

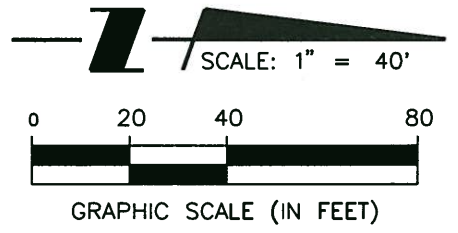
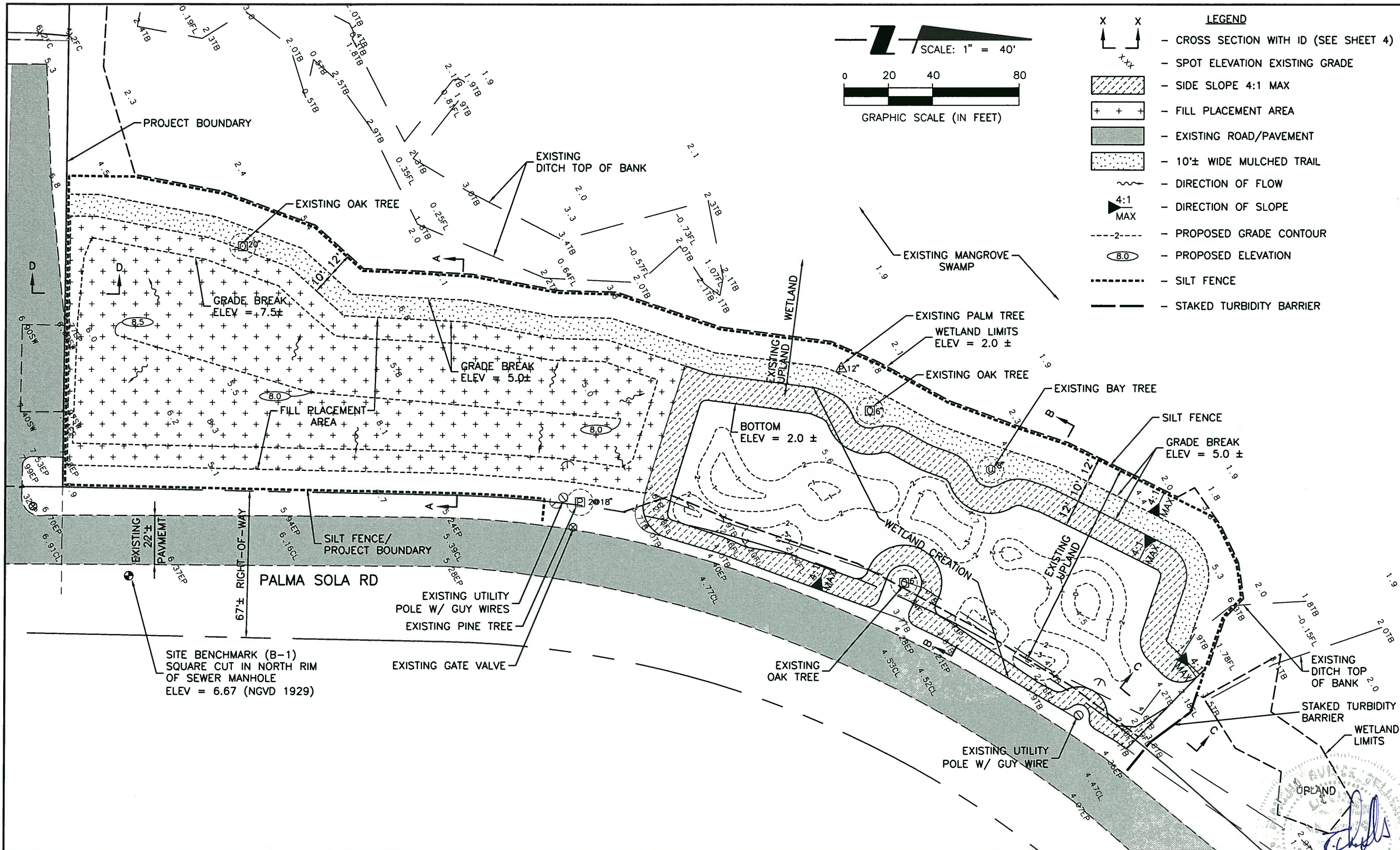
ECOLOGICAL ENHANCEMENTS ACREAGE SUMMARY TABLE	
Wetland Creation Area	0.48 ACRES
TOTAL WETLAND CREATION	0.48 ACRES
Wetland Enhancement "A"	0.82 ACRES
Wetland Enhancement "B"	1.29 ACRES
Wetland Enhancement "C"	0.45 ACRES
TOTAL WETLAND ENHANCEMENT	2.56 ACRES
Upland Enhancement "A"	0.61 ACRES
Upland Enhancement "B"	0.41 ACRES
Upland Enhancement "C"	0.05 ACRES
Upland Enhancement "D"	0.28 ACRES
Upland Enhancement "E"	0.01 ACRES
Upland Enhancement "F"	0.69 ACRES
TOTAL UPLAND ENHANCEMENT	2.05 ACRES

REV. NO.	REVISION	DATE	DRAWN BY / EMP. NO.	CHECKED BY / EMP. NO.	WM APPROVED BY:	ACTIVITY	INITIALS/EMP. NO.	DATE
						DESIGNED BY:		
						DRAWN BY:	ATO/89520	03/18/11
						CHECKED BY:		
						CONTRACT ADMIN. BY:		

WilsonMiller
 Planners • Engineers • Ecologists • Surveyors • Landscape Architects • Transportation Consultants
 WilsonMiller, Inc.
 8800 Professional Parkway East, Suite 100 • Sarasota, Florida 34240-9484 • Phone 941-907-8800 • Fax 941-907-8802 • Web Site www.wilsonmiller.com

CLIENT: BOARD OF COUNTY COMMISSIONERS
 MANATEE COUNTY, FLORIDA
 PROJECT: UNGARELLI PRESERVE
 HABITAT RESTORATION

DATE: MARCH 2011	TITLE: SITE PLAN
HORIZONTAL SCALE: 1" = 150'	PROJECT NUMBER: 215500131 300
VERTICAL SCALE: N/A	CROSS REFERENCE FILE NO.: 06333-006M01
SEC: TWP: RGE:	SHEET NUMBER: 2 of 7
355 16/15E	B-215500131-002



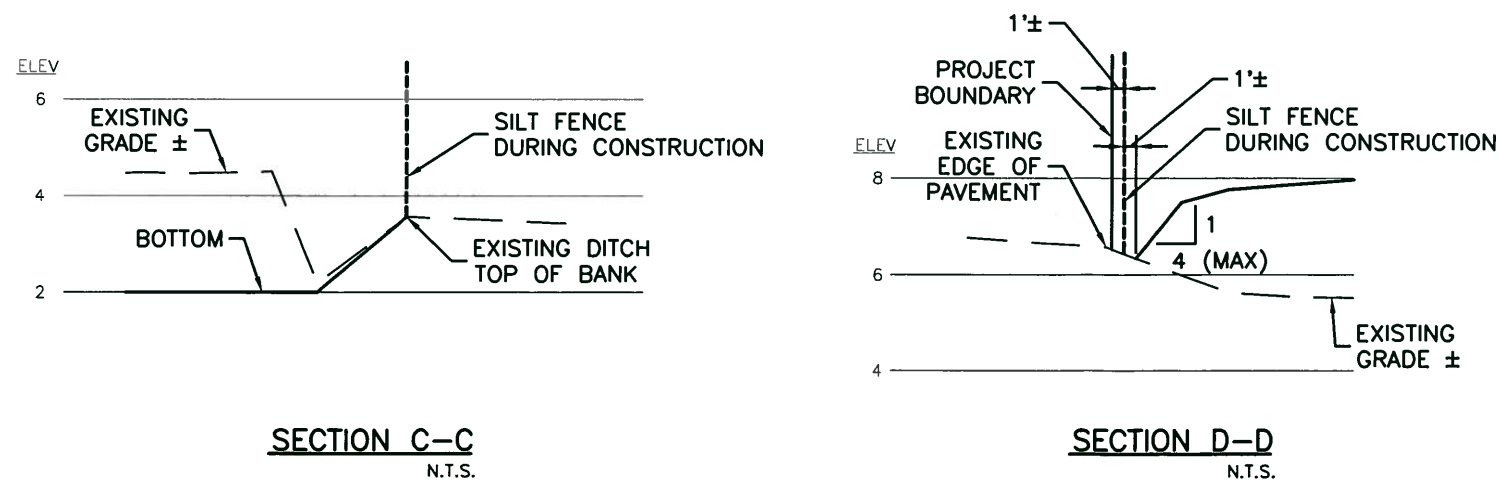
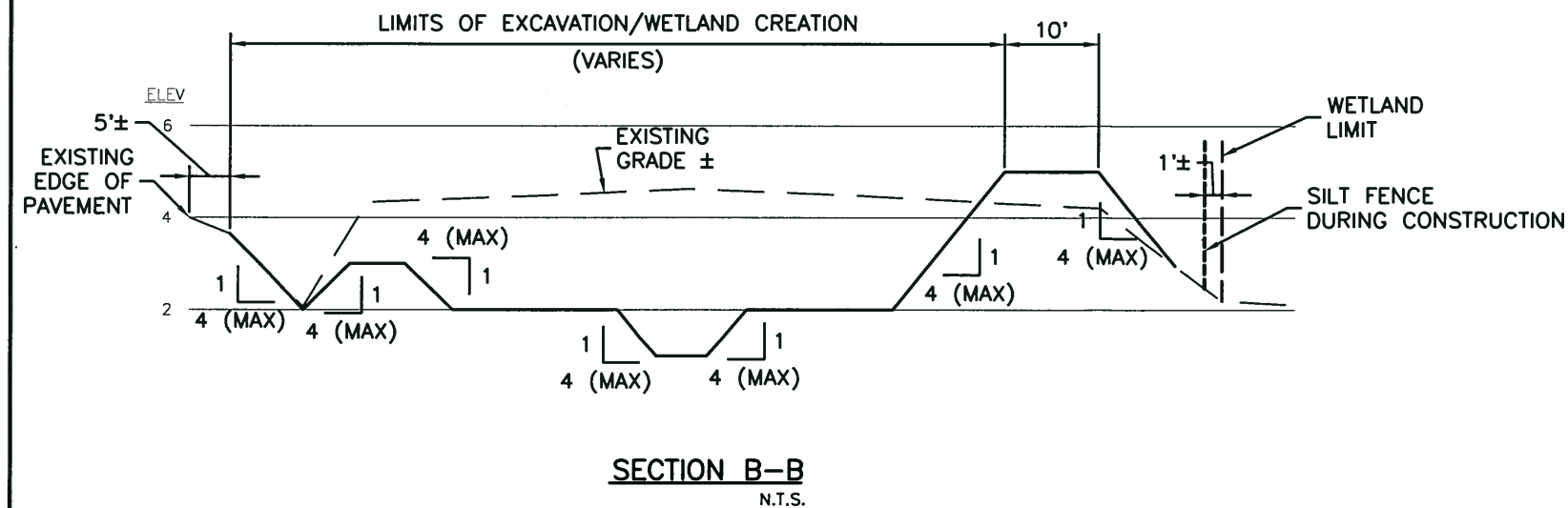
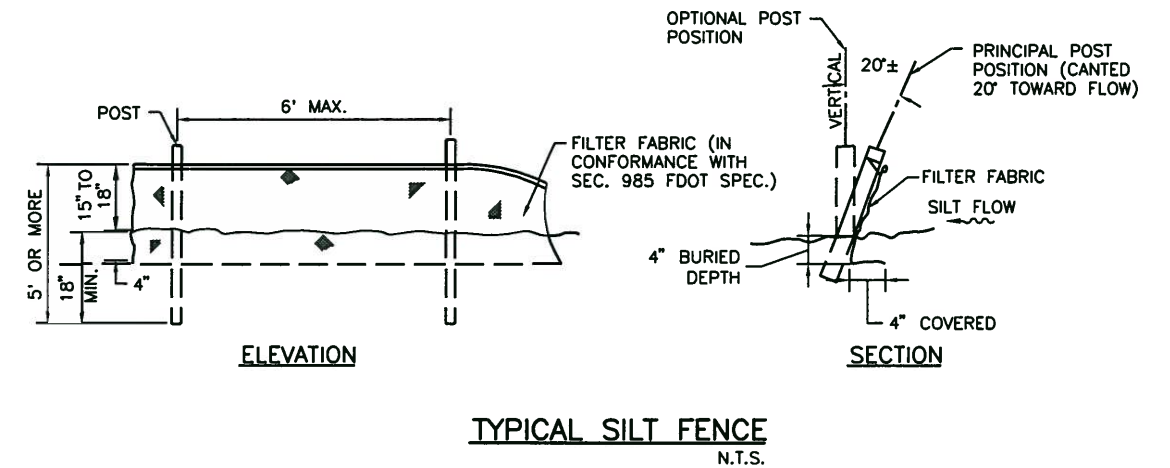
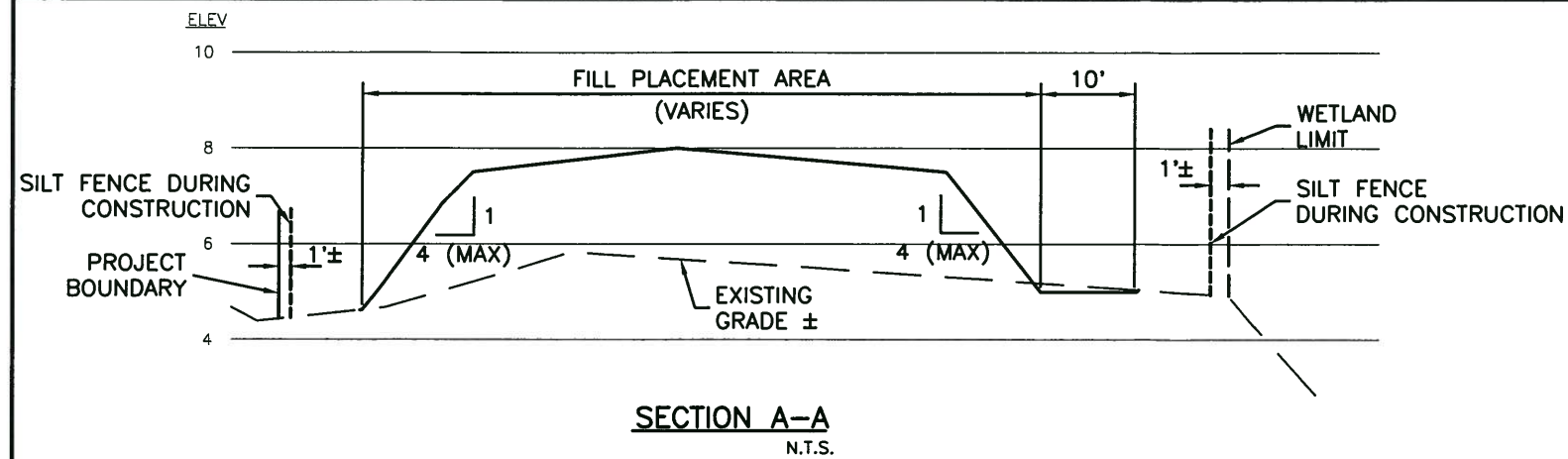
- LEGEND**
- X X - CROSS SECTION WITH ID (SEE SHEET 4)
 - xxx - SPOT ELEVATION EXISTING GRADE
 - [Hatched Box] - SIDE SLOPE 4:1 MAX
 - [Cross-hatch Box] - FILL PLACEMENT AREA
 - [Solid Grey Box] - EXISTING ROAD/PAVEMENT
 - [Dotted Box] - 10'± WIDE MULCHED TRAIL
 - ~ - DIRECTION OF FLOW
 - 4:1 MAX - DIRECTION OF SLOPE
 - - - - - 2 - - - - - PROPOSED GRADE CONTOUR
 - (8.0) - PROPOSED ELEVATION
 - - - - - SILT FENCE
 - - - - - STAKED TURBIDITY BARRIER

REV NO.	REVISION	DATE	DESIGNED BY	CHECKED BY	CONTRACT ADMIN. BY	WM APPROVED BY
A	REV SHEET TITLE: SHOW ADDITIONAL EX. TREES; IDENTIFY MULCHED TRAIL	03/18/11	ATO/89520			

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 PROJECT: UNGARELLI PRESERVE
 HABITAT RESTORATION

DATE: MARCH 2011
 HORIZONTAL SCALE: 1" = 40'
 VERTICAL SCALE: N/A
 TITLE: SITE GRADING PLAN - UPLAND 'F'
 & WETLAND CREATION AREA
 CROSS REFERENCE FILE NO.: 06333-006M01
 PROJECT NUMBER: 215500131 300
 SHEET NUMBER: 3 of 7



NOTES:

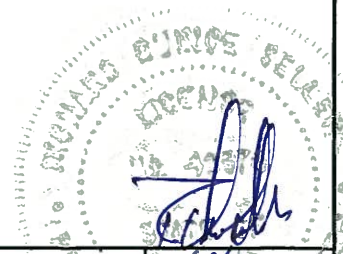
1. PROJECT BENCHMARK (B-1) DESCRIPTION: SQUARE CUT IN NORTH RIM OF SEWER MANHOLE. ELEVATION = 6.67 (NGVD 1929)
2. ALL ELEVATIONS SHOWN ON THIS DRAWING SET ARE RELATIVE TO PROJECT BENCHMARK B-1.
3. ALL CLEARING, GRUBBING AND EXCAVATED DEBRIS MATERIAL WILL BE REMOVED FROM PROJECT SITE AND DISPOSED OF PROPERLY.
4. CLEAN EXCAVATED SOIL MATERIAL FROM WETLAND CREATION WILL BE PLACED ON THE FILL PLACEMENT AREA OF UPLAND 'F'.
5. ANY DISTURBED UPLAND AREAS WILL BE STABILIZED WITH NATIVE VEGETATION.
6. THE CONNECTION TO THE EXISTING DITCH WILL BE PERFORMED UNDER THE SUPERVISION OF A QUALIFIED ECOLOGIST TO AVOID DAMAGE TO MANGROVE HABITAT.
7. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES AS NECESSARY FOR WORK PERFORMED IN AREAS CONTAINING ON, ABOVE, OR BELOW GROUND.
8. EXISTING DESIRABLE VEGETATION LOCATED ADJACENT TO THE PROJECT AREA IS TO REMAIN UNDISTURBED DURING THE CONSTRUCTION PROCESS.
9. SILT FENCE/STAKED TURBIDITY BARRIER WILL BE INSTALLED AROUND THE ENTIRE PROJECT AREA AS SHOWN ON SHEET 3.
10. POST GRADING SOIL CONDITIONS SHALL BE APPROPRIATE FOR PLANTING WITH LIMITED COMPACTION AS DETERMINED BY PROJECT ECOLOGIST.
11. IF HUMAN REMAINS OR ARCHEOLOGICAL ARTIFACTS ARE DISCOVERED DURING THE COURSE OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR MUST STOP WORK IMMEDIATELY AND PROMPTLY NOTIFY THE PROJECT MANAGER.
12. NOTIFY "SUNSHINE STATE ONE CALL (1-800-432-4770), MANATEE COUNTY PUBLIC WORKS DEPARTMENT, FLORIDA POWER & LIGHT, PEACE RIVER ELECTRIC, VERIZON AND ANY OTHER UTILITIES (GAS COMPANIES, CABLE TV, ETC.) PRIOR TO CONSTRUCTION OPERATION AND PRIOR TO ANY CONNECTION TO EXISTING UTILITIES. IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT EXISTING UTILITIES FROM DAMAGE.

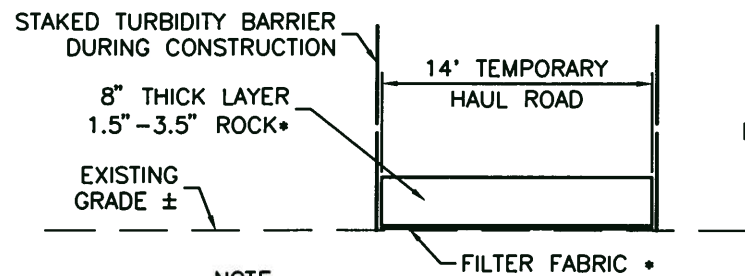
REV. NO.	REVISION	DATE	DRAWN BY / EMP. NO.	CHECKED BY / EMP. NO.	WM APPROVED BY:

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CLIENT: BOARD OF COUNTY COMMISSIONERS
 MANATEE COUNTY, FLORIDA
 PROJECT: UNGARELLI PRESERVE
 HABITAT RESTORATION

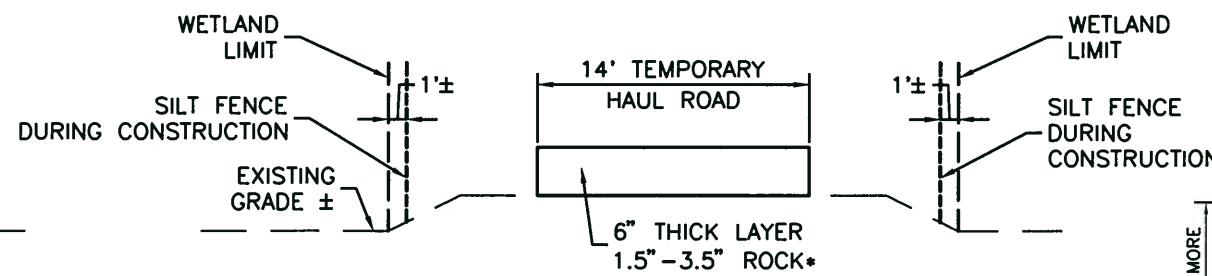
DATE: MARCH 2011	TITLE: SECTIONS AND DETAILS - UPLAND 'F' & WETLAND CREATION AREA
HORIZONTAL SCALE: AS SHOWN	VERTICAL SCALE: AS SHOWN
CROSS REFERENCE FILE NO.: 215500131_300	PROJECT NUMBER: 215500131_300
SHEET NUMBER: 4 OF 7	





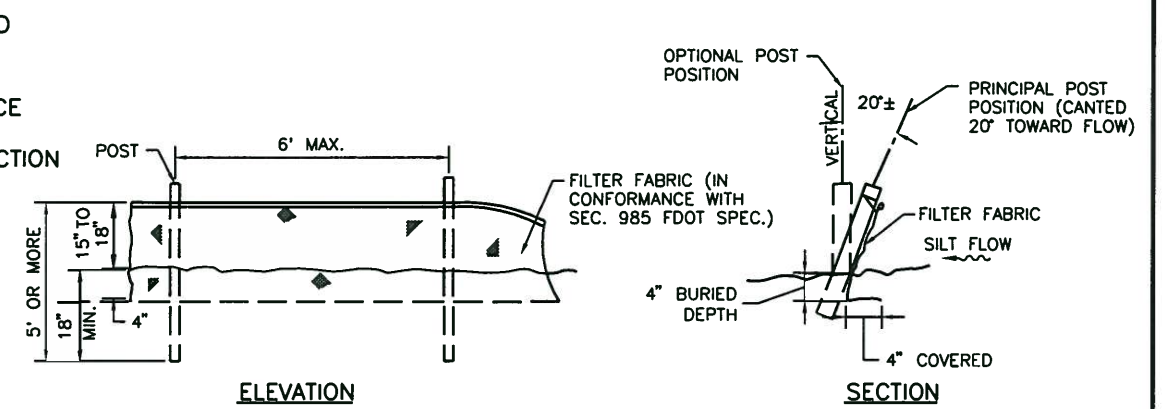
*NOTE:
TO BE REMOVED AT COMPLETION OF PROJECT.

SECTION E-E
N.T.S.

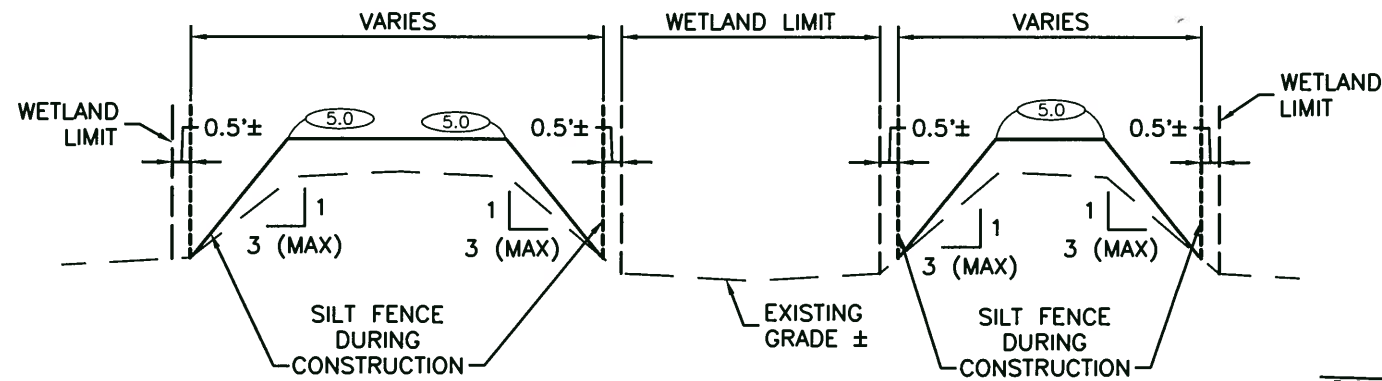


*NOTE:
TO BE REMOVED AT COMPLETION OF PROJECT.

SECTION G-G
N.T.S.



TYPICAL SILT FENCE
N.T.S.

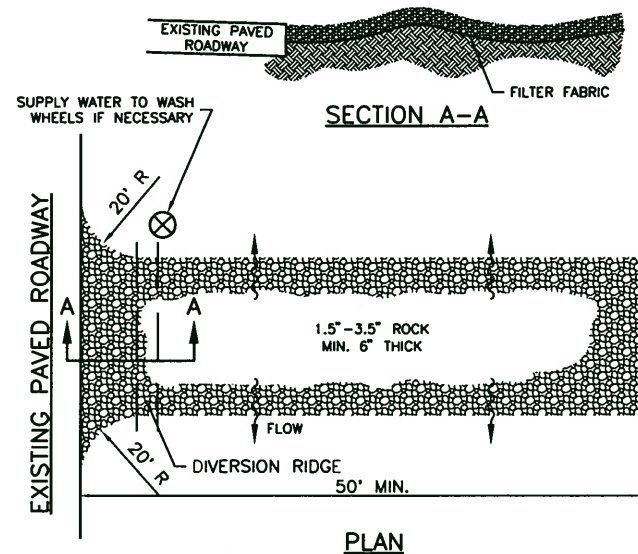


SECTION F-F
N.T.S.

NOTES:

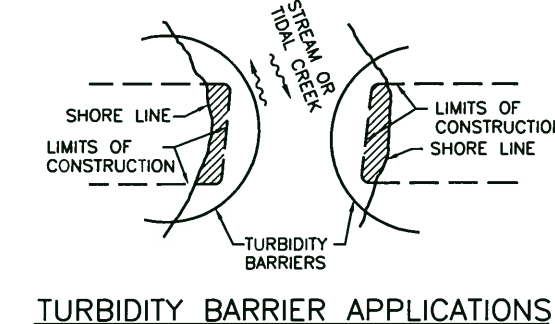
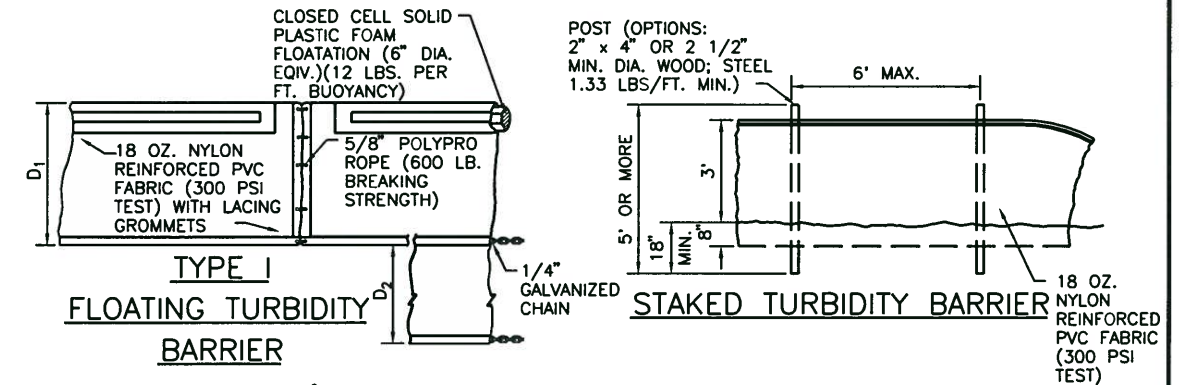
- PROJECT BENCHMARK (B-1) DESCRIPTION: SQUARE CUT IN NORTH RIM OF SEWER MANHOLE. ELEVATION = 6.67 (NGVD 1929)
- ALL ELEVATIONS SHOWN ON THIS DRAWING SET ARE RELATIVE TO PROJECT BENCHMARK B-1.
- ALL CLEARING, GRUBBING AND EXCAVATED DEBRIS MATERIAL WILL BE REMOVED FROM PROJECT SITE AND DISPOSED OF PROPERLY.
- CLEAN SOIL MATERIAL WILL BE PLACED ON THE PLACEMENT AREA.
- ANY DISTURBED UPLAND AREAS WILL BE STABILIZED WITH NATIVE VEGETATION.
- CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES AS NECESSARY FOR WORK PERFORMED IN AREAS CONTAINING ON, ABOVE, OR BELOW GROUND.
- EXISTING DESIRABLE VEGETATION LOCATED ADJACENT TO THE PROJECT AREA IS TO REMAIN UNDISTURBED DURING THE CONSTRUCTION PROCESS.
- SILT FENCE/STAKED TURBIDITY BARRIER WILL BE INSTALLED AROUND THE ENTIRE PROJECT AREA AS SHOWN ON SHEET 5.
- POST GRADING SOIL CONDITIONS SHALL BE APPROPRIATE FOR PLANTING WITH LIMITED COMPACTION AS DETERMINED BY PROJECT ECOLOGIST.
- IF HUMAN REMAINS OR ARCHEOLOGICAL ARTIFACTS ARE DISCOVERED DURING THE COURSE OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR MUST STOP WORK IMMEDIATELY AND PROMPTLY NOTIFY THE PROJECT MANAGER.
- NOTIFY "SUNSHINE STATE ONE CALL (1-800-432-4770), MANATEE COUNTY PUBLIC WORKS DEPARTMENT, FLORIDA POWER & LIGHT, PEACE RIVER ELECTRIC, VERIZON AND ANY OTHER UTILITIES (GAS COMPANIES, CABLE TV, ETC.) PRIOR TO CONSTRUCTION OPERATION AND PRIOR TO ANY CONNECTION TO EXISTING UTILITIES. IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT EXISTING UTILITIES FROM DAMAGE.

DIVERSION RIDGE REQUIRED WHERE GRADE EXCEEDS 2%
2% OR GREATER



- NOTE:
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 - WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY CONSTRUCTION
ENTRANCE DETAIL
N.T.S.



TURBIDITY BARRIER APPLICATIONS

D₁ = 5' STD. (SINGLE PANEL FOR DEPTH 5' OR LESS).
D₂ = 5' STD. (ADDITIONAL PANEL FOR DEPTHS >5').
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET.
TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTICE:
COMPONENTS OF TYPE I MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPE I SHALL BE AS APPROVED BY THE ENGINEER.

NOTE:
TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATION OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTORS OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS, HOWEVER PAYMENT WILL BE UNDER THE PAY ITEM(S) ESTABLISHED IN THE PLANS FOR FLOATING TURBIDITY BARRIER AND/OR STAKED TURBIDITY BARRIER. POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

- NOTES:
- TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
 - NUMBER AND SPACING OF ANCHORS DEPENDENT ON WATER VELOCITIES.
 - DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
 - NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.

TURBIDITY BARRIERS
N.T.S.

REV NO.	REVISION	DATE	DRAWN BY / EMP. NO.	CHECKED BY / EMP. NO.	WM APPROVED BY:
A	REV ROAD MATERIAL TO ONLY ROCK	11/28/11	ATO/89520		

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CLIENT: BOARD OF COUNTY COMMISSIONERS
MANATEE COUNTY, FLORIDA
PROJECT: UNGARELLI PRESERVE
HABITAT RESTORATION

DATE: MARCH 2011	TITLE: SECTIONS AND DETAILS - UPLAND 'B'
HORIZONTAL SCALE: AS SHOWN	INDEX NUMBER: B-215500131-006
VERTICAL SCALE: AS SHOWN	SHEET NUMBER: 6 OF 7
CROSS REFERENCE FILE NO.: 215500131 300	

UPLAND ENHANCEMENT AREAS:

THE GOAL IN THESE AREAS IS TO RESTORE THE COASTAL UPLAND HABITAT THAT WILL PROVIDE MUCH NEEDED UPLAND SUPPORT FOR EXISTING ONSITE WETLANDS. CURRENTLY THESE AREAS ARE VEGETATED WITH RUDERAL VEGETATION THAT HAS RECRUITED SINCE EXOTIC SPECIES OVERGROWTH WAS REMOVED IN DECEMBER 2009. FOLLOW UP HERBICIDE TREATMENTS WILL BE PERFORMED TO REMOVE REGROWTH OF NUISANCE AND EXOTIC VEGETATION. THESE AREAS WILL BE SMOOTHED OUT WITH GRADING EQUIPMENT AND THE MATERIAL FROM THE EXCAVATION OF THE WETLAND CREATION AREA WILL BE SPREAD THROUGHOUT THE UPLAND "F" (REFER TO SHEET 3). NO FILL WILL BE PLACED OR GRADED IN AREAS CONTAINING DESIRABLE VEGETATION. FOLLOWING GRADING THESE AREAS WILL BE PLANTED WITH NATIVE COASTAL UPLAND SPECIES. NATURAL RECRUITMENT OF NATIVE DESIRABLE GROUND COVER SPECIES IS EXPECTED IN MOST AREAS WITH SELECTIVE REMOVAL OF NUISANCE AND EXOTIC VEGETATION. AREAS WITHIN THE UPLAND ENHANCEMENT AREA THAT RECEIVE FILL FROM THE WETLAND CREATION EXCAVATION SHOULD BE SEEDED BY HYDRO-SEEDING, SEED DRILL OR DIRECT APPLICATION WITH A MIXTURE OF NATIVE SEED AT A RATE OF 12 TO 15 LBS OF SEED PER ACRE AS DETERMINED APPROPRIATE BY A QUALIFIED ECOLOGIST. REFER TO THE SUGGESTED PLANTING PALETTE BELOW:

Upland Enhancement Areas Planting Palette		
Common Name	Scientific Name	Relative Elevation/Area
Buttonwood	<i>Conocarpus erectus</i>	lowest elevations
Christmasberry	<i>Lycium carolinianum</i>	lowest elevations
Red Cedar	<i>Juniperus virginiana</i>	low to middle elevations
Wild Cotton	<i>Gossypium hirsutum</i>	low to middle elevations
Jamaica Caper	<i>Capparis cynophallophora</i>	middle elevations
Myrsine	<i>Rapanea punctata</i>	middle elevations
Cabbage Palm	<i>Sabal palmetto</i>	middle elevations
White Stopper	<i>Eugenia axillaris</i>	middle elevations
Spanish Stopper	<i>Eugenia foetida</i>	middle elevations
Marlberry	<i>Ardisia escallonioides</i>	middle elevations
Sea Grape	<i>Coccoloba uvifera</i>	middle elevations
Yellow Necklacepod	<i>Sophora tomentosa</i>	middle elevations
Gumbo Limbo	<i>Bursera simaruba</i>	highest elevations
Wax Myrtle	<i>Myrica cerifera</i>	highest areas "F & B" only
Saw Palmetto	<i>Serenoa repens</i>	highest areas "F & B" only
Live Oak	<i>Quercus virginiana</i>	highest areas "F & B" only
South Florida Slash Pine	<i>Pinus elliotii var. densa</i>	highest areas "F & B" only

WETLAND CREATION AREA:

THIS AREA WILL BE EXCAVATED FROM EXISTING GRADE AT A 4:1 SLOPE TO A BOTTOM ELEVATION THAT WILL VARY BETWEEN 0.0' AND 3.0' NGVD. THIS AREA WILL HAVE A DIRECT HYDROLOGIC CONNECTION TO THE EXISTING MANGROVE SWAMP ON THE NORTHERN EDGE OF THE WETLAND CREATION AREA VIA AN EXISTING DITCH IN THE AREA (REFER TO SHEET 3) AREAS DEEPER THAN 2.0' WILL NOT BE PLANTED. THE ELEVATED AREAS LOCATED WITHIN THE CREATED WETLAND WILL BE PLANTED WITH BUTTONWOOD (*CONOCARPUS ERECTUS*) TO PROVIDE INCREASED VEGETATION STRUCTURE FOR THE CREATION AREA. AREAS AT OR ABOVE 2.0' NGVD WILL BE PLANTED WITH NATIVE HIGH MARSH VEGETATION. SIDE SLOPES OF THE WETLAND CREATION AREA WILL ALSO BE PLANTED WITH SALT TOLERANT NATIVE SPECIES. REFER TO THE SUGGESTED PLANTING PALETTE BELOW:

Wetland Creation Area Planting Palette		
Common Name	Scientific Name	Specified Elev. NGVD
Seashore Paspalum	<i>Paspalum vaginatum</i>	2'
Dropseed	<i>Sporobolus virginicus</i>	2'
Saltgrass	<i>Distichlis spicata</i>	2'
Marsh Hay Cordgrass	<i>Spartina patens</i>	2.1'-3'
Marsh Elder	<i>Iva frutescens</i>	2.1'-3'
Sea Oxeye Daisy	<i>Borrchia frutescens</i>	2.1'-3'
Buttonwood	<i>Conocarpus erectus</i>	3'-5'
Scorpions Tail	<i>Heliotropium angiospermum</i>	3'-5'
Dune Sunflower	<i>Helianthus debilis</i> sbsp. vestitus	3'-5'
Gulf Muhlygrass	<i>Muhlenbergia capillaris</i>	4'-5'
Florida Privet	<i>Forestiera segregata</i>	4'-5'

WETLAND ENHANCEMENT AREAS:

CURRENTLY EXOTIC VEGETATION AND LITTER IS SCATTERED THROUGHOUT THE WETLAND ENHANCEMENT AREAS. LITTER AND EXOTIC AND NUISANCE PLANTS AND WILL BE REMOVED IN THESE AREAS AS THE FIRST STEP IN ENHANCING THE WETLANDS. (REFER TO SHEET 2) HEAVY EQUIPMENT WILL BE NEEDED TO REMOVE DEBRIS AND PULL STUMPS OF LARGE BRAZILIAN PEPPER TREES. THIS WILL BE DONE FROM THE UPLAND PORTIONS OF THE SITE USING A TRACK HOE WITH A THUMB BUCKET. OTHER NUISANCE SPECIES WILL BE REMOVED BY HAND. AFTER VEGETATION AND DEBRIS IS REMOVED ANY NECESSARY RE-GRADING AND RE-PLANTING WILL BE DONE. ALL WORK PERFORMED IN WETLANDS WILL BE SUPERVISED BY A QUALIFIED ECOLOGIST TO ENSURE MINIMAL DAMAGE IS DONE TO EXISTING DESIRABLE VEGETATION DURING WETLAND ENHANCEMENT. REFER TO THE SUGGESTED PLANTING PALETTE BELOW:

Wetland Enhancement Areas Planting Palette		
Common Name	Scientific Name	Relative Elevation/Area
Giant Leather Fern	<i>Acrostichum danaeifolium</i>	near freshwater inputs
Sea purslane	<i>Sesuvium portulacastrum</i>	lower areas
Needlerush	<i>Juncus roemerianus</i>	lower areas
Saltgrass	<i>Distichlis spicata</i>	higher areas
Dropseed	<i>Sporobolus virginicus</i>	higher areas
Seashore Paspalum	<i>Paspalum vaginatum</i>	higher areas

		CLIENT: BOARD OF COUNTY COMMISSIONERS MANATEE COUNTY, FLORIDA	DATE: MARCH 2011 HORIZONTAL SCALE: AS SHOWN VERTICAL SCALE: AS SHOWN	TITLE: PLANTING NOTES AND PALETTES
PROJECT: UNGARELLI PRESERVE HABITAT RESTORATION		CROSS REFERENCE FILE NO.: 215500131 300	PROJECT NUMBER: 215500131 300	SHEET NUMBER: 7 of 7

