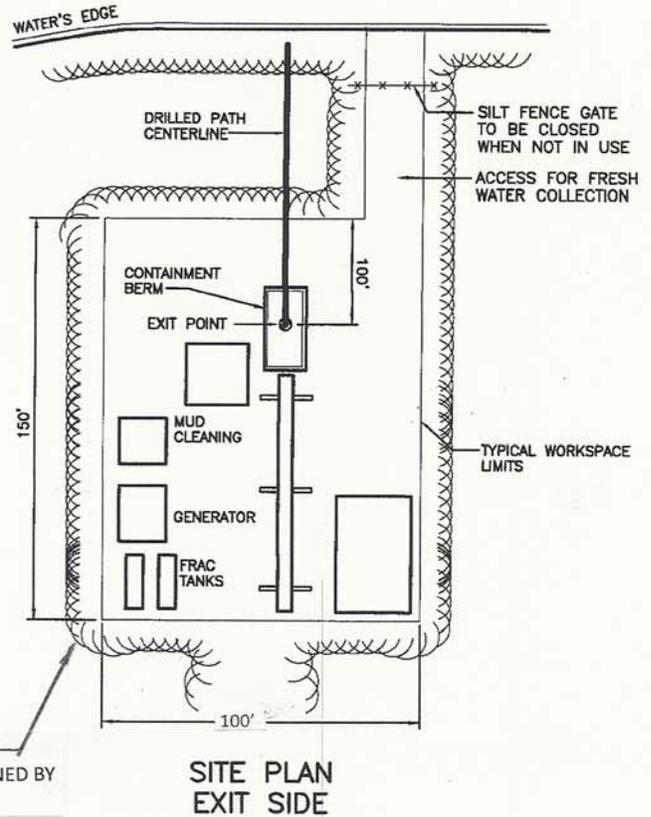
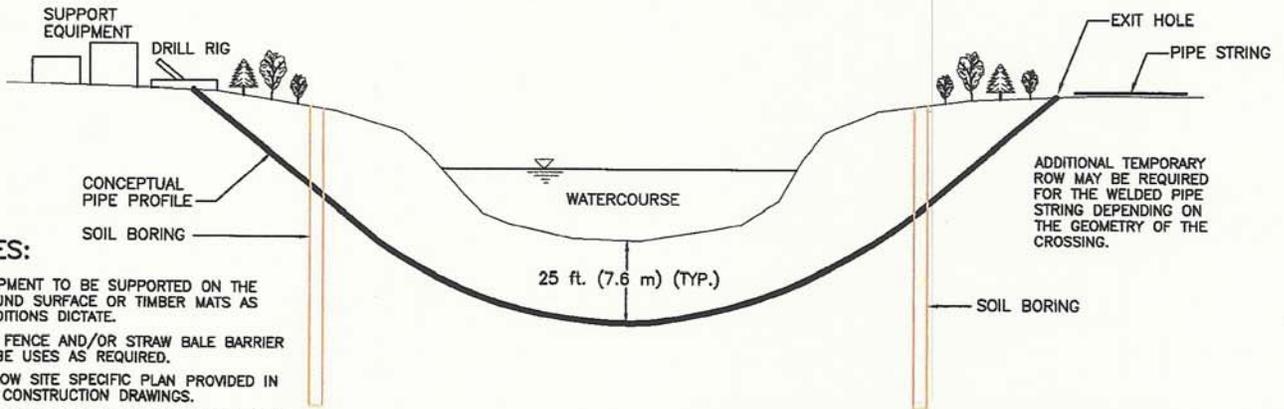


SITE PLAN ENTER SIDE



SITE PLAN EXIT SIDE

HDD ENTRY and EXIT POINT DETAILS

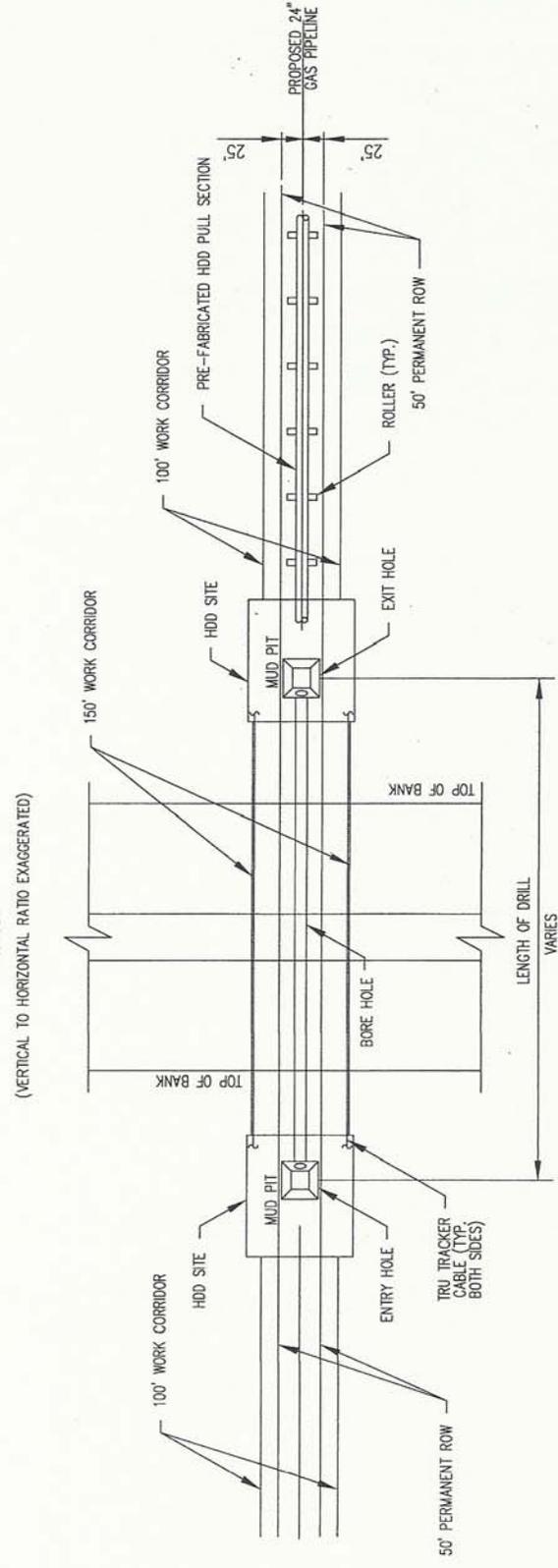
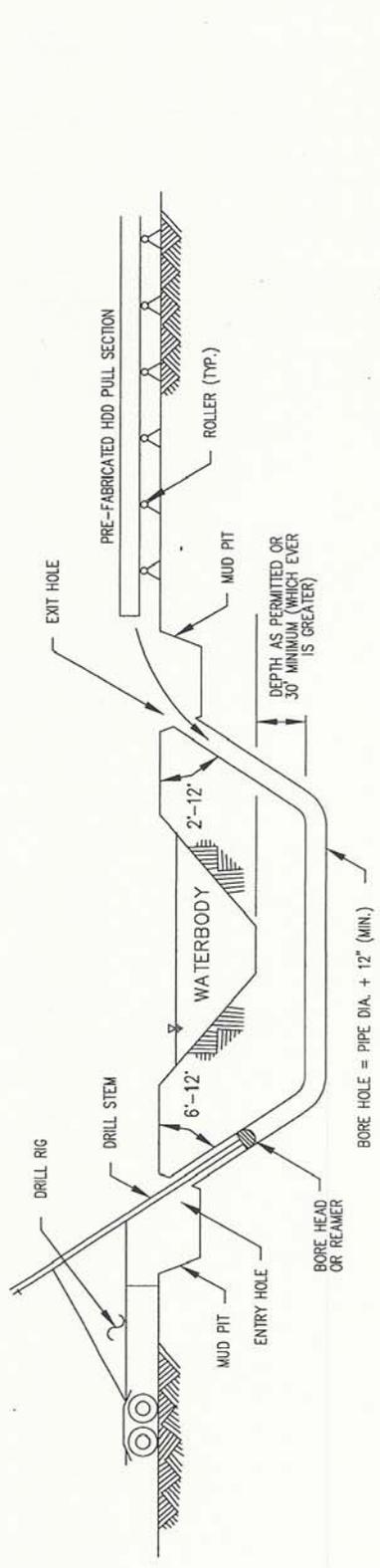


NOTES:

1. EQUIPMENT TO BE SUPPORTED ON THE GROUND SURFACE OR TIMBER MATS AS CONDITIONS DICTATE.
2. SILT FENCE AND/OR STRAW BALE BARRIER TO BE USES AS REQUIRED.
3. FOLLOW SITE SPECIFIC PLAN PROVIDED IN THE CONSTRUCTION DRAWINGS.
4. CONFIGURATIONS SHOWN ARE TYPICAL AND SHALL BE MODIFIED BY CONTRACTOR AS NECESSARY TO SUIT ACTUAL SITE CONDITIONS

PROFILE

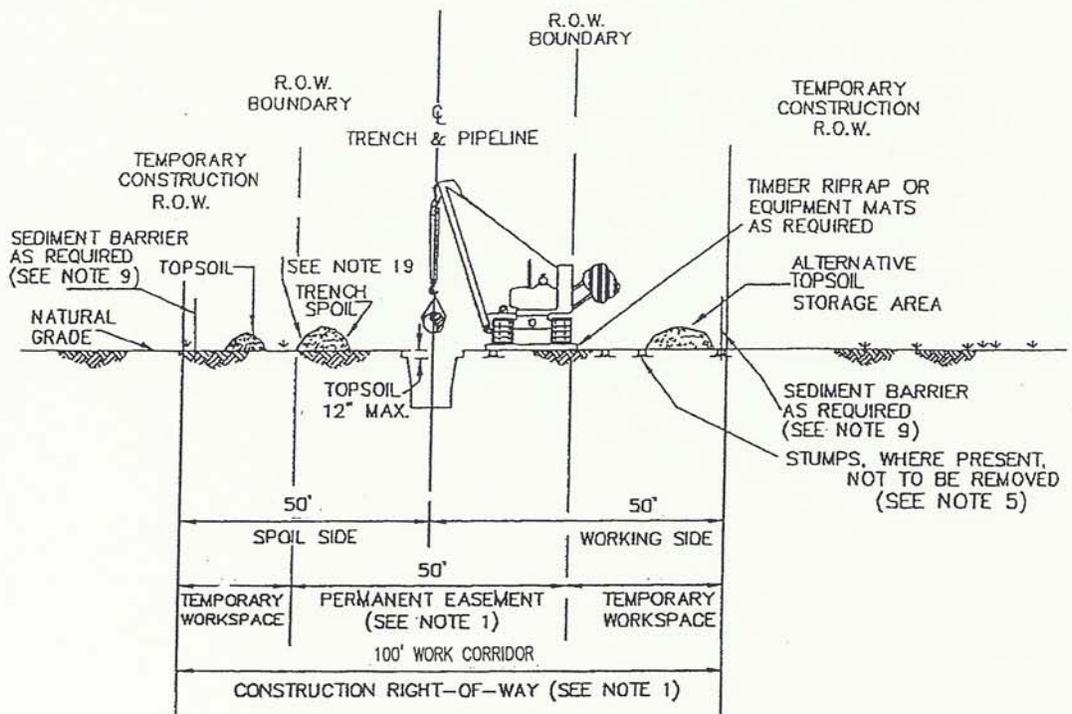
		VIA VERDE PIPELINE PROJECT	
NO.	REVISION	DATE	PROJECT:
			50388E
ISSUED FOR DEPARTMENT OF STATE FILING		MAR.15.2006	DETAIL 15
DRAWING NUMBER:	DRAWN BY	CHECKED BY	
<small>LAST PLOT DATE:</small> Tue, 04 Apr 2006 - 3:29pm			



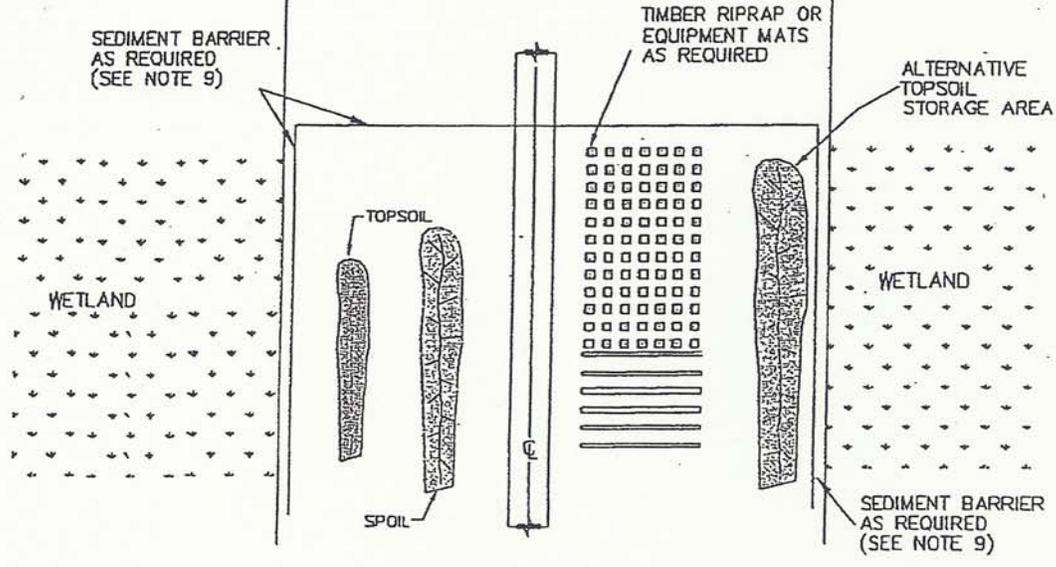
HDD CROSSING

VIA VERDE PIPELINE PROJECT		TYPICAL		PROPOSED 24" GAS PIPELINE HDD WATERBODY CROSSING	
DWN. BY: JMM		07/01/10		REV. NO. 1 OF 7	
CHK.				DWG. NO. 48.0-Z-326.04	
PROJ. ENGR.				SCALE: NONE	
PROJ. MGR.				APP'D	
CLIENT APP.				CHK'D	
BY		DATE		DATE	
REVISION-DESCRIPTION					
B	ISSUED FOR ENVIRONMENTAL PURPOSES	GDF	07/16/10		
A	ISSUED FOR REVIEW	JMM	07/01/10		
NO.					





PROFILE



PLAN VIEW

REVISIONS					DATE	BY	CHK.	APP.
△								
△								
△								
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△								
△								
△	ISSUED FOR REVIEW	05/27/00	SEK	RFP				
HL	DESCRIPTION	DATE	BY	CHK.	APP.			

	VIA VERDE PIPELINE PROJECT TYPICAL WETLAND CROSSING PUERTO RICO
PROJECT NUMBER: 2190-01 SHEET 2 OF 7 REV: A	

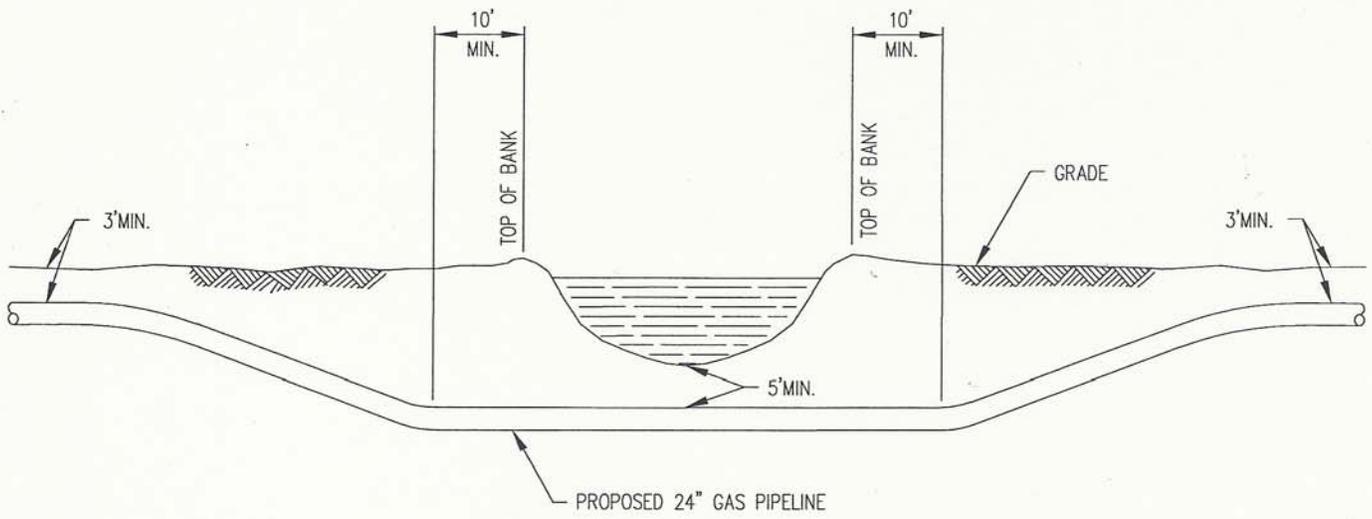
CONSTRUCTION NOTES:

1. CONSTRUCTION RIGHT-OF-WAY WILL TYPICALLY BE 100 FEET WIDE CONSISTING OF 50 FEET OF PERMANENT EASEMENT AND UP TO 25 FEET OF TEMPORARY WORKSPACE ON EITHER SIDE.
2. THE SAME LAYOUT APPLIES WHETHER CONSTRUCTION R.O.W. DOES OR DOES NOT ABUT A FOREIGN R.O.W.
3. LOCATE ANY EXTRA TEMPORARY WORK SPACE AREAS AT LEAST 25 FEET FROM EDGE OF WETLAND AND WITHIN THE APPLICABLE FULL WIDTH CONSTRUCTION R.O.W. WHENEVER POSSIBLE.
4. CLEARING OF VEGETATION AND TREES IS PROHIBITED BETWEEN TEMPORARY EXTRA WORK SPACE AND THE EDGE OF THE WETLAND.
5. CUT VEGETATION AND TREES OFF AT GROUND LEVEL, LEAVING EXISTING ROOT SYSTEMS IN PLACE WHEREVER PRACTICABLE, AND REMOVE CUTTINGS FROM THE WETLAND FOR DISPOSAL.
6. LIMIT CONSTRUCTION EQUIPMENT TO ONE PASS THROUGH WETLANDS TO THE EXTENT PRACTICABLE.
7. NO REFUELING OF EQUIPMENT WITHIN 100 FEET OF WETLAND EXCEPT IN ACCORDANCE WITH THE SPCC PLAN.
8. IF SATURATED AT TIME OF CONSTRUCTION, REDUCE SOIL COMPACTION BY UTILIZING WIDE-TRACK OR BALLOON TIRE CONSTRUCTION EQUIPMENT OR NORMAL EQUIPMENT OPERATED ON TIMBER RIPRAP OR EQUIPMENT MATS.
9. AVOID ADJACENT WETLANDS. INSTALL SEDIMENT BARRIERS IMMEDIATELY AFTER INITIAL GROUND DISTURBANCE AND AT THE EDGE OF CONSTRUCTION R.O.W. ALONG THE WETLAND AS DIRECTED BY THE COMPANY'S INSPECTOR.
10. THIS DRAWING REFLECTS "TRENCH ONLY" TOPSOIL STRIPPING PROCEDURE FOR AREAS WHERE STANDING WATER OR SATURATED SOIL ARE NOT PRESENT.
11. SALVAGE UP TO 12" OF TOPSOIL OVER TRENCH AT LOCATIONS IDENTIFIED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE COMPANY'S INSPECTOR. MAINTAIN SEPARATION BETWEEN TOPSOIL AND TRENCH SPOIL.
12. LEAVE GAPS IN TOPSOIL AND SPOIL PILES AT OBVIOUS DRAINAGES. DO NOT USE TOPSOIL FOR PADDING. AVOID SCALPING VEGETATED GROUND SURFACE WHEN BACKFILLING SPOIL PILE.
13. IN UNSATURATED CONDITIONS, SPOIL MAY BE USED TO STABILIZE THE WORKING SIDE.
14. IF SATURATED AT TIME OF CONSTRUCTION, LEAVE HARD PLUGS AT THE EDGE OF WETLAND UNTIL JUST PRIOR TO TRENCHING.
15. TRENCH THROUGH WETLANDS.
16. LOWER-IN PIPE, INSTALL TRENCH BREAKERS AT WETLAND EDGES AS DIRECTED BY THE COMPANY'S INSPECTORS TO PREVENT DRAINAGE. BACKFILL UPON COMPLETION OF CONSTRUCTION.
17. REMOVE ALL TIMBER, RIPRAP OR EQUIPMENT MATS FROM WETLANDS UPON COMPLETION OF CONSTRUCTION.
18. RESTORE GRADE TO NEAR PRE-CONSTRUCTION TOPOGRAPHY AND REPLACE TOPSOIL, WHERE SALVAGED, WITHOUT A CROWN OVER THE TRENCH.
19. IF STANDING WATER IS NOT PRESENT, SEED AS SPECIFIED.
20. TOPSOIL AND TRENCH SPOIL RELATIVE POSITIONS CAN, AS DIRECTED BY THE COMPANY'S INSPECTOR, BE REVERGED.

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								VIA VERDE PIPELINE PROJECT			
						DWN. BY: JMM		07/01/10		TYPICAL WETLAND CROSSING CONSTRUCTION NOTES	
						CHK.					
						PROJ. ENGR.					
						PROJ. MGR.					
						CLIENT APP.				DWG. NO. 48.0-Z-326.05 SHT. NO. 3 OF 7 REV. B	
						SCALE: NONE					
B	ISSUED FOR ENVIRONMENTAL PURPOSES	GDF	07/16/10								
A	ISSUED FOR REVIEW	JMM	07/01/10								
NO.	REVISION-DESCRIPTION	BY	DATE	CHK'D	APP'D						

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TYPICAL MINOR WATER BODY CROSSING

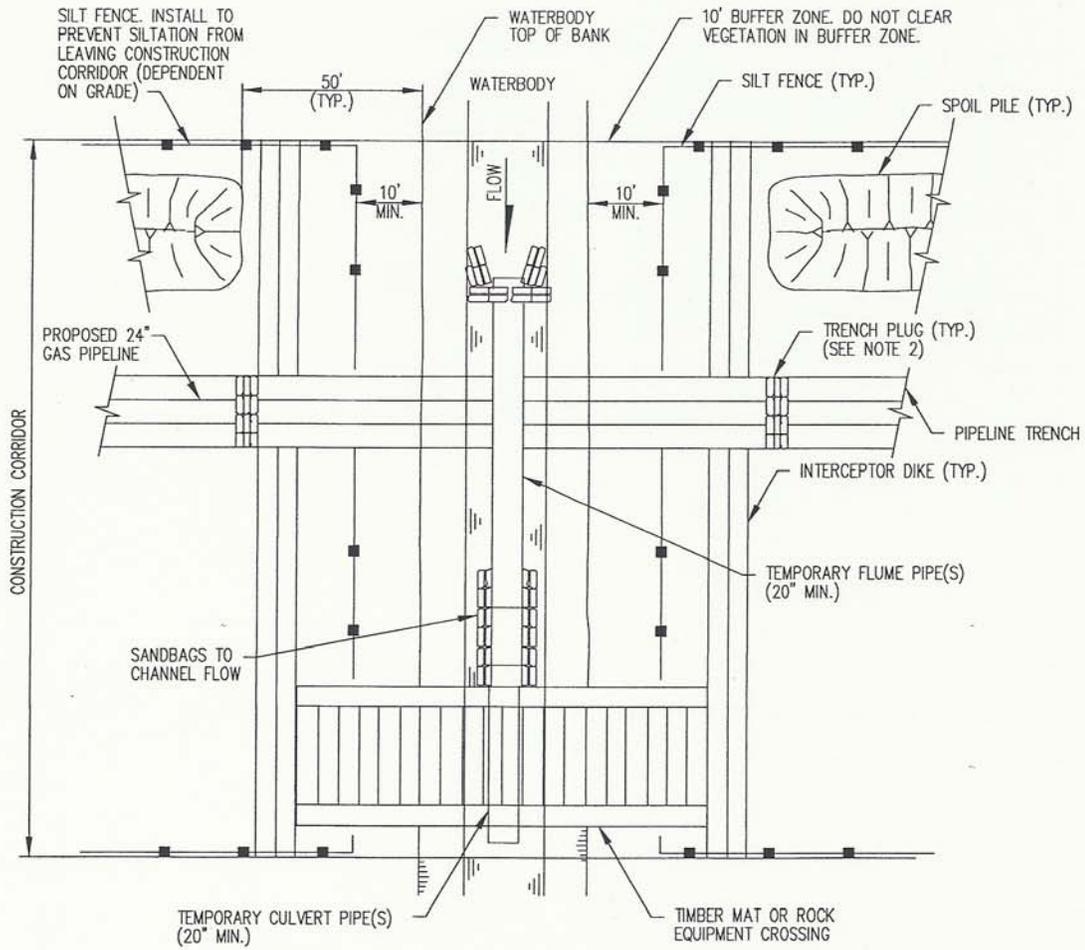
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						DWG. NO.		48.0-Z-326.05		SHT. NO.	REV.
								4 OF 7		B	B
NO.	REVISION-DESCRIPTION		BY	DATE	CHK'D	APP'D					
B	ISSUED FOR ENVIRONMENTAL PURPOSES		GDF	07/16/10							
A	ISSUED FOR REVIEW		JMM	07/01/10							

VIA VERDE PIPELINE PROJECT

TYPICAL
MINOR WATERBODY CROSSING
OPEN CUT CROSSING DETAIL

DWG. NO. 48.0-Z-326.05 SHT. NO. 4 OF 7 REV. B

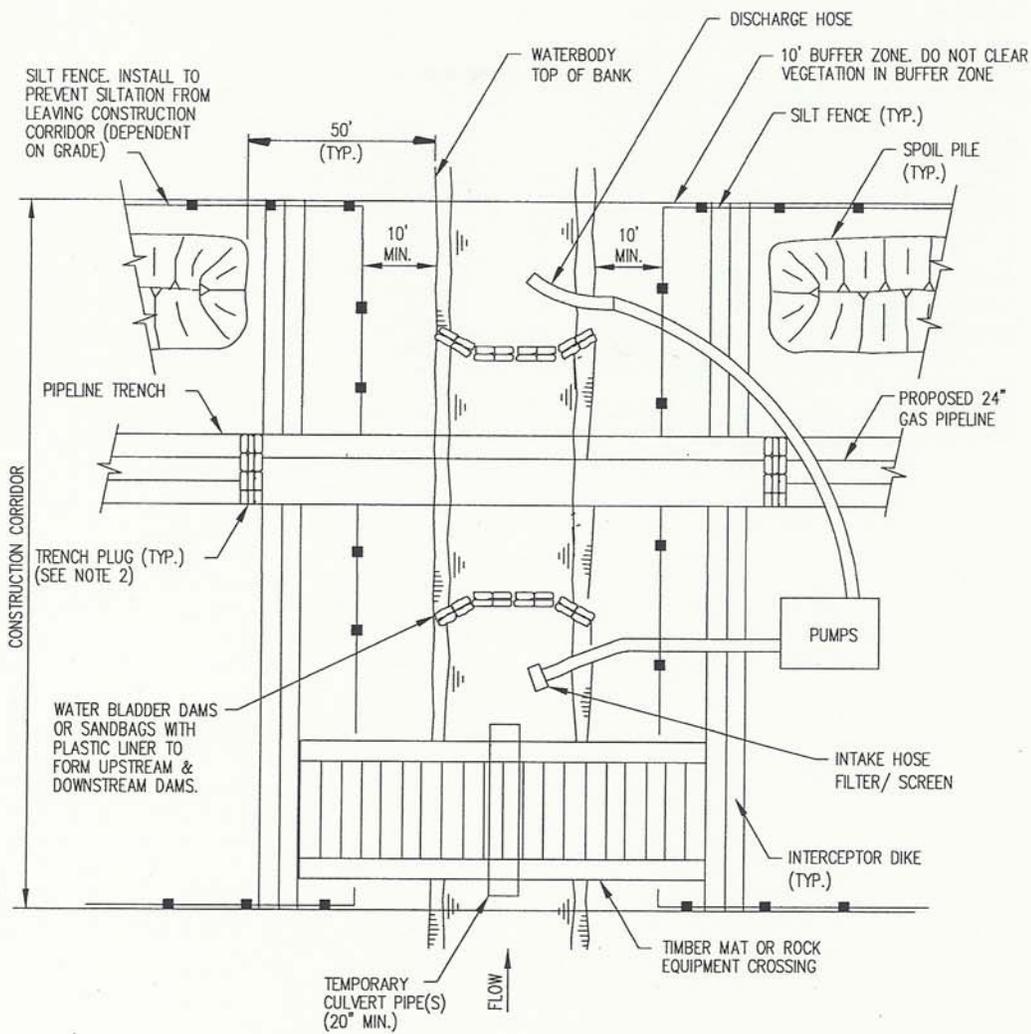
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TYPICAL WATERBODY CROSSING

1. SILT FENCE AND INTERCEPTOR DIKE TO BE REMOVED ACROSS PIPELINE TRENCH DURING CONSTRUCTION OF PIPELINE. SILT FENCE AND INTERCEPTOR DIKES TO BE REPLACED AFTER BACKFILL OF TRENCH.
2. USE HARD OR SOFT PLUGS PRIOR TO PIPE INSTALLATION. INSTALL PERMANENT TRENCH PLUGS AFTER PIPE INSTALLATION AND PRIOR TO BACKFILLING PIPELINE TRENCH.
3. NUMBER OF FLUMES MAY BE INCREASED AS NECESSARY TO SUIT FLOW.

						VIA VERDE PIPELINE PROJECT		
DWN. BY: GDF 7/12/10 CHK. PROJ. ENGR. PROJ. MGR. CLIENT APP.						ENVIRONMENTAL DETAIL TYPICAL		
SCALE: NONE						WATERBODY CROSSING FLUMED CROSSING METHOD		
DWG. NO. 48.0-Z-326.51						SHT. NO. 5 OF 7		REV. B
NO.	REVISION-DESCRIPTION	BY	DATE	CHK'D	APP'D			
B	ISSUED FOR ENVIRONMENTAL PURPOSES	GDF	7/16/10					
A	ISSUED FOR REVIEW	GDF	7/12/10					



TYPICAL WATERBODY CROSSING

1. SILT FENCE AND INTERCEPTOR DIKE TO BE REMOVED ACROSS PIPELINE TRENCH DURING CONSTRUCTION OF PIPELINE. SILT FENCE AND INTERCEPTOR DIKES TO BE REPLACED AFTER BACKFILL OF TRENCH.
2. USE HARD OR SOFT PLUGS PRIOR TO PIPE INSTALLATION. INSTALL PERMANENT TRENCH PLUGS AFTER PIPE INSTALLATION AND PRIOR TO BACKFILLING PIPELINE TRENCH.

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								VIA VERDE PIPELINE PROJECT					
						DWN. BY:	GDF	7/12/10					
						CHK.							
						PROJ. ENGR.							
						PROJ. MGR.							
						CLIENT APP.							
B	ISSUED FOR ENVIRONMENTAL PURPOSES	GDF	7/16/10			ENVIRONMENTAL DETAIL TYPICAL WATERBODY CROSSING DAM & PUMP METHOD							
A	ISSUED FOR REVIEW	GDF	7/12/10										
NO.	REVISION-DESCRIPTION	BY	DATE	CHK'D	APP'D	SCALE:	NONE	DWG. NO.	48.0-Z-326.50	SHT. NO.	6 OF 7	REV.	B

NOTES:

1. THIS METHOD APPLIES TO WATERBODIES WITH LIMITED FLOW AT THE TIME OF CONSTRUCTION WHERE DOWNSTREAM SILTATION MUST BE AVOIDED AND THE CROSSING WIDTH IS NOT PROHIBITIVE.
2. SCHEDULE CROSSING DURING LOW FLOW PERIOD IF POSSIBLE.
3. COMPLETE ALL IN-STREAM ACTIVITIES AS EXPEDIENTLY AS POSSIBLE.
4. NO REFUELING OF MOBILE EQUIPMENT WITHIN 100 FEET OF WATERBODY.
5. INSTALL TEMPORARY EQUIPMENT CROSSING IF REQUIRED.
6. IN AGRICULTURAL LAND, STRIP TOPSOIL FROM SPOIL STORAGE AREA.
7. CONSTRUCT SEDIMENT BARRIERS TO PREVENT SILT LADEN WATER AND SPOIL FROM FLOWING INTO WATERBODY. CONSTRUCTED SEDIMENT BARRIERS SHALL EXTEND ALONG THE SIDES OF THE SPOIL AND TOPSOIL STOCKPOLES AND ACROSS THE ENTIRE CONSTRUCTION R.O.W. BARRIERS MAY BE TEMPORARILY REMOVED TO ALLOW CONSTRUCTION ACTIVITIES BUT MUST BE REPLACED BY THE END OF EACH WORK DAY.
8. CONSTRUCT UPSTREAM STRUCTURE (DAM). WATER STRUCTURES (AQUA DAM, JERSEY BARRIERS, AND BAGS, STEEL PLATE, POLYETHYLENE LINER, ETC.) FINAL LOCATION WILL BE APPROVED BY THE ENVIRONMENTAL INSPECTOR.
9. SIZE PUMPS FOR DIVERSION OF ENTIRE STRAM FLOW. CONTRACTOR SHALL MAINTAIN 100% SPARE PUMPING CAPACITY ON SITE. PUMPS SHALL BE INSTALLED ON POLYETHLENE BARRIERS FOR FUEL/OIL SPILL CONTAINMENT. PUMP INTAKES WILL BE SCREENED TO PREVENT ENTRAPMENT OF FISH. CONTRACTOR SHALL MONITOR PUMPS AND WATER STRUCTURES ON A 24 HOUR BASIS UNTIL THE CROSSING INSTALLATION IS COMPLETE. SHOULD LEAKING AT THE DAM STRUCTURES OCCUR, CONTRACTOR SHALL DEWATER BETWEEN THE STRUCTURES THROUGH AN APPROPRIATE FILTER AND ONTO A WELL VEGETATED UPLAND AREA. NO HEAVILY SILT-LADEN WATER SHALL BE DISCHARGED INTO THE STREAM.
10. LEAVE HARD PLUGS AT STREAM BANK EDGE UNTIL JUST PRIOR TO PIPE INSTALLATION.
11. COMPLETE CONSTURCTION OF IN-STREAM PIPE SECTION. WEIGHT PIPE AS NECESSARY PRIOR TO COMMENCEMENT OF IN-STREAM ACTIVITY.
12. TRENCH THROUGH WATERBIDY AS EXPEDIENTLY AS PRACTICAL. INSTALL TEMPORARY (SOFT) PLUGS, IF NECESSARY, TO CONTROL WATER FLOW AND TRENCH SLOUGHING.
13. MAINTAIN STREAM FLOW THROUGHOUT CROSSING CONSTRUCTION.
14. LOWER-IN PIPE, INSTALL TRENCH PLUG AND BACKFILL IMMEDIATELY.
15. BACKFILL WITH NATIVE MATERIAL.
16. RESTORE WATERBODY CHANNEL TO APPROPRIATE PRE-CONSTRUCTION PROFILE AND SUBSTRATE.
17. DISMANTLE DOWNSTREAM WATER STRUCTURE (DAM) AND UPSTREAM WATER STRUCTURE (DAM) AFTER TRENCH BACKFILL.
18. RESTORE STREAM BANKS TO APPROXIMATE ORIGINAL CONDITION AND STABILIZE, AS REQUIRED.

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						VIA VERDE PIPELINE PROJECT		
						WATERBODY CROSSING OPEN CUT DAM / PUMP METHOD		
						CONSTRUCTION NOTES		
						DWG. NO.	SHT. NO.	REV.
						48.0-Z-326.05	7 OF 7	B
NO.	REVISION-DESCRIPTION	BY	DATE	CHK'D	APP'D	SCALE: NONE		
B	ISSUED FOR ENVIRONMENTAL PURPOSES	GDF	07/16/10			DWN. BY: JMM	07/01/10	
A	ISSUED FOR REVIEW	JMM	07/01/10			CHK.		
						PROJ. ENGR.		
						PROJ. MGR.		
						CLIENT APP.		