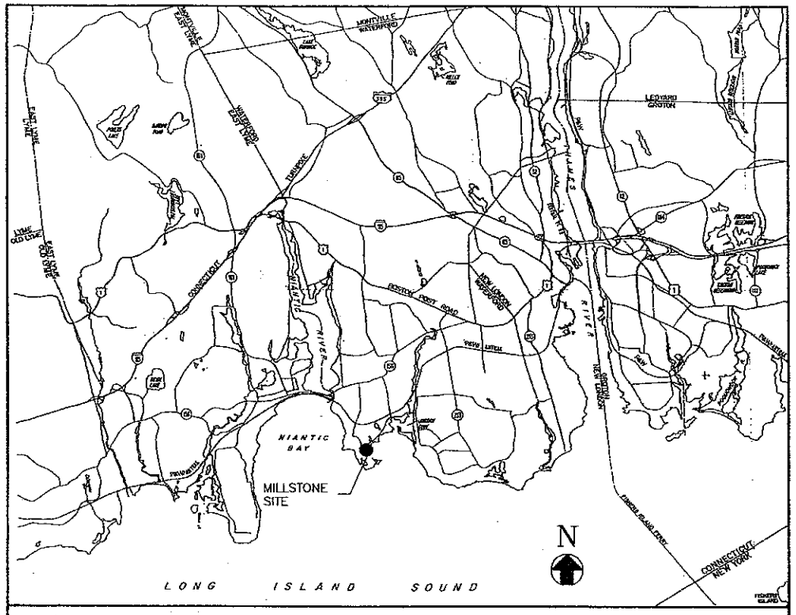
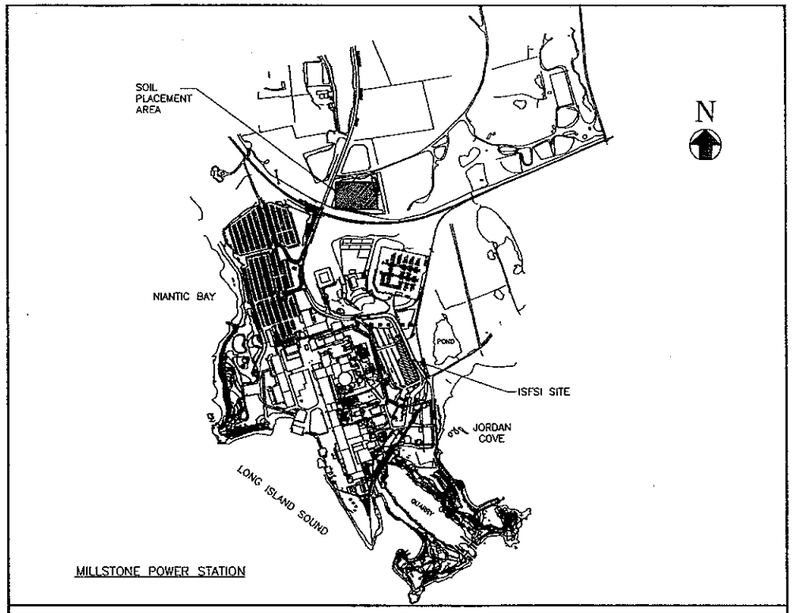
MILLSTONE POWER STATION



SITE LOCUS



SITE LOCATION

LIST OF DRAWINGS

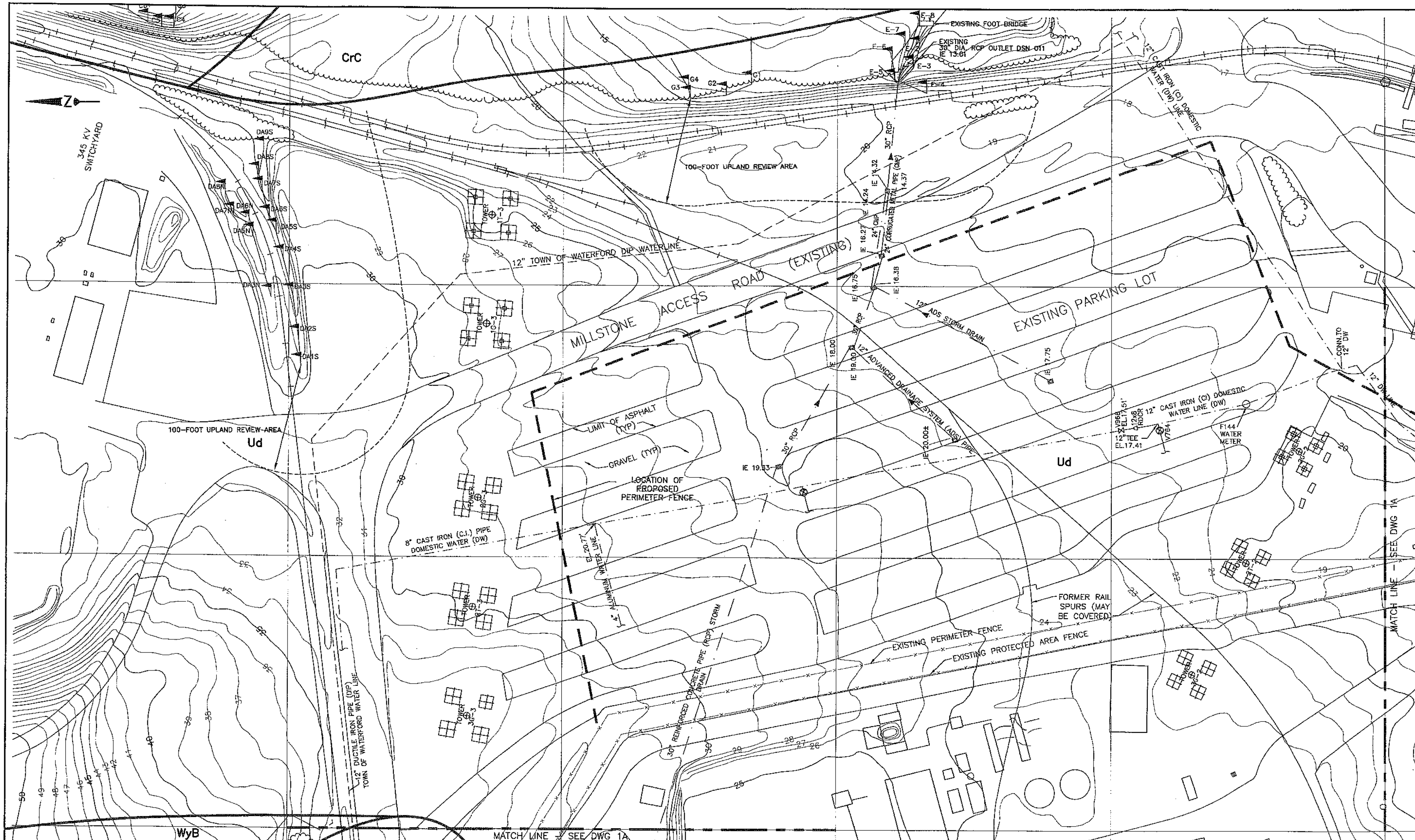
NO.	DESCRIPTION
DWGs-1 & 1A	EXISTING CONDITIONS PLANS
DWG-2	SITE PLAN (PHASE-ONE)
DWG-3	SITE PLAN (FULL BUILD-OUT)
DWGs-4 & 4A	GRADING AND DRAINAGE (PHASE-ONE)
DWG-5	GRADING AND DRAINAGE (FULL BUILD-OUT)
DWG-6	EROSION AND SEDIMENT CONTROL PLAN (PHASE-ONE)
DWG-7	EROSION AND SEDIMENT CONTROL DETAILS
DWG-8	STORMWATER DRAINAGE DETAILS (SHEET 1 OF 2)
DWG-9	STORMWATER DRAINAGE DETAILS (SHEET 2 OF 2)
DWG-10	GENERAL STORAGE MODULE PLAN AND ELEVATIONS
DWG-11	ISFSI SITE SECTIONS AND ELEVATION; UTILITY PROFILE
DWG-12	SOIL PLACEMENT AREA PLAN AND NOTES

GENERAL NOTES:

1. VERTICAL DATUM IS NATIONAL GEODETIC VERTICAL DATUM OF 1929.
2. 250 FOOT GRID BASED ON THE CONNECTICUT STATE PLANE COORDINATE SYSTEM.
3. BASE PLAN USED FOR DRAWING 12 IS FROM METCALF AND EDDY PLAN DATED JANUARY, 2001. ORIGINAL MAP REFERENCES: "NORTHEAST NUCLEAR ENERGY CO., MILLSTONE STATION, SITE PLAN." SCALE 1" = 100', DATED 08/03/99 AND "THE CONNECTICUT LIGHT & POWER CO. , BERLIN, CONNECTICUT" PROJECT: MILLSTONE POINT, SCALE: 1" = 200', SHEET 1 OF 2 AND 2 OF 2".
4. BASE PLAN FOR ALL OTHER DRAWINGS FROM CONNECTICUT LIGHT & POWER PLAN, VS R-21-1, PROJECT NO. 152-1,8, DRAWING NO. 21798. PHOTOGRAMMETRY BY PHOTO SCIENCE, INC., DATE OF PHOTOGRAMMETRY: 4/21/97
5. CERTAIN EXISTING CONDITIONS, INCLUDING CERTAIN UTILITIES, ARE NOT INDICATED ON THE PLANS FOR CLARITY AND SECURITY REASONS. THESE PLANS ARE NOT TO BE USED FOR UTILITY CLEARANCE PURPOSES.
6. POTENTIAL UTILITY INTERFERENCES WILL BE CONFIRMED PRIOR TO CONSTRUCTION. THE ALIGNMENT OF THE PROPOSED OR EXISTING UTILITIES MAY BE ADJUSTED TO AVOID IDENTIFIED INTERFERENCES.

Independent Spent Fuel Storage Installation (ISFSI)
Dominion Nuclear Connecticut Inc.
Waterford, Connecticut

THESE DRAWINGS ARE FOR THE PURPOSE OF CONNECTICUT SITING COUNCIL AND TOWN OF WATERFORD REVIEW.
NOT FOR USE FOR CONSTRUCTION.



LEGEND

Symbol	Description
25	EXISTING GROUND SURFACE ELEVATION CONTOUR
	EXISTING SECURITY FENCE
	EXISTING RAIL SPUR
TOWER 1G-3	EXISTING ELECTRIC HIGH VOLTAGE TRANSMISSION LINE
	LIMIT OF EXISTING ASPHALT PAVEMENT
	EXISTING PLANT WATER SUPPLY LINES
	EXISTING TOWN OF WATERFORD WATER SUPPLY LINE
	EXISTING STORM DRAIN (ARROW INDICATES FLOW DIRECTION)
IE 18.00	EXISTING STORM DRAIN STRUCTURE (IE INDICATES INVERT ELEVATION)
440	EXISTING BUILDING OR STRUCTURE AND IDENTIFICATION
⊗	WATER VALVE
E-6	LOCATION OF WETLAND FLAG
Ud	INDICATES SOIL UNIT AND BOUNDARY
	LOCATION OF PROPOSED PERIMETER FENCE
	100-FOOT UPLAND REVIEW AREA BOUNDARY
CB#9	PROPOSED CATCH BASIN AND IDENTIFICATION
DMH#7	PROPOSED MANHOLE AND IDENTIFICATION
	SILT FENCE/HAY BALE
	GRAVEL FILTER BERM
	CHECK DAM

SCALE: 1"=40'

0 20' 40' 80'

NOTE:

SEE GENERAL NOTES FOR BASE PLAN DETAILS.

I hereby certify that the Inland Wetlands shown on this plan are substantially correct.

Soil Scientist — May 19, 2003 Date

PREPARERS: DR/MS	DATE 05/19/03
REVIEWER: DCS	DATE 05/19/03
ENGINEER: DCS	DATE 05/19/03
PROJECT MANAGER: DCS	DATE 05/19/03

GeoEnvironmental, Inc.
27 Naek Road
Vernon, Connecticut 06066
Phone (860)875-7655 Fax (860)872-2416

ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY

REV	DATE	DESCRIPTION

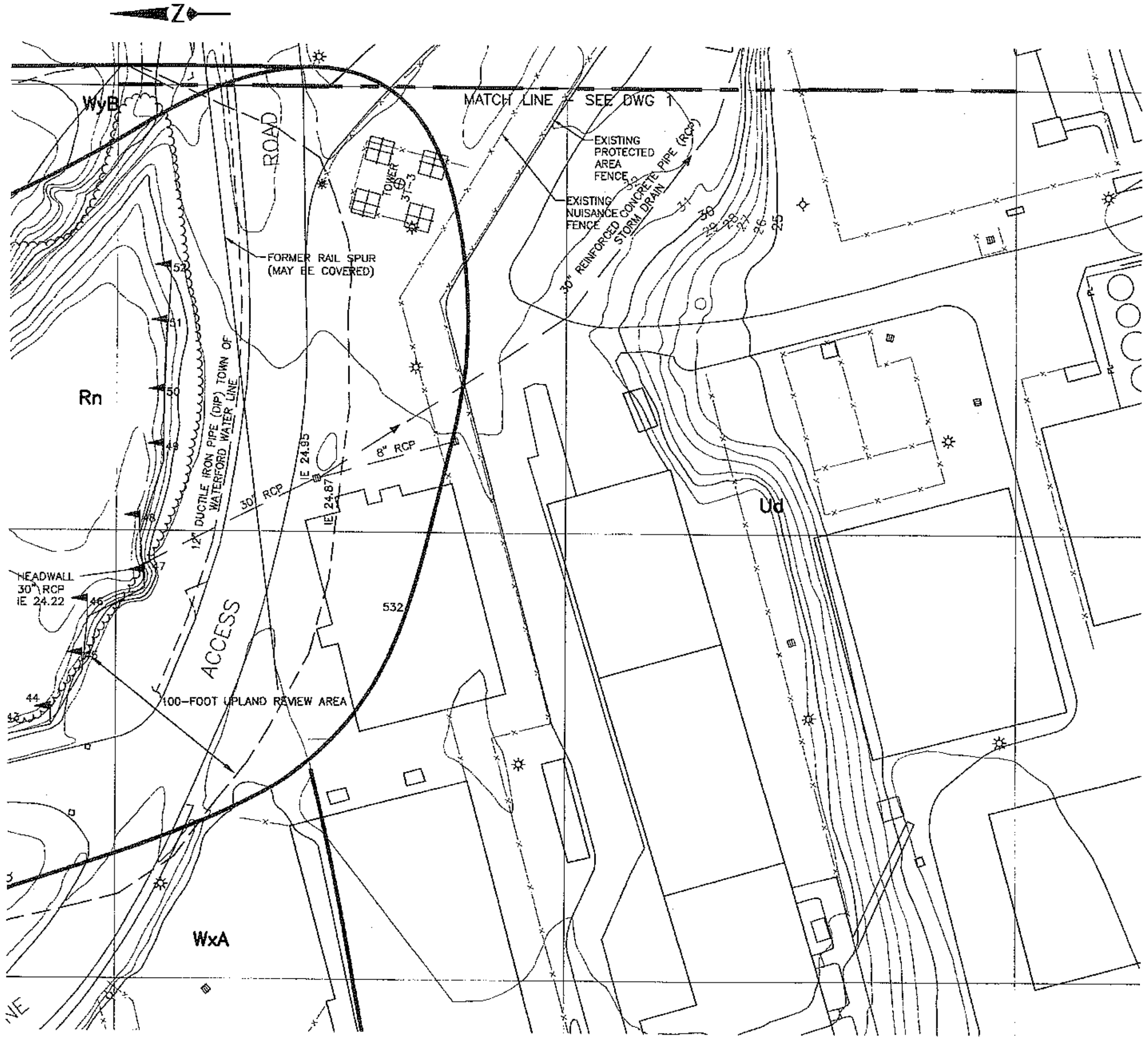
Dominion Nuclear Connecticut Inc.

MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

EXISTING CONDITIONS PLAN

PROJECT NO. TN104

DRAWING NO. DWG-1



SCALE: 1"=40'

0 20' 40' 80'

NOTES:

1. SEE GENERAL NOTES FOR BASE PLAN DETAILS.
2. SEE DWG–1 FOR LEGEND.

I hereby certify that the Inland Wetlands shown on this plan are substantially correct.

[signature] May 19, 2003

Soil Scientist Date

REV	DATE	DESCRIPTION

PREPARER: DR/MS	DATE 05/19/03	
REVIEWER: DCS	DATE 05/19/03	
ENGINEER: DCS	DATE 05/19/03	
PROJECT MANAGER: DCS	DATE 05/19/03	

GZA GeoEnvironmental, Inc.
27 Naek Road
Vernon Connecticut 06066
Phone (860)875-7655 Fax (860)872-2416

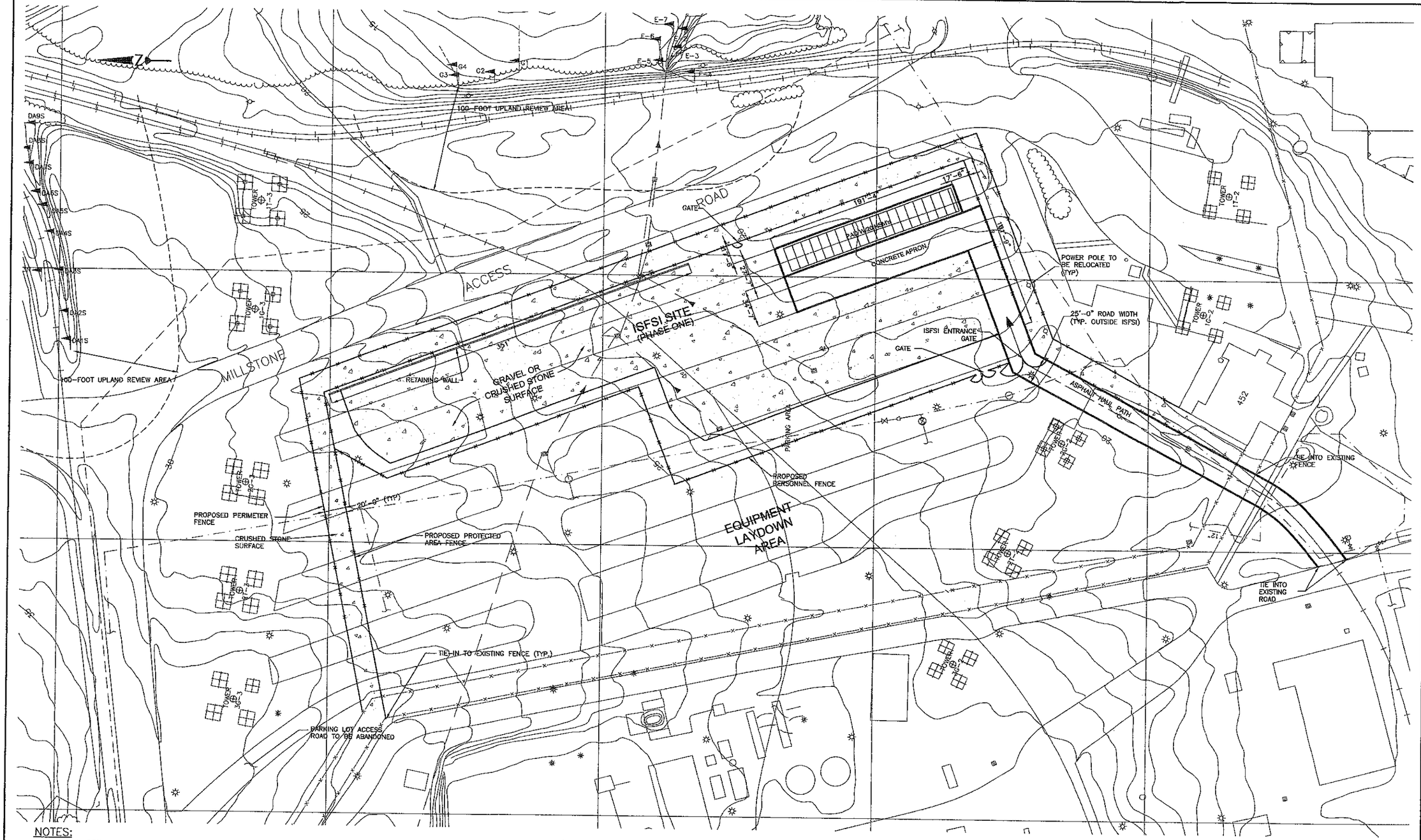
ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY

Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

EXISTING CONDITIONS PLAN

PROJECT NO.
TN104

DRAWING NO.
DWG-1A



NOTES:

1. SEE GENERAL NOTES FOR BASE PLAN DETAILS.
2. SEE DWG. 1 FOR DETAILS OF EXISTING UTILITIES.
3. SEE DWG. 1 FOR LEGEND.
4. EXISTING CONDITIONS ARE SHOWN FADED BACK. PROPOSED CONDITIONS ARE SHOWN WITH DARK LINE.
5. DEMOLITION AND SITE PREPARATION WITHIN ISFSI SITE AND EQUIPMENT LAYDOWN AREA TO INCLUDE:
   - STRIPPING OF TOPSOIL AND ASPHALT PAVEMENT (ISFSI SITE ONLY)
   - EXCAVATION TO PROPOSED SITE GRADES
   - OVER-EXCAVATION OF UNSUITABLE SOIL BENEATH CONCRETE PADS
   - REMOVAL (WITHIN ISFSI SITE) OR ABANDONMENT-IN-PLACE (ELSEWHERE) OF ALL EXISTING STORMWATER DRAINS AND STRUCTURES (DISCONNECT AT LOCATION INDICATED ON DWGS. 4 AND 4A)
   - RELOCATION OF EXISTING LOW VOLTAGE POWER LINES (SOUTH END OF ISFSI SITE AND WITHIN HAUL PATH)
6. LOCATION OF NEW STORMWATER STRUCTURES, INCLUDING CATCH BASINS, MANHOLES AND DRAIN LINES ARE SHOWN ON DWGS. 4 AND 4A.
7. ALSO SEE DWGS. 4, 4A, AND 5 FOR GRADING AND ADDITIONAL DETAILS.
8. SEE DWGS. 4A, 6 AND 7 FOR EROSION AND SEDIMENT CONTROL PLAN AND DETAILS.

SCALE: 1"=40'-0"
0 20' 40' 80'

REV	DATE	DESCRIPTION

ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY
27 Naak Road
Vernon, Connecticut 06066
Phone (860)875-7855 Fax (850)872-2416

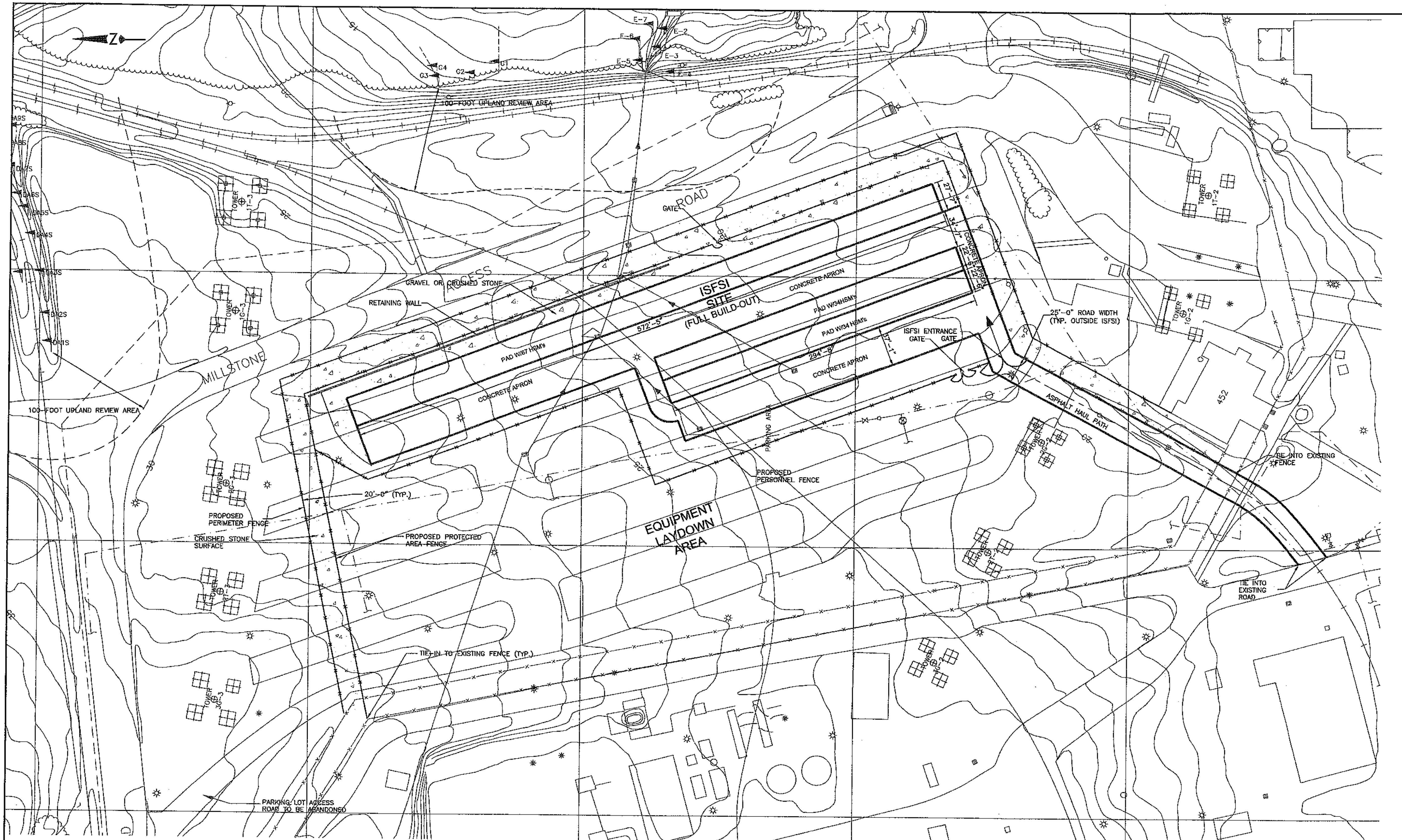
PREPARER: DK/MS	DATE 05/19/03	ENGINEER: DCS	DATE 05/19/03
REVIEWER: DCS	DATE 05/19/03	PROJECT MANAGER: DCS	DATE 05/19/03

Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

SITE PLAN (PHASE-ONE)

PROJECT NO.
TN104

DRAWING NO.
DWG-2



NOTES:

1. SEE GENERAL NOTES FOR BASE PLAN DETAILS.
2. SEE DWG.-1 FOR DETAILS OF EXISTING UTILITIES.
3. SEE DWG.-1 FOR LEGEND.
4. EXISTING CONDITIONS ARE SHOWN FADED BACK. PROPOSED CONDITIONS ARE SHOWN WITH DARK LINE.
5. LOCATION OF NEW STORMWATER STRUCTURES, INCLUDING CATCH BASINS, MANHOLES AND DRAIN LINES ARE SHOWN ON DWGS-4, 4A, AND 5.
6. ALSO SEE DWGS. 4, 4A, AND 5 FOR GRADING AND ADDITIONAL DETAILS.
7. SEE DWGS. 4A, 6 AND 7 FOR EROSION AND SEDIMENT CONTROL PLAN AND DETAILS.

REV	DATE	DESCRIPTION

27 Naek Road
Vernon, Connecticut 06066
Phone (860)875-7655 Fax (860)872-2416

ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY

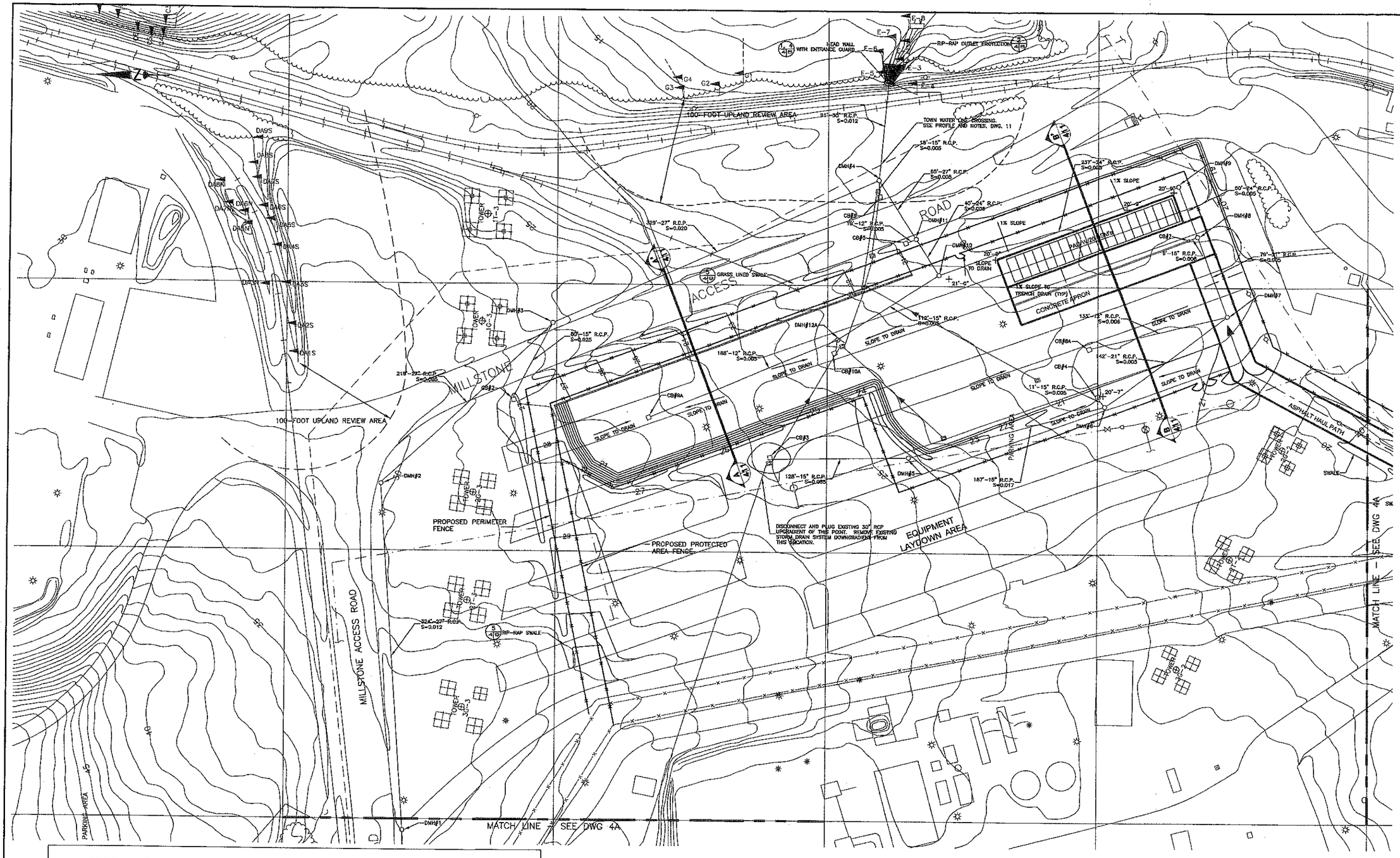
PREPARER: MJS	DATE 05/19/03	
REVIEWER: DCS	DATE 05/19/03	
ENGINEER: DCS	DATE 05/19/03	
PROJECT MANAGER: DCS	DATE 05/19/03	

Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

SITE PLAN (FULL BUILD-OUT)

PROJECT NO. TN104

DRAWING NO. DWG-3



ADDITIONAL LEGEND

+ EL.22'-6"	PROPOSED GROUND SURFACE SPOT ELEVATION
23	PROPOSED GROUND SURFACE ELEVATION CONTOUR
—✕—	PROPOSED SECURITY FENCE
194'-12" R.C.P. S=0.005	PROPOSED STORM DRAIN; PIPE SECTION LENGTH, DIAMETER AND SLOPE
═	PROPOSED TRENCH DRAIN
○ DMH#7	PROPOSED MANHOLE AND IDENTIFICATION

NOTES
1. SEE GENERAL NOTES FOR BASE PLAN DETAILS.
2. SEE DWG.1 FOR LEGEND.
3. SEE DWGS. 8 AND 9 FOR DETAILS.
4. SEE DWG. 6 FOR EROSION AND SEDIMENT CONTROL PLAN.
5. SEE DWG. 11 FOR TOWN WATER LINE CROSSING PROFILE AND NOTES.

SCALE: 1"=40'-0"
0 20' 40' 80'

REV	DATE	DESCRIPTION

GeoEnvironmental, Inc.
27 Naek Road
Vernon, Connecticut 06066
Phone (860)875-7655 Fax (860)872-2416

ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY

PREPARER: MIS	DATE 05/19/03
REVIEWER: DCS	DATE 05/19/03
ENGINEER: PHB	DATE 05/19/03
PROJECT MANAGER: DCS	DATE 05/19/03

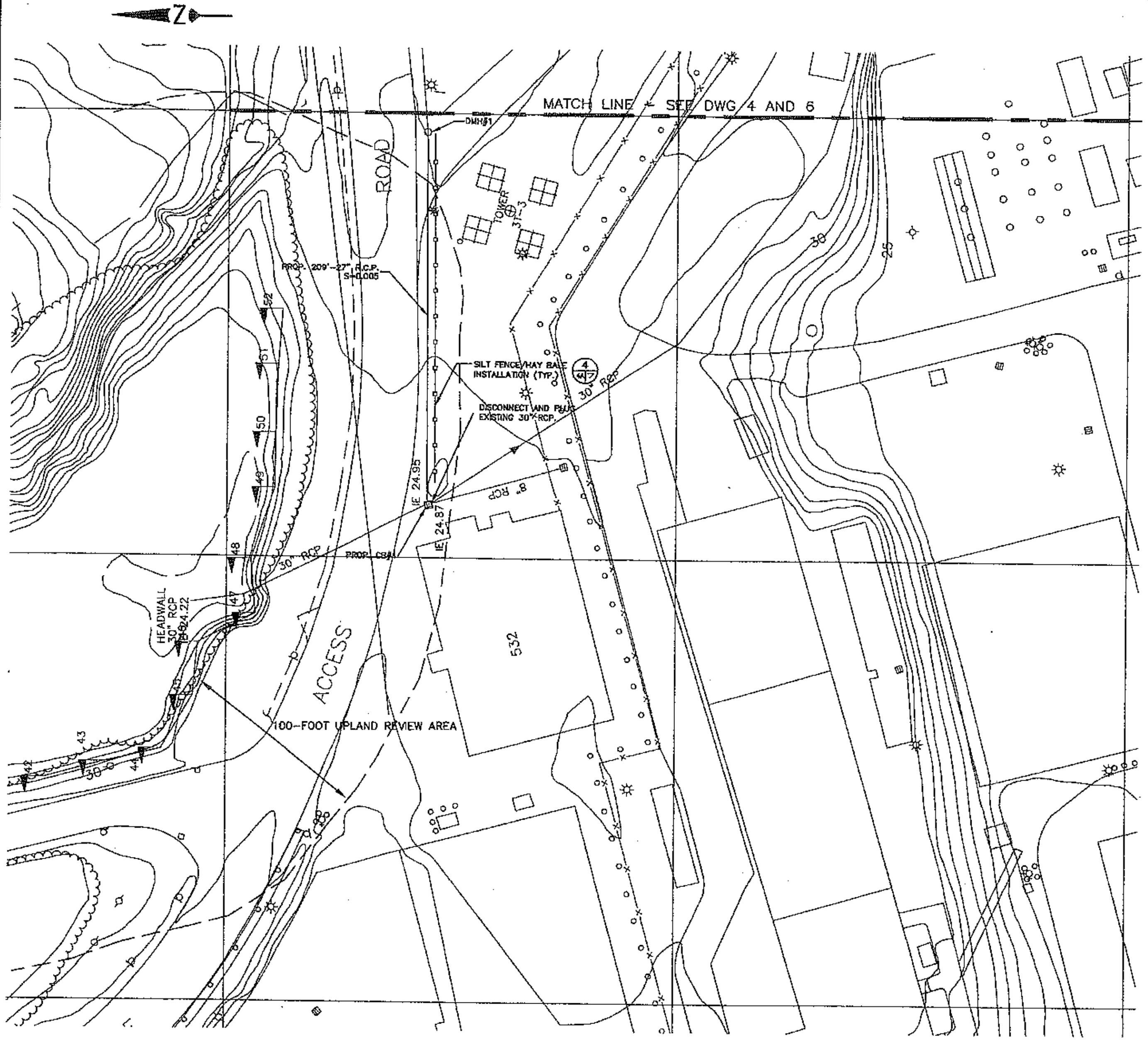
Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

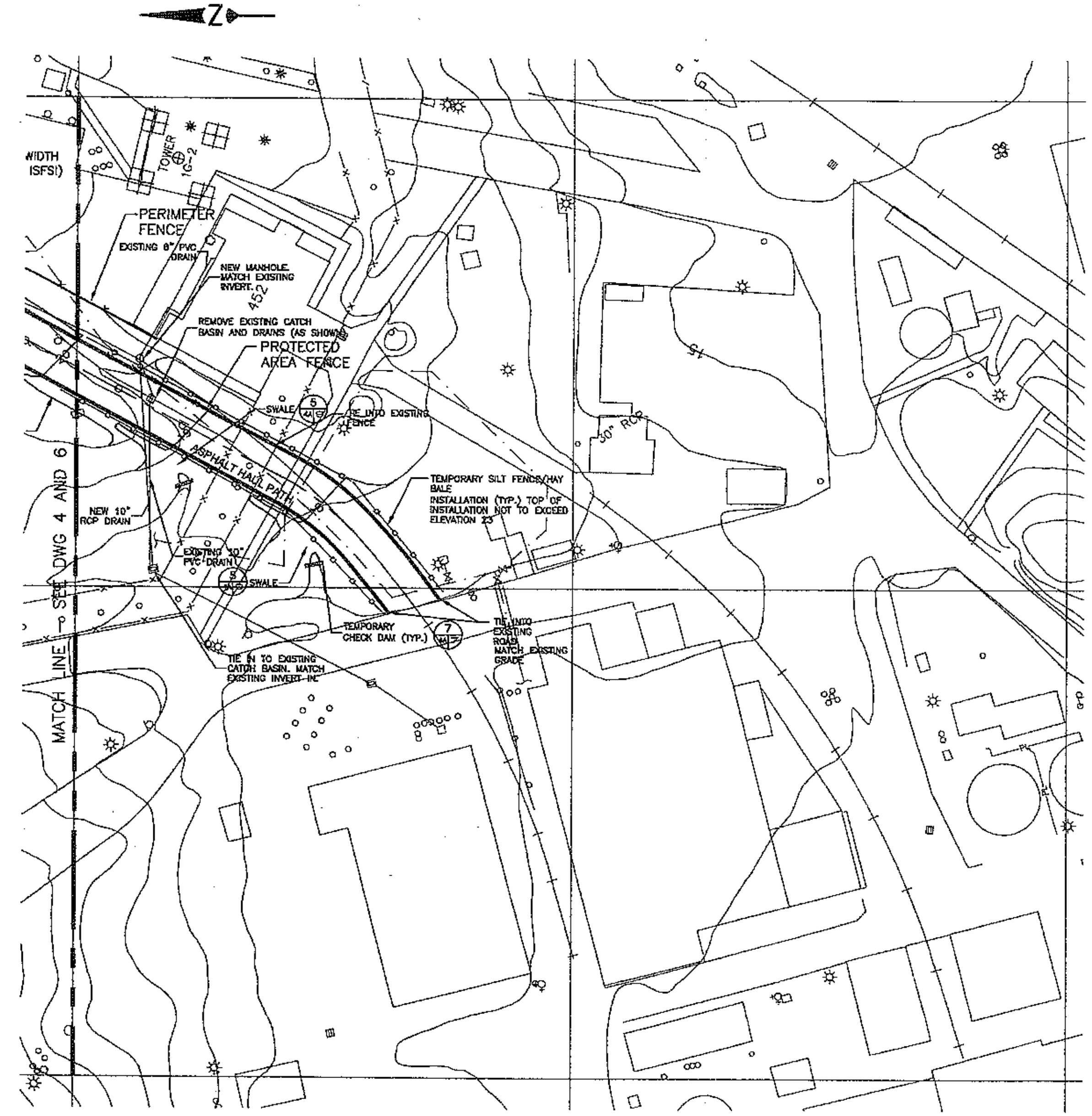
GRADING AND DRAINAGE (PHASE-ONE)

PROJECT NO.
TN104

DRAWING NO.
DWG-4

MJS, 05/14/2003, 15:47:73 | FILE: G:\JOBS\42898.L73\42898-00.DCS\42893-CAD\DWG\REVISED CSC DRAWINGS\CSC-DWG-4REV.DWG





SCALE: 1"=40'-0"

0 20' 40' 80'

NOTES
1. SEE GENERAL NOTES FOR BASE PLAN DETAILS.
2. SEE DWGS. 1 AND 4 FOR LEGEND.
3. SEE DWGS. 7, 8 AND 9 FOR DETAILS.

REV	DATE	DESCRIPTION

GeoEnvironmental, Inc.
27 Naek Road
Vernon, Connecticut 06066
Phone (860)875-7655 Fax (860)872-2416

ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY

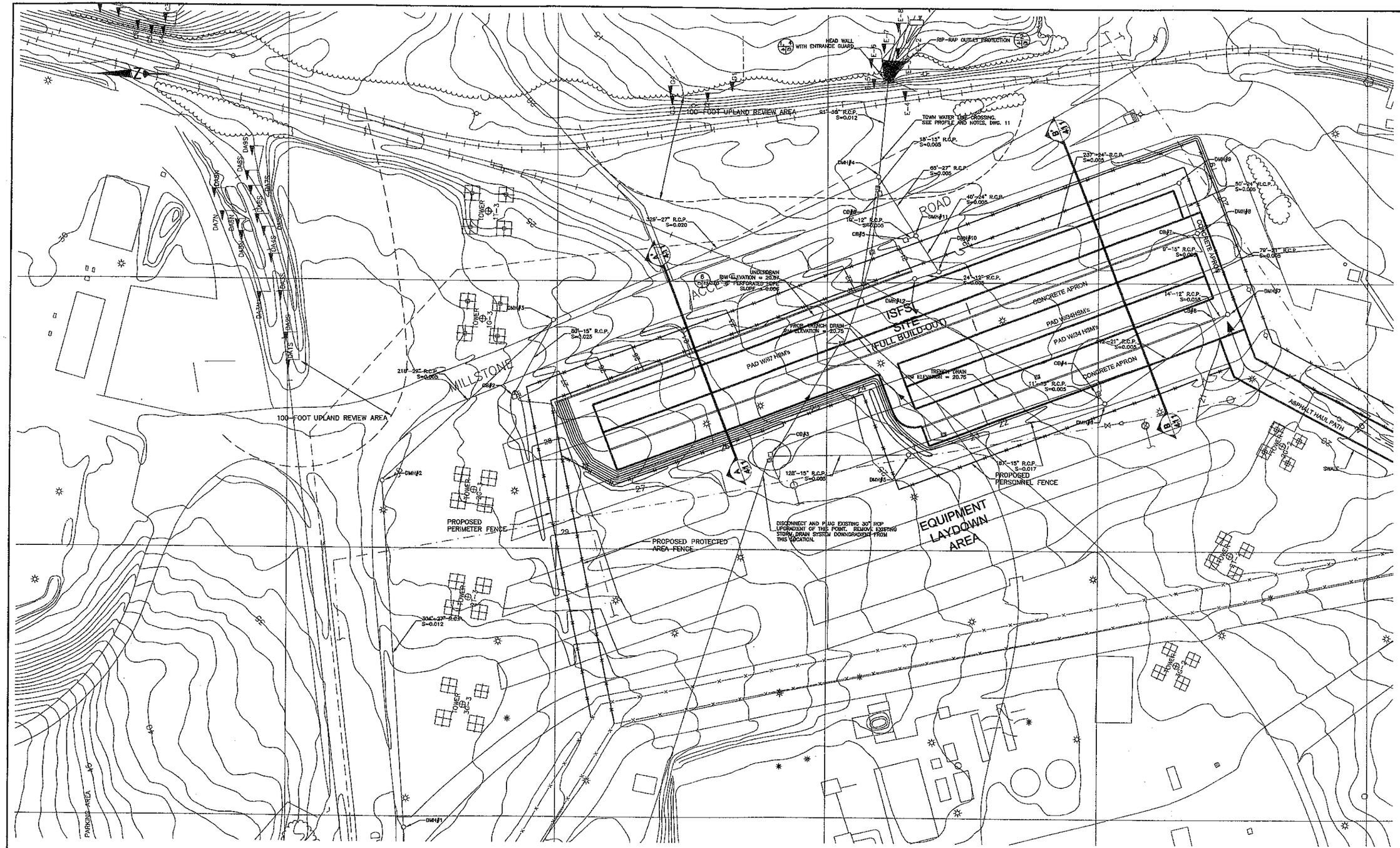
PREPARER: MS	DATE 05/19/03
REVIEWER: DCS	DATE 05/19/03
ENGINEER: PHB	DATE 05/19/03
PROJECT MANAGER: DCS	DATE 05/19/03

Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

GRADING AND DRAINAGE (PHASE-ONE)

PROJECT NO. TN104

DRAWING NO. DWG-4A



NOTES
1. SEE GENERAL NOTES FOR BASE PLAN DETAILS.
2. SEE DWGS. 1 AND 4 FOR LEGEND.
3. SEE DWGS. 8 AND 9 FOR DETAILS.
4. SEE DWG. 11 FOR TOWN WATER LINE CROSSING PROFILE AND NOTES.

REV	DATE	DESCRIPTION

ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY
27 Neek Road
Vernon, Connecticut 06066
Phone (860)875-7055 Fax (860)872-6416

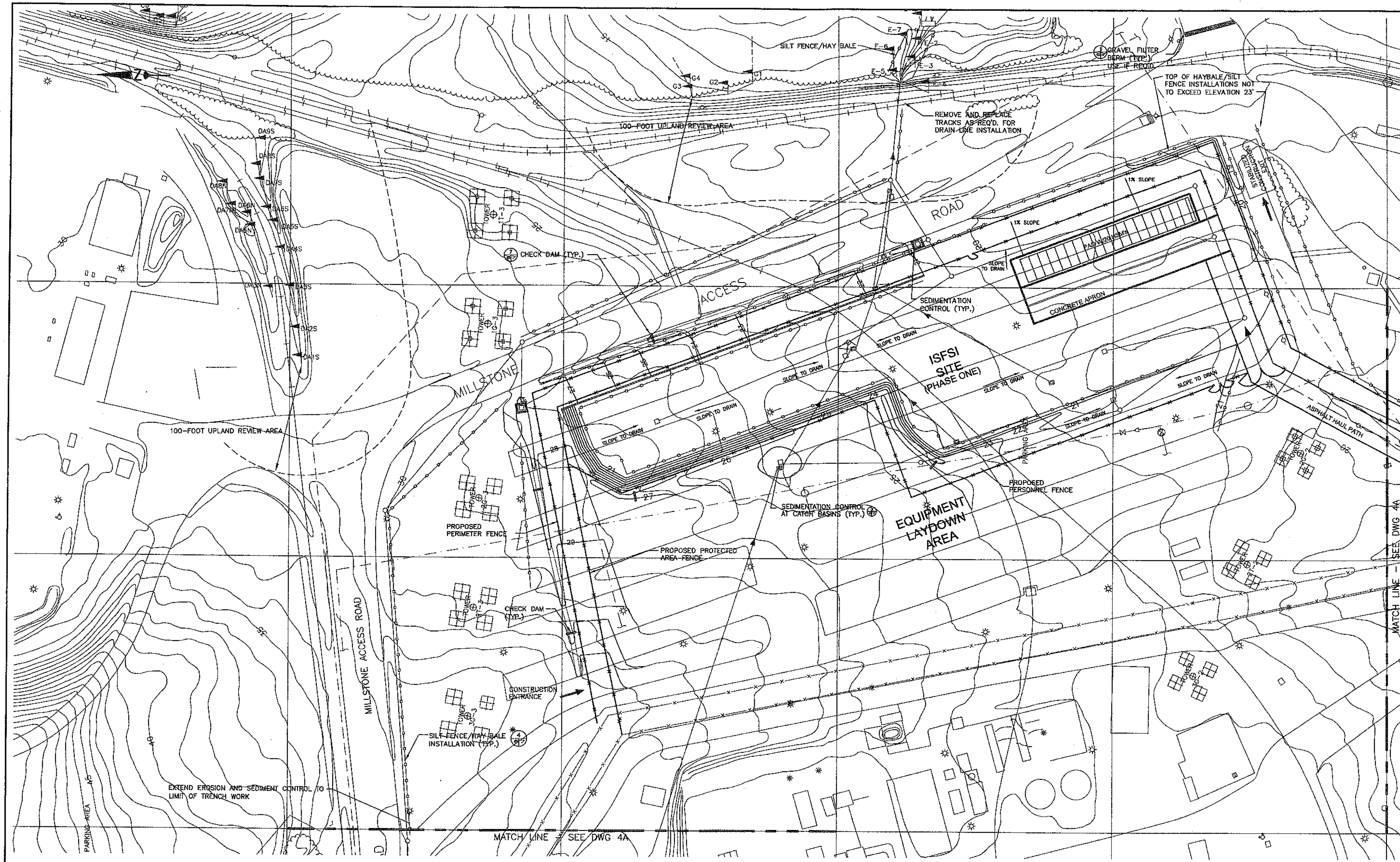
PREPARER: MIS	DATE 05/19/03	ENGINEER: PHB	DATE 05/19/03	PROJECT MANAGER: DCS	DATE 05/19/03
REVIEWER: DCS	DATE 05/19/03				

Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

GRADING AND DRAINAGE (FULL BUILD-OUT)

PROJECT NO.
TN104

DRAWING NO.
DWG-5



SCALE: 1"=40'-0"

0 20' 40' 80'

NOTES:

1. THE ISFSI PROJECT IS SUBJECT TO A STATE OF CONNECTICUT GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS ASSOCIATED WITH CONSTRUCTION ACTIVITY.
2. THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL ARE TO BE FOLLOWED.
3. SEE DWG. 7 FOR NARRATIVE, NOTES AND DETAILS.
4. SILT FENCE AND HAYBALES ARE NOT TO BE PLACED AGAINST ANY PROTECTED AREA FENCE. REMOVE PRIOR TO INSTALLATION OF PROTECTED AREA FENCE.
5. LOCATION OF TEMPORARY SEDIMENTATION TANKS AND BASINS AND CONTRACTOR FUELING AREA ARE NOT INDICATED AND WILL BE DETERMINED PRIOR TO THE START OF CONSTRUCTION.
6. SEE DWG. 4A FOR CONTINUATION OF EROSION AND SEDIMENT CONTROL PLAN.

REV	DATE	DESCRIPTION

PREPARER: MJS	DATE 05/19/03
REVIEWER: DCS	DATE 05/19/03
ENGINEER: PHB	DATE 05/19/03
PROJECT MANAGER: DCS	DATE 05/19/03

GZA GeoEnvironmental, Inc.
27 Naek Road
Vernon, Connecticut 06066
Phone (860)875-7655 Fax (860)872-2416

ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY

Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

EROSION AND SEDIMENT CONTROL PLAN (PHASE I)

PROJECT NO. TN104

DRAWING NO. DWG-6

EROSION AND SEDIMENT CONTROL NARRATIVE

EROSION AND SEDIMENT CONTROL MEASURES
The following erosion and sediment control techniques are to be employed to minimize erosion and transport of sediment to resource areas during the earthwork and construction phases of the project.

SITE STRIPPING
During the site stripping stage, existing pavement, gravel, rail spurs, etc. within the limits of the ISFSI Site are to be cleared and removed. Prior to any site stripping activities, silt fence and hay bale barriers are to be placed around the downgradient outer work perimeter. Disturbance is to be limited to those areas necessary to complete the proposed work.

HAY BALE/SILT FENCE BARRIERS
Hay bale/silt fence barriers are to be placed to trap sediment transported by runoff before it reaches the drainage system or leaves the construction site, in addition to areas where high runoff velocities or high sediment loads are expected. The silt fences and hay bale barriers are to be replaced as determined by periodic field inspections. Hay bales or silt fence should not be placed along the Protected Area fence.

CATCH BASIN INLET PROTECTION
Existing and newly constructed catch basins are to be protected with hay bale barriers (where appropriate) or silt sacks throughout construction.

CONSTRUCTION SITE EXIT
To reduce the tracking of sediment from the construction site onto other areas of the Millstone property and to public ways, as well as the production of airborne dust, stabilized construction exits are to be established at all permanent construction staging areas, including the Soil Placement Area.

SLOPE PROTECTION
Slope protection will be provided using silt fence/hay bale installations. If this erosion and sedimentation control method is ineffective, then the Contractor will install matting such as straw, jute, wood fiber, and/or plastic netting.

TEMPORARY SEDIMENT BASINS
Temporary sediment basins will be designed either as excavations or bermed stormwater detention structures (depending on grading) that will retain runoff for a sufficient period of time to allow suspended soil particles to settle out prior to discharge. These temporary basins will be located based on construction needs as determined by the contractor in consultation with the Owner's resident engineer. A perforated riser surrounded by a crushed stone filter will be typically used to control discharge from the basin. Points of discharge from sediment basins will be stabilized to minimize erosion.

STOCKPILED MATERIALS
Stockpiles created during construction activities are to be surrounded with hay bales and silt fence. Other acceptable alternatives include gravel filter berms laid around the perimeter of the stockpile. Stormwater run-off is to be diverted away from stockpiles.

SLOPE STABILIZATION
Stabilization of open slope surfaces is to be implemented within 14 days after grading or construction activities have temporarily or permanently ceased. Slope stabilization is to be used to minimize erosion on slopes of 3:1 or flatter. Establishment of temporary and permanent vegetative cover is to be established by hydro-seeding or sodding. Mulch is to be used after permanent seeding to protect soil from the impact of falling rain and to increase the capacity of the soil to absorb water. Non-vegetative slope stabilization is to include crushed stone and/or gravel surfacing, underlain by a geotextile separation fabric.

WINTER STABILIZATION
Any areas disturbed at any phase of on-site activity conducted during winter conditions will be temporarily stabilized with hand laid straw mulch, hydro-seeding, mulching, or erosion control blankets as necessary to control erosion during winter storm events.

OUTLET PROTECTION
Appropriate outlet protection, consisting of riprap channel lining, is to be provided at the stormwater outlet to reduce stormwater velocities and enhance sedimentation prior to discharge to the adjacent pond.

CONSTRUCTION DEWATERING
Dewatering may be required for construction. Where possible, the wastewater discharge is to be infiltrated into the ground. However, the existing soils have limited infiltration capacity. Construction dewatering wastewater discharged to a surface water body is to be pre-treated for sediment removal by residing in a fractionation/sedimentation tank or temporary sediment basin prior to discharge.

EQUIPMENT FUELING
Equipment fueling and other activities including petroleum, oil and other potentially hazardous substances is to be performed at a pre-approved, designated area with appropriate spill prevention and control measures. This area is to be located on an asphalt paved surface, away from catch basins and other drainage structures, within the Equipment Laydown Area. Portable secondary containment is to be used, and sorbent materials are to be placed around the perimeter of the fueling area, during all fueling activities.

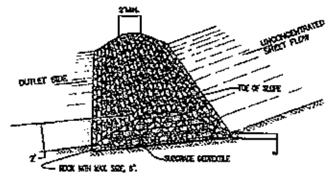
INSPECTION AND MAINTENANCE
Inspection and maintenance is to be performed during construction to ensure that the Erosion and Sediment Control measures are correctly installed and maintained. Inspections of the active work areas are to occur weekly and after every significant precipitation event (exceeding ½-inch precipitation).

The focus of the inspection will be to determine: 1) whether or not the measure was installed/performed correctly; 2) whether or not there has been damage to the measure since it was installed or performed; and 3) what should be done to correct any problems with the measure. Each measure is to be observed to determine if it is still effective. In some cases, specific measurements may be taken to determine if maintenance of the measures are required. For example, sediment depths may be measured to determine if cleaning or replacement is required.

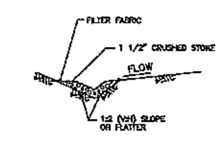
SITE MANAGER
Prior to construction a Site Manager will be designated, who will be responsible for installation, monitoring, inspection and correction of erosion and sediment control measures.

REPORTING AND RECORD KEEPING
In addition to the aforementioned inspection and maintenance procedures, the contractor is to keep a record of the following information:
1. The dates when major grading activities occur in a particular area;
2. The dates when construction activities cease in an area, temporarily or permanently; and
3. The dates when an area is stabilized, temporarily or permanently.
4. A copy of the Stormwater Pollution Control Plan and all reports generated during construction activities are to be retained as required by regulation.

SEQUENCE OF GRADING AND CONSTRUCTION ACTIVITIES
The following provides recommendations for the general sequence of work:
1. Install stabilized construction exits.
2. Install perimeter hay bales and silt fence.
3. Install check dams in areas subject to concentrated flow.
4. Construct the drainage trunkline along the Access Road.
5. Construct the new outlet structure.
6. Disconnect existing trunkline.
7. Perform stripping (removal of existing asphalt and gravel surface) of the ISFSI Site.
8. Prepare temporary sedimentation basins, as may be required.
9. Begin earthwork within the ISFSI Site.
10. Provide temporary stabilization of exposed earth slopes.
11. Provide protection of soil stockpiles.
12. During stripping and excavation, install berms to collect site runoff as required.
13. In areas where flow is concentrated, install crushed stone or hay bale check dams.
14. Upon completion of earthwork within the ISFSI Site, install remaining drainage structures.
15. Provide catch basin inlet protection at newly constructed catch basins.
16. Construct concrete pads and aprons, and gravel surface within ISFSI Site.
17. Complete grading.
18. Remove accumulated sediment from basins and other sediment control devices.
19. Perimeter erosion control will remain in place until permanent stabilization has been achieved.

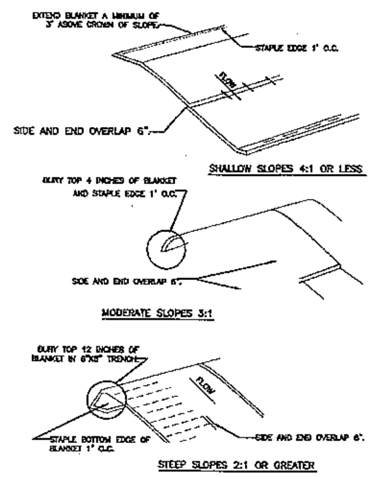


GRAVEL FILTER BERM
NOT TO SCALE



NOTES:
STABILIZE INLETS, OUTLETS, AND SLOPES.

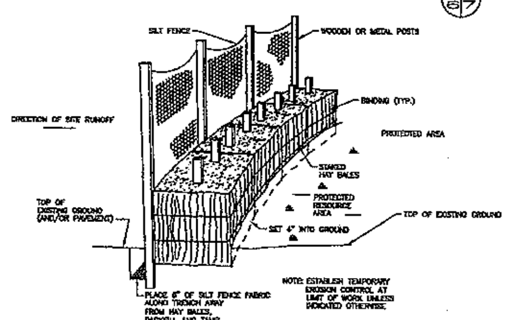
1/67 TYPICAL TEMPORARY DRAINAGE SWALE
NOT TO SCALE



NOTES:
1. ON SHALLOW SLOPES BLANKETS MAY BE APPLIED ACROSS THE SLOPE.

MATTING PROTECTION
NOT TO SCALE

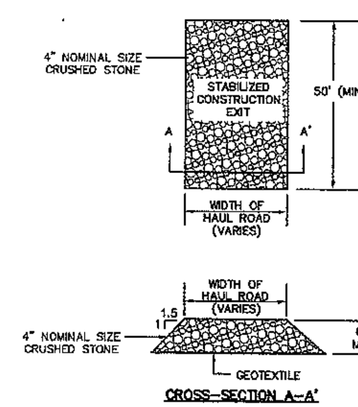
2/67



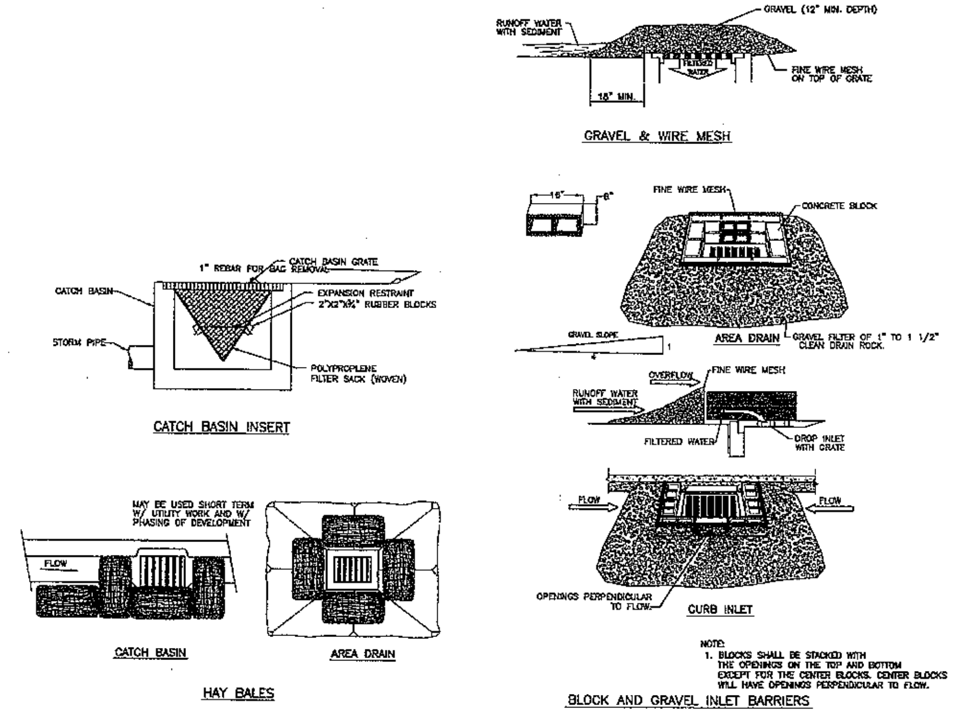
CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED WHERE SPECIFIED ON DRAWINGS IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF FOUR (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY TWO WOODEN STAKES DRIVEN THROUGH THE BALE. THE FIRST STAKE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER.
4. IN EXISTING PAVEMENT AREAS, THE CONTRACTOR SHALL SAWCUT AND REMOVE PAVEMENT AS NECESSARY TO INSTALL HAYBALES AND SILTATION FENCE AS SHOWN (i.e. PAVEMENT SHALL BE REMOVED TO ACCOMODATE TOEING-IN OF HAYBALES AND SILTATION FENCE).
5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

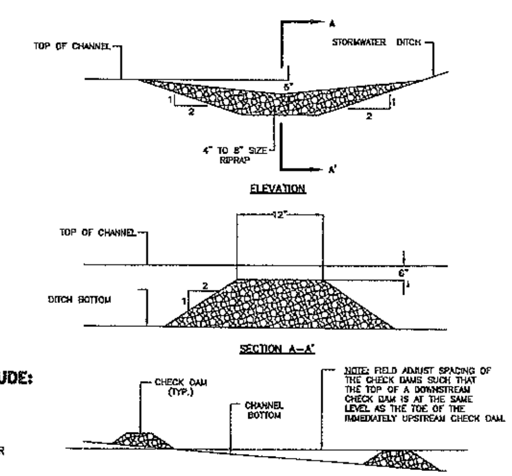
4/67 HAY BALE SILT FENCE BARRIER DETAIL
NOT TO SCALE



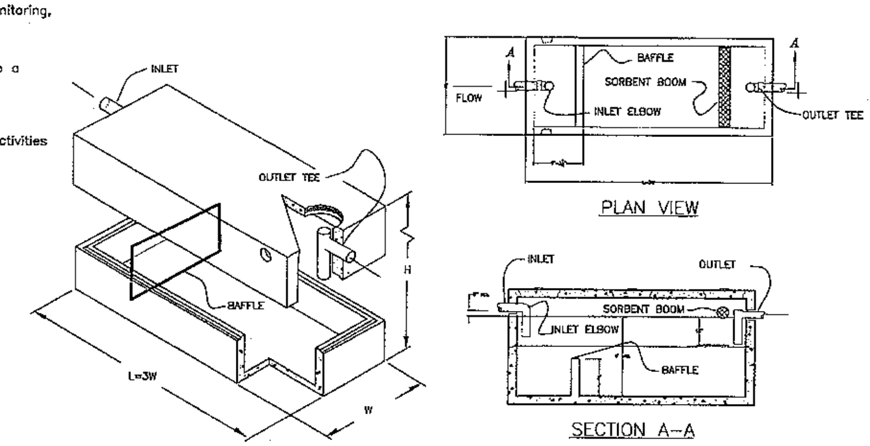
5/67 STABILIZED CONSTRUCTION EXIT (TYPICAL)
NOT TO SCALE



3/67 CATCH BASIN INLET PROTECTION
NOT TO SCALE



7/67 DETAILS – ROCK CHECK DAM
NOT TO SCALE



SEDIMENTATION TANK
NOT TO SCALE

GUIDELINES FOR PROPER DESIGN AND USE OF SEDIMENTATION TANKS INCLUDE:

SIZE TANKS TO ADEQUATELY HANDLE DEWATERING FLOWS.

TANKS SHOULD HAVE A MINIMUM DEPTH OF 4 FEET BELOW OUTLET PIPE.

TANK SURFACE AREA (LENGTH X WIDTH) SHOULD EQUAL THE MAXIMUM ANTICIPATED PUMPING RATE (GALLONS PER MINUTE) 0.8 SF/GPM. THE TANK LENGTH SHOULD BE AT LEAST THREE TIMES THE TANK WIDTH.

PLACE THE PUMP DISCHARGE HOSE AT THE INLET END OF THE TANK, AS FAR AS POSSIBLE FROM THE TANK OUTLET TO ENSURE USE OF THE ENTIRE TANK LENGTH. INSTALL A 15-INCH-LONG 90° ELBOW ON THE PUMP DISCHARGE HOSE TO DIRECT THE FLOW TOWARD THE TANK BOTTOM.

INSTALL A BAFFLE INSIDE THE TANK TO SLOW THE FLOW WITHIN THE TANK. THE BAFFLE SHOULD HAVE A MINIMUM HEIGHT OF ONE-HALF THE TANKS'S DEPTH AND SHOULD BE LOCATED 3 FEET FROM THE INLET END.

PLACE A SORBENT BOOM IN THE TANK NEAR THE OUTLET TO AID IN REMOVING PETROLEUM PRODUCTS.

INSTALL A PIPE TEE OF BAFFLE INSIDE THE TANK AT THE OUTLET TO PREVENT DISCHARGE OF FLOATABLES FROM THE TANK'S SURFACE WATER. THIS OUTLET FITTING SHOULD EXTEND 15 INCHES BELOW THE OUTLET INVERT AND UPWARDS TO A HEIGHT 2 INCHES BELOW THE TOP OF THE TANK.

LOCATE THE INVERT OF THE OUTLET PIPE AT LEAST 3 INCHES BELOW INVERT OF THE INLET PIPE.
HAVE THE OUTLET HOSE DISCHARGE DIRECTLY TO A CATCH BASIN OR OTHER DRAINAGE STRUCTURE.

IF THE TANK HAS A CLOSED TOP, ADD ACCESS HATCHES AT BOTH INLET AND OUTLET ENDS FOR INSPECTION, SAMPLING AND CLEANING.

INSPECT TANKS DAILY TO INSURE PROPER MAINTENANCE.

CLEAN TANKS WHEN SEDIMENT REACHES 1/4 OF THE TANK'S DEPTH OR WEEKLY, WHICHEVER COMES FIRST. TAKE TANKS OUT OF SERVICE WHEN THEY ARE BEING CLEANED. PLACE SEDIMENT REMOVED FROM THE TANK WITH OTHER MATERIAL EXCAVATED FROM THE SITE.

ENSURE THAT HOSES ARE NOT LEAKING AND THAT TANKS ARE NOT OVERFLOWING, THUS PREVENTING WATER FROM BYPASSING THE TANK AND ENTERING A DRAINAGE SYSTEM.

REV	DATE	DESCRIPTION

PREPARER: MJS	DATE 05/19/03
REVIEWER: DCS	DATE 05/19/03
ENGINEER: PHB	DATE 05/19/03
PROJECT MANAGER: DCS	DATE 05/19/03

GeoEnvironmental, Inc.
27 Naek Road
Vernon, Connecticut 06066
Phone (860)875-7655 Fax (860)872-2416

ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY

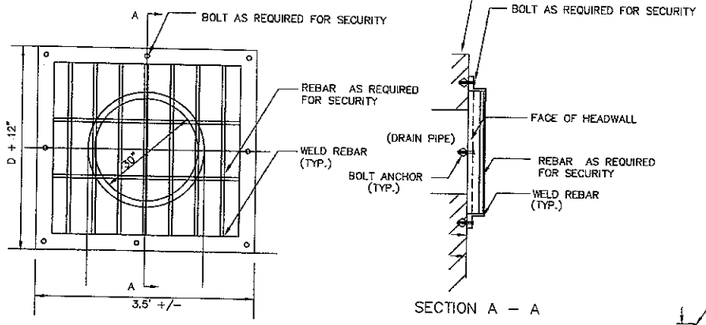
Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

EROSION & SEDIMENT CONTROL DETAILS

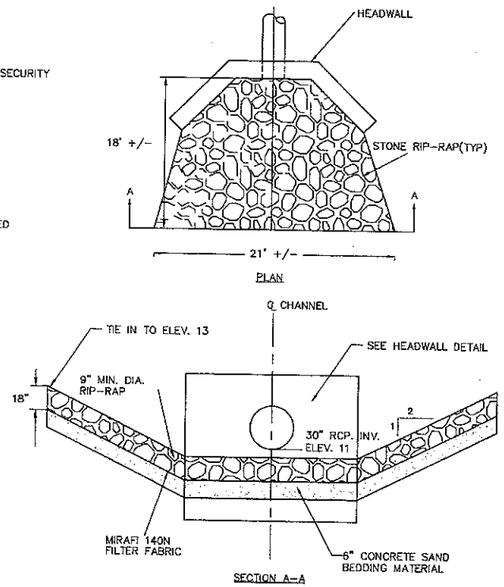
PROJECT NO. TN104

DRAWING NO. DWG-7

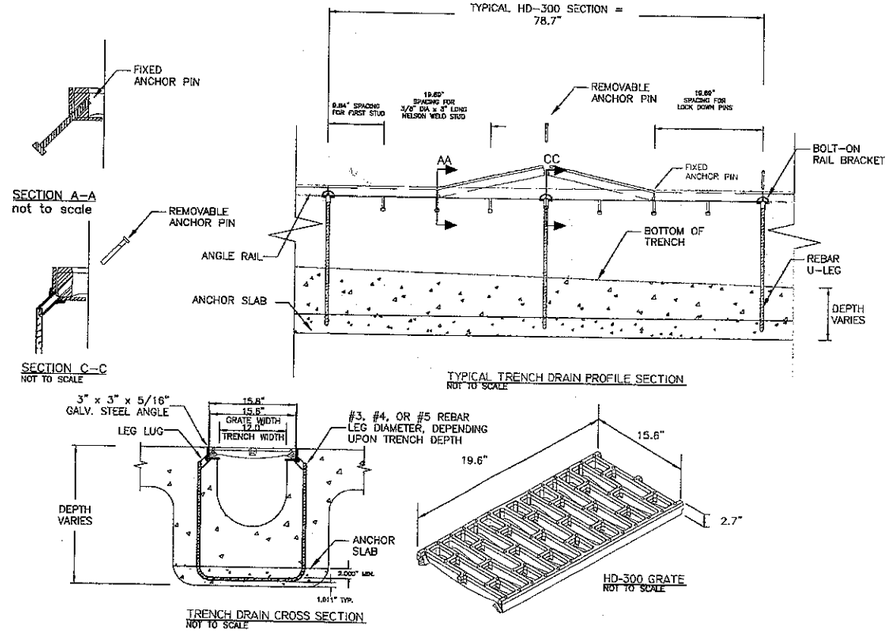
MJG, 05/14/2003, 11:02:28 | FILE: G:\J085\42898L72\42898-00.DCS\47888-CAD\DWG\REVISED CSC DRAWINGS\CSC-DWG-7REV.DWG



1 PIPE-END ENTRANCE GUARD
NOT TO SCALE



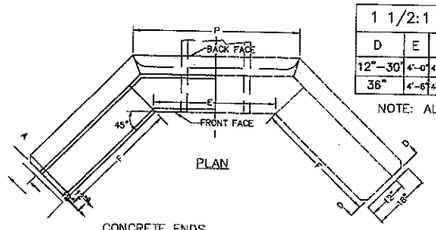
2 RIP-RAP OUTLET PROTECTION
NOT TO SCALE

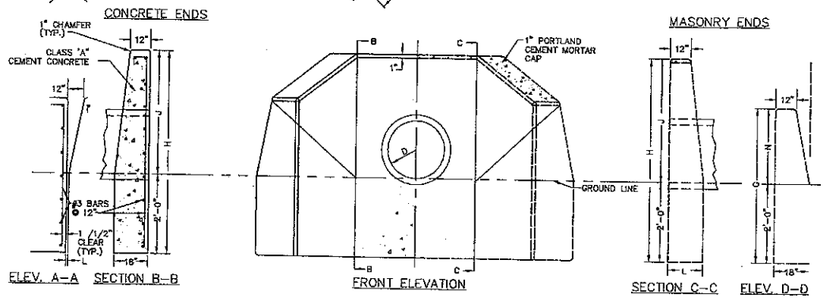


3 TYPICAL HD-300 TRENCH DRAIN SYSTEM SECTION
NOT TO SCALE

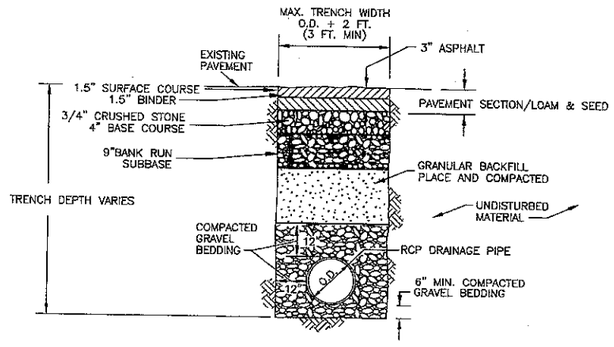
1 1/2:1 AND 2:1 SLOPES								1 1/2:1 SLOPE	2:1 SLOPE
D	E	G	H	J	L	N	P	F	F
12"–30"	4'–0"	4'–0"	5'–8"	3'–6"	1'–6"	2'–0"	5'–3"	3'–0"	4'–3"
36"	4'–6"	4'–3"	6'–0"	4'–0"	1'–8"	2'–3"	5'–11"	3'–6"	5'–0"

NOTE: ALL CONCRETE DIMENSIONS SHOWN ARE MINIMUM.

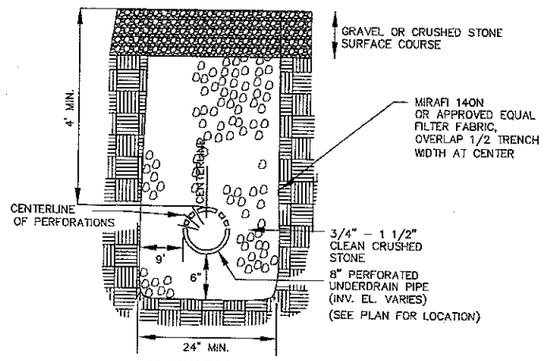




4 PIPE HEADWALL
NOT TO SCALE



5 TYPICAL TRENCH SECTION
NOT TO SCALE



6 UNDERDRAIN
NOT TO SCALE

REV	DATE	DESCRIPTION

ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY
27 Naek Road
Vernon, Connecticut 06066
Phone (860)875-7555 Fax (860)872-2416

PREPARER: MIS	DATE: 5/19/03	ENGINEER: PHB	DATE: 5/19/03
REVIEWER: DCS	DATE: 5/19/03	PROJECT MANAGER: DCS	DATE: 5/19/03

Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

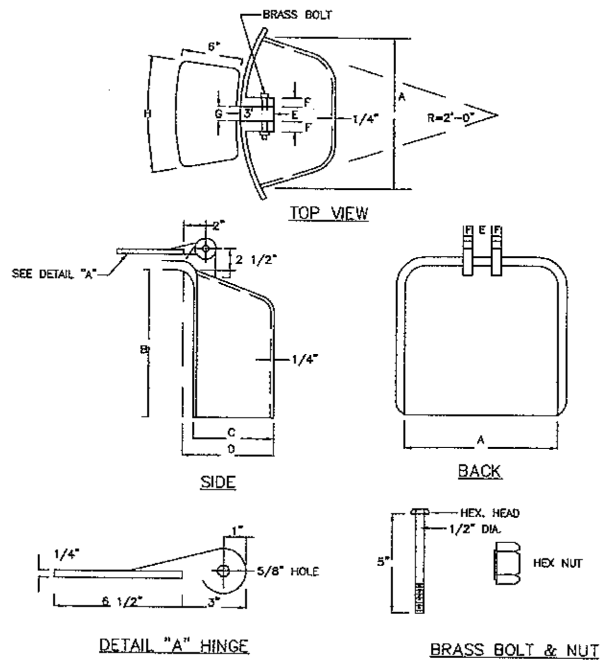
STORMWATER DRAINAGE DETAILS
(SHEET 1 OF 2)

PROJECT NO.
TN104

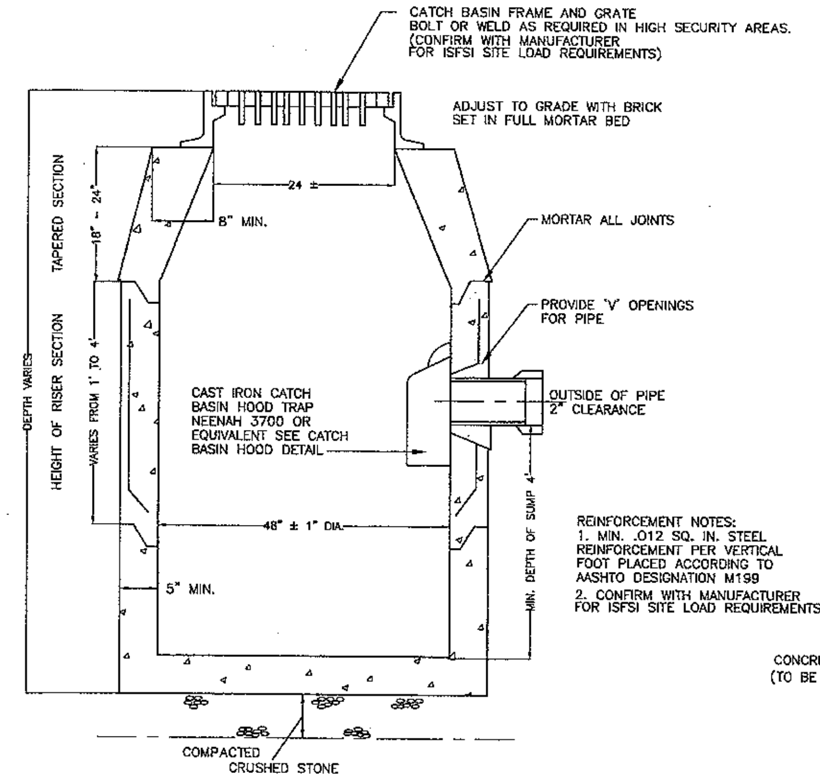
DRAWING NO.
DWG-8

DIMENSIONS	A	B	C	D	E	F	G	H
8" AND 10" PIPE	15"	15"	8"	9"	2"	7/8"	1 7/8"	14"
12" AND 15" PIPE	18"	18"	10"	1 1/4"	2"	1"	1 7/8"	14"

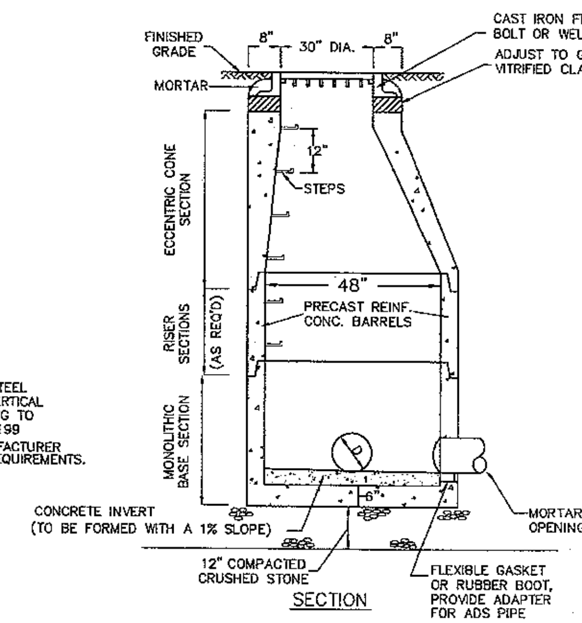
NOTE : HOODS TO BE GRAY CAST IRON AASHTO CLASS # 30



1 CATCH BASIN HOOD
NOT TO SCALE



2 CATCH BASIN DETAIL
NOT TO SCALE



GENERAL NOTES:

1. CO-POLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE MANHOLE.
2. "V" PIPE OPENINGS w/ 2" MAX. OUTSIDE PIPE CLEARANCE TO BE CAST AS REQUIRED.
3. JOINT SEALANT SHALL BE PREFORMED BUTYL RUBBER MASTIC TAPE SEAL THAT COMPLIES w/ AASHTO SPECIFICATION M-198 OR SYNTHETIC RUBBER GASKET THAT COMPLIES w/ C-443 OR C-361.
4. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

REINFORCEMENT NOTES:

1. MIN. .012 SQ. IN. STEEL REINFORCEMENT PER VERTICAL FOOT PLACED ACCORDING TO AASHTO DESIGNATION M199
2. CONFIRM WITH MANUFACTURER FOR ISFSI SITE LOAD REQUIREMENTS.

3 48" DIAMETER PRECAST DRAIN MANHOLE (DMH)
NOT TO SCALE

PROP. DMH#1
RIM=30.50
INV. IN (CB#1)=23.82
INV. OUT (DMH#2)=23.82

PROP. DMH#2
RIM=30.10
INV. IN (DMH#1)=19.99
INV. OUT (DMH#3)=19.99

PROP. DMH#3
RIM=27.50
INV. IN (DMH#2)=18.90
INV. IN (CB#2)=20.00
INV. OUT (DMH#4)=18.90

PROP. DMH#4
RIM=19.70
INV. IN (DMH#3)=12.32
INV. IN (DMH#11)=12.32
INV. IN (CB#6)=15.18
INV. OUT=12.07

PROP. DMH#5
RIM=24.20
INV. IN (CB#3)= 19.61
INV. OUT (DMH#6)=19.61

PROP. DMH#6
RIM=21.00
INV. IN (DMH#5)=16.39
INV. IN (CB#4)=16.39
INV. OUT (DMH#7)=15.90

PROP. DMH#7
RIM=20.90
INV. IN (DMH#6)=15.19
INV. IN (CB#8)=15.94
INV. OUT (DMH#8)=15.19

PROP. DMH#8
RIM=20.90
INV. IN (DMH#7)=14.79
INV. IN (CB#7)=15.70
INV. OUT (DMH#9)=14.54

PROP. DMH#9
RIM=20.75
INV. IN (DMH#8)=14.29
INV. OUT (DMH#10)=14.29

PROP. DMH#10
RIM=20.90
INV. IN (DMH#9)=13.10
INV. IN (DMH#12)=14.10
INV. IN (DMH#12A)=14.72
INV. OUT (DMH#11)=13.10

PROP. DMH#11
RIM=20.50
INV. IN (DMH#10)=12.90
INV. IN (CB#5)=16.45
INV. OUT (DMH#4)=12.65

PROP. DMH#12
RIM=20.75
INV. IN (UNDERDRAIN)=14.60
INV. OUT (DMH#10)=14.27

PROP. DMH#12A
RIM=20.75
INV. IN(CB#9A)=15.56
INV. IN (CB#10A)=15.56
INV. OUT (DMH#10)=15.31

PROP. CB#1
RIM=30.95
INV. IN (30")=24.95
INV. IN (8")=24.87
INV. OUT (DMH#1)=24.87

PROP. CB#2
RIM=26.50
INV. OUT (DMH#3)=22.00

PROP. CB#3
RIM=24.50
INV. OUT (DMH#5)=20.25

PROP. CB#4
RIM=20.70
INV. OUT (DMH#6)=16.45

PROP. CB#5
RIM=20.50
INV. OUT (DMH#11)=16.50

PROP. CB#6
RIM=19.50
INV. OUT (DMH#4)=15.25

PROP. CB#7
RIM=20.75
INV. OUT (DMH#8)=15.75

PROP. CB#8
RIM=20.75
INV. OUT (DMH#7)=16.75

PROP. CB#8A
RIM=20.60
INV. OUT (DMH#7)=16.60

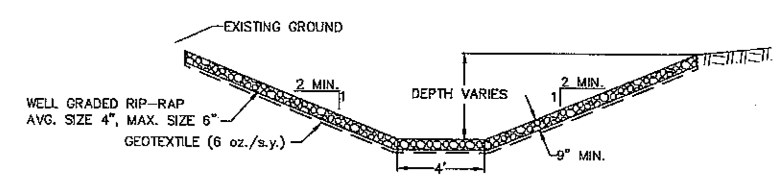
PROP. CB#9A
RIM=20.50
INV. OUT (CB#12A)=16.50

PROP. CB#10A
RIM=20.50
INV. OUT (DMH#12A)=15.93

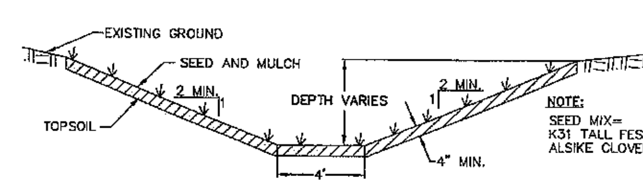
NOTES:

1. CB#8A, CB#9A, CB#10A, AND DMH#12A TO BE REMOVED UPON FINAL BUILD-OUT.

4 DRAINAGE STRUCTURE SCHEDULE



RIP-RAP LINED STORMWATER SWALE
NOT TO SCALE



NOTE:
SEED MIX=
K31 TALL FESCUE @ 60 lbs/acre
ALSIKE CLOVER @ 10 lbs/acre

5 GRASS LINED STORMWATER SWALE
NOT TO SCALE

REV	DATE	DESCRIPTION

PREPARER: MJS	DATE 05/19/03
REVIEWER: DCS	DATE 05/19/03
ENGINEER: PHB	DATE 05/19/03
PROJECT MANAGER: DCS	DATE 05/19/03

GZA GeoEnvironmental, Inc.
27 Naek Road
Vernon, Connecticut 06066
Phone (860)875-7655 Fax (860)872-2416

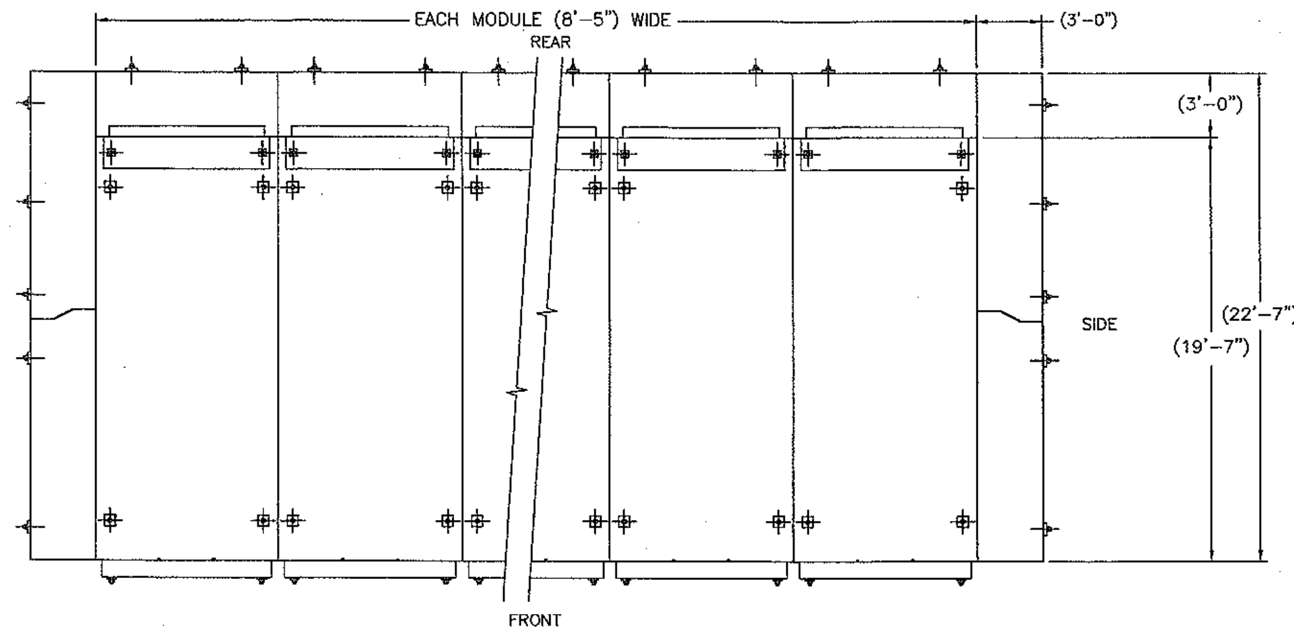
ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY

Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

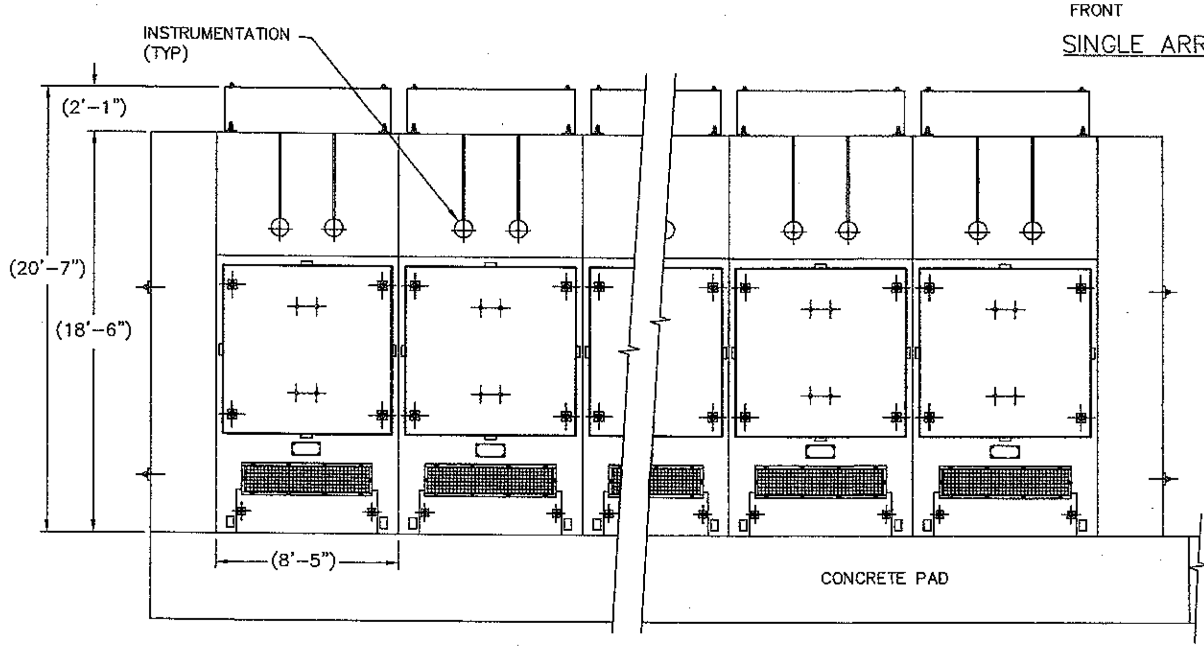
STORMWATER DRAINAGE DETAILS (SHEET 2 OF 2)

PROJECT NO. TN104

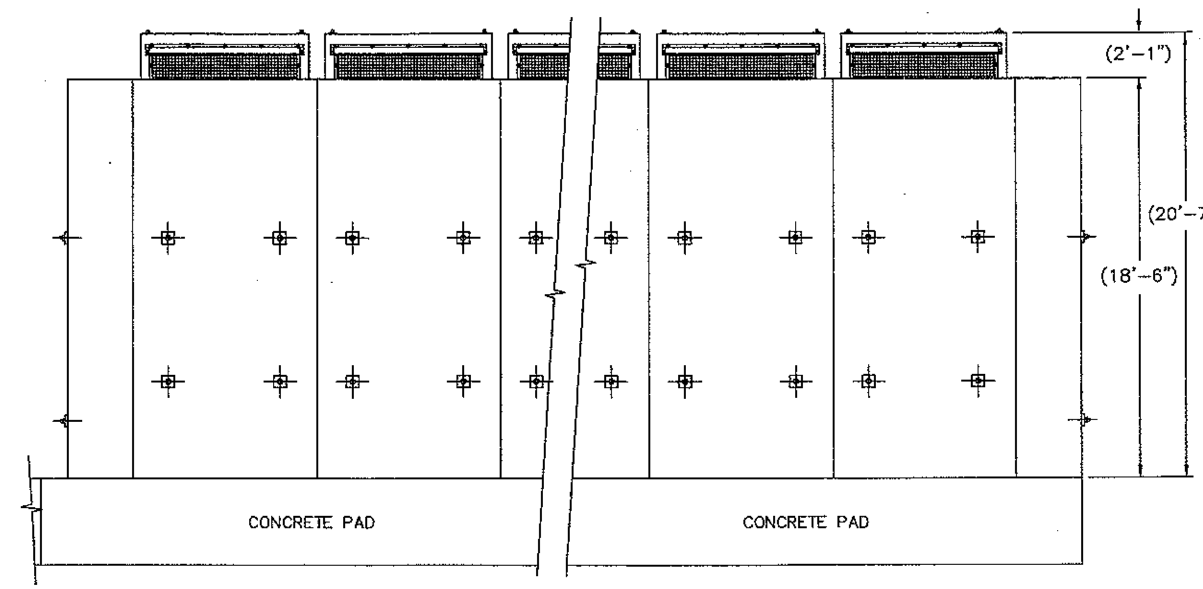
DRAWING NO. DWG-9



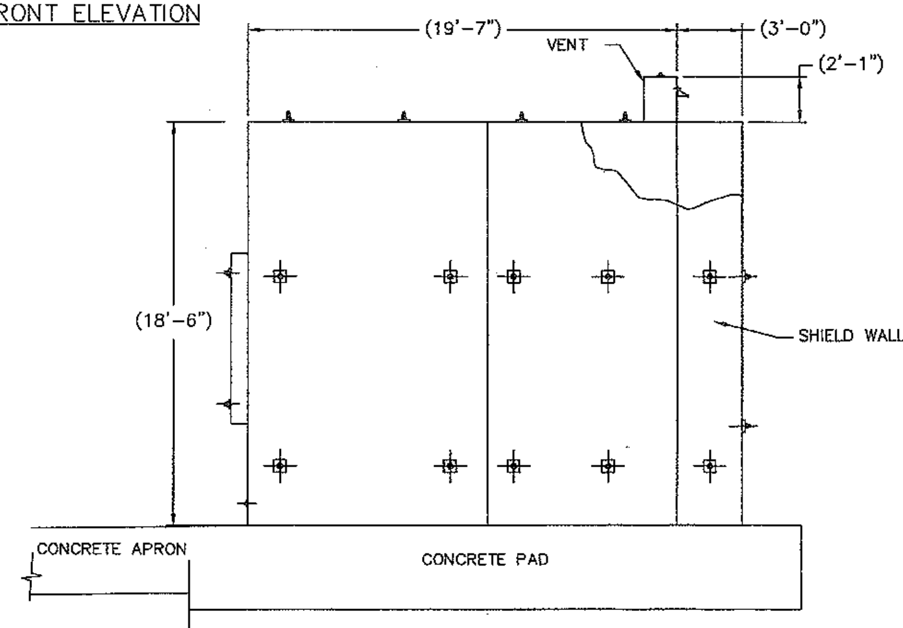
SINGLE ARRAY PLAN VIEW



SINGLE ARRAY FRONT ELEVATION



SINGLE ARRAY REAR ELEVATION



SINGLE ARRAY SIDE ELEVATION

1"=4'
0 2' 4' 8'
SCALE

NOTES:

HORIZONTAL STORAGE MODULE PLAN AND ELEVATIONS ARE FROM "NUHOMS® HORIZONTAL STORAGE MODULE GENERAL ARRANGEMENT"; DRAWING NO. DNC-01-2000; DATED NOVEMBER 12, 2002; BY TRANSNUCLEAR, INC.

REV	DATE	DESCRIPTION

27 Naek Road
Vernon, Connecticut 06066
Phone (860)875-7655 Fax (860)872-2416
GeoEnvironmental, Inc.

ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY

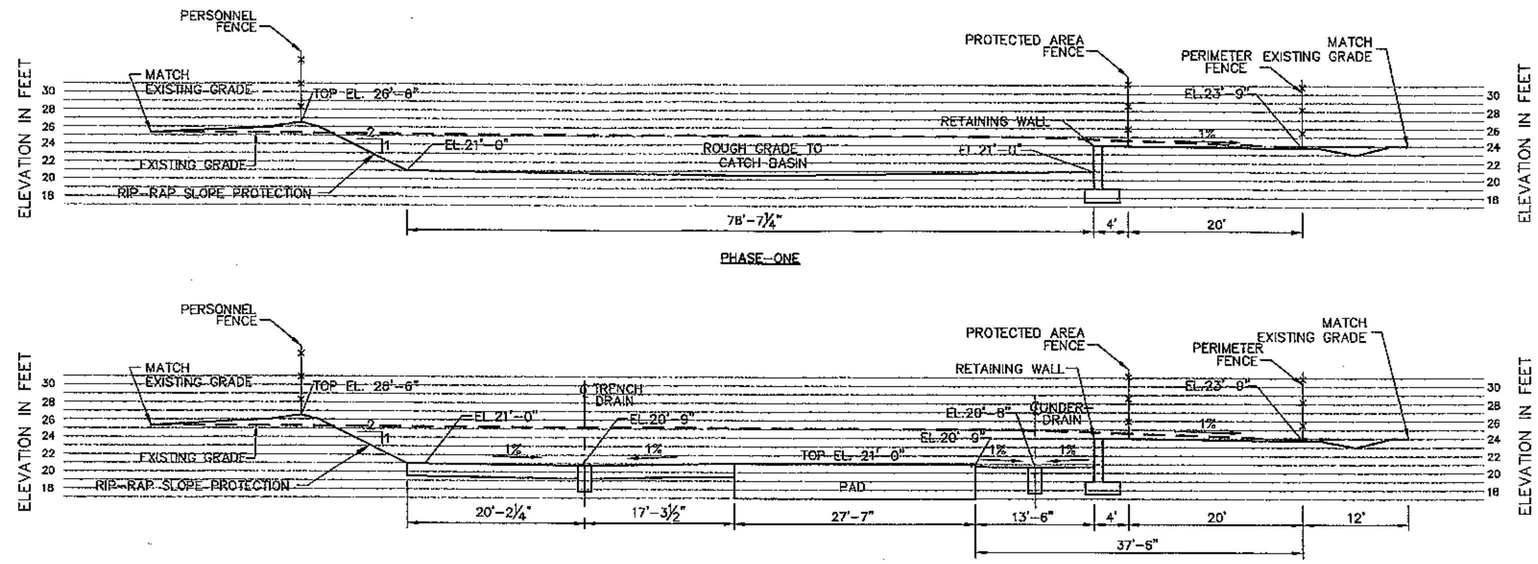
PREPARER: DR	DATE 05/19/03
REVIEWER: DCS	DATE 05/19/03
ENGINEER: DCS	DATE 05/19/03
PROJECT MANAGER: DCS	DATE 05/19/03

Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

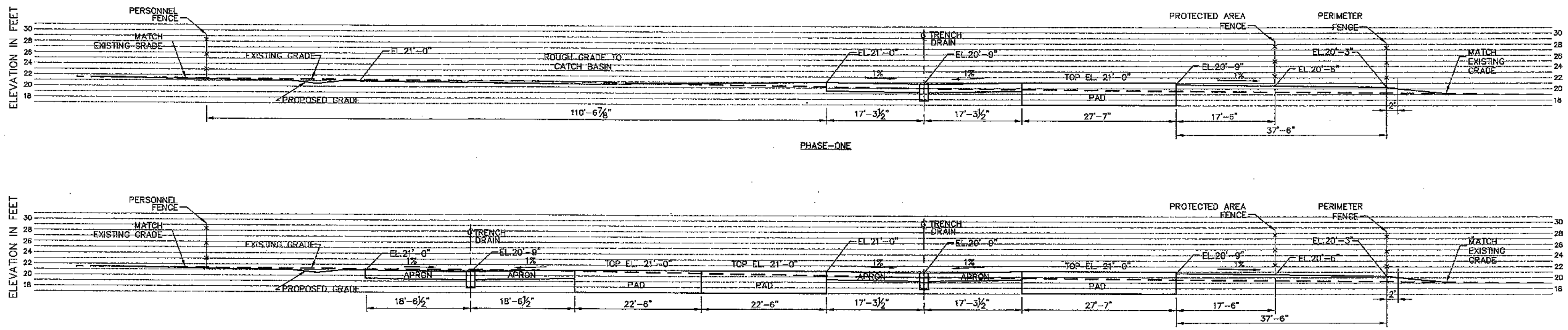
GENERAL STORAGE MODULE
PLAN AND ELEVATIONS

PROJECT NO. TN104

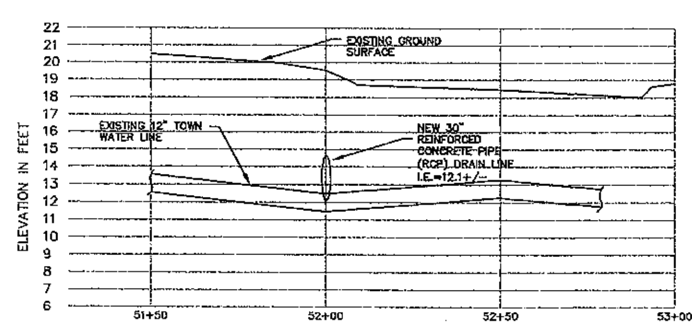
DRAWING NO. DWG-10



A ISFSI SECTIONS
SCALE: 1" = 10'



B ISFSI SECTIONS
SCALE: 1" = 10'



NOTES:

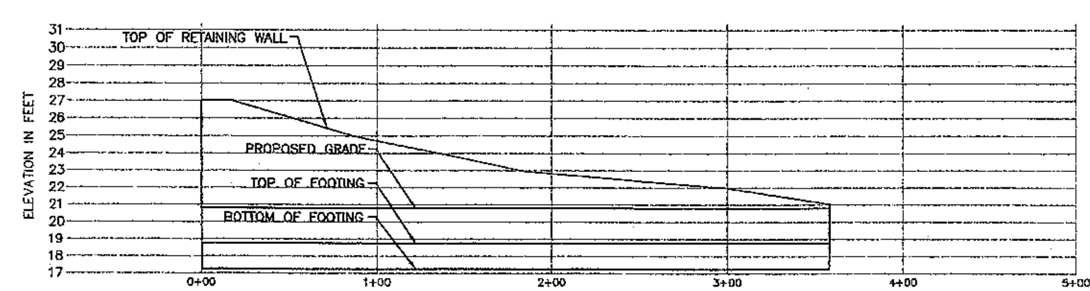
1. PROFILE OF EXISTING TOWN WATER LINE AS SHOWN ON DRAWING 46-6 OF "WATER POLLUTION CONTROL AUTHORITY, WATERFORD, CONNECTICUT, WATERWORKS CONSTRUCTION PROGRAM, CONTRACT 46, 12" WATER MAIN EXTENSION, POWERPLANT ROAD, STATIONS 4+00 – 55+68", LATEST REVISION DATE 5/15/96.

2. THE AS-BUILT LOCATION OF THE EXISTING TOWN WATER LINE WILL BE CONFIRMED PRIOR TO CONSTRUCTION.

3. THE EXISTING TOWN WATER LINE WILL BE VERTICALLY RELOCATED, IF REQUIRED, AT THE CROSSING OF THE PROPOSED 30" RCP DRAIN LINE, IN ACCORDANCE WITH THE DETAILS AND NOTES PRESENTED ON THE DRAWING SET "WATER POLLUTION CONTROL AUTHORITY, WATERFORD, CONNECTICUT, WATERWORKS CONSTRUCTION PROGRAM, CONTRACT 46, 12' WATER MAIN EXTENSION, POWERPLANT ROAD, STATIONS 4+00 ", LATEST REVISION DATE 5/15/96.

PROFILE OF EXISTING TOWN 12" WATER LINE AT PROPOSED 30" STORM DRAIN CROSSING

SCALE: 1"=25' HORIZONTAL
1"= 5' VERTICAL



RETAINING WALL ELEVATION–LOOKING EAST

SCALE: 1"=50' HORIZONTAL
1"= 5' VERTICAL

NOTE: 1. WALL DESIGN NOT COMPLETED. ELEVATION IS CONCEPTUAL ONLY.

REV	DATE	DESCRIPTION

27 Naek Road
Vernon, Connecticut 06066
Phone (860)875-7655 Fax (860)872-2416

ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY

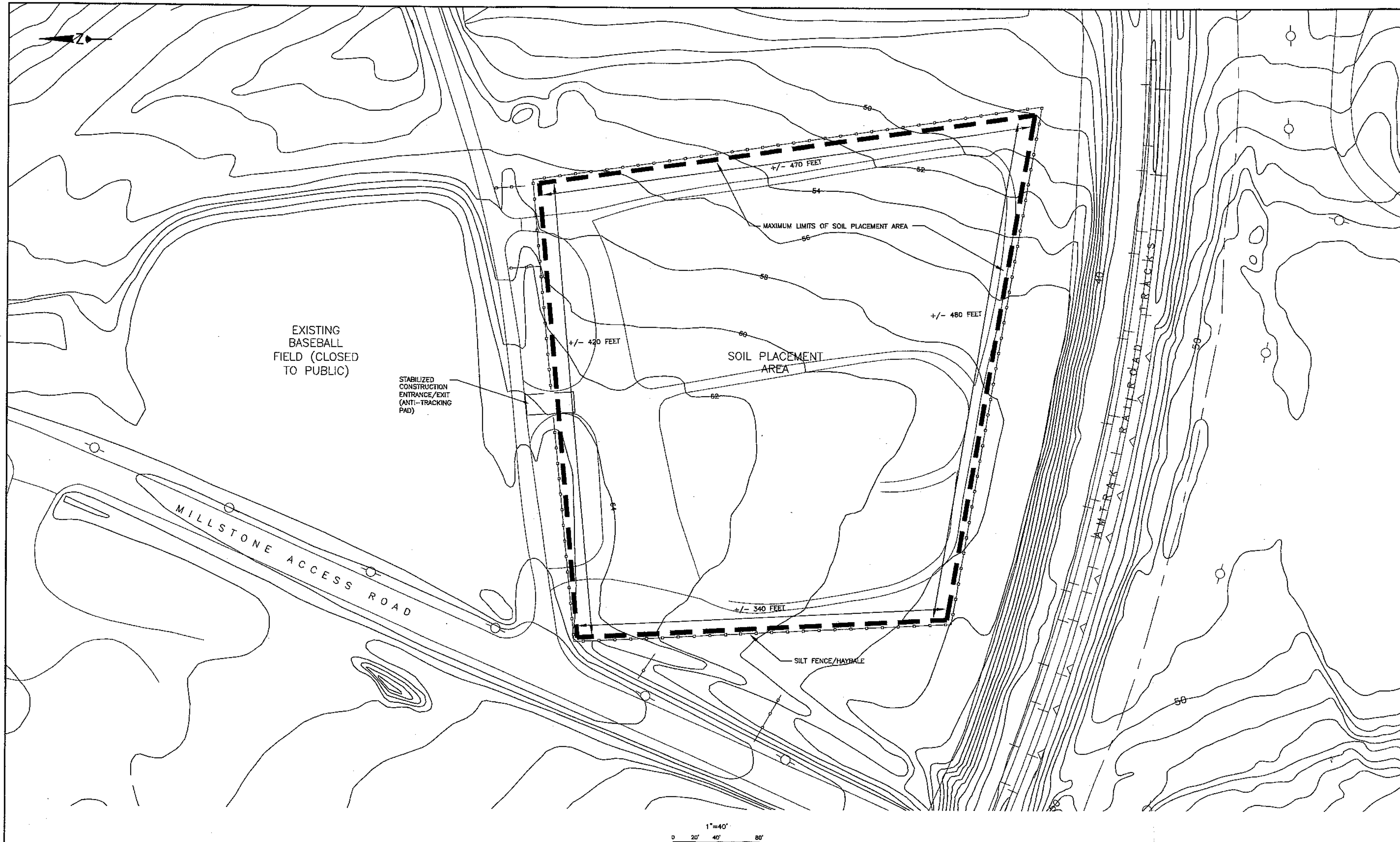
PREPARER:	MJS	DATE 05/19/03
REVIEWER:	DCS	DATE 05/19/03
ENGINEER:	PHB	DATE 05/19/03
PROJECT MANAGER:	DCS	DATE 05/19/03

Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

ISFSI SITE SECTIONS AND ELEVATION; UTILITY PROFILE

PROJECT NO. TN104

DRAWING NO. DWG-11



NOTES:

1. SEE DWG-1 FOR LEGEND.
2. SEE DWG-7 FOR EROSION AND SEDIMENT CONTROL DETAILS.
3. SOIL TO BE PLACED ON AS-NEEDED BASIS. SOIL PLACEMENT TO BEGIN AT NORTHWEST CORNER AND ADVANCE TO THE SOUTH AND EAST.
4. EXCESS SOIL TO BE PLACED IN LOOSE LIFTS OF 12 INCHES OR LESS AND GRADED TO DRAIN TO THE SOUTH AND EAST. EXCESS SOIL NOT TO BE PLACED ABOVE ELEVATION 64 FEET. LOAM AND SEED. MAINTAIN EROSION AND SEDIMENTATION CONTROLS UNTIL VEGETATED.
5. SLOPES NOT TO EXCEED 2H:1V.
6. WETLANDS ARE PRESENT EAST OF THE SOIL PLACEMENT AREA. NO EXCESS SOIL SHALL BE PLACED WITHIN 100 FEET OF WETLANDS.
7. CAPACITY OF SOIL PLACEMENT AREA:
   - ASSUMING AVERAGE THICKNESS OF TWO FEET - APPROXIMATELY 12,000 CUBIC YARDS;
   - ASSUMING AVERAGE THICKNESS OF THREE FEET - APPROXIMATELY 18,000 CUBIC YARDS.

REV	DATE	DESCRIPTION

27 Nask Road
Vernon, Connecticut 06066
Phone (860)875-7655 Fax (860)872-2416

ENERCON SERVICES, INC.
MOUNT ARLINGTON, NEW JERSEY

PREPARER: MS	DATE	05/19/03
REVIEWER: DCS	DATE	05/19/03
ENGINEER: MS	DATE	05/19/03
PROJECT MANAGER: DCS	DATE	05/19/03

Dominion Nuclear Connecticut Inc.
MILLSTONE POWER STATION
WATERFORD, CONNECTICUT

SOIL PLACEMENT AREA
PLAN AND NOTES

PROJECT NO.
TN104

DRAWING NO.
DWG-12