **D**
DATE **4 Feb 06** SCALE **NTS** CONT'D **ON SH**
FILE NAME **GST-G-1011-01.DWG**

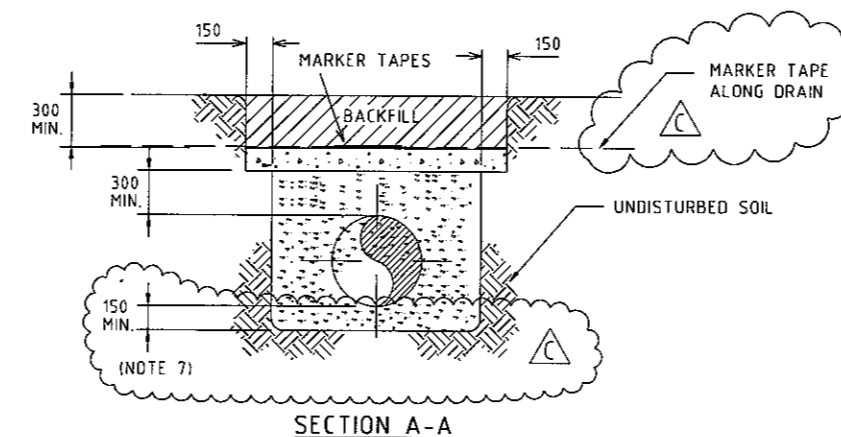
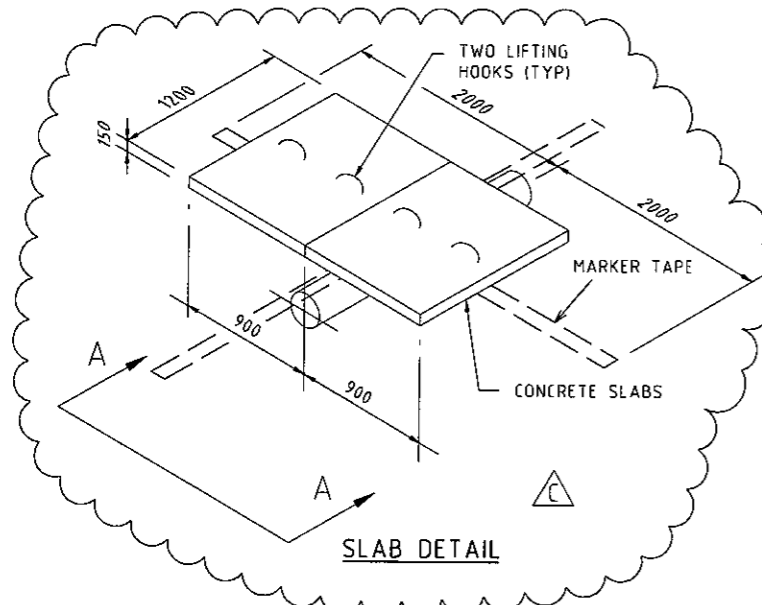
**DAMPIER BUNBURY NATURAL GAS PIPELINE
STANDARD DRAWING
TYPICAL BITUMEN ROAD CROSSING BORED**

REVISION		PRIMARY SIGNATURES	
NO.	DESCRIPTION	DATE	SIGNATURE
D	31.05.06 REVISED AS NOTED	NR	
C	16.09.05 ISSUED FOR CONSTRUCTION DOWP LOOPING PROJECT	SFC	
B	28.08.01 ISSUED FOR CLIENT APPROVAL	SH	
A	08.08.01 ISSUED FOR REVIEW	SH	
REV	DATE	DESCRIPTION	DRAWN CHECKED S.P. THIER

NO.	DESCRIPTION
GST-G-1041-01	TYPICAL SIGN LOCATION PLAN LOOPING
GST-G-1027-01	TYPICAL PIPELINE SIGN DETAIL
GST-G-1026-01	TYPICAL SIGN LOCATION PLAN

DRAWING REFERENCES
DRAWING NO.
DRAWING REFERENCES




1. DRAWN AS IN SITU UNREINFORCED CONCRETE. SLAB 1000 mm WIDE. REF SLAB DETAIL FOR PRE-CAST ALTERNATIVE.
2. REFER TO RELEVANT ALIGNMENT SHEET FOR PIPE WALL THICKNESS.
3. SAG BENDS AND OVER BENDS TO RESUME NORMAL PIPELINE DEPTH SHALL BE IN ACCORDANCE WITH APPLICABLE SECTION OF THE CONSTRUCTION SPECIFICATION.
4. REINSTATEMENT OF EXCAVATED TRENCH TO BE IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS.
5. SEALING OF ROAD SURFACE IS TO BE BY LOCAL AUTHORITY.
6. HEAVY WALL PIPE TO BE USED ACCROSS ROAD RESERVE.
7. MINIMUM 150mm THK CLEAN SAND AT 95% COMPACTION.

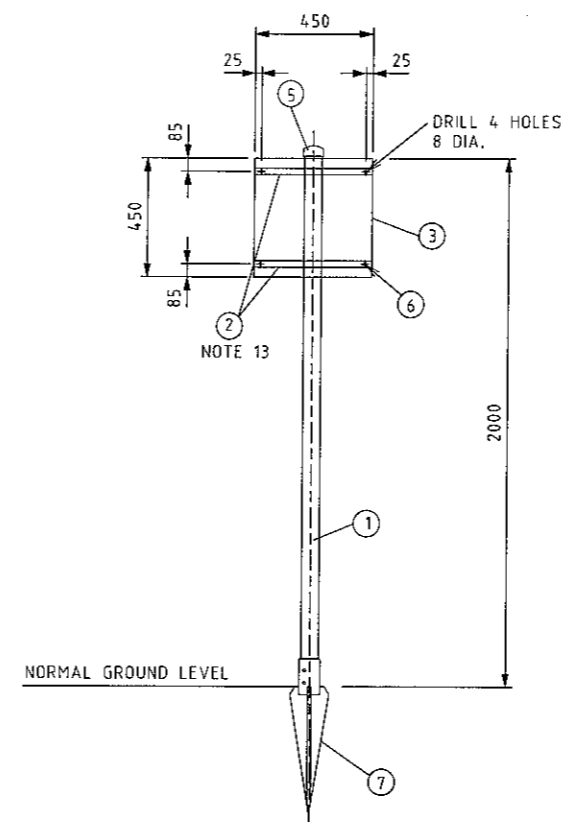
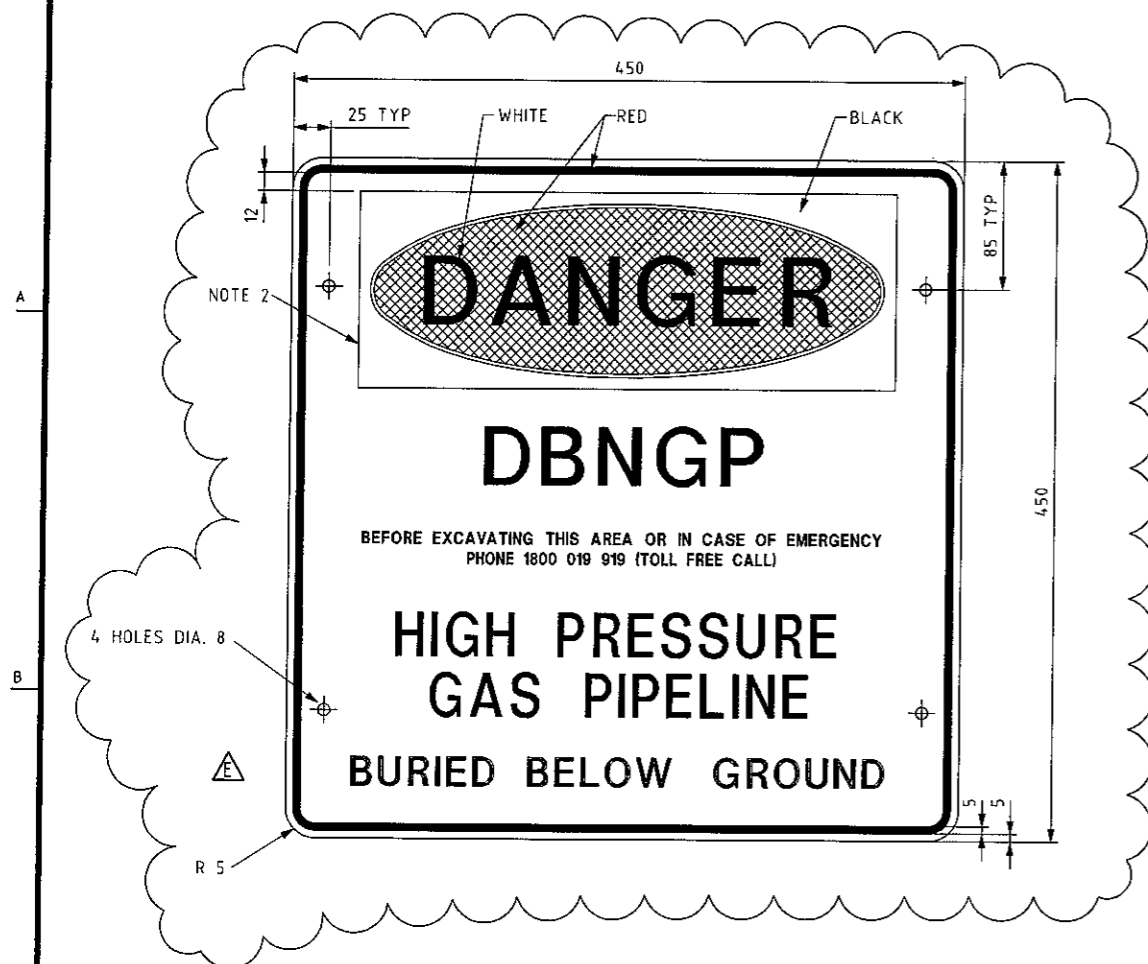


GST-G-1043-01	TYPICAL SIGN LOCATION PLAN LOOPING		
GST-G-1027-01	TYPICAL PIPELINE SIGN DETAIL		
GST-G-1026-01	TYPICAL SIGN LOCATION PLAN		
DRAWING No.	DRAWING DESCRIPTIONS	DRAWING No.	DRAWING DESCRIPTIONS

						PRIMARY SIGNATURES			
						E&CFT, CHRC			
						DIST. CENTER			
						SECTION HEAD			
						SECONDARY SIGNATURES			
C	16.09.05	APPROVED FOR CONSTRUCTION		AF					
B	28.08.01	ISSUED FOR CLIENT APPROVAL		SH	JD	MM			
A	08.08.01	ISSUED FOR REVIEW		SH	JD	MM			
DIST.	E&CFT	PRESIDENT		CHRC	CHRC	F.O	THIRD		

DAMPIER-BUNBURY NATURAL GAS PIPELINE
STANDARD DRAWING
TYPICAL ROAD CROSSING OPEN CUT

 WorleyParsons resources & energy	LEVEL 6 QV1, 250 ST GEORGES TERRACE PERTH, W.A. 6000 PH - +61 8 9278 8111 - FAX - +61 8 9278 8110 ACN 001 279 812	
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 epicenergy	Epic Energy (WA) Transmission Pty. Ltd. <h1>Engineering</h1>	
 MANAGER ENGINEERING	DRG. No.	REV
GST-10-12-01		C
DATE <u>27.06.06</u>	S&LF NIS	CONT'D ON SH
CAC FILE REF#	GST-G-1012-01DGN	- AI



ONE PLATE SHOWN
PIPELINE WARNING MARKER


- NOTES
PIPELINE WARNING MARKER

- 1 DELETED
- 2 THE WORD DANGER AND SURROUNDING DETAIL TO
AS1319-1994.
- 3 OTHER WORDING OF SIGN BLACK LETTERS ON WHITE
BACKGROUND.
- 4 WARNING SIGN TO BE CONSTRUCTED FROM 1.6mm THICK
MARINE GRADE ALUMINIUM (MGA)
- 5 DELETED
- 6 SIGN SHALL BE MGA - POWDER COATED AND SCREEN PRINTED
WITH ENAMEL ARTWORK
- 7 SIGN SUPPLIED WITH GALV. STRAPS AND 4-M6 x 20LG.
GALV. BOLTS, NUTS AND WASHERS.
- 8 MARKERS SHALL BE LOCATED ALONG R.O.W. AS PER
SPECIFICATION AND 1.5m FROM THE PIPELINE.
- 9 ALL STEEL WORK SHALL BE HOT DIPPED GALVANISED,
AFTER WELDING.
- 10 DELETED
- 11 CONCRETE TO BE 20MPa AT 28 DAYS IN ACCORDANCE WITH
AS3600.
- 12 WARNING SIGN BOTH SIDES OF POST i.e. 2 SIGNS PER
POST BACK TO BACK.
- 13 WELD TO BOTH SIDES OF PIPE
- 14 USE "OZ-POST" METAL POST SUPPORT
TYPE S600 FOR HARD CLAY/SHALE
TYPE SW750 FOR SAND/SOFT SOIL

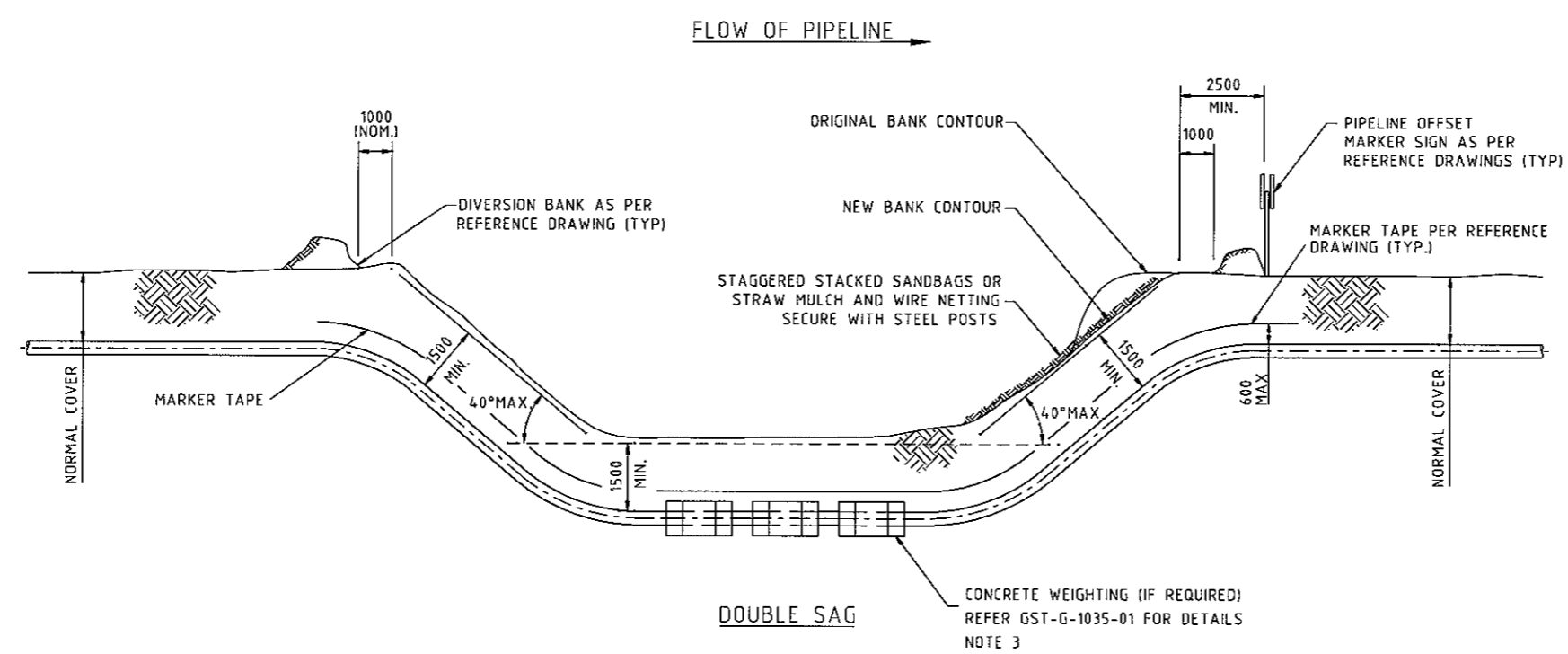
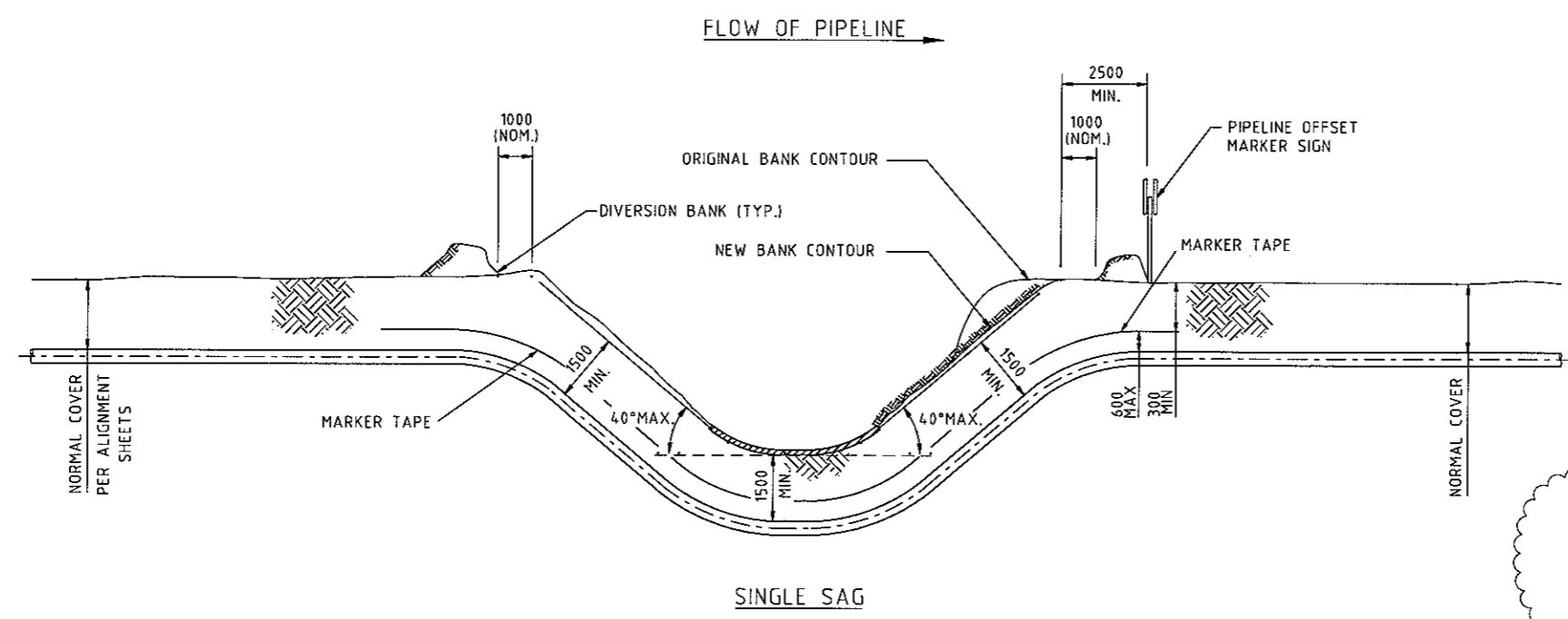
7	1	OZ-POST SUPPORT S600 OR SW750
6	8	GUTTER BOLTS M6 x 20 LG C/W NUTS & WASHERS (GALV.)
5	1	CAP TO SUIT DN40 PIPE GALVANISED
4	1	PLATE 100 x 100 x 6 THICK
3	2	PLATE 450 x 450 x 1.6 THICK
2	4	FLAT 25 x 6 PLATE x 450 LONG
1	1	PIPE Ø50 OD GALVANISED PIPE x 2000 LONG
ITEM	QTY	DESCRIPTION

							PRIMARY SIGNATURES							
													DRAFT CHECK	
													RFST. OFFICE	JALB
													SECTION HEAD	CAL
							SECONDARY SIGNATURES							
E	11.01.06	REVISED AS NOTED RE-ISSUED FOR CONSTRUCTION DBNGP LOOPING PROJECT	KR				SFC	JB	AH	AH				
D	30.11.05	REVISED AS NOTED RE-ISSUED FOR CONSTRUCTION DBNGP LOOPING PROJECT	SFC	JB	AH	AH								
C	16.09.05	ISSUED FOR CONSTRUCTION DBNGP LOOPING PROJECT	SFC	FUG	AH	AH								
B	28.08.01	ISSUED FOR CLIENT APPROVAL	SH											
A	08.08.01	ISSUED FOR REVIEW	SH	JD	MM									
REF.	DATE	DESCRIPTION	FEELAH	WRT	G.P	THICK								

DAMPIER - BUNBURY NATURAL GAS PIPELINE
STANDARD DRAWING
TYPICAL PIPELINE SIGN DETAIL

	<h1 style="margin: 0;">WorleyParsons</h1>	
	<p>LEVEL 6 CV1, 250 ST GEORGES TERRACE, PERTH, W.A. 6000</p>	
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- NOTES**
1. THE USE OF A SINGLE SAG OR DOUBLE SAG SHALL BE DETERMINED BY THE WIDTH OF THE CROSSING.
 2. WHERE THERE IS EVIDENCE OF SCOUR OR EROSION OF THE BANKS, THE SAG BENDS SHALL BE LOCATED WITHIN THE BANKS FAR ENOUGH SUCH THAT A MIN. 2000 COVER IS ENSURED.
 3. REFER ALIGNMENT SHEETS FOR LINE PIPE WALL THICKNESS, PIPE COATING, CONTINUOUS CONCRETE COATING OR SADDLE WEIGHTS.
 4. ALL DIMENSIONS IN MILLIMETRES
 5. WATER TO BE DIVERTED THROUGH FLUME PIPES DURING TRENCHING AND CONSTRUCTION THROUGH THE WATERCOURSE REFER DWG: GST-G-1031-01
 6. CONCRETE SHALL BE MINIMUM N20 TO AS3600
 7. BANKS SHALL BE RESTORED BY GRADING AND REINSTATING ALL DISTURBED GROUND IN ACCORDANCE WITH THE REFERENCING DRAWING.
 8. REFER CEMP'S AND APPROVED WORK PROCEDURES FOR ENVIRONMENTAL REQUIREMENTS OF CONSTRUCTION AND REINSTATEMENT.



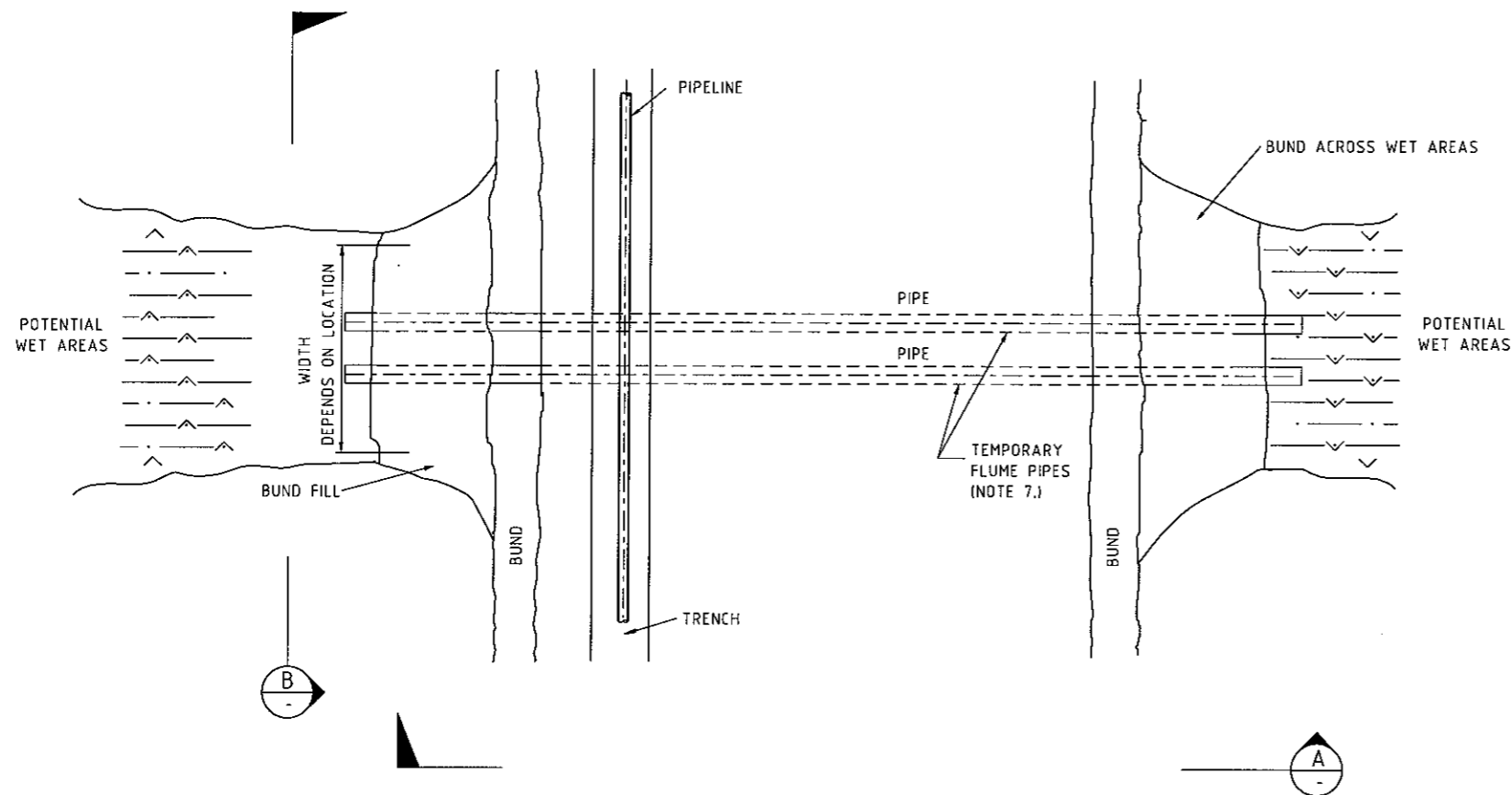
DRAWING No.		DRAWING REFERENCES		DRAWING No.		DRAWING REFERENCES	
GST-G-1020-01		TYPICAL DETAIL OF BANK STABILISATION		GST-G-1027-01		TYPICAL PIPELINE SIGN DETAIL	
GST-G-1035-01		TYP. PIPELINE CONCRETE COATING AND SADDLE WEIGHTS		GST-G-1031-01		TYPICAL FLUME PIPE CROSSING	
GST-G-1030-01		TYPICAL FLUME PIPE CROSSING					

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DATE 3 JUL 06		SCALE NYS	CONT'D ON SH
CAD FILE NAME GST-G-1030-01.dwg		A1	

**DAMPIER BUNBURY NATURAL GAS PIPELINE
STANDARD DRAWING
TYPICAL - MINOR WATER CROSSING**

NOTES:

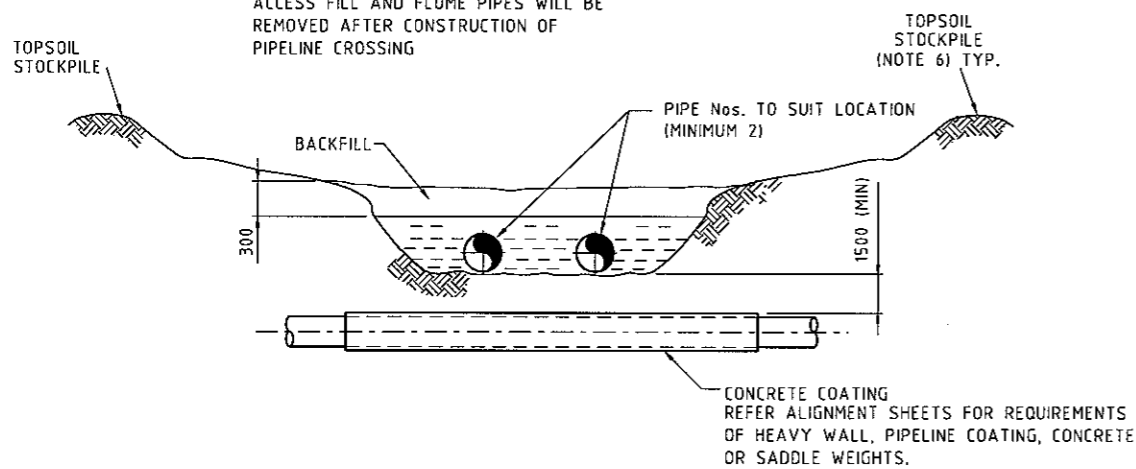
1. ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. CONTINUOUS CONCRETE OR SADDLE WEIGHTS SHALL BE USED WHERE NOMINATED ON THE ALIGNMENT SHEETS AND INSTALLED IN ACCORDANCE WITH THE REFERENCE DRAWING.
3. EROSION CONTROL BANKS SHALL BE INSTALLED IN ACCORDANCE WITH THE REFERENCE DRAWING.
4. TRENCH BREAKERS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS AND REFERENCE DRAWING.
5. BANKS SHALL BE RESTORED BY GRADING AND REINSTATE ALL DISTURBED GROUND IN ACCORDANCE WITH THE REFERENCE DRAWING.
6. TOPSOIL STRIPPED FROM AREA TO BE DISTRIBUTED AND STORED AT TOP OF BANKS FOR SUBSEQUENT REINSTATEMENT.
7. FLUME PIPE TO BE SIZED FOR 125% OF MAXIMUM EXPECTED FLOW.
8. REFER CEMP'S FOR ENVIRONMENTAL REQUIREMENTS OR CONSTRUCTION INCLUDING REINSTATEMENT.
9. CONTRACTORS SUPERINTENDANT SHALL CONFIRM DIMENSION OF THE TEMPORARY BUILD-UP AND THE REQUIREMENT FOR STABILISATION BASED ON PREVAILING CONDITIONS



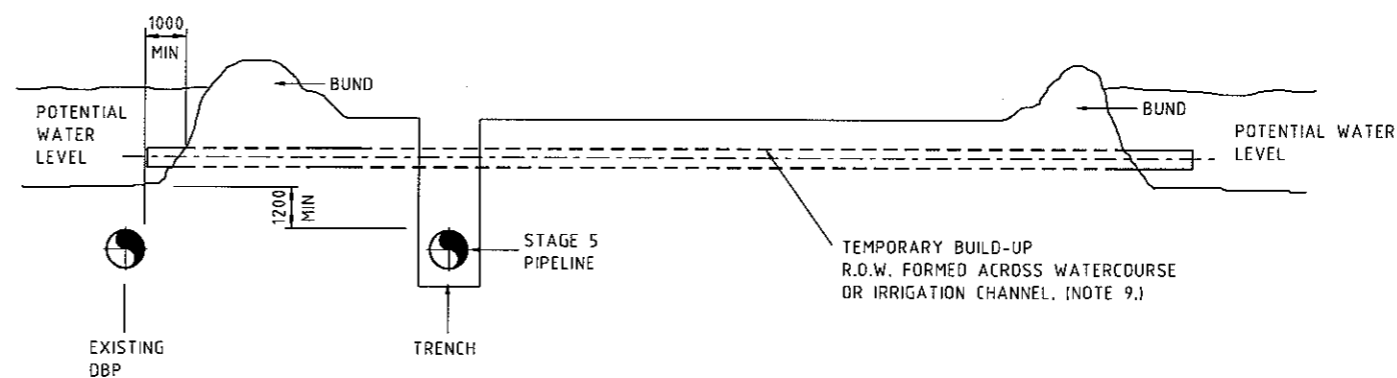
PIPE CROSSING THROUGH WATERCOURSE OR IRRIGATION CHANNELS

SCALE 1:100

NOTE:
ACCESS FILL AND FLUME PIPES WILL BE
REMOVED AFTER CONSTRUCTION OF
PIPELINE CROSSING



SECTION B-B
SCALE 1:50



SECTION A-A



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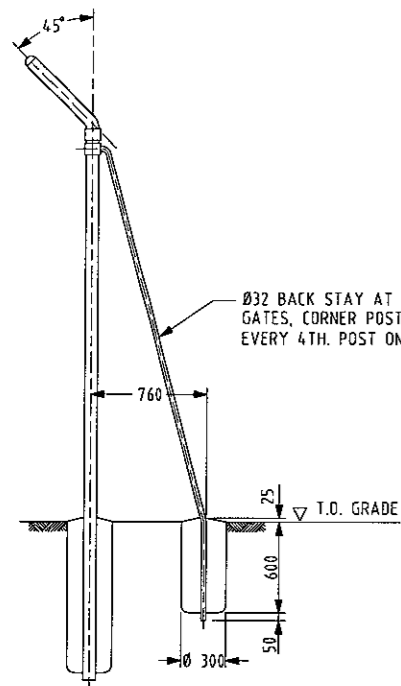
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ACN 001 279 812

DAMPIER BUNBURY NATURAL GAS PIPELINE
STANDARD DRAWING
TYPICAL - FLUME PIPE CROSSING THROUGH
WATERCOURSES

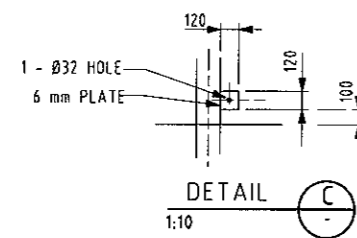
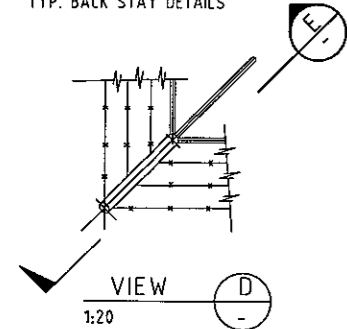
DRAWING REFERENCES				DRAWING REFERENCES			
GST-G-1020-01	TYPICAL DETAIL OF BANK STABILISATION	GST-G-1035-01	TYPICAL PIPELINE CONCRETE COATING & SADDLE WEIGHTS				
GST-G-1036-01	TYPICAL EROSION BANK DETAIL						
DRAWING No.	DRAWING REFERENCES	DRAWING No.	DRAWING REFERENCES				

REVISION				PRIMARY SIGNATURES			
B	15.06.06	REVISED AS NOTED		DRAFT CHECK			
A	26.07.05	APPROVED FOR CONSTRUCTION DONGP LOOPING PROJECT		RESP. OFFICER			
REV	DATE	DESCRIPTION		SECTION HEAD			
				SECONDARY SIGNATURES			

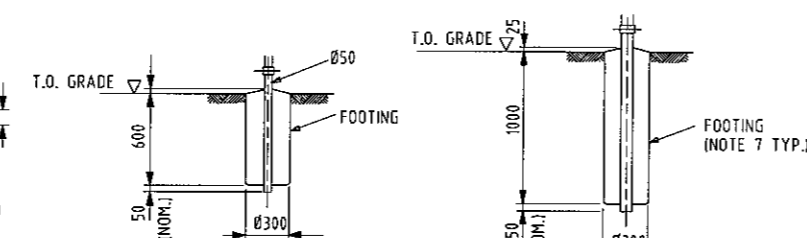
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14/06/2006	1:50	NTS			B
CAD FILE NAME	GST-G-1031-01.dgn				A1



SECTION E
1:20
TYP. BACK STAY DETAILS

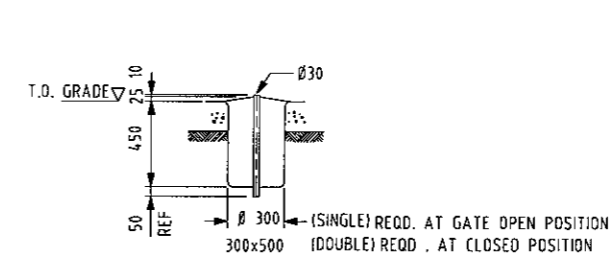


DETAIL C
1:10
TYP. EARTHING LUG DETAIL
NOTE 4

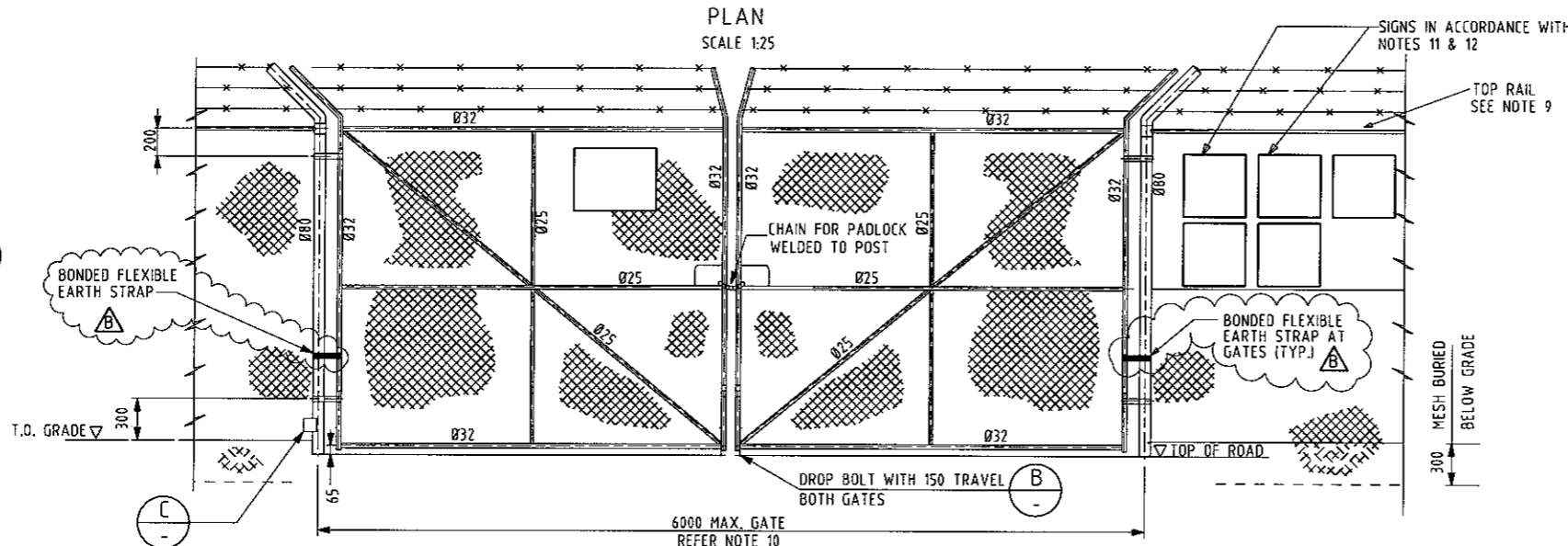


DETAIL G
1:20
TYP. INTERMEDIATE POST FOOTING DETAIL

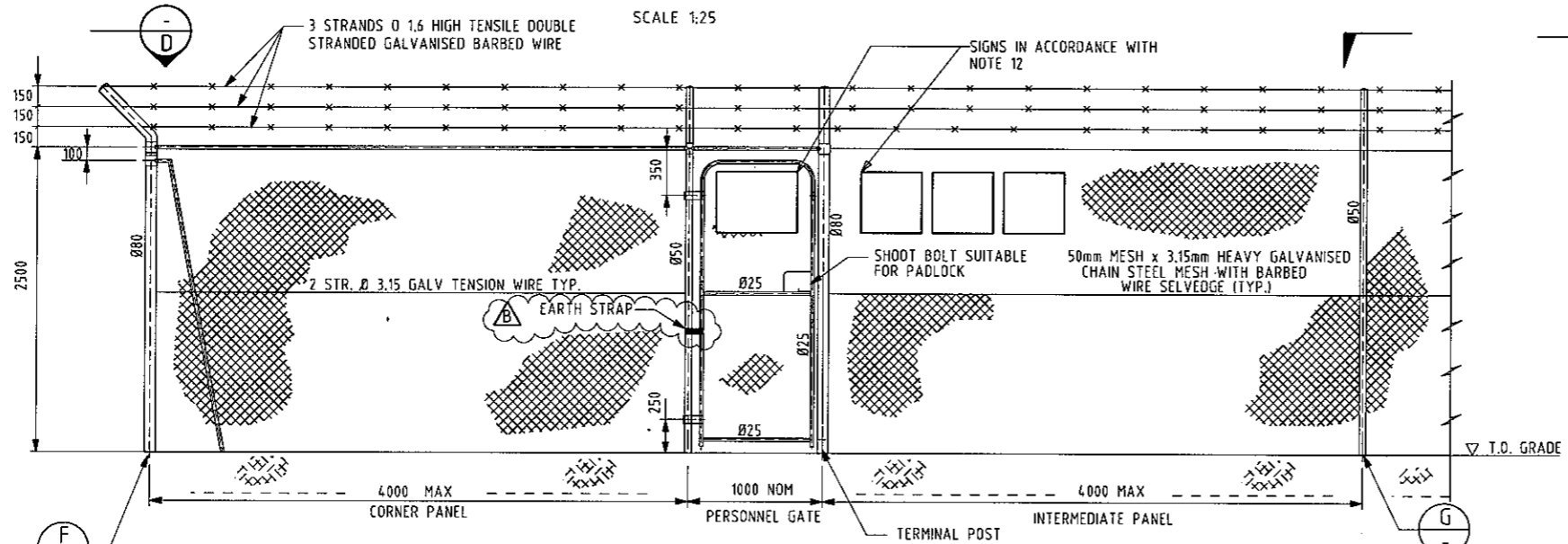
DETAIL F
1:20
TYP. TERMINAL & CORNER POST FOOTING DETAIL



DETAIL B
1:20
GATE DROP BOLT LOCATION PIPE



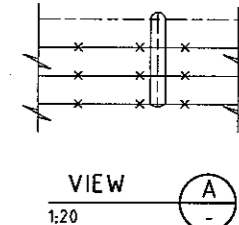
ELEVATION - TYPICAL SWING GATE



ELEVATION - TYPICAL CORNER PANEL, PERSONNEL GATE, INTERMEDIATE PANEL

SCALE 1:25

- FENCE NOTES**
1. CONSTRUCTION OF CHAINWIRE FENCE TO BE IN ACCORDANCE WITH A.S.1725
 2. ALL POSTS TO BE GALVANISED MEDIUM WT. STEEL PIPES TO A.S.1074 FITTED WITH CAPS
 3. CONSTRUCT POST FOUNDATION SO THAT NO MOISTURE CAN ACCUMULATE INSIDE POSTS BY ALLOWING THE BOTTOM OF POST TO PROTRUDE THROUGH THE CONCRETE FOUNDATION
 4. EARTHING LUGS TO BE PROVIDED ON ALL POSTS. LUGS TO BE MOUNTED 100 ABOVE GRADE
 5. FITTINGS SHALL BE STD. GALV. SPLIT COMPRESSION TYPE TO A.S.1074
 6. FENCE DESIGNED FOR MAX. WIND VELOCITY OF 69 m/s
 7. CONCRETE FOOTINGS TO AS 3600 & MINIMUM F'C 25MPa AT 28 DAYS
 8. DAMAGED SURFACES TO BE MADE GOOD BY APPLYING TWO COATS ZINC RICH PAINT GREY IN COLOUR
 9. RAILS OF Ø40 GALVANISED MEDIUM PIPE TO A.S.1074 SHALL BE FITTED IN TOP POSITIONS OF CHAINWIRE MESH AT CORNER PANELS AND PANELS ADJACENT TO MAIN GATES.
 10. FOR GATES WIDTHS BETWEEN 6000 & 8000 USE Ø100 TERMINAL POSTS & Ø40 OUTER FRAME MEMBERS FOR GATE. Ø100 TERMINAL POSTS TO BE SET IN 1200 x Ø450 FOOTINGS.
 11. SECURE SIGNS TO MESH FENCE FACING TO OUTSIDE OF COMPOUND
 12. SIGN TYPES, NUMBERS AND LOCATIONS TO BE AS PER KEYPLAN ON DRG No GST-G-1040-01



VIEW A
1:20



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DAMPIER BUNBURY NATURAL GAS PIPELINE
STANDARD DRAWING
TYPICAL - STATION SITE FENCE DETAIL

DATE: 3/06/06		SCALE: NTS		CONT'D ON SH - A1	
DRAFT: CHECK		RESP. OFFICER		SECTION HEAD	
SECONDARY SIGNATURES		REV: 1:04/06		REVISED AS NOTED	
REV: 1:04/06		APPROVED FOR CONSTRUCTION FOR DMBP LOOPING PROJECT		AF: SFC FG AH AH	
DRAWN: CHK'D		R.D. PMGR			

DRAWING No.	DRAWING REFERENCES
GST-G-1040-01	COMPOUND SIGN DETAILS

REV	DATE	DESCRIPTION
B	1:04/06	REVISED AS NOTED
A	1:04/05	APPROVED FOR CONSTRUCTION FOR DMBP LOOPING PROJECT

NOTES

1. SANDBAGS TO BE POLYPROPYLENE (NOT HESSIAN). SANDBAGS TO BE 0.015M³ NOMINAL VOLUME FILLED TO APPROX. 40% CAPACITY WITH 16:1 STABILISED SAND
2. BEDDING IS ONLY REQUIRED WHERE TRENCH BASE CONDITIONS ARE POTENTIALLY INJURIOUS TO PIPELINE COATING
3. MARKER SIGN SHALL BE INSTALLED IN ACCORDANCE WITH REFERENCED DRAWING, OFFSET FROM PIPELINE AND FIBRE OPTIC CABLE AS INDICATED
4. TRENCH TO BE IN ACCORDANCE WITH REFERENCED DRAWING

A

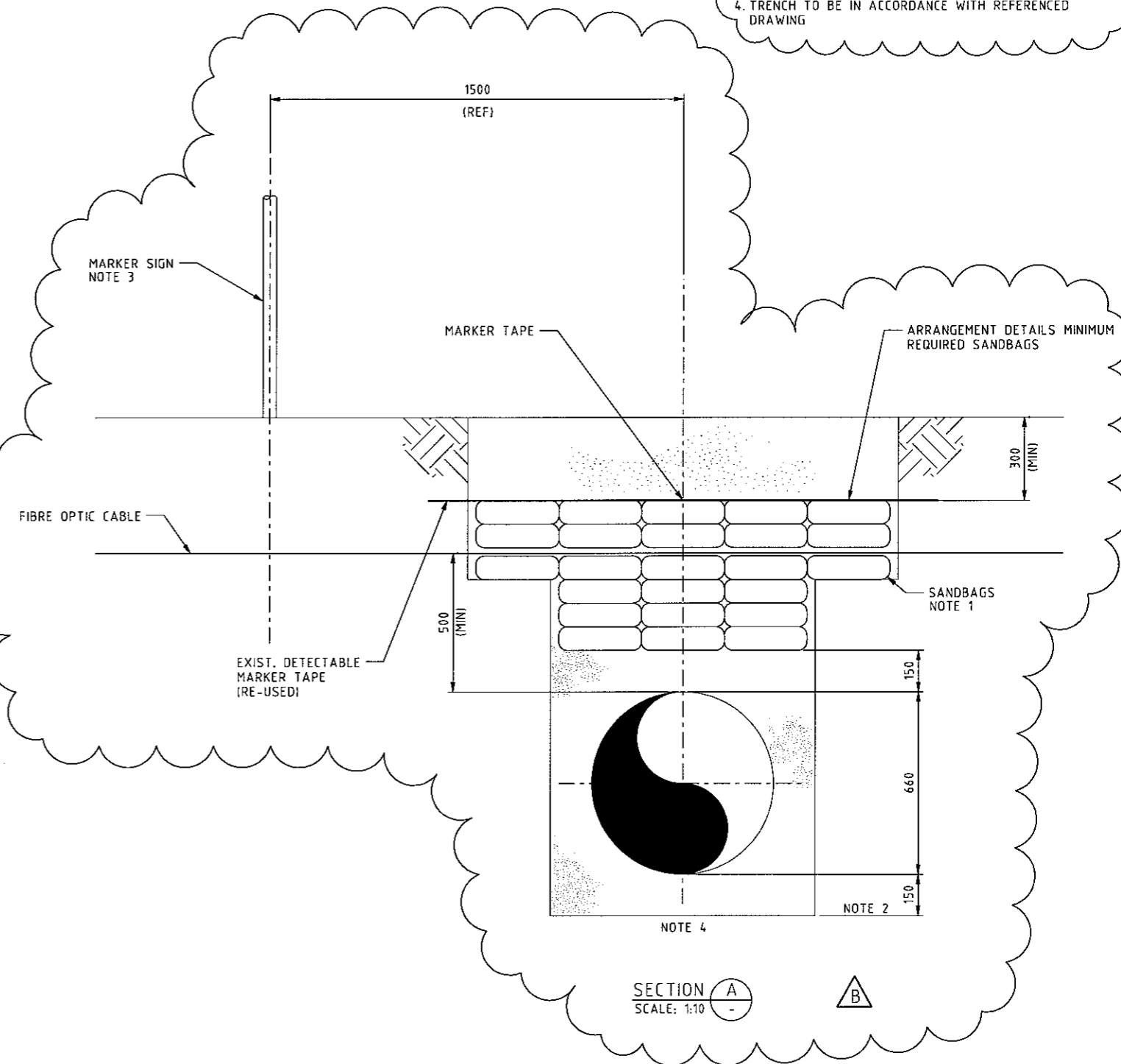
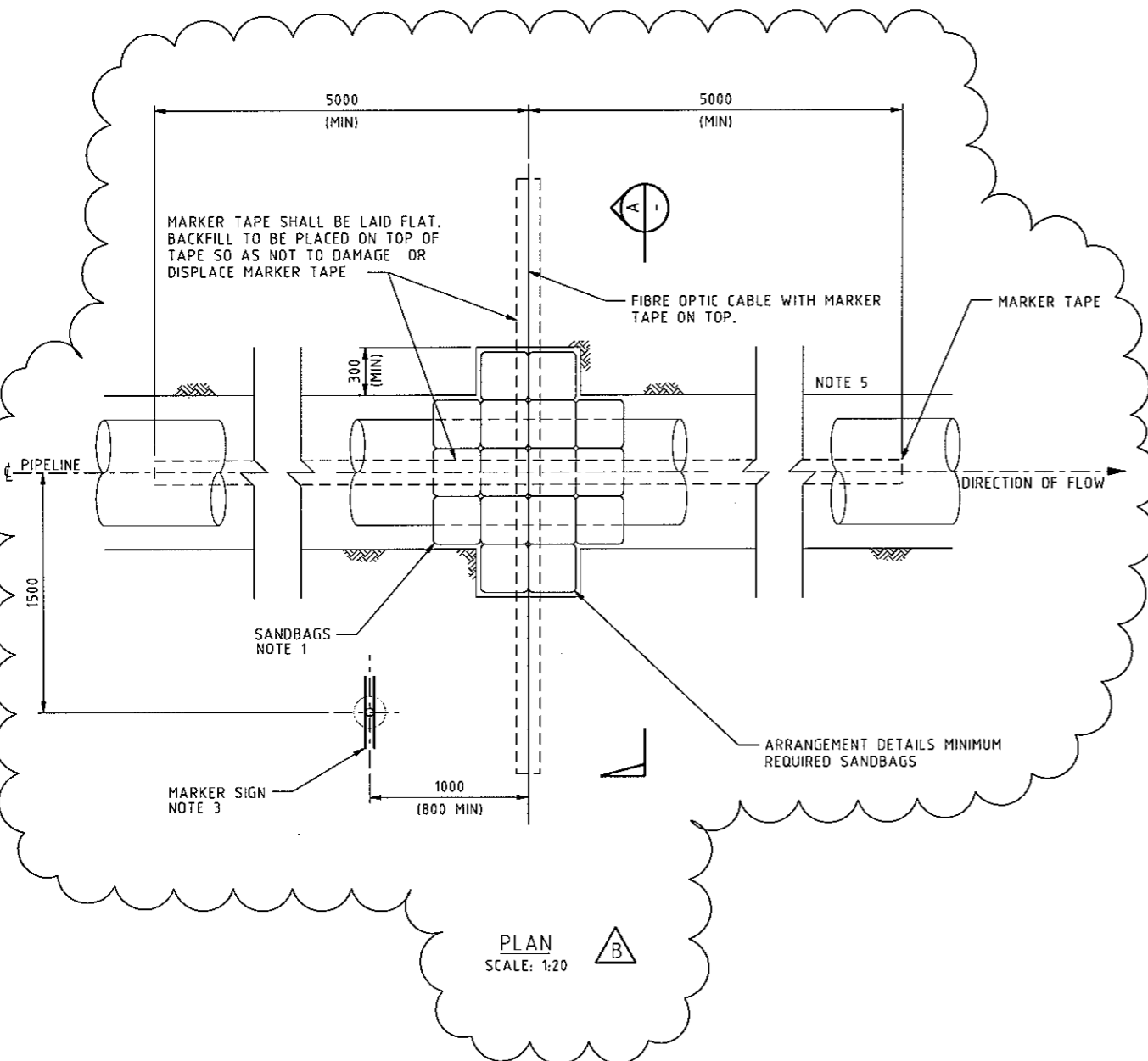
B

C

D

E

H:\ANSI\4000007\Alignment Sid Drgs\gst-g-1039-01.dgn
26/06/2006 10:43 AM



DRAWING No.	DRAWING REFERENCES	DRAWING No.	DRAWING REFERENCES
GST-G-1041-01	TYPICAL SIGN LOCATION PLAN FOR PIPELINE LOOPING		
GST-G-1026-01	TYPICAL SIGN LOCATION PLAN		
GST-G-1026-01	TYPICAL TRENCH DETAILS		
GST-G-1027-01	TYPICAL PIPELINE SIGN DETAIL		

REV	DATE	DESCRIPTION	DRAWN/CHK'D	R.D.	MNGR.
B	31/05/06	REVISED AS NOTED	KR		
A	16/09/05	APPROVED FOR CONSTRUCTION FOR DBMGP LOOPING PROJECT	SFC		

PRIMARY SIGNATURES	SECONDARY SIGNATURES
DRAFT, CHECK RESP. OFFICER SECTION HEAD	

resources & energy

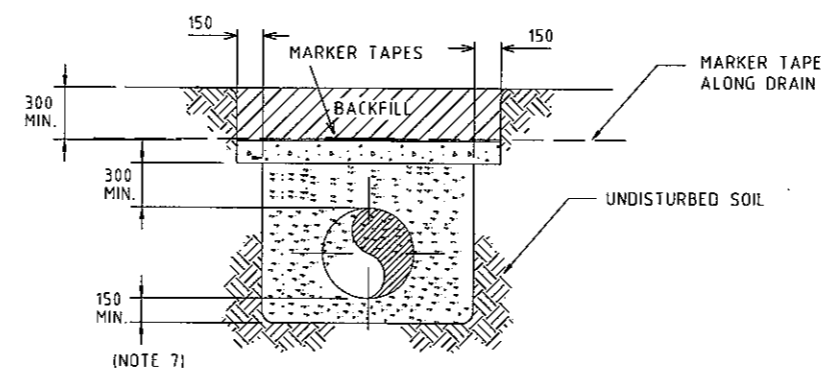
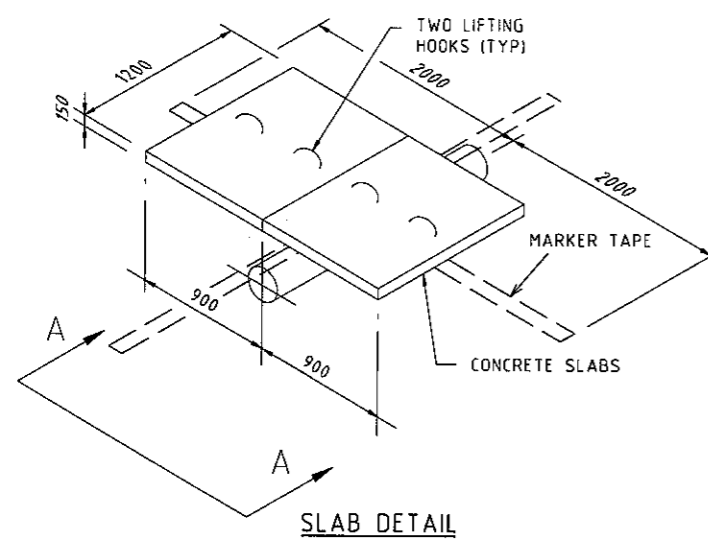
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PERTH, W.A. 6000
PH: +61 8 9278 8111 - FAX: +61 8 9278 8110
ACN 001 279 812

DATE: 31/06/06
SCALE: AS SHOWN
CAD FILE NAME: GST-G-1039-01.dgn

DRG. No. GST-G-1039-01
REV B
CONT'D ON SH - A1



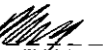
DAMPIER BUNBURY NATURAL GAS PIPELINE STANDARD DRAWING FIBRE OPTIC CABLE CROSSING DETAILS

1. DRAWN AS IN SITU UNREINFORCED CONCRETE. SLAB 1000 mm WIDE. REF SLAB DETAIL FOR PRE-CAST ALTERNATIVE.
2. 1000mm MIN COVER UNDER DRAIN APPLIES WHERE CONCRETE SLABS ARE NOT SPECIFIED.
3. REFER TO RELEVANT ALIGNMENT SHEET FOR PIPE WALL THICKNESS.
4. SAG BENDS AND OVER BENDS TO RESUME NORMAL PIPELINE DEPTH SHALL BE IN ACCORDANCE WITH APPLICABLE SECTION OF THE CONSTRUCTION SPECIFICATION.
5. RE-INSTATEMENT OF EXCAVATED TRENCH TO BE IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS
6. HEAVY WALL PIPE TO BE USED ACROSS TOTAL ROAD RESERVE AS SPECIFIED ON ALIGNMENT SHEETS
7. TRENCH PADDING TO BE USED IF BASE OF TRENCH CONTAINS MATERIALS THAT COULD BE DETRIMENTAL TO PIPELINE COATING. IF TRENCH PADDING IS USED IT SHALL BE MINIMUM 150mm THK CLEAN SAND AT 95% COMPACTION.



SLAB DETAIL

[illegible]

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		Epic Energy (WA) Transmission Pty. Ltd. <h1>Engineering</h1>	
 MANAGER ENGINEERING		DRG. No. GST-G-1043-01	REV A
DATE 2 Jul 06	SCALEF	MYS	CONT'D -
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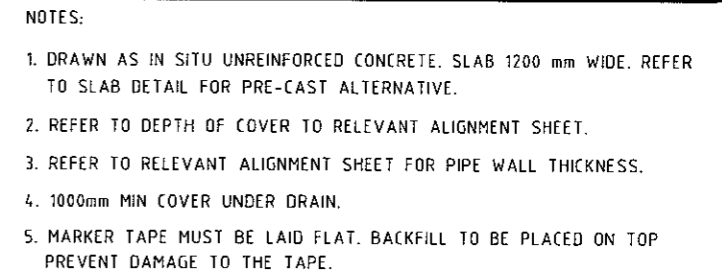


Diagram illustrating the reinstatement of a drain contour. The diagram shows a cross-section of a road surface with a concrete slab and a drain contour to be reinstated to original lines. The diagram includes labels for 'NOTE 2', 'CONCRETE SLAB', 'DRAIN CONTOUR TO BE REINSTATED TO ORIGINAL LINES', 'MARKER TAPE ALONG DRAIN', and 'MARKER TAPE NOTE 5'. Dimensions include 150, 300 MIN., and 1000 MIN.

Figure 1: Slab Detail. A 3D perspective diagram of a concrete slab. The slab is 2000 units long and 1200 units wide. It has a thickness of 250 units. Two lifting hooks (TYP) are shown on the top surface. Marker tape is indicated on the side. The slab is supported by two concrete slabs, each 900 units wide. A section line A-A is shown at the bottom.




Diagram illustrating the installation of a marker tape in a trench. The diagram shows a cross-section of the trench with the following dimensions and components:

- Marker Tapes:** Two horizontal lines at the top of the trench, spaced 150 units apart.
- Backfill:** The material filling the trench, indicated by a hatched pattern.
- Marker Tape Along Drain:** A horizontal line running along the length of the trench.
- Undisturbed Soil:** The soil surrounding the trench, indicated by a cross-hatched pattern.
- Dimensions:**
 - 300 MIN. (Minimum depth of the trench)
 - 300 MIN. (Minimum depth of the backfill layer)
 - 150 MIN. (Minimum depth of the undisturbed soil layer)

(NOTE 7)

[illegible]

DAMPIER-BUNBURY NATURAL GAS PIPELINE
STANDARD DRAWING
TYPE 6 CROSSING
CONTOUR OR MANMADE DRAIN

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<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  epicenergy </div> <div style="text-align: center;"> Epic Energy (WA) Transmission Pty. Ltd. <h1>Engineering</h1> </div> </div>		
 MANAGER, ENGINEERING	DRG No. <div style="font-size: 2em; font-weight: bold;">GST-G-1044-01</div>	REV <div style="font-size: 2em; font-weight: bold;">A</div>
DATE <u>2 JUL 08</u> (C.F. FILE NAME)	SCALE NTS GST-G-XXXX-XX.DGN	CONT'D ON SH - <div style="font-size: 2em; font-weight: bold;">A1</div>