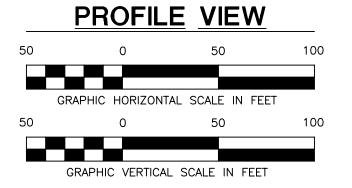
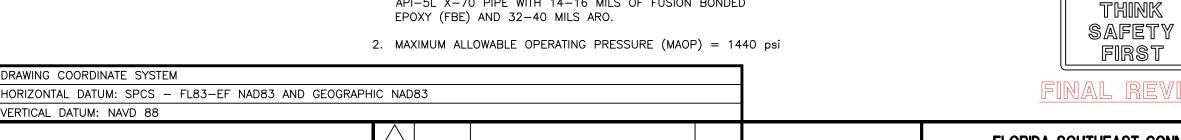


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- 3. WATER SOURCE: DRILL WATER AND HYDROSTATIC TEST WATER SHALL BE OBTAINED FROM COMPANY APPROVED SOURCE. 4. HYDROSTATIC TEST: PRE-INSTALLATION AND POST-INSTALLATION HYDROSTATIC TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH THE HYDROSTATIC TEST PLAN. TEST WATER SHALL BE ACQUIRED FROM AN APPROVED SOURCE. THE TEST WATER SHALL BE DISCHARGED IN AN UPLAND AREA INTO AN EROSION CONTROL STRUCTURE OF STRAW BALES AND/OR SILT FENCES, GEOTEXTILE FILTER BAG, OR COLLECTED IN A TRUCK AND HAULED TO AN APPROVED DISPOSAL SITE. UPON COMPLETION OF DEWATERING AND DRYING, A CALIPER PIG SURVEY SHALL BE COMPLETED IN ACCORDANCE WITH THE
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- 7. INSTALLATION: THE PIPE SECTION FOR THE DRILLED CROSSING SHALL BE MADE UP WITHIN THE APPROVED CONSTRUCTION RIGHT-OF-WAY AS SHOWN. AFTER THE PILOT HOLE IS COMPLETE, CONTRACTOR'S ACTUAL DRILL PROFILE SHALL BE SUBMITTED FOR COMPANY APPROVAL. CONTRACTOR SHALL ASSESS THE NEED FOR AND SUPPLY APPROPRIATE BALLAST
- 8. DRILLING FLUID DISPOSAL: CONTRACTOR SHALL DISPOSE OF EXCESS DRILLING FLUID IN ACCORDANCE WITH PERMIT CONDITIONS. UNDER NO CIRCUMSTANCES SHALL DRILLING FLUID BE DISPOSED OF IN WATER BODIES OR WETLANDS. ANY DRILLING FLUID WHICH INADVERTENTLY SURFACES AT POINTS OTHER THAN THE ENTRY OR EXIT POINTS SHALL BE CONTAINED AND COLLECTED TO THE EXTENT PRACTICAL AND DISPOSED OF IN ACCORDANCE WITH PERMIT CONDITIONS.
- 9. CLEANUP/STABILIZATION/RESTORATION: ALL DISTURBED AREAS SHALL BE RETURNED TO THE ORIGINAL CONTOURS. DISTURBED AREAS SHALL BE SEEDED AS SPECIFIED IN THE CLEAN-UP AND RESTORATION REQUIREMENTS.
- 10. IF THE TERRAIN ALLOWS AND ACCESS IS PERMITTED, CONTRACTOR SHALL UTILIZE LOW GROUND PRESSURE EQUIPMENT OR OTHER EQUIPMENT APPROVED BY COMPANY, TO FACILITATE CONTAINMENT AND CLEAN-UP OF ANY INADVERTENT RETURNS THAT OCCUR DURING THE HDD INSTALLATION PROCESS.
- 11. THE MINIMUM ALLOWABLE THREE JOINT RADIUS SHALL NOT BE LESS THAN 2600 FEET.
- 12. GROUND SURFACE SURVEY DATA PROVIDED BY UNIVERSALPEGASUS INTERNATIONAL.
- 13. CONTRACTOR IS RESPONSIBLE FOR PHYSICALLY LOCATING ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
 IF ANY UTILITY IS LOCATED WITHIN 15 FEET OF THE DESIGNED HDD PROFILE AND ALIGNMENT, CONTRACTOR SHALL OBTAIN
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- 14. THE PIPELINE INFORMATION SHOWN ON THIS DRAWING IS A COMPILATION OF DATA OBTAINED FROM VARIOUS SOURCES, LANEY DIRECTIONAL DRILLING DOES NOT GUARANTEE THE ACCURACY OF THE INFORMATION SHOWN.
- 15. GEOTECHNICAL DATA: BORE HOLES ARE OFFSET FROM THE PIPELINE CENTERLINE AS SHOWN ON THE PLAN VIEW. THE GEOTECHNICAL INFORMATION PROVIDED ON THIS DRAWING IS A GENERAL SUMMARY. REFER TO THE APPLICABLE GEOTECHNICAL DOCUMENTATION / REPORT FOR MORE DETAILED INFORMATION.



PIPE SPECIFICATIONS:

1. PRODUCT PIPE WILL CONSIST OF 30.000" O.D. X 0.617" W.T., API-5L X-70 PIPE WITH 14-16 MILS OF FUSION BONDED





HORIZONTAL DIRECTIONAL DRILL DATA MP106 — SR 70 HDD						
DESCRIPTION	STATION (ft)	ELEVATION (ft)				
ENTRY @ 10°	5578+58.00	35.36				
PC1 = 3000' RADIUS	5578+33.02	30.95				
PT1 =	5573+12.08	-14.62				
PC2 = 3000' RADIUS	5571+76.90	-14.62				
PT2 =	5567+59.38	14.57				
EXIT @ 8°	5566+08.00	35.85				
HORIZONTAL DISTANCE	(ft) = 1250.00					

DIRECTIONAL DRILL PIPE LENGTH (ft) = 1255.89

PROJECT

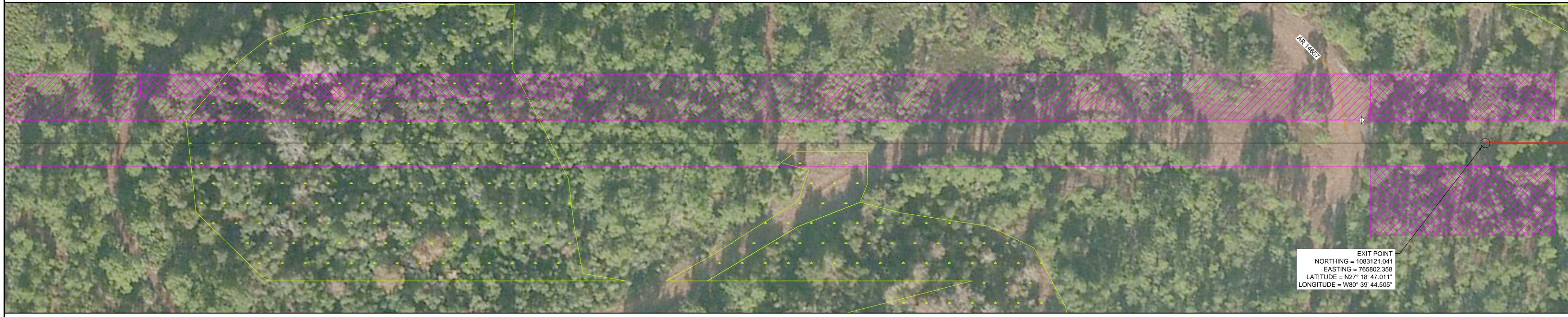
FLORIDA SOUTHEAST

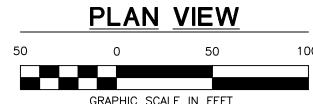
HORIZONTAL DATUM: SPCS - FL83-EF NAD83 AND GEOGRAPHIC NAD83					FINAL REVIEW	
\setminus	ERTICAL DATUM: NAVD 88					
Г		\triangle				FLORIDA SOUTHEAST CONNECTION, LLC
		E	09/09/14	MADE CLIENT REVISIONS	APS	FLORIDA SOUTHEAST CONNECTION PIPELINE P
		\triangle	09/04/14	ISSUED FOR FINAL REVIEW	APS	ST. LUCIE COUNTY
		<u></u>	06/27/14	ADDED GEOTECH	JRS	πίτιε MP-106-SR 70
		B	05/09/14	PRELIMINARY — PLAN VIEW ROTATED	APS	HORIZONTAL DIRECTIONAL DRILL
		A	05/02/14	PRELIMINARY	APS	DESIGNED DRAWN CK'D. PROJECT NO. JRS TTH APS 100
	REFERENCE DRAWINGS	REV.	DATE	REVISION	APPVD.	SCALE AS NOTED DATE 04/30/14 DWG. NO. MP-106-HDD SHT. 1 OF 1

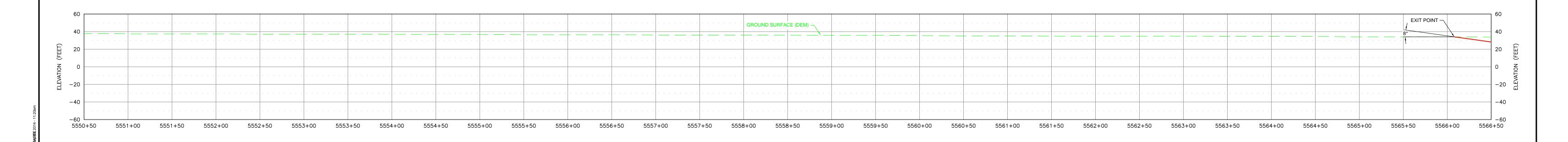


ST. LUCIE COUNTY, FLORIDA

HDD PULLBACK AREA







LEGEND PERMANENT EASEMENT (PE) TEMPORARY WORKSPACE (TWS) ADDITIONAL TEMPORARY WORKSPACE (ATWS) wetland WATER BODY

1. ALL EQUIPMENT MUST ACCESS THE SITE ALONG THE CONSTRUCTION RIGHT-OF-WAY OR FROM APPROVED ACCESS ROADS. 2. WORK SPACE: MAXIMUM WORK SPACE LIMITS ARE DEPICTED. RESTRICT CLEARING TO THE WORK SPACE INDICATED AT THE ENTRY AND EXIT POINTS AND PRODUCT PIPE STRINGING AND FABRICATION AREA ALONG THE CONSTRUCTION RIGHT-OF-WAY. CLEARING BETWEEN THE ENTRY AND EXIT POINTS REQUIRES PRIOR COMPANY APPROVAL AND IS LIMITED TO THE AMOUNT

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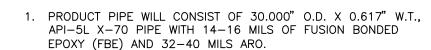
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PROFILE VIEW GRAPHIC HORIZONTAL SCALE IN FEET

PIPE SPECIFICATIONS: GRAPHIC VERTICAL SCALE IN FEET



2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) = 1440 psi

DRAWING COORDINATE SYSTEM								
HORIZONTAL DATUM: SPCS - FL83-EF NAD83 AND GEOGRAPHIC NAD83								
VERTICAL DATUM: NAVD 88								
	Æ	09/09/14	MADE CLIENT REVISIONS	APS				
		09/04/14	ISSUED FOR FINAL REVIEW	APS				
	$\langle \emptyset $	06/27/14	ADDED GEOTECH	JRS				
	⟨B	05/09/14	PRELIMINARY — PLAN VIEW ROTATED	APS				
	$\langle A \rangle$	05/02/14	PRELIMINARY	APS				
REFERENCE DRAWINGS	REV.	DATE	REVISION	APPVD.				

FLORIDA SOUTHEAST



FLORIDA SOUTHEAST CONNECTION, LLC FLORIDA SOUTHEAST CONNECTION PIPELINE PROJECT MP-106-SR 70 HORIZONTAL DIRECTIONAL DRILL TTH CK'D. APS PROJECT NO.

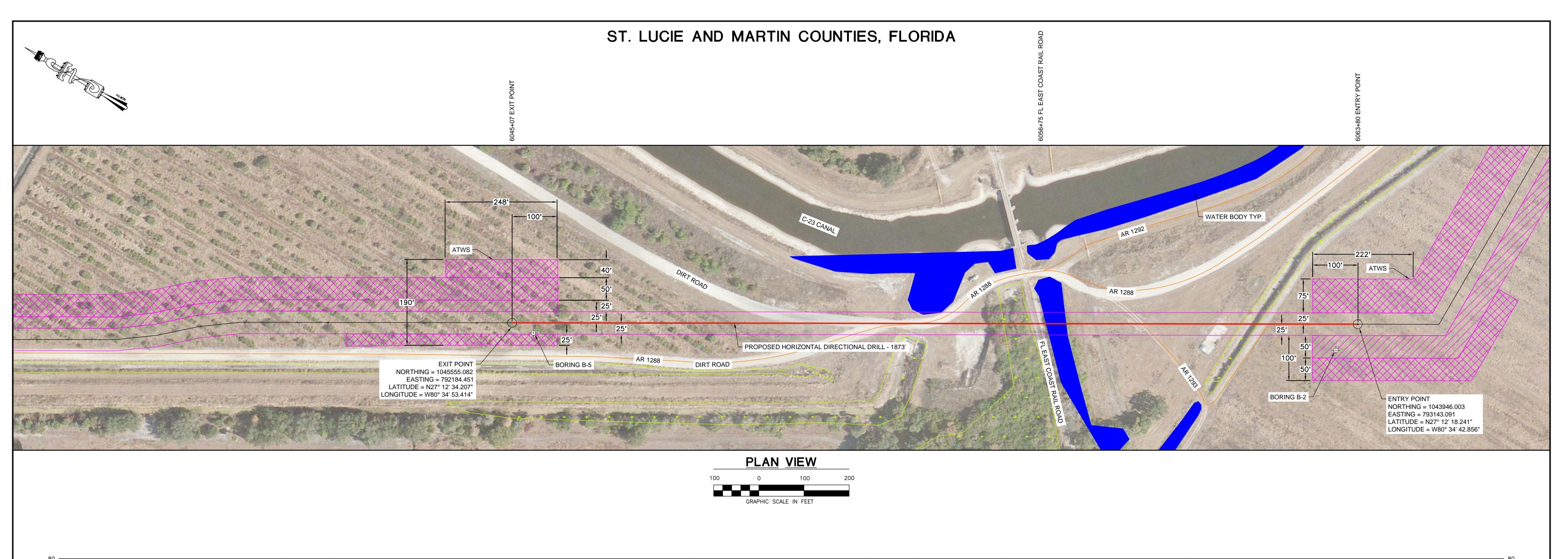
SCALE AS NOTED DATE 04/30/14 DWG. NO. MP-106-HDD SHT. 1 OF 1

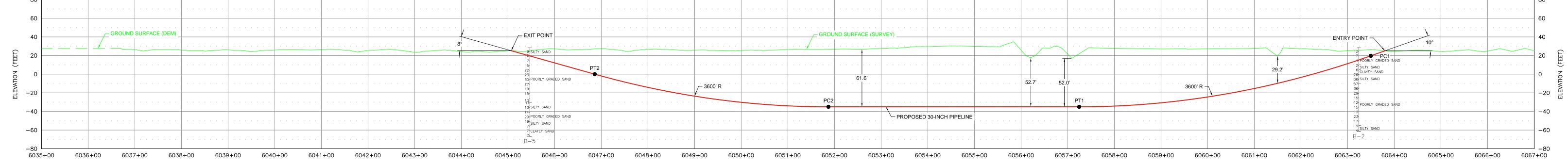
JRS

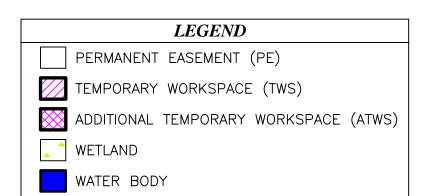


Tel: (281) 540-6615 • Fax: (281) 540-6727

www.laneydrilling.com







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PROFILE VIEW GRAPHIC HORIZONTAL SCALE IN FEET GRAPHIC VERTICAL SCALE IN FEET

PIPE SPECIFICATIONS:

1. PRODUCT PIPE WILL CONSIST OF 30.000" O.D. X 0.617 W.T., API-5L X-70 PIPE WITH 14-16 MILS OF FUSION BONDED EPOXY (FBE) AND 32-40 MILS ARO.

2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) = 1440 psi

AWING COORDINATE SYSTEM						
DRIZONTAL DATUM: SPCS - FL83-EF NAD83 AND GEOGRAPHIC NAD83						
ERTICAL DATUM: NAVD 88						
	\wedge					
		09/09/14	MADE CLIENT REVISIONS	APS		
	\bigcirc	09/04/14	ISSUED FOR FINAL REVIEW	APS		
	⟨B	06/27/14	ADDED GEOTECH	JRS		
	$\langle \langle \rangle$	03/26/14	CENTERLINE AND GEOTECHNICAL BORE LOCATIONS	APS		
REFERENCE DRAWINGS	REV.	DATE	REVISION	APPVD.		



		TAL DIRECTIONAL DRILL DATA C—23 CANAL HDD						
	DESCRIPTION	STATION (ft)	ELEVATION (ft)					
	ENTRY @ 10°	6063+80.00	25.06					
	PC1 = 3600' RADIUS	6063+49.56 19.69						
	PT1 =	6057+24.42	-35.00					
	PC2 = 3600' RADIUS	6051+86.94	-35.00					
	PT2 =	6046+85.92	0.03					
	EXIT @ 8°	6045+07.00	25.18					
H	HORIZONTAL DISTANCE (ft) = 1873.00							
DI	DIRECTIONAL DRILL PIPE LENGTH (ft) = 1880.04							

FLORIDA SOUTHEAST CONNECTION, LLC

FLORIDA SOUTHEAST CONNECTION PIPELINE PROJECT MP-115 C-23 CANAL HORIZONTAL DIRECTIONAL DRILL
 DESIGNED
 DRAWN
 CK'D.
 PROJECT NO.

 JRS
 TTH
 APS
 100

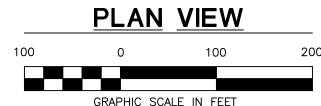
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 DATE 03/26/14
 DWG. NO. C-23-HDD SHT. 1 OF 2

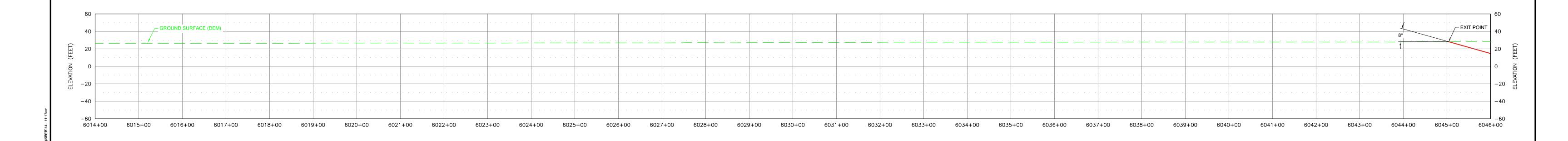


ST. LUCIE AND MARTIN COUNTIES, FLORIDA

HDD PULLBACK AREA







LEGEND PERMANENT EASEMENT (PE) TEMPORARY WORKSPACE (TWS) ADDITIONAL TEMPORARY WORKSPACE (ATWS) WETLAND WATER BODY

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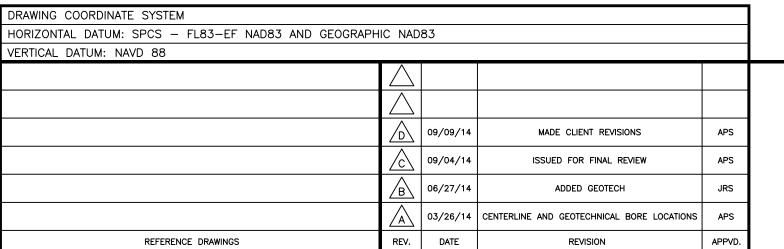
PROFILE VIEW 00 0 100 200 GRAPHIC HORIZONTAL SCALE IN FEET 50 0 50 100

GRAPHIC VERTICAL SCALE IN FEET

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2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) = 1440 psi





FLORIDA SOUTHEAST



FLORIDA SOUTHEAST CONNECTION, LLC
FLORIDA SOUTHEAST CONNECTION PIPELINE PROJECT

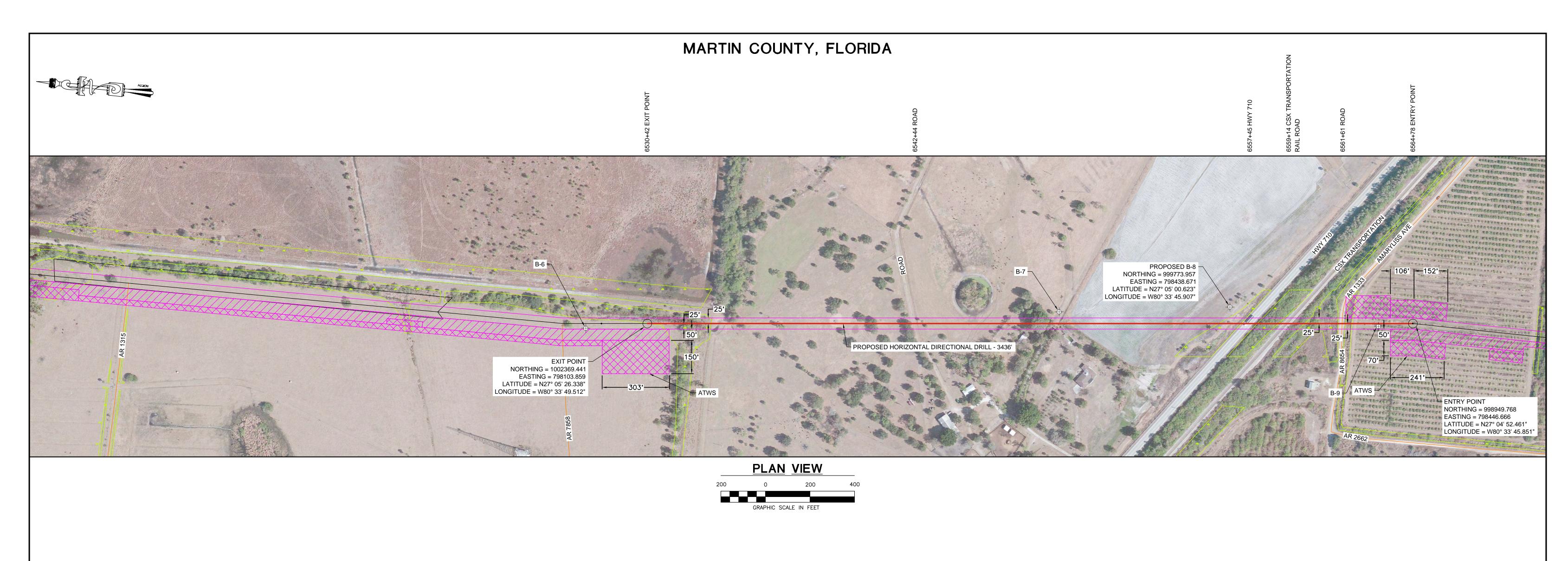
ST. LUCIE AND MARTIN COUNTIES

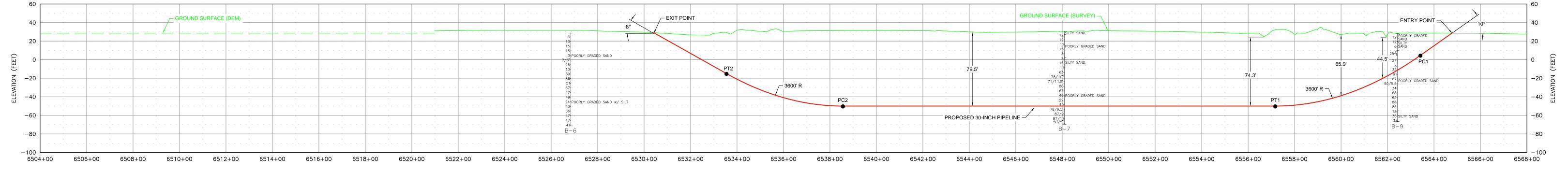
MP-115 C-23 CANAL
HORIZONTAL DIRECTIONAL DRILL

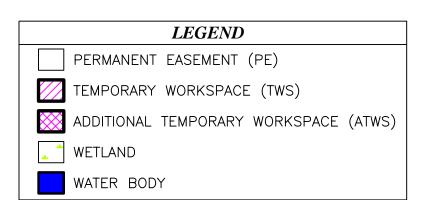
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SCALE AS NOTED DATE 03/26/14 DWG. NO. C-23-HDD SHT. 1 OF 2









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- 3. WATER SOURCE: DRILL WATER AND HYDROSTATIC TEST WATER SHALL BE OBTAINED FROM COMPANY APPROVED SOURCE. 4. HYDROSTATIC TEST: PRE-INSTALLATION AND POST-INSTALLATION HYDROSTATIC TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH THE HYDROSTATIC TEST PLAN. TEST WATER SHALL BE ACQUIRED FROM AN APPROVED SOURCE. THE TEST WATER SHALL BE DISCHARGED IN AN UPLAND AREA INTO AN EROSION CONTROL STRUCTURE OF STRAW BALES AND/OR SILT FENCES, GEOTEXTILE FILTER BAG, OR COLLECTED IN A TRUCK AND HAULED TO AN APPROVED DISPOSAL SITE. UPON COMPLETION OF DEWATERING AND DRYING, A CALIPER PIG SURVEY SHALL BE COMPLETED IN ACCORDANCE WITH THE
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- 6. EROSION AND SEDIMENT CONTROL: CONTRACTOR SHALL SUPPLY, INSTALL AND MAINTAIN SEDIMENT CONTROL STRUCTURES IN ACCORDANCE WITH CONTRACT DOCUMENTS. CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL STRUCTURES AS
- 7. INSTALLATION: THE PIPE SECTION FOR THE DRILLED CROSSING SHALL BE MADE UP WITHIN THE APPROVED CONSTRUCTION RIGHT-OF-WAY AS SHOWN. AFTER THE PILOT HOLE IS COMPLETE, CONTRACTOR'S ACTUAL DRILL PROFILE SHALL BE SUBMITTED FOR COMPANY APPROVAL. CONTRACTOR SHALL ASSESS THE NEED FOR AND SUPPLY APPROPRIATE BALLAST
- 8. DRILLING FLUID DISPOSAL: CONTRACTOR SHALL DISPOSE OF EXCESS DRILLING FLUID IN ACCORDANCE WITH PERMIT CONDITIONS. UNDER NO CIRCUMSTANCES SHALL DRILLING FLUID BE DISPOSED OF IN WATER BODIES OR WETLANDS. ANY DRILLING FLUID WHICH INADVERTENTLY SURFACES AT POINTS OTHER THAN THE ENTRY OR EXIT POINTS SHALL BE CONTAINED AND COLLECTED TO THE EXTENT PRACTICAL AND DISPOSED OF IN ACCORDANCE WITH PERMIT CONDITIONS.
- 9. CLEANUP/STABILIZATION/RESTORATION: ALL DISTURBED AREAS SHALL BE RETURNED TO THE ORIGINAL CONTOURS. DISTURBED AREAS SHALL BE SEEDED AS SPECIFIED IN THE CLEAN-UP AND RESTORATION REQUIREMENTS.
- 10. IF THE TERRAIN ALLOWS AND ACCESS IS PERMITTED, CONTRACTOR SHALL UTILIZE LOW GROUND PRESSURE EQUIPMENT OR OTHER EQUIPMENT APPROVED BY COMPANY, TO FACILITATE CONTAINMENT AND CLEAN-UP OF ANY INADVERTENT RETURNS THAT OCCUR DURING THE HDD INSTALLATION PROCESS.
- 11. THE MINIMUM ALLOWABLE THREE JOINT RADIUS SHALL NOT BE LESS THAN 2600 FEET.
- 12. GROUND SURFACE SURVEY DATA PROVIDED BY UNIVERSALPEGASUS INTERNATIONAL.
- 13. CONTRACTOR IS RESPONSIBLE FOR PHYSICALLY LOCATING ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
 IF ANY UTILITY IS LOCATED WITHIN 15 FEET OF THE DESIGNED HDD PROFILE AND ALIGNMENT, CONTRACTOR SHALL OBTAIN
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- 14. THE PIPELINE INFORMATION SHOWN ON THIS DRAWING IS A COMPILATION OF DATA OBTAINED FROM VARIOUS SOURCES, LANEY DIRECTIONAL DRILLING DOES NOT GUARANTEE THE ACCURACY OF THE INFORMATION SHOWN.
- 15. GEOTECHNICAL DATA: BORE HOLES ARE OFFSET FROM THE PIPELINE CENTERLINE AS SHOWN ON THE PLAN VIEW. THE GEOTECHNICAL INFORMATION PROVIDED ON THIS DRAWING IS A GENERAL SUMMARY. REFER TO THE APPLICABLE GEOTECHNICAL DOCUMENTATION / REPORT FOR MORE DETAILED INFORMATION.

PROFILE VIEW GRAPHIC HORIZONTAL SCALE IN FEET GRAPHIC VERTICAL SCALE IN FEET

PIPE SPECIFICATIONS:

1. PRODUCT PIPE WILL CONSIST OF 30.000" O.D. X 0.617" W.T., API-5L X-70 PIPE WITH 14-16 MILS OF FUSION BONDED EPOXY (FBE) AND 32-40 MILS ARO.

2. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) = 1440 psi

DRAWING COORDINATE SYSTEM							
HORIZONTAL DATUM: SPCS - FL83-EF NAD83 AND GEOGRAPHIC NAD83							
VERTICAL DATUM: NAVD 88							
	\triangle						
	\triangle						
	\triangle	09/09/14	MADE CLIENT REVISIONS	APS			
	C	09/04/14	ISSUED FOR FINAL REVIEW	APS			
	B	06/27/14	ADDED GEOTECH	JRS			
	A	11/14/13	PRELIMINARY DRAFT	APS			
REFERENCE DRAWINGS	REV.	DATE	REVISION	APPVD.			



HORIZONTAL DIRECTIONAL DRILL DATA MP-124 HDD					
DESCRIPTION	STATION (ft)	ELEVATION (ft)			
ENTRY @ 10°	6564+78.00	28.70			
PC1 = 3600' RADIUS	6563+41.84	4.69			
PT1 = 6557+16.71 -50.00					
PC2 = 3600' RADIUS	6538+55.61	-50.00			
PT2 = 6533+54.58 -14.97					
EXIT @ 8° 6530+41.19 29.08					
HORIZONTAL DISTANCE (ft) = 3436.81					
DIRECTIONAL DRILL PIPE LENGTH (ft) = 3446.81					

FLORIDA SOUTHEAST CONNECTION, LLC FLORIDA SOUTHEAST CONNECTION PIPELINE PROJECT MP-124 HORIZONTAL DIRECTIONAL DRILL TTH APS PROJECT NO. DESIGNED

SCALE AS NOTED DATE 11/14/13 DWG. NO. MP-124-HDD SHT. 1 OF 1

JRS

10076

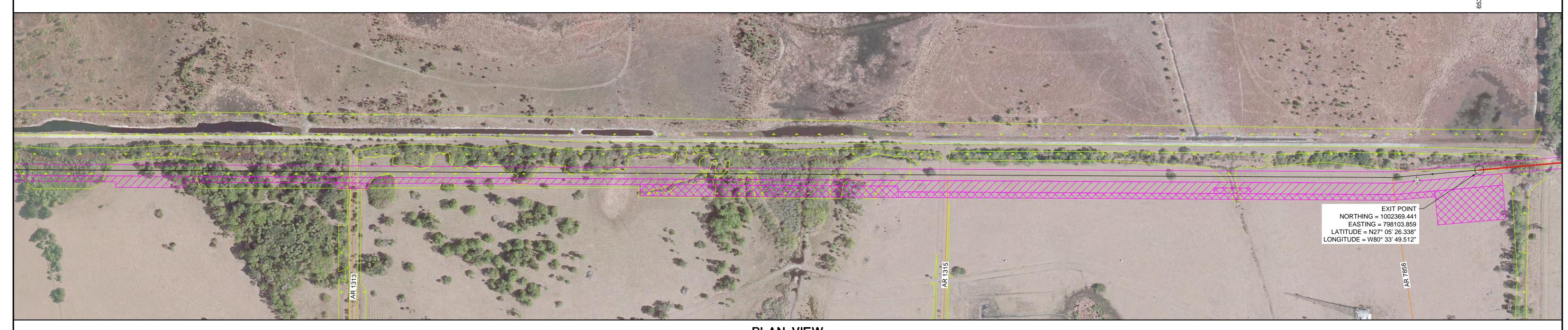
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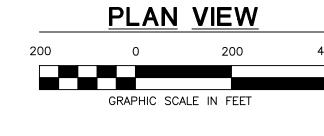


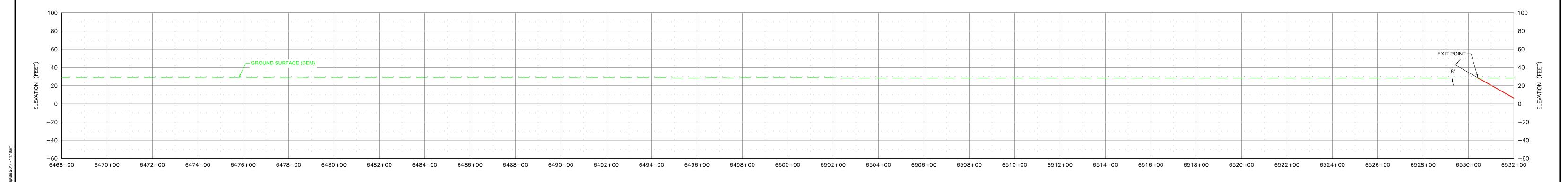
MARTIN COUNTY, FLORIDA

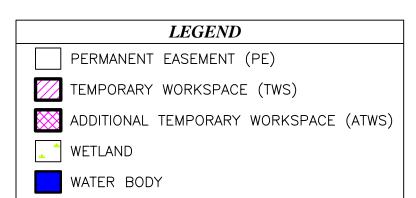












HLINON

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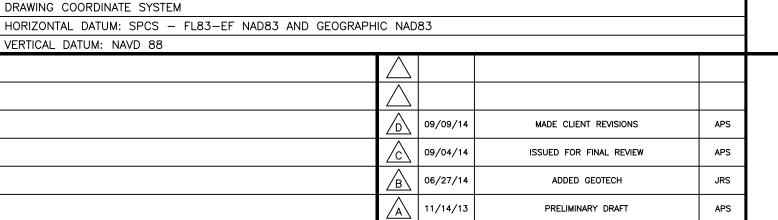
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REVISION

APPVD.



REV. DATE



FLORIDA SOUTHEAST CONNECTION, LLC FLORIDA SOUTHEAST CONNECTION PIPELINE PROJECT								
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