

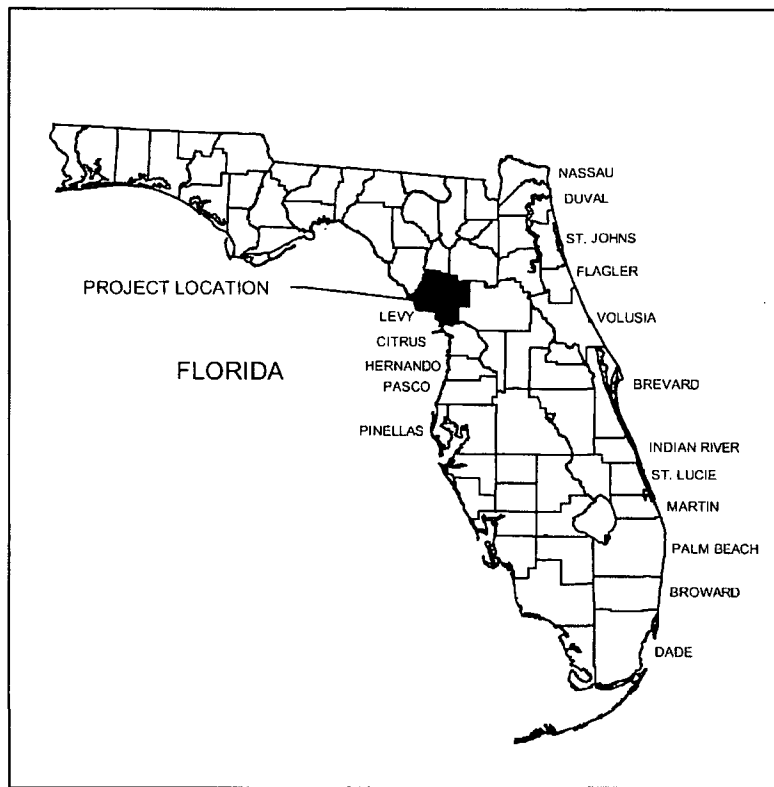
3.11 Engineering Detail Drawings

Please see the attached engineering detail drawings.

PROGRESS ENERGY MITIGATION PROJECT LEVY NUCLEAR PLANT SITE LEVY COUNTY, FLORIDA

DRAWING INDEX

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SHEET 20	DITCH BLOCK AREA 4B - CROSS SECTIONS
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SHEET 22	EROSION CONTROL DETAILS



LOCATION MAP
N.T.S.

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Business Days
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1-800-432-4770

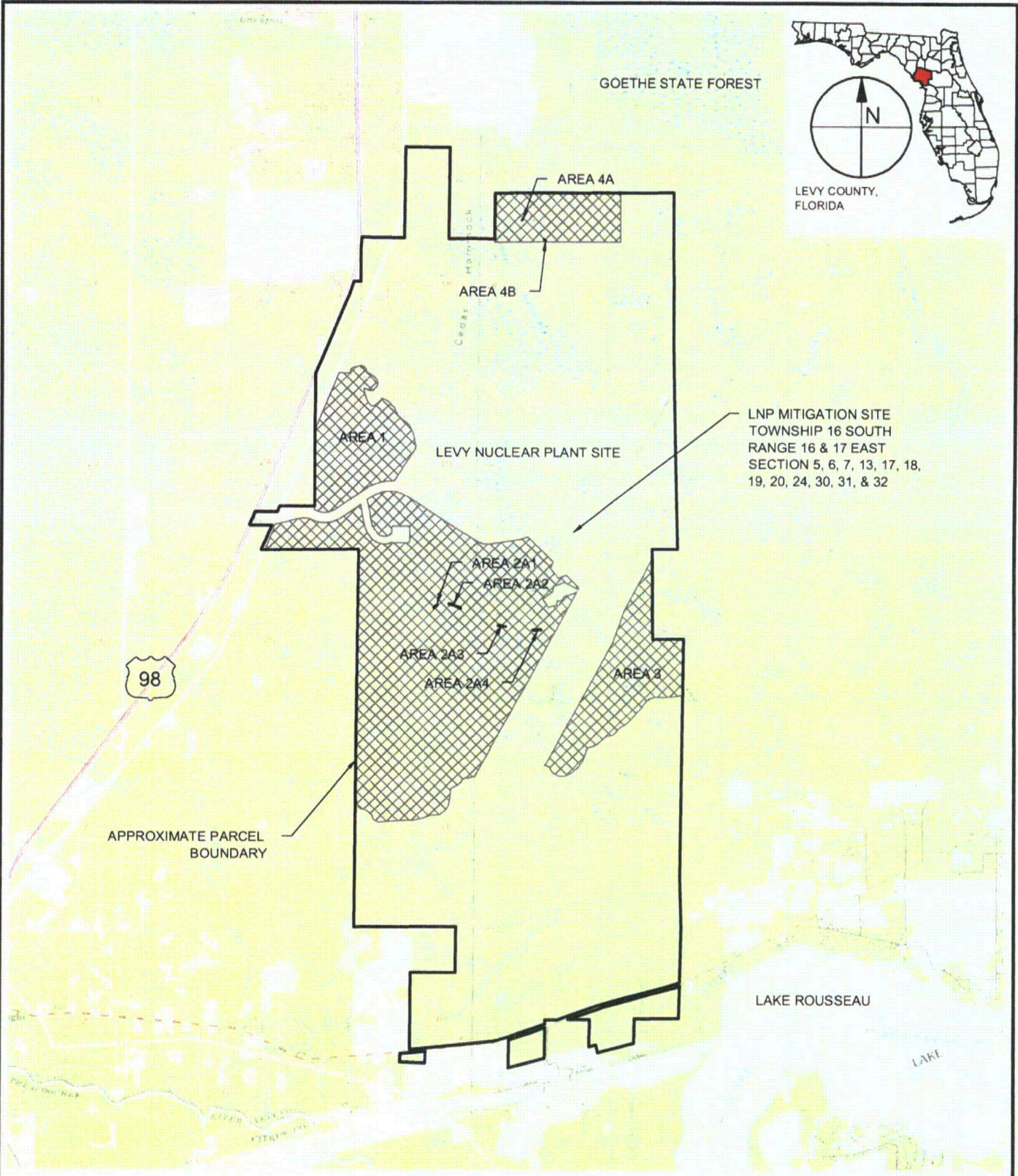
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	<p>TAYLOR ENGINEERING INC. 10151 DEERWOOD PARK BLVD. BLDG. 300, SUITE 300 JACKSONVILLE, FL 32256 CERTIFICATE OF AUTHORIZATION # 4815</p>
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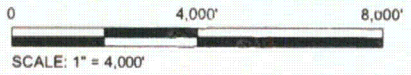
<p>TITLE SHEET PROGRESS ENERGY MITIGATION PROJECT LEVY NUCLEAR PLANT SITE LEVY COUNTY, FLORIDA</p>

PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	1 of 22
DATE	JULY 2011

<p>SEAL</p>  <p>MICHAEL J. DELCHAMBRE P.E. #157403</p>	<p>DATE</p>
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THIS SHEET SET DOES NOT INCLUDE DRAWINGS FOR ACTIVITY AREA 1 AND 3 BECAUSE NO ENGINEERING DESIGN IS PROPOSED FOR THESE AREAS.



CARRY SHELL X:\S\PROJECTS\2011-025-PROGRESS ENERGY\PERMIT\LAYOUT\2011-025-LNP-LOCATION MAP.DWG 8/19/2011 10:26:36 AM

TAYLOR ENGINEERING INC.
 10151 DEERWOOD PARK BLVD.
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PROJECT LOCATION MAP PROGRESS ENERGY MITIGATION PROJECT LEVY NUCLEAR PLANT SITE LEVY COUNTY, FLORIDA			
PROJECT	DRAWN BY	SHEET	DATE
2011-025	RLJ/CAS	2 of 22	JULY 2011

SEAL

Michael J. DelChamco 9/20/11

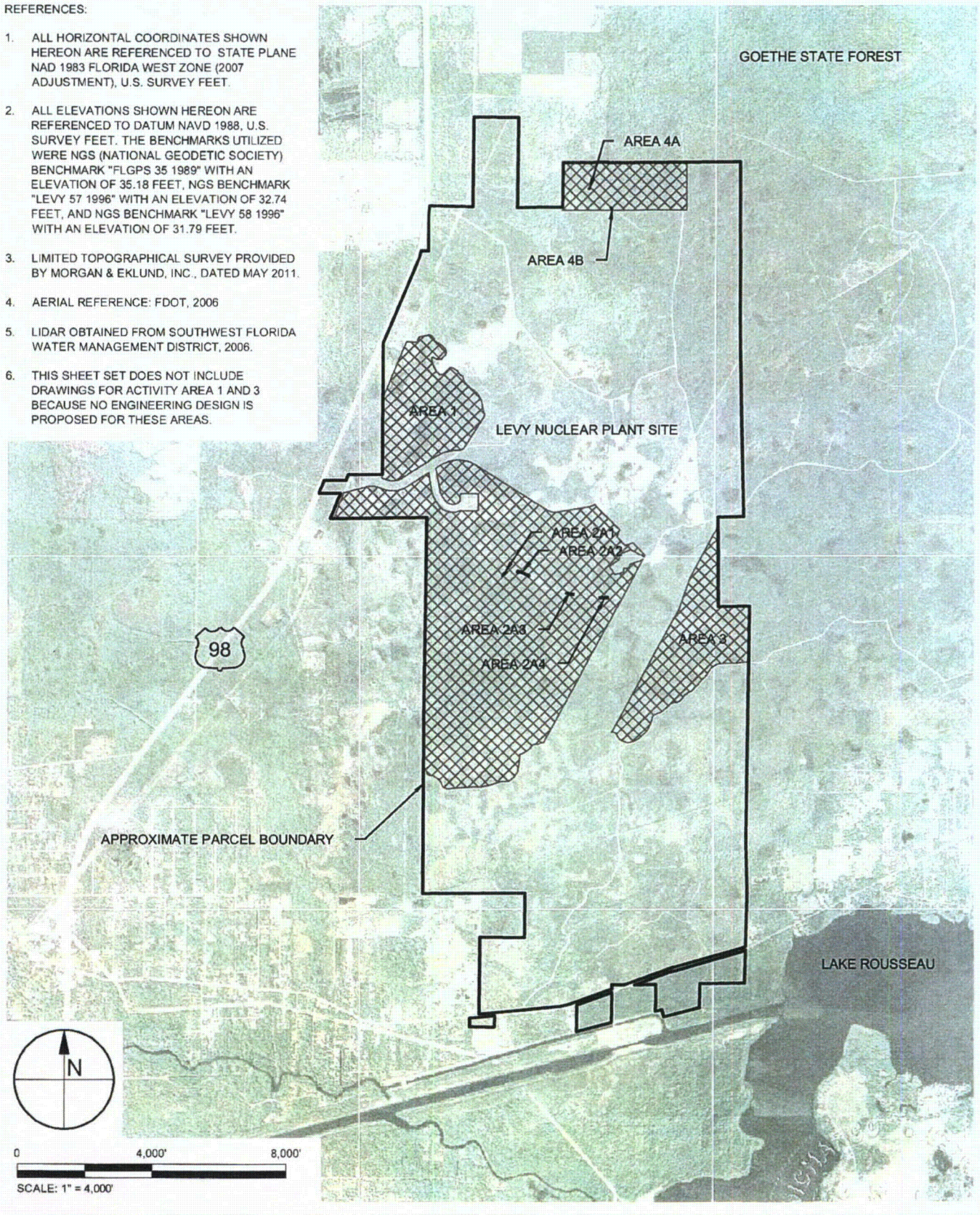
MICHAEL J. DELCHAMCO P.E. # 5023

DATE

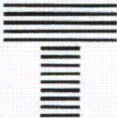
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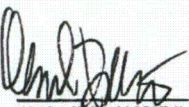
1. ALL HORIZONTAL COORDINATES SHOWN HEREON ARE REFERENCED TO STATE PLANE NAD 1983 FLORIDA WEST ZONE (2007 ADJUSTMENT), U.S. SURVEY FEET.
2. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO DATUM NAVD 1988, U.S. SURVEY FEET. THE BENCHMARKS UTILIZED WERE NGS (NATIONAL GEODETIC SOCIETY) BENCHMARK "FLGPS 35 1989" WITH AN ELEVATION OF 35.18 FEET, NGS BENCHMARK "LEVY 57 1996" WITH AN ELEVATION OF 32.74 FEET, AND NGS BENCHMARK "LEVY 58 1996" WITH AN ELEVATION OF 31.79 FEET.
3. LIMITED TOPOGRAPHICAL SURVEY PROVIDED BY MORGAN & EKLUND, INC., DATED MAY 2011.
4. AERIAL REFERENCE: FDOT, 2006
5. LIDAR OBTAINED FROM SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT, 2006.
6. THIS SHEET SET DOES NOT INCLUDE DRAWINGS FOR ACTIVITY AREA 1 AND 3 BECAUSE NO ENGINEERING DESIGN IS PROPOSED FOR THESE AREAS.

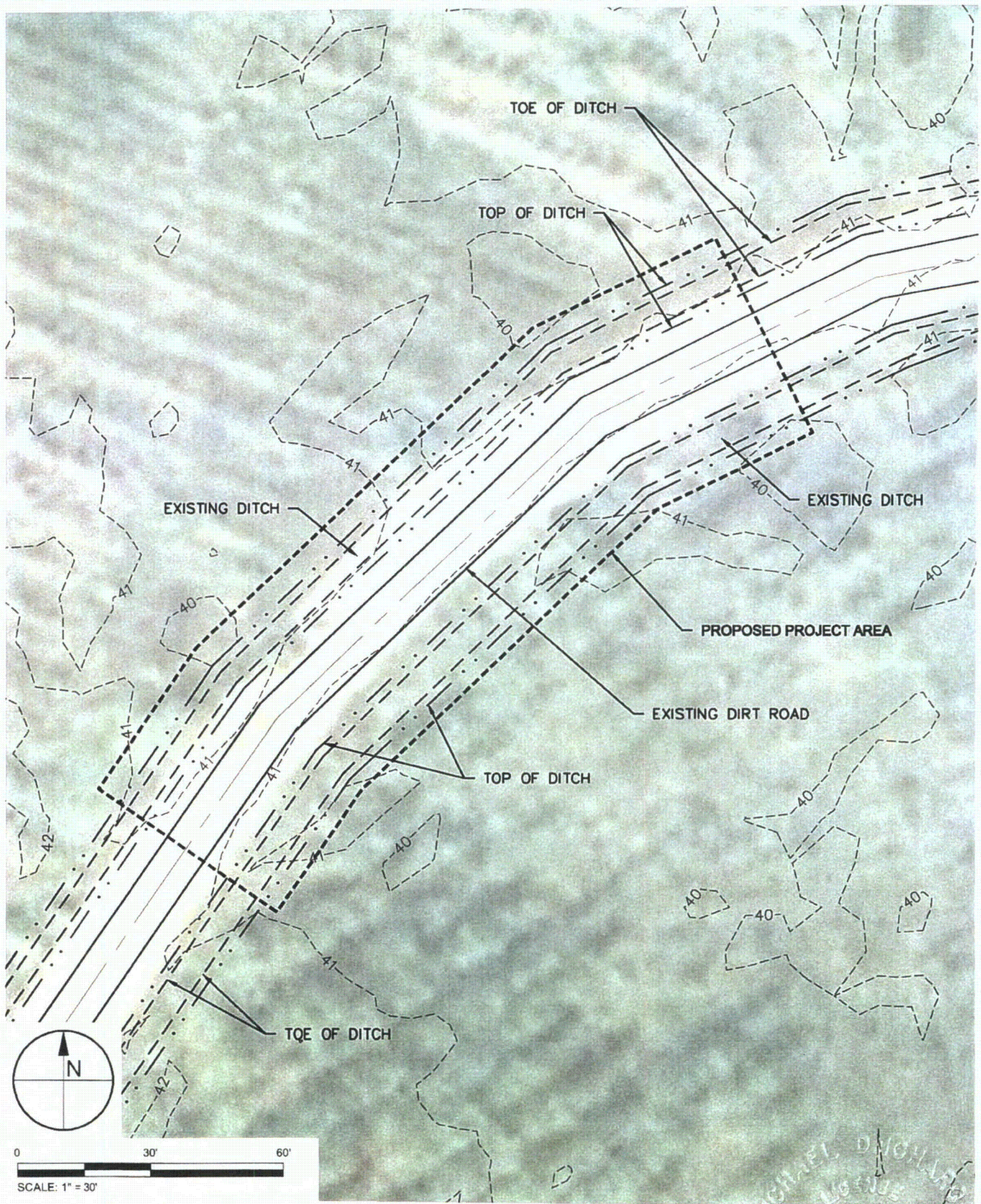


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TAYLOR ENGINEERING INC.
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PROJECT OVERVIEW					
PROGRESS ENERGY MITIGATION PROJECT					
LEVY NUCLEAR PLANT SITE					
LEVY COUNTY, FLORIDA					
PROJECT	2011-025	DRAWN BY	RLJ/CAS	SHEET	3 of 22
DATE	JULY 2011				

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 9/20/11
 MICHAEL J. DELORENZO P.E. # 97423
 DATE



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EXISTING CONDITIONS - AREA 2A1 PROGRESS ENERGY MITIGATION PROJECT LEVY NUCLEAR PLANT SITE LEVY COUNTY, FLORIDA			
PROJECT	DRAWN BY	SHEET	DATE
2011-025	RLJ/CAS	4 of 22	JULY 2011

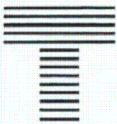
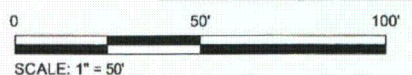
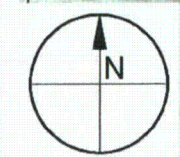
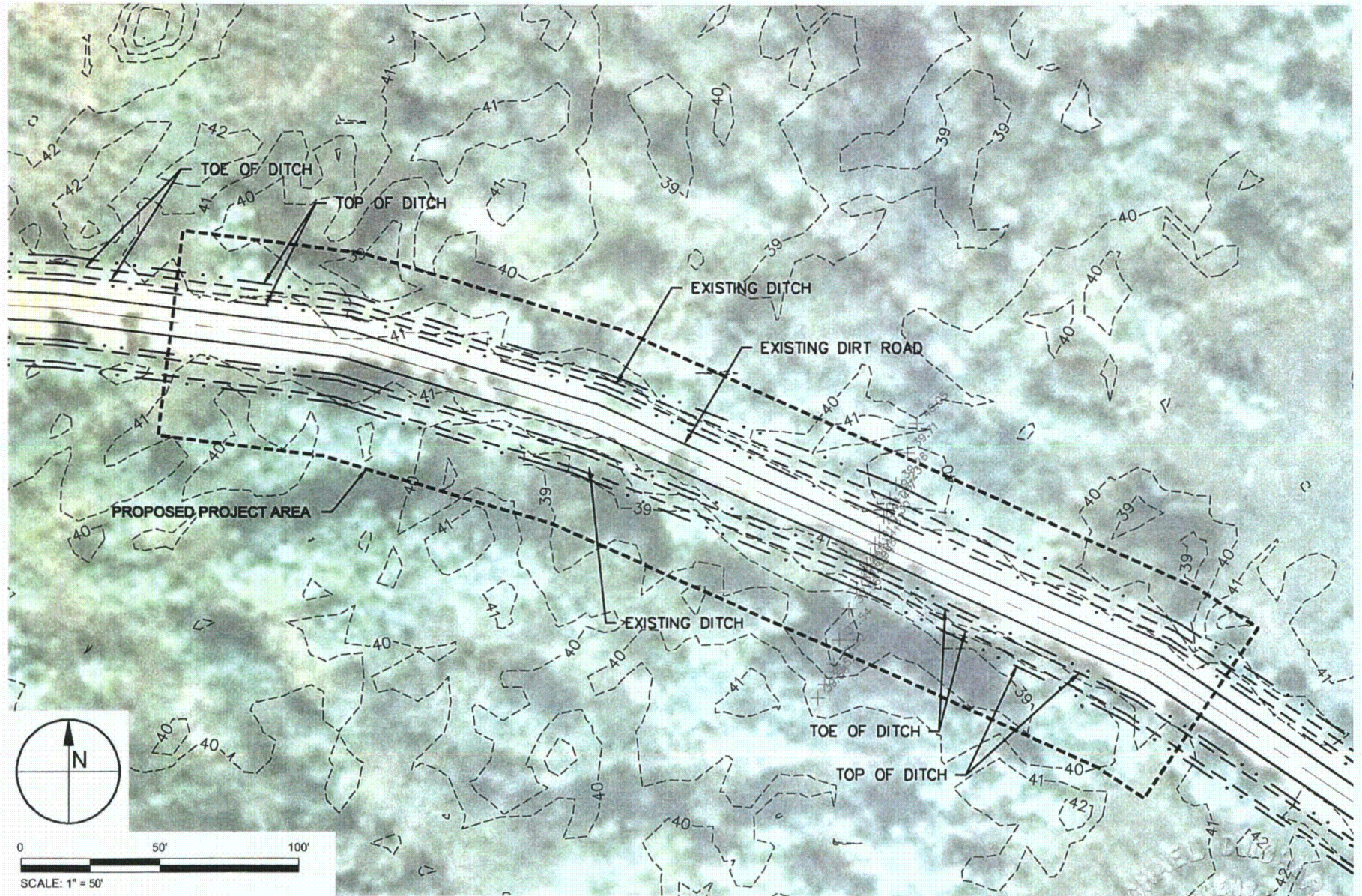
SEAL

 MICHAEL J. DELCHARCO P.E. # 51463
 DATE

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EXISTING CONDITIONS - AREA 2A2
 PROGRESS ENERGY MITIGATION PROJECT
 LEVY NUCLEAR PLANT SITE
 LEVY COUNTY, FLORIDA

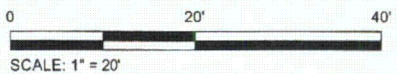
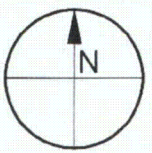
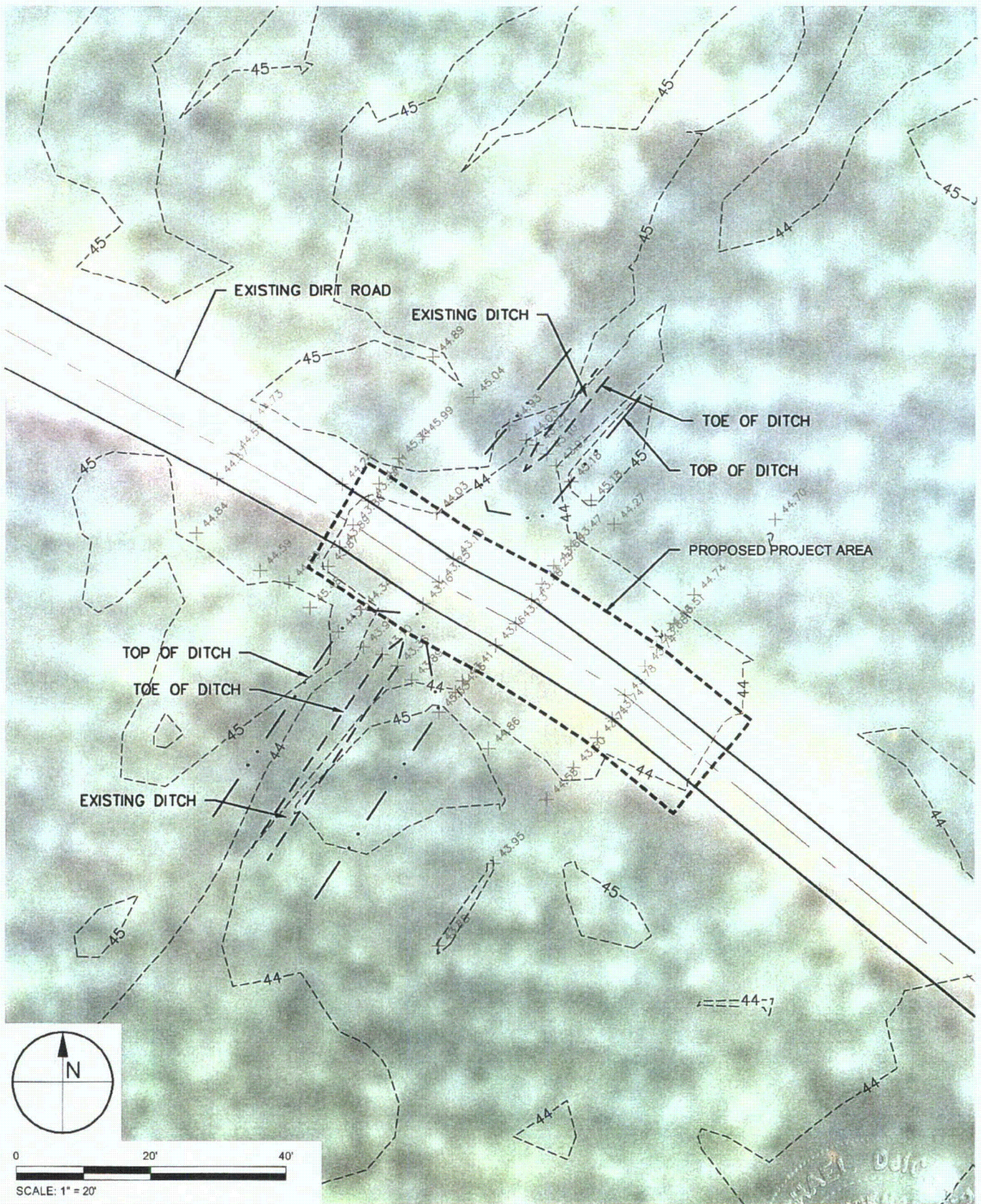
PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	5 of 22
DATE	JULY 2011

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 MICHAEL J. CASPER, P.E. #1152423
 DATE

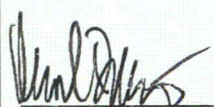
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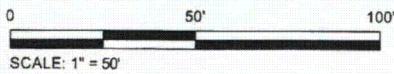
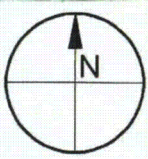
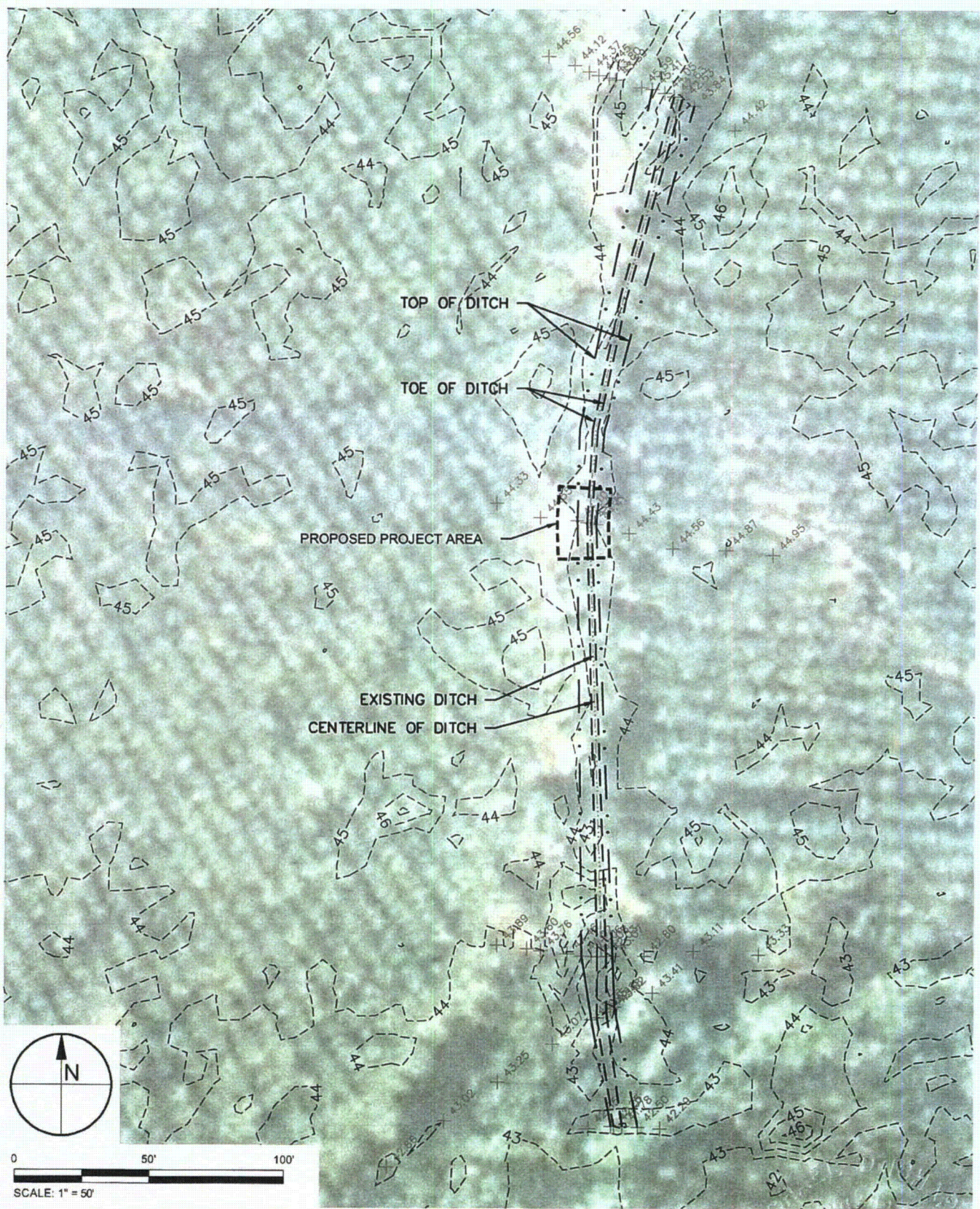
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EXISTING CONDITIONS AREA 4B PROGRESS ENERGY MITIGATION PROJECT LEVY NUCLEAR PLANT SITE LEVY COUNTY, FLORIDA			
PROJECT	DRAWN BY	SHEET	DATE
2011-025	RLJ/CAS	9 of 22	JULY 2011

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 9/20/11
 DATE

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EXISTING CONDITIONS AREA 4A PROGRESS ENERGY MITIGATION PROJECT LEVY NUCLEAR PLANT SITE LEVY COUNTY, FLORIDA			
PROJECT	DRAWN BY	SHEET	DATE
2011-025	RLJ/CAS	8 of 22	JULY 2011

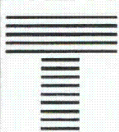
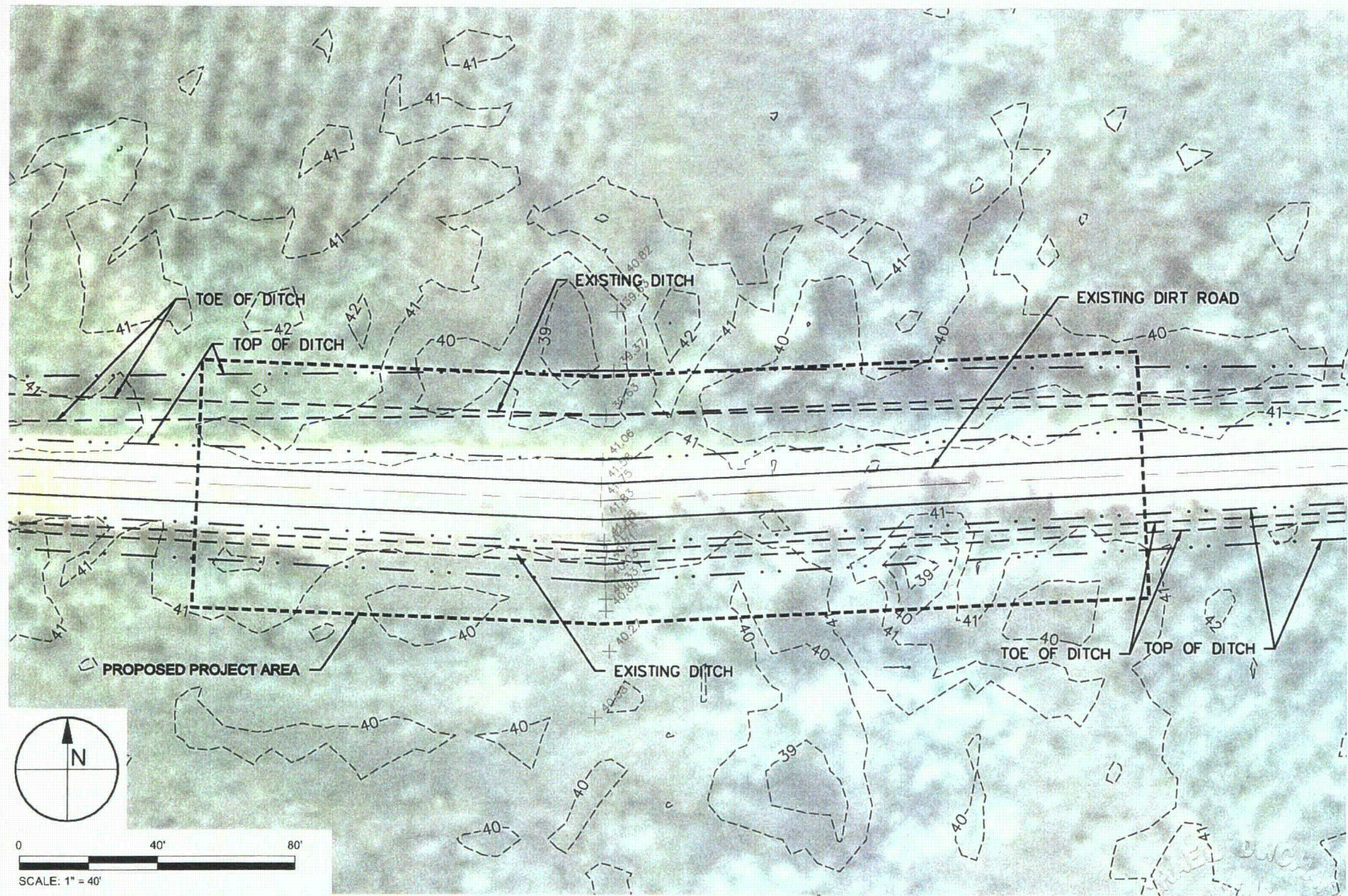
SEAL

 MICHAEL J. DELCHARO P.E. # 28-23
 DATE

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 BLDG. 300, SUITE 300
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 CERTIFICATE OF AUTHORIZATION # 4815

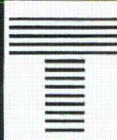
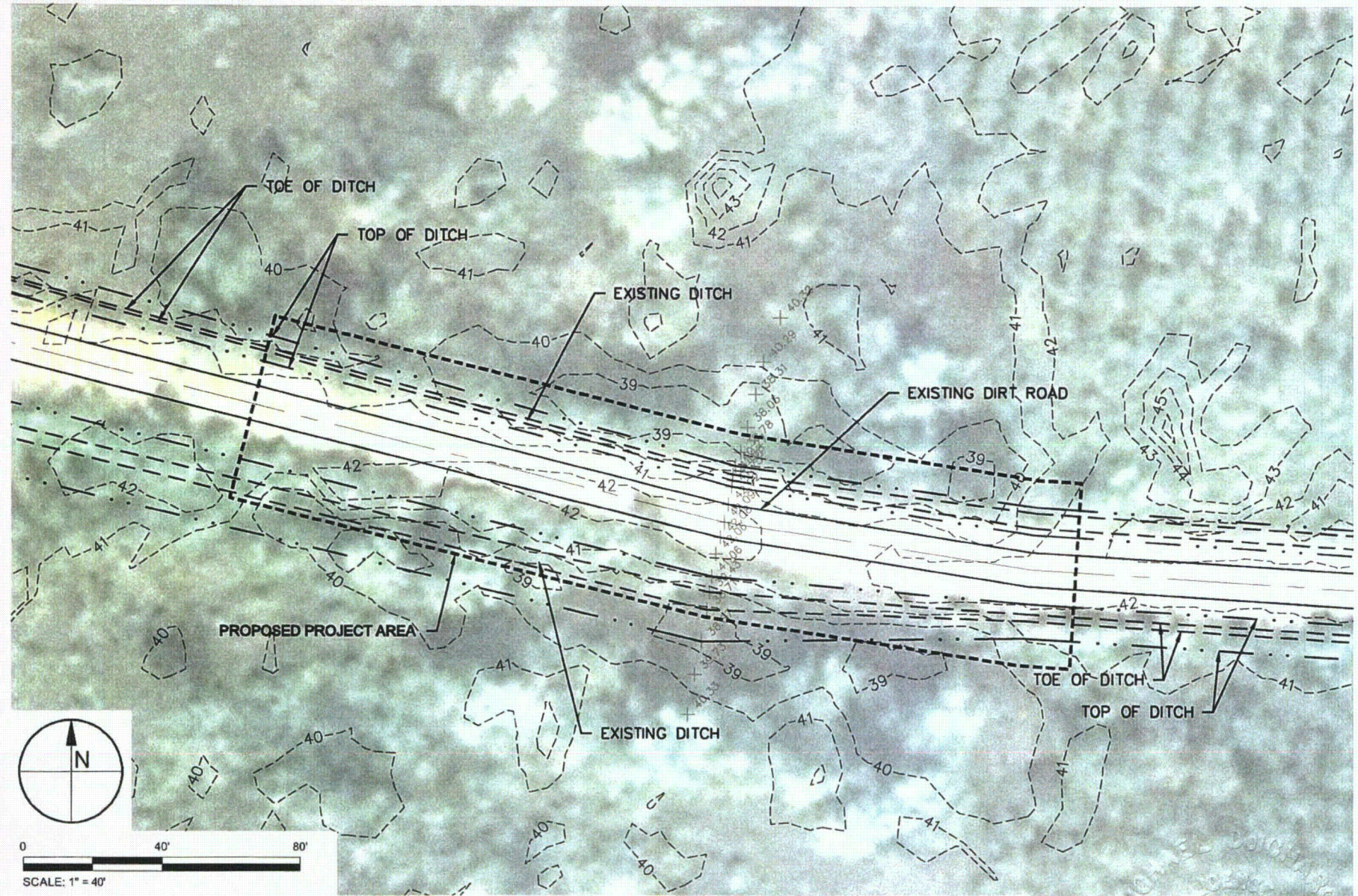
EXISTING CONDITIONS - AREA 2A4
 PROGRESS ENERGY MITIGATION PROJECT
 LEVY NUCLEAR PLANT SITE
 LEVY COUNTY, FLORIDA

PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	7 of 22
DATE	JULY 2011

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Michael J. DeLarchy 9/20/11
 MICHAEL J. DELARCHY P.E. #5793 DATE

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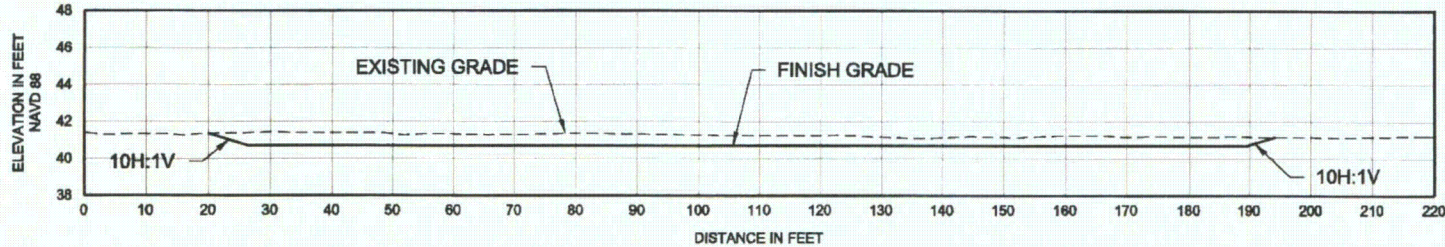
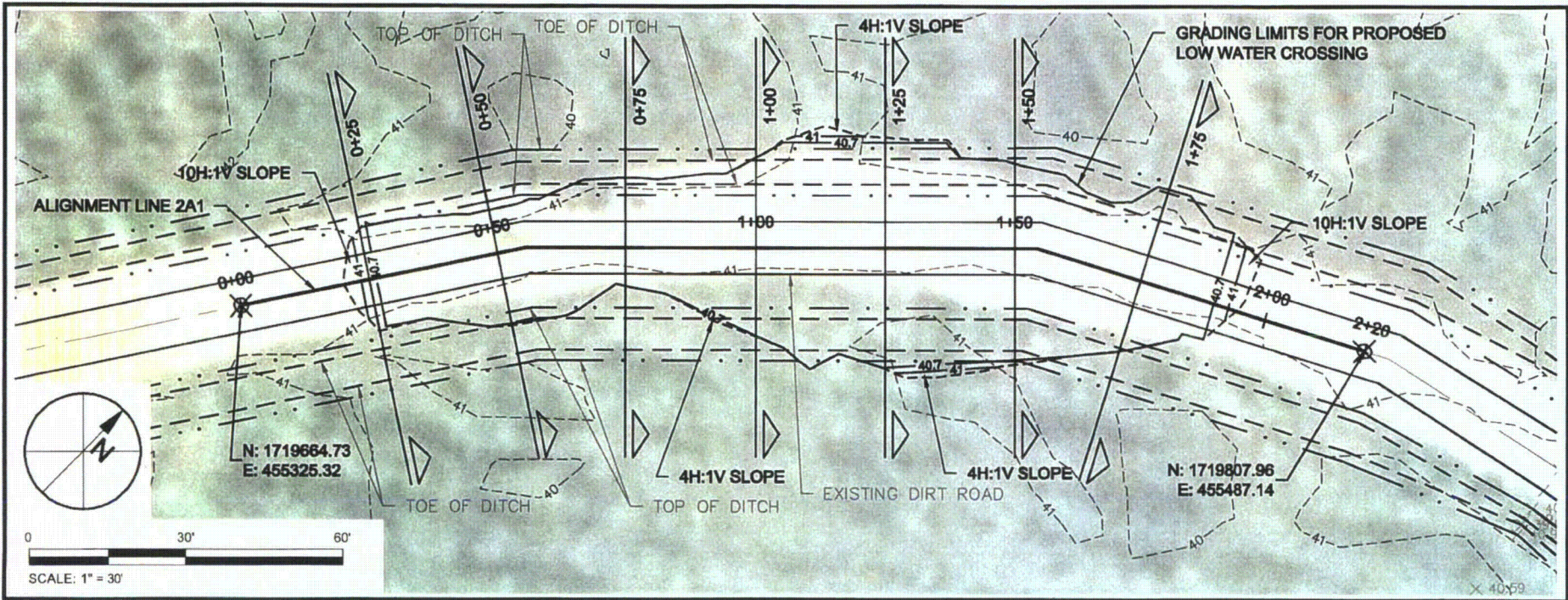
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 PROGRESS ENERGY MITIGATION PROJECT
 LEVY NUCLEAR PLANT SITE
 LEVY COUNTY, FLORIDA

PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	6 of 22
DATE	JULY 2011

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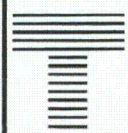
 MICHAEL J. DEBARCO P.E. # 97423
 DATE

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LOW WATER CROSSING AREA 2A1 - PROFILE ALONG ALIGNMENT LINE 2A1

SCALE: 1" = 30'
V-SCALE: 1" = 10'



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LOW WATER CROSSING AREA 2A1 - PLAN & PROFILE
PROGRESS ENERGY MITIGATION PROJECT
LEVY NUCLEAR PLANT SITE
LEVY COUNTY, FLORIDA

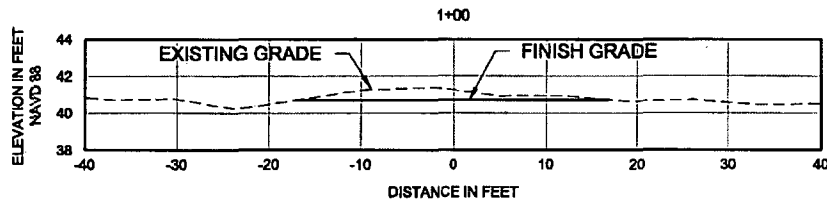
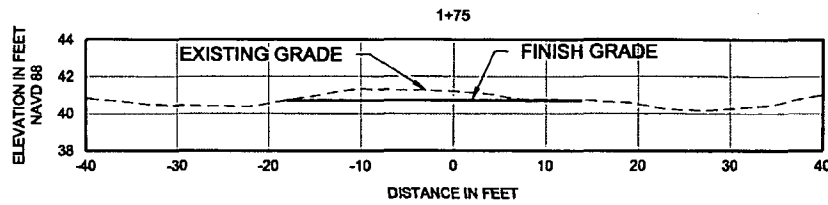
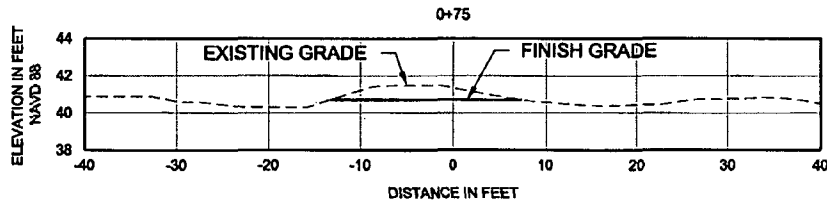
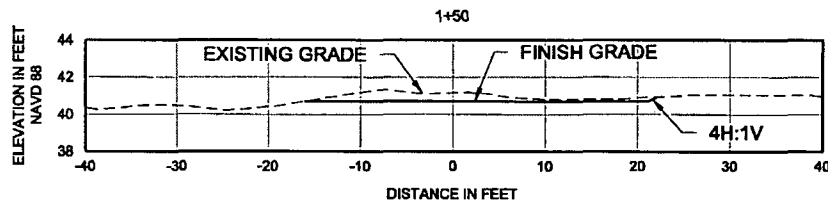
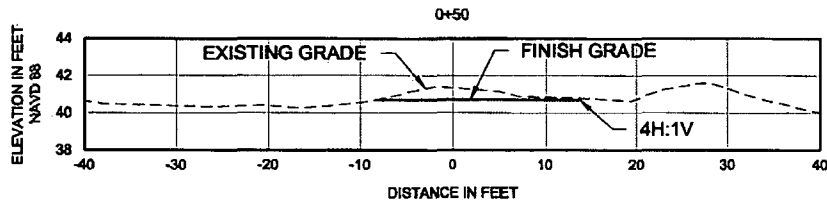
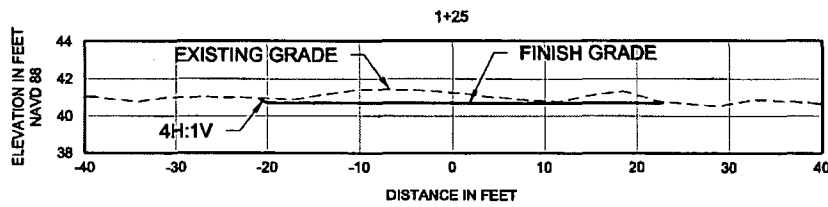
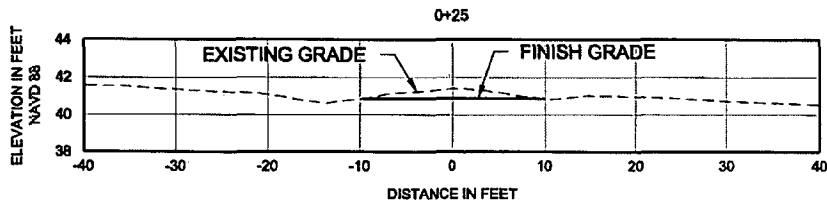
PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	10 of 22
DATE	JULY 2011

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[Signature]
MICHAEL J. DELCHARCO
DATE

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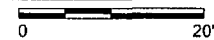
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LOW WATER CROSSING AREA 2A1 CROSS SECTIONS

SCALE: 1" = 20'
 V-SCALE: 1" = 10'



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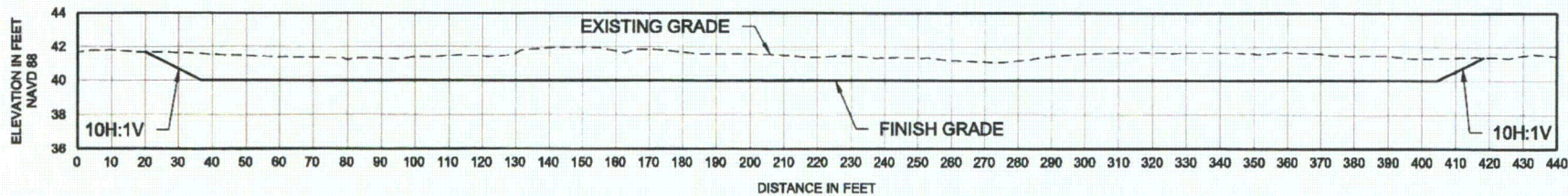
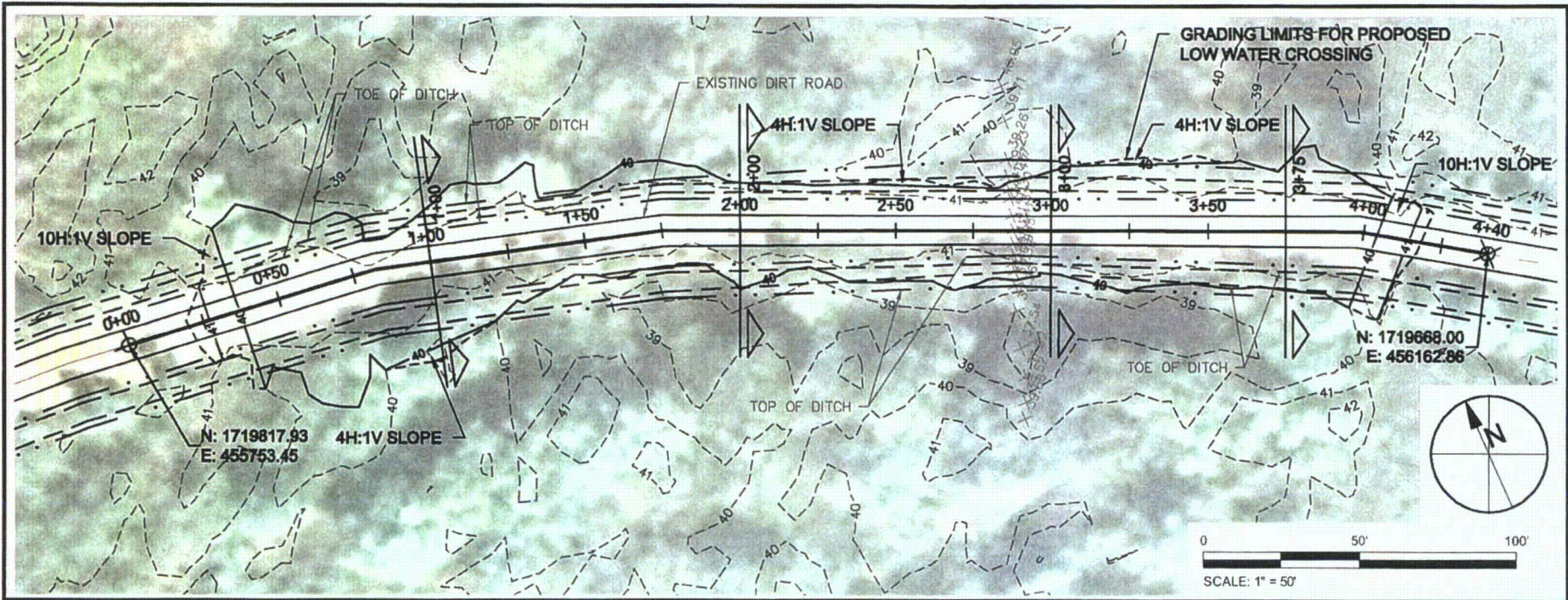
10151 DEERWOOD PARK BLVD.
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LOW WATER CROSSING AREA 2A1 - CROSS SECTIONS
 PROGRESS ENERGY MITIGATION PROJECT
 LEVY NUCLEAR PLANT SITE
 LEVY COUNTY, FLORIDA

PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	11 of 22
DATE	JULY 2011

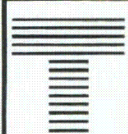
SEAL

 MICHAEL J. DELEONARDO P.E. # 67423
 DATE 9/20/11



LOW WATER CROSSING AREA 2A2 - PROFILE ALONG ALIGNMENT LINE 2A2

SCALE: 1" = 50'
V-SCALE: 1" = 10'



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LOW WATER CROSSING AREA 2A2 - PLAN & PROFILE
PROGRESS ENERGY MITIGATION PROJECT
LEVY NUCLEAR PLANT SITE
LEVY COUNTY, FLORIDA

PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	12 OF 22
DATE	JULY 2011

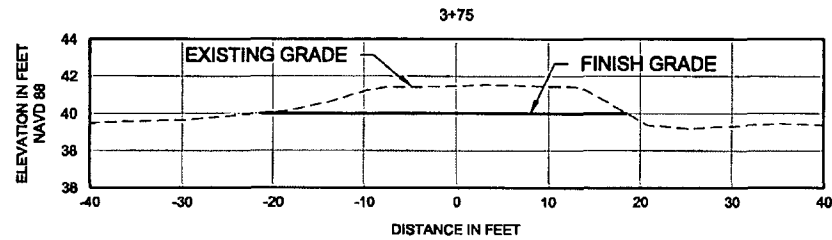
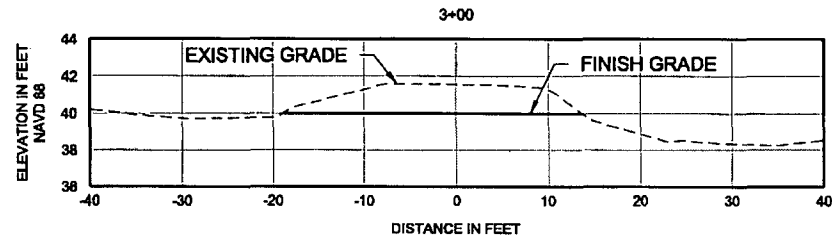
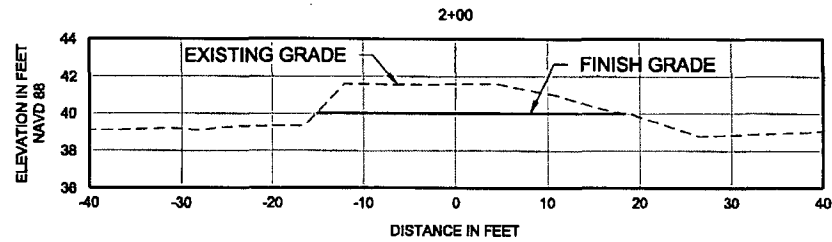
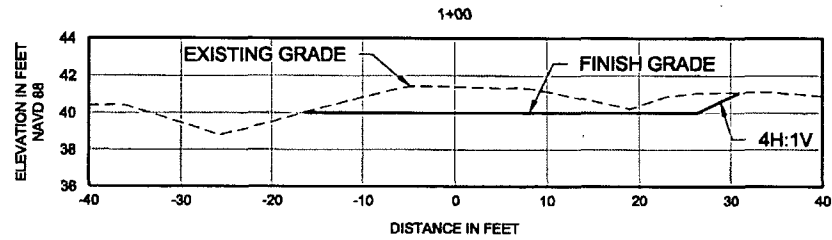
SEAL
Michael J. DeLorenzo
MICHAEL J. DELORONZO P.L.#5723 DATE

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CATHY SHEL X:\S\PROJECTS\C2011-025-PROGRESS ENERGY PERMIT\LP\C2011-025-PLUP-GROUND PLAN SITE B2.DWG



LOW WATER CROSSING AREA 2A2 - CROSS SECTIONS

SCALE: 1" = 20'
V-SCALE: 1" = 10'



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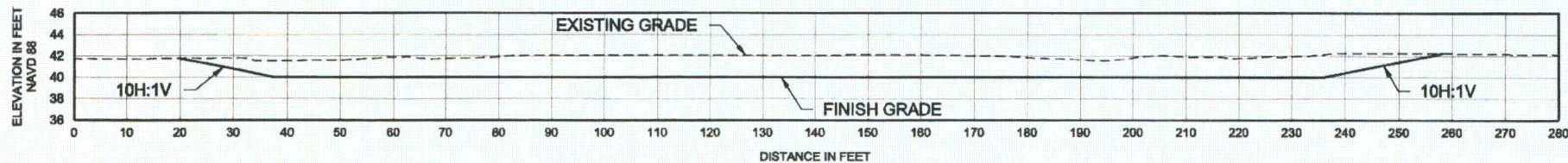
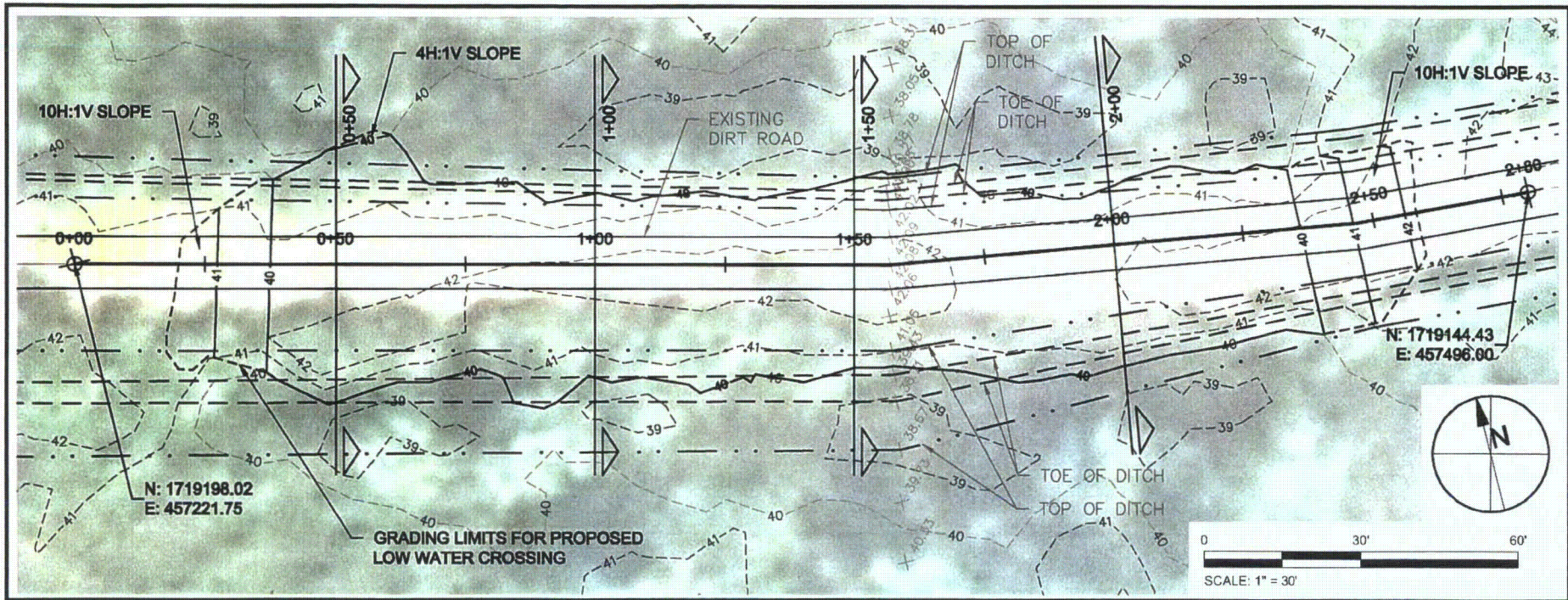
10151 DEERWOOD PARK BLVD.
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LOW WATER CROSSING AREA 2A2 - CROSS SECTIONS
 PROGRESS ENERGY MITIGATION PROJECT
 LEVY NUCLEAR PLANT SITE
 LEVY COUNTY, FLORIDA

PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	13 of 22
DATE	JULY 2011

SEAL

[Signature]
 MICHAEL J. DELCANTO, P.E. # 5231
 DATE



LOW WATER CROSSING AREA 2A3 - PROFILE ALONG ALIGNMENT LINE 2A3

SCALE: 1" = 30'
V-SCALE: 1" = 15'



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LOW WATER CROSSING AREA 2A3 - PLAN & PROFILE
PROGRESS ENERGY MITIGATION PROJECT
LEVY NUCLEAR PLANT SITE
LEVY COUNTY, FLORIDA

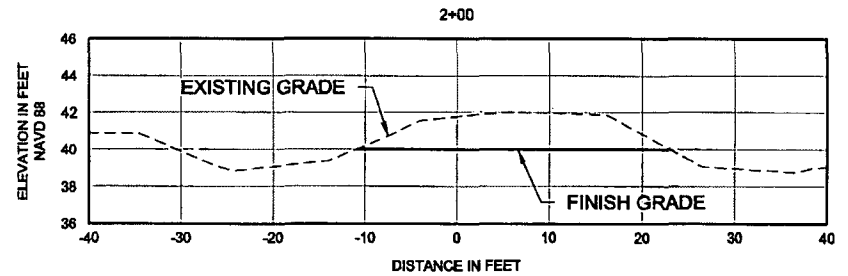
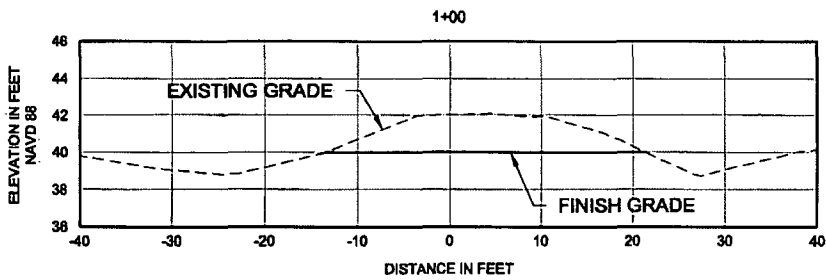
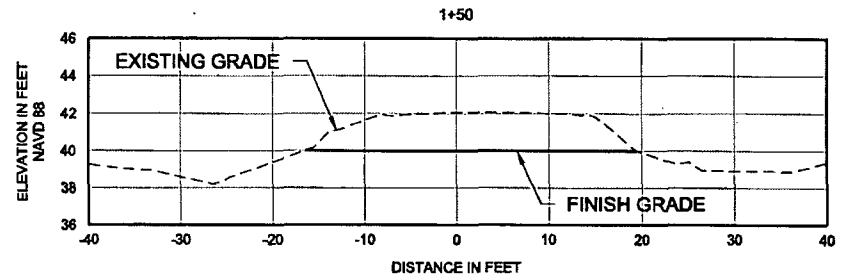
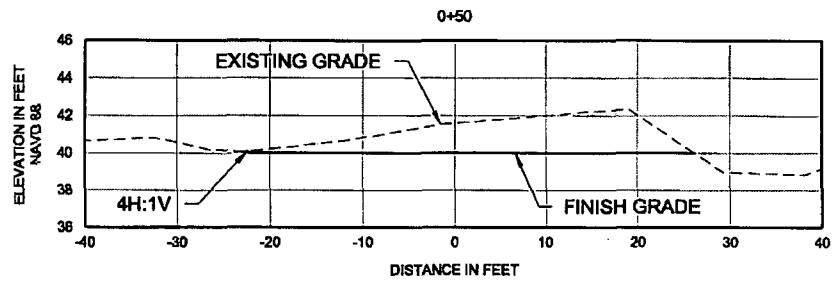
PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	14 of 22
DATE	JULY 2011

SEALED
[Signature] 7/20/11
MICHAEL DELGAMICO P.E. # 51423 DATE

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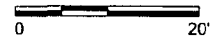
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LOW WATER CROSSING AREA 2A3 CROSS SECTIONS

SCALE: 1" = 20'
V-SCALE: 1" = 10'



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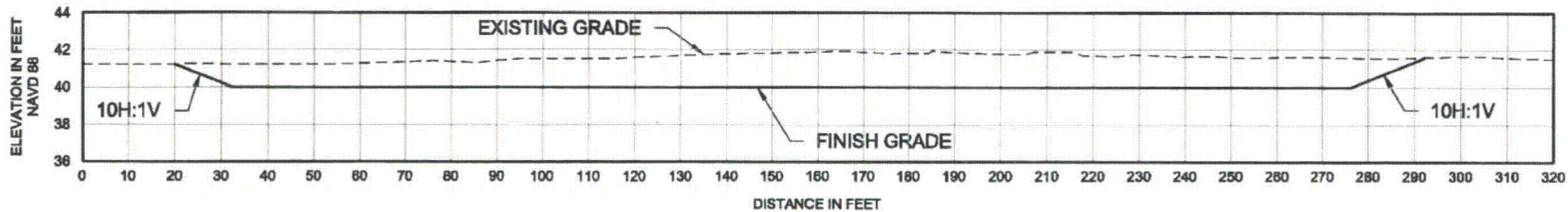
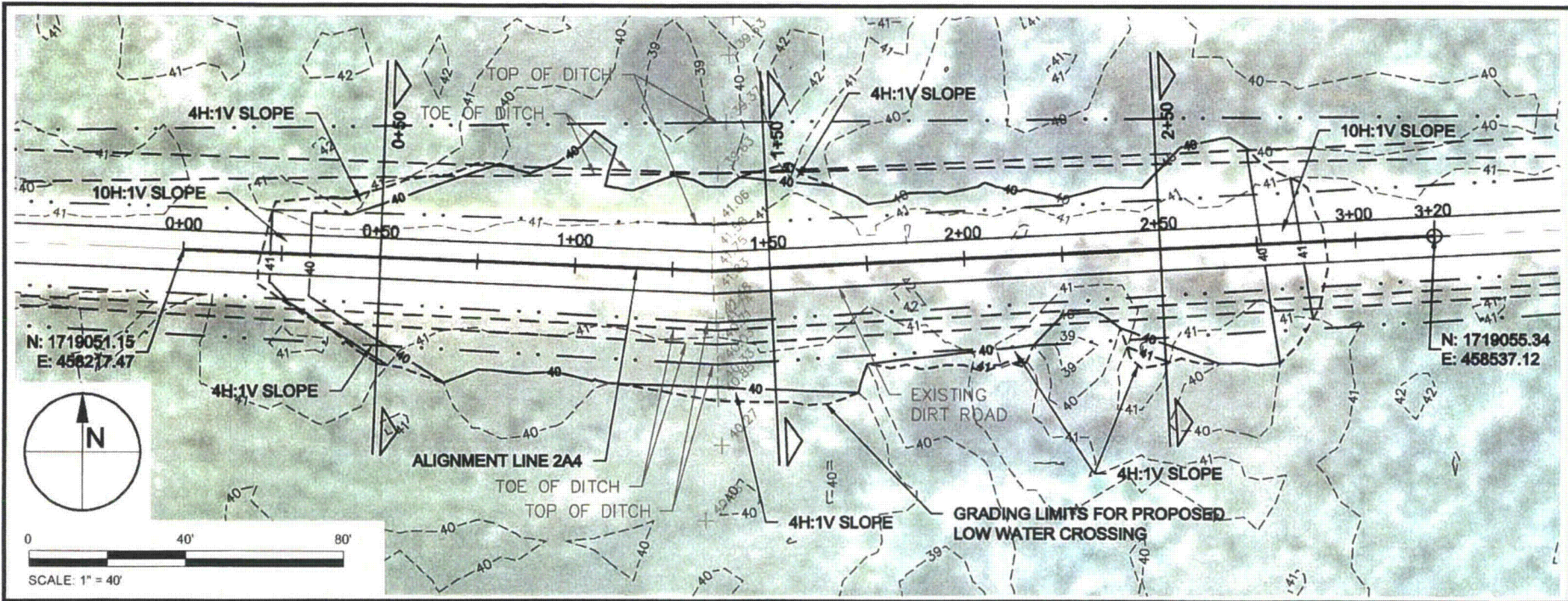
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FL 32256
CERTIFICATE OF AUTHORIZATION # 4815

LOW WATER CROSSING AREA 2A3 - CROSS SECTIONS
PROGRESS ENERGY MITIGATION PROJECT
LEVY NUCLEAR PLANT SITE
LEVY COUNTY, FLORIDA

PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	15 of 22
DATE	JULY 2011

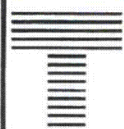
SEAL

 MICHAEL J. DELCIARO, P.E. # 91201
 DATE



LOW WATER CROSSING AREA 2A4 - PROFILE ALONG ALIGNMENT LINE 2A4

SCALE: 1" = 40'
V-SCALE: 1" = 10'



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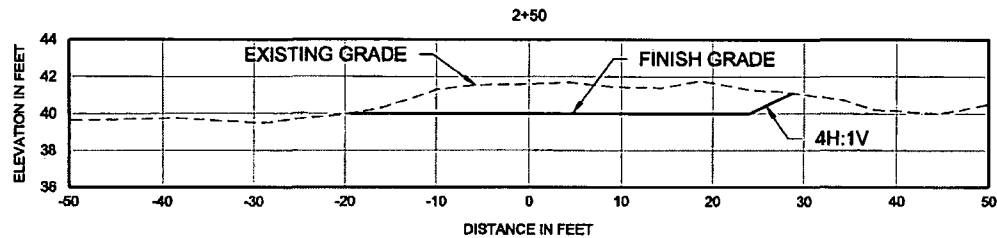
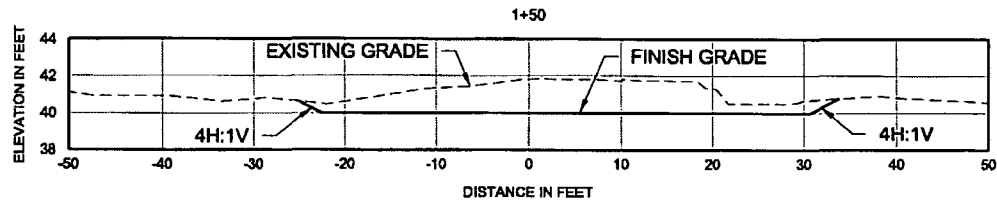
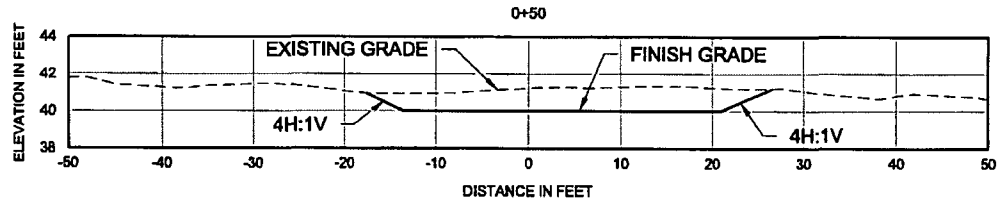
LOW WATER CROSSING AREA 2A4 - PLAN & PROFILE
PROGRESS ENERGY MITIGATION PROJECT
LEVY NUCLEAR PLANT SITE
LEVY COUNTY, FLORIDA

PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	16 of 22
DATE	JULY 2011

SEAL
Michael J. DeLeonard 9/24/11
MICHAEL J. DELEONARD, P.E. #97423 DATE

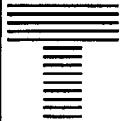
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LOW WATER CROSSING AREA 2A4 - CROSS SECTIONS

SCALE: 1" = 20'
V-SCALE: 1" = 10'



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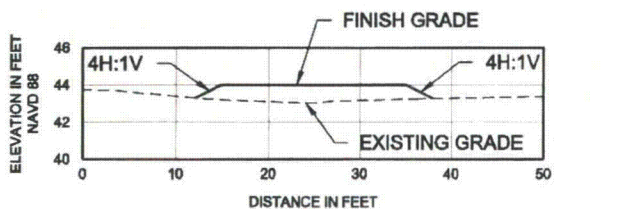
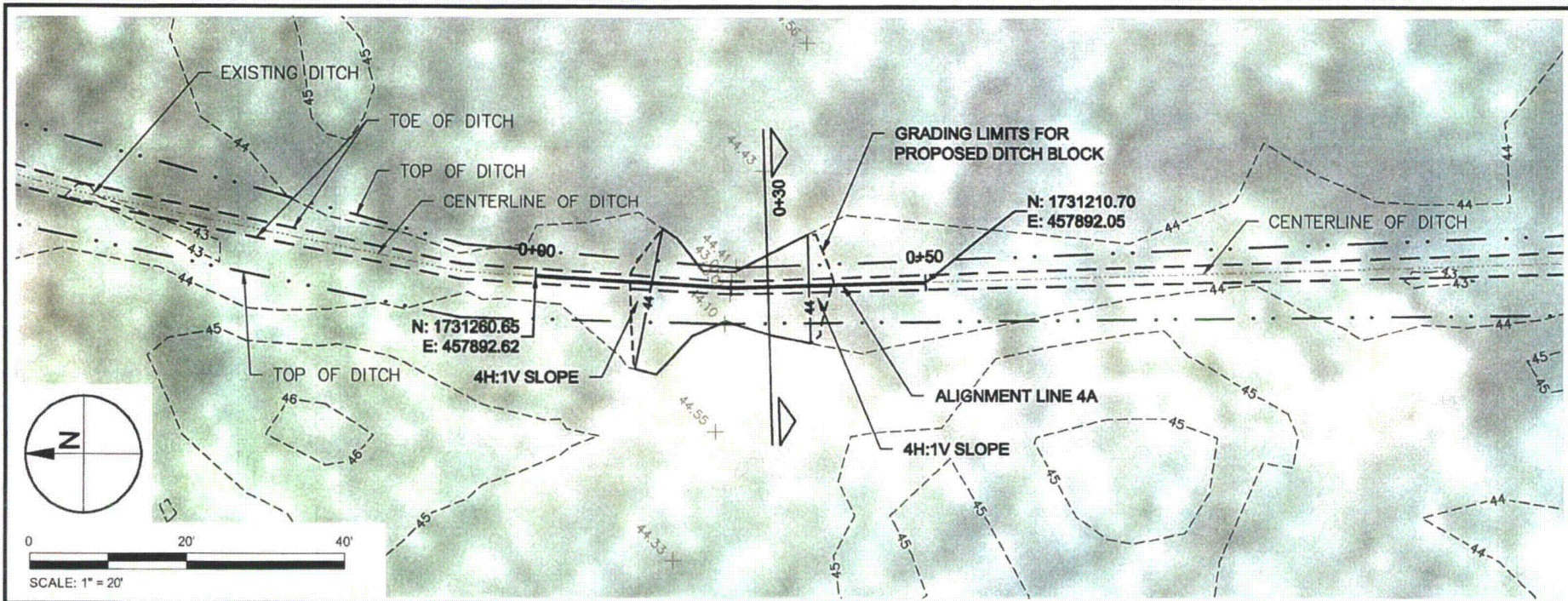
10151 DEERWOOD PARK BLVD.
BLDG. 300, SUITE 300
JACKSONVILLE, FL 32256
CERTIFICATE OF AUTHORIZATION # 4815

LOW WATER CROSSING AREA 2A4 - CROSS SECTIONS
PROGRESS ENERGY MITIGATION PROJECT
LEVY NUCLEAR PLANT SITE
LEVY COUNTY, FLORIDA

PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	17 of 22
DATE	JULY 2011

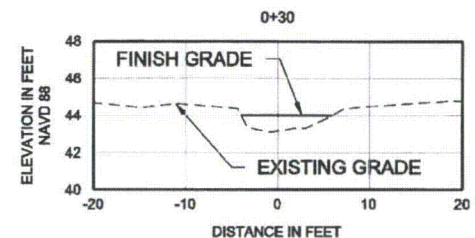
SEAL

[Signature]
MICHAEL J. LUCIANO, P.E. # 17423
DATE



DITCH BLOCK AREA 4A
PROFILE ALONG ALIGNMENT LINE 4A

SCALE: 1" = 20'
V-SCALE: 1" = 10'



DITCH BLOCK AREA 4A CROSS SECTION

SCALE: 1" = 20'
V-SCALE: 1" = 10'

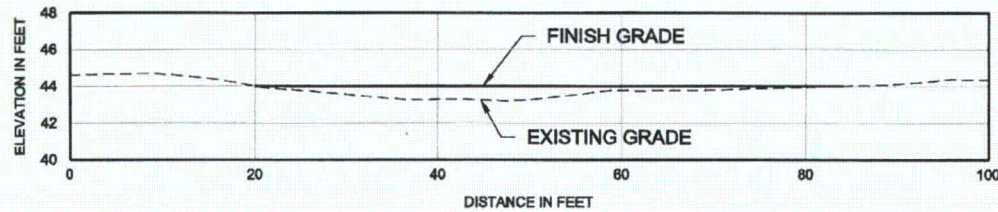
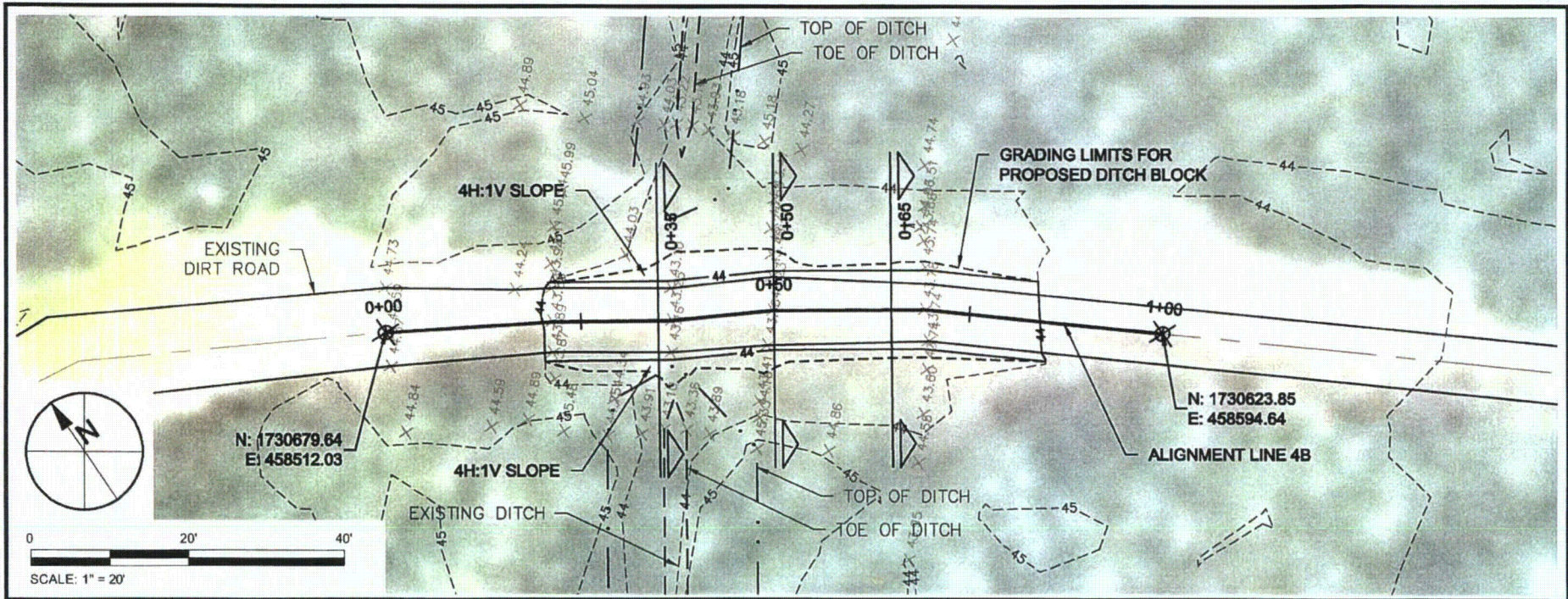
TAYLOR ENGINEERING INC.
 10151 DEERWOOD PARK BLVD.
 BLDG. 300, SUITE 300
 JACKSONVILLE, FL 32256
 CERTIFICATE OF AUTHORIZATION # 4815

DITCH BLOCK AREA 4A - PLAN, PROFILE & CROSS SECTION
 PROGRESS ENERGY MITIGATION PROJECT
 LEVY NUCLEAR PLANT SITE
 LEVY COUNTY, FLORIDA

PROJECT	2011-025	SEAL
DRAWN BY	RLJ/CAS	
SHEET	18 of 22	
DATE	JULY 2011	

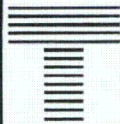
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PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR AGENCY REVIEW.



DITCH BLOCK AREA 4B - PROFILE ALONG ALIGNMENT LINE 4B

SCALE: 1" = 20'
V-SCALE: 1" = 10'



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DITCH BLOCK AREA 4B - PLAN & PROFILE
PROGRESS ENERGY MITIGATION PROJECT
LEVY NUCLEAR PLANT SITE
LEVY COUNTY, FLORIDA

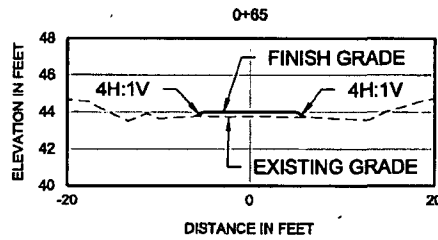
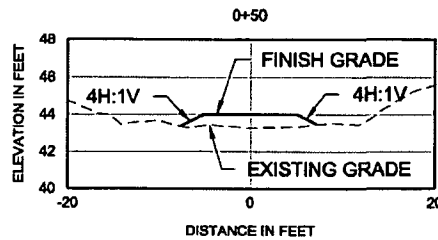
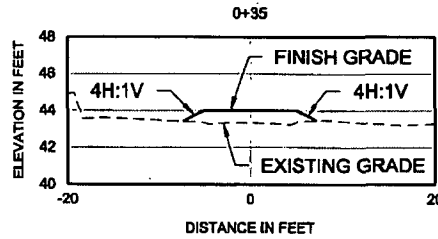
PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	19 of 22
DATE	JULY 2011

SEAL
MICHAEL J. DELCHARCO P.E. #10423
DATE

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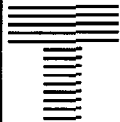
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DITCH BLOCK AREA 4B - CROSS SECTIONS

SCALE: 1" = 20'
V-SCALE: 1" = 10'



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DITCH BLOCK AREA 4B - CROSS SECTIONS
PROGRESS ENERGY MITIGATION PROJECT
LEVY NUCLEAR PLANT SITE
LEVY COUNTY, FLORIDA

PROJECT	2011-025
DRAWN BY	RLJ/CAS
SHEET	20 of 22
DATE	JULY 2011

SEAL: *[Signature]* 9/20/11
DATE

EROSION CONTROL AND GENERAL VEGETATION NOTES:

1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN EROSION CONTROL MEASURES AS NECESSARY TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND COMPLY WITH STATE WATER QUALITY CRITERIA FOR STORMWATER DISCHARGE. EROSION CONTROL MEASURES INCLUDE BUT ARE NOT LIMITED TO TURBIDITY SCREENS, MULCHING, HAY BALES, AND SILT FENCE. IF A WATER QUALITY VIOLATION OCCURS, THE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR ALL DAMAGE AND ALL COSTS WHICH MAY RESULT INCLUDING LEGAL FEES, CONSTRUCTION COSTS, AND FINES.
2. DISTURBED AREAS SHALL BE VEGETATED, FERTILIZED, MULCHED, AND MAINTAINED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING PERMANENT VEGETATION AT ALL DISTURBED AREAS PER NPDES FINAL STABILIZATION REQUIREMENTS.
4. EROSION CONTROL MEASURES SHALL BE MAINTAINED FOR THE ENTIRE DURATION OF THE PROJECT OR UNTIL PERMANENT VEGETATION IS ESTABLISHED.
5. EROSION CONTROL MEASURES SHALL BE PLACED TO CONTAIN ALL POINTS OF DISCHARGE TO SURFACE WATERS OR WETLANDS INCLUDING CURB INLETS, DITCH BOTTOM INLETS, DITCHES, AND DOWNSTREAM PORTIONS OF NATURAL DRAINAGE PATHWAYS, STREAMS, CANALS, AND TIDAL WATERS ADJACENT TO CONSTRUCTION.
6. 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR WILL SUBMIT A "NOTICE OF INTENT" TO THE EPA IN ACCORDANCE WITH NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM RULES AND REGULATIONS.
7. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
8. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.


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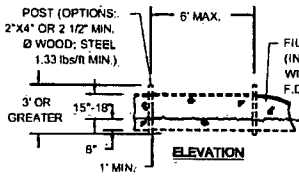


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 10151 DEERWOOD PARK BLVD.
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 JACKSONVILLE, FL 32256
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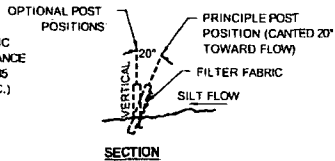
EROSION CONTROL NOTES
 PROGRESS ENERGY MITIGATION PROJECT
 LEVY NUCLEAR PLANT SITE
 LEVY COUNTY, FLORIDA

PROJECT	2011-025	SEAL
DRAWN BY	RLJ/CAS	
SHEET	21 of 22	
DATE	JULY 2011	

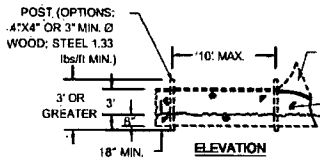
MICHAEL J. DELCHIARO PE # 8123



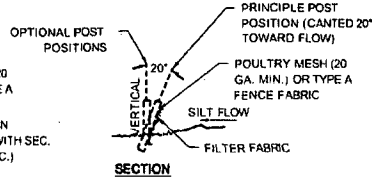
TYPE III SILT FENCE



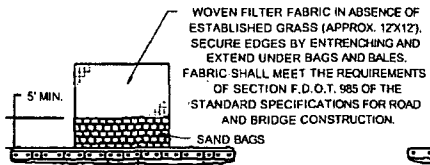
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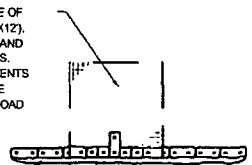
TYPE IV SILT FENCE



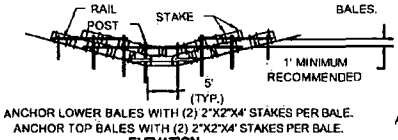
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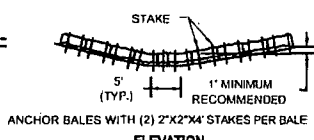
PLAN



PLAN



ELEVATION



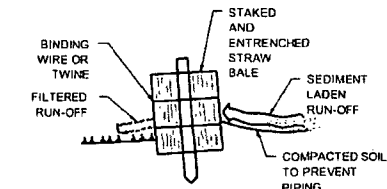
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APPLICATION AND SPACING OF TYPES I & TYPES II HAY BALE BARRIERS SHALL BE IN ACCORDANCE WITH SHEET 1 OF 3, F.D.O.T. INDEX NO. 102

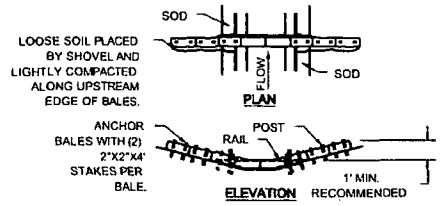
TYPE II

TYPICAL STRAW BALE DETAIL

TYPE I



CROSS SECTION OF A PROPERLY INSTALLED STRAW BALE

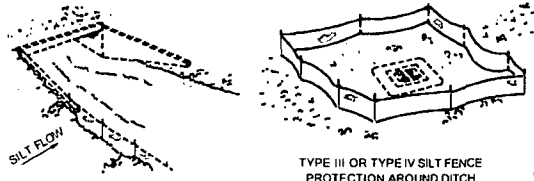


LOOSE SOIL PLACED BY SHOVEL AND LIGHTLY COMPACTED ALONG UPSTREAM EDGE OF BALES.

ANCHOR BALES WITH (2) 2"x2"x4" STAKES PER BALE.

SPACING: BALE BARRIERS FOR PAVED DITCHES SHOULD BE SPACED IN ACCORDANCE WITH CHART I, SHEET 1 OF 3, INDEX NO. 102 OF THE F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS.

STRAW BALE BARRIER FOR PAVED DITCH



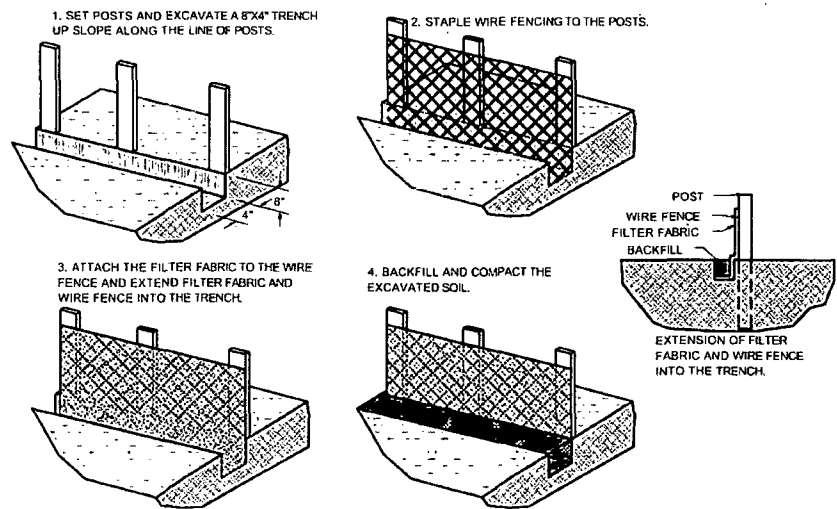
TYPE III OR TYPE IV SILT FENCE



TYPE II AND IV SILT FENCE

DITCH INSTALLATION AND SPACING FOR TYPE III & TYPE IV FENCE TO BE IN ACCORDANCE WITH SHEET 1 OF 3, OF THE F.D.O.T. INDEX NO. 102

DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.



SILT FENCE INSTALLATION DETAILS

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 BLDG. 300, SUITE 300
 JACKSONVILLE, FL 32256
 CERTIFICATE OF AUTHORIZATION # 4815

EROSION CONTROL DETAILS
 PROGRESS ENERGY MITIGATION PROJECT
 LEVY NUCLEAR PLANT SITE
 LEVY COUNTY, FLORIDA

PROJECT	2011-025	SEAL
DRAWN BY	RLJ/CAS	 MICHAEL J. DECENZO P.E.
SHEET	22 of 22	
DATE	JULY 2011	DATE