APPENDIX D

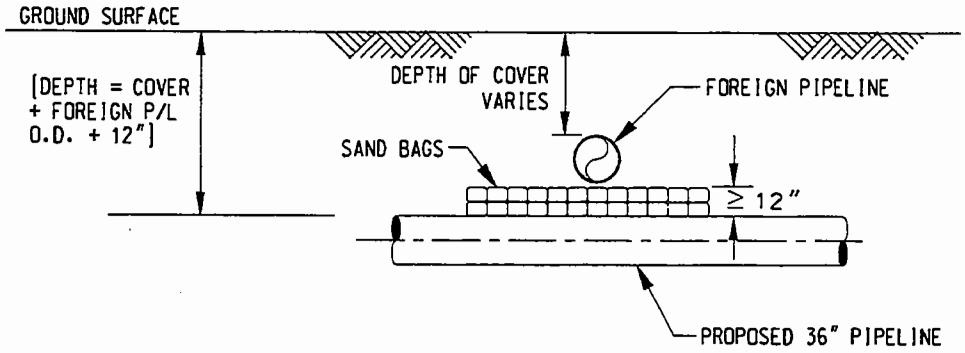
GOLDEN PASS PIPELINE SYSTEM

RIGHT-OF-WAY CROSS-SECTIONS

GOLDEN PASS PIPELINE SYSTEM
RIGHT-OF WAY CROSS-SECTIONS

GOLDEN PASS PIPELINE SYSTEM
RIGHT-OF WAY CROSS-SECTIONS

Figure Number	Description
3-3	Two Pipelines – Saturated Wetland Crossing without Topsoil Segregation
3-4	Two Pipelines – Saturated Wetland without Topsoil Segregation (Cross-Section)
3-5	Single Pipeline – Unsaturated Wetland Crossing with Topsoil Segregation
3-6	Single Pipeline – Unsaturated Wetland with Topsoil Segregation (Cross-Section)
3-7	Two Pipelines – Unsaturated Wetland Crossing with Topsoil Segregation
3-8	Two Pipelines – Unsaturated Wetland with Topsoil Segregation (Cross-Section)
3-9	Single Pipeline – Typical Marsh Trenching and Backfill
3-10	Two Pipelines – Typical Marsh Trenching and Backfill of Mainline
3-11	Two Pipelines – Typical Marsh Backfill of Loop
3-12	Permanent Maintenance Right-of-Way in Forested Wetland Areas
4	**Road Crossings**
4-1	Bored (Road/Railroad) Crossing
4-2	Trenched Road Crossing
5	**Environmental Details**
5-1	Entrance from Road to Construction Right-of-Way
5-2	Silt Fence
5-3	Interceptor Dike
5-4	Trench Plug
5-5	Hydrostatic Test Dewatering Structure



NOTES

1. CROSS UNDER FOREIGN LINE AND MAINTAIN SEPARATION REQUIREMENTS.
2. MAINTAIN 12" MINIMUM SEPARATION BETWEEN PIPELINES.

TYPICAL FOREIGN PIPELINE CROSSING DETAIL

Figure 1-1
Typical Upland Foreign
Pipeline Crossing

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA

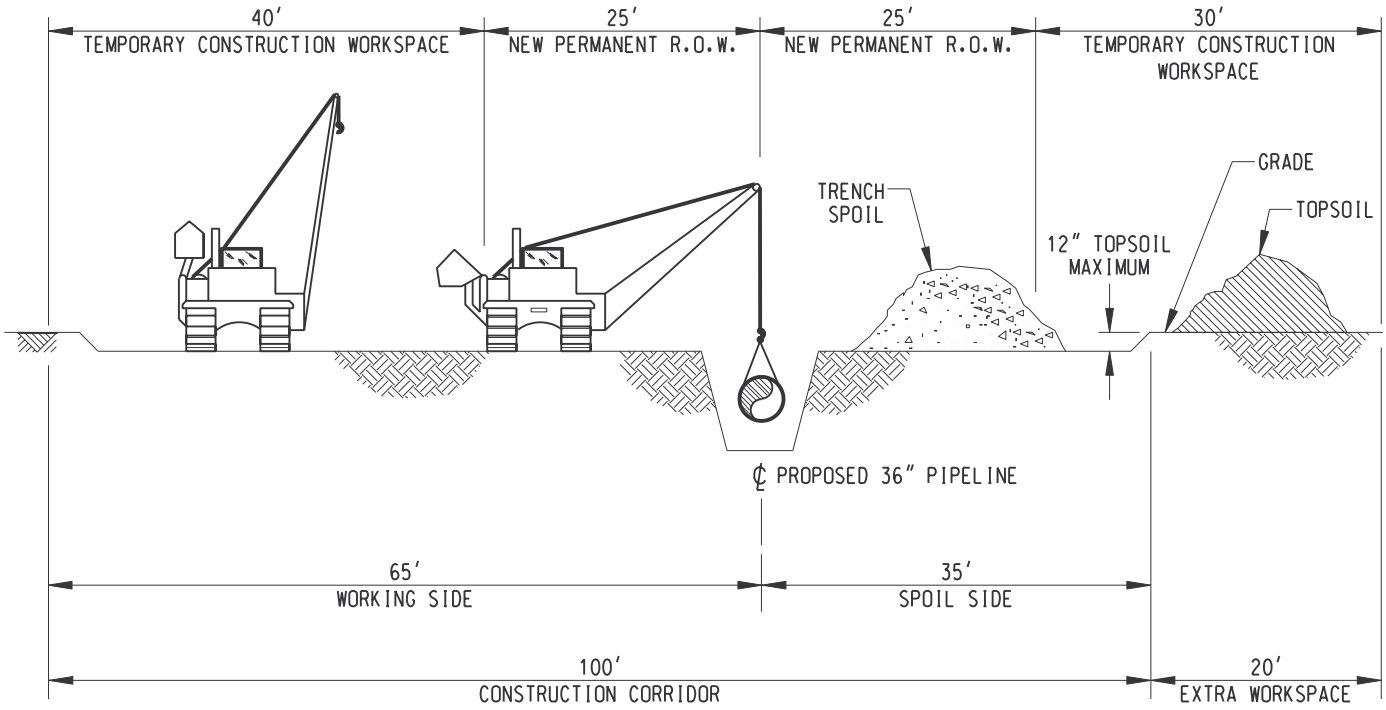
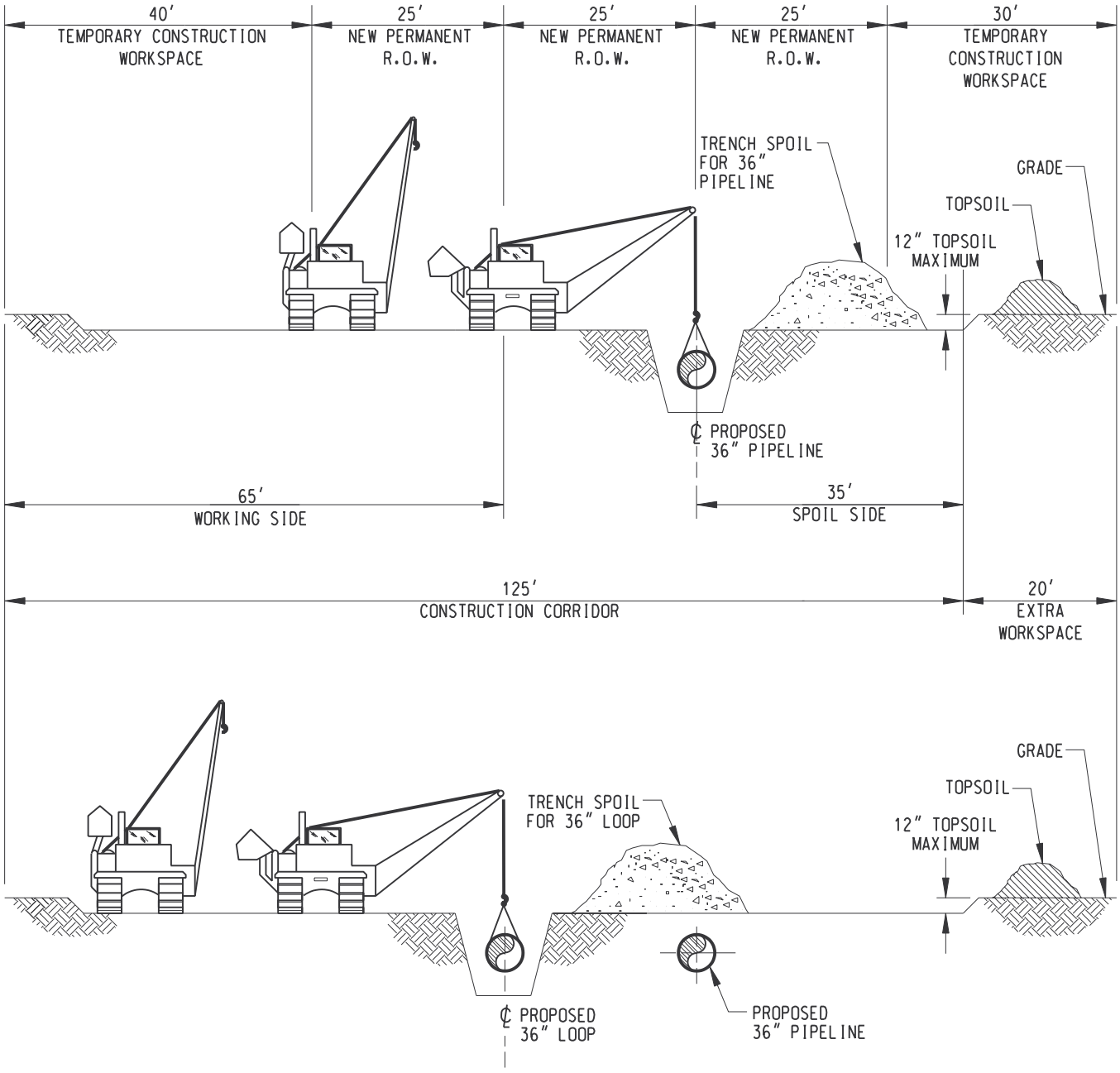


Figure 1-2
Single Pipeline - With Full Width Topsoil Segregation

Golden Pass LNG Terminal and Pipeline Project
Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



PROFILE

Figure 1-3
Two Pipelines - With Full Width
Topsoil Segregation

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA

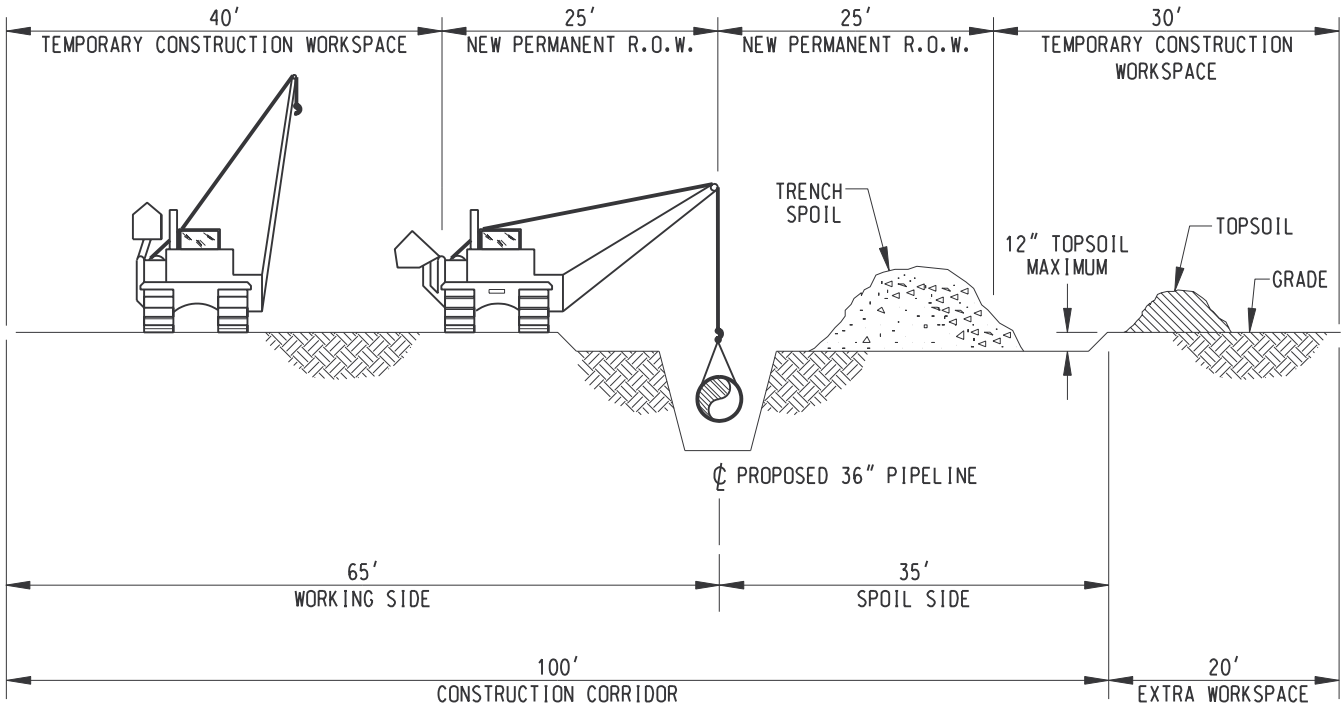
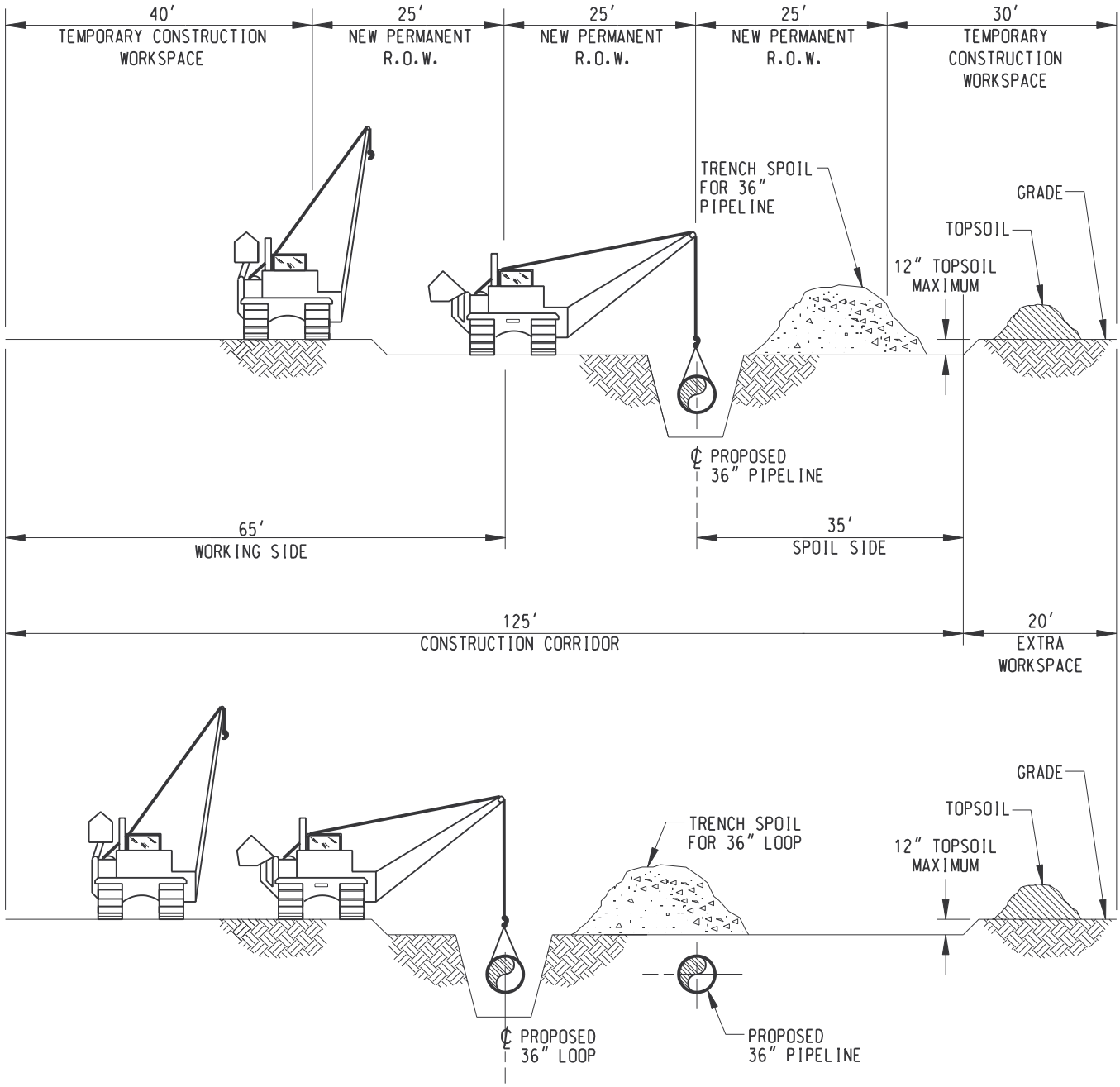


Figure 1-4
Single Pipeline - With Ditch Plus Spoil Side Topsoil Segregation

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA

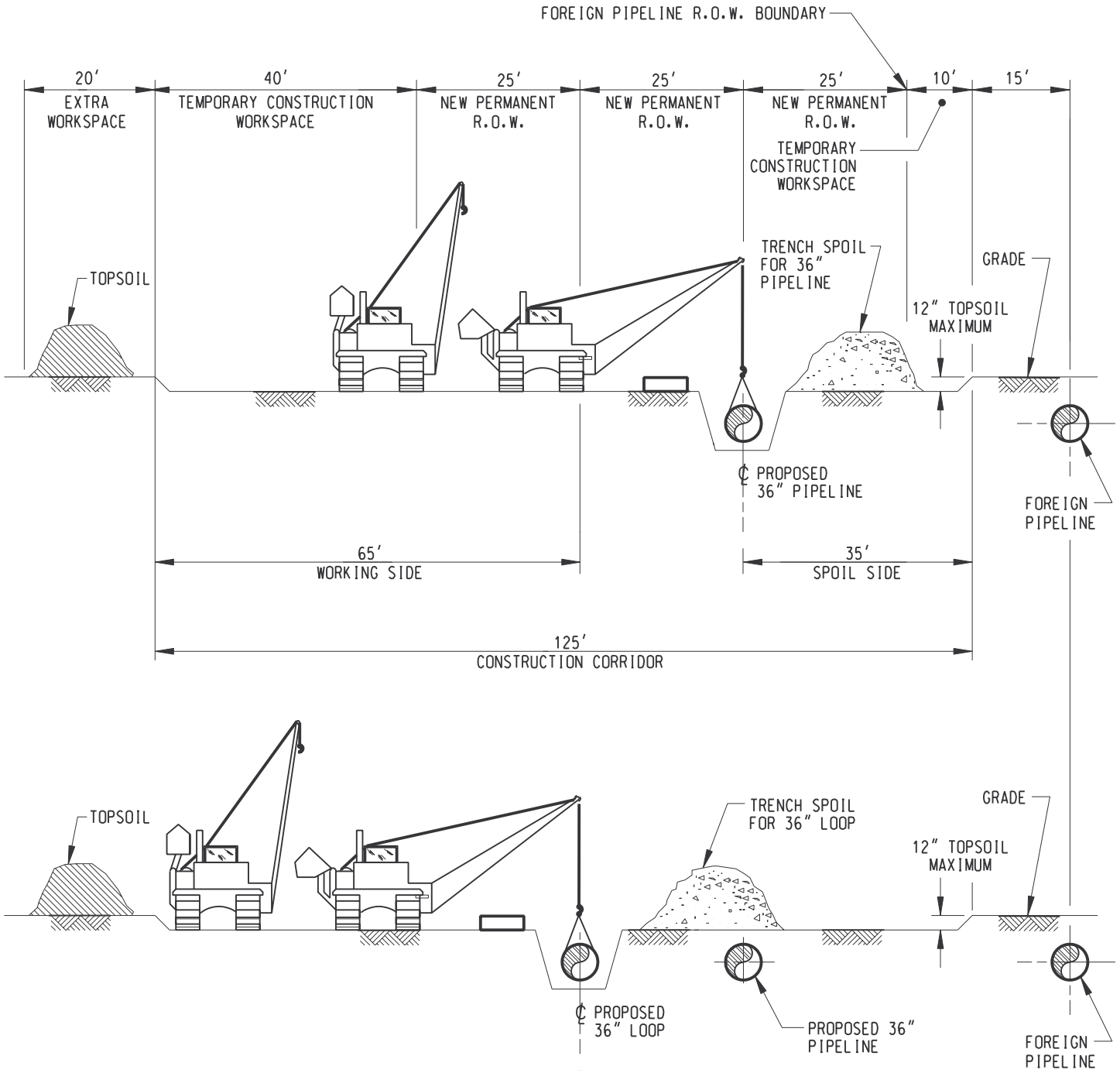


PROFILE

Figure 1-5
Two Pipelines - With Ditch Plus Spoil Side Topsoil Segregation

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA

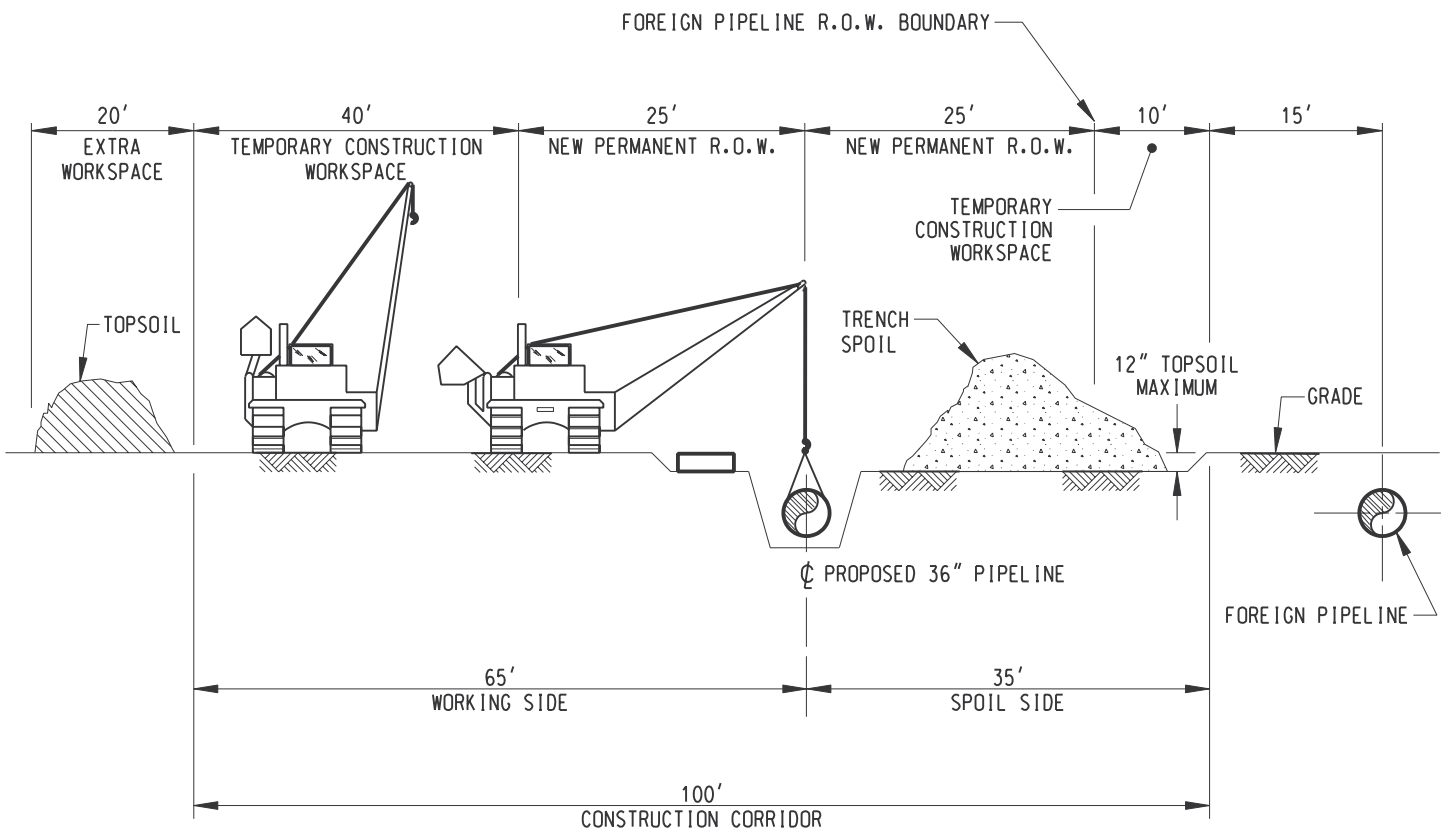


PROFILE

Figure 1-6
Two Pipelines Adjacent to Foreign Pipeline - With Full Width Topsoil Segregation

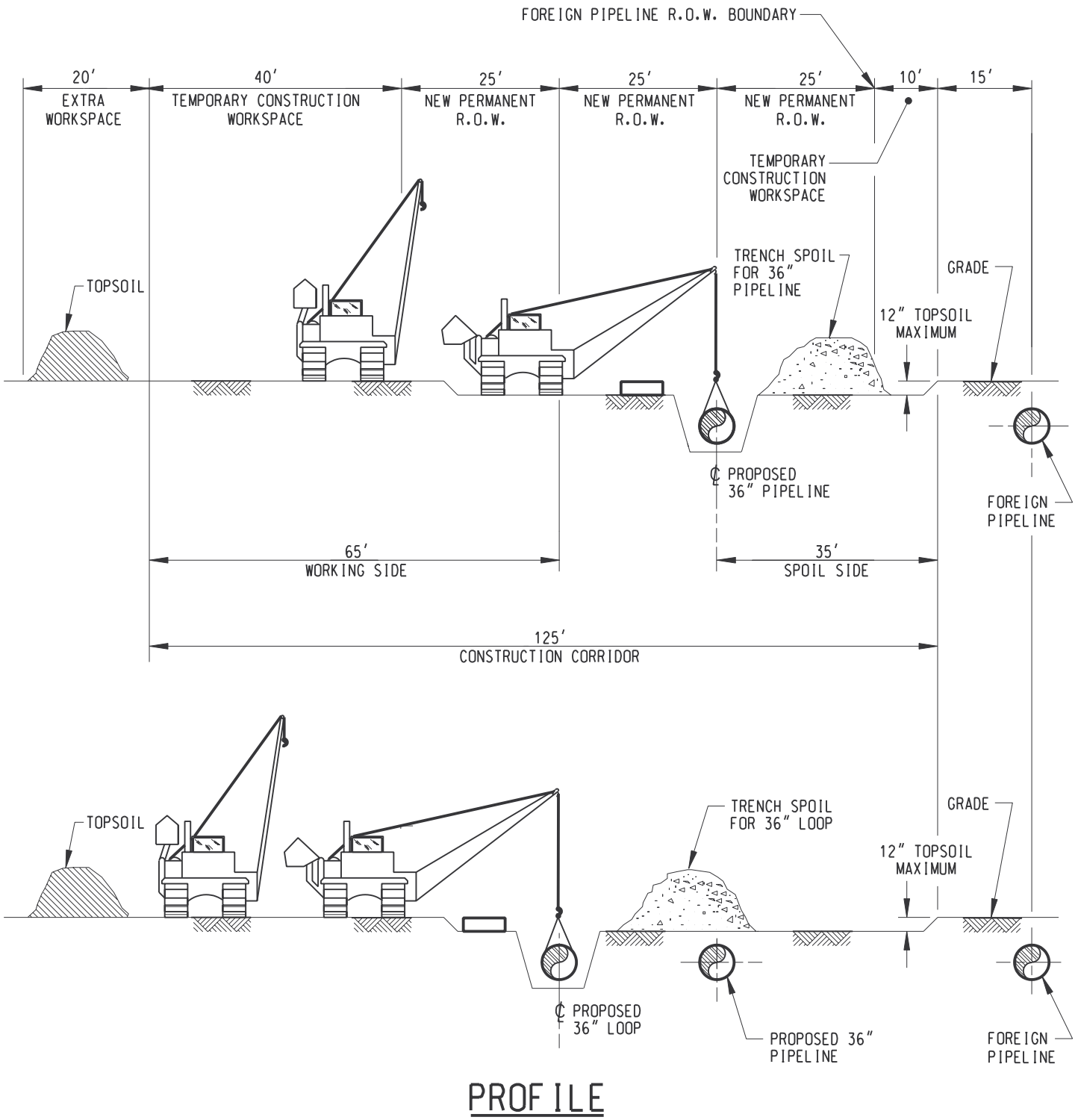
Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



PROFILE

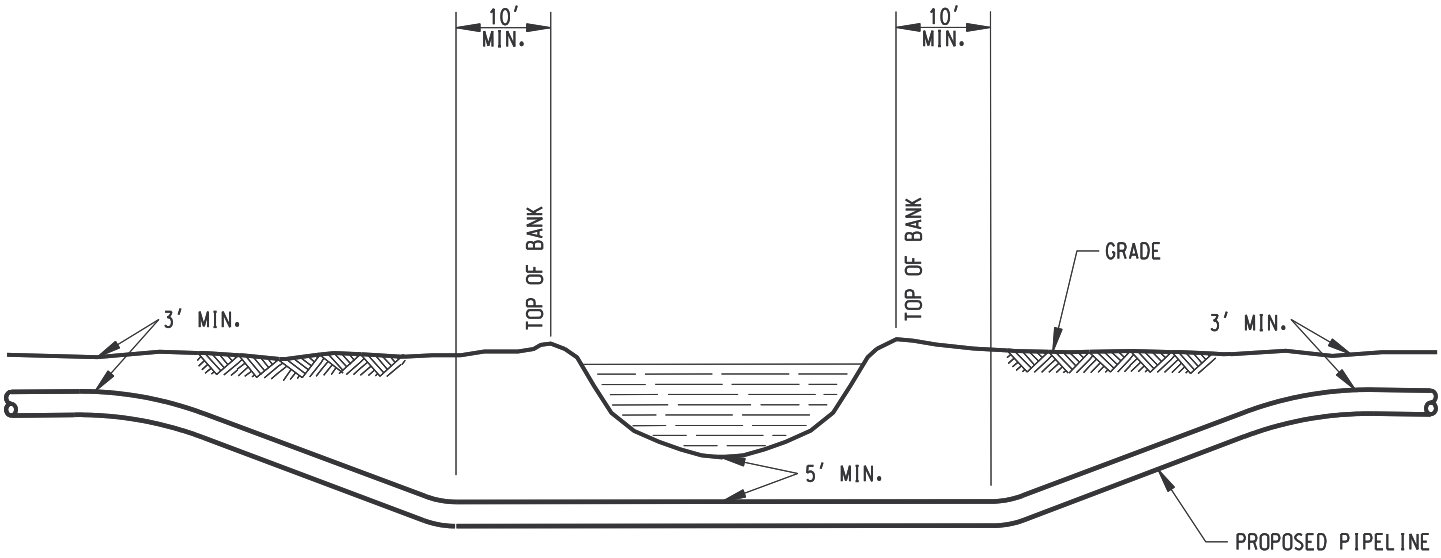
	Figure 1-7 Single Pipeline Adjacent to Foreign Pipeline - With Ditch Plus Spoil Side Topsoil Segregation	Golden Pass LNG Terminal and Pipeline Project Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



PROFILE

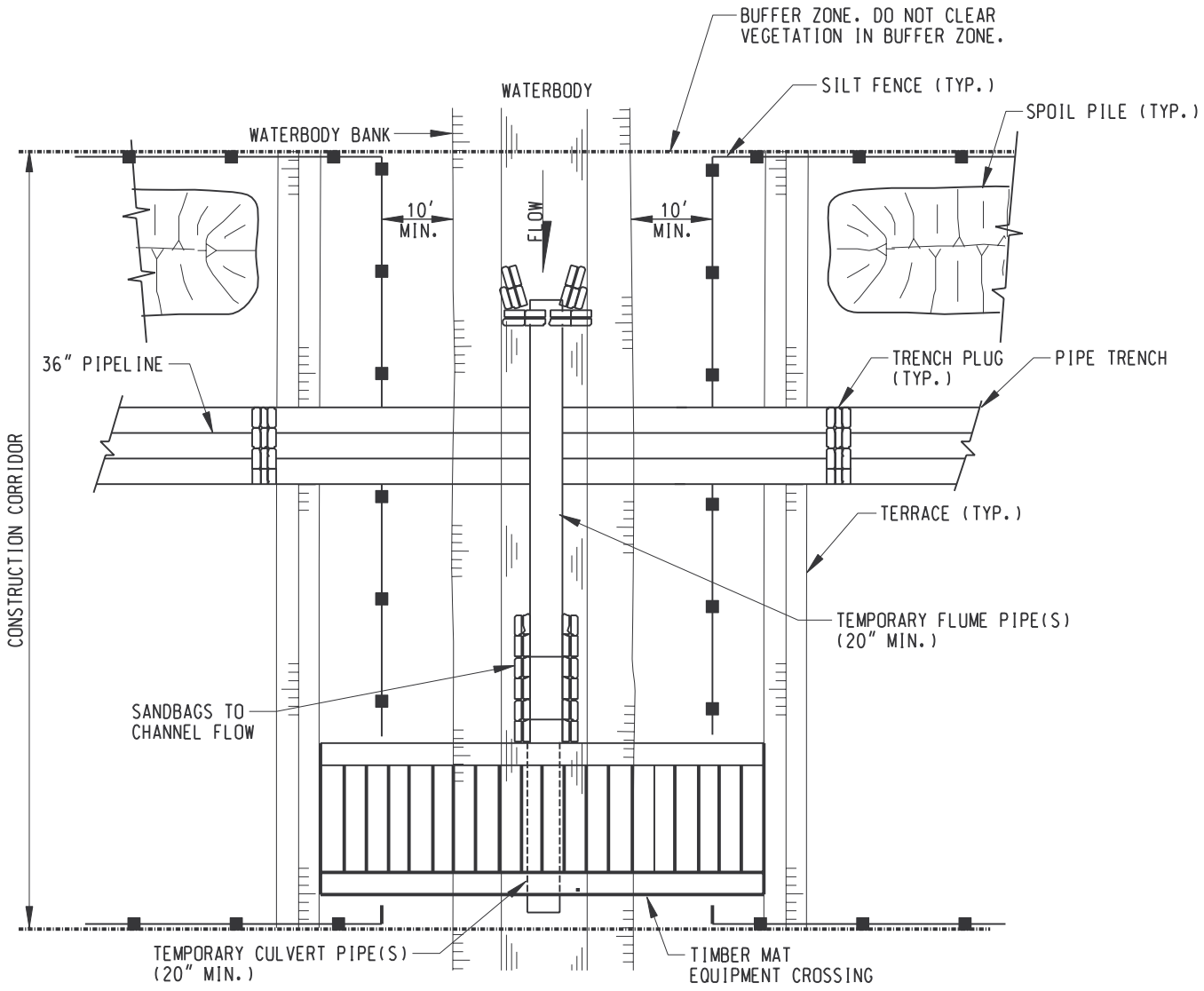
Figure 1-8
Two Pipelines Adjacent to Foreign Pipeline - With Ditch Plus Spoil Side Topsoil Segregation

Golden Pass LNG Terminal and Pipeline Project
Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



TYPICAL WATERBODY CROSSING

	Figure 2-1 Typical Waterbody Crossing	Golden Pass LNG Terminal and Pipeline Project Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



UPLAND WATERBODY CROSSING

FLUMED CROSSING METHOD # 1

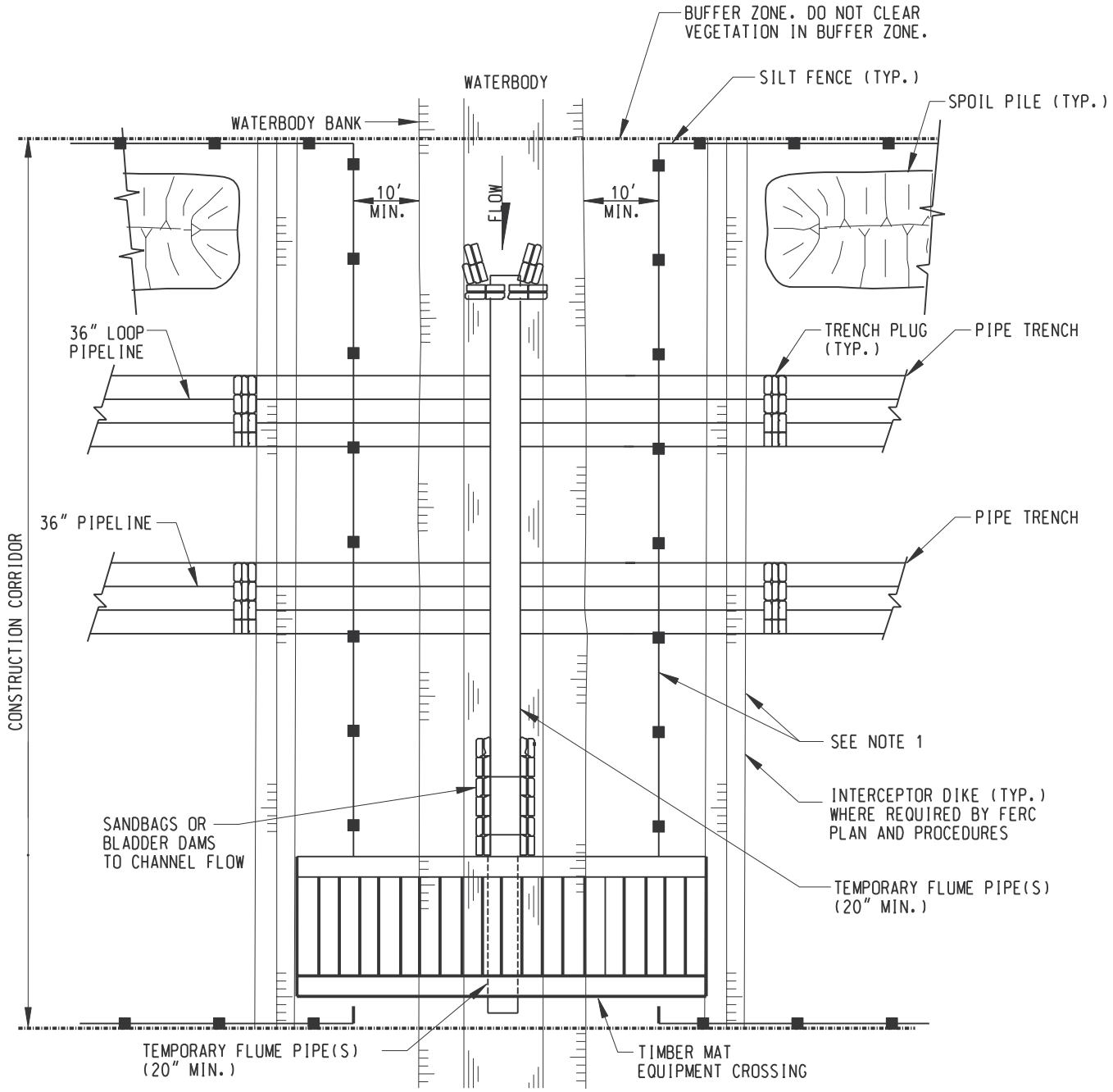
(APPLIES TO WATERBODIES 10' WIDE OR LESS)

1. SILT FENCE AND INTERCEPTOR DIKE TO BE REMOVED ACROSS PIPE TRENCH DURING CONSTRUCTION OF PIPELINES. SILT FENCE AND INTERCEPTOR DIKE TO BE REPLACED AFTER BACKFILL OF TRENCHES.

Figure 2-2
Single Pipeline - Flumed Crossing Method 1 (waterbodies 10 feet wide or less)

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



UPLAND WATERBODY CROSSING

FLUMED CROSSING METHOD # 2

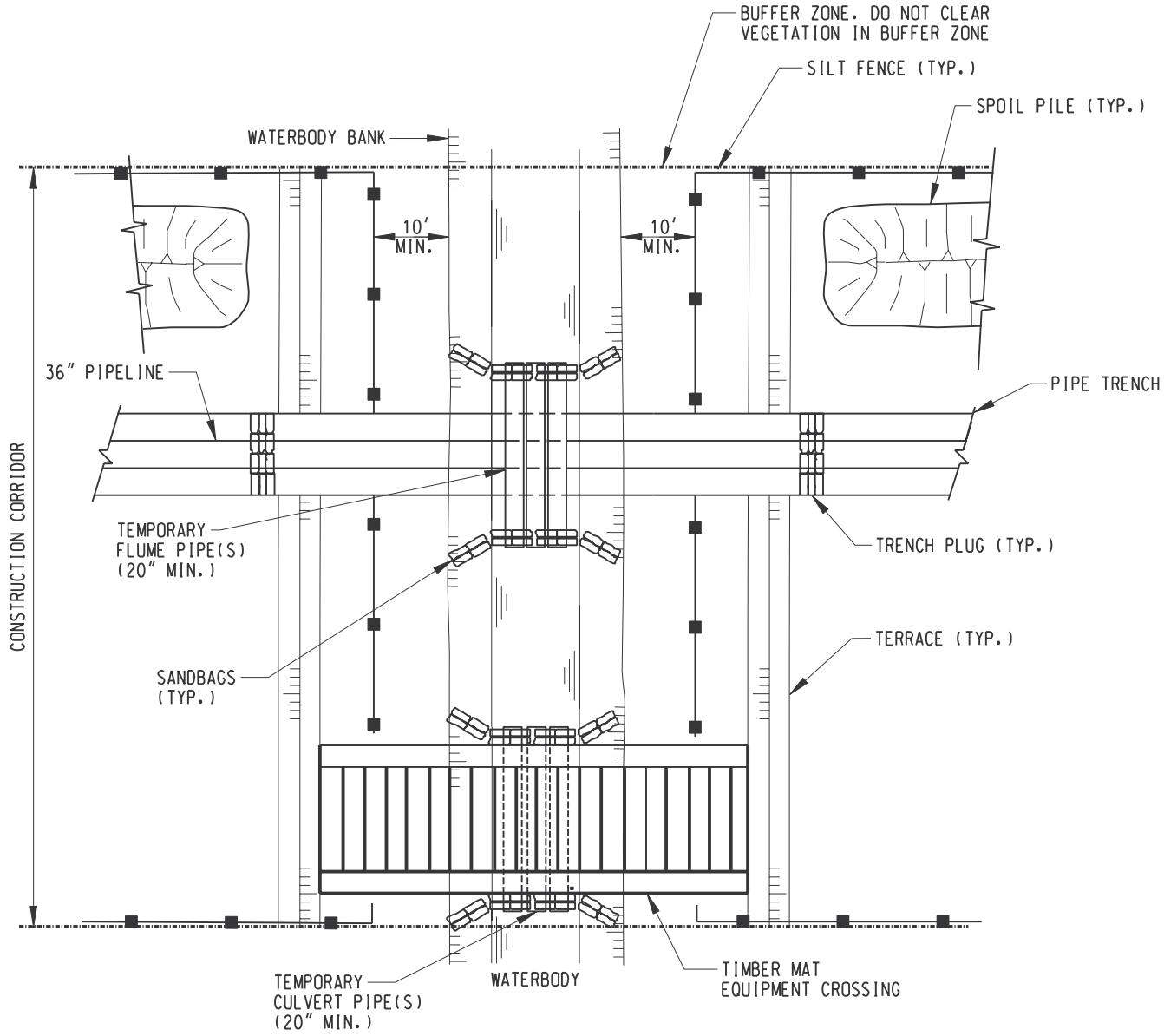
(APPLIES TO WATERBODIES 10' WIDE OR LESS)

1. SILT FENCE AND INTERCEPTOR DIKE TO BE REMOVED ACROSS PIPE TRENCH DURING CONSTRUCTION OF PIPELINES. SILT FENCE AND INTERCEPTOR DIKE TO BE REPLACED AFTER BACKFILL OF TRENCHES.

Figure 2-3
Two Pipelines - Flumed Crossing Method 2 (waterbodies 10 feet wide or less)

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



UPLAND WATERBODY CROSSING
FLUMED CROSSING METHOD # 3

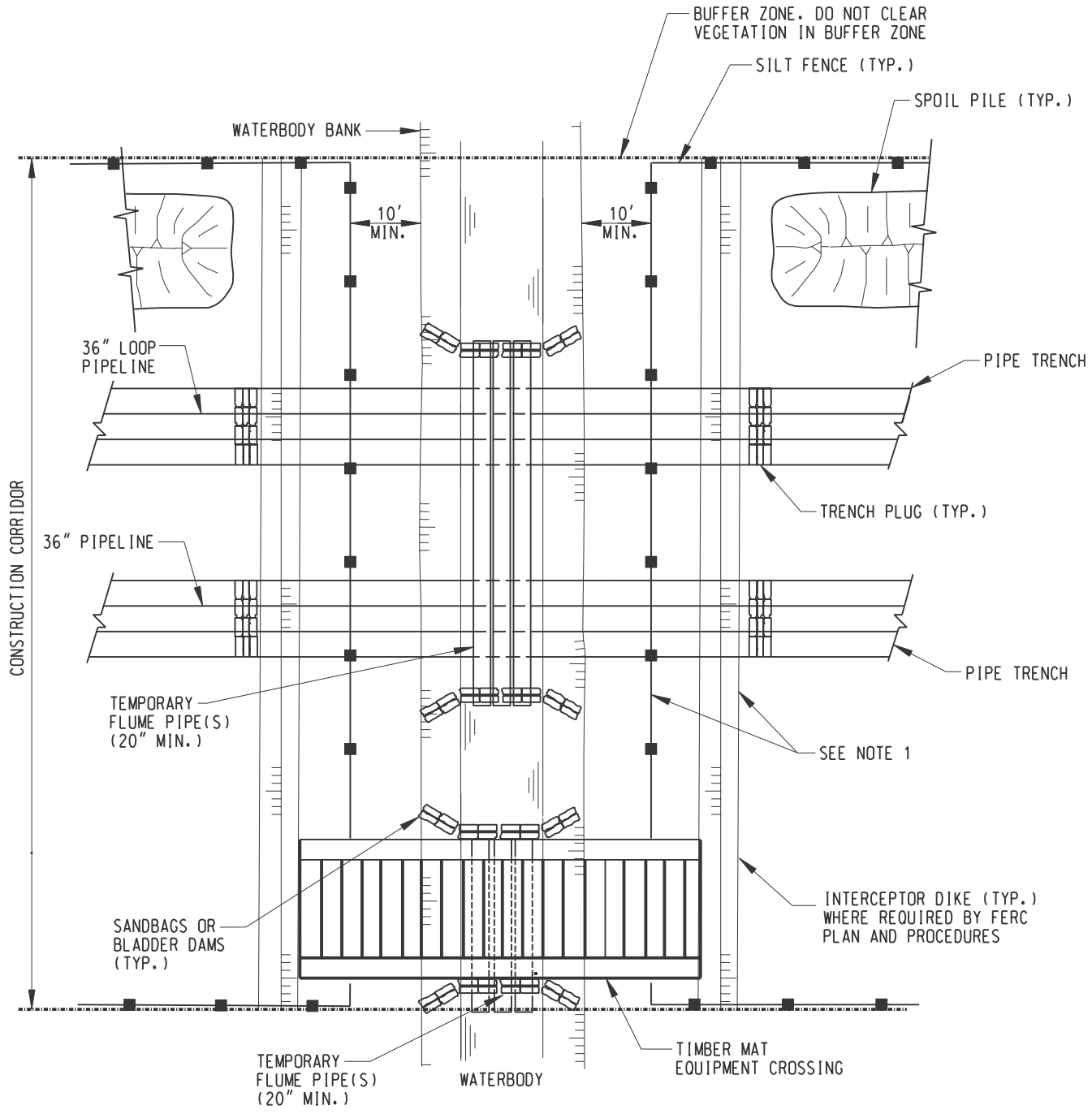
(APPLIES TO WATERBODIES GREATER THAN 10' WIDE, BUT NOT GREATER THAN 100' WIDE)

1. SILT FENCE AND INTERCEPTOR DIKE TO BE REMOVED ACROSS PIPE TRENCH DURING CONSTRUCTION OF PIPELINES. SILT FENCE AND INTERCEPTOR DIKE TO BE REPLACED AFTER BACKFILL OF TRENCHES.

Figure 2-4
Single Pipeline - Flumed Crossing Method 3
(waterbodies wider than 10 feet but less than 100 feet)

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



UPLAND WATERBODY CROSSING

FLUMED CROSSING METHOD # 4

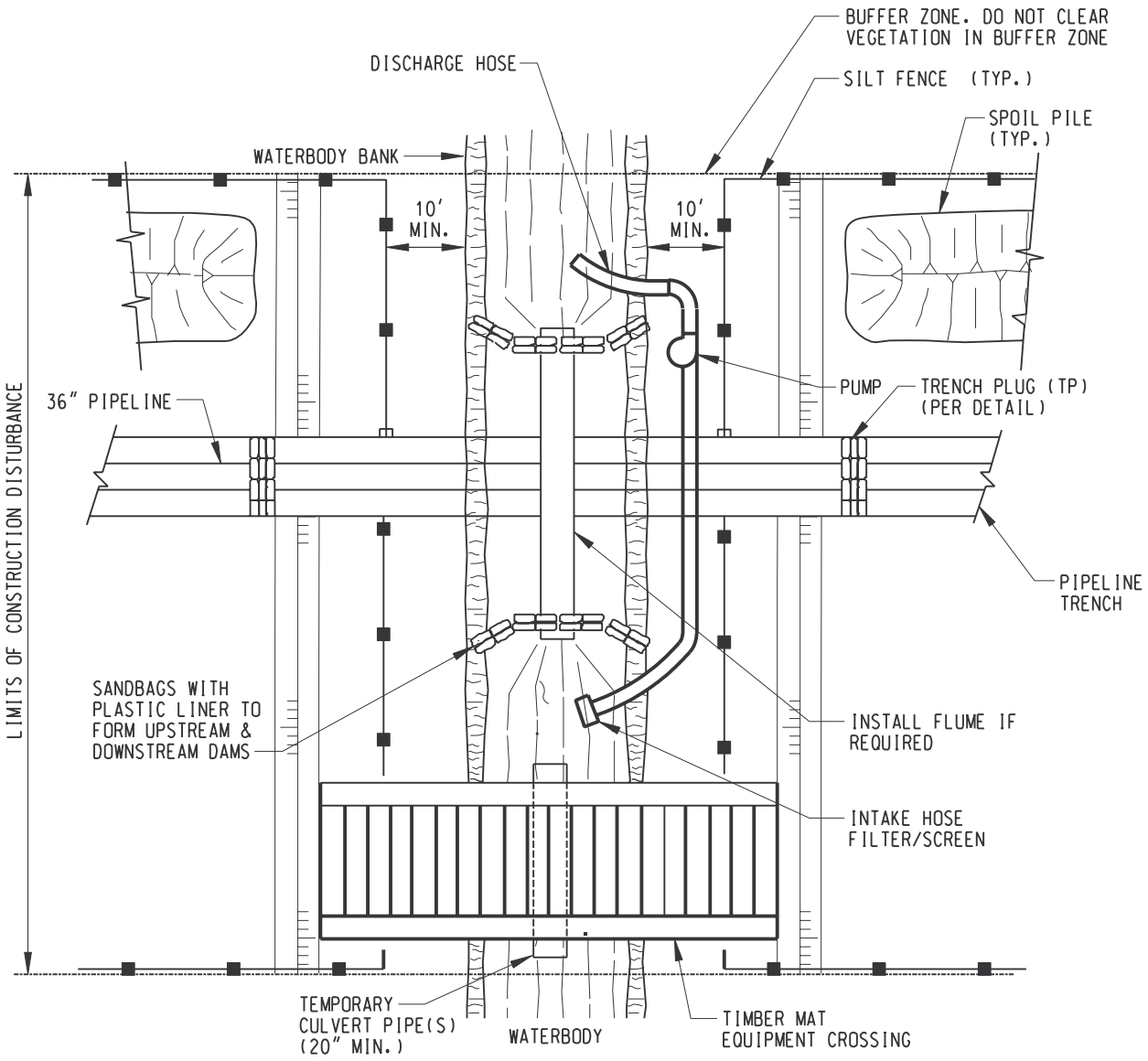
(APPLIES TO WATERBODIES GREATER THAN 10' WIDE, BUT NOT GREATER THAN 100' WIDE)

1. SILT FENCE AND INTERCEPTOR DIKE TO BE REMOVED ACROSS PIPE TRENCH DURING CONSTRUCTION OF PIPELINES. SILT FENCE AND INTERCEPTOR DIKE TO BE REPLACED AFTER BACKFILL OF TRENCHES.

Figure 2-5
Two Pipelines - Flumed
Crossing Method 4
(waterbodies wider than 10 feet
but less than 100 feet)

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA

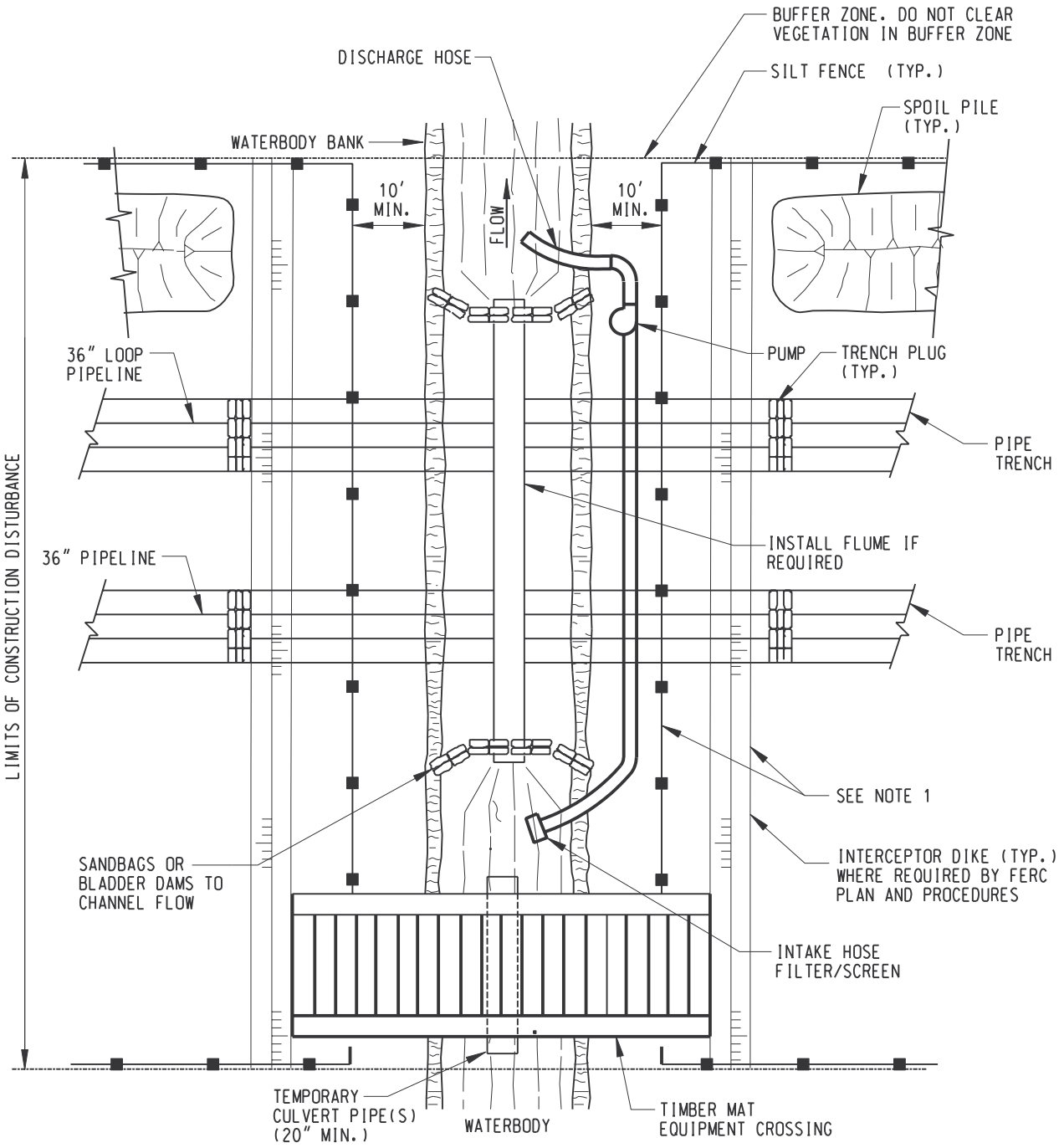


UPLAND WATERBODY CROSSING
DAM & PUMP METHOD

Figure 2-6
Single Pipeline - Dam and Pump Method

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



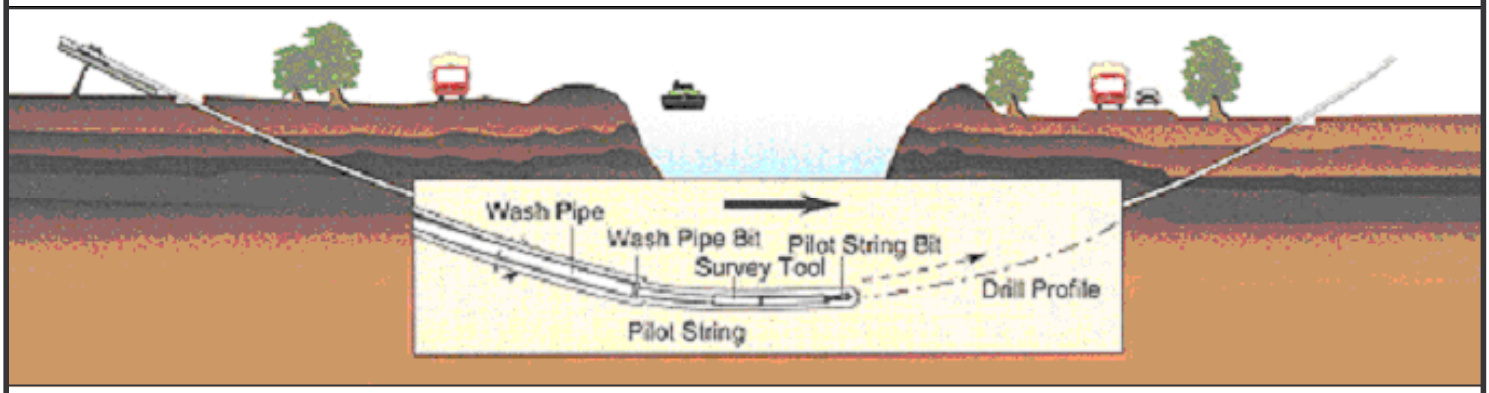
UPLAND WATERBODY CROSSING
DAM & PUMP METHOD

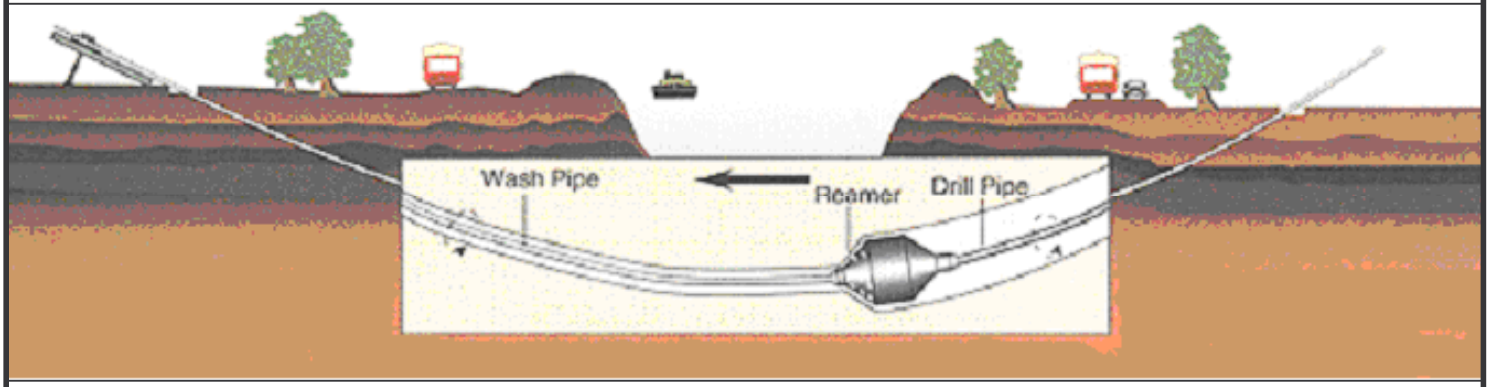
1. SILT FENCE AND INTERCEPTOR DIKE TO BE REMOVED ACROSS PIPE TRENCH DURING CONSTRUCTION OF PIPELINES. SILT FENCE AND INTERCEPTOR DIKE TO BE REPLACED AFTER BACKFILL OF TRENCHES.

Figure 2-7
Two Pipelines - Dam and Pump Method

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA





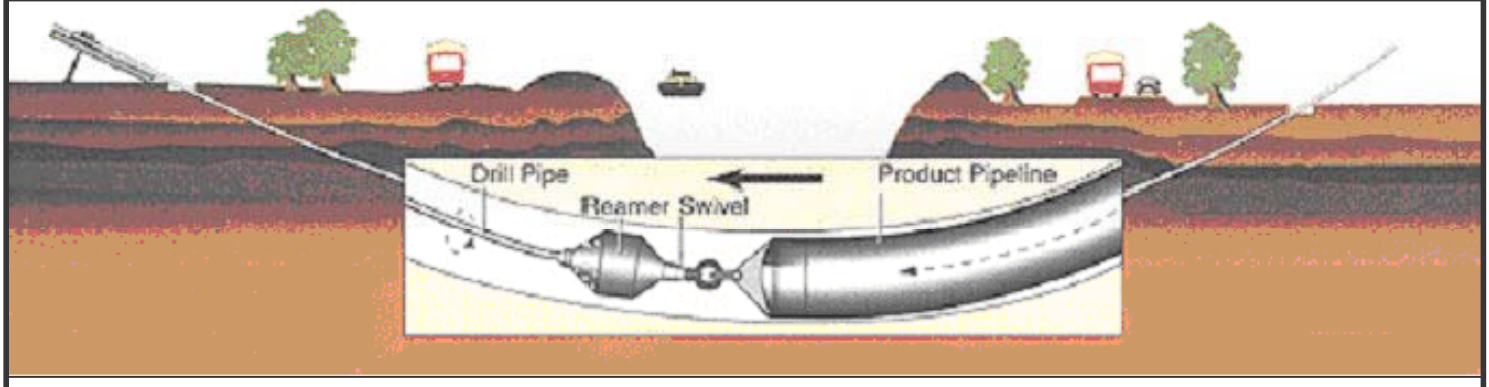
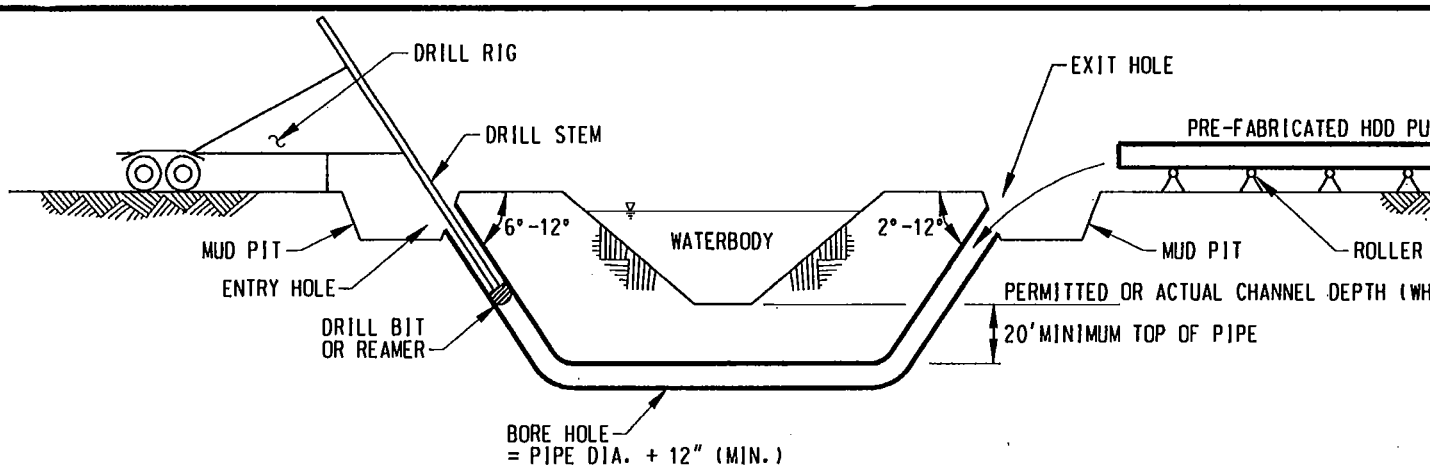


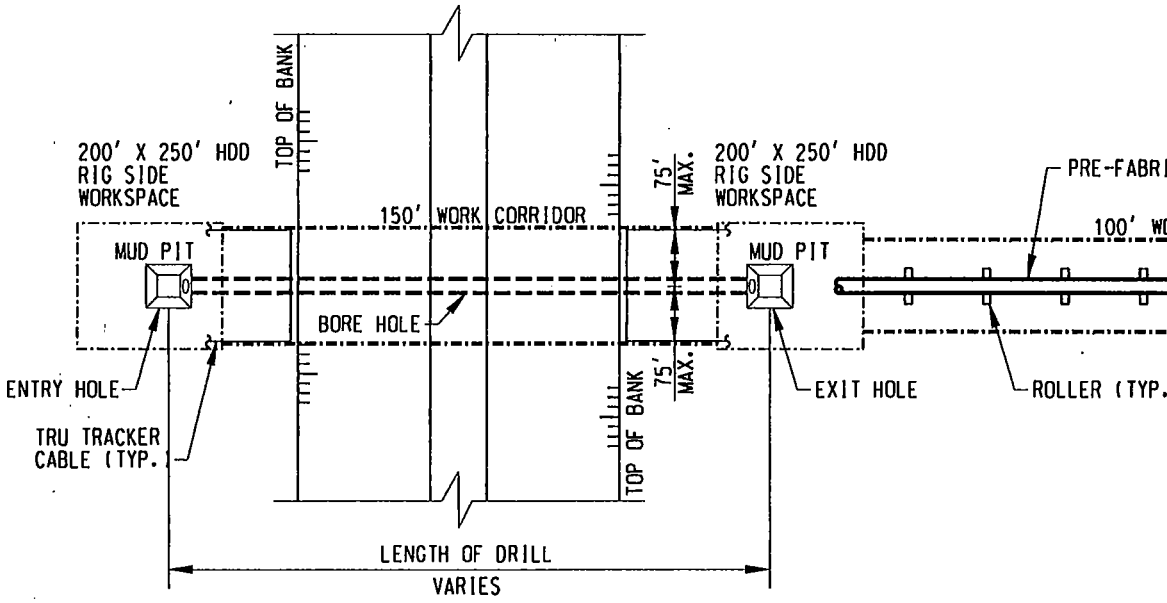
Figure 2-8
Typical Horizontal
Directional Drill Crossing
Method

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA



SECTION
N.T.S.
(VERTICAL TO HORIZONTAL RATIO EXAGGERATED)



PLAN
N.T.S.

Figure 2-9
Single Pipeline - Typical Horizontal
Directional Drill Cross-Section

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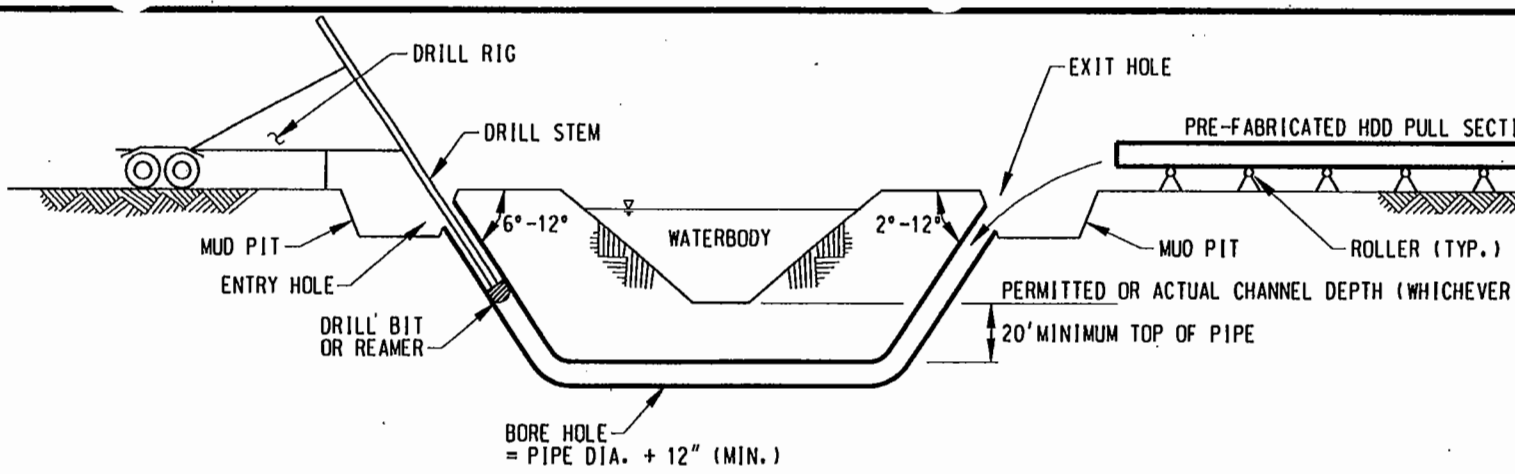
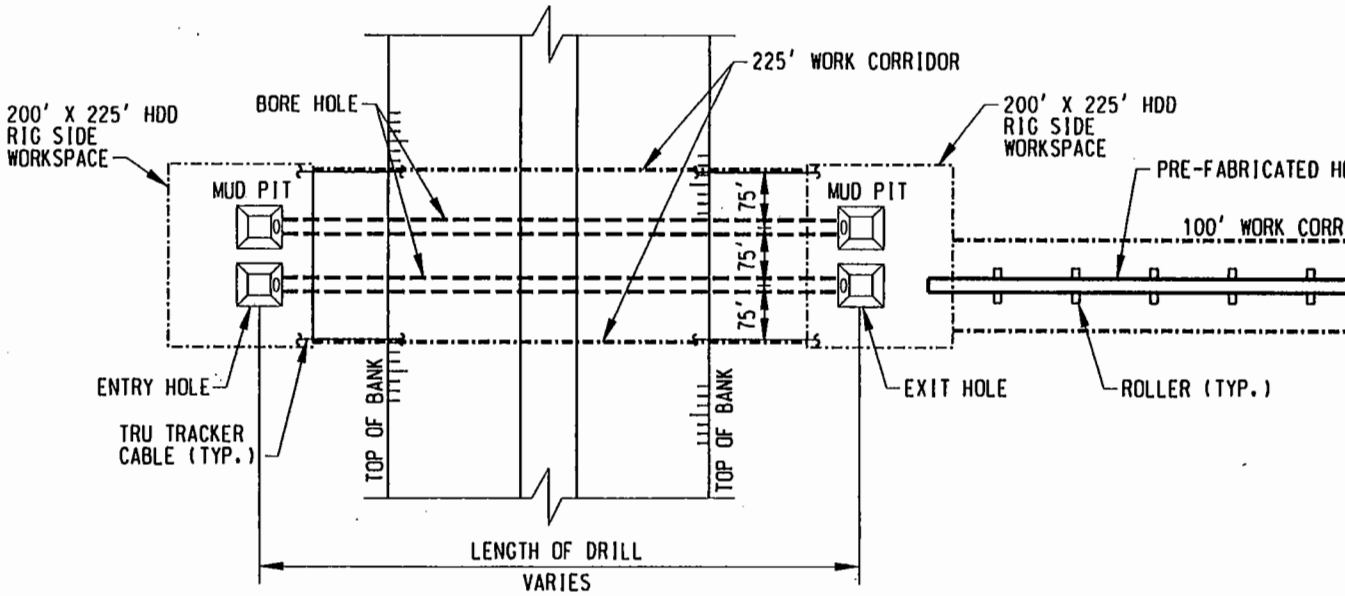


SECTION
N.T.S.
(VERTICAL TO HORIZONTAL RATIO EXAGGERATED)



PLAN
N.T.S.

Figure 2-10
Two Pipelines - Typical
Horizontal Directional Drill
Cross-Section

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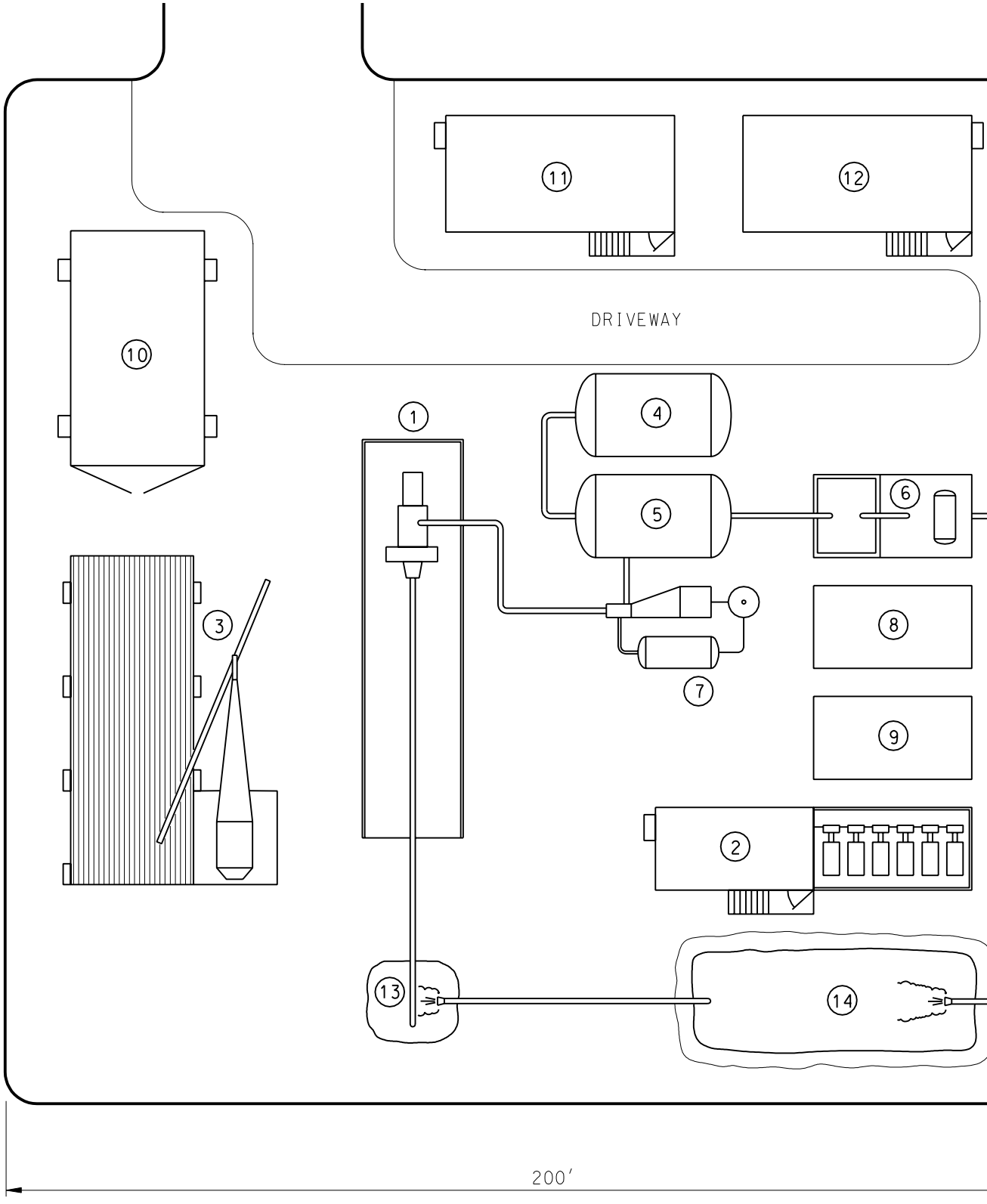
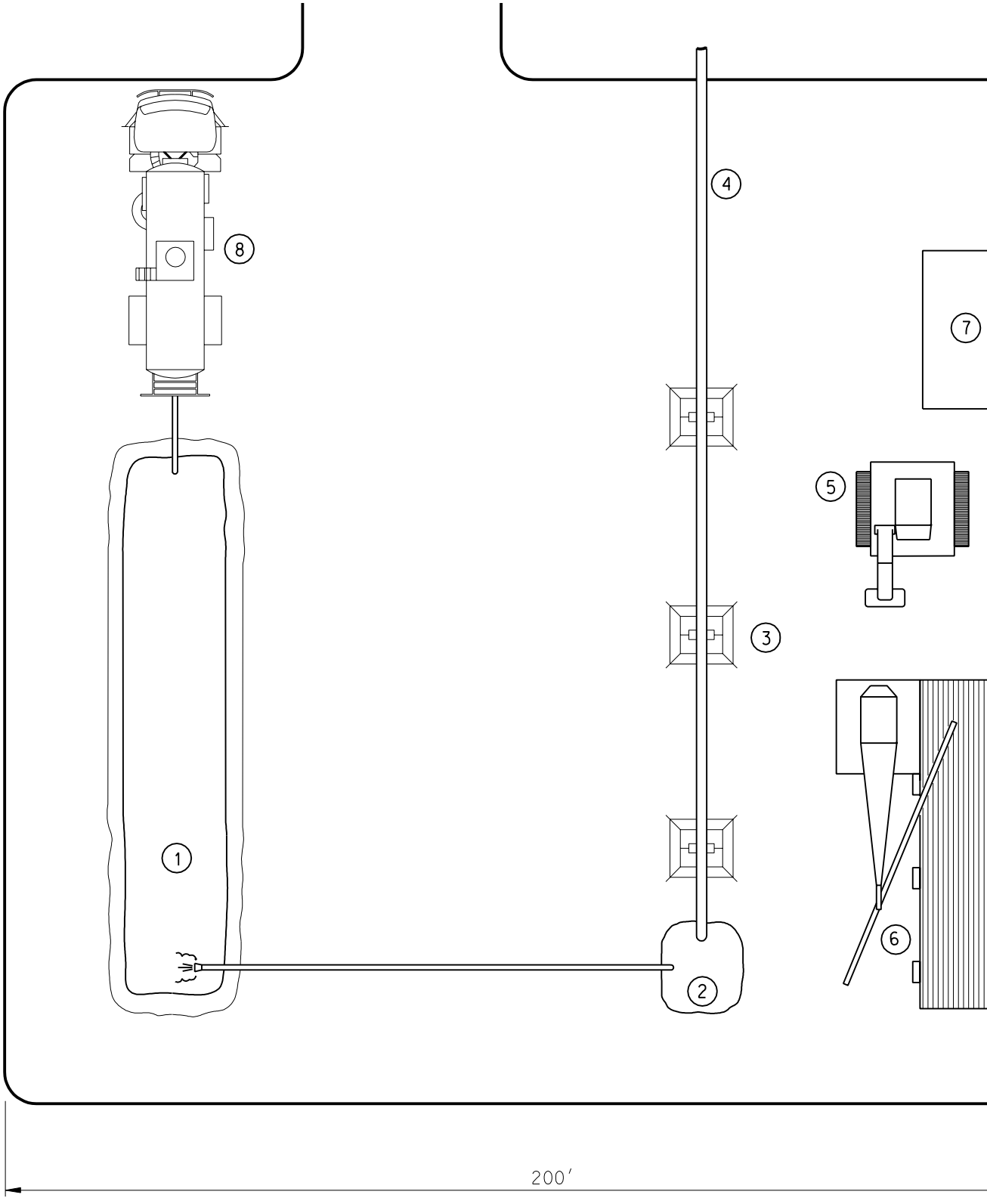


TYPICAL RIG SIDE WORK SPACE

N.T.S.

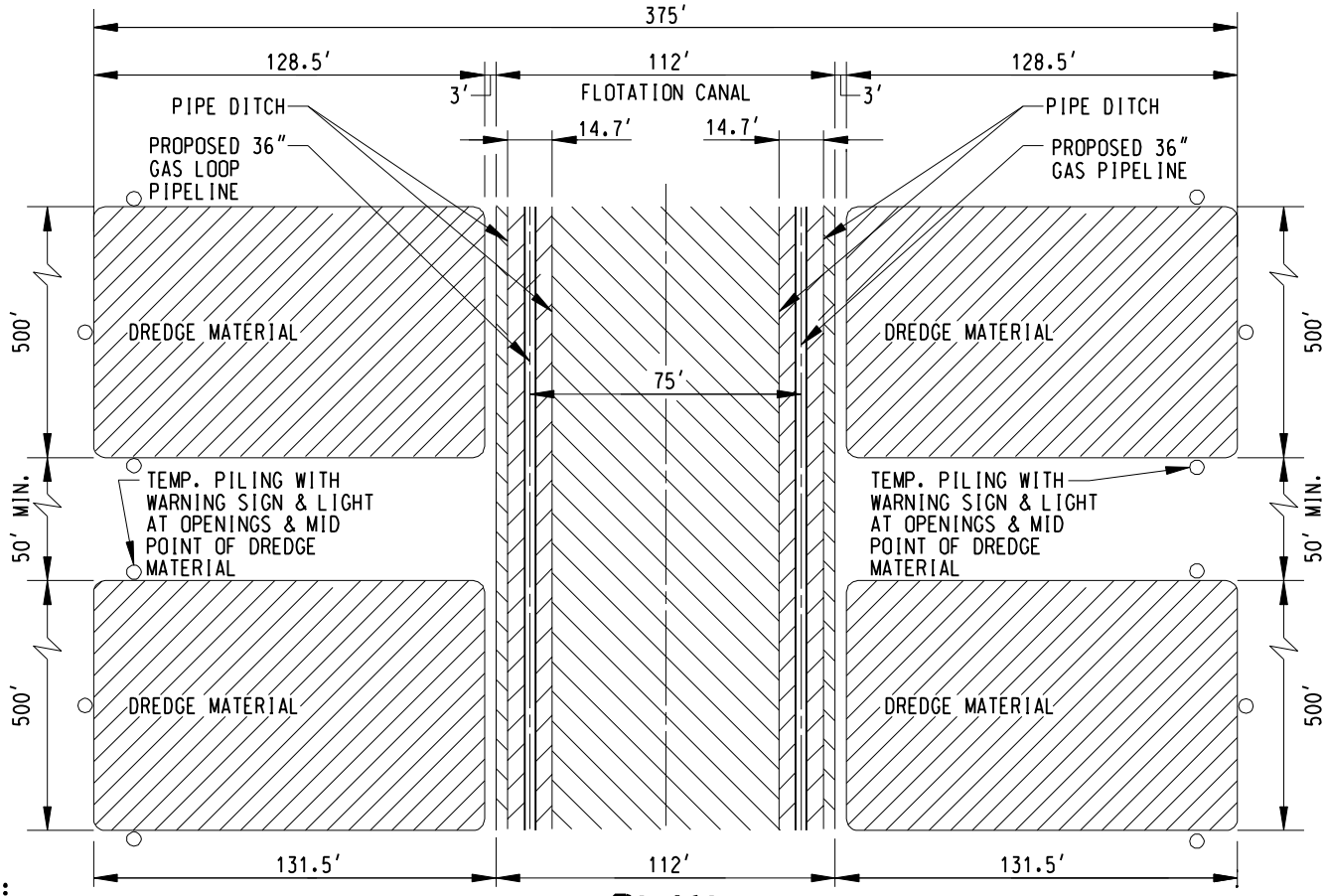
Figu
Typical Rig Side Wo
Directional



TYPICAL PIPE SIDE WORK SPACE

N.T.S.

Figur
Typical Pipe Side Wo
Directional



NOTES:

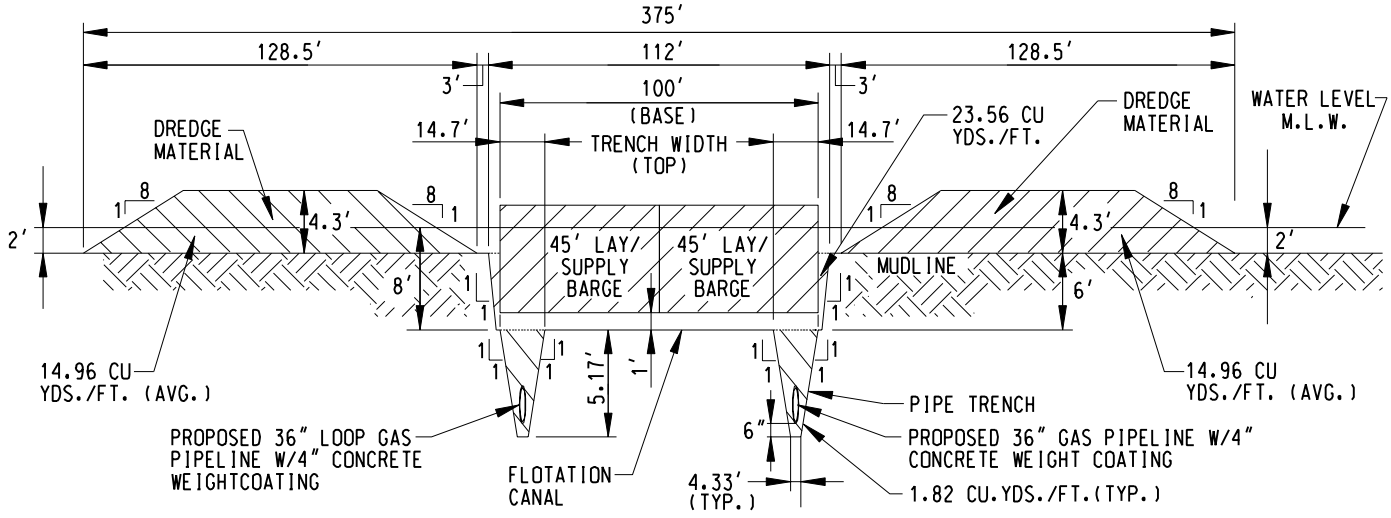
DREDGED MATERIAL TO BE TEMPORARILY STOCKPILED ADJACENT TO DREDGE AREA. UPON COMPLETION OF CONSTRUCTION ACTIVITIES, DREDGED MATERIAL IS TO BE USED AS BACKFILL.
BARGE DRAFT IS 7 FT.

PLAN

TYPICAL FLOTATION CANAL IN OPEN WATER TWO PIPELINES

NO SCALE

NOTE: FLOATATION CANAL REQUIRED FOR WATER DEPTHS LESS THAN 8 FEET. WATER DEPTHS VARY. 2-FOOT DEPTH SHOWN AS AN EXAMPLE.



SECTION

TYPICAL FLOTATION CANAL IN OPEN WATER TWO PIPELINES

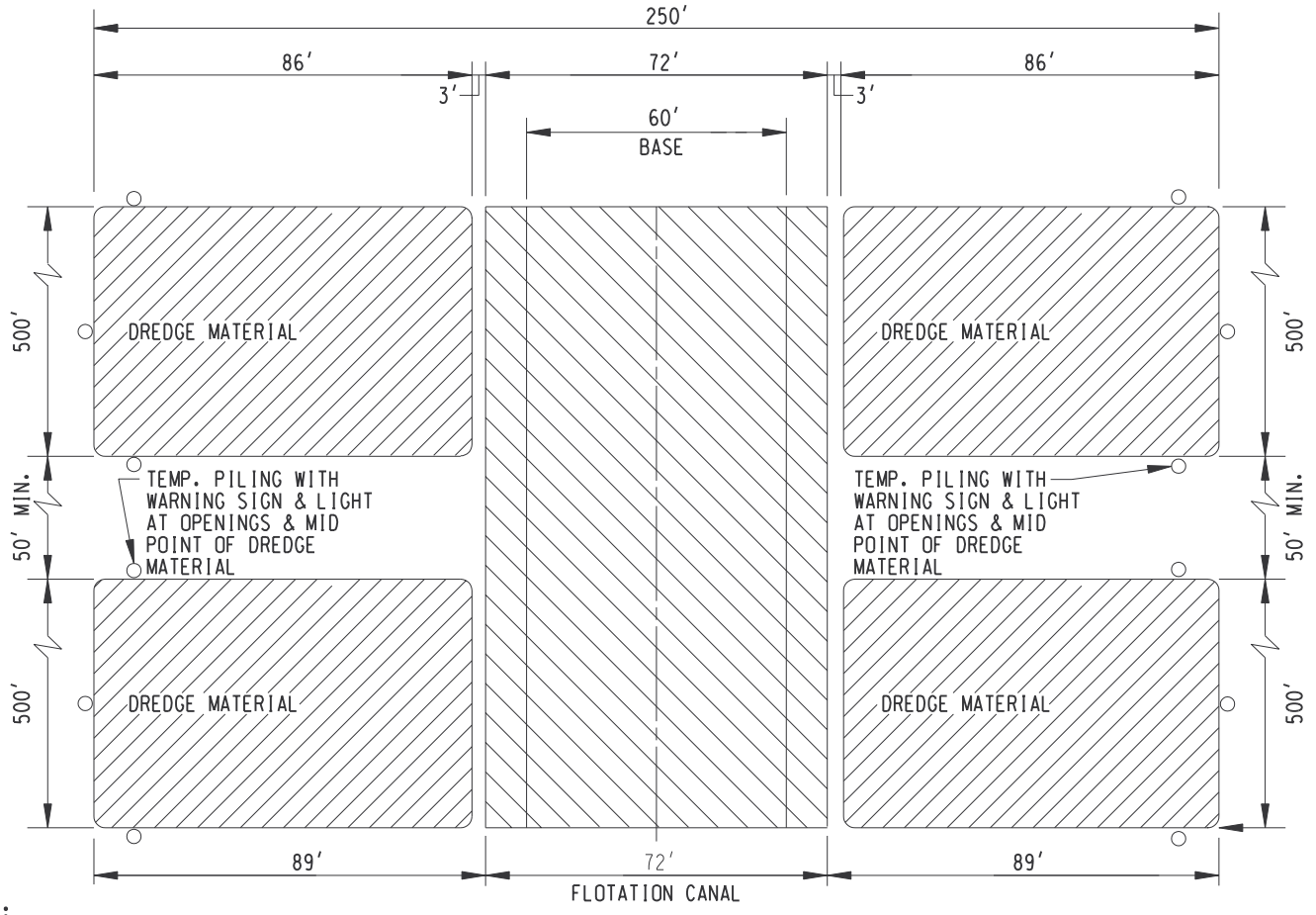
NO SCALE

PROPOSED 36" PIPELINE TYPICAL FLOTATION CANAL IN OPEN WATER TWO PIPELINES

Figure 2-13
Two Pipelines - Typical Flotation Canal in Open Water

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



NOTES:

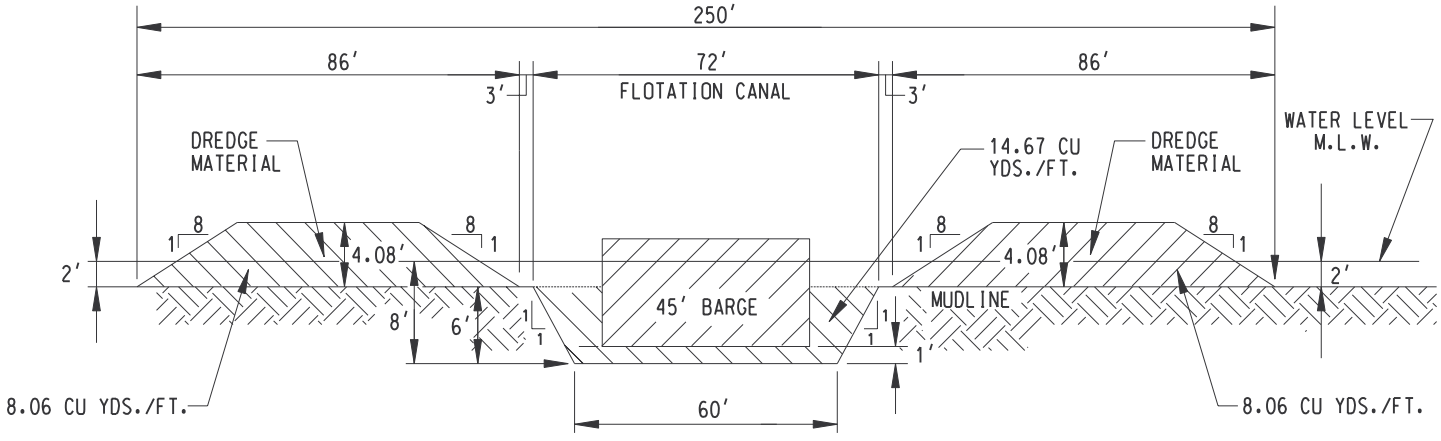
DREDGED MATERIAL TO BE TEMPORARILY STOCKPILED ADJACENT TO DREDGE AREA. UPON COMPLETION OF CONSTRUCTION ACTIVITIES, DREDGED MATERIAL IS TO BE USED AS BACKFILL.
BARGE DRAFT IS 7 FT.

PLAN

TYPICAL ACCESS CANAL IN OPEN WATER

NO SCALE

NOTE: FLOATATION CANAL REQUIRED FOR WATER DEPTHS LESS THAN 8 FEET. WATER DEPTHS VARY. 2-FOOT DEPTH SHOWN AS AN EXAMPLE.



SECTION

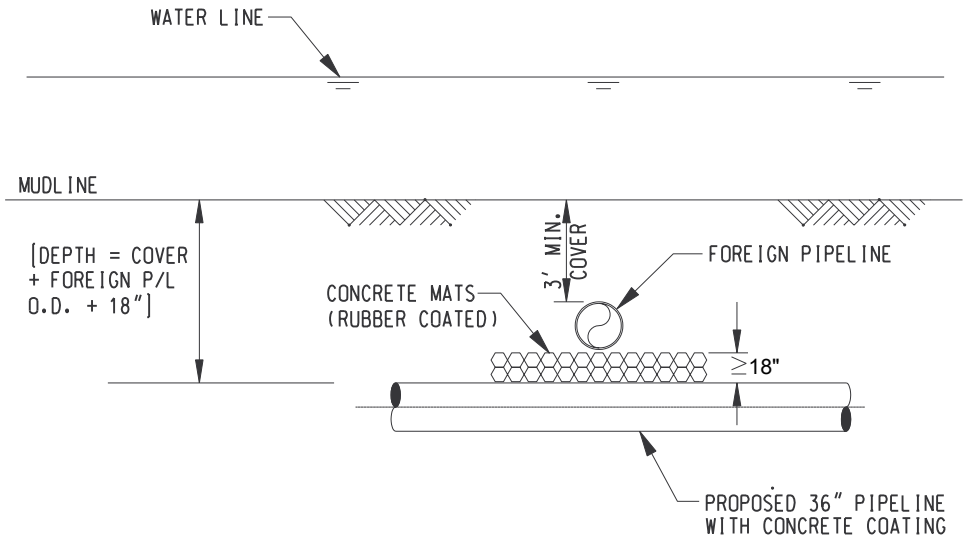
TYPICAL ACCESS CANAL IN OPEN WATER

NO SCALE

Figure 2-14
Two Pipelines -
Typical Access
Canal in Open Water

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA

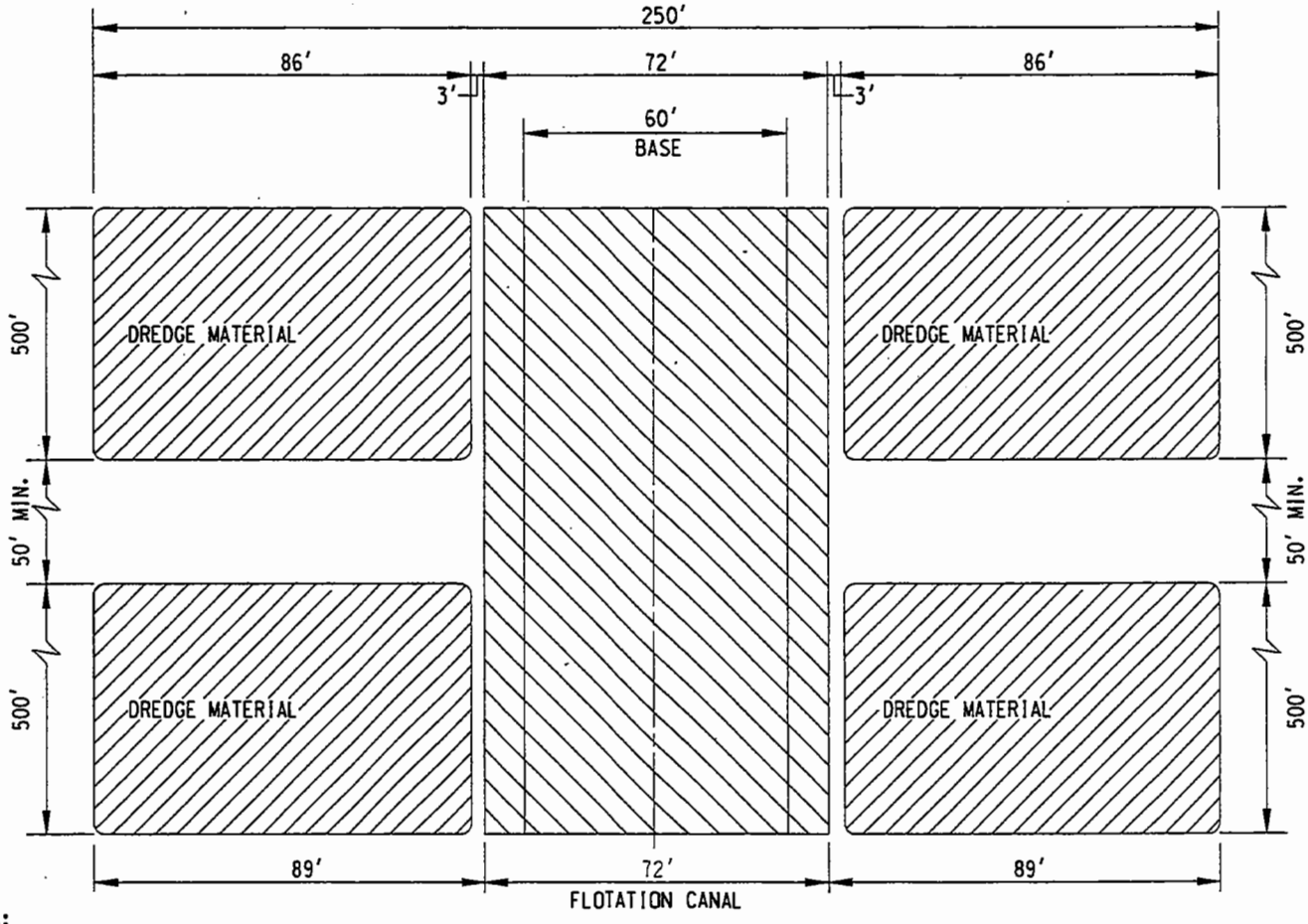


NOTES

1. CROSS UNDER FOREIGN LINE AND MAINTAIN SEPARATION REQUIREMENTS.
2. MAINTAIN 18" MINIMUM SEPARATION BETWEEN PIPELINES.

TYPICAL WATERBODY FOREIGN PIPELINE CROSSING DETAIL

	Figure 2-15 Typical Foreign Pipeline Crossing in Open Water	Golden Pass LNG Terminal and Pipeline Project Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA

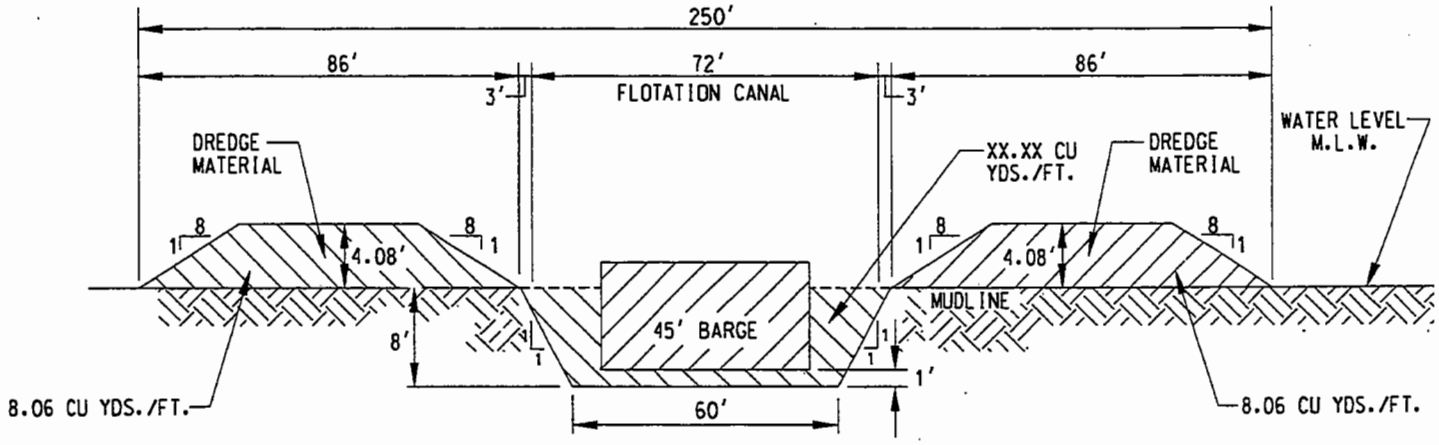


NOTES:

DREDGED MATERIAL TO BE TEMPORARILY STOCKPILED ADJACENT TO DREDGE AREA. UPON COMPLETION OF CONSTRUCTION ACTIVITIES, DREDGED MATERIAL IS TO BE USED AS BACKFILL.
BARGE DRAFT IS 7 FT.

PLAN
ACCESS CANAL THROUGH STAURATED WETLANDS
NO SCALE

NOTE: FLOATATION CANAL REQUIRED FOR WATER DEPTHS LESS THAN 8 FEET AND WHEN CROSSING BETWEEN TWO WATERBODIES. WATER DEPTHS SHOWN AT THE MUDLINE.

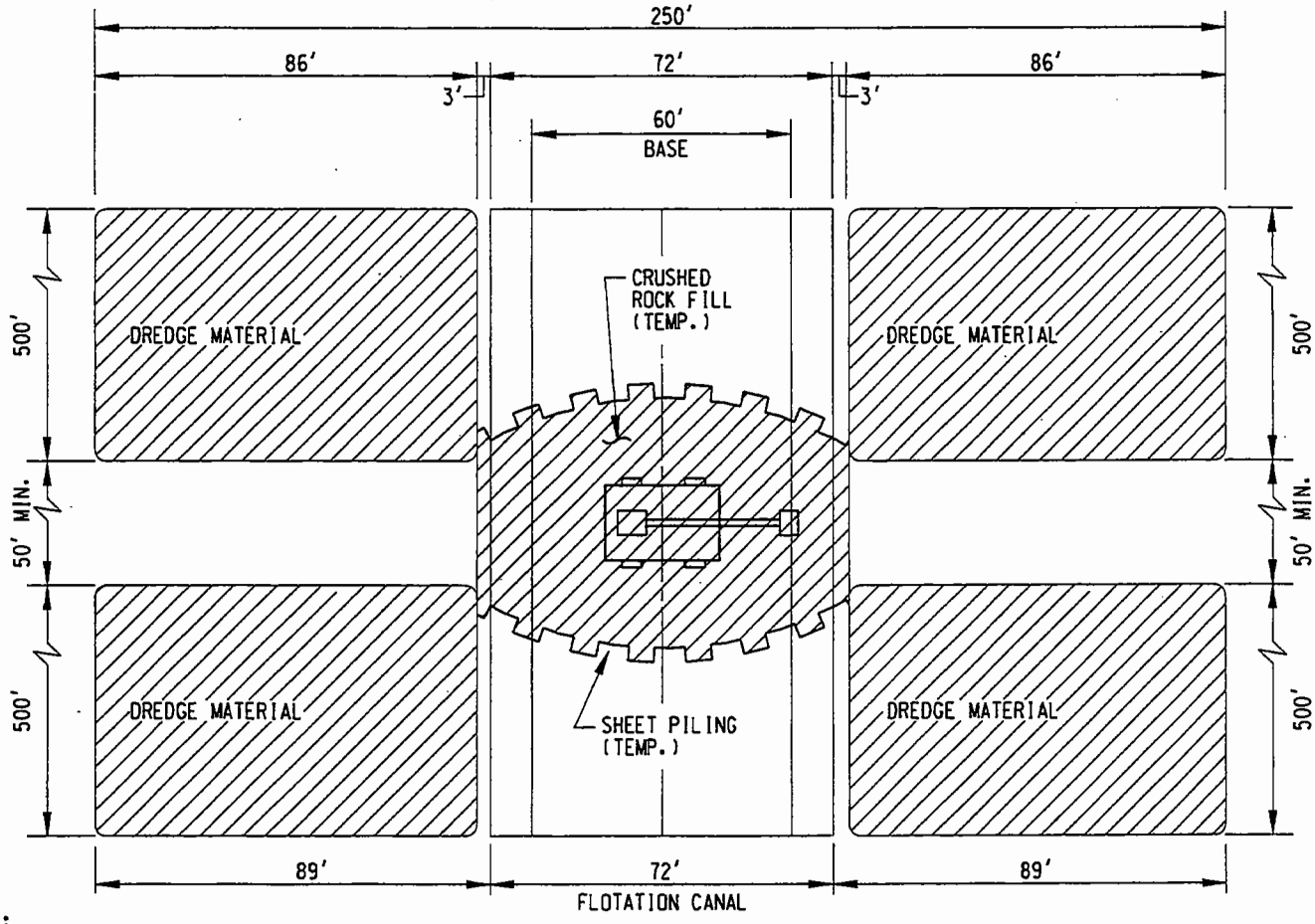


SECTION
ACCESS CANAL THROUGH SATURATED WETLANDS
NO SCALE

Figure 2-16
Access Canal through Saturated Wetlands at Salt Bayou
(MP 8.6)

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



NOTES:

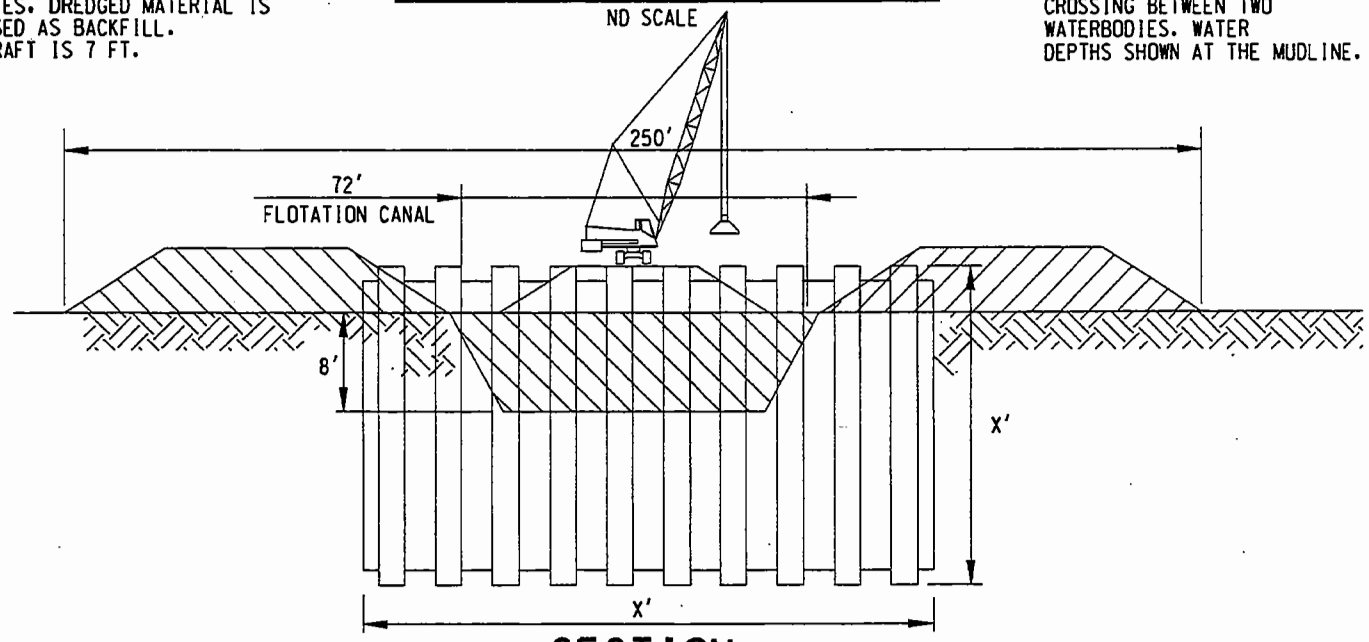
DREDGED MATERIAL TO BE TEMPORARILY STOCKPILED ADJACENT TO DREDGE AREA. UPON COMPLETION OF CONSTRUCTION ACTIVITIES. DREDGED MATERIAL IS TO BE USED AS BACKFILL.
BARGE DRAFT IS 7 FT.

PLAN

TEMPORARY PLUG FOR ACCESS CANAL

NO SCALE

NOTE: FLOATATION CANAL REQUIRED FOR WATER DEPTHS LESS THAN 8 FEET AND WHEN CROSSING BETWEEN TWO WATERBODIES. WATER DEPTHS SHOWN AT THE MUDLINE.



SECTION

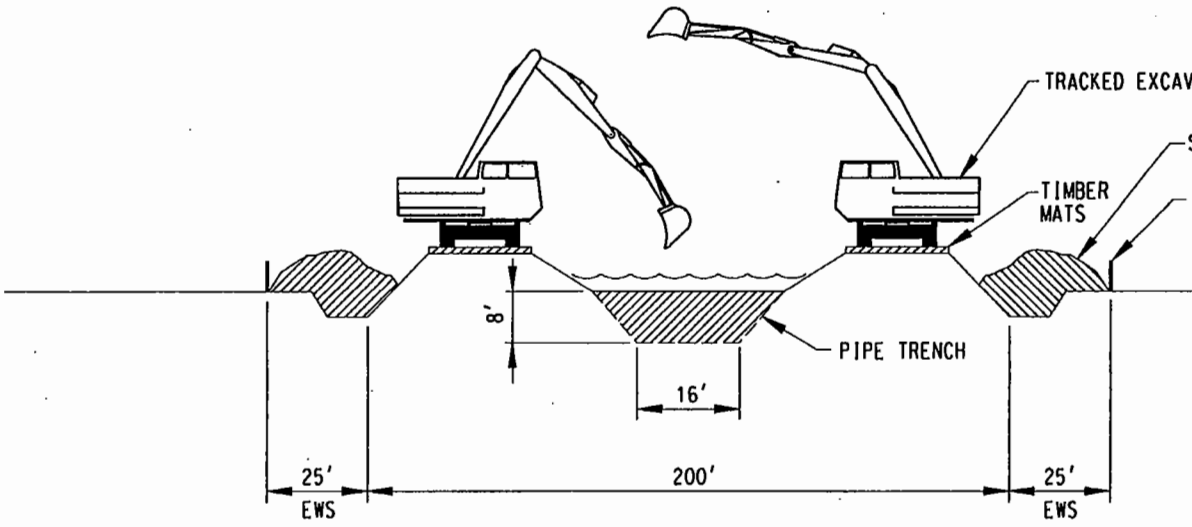
TEMPORARY PLUG FOR ACCESS CANAL

NO SCALE

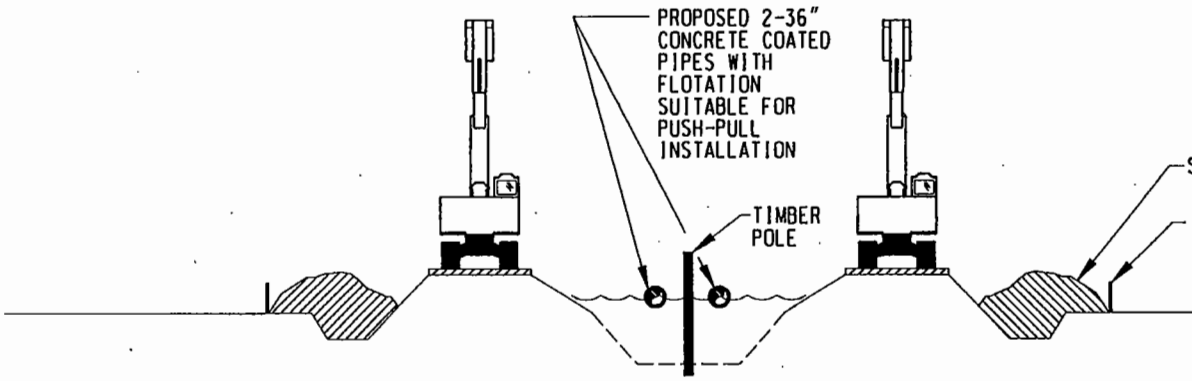
Figure 2-17
Temporary Plug Access Canal at Salt Bayou (MP 8.6)

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



EXCAVATE PIPE TRENCH



PUSH-PULL INSTALLATION

Figure 2-18
Two Pipelines - J.D. Murphree WMA
(MPs 9.6 to 11.4) - Excavate and Install

Gol

Jefferson
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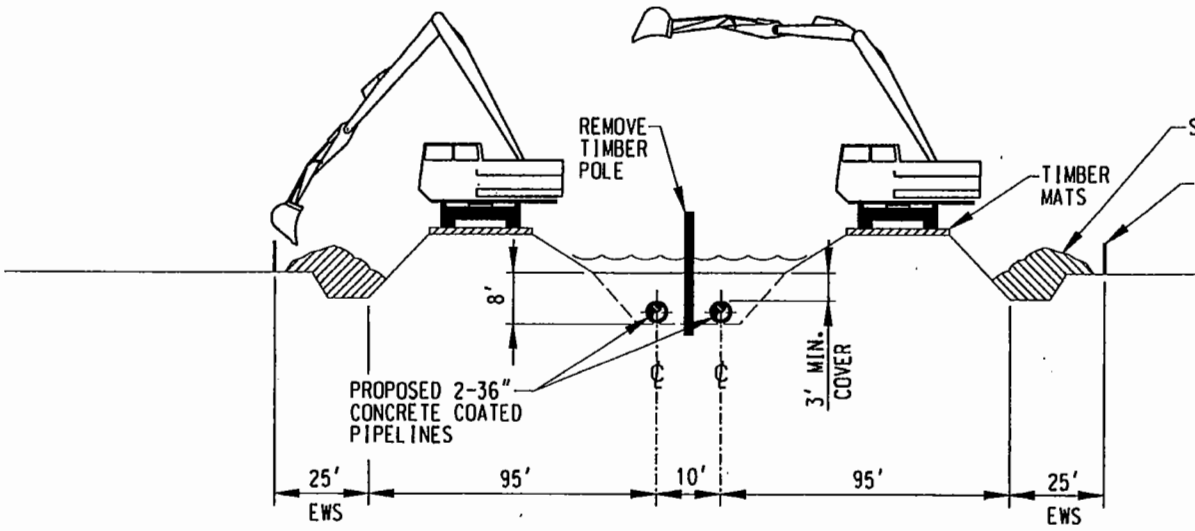
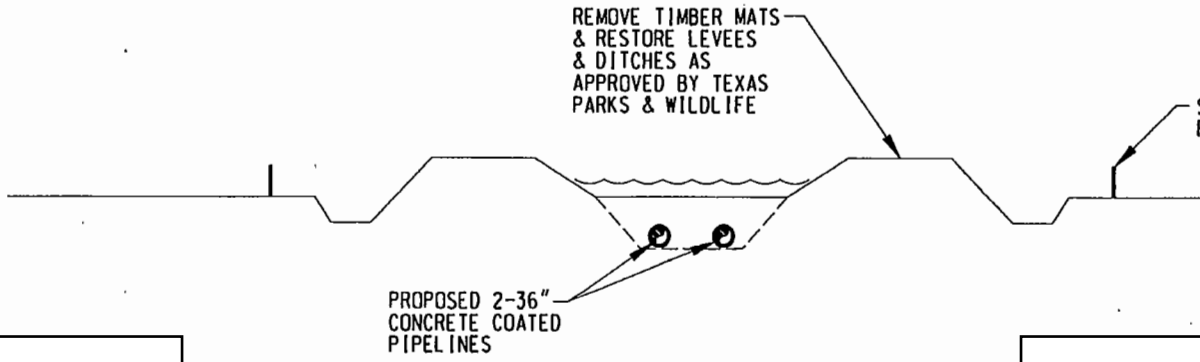


LOWER PIPELINES & BACKFILL



RESTORE LEVEES

Figure 2-19
Two Pipelines - J.D. Murphree WMA
(MPs 9.6 - 11.4) - Lower, Backfill and Restore

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Jefferson,
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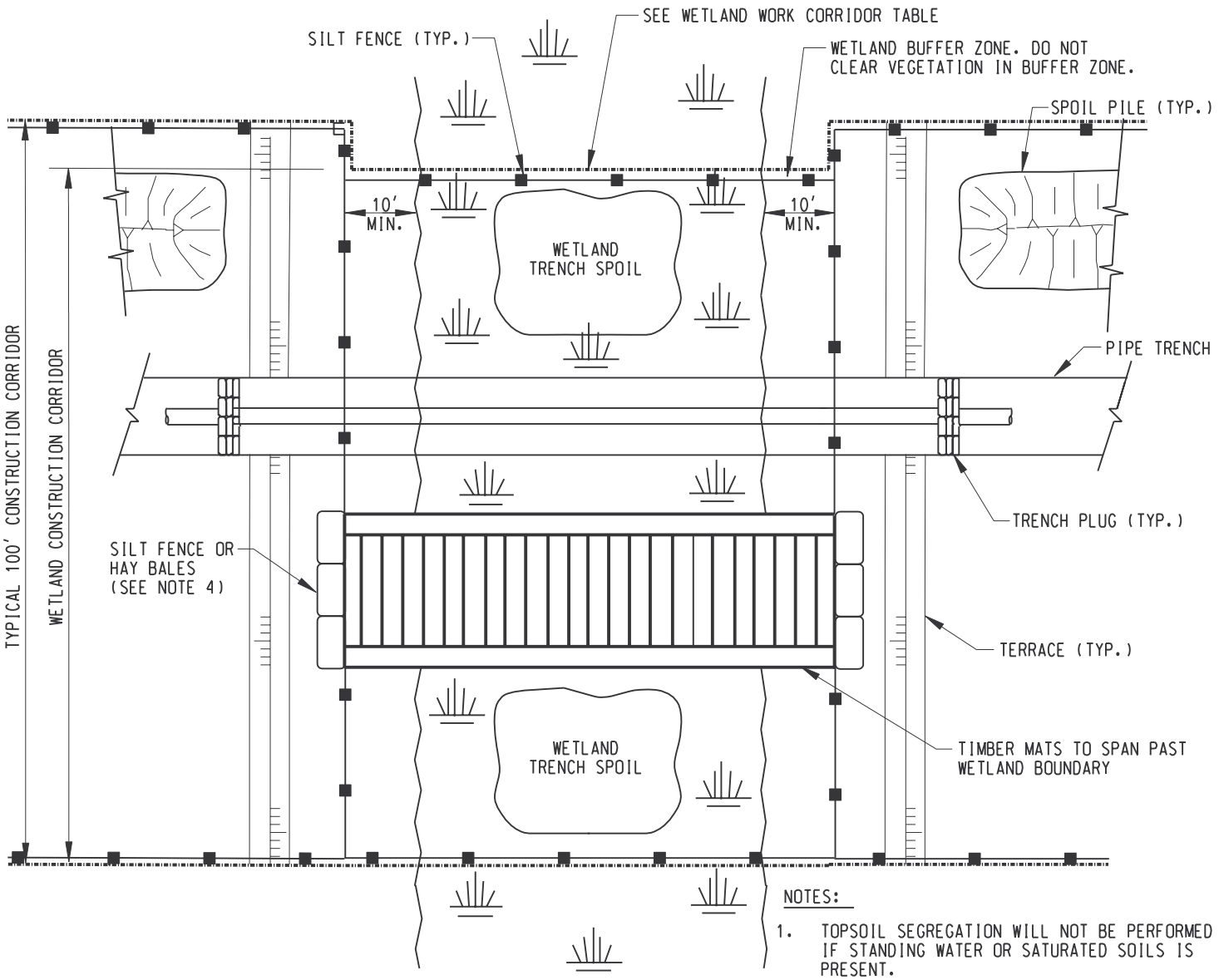


NOTES:

1. TOPSOIL SEGREGATION WILL NOT BE PERFORMED IF STANDING WATER OR SATURATED SOILS IS PRESENT.
2. INSTALL PERMANENT TERRACES AT THE BASE OF ALL SLOPES ADJACENT TO THE WETLAND.
3. CONTRACTOR SHALL POSTPONE GRADING OF RIGHT-OF-WAY ADJACENT TO WETLAND UNTIL STAGING AREA IS PREPARED AND WORK IN THE WETLAND IS READY TO COMMENCE.
4. SILT FENCE OR HAY BALES SHALL BE PLACED IN THE GAP AT THE TIMBER MATS BY THE END OF EACH DAY OR PRIOR TO APPROACHING RAIN TO PREVENT SEDIMENT FLOW INTO WETLAND.
5. USE ADDITIONAL TIMBER MAT LAYERS TO RAISE CROSSING ABOVE GRADE WHERE POOR SOIL CONDITIONS EXIST.

WETLAND WORK CORRIDOR TABLE

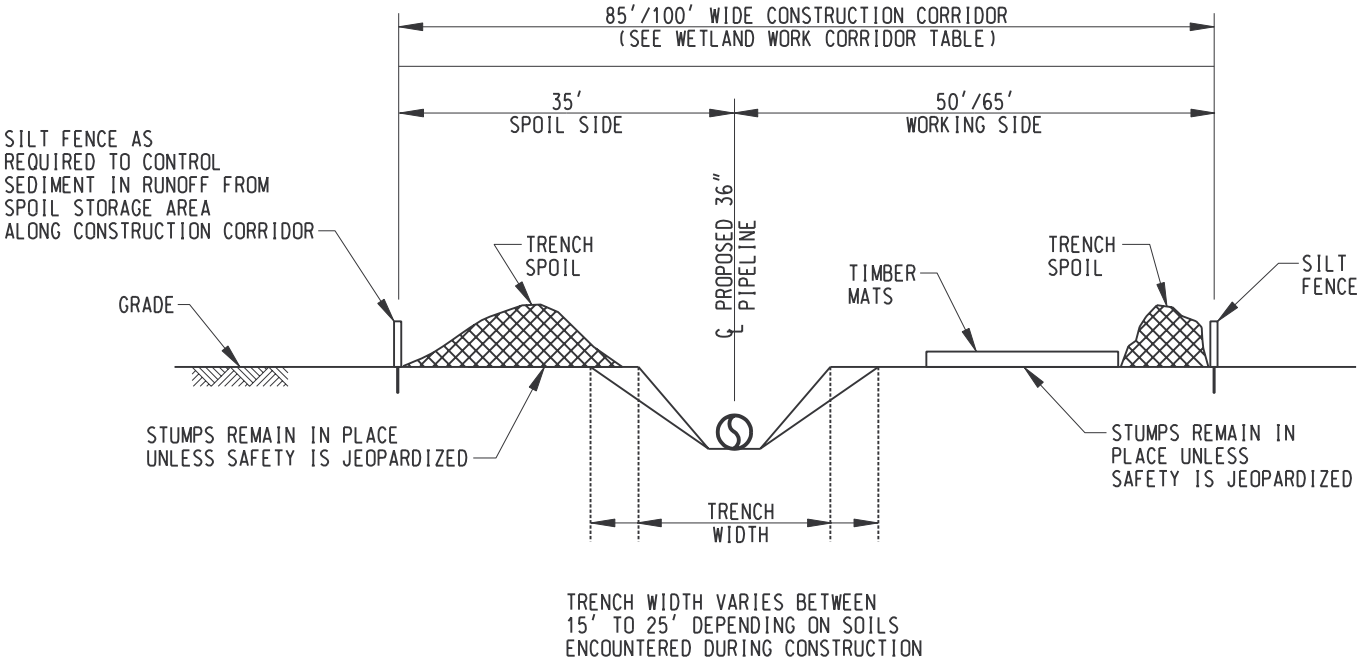
WETLAND LENGTH	CONSTRUCTION CORRIDOR	WORKING SIDE	SPOIL SIDE
LESS THAN 100' LONG	85'	50'	35'
GREATER THAN 100' LONG	100'	65'	35'

SATURATED WETLAND CROSSING WITHOUT TOPSOIL SEGREGATION

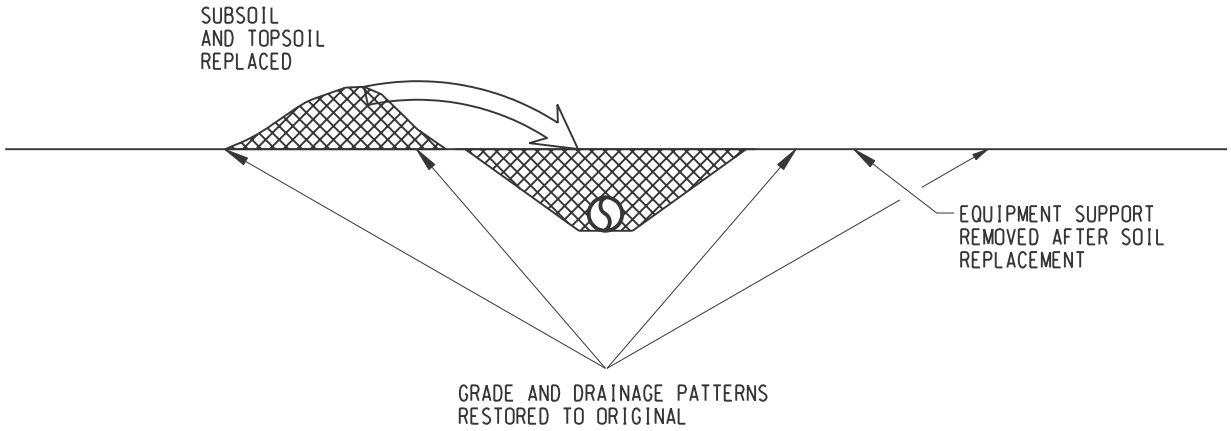
Figure 3-1
Single Pipeline - Saturated Wetland Crossing without Topsoil Segregation

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



CROSS SECTION

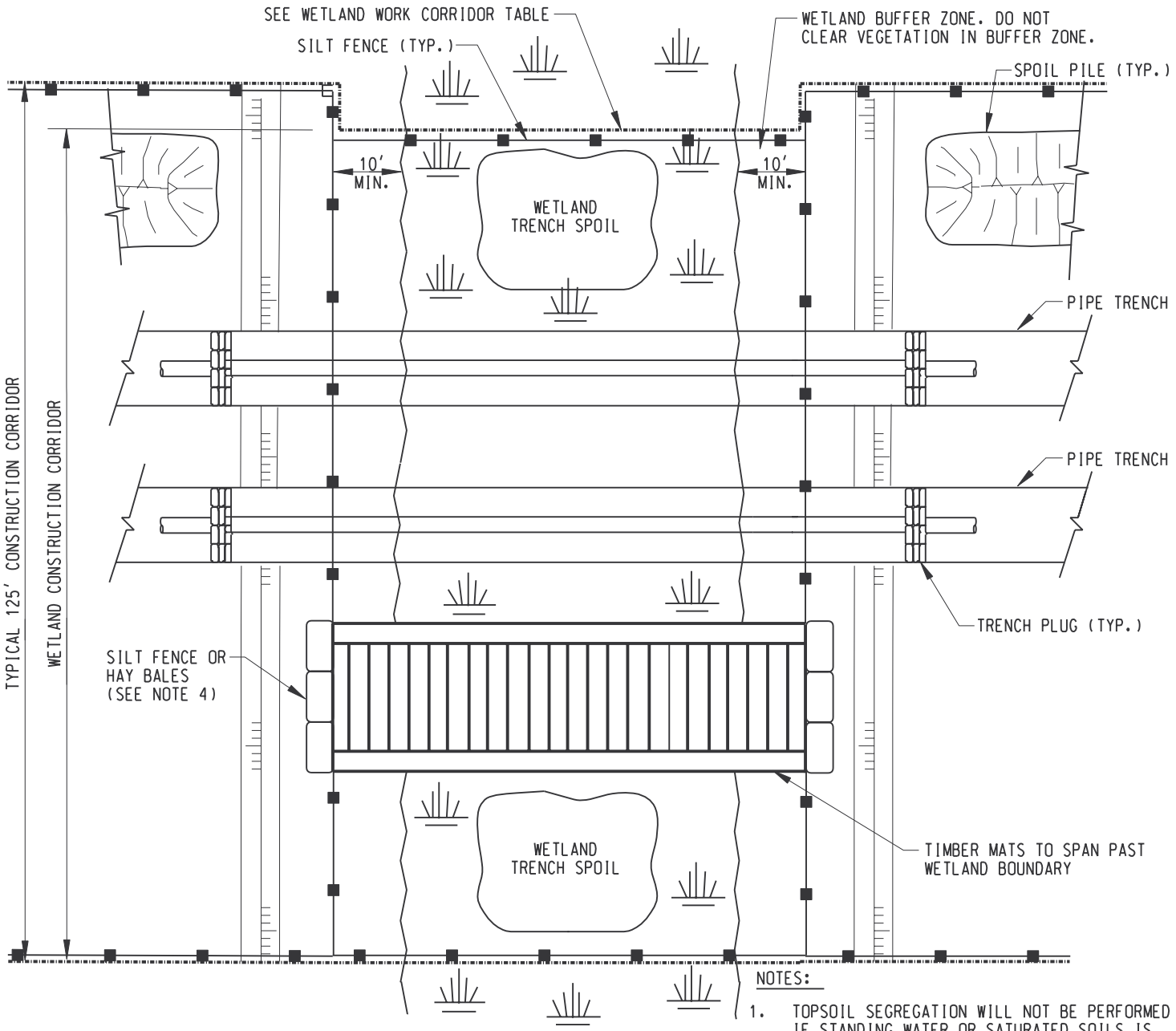


WETLAND RESTORATION

Figure 3-2
Single Pipeline - Saturated Wetland without Topsoil Segregation (Cross-Section)

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



WETLAND WORK CORRIDOR TABLE				
WETLAND LENGTH	CONSTRUCTION CORRIDOR	WORKING SIDE	SPACING BETWEEN PIPELINES	SPOIL SIDE
LESS THAN 100' LONG	110'	65'	25'	20'
GREATER THAN 100' LONG	125'	65'	25'	35'

SATURATED WETLAND CROSSING WITHOUT TOPSOIL SEGREGATION

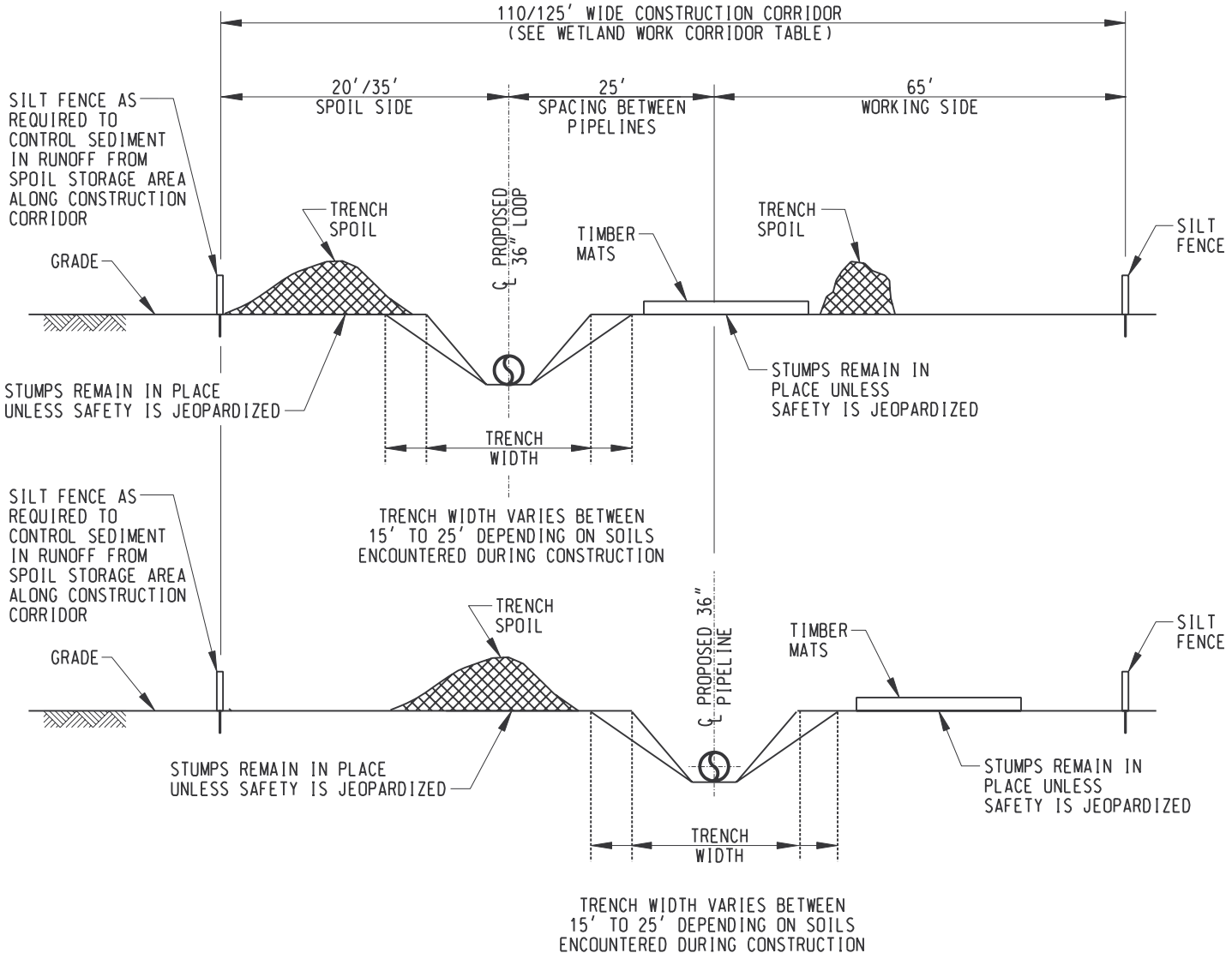
NOTES:

1. TOPSOIL SEGREGATION WILL NOT BE PERFORMED IF STANDING WATER OR SATURATED SOILS IS PRESENT.
2. INSTALL PERMANENT INTERCEPTOR DIKES AT THE BASE OF ALL SLOPES ADJACENT TO THE WETLAND.
3. CONTRACTOR SHALL POSTPONE GRADING OF RIGHT-OF-WAY ADJACENT TO WETLAND UNTIL STAGING AREA IS PREPARED AND WORK IN THE WETLAND IS READY TO COMMENCE.
4. SILT FENCE OR HAY BALES SHALL BE PLACED IN THE GAP AT THE TIMBER MATS BY THE END OF EACH DAY OR PRIOR TO APPROACHING RAIN TO PREVENT SEDIMENT FLOW INTO WETLAND.
5. USE ADDITIONAL TIMBER MAT LAYERS TO RAISE CROSSING ABOVE GRADE WHERE POOR SOIL CONDITIONS EXIST.

Figure 3-3
Two Pipelines - Saturated Wetland Crossing without Topsoil Segregation

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



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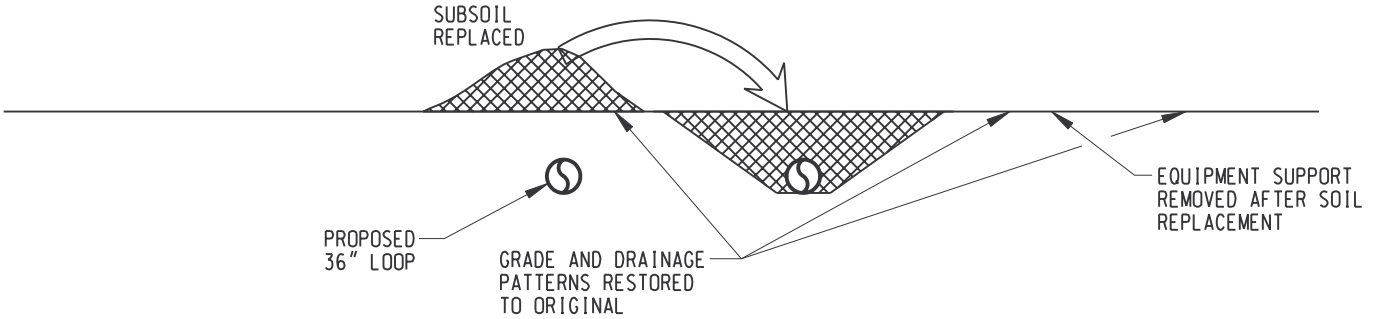
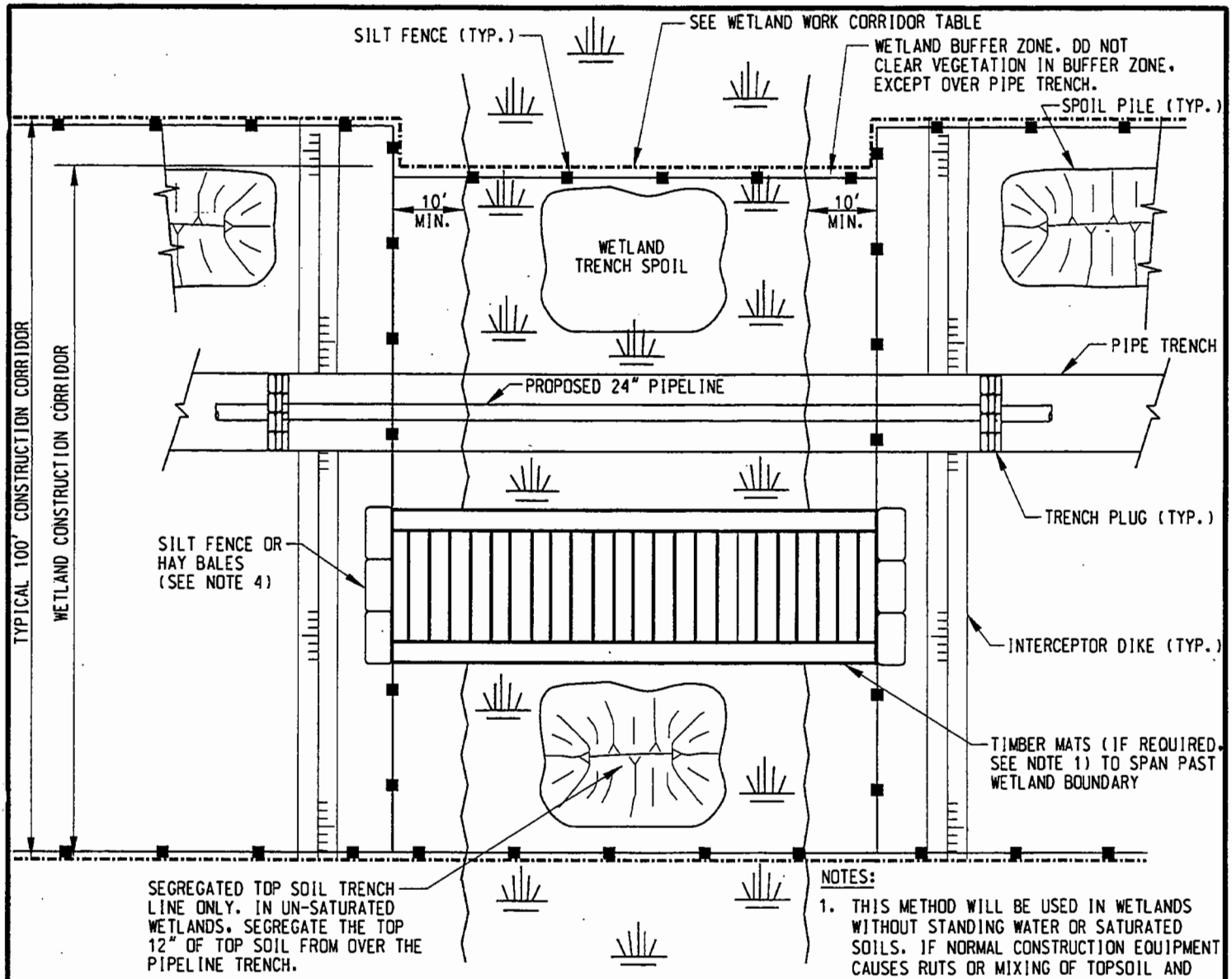


WETLAND RESTORATION

Figure 3-4
Two Pipelines - Saturated Wetland without Topsoil Segregation (Cross-Section)

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



WETLAND WORK CORRIDOR TABLE			
WETLAND LENGTH	CONSTRUCTION CORRIDOR	WORKING SIDE	SPOIL SIDE
LESS THAN 100' LONG	85'	50'	35'
GREATER THAN 100' LONG	100'	65'	35'

NOTES:

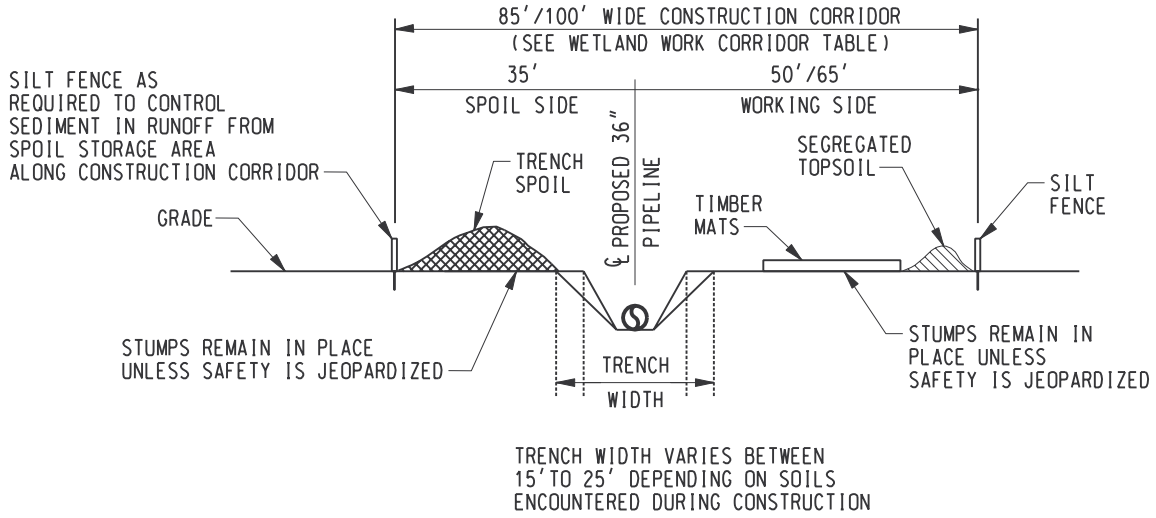
1. THIS METHOD WILL BE USED IN WETLANDS WITHOUT STANDING WATER OR SATURATED SOILS. IF NORMAL CONSTRUCTION EQUIPMENT CAUSES RUTS OR MIXING OF TOPSOIL AND SUBSOIL, LOW-GROUND-PRESSURE EQUIPMENT WILL BE USED, OR NORMAL EQUIPMENT WILL BE OPERATED ON TIMBER MATS.
2. INSTALL PERMANENT INTERCEPOR DIKES AT THE BASE OF ALL SLOPES ADJACENT TO THE WETLAND.
3. CONTRACTOR SHALL POSTPONE GRADING OF RIGHT-OF-WAY ADJACENT TO WETLAND UNTIL STAGING AREA IS PREPARED AND WORK IN THE WETLAND IS READY TO COMMENCE.
4. SILT FENCE OR HAY BALES SHALL BE PLACED IN THE GAP AT THE TIMBER MATS BY THE END OF EACH DAY OR PRIOR TO APPROACHING RAIN TO PREVENT SEDIMENT FLOW INTO WETLAND.
5. USE ADDITIONAL TIMBER MAT LAYERS TO RAISE CROSSING ABOVE GRADE WHERE POOR SOIL CONDITIONS EXIST.
6. SILT FENCE AND INTERCEPTOR DIKE TO BE REMOVED ACROSS PIPE TRENCH AND DURING CONSTRUCTION OF PIPELINE. SILT FENCE AND INTERCEPTOR DIKE TO BE REPLACED AFTER BACKFILL OF TRENCH.

UNSATURATED WETLAND CROSSING WITH TOPSOIL SEGREGATION

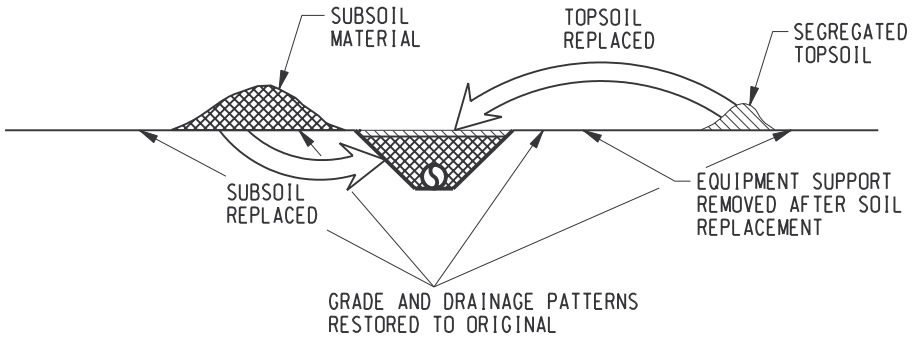
Figure 3-5
Single Pipeline - Unsaturated Wetland Crossing with Topsoil Segregation

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



CROSS SECTION

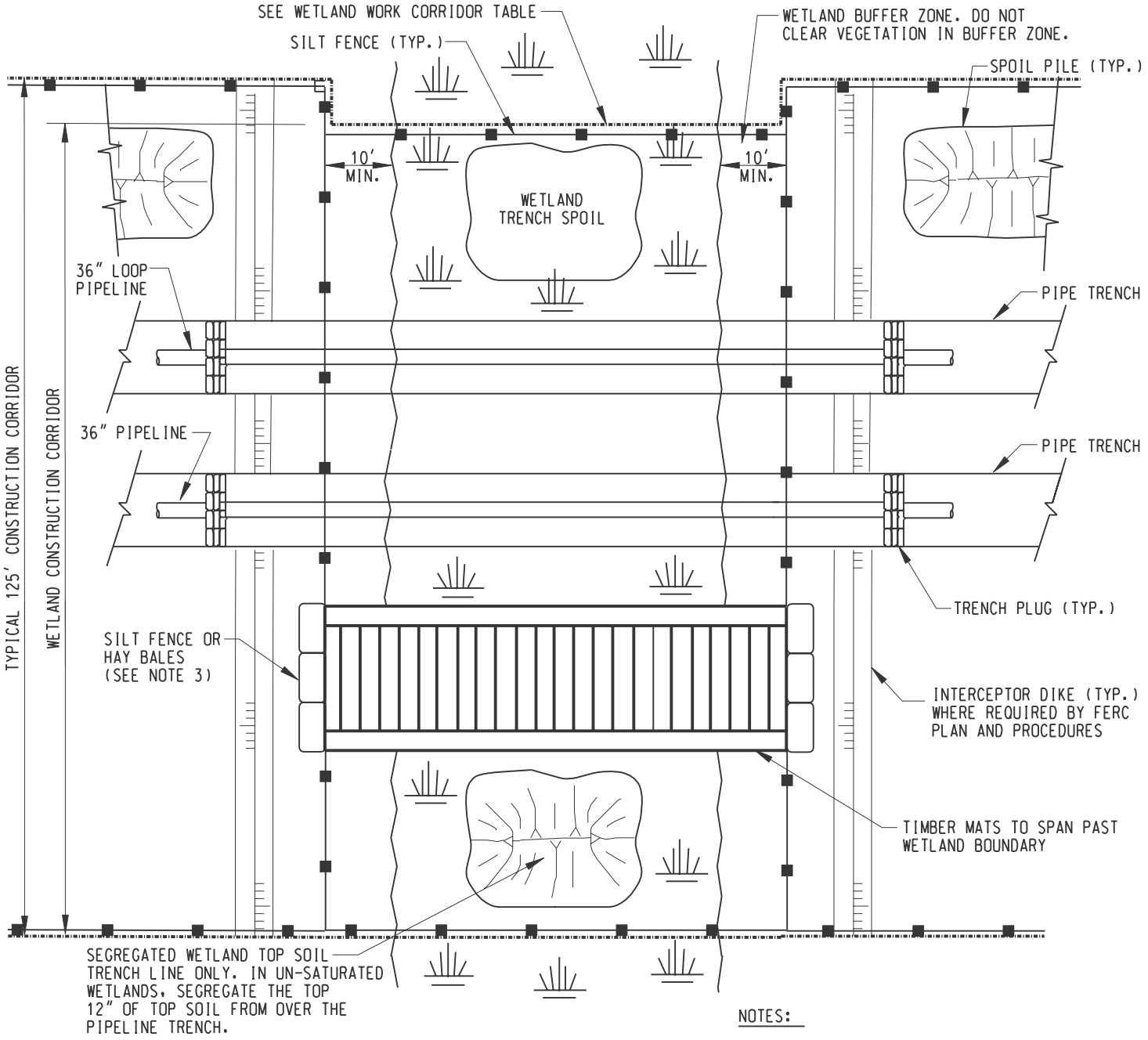


WETLAND RESTORATION

Figure 3-6
Single Pipeline -
Unsaturated Wetland with
Topsoil Segregation

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA



WETLAND WORK CORRIDOR TABLE				
WETLAND LENGTH	CONSTRUCTION CORRIDOR	WORKING SIDE	SPACING BETWEEN PIPELINES	SPOIL SIDE
LESS THAN 100' LONG	110'	65'	25'	20'
GREATER THAN 100' LONG	125'	65'	25'	35'

NOTES:

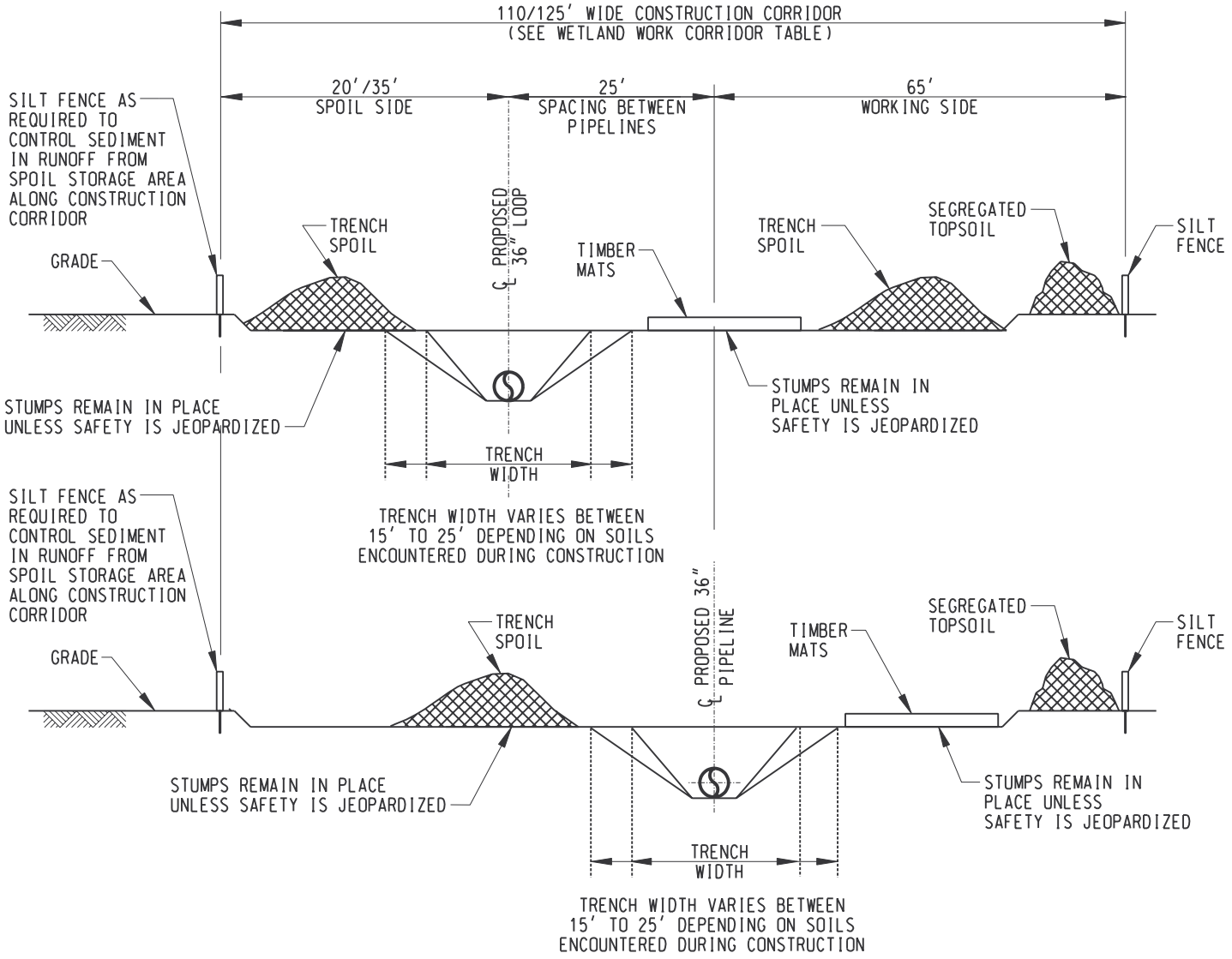
1. INSTALL PERMANENT INTERCEPTOR DIKES AT THE BASE OF ALL SLOPES ADJACENT TO THE WETLAND.
2. CONTRACTOR SHALL POSTPONE GRADING OF RIGHT-OF-WAY ADJACENT TO WETLAND UNTIL STAGING AREA IS PREPARED AND WORK IN THE WETLAND IS READY TO COMMENCE.
3. SILT FENCE OR HAY BALES SHALL BE PLACED IN THE GAP AT THE TIMBER MATS BY THE END OF EACH DAY OR PRIOR TO APPROACHING RAIN TO PREVENT SEDIMENT FLOW INTO WETLAND.
4. USE ADDITIONAL TIMBER MAT LAYERS TO RAISE CROSSING ABOVE GRADE WHERE POOR SOIL CONDITIONS EXIST.

UNSATURATED WETLAND CROSSING WITHOUT TOPSOIL SEGREGATION

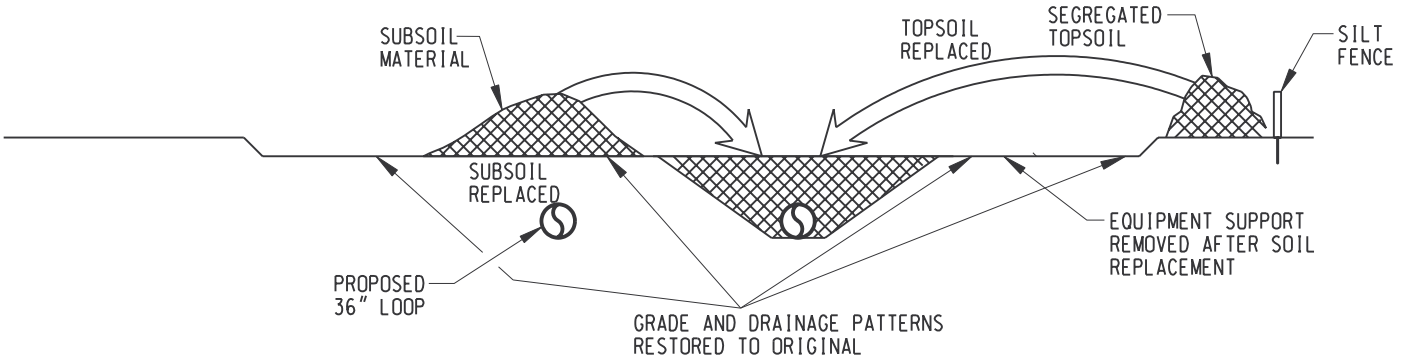
Figure 3-7
Two Pipelines - Unsaturated Wetland Crossing with Topsoil Segregation

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



CROSS SECTION

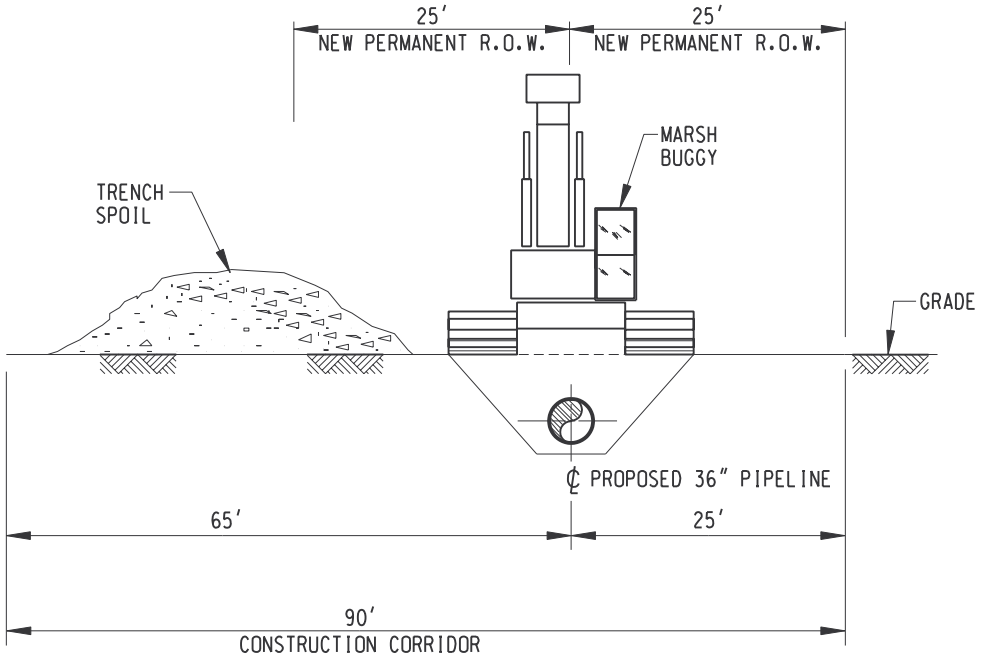


WETLAND RESTORATION

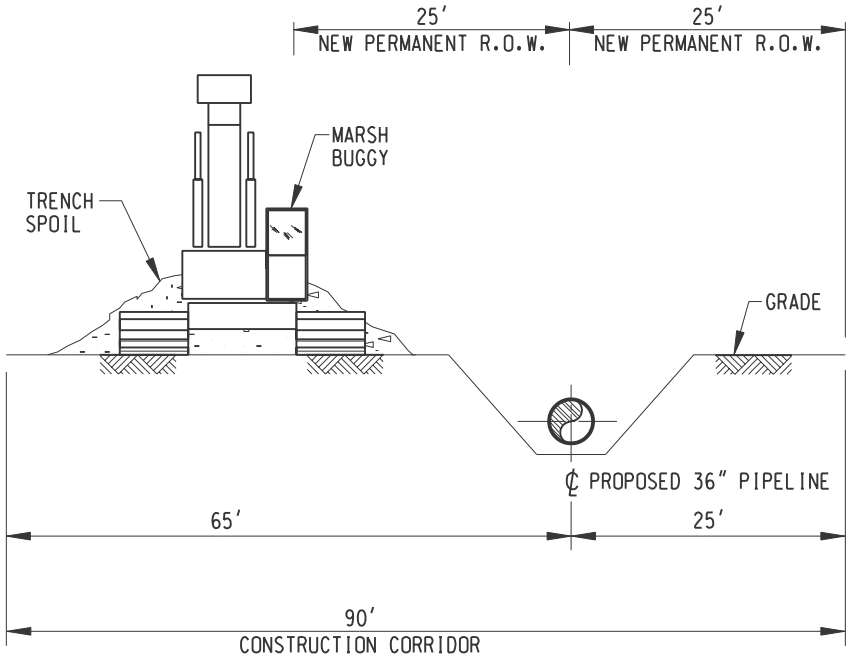
Figure 3-8
Two Pipelines -
Unsaturated Wetland with
Topsoil Segregation
(Cross-Section)

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA



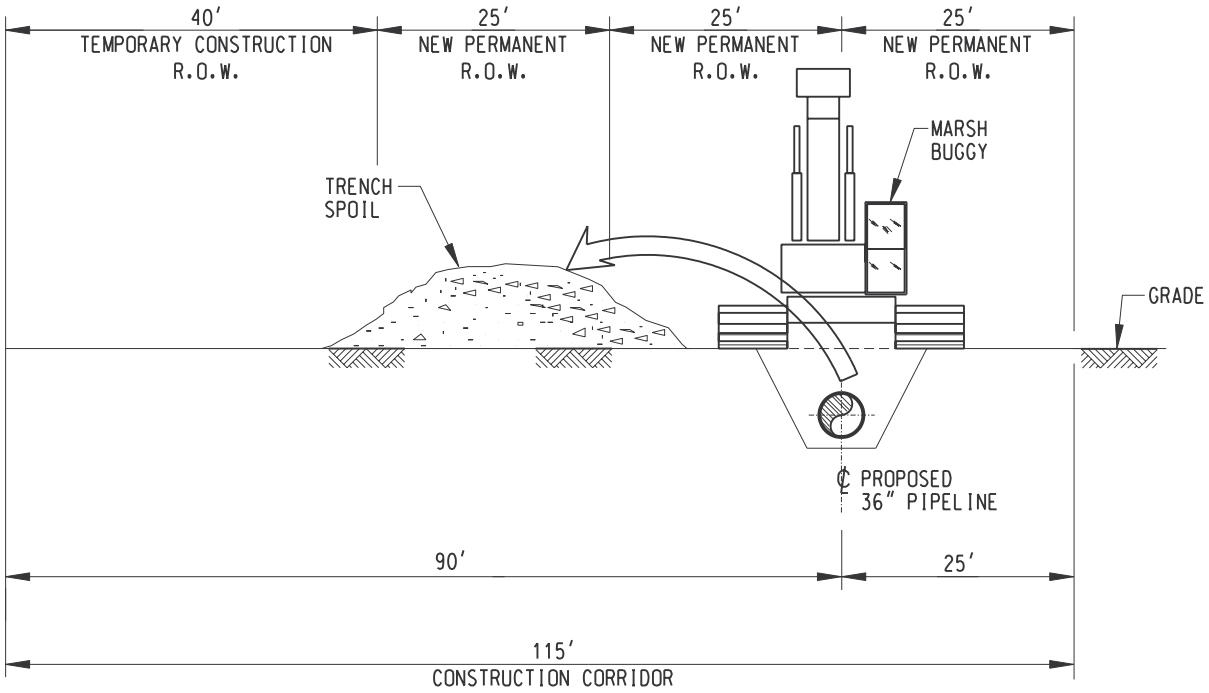
TYPICAL MARSH TRENCHING CROSS SECTION



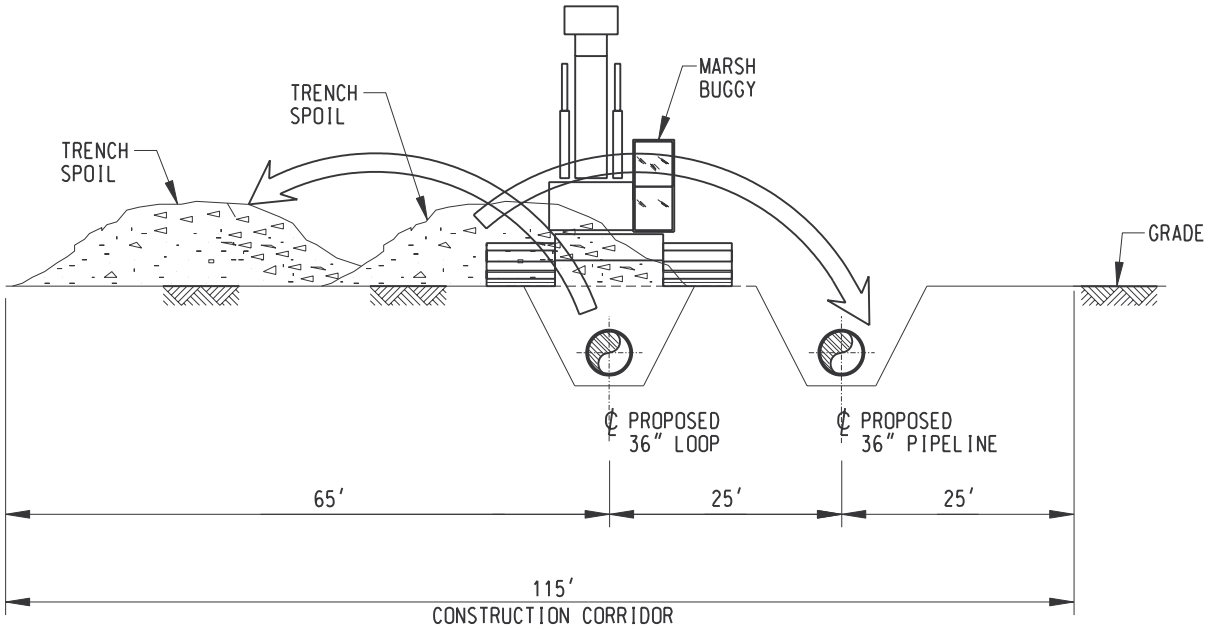
TYPICAL MARSH BACKFILL CROSS SECTION

Figure 3-9
Single Pipeline - Typical
Marsh Trenching and Backfill

Golden Pass LNG Terminal
and Pipeline Project
Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA



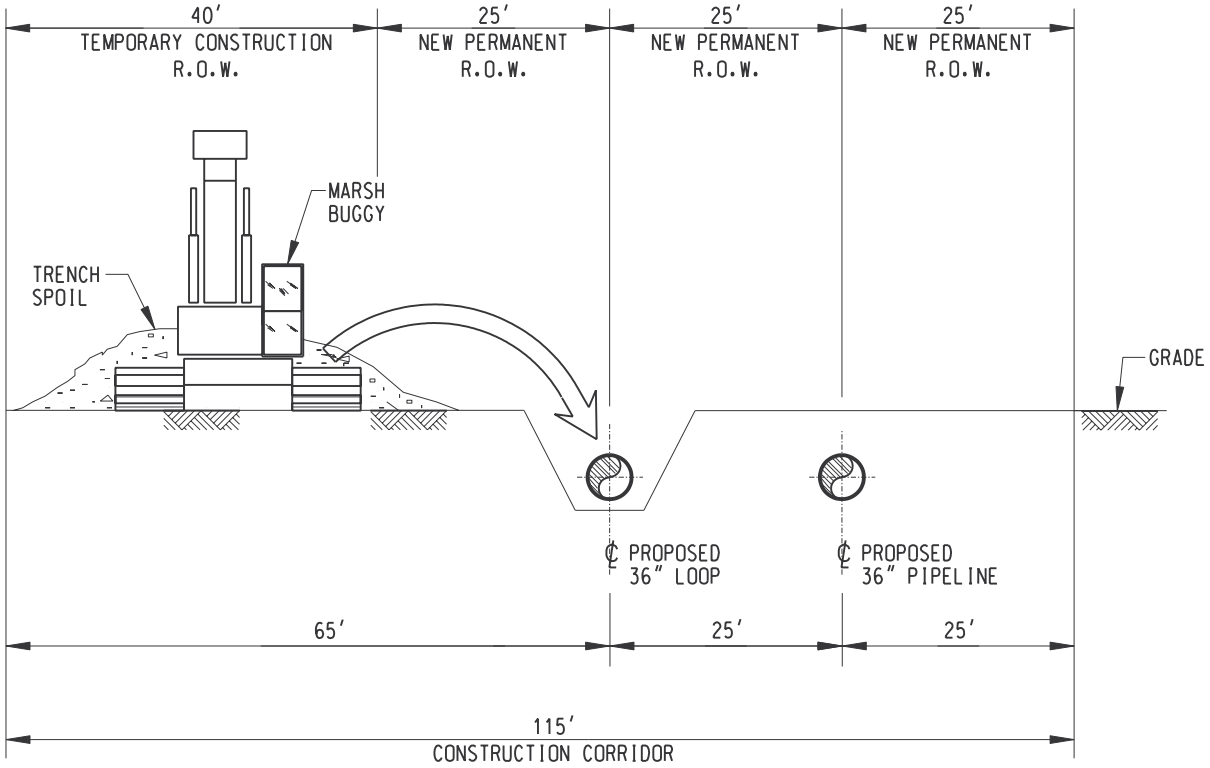
TYPICAL MARSH TRENCHING CROSS SECTION



TYPICAL MARSH BACKFILLING OF PIPELINE TRENCHING OF LOOP CROSS SECTION

Figure 3-10
Two Pipelines - Typical
Marsh Trenching and
Backfill of Mainline

Golden Pass LNG Terminal
and Pipeline Project
Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA

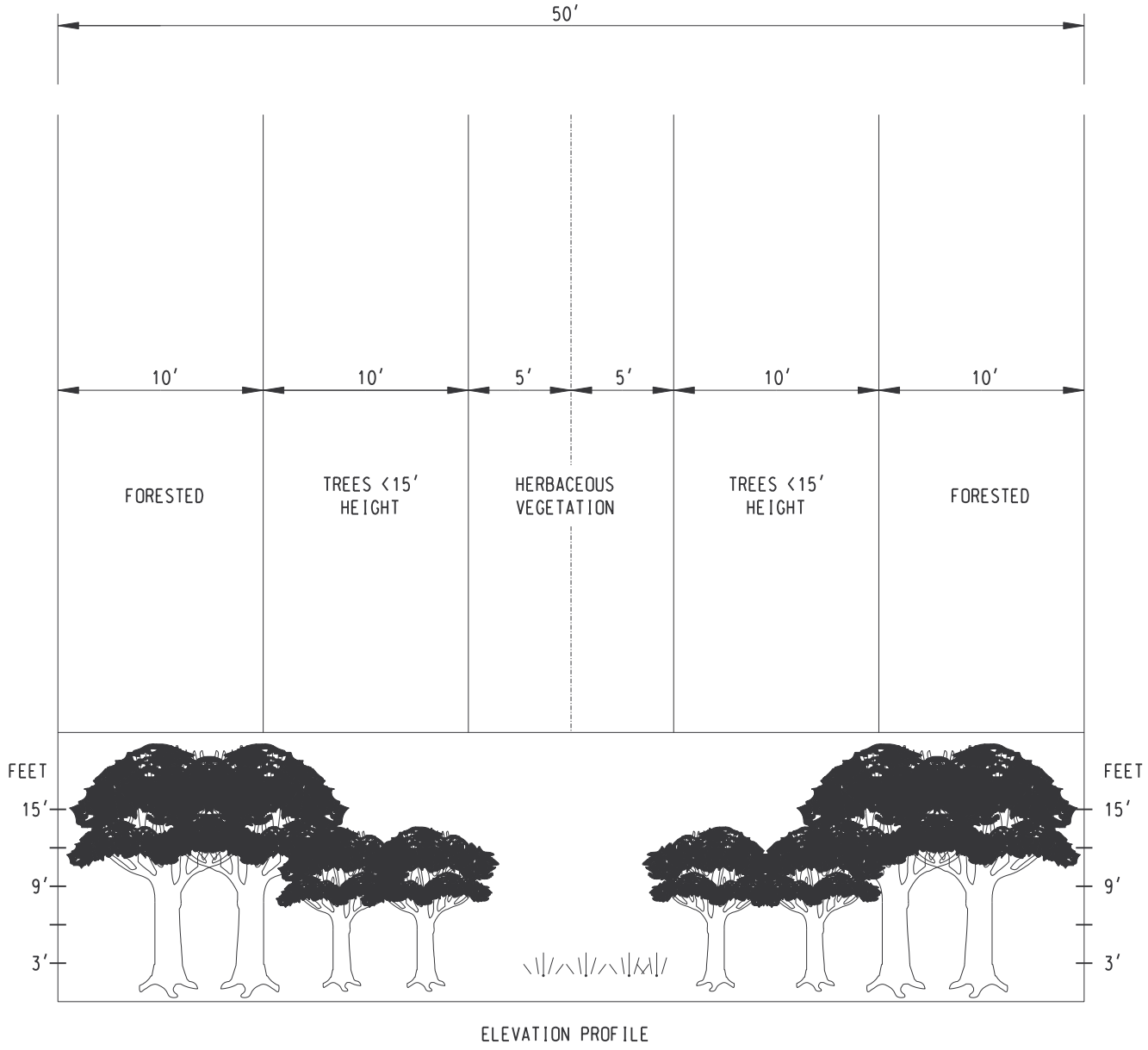


TYPICAL MARSH BACKFILLING OF PIPELINE

Figure 3-11
Two Pipelines -
Typical Marsh Backfill
of Loop

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA



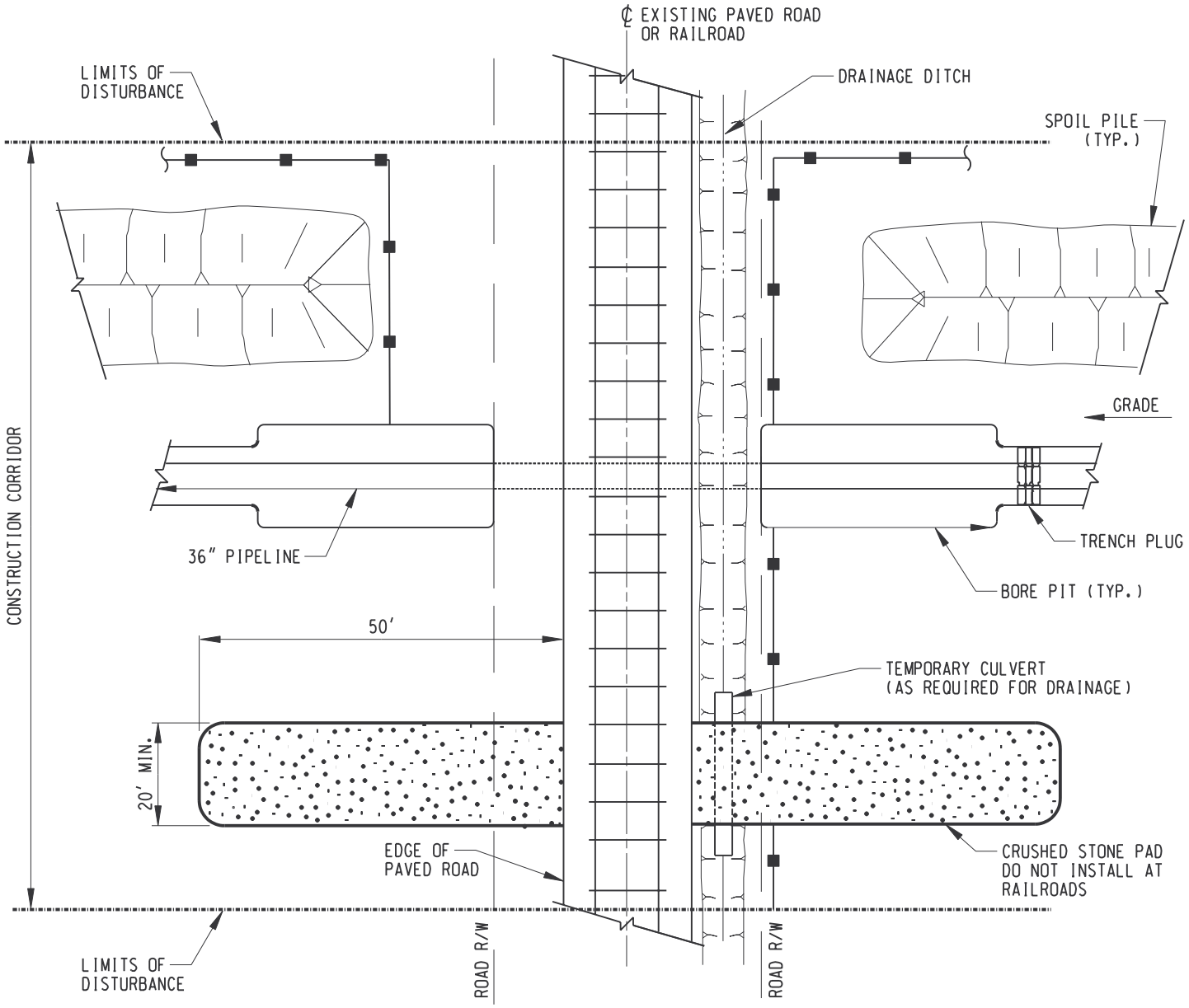
ELEVATION PROFILE

PERMANENT RIGHT-OF-WAY MAINTENANCE IN FORESTED AREAS

Figure 3-12
Permanent Maintenance
Right-of-Way in Forested
Wetland Areas

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA

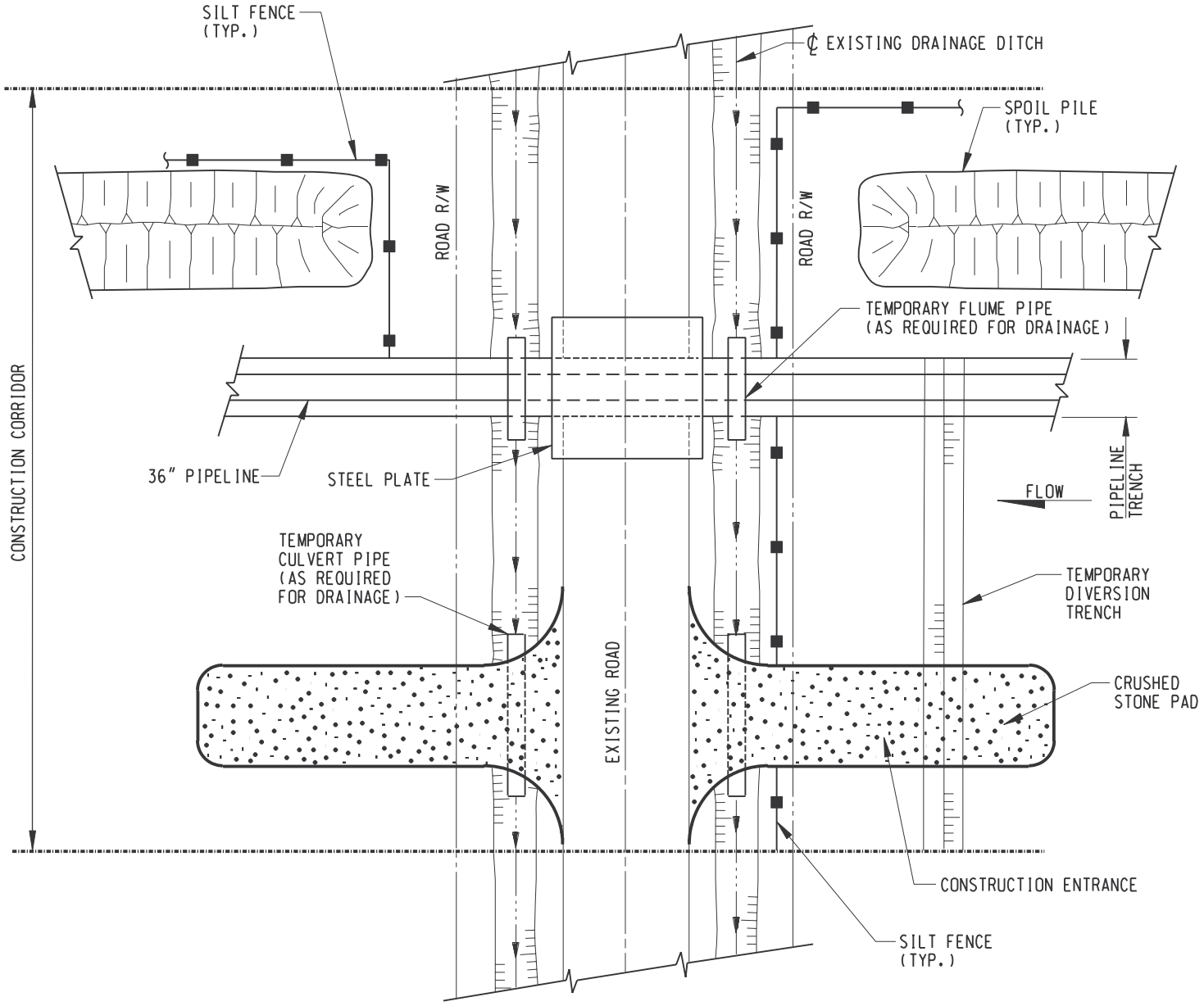


BORED ROAD/RAILROAD CROSSING

Figure 4-1
Bored (Road/Railroad)
Crossing

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA

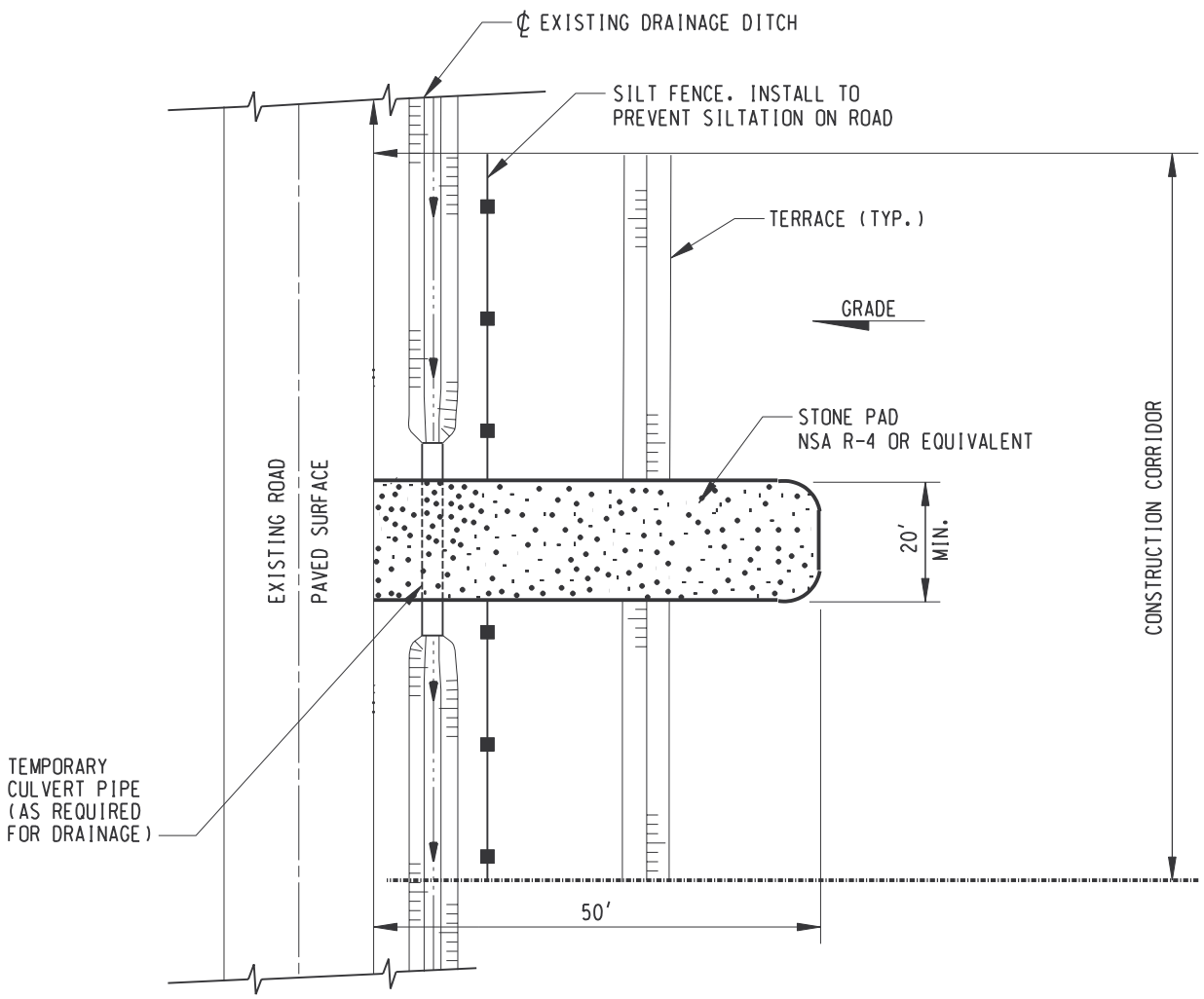


TRENCHED ROAD CROSSING

Figure 4-2
Trenched Road
Crossing

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA



NOTE:

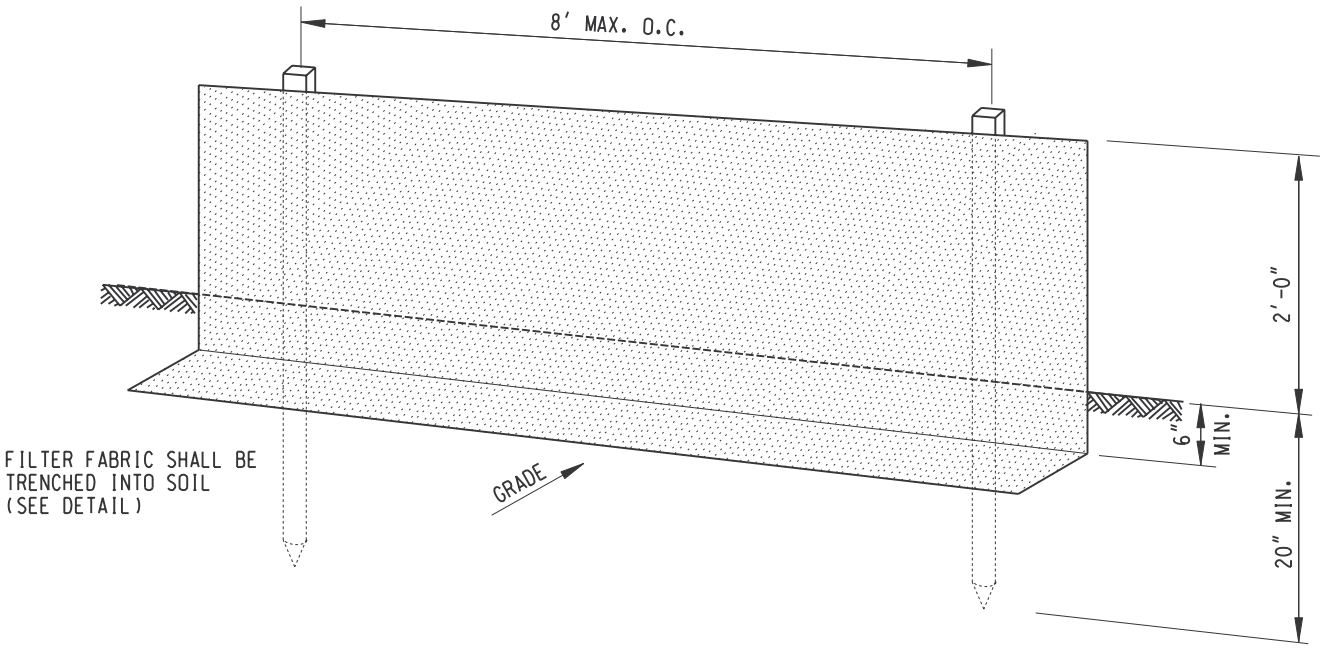
1. ENTRANCES AS SHOWN ON THE PLANS ARE APPROXIMATE. THE ENTRANCES CAN BE AT ANY LOCATION WITHIN THE PROJECT LIMITS SO AS TO ENSURE SAFE AND ACCESSIBLE CONDITIONS THROUGHOUT THE CONSTRUCTION PHASE.

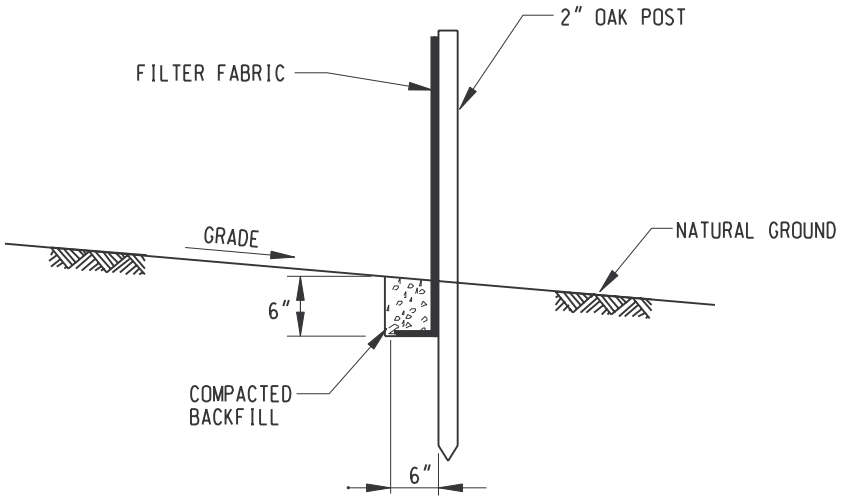
CONSTRUCTION ENTRANCE

Figure 5-1
Entrance from Road to
Construction Right-of-Way

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA



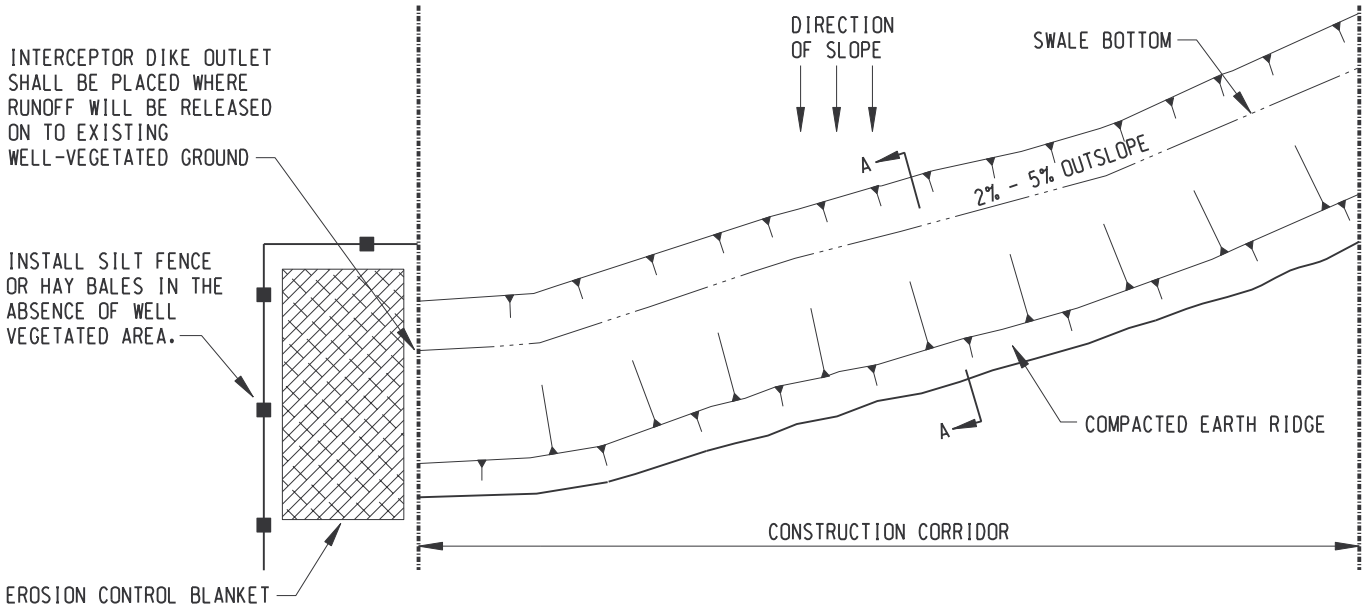


TRENCH DETAIL

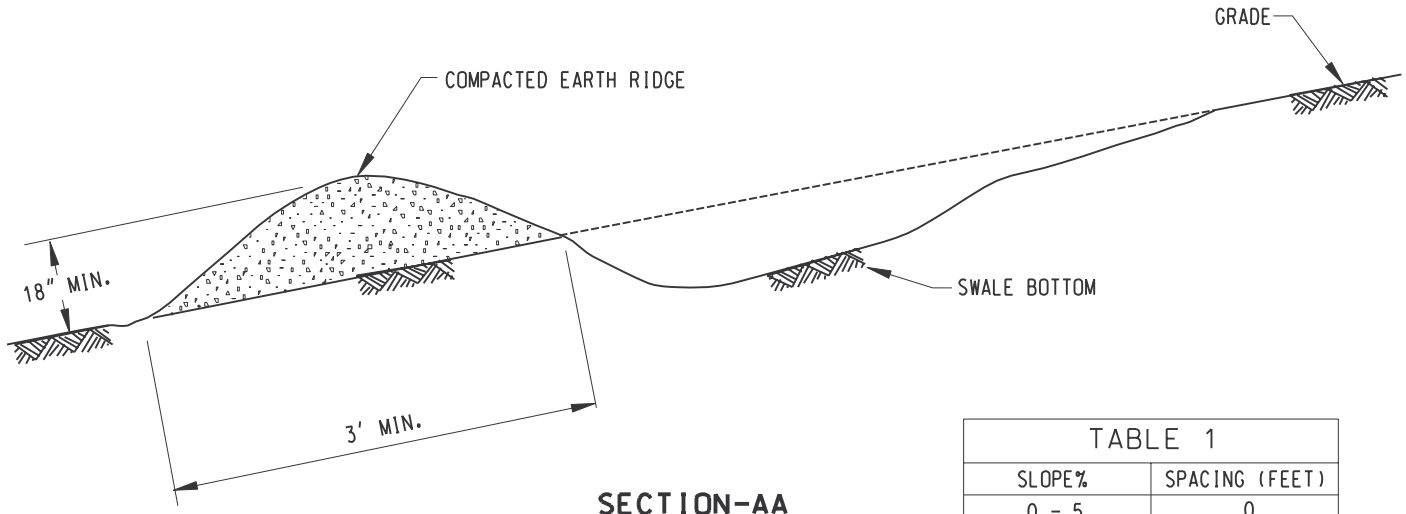
Figure 5-2
Silt Fence

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA



PLAN



SECTION-AA

TABLE 1	
SLOPE%	SPACING (FEET)
0 - 5	0
5 -15	300
15 - 30	200
> 30	100

NOTES:

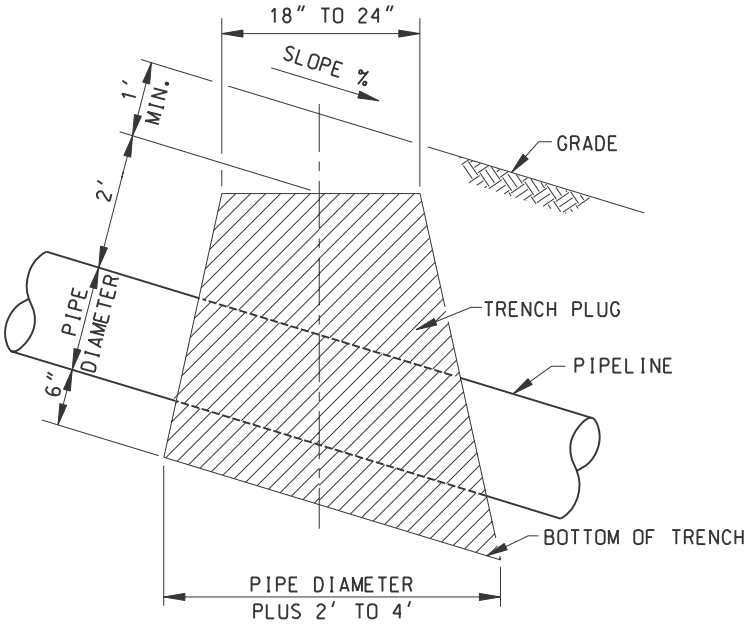
1. DURING CONSTRUCTION, TEMPORARY INTERCEPTOR DIKES SHALL BE REPAIRED AND FUNCTIONAL AT THE END OF EACH WORKING DAY.
2. PERMANENT INTERCEPTOR DIKES SHALL BE INSTALLED AT THE BASE OF SLOPES ADJACENT TO WATERBODIES AND WETLANDS.
3. PERMANENT INTERCEPTOR DIKES SHALL BE INSTALLED PER THE SPACING REQUIREMENTS IN "TABLE 1" AND AS PART OF FINAL GRADING.

TYPICAL INTERCEPTOR DIKE

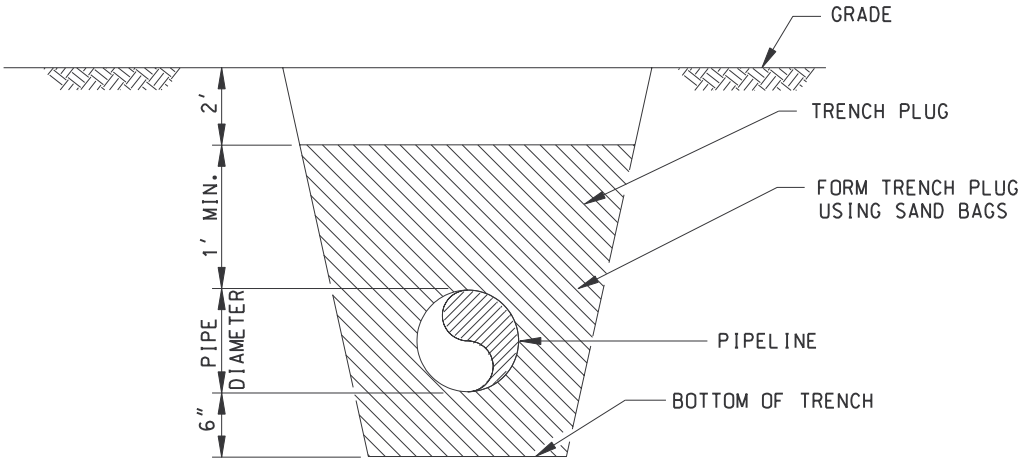
Figure 5-3
Interceptor Dike

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



PROFILE



SECTION

NOTES:

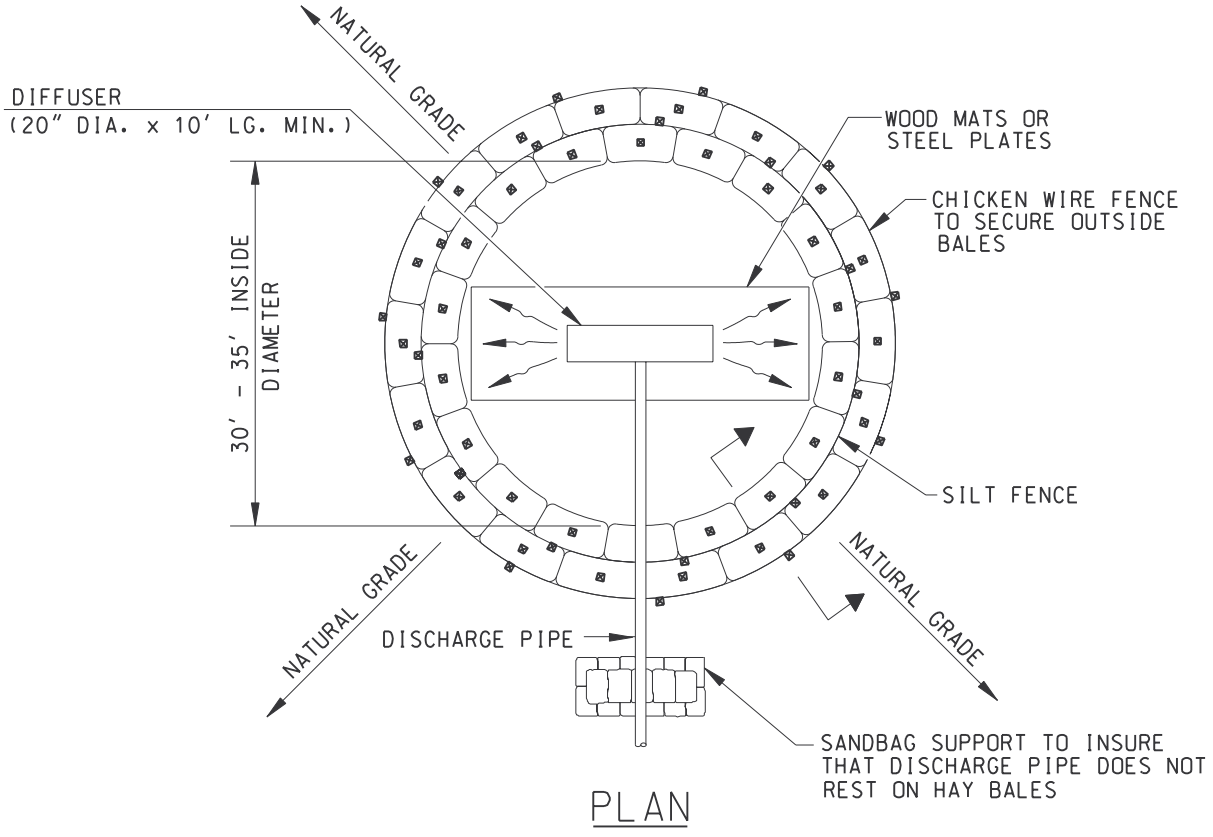
1. CONSTRUCT TRENCH PLUGS WITH SAND BAGS. DO NOT USE TOPSOIL FOR FILLING SAND BAGS.
2. INSTALL TRENCH PLUGS AT THE BASE OF SLOPES ADJACENT TO IMPROVED ROADS, WATERBODIES AND WETLANDS.
3. TRENCH PLUGS SHALL BE INSTALLED IN PIPELINE TRENCH ON SLOPED GRADES ACCORDING TO THE SPACING SHOWN IN "TABLE 1".

TABLE 1	
SLOPE (%)	SPACING (FEET)
0 - 5	0
5 - 15	300
15 - 30	200
>30	100

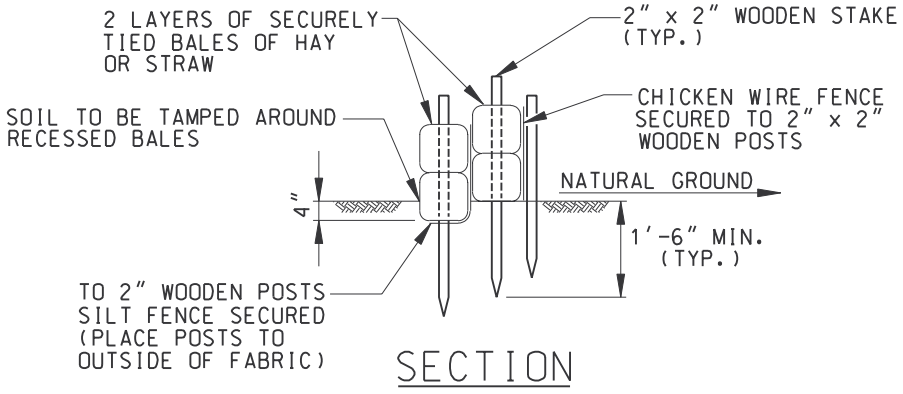
Figure 5-4
Trench Plug

Golden Pass LNG Terminal and Pipeline Project

Jefferson, Orange & Newton Counties, TX and Calcasieu Parish, LA



PLAN



SECTION

NOTE:
STAKES SECURING SILT FENCE BETWEEN
HAY BALES ARE NOT SHOWN FOR CLARITY

NOTES:

1. STRUCTURE SHALL BE PLACED ON A LEVEL WELL VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM STRUCTURE AND ANY WORK AREAS.
2. FLOW RATES THROUGH DISCHARGE AND DIFFUSER PIPE SHALL BE SUCH THAT STRUCTURE WILL NOT OVERFLOW.
3. A 30' x 30' RECTANGULAR STRUCTURE MAY BE SUBSTITUTED FOR THE CIRCULAR CONFIGURATION SHOWN.
4. DIMENSIONS SHOWN ARE THE MINIMUM ACCEPTABLE AND MAY BE VARIED DEPENDING UPON SPECIFIC LOCATION.

Figure 5-5
Hydrostatic Test
Dewatering Structure

Golden Pass LNG Terminal
and Pipeline Project

Jefferson, Orange & Newton Counties, TX
and Calcasieu Parish, LA