

PLANS FOR CONSTRUCTION

JOHNSONVILLE FOSSIL PLANT

ASH DISPOSAL AREA NO. 2

SOUTHEAST DIKE STABILITY IMPROVEMENTS

WORK PLAN 7 (JOF-100702-WP-7)

NEW JOHNSONVILLE, HUMPHREYS COUNTY, TENNESSEE

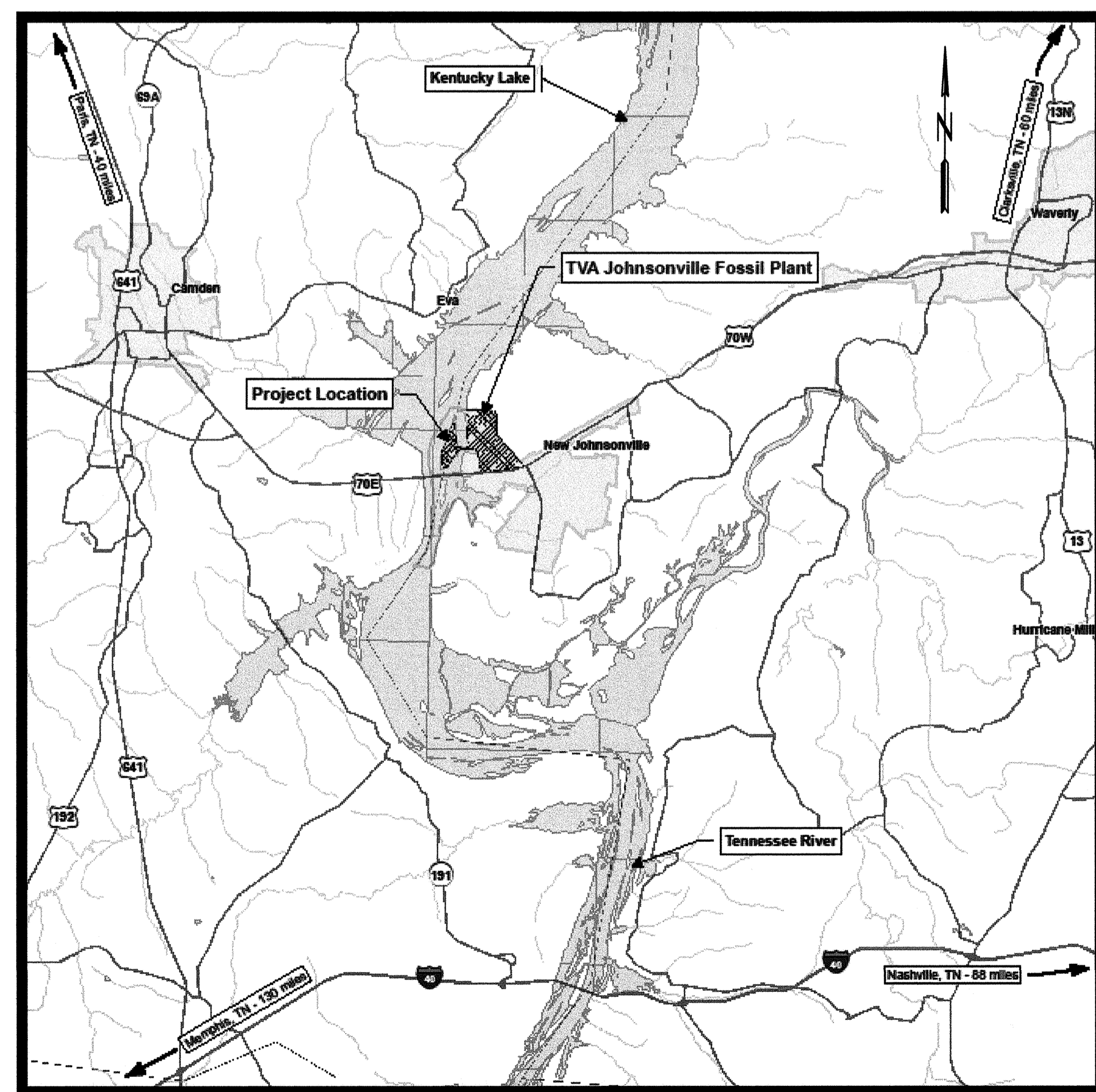
PREPARED FOR

TENNESSEE VALLEY AUTHORITY

PREPARED BY



Stantec Consulting
 Services Inc.
 1901 Nelson Miller Pky.
 Louisville, Kentucky
 40223-2177
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 Fax 502.212.5055
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GRAPHIC SCALE
 0 6000 12000 24000 FEET
VICINITY MAP

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES
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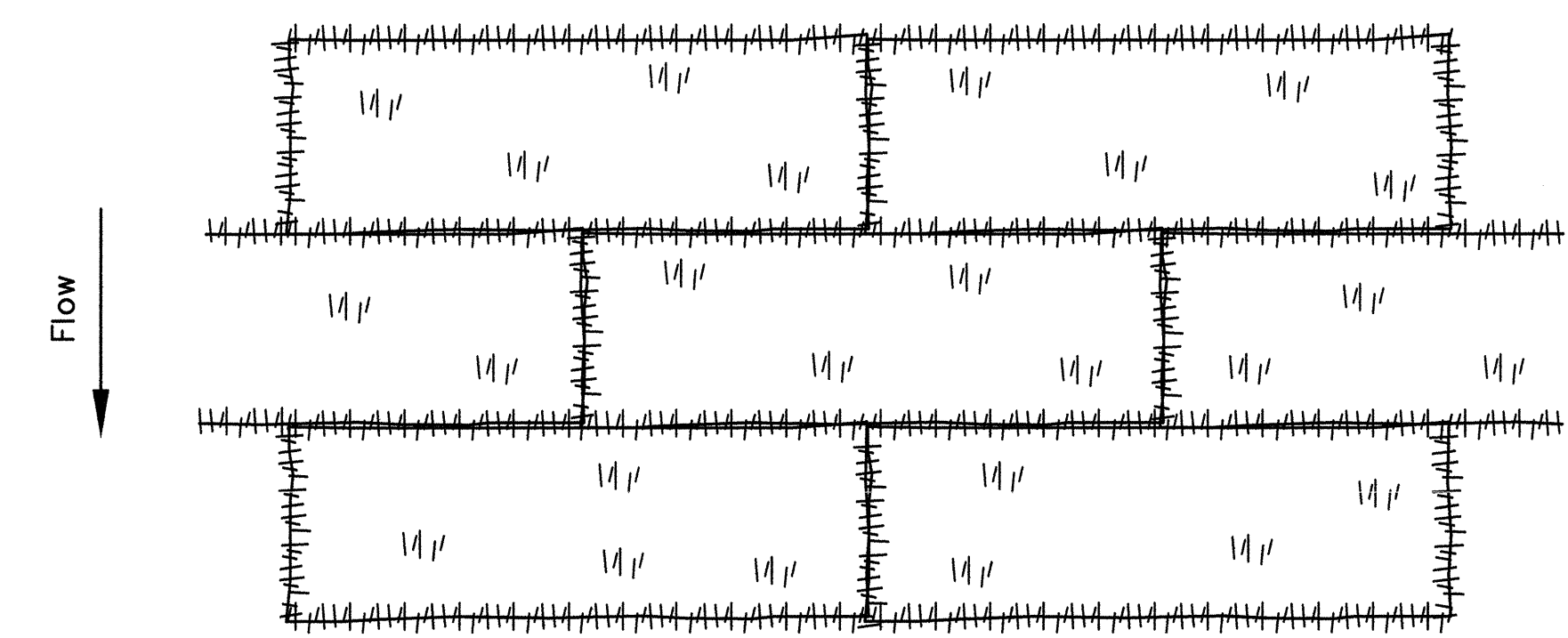
For Supporting Design Calculations See FPGJOFFESCDX00000020100010		R 1	09/03/10	JK	RP	SHB	SHB	SHB	SHB	TJ	-	-	-
		R 0	07/02/10	JK	RP	SHB	SHB	SHB	SHB	TJ	-	-	-
ISSUED FOR CONSTRUCTION													
REV. NO.	DATE	DSGN	DRWN	CHG	SUPV	RVSD	APPD	ISSD	PROJECT	AS CONST.			
SCALE: AS SHOWN											EXCEPT AS NOTED		
YARD ASH DISPOSAL AREA NO. 2 SOUTHEAST DIKE IMPROVEMENTS COVER SHEET WORK PLAN 7 (JOF-100702-WP-7)													
DRAWN BY:	J. KOPP	CHECKED BY:	R. PETTY	SUPERVISED BY:	S. BICKEL	REVIEWED BY:	S. BICKEL	APPROVED BY:	S. BICKEL	ISSUED BY:	T. JOHNSON		
JOHNSONVILLE FOSSIL PLANT TENNESSEE VALLEY AUTHORITY FOSSIL AND HYDRO ENGINEERING													
AUTOCAD R 2000	DATE	07/02/10	30	C	10W550-01		R 1						

ISSUED FOR CONSTRUCTION

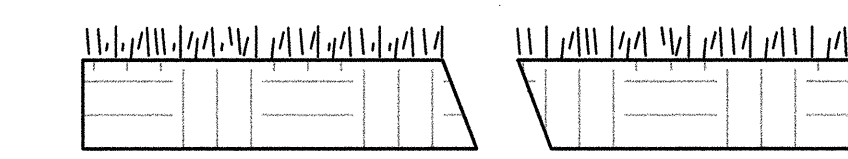
GENERAL NOTES

- Definitions: Whenever the following terms are used in these Plans for Construction, it is understood that they represent the following:
 Contractor: Entity responsible for construction.
 Engineer: Stantec Consulting Services Inc. (Stantec)
 Owner: Tennessee Valley Authority (TVA) - Johnsonville Fossil Plant (JOF)
 TDOT: Tennessee Department of Transportation and specifically references the "Standard Specifications for Road and Bridge Construction", current edition. Any material designated as "TDOT" is to conform to the material standards noted and placement/installation methodology specified in the current edition of the "Standard Specifications for Road and Bridge Construction".
 Construction Quality Control (CQC) Plan: Refers to a document that establishes minimum quality control requirements, testing frequency and quality oversight responsibility.
 Quality Control (QC) Manager: A professional engineer licensed in the State of Tennessee that is responsible for the Quality of the constructed project as defined in the CQC Plan. The QC Team consists of qualified personnel that work under the direct supervision of the QC Manager. QC Team personnel are individuals that are familiar with the materials utilized and the buttress construction components.
- These Plans for Construction, along with the Technical Specifications, CQC Plan, and other referenced specifications or standards, shall constitute the complete construction documents for this project.
- The Contractor shall communicate constructability issues, discrepancies in the Plans for Construction or specifications, etc., to the QC Manager and Owner immediately upon becoming aware. The Contractor shall use the Owner's request for information (RFI) form that is contained in the CQC Plan to communicate and establish written documentation of the issue and its resolution.
- Construction activities shall be observed by the QC Manager or the designated representative on the QC Team. The Contractor shall coordinate with the onsite QC representative and inform the representative of the Contractor's scheduled work shifts to insure that QC representation occurs as required.
- The Contractor shall be aware of construction activities ongoing for the JOF Existing Spillway Closure Project (ESCP, JOF-100407-WP-4). Both projects will be constructed simultaneously. The Contractor shall coordinate with the ESPC Contractor to prevent conflicts.
- Material deliveries and hauling for this project shall not be permitted during the hours of normal plant shift change (6:30 to 7:00 a.m. and 3:30 to 3:45 p.m.)
- Onsite utilities and underground facilities, whether shown on the plans or not, shall be protected by the Contractor from damage by the Contractor's operations. If damage occurs the Contractor shall coordinate repairs with the Owner. The Contractor shall be responsible for any damage that occurs and is attributed to the Contractor's operations.
- Existing geotechnical instrumentation (piezometers and slope inclinometers) is shown on the Plans for Construction. The Contractor shall protect this instrumentation from damage. This instrumentation shall be extended upward during the course of the work if needed.
- The Contractor shall be responsible for health and safety of its personnel and shall meet industry standard requirements. The Contractor shall adhere to the Owner's requirements for safety during construction.
- The Contractor shall be responsible for the maintenance of all access roads, staging areas and storage areas used during construction, and shall restore said areas to their original condition, or better once construction is complete unless the Owner gives written permission to the Contractor to retain the area "as is".
- The Contractor is responsible for site drainage throughout construction and shall install temporary drainage structures or pump water as necessary to prevent interference with the work. Such temporary drainage features shall be performed in accordance with the requirements of environmental permits and the Storm Water Pollution Prevention Plan (SWPPP).
- Vegetative and organic materials shall be removed as described in the Specifications.
- Drainage conditions surrounding existing facilities outside the project limits are not addressed by the Plans for Construction. Grading, shaping and installation of drainage structures may be required to promote positive drainage. Such work shall be directed by others.
- Materials delivered for incorporation into the work shall be temporarily stored in areas selected by the Contractor and approved by the Owner. Materials shall be stored in accordance with the manufacturer's recommendations.
- The erosion and sediment control measures shown shall be considered the minimum; supplemental measures shall be provided by the Contractor as field conditions dictate.
- During construction, the Contractor shall inspect, clean, and maintain all sediment control devices as shown on the Plans for Construction and provide reporting as required by the Specifications and regulations on said items.
- The Contractor shall control fugitive dust emissions during construction in such a manner as to comply with applicable regulations. Dust control measures shall be subject to approval of the QC Manager and the Owner.
- Stockpiles shall be graded to maintain positive drainage at all times. The side slopes shall have maximum 3H:1V slope. The top of the stockpile shall have a minimum two percent slope. Materials shall be segregated as directed by the QC Manager.

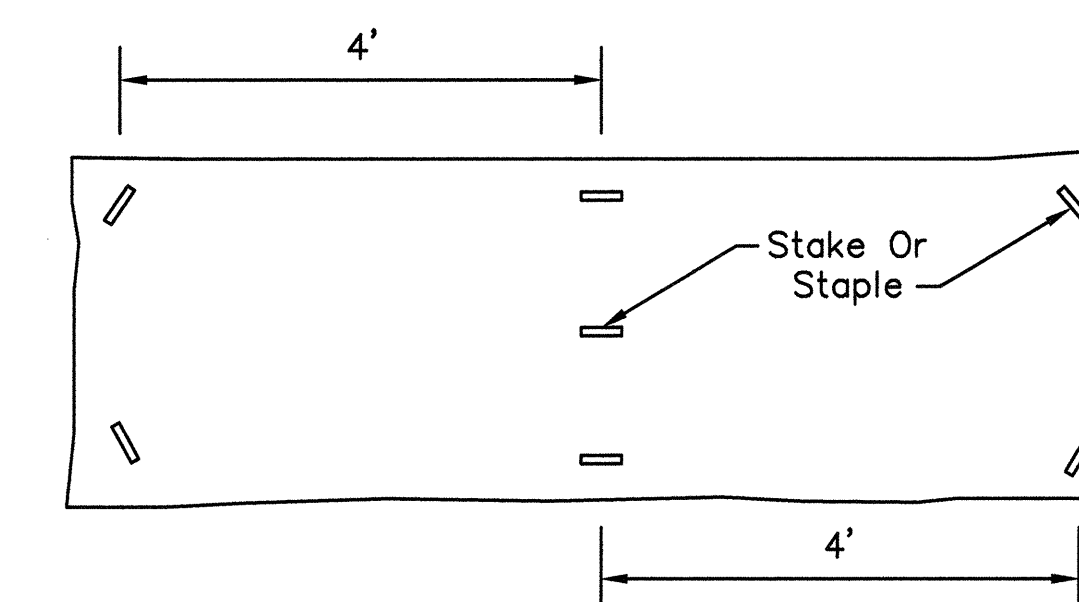
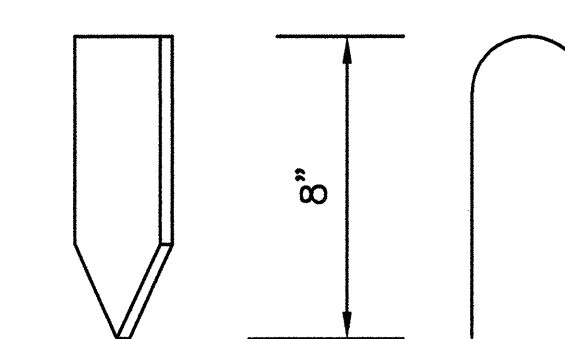
- Soil stockpiles that will not be disturbed for 14 days or more shall be temporarily seeded with wheat or rye at a rate of 60 lbs/acre and shall be covered with mulch.
- Final embankment surfaces shall be finished to a relatively smooth and compact surface. Contractor shall revegetate slope with either seed and erosion control blanket or sod.
 Seedbed preparation and seeding shall be in accordance with the technical specifications. A layer of erosion control blanket shall be placed prior to seeding as shown on these Plans For Construction and shall be in accordance with the Tennessee Erosion and Sediment Control Handbook (TDEC 2002). Erosion control blanket shall be North American Green S150 or Engineer approved equivalent.
 Sod shall be placed as shown on these Plans For Construction and shall be in accordance with the Tennessee Erosion and Sediment Control Handbook (TDEC 2002).
- All pipe removal and trenching shall be conducted in strict accordance with applicable TVA process and procedure requirements.
- Geotextiles used for construction shall be certified by the manufacturer as conforming to the project requirements. Geotextiles shall not be utilized as a filter unless approved by TVA. It may be used as a temporary measure and removed.
- Certifications of material quality and conformance to project requirements shall be submitted to the QC Manager for approval five (5) working days prior to installation.
- All surfaces shall be approved by the QC Manager or the designated representative on the QC Team prior to embankment or buttress construction.
- The Contractor shall be responsible for construction surveyor selection and coordination of all construction related surveying. All established TVA bench marks or other monuments shall be preserved and protected. Any established marker or benchmark that is damaged by construction activities shall be replaced by TVA Surveying Services at the Contractor's expense.
- The Contractor shall provide survey control stakes and hubs at full 100 foot stations on the top of the dike and on the lower bench. Stakes and hubs on the lower bench shall be set immediately inside the reinforced silt fence, or as requested by the onsite QC representative. Stakes shall be standard oak survey stakes, at least 48 inches in height, and shall show the station, offset and ground elevation. If survey stakes are damaged, they shall be replaced by the Contractor within 24 hours.



Lay Sod Across The Direction Of Flow In A Staggered Pattern. Butt The Strips Tightly Against Each Other. Do Not Leave Gaps Between Adjacent Strips And Do Not Overlap.

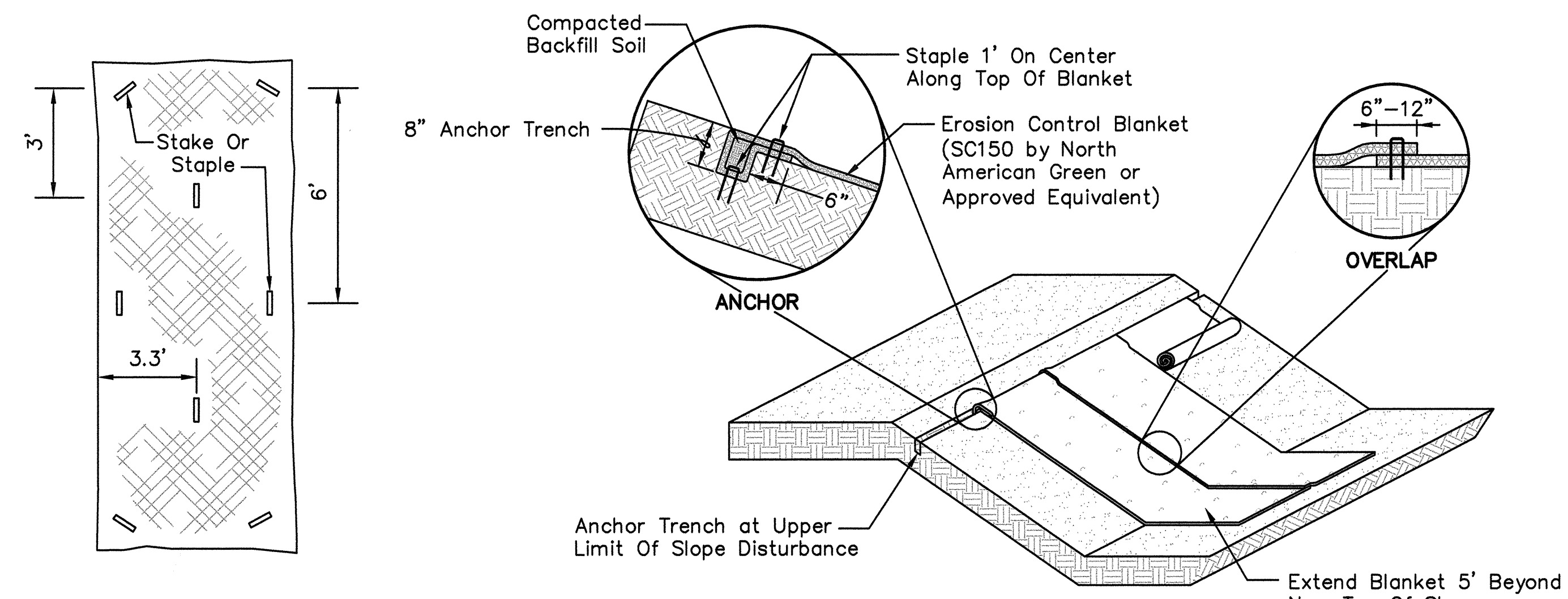


Butting - Angled Ends Caused By The Automatic Sod Cutter Must Be Matched Correctly.



Use Stakes Or Staples To Fasten Sod Firmly At The Ends Of Strips And In The Center Or Every 4 Feet.

2 DETAIL - SOD INSTALLATION
2 NOT TO SCALE

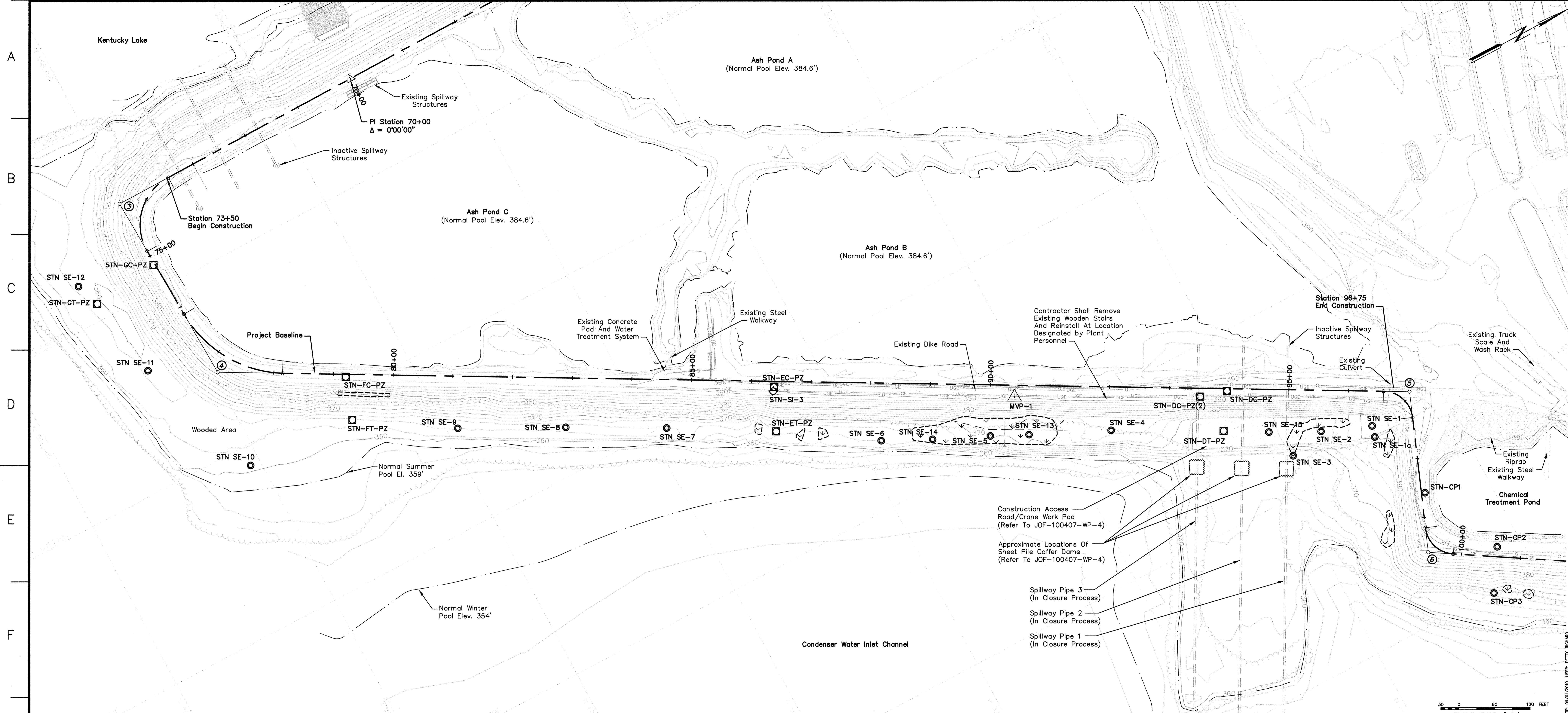


Use Stakes Or Staples To Fasten Fabric Firmly.

1 DETAIL - EROSION CONTROL BLANKET
2 NOT TO SCALE

ISSUED FOR CONSTRUCTION

For Supporting Design Calculations See FPGJOFFESCDCX00000020100010		R 1 09/03/10 JK RP SHB SHB SHB SHB TJ - - - EXISTING TREELINE ADDED TO PLAN, SAND DRAINAGE BLANKET ADDITION R 0 07/02/10 JK RP SHB SHB SHB SHB TJ - - - ISSUED FOR CONSTRUCTION
		SCALE: NONE EXCEPT AS NOTED YARD ASH DISPOSAL AREA NO. 2 SOUTHEAST DIKE IMPROVEMENTS GENERAL NOTES WORK PLAN 7 (JOF-100702-WP-7)
DESIGNED BY: J. KOPP	DRAWN BY: R. PETTY	CHECKED BY: S. BICKEL
SUPERVISED BY: S. BICKEL	REVIEWED BY: S. BICKEL	APPROVED BY: S. BICKEL
JOHNSONVILLE FOSSIL PLANT TENNESSEE VALLEY AUTHORITY FOSSIL AND HYDRO ENGINEERING		
AUTOCAD R 2000	DATE: 07/02/10	SHEET NO.: 30 C
PROJECT NO.: 10W550-02		R 1



PLAN - SOUTHEAST DIKE
SCALE: 1"=60'

BASELINE CURVE DATA

③
P.I. Sta. = 74+39.77
Northing = 598,694.98
Easting = 1,409,641.42
Δ = 91°28'56"
R = 90.00'
T = 92.36'
L = 143.70'
E = 38.96'
P.C. Sta. = 73+47.41
P.T. Sta. = 74+91.11

④
P.I. Sta. = 77+26.20
Northing = 598,706.90
Easting = 1,409,968.65
Δ = 58°56'48"
R = 200.00'
T = 113.03'
L = 205.76'
E = 29.73'
P.C. Sta. = 76+13.17
P.T. Sta. = 78+18.93

BASELINE REFERENCE POINTS			
STATION	NORTHING	EASTING	ELEVATION
70+00.0	599,134.72	1,409,636.78	

CONTROL POINTS				
CONTROL POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
MVP-1	Angle Iron	599,865.37	1,410,632.96	390.27'

NOTES:

- Baseline reference locations along the centerline of the crest are shown to assist the Contractor in establishing the baseline and the location of the slope improvements. No field staking of these points has been performed.
- Topographic and hydrographic mapping is based on survey data provided by TVA dated March 15, 2010.
- Survey Coordinates are referenced to Tennessee State Plane Coordinate System (Lambert), North American Datum (NAD) 27. Elevations are Based On National Geodetic Vertical Datum (NGVD) 29.

TREE AND VEGETATION REMOVAL

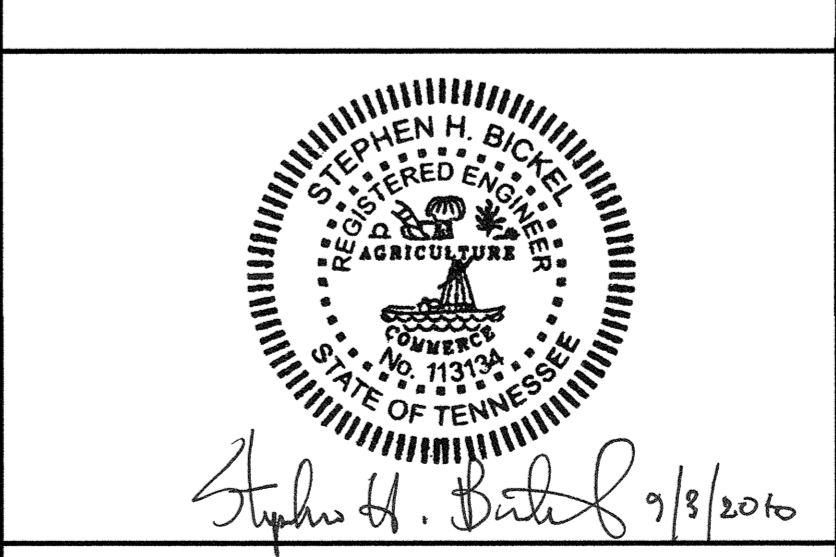
- From Stations 73+50 To 80+00, Remove All Trees Within 5 Feet Of The Access Road Or Within 20 Feet Of The Dike Toe.
- From Stations 80+00 To 93+40, Remove All Trees And Vegetation.
- Contractor shall remove all debris and trash in the project area deposited from the flood event of May 1st and 2nd.

ISSUED FOR CONSTRUCTION

LEGEND

- ⊕ Existing Piezometer Do Not Disturb (DND)
- ⊙ Existing Slope Inclinator Do Not Disturb (DND)
- ⊙ Soil Boring Location with Standard Penetration Tests
- △ Baseline Reference Points
- ⊔ Area Of Observed Seepage And/Or Standing Water
- ▭ Existing Gravel Road
- UGE — Existing Underground Electric
- G — Existing Gas Line
- ⋯ Tree Line

For Supporting Design Calculations See FPGJOFFESCDX00000020100010



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REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV	INVD	APPD	ISSD	PROJECT ID	AS CONST	DATE
R 1	09/03/10	JK	RP	SHB	SHB	SHB	SHB	TJ			
R 0	07/02/10	JK	RP	SHB	SHB	SHB	SHB	TJ			

SCALE: 1"=60'

YARD
ASH DISPOSAL AREA NO. 2

SOUTHEAST DIKE IMPROVEMENTS
EXISTING CONDITIONS
WORK PLAN 7 (JOF-100702-WP-7)

DESIGNED BY: J. KOPP
DRAWN BY: R. PETTY
CHECKED BY: S. BICKEL
SUPERVISED BY: S. BICKEL
REVIEWED BY: S. BICKEL
APPROVED BY: T. JOHNSON
ISSUED BY: T. JOHNSON

JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

AUTOCAD R 2000 DATE 07/02/10 30 C 10W550-03 R 1

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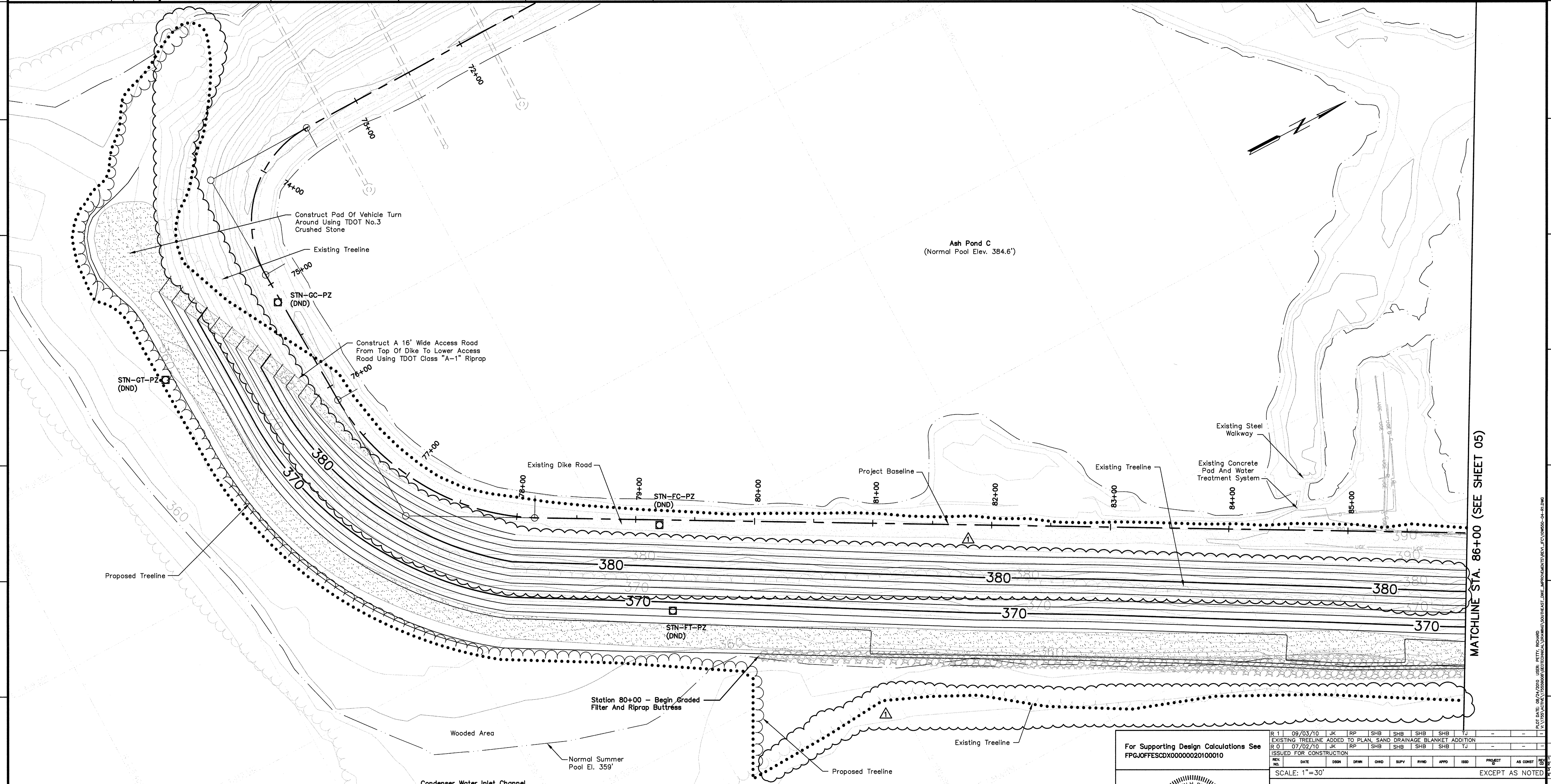
D

E

F

G

H



MATCHLINE STA. 86+00 (SEE SHEET 05)

- NOTES:**
- See Sheet 03 for Project Baseline Coordinates and Curve Data.
 - From Stations 73+50 To 80+00, Remove All Trees Within 5 Feet Of The Access Road Or Within 20 Feet Of The Dike Toe.
 - From Stations 80+00 To 93+40, Remove All Trees And Vegetation.

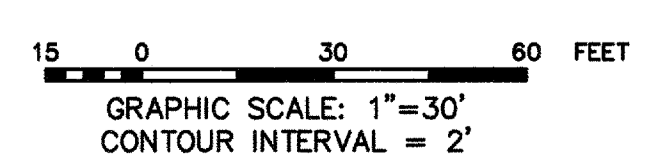
LEGEND

	Existing Plezometer Do Not Disturb (DND)		Existing Gravel Road
	Limits Of Disturbance		Existing Underground Electric
	Riprap Buttress		Existing Gas Line
	New Access		Existing Treeline
			Proposed Treeline

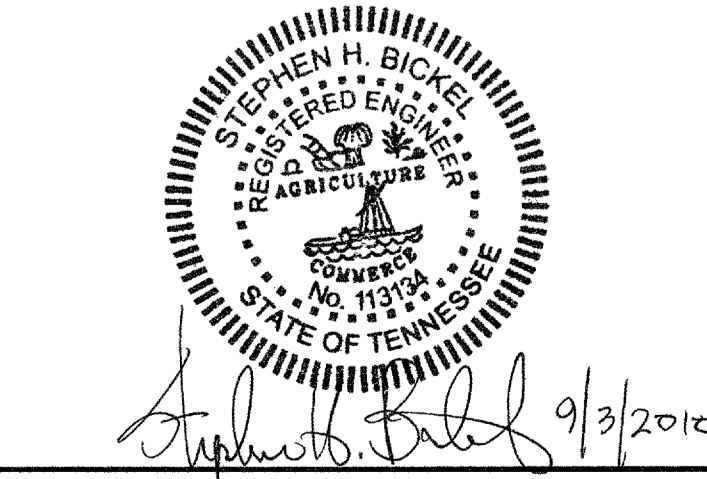
PLAN - SOUTHEAST DIKE
SCALE: 1"=30'

ISSUED FOR CONSTRUCTION

Section Or Detail No.
Target Drawing
Reference Key



For Supporting Design Calculations See
FPGJOFESCDX00000020100010



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REV NO.	DATE	DSGN	DRWN	CHKD	SUPV	RVSD	APPR	ISSD	PROJECT	AS CONST	BY
R 1	09/03/10	JK	RP	SHB	SHB	SHB	SHB	TJ			
R 0	07/02/10	JK	RP	SHB	SHB	SHB	SHB	TJ			

SCALE: 1"=30'
EXCEPT AS NOTED

YARD
ASH DISPOSAL AREA NO. 2
SOUTHEAST DIKE IMPROVEMENTS
GRADING PLAN
WORK PLAN 7 (JOF-100702-WP-7)

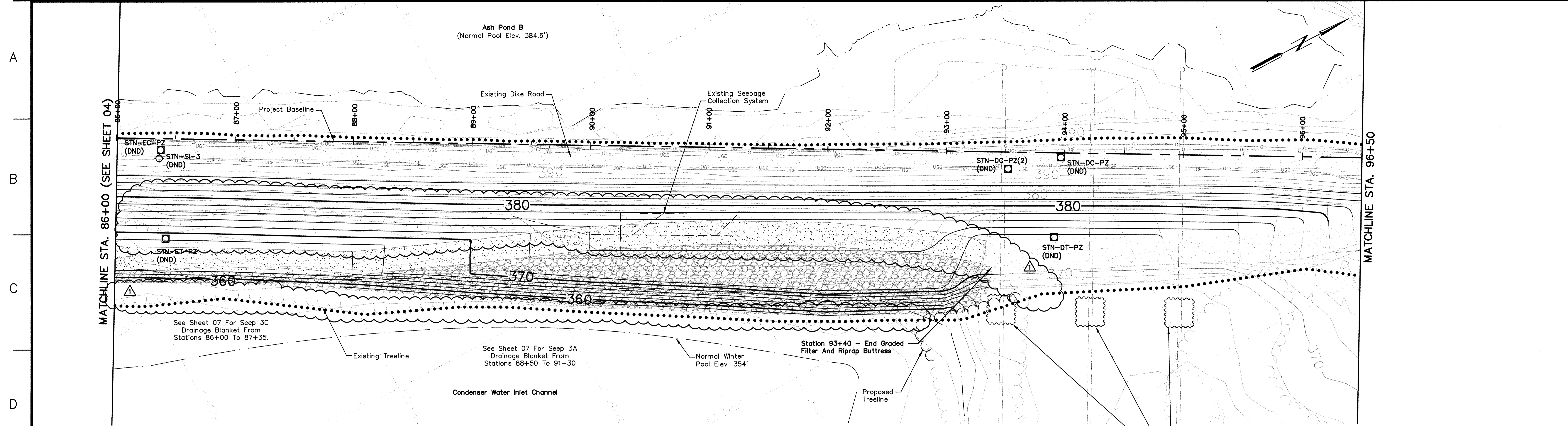
DESIGNED BY:	DRAWN BY:	CHECKED BY:	SUPERVISED BY:	REVIEWED BY:	APPROVED BY:	ISSUED BY:
J. KOPP	R. PETTY	S. BICKEL	S. BICKEL	S. BICKEL	S. BICKEL	T. JOHNSON

JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

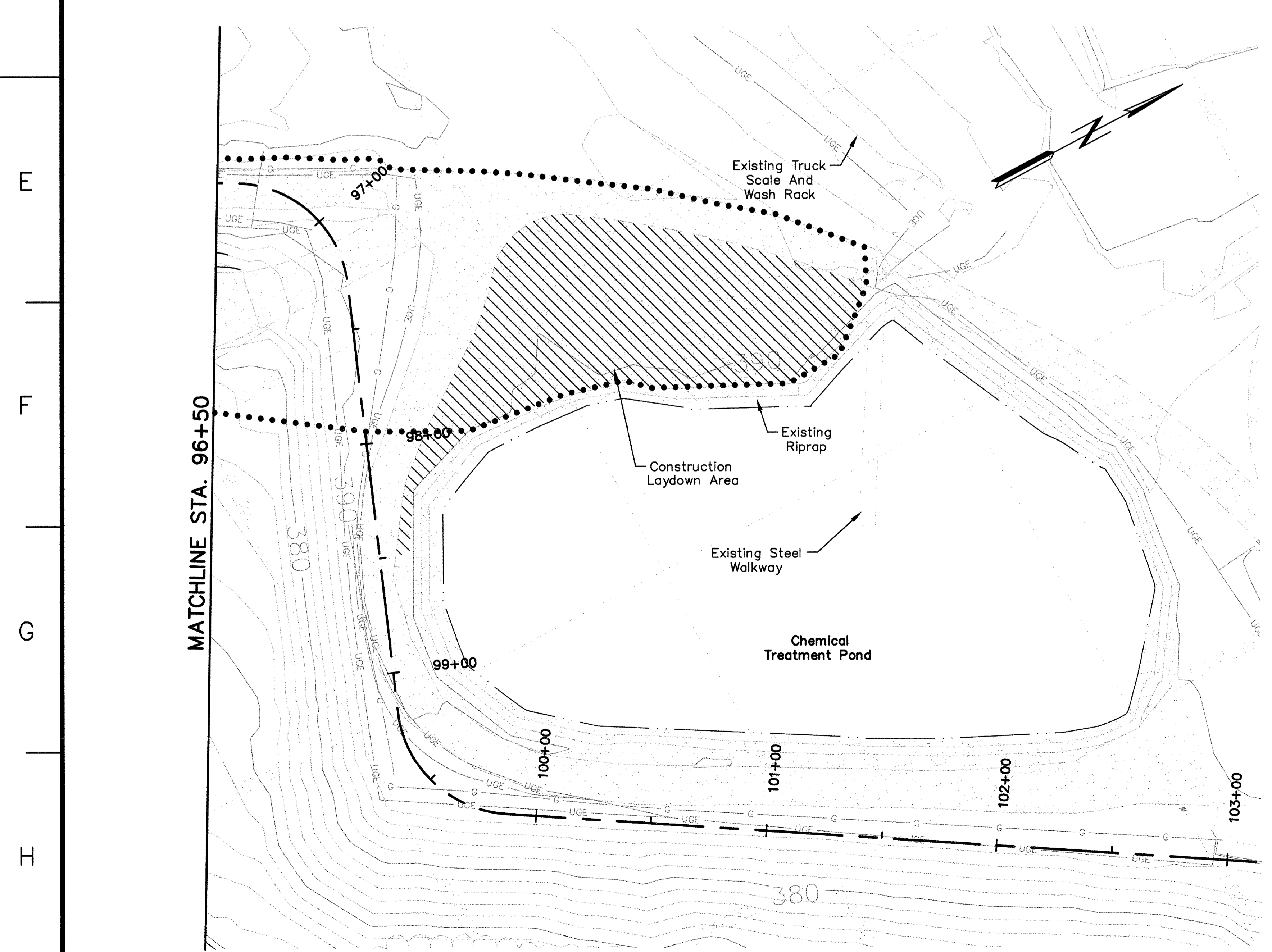
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	07/02/10				

STANTEC	1
TASK COMPLETED BY:	REV NO.

PLOT FACTOR: XX
W_TVA
C.A.D. DRAWING
DO NOT ALTER MANUALLY



PLAN - SOUTHEAST DIKE
SCALE: 1"=30'



NOTES:

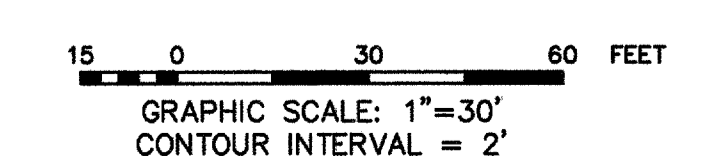
1. See Sheet 03 for Project Baseline Coordinates and Curve Data.
2. From Stations 80+00 To 93+40, Remove All Trees And Vegetation.

Section Or Detail No. _____
Target Drawing _____
Reference Key

ISSUED FOR CONSTRUCTION

LEGEND

- Existing Piezometer Do Not Disturb (DND)
- Existing Slope Inclinometer Do Not Disturb (DND)
- Limits Of Disturbance
- Riprap Buttress
- New Access Road
- Existing Gravel Road
- Existing Underground Electric
- Existing Gas Line
- Existing Treeline
- Proposed Treeline

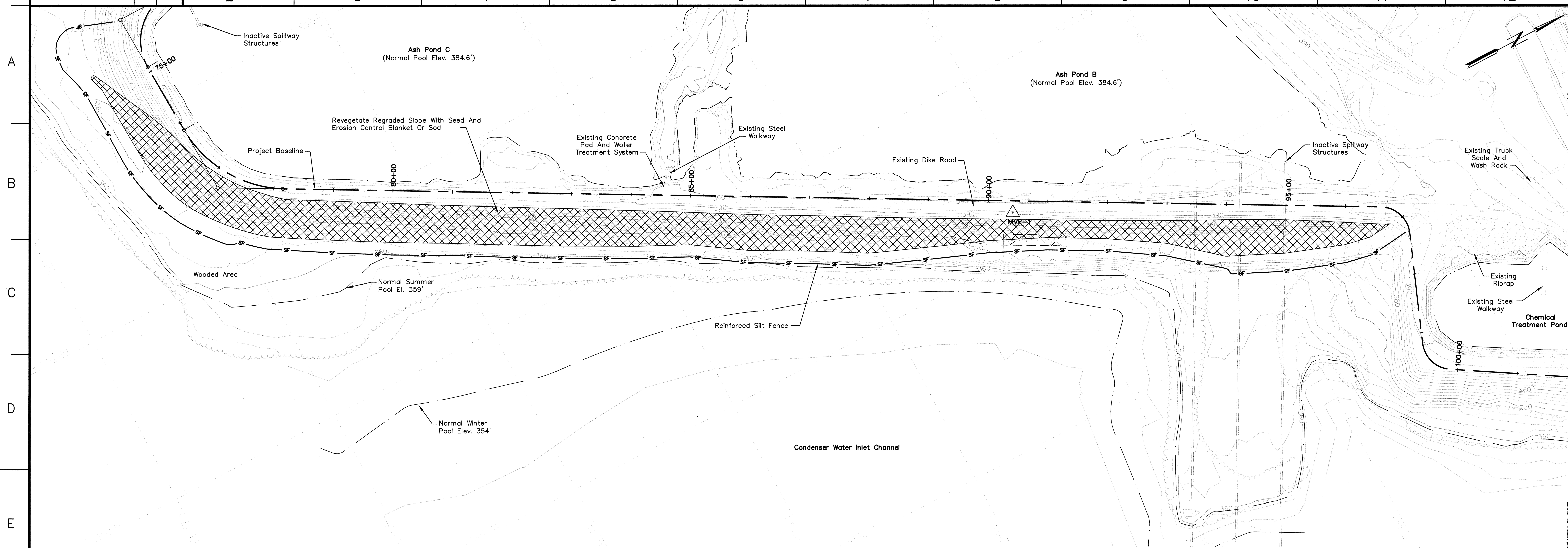


For Supporting Design Calculations See
FPGJOFFESDX00000020100010

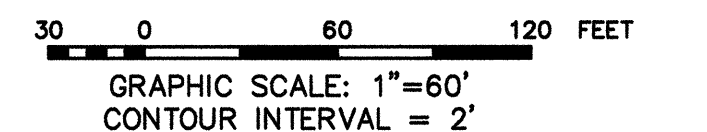
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R 1	09/03/10	JK	RP	SHB	SHB	SHB	SHB	TJ			
R 0	07/02/10	JK	RP	SHB	SHB	SHB	SHB	TJ			

SCALE: 1"=30'											
EXCEPT AS NOTED											
YARD ASH DISPOSAL AREA NO. 2											
SOUTHEAST DIKE IMPROVEMENTS											
GRADING PLAN											
WORK PLAN 7 (JOF-100702-WP-7)											
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JOHNSONVILLE FOSSIL PLANT TENNESSEE VALLEY AUTHORITY FOSSIL AND HYDRO ENGINEERING											
AUTOCAD R 2000	DATE	07/02/10	30	C	10W550-05			R 1			



PLAN - EROSION PREVENTION & SEDIMENT CONTROL
SCALE: 1"=60'

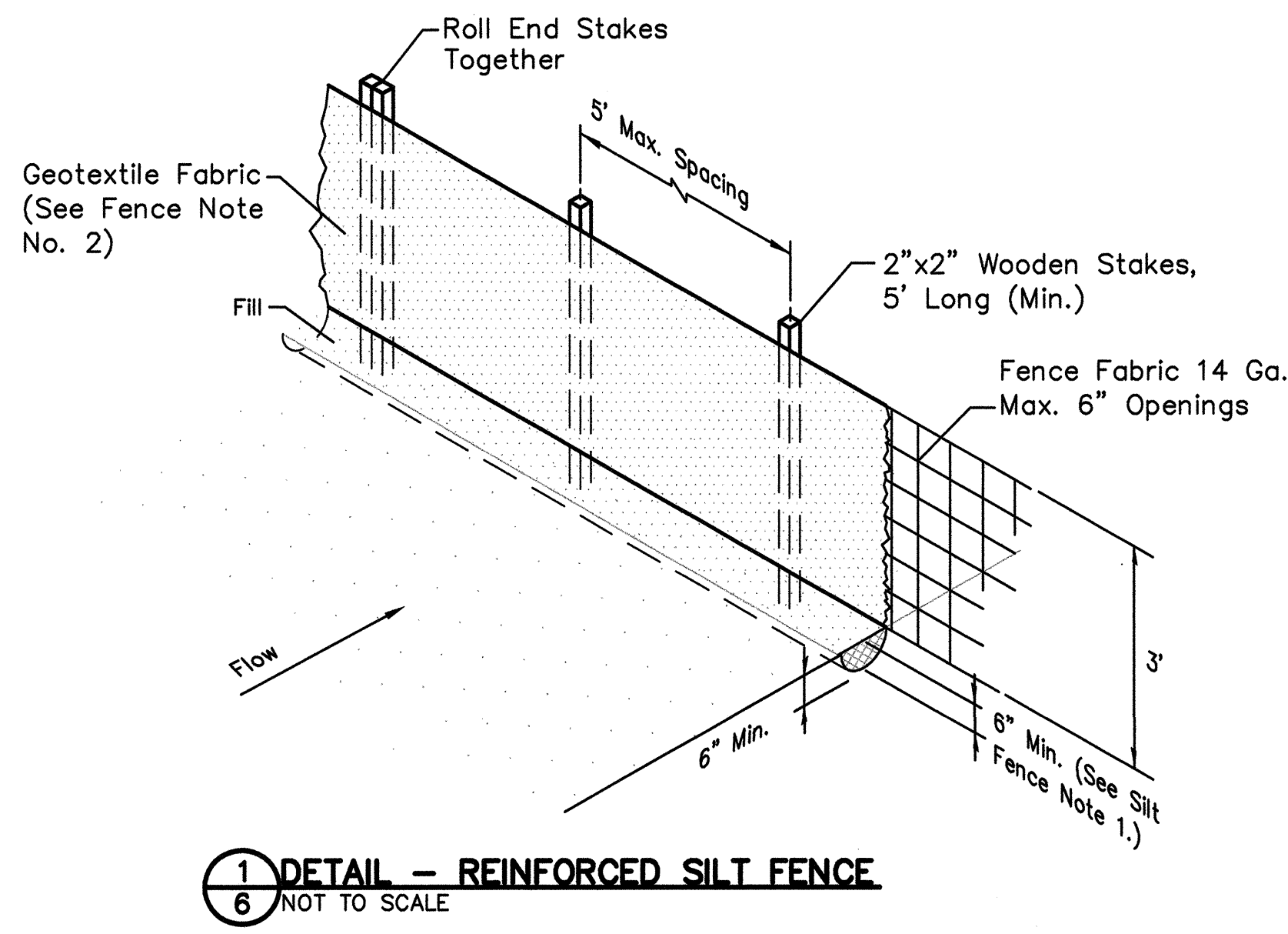


EROSION PREVENTION & SEDIMENT CONTROL NOTES:

- The Best Management Practices (BMP's) Shown On The Erosion Prevention And Sediment Control (EPSC) Plan Are Considered The Minimum. It Is The Responsibility Of The Contractor To Provide Additional Measures As May Be Required To Prevent Sediment Loading To Adjacent Waterway. The Contractor Shall Be Familiar With The Stormwater Pollution Prevention Plan (SWPPP) Prepared For This Project And Construct The BMP's.
- The EPSC Plan Shall Be Implemented Prior To Any Land-disturbing Activity On The Project Site. EPSC BMP's Shall Be Installed Per The Plan. Modifications To The Plan Must Be Reviewed And Approved By The Owner Or Engineer.
- EPSC BMP's Shall Be Maintained At All Times. The Contractor Shall Inspect EPSC BMP's At Least Weekly And After Each Rain, And Repair As Necessary, Or As Directed By The Owner Or Engineer. Inspection And Maintenance Of All EPSC BMP's Shall Be Conducted Until Final Release Is Granted By The Owner.
- Actions Must Be Taken To Minimize The Tracking Of Mud And Soil From The Project Area Onto The Existing Crushed Stone Dike Crest. Soil Tracked Onto The Crest Or Access Ramp Shall Be Removed Daily. Remove Accumulated Sediment From Behind Silt Fences When Sediment Reaches 9" Depth.
- Where Construction Or Land Disturbing Activity Has Temporarily Ceased On Any Portion Of The Project Site, Temporary Site Stabilization Measures Shall Be Required As Soon As Practicable, But No Later Than 14 Calendar Days After The Activity Has Ceased.
- Seeding, Mulching, And Fertilization Of Disturbed Areas Shall Be Completed As Soon As Practical After Regrading Activities.
- Sod Or Erosion Control Blankets Shall Be Installed After Each 800 Foot Section Of The Dike Is Regraded And No More Than Four (4) Days After Regrading Is Completed. Sod Or Erosion Control Blankets Shall Be Installed Using The Practices Described In The Tennessee Erosion And Sediment Control Handbook (TDEC, 2002).

EPSC PHASING AND SEQUENCING:

- Clear Vegetation From Lake Bank And Cover With A Layer Of Sand And No. 57 Stone Daily. Under No Circumstances Shall Any Disturbed Area Of The Bank Remain Uncovered When The Contractor Leaves The Site At The End Of The Day.
- Install Silt Fence For Perimeter Control As Soon As Practicable After Completion Of Riprap Buttress.
- Clear Vegetation From Slope And Regrade Slope Per Plan.
- Reinstall Any Damaged Silt Fence Immediately.
- Place Sod Or Seed And Cover With Erosion Control Blanket After Regrading Has Been Complete.



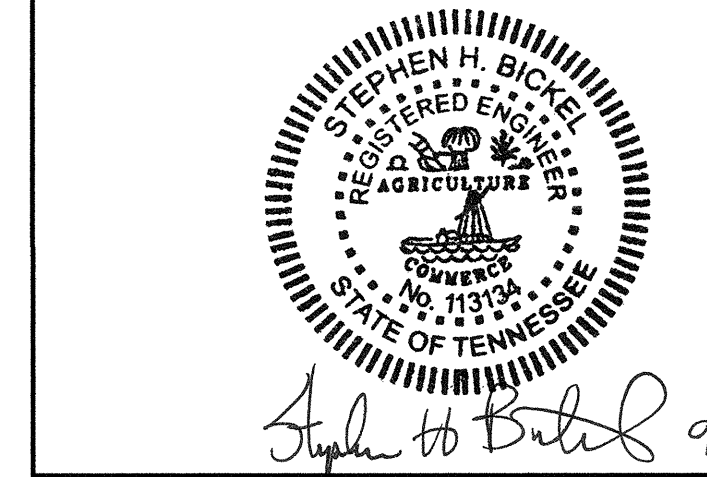
1 6 **DETAIL - REINFORCED SILT FENCE**
NOT TO SCALE

NOTES:

- The Bottom 12 Inches Of The Fabric Shall Be Buried In A 6-inch Trench Cut Into The Ground Of Covered By 6 Inches Of Fill Material To Prevent Sediment From Escaping Under The Fence. All Earthwork Shall Be On The Upstream Side Of The Fence.
- Geotextile Fabric Shall Meet The Following Specifications: Grab Strength (ASTM D1682) - 100 Lbs Min., Width - 4' Min., Bursting Strength (ASTM D751) - 150 P.S.I. Min., Flow Rate (KM64-106) - 0.3 Gal./Sq. Ft., Retention Efficiency (KM64-106) - 75%.

ISSUED FOR CONSTRUCTION

For Supporting Design Calculations See
FPGJOFFESCDX0000020100010

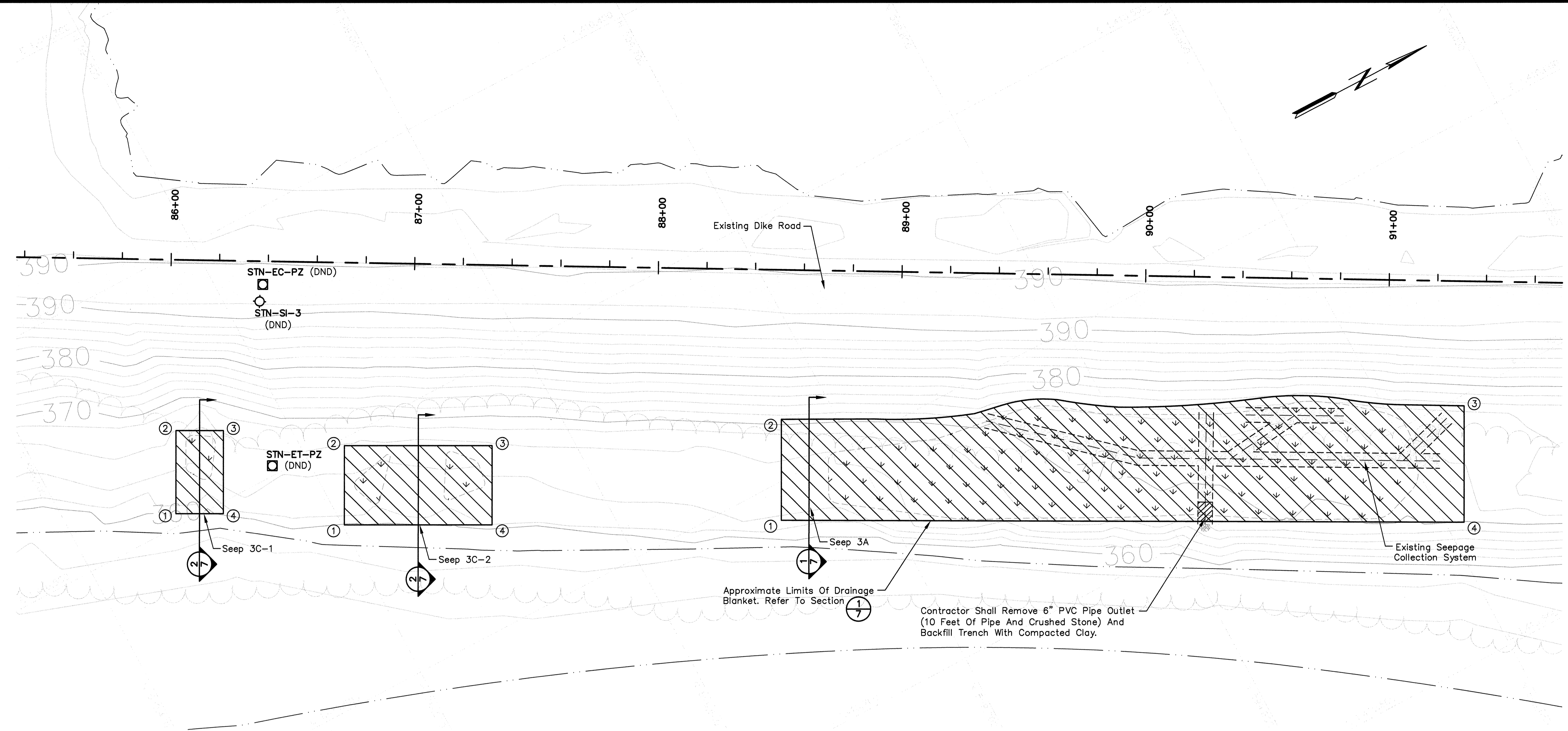


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R 1	09/03/10	JK	RP	SHB	SHB	SHB	SHB	TJ	-	-	-	-	-	-	-	-	-	-	-	-
R 0	07/02/10	JK	RP	SHB	SHB	SHB	SHB	TJ	-	-	-	-	-	-	-	-	-	-	-	-

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JOHNSONVILLE FOSSIL PLANT TENNESSEE VALLEY AUTHORITY FOSSIL AND HYDRO ENGINEERING												
AUTOCAD R 2000	DATE 07/02/10	30	C	10W550-06	R 1							

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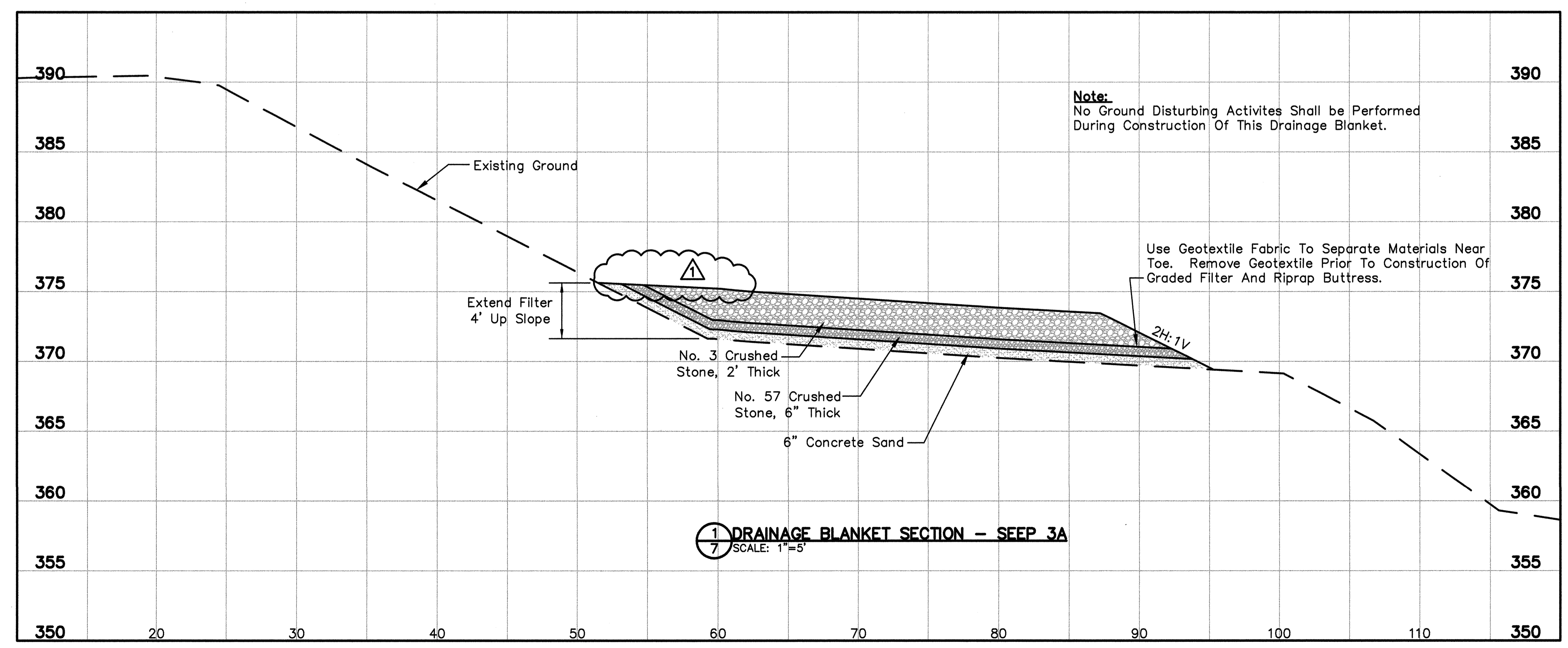


Seep 3C-1		
No.	Northing	Easting
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2	599,457.87	1,410,464.85
3	599,475.15	1,410,474.04
4	599,459.07	1,410,504.29

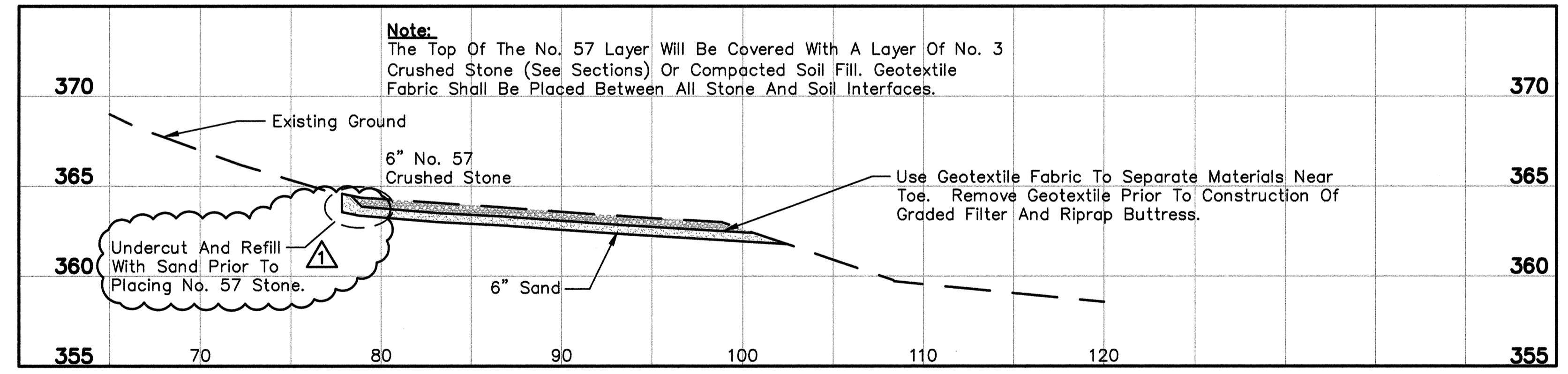
Seep 3C-2		
No.	Northing	Easting
1	599,500.64	1,410,531.66
2	599,515.99	1,410,502.79
3	599,569.59	1,410,531.29
4	599,554.24	1,410,560.15

Seep 3A		
No.	Northing	Easting
1	599,659.90	1,410,614.22
2	599,679.45	1,410,577.46
3	599,929.40	1,410,704.11
4	599,906.87	1,410,746.49

PLAN - SOUTHEAST DIKE
SCALE: 1"=20'



1 DRAINAGE BLANKET SECTION - SEEP 3A
SCALE: 1"=5'



2 DRAINAGE BLANKET SECTION - SEEP 3C-1 AND SEEP 3C-2
SCALE: 1"=5'

LEGEND

- Existing Piezometer Do Not Disturb (DND)
- Existing Slope Inclinator Do Not Disturb (DND)
- Area Of Observed Seepage And Standing Water
- Gravel Dike Road
- Section Or Detail No. Target Drawing Reference Key

GRAPHIC SCALE: 1"=20'
CONTOUR INTERVAL = 2'

ISSUED FOR CONSTRUCTION

For Supporting Design Calculations See FPGJOFFESCDX00000020100010

SEAL
STEPHEN H. BICKEL
REGISTERED ENGINEER
No. 13178
STATE OF TENNESSEE

9/13/2010

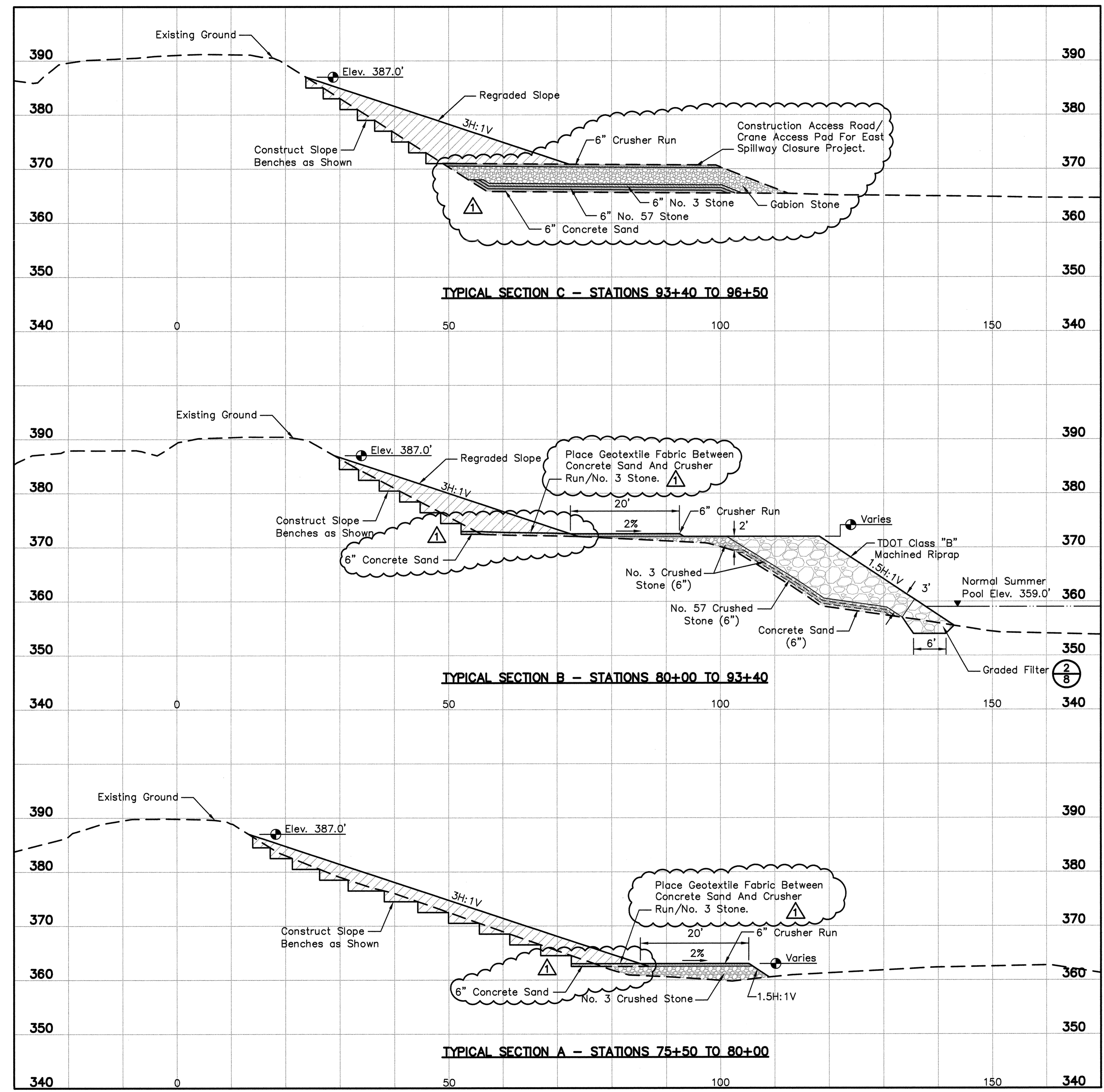
Stantec Consulting Services Inc.
1901 Nelson Miller Pky.
Louisville, Kentucky
40223-2177
Tel: 502.212.5000
Fax: 502.212.5055
www.stantec.com

DESIGNED BY: J. KOPP	DRAWN BY: R. PETTY	CHECKED BY: S. BICKEL	SUPERVISED BY: S. BICKEL	REVIEWED BY: S. BICKEL	APPROVED BY: S. BICKEL	ISSUED BY: T. JOHNSON
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JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

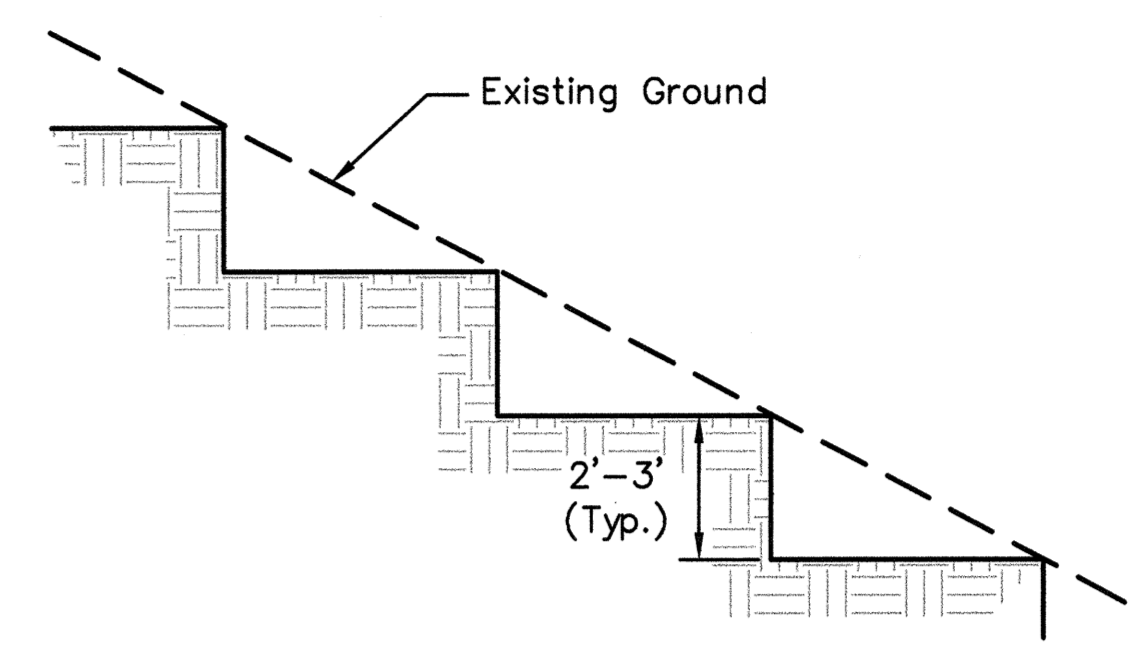
AUTOCAD R 2000 DATE 07/02/10 30 C 10W550-07 R 1

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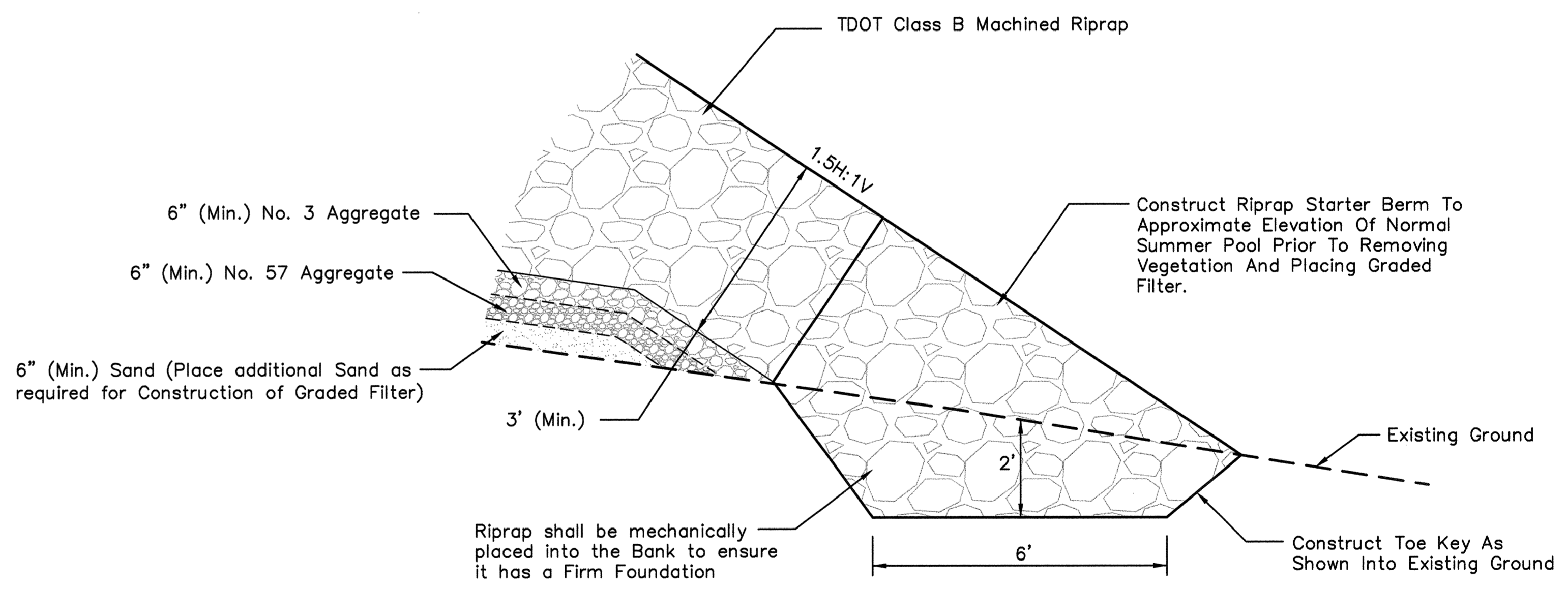


GRAPHIC SCALE: 1"=10'

- Notes:**
1. Geotextile Fabric Shall Be Placed Between All Soil/Crushed Stone Boundaries or Interfaces.
 2. Excavate Soft Zones And Replace With Compacted Soil, Sand, or Crushed Stone As Required To Stabilize For Proper Compaction Of Fill.



1 DETAIL - SLOPE BENCHES
SCALE: 1/4"=1'-0"



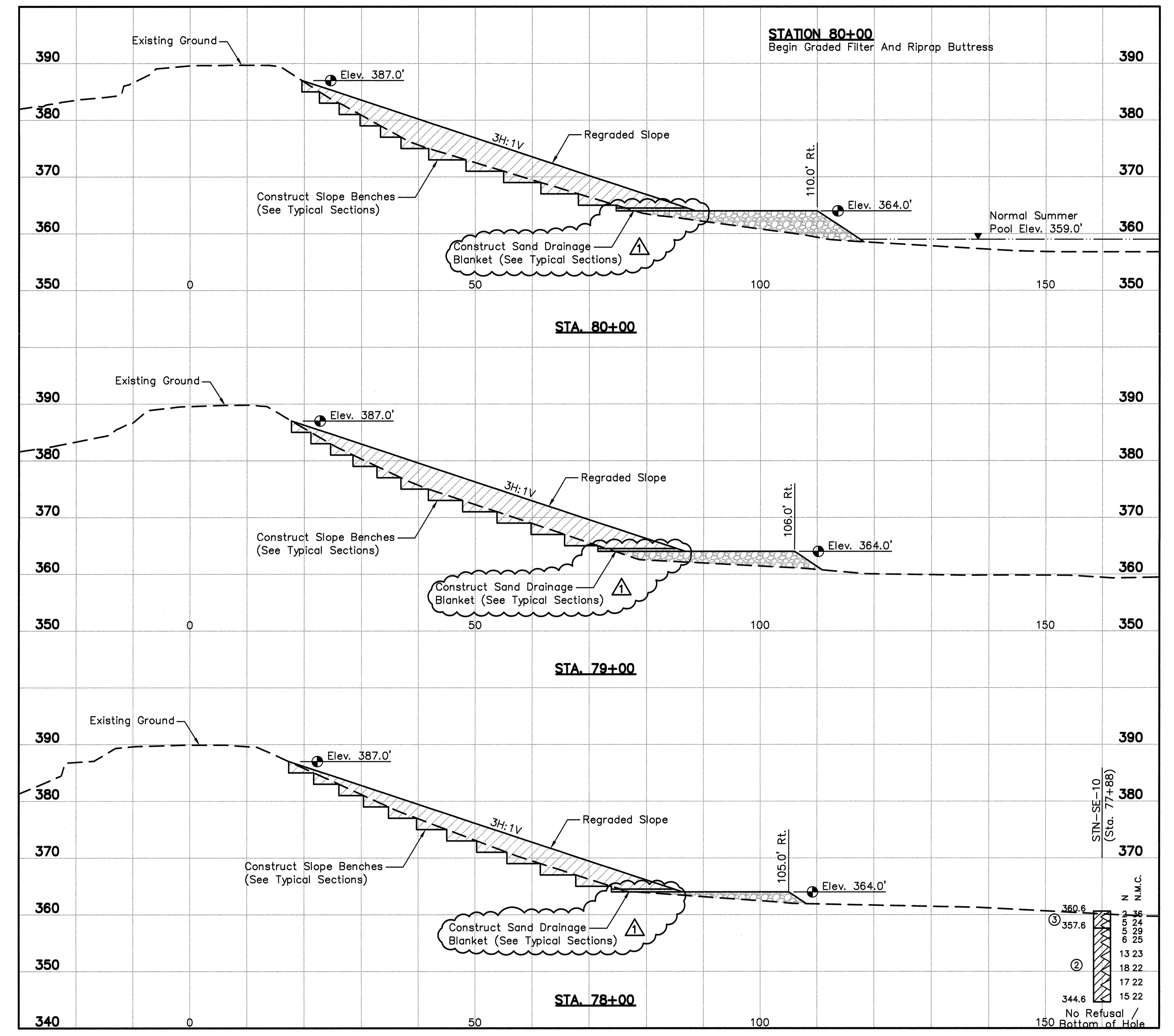
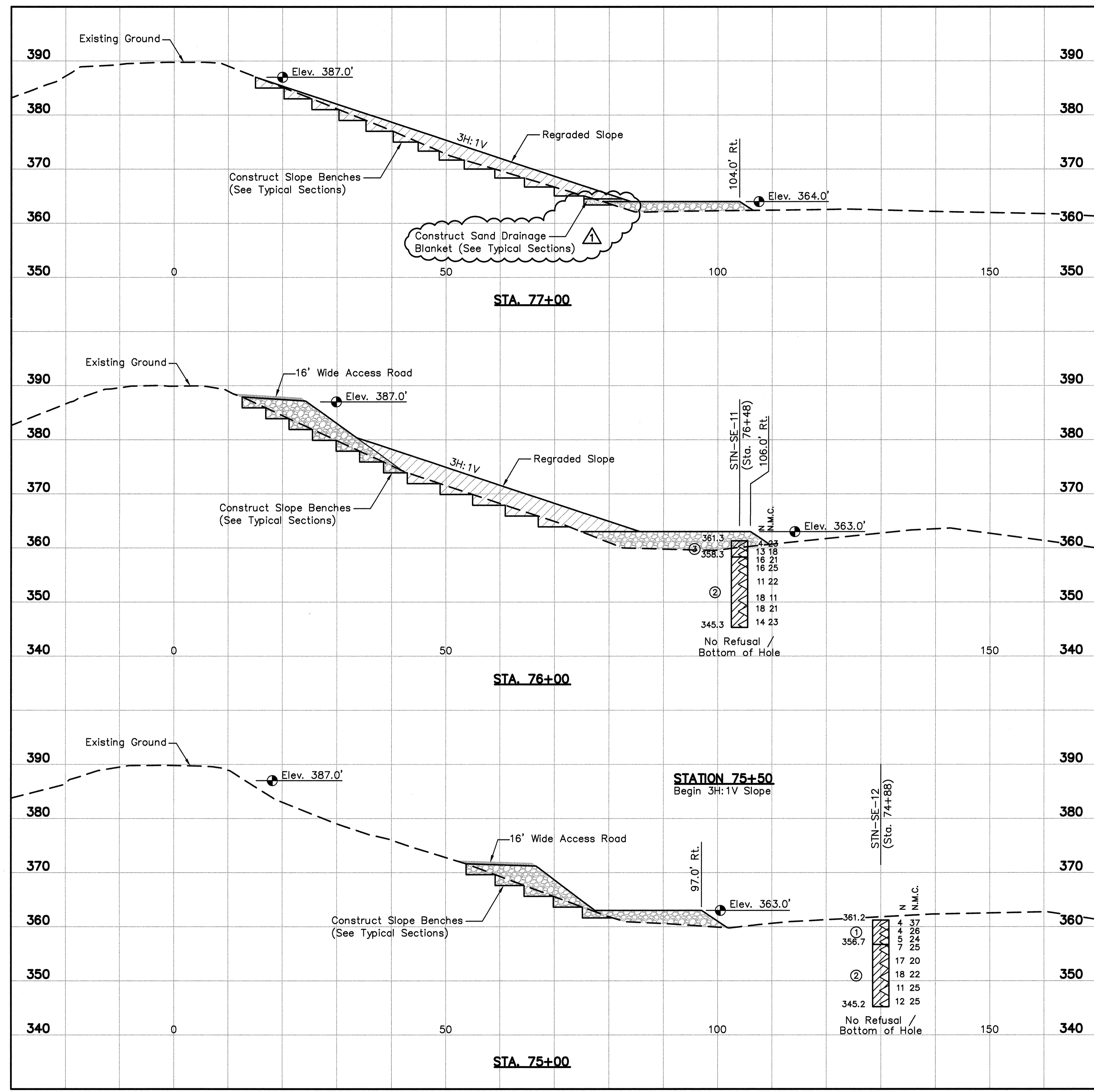
2 DETAIL - RIPRAP STARTER BERM
SCALE: 1/2"=1'-0"

ISSUED FOR CONSTRUCTION

Section or Detail No.
Sheet Where Shown
REFERENCE KEY

For Supporting Design Calculations See FPGJOFFESCDCX00000020100010		R 1 09/03/10 JK RP SHB SHB SHB SHB TJ - - - -									
		R 0 07/02/10 JK RP SHB SHB SHB SHB TJ - - - -									
		ISSUED FOR CONSTRUCTION									
NO.	DATE	DSGN	DRWN	CHG	SUPV	RYVD	APPD	ISSD	PROJECT	AS CONST	
SCALE: AS SHOWN EXCEPT AS NOTED											
YARD ASH DISPOSAL AREA NO. 2											
SOUTHEAST DIKE IMPROVEMENTS TYPICAL SECTIONS WORK PLAN 7 (JOF-100702-WP-7)											
DESIGNED BY:	J. KOPP	DRAWN BY:	R. PETTY	CHECKED BY:	S. BICKEL	SUPERVISED BY:	S. BICKEL	REVIEWED BY:	S. BICKEL	APPROVED BY:	T. JOHNSON
JOHNSONVILLE FOSSIL PLANT TENNESSEE VALLEY AUTHORITY FOSSIL AND HYDRO ENGINEERING											
AUTOCAD R 2000	DATE	07/02/10	30	C	10W550-08		R 1				

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- SOIL BORING LEGEND**
- ① Lean Clay (CL), reddish-brown, moist, soft to medium stiff, with organics.
 - ② Lean Clay (CL), brown and gray mottled, moist to wet, medium to very stiff, manganese concretions.
 - ③ Lean Clay (CL), brown, moist, soft to stiff, manganese concretions.
 - ◁ Standard Penetration Test Interval
 - N Standard Penetration Test Blow Count (blows/ft.)
 - N.M.C. Natural Moisture Content (%)
 - No Refusal No Refusal Encountered

- Notes:**
- For Typical Sections See Sheet 08.
 - Geotextile Fabric Shall Be Placed Between All Soil To Stone Interfaces.
 - Excavate Soft Spots And Replace As Required To Stabilize For Compaction.

For Supporting Design Calculations See FPGJOFFESDX00000020100010

DESIGNED BY: J. KOPP	DRAWN BY: R. PETTY	CHECKED BY: S. BICKEL	SUPERVISED BY: S. BICKEL	REVIEWED BY: S. BICKEL	APPROVED BY: T. JOHNSON	ISSUED BY: T. JOHNSON
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**JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING**

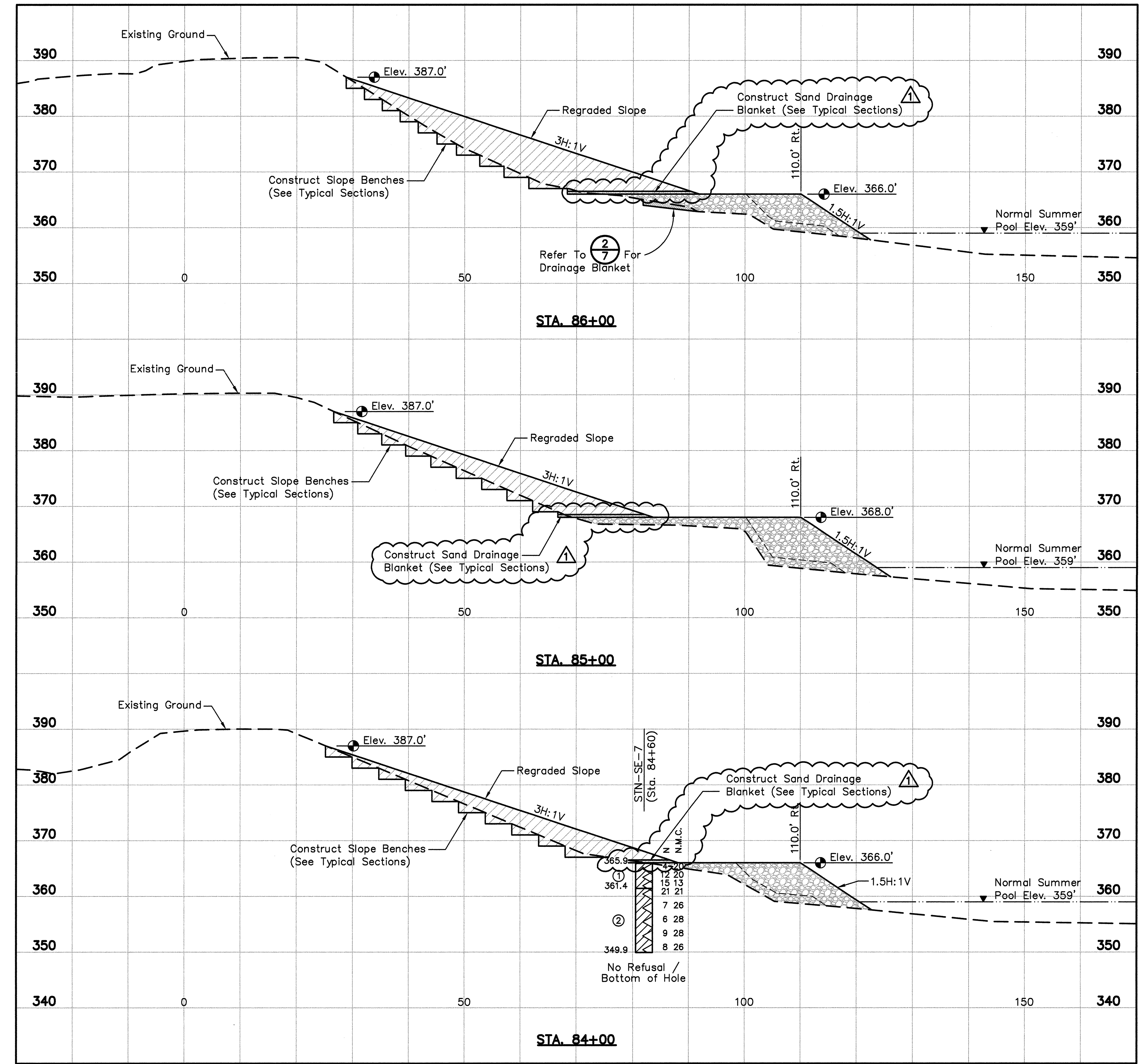
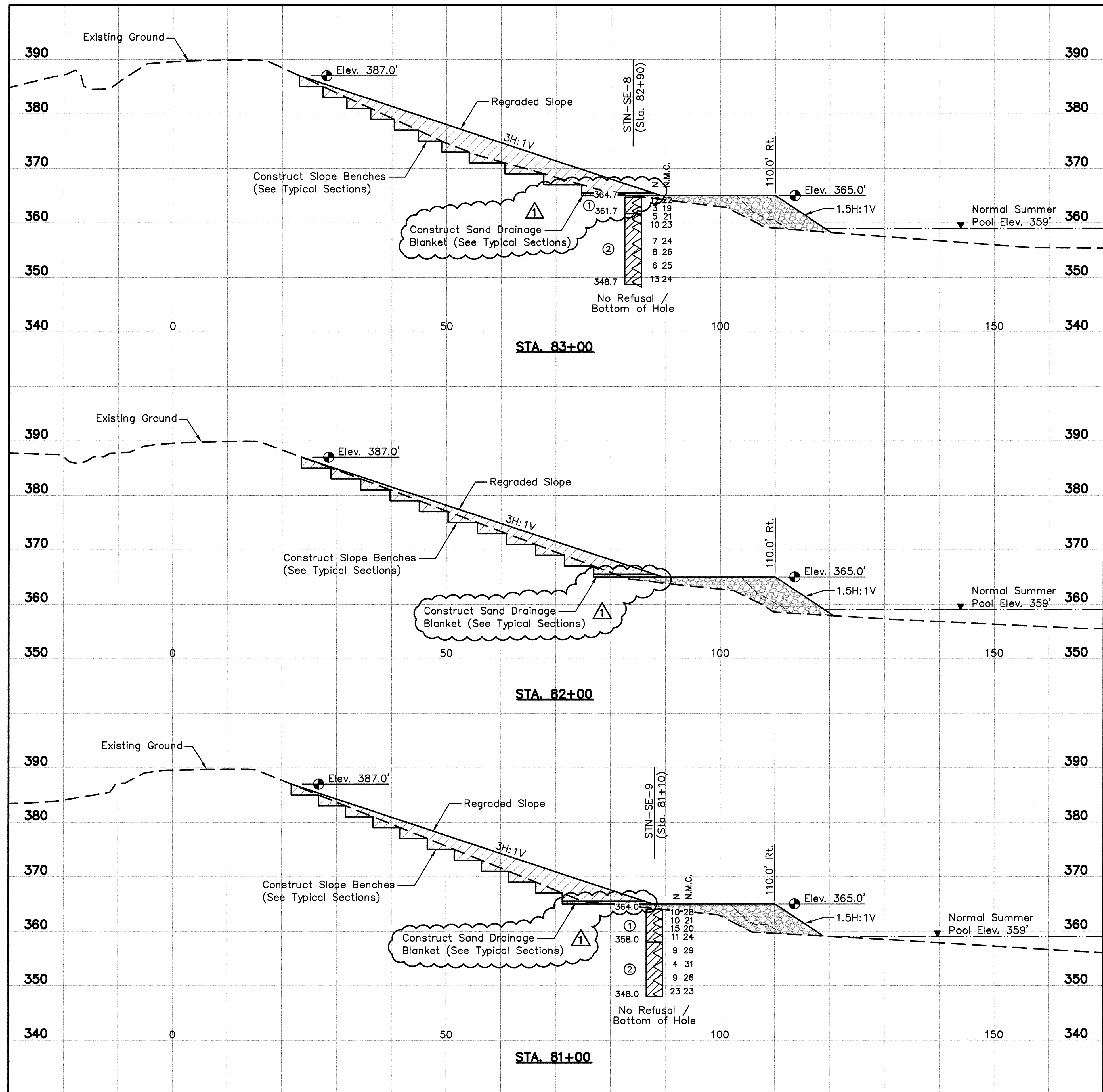
SCALE: 1"=10' EXCEPT AS NOTED

YARD ASH DISPOSAL AREA NO. 2
SOUTHEAST DIKE IMPROVEMENTS
CROSS SECTIONS
WORK PLAN 7 (JOF-100702-WP-7)

AUTOCAD R 2000 DATE 07/02/10 30 C 10W550-09 R 1

ISSUED FOR CONSTRUCTION

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- SOIL BORING LEGEND**
- ① Lean Clay (CL), reddish-brown, moist, soft to medium stiff, with organics.
 - ② Lean Clay (CL), brown and gray mottled, moist to wet, medium to very stiff, manganese concretions.
 - ◁ Standard Penetration Test Interval
 - N Standard Penetration Test Blow Count (blows/ft.)
 - N.M.C. Natural Moisture Content (%)
 - No Refusal No Refusal Encountered
- Section or Detail No.
 Sheet Where Shown
- REFERENCE KEY**

- Notes:**
- For Typical Sections See Sheet 08.
 - Geotextile Fabric Shall Be Placed Between All Soil To Stone Interfaces.
 - Excavate Soft Spots And Replace As Required To Stabilize For Compaction.

ISSUED FOR CONSTRUCTION

For Supporting Design Calculations See FPGJOFFESCDX0000020100010

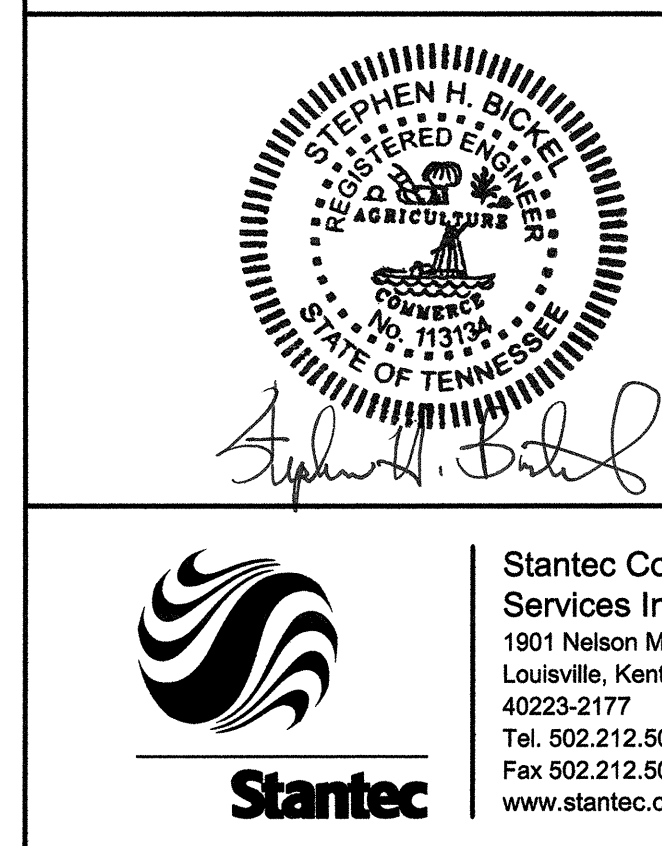
SCALE: 1"=10'

YARD
ASH DISPOSAL AREA NO. 2
SOUTHEAST DIKE IMPROVEMENTS
CROSS SECTIONS
WORK PLAN 7 (JOF-100702-WP-7)

JOHNSONVILLE FOSSIL PLANT
TENNESSEE VALLEY AUTHORITY
FOSSIL AND HYDRO ENGINEERING

DESIGNED BY: J. KOPP | DRAWN BY: R. PETTY | CHECKED BY: S. BICKEL | SUPERVISED BY: S. BICKEL | REVIEWED BY: S. BICKEL | APPROVED BY: T. JOHNSON | ISSUED BY: T. JOHNSON

DATE: 07/02/10 | 30 C | 10W550-10 | R 1



Stantec Consulting Services Inc.
1901 Nelson Miller Pkwy.
Louisville, Kentucky 40223-2177
Tel: 502.212.5000
Fax: 502.212.5055
www.stantec.com

PLOT DATE: 09/01/2010 USER: PETTY, RICHARD
 V:\105\ACTIVE\10550008\2010\TECHNICAL\DRAWING\00\HEATLINE\IMPROVEMENTS\VIEW_10\10W550-10-PL.DWG

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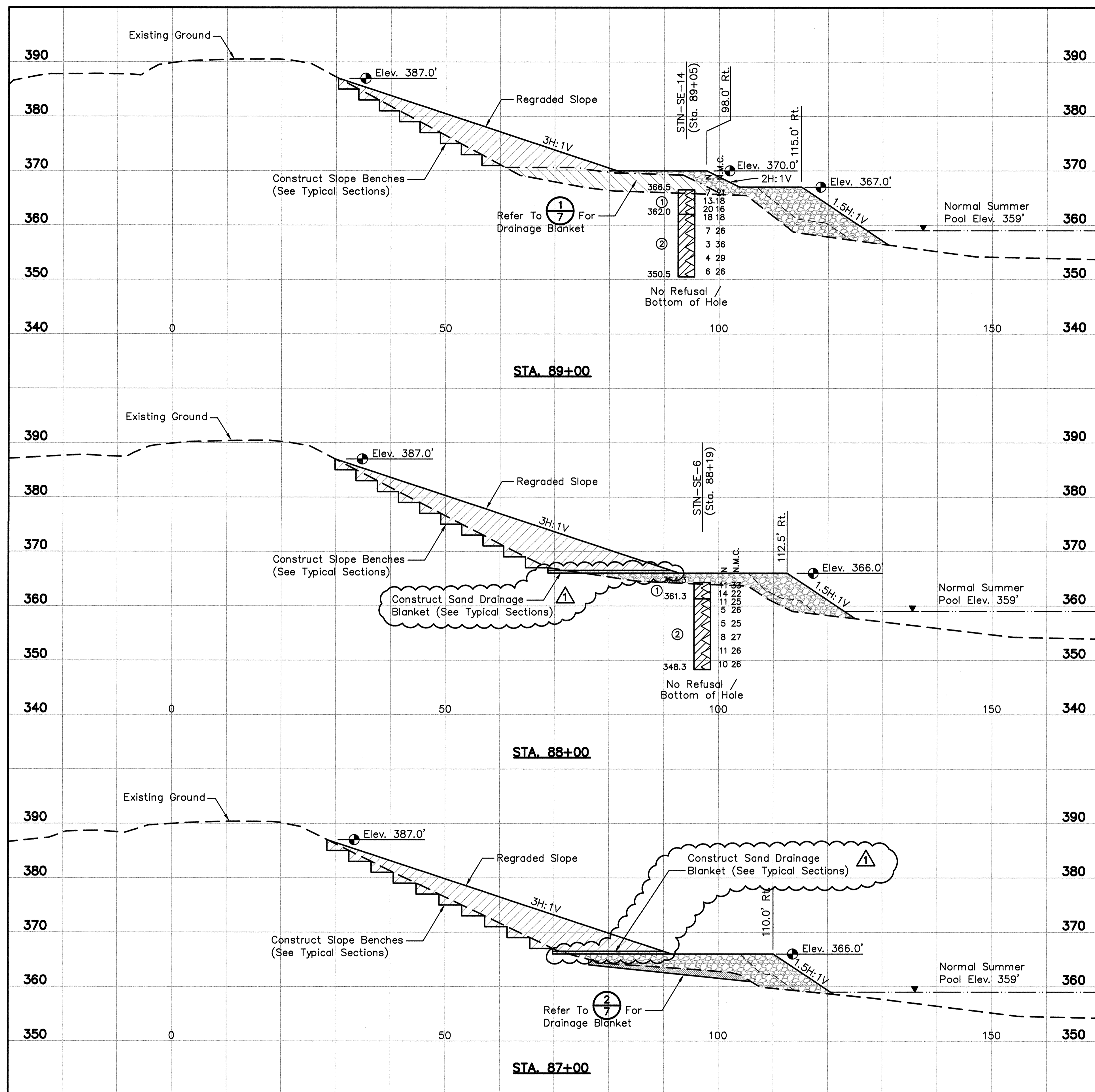
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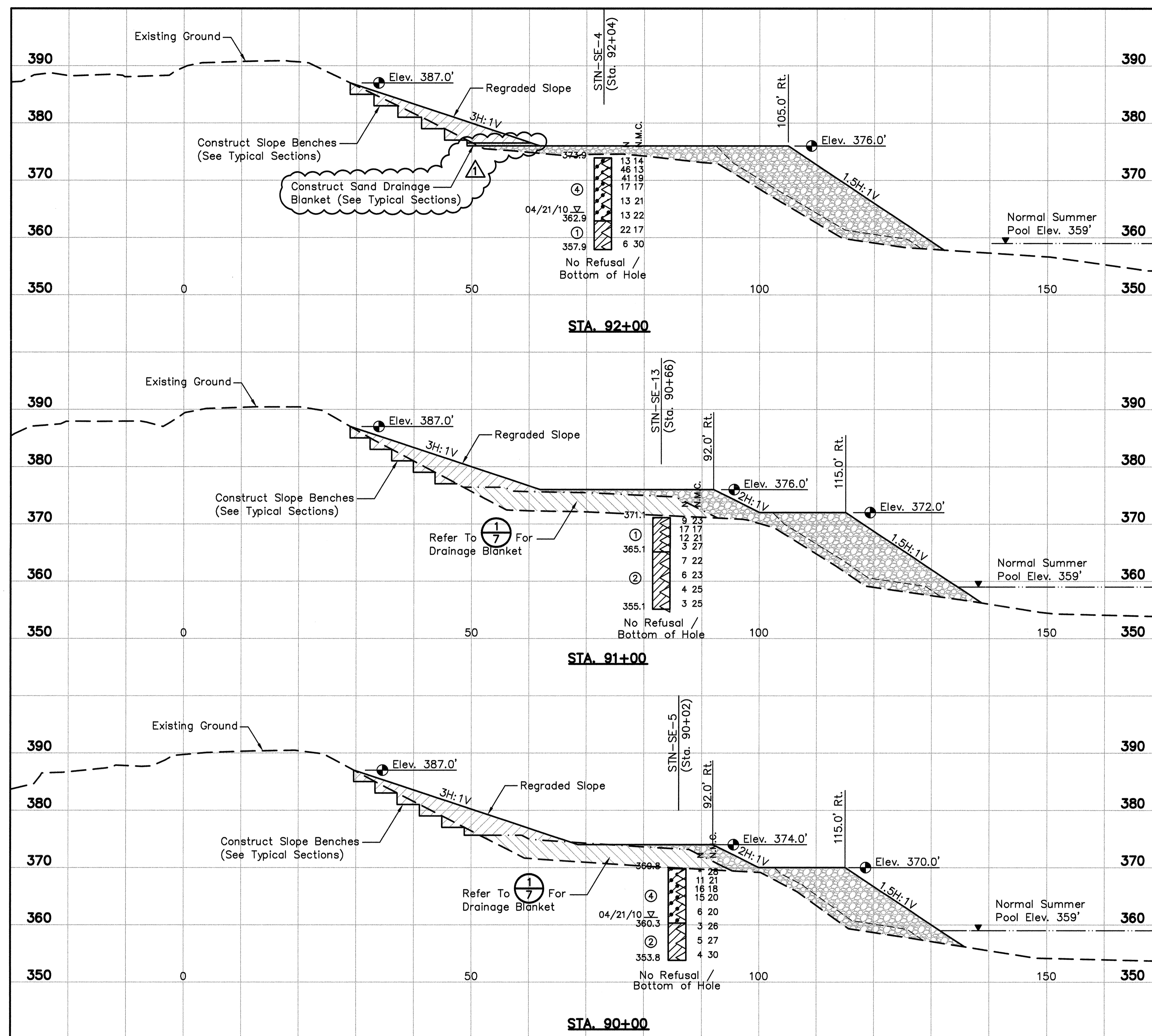
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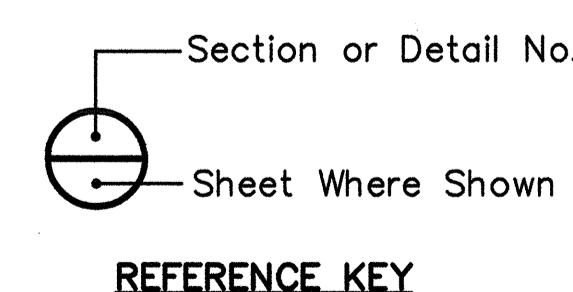
Notes:

- For Typical Sections See Sheet 08.
- Geotextile Fabric Shall Be Placed Between All Soil To Stone Interfaces.
- Excavate Soft Spots And Replace As Required To Stabilize For Compaction.



SOIL BORING LEGEND

- ① Lean Clay (CL), reddish-brown, moist, soft to medium stiff, with organics.
- ② Lean Clay (CL), brown and gray mottled, moist to wet, medium to very stiff, manganese concretions.
- ④ Clayey Gravel with Sand (GC), reddish brown, moist to wet, medium to very dense, chert fragments throughout.
- ◁ Standard Penetration Test Interval
- N Standard Penetration Test Blow Count (blows/ft.)
- N.M.C. Natural Moisture Content (%)
- No Refusal No Refusal Encountered



ISSUED FOR CONSTRUCTION

For Supporting Design Calculations See FPGJOFFESDX00000020100010

SCALE: 1"=10'

YARD ASH DISPOSAL AREA NO. 2

SOUTHEAST DIKE IMPROVEMENTS

CROSS SECTIONS

WORK PLAN 7 (JOF-100702-WP-7)

JOHNSONVILLE FOSSIL PLANT

TENNESSEE VALLEY AUTHORITY

FOSSIL AND HYDRO ENGINEERING

STANTEC CONSULTING SERVICES INC.

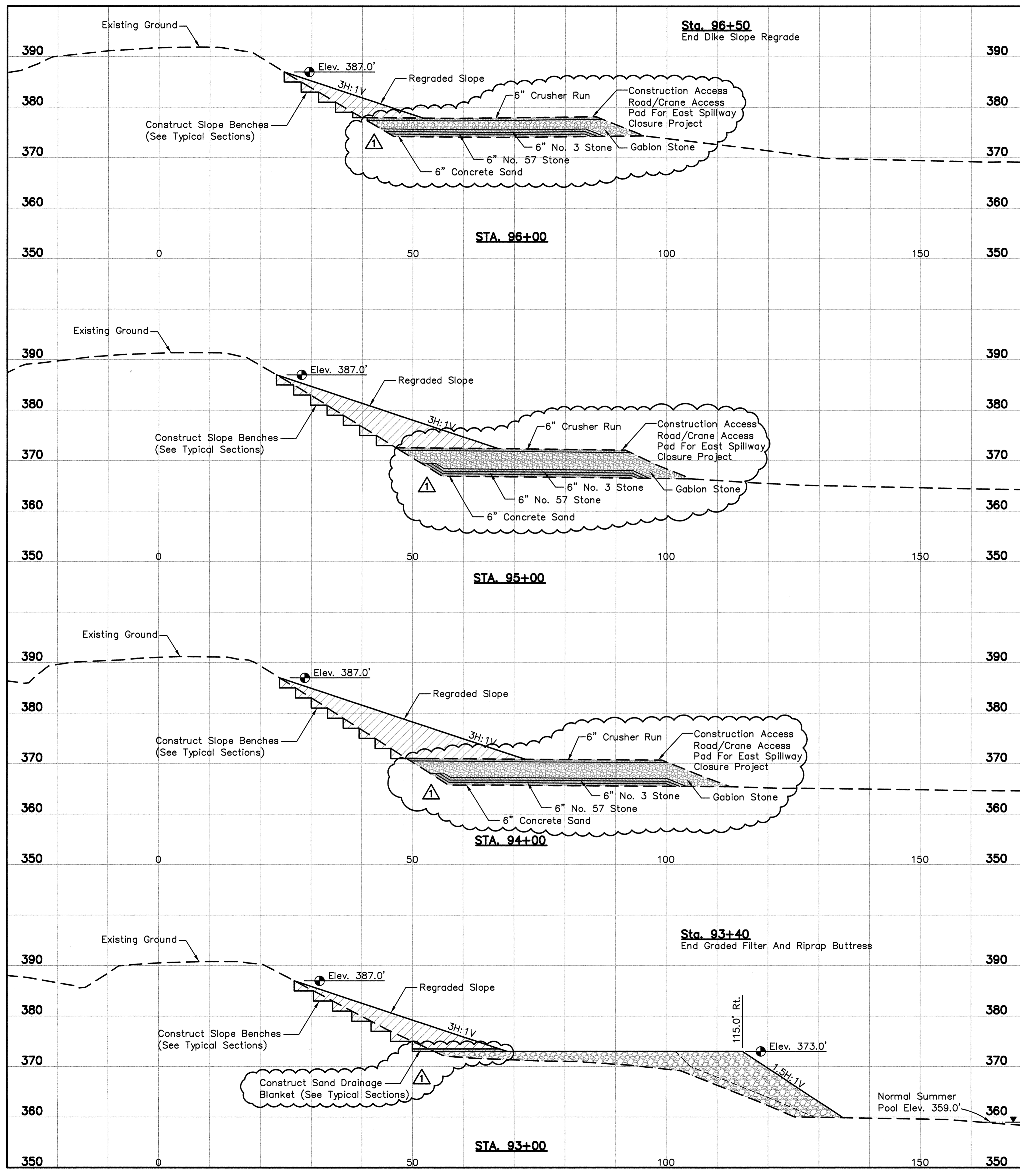
1901 NELSON MILLER PKY. LOUISVILLE, KENTUCKY 40223-2177

TEL: 502.212.5000 FAX: 502.212.5055 WWW.STANTEC.COM

DESIGNED BY: J. KOPP	DRAWN BY: R. PETTY	CHECKED BY: S. BICKEL	SUPERVISED BY: S. BICKEL	REVIEWED BY: S. BICKEL	APPROVED BY: S. BICKEL	ISSUED BY: T. JOHNSON
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AUTOCAD R 2000 DATE 07/02/10 30 C 10W550-11 R 1

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- Notes:**
1. For Typical Sections See Sheet 08.
 2. Geotextile Fabric Shall Be Placed Between All Soil To Stone Interfaces.
 3. Excavate Soft Spots And Replace As Required To Stabilize For Compaction.

ISSUED FOR CONSTRUCTION

For Supporting Design Calculations See FPGJOFFESC00000020100010		R 1	09/03/10	JK	RP	SHB	SHB	SHB	SHB	TJ	-	-	-	-
		R 0	07/02/10	JK	RP	SHB	SHB	SHB	SHB	TJ	-	-	-	-
ISSUED FOR CONSTRUCTION EXCEPT AS NOTED														
SCALE: 1"=10'														
YARD ASH DISPOSAL AREA NO. 2														
SOUTHEAST DIKE IMPROVEMENTS														
CROSS SECTIONS														
WORK PLAN 7 (JOF-100702-WP-7)														
DESIGNED BY:	J. KOPP	DRAWN BY:	R. PETTY	CHECKED BY:	S. BICKEL	SUPERVISED BY:	S. BICKEL	REVIEWED BY:	S. BICKEL	APPROVED BY:	S. BICKEL	ISSUED BY:	T. JOHNSON	
JOHNSONVILLE FOSSIL PLANT TENNESSEE VALLEY AUTHORITY FOSSIL AND HYDRO ENGINEERING														
AUTOCAD R 2000	DATE	07/02/10	30	C	10W550-12	R 1								