

WATER PERMIT NO. 6639-3

Name of Applicant: SD Dept of Game, Fish and Parks

Address: 523 E Capitol, Pierre SD Phone: 773-4619

Amount of Water Claimed: 38.80 Total Acres:

Source of Water Supply: Vermillion River

Water to be used for: recreational County: Turner

Type of Waste Disposal System:

Location: west edge of Centerville

PRIORITY Date Received: 8-3-05 Application/License Fee: \$NA

Corrected Application Received: Period of Annual Use: January 1 – December 31

Remarks: Reconstruction of Centerville dam involving the restoration of old Mill Dam

Diversion Point: SW ¼ NE ¼ Sec 22-T96N-R52W

Land to be Irrigated:

Depth of Well:

Well Driller:

Remarks:

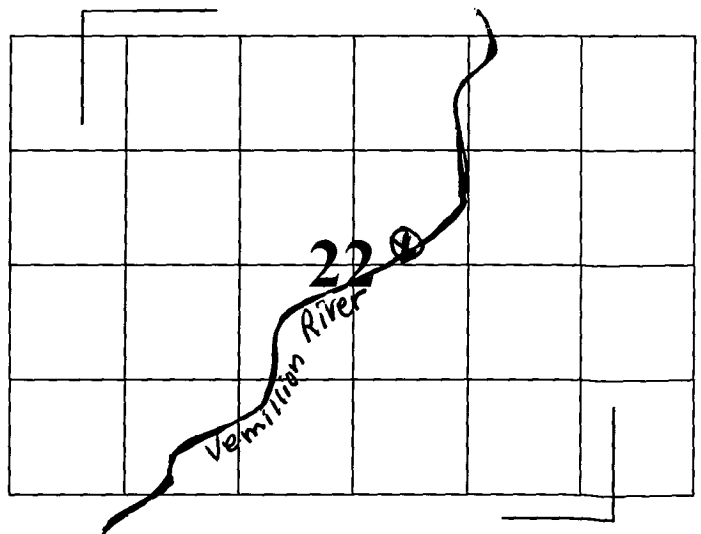
Type of Map: topo

Prepared by: Jeffrey D Peters, PE

Reviewed and the Number Assigned on: 8-3-05

By: Karen Schlaak

Notice of Hearing - date to intervene: _____



Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	No. <u>6639-3</u>	(office use only) Hydrologic Unit <u>10170102</u>
	Basin <u>Vermillion River</u>	
	Newspaper <u>Centerville Journal</u>	

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Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

- | | | | |
|---|---|--|--|
| ☐ Municipal | ☐ Suburban Housing | ☒ Recreational | ☐ Institutional |
| ☐ Rural Water System | ☐ Commercial | ☐ Fish & Wildlife | ☐ Geothermal Heat |
| ☐ Domestic (over 18 gpm) | ☐ Industrial | ☐ Other _____ | |

Type of Application: ☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
(check one) ☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☐ Amendment/Correction to Permit No. _____

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)

1. Name of Applicant South Dakota Department of Game, Fish & Parks Phone 773-4619
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 523 East Capitol Pierre State SD 57501
(Street, RR, or Box and City) (Zip Code)
2. Amount of water claimed _____ *CFS or _____ **GPM 38.80 6.30 ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)
3. Source of water supply Vermillion River
4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County Turner
Section 22 Township 96 North Range 52 W (SW1/4 NE1/4)
5. County or counties where water will be used Turner
6. Annual period during which water is to be used All Year Jan 1-Dec 31
7. Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

Centerville Dam reconstruction involves restoration of the old Mill Dam across the Vermillion River in Centerville, SD. Enhancements will include a permanent secondary spillway weir and removal of the old control gates.

STATE OF SOUTH DAKOTA)
County of Hughes SS

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Attach map and any other technical information. (see instructions)

I, Douglas R. Hansen, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Applicant's signature Douglas R Hansen

Subscribed and sworn to before me this 3rd day of August 20 05

Notary Public signature

**SOUTH DAKOTA
WATER PERMIT NO. 6639-3**

Date of first receipt of application August 3, 2005.

The Water Management Board approved Water Permit No. 6639-3 on October 4, 2005 for South Dakota Department of Game, Fish and Parks, 523 E Capitol, Pierre SD 57501 authorizing the dam and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 6639-3 authorizes impoundment of 38.80 acre-feet of water from the Vermillion River by reconstructing Centerville Dam located in the SW ¼ NE ¼ Section 22-T96N-R52W.
2. The water appropriated shall be used for the purpose of recreational use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date from which applicant may claim right is August 3, 2005.
5. One-fifth of the construction is to be completed on or before April 4, 2008.
6. All construction is to be completed on or before October 4, 2010.
7. Water is to be put to beneficial use on or before October 4, 2014.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. Water Permit No. 6639-3 authorizes a dam with a storage capacity of 38.8 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation of 1,198 feet mean sea level.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

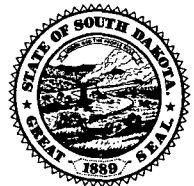
WATER MANAGEMENT BOARD

By: Garland Erbele

Garland Erbele, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

OCT 13 2005

date



(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter _____ Depth _____
- b) Casing Type _____ Diameter _____ Thickness _____
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material _____
- f) Depth to Water (ground surface to water level) _____
- g) Distance to nearest existing domestic well:
- On applicants property _____ On property owned by others _____

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System _____

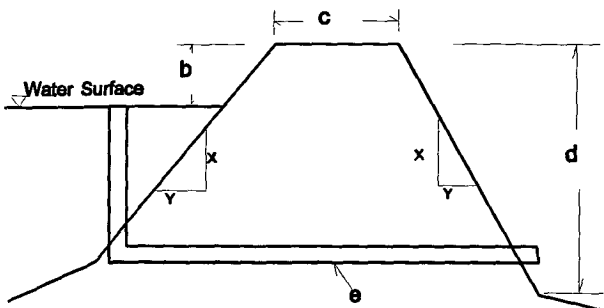
3. Dugout Information

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

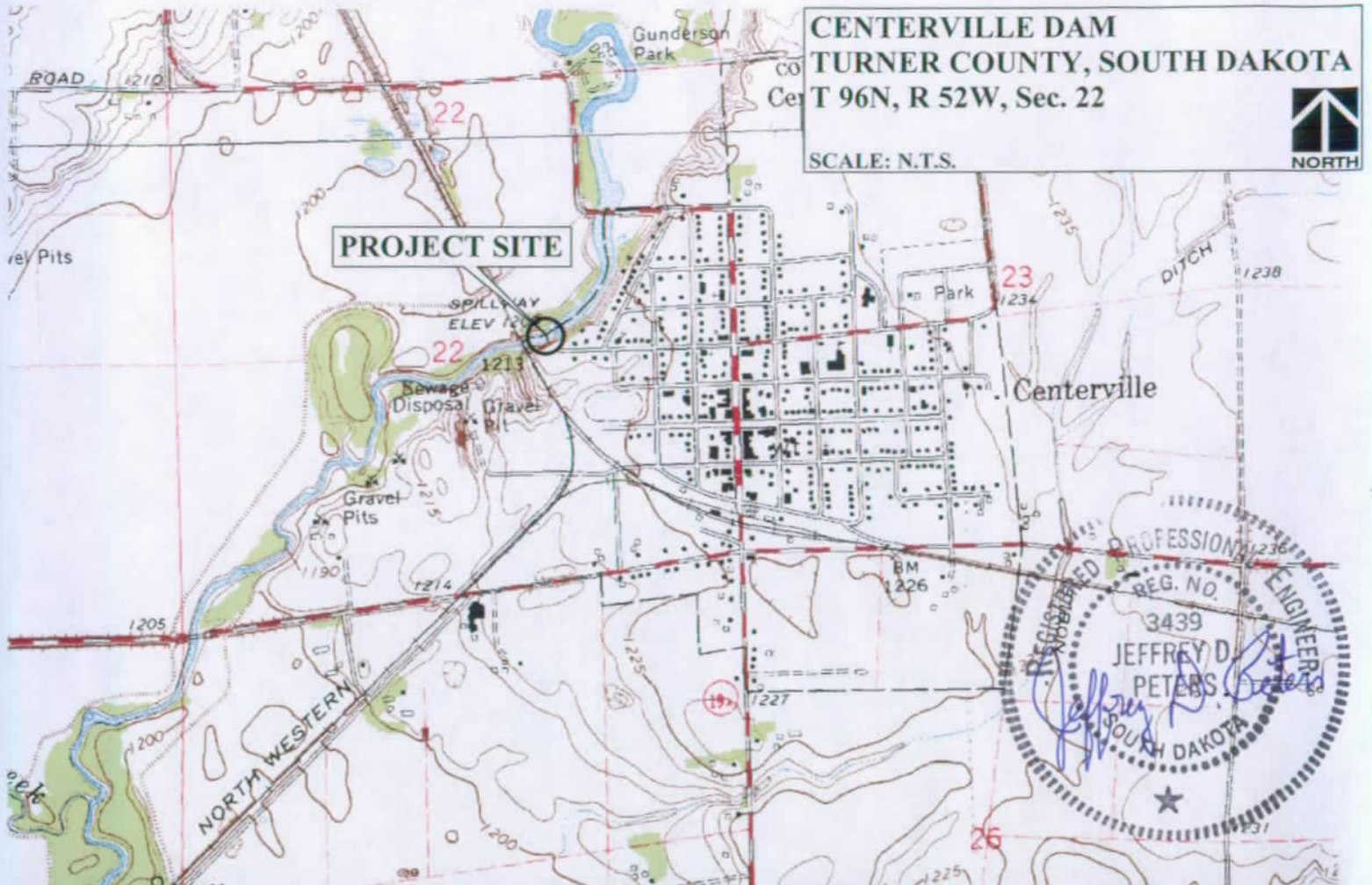
4. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:



- b) Freeboard _____ 1'
- c) Crest Width _____ 2'
- Crest Length _____ 150'
- d) Height _____ 6.8'
- e) Primary Outlet Capacity _____ 2735 cfs
If pipe, diameter _____ 70.5' (wide)
- f) Secondary Spillway Capacity _____ 2175 cfs
Spillway Width _____ 79.5'
- g) X & Y Slope _____ N/A
Upstream _____
Downstream _____
- h) Surface Area of Impoundment _____ .79 Acres
- i) Storage _____ 6.3 _____ Acre Feet
- j) Drainage Area Above Dam _____ Acres

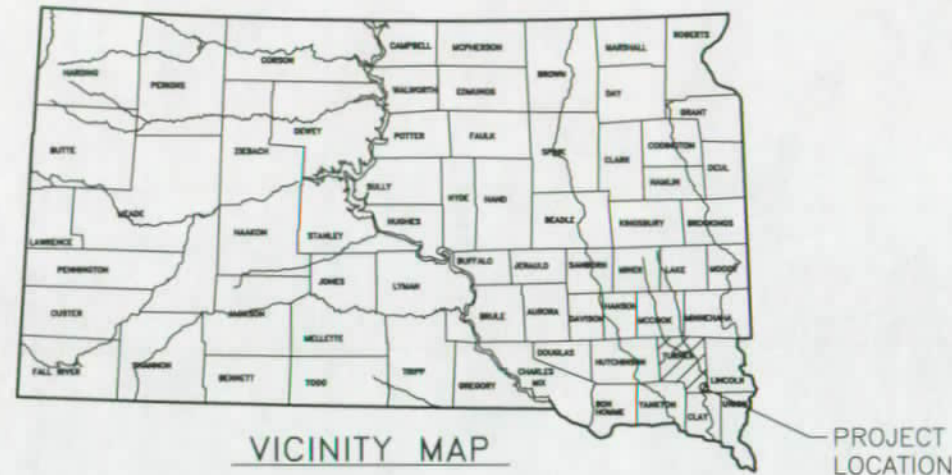


SOUTH DAKOTA DEPARTMENT OF GAME, FISH & PARKS

CENTERVILLE DAM DAM RECONSTRUCTION

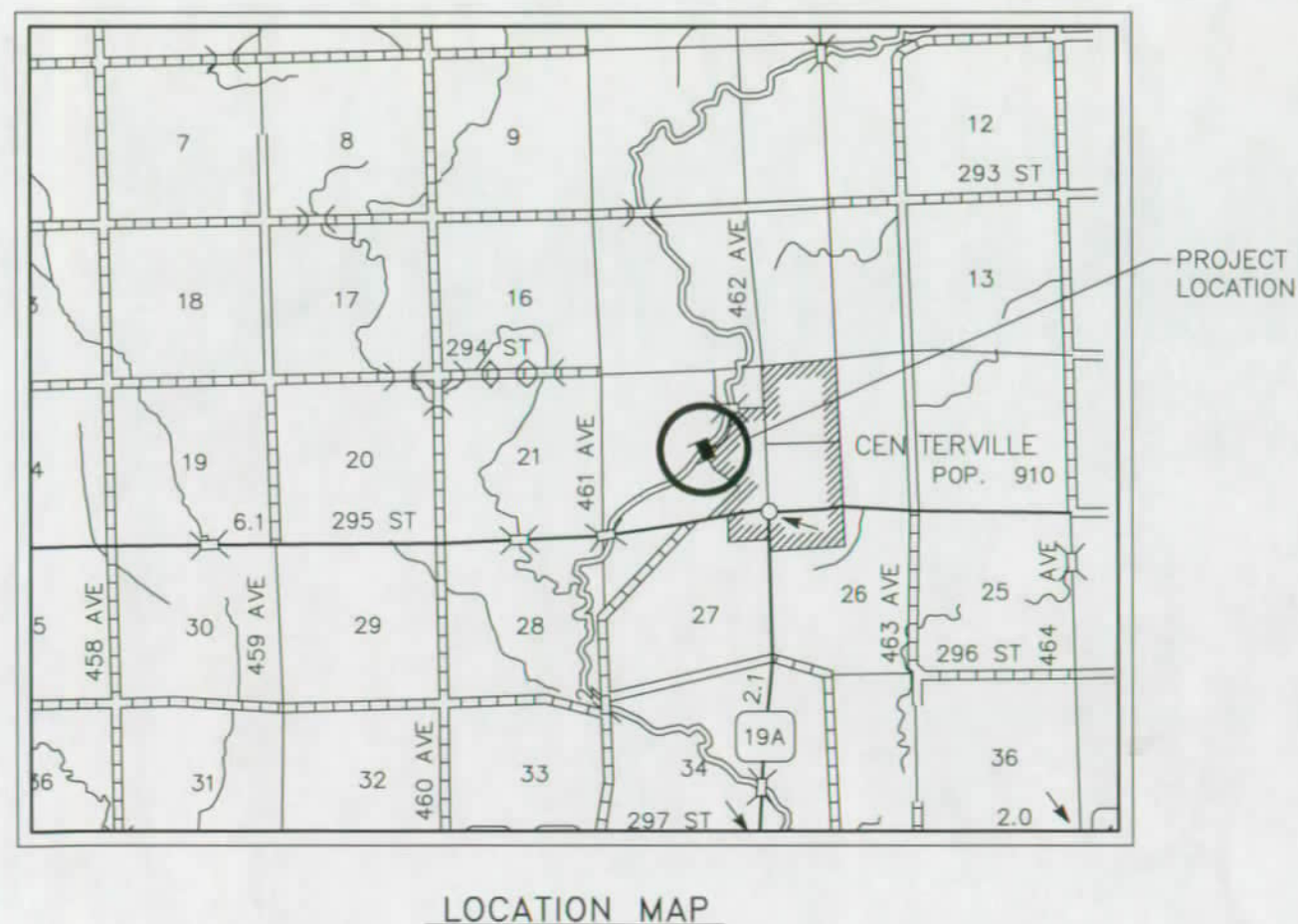
TURNER COUNTY, SOUTH DAKOTA

GFP PROJECT NO. Tur-Cent-W06-A SECTION 22, T96N, R52W



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LIST OF DRAWINGS	
SHEET NO.	DRAWING TITLE
1	Title Sheet
2	Estimate of Quantities
3-5	Plan Notes
6	Finished Plan View
7-8	Details
9	Aerial Project View
10-11	Site Demolition Plans
12	Diversion Plan
13	Diversion Channel Plan & Profile
14-17	Diversion Channel Sections
18	Training Berm Plan & Profile
19-20	Training Berm Sections
21	Riprap Plan
22-23	Riprap Sections
24	Spillway Plan & Profile
25-26	Spillway Sections
27	Finished View
28-30	Concrete Details
31	Fence Details
32	Trail Plan & Profile
33-38	Trail Sections
39-40	Block Details
41-46	Erosion Control
47	Traffic Control



ESTIMATE OF QUANTITIES

Item No.	Bid Item	Units	Diversion Channel	Spillway	Training Berm	South Bank	Trail	Fishing Platform	Miscellaneous	Total
1.00	Mobilization	LS								1
1.01	Remove & Dispose of Trees & Debris	LS								1
1.02	Clearing & Grubbing	LS								1
1.03	Remove & Dispose of Silt	CY								2443
1.04	Concrete Demolition & Disposal	LS		1						1
1.05	Remove & Dispose of Stairs	LS				1				1
1.06	Unclassified Excavation	CY	9964	114	269	87	170		100	10704
1.07	Compacted Embankment	CY		70	2251	86	236		50	2693
1.08	Salvage & Place Riprap	TONS			254					254
1.09	Class C Riprap, F&I	TONS		382	1251	466				2099
1.10	Ordinary Trail Grading	LF					227			227
1.11	Compacted Limestone	TONS					32			32
1.12	Reinforced Concrete	CY		133				12		145
1.13	Concrete Slurry	CY		50						50
1.14	Engineered Fill	TONS		43			8	27		78
1.15	Topsoil Strip & Place	CY	746		83		48			877
1.16	Woven Geotextile Fabric	SY					151			151
1.17	Nonwoven Geotextile Fabric	SY		340	398	232				970
1.18	Repair Fishing Platform	LS						1		1
1.19	Incidental Work	LS							1	1
1.20	Seeding & Erosion Control	LS								1
1.21	Traffic Control	LS								1
1.22	Remove & Dispose of Timber Piles	LS								1
1.23	Lining for Diversion Channel	SY	5583							5583
1.24	Dewatering	LS								1
1.25	Steel Railing, Furnish & Install	LF						70		70
1.26	Block Retaining Wall	SF					503			503
1.27	Cofferdam	LS								1



Department of Game, Fish & Parks
South Dakota

Division of Administration
Foss Building
523 E. Capitol Ave.
Pierre, South Dakota 57501-3182
Phone: (605) 773 - 8082

PROJECT NAME
TIF-CENT-W06-A
DATE
7/28/05
BY
JA
CHECKED BY

ESTIMATE OF QUANTITIES

2
OF
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SPECIFICATIONS

Standard Specifications for Roads & Bridges, South Dakota Department of Transportation, 2004 Edition, Supplemental Specifications and/or Special Provisions shall apply where applicable for construction and materials details with the exception of Method of Payment and Basis of Payment. Plans, notes and/or details shall supersede all General Provisions of the Standard Specifications.

SCOPE OF WORK

Work covered under this contract, but is not limited to:

- 1. Construction of an earthen training berm.
- 2. Construction of an earthen diversion channel.
- 3. Extend spillway with a reinforced concrete wall.
- 4. Riprap placement
- 5. Construction of a limestone trail.
- 6. Construction of a modular block retaining wall.
- 7. Furnish and install a steel railing.

GENERAL NOTES

The Contractor shall take care not to damage existing vegetation and trees in the construction site. No trees shall be removed unless such removal has been authorized by the Project Engineer.

Due to work area constraints, some hand work and miscellaneous small equipment may be necessary to accomplish the work. The contractor shall take this into consideration when bidding this project.

The Contractor is advised to visit the site prior to bid preparation to ascertain the amount of work involved.

WORK SCHEDULE

The Contractor shall submit a detailed schedule for the proposed work. The Owner/Engineer must approve the sequence and schedule prior to construction.

COMPLETION DATE

All work must be completed by _____.

UTILITIES

The Contractor shall notify SOUTH DAKOTA ONE CALL, 1-800-781-7474, to locate any utility that may be located within the project limits. The Contractor is responsible for any damage to utilities and shall be repaired at the Contractor's expense.

HAUL ROUTES

The Contractor will be responsible for determining any haul routes from the material source(s) to the project site including any agreements necessary with respective governmental agencies for maintenance and restoration of the routes.

It shall be the responsibility of the contractor to prepare the haul route, maintain the haul route in a good condition satisfactory to the governing agency and upon completion of its use, restore the haul route to a condition at least equal to that which existed at the time hauling operation began.

The fact that other general and normal traffic has used the haul route or a portion of it concurrently shall not relieve the Contractor of his obligation to maintain and restore the haul route as required.

NOTIFICATION TO PROJECT ENGINEER

- 1. The Project Engineer shall be notified 3 weeks in advance of the date construction is to begin.
- 2. The Project Engineer shall be notified prior to any over runs from plans quantities.
- 3. The Project Engineer shall be notified 24 hours prior to placing any concrete.

WASTE DISPOSAL SITE

The Contractor must supply his own waste disposal site for all trees, stumps, debris and other waste generated on the project.

TREE REMOVAL

The Contractor shall remove all trees within the construction limits or as directed by the Project Engineer.

CLEARING & GRUBBING

Clearing & Grubbing involves the removal of all brush and debris within the construction limits. Clearing & Grubbing will be paid at the lump sum price.

APPROVALS

A Corps of Engineer's 404 permit is necessary and DENR review for 401 (water quality) certification is required before construction can proceed. The owner will be responsible for permitting, but the Contractor will be responsible for following plans to maintain permit conditions.

DEWATERING

Dewatering will be necessary during construction of the overflow spillway. The dewatering shall be continuous so that the construction site is maintained free of water while constructing the overflow spillway.

The Contractor will be required to submit a detailed description of any dewatering methods not included in the original plans. The plan must be approved by the Project Engineer before construction can begin. Payment for dewatering will be by the Lump Sum.

COMPACTED EMBANKMENT

Compacted Embankment is all suitable material used for fill purposes at a certain area as designated in the plans. A compaction factor of 1.30 is used. Compacted Embankment will be paid for by the cubic yard. All water required for compaction of the Compacted Embankment shall be included in the bid item "Compacted Embankment."

UNCLASSIFIED EXCAVATION

Unclassified Excavation is material obtained from earthwork. Suitable material obtained from excavation shall be used for Compacted Embankment. All other excess excavation shall be wasted on site as directed by the Project Engineer. Unclassified Excavation will be paid for by the cubic yard.

NOTE: MOST OF THE EXCAVATION IS COMING FROM THE DIVERSION CHANNEL. SINCE THE DIVERSION CHANNEL IS BEING BUILT ON PRIVATE FARM LAND, YOU MIGHT NEED SPECIAL PROVISIONS STATING MATERIAL REMOVED IS THE SAME MATERIAL THAT IS PUT BACK IN. YOU MAY ALSO NEED TO USE A DIFFERENT COMPACTION FACTOR.

ORDINARY TRAIL GRADING

The Contractor may perform grading or surfacing work during daylight hours only unless additional hours are approved by the Project Engineer.

Removal and disposal of all vegetation and debris within the project limits will be considered subsidiary work to other contract items. No separate payment will be made for their removal and disposal.

During construction of the project, existing traffic control devices shall be removed and/ or reset as necessary by the contractor to safely control traffic. Removed items shall be neatly stockpiled at the site.

Water for compaction of earth embankments is estimated to be applied at the rate of 15 gallons per cubic yard of embankment minus waste. Payment for water shall be adsorbed into the bid items "Unclassified Excavation and Compacted Embankment".

Compaction shall be by the Ordinary Compaction Method.

SALVAGING. STOCKPILING AND PLACING TOPSOIL

Prior to starting construction operations, topsoil shall be removed from construction limits. Following completion of grading operations, topsoil shall be respread evenly over the disturbed areas and the bed shall be prepared for seeding. This depth will be approximately 4 inches over the work limits.

NOTE: YOU MAY WANT TO STRIP ADDITIONAL TOPSOIL ON THE FARM GROUND.

Cost for this work shall be included in the contract unit price per cubic yard of "Topsoil Strip & Place."



PROJECT NUMBER 11B-CENT-WO6-A	DATE 7/28/05
DRAWN BY JA	REVISION
CHECKED BY	REVISION

WATER FOR COMPACTION

Cost of water for compaction of the granular material shall be absorbed in the unit price for various contract items. Six (6) percent, plus or minus, moisture will be required at the time of compaction unless otherwise directed by the Engineer.

SILT REMOVAL

The bid item silt removal includes silt removal, disposal and shaping of the excavated bottom. Quantities are estimated and actual payment will be based upon measured quantities. Excavated slopes and bottom will be determined by the Project Engineer.

The Contractor will be responsible for finding his own silt disposal site.

The Contractor shall take special provisions to keep silt in the truck bed during hauling operations. The Contractor may need to seal or cover the truck bed to prevent the silt from falling onto the roads. The Contractor will be responsible to clean any silt off the haul roads as deemed necessary by the Project Engineer.

CONCRETE DEMOLITION & DISPOSAL

The Contractor will be responsible for concrete demolition and disposal as shown in the plan sheets. Concrete may be disposed of under the training berm or underneath riprap sections. Concrete Demolition & Disposal shall be paid for by the Lump Sum.

REMOVE & DISPOSE OF STAIRS

The Contractor shall remove and dispose of two sets of stairs on the south bank. Removal and disposal of both sets of stairs shall be paid for by the lump sum.

REPAIR FISHING PLATFORM

Repair of the fishing platform shall be paid for by the Lump Sum and shall include removal of two deteriorated concrete walls, cutting off the gate structure to an elevation at or below the existing concrete wall height, welding the gates closed, filling the voids at the bottom of the structure with flowable grout and filling the spacing between walls with rock. **MAY WANT TO SPECIFY A SPECIFIC TYPE OF ROCK OR MAY ALLOW THEM TO USE A RANDOM FILL SOURCE.**

INCIDENTAL WORK

- 1. All handling of excess excavation for construction of the overflow spillway wall.
- 2. All handling of excess excavation needed for demolition.
- 3. All dowels or other methods necessary to tie new concrete work into the existing spillway structure.
- 4. All sweeping of excavated silt deposited on the roads during hauling operations.
- 5. All sawing of concrete.
- 6. Excavation for slurry trench.
- 7. Any rock needed for diversion channel crossing and rock needed to hold down the drainage fabric in the diversion channel.
- 8. Cleanup of all construction debris from the project site.
- 9. All other work not specifically identified under payment provisions. **_YOU MAY NOT WANT THIS LAST ITEM SINCE IT IS PRETTY VAGUE.**

LIMESTONE

Limestone shall be furnished by the Contractor. Material shall be crushed limestone and shall conform to the standard specifications, section 882 and shall be from a source approved by the Engineer. The modified gradation specifications shall be as follows:

Sieve Size	Percent Passing by Weight
3/8"	100
No. 4	60-90
No. 10	20-60
No. 40	15-30
No. 200	0-15

Plasticity Index: 0-3
Liquid Limit: 25

All other requirements of section 882 shall apply. To obtain approval, the contractor shall collect a 10lb. minimum sample and submit to the testing firm selected by the owner for source approval.

Compaction of the limestone shall conform to Section 260.3B & C of the Standard Specifications shall apply.

Cost of water for compaction of the limestone shall be adsorbed in the contract unit bid price for the item.

A woven geotextile fabric shall be used as a separation and reinforcement between the limestone and soil. Geotextile Fabric to be installed following manufacturers recommendations and (6 or 7) ft. roll widths. See project manual specifications.

REMOVE & DISPOSE OF TIMBER PILES

Timber piles shall be cutoff at ground level and disposed of off site. Payment for removal of timber piles shall be by the Lump Sum.

BLOCK RETAINING WALL

Wall shall consist of concrete blocks reinforced with geogrid. Wall height and geogrid placement will vary as indicated on the plan sheets or as directed by the Project Engineer.

Remaining wall is to be bid by the square foot under the bid item "Block Retaining Wall." Price per square foot includes all excavation and materials to construct the wall (i.e. blocks, geogrid, drain, gravel and footing).

COFFERDAM

Payment for the construction and removal of the cofferdam shall be paid for by the lump sum. Cofferdam can be constructed by various methods and materials including earthen fill, sheet piling and sand bags.

The Contractor must submit a design of his cofferdam to the Project Engineer prior to construction.

ENGINEERED FILL

Engineered fill shall consist of 3/4" clean crushed quartzite leveling course.

RIPRAP

See Technical Specifications

SALVAGE & PLACE RIPRAP

Contractor shall salvage all Riprap?????????

GEOTEXTILE FABRIC

See Technical Specifications

REINFORCED CONCRETE

The Contractor shall submit shop drawings to the Project Engineer for prior approval before forming concrete. See Technical Specifications for further details.

FLOWABLE GROUT

Flowable grout shall be furnished and placed by the Contractor and will be paid for by the cubic yard. See Technical Specifications for further details.

SEEDING & EROSION CONTROL

NOTE: YOU WILL WANT TO CHECK WITH WILDLIFE AND HAVE SOMEONE PROVIDE A SEED MIX APPROPRIATE FOR THE AREA. YOU WILL ALSO NEED TO QUANTIFY OR EXPLAIN EROSION CONTROL AND YOUR PLAN FOR HANDLING IT.

The item "Seeding & Erosion Control" includes material, equipment and labor to seed, fertilize and mulch the disturbed areas resulting from work required by this contract.

The seed mixture shall consist of 35% Red Top, 31% Thickspike Wheatgrass, Critana and 30% Annual Ryegrass. The seed mixture shall be free of noxious weed seed and applied at the rate of 20-22 lbs. PLS/acre.

A commercial fertilizer with a minimum guaranteed analysis of 18-46-0 or an approved alternate fertilizer shall be applied to all newly seeded areas at the application rate of one hundred pounds per acre.

Mulch consisting of grasshay or straw shall be blown on at the rate of two tons per acre and punched in. Mulch shall be free of noxious weed seeds and objectionable foreign matter.

The Contractor shall provide an erosion control and erosion maintenance plan to the Project Engineer for approval prior to construction. The plan shall include but is not limited to special provisions to protect the creek from sediment and debris during construction. The erosion control plan shall be maintained throughout the project.



PROJECT STAKING

The Game, Fish & Parks will do the initial project staking. The Contractor is responsible for maintaining stakes and grades thereafter. No separate payment will be made to maintain grade stakes.

PROJECT CONTACTS

PROJECT MANAGER WITH GAME, FISH & PARKS
South Dakota Game, Fish & Parks – Engineering
(605)773-????

ANYONE ELSE INVOLVED WHO YOU WANT INVOLVED
South Dakota Game, Fish & Parks – Wildlife Division
(605)

SEQUENCE OF OPERATIONS

The Sequence of Operations may be changed provided the Contractor can furnish the Owner with an acceptable alternative. Seasonal limitations, as outlined in the SDDOT Standard Specification for Roads and Bridges, 2004 Edition may be amended by the Engineer provided temperature and weather restrictions are met.

The Contractor shall submit a detailed schedule for the proposed work. The Owner/Engineer must approve the sequence and schedule prior to construction.

All work must be completed by _____.

MAINTENANCE OF TRAFFIC

The Contractor’s traffic control shall conform with applicable MUTCD Standards 2000 Ed. with revisions and Section 4.4 of the SDDOT Standard Specifications for Roads and Bridges.

The Contractor shall provide necessary flag persons as directed by the Engineer to safely direct traffic onto and through the project site. Flagger(s) will be required where work activity and/or equipment encroaches into a lane open to traffic. Flagging and use of Contractor furnished signs will be paid for in accordance with the appropriate contract unit bid item.

The Contractor has the responsibility to assure that all traffic signs be kept in proper position, clean and legible at all times. Damaged signs should be replaced without undue delay.

During construction of the project, existing State owned traffic control devices shall be removed, reset, or relocated as necessary, by the Contractor per the Engineer’s direction.

The lump sum bid item Traffic Control Miscellaneous will be full compensation for all equipment, work, materials and incidentals specified and shall be paid only once on each construction site.

Crash worthy sign supports shall be used for all construction related signing.

CERTIFICATION AND TESTING

Certification documents shall be provided for all materials delivered to the site. Appropriate sampling and testing in compliance with the South Dakota Standard Specifications for Roads and Bridges, 2004 Edition shall apply.

Random densities, aggregate samples, depth measurements, etc.. may be requested and shall be provided by the Owner. Any retesting due to failed initial tests will be provided by the Contractor.

Division of Administration
Rose Building
523 E. Capitol Ave.
Pierre, South Dakota 57501-3182
Phone: (605) 773 - 8082

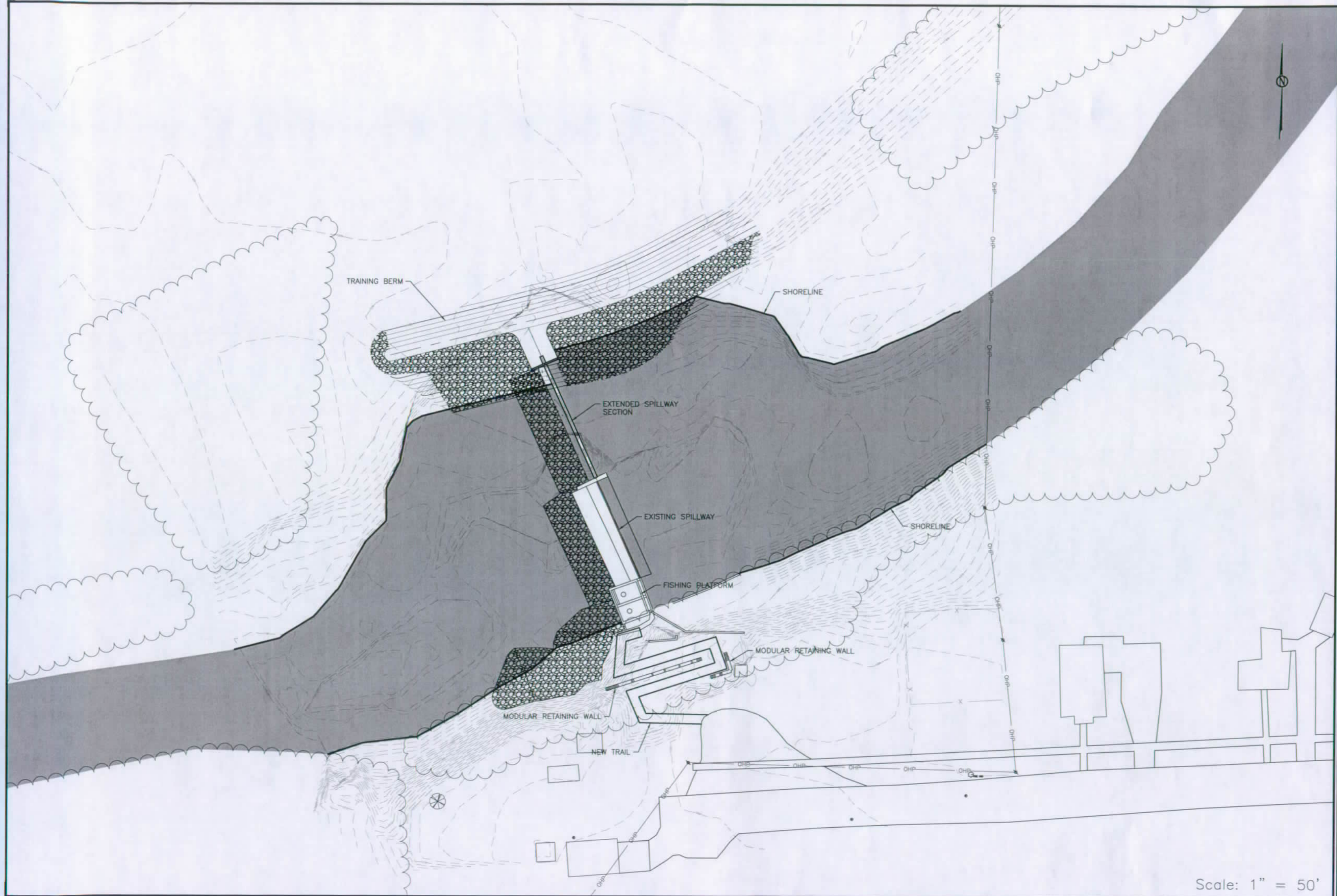
South Dakota
Department of Game, Fish & Parks



PROJECT NUMBER TIF-CENT-W06-A	DATE 7/28/05
DRAWN BY JA	REVISION
CHECKED BY	REVISION

PLAN NOTES

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FINISHED PLAN VIEW

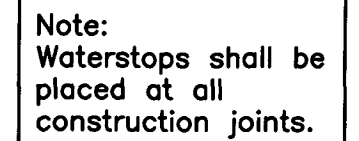
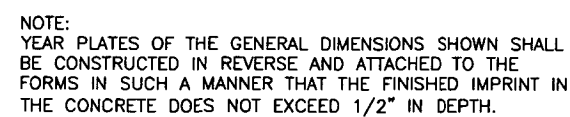
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or
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PROJECT NAME: TIE-VENT-WO-A
DATE: 7/28/05
DESIGNER: JA
CHECKER: JH

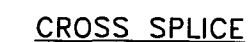
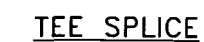


South Dakota
Department of Game, Fish & Parks

Division of Administration
Foss Building
523 E. Capitol Ave.
Pierre, South Dakota 57501-3182
Phone: (605) 773 - 6062



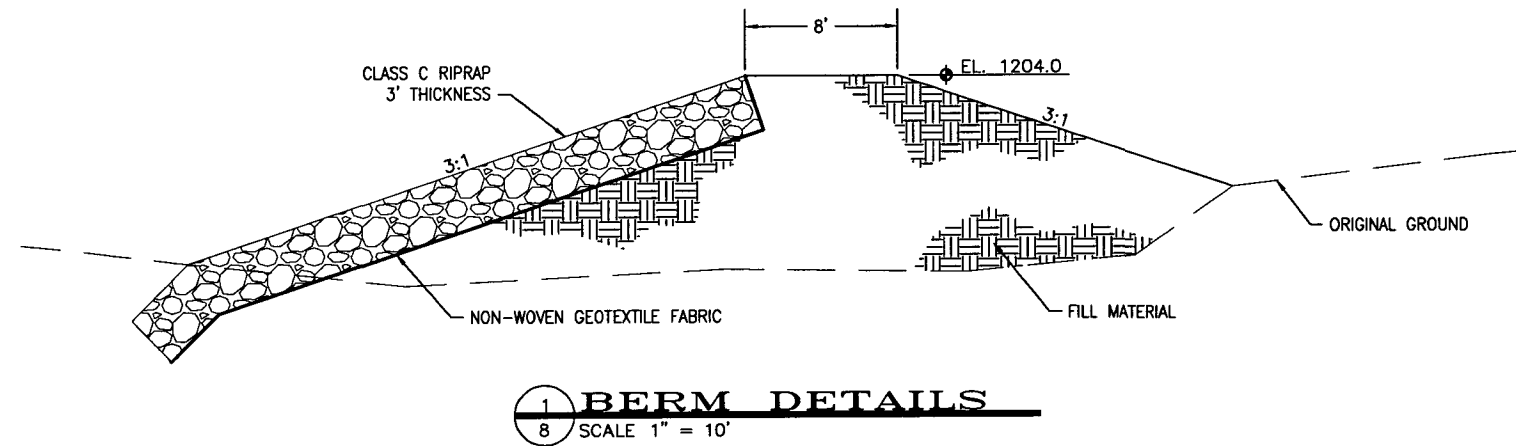
DETAIL — WATERSTOP SUPPORT
SCALE N.T.S.



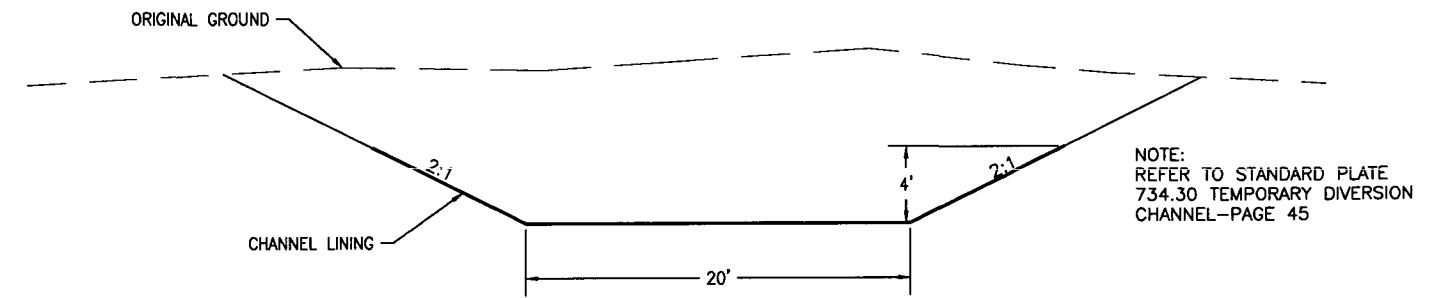
HEAT SPLICING WATERSTOP JOINTS

1. CUT CLEAN STRAIGHT EDGES.
2. HOLD THE TWO EDGES TO BE JOINED IN CONTACT WITH A THERMOSTATICALLY CONTROLLED ELECTRIC HEATING IRON (380° - 425° F) UNTIL THEY BECOME MOLTEN (15 - 50 SECONDS). IMMEDIATELY JOIN THE MOLTEN ENDS, BEING CERTAIN TO MAINTAIN THE CONTINUITY OF THE CENTER BULB AND RIBS.
3. ALLOW THE WATERSTOP TO COOL BEFORE STRESSING.
4. FABRICATED CORNER, TEE AND CROSS SPLICES MAY BE PURCHASED FROM MANUFACTURER IN LIEU OF HAND FABRICATION IN THE FIELD.

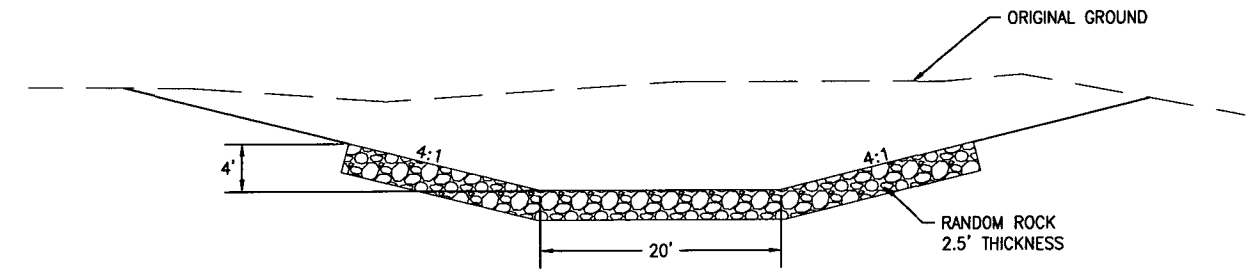
4 HEAT SPLICING WATERSTOP JOINTS
7 SCALE N.T.S.



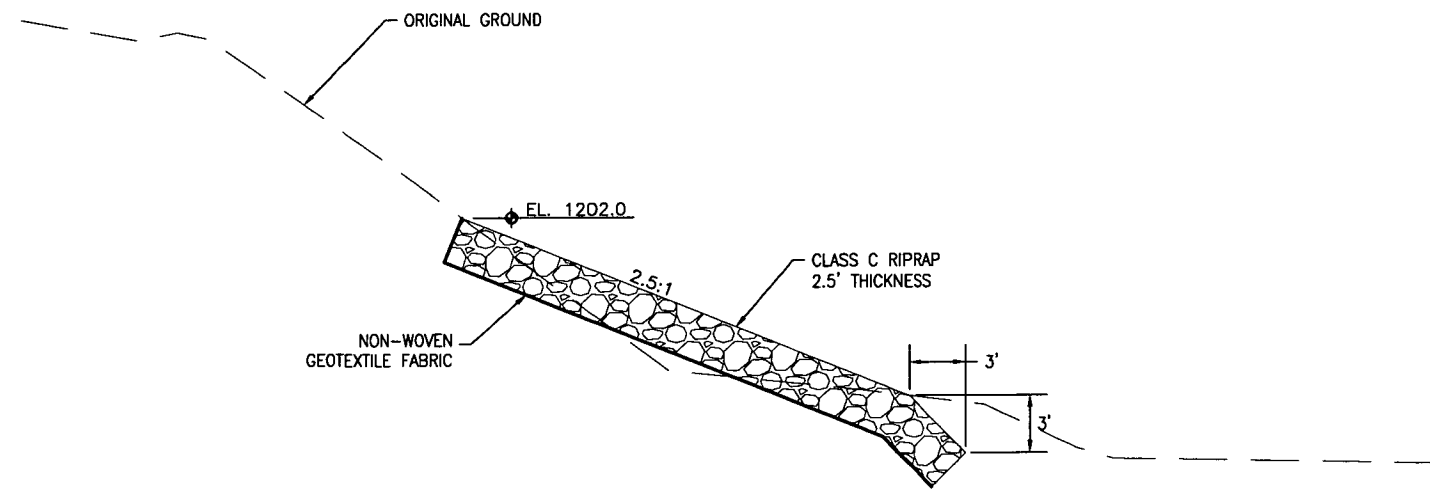
1 BERM DETAILS
8 SCALE 1" = 10'



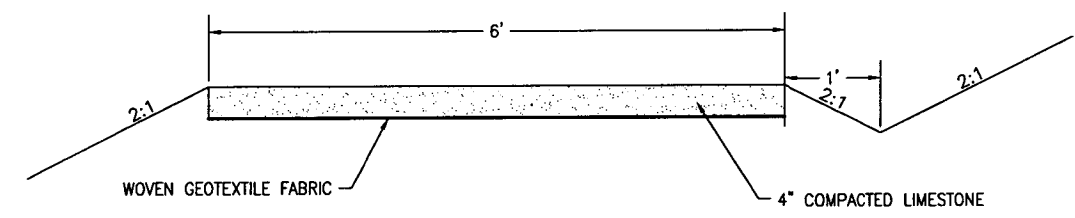
2 TYP. DIVERSION CHANNEL
8 SCALE 1" = 10'



3 DIVERSION CHANNEL CROSSING
8 SCALE 1" = 16'



4 RIPRAP DETAILS
8 SCALE 1" = 10'



5 TYP. TRAIL SECTION
8 SCALE 1" = 1'





NORTH

SCALE: 1" = 150'

AERIAL VIEW



PHOTO 1
VIEW OF TREES TO BE REMOVED



PHOTO 2
VIEW LOOKING DOWNSTREAM



PHOTO 3
VIEW LOOKING UPSTREAM

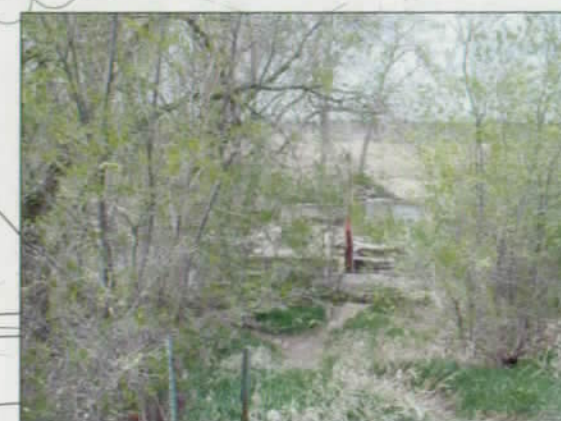
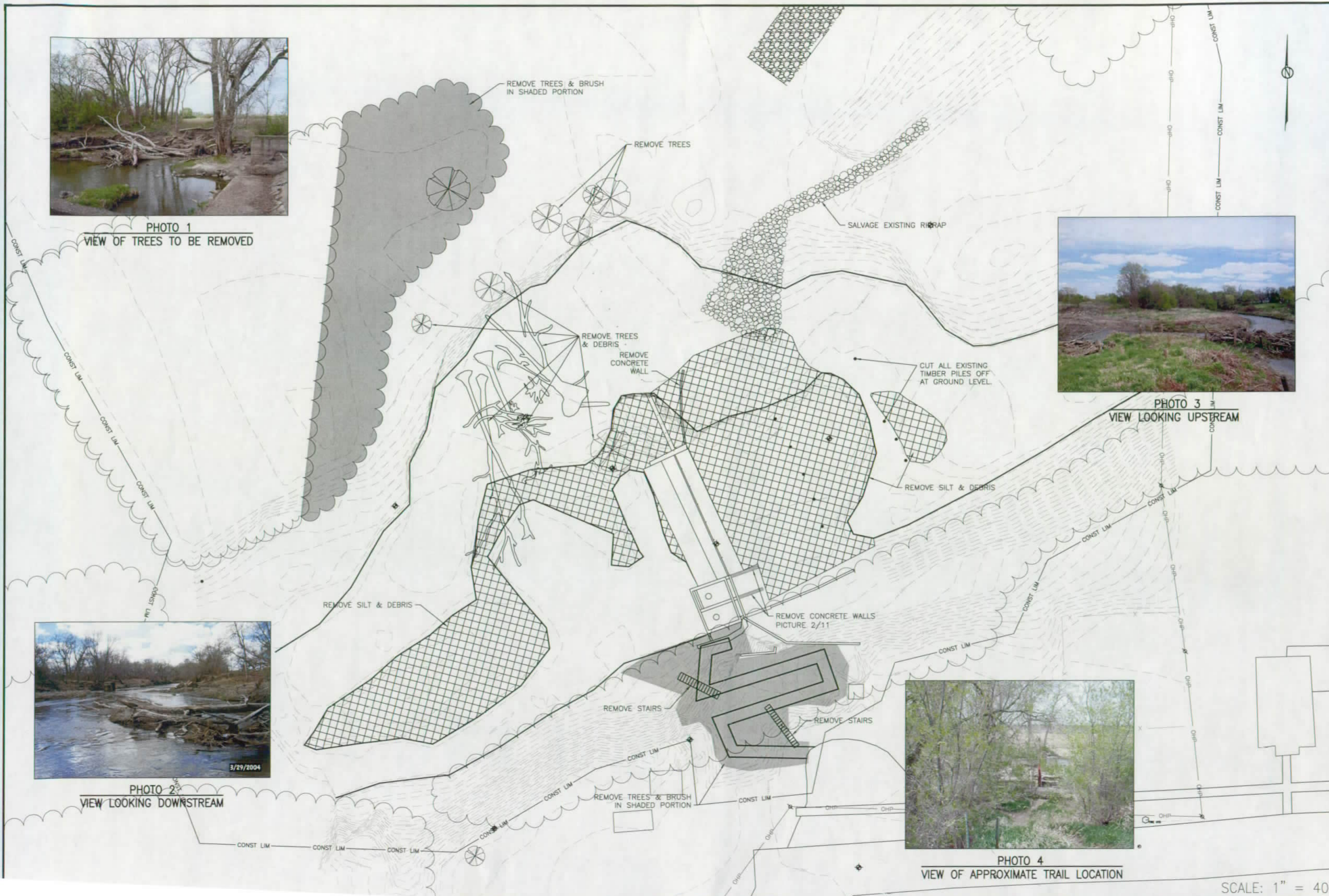
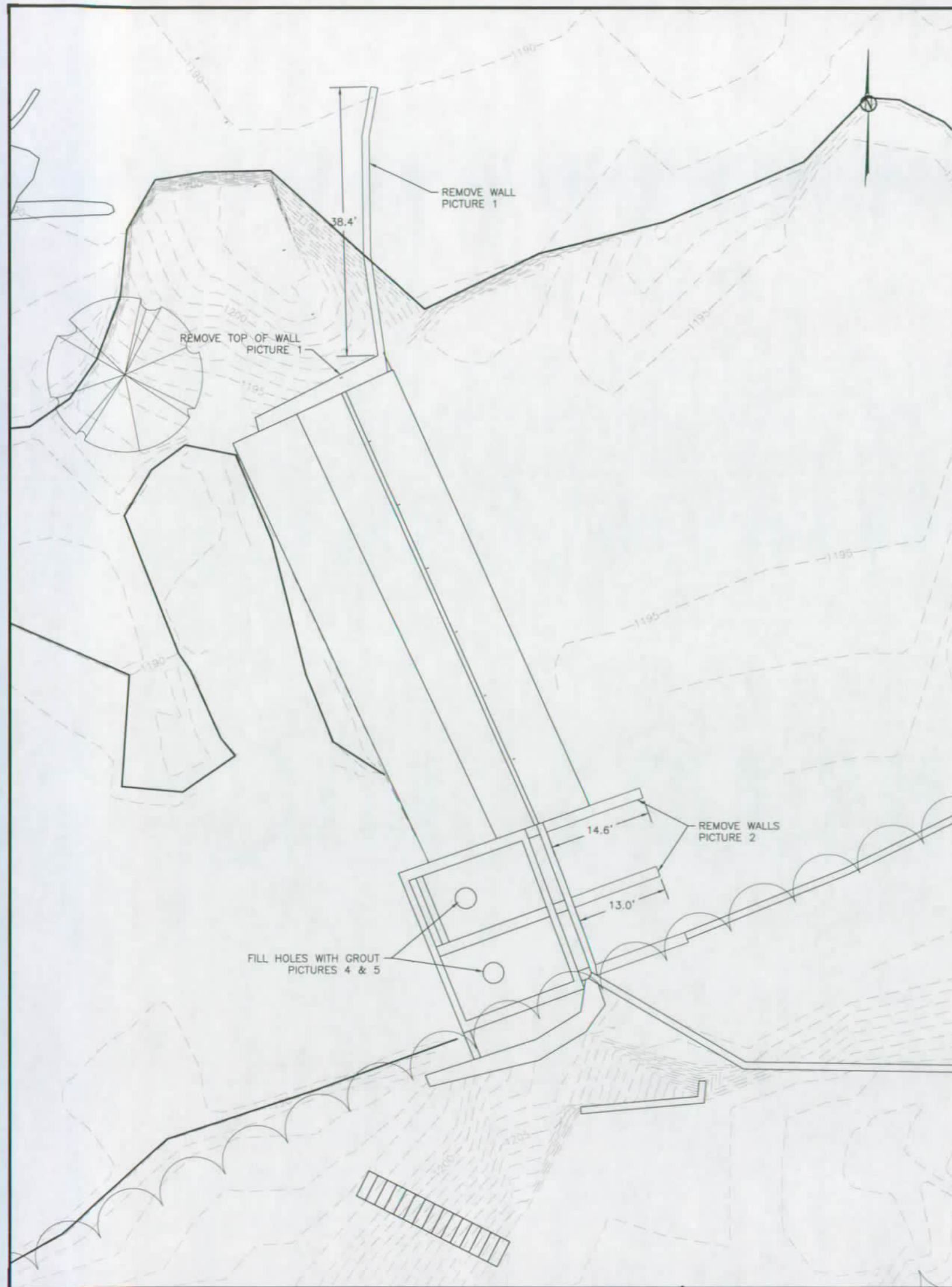


PHOTO 4
VIEW OF APPROXIMATE TRAIL LOCATION



SCALE: 1" = 40'



REMOVE TOP OF CONCRETE WALL AS SHOWN
OVER EXCAVATE 4 INCHES AND CAP
WITH NEW CONCRETE.



REMOVE CONCRETE WALL



REMOVE CONCRETE WALLS
SO THEY ARE FLUSH
WITH THE ORIGINAL
GROUND SURFACE



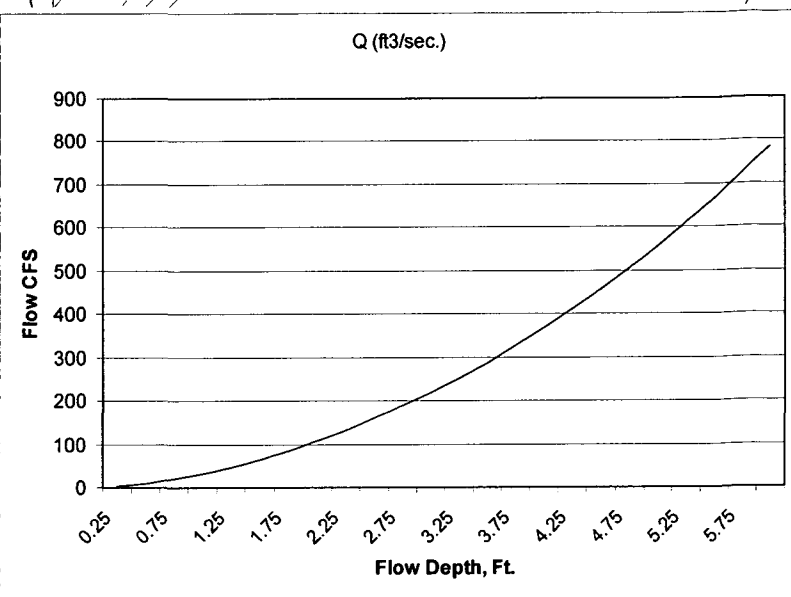
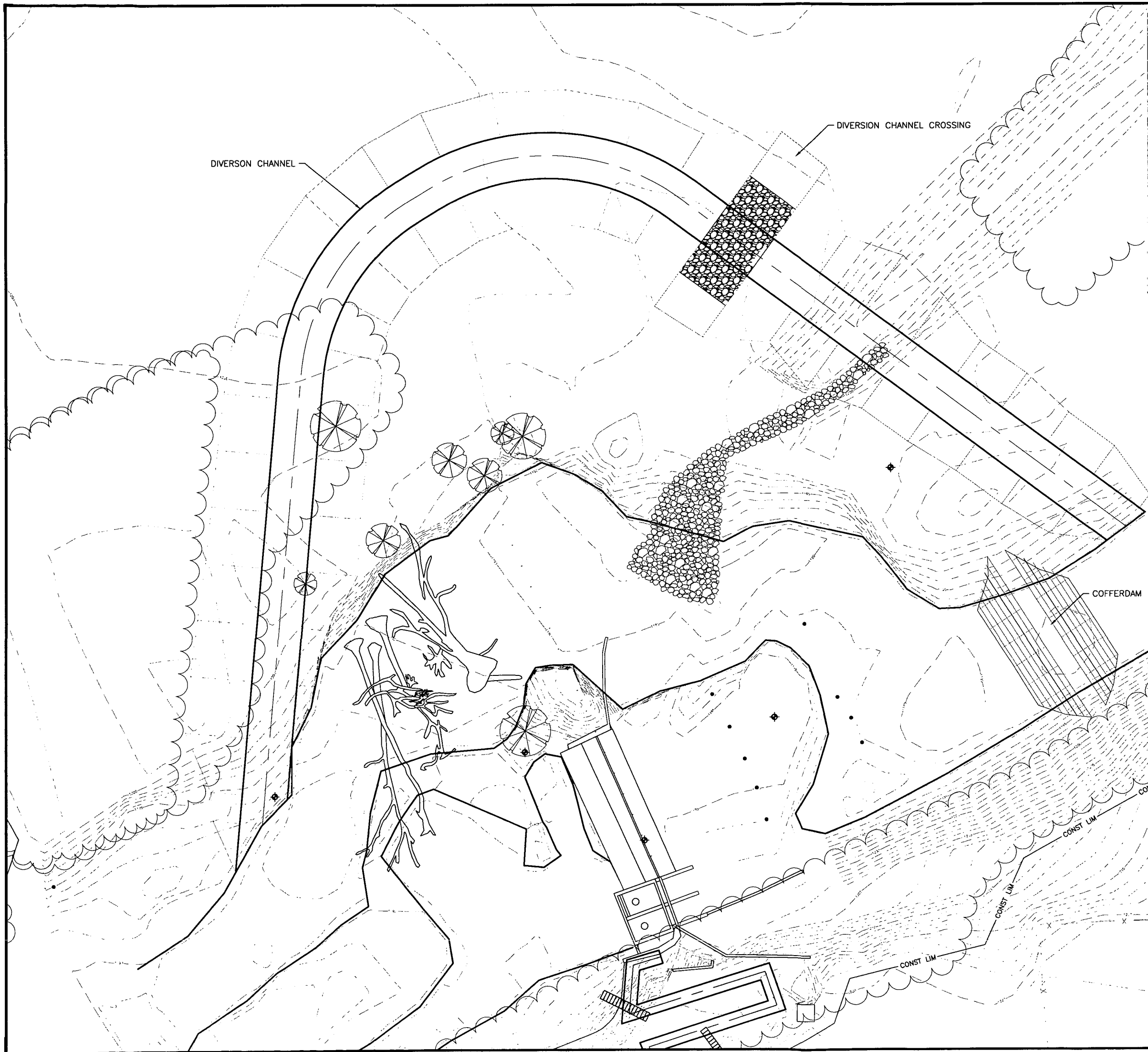
CUT-OFF STEEL GATES SO
THEY ARE FLUSH WITH THE
TOP OF THE EXISTING CONCRETE.
GATES SHALL BE CLOSED AND
WELDED IN PLACE.



CONSTRUCT 8" CONCRETE WALL TO FILL EXISTING VOIDS
DIMENSIONS VARIABLE
REINFORCE WITH #4 BARS @ 12" O.C.E.W.
DRILL AND EXTEND STEEL INTO EXISTING VERTICAL SIDEWALLS
REMOVE DEBRIS AS REQUIRED FOR CONCRETE TO CONCRETE INSTALLATION



FILL HOLES WITH FLOWABLE GROUT



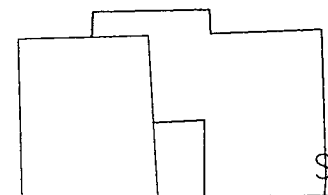
DIVERSION NOTES:

CONTRACTOR SHALL CONSTRUCT A COFFERDAM WITH A MINIMUM TO ELEVATION OF 1194' MSL.

CONTRACTOR SHALL CONSTRUCT A CHANNEL TO DIVERT WATER DURING CONSTRUCTION AS SHOWN IN THE PLAN DRAWINGS. WHEN FINISHED, THE CONTRACTOR SHALL RESORE THE FIELD TO THE ENGINEER'S SATISFACTION.

COFFERDAM CAN BE CONSTRUCTED BY VARIOUS METHODS AND MATERIALS INCLUDING EARTHEN FILL, SHEET PILING AND SAND BAGS.

THE CONTRACTOR SHALL SUBMIT A DESIGN OF COFFERDAM TO THE PROJECT ENGINEER PRIOR TO CONSTRUCTION.



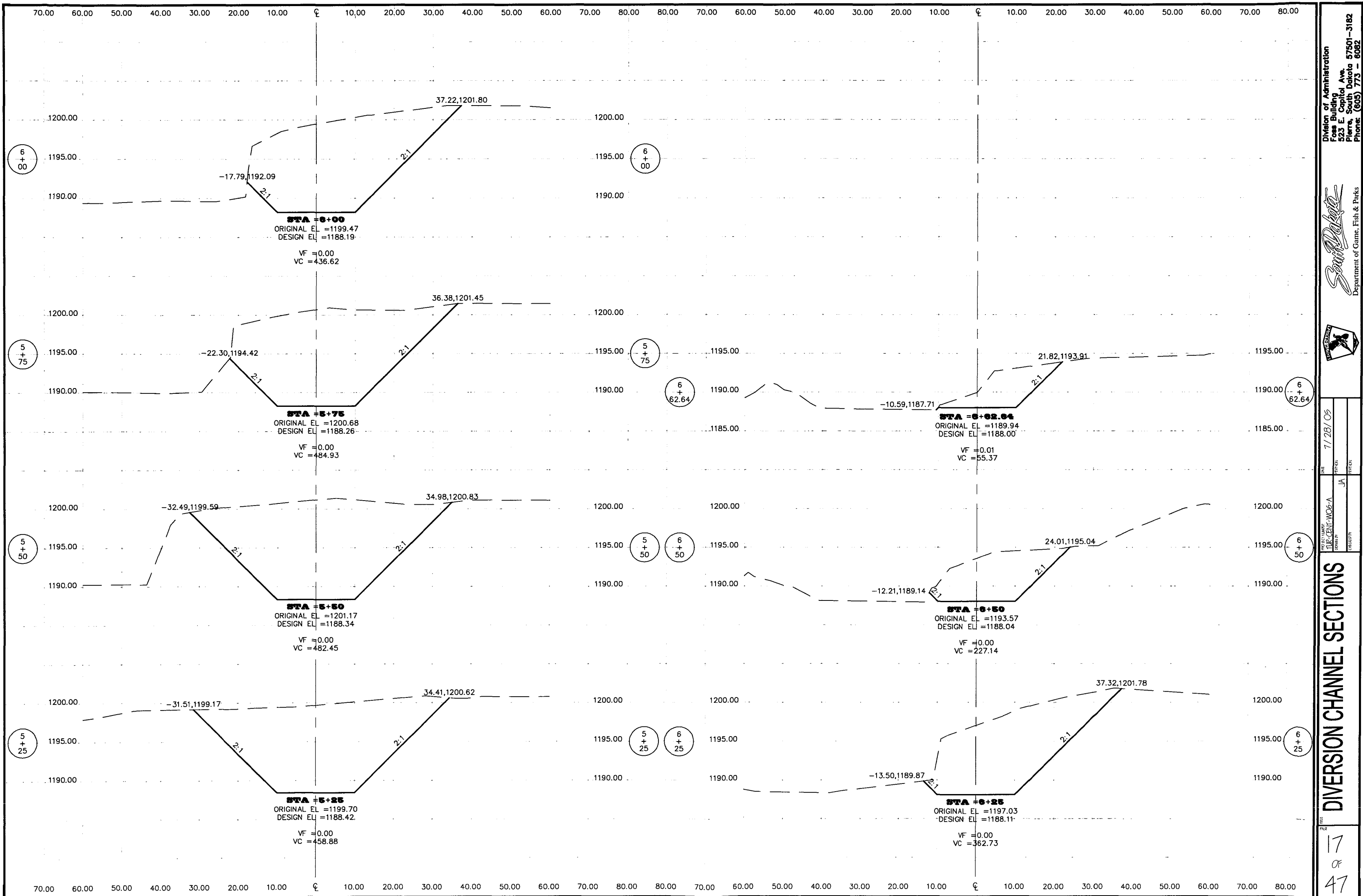
SCALE: 1" = 40'

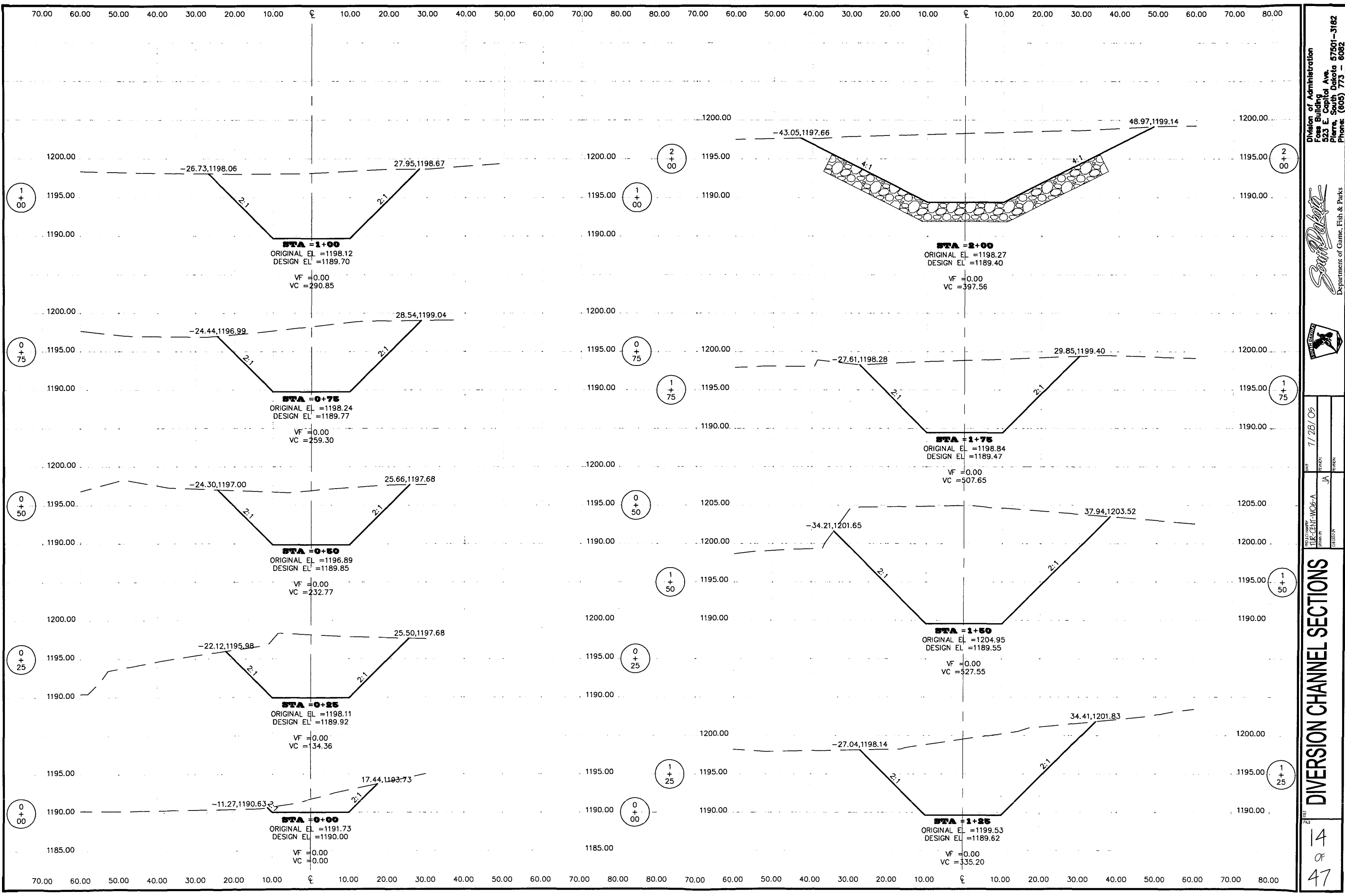
Division of Administration
Foss Building
523 E. Capitol Ave.
Pierre, South Dakota 57501-3182
Phone: (605) 773 - 8082

DIVERSION PLAN

12 OF 47

DATE: 7/28/05
DRAWN: JA
CHECKED: JH
DESIGNED: JH





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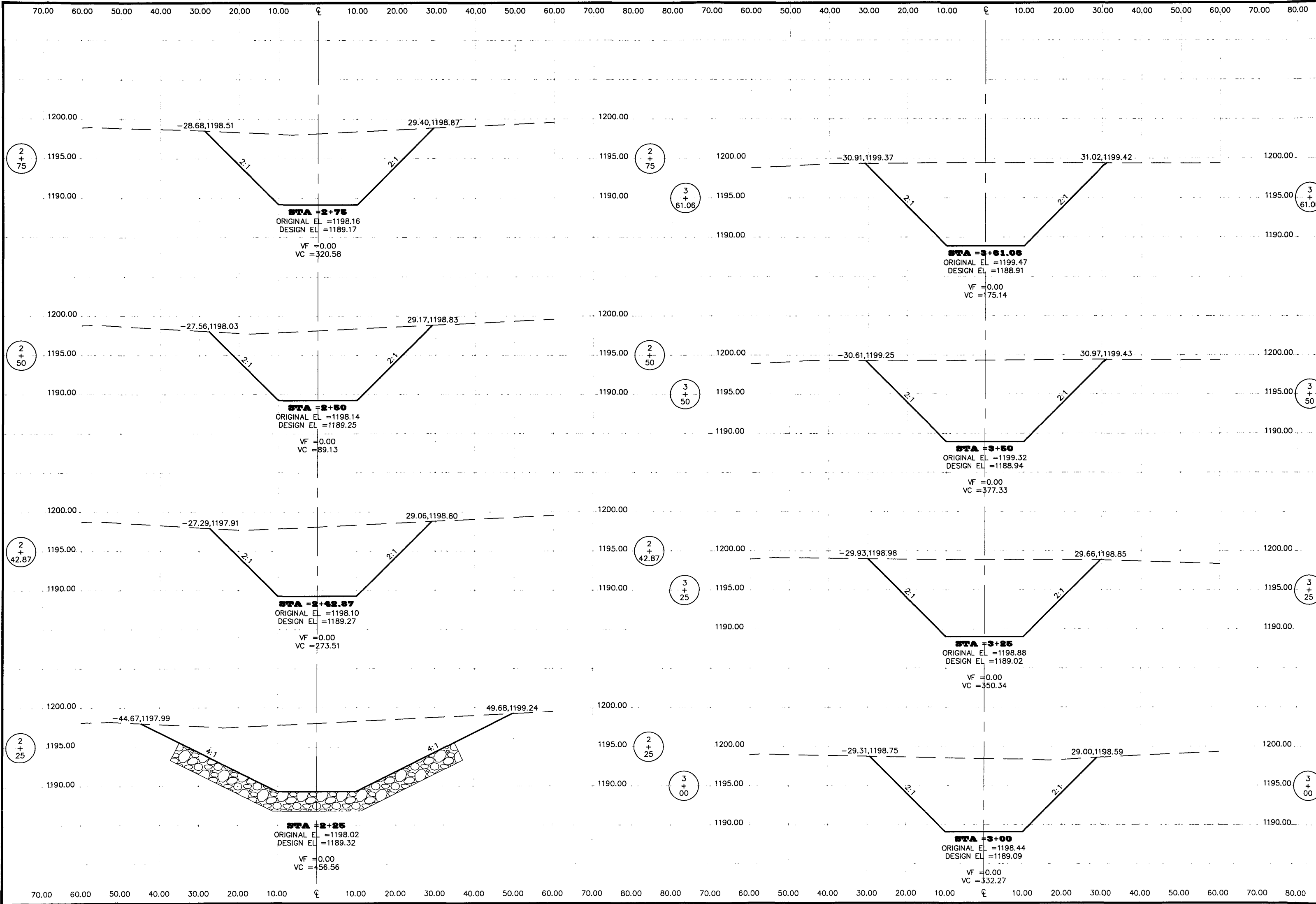
South Dakota
Department of Game, Fish & Parks

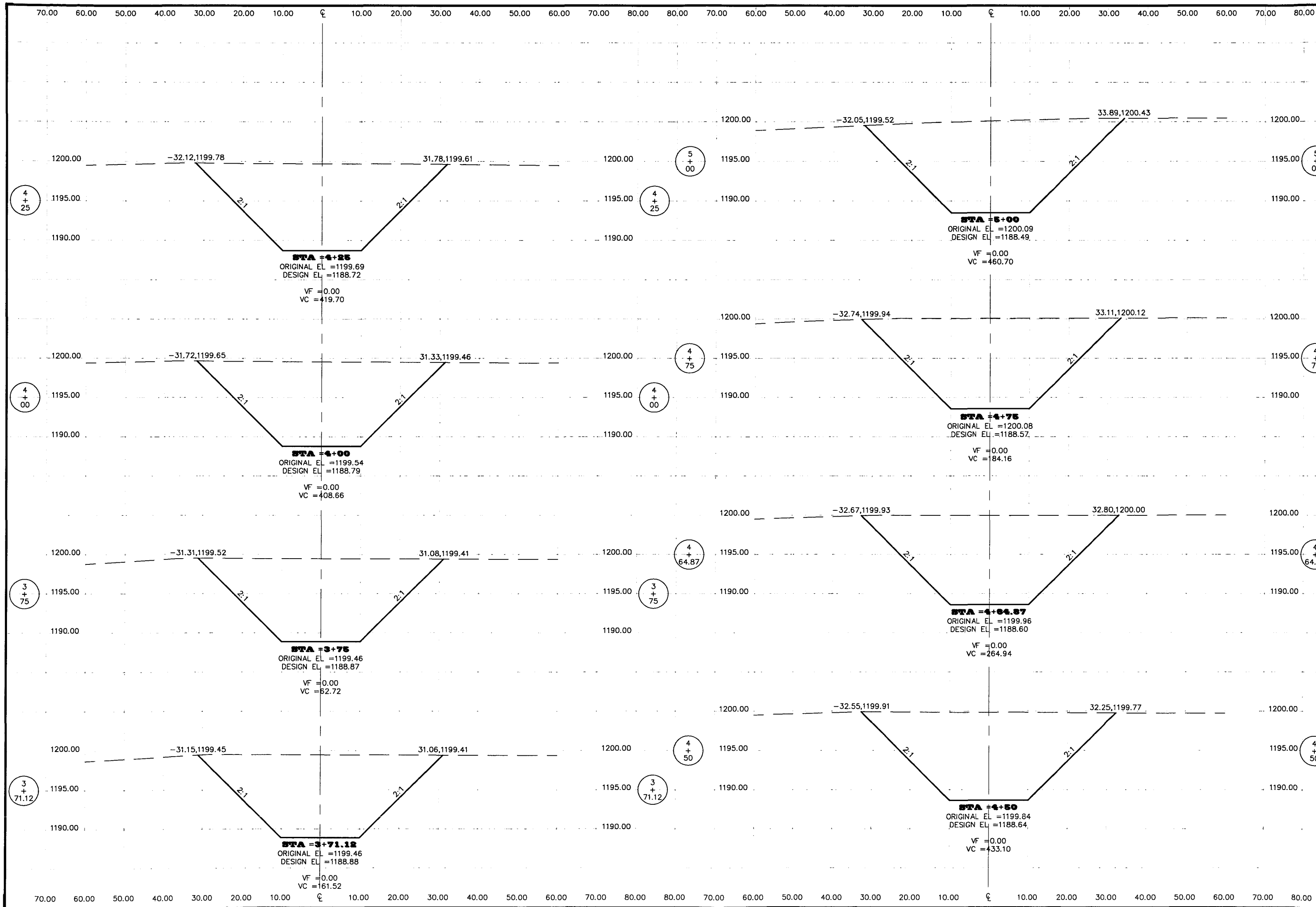


DATE 7/28/05
DRAWN BY JA
CHECKED BY

PROJECT: TLR-CENT-W06-A
SHEET: 14 OF 47

DIVERSION CHANNEL SECTIONS





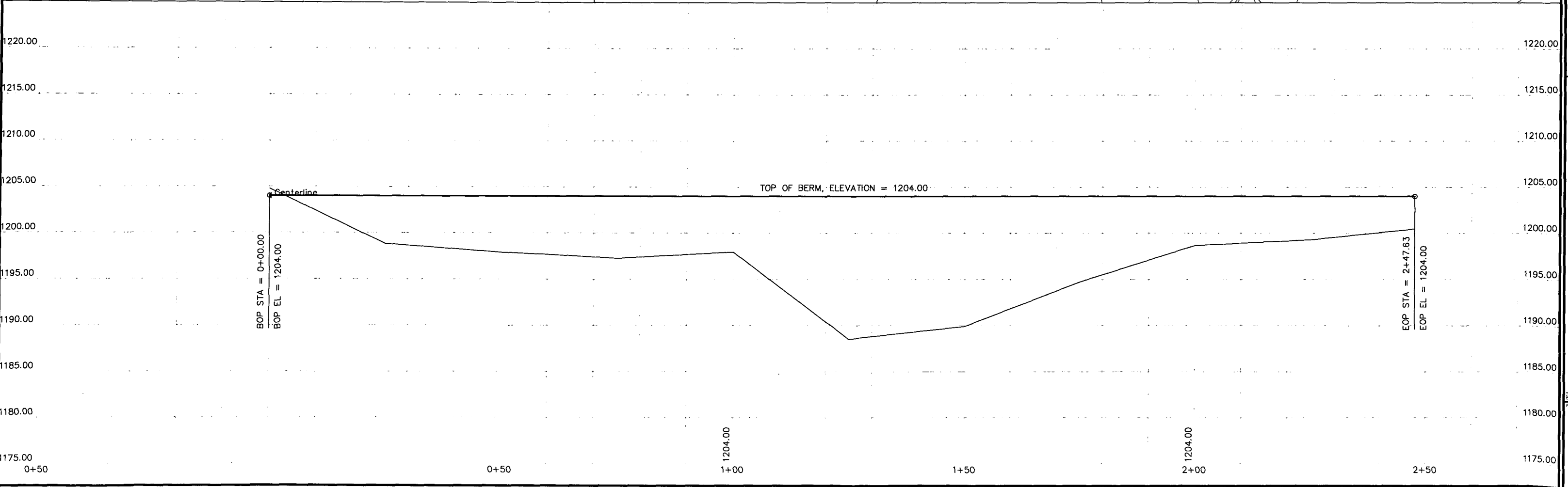
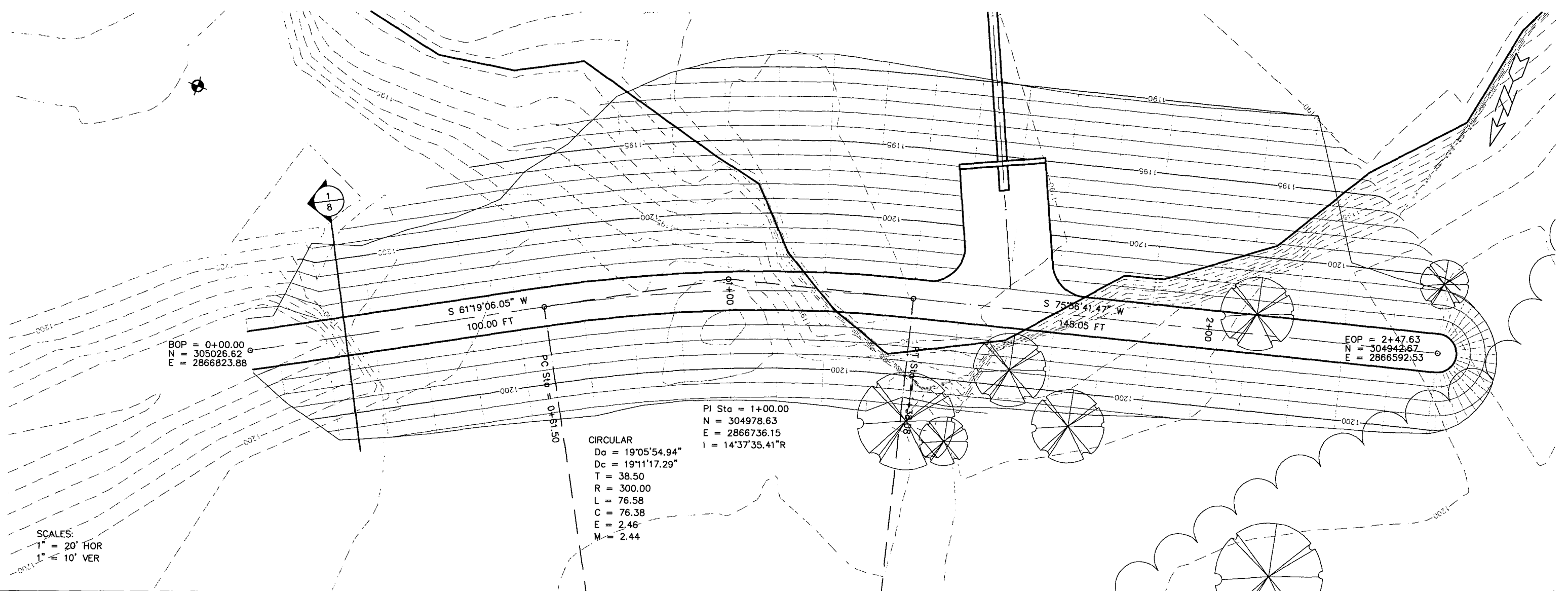
Division of Administration
Foss Building
523 E. Capitol Ave.
Pierre, South Dakota 57501-3182
Phone: (605) 773 - 8082

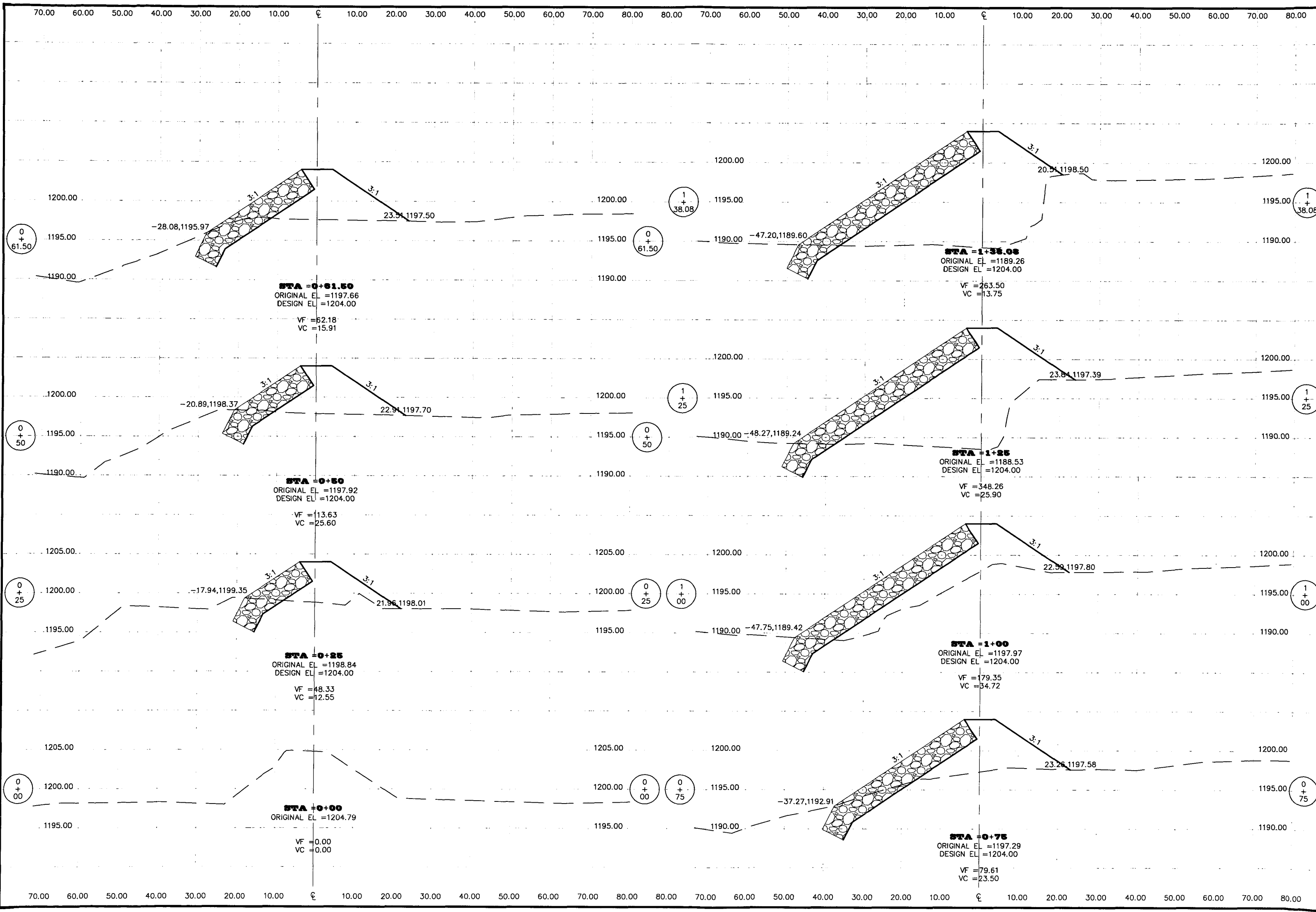
South Dakota
Department of Game, Fish & Parks



DATE 7/28/05
PROJECT NAME IIR-CENT-W06-A
DRAWN BY JA
CHECKED BY

DIVERSION CHANNEL SECTIONS





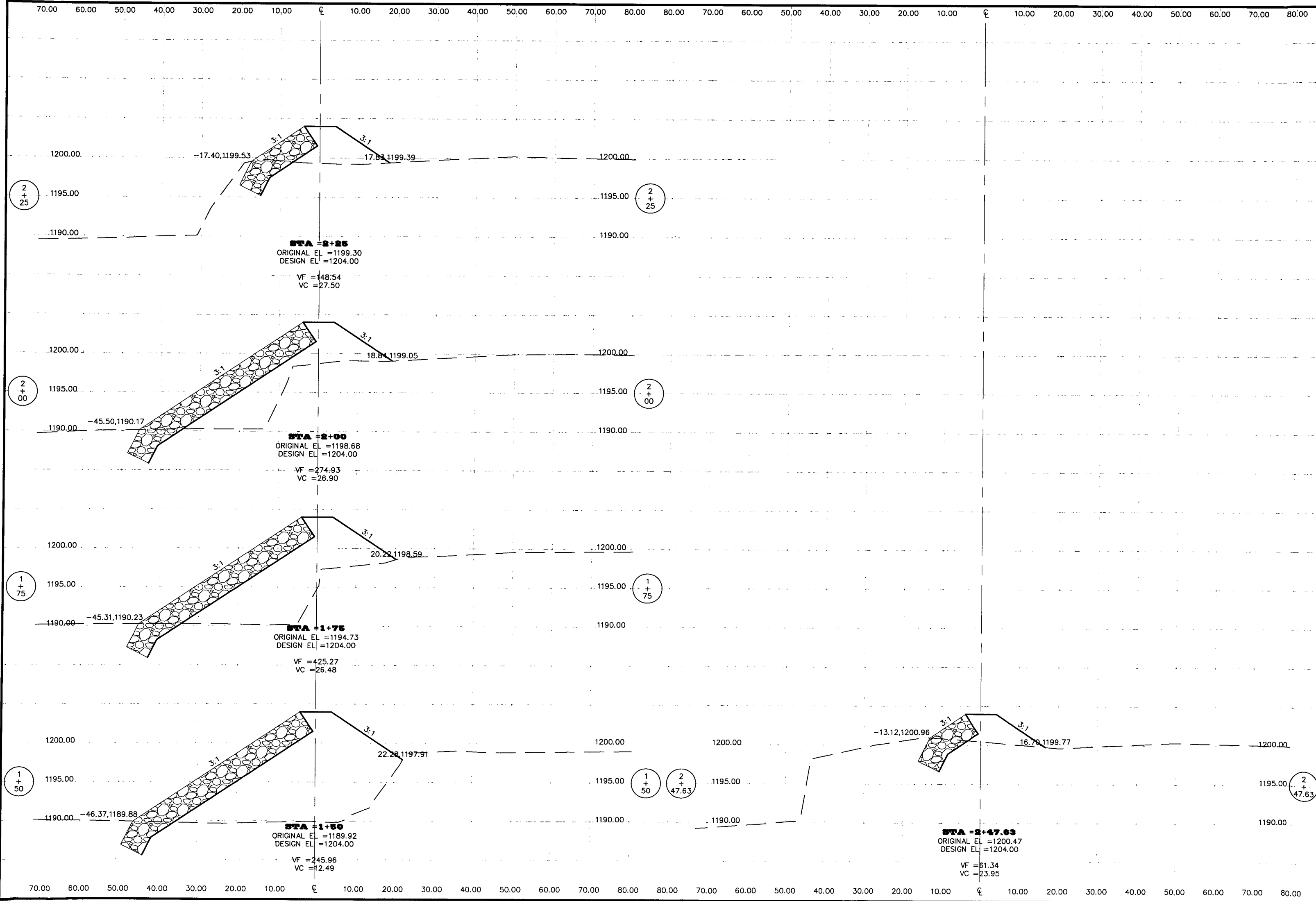
Division of Administration
Foss Building
523 E. Capitol Ave.
Pierre, South Dakota 57501-3182
Phone: (605) 773 - 6082

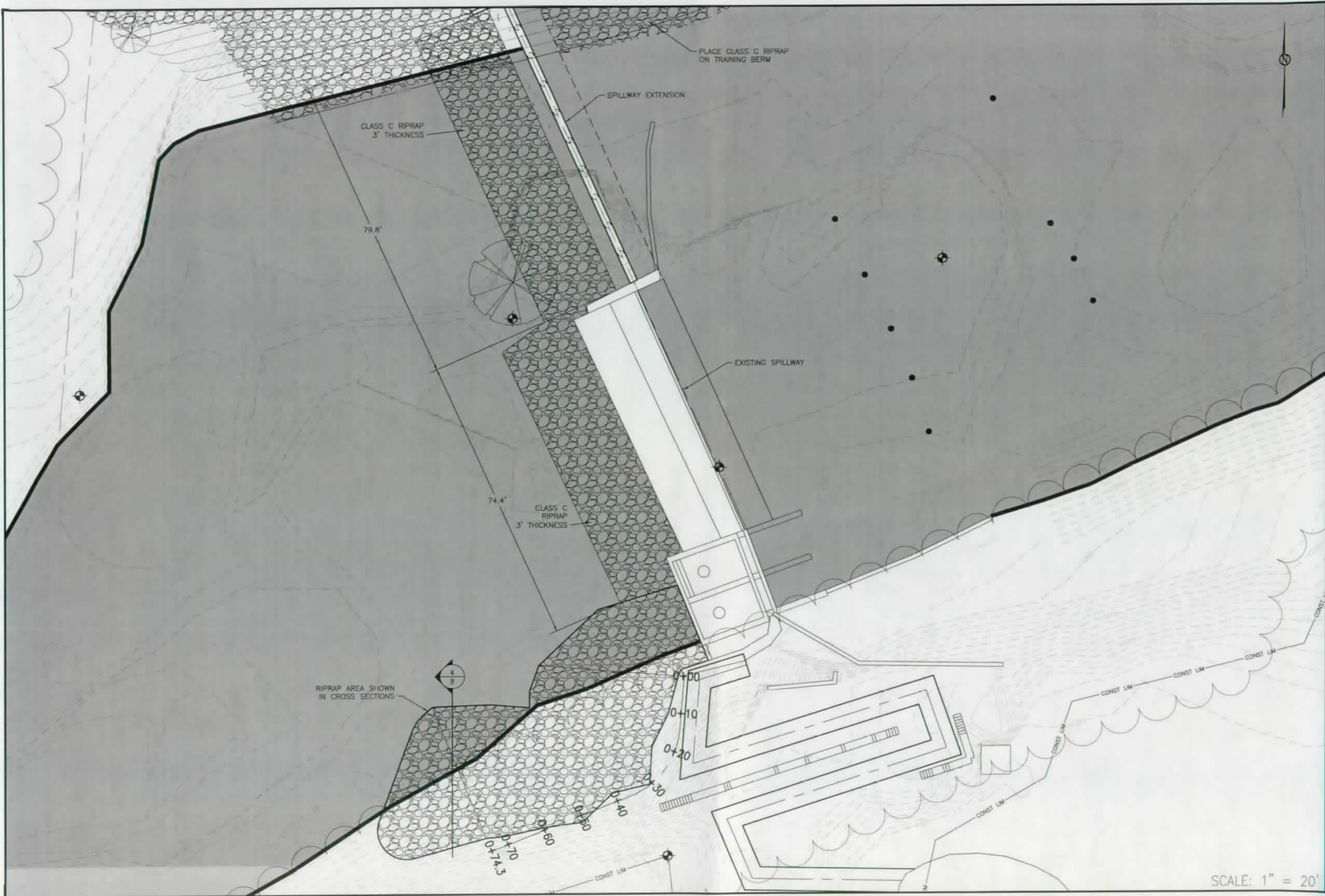
South Dakota
Department of Game, Fish & Parks

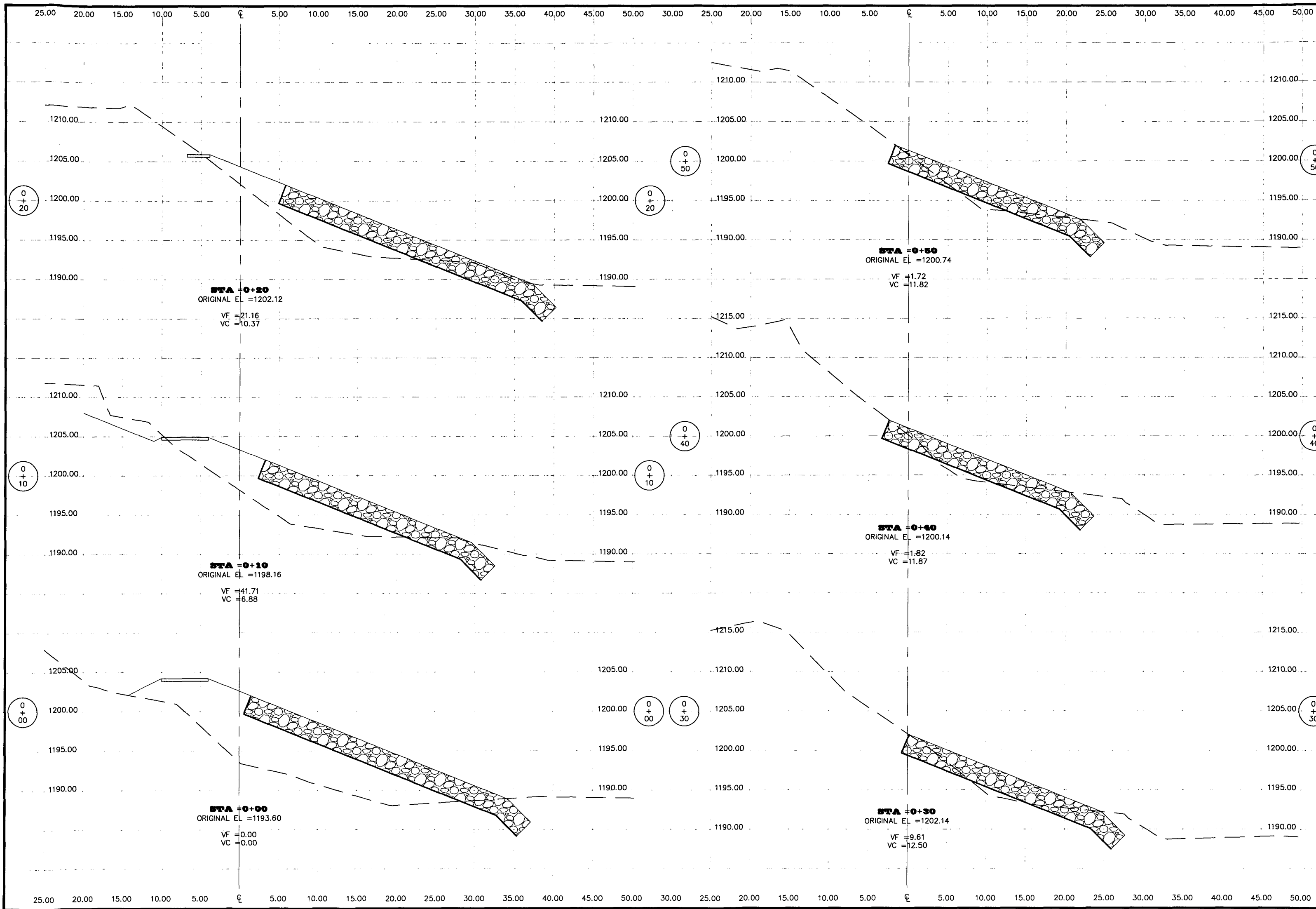


PROJECT NAME	FILE	DATE
TR-CENT-WOG-A	11/28/05	
DRAWN BY	REVIEW	DATE
JA		
CHECKED BY	DATE	

BERM SECTIONS







Division of Administration
Foss Building
523 E. Capital Ave.
Pierre, South Dakota 57501-3182
Phone: (605) 773 - 6082

Department of Game, Fish & Parks

PROJECT NAME
TILE-CENT-WOG-A

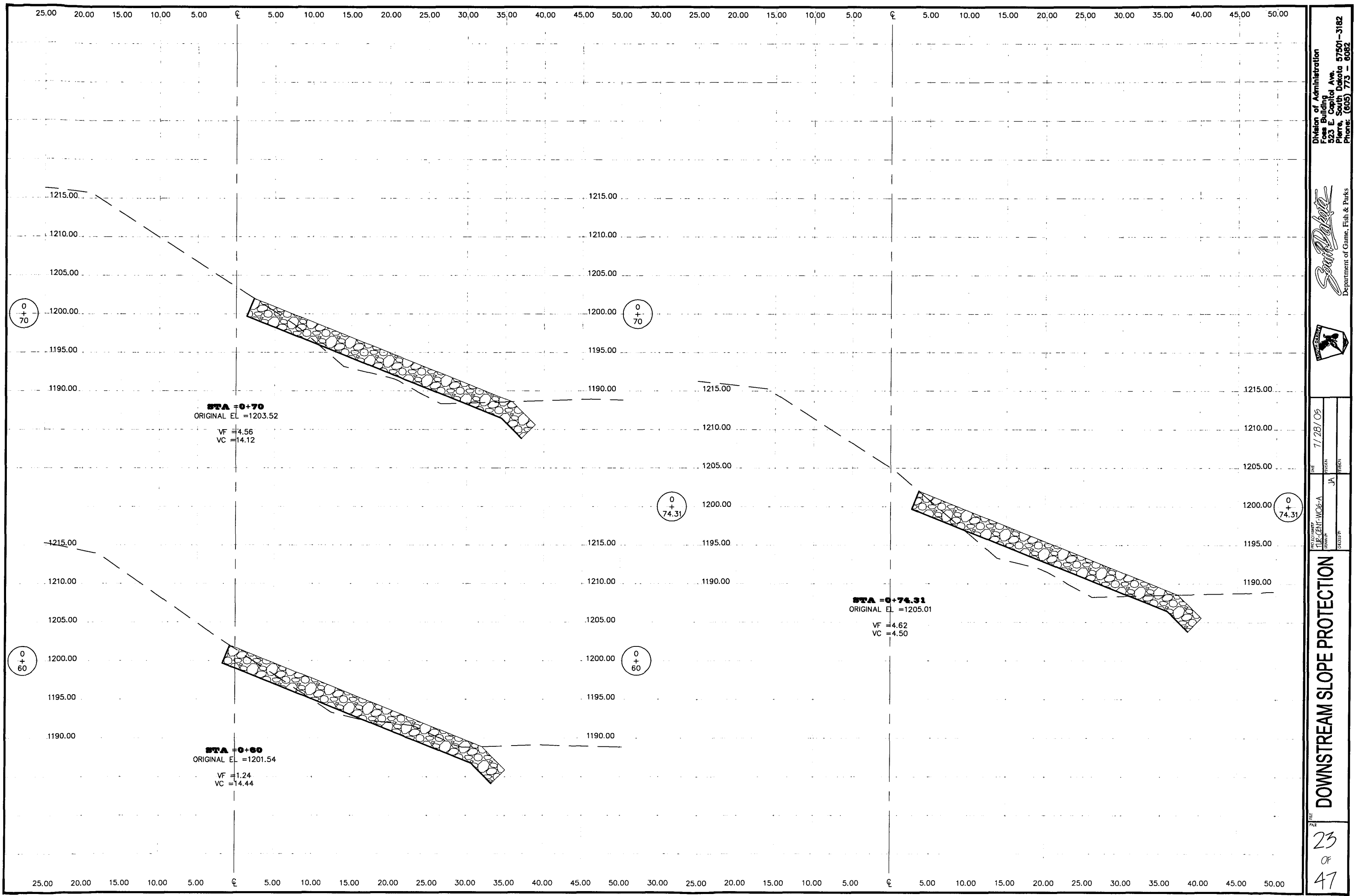
DATE
7/28/05

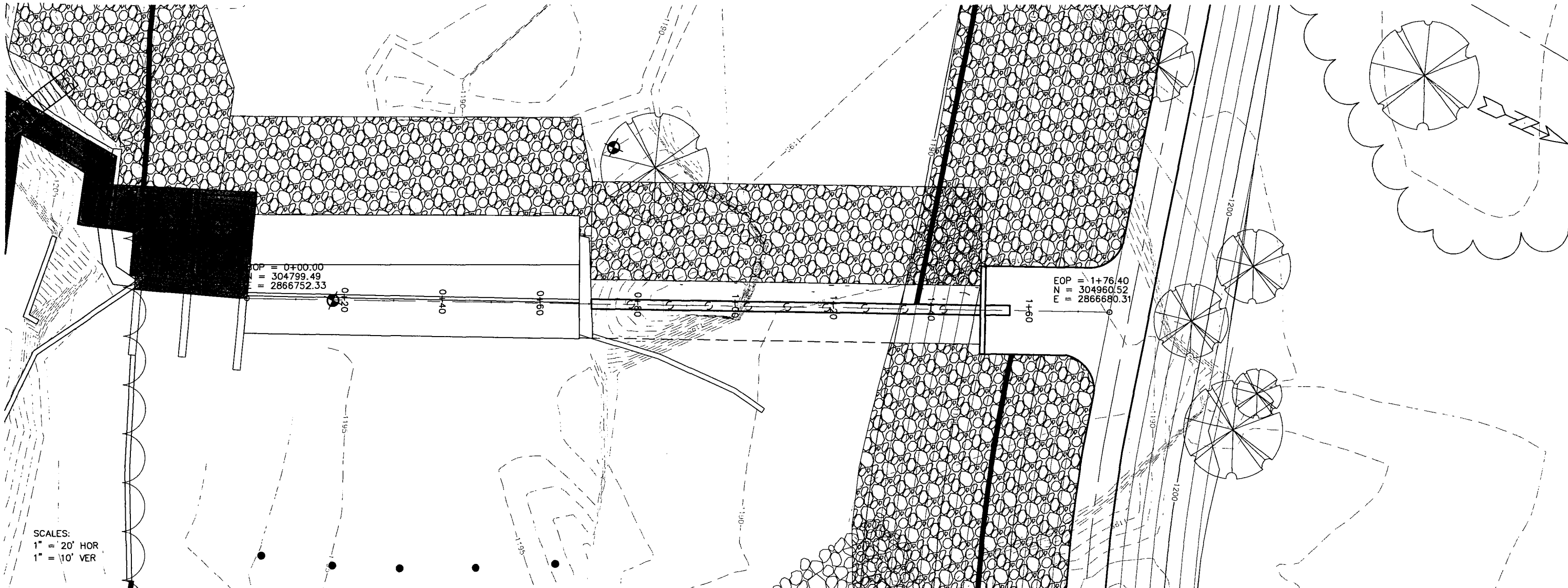
DESIGNER
JA

CHECKER
TICKER

22
OF
47

DOWNSTREAM SLOPE PROTECTION

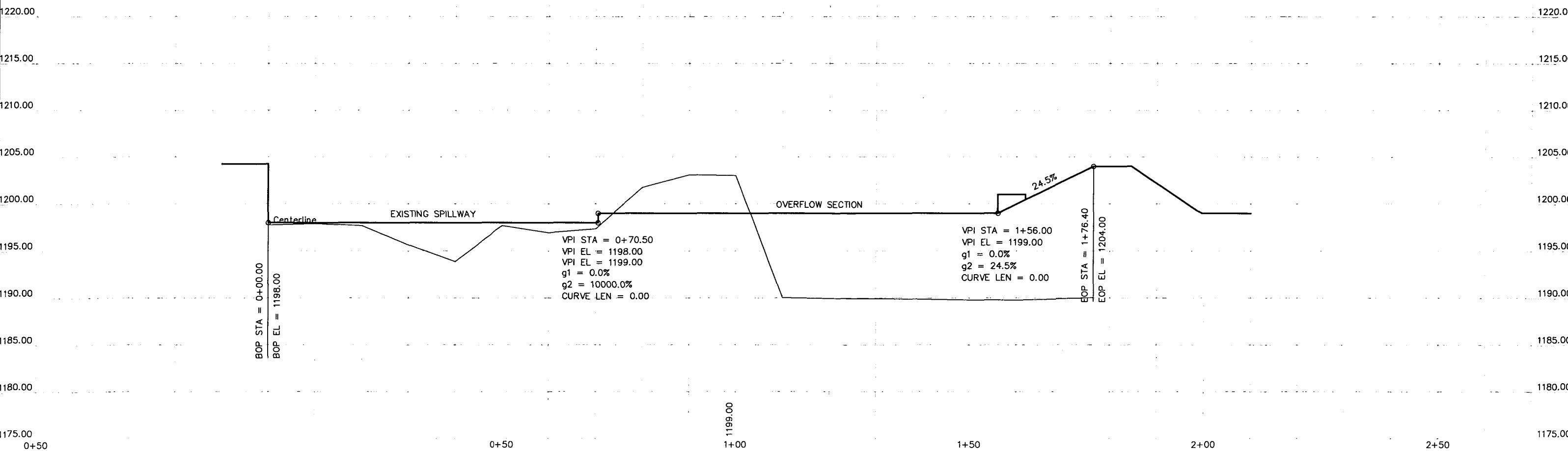




SCALES:
1" = 20' HOR
1" = 10' VER

TOP = 0+00.00
N = 304799.49
E = 2866752.33

EOP = 1+76.40
N = 304960.52
E = 2866680.31

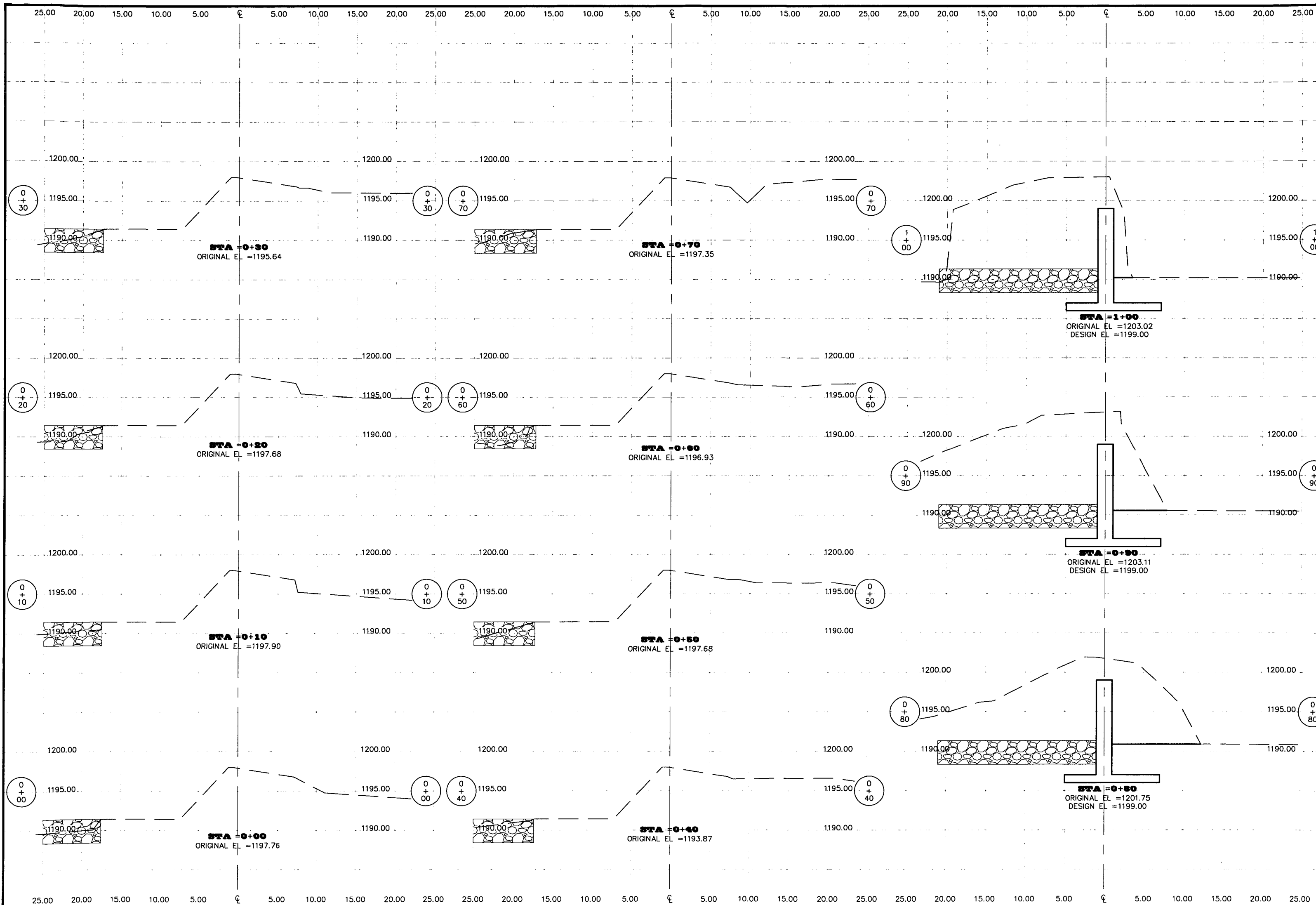


BOP STA = 0+00.00
BOP EL = 1198.00

VPI STA = 0+70.50
VPI EL = 1198.00
VPI EL = 1199.00
g1 = 0.0%
g2 = 10000.0%
CURVE LEN = 0.00

VPI STA = 1+56.00
VPI EL = 1199.00
g1 = 0.0%
g2 = 24.5%
CURVE LEN = 0.00

EOP STA = 1+76.40
EOP EL = 1204.00



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Department of Game, Fish & Parks

PROJECT NAME
119-CENT-W06-A

DATE
7/28/05

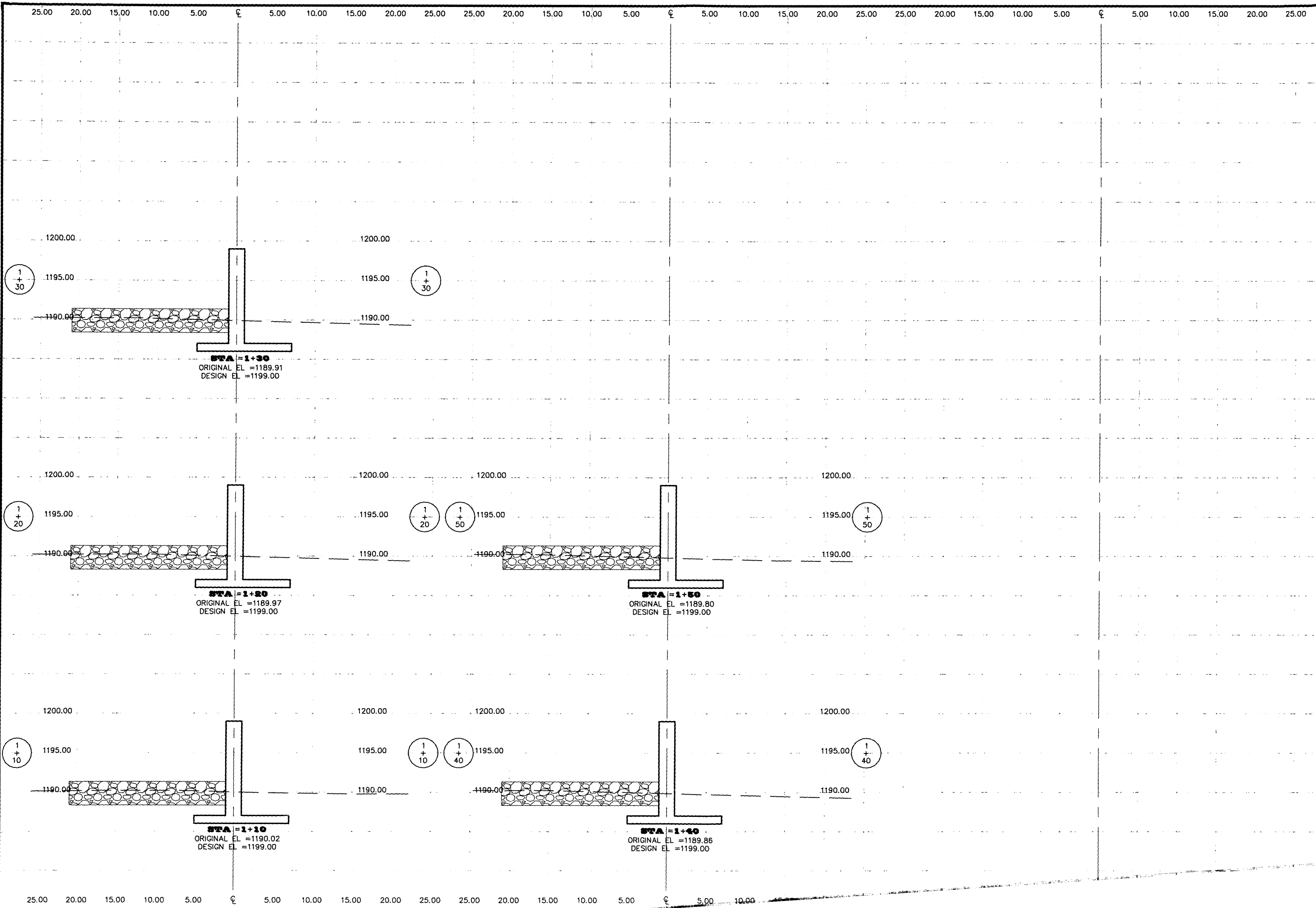
DESIGNED BY
JA

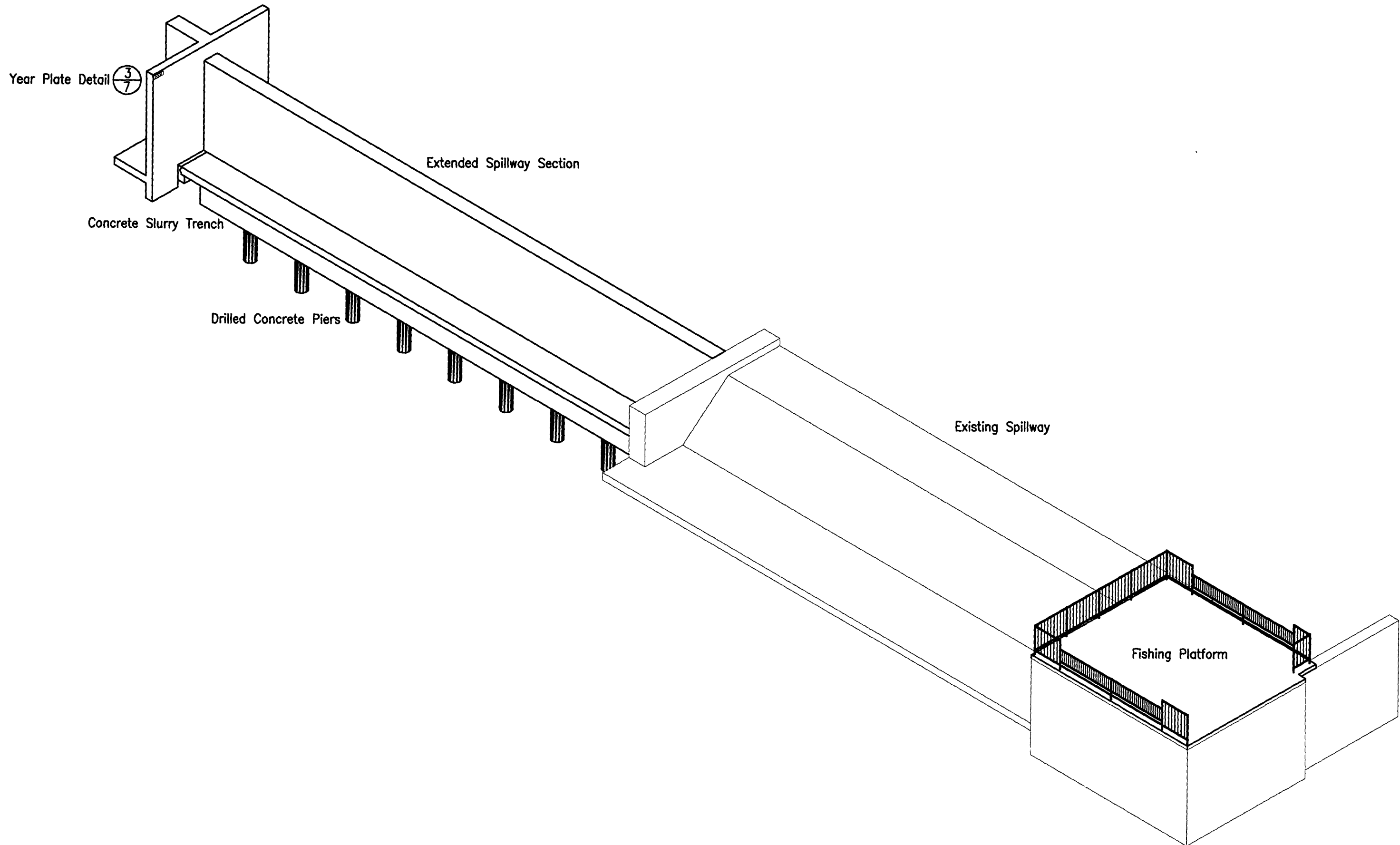
CHECKED BY
JAN

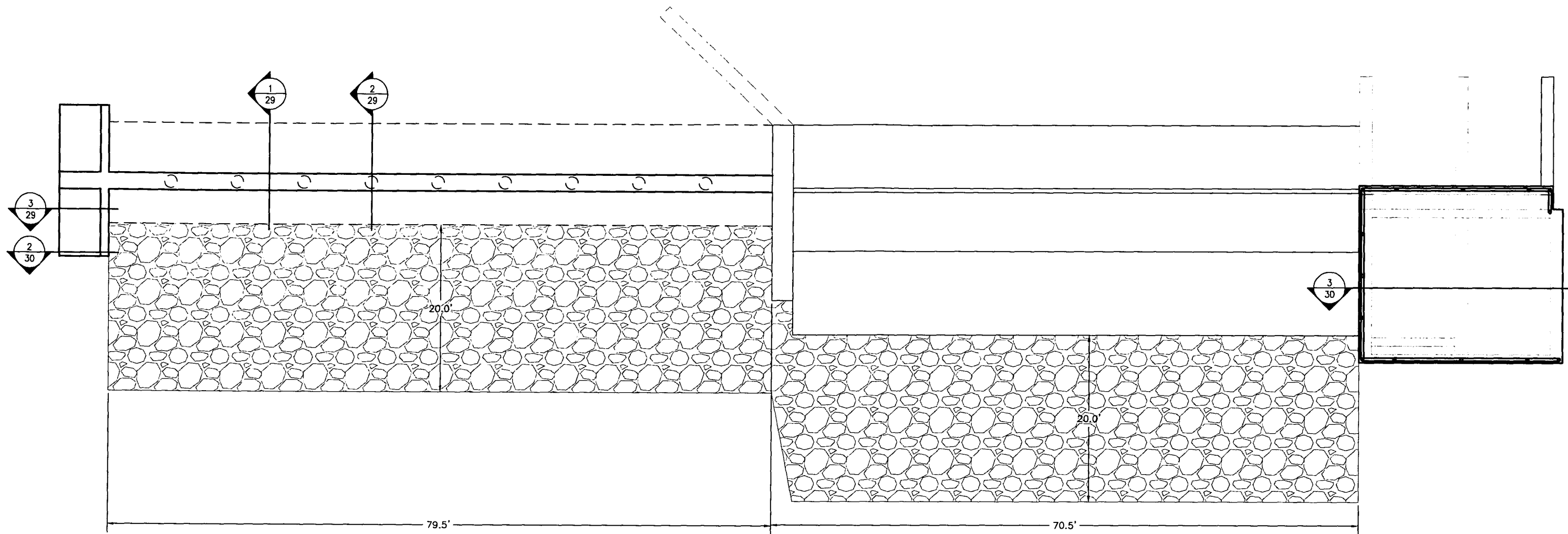
FILE
25

PAGE
OF
47

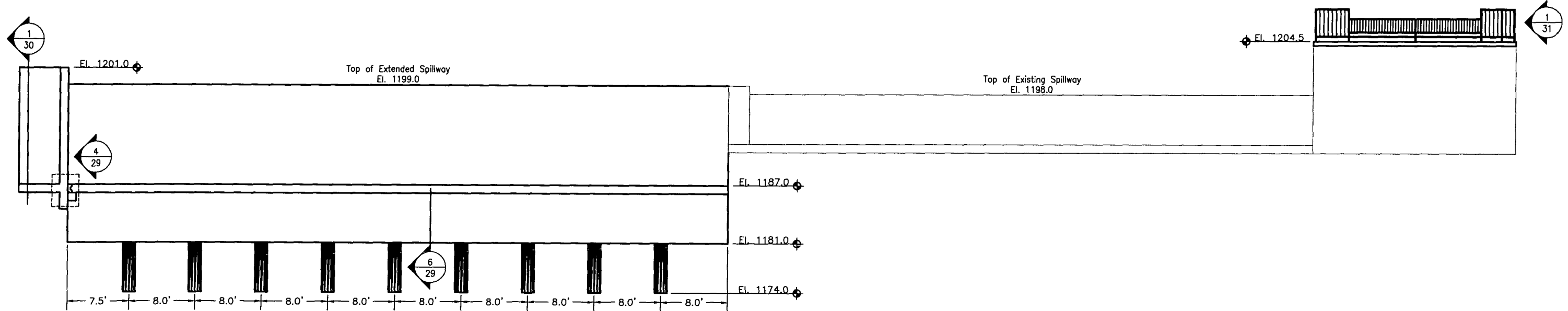
SPILLWAY SECTIONS

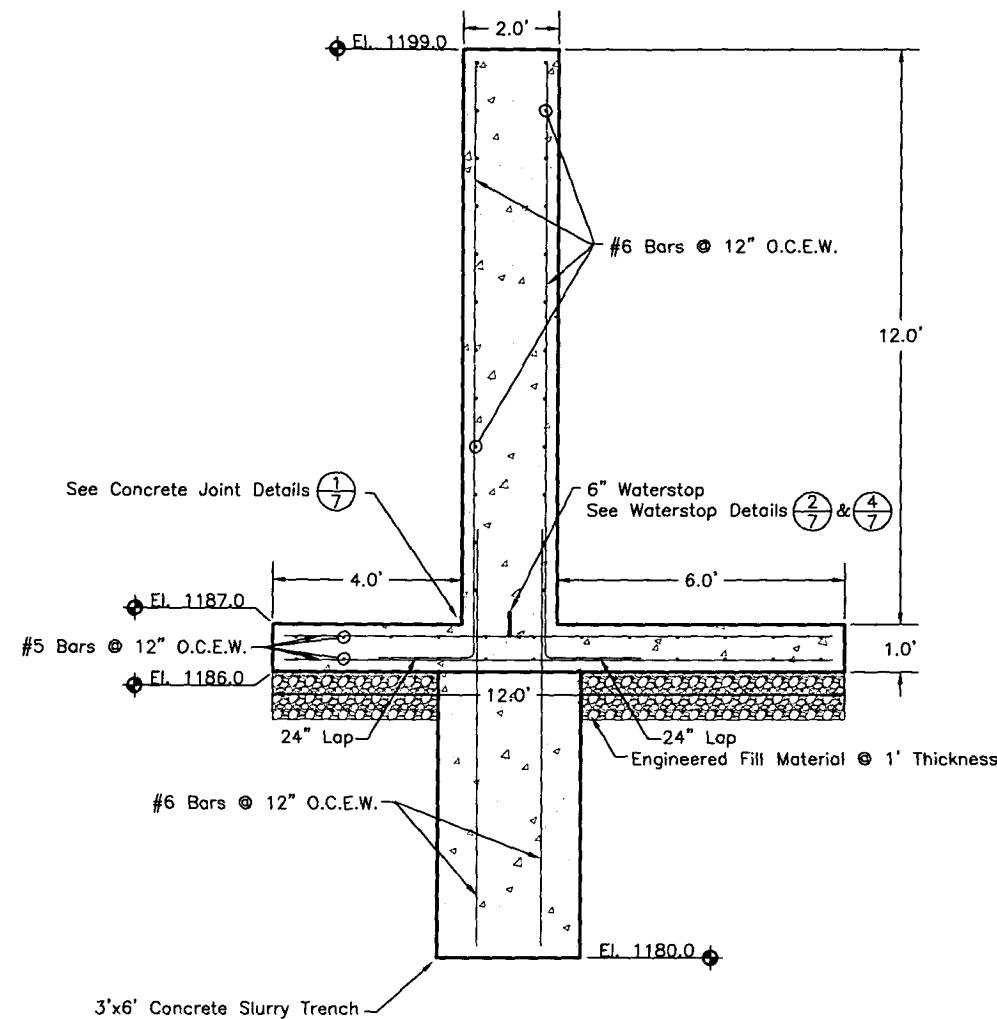






1 SPILLWAY DETAILS
28 SCALE 1" = 12'



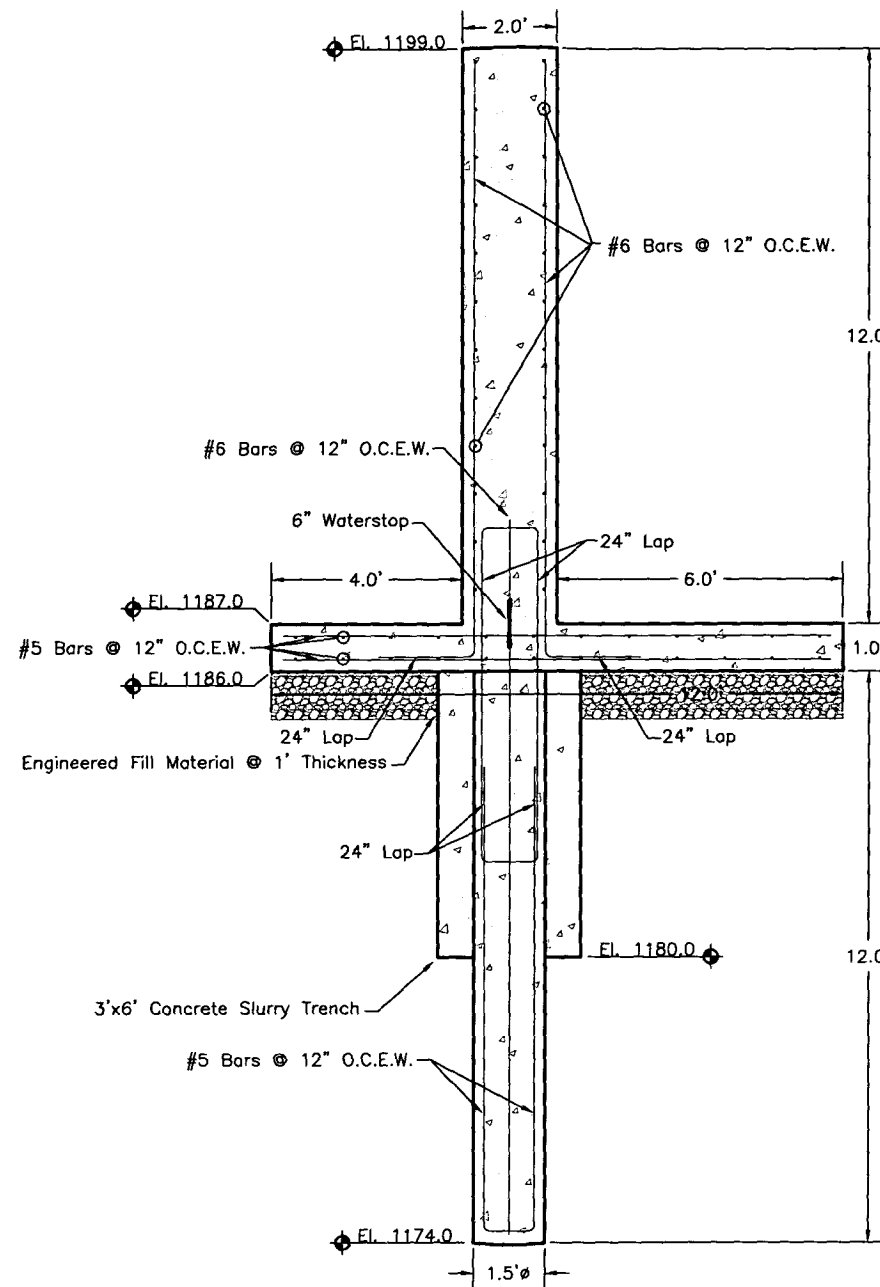


1 Wall Detail
29 SCALE 1" = 4'

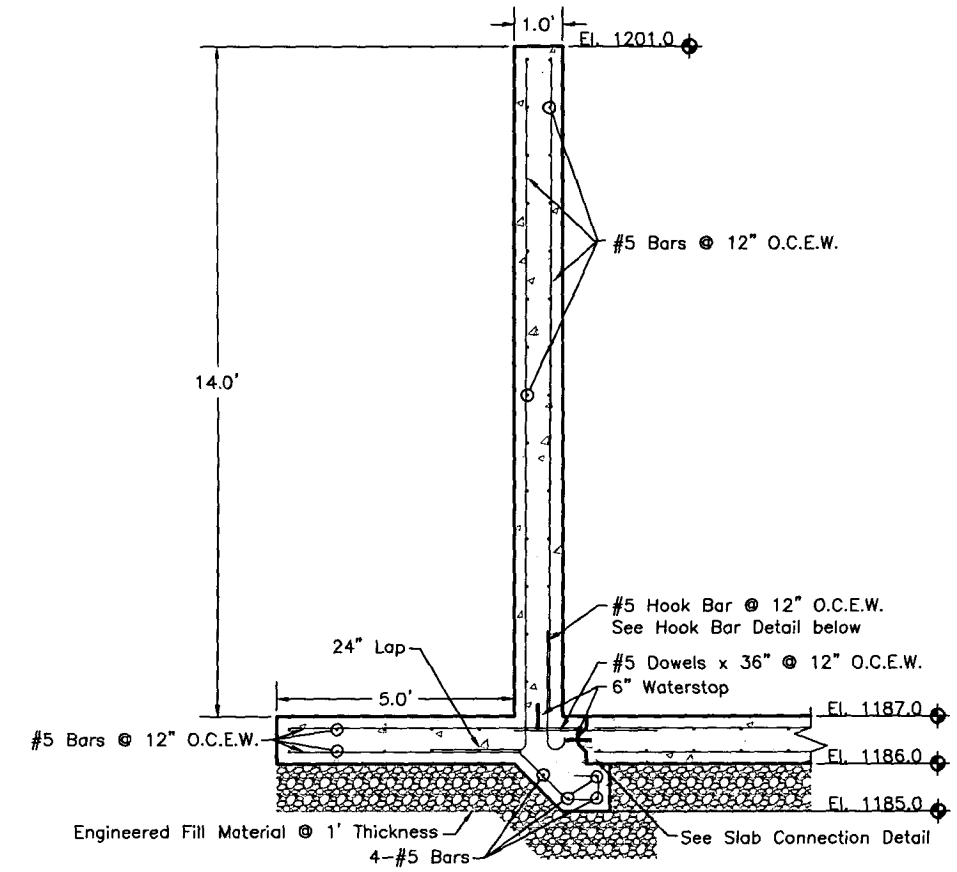
Notes:

Provide 3" clear cover for all reinforcement steel unless otherwise specified on plan.

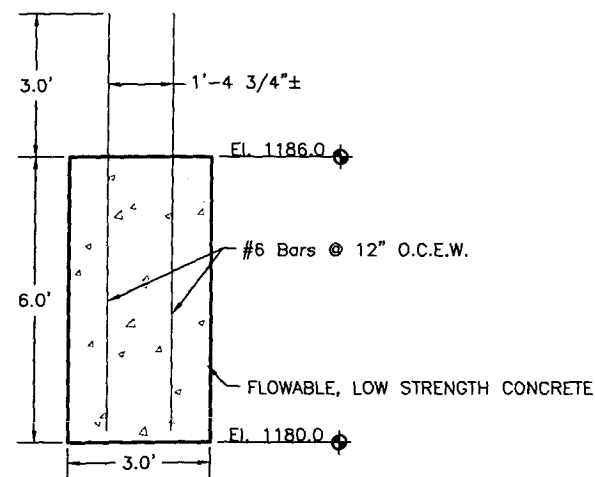
Chamfer all exposed edges.



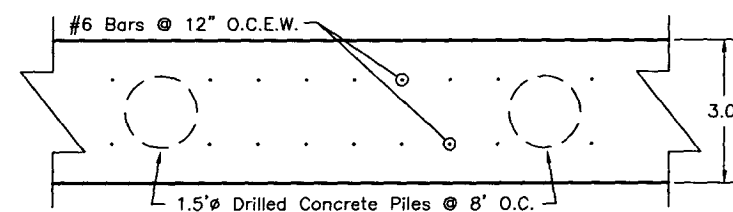
2 Wall Detail
29 SCALE 1" = 4'



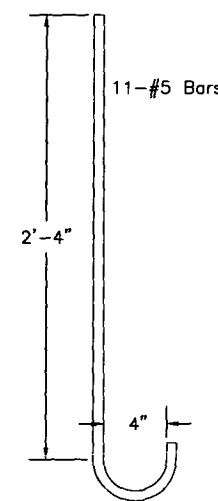
3 Wall Detail
29 SCALE 1" = 4'



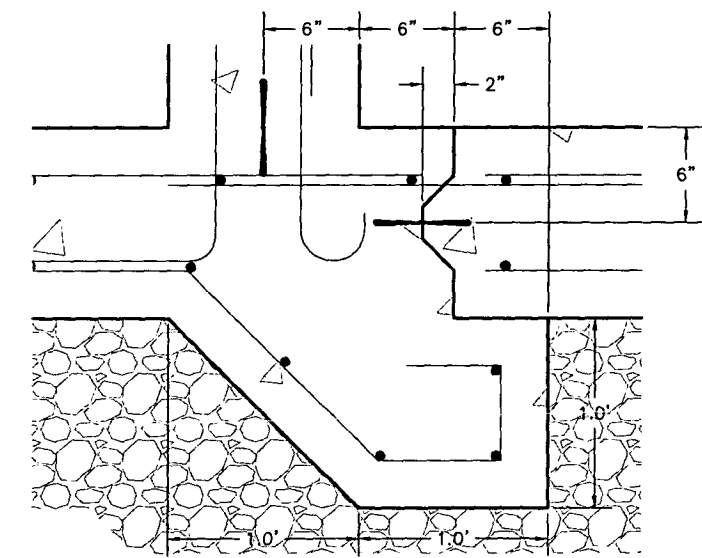
6 Slurry Trench Detail
29 SCALE 1" = 4'



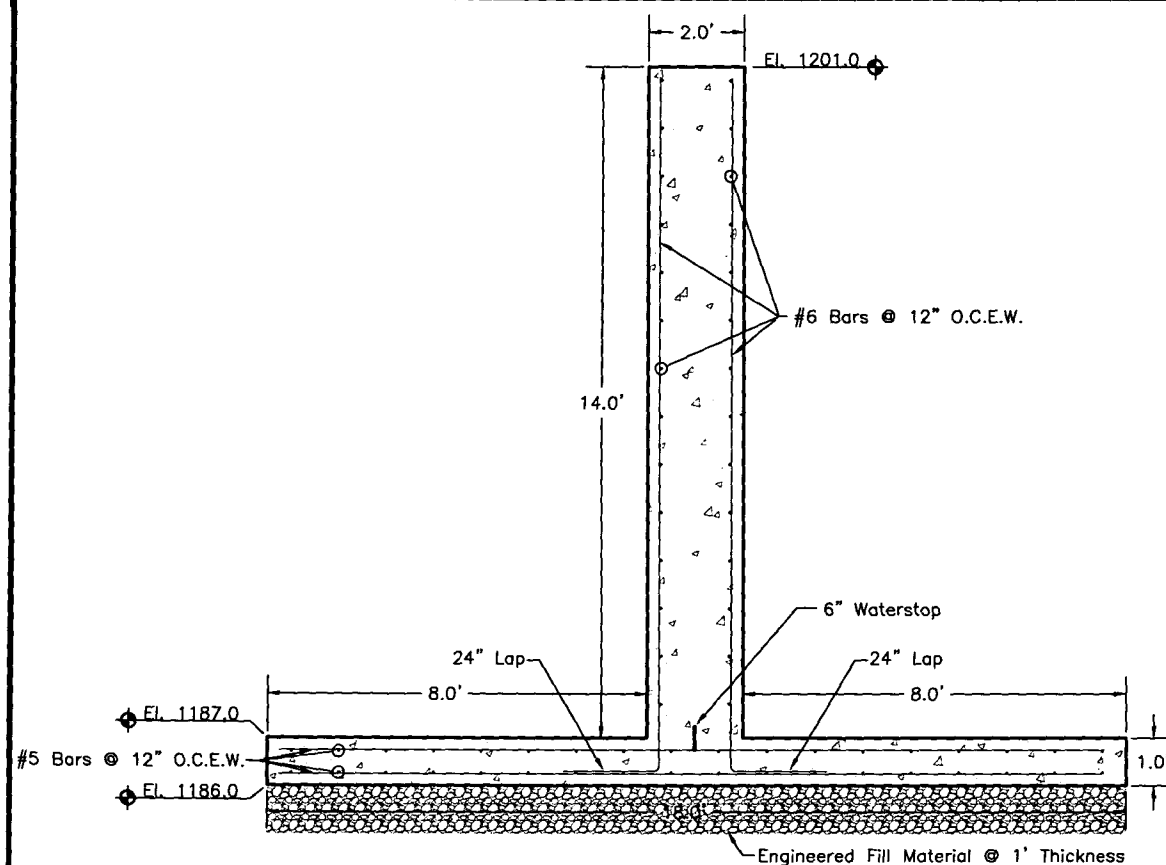
Plan View



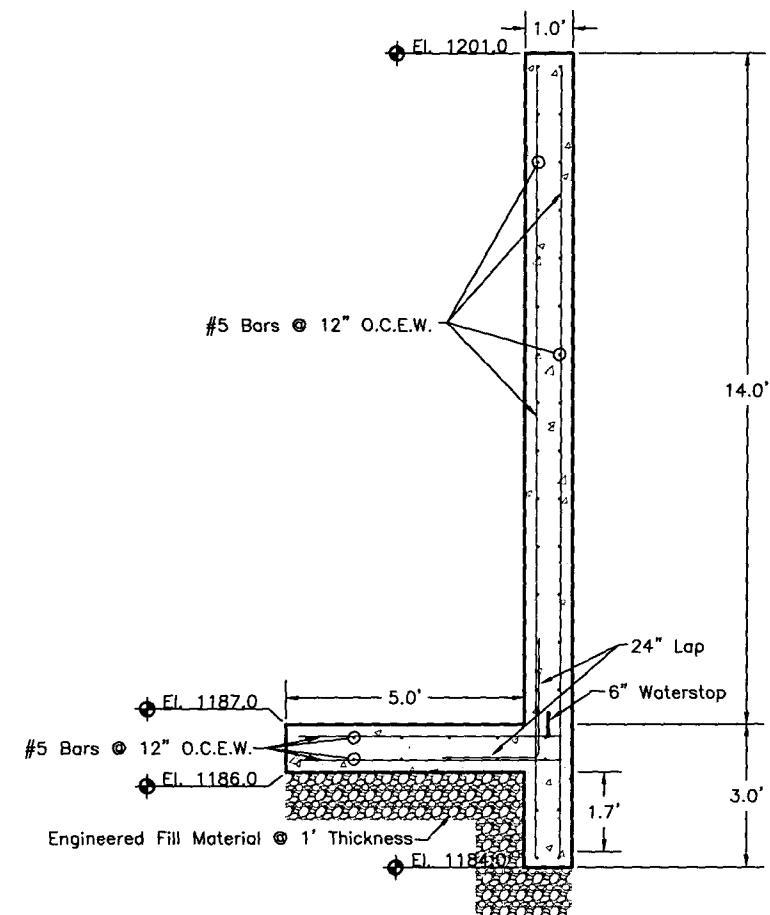
5 Hook Bar Detail
29 SCALE 1" = 2'



4 Slab Connection Detail
29 SCALE 1" = 2'



1 Wall Detail
30 SCALE 1" = 4'

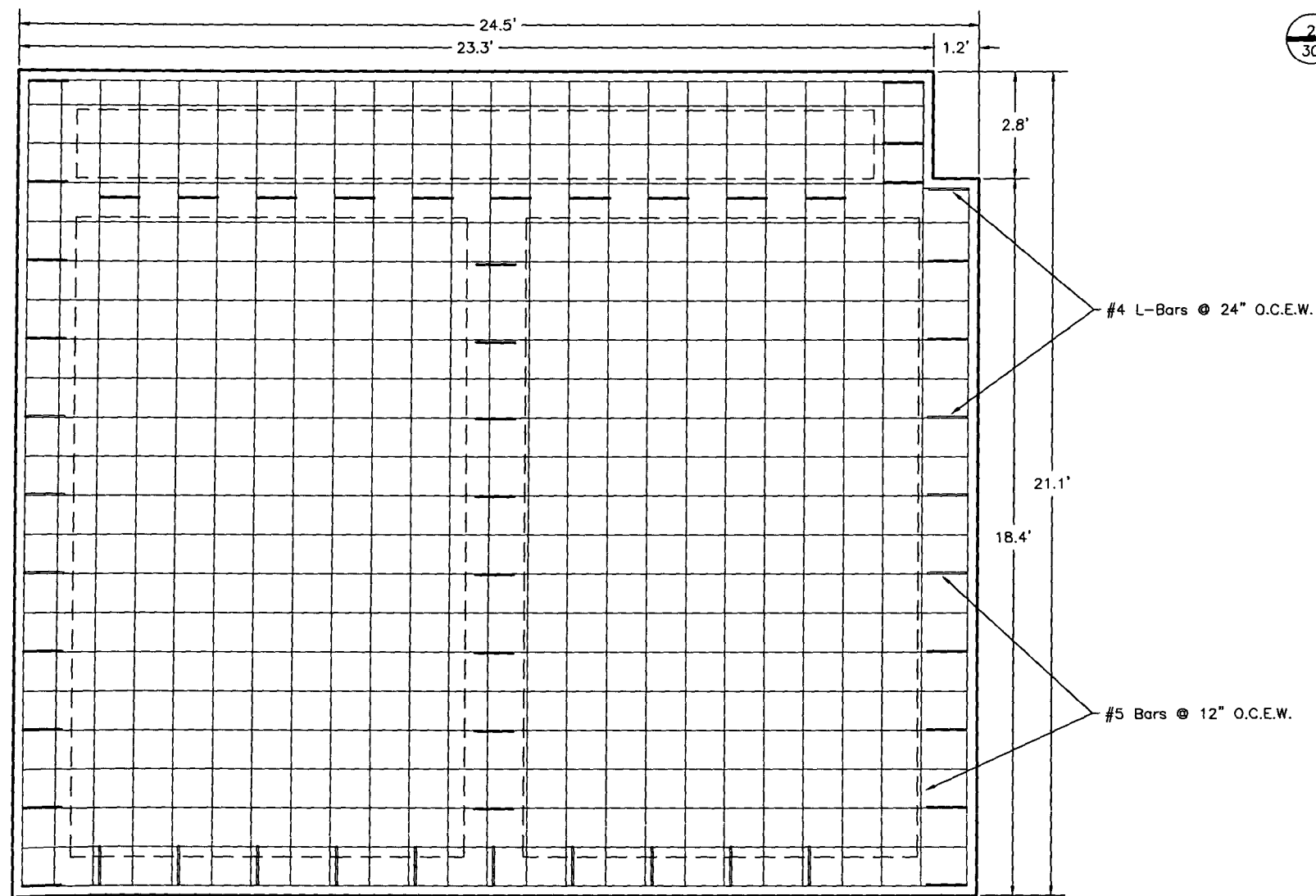


2 Wall Detail
30 SCALE 1" = 4'

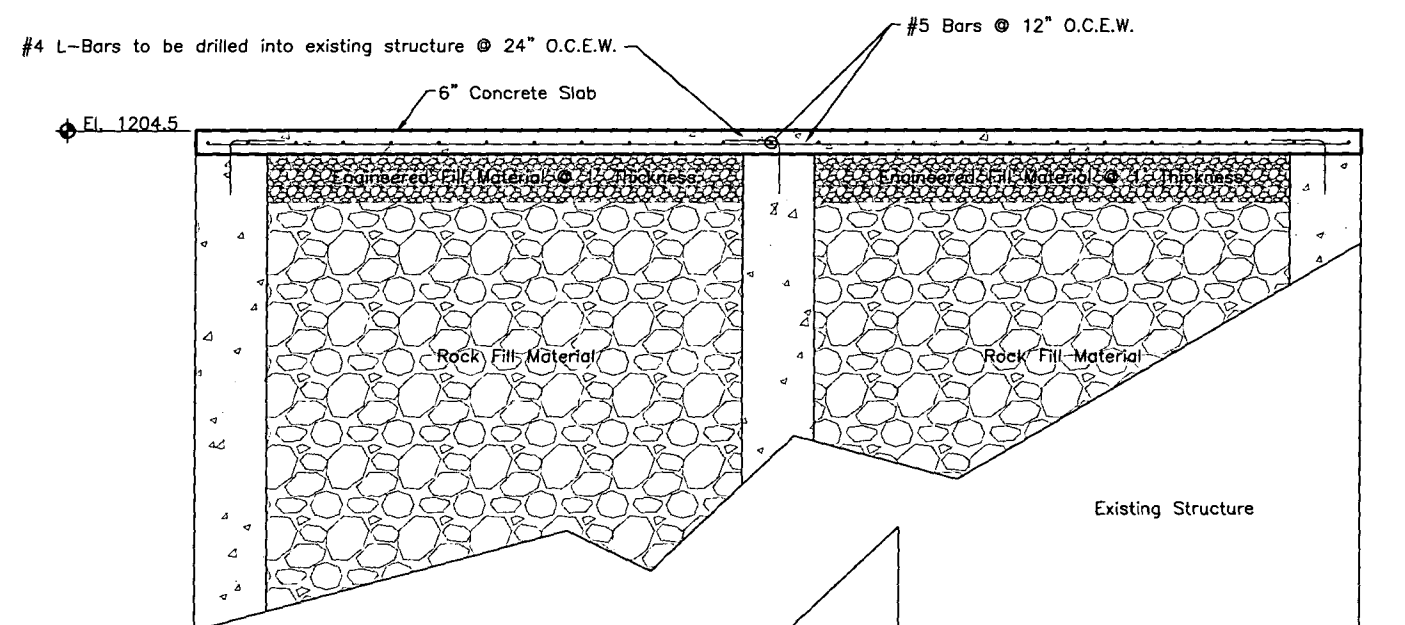
Notes:

Provide 3" clear cover for all reinforcement steel unless otherwise specified on plan.

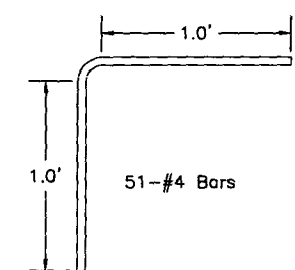
Chamfer all exposed edges.



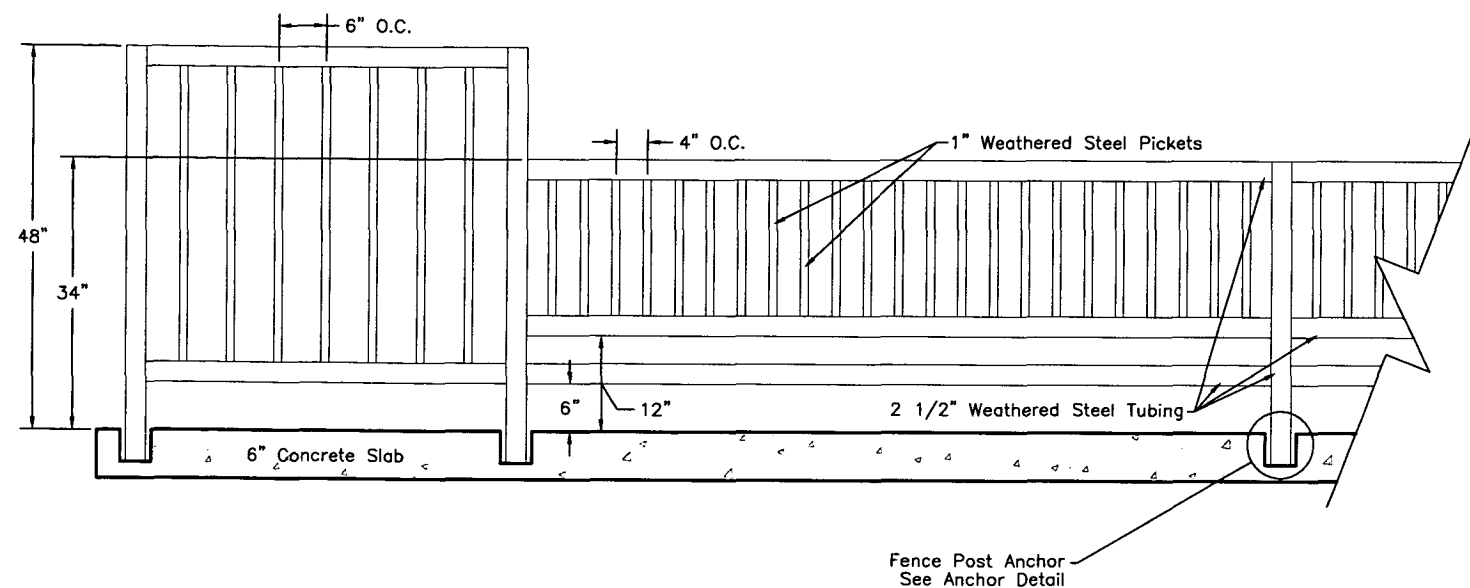
Plan View



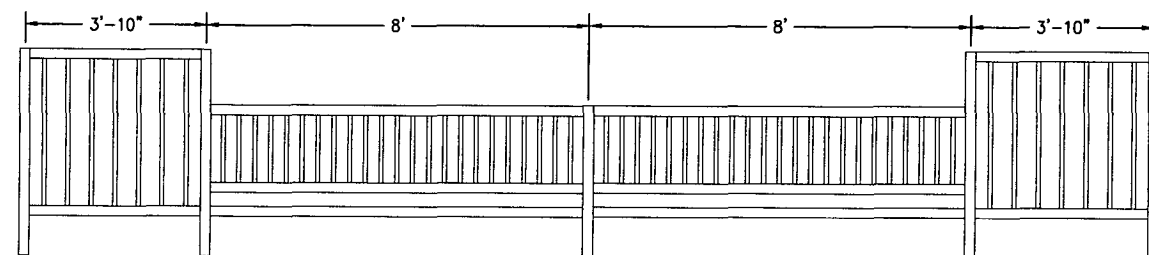
3 Slab Detail
30 SCALE 1" = 4'



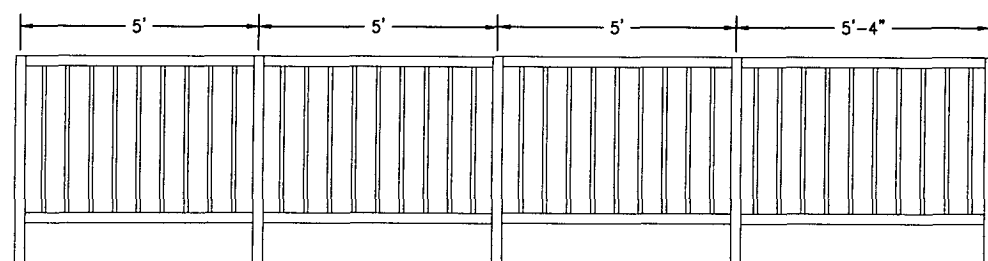
4 L-Bar Detail
30 SCALE 1" = 2'



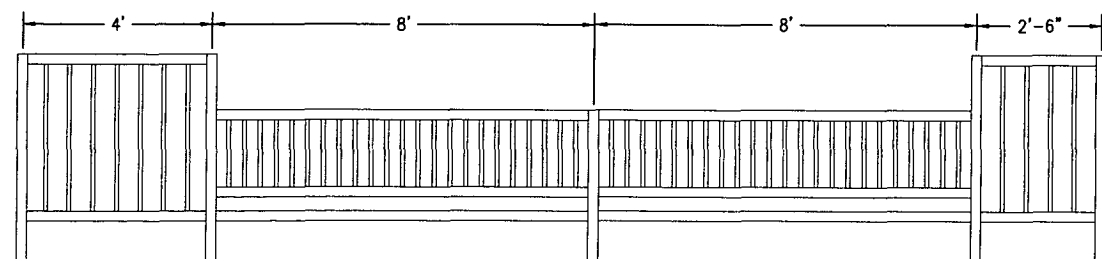
1 Fence Detail
31 SCALE 1" = 2'



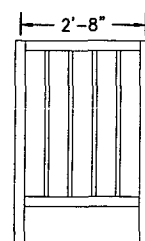
ELEVATION A
SCALE: 1" = 4'



ELEVATION B
SCALE: 1" = 4'

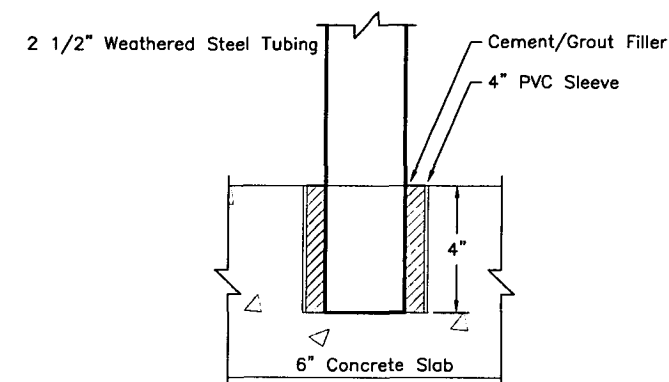


ELEVATION C
SCALE: 1" = 4'

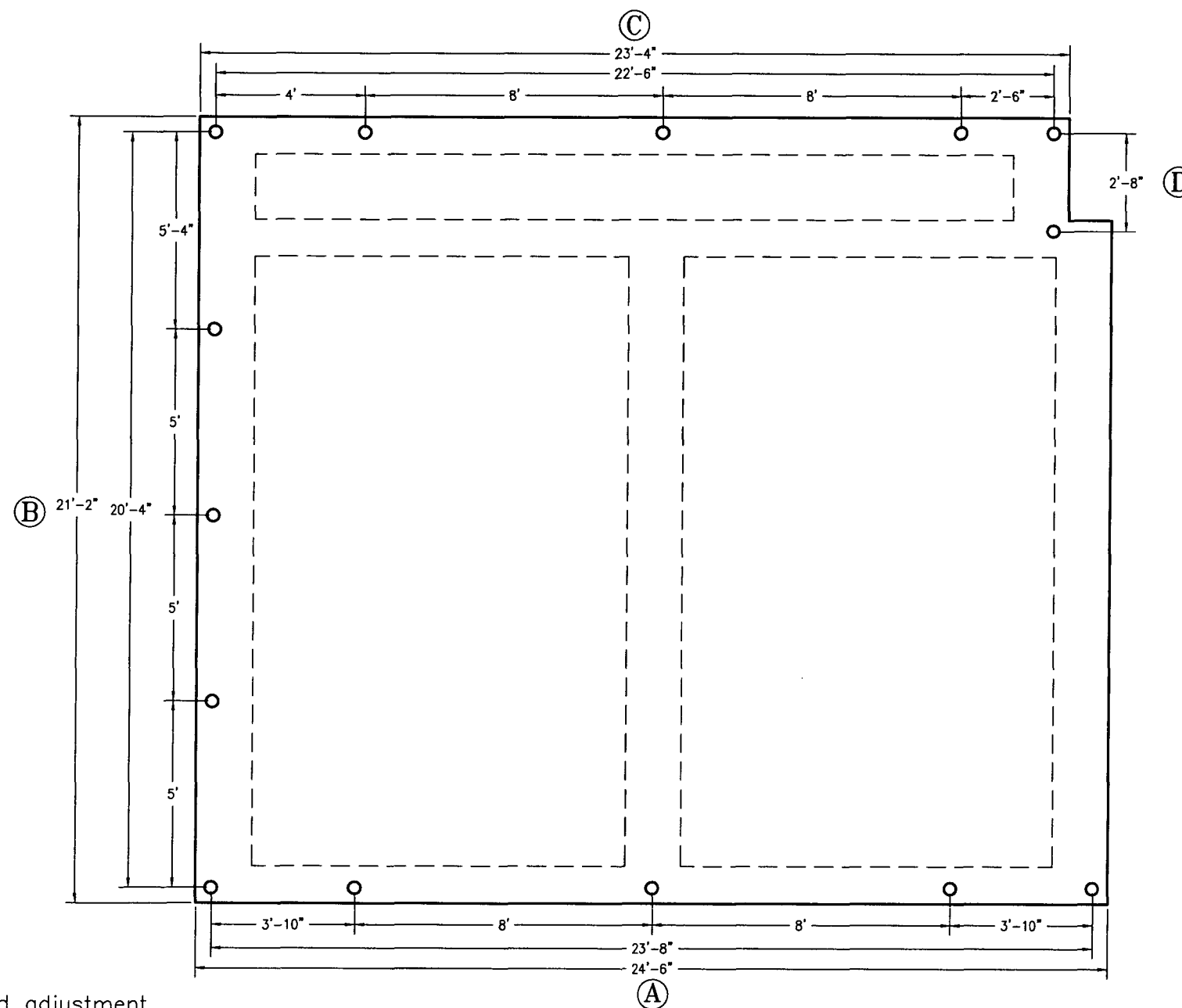


ELEVATION D
SCALE: 1" = 4'

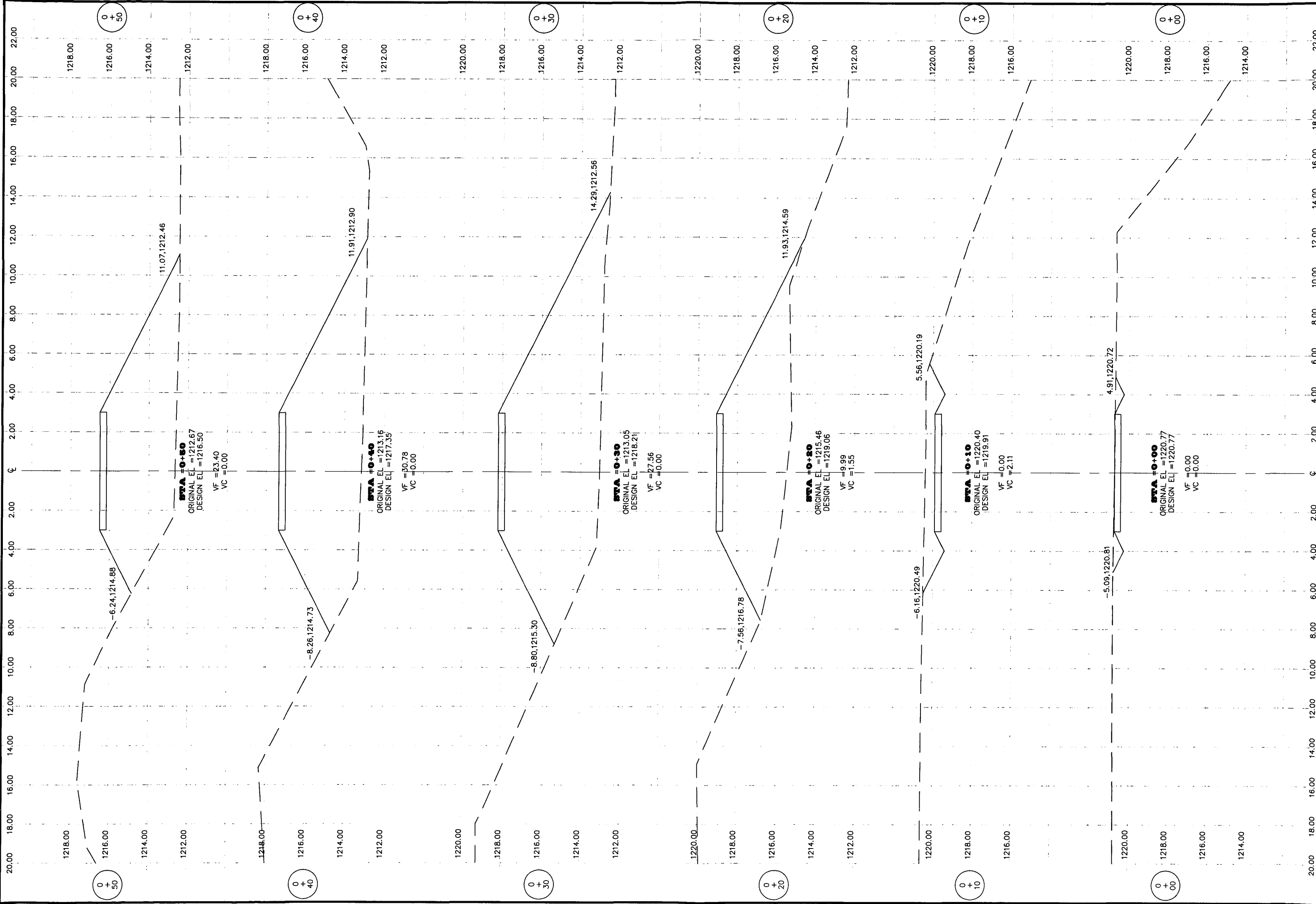
Note:
Plan dimensions may require field adjustment
to accommodate specified spacing.



2 Anchor Detail
31 SCALE 1" = 1'



3 Anchor Location Detail
31 SCALE 1" = 4'

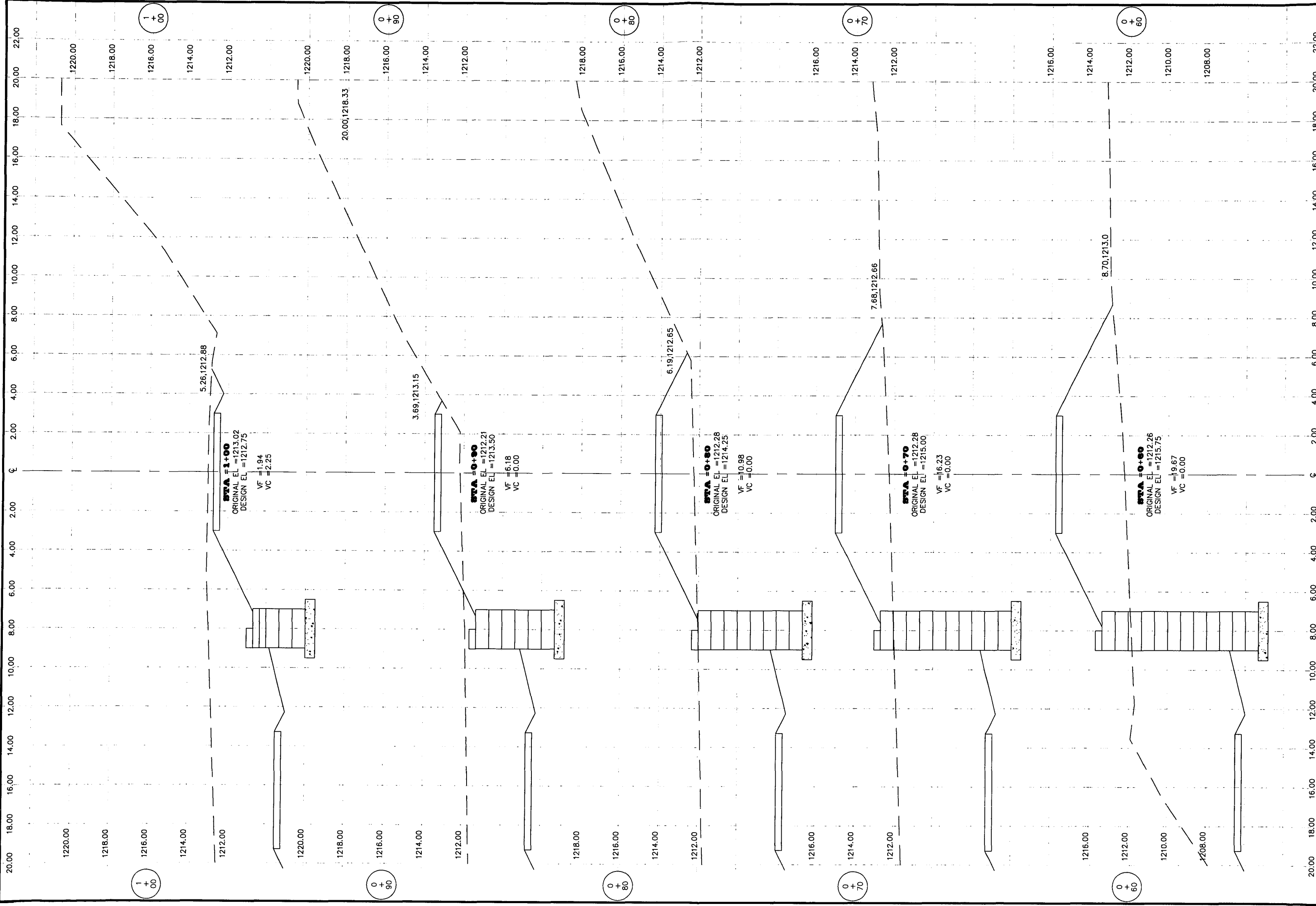


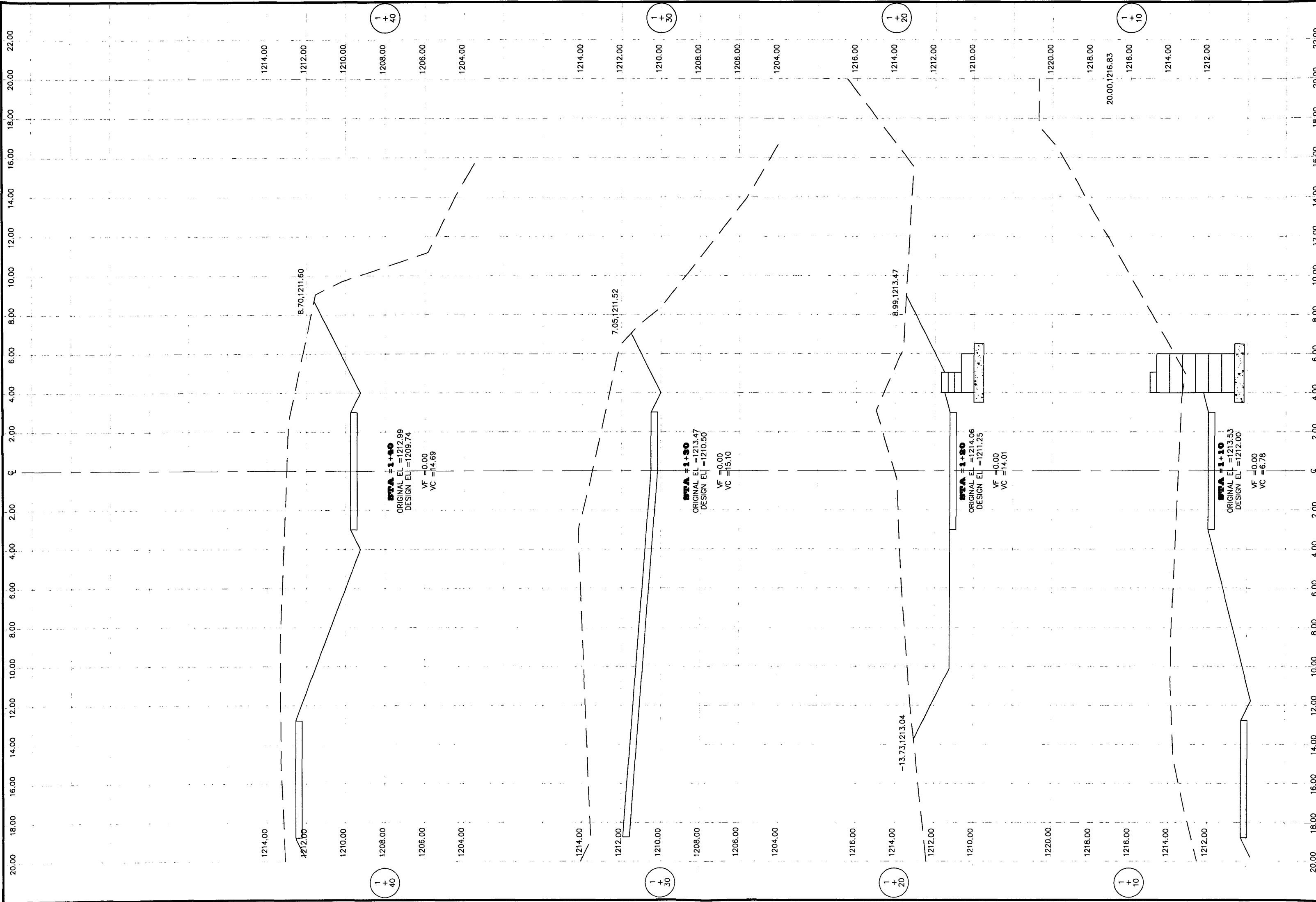
TRAIL SECTIONS

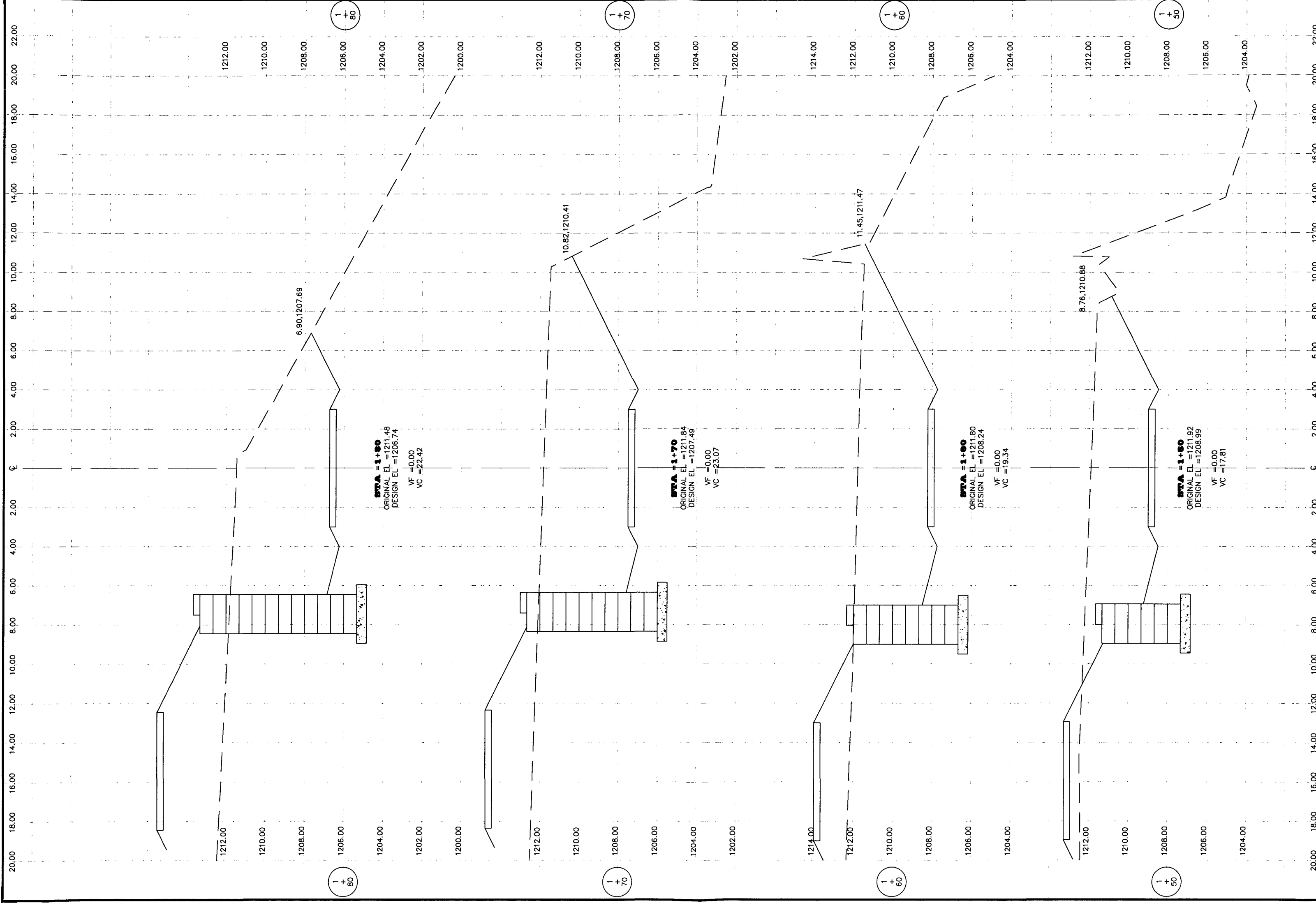
PROJECT NAME: TUR CENT-WOB-A
DRAWN BY: JAWAN
DATE: 7/28/05
SYMBOL: JA
REVISION: JERSON

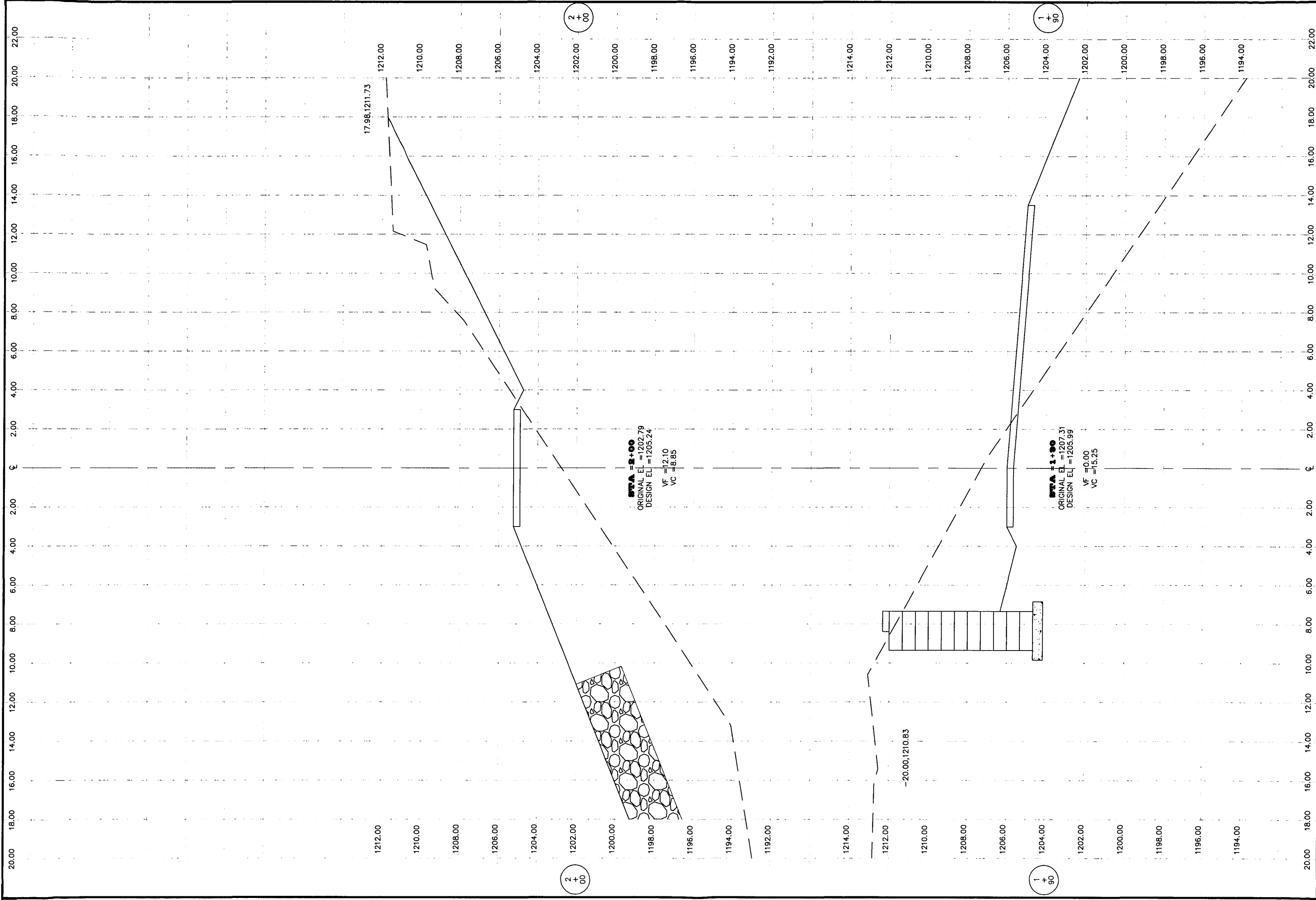


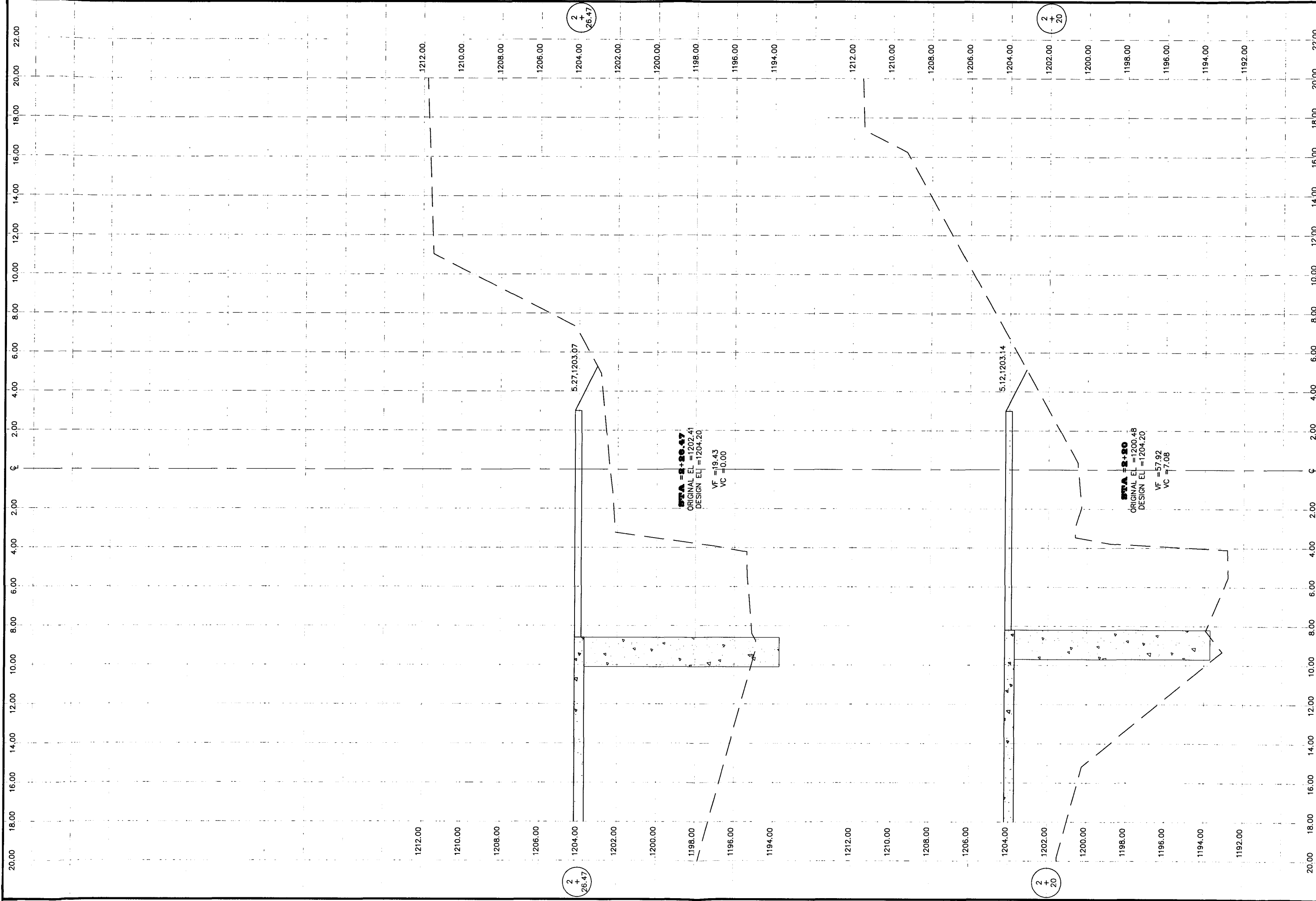
Division of Administration
Foss Building
523 E. Capitol Ave.
Pierre, South Dakota 57501-3182
Phone: (605) 773 - 6052







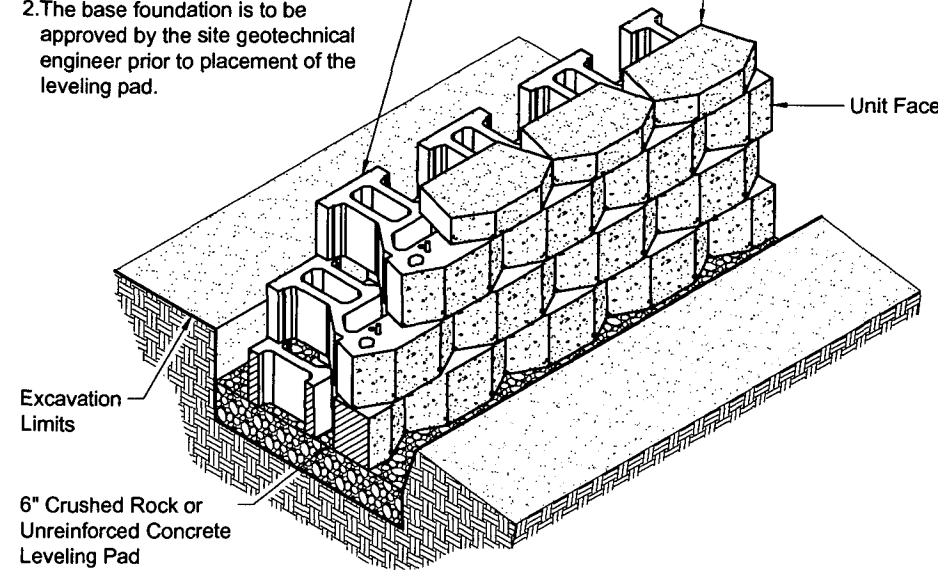




Base Leveling Pad Notes:

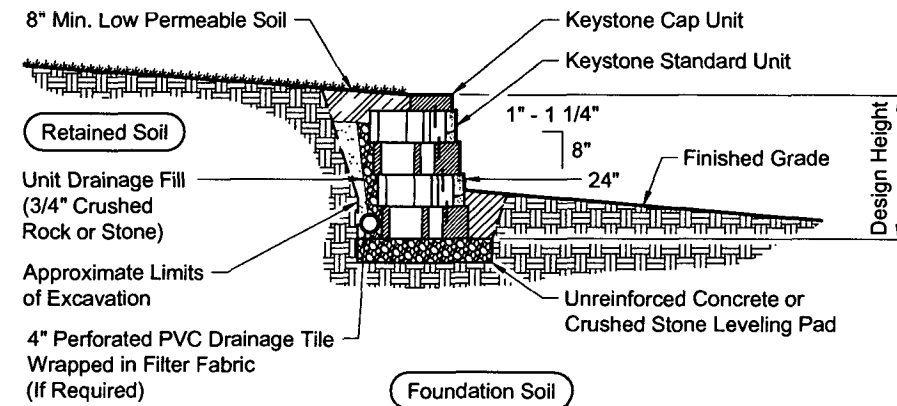
1. The leveling pad is to be constructed of crushed stone or 2,000 psi± unreinforced concrete
2. The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.

Standard Unit		Cap Unit	
*Width:	18"	*Width:	18"
*Depth:	21 1/2"	*Depth:	10 1/2"
*Height:	8"	*Height:	4"
*Weight:	115 lbs	*Weight:	45 lbs



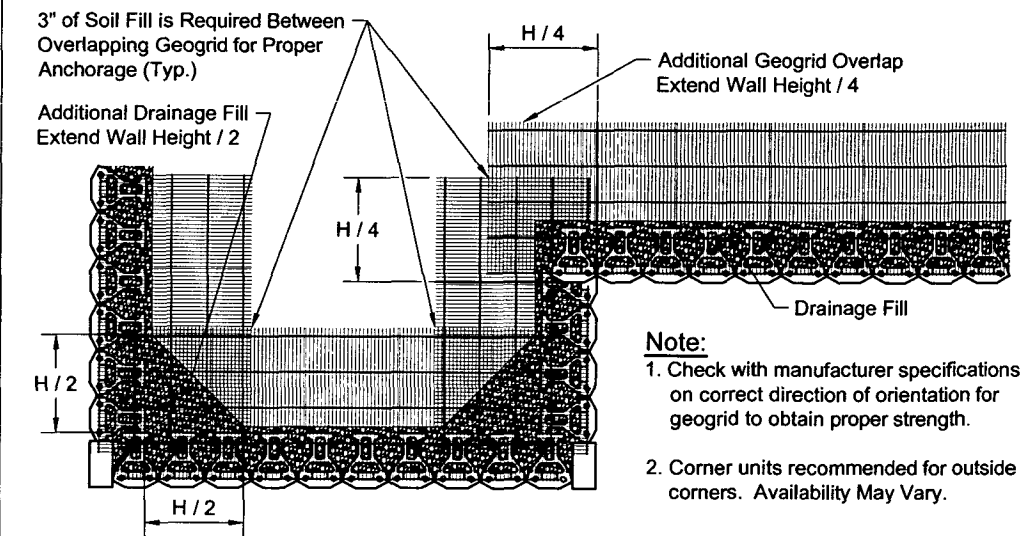
Standard Unit/Base Pad Isometric Section View

* Dimensions & Weight May Vary by Region



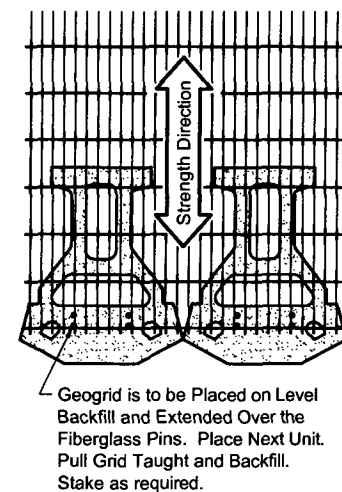
Typical Gravity Wall Section

Standard Unit - 1" Setback

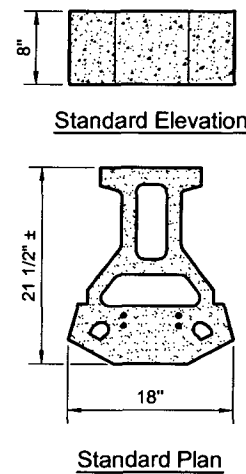


Geogrid Installation at Corners

- Note:**
1. Check with manufacturer specifications on correct direction of orientation for geogrid to obtain proper strength.
 2. Corner units recommended for outside corners. Availability May Vary.

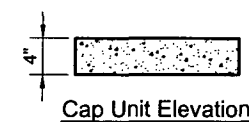


Grid & Pin Connection

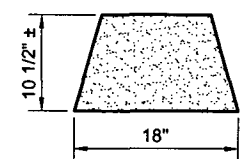


Standard Unit

* Dimensions May Vary by Region



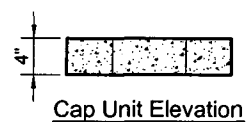
Cap Unit Elevation



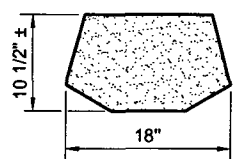
Cap Unit Plan

Universal Cap Unit Option

* Dimensions & Availability Will Vary by Region



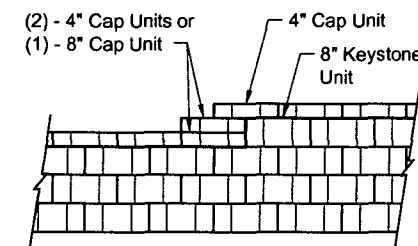
Cap Unit Elevation



Cap Unit Plan

3-Plane Split Cap Unit Option

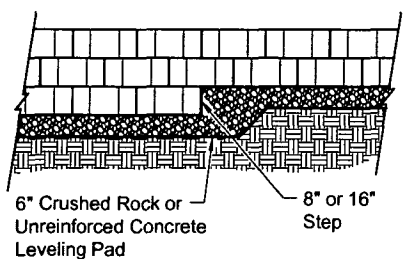
* Dimensions & Availability Will Vary by Region



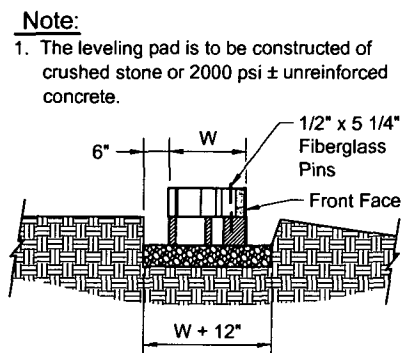
Note:

1. Secure all cap units with Keystone Kapseal or equal.

Top of Wall Steps



Elevation

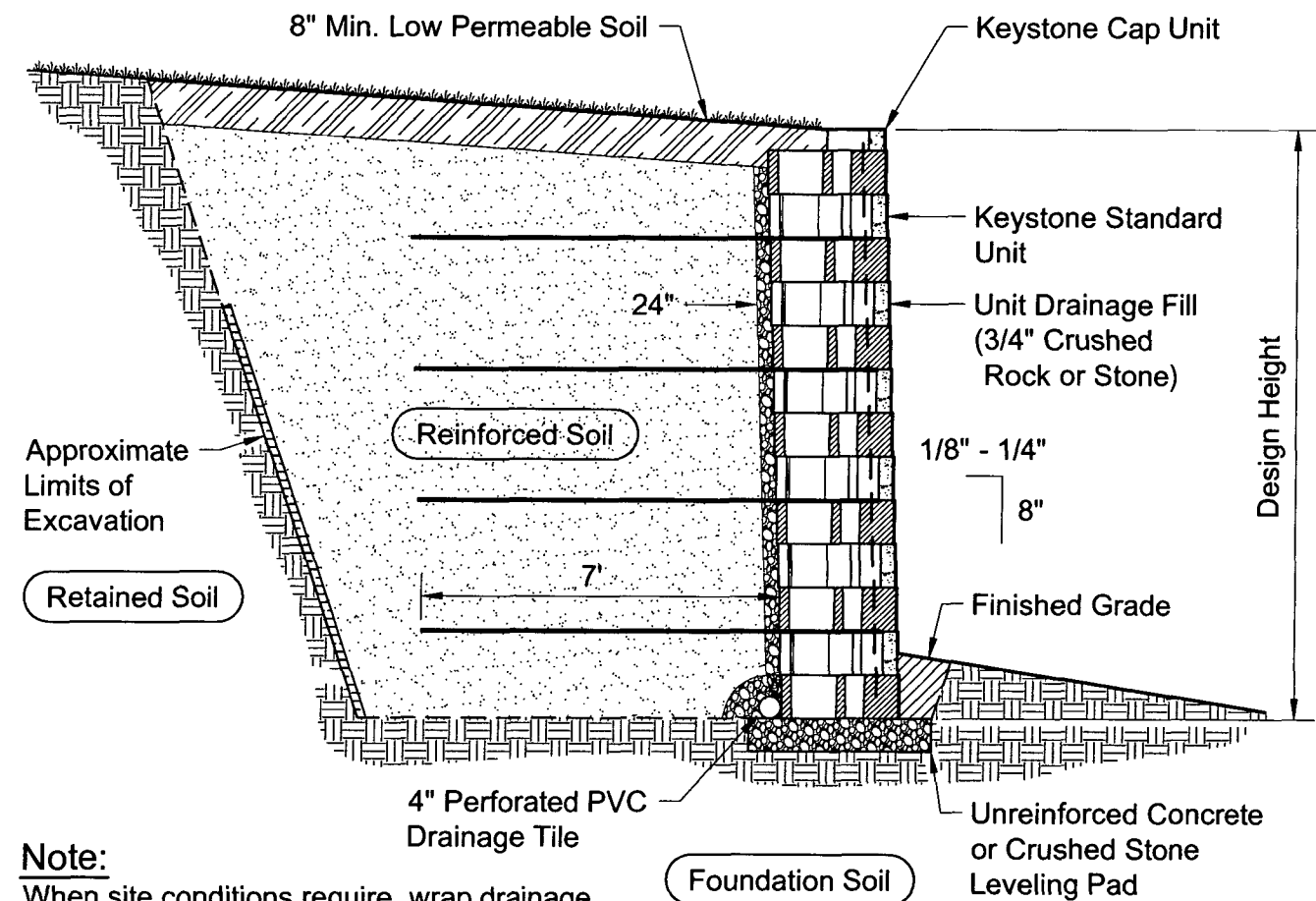


Section

Leveling Pad Detail

Note:

1. The leveling pad is to be constructed of crushed stone or 2000 psi± unreinforced concrete.

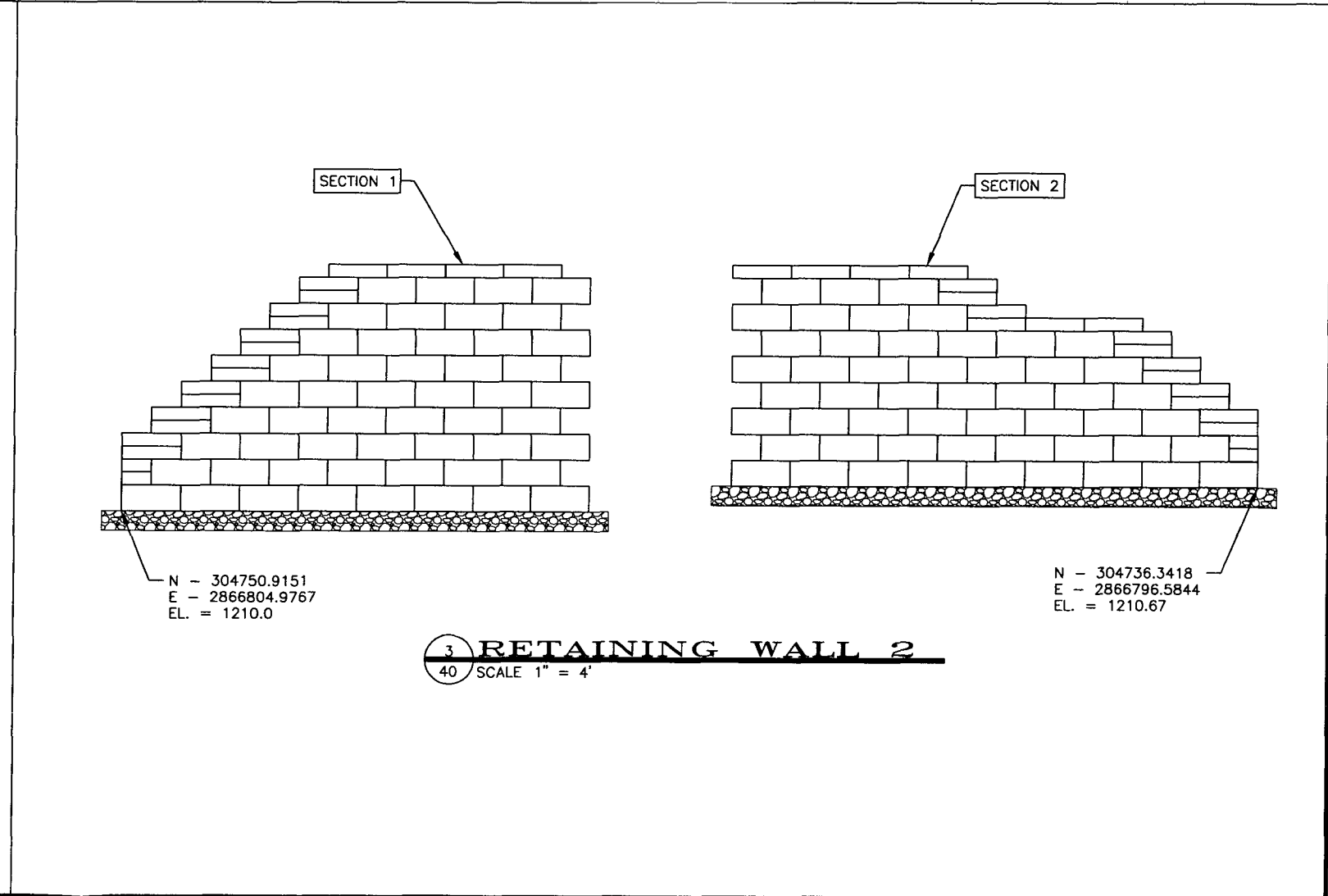
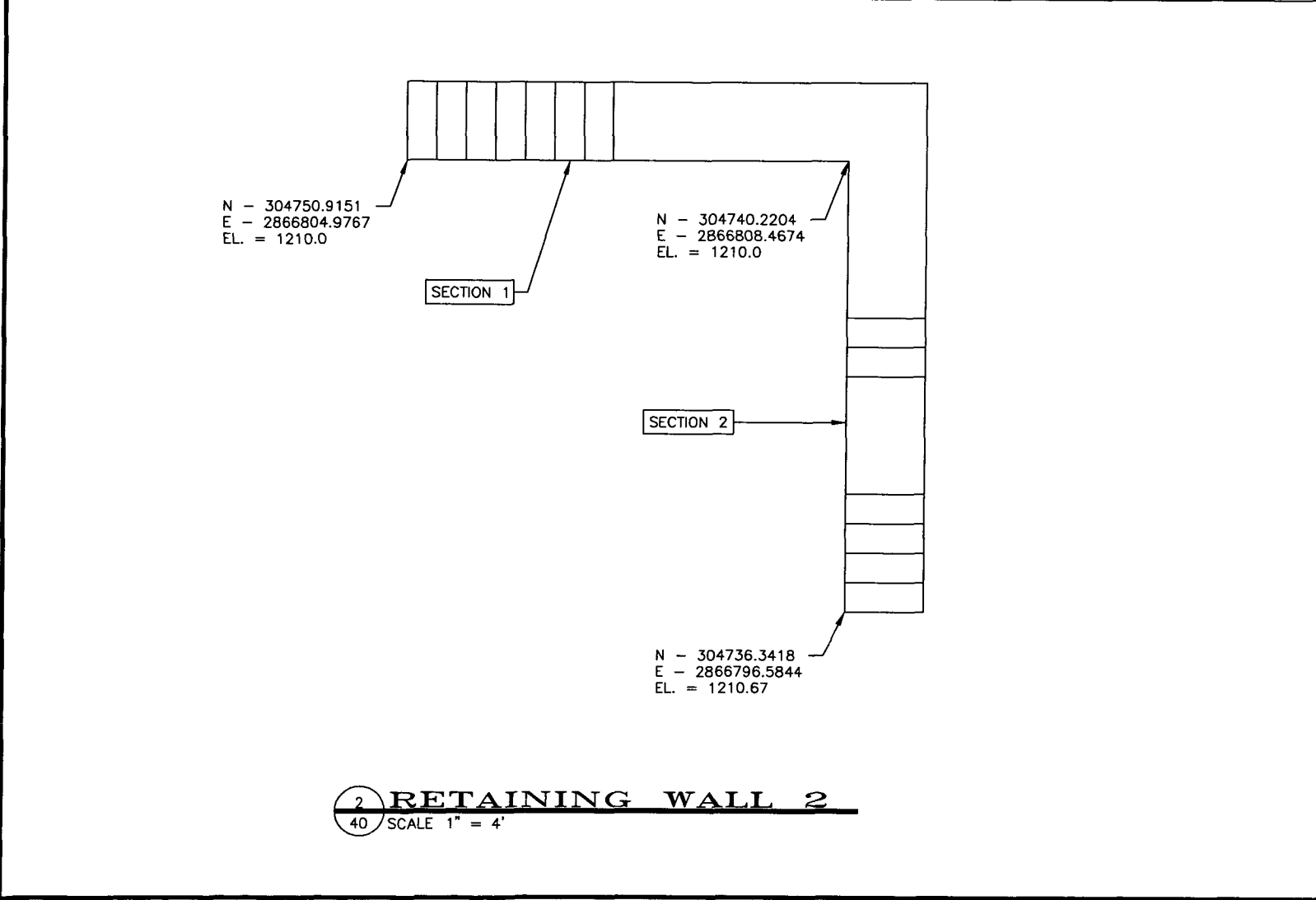
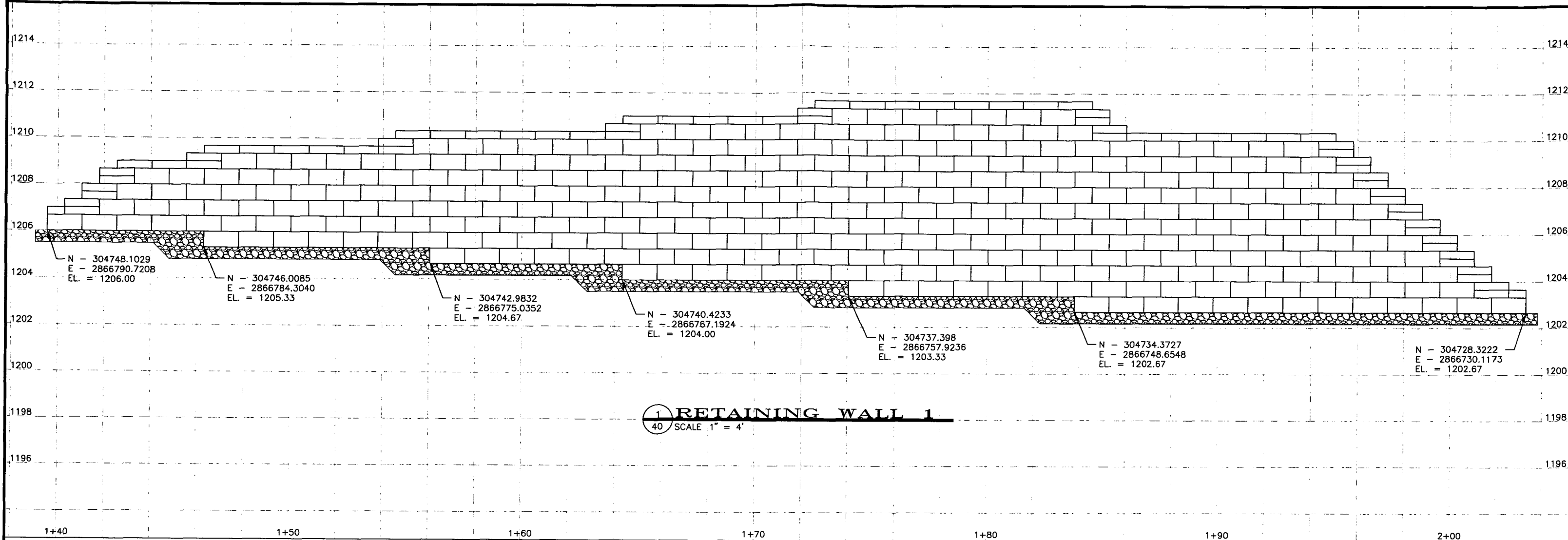


Note:

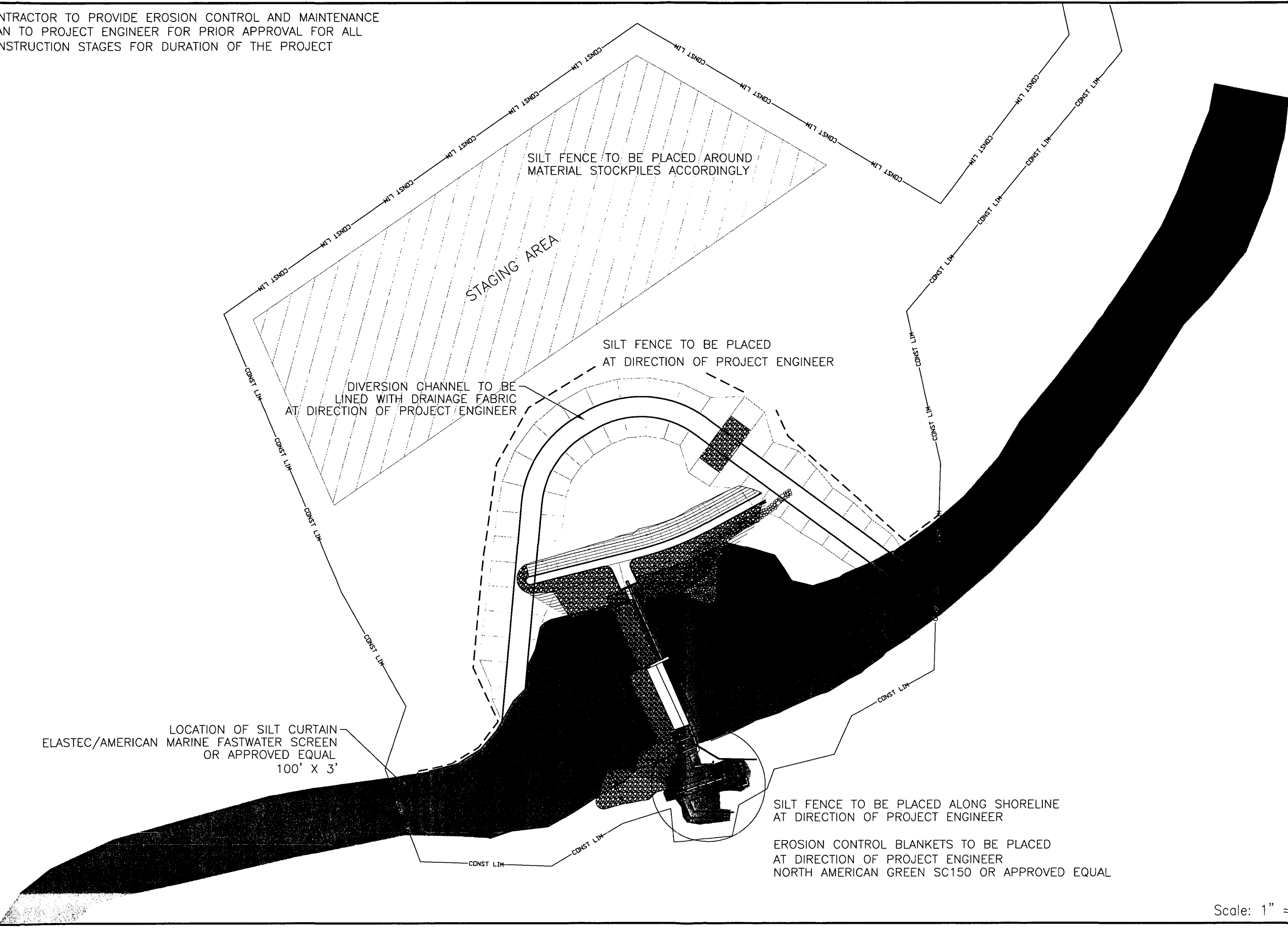
When site conditions require, wrap drainage tile in 3/4" aggregate and filter fabric with drainage composite or aggregate back drain system, as directed by geotechnical engineer.

Typical Reinforced Wall Section

Standard Unit - Near Vertical Setback



CONTRACTOR TO PROVIDE EROSION CONTROL AND MAINTENANCE
PLAN TO PROJECT ENGINEER FOR PRIOR APPROVAL FOR ALL
CONSTRUCTION STAGES FOR DURATION OF THE PROJECT



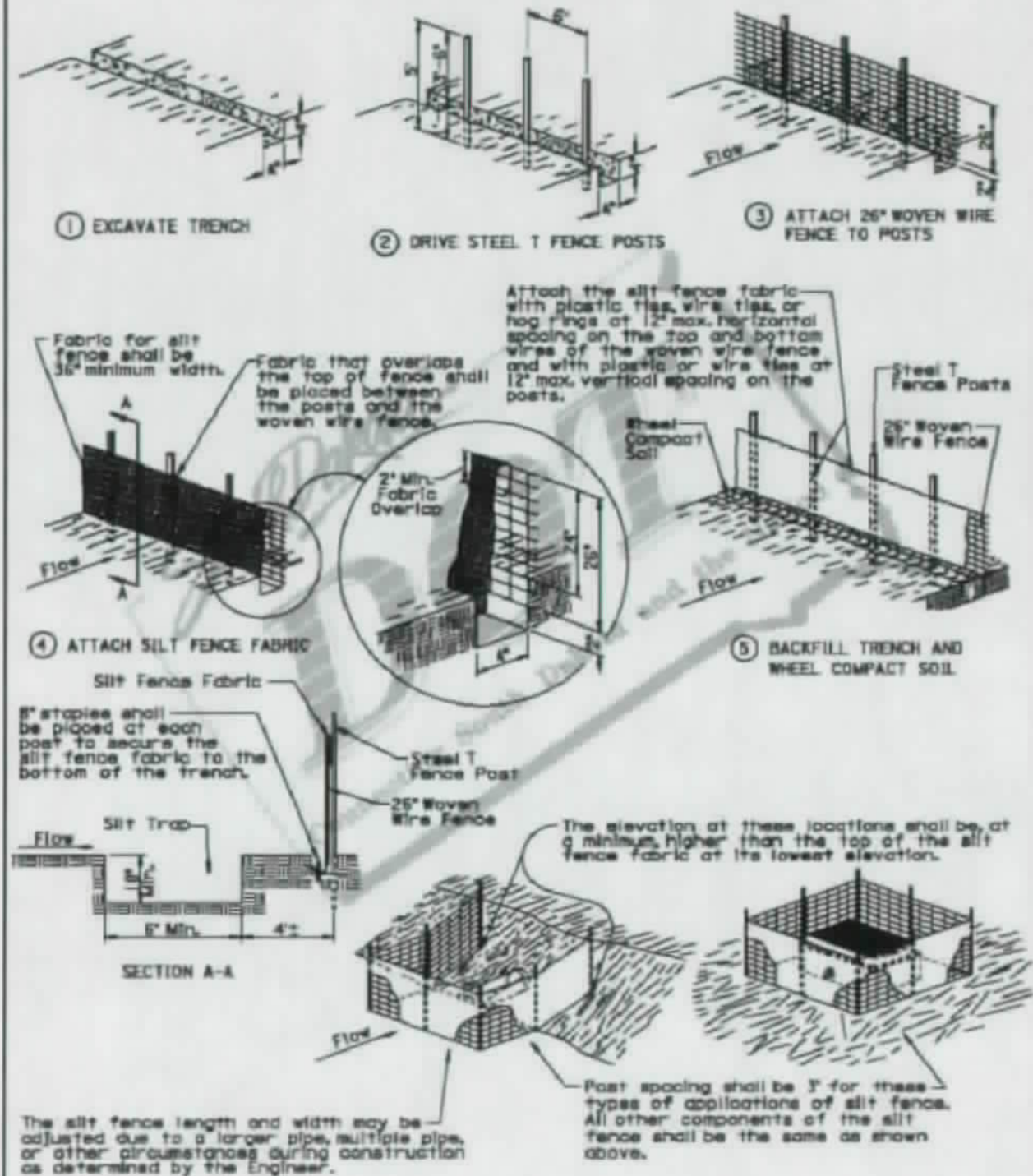
Division of Administration
Foss Building
523 E. Capitol Ave.
Pierre, South Dakota 57501-3182
Phone: (605) 773 - 6082

South Dakota
Department of Game, Fish & Parks

PROJECT: TIE-CEM-W06-A
DATE: 7/28/05
DRAWN BY: JA
CHECKED BY: STYREN

EROSION CONTROL
41
OF
47
Scale: 1" = 40'

MANUAL LOW FLOW SILT FENCE INSTALLATION



December 23, 2003

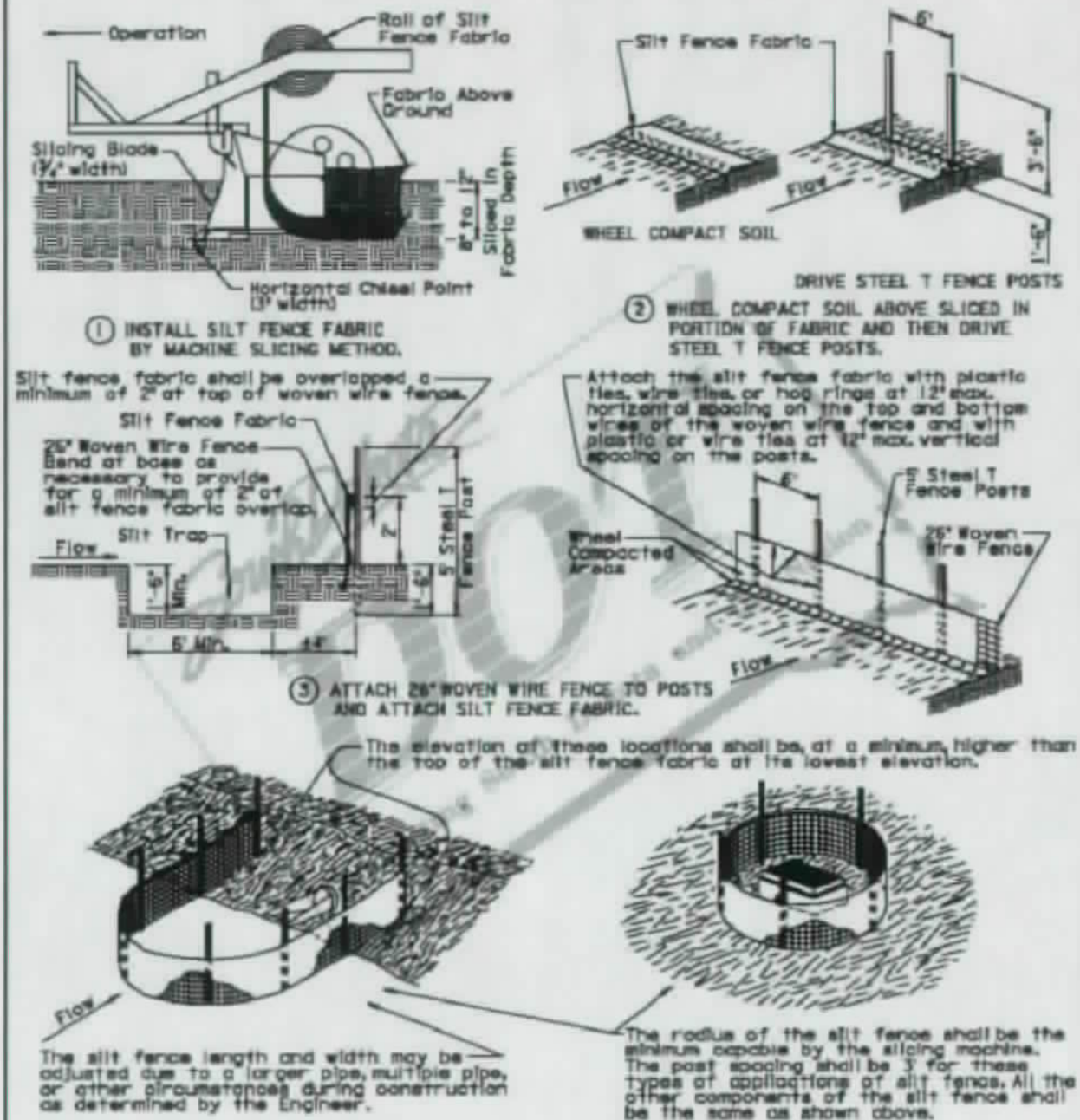
SDOT

LOW FLOW SILT FENCE
AND SILT TRAP

PLATE NUMBER
734.04

Sheet 1 of 2

MACHINE SLICED LOW FLOW SILT FENCE INSTALLATION



GENERAL NOTES:

A silt trap shall be provided when specified by a plan note. All costs for constructing the silt trap shall be incidental to the contract unit price per cubic yard for "Silt Trap".

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags buried end to end shall be provided on top of the extra length of silt fence fabric to prevent underflow.

December 23, 2003

SDOT

LOW FLOW SILT FENCE
AND SILT TRAP

PLATE NUMBER
734.04

Sheet 2 of 2

MANUAL HIGH FLOW SILT FENCE INSTALLATION

1 EXCAVATE TRENCH

2 DRIVE STEEL T FENCE POSTS

Attach the silt fence fabric with a total of 4 plastic or wire ties per post. Three ties shall be used at the top and 1 tie shall be approximately at mid-point of the post.

Fabric for silt fence shall be 36" minimum width.

3 ATTACH SILT FENCE FABRIC

4 BACKFILL TRENCH AND WHEEL COMPACT SOIL

Silt Fence Fabric

Steel T Fence Post

8" staples shall be placed at each post to secure the silt fence fabric to the bottom of the trench.

Plastic or Wire Ties

SECTION A-A

The elevation at these locations shall be, at a minimum, higher than the top of the silt fence fabric at its lowest elevation.

Post spacing shall be 3' for these types of applications of silt fence. All other components of the silt fence shall be the same as shown above.

The silt fence length and width may be adjusted due to a larger pipe, multiple pipe, or other circumstances during construction as determined by the Engineer.

December 23, 2003

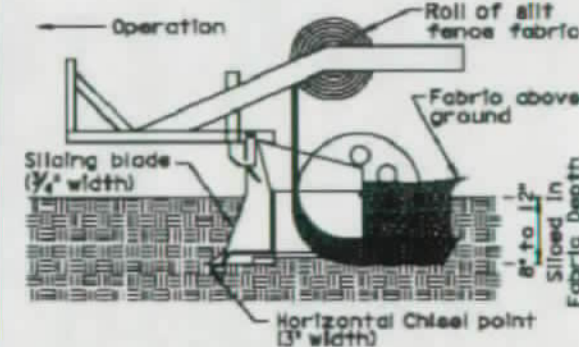
SDDOT

HIGH FLOW SILT FENCE

PLATE NUMBER
734.05

Sheet 1 of 2

MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION



1 INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.

2 WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.

Fabric for silt fence shall be 36" minimum width.

Attach the silt fence fabric with a total of 4 plastic or wire ties per post. Three ties shall be used at the top and 1 tie shall be approximately at mid-point of the post.

3 ATTACH SILT FENCE FABRIC

SECTION A-A

The elevation at these locations shall be, at a minimum, higher than the top of the silt fence fabric at its lowest elevation.

The silt fence length and width may be adjusted due to a larger pipe, multiple pipe, or other circumstances during construction as determined by the Engineer.

The radius of the silt fence shall be the minimum capable by the slicing machine. The post spacing shall be 3' for these types of applications of silt fence. All the other components of the silt fence shall be the same as shown above.

GENERAL NOTE:

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end shall be provided on top of the extra length of silt fence fabric to prevent underflow.

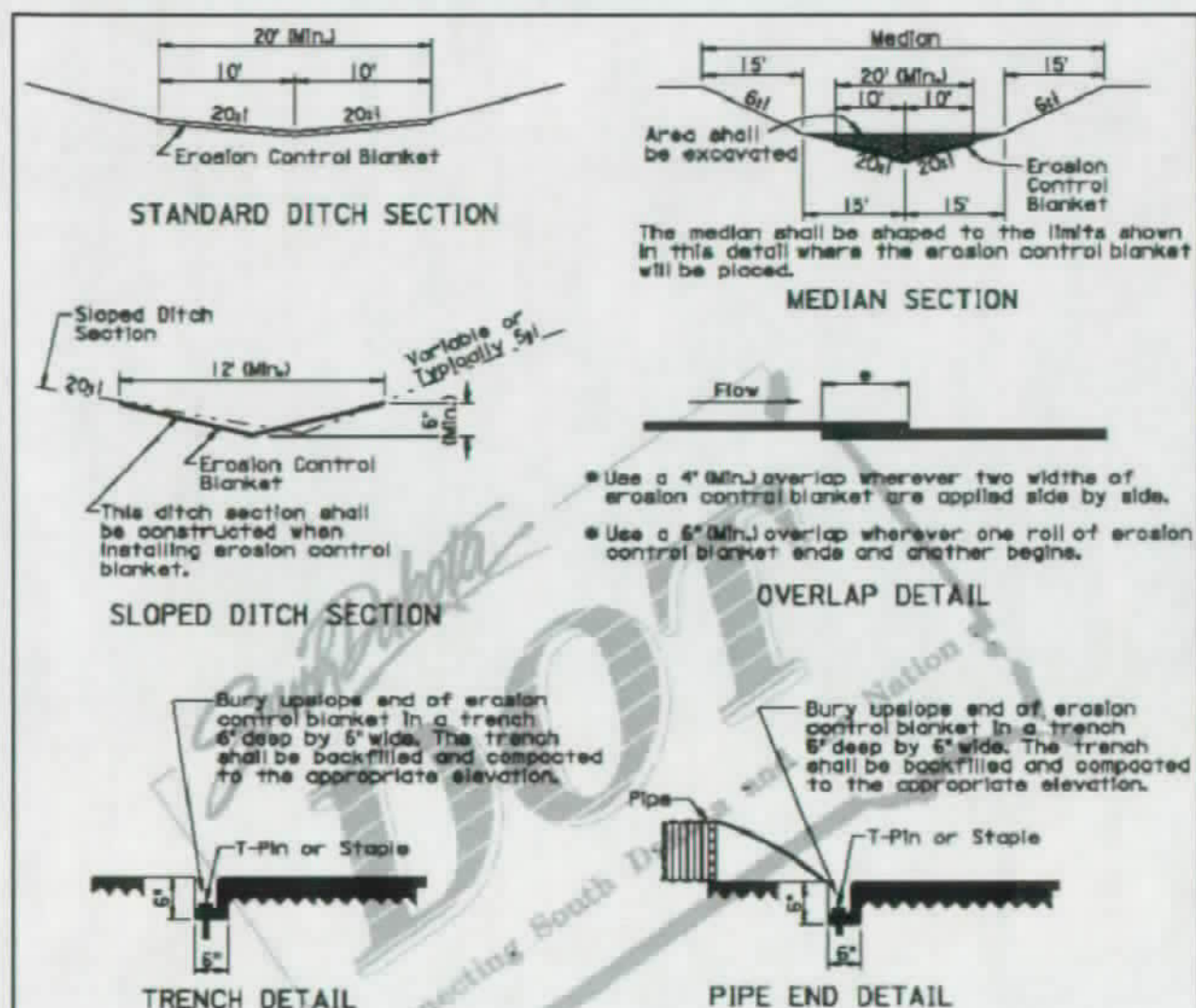
December 23, 2003

SDDOT

HIGH FLOW SILT FENCE

PLATE NUMBER
734.05

Sheet 2 of 2



GENERAL NOTES:

Prior to placement of the erosion control blanket, the area shall be properly prepared, shaped, seeded, and fertilized.

Erosion control blanket shall be unrolled in the direction of the flow of water when placed in ditches and on slopes. The upslope end of the erosion control blanket shall be buried in a trench 6" wide by 6" deep. There shall be at least a 6" overlap wherever one roll of erosion control blanket ends and another begins, with the upslope erosion control blanket placed on top of the downslope erosion control blanket.

The erosion control blanket shall be pinned to the ground according to the manufacturer's installation recommendations.

After the placement of the erosion control blanket, the Contractor shall fine grade along all edges of the blanket to maintain a uniform slope adjacent to the blanket and level any low spots which might prevent uniform and unrestricted flow of side drainage directly onto the erosion control blanket.

All ditch sections shall be shaped when installing the erosion control blanket. All costs for shaping the ditches shall be incidental to the contract unit price per foot for "Shaping for Erosion Control Blanket".

December 23, 2004

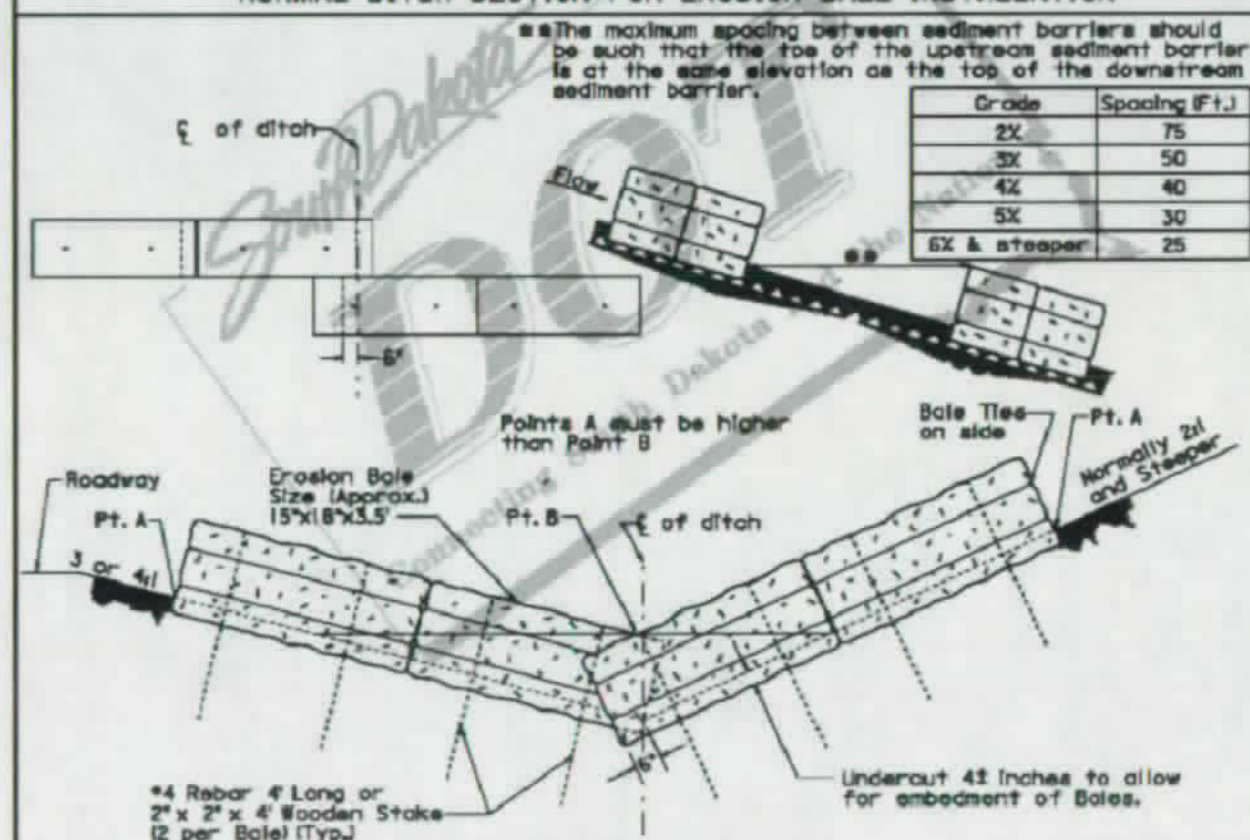
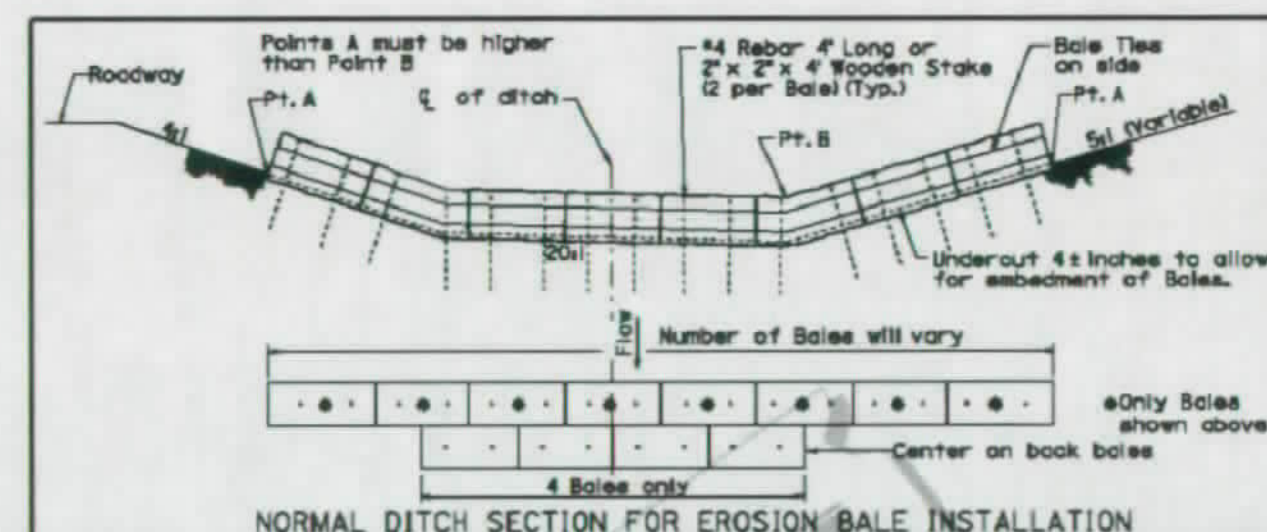
S
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EROSION CONTROL BLANKET

PLATE NUMBER

734.01

Sheet 1 of 1



GENERAL NOTES:

The erosion bale sediment barrier must be entrenched and backfilled. A trench should be excavated the width of a bale and the length of the proposed sediment barrier to a minimum depth of 4 inches. After the bales are staked with rebar or wood stakes, the excavated soil must be backfilled against the sediment barrier. The sediment barrier must be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale.

March 28, 2001

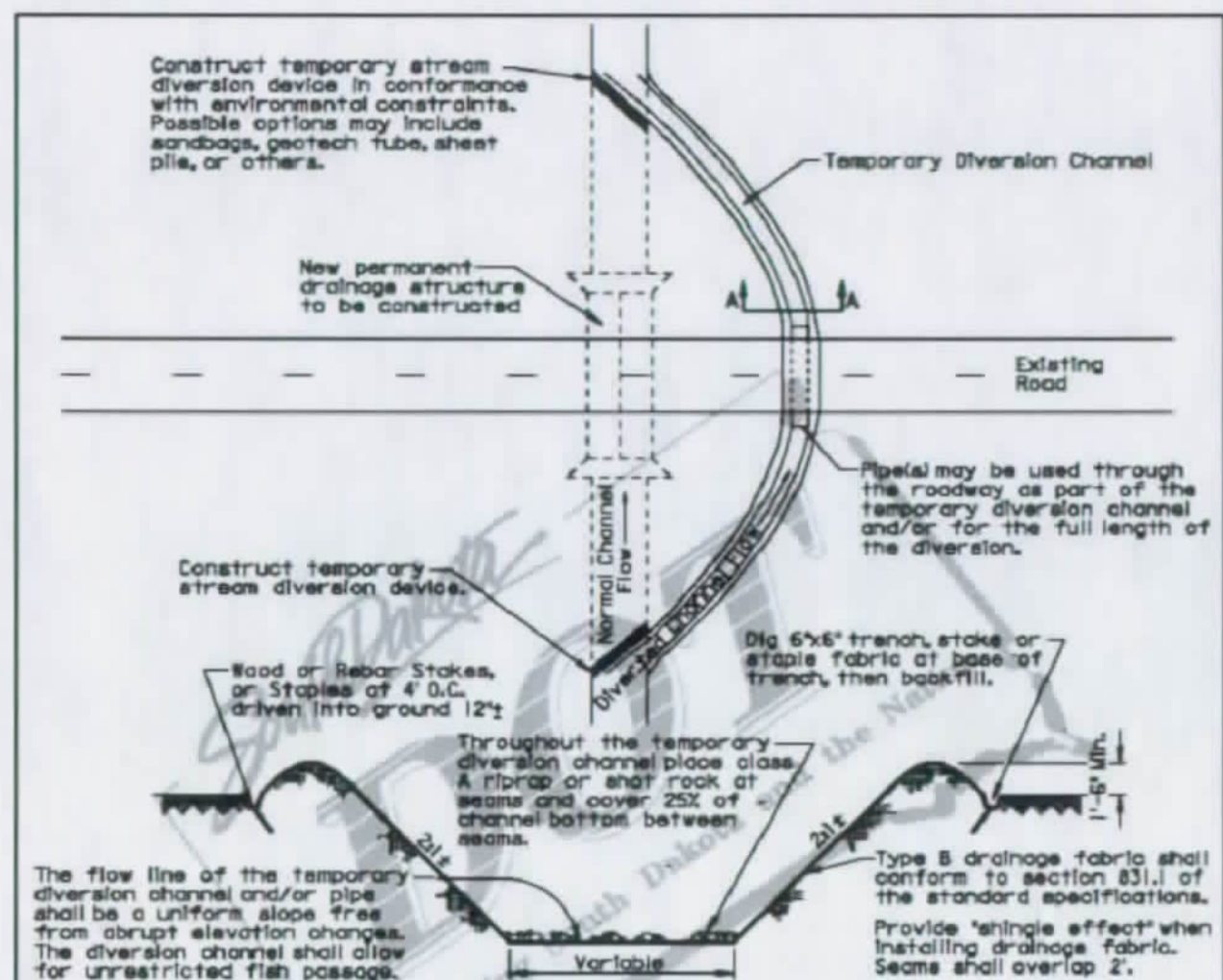
S
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EROSION BALES

PLATE NUMBER

734.02

Sheet 1 of 1



GENERAL NOTES:

A temporary diversion channel and/or pipe(s) shall be used to divert stream or drainage away from a construction area to provide a dry work area for construction. The diversion of streams and waterways is intended to protect the streams and waterways from various construction contaminants and sediment. Disturbing the existing stream channel and riparian zone should be minimized. Equipment shall not cross through the stream outside of the work area.

Sizing of the temporary diversion channel and/or pipe(s) shall be the Contractor's responsibility.

The method and materials used to construct the stream diversion device shall be the Contractor's responsibility, however, earthen berms are not acceptable since their removal causes siltation problems.

The Contractor shall restore the original channel bottom to its original condition prior to returning any flows. Upon completion of the new permanent drainage structure, the temporary stream diversion block or device shall be removed in a manner that will not cause violation of water quality standards. The temporary diversion channel shall then be backfilled and any pipe(s) (if used) shall be removed. The entire work area shall be cleaned and restored to smooth/even contours.

All costs for labor, equipment, materials and incidentals as indicated on this sheet to complete a satisfactory Temporary Diversion Channel and/or Pipe(s) shall be incidental to the contract unit price per each for "Temporary Diversion Channel and/or Pipe(s)". "Temporary Diversion Channel and/or Pipe(s)" will be paid for once per structure site regardless of the number of times water is diverted at the individual site.

December 23, 2004

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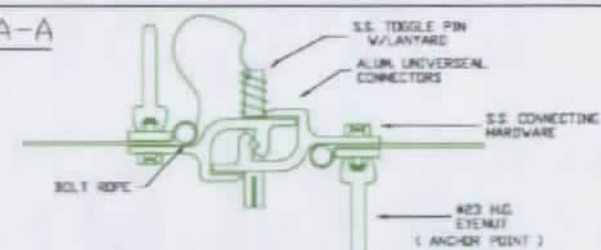
TEMPORARY DIVERSION CHANNEL

PLATE NUMBER

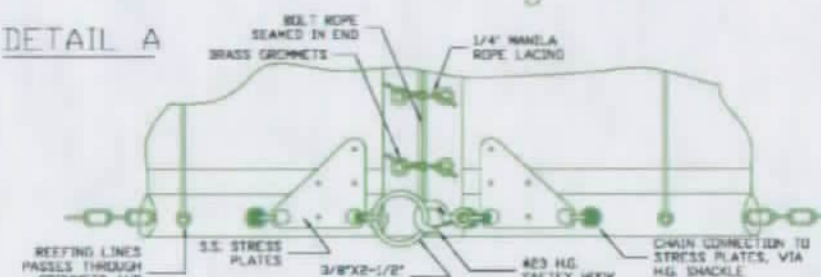
734.30

Sheet 1 of 1

SECTION A-A



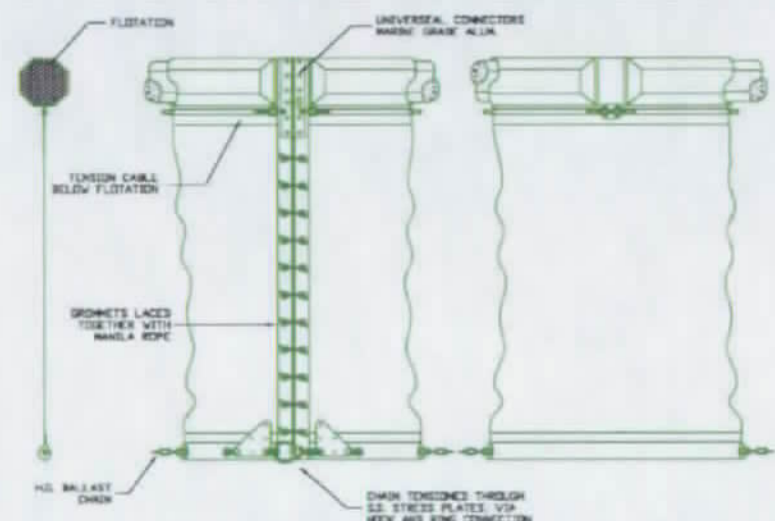
DETAIL A



ELASTEC / AMERICAN MARINE

FWS DETAILS

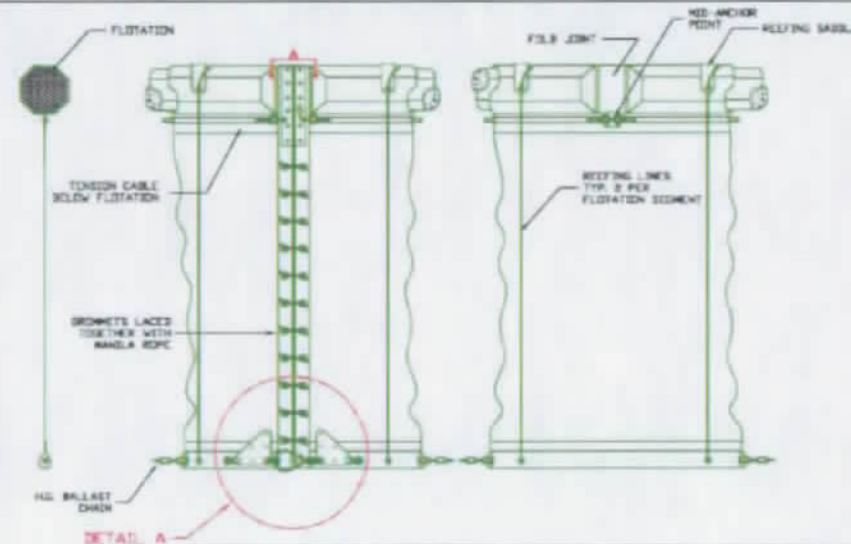
NO.	REVISION	DATE	NTS	3314C	04/14/03	G.CASSELL	OWNER
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ELASTEC / AMERICAN MARINE

FASTWATER SCREEN

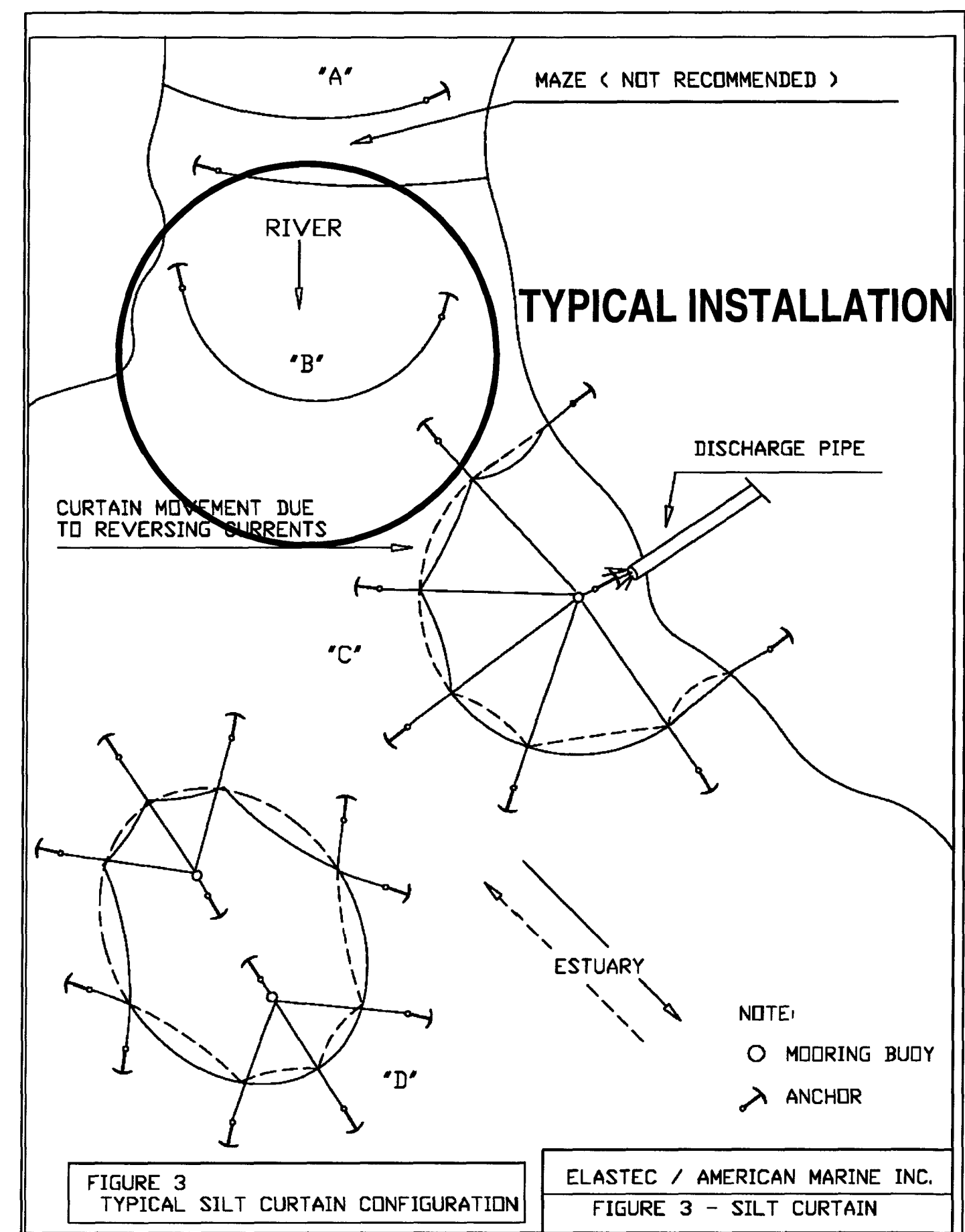
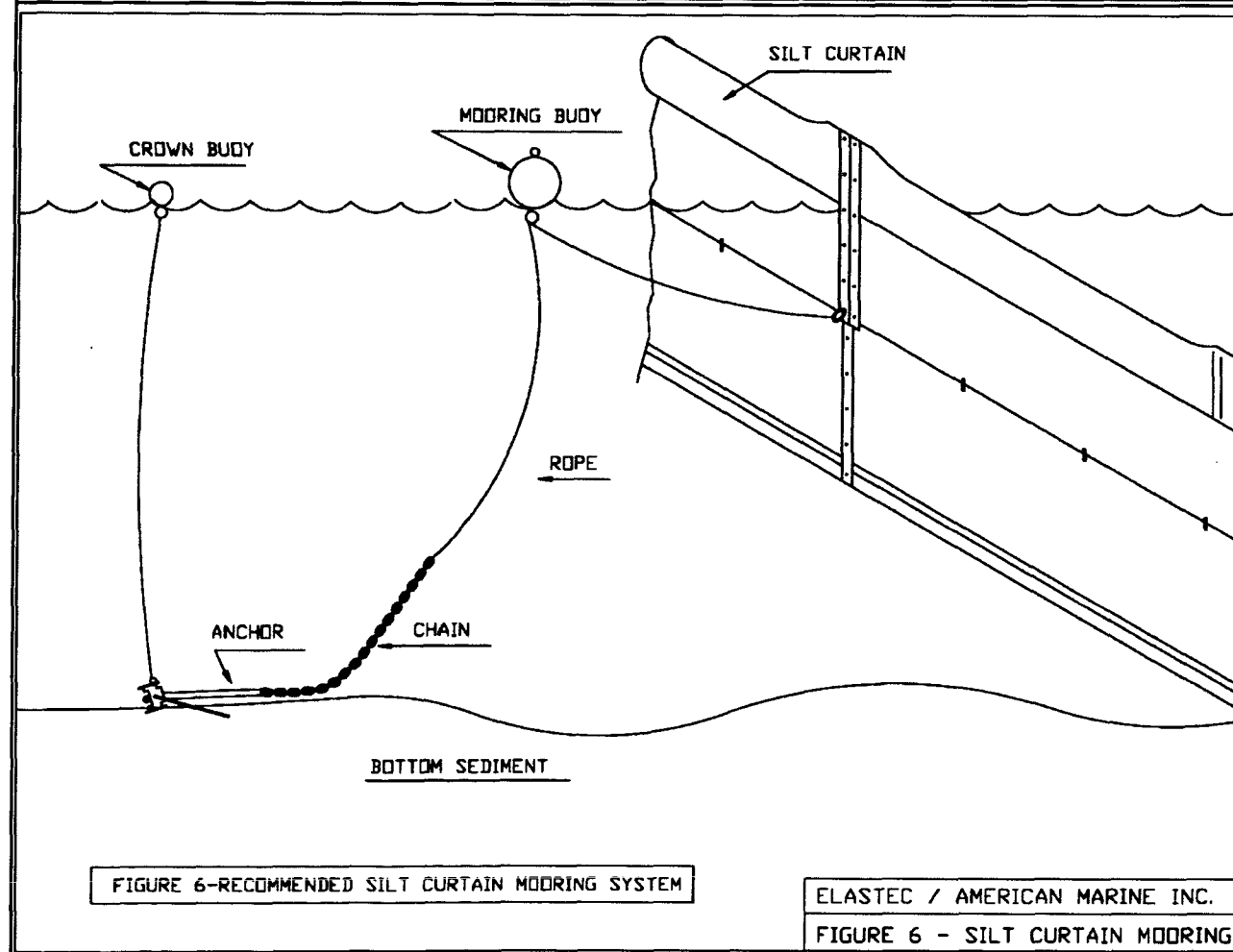
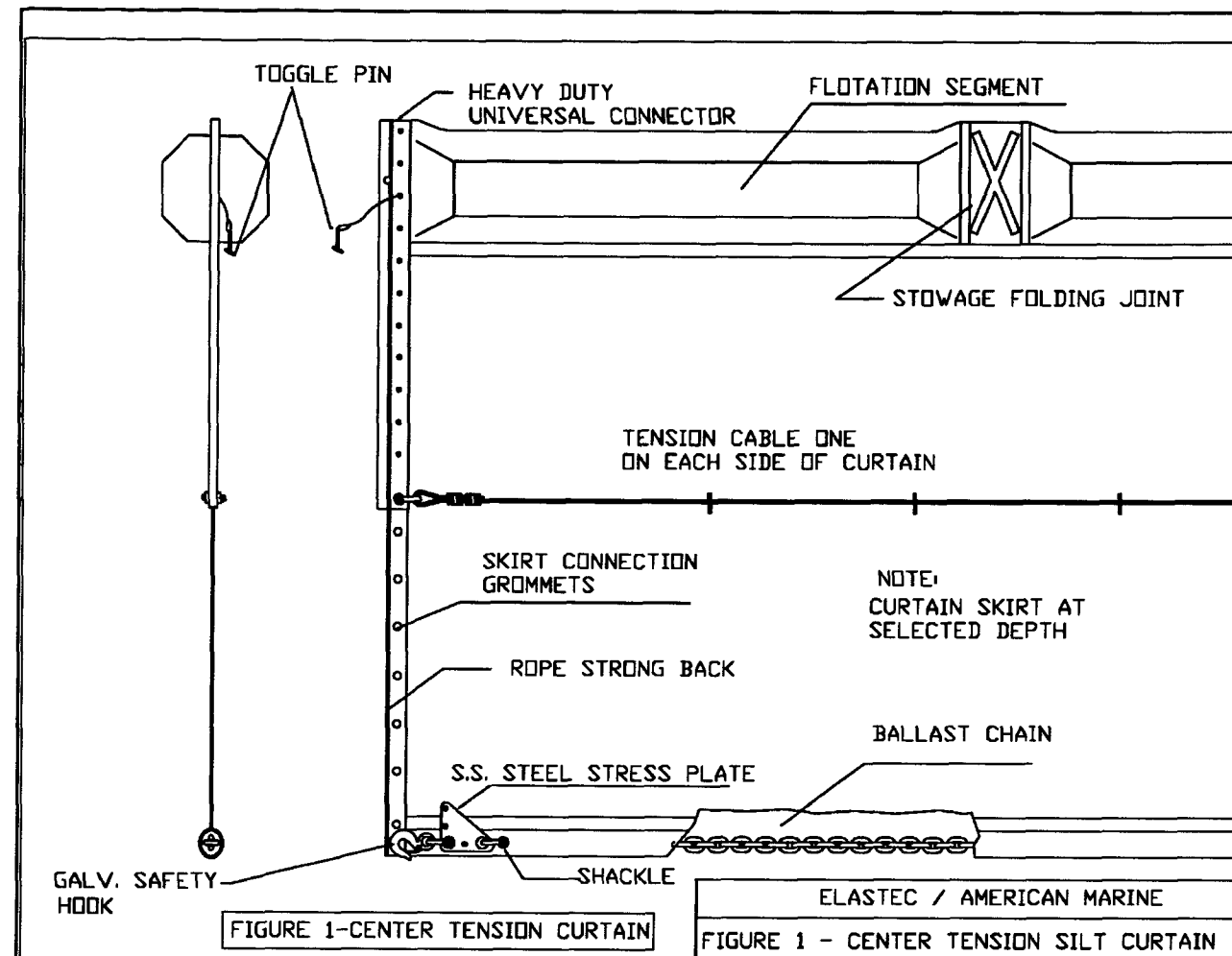
NO.	REVISION	DATE	NTS	3314A	04/14/03	G.CASSELL	OWNER
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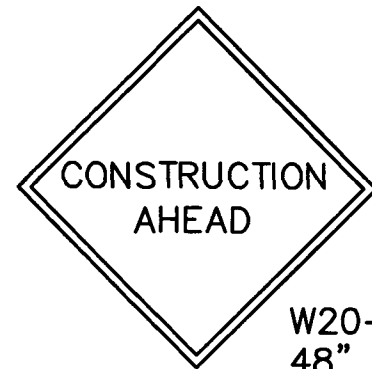


ELASTEC / AMERICAN MARINE

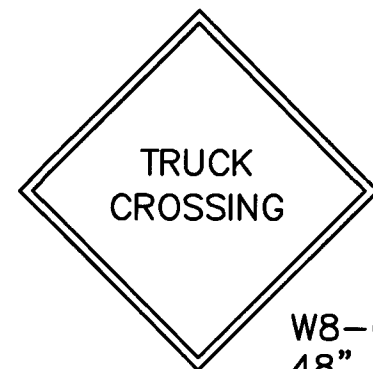
FASTWATER SCREEN REEFING SYSTEM INCLUDED

NO.	REVISION	DATE	NTS	3313	04/14/03	G.CASSELL	OWNER
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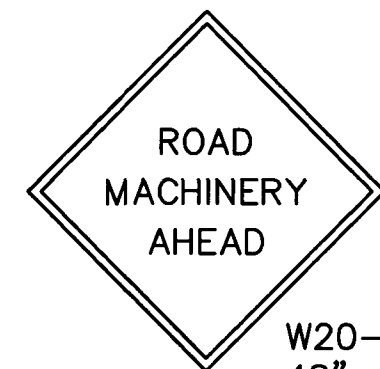
W20-1
48" x 48"



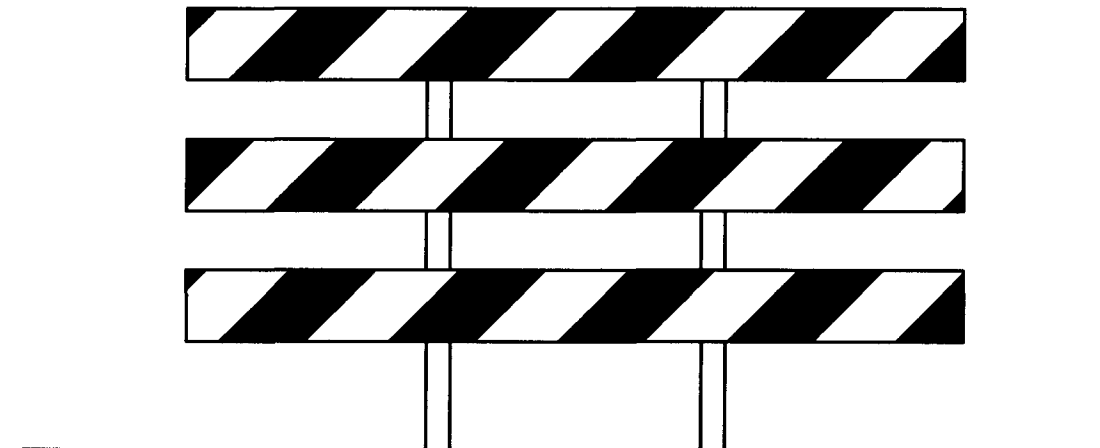
W8-6
48" x 48"



LW21-SP
48" x 48"



W20-4A
48" x 48"



TYPE III BARRICADE

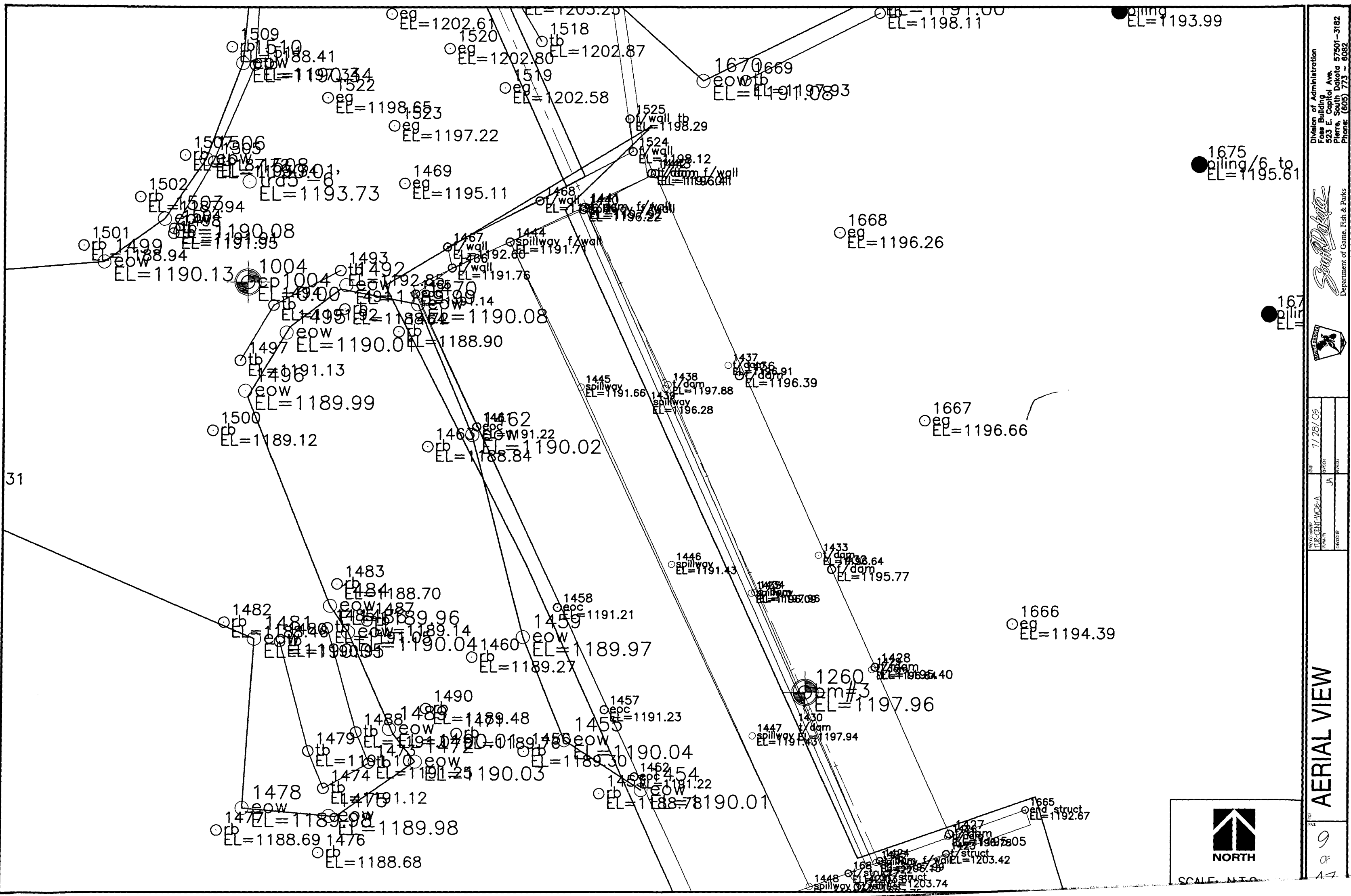
NOTES :

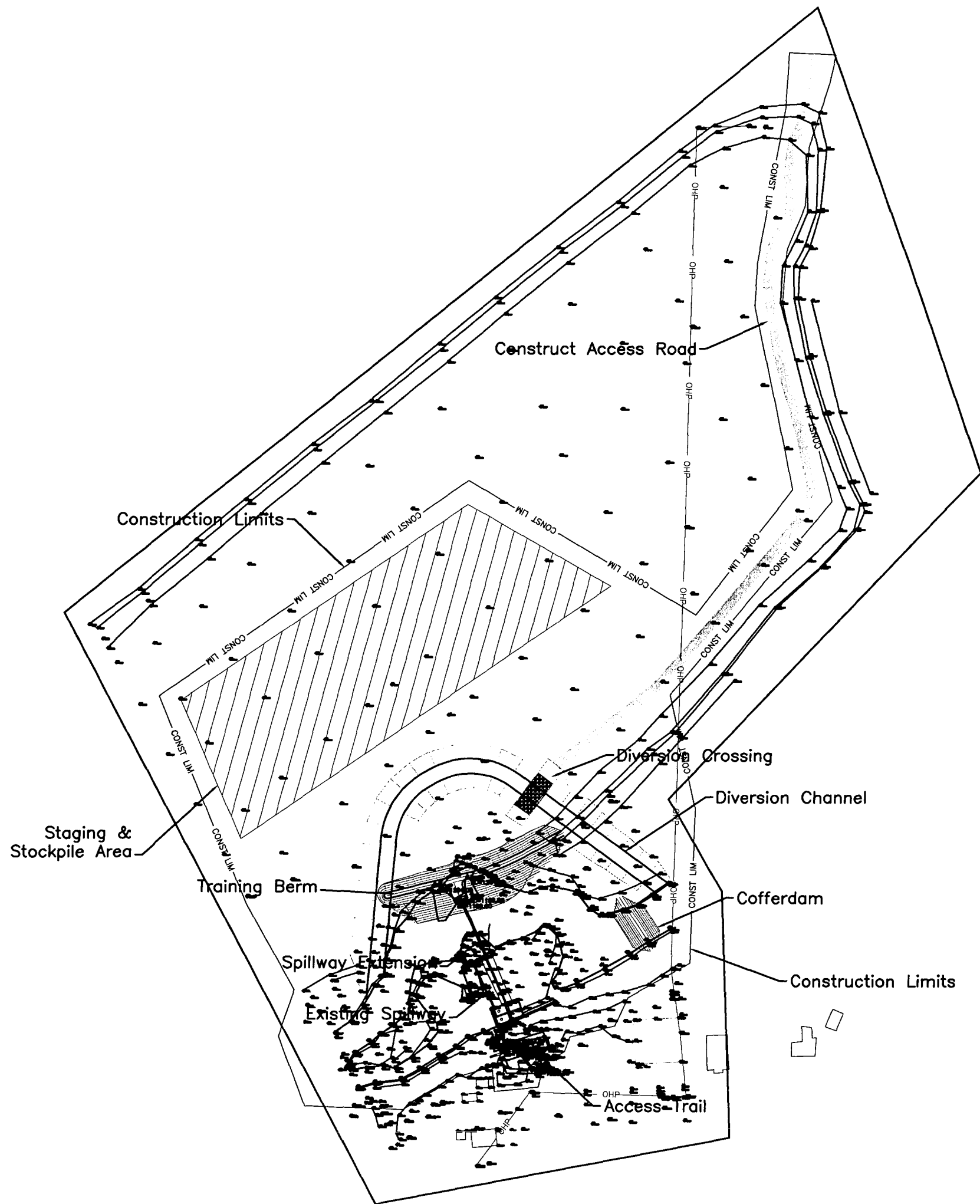
USE APPROPRIATE TRAFFIC CONTROL AS SHOWN ABOVE AS DIRECTED BY PROJECT ENGINEER.

CRASH-WORTHY SIGN SUPPORTS SHALL BE USED FOR ALL CONSTRUCTION RELATED SIGNAGE.

THE LUMP SUM BID ITEM TRAFFIC CONTROL WILL BE FULL COMPENSATION FOR ALL EQUIPMENT, WORK, MATERIALS, SIGNAGE AND INCIDENTALS SPECIFIED AND SHALL BE PAID ONLY ONCE ON EACH CONSTRUCTION SITE.

THE CONTRACTOR HAS THE RESPONSIBILITY TO ASSURE THAT ALL TRAFFIC SIGNS ARE KEPT IN PROPER POSITION, CLEAN AND LEGIBLE AT ALL TIMES. DAMAGED SIGNS SHOULD BE REPLACED WITHOUT UNDUE DELAY.







NORTH

SCALE: 1" = 150'



DEPARTMENT OF GAME, FISH AND PARKS

Foss Building
523 East Capitol
Pierre, South Dakota 57501-3182

(605)773-6082

August 3, 2005

Mr. Garland Erbele, Chief Engineer
SD Dept of Environmental & Natural Resources
523 East Capitol Avenue
Pierre, SD 57501

Re: Centerville Dam, Turner County – Water Permit Application

Dear Mr. Erbele:

Forwarded with this application are plans to restore an old existing low-head structure across the Vermillion River at Centerville, South Dakota. The structure was originally constructed in 1886 by the Centerville Milling Company. In 1934, a CWA project reconstructed the structure, but it has since been breached several times over the years.

The reconstruction will add a permanent protected secondary spillway to allow controlled overflow of spring runoff events. Also, the control gates formerly used to control flow at the mill will be removed and only uncontrolled natural flows will over-top the structure.

Based on community request, we are requesting a new water right and restoration of the low-head structure for recreation purposes.

Sincerely,

Douglas R. Hansen, Director
Division of Wildlife

DRJ*cn

Enclosure

RECEIVED

AUG - 3 2005

**WATER RIGHTS
PROGRAM**

Water Permit Application No. 6639-3
SD Dept. of Game Fish & Parks

Cat. 3 Low Hazard Dam

* Centerville Dam is an existing Low Head Dam (In-Stream Weir) located on the Vermillion River at Centerville, SD

Existing Spillway Elev. (Top of Dam) - 1198

Proposed 2nd Spillway Elev. (New Top of Dam) - 1199

Bottom of Dam (Dis Toe Elev.) - 1191.2

} H = 7.8 ft

Existing Ht. = 6.8 ft

Normal Storage Capacity (Elev. 1198) - 38.8 Ac-Ft

Max Storage Capacity (Elev. 1199) - 52 Ac-Ft

With a dam height of 7.8 ft and Max. Storage Capacity of 52 Ac-Ft, Centerville Dam is large enough to be classified as a Small size - Low Hazard Dam. Since it is a low-head dam (In-stream Weir), it is treated a little differently than a normal storage dam and existing spillway requirements do not apply. Flows greater than a 10-year event (4900 cfs) will probably drowned out the dam structure.

Section 74:02:08

1. Topo Map - OK
2. Dam Axis Profile - OK
3. Dam Max X-Sec. - OK
4. Area Capacity - Verbal - OK
5. Outlet Details - N/A - OK
6. Spillway Rating - OK
7. Spillway Details - OK
8. Specs. - OK
9. EPP - Cat. 3 N/A - OK



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

August 15, 2005

Nancy Kludt, Finance Officer
City of Centerville
PO Box C
Centerville SD 57014-0902

Dear Ms. Kludt:

Enclosed is a copy of the report, recommendation and public notice for Water Permit Application No. 6639-3 filed by the SD Department of Game, Fish and Parks for the reconstruction of Centerville Dam. The public notice is scheduled to be published August 25th and September 1st in the Centerville Journal.

This information is being sent to you because of the city's interest and past involvement with Centerville Dam. Please forward this information to appropriate city officials.

Additionally, the city holds Vested Water Right No. 4972-3 for this dam. However, since the dam has been in its current breached condition for about 10 years this water right is subject to abandonment and forfeiture for nonuse. The city will receive notice of cancellation of this water right by separate notice.

If you have any questions regarding Application No. 6639-3 or the cancellation of Right No. 4972-3, please give me a call.

Sincerely,

Eric Gronlund
Water Rights Program
(605) 773-3352

enclosures



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

August 15, 2005

Doug Hansen, Director
Division of Wildlife
SD Dept. of Game, Fish & Parks
Joe Foss Bldg., 523 E. Capitol
Pierre, SD 57501

Dear Mr. Hansen:

We have reviewed the plans and specifications for the Centerville Dam Reconstruction Project, located in the SW ¼ NE ¼ of Sec. 22-T96N-R52W, in Turner County. The plans and specifications for the repair of the dam are approved. Approval of the plans and specifications does not authorize construction of the dam. The construction of the dam may not begin until Water Permit No. 6639-3 is approved.

Our review was to determine compliance with the requirements of the Water Management Board Safety of Dams Rules, Chapter 74:02:08. Approval of these plans and specifications does not release the Department of Game, Fish & Parks, as owner of the dam, from the responsibility for operating and maintaining the dam in good repair to ensure the safety of the dam.

The Centerville Dam will be classified as a small size Category 3, Low Hazard dam with a dam height of 6.8 ft. and a normal storage capacity of 38.8 acre-feet and a maximum storage capacity of 52 acre-feet.

If you have any questions, please feel free to contact us.

Sincerely,

Timothy G. Schaal, P.E.
Natural Resources Engineer Specialist
for Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

c: Jeff Peters, GF&P

RECEIVED

SEP 20 2005



Consulting Engineers and Land Surveyors

WATER RIGHTS
PROGRAM

Memo

TO: Jeff Peters, PE, Division of Administration, SD Game Fish & Parks
FROM: Len Neugebauer, PE/LS *Len Neugebauer*
DATE: September 15, 2005
RE: Hydraulic Review and Comments on Preliminary Plans (DGR#648181, Centerville Dam)

As I indicated in our meeting on 9/13/05, I have re-visited the hydraulic analysis work from my 1999 study relative to your design. I have also reviewed the plans and have a few comments. It is important to note that the 1999 study was based on an assumed elevation of the spillway crest of 1200 feet. The 2005 survey was based on GPS survey of the spillway crest elevation of 1197.94 feet (NAVD88 mean sea level datum). All of the 1999 survey data was adjusted to this new datum before combining with the 2005 survey data and submitting this data to you.

I am attaching the following hydraulic profiles and computer output for the 2, 5 and 10-year peak flood discharges, which profiles have all been converted to the NAVD88 datum:

- A. Existing 70' spillway @1198 and existing gate open (prior to dam breach)
- B. Existing 70' spillway @1198 with 90' spillway extension @1198 and existing gate open (DGR Option 2 in our 1999 report)
- ✓ C. Existing 70' spillway @1198 with 80' spillway extension @1199 and existing gate plugged (This is as shown on your preliminary plans for the Centerville Dam reconstruction)
- D. Existing 70' spillway @1198 with 80' spillway extension @1198 and existing gate plugged (This is your preliminary plan modified for the spillway extension @1198)

The flood profiles show the peak water surface elevations (a plot of the W.S. Elev. data shown in the tables which follow the profile plots) and are self-explanatory. Although the water surface elevations computed for your proposed plan are slightly higher than our elevations for DGR Option 2, I believe these slightly higher elevations are acceptable for this dam reconstruction.

I have the following comments and recommendations with regard to your preliminary plans:

1. Sheet 24 of 47: I would recommend that the top of wall and top of berm at the north end of the spillway extension be at elevation 1207 (3' higher than you show it). I would recommend a clay cut-off core trench and extending your anti-seep wall as shown.

September 15, 2005

MEMO TO: Jeff Peters, PE, Division of Administration, SD Game Fish & Parks

Page 2

2. Exhibit 6: As shown on the attached Exhibit 6, I would recommend that the top of berm/levee be 1207 at the north end of the dam and that the top of berm/levee profile be at the elevations shown on this exhibit and tapered to match the existing top of levee elevation of 1205. The purpose of this top of berm/levee profile is for any potential overtopping of the levee to occur upstream of the dam for major events greater than the 10-year. If a major event did overtop the levee, a possible breach from such overtopping would be of less consequence upstream of the dam than right at the dam and would be much less costly to repair. In short, we don't want to overtop too close to the north end of the spillway structure.
3. Sheet 28 of 47: As I mentioned at our 9/13/05 meeting, I would recommend that the bottom of your concrete cutoff wall penetrate into underlying impervious clay stratum or should extend into a constructed clay core trench which penetrates into the underlying impervious clay stratum, to prevent an underseepage failure.
4. Sheet 32 of 47: As I mentioned at our 9/13/05 meeting, I would recommend that a fence or other suitable barrier be erected to protect the pedestrians from falling off and/or attempting to climb the retaining wall in the U-shaped portion of the pedestrian walkway.

I trust this information, comments, and recommendations will be useful to you in finalizing you design for this dam reconstruction. If you have any question, please let me know. We look forward to working with you on this project.

* * * * * END OF MEMO * * * * *

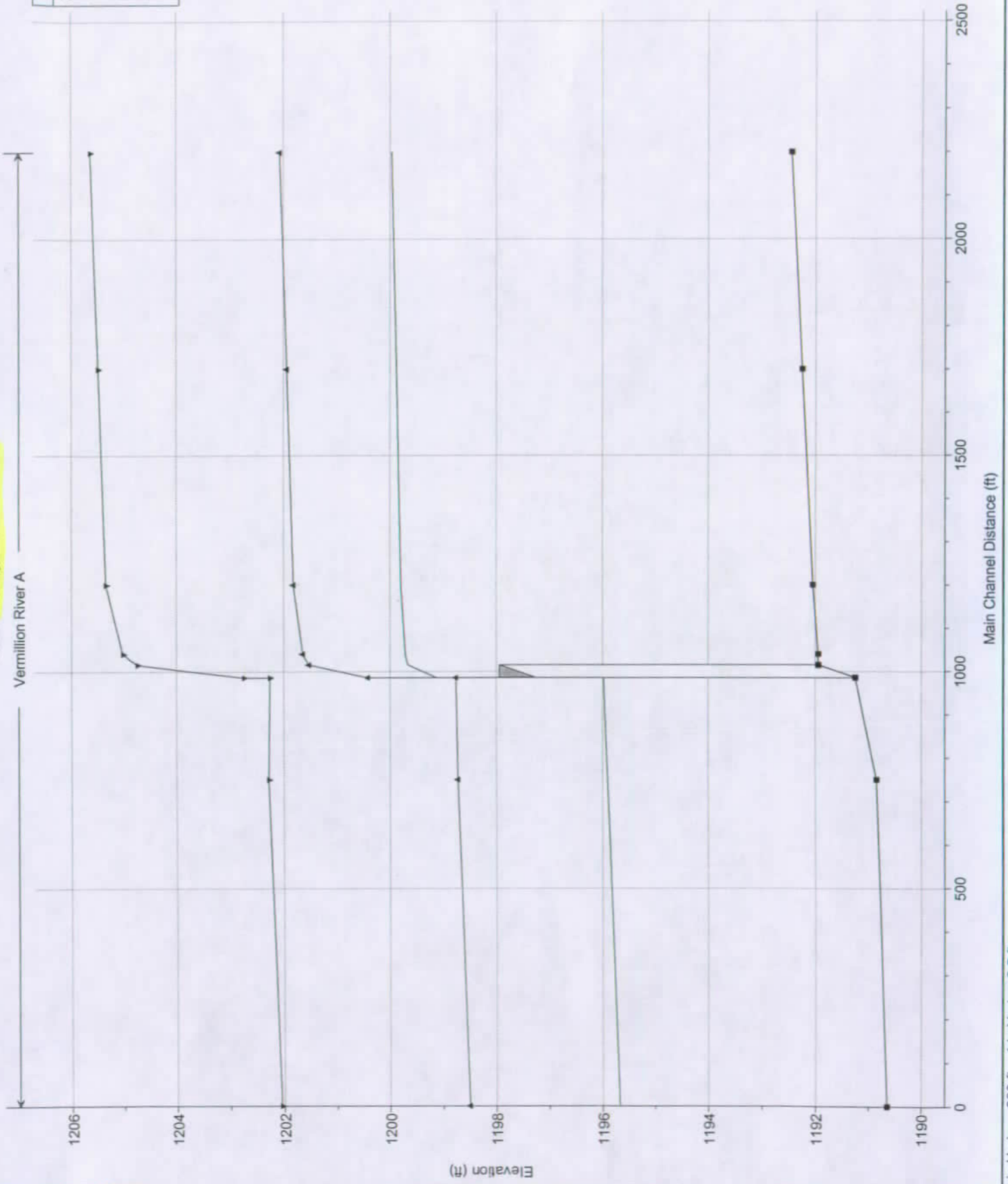
cc: Tim Schaal, DENR
City of Centerville
Myron Adam, DGR

Exist Centerville dam before breach Plan: Plan 01 9/15/2005

Geom: Existing dam before breach

Vermillion River A

Legend	
WS 10-YR	▲
WS 5-YR	▼
WS 2-YR	■
Ground	●



A

1 in Horiz. = 300 ft 1 in Vert. = 2.5 ft

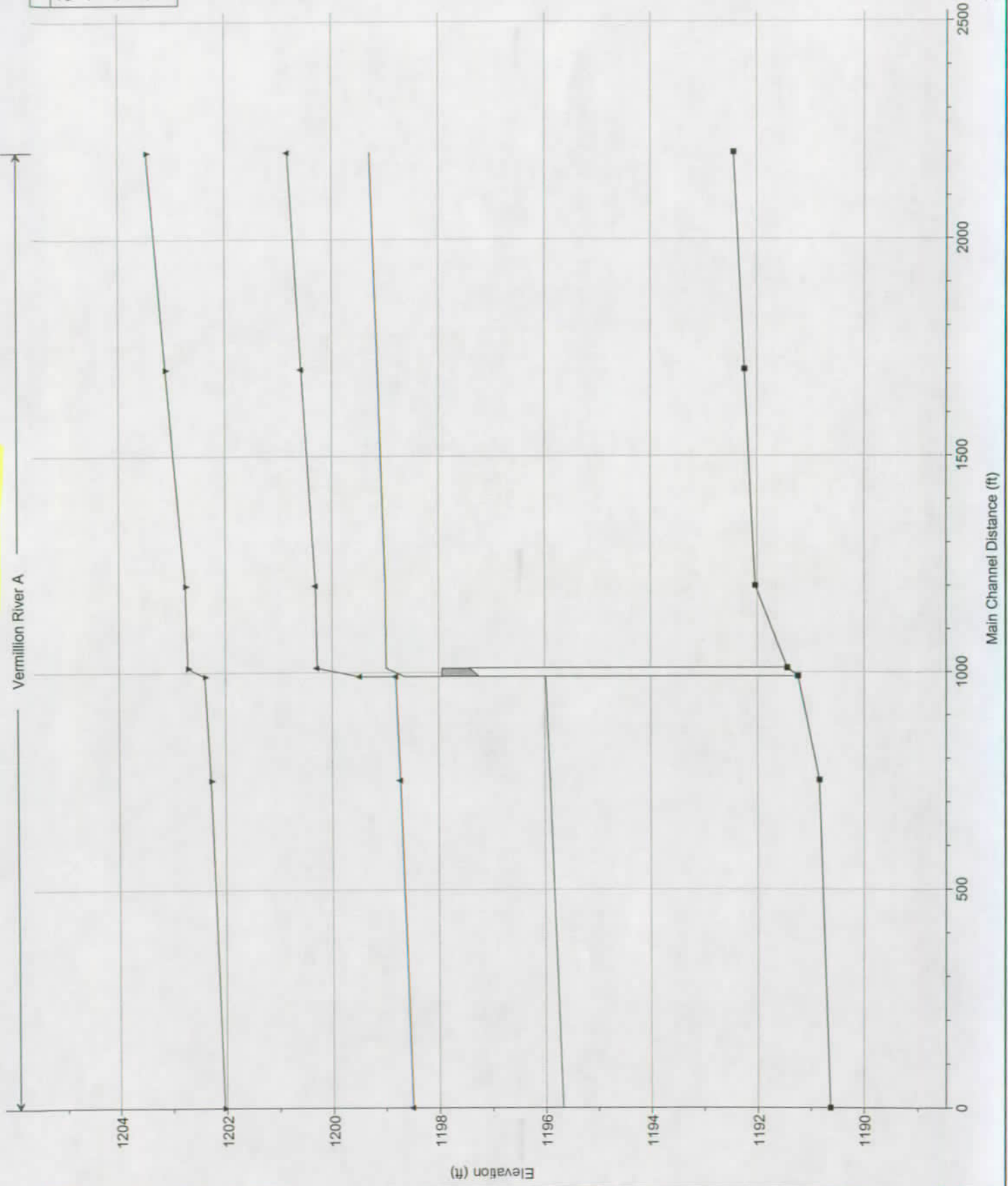
Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
A	0	1050.00	1190.64	1195.68	1191.96	1195.72	0.000300	1.56	671.43	146.57	0.13
A	0	2250.00	1190.64	1198.49	1192.82	1198.56	0.000300	2.04	1104.75	161.42	0.14
A	0	4900.00	1190.64	1202.04	1194.26	1202.14	0.000300	2.57	2750.81	720.81	0.14
A	750	1050.00	1190.84	1195.90	1192.16	1195.94	0.000295	1.56	674.99	146.70	0.13
A	750	2250.00	1190.84	1198.72	1193.03	1198.78	0.000297	2.03	1108.77	161.55	0.14
A	750	4900.00	1190.84	1202.28	1194.46	1202.40	0.000370	2.85	1748.37	720.97	0.16
A	985	1050.00	1191.24	1195.98		1196.13	0.001450	3.10	339.21	81.83	0.27
A	985	2250.00	1191.24	1198.75		1199.00	0.001295	3.96	568.87	83.60	0.27
A	985	4900.00	1191.24	1202.25		1202.75	0.001681	5.66	865.11	85.79	0.31
A	1000	Culvert									
A	1015	1050.00	1191.94	1199.66	1195.53	1199.75	0.000574	2.31	454.18	83.96	0.18
A	1015	2250.00	1191.94	1201.52	1197.00	1201.73	0.001035	3.68	611.51	85.16	0.24
A	1015	4900.00	1191.94	1204.74	1198.94	1205.21	0.001550	5.52	888.40	87.09	0.30
A	1040	1050.00	1191.94	1199.71		1199.76	0.000380	1.90	552.09	102.95	0.14
A	1040	2250.00	1191.94	1201.64		1201.78	0.000666	2.98	756.21	108.65	0.20
A	1040	4900.00	1191.94	1205.01		1205.29	0.000933	4.26	1149.83	122.07	0.24
A	1200	1050.00	1192.04	1199.79		1199.81	0.000160	1.18	887.27	183.39	0.09
A	1200	2250.00	1192.04	1201.81		1201.86	0.000240	1.77	1268.34	193.50	0.12
A	1200	4900.00	1192.04	1205.33		1205.43	0.000290	2.48	1979.75	209.35	0.14
A	1700	1050.00	1192.24	1199.87		1199.90	0.000172	1.21	865.74	182.80	0.10
A	1700	2250.00	1192.24	1201.93		1201.98	0.000249	1.80	1253.24	193.11	0.12
A	1700	4900.00	1192.24	1205.48		1205.57	0.000295	2.49	1968.38	209.23	0.14
A	2200	1050.00	1192.44	1199.96		1199.99	0.000186	1.24	845.46	182.24	0.10
A	2200	2250.00	1192.44	1202.06		1202.11	0.000258	1.82	1239.03	192.74	0.13
A	2200	4900.00	1192.44	1205.63		1205.72	0.000300	2.50	1957.56	209.13	0.14

Extend Centerville dam Plan: Plan 01 9/15/2005

Geom: Extend dam + keep gate

Vermillion River A

Legend	
WS 10-YR	▲
WS 5-YR	▲
WS 2-YR	▲
Ground	■



B

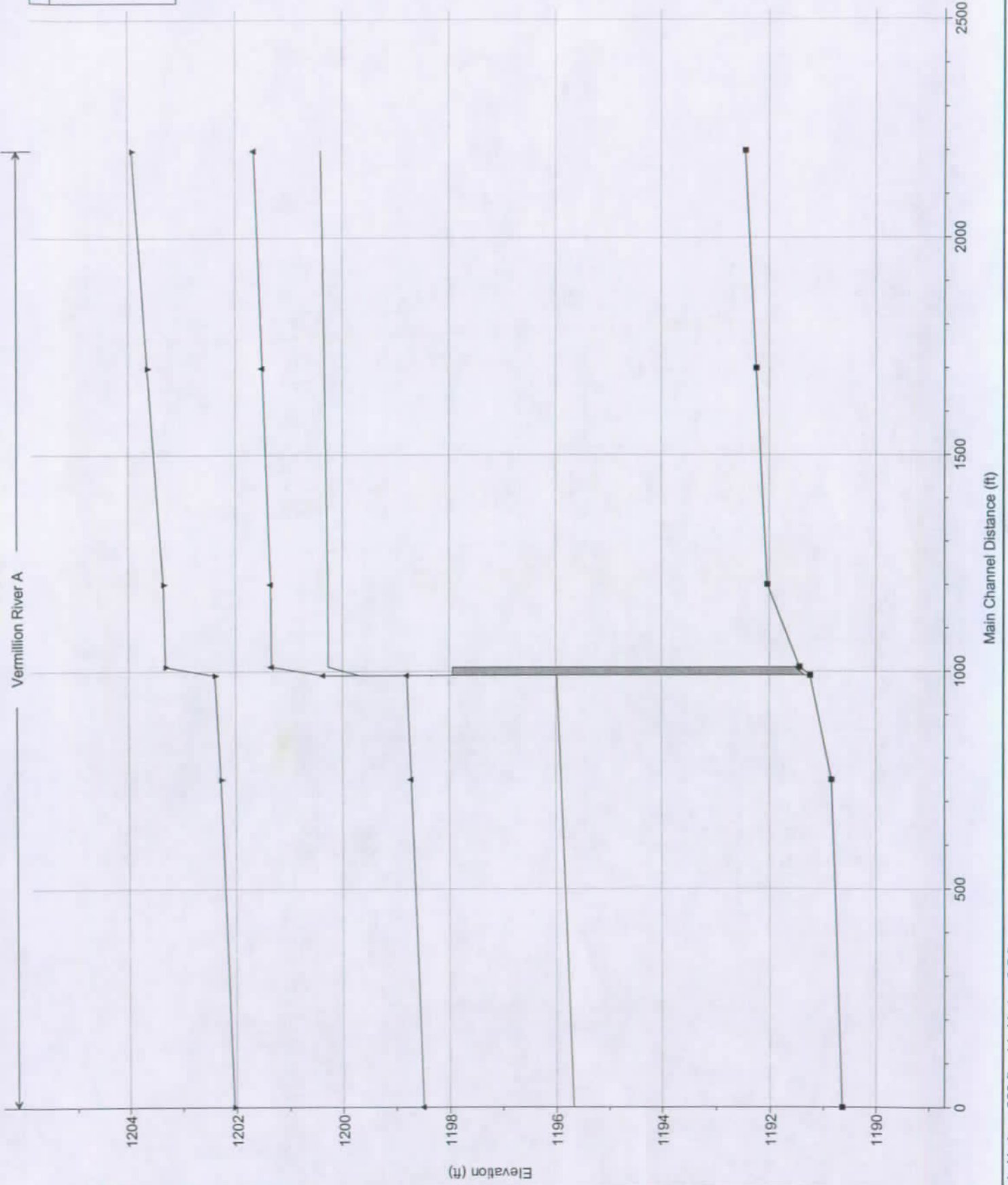
Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
A	0	1050.00	1190.64	1195.68	1191.96	1195.72	0.000300	1.56	671.43	146.57	0.13
A	0	2250.00	1190.64	1198.49	1192.82	1198.56	0.000300	2.04	1104.75	161.42	0.14
A	0	4900.00	1190.64	1202.04	1194.26	1202.14	0.000300	2.57	2750.81	720.81	0.14
A	750	1050.00	1190.84	1195.90	1192.16	1195.94	0.000295	1.56	674.99	146.70	0.13
A	750	2250.00	1190.84	1198.72	1193.03	1198.78	0.000297	2.03	1108.75	161.55	0.14
A	750	4900.00	1190.84	1202.28	1194.46	1202.40	0.000366	2.84	1834.47	720.97	0.16
A	990	1050.00	1191.24	1195.98		1196.01	0.000308	1.43	734.93	182.50	0.13
A	990	2250.00	1191.24	1198.80		1198.85	0.000250	1.80	1251.20	183.99	0.12
A	990	4900.00	1191.24	1202.39		1202.49	0.000302	2.56	1914.38	185.89	0.14
A	1000	Culvert									
A	1010	1050.00	1191.44	1198.98	1193.14	1198.99	0.000055	0.84	1248.01	183.98	0.06
A	1010	2250.00	1191.44	1200.28	1193.81	1200.32	0.000143	1.51	1487.49	184.67	0.09
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A	1200	2250.00	1192.04	1200.31		1200.39	0.000532	2.29	982.38	185.96	0.18
A	1200	4900.00	1192.04	1202.75		1202.93	0.000751	3.37	1451.92	198.18	0.22
A	1700	1050.00	1192.24	1199.14		1199.17	0.000293	1.43	732.19	179.11	0.12
A	1700	2250.00	1192.24	1200.57		1200.65	0.000513	2.26	994.24	186.28	0.17
A	1700	4900.00	1192.24	1203.12		1203.29	0.000699	3.30	1486.22	199.04	0.21
A	2200	1050.00	1192.44	1199.28		1199.32	0.000305	1.45	723.05	178.86	0.13
A	2200	2250.00	1192.44	1200.82		1200.90	0.000497	2.24	1004.31	186.55	0.17
A	2200	4900.00	1192.44	1203.47		1203.63	0.000658	3.23	1515.64	199.78	0.21

Proposed Centerville Dam Improvements Plan: Plan 01 9/15/2005

Geom: Proposed Dam Improvements

Vermillion River A

Legend	
WS 10-YR	▲
WS 5-YR	●
WS 2-YR	■
Ground	■



1 in Horiz. = 300 ft 1 in Vert. = 2.5 ft

C

Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
A	0	1050.00	1190.64	1195.68	1191.96	1195.72	0.000300	1.56	671.43	146.57	0.13
A	0	2250.00	1190.64	1198.49	1192.82	1198.56	0.000300	2.04	1104.75	161.42	0.14
A	0	4900.00	1190.64	1202.04	1194.26	1202.14	0.000300	2.57	2750.81	720.81	0.14
A	750	1050.00	1190.84	1195.90	1192.16	1195.94	0.000295	1.56	674.99	146.70	0.13
A	750	2250.00	1190.84	1198.72	1193.03	1198.78	0.000297	2.03	1108.77	161.55	0.14
A	750	4900.00	1190.84	1202.28	1194.46	1202.40	0.000366	2.84	1834.43	720.96	0.16
A	990	1050.00	1191.24	1195.98		1196.01	0.000308	1.43	734.93	182.50	0.13
A	990	2250.00	1191.24	1198.80		1198.85	0.000250	1.80	1251.22	183.99	0.12
A	990	4900.00	1191.24	1202.39		1202.49	0.000302	2.56	1914.36	185.89	0.14
A	1000	Culvert									
A	1010	1050.00	1191.44	1200.27	1193.14	1200.28	0.000031	0.71	1485.26	184.66	0.04
A	1010	2250.00	1191.44	1201.33	1193.81	1201.36	0.000096	1.34	1682.15	185.23	0.08
A	1010	4900.00	1191.44	1203.31	1194.95	1203.39	0.000244	2.39	2048.32	186.27	0.13
A	1200	1050.00	1192.04	1200.27		1200.29	0.000118	1.08	976.62	185.81	0.08
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A	1700	1050.00	1192.24	1200.34		1200.35	0.000128	1.10	950.85	185.11	0.09
A	1700	2250.00	1192.24	1201.50		1201.56	0.000308	1.92	1170.05	190.94	0.14
A	1700	4900.00	1192.24	1203.64		1203.79	0.000569	3.08	1589.29	201.62	0.19
A	2200	1050.00	1192.44	1200.40		1200.42	0.000139	1.13	926.17	184.44	0.09
A	2200	2250.00	1192.44	1201.66		1201.72	0.000316	1.94	1161.56	190.72	0.14
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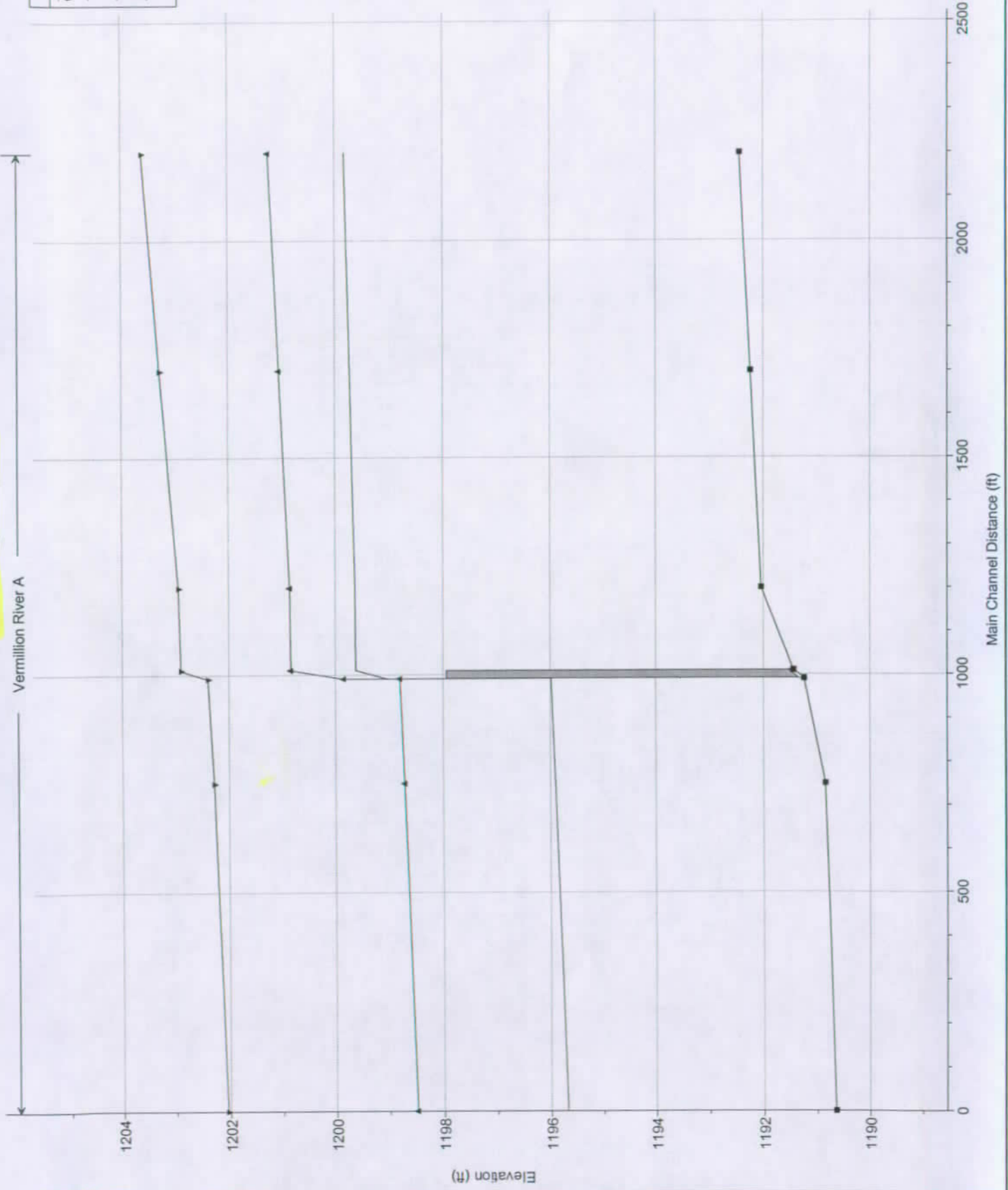
©

Centerville Dam Improvements (all 1198) Plan: Plan 01 9/15/2005

Geom: Extend dam @ 1198 + plug gate

Vermillion River A

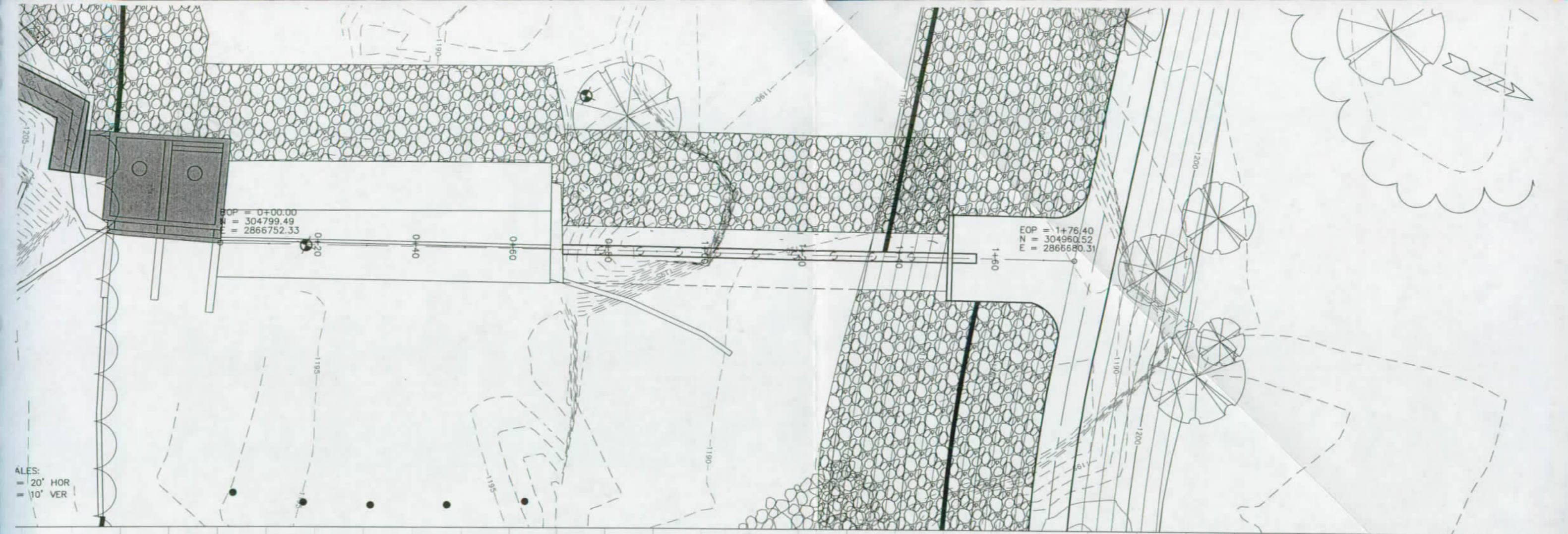
Legend	
WS 10-YR	▲
WS 5-YR	▲
WS 2-YR	■
Ground	■



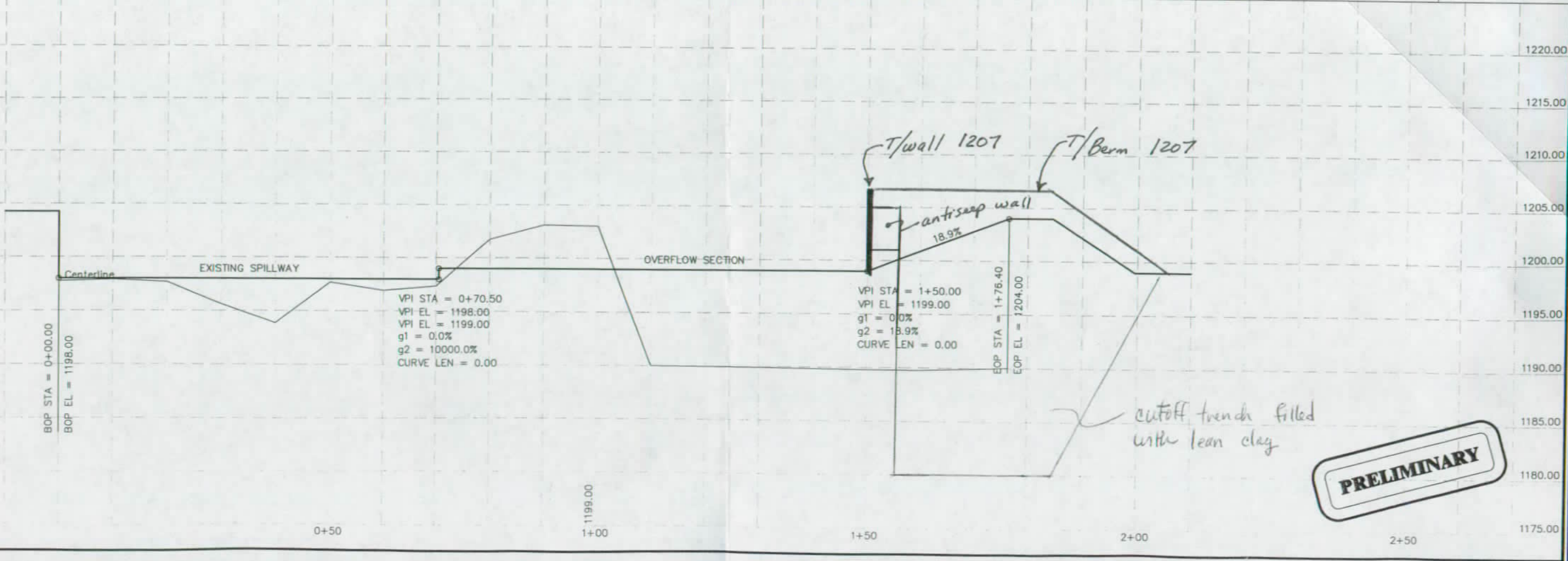
1 in Horiz. = 300 ft 1 in Vert. = 2.5 ft

D

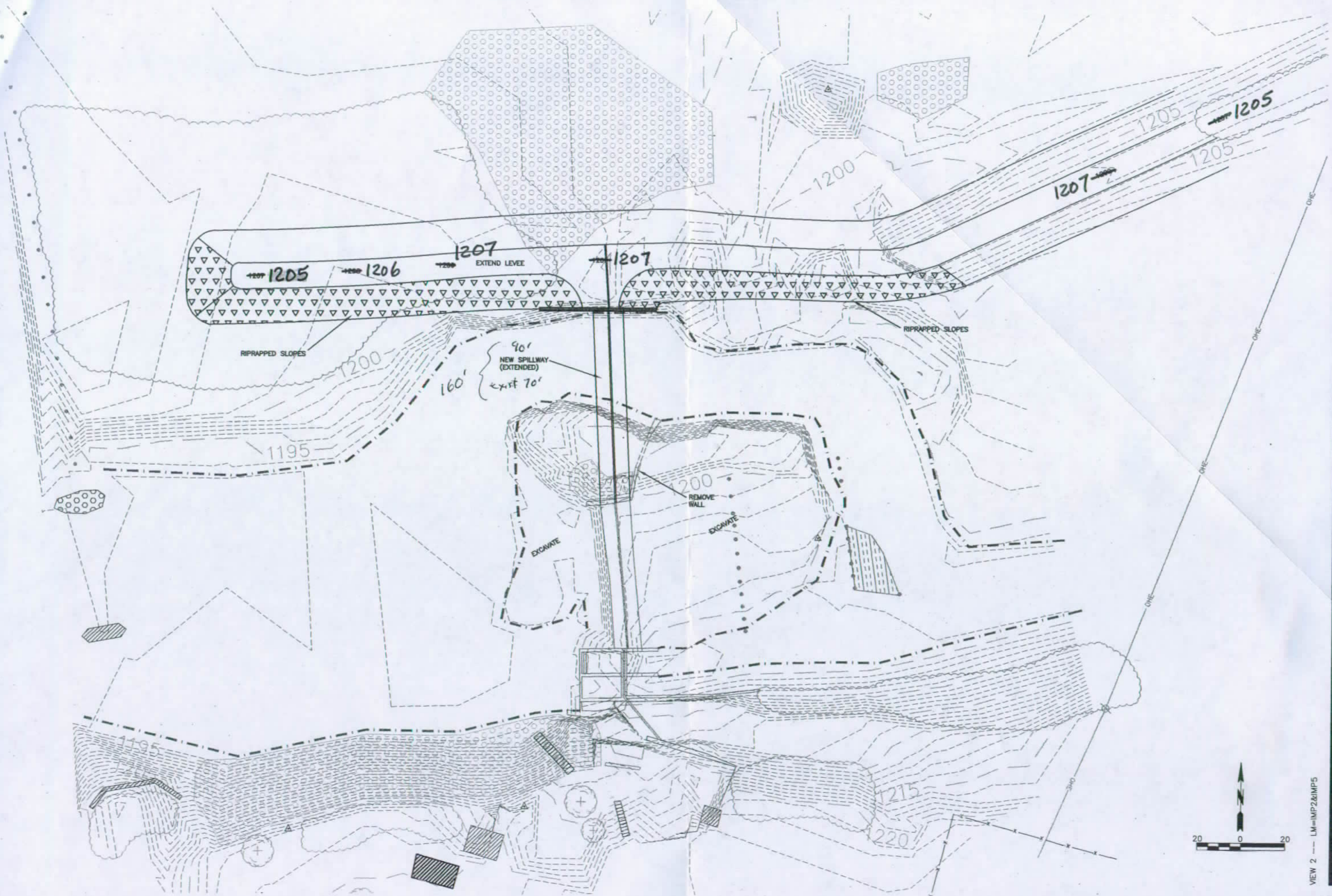
Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
A	0	1050.00	1190.64	1195.68	1191.96	1195.72	0.000300	1.56	671.43	146.57	0.13
A	0	2250.00	1190.64	1198.49	1192.82	1198.56	0.000300	2.04	1104.75	161.42	0.14
A	0	4900.00	1190.64	1202.04	1194.26	1202.14	0.000300	2.57	2750.81	720.81	0.14
A	750	1050.00	1190.84	1195.90	1192.16	1195.94	0.000295	1.56	674.99	146.70	0.13
A	750	2250.00	1190.84	1198.72	1193.03	1198.78	0.000297	2.03	1108.77	161.55	0.14
A	750	4900.00	1190.84	1202.28	1194.46	1202.40	0.000366	2.84	1834.47	720.97	0.16
A	990	1050.00	1191.24	1195.98		1196.01	0.000308	1.43	734.93	182.50	0.13
A	990	2250.00	1191.24	1198.80		1198.85	0.000250	1.80	1251.22	183.99	0.12
A	990	4900.00	1191.24	1202.39		1202.49	0.000302	2.56	1914.38	185.89	0.14
A	1000	Culvert									
A	1010	1050.00	1191.44	1199.62	1193.14	1199.63	0.000041	0.77	1365.81	184.32	0.05
A	1010	2250.00	1191.44	1200.84	1193.81	1200.87	0.000116	1.42	1589.98	184.96	0.09
A	1010	4900.00	1191.44	1202.89	1194.95	1202.99	0.000275	2.48	1971.87	186.05	0.13
A	1200	1050.00	1192.04	1199.63		1199.65	0.000177	1.22	857.72	182.58	0.10
A	1200	2250.00	1192.04	1200.86		1200.92	0.000390	2.07	1085.31	188.71	0.15
A	1200	4900.00	1192.04	1202.94		1203.11	0.000695	3.29	1489.07	199.12	0.21
A	1700	1050.00	1192.24	1199.72		1199.75	0.000191	1.25	837.93	182.04	0.10
A	1700	2250.00	1192.24	1201.05		1201.12	0.000391	2.07	1084.36	188.68	0.15
A	1700	4900.00	1192.24	1203.28		1203.44	0.000655	3.23	1518.11	199.84	0.21
A	2200	1050.00	1192.44	1199.82		1199.84	0.000205	1.28	819.46	181.53	0.11
A	2200	2250.00	1192.44	1201.25		1201.31	0.000392	2.08	1083.50	188.66	0.15
A	2200	4900.00	1192.44	1203.61		1203.77	0.000623	3.17	1543.34	200.47	0.20



ALLES:
= 20' HOR
= 10' VER



PRELIMINARY



VIEW 2 --- LM=IMP2&IMP5

DCR

David Grant Reckert
and Associates Company
Consulting Engineers
Rock Rapids, Iowa
Sioux Falls, South Dakota
Sioux City, Iowa

Date:
Drawn by:
Checked by:
Approved by:

OPTION 2
LENGTHEN SPILLWAY

CENTERVILLE DAM
CENTERVILLE, SD

EXHIBIT
6

REPORT ON
WATER PERMIT APPLICATION No. 6639-3
South Dakota Department of Game, Fish & Parks
August 10, 2005

Water Permit Application No. 6639-3 has been filed by the South Dakota Department of Game, Fish & Parks to impound 38.8 acre-feet of water by repairing the Centerville Dam located on the Vermillion River in the SW ¼ NE ¼ of Section 22-T96N-R52W, in Turner County. The application also requests impoundment of sufficient water to maintain water at the outlet elevation 1198 feet mean sea level (fmsl). The water will be used for recreational uses.

Discussion:

The dam will be classified as a small size, Category 3, Low Hazard dam. The Department of Game, Fish & Parks has designed the repair of the dam. The plans and specifications have been reviewed and will be approved; however, construction of the dam can not begin until Water Permit Application No. 6639-3 is approved.

Centerville Dam is an existing low head dam, or in-stream weir, located on the Vermillion River at Centerville, South Dakota. It was originally constructed in 1886 along with a flour mill owned by the Centerville Milling Company. The dam and flour mill were operated until February 21, 1930 when the flour mill burned down. At some time after that the dam had been turned over to the State of South Dakota. The Department of Game, Fish & Parks is the current owner of Centerville Dam. There have been several repair projects since then including a Civil Works Administration (CWA) project in 1934. Another repair project was completed in 1949 to repair damage from ice flow. In 1973 a South Dakota National Guard project was completed to repair damage done from a breach that occurred in 1970-1971. The National Guard returned in 1978 for another repair project. Also in 1978, the City of Centerville filled the rock filled cribs with concrete. Since then the several repair project completed mainly involved repair of the adjacent earthen dike then would tend to wash out when high flows were diverted over and around the concrete filled dam.

The existing dam consists of a gate structure, spillway (dam) and levee system. The gate structure contains two 10 foot wide steel gates. The operational use of the gates is questionable at this time. The existing spillway (dam) is 6.8 feet high, 70.5 feet wide with the crest elevation is 1198 (fmsl). The proposed repair project by GF&P involves extension of the existing spillway (dam) by construction an additional 79.5 foot wide secondary spillway with a crest elevation of 1199 fmsl, which is one foot higher than the current spillway elevation. The project also involves repair and riprapping of the breached levee system to an elevation of 1204 fmsl. The two steel gates will be partially removed and welded shut. The opening for the gates will be filled in and the area leveled off and capped to make a fishing platform. This will remove any conflicts that have occurred in the past regarding the operation of the gates.

The existing dam is 6.8 feet high with a normal storage capacity of 38.8 acre-feet with a reservoir level at the current primary spillway (dam) elevation. In 1999, DeWild Grant Reckert (DGR) and Associates Company completed a hydrologic analysis using the US Army Corps of Engineer River Analysis System (HEC-RAS) modeling program. The analysis used the 2 year, 5 year, and 10 year recurrence interval flooding events, which flood flow rates, have a 50%, 20% and 10% chance, respectively, of being equaled or exceeded in any given year. They used peak flow rates for the Vermillion River for the 2, 5, and 10-year floods of 1050 cfs, 2250 cfs and 4900 cfs, respectively, taken from a 1992 US Army Corps of Engineers Vermillion River Basin study. The analysis compared upstream flood profiles for these events to conditions with Centerville Dam in its pre-breached condition, its current breached condition, and the proposed repaired condition.

With Centerville Dam in its pre-breached condition, the analysis showed that events larger than the 5 year, 2250 cfs, event would overtop and probably breach the levee system. Therefore, repairing the dam to its original condition was not a chosen option. Repairing the dam with the proposed additional spillway capacity allows the 10 year, 4900cfs, event to safely pass over the structure without overtopping the adjacent levee system. The HEC-RAS analysis indicates that the upstream flooding conditions using the 10 year, 4900 cfs, scenario for the repaired dam were comparatively similar to the upstream conditions for the dam in its current breached condition. In other words, the repaired dam will have similar upstream conditions for events up to the 10 year flood as they exist now with the dam in its current breached condition. Vermillion River flows greater than the 10 year event of 4900 cfs would overtop the adjacent levee system.

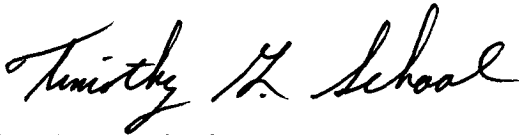
The Centerville Dam is an existing low head dam located in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 22-T96N-R52W on the Vermillion River at Centerville, South Dakota. It is about 50 river miles upstream of the confluence of the Vermillion River and the Missouri River near Vermillion, South Dakota. There are no existing Water Permits/Rights on the Vermillion River downstream of the Centerville Dam. The City of Centerville filed Vested Water Right No. 4972-3 in 1983 for storage of 40 acre-feet at the Centerville Dam. The Vested Water Right was filed for at that time in conjunction with a repair project. The dam has been in its current breached condition for about 10 years. Currently the Vermillion River has washed around the concrete structure and breached the adjacent levee system. Vested Water Right No. 4972-3 should be scheduled for cancellation due to abandonment and/or forfeiture.

Page 3

Water Permit Application No. 6639-3
SD GF&P

Conclusions:

1. Water Permit Application No. 6639-3 should be approved since unappropriated water is available and approval should not have any adverse effect on existing Water Permits/Rights.
2. The removal of the gates at Centerville Dam should eliminate any operational conflicts that have occurred in the past.
3. If approved, the low flow bypass requirement for domestic use should be a qualification on Water Permit Application No. 6639-3.
4. The City of Centerville's Vested Water Right No. 4972-3 should be scheduled for cancellation due to abandonment and/or forfeiture.



Timothy G. Schaal, P.E.
Natural Resources Engineer Specialist

BIBLIOGRAPHY

- DeWild Grant Reckert & Associates Co., April 1999, Preliminary Engineering Report, CENTERVILLE DAM, Centerville, South Dakota, DGR Project No. 648180,
DeWild Grant Reckert & Associates Co., 1109 East 14th Street, Sioux Falls, SD 57104
- US Army Corps of Engineers, October 1992, Reconnaissance Report, Vermillion River Basin South Dakota, US Army Corps of Engineers, Omaha District, Missouri River Division



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 6639-3, South Dakota Department of Game, Fish and Parks**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 6639-3, South Dakota Department of Game, Fish and Parks, c/o Doug Hansen, Director, Division of Wildlife, Joe Foss Buldg, 523 E. Capitol Avenue, Pierre SD 57501.

The Chief Engineer is recommending APPROVAL of Application No. 6639-3 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. Water Permit No. 6639-3 authorizes a dam with a storage capacity of 38.8 acre feet of water and sufficient water annually to maintain the water level to the outlet elevation of 1,198 feet mean sea level.
2. Low flows as needed for downstream domestic use, including livestock water and prior water rights must be by-passed.

See report on application for additional information.

Garland Erbele, Chief Engineer
August 12, 2005

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
 County of Turner)

I, Cynthia Sletten

certify that the attached printed Notice was taken

from the Centerville Journal

printed and published in Turner

County of _____ and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

August 25, 2005

September 1, 2005

Cost of Printing 54.65

Cynthia Sletten
 (Signature)

Billing & Receivables
 (Title)

Sept. 1, 2005
 (Date Signed)

NOTICE OF HEARING on Application No. 0539-3 to Appropriate Water

Notice is given that the South Dakota Department of Game, Fish and Parks, 523 E Capitol, Pierre SD 57501 has filed an application for a water permit to impound 38.80 acre-feet of water from the Vermillion River by reconstructing Centerville Dam located in the SW1/4 NE1/4 Section 22-T96N-R52W. This application requests impoundment of sufficient water to maintain water to the outlet elevation of 1198 feet mean sea level. The water is for recreational use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 0539-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605-773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 23, 2005. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

The Water Management Board will consider this application at 10:00 A.M., October 4, 2005, in the Chamber of Commerce Community Room, 800 W Dakota Avenue, Pierre, SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. The October 4, 2005 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by September 23, 2005.

Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26.

These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by September 23, 2005, at the above Water Rights Program address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

Since this application does not involve a monetary controversy in excess of \$2,500.00 or termination of a property right in accordance with SDCL 1-26-18.3, the Chief Engineer has determined this contested case may not be referred to the Office of Hearing Examiners. If any party disagrees with this determination, the Chief Engineer shall be notified by September 23, 2005.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15. Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Publish Aug. 25 and Sept. 1, 2005

RECEIVED

SEP 06 2005

WATER RIGHTS
PROGRAM

Instruction to Newspaper - Publish first Notice on August 25, 2005 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 6639-3 to Appropriate Water

Notice is given that the South Dakota Department of Game, Fish and Parks, 523 E Capitol, Pierre SD 57501 has filed an application for a water permit to impound 38.80 acre-feet of water from the Vermillion River by reconstructing Centerville Dam located in the SW ¼ NE ¼ Section 22-T96N-R52W. This application requests impoundment of sufficient water to maintain water to the outlet elevation of 1198 feet mean sea level. The water is for recreational use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 6639-3 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by September 23, 2005. The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

The Water Management Board will consider this application at 10:00 A.M., October 4, 2005, in the Chamber of Commerce Community Room, 800 W Dakota Avenue, Pierre, SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. The October 4, 2005 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by September 23, 2005.

Any hearing will be an adversary proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by September 23, 2005, at the above Water Rights Program address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

Since this application does not involve a monetary controversy in excess of \$2,500.00 or termination of a property right in accordance with SDCL 1-26-18.3, the Chief Engineer has determined this contested case may not be referred to the Office of Hearing Examiners. If any party disagrees with this determination, the Chief Engineer shall be notified by September 23, 2005.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

**NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER RIGHT AWAY.**

August 15, 2005

South Dakota Department of Game Fish & Parks
% Douglas Hansen
523 E Capitol
Pierre SD 57501

Dear Mr. Hansen:

Water Permit Application No. 6639-3 for recreational use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Publisher of the Centerville Journal printed at Centerville, SD (Ph # 605-563-2351). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and a report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your Notice and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization, the publisher has been instructed to publish your notice once each week for two consecutive weeks. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

c: Jeff Peters, Game Fish & Parks

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.



OCT 13 2005

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

South Dakota Dept of Game Fish & Parks
% Douglas Hansen
523 E Captiol
Pierre SD 57501

Dear Mr. Hansen:

Enclosed is Water Permit No. 6639-3 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

Garland Erbele, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures