STATE PLANE NORTH
TRUNCATED NORTH

E 11500.00
E 12000.00
E 12500.00

N 23500.00
N 23000.00
N 22500.00

MATCHLINE SEE SHEET 20

MATCHLINE SEE SHEET 15

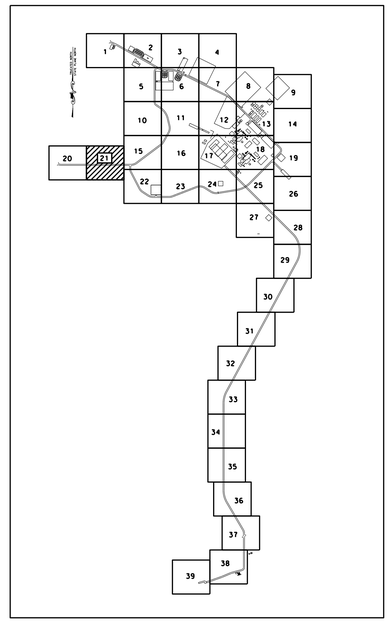
MATCHLINE SEE SHEET 22

SP # 4

MAIN ACCESS ROAD

EQUALIZATION CULVERT

13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 — PROPOSED MINOR CONTOUR
- 42.00 — EXISTING MAJOR CONTOUR
- 42.00 — EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-0-0 — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS, STAKED SILT FENCE IN UPLAND AREAS, AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP — SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUE FOR PERMITS	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN
SHEET 21

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE: E
DRAWING NUMBER: LNG-G1-X0-021
REV NO: 0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-021.DGN 5/19/08

#FILE#
#USERNAME#
#DATE#
#TIME#

MATCHLINE SEE SHEET 15

STATE PLANE NORTH
TRUNCATED NORTH

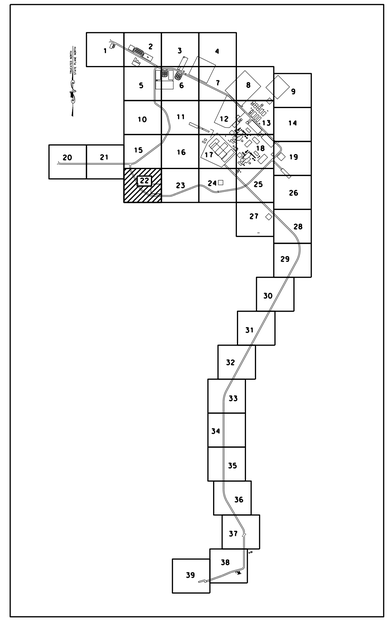
MATCHLINE SEE SHEET 21

E 13000.00
E 13500.00
E 14000.00
E 14500.00
N 22500.00
N 22000.00
N 21500.00

SP #6
SP #5
SP #6

MAIN ACCESS ROAD

EXISTING METEOROLOGY TOWER



KEY MAP
SCALE: 1"=600'

MATCHLINE SEE SHEET 23

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 - PROPOSED MINOR CONTOUR
- 42.00 — - EXISTING MAJOR CONTOUR
- 42.00 - EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS. STAKED SILT FENCE IN UPLAND AREAS. AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUE FOR PERMITS	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN SHEET 22

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-022	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-022.DGN 5/19/08

FILES:
BACKGROUND
NOTES
ITEMS

MATCHLINE SEE SHEET 16

STATE PLANE NORTH
TRUNCATED NORTH

E 15000.00
E 15500.00
E 16000.00
N 22500.00
N 22000.00
N 21500.00

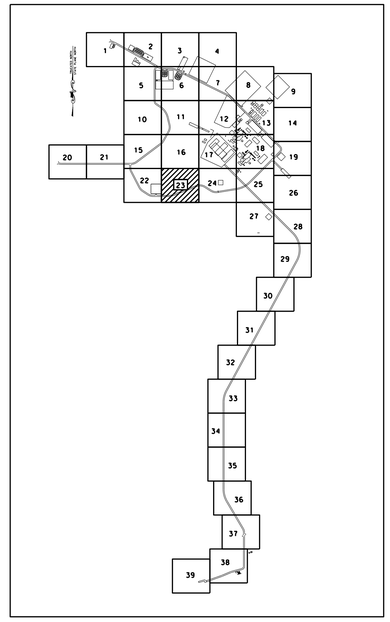
MATCHLINE SEE SHEET 22

MATCHLINE SEE SHEET 24

MAIN ACCESS ROAD

SP # 5
SP # 6
SP # 5
SP # 6

22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 - PROPOSED MINOR CONTOUR
- 42.00 — EXISTING MAJOR CONTOUR
- 42.00 - EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS, STAKED SILT FENCE IN UPLAND AREAS, AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

| REVISION | | |

STATE PLANE NORTH
TRUNCATED NORTH

MATCHLINE SEE SHEET 17

MATCHLINE SEE SHEET 23

MATCHLINE SEE SHEET 25

E 16500.00

E 17000.00

E 12500.00

N 22500.00

N 22000.00

N 21500.00

COOLING TOWERS

RIVER ACCESS ROAD

MAIN ACCESS ROAD

MAKE-UP AND
BLOWDOWN LINES

160

CULVERT

SP # 5

SP # 6

SP # 6

39+00

40+00

41+00

42+00

43+00

44+00

45+00

46+00

47+00

48+00

49+00

50+00

51+00

52+00

53+00

54+00

55+00

PI STA 39+68.65

PCS STA 41+42.69

PTS STA 41+75.69

PCS STA 44+13.20

PTS STA 47+88.95

PCS STA 47+91.45

PTS STA 48+95.45

PCS STA 50+15.00

PTS STA 50+41.00

KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 — PROPOSED MINOR CONTOUR
- 42.00 — EXISTING MAJOR CONTOUR
- 42.00 — EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-0-0 — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

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- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

| REVISION | | |

MATCHLINE SEE SHEET 18

STATE PLANE NORTH
TRUNCATED NORTH

E 1800000.00

E 1805000.00

E 1900000.00

125A

125B

125C

126

N 22500.00

N 22000.00

N 21500.00

HEAVY HAUL ROAD

MAIN ACCESS ROAD

MAIN ACCESS ROAD

HEAVY HAUL ROAD

POND B

DRAWDOWN PIPE

MAKE-UP &
BLOWDOWN LINES
CORRIDOR

INVERT UPSTREAM
EL 40.40'

CULVERT #1
INVERT DOWNSTREAM EL 39.20'
SIZE: 4-24" DIA PIPES OR
EQUIVALENT

MATCHLINE SEE SHEET 24

MATCHLINE SEE SHEET 19

MATCHLINE SEE SHEET 26

MATCHLINE SEE SHEET 27

KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 - PROPOSED MINOR CONTOUR
- 42.00 — - EXISTING MAJOR CONTOUR
- 42.00 - - - EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
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- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION					
0	ISSUE FOR PERMITS	TITLE	APPR	DATE
		PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

CONFIDENTIAL

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PROGRESS ENERGY FLORIDA. INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN SHEET 25

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5/18/08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-025	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-025.DGN 5/19/08

#FILES
#USERNAMES
#XREFS
#TIMES

MATCHLINE SEE SHEET 19

STATE PLANE NORTH
TRUNCATED NORTH

POND "B"

POND "C"

E 19500.00

E 20000.00

E 20500.00

N 22000.00

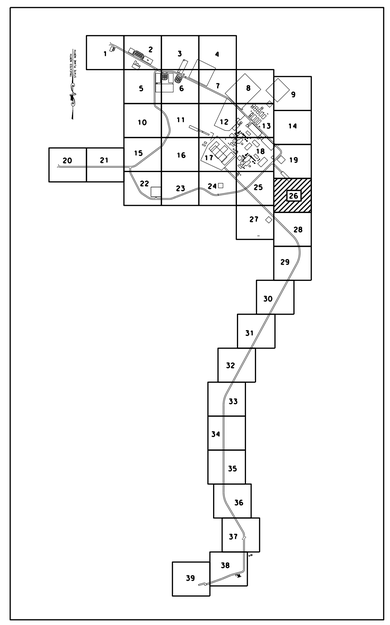
N 21500.00

N 21000.00

MATCHLINE SEE SHEET 25

MATCHLINE SEE SHEET 27

MATCHLINE SEE SHEET 28



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 – PROPOSED MINOR CONTOUR
- 42.00 – – EXISTING MAJOR CONTOUR
- 42.00 - - - EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS. STAKED SILT FENCE IN UPLAND AREAS. AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUE FOR PERMITS	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN SHEET 26

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-026	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-026.DGN 5/19/08

WELD, NOZZLE&MISC. DETAILS SHEET

MATCHLINE SEE SHEET 25

STATE PLANE NORTH
TRUNCATED NORTH

E 18000.00
E 18500.00
E 19000.00

N 21000.00
N 20500.00
N 20000.00

MAKE-UP AND BLOWDOWN LINES CORRIDOR

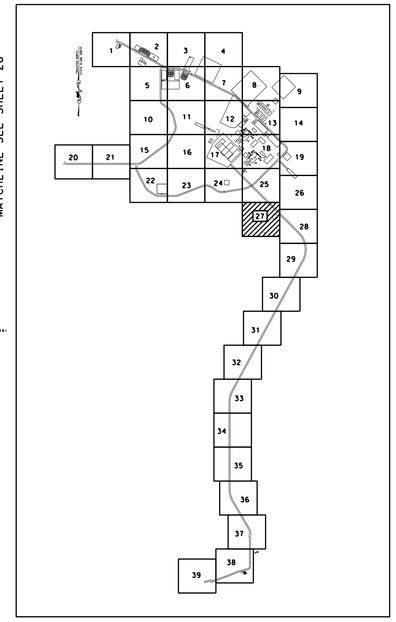
HEAVY HAUL ROAD

CULVERT

CULVERT #3
INVERT DOWNSTREAM EL 40
SIZE: 6-30" DIA PIPES OR EQUIVALENT

MATCHLINE SEE SHEET 26

MATCHLINE SEE SHEET 28



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 – PROPOSED MINOR CONTOUR
- 42.00 – – EXISTING MAJOR CONTOUR
- 42.00 – – – EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS. STAKED SILT FENCE IN UPLAND AREAS. AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUE FOR PERMITS	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN SHEET 27

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-027	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-027.DGN 5/19/08

#1&2 NUCLEAR UNITS SITING

MATCHLINE SEE SHEET 26

STATE PLANE NORTH
TRUNCATED NORTH

E 19500.00

E 20000.00

E 20500.00

INVERT @ UPSTREAM EX. 40.50

SP # 8

SP # 7

N 20500.00

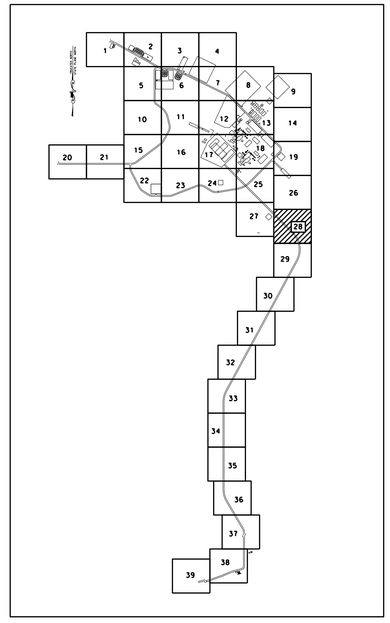
N 20000.00

MAKE-UP AND BLOWDOWN LINES CORRIDOR

HEAVY HAUL ROAD

MATCHLINE SEE SHEET 27

MATCHLINE SEE SHEET 29



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 – PROPOSED MINOR CONTOUR
- 42.00 – – EXISTING MAJOR CONTOUR
- 42.00 - - - EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS. STAKED SILT FENCE IN UPLAND AREAS. AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION				
0	ISSUE FOR PERMITS	TITLE	APPR	DATE
		PE		
		DY		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN SHEET 28

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-028	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-028.DGN 5/19/08

MATCHLINE SEE SHEET 28

STATE PLANE NORTH
TRUNCATED NORTH

N 19500.00
E 19500.00
E 20000.00
E 20500.00
N 19000.00
N 18500.00

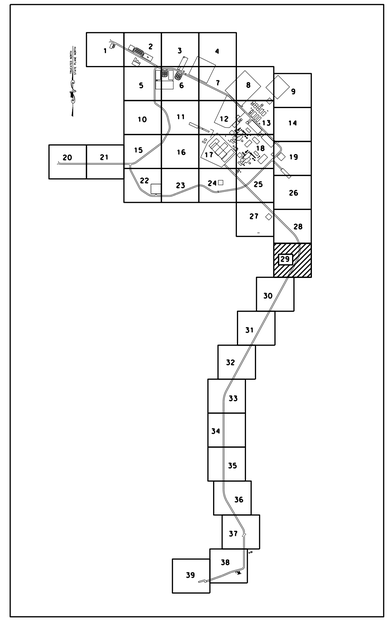
MAKE-UP AND BLOWDOWN LINES CORRIDOR

CULVERT #4
INVERT DOWNSTREAM EL 42.00'
SIZE: 6-24" DIA PIPES OR EQUIVALENT

CULVERT #5
INVERT DOWNSTREAM EL 43.00'

HEAVY HAUL ROAD

MATCHLINE SEE SHEET 30



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 — PROPOSED MINOR CONTOUR
- 42.00 — EXISTING MAJOR CONTOUR
- 42.00 — EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS, STAKED SILT FENCE IN UPLAND AREAS, AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION				
0	ISSUE FOR PERMITS	PE		
		DY		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

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PROGRESS ENERGY FLORIDA. INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN
SHEET 29

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LVG-G1-X0-029	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-029.DGN 5/19/08

IF ELEX NUCSTPWRCS SCALE IS NOT 1 INCH

MATCHLINE SEE SHEET 29

STATE PLANE NORTH
TRUNCATED NORTH

E 19000.00

E 19500.00

N 18000.00

N 17500.00

N 17000.00

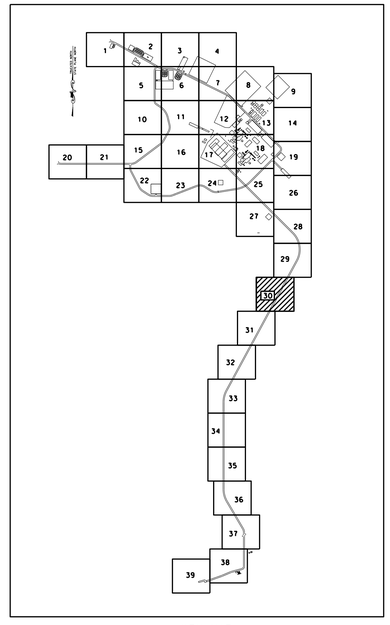
CULVERT #5
INVERT DOWNSTREAM EL 41.80'
SIZE: 4-24" DIA PIPE

INVERT UPSTREAM
EL 42.00'

MAKE-UP AND
BLOWDOWN LINES
CORRIDOR

HEAVY HAUL ROAD

MATCHLINE SEE SHEET 31



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 - PROPOSED MINOR CONTOUR
- 42.00 -- EXISTING MAJOR CONTOUR
- 42.00 - EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS, STAKED SILT FENCE IN UPLAND AREAS, AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUE FOR PERMITS	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

CONFIDENTIAL

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN
SHEET 30

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-030	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-030.DGN 5/19/08

FILES:
NUMBERING:
PLOTTED:

MATCHLINE SEE SHEET 30

STATE PLANE NORTH
TRUNCATED NORTH

E 1800000

E 1585000

N 16500.00

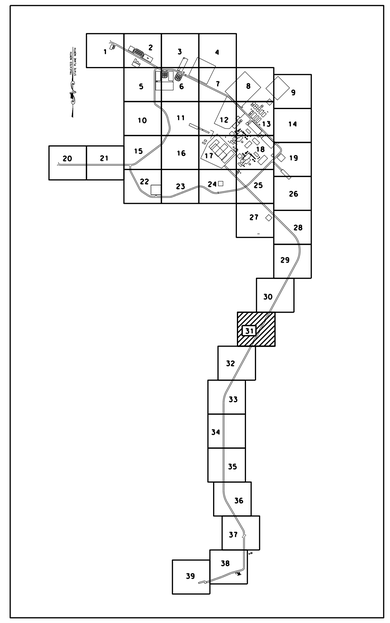
N 16000.00

N 15500.00

MAKE-UP AND BLOWDOWN LINES CORRIDOR

HEAVY HAUL ROAD

MATCHLINE SEE SHEET 32



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 - PROPOSED MINOR CONTOUR
- 42.00 — - EXISTING MAJOR CONTOUR
- 42.00 - EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS, STAKED SILT FENCE IN UPLAND AREAS, AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUE FOR PERMITS	PE		
		DY		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

CONFIDENTIAL

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN
SHEET 31

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-031	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-031.DGN 5/19/08

#FLEX #LEGEMPHICS #SHEET #INFO

STATE PLANE NORTH
TRUNCATED NORTH

MATCHLINE SEE SHEET 31

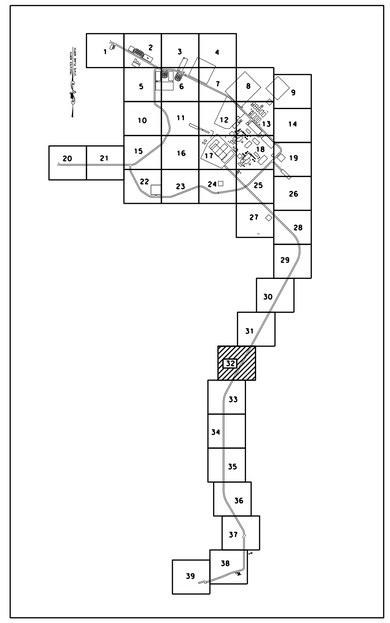
E 17000.00
E 17500.00
E 18000.00
E 18500.00
N 15000.00
N 14500.00
N 14000.00

MAKE-UP AND BLOWDOWN LINES CORRIDOR

HEAVY HAUL ROAD

84+00
83+00
82+00
81+00
80+00
79+00
78+00
77+00
76+00
75+00
74+00
73+00
72+00
71+00
70+00

MATCHLINE SEE SHEET 33



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 - PROPOSED MINOR CONTOUR
- 42.00 — - EXISTING MAJOR CONTOUR
- 42.00 - EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS. STAKED SILT FENCE IN UPLAND AREAS. AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUE FOR PERMITS	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL					ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN
SHEET 32

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-032	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-032.DGN 5/19/08

FIELD MODIFIED & NOTED IN RED

STATE PLANE NORTH
TRUNCATED NORTH

MATCHLINE SEE SHEET 32

E 17000.00

E 17500.00

E 18000.00

N 13500.00

N 13000.00

N 12500.00

MAKE-UP AND BLOWDOWN LINES CORRIDOR

HEAVY HAUL ROAD

PI Sta 64+06.87

PI Sta 61+64.09

PCS Sta 59+10.66

65+00

66+00

67+00

64+00

63+00

62+00

61+00

60+00

59+00

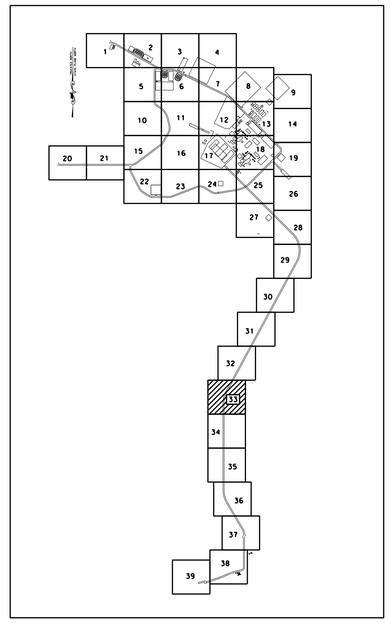
58+00

57+00

56+00

55+00

MATCHLINE SEE SHEET 33



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 - PROPOSED MINOR CONTOUR
- 42.00 — EXISTING MAJOR CONTOUR
- 42.00 - EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS. STAKED SILT FENCE IN UPLAND AREAS. AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP — SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION	DESCRIPTION	TITLE	APPR	DATE
0	ISSUE FOR PERMITS	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

CONFIDENTIAL

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN SHEET 33

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-033	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-033.DGN 5/19/08

WILEY NORTHWARD HISTORIC SITES

MATCHLINE SEE SHEET 33

STATE PLANE NORTH
TRUNCATED NORTH

E 17000.00
E 17500.00
E 18000.00
N 12000.00
N 11500.00
N 11000.00

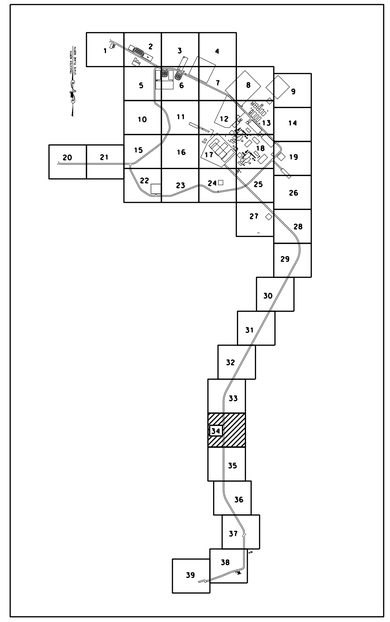
MAKE-UP AND BLOWDOWN LINES CORRIDOR

HEAVY HAUL ROAD

SP # 7

SP # 8

MATCHLINE SEE SHEET 35



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 — PROPOSED MINOR CONTOUR
- 42.00 — EXISTING MAJOR CONTOUR
- 42.00 — EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS, STAKED SILT FENCE IN UPLAND AREAS, AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUE FOR PERMITS	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN
SHEET 34

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-034	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-034.DGN 5/19/08

IFLEX
NORTHWINDS
NORTH
STONE

MATCHLINE SEE SHEET 34

STATE PLANE NORTH
TRUNCATED NORTH

E 17000.00
E 17500.00
E 18000.00
N 10500.00
N 10000.00
N 9500.00

35+00
34+00
33+00
32+00
31+00
30+00
29+00
28+00
27+00
26+00

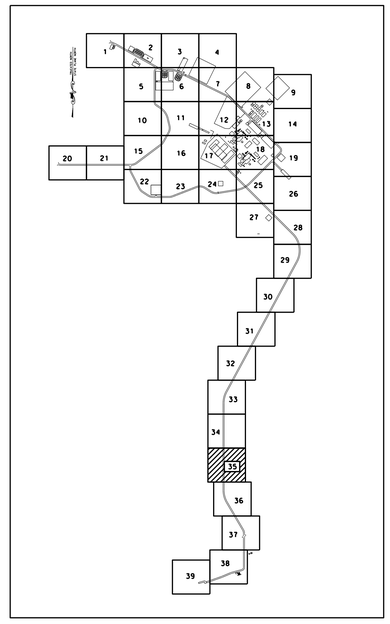
MAKE-UP AND BLOWDOWN LINES CORRIDOR

HEAVY HAUL ROAD

CULVERT #12
INVERT DOWNSTREAM EL 33.00'
SIZE: 4-30" DIA PIPES

INVERT UPSTREAM EL 34.00'

MATCHLINE SEE SHEET 36



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 — PROPOSED MINOR CONTOUR
- 42.00 — EXISTING MAJOR CONTOUR
- 42.00 — EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS. STAKED SILT FENCE IN UPLAND AREAS. AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP — SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUE FOR PERMITS	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL					ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

CONFIDENTIAL

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN SHEET 35

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-035	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-035.DGN 5/19/08

WILEY SCHIMMING & HOYER SITKE

STATE PLANE NORTH
TRUNCATED NORTH

MATCHLINE SEE SHEET 35

E 17000.00 E 17500.00 E 18000.00

N 9000.00 N 8500.00 N 8000.00

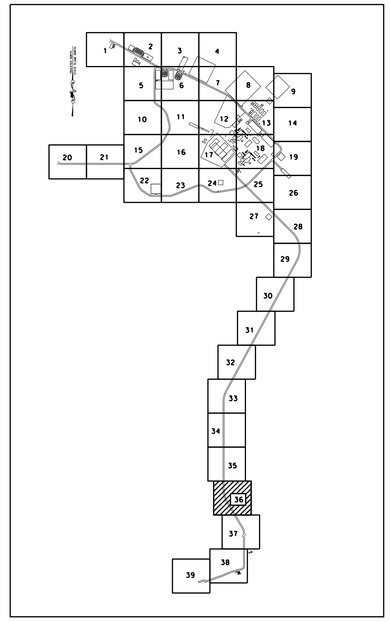
MAKE-UP AND BLOWDOWN LINES CORRIDOR

HEAVY HAUL ROAD

CULVERT #12
INVERT DOWNSTREAM EL 29.00
SIZE: 6-30" DIA PIPES

INVERT UPSTREAM EL 30.00

MATCHLINE SEE SHEET 37



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 - PROPOSED MINOR CONTOUR
- 42.00 — - EXISTING MAJOR CONTOUR
- 42.00 - EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-0-0 — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
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- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUE FOR PERMITS	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL					ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

CONFIDENTIAL

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN
SHEET 36

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-036	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-036.DGN 5/19/08

STYLES: NUCORWHS & NUCORWHS_ETIMES

MATCHLINE SEE SHEET 36

STATE PLANE NORTH
TRUNCATED NORTH

E 17500.00

E 18000.00

E 18500.00

N 7500.00

N 7000.00

N 6500.00

SP # 7

SP # 8

MAKE-UP AND BLOWDOWN LINES CORRIDOR

HEAVY HALL ROAD

CR 40

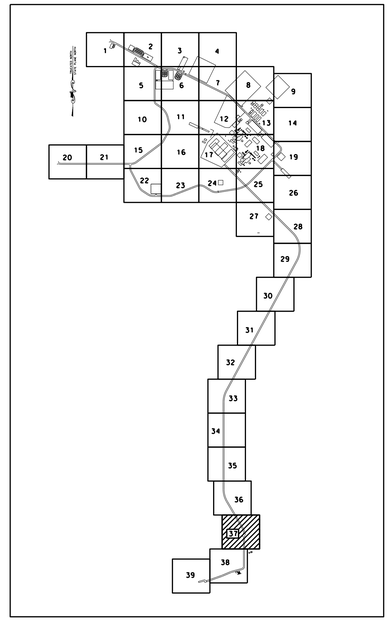
CULVERT #13
INVERT DOWNSTREAM EL 29.00
SIZE: 8-24" DIA PIPES

INVERT UPSTREAM EL 33.00

STP

1+00

MATCHLINE SEE SHEET 38



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 - PROPOSED MINOR CONTOUR
- 42.00 -- EXISTING MAJOR CONTOUR
- 42.00 - - EXISTING MINOR CONTOUR
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- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
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- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUE FOR PERMITS	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN
SHEET 37

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5-13-08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-037	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-037.DGN 5/19/08

IF BLACK RECTANGLES ARE NOT VISIBLE, STOP.

MATCHLINE SEE SHEET 37

STATE PLANE NORTH
TRUNCATED NORTH

E 17000.00
E 17500.00
E 18000.00
N 6000.00
N 5500.00

MAKE-UP AND BLOWDOWN LINES CORRIDOR

ACCESS ROAD BRIDGE (BY OTHERS)

192

UTILITY BRIDGE

193

INGLIS LOCK BYPASS CHANNEL

MAKE-UP LINES

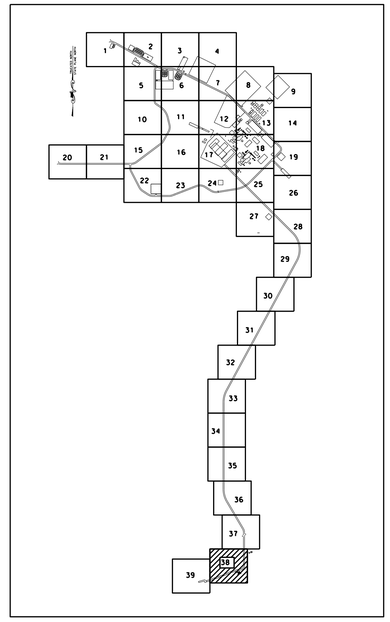
BLOWDOWN LINES TO CONTINUE TO CRYSTAL RIVER ENERGY COMPLEX CANAL

194

U1&2
156

CROSS FLORIDA BARGE CANAL

MATCHLINE SEE SHEET 39



KEY MAP
SCALE: 1"=600'

LEGEND

- 42.00 — PROPOSED MAJOR CONTOUR
- 42.00 — PROPOSED MINOR CONTOUR
- 42.00 — EXISTING MAJOR CONTOUR
- 42.00 — EXISTING MINOR CONTOUR
- STP — SOIL TRACKING PREVENTION
- NEW EDGE OF ROAD
- EXISITNG EDGE OF ROAD
- L-O-D — LIMIT OF DISTURBANCE & TURBIDITY BARRIER

NOTE:
PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS, STAKED SILT FENCE IN UPLAND AREAS, AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE

- SP= SPILLWAY (SEE DRY SWALE DETAIL)
- BERM (SEE DRY SWALE DETAIL)

50' 0 50' 100'
SCALE: 1"=50'

| REVISION | | |

STATE PLANE NORTH
TRUNCATED NORTH

N 6000.00
N 5500.00
N 5000.00
E 15500.00
E 16000.00
E 16500.00

INGLIS LOCK BYPASS CHANNEL

CROSS FLORIDA BARGE CANAL

BOAT SLIP
(BY OTHERS)

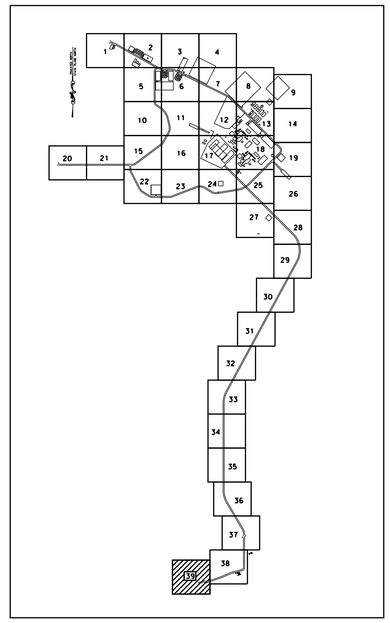
SEE NOTE 2

SEE NOTE 2

12' WIDE EARTH BERM
SEE NOTE 1

BLOWDOWN LINES TO
CONTINUE TO CRYSTAL
RIVER ENERGY COMPLEX
CANAL

MATCHLINE SEE SHEET 38



KEY MAP
SCALE: 1"=600'

LEGEND

42.00	PROPOSED MAJOR CONTOUR
42.00	PROPOSED MINOR CONTOUR
42.00	EXISTING MAJOR CONTOUR
42.00	EXISTING MINOR CONTOUR
STP	SOIL TRACKING PREVENTION
	NEW EDGE OF ROAD
	EXISITNG EDGE OF ROAD
L-O-D	LIMIT OF DISTURBANCE & TURBIDITY BARRIER
	NOTE: PROVIDE STAKED TURBIDITY BARRIERS IN WETLAND AREAS, STAKED SILT FENCE IN UPLAND AREAS, AND FLOATING TURBIDITY BARRIERS IN AREAS WITH STANDING WATER AT LIMITS OF DISTURBANCE
SP	SP= SPILLWAY (SEE DRY SWALE DETAIL)
	BERM (SEE DRY SWALE DETAIL)

NOTES:

1. EARTH BERM WILL BE EXCAVATED AFTER OBTAINING SCA PERMIT
2. RIPRAP WILL BE ADDED AFTER THE EXCAVATION OF THE EARTH BERM

50' 0 50' 100'
SCALE: 1"=50'

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
1	ADDED EARTH BERM AND NOTE 1 AND 2 ISSUED FOR PERMIT	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL					ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SITE GRADING, STORMWATER AND EROSION CONTROL PLAN SHEET 39

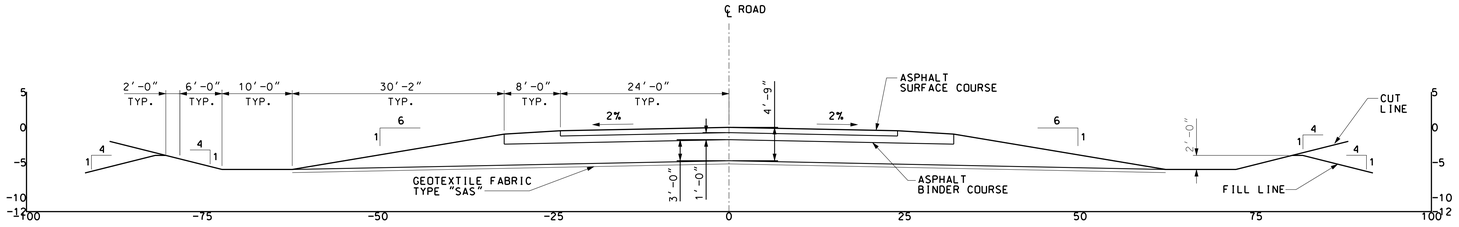
Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE: 1"=50'
DATE: 5/29/08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-039	1

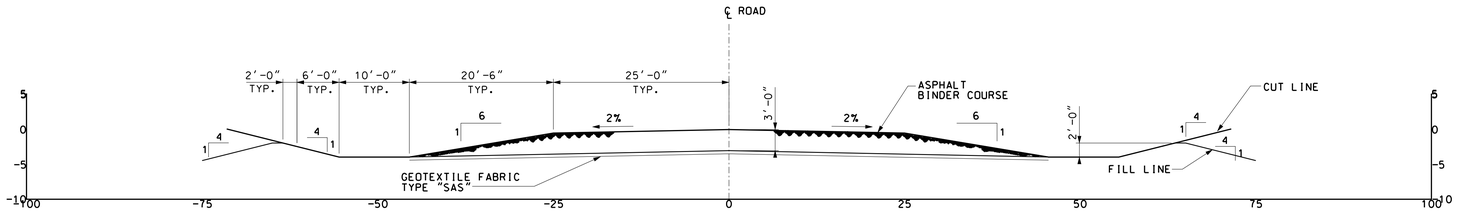
THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-039.DGN 5/19/08

WILES
MCDONOUGH
MARTIN
KING



MAIN ACCESS ROAD

CONSTRUCTION ACCESS ROAD



HEAVY HAUL ROAD

10' 0 10' 20'

SCALE: 1"=10'

REVISION													
0	REVISION DESCRIPTION									TITLE	APPR	DATE	
	ISSUE FOR PERMITS									PE			
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REVIEW	CSA		MECHANICAL							ELECT/INSTR			
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT		LTG	I&C		

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE

TYPICAL
ROADWAY SECTIONS

Shaw Nuclear

DESIGNED BY:
CHECKED BY:
SCALE 1"=10'
DATE 5/19/08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-043	0

THIS DRAWING CREATED ELECTRONICALLY LNG-G1-X0-043.DGN 5/19/08

ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. EROSION CONTROL PRACTICES MUST COMPLY WITH THE MINIMUM BEST MANAGEMENT PRACTICES FOR EROSION CONTROL.

2. THE INSTALLATION OF EROSION CONTROL MEASURES ARE TO BE ACCOMPLISHED PRIOR TO ANY OTHER CONSTRUCTION ON THE SITE AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

3. STAKED SILT FENCE, STAKED TURBIDITY BARRIERS, AND FLOATING TURBIDITY BARRIERS IN AREAS OF STANDING WATER SHALL BE PLACED AT DOWNSTREAM TOE OF ALL FILL SLOPES UNLESS OTHERWISE PROTECTED.

4. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION CONTROL DEVICES TO BE USED MAY BE REQUIRED.

5. PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY TO OR EXIT FROM THE SITE.

6. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC STREETS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANING OUT ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR FROM THE SITE ONTO PUBLIC ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED.

7. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCES/EXITS, ALL PERIMETER EROSION CONTROL DEVICES AND STORM WATER MANAGEMENT DEVICES SHALL BE INSTALLED. CLEARING, GRUBBING, OR OTHER LAND DISTURBANCE SHALL NOT COMMENCE UNTIL PERIMETER CONTROLS ARE COMPLETE.

8. THE CONSTRUCTION OF THE SITE WILL INITIATE WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED WITH PERMANENT VEGETATION AND ALL ROADS/DRIVEWAYS HAVE BEEN PAVED.

9. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED TO LOCAL JURISDICTIONAL STANDARDS.

10. SEDIMENT/EROSION CONTROL DEVICES MUST BE CHECKED AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.

11. STAKED SILT FENCE, STAKED TURBIDITY BARRIERS, AND FLOATING TURBIDITY BARRIERS IN AREAS OF STANDING WATER AND HAY BALE BARRIERS SHALL BE CLEANED OR REPLACED AND MAINTAINED IN FUNCTIONAL CONDITION UNTIL PERMANENT EROSION CONTROL MEASURES ARE ESTABLISHED.

12. DISTURBED AREAS LEFT IDLE FOR 14 DAYS, AND ARE NOT TO FINAL GRADE, WILL BE ESTABLISHED TO TEMPORARY VEGETATION. DISTURBED AREAS LEFT IDLE FOR 30 DAYS OR MORE WILL BE ESTABLISHED TO PERMANENT VEGETATION. ALL AREAS TO FINAL GRADE WILL BE ESTABLISHED TO PERMANENT VEGETATION IMMEDIATELY UPON COMPLETION.

13. OTHER EROSION CONTROL NOTES:
    a) ALL CUT AND FILL SLOPES MUST BE SURFACE ROUGHENED AND VEGETATED WITHIN 14 DAYS OF THEIR CONSTRUCTION.
    b) ALL FILL SLOPES WILL HAVE SILT FENCE AT TOE OF SLOPES.
    c) A 25 TO 35 FOOT UNDISTURBED BUFFER ADJACENT TO ALL RUNNING STREAMS AND CREEKS WILL BE LEFT AND MAINTAINED.

14. WHEN HAND PLANTING, MULCH (HAY OR STRAW) SHOULD BE UNIFORMLY SPREAD OVER SEEDED AREA WITHIN 24 HOURS OF SEEDING.

15. MULCH WILL BE USED AS A TEMPORARY COVER ON SLOPES THAT ARE GREATER THAN 2-1/2 HORIZ TO 1 VERT. MULCH, IF USED, WILL BE ANCHORED.

16. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION OF THE ISSUING AUTHORITY, THE ENGINEER, OR PROGRESS ENERGY, INC.

17. CONSTRUCTION WASTE DISPOSAL

    NOTE: CONSTRUCTION WASTE MAY NOT BE BURIED AND MUST BE TAKEN TO A STATE APPROVED LANDFILL.

    CRITICAL AREAS

    FILL SLOPES
    SURFACE ROUGHENING OF THE FILL SLOPES ALONG WITH TEMPORARY AND PERMANENT GRASSING WILL BE UTILIZED TO CONTROL EROSION OF THE SLOPE FACE. STAKED SILT FENCE, STAKED TURBIDITY BARRIERS, AND FLOATING TURBIDITY BARRIERS IN AREAS OF STANDING WATER WILL BE PLACED AT THE TOE OF THE SLOPES.

    CUT SLOPE
    SURFACE ROUGHENING OF THE CUT SLOPES ALONG WITH TEMPORARY AND PERMANENT GRASSING WILL BE UTILIZED TO CONTROL EROSION OF THE SLOPE FACE.

SEEDING NOTES

1. TOPSOIL:
   a. TOPSOIL SHALL BE WORKABLE, LOAMY SOIL, FREE OF DEBRIS, REFUSE AND SIMILAR FOREIGN MATTER, AND REASONABLY FREE OF SUBSOIL, HARD LUMPS, GRAVEL AND OTHER SUCH MATERIALS. TOPSOIL SHALL HAVE A MINIMUM PLACTICITY (PI) OF 4, A MAXIMUM PIOF 12, A PH OF 5.5 TO 8.0, A MINIMUM ORGANIC CONTENT OF 3 PERCENT, AND SHALL BE CAPABLE OF SUPPORTING ADEQUATE VEGETATION.
   b. AREAS TO RECEIVE TOPSOIL SHALL BE SCARIFIED. AGRICULTURAL LIME, IF REQUIRED, SHALL BE SPREAD PRIOR TO SCARIFYING AREAS.
   c. TOPSOIL SHALL BE UNIFORMLY SPREAD OVER THE AREAS TO A MINIMUM DEPTH OF 4 INCHES AND ROLLED TO A UNIFORM SURFACE WITH A CULTIPACKER OR OTHER SUITABLE EQUIPMENT.

2. FERTILIZER:
   a. FERTILIZER SHALL BE A COMMERCIAL TYPE COMPLYING WITH THE COMMERCIAL FERTILIZER LAWS IN EFFECT AS REGULATED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND FORESTRY. FERTILIZER SUPPLIED IN GRANULAR, PELLET OR TABLET FORM SHALL BE PACKAGED IN MOIST ROOF CONTAINERS.
   b. FERTILIZER SHALL BE EITHER 8-8-8, 12-12-12, 13-13-13, OR 16-16-16. THE 3 NUMBERING SEQUENCE REPRESENTS THE MINIMUM PERCENTAGES BY WEIGHT, RESPECTIVELY, OF NITROGEN, AVAILABLE PHOSPHORIC ACID AND SOLUBLE POTASH.
   c. FERTILIZER SHALL BE UNIFORMLY BROADCAST OVER AREAS TO BE FERTILIZED BY EITHER HAND OR MACHINE METHODS. THE RATE OF FERTILIZER APPLICATION SHALL BE IN ACCORDANCE WITH FERTILIZER APPLICATION RATES AS SHOWN IN "TABLE - C" THIS DRAWING.
   d. FERTILIZER SHALL BE APPLIED BEFORE FINAL DISKING, HARROWING, OR ROTOTILLING DURING SURFACE DRESSING. WHEN THE SURFACE IS DRESSED BY HAND, THE FERTILIZER MAY BE APPLIED BEFORE FINAL RAKING AND LEVELING.

3. AGRICULTURAL LIME:
   a. AGRICULTURAL LIME SHALL CONSIST OF GROUND LIMESTONE OR SEASHELLS CONTAINING AT LEAST 90 PERCENT CALCIUM CARBONATE EQUIVALENT WHEN TESTED IN ACCORDANCE WITH ASTM C 602. THE MATERIAL SHALL BE GROUND SO THAT A MINIMUM OF 90 PERCENT PASSES A No. 10 SIEVE AND 25 PERCENT PASSES A No. 100 SIEVE.
   b. AGRICULTURAL LIME SHALL BE SPREAD UNIFORMLY AT A MINIMUM OF 2 TONS PER ACRE WITH A SPREADER. LIME SHALL BE APPLIED PRIOR TO SEEDING AND TOPSOIL PLACEMENT AND MAY BE APPLIED IN CONJUNCTION WITH FERTILIZER.
   c. AFTER APPLICATION, THE AREAS SHALL BE DISKED, HARROWED, OR ROTOTILLED TO INCORPORATE LIME OR LIME-FERTILIZER INTO THE TOP 3 INCHES TO 6 INCHES OF SOIL.

4. SEED BED PREPARATION:
   a. SEED BEDS SHALL BE PREPARED BY DISKING, HARROWING OR OTHER APPROVED METHODS. SOIL SHALL BE THOROUGHLY PULVERIZED TO A MINIMUM DEPTH OF 3 INCHES. SLOPES SHALL BE SMOOTHED TO GRADE AND ROLLED PRIOR TO SEEDING.

5. SEED:
   a. PERMANENT SEED MIXTURES AND PLANTING DATES SHALL BE IN ACCORDANCE WITH THE PERMANENT SEEDING SCHEDULE PROVIDED IN "TABLE - A" THIS DRAWING.
   b. TEMPORARY SEED MIXTURES AND PLANTING DATES SHALL BE IN ACCORDANCE WITH THE TEMPORARY SEEDING SCHEDULE PROVIDED IN "TABLE - B" THIS DRAWING.
   c. SEED SHALL COMPLY WITH REQUIREMENTS OF FLORIDA LAW. THE MINIMUM PERCENTAGE OF PURE LIVE SEED AND THE MAXIMUM PERCENTAGE OF WEED SEED PERMITTED SHALL BE IN ACCORDANCE WITH SEED REQUIREMENTS PROVIDED IN "TABLE - D" THIS DRAWING.
   d. EACH VARIETY OF SEED SHALL BE FURNISHED AND DELIVERED IN SEPARATE BAGS OR OTHER CONTAINERS. EACH BAG OR CONTAINER SHALL BEAR AN ANALYSIS TAG WHICH IS A MINIMUM NO. 6 STANDARD SHIPPING TAG HAVING ALL INFORMATION REQUIRED BY THE FLORIDA SEED LAW, ARRANGED AS SHOWN IN "TABLE - E" THIS DRAWING.
   e. SEED FURNISHED SHALL BE THE PREVIOUS SEASON'S CROP (THE LAST CROP YEAR FOR THE CROP KIND IN QUESTION) AND THE DATE OF ANALYSIS SHOWN ON EACH TAG SHALL BE WITHIN 5 MONTHS (EXCLUDING THE MONTH IN WHICH THE TEST IS COMPLETED) OF THE TIME OF DELIVERY TO THE PROJECT.

6. NOXIOUS WEEDS:
   a. NOXIOUS WEEDS SHALL BE INTERPRETED TO MEAN THAT LIST OF WEEDS, EXCEPT BERMUDA, WHICH HAS BEEN ADOPTED BY THE FLORIDA SEED COMMISSION AS BEING NOXIOUS IN FLORIDA. NOXIOUS WEED SEEDS SHALL NOT EXCEED THE LIMITATIONS PRESCRIBED IN THE REGULATIONS AND IN NO CASE SHALL THEY EXCEED 500 PER POUND.
   b. ANALYSIS TAGS SHALL BE REMOVED FROM EACH BAG OR CONTAINER ONLY BY THE ENGINEER OR AN AUTHORIZED REPRESENTATIVE.

7. TEST REPORT:
   a. A COPY OF THE LABORATORY TEST REPORT OF AN "OFFICIAL" SAMPLE TAKEN AND TESTED FOR EACH LOT OF SEED FURNISHED AS PREPARED BY THE STATE SEED ANALYST OF THE FLORIDA DEPARTMENT OF AGRICULTURE AND FORESTRY SHALL BE SUBMITTED TO THE ENGINEER BY THE CONTRACTOR. TEST REPORTS WILL BE ACCEPTED FROM THE AGRICULTURAL DEPARTMENTS OF OTHER STATES PROVIDED THE REQUIREMENTS OF THESE SPECIFICATIONS ARE MET.
   b. THE LOT NUMBER ON THE ANALYSIS TAG SHALL MATCH THE LABORATORY TEST REPORT LOT NUMBER.

8. WATERING:
   a. SEEDED AREAS SHALL BE PERIODICALLY WATERED UNTIL FINAL ACCEPTANCE. WATER MAY BE OBTAINED FROM ANY SOURCE, EXCEPT BRACKISH, CHEMICALLY CONTAMINATED, OR OILY WATER SHALL NOT BE USED.

MULCHING NOTES

1. GENERAL:
   a. MULCHING SHALL FOLLOW SEEDING OPERATIONS WITHIN 48 HOURS TO PROMOTE SEED GERMINATION AND GROWTH.
   b. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 7 CALENDAR DAYS IN ADVANCE OF COMMENCING OPERATIONS SO THAT THE MULCH CAN BE INSPECTED AND APPROVED PRIOR TO USE.
   c. MULCH SHALL CONSIST OF EITHER TACKED VEGETATIVE MULCH OR AN APPROVED FIBER MULCH PRODUCT.
   d. VEGETATIVE MULCH OR FIBER MULCH SHALL BE DELIVERED IN BALES OR BAGS OF UNIFORM SIZE. MULCH STORAGE STOCKPILES SHALL BE PROTECTED FROM WEATHER.

2. TACKED VEGETATIVE MULCH:
   a. VEGETATIVE MULCH SHALL CONSIST OF PINE STRAW, STEMS OR STALKS OF OATS, RYE, RICE, OR OTHER APPROVED STRAWS.
   b. THE CONTRACTOR MAY ALSO USE HAY OBTAINED FROM VARIOUS LEGUMES AND GRASSES SUCH AS LESPEDEZAS, CLOVER, VETCHES, SOYBEANS, BERMUDA, DALLIES, CARPET SEDGE, FESCUE OR OTHER APPROVED LEGUMES OR GRASSES OF ANY COMBINATION THEREOF.
   c. STRAW OR HAY SHALL BE REASONABLY DRY AND FREE FROM MOLD, JOHNSON GRASS OR OTHER NOXIOUS WEEDS.
   d. VEGETATIVE MULCH SHALL BE TACKED WITH AN APPROVED TACKING AGENT FOR VEGETATIVE MULCH LISTED IN THE QUALIFIED PRODUCTS LIST FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST.

   e. VEGETATIVE MULCH SHALL BE APPLIED AT A RATE OF 1 1/2 TO 2 TONS OF MULCH PER ACRE SIMULTANEOUSLY WITH THE TACKING AGENT.

   f. THE MINIMUM ALLOWABLE VEGETATIVE DENSITY FOR SOURCE APPROVAL OF TACKED VEGETATIVE MULCH SHALL BE 70 PERCENT FOR CLAY SOILS AND 60 PERCENT FOR SANDY SOILS WHEN EVALUATED IN ACCORDANCE WITH THE TEXAS TRANSPORTATION INSTITUTE (TTI) FIELD PERFORMANCE TESTING PROCEDURE OF SELECTED EROSION CONTROL PRODUCTS.

3. FIBER MULCH PRODUCTS:
   a. ACCEPTABLE FIBER MULCH PRODUCTS SHALL BE LISTED IN THE FLORIDA DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST.

   b. FIBER MULCH SHALL BE APPLIED AS A SLURRY AT A RATE OF 1 TO 1 1/2 TONS PER ACRE BASED ON DRY WEIGHT (MASS) OF THE FIBERS. THE APPLICATION RATE OF THE TACKING AGENT, IF NOT PRE-BLENDED WITH THE FIBERS BY THE MANUFACTURER, SHALL BE IN ACCORDANCE WITH APPLICATION RATE RECOMMENDED BY THE MANUFACTURER.
   c. THE MINIMUM ALLOWABLE VEGETATIVE DENSITY FOR SOURCE APPROVAL OF FIBER MULCH PRODUCTS SHALL BE 70 PERCENT FOR CLAY SOILS AND 60 PERCENT FOR SANDY SOILS WHEN EVALUATED IN ACCORDANCE WITH THE TEXAS TRANSPORTATION INSTITUTE (TTI) FIELD PERFORMANCE TESTING PROCEDURE OF SELECTED EROSION CONTROL PRODUCTS.

HYDRO-SEEDING NOTES

1. HYDRO-SEEDING SHALL CONSIST OF MIXING AND APPLYING SEED, COMMERCIAL FERTILIZER, WATER MANAGEMENT GEL, POLYACRYLAMIDE TACKIFIER, AND MYCORRHIZAL INOCULUM WITH FIBER AND WATER.

2. POLYACRYLAMIDE TACKIFIER SHALL NOT BE APPLIED DURING ANY RAINY WEATHER OR WHEN SOIL TEMPERATURES ARE BELOW 41 DEG. F.

3. SEED SHALL BE UNIFORMLY SPREAD OVER THE AREA AT RATES SPECIFIED IN TABLE - A AND/OR TABLE - B. FERTILIZER SHALL BE UNIFORMLY SPREAD OVER THE AREA AT RATES SPECIFIED IN TABLE - C.

4. A MINIMUM OF 535 POUNDS OF WOOD FIBER PER ACRE SHALL BE MIXED AND APPLIED WITH THE SEED. THE FIBER SHALL BE IN ADDITION TO STRAW OR MULCH WHEN STRAW OR MULCH IS SPECIFIED.

5. THE APPLICATION RATE FOR PELLET-INOCULATED SEED SHALL BE DETERMINED USING THE SEED MASS EXCLUSIVE OF INOCULANT MATERIALS.

6. MIXING OF MATERIALS FOR APPLICATION WITH HYDRO-SEEDING EQUIPMENT SHALL BE PERFORMED IN A TANK WITH A BUILT-IN CONTINUOUS AGITATION SYSTEM OF SUFFICIENT OPERATING CAPACITY TO PRODUCE A HOMOGENEOUS MIXTURE AND A DISCHARGE SYSTEM WHICH WILL APPLY THE MIXTURE AT A CONTINUOUS AND UNIFORM RATE.

TABLE - A

PERMENANT SEEDING SCHEDULE

SEED MIXTURES	POUNDS/ ACRE	PLANTING DATES
HULLED BERMUDA	30	MARCH-SEPT.
KENTUCKEY FESCUE UNHULLED BERMUDA	25 20	SEPT.-FEB.
UNHULLED BERMUDA CRIMSON CLOVER	20 40	SEPT.-FEB.
BALD CLOVER UNHULLED BERMUDA	25 20	FEB.-MARCH
VETCH (COMMON)	40	SEPT.-OCT.
LESPEDEZA	40	MARCH-MAY

INOCULATE CRIMSON CLOVER PRIOR TO PLANTING WITH PROPER BACTERIAL CULTURE.

TABLE - B

TEMPORARY SEEDING SCHEDULE

SEED MIXTURES	POUNDS/ ACRE	PLANTING DATES
HULLED BERMUDA	30	MARCH-SEPT.
KENTUCKEY FESCUE UNHULLED BERMUDA	25 20	SEPT.-FEB.
UNHULLED BERMUDA CRIMSON CLOVER	20 40	SEPT.-FEB.
BALD CLOVER UNHULLED BERMUDA	25 20	FEB.-MARCH
VETCH (COMMON)	40	SEPT.-OCT.
LESPEDEZA	40	MARCH-MAY
ANNUAL RYE	30	SEPT.-JAN.

ANNUAL RYE GRASS IS THE ONLY ACCCEPTABLE GRASS FOR WINTER COVER. ANNUAL RYE GRASS SHALL NOT BE PLANTED BEFORE SEPTEMBER 20. ANNUAL RYE GRASS MAY BE PLANTED AS LATE AS JANUARY 15 IF CLIMATE CONDITIONS AND SOIL TEMPERATURES WILL ALLOW GERMINATION.

INOCULATE CRIMSON CLOVER PRIOR TO PLANTING WITH PROPER BACTERIAL CULTURE.

TABLE - C

FERTILIZER APPLICATON RATES

TYPE FERTILIZER	POUNDS PER ACRE	KILOGRAM PER HECTARE
8-8-8	1000	1200
12-12-12	667	748
13-13-13	615	689
16-16-16	500	560

TABLE - D

SEED REQUIREMENT

VARITY	MINIMUN PERCENT OF PURE LIVE SEED (PURITY TIMES GERMINATION INCLUDING HARD SEED BY COUNT)	MAXIMUM PERCENT OF WEED SEED, BY COUNT
HULLED BERMUDA	83	1
PENSACOLA BAHIA	81	2
CRIMSON CLOVER	78	1
KENTUCKEY 31 FESCUE	80	1
UNHULLED BERMUDA	80	1
BALLED CLOVER	80	1
VETCH (COMMON)	80	1
LESPEDEZA	80	1
ANNUAL RYE	80	1

FOR PERMITTING

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUED FOR PERMIT	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
SEDIMENT & EROSION CONTROL NOTES AND DETAILS

Shaw Nuclear

DESIGNED BY: DEB
CHECKED BY: JVS
SCALE: NTS
DATE: 5/18/08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G1-X0-044	0

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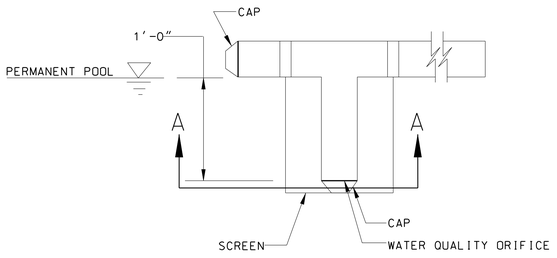
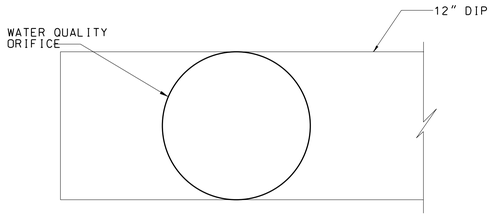
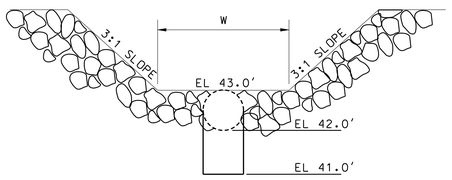
FILES
MICROMANAGER
ACTIVITY
ATTACH



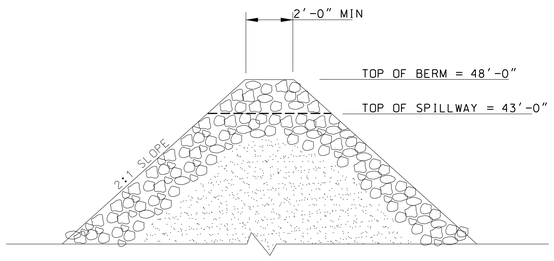
INSERT 1-1
WATER QUALITY ORIFICE DETAIL
NTS



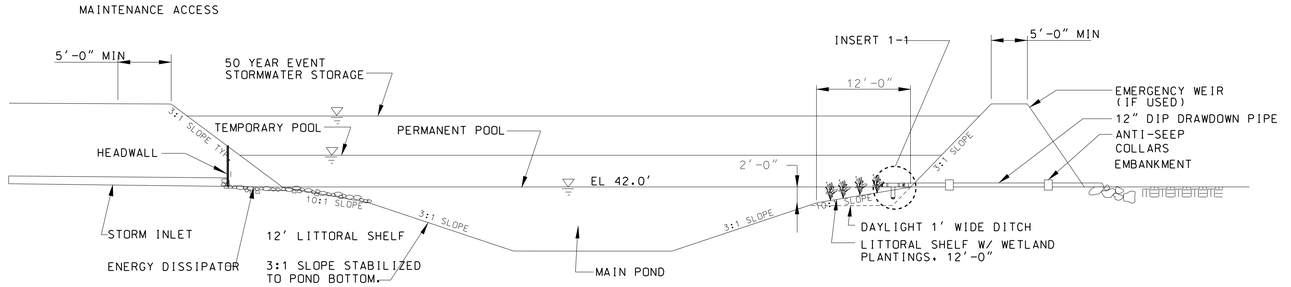
SECTION A-A
NTS



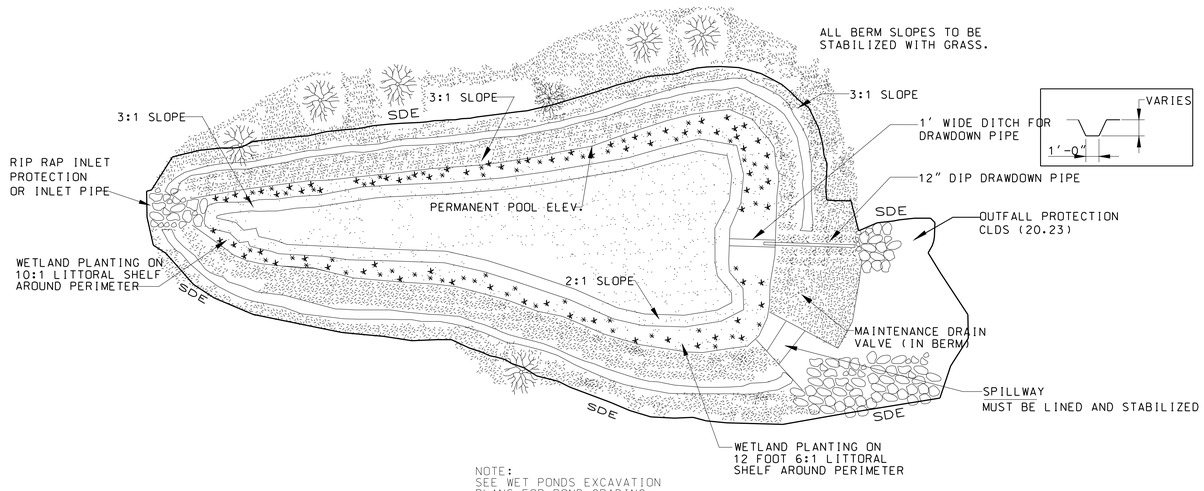
WEIR SECTION
NTS



BERM AND WEIR SECTION
NTS



TYPICAL WET POND SECTION
NTS



NOTE:
SEE WET PONDS EXCAVATION PLANS FOR POND GRADING.

TYPICAL WET POND PLAN
NTS

POND DESIGN SUMMARY				
	DRAWDOWN PIPE #	DIA OF WATER QUALITY ORIFICE D, (IN)	WIDTH OF SPILLWAY, W, (FT)	SPILLWAY INVERT ELEVATION (FT)
POND A	1	12	80	43
POND B, C1, C2	2	12	15	43

FOR PERMITTING

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

WEC SAFETY CLASSIFICATION: E

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
WET POND DETAILS
AND TYPICAL SECTIONS

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUED FOR PERMIT	PE		
		QV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL					ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

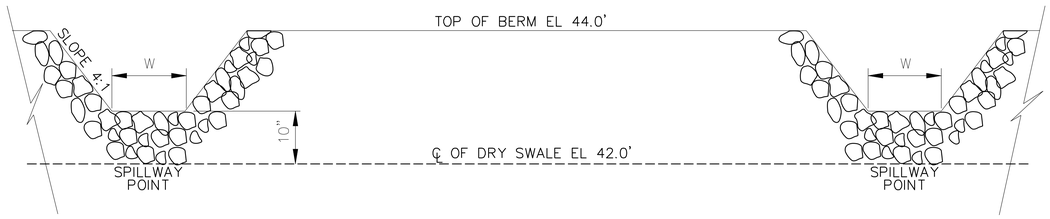
DESIGNED BY: DEB
CHECKED BY: JVS
SCALE: NTS
DATE: 5/17/08

Shaw Nuclear

SIZE	DRAWING NUMBER	REV NO
E	LNG-G100-X3-014-01	0

THIS DRAWING CREATED ELECTRONICALLY BMP WET POND DETAILS - 1.DGN 5/19/08

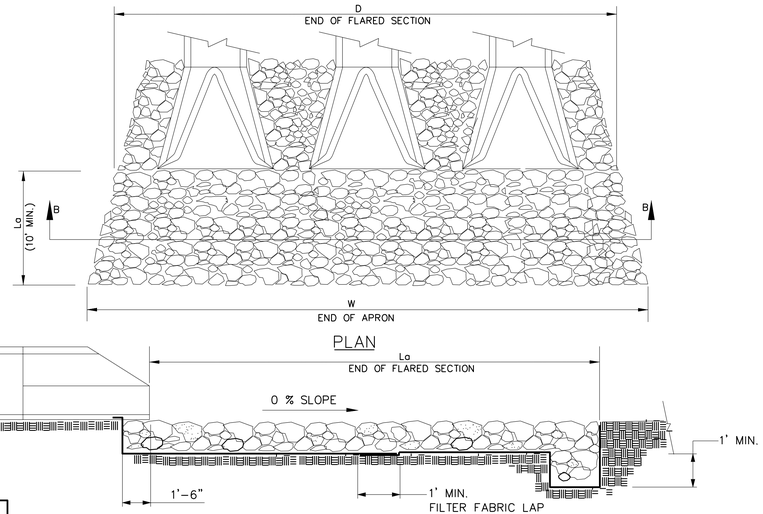
WILES
MUGEHRAMER
MORGAN
KING

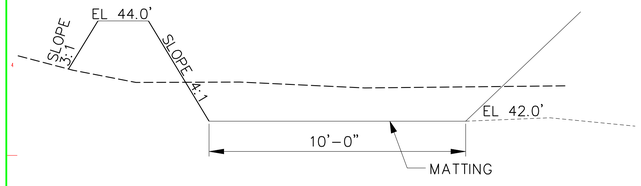


DRY SWALE PROFILE/SPILLWAYS DETAIL 1
NTS

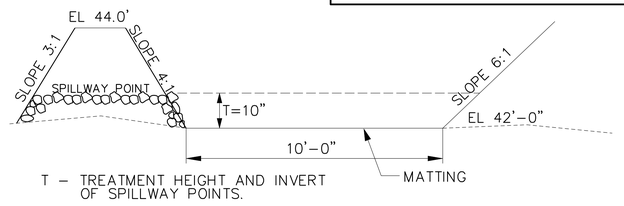
NOTES:

1. CLASS OR MEDIAN SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE DESIGNED BY THE ENGINEER.
2. RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.
3. THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
4. THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 5:1
5. ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
6. THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
7. NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.
8. FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.
9. ANY DISTURBED AREA FROM END OF APRON TO RECIEVING CHANNEL MUST BE STABILIZED.





CUT/FILL SECTION
NTS

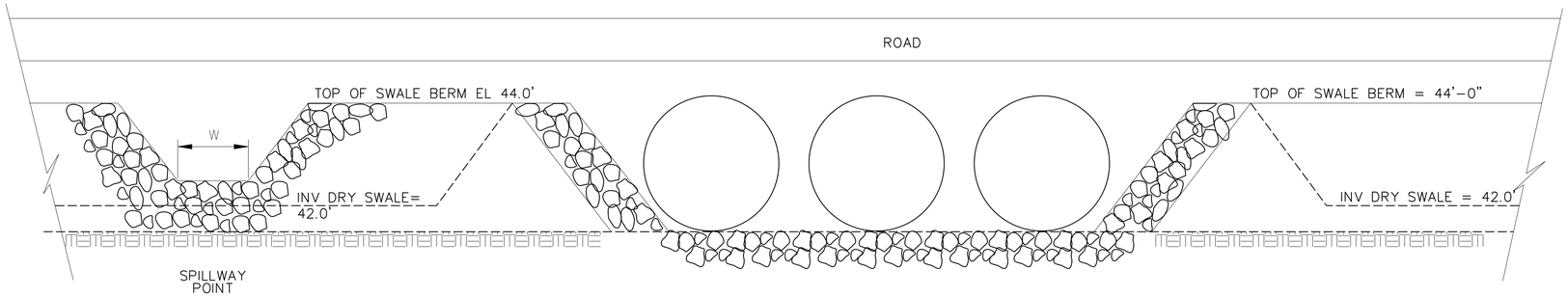


FILL SECTION
NTS

DETAIL 2
NTS

Culvert #	Size	No Required	Width at Culvert Outlet D (ft)	Length of Apron La (ft)	Width at end of Apron W (ft)
	(in)				
3	30	6	25	30	37
4	24	6	22	30	34
5	24	4	14	20	22
6	30	5	21	20	29
8	30	5	21	20	29
9	24	5	18	20	26
11	30	4	16	20	24
12	30	6	25	20	33
13	24	8	30	20	38

RIP RAP APRON AT PIPE OUTFALL
DETAIL #4



CULVERT TRANSITION DETAIL 3
NTS

Spillways for Dry Swales, SP = Spillway

Spillway # / Road	# Spillways	Spillway Width, W (ft)
SP 3 / Construction Access Road	4	4
SP 4 / Main Access Road	4	3
SP 5 / Main Access Road	6	3
SP 6 / Main Access Road	6	4
SP 7 / Haul Road	4	2
SP 8 / Haul Road	4	2

Note 1: See layout of SP #'s labeled on plan.

Note 2: Spillway numbers correspond to Drainage Area Numbers given in the Storm Water Management Report, which represent areas divided by crown/center of the road except construction access road.

FOR PERMITTING

PE STAMP

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STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE: DRY SWALE DETAILS

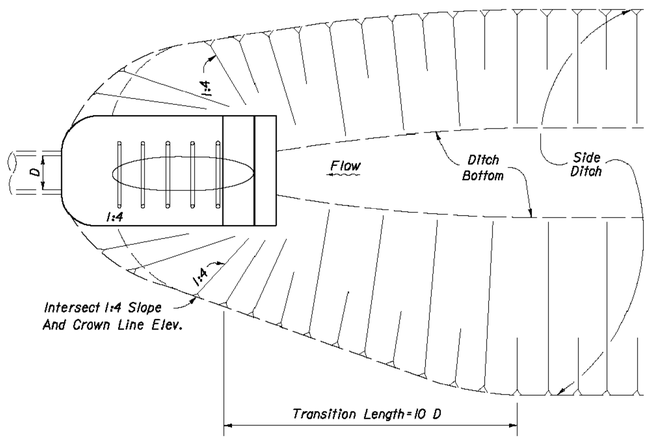
REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	ISSUED FOR PERMIT	PE		
		DY		
		LE		
		RE		

CSA: ARCH, CIVIL/STRUC | MECHANICAL: PIPE, PIPE SUP, SA, ENG, HVAC, FIRE PROT | ELECT/INSTR: LTG, I&C

Shaw Nuclear

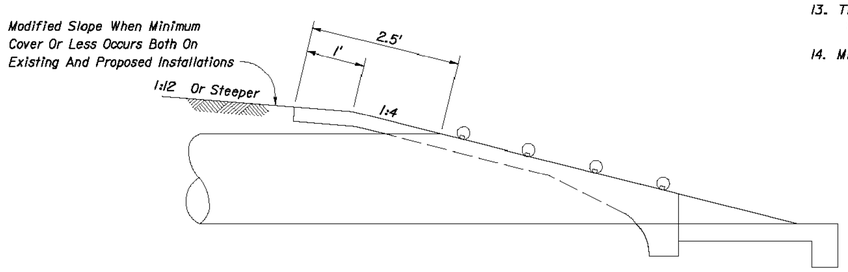
DESIGNED BY: DEB
CHECKED BY: JVS
SCALE: NTS
DATE: 5/17/08
SIZE: E
DRAWING NUMBER: LNG-G100-X3-014-02
REV NO: 0

THIS DRAWING CREATED ELECTRONICALLY BMP WET POND DETAILS - 2.DGN 5/19/08



PLAN

DITCH TRANSITION



PERMISSIBLE PAVEMENT MODIFICATION

GENERAL NOTES

1. Unless otherwise designated in the plans, concrete pipe mitered end sections may be used with any type of side drain pipe; corrugated steel pipe mitered end sections may be used with any type of side drain pipe except aluminum pipe; and, corrugated aluminum mitered end sections may be used with any type of side drain pipe except steel pipe. When bituminous coated metal pipe is specified for side drain pipe, mitered end sections shall be constructed with like pipe or concrete pipe. When the mitered end section pipe is dissimilar to the side drain pipe, a concrete jacket shall be constructed in accordance with Index No. 280.
2. Concrete pipe used in the assembly of mitered end sections shall be of selective lengths to avoid excessive connections.
3. Corrugated metal pipe galvanizing that is damaged during beveling and perforating for mitered end section shall be repaired.
4. That portion of corrugated metal pipe in direct contact with the concrete slab and extending 12" beyond shall be bituminous coated prior to placing of the concrete.
5. Corrugated polyethylene pipe (CPE) for side drain application of 15", 18" or 24" diameter shall utilize either corrugated metal or concrete mitered end sections. When used in conjunction with corrugated metal mitered end sections, connection shall be by either a formed metal band specifically designated to join CPE pipe and metal pipe or other coupler approved by the State Drainage Engineer. When used in conjunction with a concrete mitered end section, connection shall be by concrete jacket constructed in accordance with Index No. 280.
6. When existing multiple side drain pipes are spaced other than the dimensions shown in this detail, or have nonparallel axes, or have non-uniform sections, the mitered end sections will be constructed either separately as single pipe mitered end sections or collectively as multiple pipe end sections as directed by the Engineer; however, mitered end sections will be paid for each, based on each independent pipe end.
7. In addition to the requirements of Section 430-4, side drain culverts shall comply with the cover requirements shown on Index No. 205.
8. The reinforced concrete slab shall be constructed for all sizes of side drain pipe and cast in place with Class I concrete.
9. Round pipe size 30" or greater, pipe-arch size 35" x 24" or greater and elliptical pipe 19" x 30" or greater shall be grated unless excepted in the plans. Smaller sizes of pipe shall be grated only when called for in plans. The lower grate on trailing downstream ends on divided highways shall be omitted.
10. Grates are to be fabricated from steel ASTM A53, Grade B, pipe. The lower grate on all traffic approach ends shall be Schedule 80 and all remaining grates shall be Schedule 40. Grates subject to salt free and corrosive free environment may be fabricated from galvanized pipe, with base metal exposed during fabrication repaired as specified in Section 562, Standard Specifications; or, fabricated from black pipe and hot dip galvanized after fabrication in accordance with ASTM A123. Grates subject to salt water or highly corrosive environment shall be hot dip galvanized after fabrication in accordance with ASTM A123.
11. Ditch transitions shall be used on all grades in excess of 3% as directed by the Engineer. where a minimum spacing of 30' will not result between the toe points of the mitered end sections.
12. The project engineer shall contact the District Drainage Engineer for possible alternate treatment prior to constructing side drain mitered end sections wher a minimum spacing of 30' will not result between the toe points of the mitered end sections.
13. The cost of all pipe(s), grates, fasteners, reinforcing, connectors, anchors, concrete, sealants, jackets and coupling bands shall be included in the cost for the mitered end section. Sodding shall be paid for separately under the contract unit price for Performance Turf, SY.
14. Mitered end sections shall be paid for under the contract unit price for Mitered End Section (SD), Ea., based on each independent pipe end.

DESIGN NOTES

1. In critical hydraulic locations, grates shall not be used until potential debris transport has been evaluated by the drainage engineer and appropiate adjustments made. Ditch grades in excess of 3% or pipe with less than 1.5' of cover and grades in excess of 1% will require such an evaluation (General Note 9).
2. The design engineer shall determine highly corrosive locations and specify in the plans when the grates shall be hot-dip galvanized after fabrication (General Note 10).
3. The design engineer shall determine and designate in the plans which alternate types of mitered end section will not be permitted. The restriction shall be based on corrosive or structural requirements.

	2008 FDOT Design Standards	Last Revision 07/01/07	Sheet No. 6 of 6
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION	SIDE DRAIN MITERED END SECTION NOTES & INFORMATION		Index No. 273

PE STAMP

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
FDOT
STANDARD
END SECTIONS

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	FOR PEMIT ONLY	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL						ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

Shaw® Nuclear

DESIGNED BY: MKD
CHECKED BY: JVS
SCALE NTS
DATE 5/17/08

SIZE	DRAWING NUMBER	REV NO
E	LNG-G100-XJ-001	0

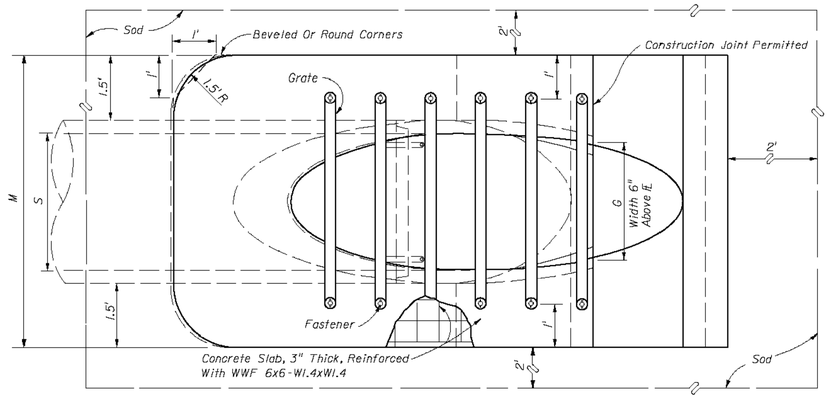
THIS DRAWING CREATED ELECTRONICALLY LNG-G100-XJ-001.DGN 5/19/08

MILES MCDERMOTT MICHAEL KING

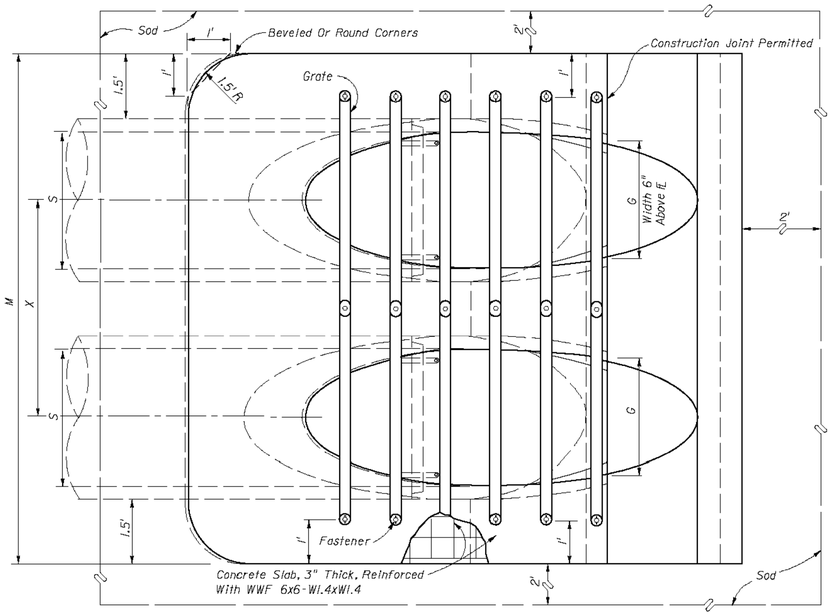
DIMENSIONS & QUANTITIES

Rise R	Span S	X	A	B	C	E	F	G	H ■	M				N	GRATE SIZES		CONCRETE (Cu. Yds.)				SODDING (Sq. Yds.)			
										Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe		Standard Weight Pipe	Extra Strong Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
12"	18"	2'-10"	2.36'	3.06'	5.42'	3.03'	5'	1.50'	2.0'	4.92'	7.75'	10.58'	13.42'	1.21'			0.68	1.04	1.41	1.77	8	9	11	12
14"	23"	3'-4"	2.44'	3.75'	6.19'	3.70'	6'	1.90'	2.3'	5.38'	8.71'	12.04'	15.38'	1.23'			0.76	1.19	1.63	2.05	9	10	12	13
19"	30"	4'-0"	2.62'	5.47'	8.09'	5.36'	8'	2.37'	2.6'	6.04'	10.04'	14.04'	18.04'	1.27'	$2\frac{1}{2}$"	3"	0.95	1.52	2.09	2.65	10	12	13	15
24"	38"	5'-0"	2.79'	7.18'	9.97'	7.03'	10'	2.85'	3.0'	6.79'	11.79'	16.79'	21.79'	1.31'	$2\frac{1}{2}$"	3"	1.18	1.95	2.74	3.53	11	13	15	18
29"	45"	5'-11"	3.05'	8.90'	11.95'	8.70'	12'	3.19'	3.3'	7.50'	13.42'	19.33'	25.25'	1.38'	$2\frac{1}{2}$"	$3\frac{1}{2}$"	1.41	2.42	3.44	4.45	12	15	18	20
34"	53"	7'-0"	3.22'	10.62'	13.84'	10.36'	13'	3.57'	2.6'	8.25'	15.25'	22.25'	29.25'	1.42'	3"	$3\frac{1}{2}$"	1.63	2.92	4.22	5.52	13	17	20	23
38"	60"	7'-10"	3.39'	11.99'	15.38'	11.70'	15'	3.95'	3.3'	8.92'	16.75'	24.58'	32.42'	1.46'	3"	4"	1.83	3.36	4.89	6.41	14	18	21	25
43"	68"	8'-11"	3.56'	13.71'	17.27'	13.36'	17'	4.28'	3.6'	9.67'	18.58'	27.50'	36.42'	1.50'	3"	4"	2.09	3.95	5.80	7.65	16	20	23	27
48"	76"	9'-11"	3.73'	15.43'	19.16'	15.03'	19'	4.59'	4.0'	10.42'	20.33'	30.25'	40.17'	1.54'	Special	Special	2.37	4.54	6.73	8.92	17	21	26	30
53"	83"	10'-8"	3.91'	17.15'	21.06'	16.70'	20'	4.77'	3.3'	11.08'	21.75'	32.42'	43.08'	1.58'	Special	Special	2.61	5.09	7.56	10.03	18	23	27	32
58"	91"	11'-8"	4.08'	18.87'	22.95'	18.36'	22'	5.01'	3.6'	11.83'	23.50'	35.17'	46.83'	1.63'	Special	Special	2.91	5.77	8.64	11.50	19	24	29	35

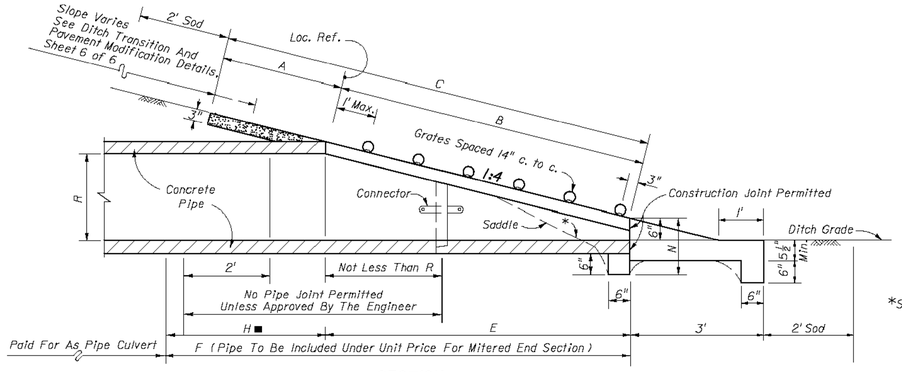
■ Values shown for estimating pipe quantities and are for information only.



TOP VIEW-SINGLE PIPE



TOP VIEW-MULTIPLE PIPE



SECTION

NOTE: See Sheets 5 and 6 for details and general notes.

*Slope:
To Major Axis For Pipes 24" x 38" And Smaller.
1:2 For Pipes 29" x 45" And Larger.

NOTE: ALL ENDS OF CULVERTS TO BE MITERED AS SHOWN ABOVE

2008 FDOT Design Standards	Last Revision 02	Sheet No. 4 of 6
SIDE DRAIN MITERED END SECTION - SINGLE AND MULTIPLE ELLIPTICAL CONCRETE PIPE		Index No. 273

0	REVISION DESCRIPTION	TITLE	APPR	DATE
REVISION	FOR PEMIT ONLY	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL					ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

PE STAMP

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STOUGHTON, MA 02072-4705
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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
FDOT STANDARD END SECTIONS

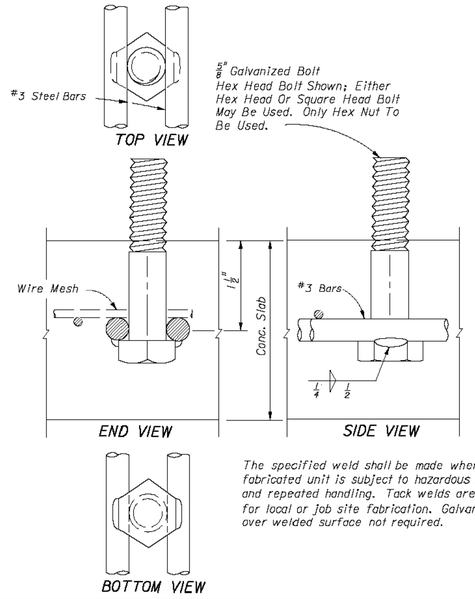
Shaw® Nuclear

DESIGNED BY: MKD
CHECKED BY: JVS
SCALE NTS
DATE 5/17/08

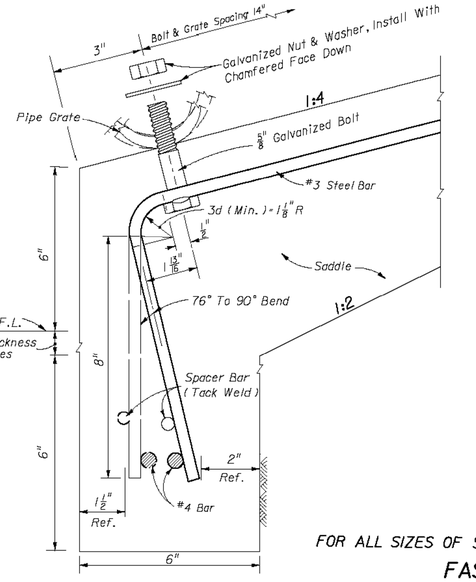
SIZE	DRAWING NUMBER	REV NO
E	LNG-G100-XJ-002	0

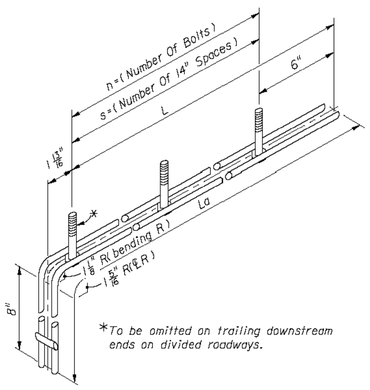
THIS DRAWING CREATED ELECTRONICALLY LNG-G100-XJ-002.DGN 5/19/08

FILES:
NUCSTDNAME
NUCSTDA
XREFS:



The specified weld shall be made when the fabricated unit is subject to hazardous hauls and repeated handling. Tack welds are permitted for local or job site fabrication. Galvanizing over welded surface not required.





*To be omitted on trailing downstream ends on divided roadways.

Drain Size	s	n	L	La
CONCRETE PIPE (ROUND)				
15"	3	4	4'-0"	4'-11"
18"	4	5	5'-2"	6'-1"
24"	6	7	7'-6"	8'-5"
30"	7	8	8'-8"	9'-7"
36"	9	10	11'-0"	11'-11"
42"	11	12	13'-4"	14'-3"
48"	13	14	15'-8"	16'-7"
54"	14	15	16'-10"	17'-9"
60"	16	17	19'-2"	20'-1"
CORRUGATED METAL PIPE (ROUND)				
15"	2	3	2'-10"	3'-9"
18"	3	4	4'-0"	4'-11"
24"	5	6	6'-4"	7'-3"
30"	7	8	8'-8"	9'-7"
36"	8	9	9'-10"	10'-9"
42"	10	11	12'-2"	13'-1"
48"	12	13	14'-6"	15'-5"
54"	14	15	16'-10"	17'-9"
60"	15	16	18'-0"	18'-11"
CORRUGATED METAL PIPE (ARCH) ***				
17" x 13"	1	2	1'-8"	2'-7"
21" x 15"	2	3	2'-10"	3'-9"
28" x 20"	4	5	5'-2"	6'-1"
35" x 24"	5	6	6'-4"	7'-3"
42" x 29"	6	7	7'-6"	8'-5"
49" x 33"	7	8	8'-8"	9'-7"
57" x 38"	9	10	11'-0"	11'-11"
64" x 43"	10	11	12'-2"	13'-1"
71" x 47"	12	13	14'-6"	15'-5"

Drain Size	s	n	L	La
ELLIPTICAL CONCRETE PIPE				
12" x 18"	2	3	2'-10"	3'-9"
14" x 23"	3	4	4'-0"	4'-11"
19" x 30"	4	5	5'-2"	6'-1"
24" x 38"	5	6	6'-4"	7'-3"
29" x 45"	7	8	8'-8"	9'-7"
34" x 53"	8	9	9'-10"	10'-9"
38" x 60"	10	11	12'-2"	13'-1"
43" x 68"	11	12	13'-4"	14'-3"
48" x 76"	13	14	15'-8"	16'-7"
53" x 83"	14	15	16'-10"	17'-9"
58" x 91"	15	16	18'-0"	18'-11"

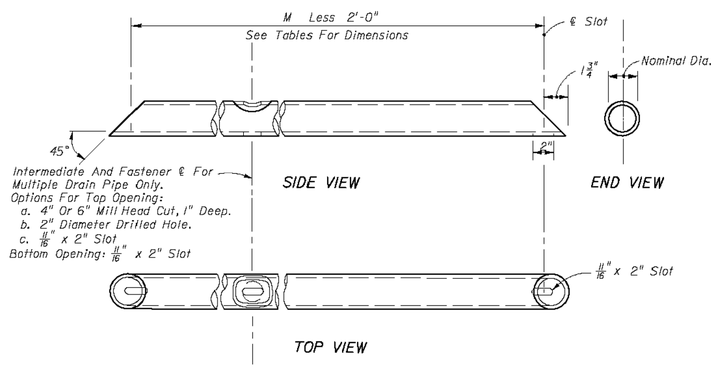
** Note: 5/8" x 3" bolts are standard for all grate fasteners, except when the contractor elects to use the slotted upper holes for the intermediate fasteners on multiple drain pipe, which will require the following bolt lengths:

Grate Size (Std. & X-Stg.)	Bolt Length
2½"	5½"
3"	6"
3½"	6½"
4"	7"

**To be used only when grates are called for in the plans.
***1974 AASHTO Pipe Arch Sizes.

FOR ALL SIZES OF SINGLE AND MULTIPLE DRAIN PIPE

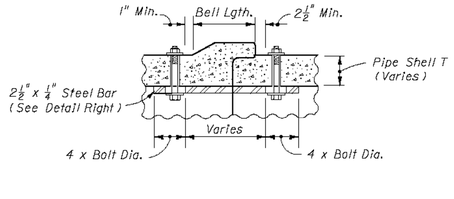
FASTENER UNIT

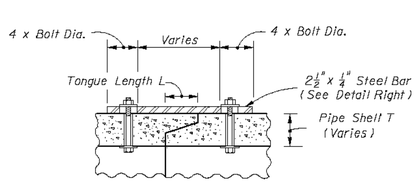


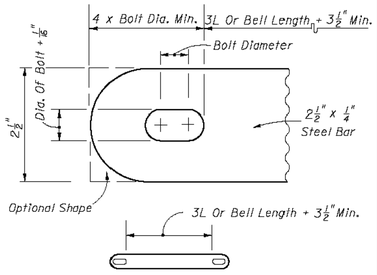
See General Notes, Sheet 6.

GRATE DETAIL

FOR SINGLE & MULTIPLE DRAIN PIPE

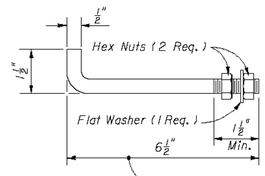






All bars, bolts, nuts and washers are to be galvanized steel.
Bolt diameters shall be ⅜" for 15" to 36" pipe and ⅝" for 42" to 60" pipe.
Two connectors required per joint, located 60° right and left of bottom center of pipe.
Bolt holes in pipe shell are to be drilled.

CONCRETE PIPE CONNECTOR DETAIL



Anchors required for CMP only.
Anchor, washer and nuts to be galvanized steel.
Bend anchor where required to center in concrete slab. Damaged surfaces to be repaired after bending.
Anchors are to be spaced a distance equal to four (4) corrugations. Place the anchors in the outside crest of corrugation.
Flat washer to be placed on inside wall of pipe.

Holes in the mitered end pipe are to be drilled or punched; burning not permitted.

ANCHOR DETAIL

2008 FDOT Design Standards	Last Revision	Sheet No.
SIDE DRAIN MITERED END SECTION DETAILS FOR CONCRETE & CORRUGATED METAL PIPE	00	5 of 6
	Index No.	273

SHAW NUCLEAR
STONE & WEBSTER INC.
100 TECHNOLOGY CENTER DRIVE
STOUGHTON, MA 02072-4705
COA #8945

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PROGRESS ENERGY FLORIDA, INC

PROGRESS ENERGY FLORIDA, INC
LEVY NUCLEAR PLANT
UNITS 1 & 2

TITLE
FDOT
STANDARD
END SECTIONS

REVISION	REVISION DESCRIPTION	TITLE	APPR	DATE
0	FOR PERMIT ONLY	PE		
		DV		
		LE		
		RE		

REVIEW	CSA		MECHANICAL					ELECT/INSTR	
	ARCH	CIVIL STRUC	PIPE	PIPE SUP	SA	ENG	HVAC	FIRE PROT	LTG	I&C

DESIGNED BY: MKD
CHECKED BY: JVS
SCALE: NTS
DATE: 5/17/08

Shaw Nuclear

SIZE	DRAWING NUMBER	REV NO
E	LNG-G100-XJ-003	0

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