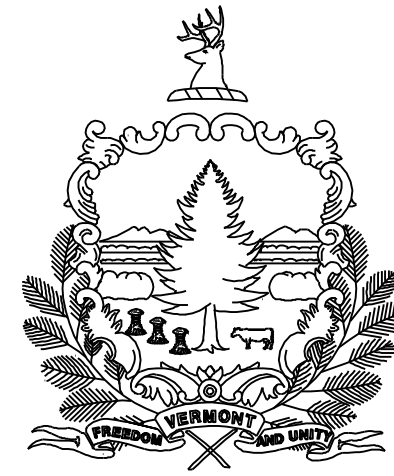
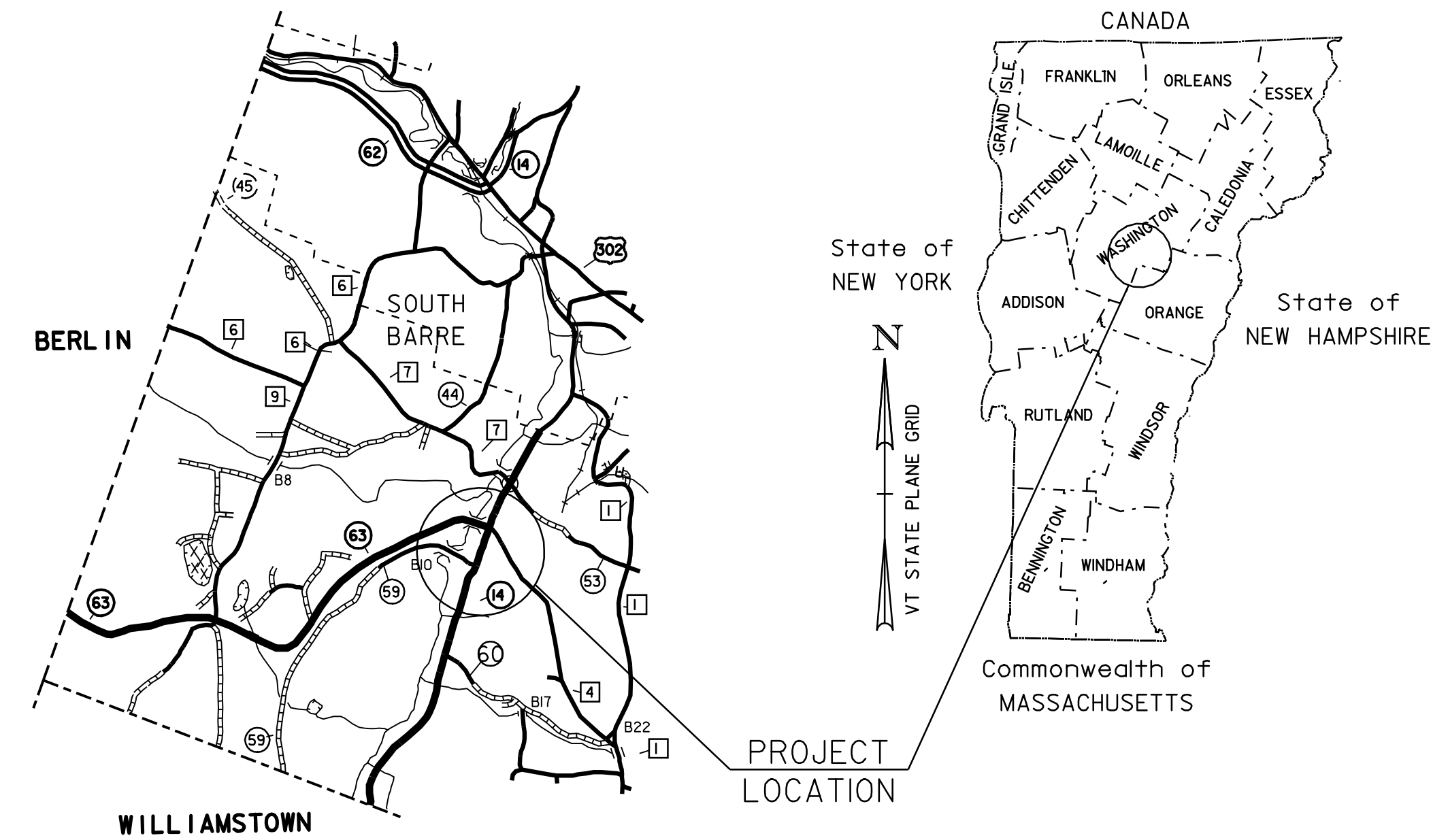


STATE OF VERMONT AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT TOWN OF BARRE COUNTY OF WASHINGTON



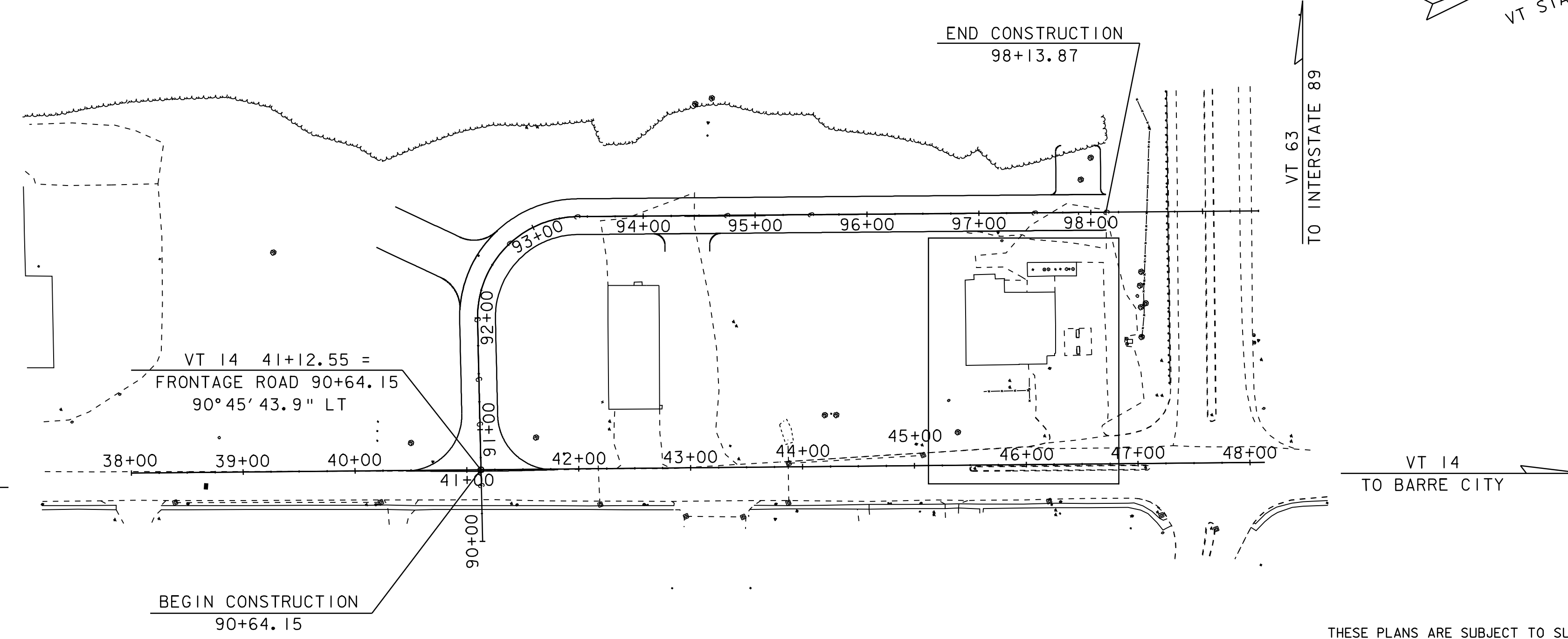
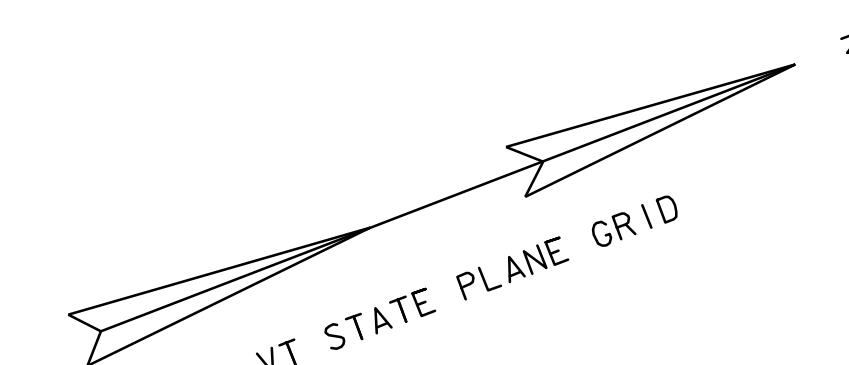
RECORD PLANS

CONSTRUCTED BY DISTRICT 6
YEAR CONSTRUCTED: 2007
RECORD PLANS BY TOM ANDERSTON AND PAUL BEYOR

PROJECT LOCATION: THE NEW FRONTAGE ROAD BEGINS 625' SOUTH OF THE INTERSECTION OF VT 63 AND VT 14, AND EXTENDS WESTERLY THEN NORTHERLY FOR TOTAL LENGTH OF 750'.

PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES CONSTRUCTION OF A NEW FRONTAGE ROAD, WITH NEW DRAINAGE, SUBBASE, PAVEMENT, SIGNING, AND OTHER ROADWAY RELATED ITEMS. ALSO MINOR CONSTRUCTION ON VT ROUTE 14.

ROADWAY LENGTH: 750.00' = 0.14 MILES
PROJECT LENGTH: 750.00' = 0.14 MILES



THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

CONVENTIONAL SYMBOLS

COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY :	R. GILMAN
SURVEYED DATE :	12-06-2005
DATUM	
VERTICAL	NAD-83 (92)
HORIZONTAL	NAVD88

DIRECTOR OF PROGRAM DEVELOPMENT	
APPROVED _____	DATE _____
PROJECT MANAGER : ROGER L. THOMPSON	
PROJECT NAME :	BARRE TOWN
PROJECT NUMBER :	ST 0147 (16)
SHEET 1 OF 26 SHEETS	

1	TITLE SHEET
2	INDEX OF SHEETS
3	TYPICAL SECTION SHEET
4-5	QUANTITY SHEETS
6	DRAINAGE DETAIL SHEET
7	LAYOUT SHEET
8	PROFILE & BANKING DIAGRAM SHEET
9	EROSION CONTROL NARRATIVE
10	EROSION CONTROL GENERAL NOTES
11	EROSION CONTROL LAYOUT SHEET
12	EXISTING CONTOURS SHEET
13	PROPOSED CONTOURS SHEET
14	SILT FENCE DETAIL
15	DROP INLET PROTECTION DETAIL
16	CONSTRUCTION ENTRANCE DETAIL
17	DITCH & SLOPE PROTECTION DETAIL
18	SIGN & PAVEMENT MARKING SHEET
19-20	TRAFFIC SIGN SUMMARY SHEETS
21-25	CROSS-SECTION SHEETS

A-76	STANDARD FOR DEVELOPMENT ROADS
B-1	BANKING TABLES
B-5	SLOPE GRADING, EMBANKMENTS, MUCK
B-12	SIDE ROAD INTERSECTION, DEPRESSED RAMP
B-71	RESIDENTIAL AND COMMERCIAL DRIVES
C-1	CURBS, BITUMINOUS CONCRETE SIDEWALKS GRANITE SLOPE EDGING, VERTICAL GRANITE CURB PRECAST REINFORCED CONCRETE CURB CAST IN PLACE CONCRETE CURB BITUMINOUS CONCRETE CURB, TREATED TIMER CURB
D-6	REINF. CONCRETE DROP INLET W/GRATE (DITCHES)
D-8	REINFORCED CONCRETE DROP INLET WITH PRECAST COVER & GRATE (BOTTOM SECTION) SEE SHEETS D-9, 10, 11 FOR TOP SECTION
D-9	REINFORCED CONCRETE DROP INLET TOPS VERTICAL CURB & THROAT ADAPTER
D-11	GRATES & COVERS (TYPE A)
E-100	CONSTRUCTION APPROACH SIGNS
E-101	CONSTRUCTION SIGN DETAILS
E-102	CONSTRUCTION SIGN DETAILS
E-108	CONSTRUCTION ZONE LONGITUDINAL DROP OFFS
E-111	MINOR MAINTENANCE OPERATION
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD
E-123	GUIDE SIGN PLACEMENT - MISCELLANEOUS DETAILS
E-141	REGULATORY SIGN DETAILS
E-142	REGULATORY SIGN DETAILS
E-143	REGULATORY SIGN DETAILS
E-150	WARNING SIGN DETAILS
E-160	FLANGED CHANNEL STEEL SIGN POST
E-163	TUBULAR STEEL SIGN POST
E-164	SQUARE STEEL SIGN POST
E-191	PAVEMENT MARKING DETAILS
E-193	PAVEMENT MARKING DETAILS
E-198	DELINEATORS AND MILE POSTS
G-1D	STEEL BEAM GUARDRAIL (40MPH & LESS) HEAVY DUTY STEEL BEAM GUARDRAIL STEEL BEAM MEDIAN BARRIER ANCHOR FOR STEEL BEAM RAIL
G-4	MARKERS - GUIDE POSTS - PLANK GUARD RAIL PLANK RAIL GUIDE POSTS WOOD MARKER POSTS STEEL MARKER POSTS
G-5	CEDAR LOG GUARD RAIL

INDEX OF SHEETS

PROJECT NAME: BARRE TOWN	
PROJECT NUMBER: ST 0147(16)	
FILE NAME: 05e290\Design\D05E290FRM	PLOT DATE: 18-MAR-2008
PROJECT LEADER: R. THOMPSON	DRAWN BY: P. PELOQUIN
DESIGNED BY: P. PELOQUIN	CHECKED BY:
05e290Ind.I	SHEET 2 OF 26

MATERIAL ITEM	THICKNESS TOLERANCE (TOTAL DEPTH)
PAVEMENT	± 1/4"
SUBBASE	± 1"

NORMAL TYPICAL SECTION

1 1/2" BITUMINOUS CONCRETE PAVEMENT, TYPE III } (PG 58 - 34)
 3 1/2" BITUMINOUS CONCRETE PAVEMENT, TYPE I }
 18" SUBBASE OF DENSE GRADED CRUSHED STONE

SEEDING FORMULA

RURAL AREAS

% WT.	LBS. /A.	NAME	PUR %	GERM %
37.5	22.5	CREeping RED FESCUE	98	85
37.5	22.5	TALL FESCUE	95	90
5.0	3.0	RED TOP	95	90
15.0	9.0	BIRDSFOOT TREFOIL	98	85
5.0	3.0	ANNUAL RYEGRASS	95	85
100.0	60.0			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULA OR AS DIRECTED BY THE ENGINEER.

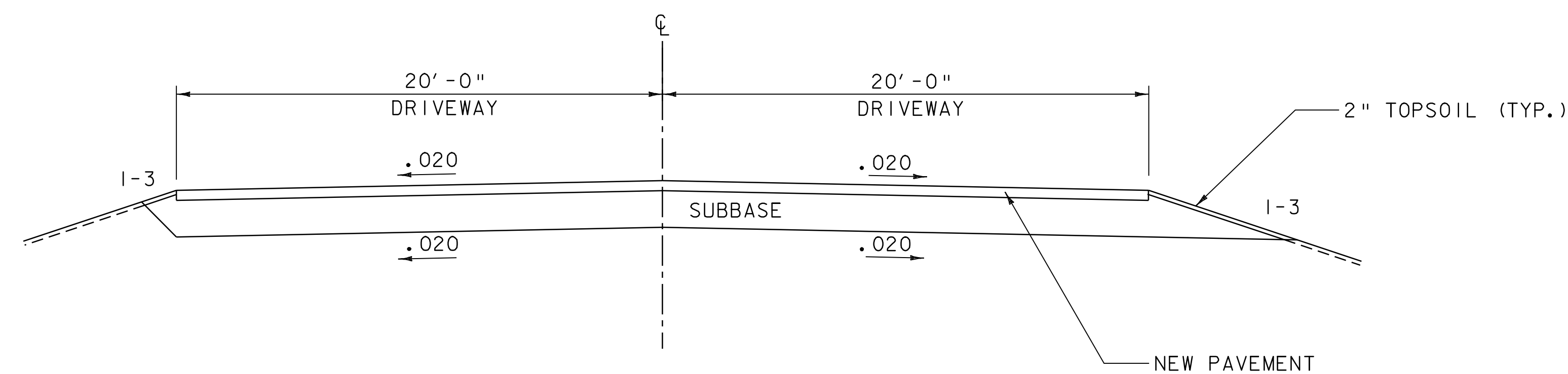
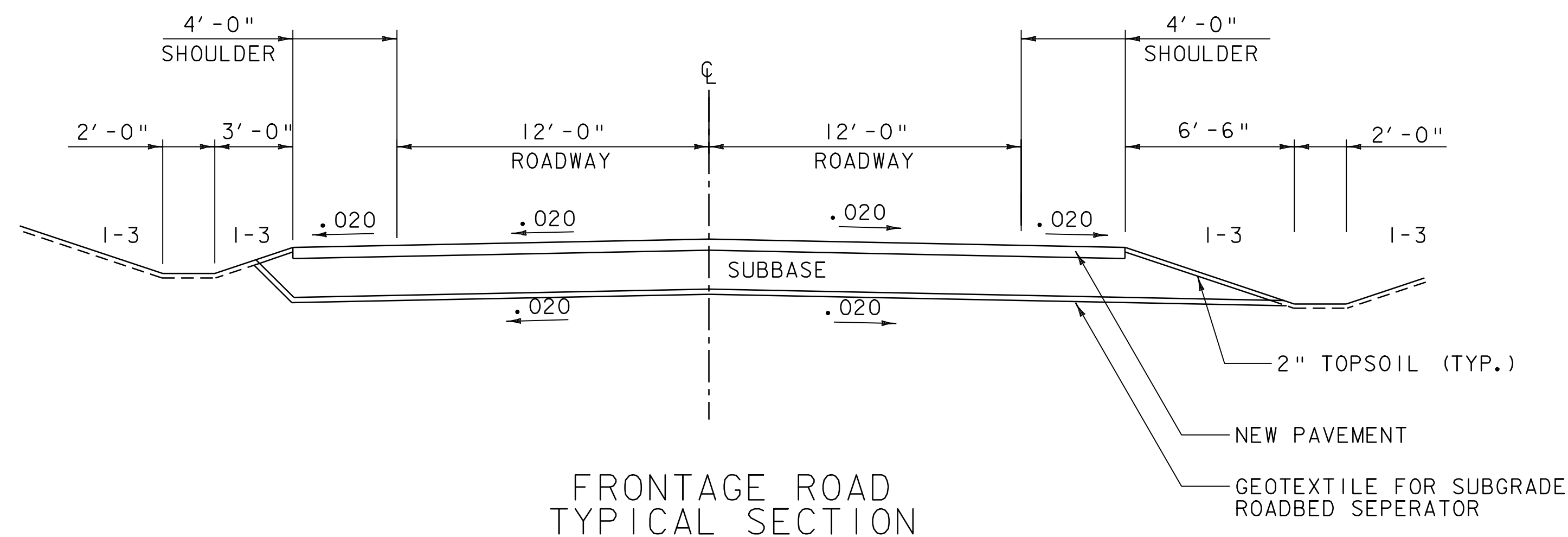
FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.015 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.



NOT TO SCALE

TYPICAL SECTION SHEET

PROJECT NAME:	BARRE TOWN	FILE NAME:	05E290/Design/D05E290NUI	PLOT DATE:	18-MAR-2008
PROJECT NUMBER:	ST 0147(16)	PROJECT LEADER:	R. THOMPSON	DRAWN BY:	P.BEYOR
		DESIGNED BY:	P. BEYOR	CHECKED BY:	
			05e290+yp.i	SHEET	3 OF 26

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES													TOTALS			DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES						
													EROSION	E & C	ROADWAY	BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
													1					1		LS	EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.10			
													20					20		HR	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.20			
													1					1		LU	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.30			
															56			56		SF	TRAFFIC SIGNS, TYPE A	675.20			
															110					LF	FLANGED CHANNEL SIGN POST	675.301			
															66			66		LF	FLANGED CHANNEL SIGN POST - OPTION #1	675.301			
															137			137		LB	TUBULAR STEEL SIGN POSTS	675.33			
															66			66		LF	SQUARE TUBE SIGN POSTS AND ANCHOR - OPTION #2	675.341			
															1			1		EA	FOUNDATION FOR TUBULAR STEEL POSTS	675.43			
															12			12		EA	DELINEATORS W/STEEL POSTS	676.10			

PROJECT NAME: **BARRE TOWN**
 PROJECT NUMBER: **ST 0147(16)**
 FILE NAME: 05E290Design/05e290FRM
 PROJECT MANAGER: R. THOMPSON
 DESIGNED BY: P. PELOQUIN
 05e290qty2.i
 PLOT DATE: 8/14/2006
 DRAWN BY: P. PELOQUIN
 CHECKED BY:
 SHEET 5 OF 26

HVCTRL #1

STANDARD DISK STAMPED

SO. BARRE Az Mk

N = 608573.40
 E = 1634218.22
 ELEV. =

TO REACH FROM THE JUNCTION OF VERMONT ROUTE 63 AND VERMONT ROUTE 14 IN SOUTH BARRE PROCEED WESTERLY ALONG ROUTE 63 FOR 0.9 MI.(1.4 KM) TO THE MARK ON THE LEFT. TO REACH FROM THE JUNCTION OF VERMONT ROUTE 63 AND MILLER ROAD (EXT) PROCEED EASTERLY ALONG ROUTE 63 FOR 1.1 MI.(1.8 KM) TO THE MARK ON THE RIGHT. THE MARK IS SET IN A 5 FT (1.5 M) WIDE X 3 FT (0.9 M) HIGH ROCK OUTCROP. THE MARK IS LOCATED 59 FT (18.0 M) SOUTHWEST OF A 2 FOOT (0.6 M) SQUARE DI, 31 FT (9.4 M) SOUTH OF AND 6 FT (1.8 M) HIGHER THAN THE SOUTH EDGE OF VERMONT ROUTE 63.

HVCTRL #2

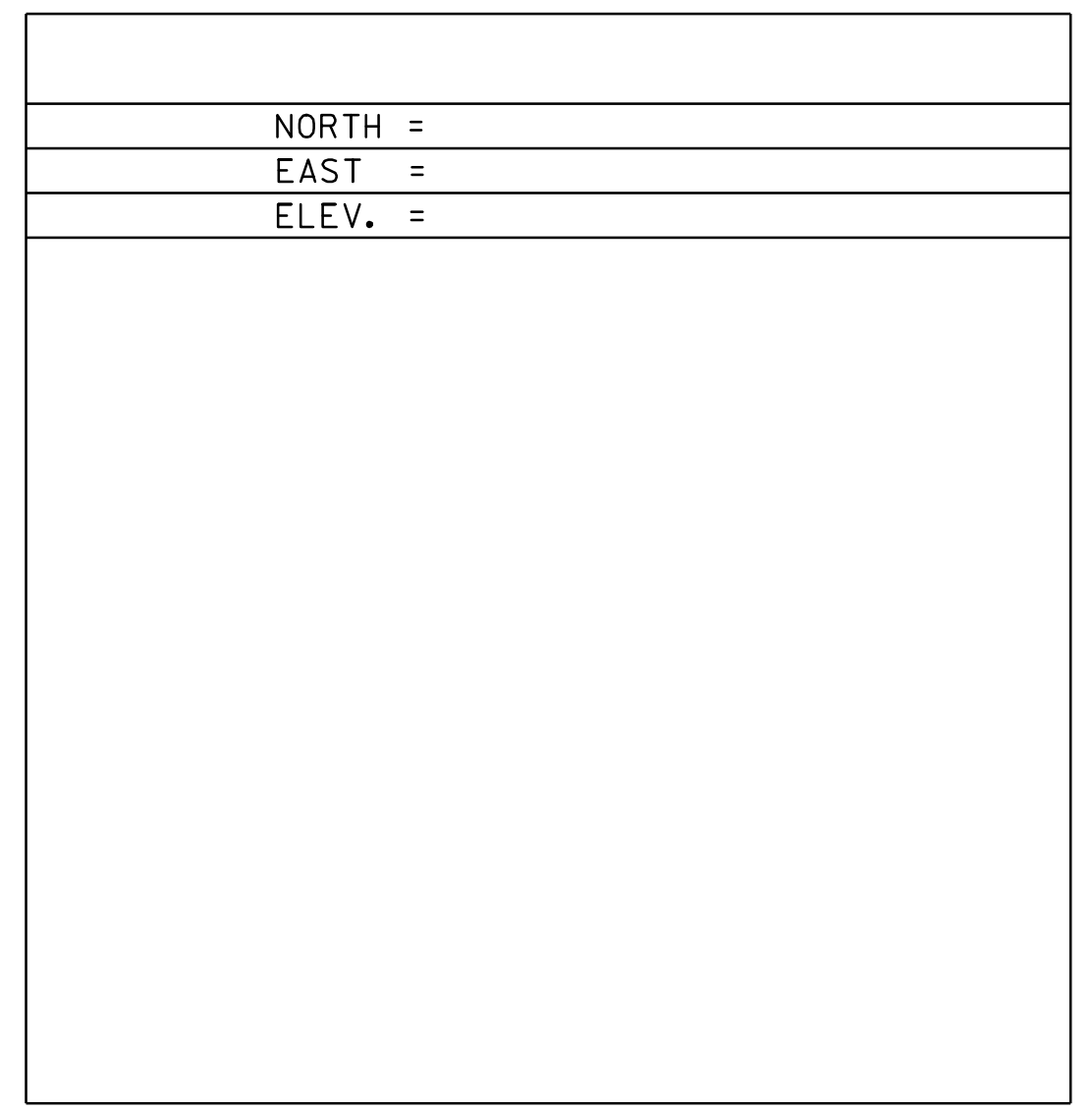
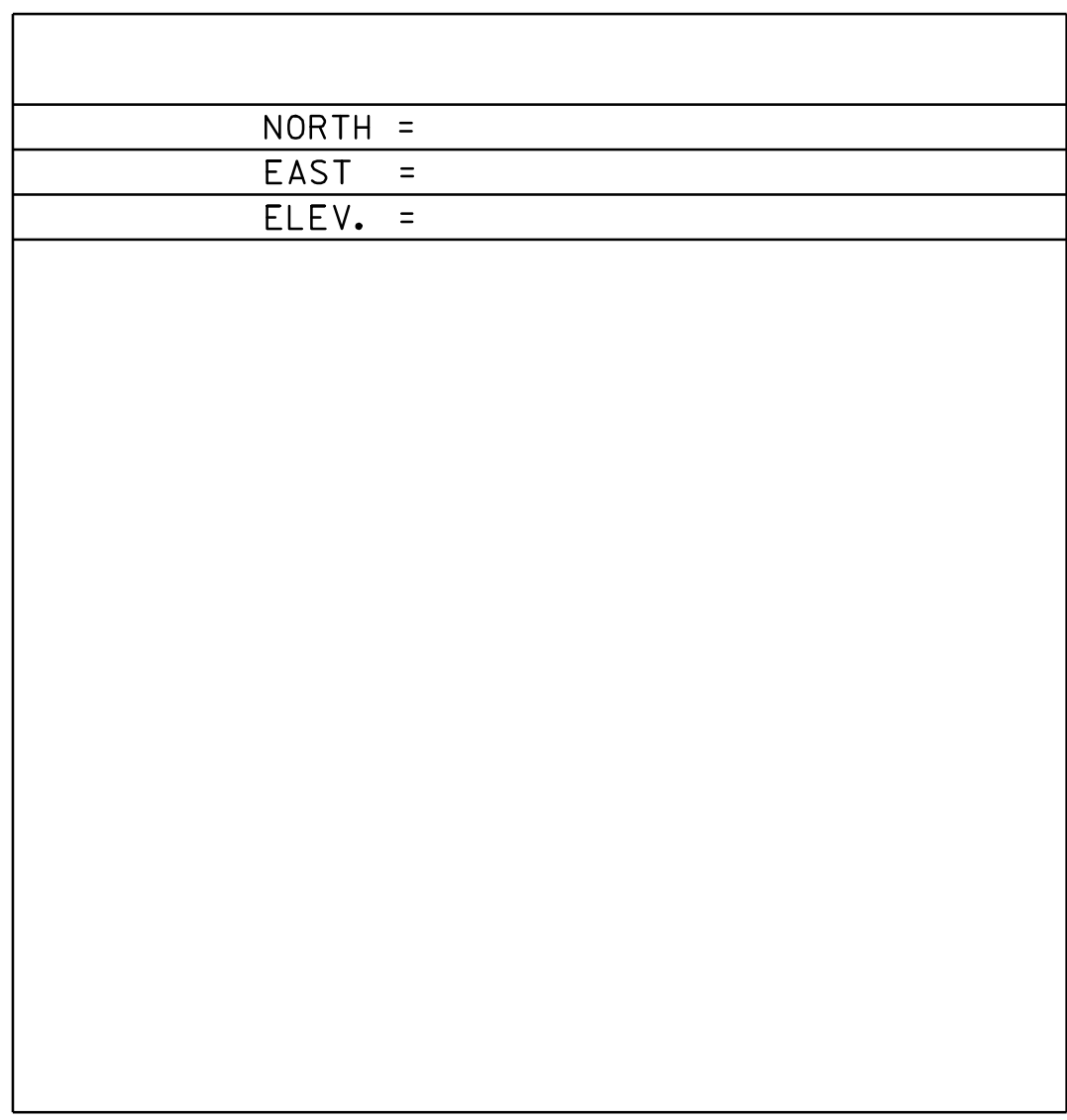
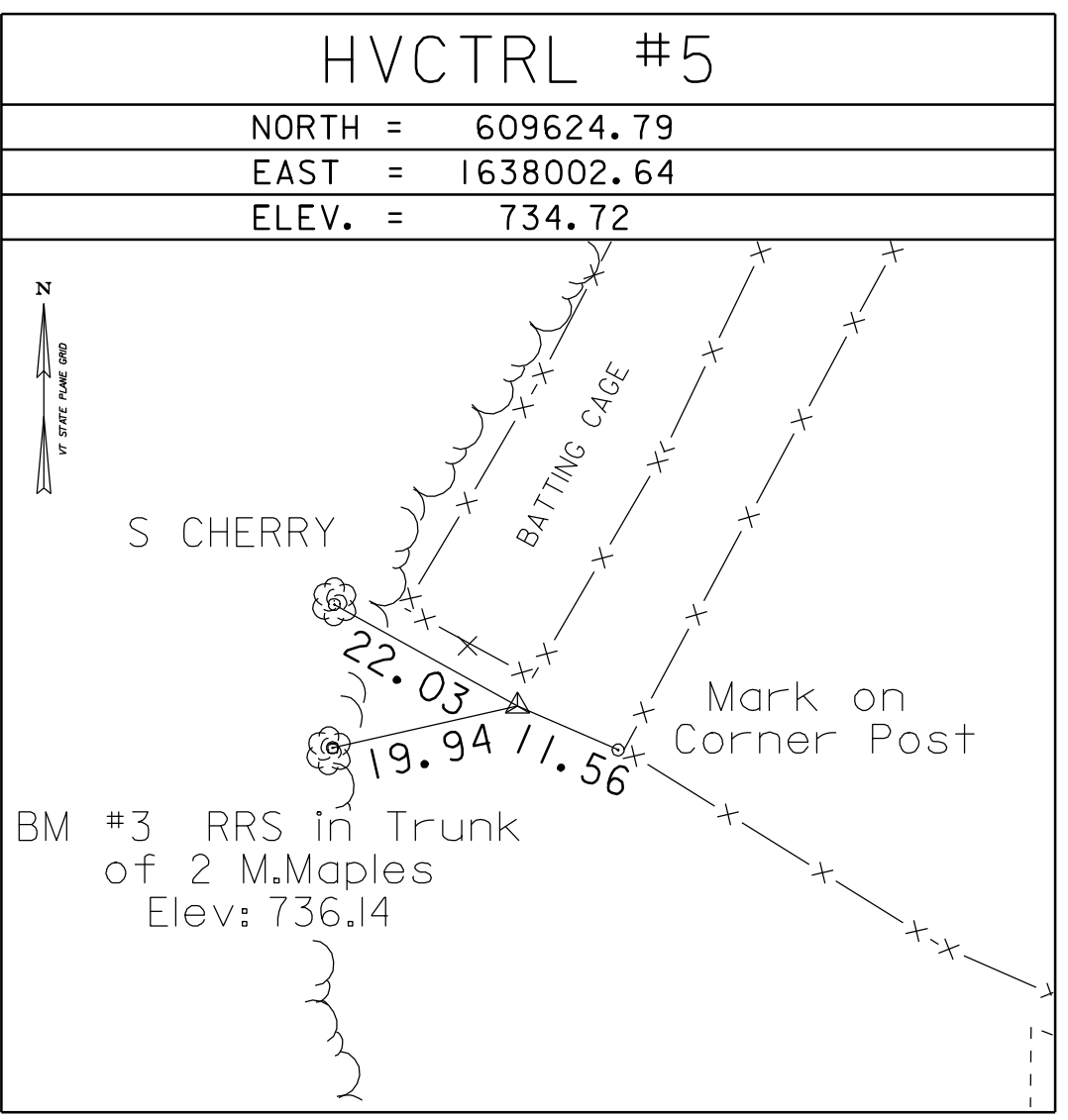
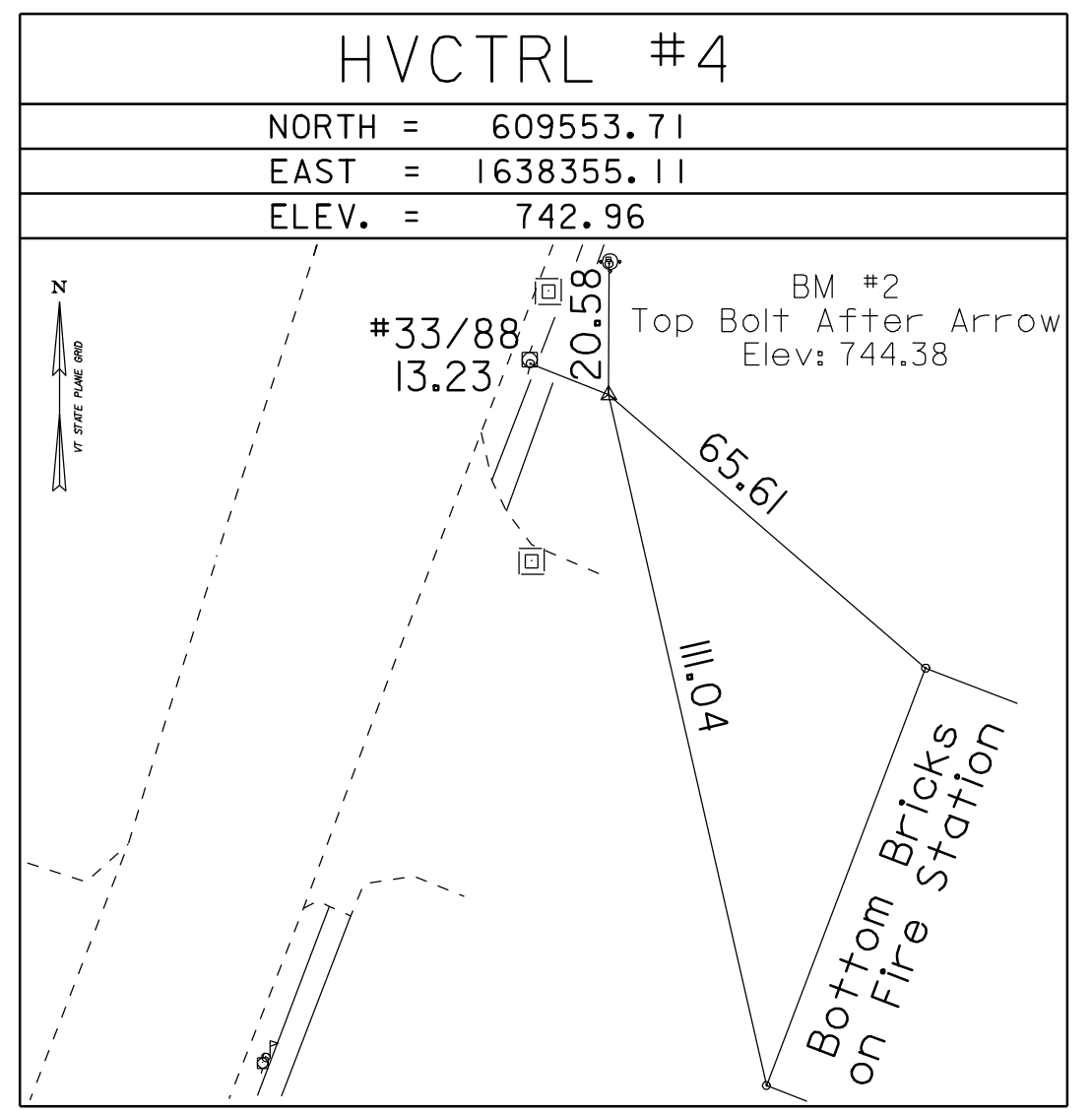
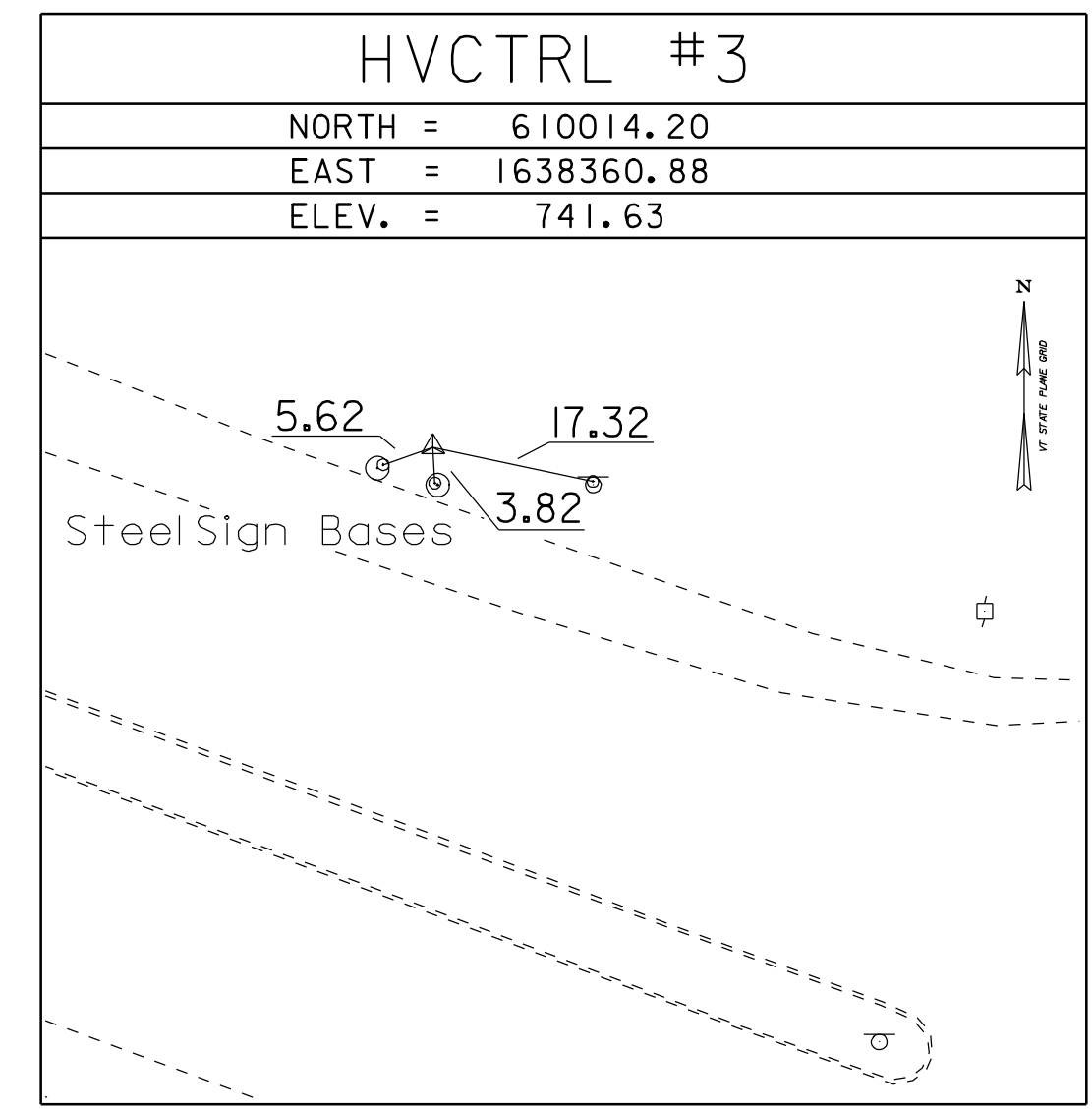
STANDARD DISK STAMPED

SO. BARRE

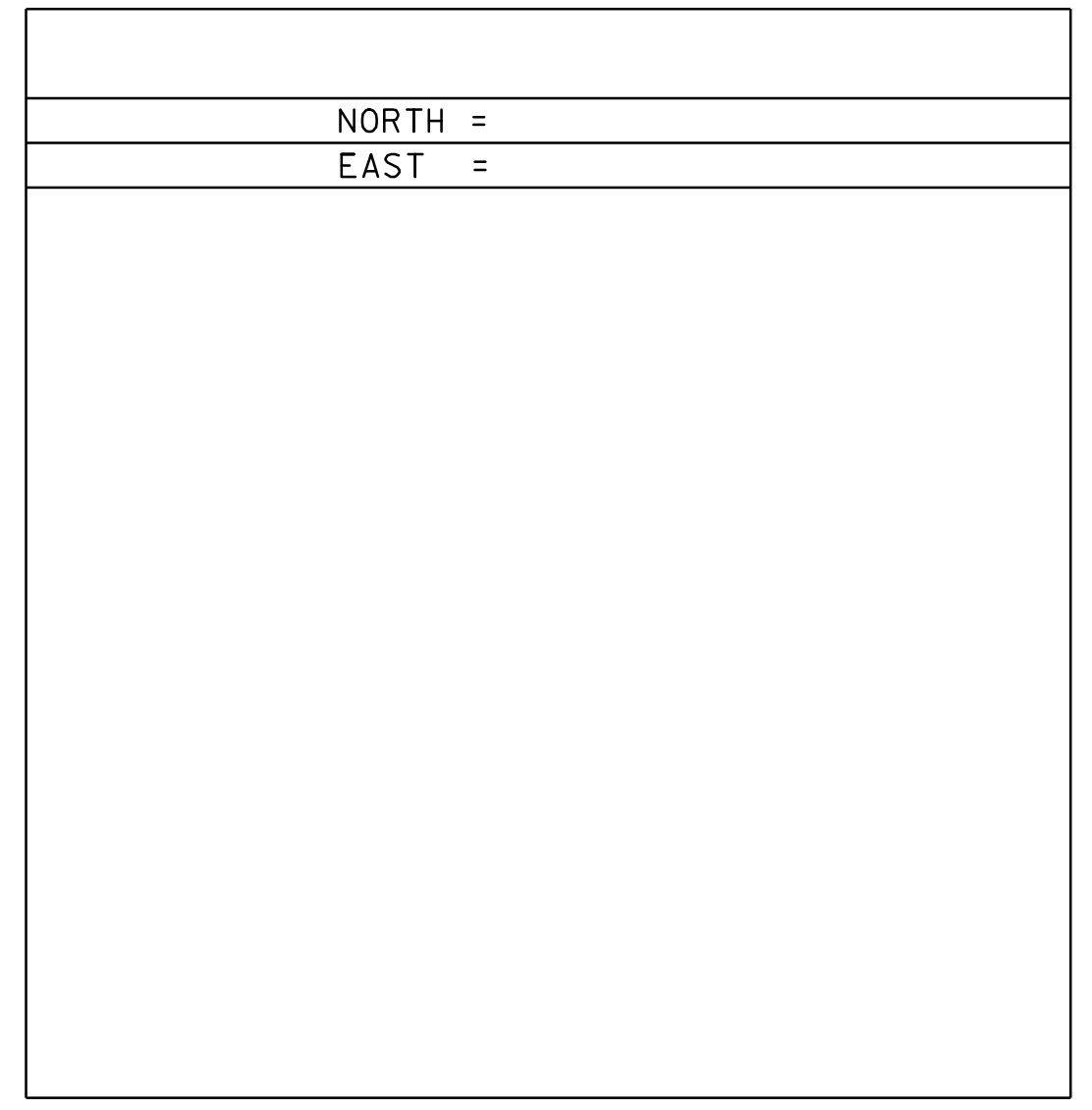
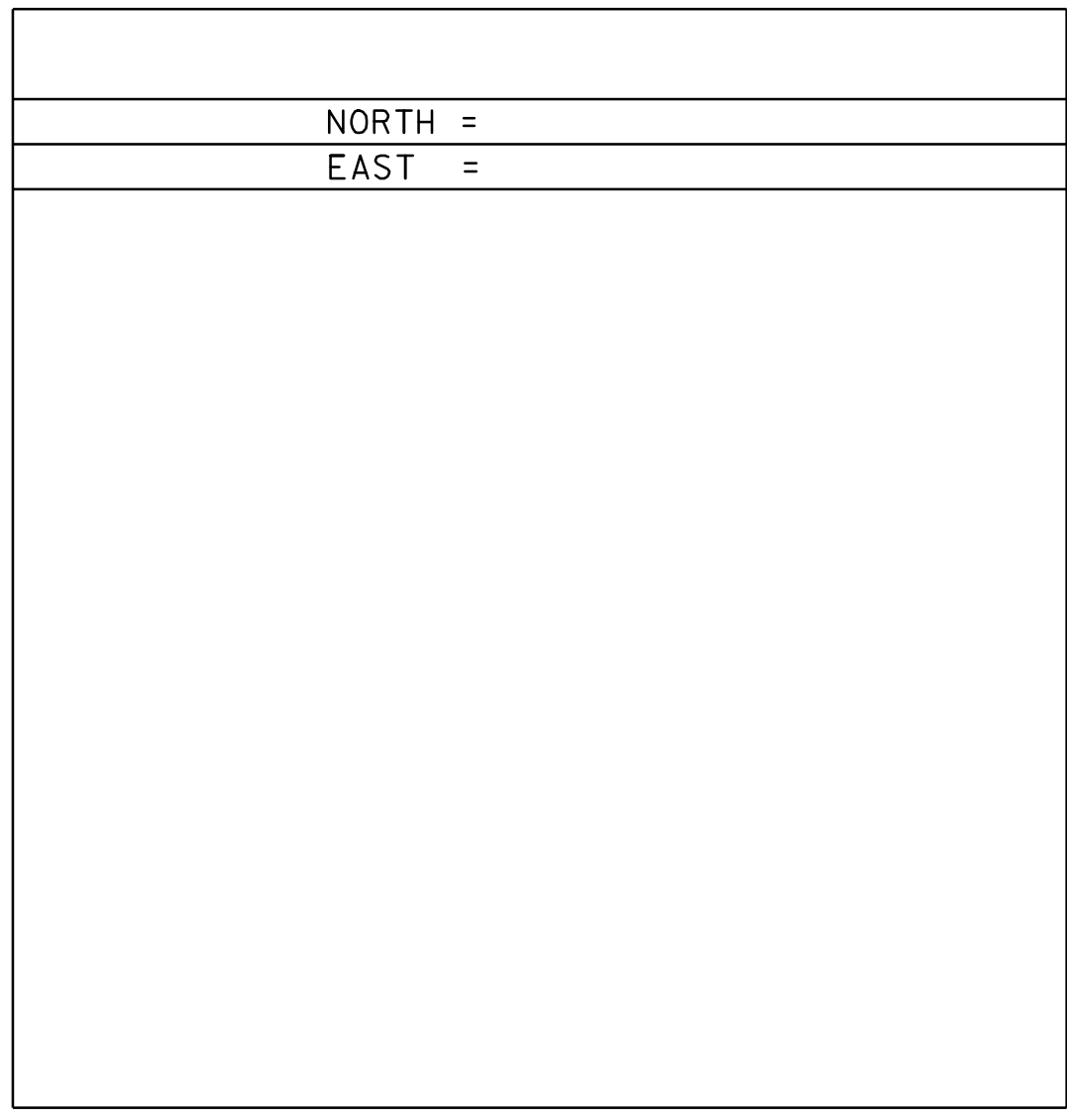
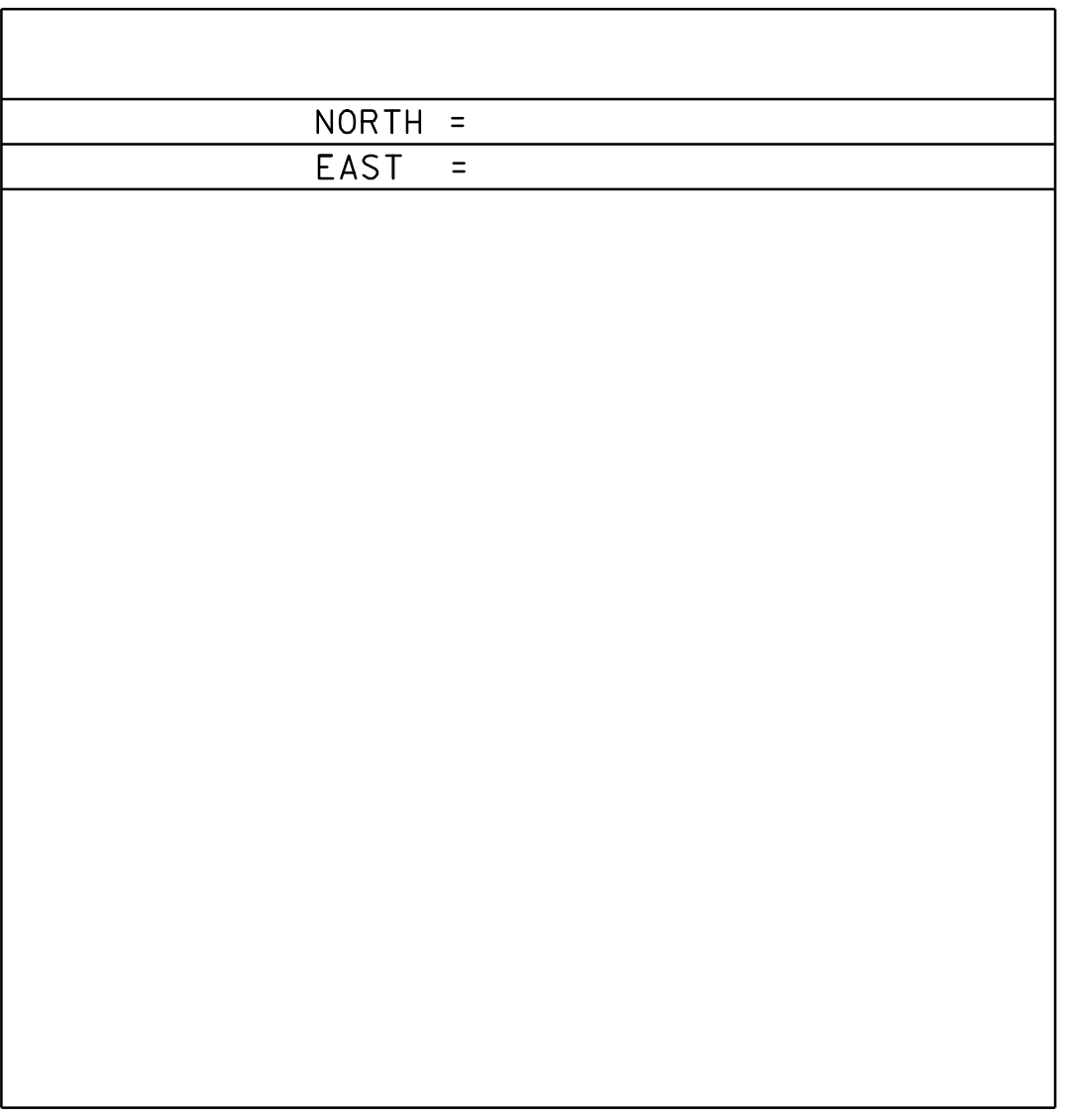
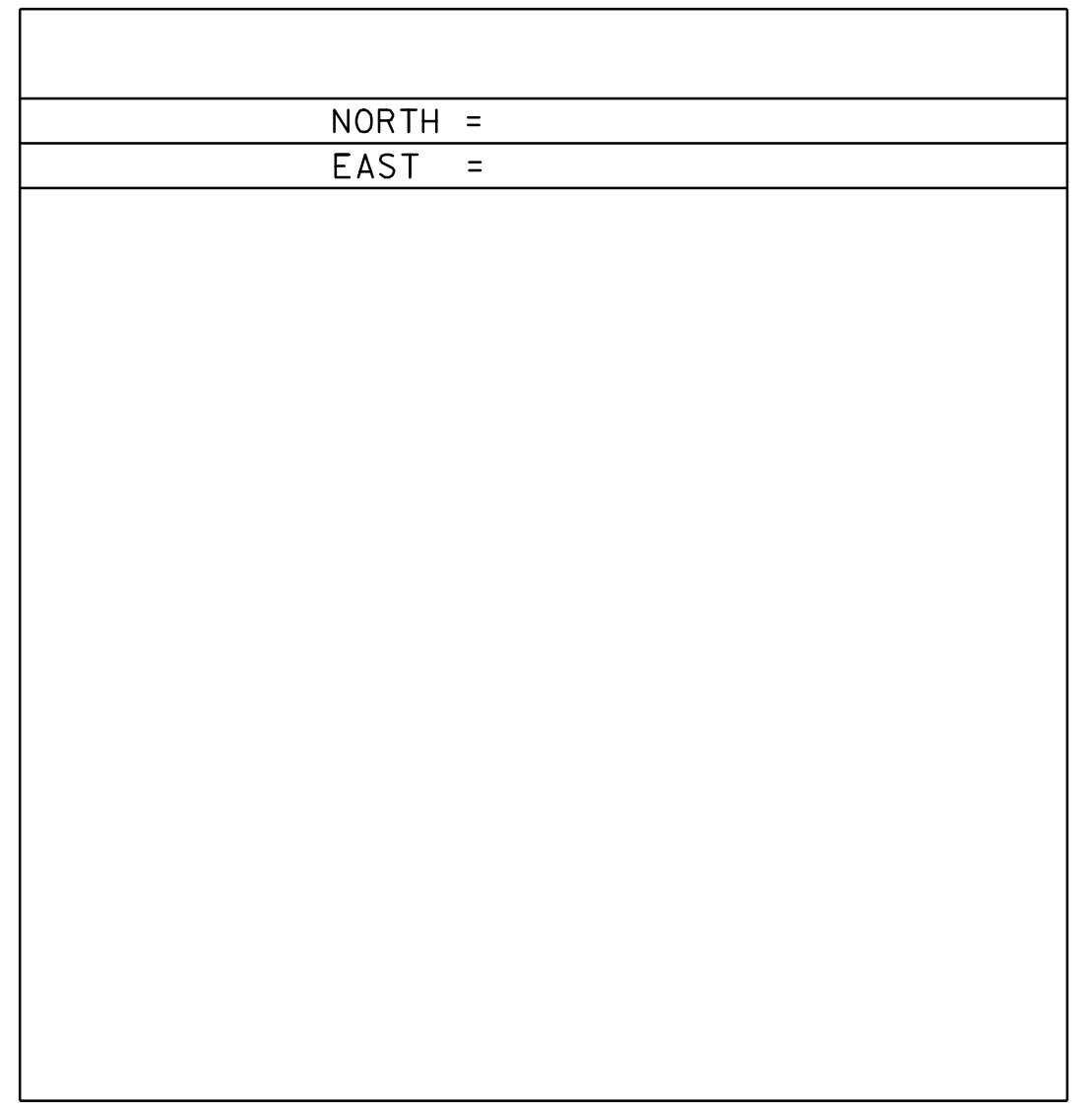
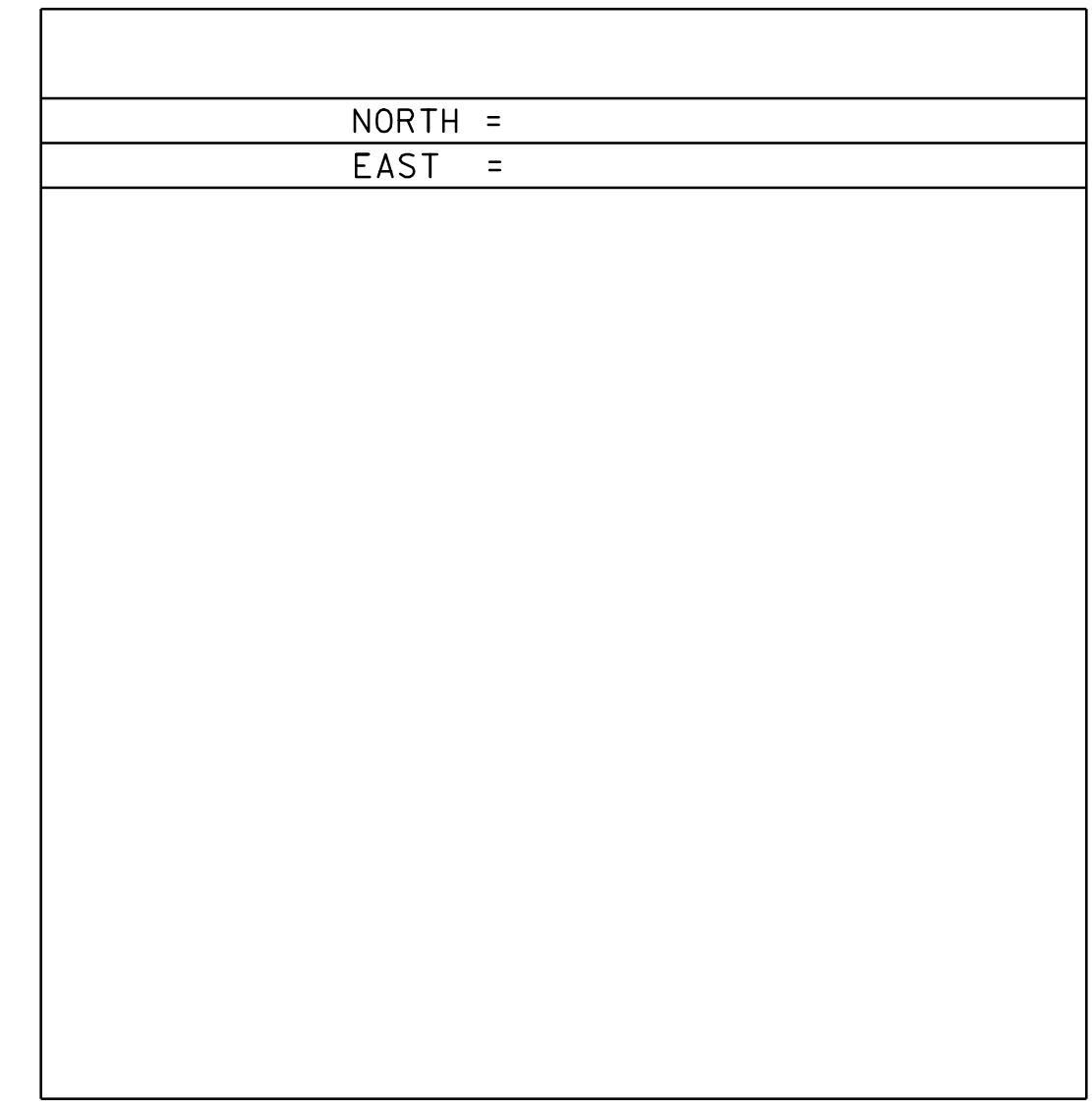
N = 610161.99
 E = 1637191.18
 ELEV. = 746.02

TO REACH FROM THE JUNCTION OF VERMONT ROUTE 63 AND VERMONT ROUTE 14 IN SOUTH BARRE PROCEED WESTERLY ALONG ROUTE 63 FOR 0.25 MI.(0.40 KM) TO THE MARK ON THE RIGHT. TO REACH FROM THE JUNCTION OF VERMONT ROUTE 63 AND MILLER ROAD (EXT) PROCEED EASTERLY ALONG ROUTE 63 FOR 1.75 MI.(2.82 KM) TO THE MARK ON THE LEFT. THE MARK IS A 4 INCH SQUARE RIGHT OF WAY MONUMENT WITH A SURVEY DISK SET IN THE TOP AND IS LOCATED 0.7 FT (21.3 CM) BELOW THE ROAD. THE MARK IS LOCATED 119.4 FT (36.4 M) EAST OF AN 18 INCH CGMP CULVERT WITH CONCRETE HEADWALL, 74.9 FT (22.8 M) NORTHWEST OF A TRAFFIC SIGNAL SIGN, 71.5 FT (21.8 M) NORTHEAST OF A DIVIDED HIGHWAY SIGN AND 2.3 FT (0.7 M) NORTH OF THE EDGE OF VERMONT ROUTE 63.

• DESCRIPTION PROVIDED BY VREMONT AGENCY OF TRANSPORTATION GEODETIC SURVEY UNIT



• Main Traverse Completed 12/06/05 by R. Gilman P.C. & P. Winters



DATUM	
VERTICAL	NAVD 88
HORIZONTAL	NAD 83(96)
ADJUSTMENT	None

PROJECT NAME:	Barre Town
PROJECT NUMBER:	ST 0147 (16)
FILE NAME:	05e290\survey\05e290sv.dgn
PROJECT LEADER:	R. THOMPSON
DESIGNED BY:	05e290+te.l
PLOT DATE:	18-MAR-2008
DRAWN BY:	R. Bullock
CHECKED BY:	
SHEET	7 OF 26

CONSTRUCT DRIVES

FRONTAGE ROAD
STA. 92+40 LT (40')
STA. 94+39 RT (40')
STA. 97+89 LT (40')
STA. 96+88 - 98+14 RT

CHANGE ELEVATION OF MANHOLE

FRONTAGE ROAD
STA. 92+50 (15' LT)
STA. 94+86 (26' RT)
STA. 97+84 (29' RT)

VT I4
STA. 46+41(36' LT)

CAST-IN-PLACE CONCRETE CURB

VT I4
STA. 41+78 TO 43+84 LT
STA. 46+03 TO 47+30 LT

GRANITE SLOPE EDGING (ISLAND)

VT I4
STA. 46+25 TO 46+75 RT
STA. 46+25 TO 46+75 RT

DI 94+65 - 25.5' RT
RIM ELEV. = 732.36
INV. OUT = 729.75

REMOVE EXISTING CURB

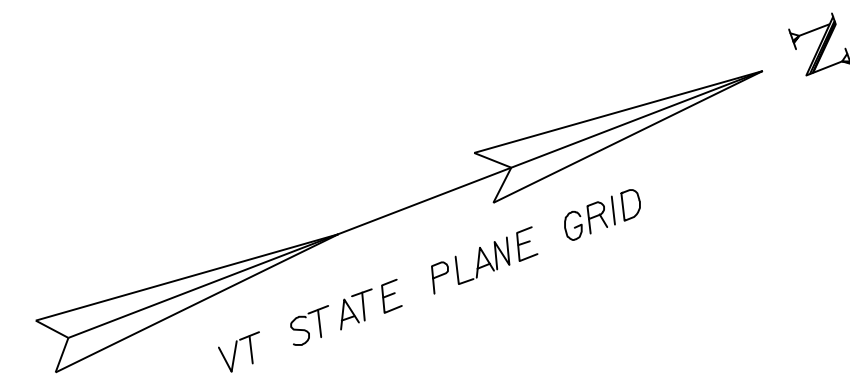
VT I4
STA. 46+03 TO 46+22 LT
STA. 46+68 TO 47+29 LT

DI 94+11 - 20' LT
RIM ELEV. = 733.50
INV. IN = 728.50
INV. OUT = 728.25

DI 94+11 - 25.5' RT
RIM ELEV. = 734.09
INV. IN (S) = 731.20
INV. IN (N) = 729.10
INV. OUT = 729.00

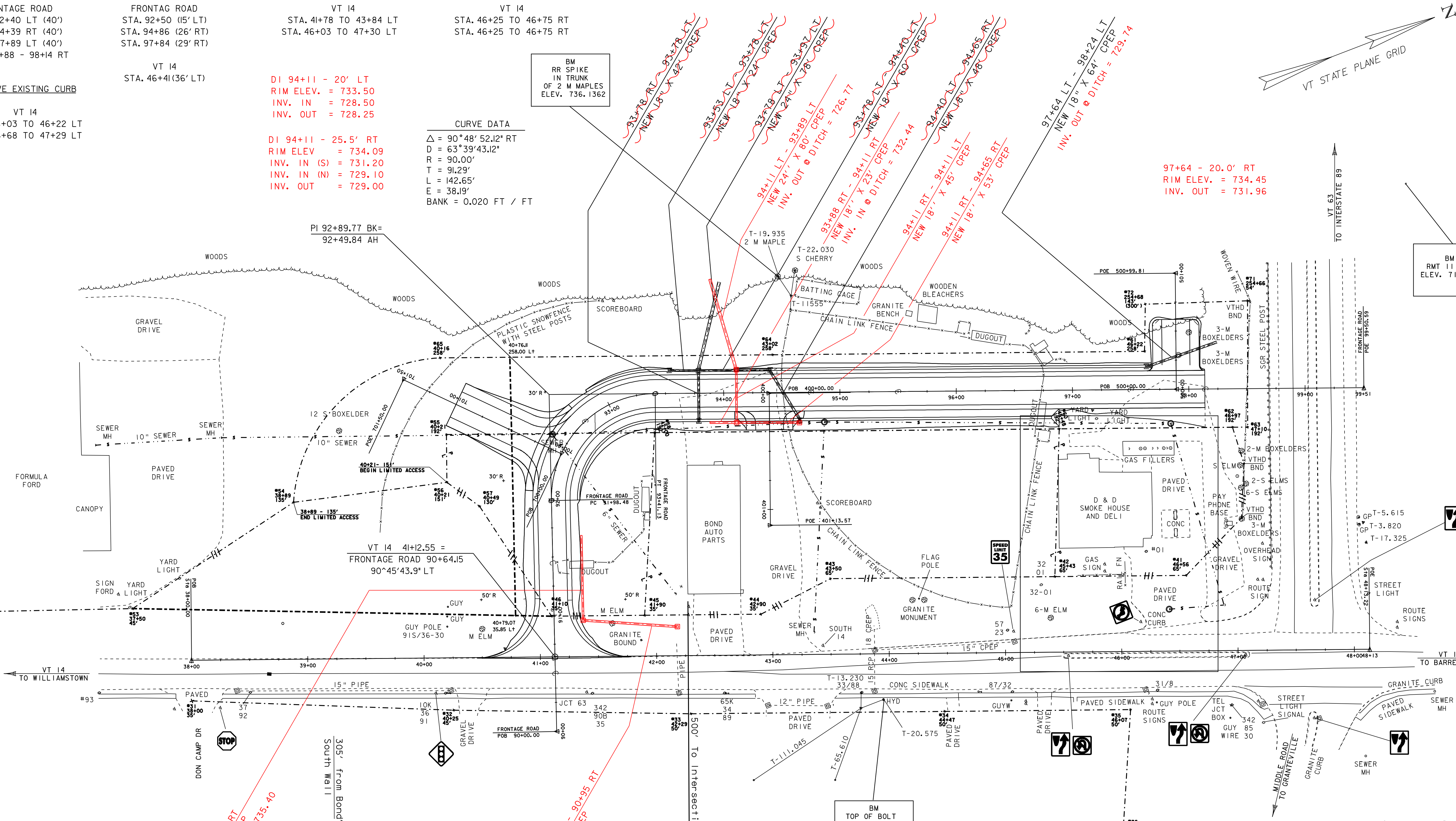
CURVE DATA
Δ = 90° 48' 52.12" RT
D = 63° 39' 43.12"
R = 90.00'
T = 91.29'
L = 142.65'
E = 38.19'
BANK = 0.020 FT / FT

BM
RR SPIKE
IN TRUNK
OF 2 M MAPLES
ELEV. 736.1362



97+64 - 20.0' RT
RIM ELEV. = 734.45
INV. OUT = 731.96

BM
RMT 11 1971
ELEV. 718.8622



90+95 RT - 25' RT
NEW 18' X 73' CPEP
INV. OUT @ DITCH = 735.40

DI 90+95 - 25' RT
RIM ELEV. = 739.30
INV. IN = 736.50
INV. OUT = 736.00

42+18 LT (VT I4) - 25.00 LT
NEW 18' X 79' CPEP

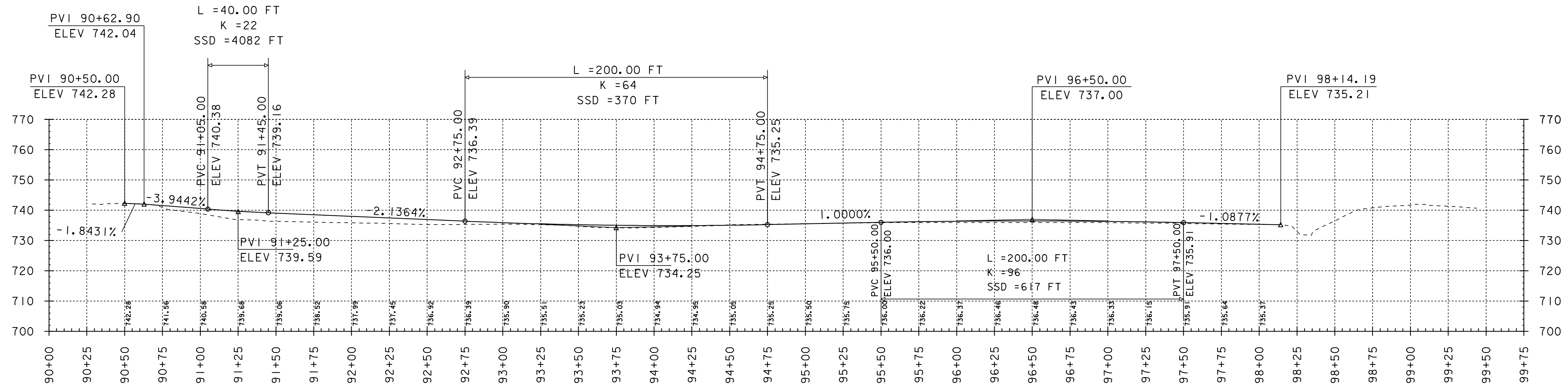
DI 42+18 (VT I4) - 25.00 LT
RIM ELEV. = 739.60
INV. IN = 737.34
INV. OUT = 737.00

BM
TOP OF BOLT
ON HYDRANT
AFTER ARROW
ELEV. 744.3790



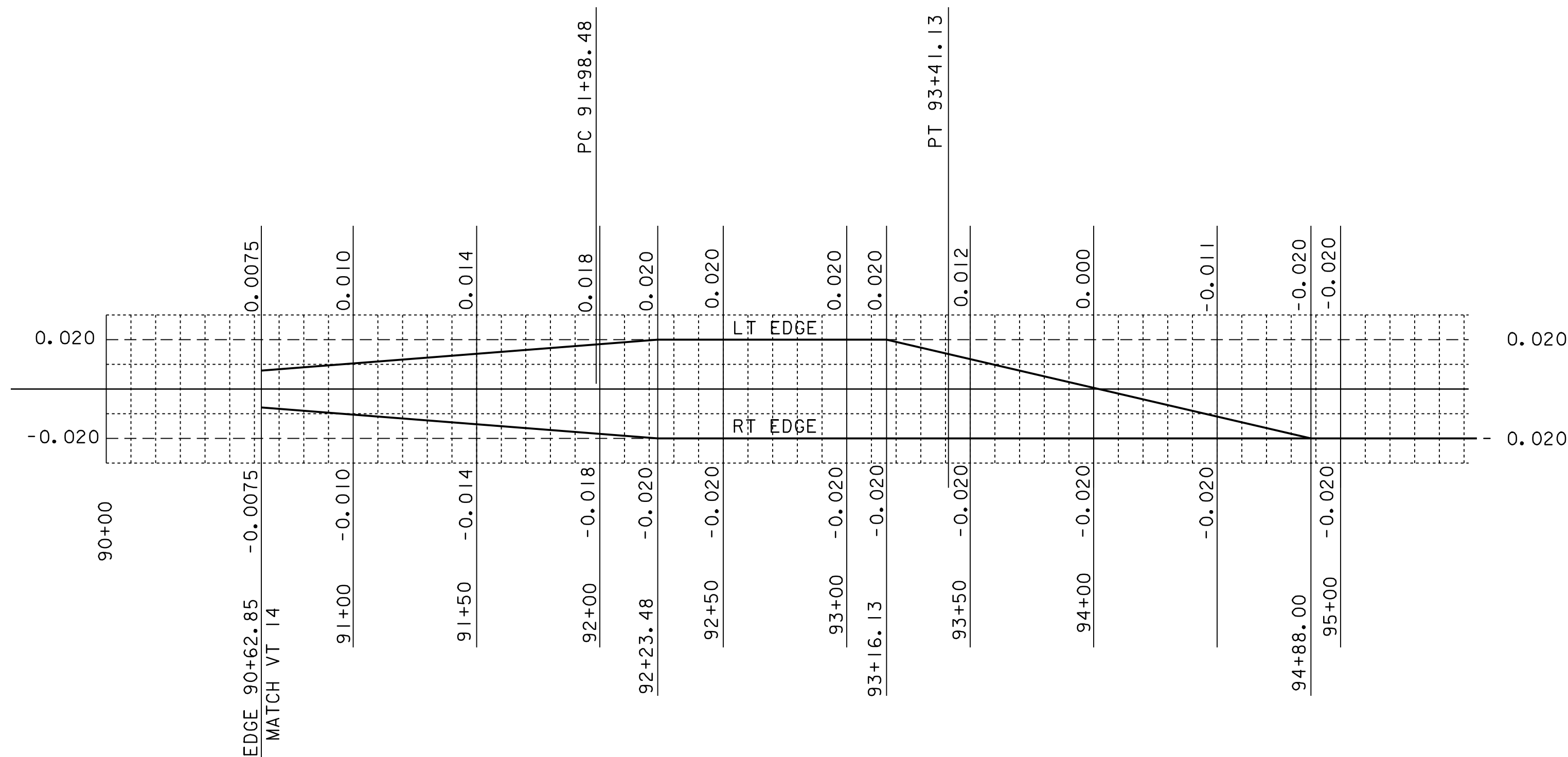
LAYOUT SHEET

PROJECT NAME:	BARRE TOWN	FILE NAME:	05E290/Design/D05E290NUI	PLOT DATE:	18-MAR-2008 14:2
PROJECT NUMBER:	ST 0147(16)	PROJECT LEADER:	R. THOMPSON	DRAWN BY:	P. BEYOR
		DESIGNED BY:	P. BEYOR	CHECKED BY:	
			05e290lay.1	SHEET 8	OF 26



FRONTAGE ROAD PROFILE

LINE	SURFACE	OFFSET
-----	x05e290og	0.00
Scaled 2.0000 Times Ver.		
Scaled 1.0000 Times Hor.		



FRONTAGE ROAD BANKING DIAGRAM

PROFILE & BANKING DIAGRAM SHEET

PROJECT NAME:	BARRE TOWN	PLOT DATE:	18-MAR-200
PROJECT NUMBER:	ST 0147(16)	DRAWN BY:	P. BEYOR
FILE NAME:	05E290/Design/D05E290NUI	DESIGNED BY:	P. BEYOR
		CHECKED BY:	
		SHEET	9 OF 26

EROSION PREVENTION AND SEDIMENT CONTROL PLAN NARRATIVE

PROJECT DESCRIPTION

THIS PROJECT IS LOCATED IN THE TOWN OF BARRE, BEGINNING 625 FEET SOUTH OF THE INTERSECTION OF VT 63 AND VT 14, AND EXTENDS WESTERLY, THEN NORTHERLY FOR A TOTAL LENGTH OF 750 FEET . THE PURPOSE OF THE PROJECT IS TO CONSTRUCT A NEW FRONTAGE ROAD.

THIS PROJECT INCLUDES THE CONSTRUCTION OF THE NEW FRONTAGE ROAD, WITH NEW DRAINAGE, SUBBASE, PAVEMENT, SIGNING, AND OTHER ROADWAY RELATED ITEMS. MINOR WORK ON VT 14 IS ALSO ANTICIPATED.

THE TOTAL DISTURBED AREA; EXCLUDING WASTE, BORROW AND STAGING AREAS, IS 1.15 ACRES.

SITE INVENTORY AND ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS

THE AREA EAST OF VT 14 CONSIST OF RESIDENTIAL LAWNS THAT DRAIN TOWARDS VT 14. STORMWATER RUNOFF DRAINS TO A PAVED ROADSIDE DITCH RUNNING ALONGSIDE OF VT 14, WHERE THE RUNOFF IS COLLECTED AND TRANSFERRED UNDER VT 14 BY CULVERT. ALL RUNOFF FLOWS WEST INTO THE STEVEN'S BRANCH OF THE WINOOSKI RIVER. THE AREAS EAST AND WEST OF THE IMMEDIATE LOCATION ARE FORESTED. THE SURROUNDING AREA IS CLASSIFIED AS HILLY BUT THE PROJECT AREA IS FAIRLY FLAT.

DRAINAGE, WATERWAYS, BODIES OF WATER

THERE ARE NO BODIES OF WATER WITHIN THE PROJECT AREA. ALL STORM RUNOFF EITHER INFILTRATES OR DRAINS TO THE STEVEN'S BRANCH OF THE WINOOSKI RIVER. THE STEVEN'S BRANCH OF THE WINOOSKI RIVER IS LOCATED APPROXIMATELY 150 FEET WEST OF THE MAJORITY OF THE PROJECT. HOWEVER, THE INSTALLATION OF THE NEW 24 INCH DRAINAGE CULVERT WILL INVOLVE EXCAVATION AT THE TOP OF THE BANK NEAR THE RIVER.

THERE ARE SEVERAL DROP INLETS IN THE PROJECT AREA THAT CARRY RUNOFF FROM THE ROAD TO THE RIVER, BUT THERE ARE NO KNOWN WETLANDS, STREAMS OR PONDS WITHIN THE PROJECT SITE.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TERRAIN OF THE PROJECT AREA IS FLAT. VT 14, VT 63, AND SEVERAL DRIVES WITHIN THE PROJECT AREA; ARE PAVED. A GAS STATION AND CONVENIENCE STORE IS LOCATED ON THE NORTH SIDE OF THE PROJECT AND THEY CONTAIN PAVED AND GRAVEL PARKING AREAS. AN AUTO PARTS STORE IS LOCATED ON THE EASTERLY SIDE OF THE PROJECT AREA AND ALSO HAS A PAVED AND GRAVEL PARKING AREA THE AUTO DEALER ON THE SOUTH SIDE OF THE PROJECT AREA HAS A GRASSED DISPLAY AREA ADJACENT TO THE PROPOSED FRONTAGE ROAD.

THE UTILITIES WITHIN THE PROJECT CONSIST OF OVERHEAD LINES OWNED BY GREEN MOUNTAIN POWER CORPORATION AND VERIZON, WHICH WILL NOT BE DISTURBED. THE UNDERGROUND SEWER AND WATERLINES WITHIN THE PROJECT ARE OWNED BY THE TOWN OF BARRE AND WILL NOT BE DISTURBED (OTHER THAN RE-ADJUSTING THE TOP OF A SEWER MANHOLE).

VEGETATION

THE VEGETATION ON THE PROJECT SITE IS PRIMARILY LIMITED TO RESIDENTIAL LAWNS AND COMMERCIAL PROPERTY.

THE CONSTRUCTION OF THE FRONTAGE ROAD WILL NECESSITATE THE REMOVAL OF SOME GRASS, AND SEVERAL TREES. VARIOUS GRASSES WILL BE PLANTED WITHIN THIS REGION.

SOILS

THE SOIL IN THE PROJECT AREA CONSIST MAINLY OF ADAMS LOAMY FINE SAND; 3 TO 8 % SLOPE; WITH AN EROSION K FACTOR OF 0.17

SENSITIVE RESOURCE AREAS

NO THREATENED & ENDANGERED SPECIES, PRIME AGRICULTURAL LAND, WETLANDS, OR CRITICAL HABITATS HAVE BEEN IDENTIFIED WITHIN THE PROJECT AREA. THE ONLY SENSITIVE AREA IS THE STEVEN'S BRANCH OF THE WINOOSKI RIVER AND IT IS LOCATED APPROXIMATELY 150 FEET WEST OF THE PROJECT.

TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL

PROJECT DEMARCATIION FENCE

INSTALL PDF ALONG THE PERIMETERS OF AREAS OF DISTURBED SOILS. THIS FENCING PROVIDES A PHYSICAL REMINDER OF THE LIMIT OF ALLOWABLE SOIL AND VEGETATION DISTURBANCE.

INLET PROTECTION

SAND BAGS FILLED WITH CLEAN, SMALL DIAMETER STONE, OR AN EQUIVALENT BARRIER, WILL BE UTILIZED AROUND THE DROP INLET TO CREATE A TEMPORARY PONDING AREA FOR PARTICLES TO SETTLE OUT AS WATER DRAINS THROUGH THE BARRIER. INLET PROTECTION SHALL BE INSTALLED AS SOON AS THERE IS THE POSSIBILITY OF WATER FLOWING TO THE STRUCTURE. THE HEIGHT OF THE BARRIER SHALL BE LIMITED SUCH THAT THE PONDING AREA DOES NOT PRESENT A HAZARD TO THE TRAVELING PUBLIC. ALTERNATIVE INLET CONTROL MEASURES SHALL BE APPROVED BY THE ENGINEER AND ON-SITE COORDINATOR PRIOR TO IMPLEMENTATION.

SILT FENCE

A SILT FENCE IS A TEMPORARY SEDIMENT BARRIER INSTALLED AT THE TOE OF A SLOPE, OR ADJACENT WATERWAY. THE PURPOSE OF THE SILT FENCE IS TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT FROM UNPROTECTED AREAS OF LIMITED EXTENT, AND TO REDUCE WATER VELOCITY ON THE CONSTRUCTION SITE. A SILT FENCE IS CONSTRUCTED OF SYNTHETIC SEDIMENTATION CONTROL FABRIC FASTENED TO A SUPPORT STRUCTURE SUCH AS A LIGHTWEIGHT STOCK FENCE. THE FENCE IS BUILT PARALLEL TO CONTOURS. THE LOWER EDGE OF THE FILTER FABRIC MUST BE BURIED APPROXIMATELY 6 INCHES BELOW GROUND SURFACE TO PREVENT UNDERFLOW, AND THE ENDS OF THE FENCE SHOULD BE CURVED UPHILL TO PREVENT FLOW AROUND THE ENDS.

EROSION MATTING

SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING, OR AN EQUIVALENT PRODUCT, WILL BE UTILIZED ON ALL SLOPES STEEPER THAN 3:1 THAT ARE NOT LINED WITH STONE FILL. THE PURPOSE OF EROSION MATTING IS TO HELP BIND SOIL PARTICLES TOGETHER SO THAT THEY CAN BETTER RESIST THE SHEAR STRESSES BUILT UP BY WATER FLOWING DOWN THE SLOPE. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE OR DURING INTERMITTENT PHASES OF CONSTRUCTION ACTIVITY.

SEEDING AND MULCHING

HAY MULCH SHOULD BE APPLIED TO EXPOSED SOIL AT THE END OF EACH WORK DAY. THIS WILL REQUIRE CAREFUL PLANNING OF THE PHASING OF EARTH MOVING. SEED AND HAY MULCH SHOULD BE APPLIED AS SOON AS NO MORE SOIL DISTURBANCE IS EXPECTED TO OCCUR, OF IF THE AREA IS TO BE WITHOUT CONSTRUCTION ACTIVITY FOR A PERIOD OF 14 DAYS. SEED AND HAY MULCH SHOULD BE APPLIED TO TOPSOIL STOCKPILES AS WELL AS TO AREAS OF DISTURBED SOIL. ALL EXPOSED AREAS SHALL BE APPROPRIATELY STABILIZED PRIOR TO A SIGNIFICANT RAIN EVENT.

SURFACE ROUGHENING

IF SURFACES OF SLOPES ARE LEFT ROUGH, THIS CAN HELP TO REDUCE WATER VELOCITY AND INCREASE INFILTRATION RATES. ROUGH SLOPES HOLD WATER, SEED, AND MULCH BETTER THAN SMOOTH SLOPES. SLOPE SURFACES CAN BE ROUGHENED BY RUNNING WHEELED CONSTRUCTION EQUIPMENT ACROSS THE SLOPE OR DRIVING TRACKED EQUIPMENT UP AND DOWN THE SLOPE. THE GROOVES CREATED BY THE CONSTRUCTION EQUIPMENT SHOULD RUN ACROSS THE SLOPE HORIZONTALLY AND NOT UP AND DOWN THE SLOPE. SLOPES CAN ALSO BE SCARIFIED TO PRODUCE THE DESIRED SURFACE ROUGHNESS. SURFACE ROUGHENING SHOULD OCCUR AFTER HAY MULCH HAS BEEN APPLIED.

STABILIZED CONSTRUCTION ENTRANCE

A STABILIZED PAD OF CRUSHED STONE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, SIDEWALK OR PARKING AREA. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY.

FINAL EROSION CONTROL MEASURES

SEED AND MULCH

SEEDING AND MULCHING IS ONE OF THE MOST EFFECTIVE MEANS OF CONTROLLING EROSION. THEREFORE, ALL EXPOSED SURFACES OUTSIDE OF THE ROADWAY LIMITS, WHICH ARE NOT SPECIFIED TO BE COVERED BY STONES OR SOME OTHER SUITABLE COVER, WILL BE SEEDED AND MULCHED.

DRAINAGE INLETS AND PIPES

DRAINAGE INLETS AND UNDERGROUND PIPES WILL BE INSTALLED AT SPECIFIED INTERVALS TO HELP CONVEY THE SURFACE WATER RUNOFF FROM THE ROADWAY SURFACE AND SURROUNDING LIMITED PERMEABILITY GROUND SURFACE TO THE STEVEN'S BRANCH OF THE WINOOSKI RIVER. THESE STRUCTURES HELP PREVENT UNDERMINED ROADWAY SURFACES AND LIMIT EROSION FROM UNCHANNELLED FLOW. DRAINAGE INLETS WILL BE INSTALLED AT: 93+53 LT, 93+78 LT, 93+78 RT, 94+40 LT, 94+65 RT, AND 97+64 LT. STONE OUTFLOW PADS WILL BE CONSTRUCTED AT 93+97 LT AND 98+24 LT. THESE PADS WILL HELP PREVENT THE CONCENTRATED FLOW LEAVING THE DRAINAGE PIPE FROM ERODING THE SOIL IN THE IMMEDIATE VICINITY OF THE END OF THE PIPE.

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT TO CONTROL EROSION AND MINIMIZE THE SEDIMENTATION OF RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ENSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS EROSION AND SEDIMENT CONTROL. EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS. THE CONTRACTOR WILL USE ADDITIONAL EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE ENGINEER. SEE SECTION 105.23 OF THE VERMONT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001.

INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN IN THE EROSION CONTROL PLAN OR AS DIRECTED BY THE ENGINEER. DO NOT MODIFY THE TYPE, SIZE OR LOCATION OF ANY CONTROL OR PRACTICE WITHOUT APPROVAL OF THE ENGINEER. ANY CHANGES SHALL BE NOTED ON THE PLANS, IN THE WEEKLY INSPECTION REPORT, AND REPORTED TO THE APPROPRIATE AUTHORITY IN A TIMELY MANNER. INSPECT ALL CONTROL MEASURES WEEKLY AND AFTER EACH RAINFALL EVENT. REPAIR OR REPLACE ANY DAMAGED MEASURES.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. THEREFORE, STABILIZE ALL DISTURBED AREAS PROMPTLY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY VEGETATION SHALL BE ESTABLISHED IF THE AREA IS TO BE WITHOUT CONSTRUCTION ACTIVITY FOR A PERIOD OF 14 DAYS. PERIMETER CONTROL MEASURES SHALL BE INSTALLED FOLLOWING CLEARING, BUT PRIOR TO THE START OF ANY GRUBBING OR GRADING ACTIVITY, INSTALL OTHER TEMPORARY CONTROLS IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

CONTROL ONLY SEDIMENT-LADEN RUNOFF GENERATED BY THE PROJECT SITE. COLLECT AND ROUTE CLEAN OFFSITE RUNOFF AROUND OR THROUGH THE PROJECT SITE USING DIVERSION BERMS, DIVERSION CHANNELS, CULVERTS AND/OR TEMPORARY PIPES.

DO NOT ALLOW CONSTRUCTION EQUIPMENT TO OPERATE ON THE DOWN SLOPE SIDE OF PERIMETER CONTROL MEASURES.

EROSION CONTROL NARRATIVE

PROJECT NAME:	BARRE TOWN	
PROJECT NUMBER:	ST 0147(16)	
FILE NAME: 05E290/Design/D05E290ERO	PLOT DATE: 18-MAR-2008	
PROJECT LEADER: R. THOMPSON	DRAWN BY: P.BEYOR	
DESIGNED BY: P. BEYOR	CHECKED BY:	
05E290ecl1	SHEET 10 OF 26	

EROSION PREVENTION AND SEDIMENT CONTROL PLAN GENERAL NOTES

1. CONTRACTOR'S RESPONSIBILITIES FOR EROSION PREVENTION AND SEDIMENT CONTROL

- A. THE CONTRACTOR SHALL PROVIDE A NARRATIVE AND PLAN SHEETS THAT ADDRESSES ALL ITEMS ON THE VTRANS CONTRACTOR'S CHECK LIST FOR EROSION PREVENTION AND SEDIMENT CONTROL
- B. PREVENT OR MINIMIZE SOIL EROSION OF DISTURBED LAND AND PREVENT THE DISCHARGE OF SEDIMENT AND OTHER CONSTRUCTION RELATED POLLUTANTS TO WATERS OF THE STATE.
- C. FURNISH, INSTALL, INSPECT AND MAINTAIN EROSION AND SEDIMENT CONTROL MATERIALS IN CONJUNCTION WITH THE GENERAL CLEARING, GRADING AND EXCAVATION OF THE SITE.
- D. ESTABLISH LIMITS OF SOIL DISTURBANCE; LOCATION(S) OF TOPSOIL STOCKPILES; CONSTRUCTION STAGING AREAS; STORAGE AREAS; REFUELING AND MAINTENANCE AREAS.
- E. ESTABLISH AND MARK BOUNDARIES FOR ANY UNDISTURBED RIPARIAN BUFFER ZONES AND MAINTAIN ALL EXISTING STREAMS AND RIPARIAN BUFFER ZONES IN THEIR NATURAL CONDITION, EXCEPT IN THE AREA OF STREAM WORK.
- F. SEQUENCE CONSTRUCTION ACTIVITIES TO MINIMIZE THE EXTENT OF DISTURBED SOILS LEFT OPEN TO EROSION AT ANY GIVEN TIME AS DETAILED IN THE CONSTRUCTION PHASING AND EROSION AND SEDIMENT CONTROL PLANS.
- G. MAINTAIN AND PRESERVE TO THE EXTENT POSSIBLE THE SITE'S NATURAL DRAINAGE WAYS THAT CONVEY STORMWATER TO STREAMS, RIVERS, LAKES, PONDS AND WETLANDS.
- H. PREVENT OFF-SITE STORMWATER FROM ENTERING AREAS OF DISTURBED SOIL ON-SITE.
- I. PREVENT THE OFF-SITE DISCHARGE OF SEDIMENT MOBILIZED ON THE CONSTRUCTION SITE, INCLUDING OFF-SITE TRACKING OF SEDIMENT ONTO PAVED PUBLIC OR PRIVATE ROADWAYS BY CONSTRUCTION VEHICLES.
- J. DISPOSE OF SEDIMENTS AND OTHER POLLUTANTS WHICH HAVE BEEN COLLECTED AND REMOVED IN THE COURSE OF STORMWATER TREATMENT IN A MANNER THAT WILL NOT RESULT IN THE SEDIMENTS AND POLLUTANTS ENTERING WATERS OF THE STATE. DISPOSAL SITES REQUIRE RELATIVELY LEVEL TERRAIN WITH AN ISOLATION DISTANCE OF AT LEAST 100 FEET FROM ANY SURFACE WATERS, INCLUDING WETLANDS.

2. LIMITATIONS AND PROHIBITIONS

- A. ANY PROPOSED SOIL DISTURBANCE AND EARTHWORKS BETWEEN OCTOBER 15 AND MAY 1 WILL REQUIRE DEVELOPMENT OF A SPECIAL WINTER EROSION AND SEDIMENT CONTROL PLAN ADDRESSING THE SPECIFIC CONCERNS OF WINTER CONSTRUCTION.
- B. DISCHARGES OF ANY MATERIAL OTHER THAN STORM WATER, SUCH AS VEHICLE AND EQUIPMENT MAINTENANCE SPILLS, FUELS, WASH WATER, CONSTRUCTION DEBRIS, OIL, WET CONCRETE (INCLUDING WASHOUT WATER FROM CONCRETE BATCH TRUCKS OR EQUIPMENT USED TO MIX CONCRETE), AND OTHER SUBSTANCES, ARE PROHIBITED.
- C. DISPOSAL OF SEDIMENT IN A WETLAND OR ANY CORRECTIVE ACTION UNDERTAKEN TO REMOVE SEDIMENT FROM A WETLAND IS PROHIBITED.
- D. THE FAILURE TO PROMPTLY ABATE THE DISCHARGE OF SEDIMENT OR ANY OTHER WASTE WHICH CAUSES A VISIBLE DISCOLORATION OF SURFACE WATERS (INCLUDING WETLANDS), OR IS FOUND TO BE EXCEEDING WATER QUALITY STANDARDS BASED ON MONITORING, IS PROHIBITED.

3. GENERAL CONSTRUCTION NOTES

- A. VEHICLE AND EQUIPMENT STORAGE AREAS OR AREAS ADJACENT TO CONSTRUCTION TRAILER OR OTHER HIGH TRAFFIC AREAS SHALL BE COVERED WITH GEOTEXTILE FABRIC AND 12 INCHES OF GRAVEL. FOLLOWING COMPLETION OF CONSTRUCTION, ALL NON-NATIVE MATERIALS SHALL BE REMOVED FROM THE STAGING AREA. COMPACTED, RUTTED, OR OTHERWISE DISTURBED SOILS SHALL BE TILLED, RAKED, SEEDED AND MULCHED.
- C. ALL EXPOSED AREAS WHICH WILL NOT RECEIVE FURTHER DISTURBANCE FOR A PERIOD OF 7 DAYS OR MORE SHALL BE TEMPORARILY STABILIZED WITH MULCH.
- D. ALL EXPOSED AREAS SHALL BE PERMANENTLY STABILIZED WITH EROSION CONTROL MATTING WITHIN 48 HOURS OF REACHING FINAL GRADE.

4. MONITORING EROSION PREVENTION AND SEDIMENT CONTROL PLAN

- A. THE CONTRACTOR SHALL DESIGNATE A PERSON, ON - SITE PLAN COORDINATOR (OPC), WHO IS DIRECTLY RESPONSIBLE FOR THE ON-SITE IMPLEMENTATION OF THE PLAN. THIS PERSON SHALL GENERALLY BE ON - SITE ON A DAILY BASIS DURING ACTIVE CONSTRUCTION AND HAVE THE AUTHORITY TO HALT CONSTRUCTION ACTIVITIES IF NECESSARY. THE QUALIFICATIONS OF THE OPC SHALL BE INCLUDED IN AND ACCEPTED UPON APPROVAL OF THE PLAN. HOWEVER, THE ENGINEER, IF NOT SATISFIED WITH THE PERFORMANCE MAY AT ANY TIME REQUEST A REPLACEMENT.
- B. THE OPC SHALL BE RESPONSIBLE FOR INSPECTIONS AND REPORTING. THE AGENCY'S EROSION PREVENTION AND SEDIMENT CONTROL WEEKLY PLAN REVIEW SHALL BE COMPLETED TO INFORM THE AGENCY OF THE STATUS OF THE PROJECT WITH REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL. THE AGENCY'S STORM EVENT MONITORING REPORT SHALL BE COMPLETED TO PROVIDE INFORMATION REGARDING THE EFFECTIVENESS OF THE PLAN DURING A STORM EVENT. SHEET 1 OF THE REPORT SHALL BE COMPLETED WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE STORMWATER TO LEAVE THE CONSTRUCTION SITE. BOTH SHEETS 1 AND 2 OF THE REPORT SHALL BE COMPLETED IF THERE IS EVIDENCE OF SEDIMENT OR SEDIMENT LADEN WATER LEAVING THE CONSTRUCTION SITE OR ENTERING SURFACE WATERS (INCLUDING WETLANDS). IMMEDIATE ACTION SHALL BE TAKEN TO CORRECT THE DISCHARGE OF SEDIMENT, INCLUDING HALTING OR REDUCING CONSTRUCTION ACTIVITIES AS NECESSARY UNTIL THE DISCHARGE AND/OR THE CONDITION IS FULLY CORRECTED. CORRECTIVE ACTIONS SHALL BE RECORDED ON MONITORING REPORTS AND SHOWN ON THE PLAN. EACH REPORT SHALL BE SIGNED BY THE OPC.
- C. MONITORING OF EROSION PREVENTION AND SEDIMENT CONTROL MEASURES FOR MULTI YEAR PROJECTS AND PROJECTS THAT HAVE NOT BEEN ACCEPTED DUE TO INSUFFICIENT ESTABLISHMENT OF VEGETATION SHALL BE CONDUCTED THROUGHOUT THE WINTER SEASON. THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO CONDUCTING ANY REVIEWS, AND THE REVIEWS SHALL BE CONDUCTED AT LEAST ONCE EVERY OTHER WEEK, AND AFTER ANY MAJOR STORM EVENT GREATER THAN 1/2 INCH OF RAIN IN A 24 HOUR PERIOD OR A SIGNIFICANT SNOW MELT EVENT. COPIES OF THE INSPECTION REPORTS SHALL BE SUBMITTED TO THE ENGINEER AS COMPLETED TO BE KEPT IN THE PROJECT FILES.

5. MAINTENANCE

- A. THE CONTRACTOR SHALL REPAIR ALL EROSION AND SEDIMENT CONTROL STRUCTURES AND MEASURES THAT ARE DETERMINED TO BE FAILING, OR NOT FUNCTIONING AS DESIGNED, WITHIN 24 HOURS OF INSPECTION.
- B. THE CONTRACTOR SHALL REMOVE ACCUMULATED SEDIMENT FROM CONTAINMENT SYSTEMS AND OTHER SEDIMENT CONTROL STRUCTURES AS REQUIRED, SUCH THAT PERFORMANCE OF THESE SYSTEMS IS NOT COMPROMISED OR IN ANY WAY IMPAIRED.
- C. THE CONTRACTOR SHALL REMOVE ALL DEBRIS AND REPAIR ALL DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION EQUIPMENT AT OR BEFORE THE END OF EACH WORKING DAY.

EROSION CONTROL GENERAL NOTES

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	ST 0147(16)
FILE NAME: 05E290/Design/D05E290ERO	PLOT DATE: 18-MAR-2008
PROJECT LEADER: R. THOMPSON	DRAWN BY: P.BEYOR
DESIGNED BY: P. BEYOR	CHECKED BY:
05E290ecl1	SHEET II OF 26

GEOTEXTILE FOR SILT FENCE

FRONTAGE ROAD
 STA. 90+75 TO 91+00 LT
 STA. 91+00 LT (99')
 STA. 91+03 TO 92+03 LT
 STA. 90+77 TO 93+77 RT
 STA. 92+72 TO 93+57 LT
 STA. 93+71LT (66')
 STA. 93+92 LT (65')
 STA. 94+42 TO 97+62 LT
 STA. 94+68 TO 96+88 RT
 STA. 98+23 CL (49')

FORD DRIVE
 STA. 700+23 TO 701+10 RT
 STA. 701+10 CL (118')

TURN AROUND
 STA. 500+16 TO 500+72 RT
 STA. 500+32 TO 500+73 LT
 STA. 500+73 CL (60')

VT 14
 STA. 42+06 TO 43+79 LT
 STA. 46+01 TO 47+15 LT

SNOW FENC (MOD. - PDF)

FRONTAGE ROAD
 STA. 91+14 TO 93+60 LT
 STA. 90+87 TO 93+77 RT
 STA. 93+60 LT (70')
 STA. 94+03 LT (60')
 STA. 94+03 TO 97+62 LT
 STA. 94+68 TO 96+88 LT
 STA. 98+23 CL (49')

TURN AROUND
 STA. 500+16 TO 500+72 RT
 STA. 500+32 TO 500+73 LT
 STA. 500+73 CL (60')

VT 14
 STA. 42+03 TO 47+06 LT

STONE FILL TYPE I
 (MOD. - INLET PROTECTION)

FRONTAGE ROAD
 STA. 93+53 LT
 STA. 93+79 LT
 STA. 93+79 RT
 STA. 94+40 LT
 STA. 94+65 RT
 STA. 97+64 LT

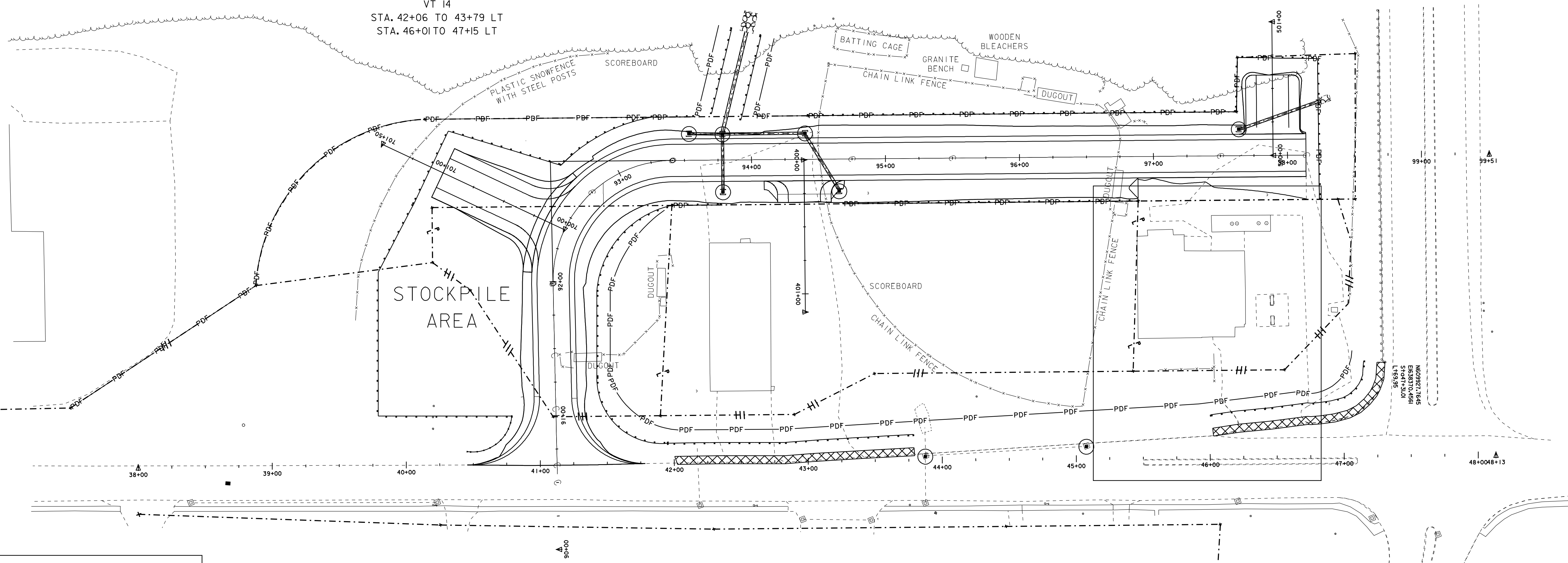
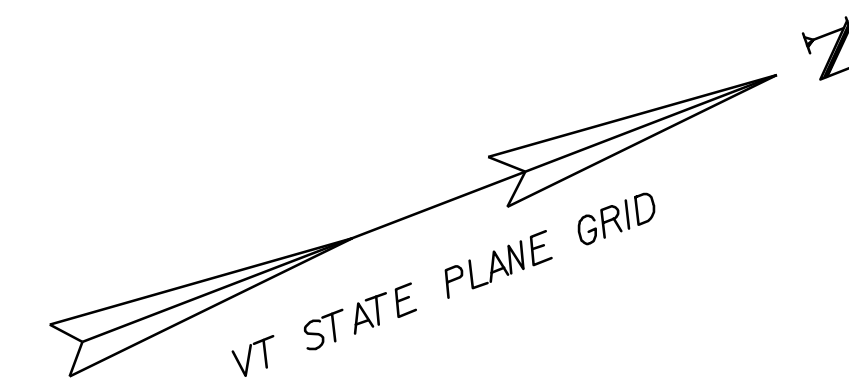
VT 14
 STA. 43+88 LT
 STA. 45+08 LT

STONE FILL TYPE I
 (MOD. - CONSTRUCTION ENTRANCE)

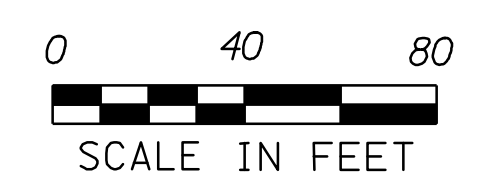
FRONTAGE ROAD
 STA. 90+64 TO 91+14 CL (30 CY)

STONE FILL TYPE II

FRONTAGE ROAD
 STA. 93+97 LT (11CY)
 STA. 98+24 (3 CY)

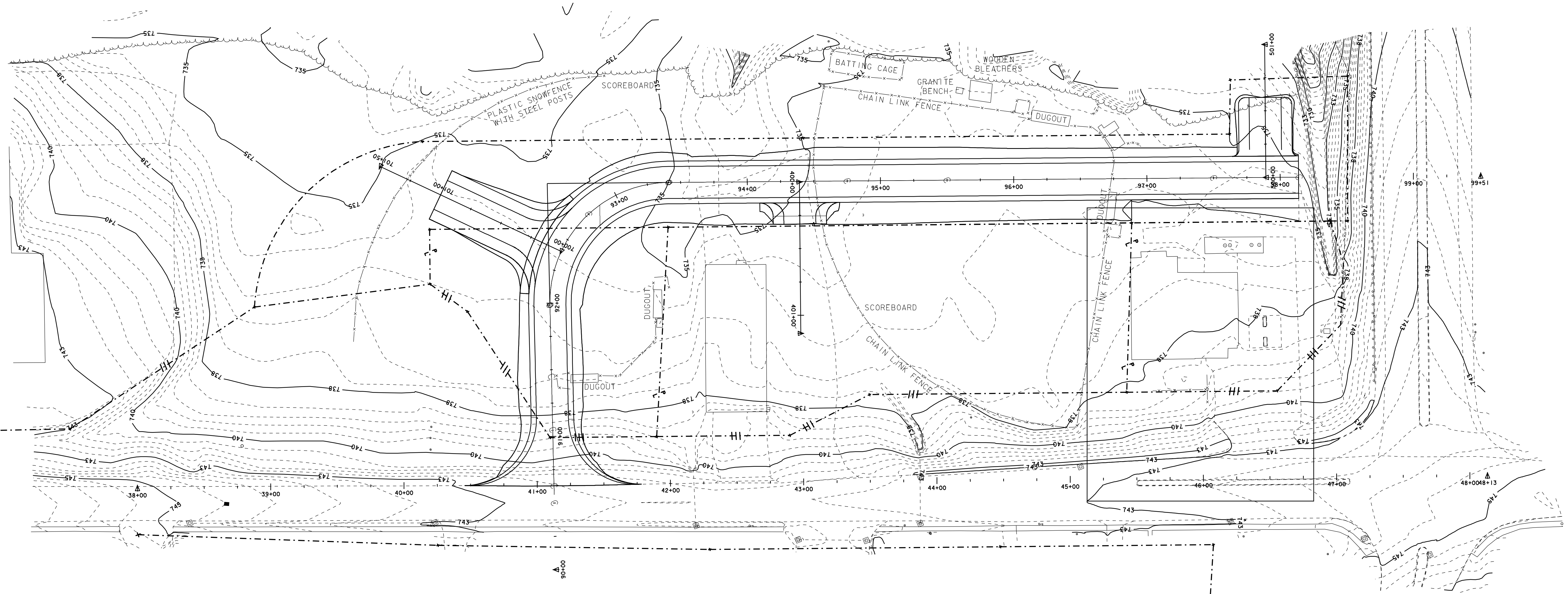
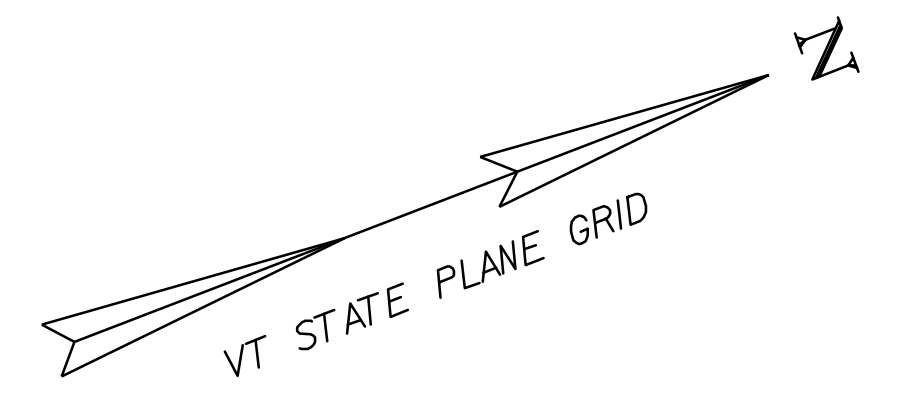


	INLET PROTECTION
	OUTLET PROTECTION
	SILT FENCE
	PROJECT DEMARCATION FENCE
	ADDITIONAL DISTURBANCE



EROSION CONTROL LAYOUT SHEET

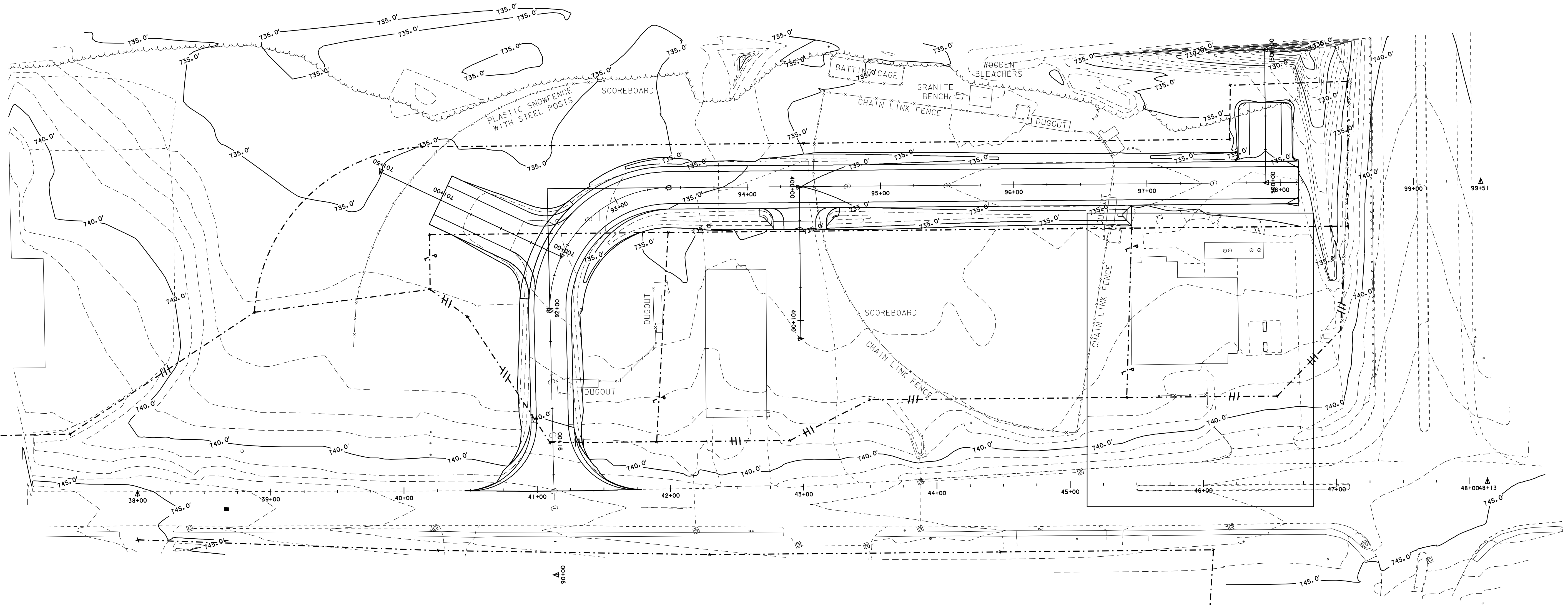
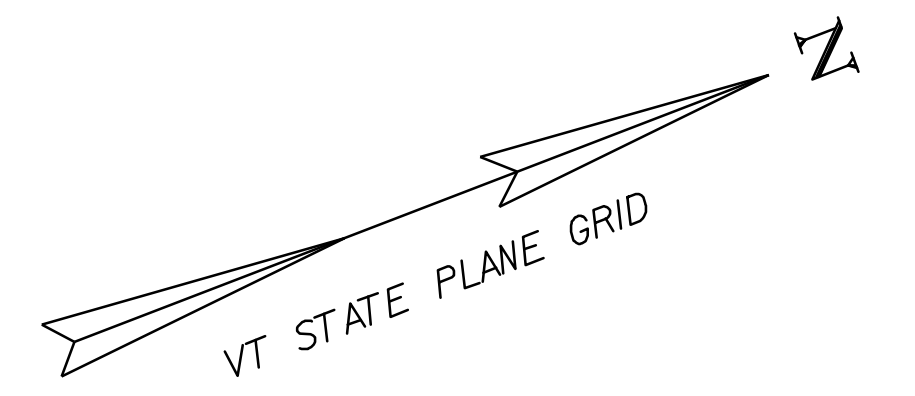
PROJECT NAME:	BARRE TOWN	PLOT DATE:	18-MAR-2008
PROJECT NUMBER:	ST 0147(16)	DRAWN BY:	P. PELOQUIN
FILE NAME:	05E290/Design/D05E290ERO	DESIGNED BY:	P. PELOQUIN
DESIGNED BY:	P. PELOQUIN	CHECKED BY:	
05e290ec3.i		SHEET 12	OF 26



EXISTING CONTOURS SHEET



PROJECT NAME:	BARRE TOWN	FILE NAME:	05E290/Design/D05E290ERO	PLOT DATE:	18-MAR-2008
PROJECT NUMBER:	ST 0147(16)	PROJECT LEADER:	R. THOMPSON	DRAWN BY:	P. BEYOR
		DESIGNED BY:	P. BEYOR	CHECKED BY:	
			05e290ec4.i	SHEET 13	OF 26



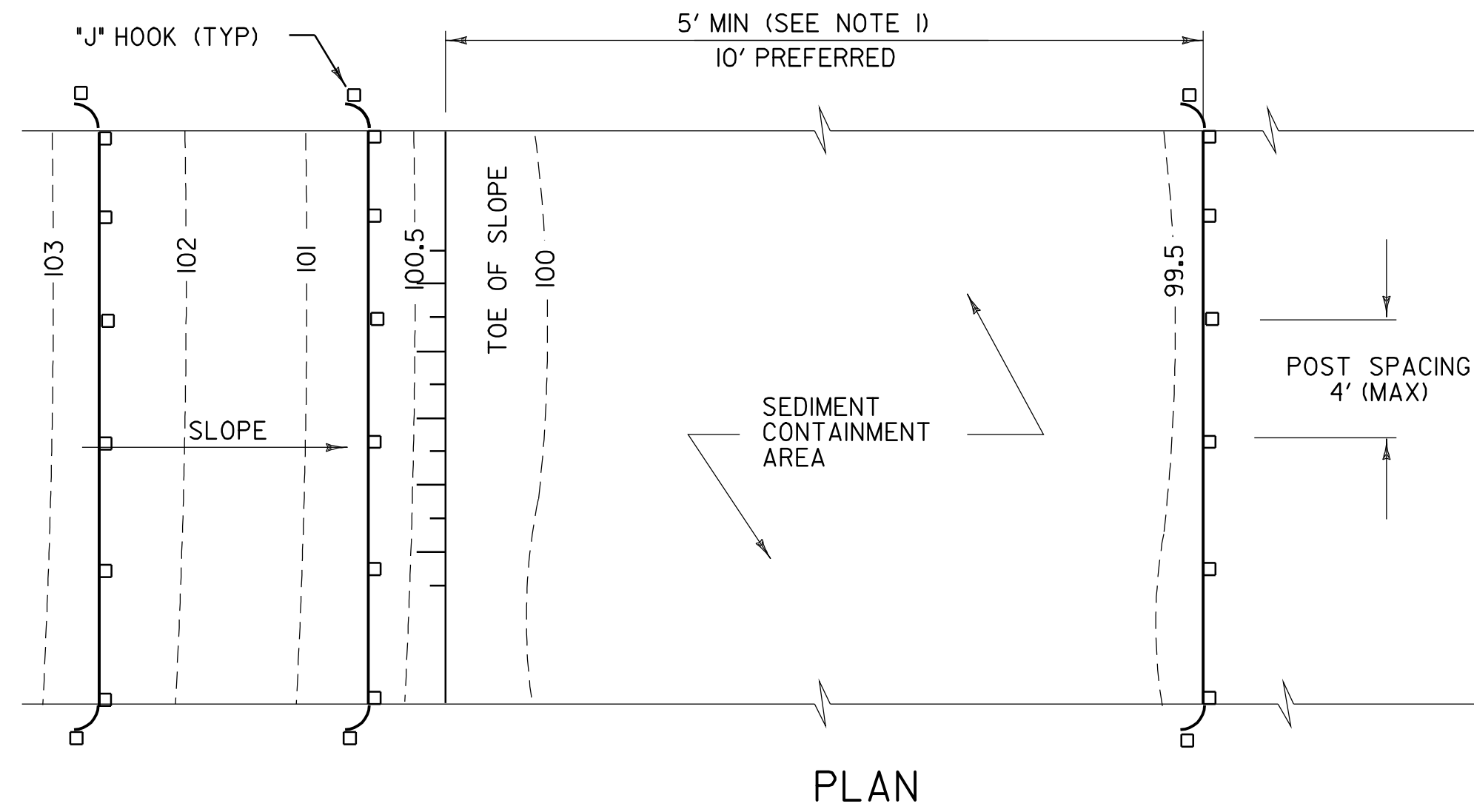
PROPOSED CONTOUR SHEET



PROJECT NAME:	BARRE TOWN	FILE NAME:	05E290/Design/D05E290ERO	PLOT DATE:	18-MAR-2008
PROJECT NUMBER:	ST 0147(16)	PROJECT LEADER:	R. THOMPSON	DRAWN BY:	P. BEYOR
		DESIGNED BY:	P. BEYOR	CHECKED BY:	
		05e290ec5.i		SHEET 14	OF 26

EROSION PREVENTION & SEDIMENT CONTROL DETAILS

SILT FENCE



PLAN

APPLICATION NOTES:

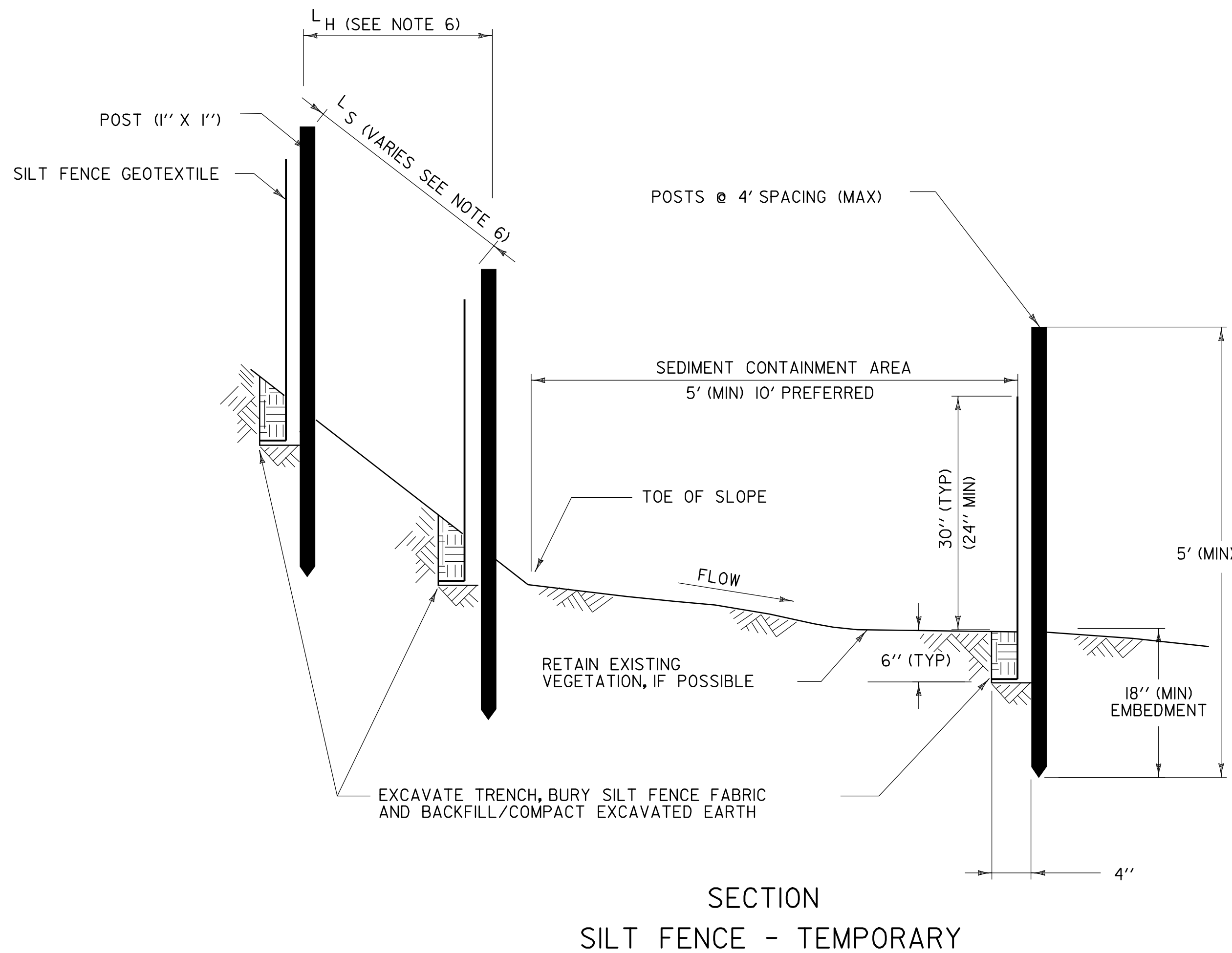
- A. THE PRIMARY PURPOSE OF SILT FENCE IS TO REDUCE RUNOFF VELOCITY AND TRAP SEDIMENT. VELOCITY IS REDUCED, WATER IS IMPOUNDED BEHIND THE MEASURE, AND SEDIMENT FALLS OUT OF SUSPENSION.
- B. SILT FENCE SHALL BE INSTALLED ON A LINE OF EQUAL ELEVATION (CONTOUR). IT MAY BE INSTALLED AT INTERMEDIATE POINTS UP SLOPES AS WELL AS AT THE BOTTOM, AS SHOWN IN THE DETAIL.
- C. SILT FENCE SHALL NOT BE USED ACROSS CONCENTRATED FLOW.

GENERAL NOTES:

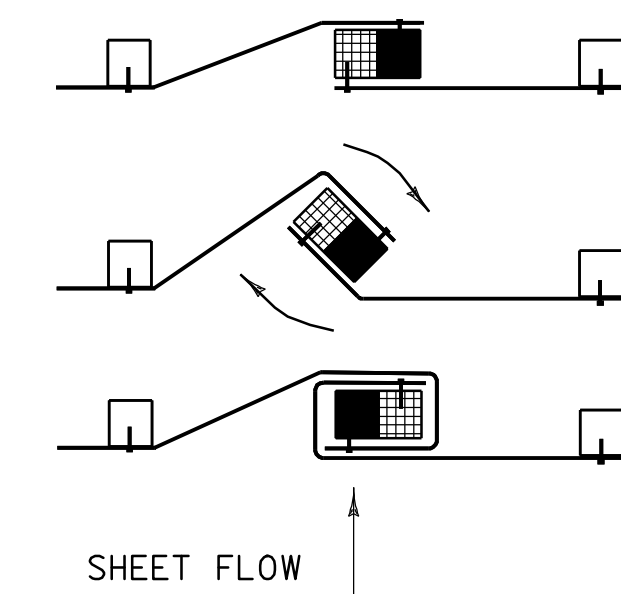
1. SILT FENCE SHALL GENERALLY BE PLACED A MINIMUM OF 5 FEET BEYOND TOE OF SLOPE, 10 FEET PREFERRED, TO PROVIDE ADEQUATE AREA FOR SEDIMENT STORAGE AND FACILITATE MAINTENANCE OF SEDIMENT CONTAINMENT AREA.
2. ALL ENDS SHALL BE 'J' HOOKED TO TRAP SEDIMENT.
3. IN AREAS WITH TWO SLOPES, SILT FENCE SHALL BE USED TO ERECT A DAM AND TRAP SEDIMENT AT THE BASE OF THE STEEPER SLOPE.
4. THE BOTTOM EDGE OF SILT FENCE SHALL BE BURIED A MINIMUM OF 6 INCHES BELOW GROUND, AND KEYED IN 4 INCHES. THE FENCE SHALL BE INSTALLED WITH THE POSTS ON THE DOWNSTREAM SIDE OF THE FABRIC.
5. MAXIMUM DRAINAGE AREA TRIBUTARY TO 100 FEET OF SILT FENCE SHALL BE 0.25 ACRES.
6. THE FOLLOWING ARE MAXIMUM SLOPE LENGTHS FOR THESE MEASURES:

CONSTRUCTED SLOPE	SLOPE LENGTH (LS) FT	HORIZONTAL LENGTH (LH) FT
3 - 1	80	75
4 - 1	130	125
5 - 1	200	200
> 5 - 1	250	250

7. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
8. MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
9. SILT FENCE SHALL BE REMOVED WHEN THE AREA HAS BEEN STABILIZED. AT TIME OF REMOVAL OF THE SILT FENCE, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
10. PAYMENT FOR INSTALLATION AND REMOVAL OF SILT FENCE SHALL BE MADE UNDER THE GEOTEXTILE FOR SILT FENCE ITEM.
11. PAYMENT FOR MONITORING SILT FENCE SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.



SECTION
SILT FENCE - TEMPORARY



SPlicing DETAIL

1. PLACE THE END POST OF ONE FENCE INSIDE THE END POST OF THE OTHER FENCE.
2. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL
3. DRIVE BOTH POSTS 18 INCHES INTO THE GROUND AND BURY THE FLAP IN THE TRENCH.

SILT FENCE DETAIL

N.T.S.

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: ST 0147(16)

FILE NAME: 05E290/Design/D05E290E00 PLOT DATE: 18-MAR-2008
PROJECT LEADER: R. THOMPSON DRAWN BY: P.BEYOR
DESIGNED BY: P. BEYOR CHECKED BY:
05E290ec6.1 SHEET 15 OF 26

EROSION PREVENTION & SEDIMENT CONTROL DETAILS

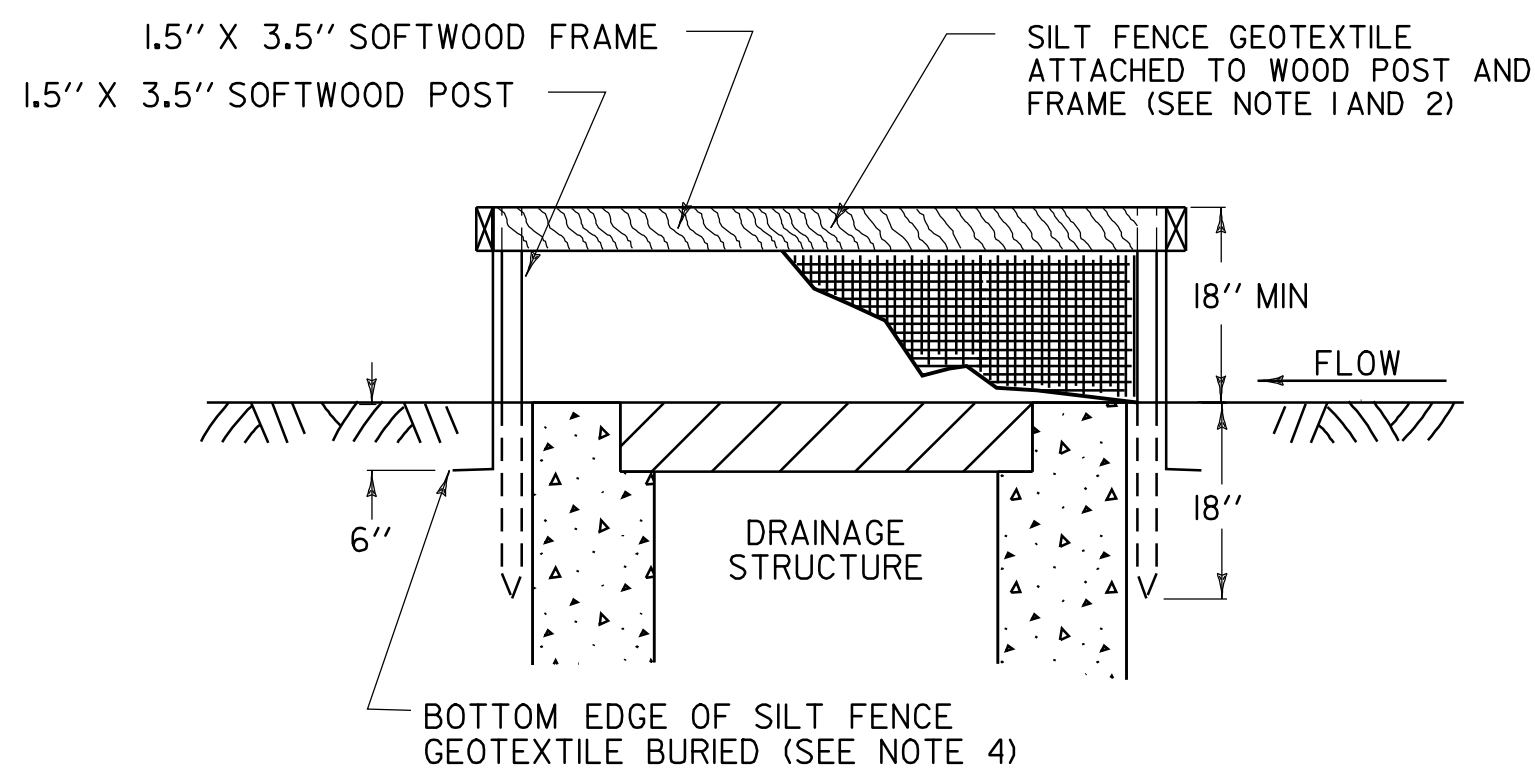
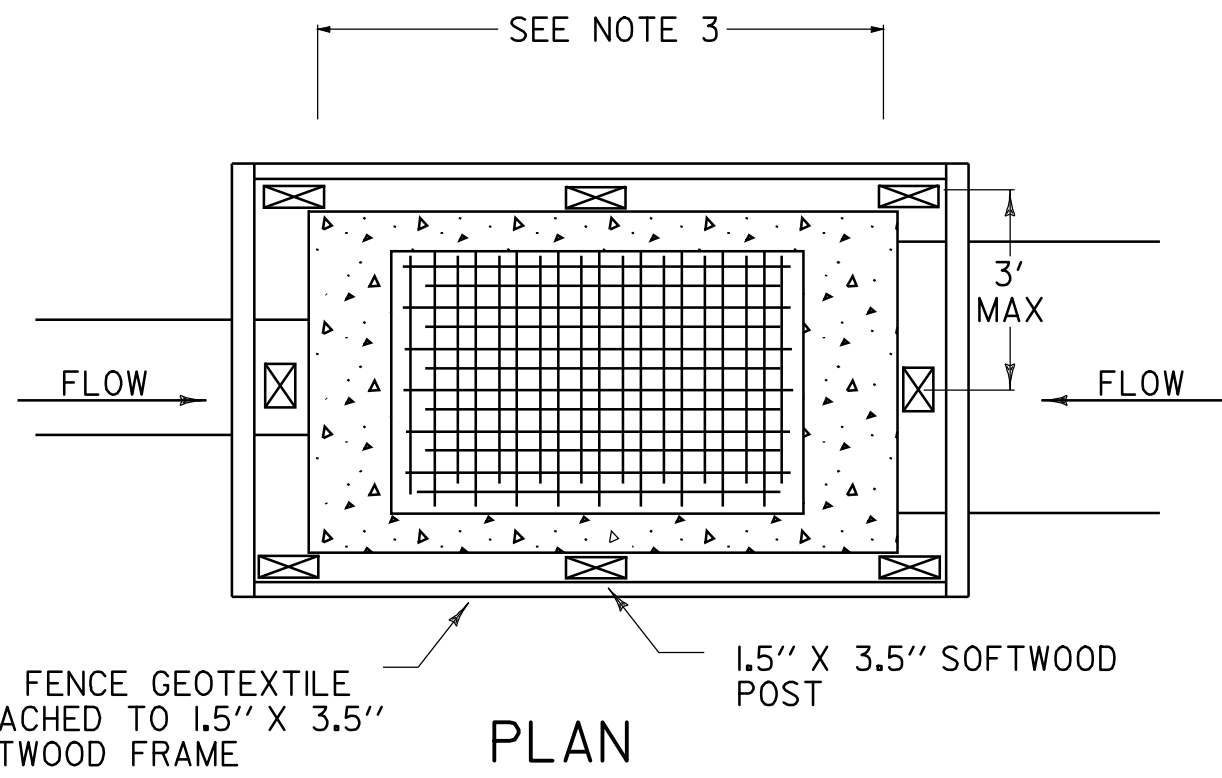
DROP INLET PROTECTION

APPLICATION NOTES:

- A. THE PRIMARY PURPOSE OF DRAINAGE STRUCTURE INLET PROTECTION IS TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM BY PONDING WATER WHICH ALLOWS SEDIMENT TO FALL OUT OF SUSPENSION.
- B. THESE EXAMPLES OF DROP INLET PROTECTION ARE NOT INTENDED FOR USE ON GRADES. ON GRADE THEY MAY CAUSE WATER TO BYPASS THE STRUCTURE, CREATING ADDITIONAL EROSION OR FLOODING.
- C. POSSIBLE MODIFICATIONS FOR USE ON GRADE INCLUDE ADDING A BERM DOWNSTREAM OF THE INLET TO CREATE PONDING. CHECK DAMS MAY ALSO BE USED UPSTREAM OF THE INLET TO SLOW VELOCITIES.
- D. PREFABRICATED DROP INLET PROTECTION SPECIFICATIONS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

GENERAL NOTES:

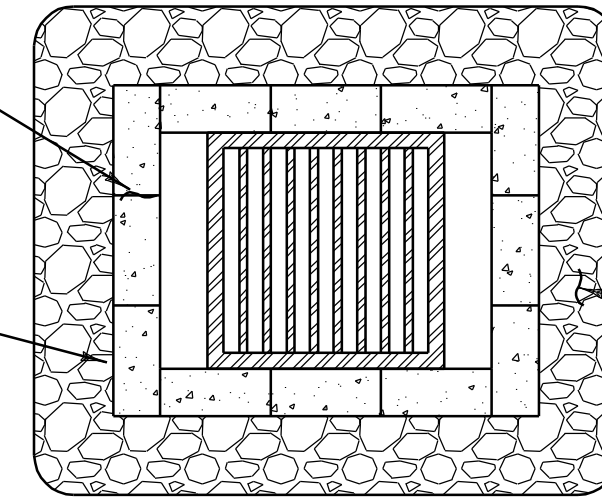
1. THE TOP OF THE INLET PROTECTION SHALL BE SET AT THE MAXIMUM DESIRED WATER LEVEL, BASED ON FIELD LOCATION AND CONDITIONS.
2. SILT FENCE GEOTEXTILE SHALL BE A SINGLE CONTINUOUS PIECE TO ELIMINATE JOINTS.
3. SPACE SILT FENCE POSTS EVENLY AROUND INLET WITH A MAXIMUM SPACING OF 3 FEET. DRIVE POSTS A MINIMUM OF 18 INCHES INTO GROUND. WIRE MESH MAY BE REQUIRED BEHIND GEOTEXTILE TO PROVIDE SUPPORT.
4. SILT FENCE GEOTEXTILE SHALL BE EMBEDDED A MINIMUM OF 6 INCHES AND BACKFILLED. GEOTEXTILE SHALL BE SECURELY FASTENED TO POSTS AND FRAME.
5. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
6. MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED, SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
7. PAYMENT FOR SILT FENCE DROP INLET PROTECTION SHALL BE MADE UNDER GEOTEXTILE FOR SILT FENCE. PAYMENT FOR ROCK BARRIER DROP INLET PROTECTION SHALL BE MADE UNDER STONE FILL, TYPE I (MOD - INLET PROTECTION).
8. PAYMENT FOR MONITORING INLET PROTECTION SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.



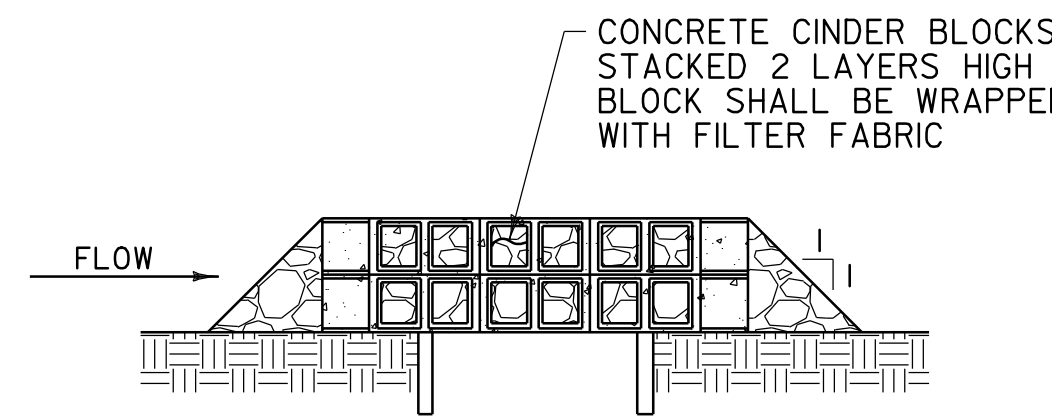
SILT FENCE DROP INLET PROTECTION

PLACE CONCRETE "CINDER" BLOCKS AROUND THE DRAINAGE STRUCTURE SO THAT OPEN AREAS OF BLOCKS ALLOW FLOW TO REACH THE GRATE.

PLACE FILTER FABRIC AROUND THE CONCRETE BLOCKS TO PREVENT CRUSHED STONE FROM ENTERING OPEN AREAS OF BLOCKS.



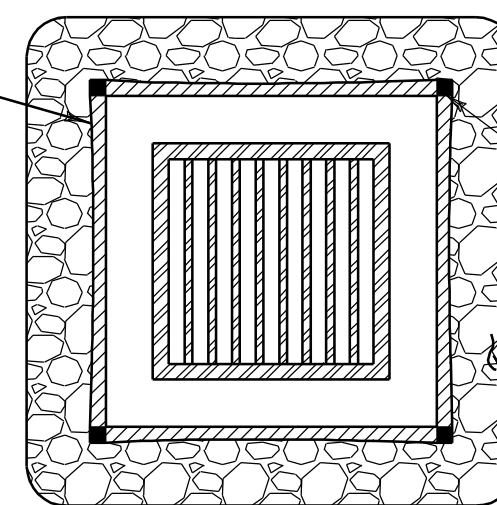
PLAN



SECTION

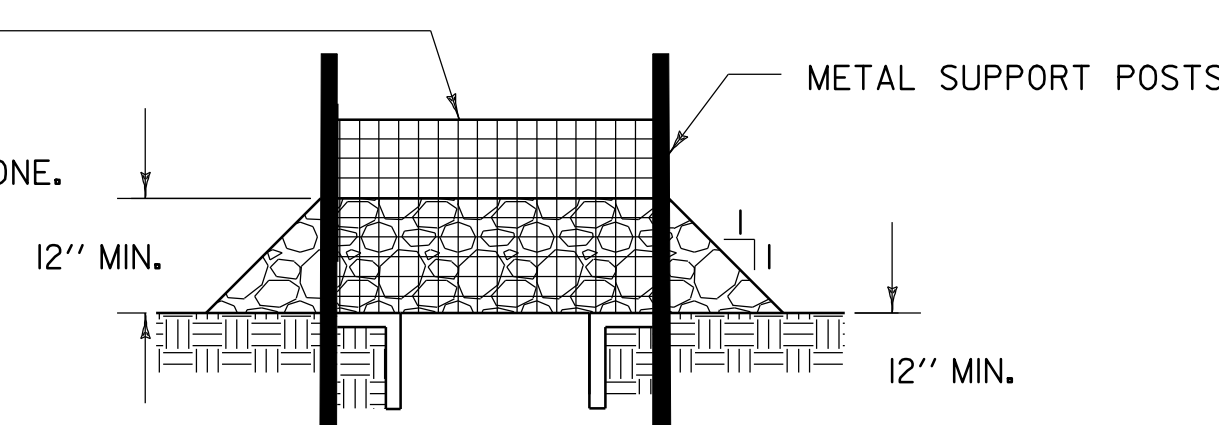
ROCK BARRIER DROP INLET PROTECTION
TEMPORARY PAVED AREAS

PLACE FILTER FABRIC AROUND THE WIRE MESH TO PREVENT CRUSHED STONE FROM ENTERING THE DROP INLET.



PLAN

WIRE MESH FENCE WITH 0.5" MAX. OPENINGS. FENCE WILL BE WRAPPED WITH FILTER FABRIC. SECURE TIGHTLY TO METAL SUPPORT POSTS BEFORE PLACEMENT OF CRUSHED STONE.



SECTION

ROCK BARRIER INLET PROTECTION
TEMPORARY UNPAVED AREAS

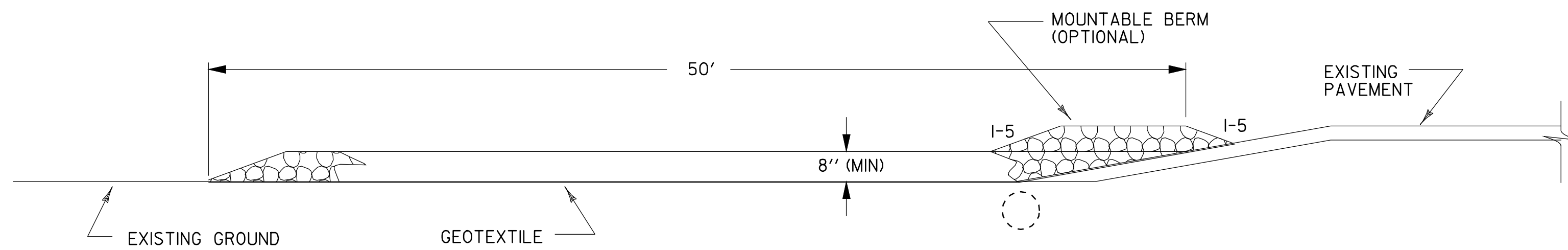
DROP INLET PROTECTION DETAIL

PROJECT NAME:	BARRE TOWN
PROJECT NUMBER:	ST 0147(16)
FILE NAME: 05E290/Design/D05E290ERO	PLOT DATE: 18-MAR-2008
PROJECT LEADER: R. THOMPSON	DRAWN BY: P.BEYOR
DESIGNED BY: P. BEYOR	CHECKED BY:
D05E290ec7.1	SHEET 16 OF 26

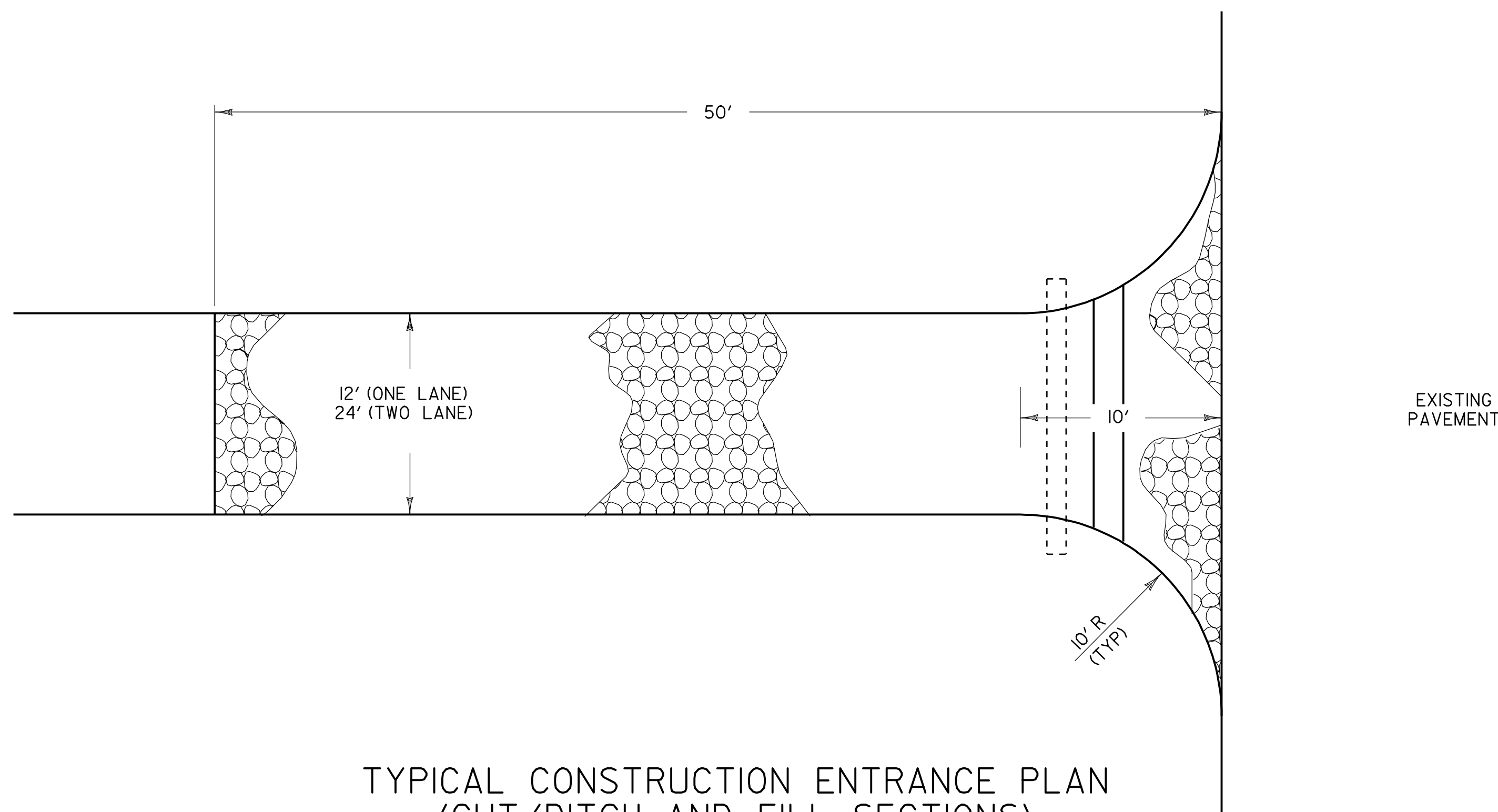
N.T.S.

EROSION PREVENTION & SEDIMENT CONTROL DETAILS

CONSTRUCTION ENTRANCE



TYPICAL CONSTRUCTION ENTRANCE PROFILE
(CUT AND DITCH SECTIONS)



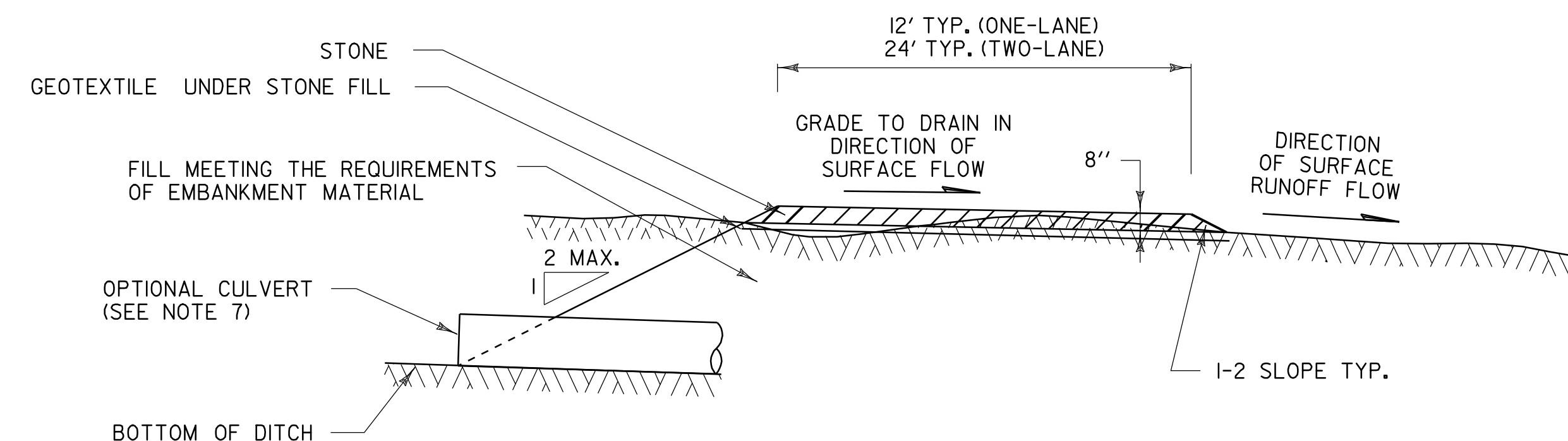
TYPICAL CONSTRUCTION ENTRANCE PLAN
(CUT/DITCH AND FILL SECTIONS)

APPLICATION NOTES:

A. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY OR STREETS.

GENERAL NOTES:

1. STONE SIZE - USE CLEAN STONE WITH GRADATION BETWEEN 2 INCHES AND 4 INCHES .
2. LENGTH - 50 FEET (MIN)
3. THICKNESS - 8 INCHES (MIN)
4. WIDTH - 12 FEET (MIN)
5. GEOTEXTILE UNDER STONE WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE AS DIRECTED BY THE ENGINEER. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 1-5 SLOPES WILL BE PERMITTED.
7. PROPOSED DRAINAGE PIPE SHALL BE SIZED WITH SUFFICIENT CAPACITY TO CARRY DITCH FLOWS. ALTERNATIVE WAYS OF TRANSPORTING DITCH DRAINAGE ACROSS CONSTRUCTION ENTRANCES MAY BE PROPOSED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
8. WHEN WASHING OF VEHICLE IS NECESSARY, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
10. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
11. AT THE TIME OF REMOVAL OF THE STABILIZED CONSTRUCTION ENTRANCE THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
12. PAYMENT OF THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MADE UNDER STONE FILL, TYPE I (MOD - CONSTRUCTION ENTRANCE).
13. PAYMENT FOR MONITORING STABILIZED CONSTRUCTION ENTRANCES SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.



TYPICAL CONSTRUCTION ENTRANCE SECTION

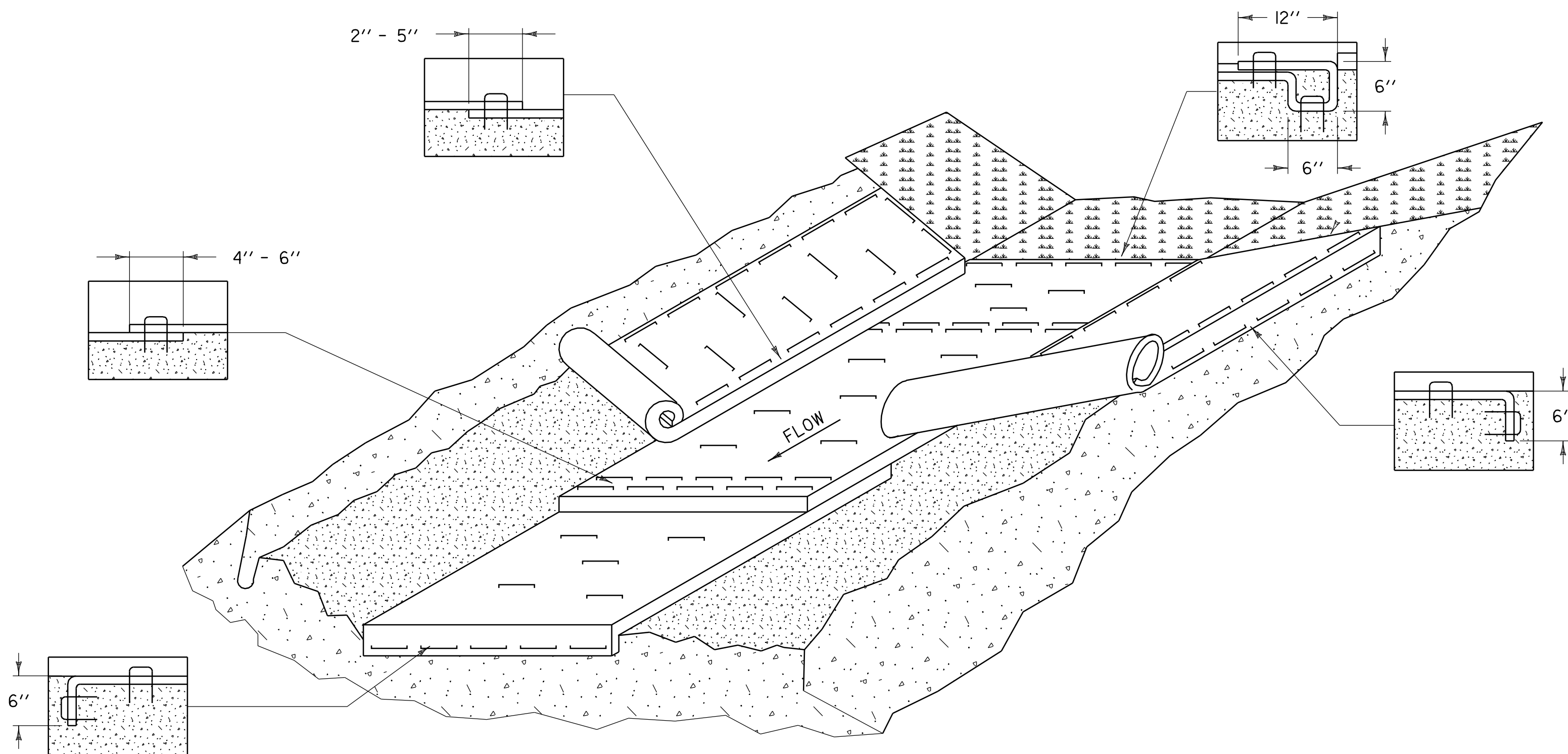
CONSTRUCTION ENTRANCE DETAIL

PROJECT NAME:	BARRE TOWN	
PROJECT NUMBER:	ST 0147(16)	
FILE NAME: 05E290/Design/D05E290ERO	PLOT DATE: 18-MAR-2008	
PROJECT LEADER: R. THOMPSON	DRAWN BY: P.BEYOR	
DESIGNED BY: P. BEYOR	CHECKED BY:	
D05E290ec8.1	SHEET 17	OF 26

N.T.S.

EROSION PREVENTION & SEDIMENT CONTROL DETAILS

DITCH & SLOPE PROTECTION



EROSION PROTECTION FOR DITCHES

APPLICATION NOTES:

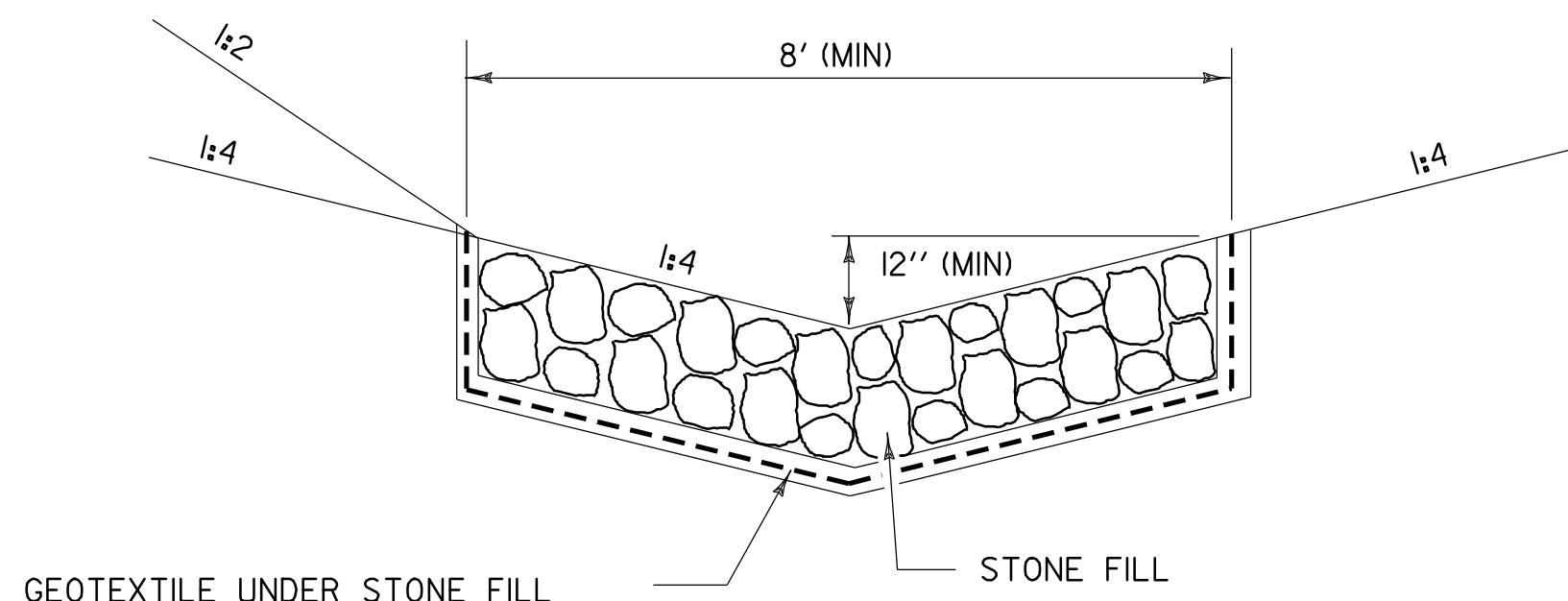
- A. THE PURPOSE OF LINING THE DITCH WITH EROSION MATTING IS TO REDUCE EROSION AND AID THE ESTABLISHMENT OF VEGETATION AT LOW VELOCITIES.
- B. THE FOLLOWING CHARTS SHALL BE USED TO DETERMINE THE APPROPRIATE EROSION CONTROL MEASURE:

DITCH AND CHANNEL PROTECTION	
SLOPE	LINING
< 1%	GRASS
1% TO 4%	EROSION MATTING
4% TO 10%	STONE FILL, TYPE I
> 10%	STONE FILL, TYPE II

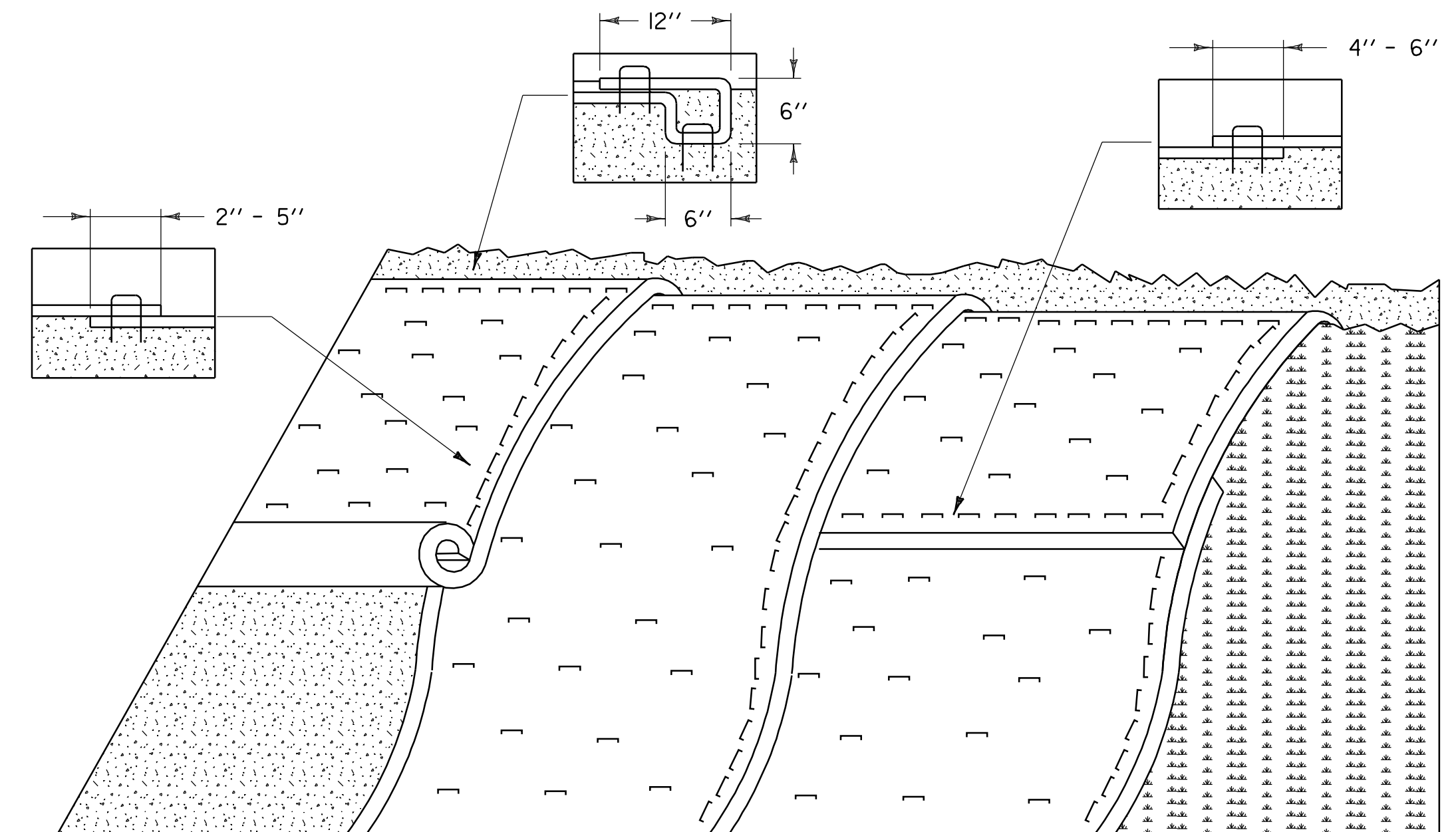
STONE FILL THICKNESS	
STONE FILL TYPE	THICKNESS
TYPE I	1 FT
TYPE II	2 FT

GENERAL NOTES:

1. WATER MAY NEED TO BE DIVERTED TO ALLOW PROPER MATTING INSTALLATION.
2. GRADE AND SMOOTH CHANNEL TO PROVIDE GOOD MATTING TO SOIL SURFACE CONTACT.
3. APPLY FERTILIZER, LIME, AND SEED PRIOR TO PLACING MATTING.
4. INSTALL MATTING IN THE CENTER OF THE CHANNEL, IN THE DIRECTION OF THE WATER FLOW.
5. INSTALL MATTING ON THE SIDE SLOPES OF THE CHANNEL, OVERLAPPING THE CENTER MAT.
6. ANCHOR MATTING AS SHOWN, UTILIZING ANCHOR STAPLES. STAPLE PLACEMENT SHALL BE DETERMINED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
7. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
8. MEASURES SHALL BE REPAIRED AND RESTAPLED AS NECESSARY TO ENSURE PROPER FUNCTION.
9. PAYMENT FOR INSTALLATION OF MATTING SHALL BE MADE UNDER THE EROSION CONTROL WITH MATTING ITEM.
10. PAYMENT FOR MONITORING EROSION CONTROL MATTING SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.



**TEMPORARY
STONE LINED
DITCH**



EROSION PREVENTION FOR SIDE SLOPES

APPLICATION NOTES:

- A. THE PURPOSE OF MATTING ON SIDE SLOPES IS TO REDUCE EROSION AND AID THE ESTABLISHMENT OF VEGETATION
- B. EROSION CONTROL MATTING SHALL BE USED FOR THE FOLLOWING REASONS:
 - SIDE SLOPES > 1-3
 - AREAS WHERE SEED AND MULCH WILL NOT STAY IN PLACE ALONE
 - WHERE SEEDING IS OUTSIDE THE GROWING SEASON.

GENERAL NOTES:

1. GRADE AND SMOOTH THE SLOPE TO PROVIDE GOOD MATTING TO SOIL SURFACE CONTACT.
2. APPLY FERTILIZER, LIME, AND SEED PRIOR TO PLACING MATTING.
3. ANCHOR MATTING AS SHOWN, UTILIZING ANCHOR STAPLES. STAPLE PLACEMENT SHALL BE DETERMINED BY THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. UNROLL MATTING VERTICALLY DOWN SLOPE IN THE DIRECTION OF WATER FLOW.
5. OVERLAP UPPER MATTING OVER LOWER MATTING AS SHOWN.
6. OVERLAP ADJACENT MATTING AS SHOWN.
7. CUT EXCESS MATTING AT END OF SLOPE AND ANCHOR THE END.
8. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
9. MATTING SHALL BE REPAIRED AND RESTAPLED AS NECESSARY TO ENSURE PROPER FUNCTION.
10. PAYMENT FOR INSTALLATION OF MATTING SHALL BE MADE UNDER THE EROSION CONTROL WITH MATTING ITEM.
11. PAYMENT FOR MONITORING EROSION CONTROL MATTING SHALL BE MADE UNDER THE MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN ITEM.

DITCH /SLOPE PROTECTION DETAIL

PROJECT NAME:	BARRE TOWN	
PROJECT NUMBER:	ST 0147(16)	
FILE NAME:	O5E290/Design/D05E290E0	PLOT DATE:
PROJECT LEADER:	R. THOMPSON	DRAWN BY:
DESIGNED BY:	P. BEYOR	CHECKED BY:
D05E290ec8.1		SHEET 18
		OF 26

N.T.S.

STA.90+97 RT

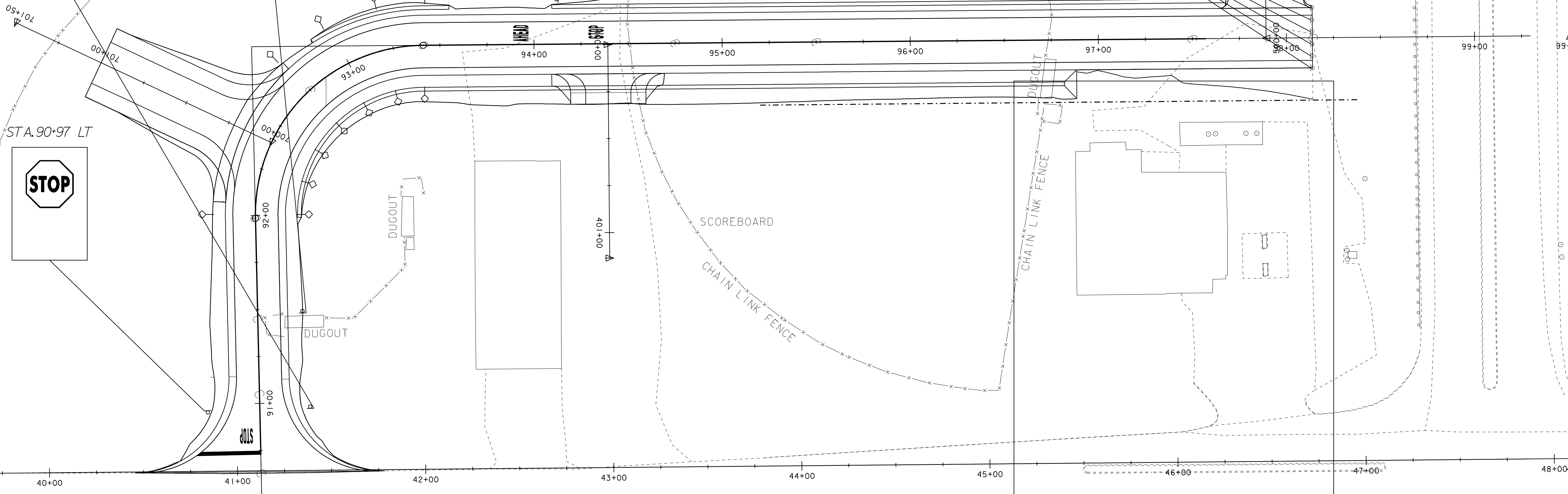
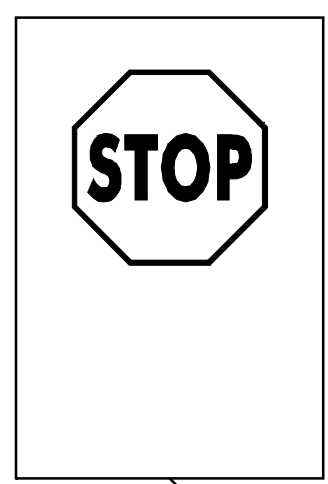
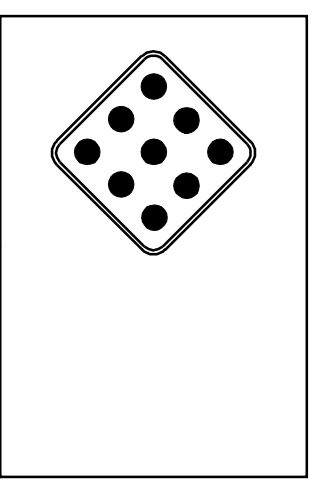
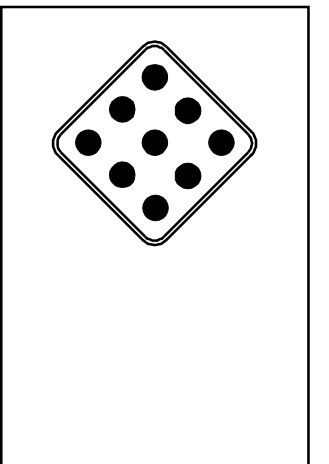
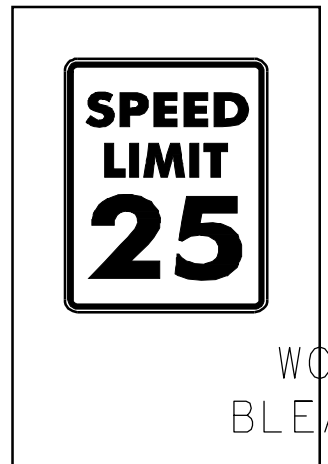
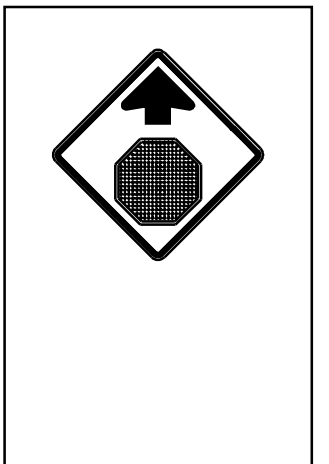
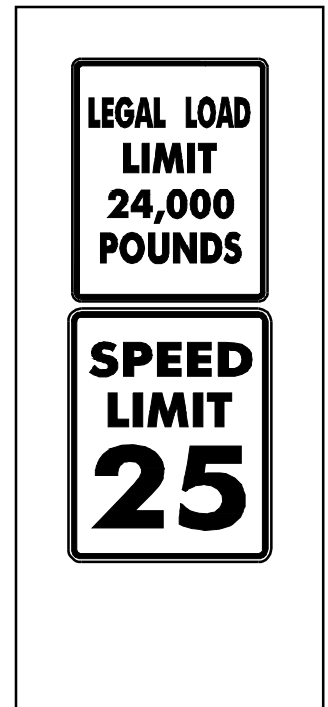
STA.91+48 RT

STA.94+13 LT

STA.96+44 LT

STA.98+13 CL

STA.97+74 LT
STA.97+84 LT
STA.97+94 LT
STA.98+04 LT



DELINEATORS W/STEEL POSTS

4" WHITE LINE

4" YELLOW LINE (DOUBLE YELLOW LINE)

24" STOP BAR

LETTER OR SYMBOL

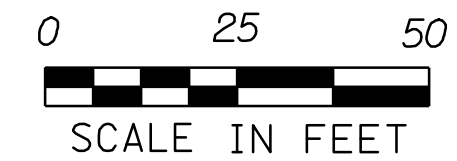
STA.92+01 LT & RT
STA.92+24 RT
STA.92+49 RT
STA.92+73 LT & RT
STA.92+97 LT & RT
STA.93+21 LT & RT
STA.93+42 LT & RT

(FRONTAGE ROAD)
STA.90+64 TO 97+69 LT
STA.90+63 TO 97+45 RT
(VT 14)
STA.41+75 TO 43+42 LT
STA.40+57 TO 42+27 RT
STA.46+03 TO 47+29 LT

(FRONTAGE ROAD)
STA.90+73 TO 97+57 CL
(VT 14)
STA.40+46 TO 42+27 RT

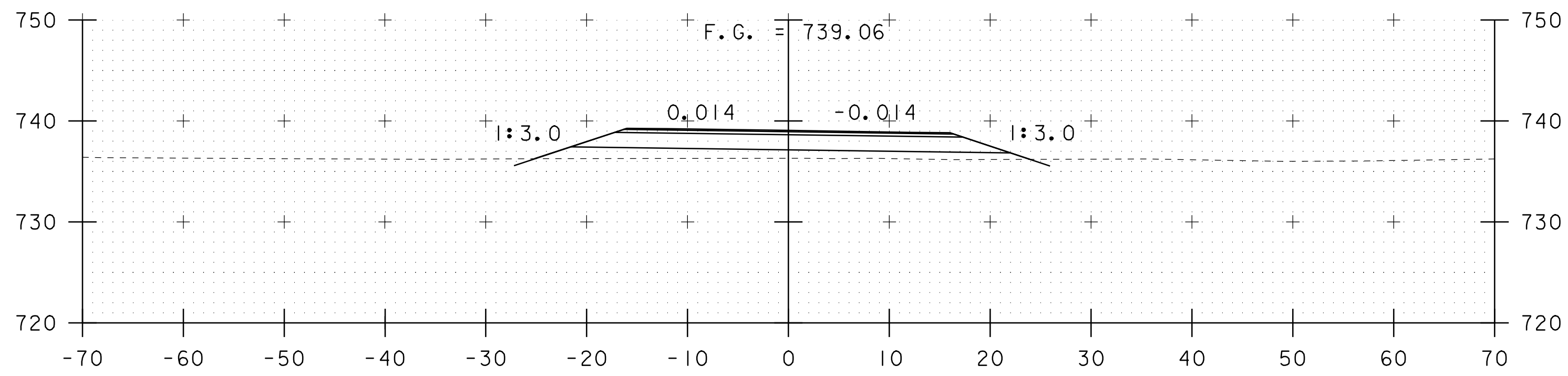
STA.90+34 (34') CL

STA.90+83 CL - STOP
STA.93+93 CL - AHEAD
STA.94+33 CL - STOP

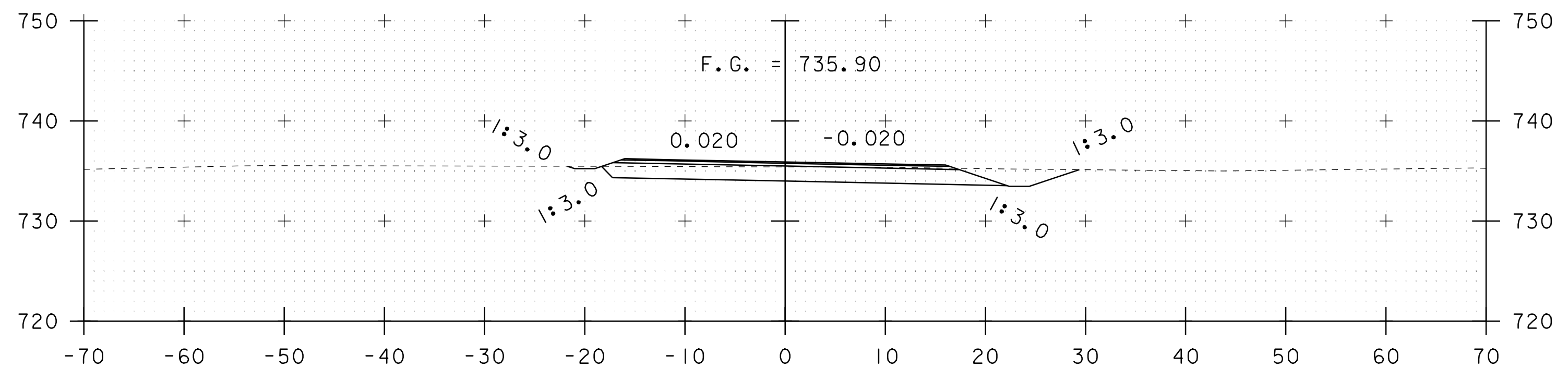


SIGN & PAVEMENT MARKING LAYOUT SHEET

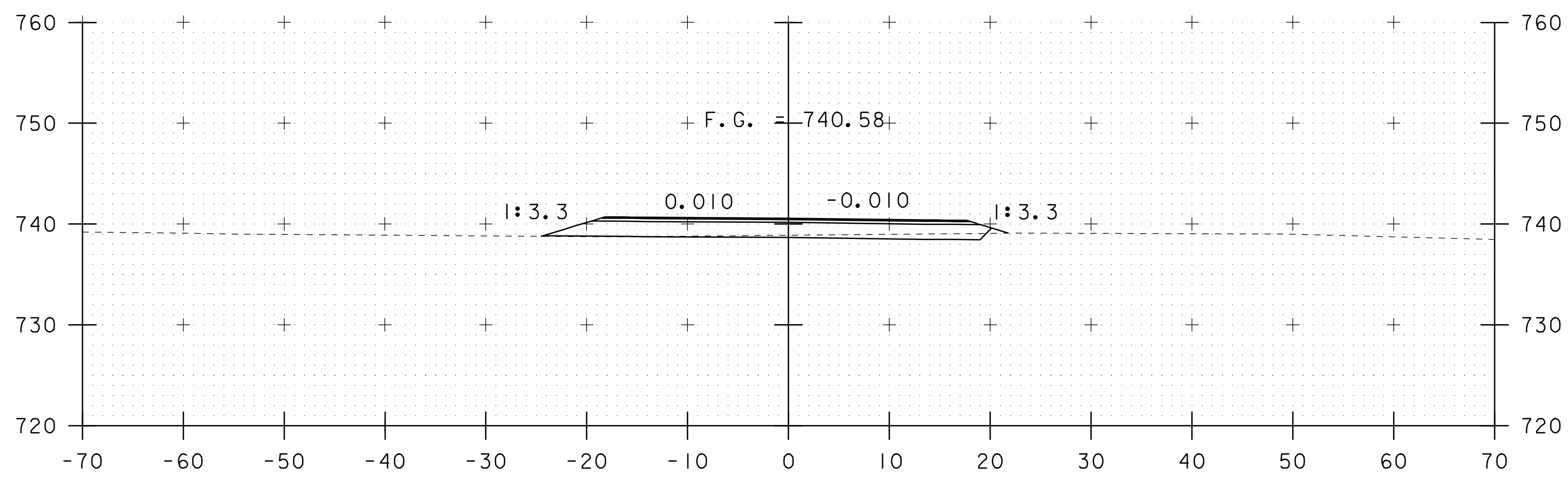
PROJECT NAME: BARRE TOWN	PLOT DATE: 18-MAR-2008
PROJECT NUMBER: ST 0147(16)	DRAWN BY: P. PELOQUIN
FILE NAME: 05e290\Design\D05E290TRF	CHECKED BY:
DESIGNED BY: P. PELOQUIN	SHEET 19 OF 26
05e290+tr1.1	



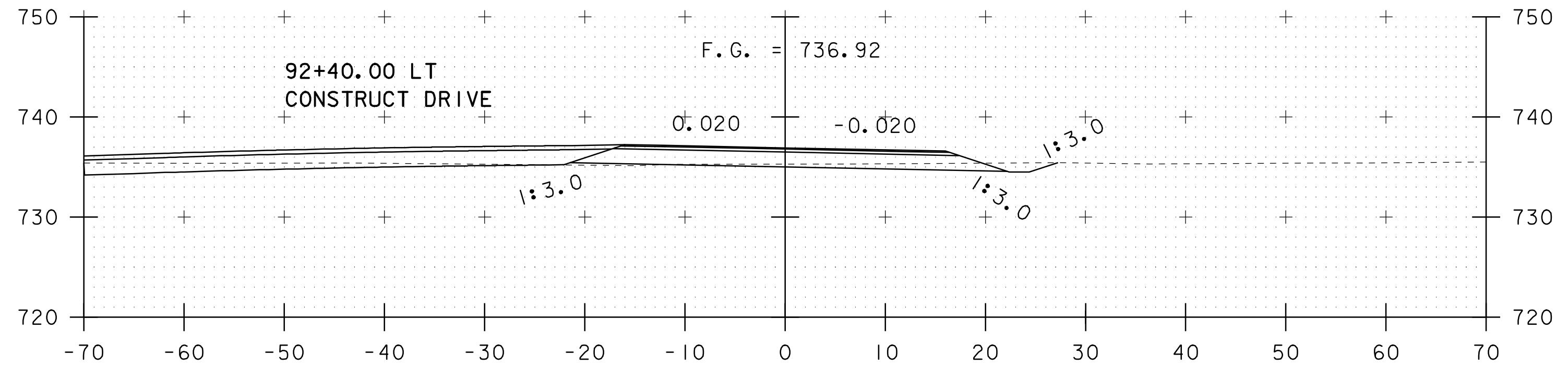
91+50



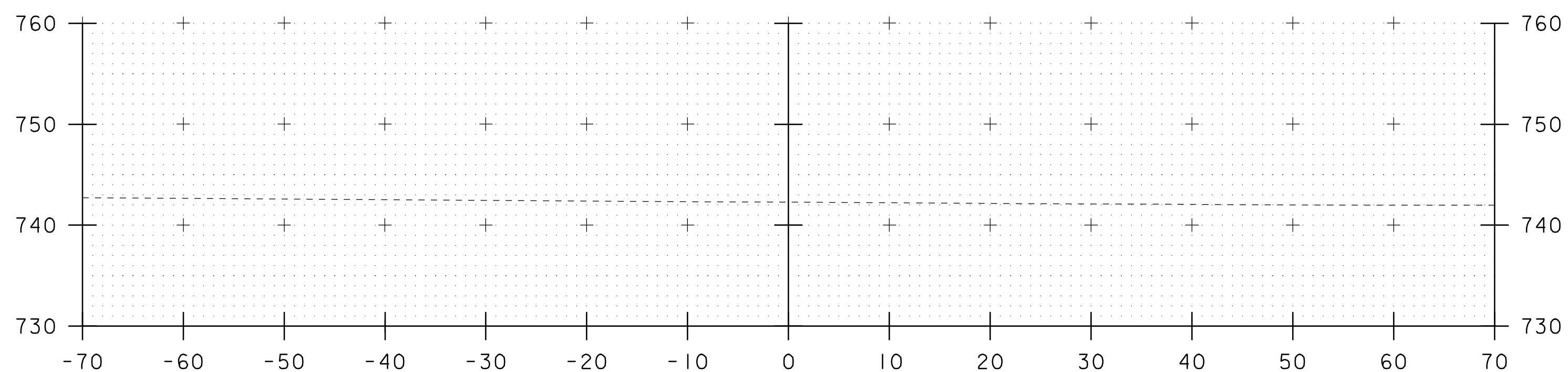
93+00



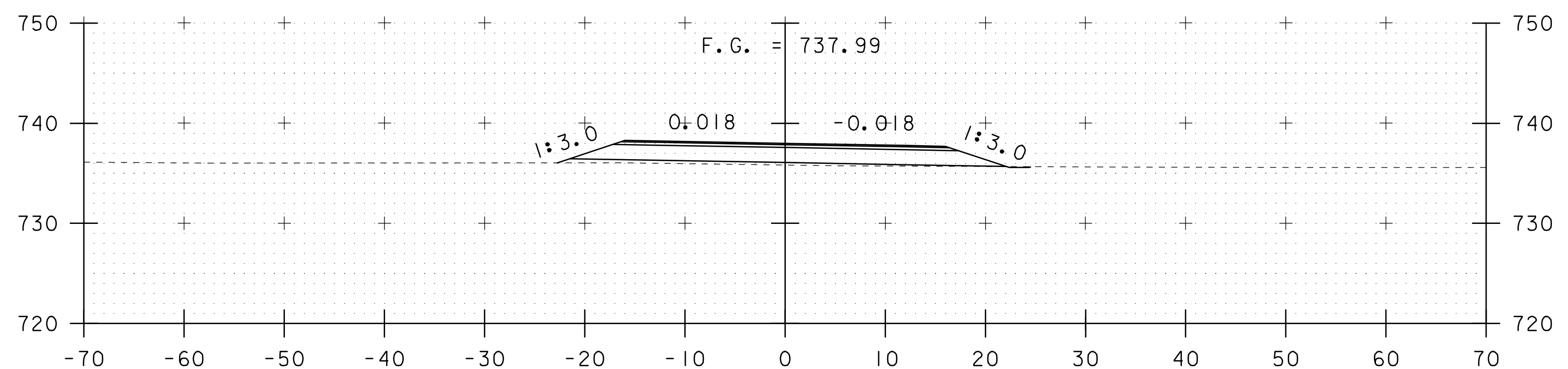
91+00



92+50



90+50

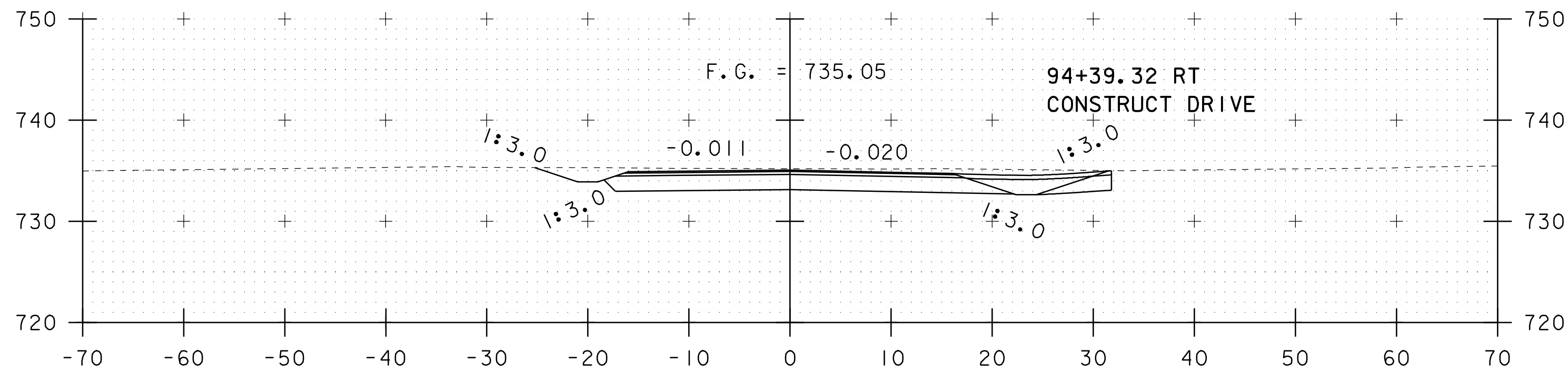


92+00

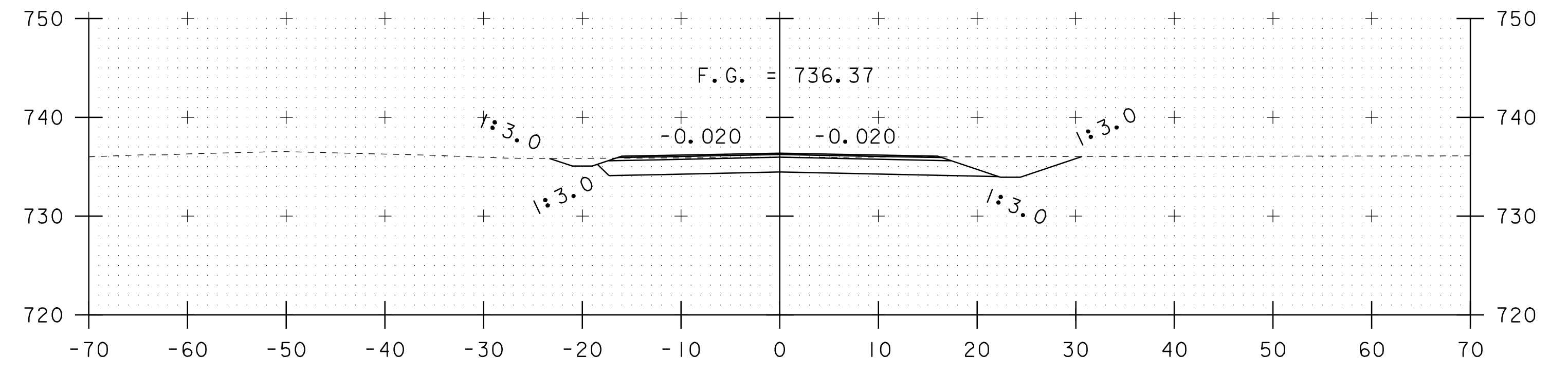
FRONTAGE ROAD CROSS SECTIONS

FRONTAGE ROAD CROSS-SECTION SHEET #1

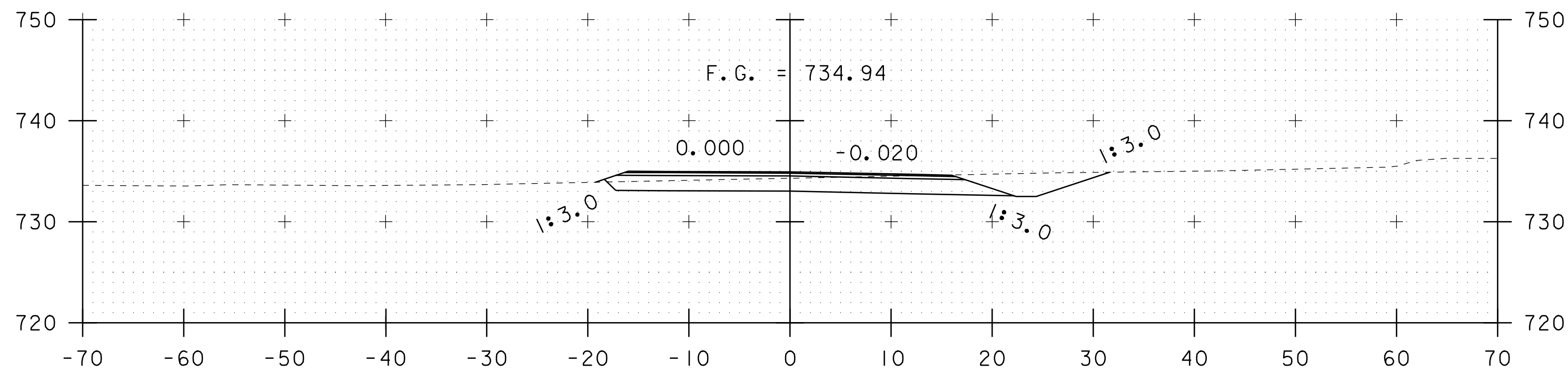
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PROJECT NUMBER:	ST 0147(16)	PROJECT LEADER:	R. THOMPSON	DRAWN BY:	P. BEYOR
		DESIGNED BY:	P. BEYOR	CHECKED BY:	
		D05E290XSI.I		SHEET	22 OF 26



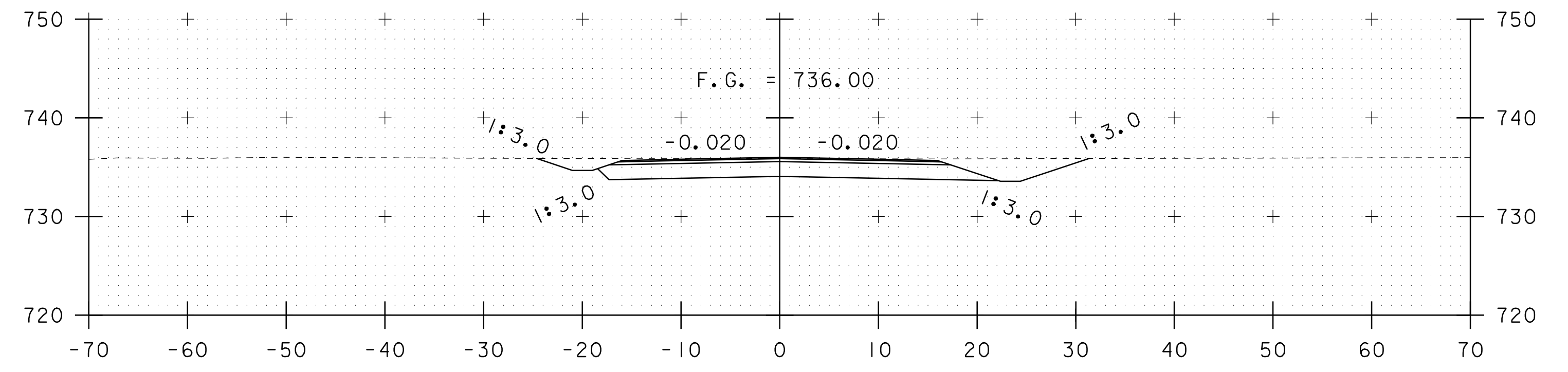
94+50



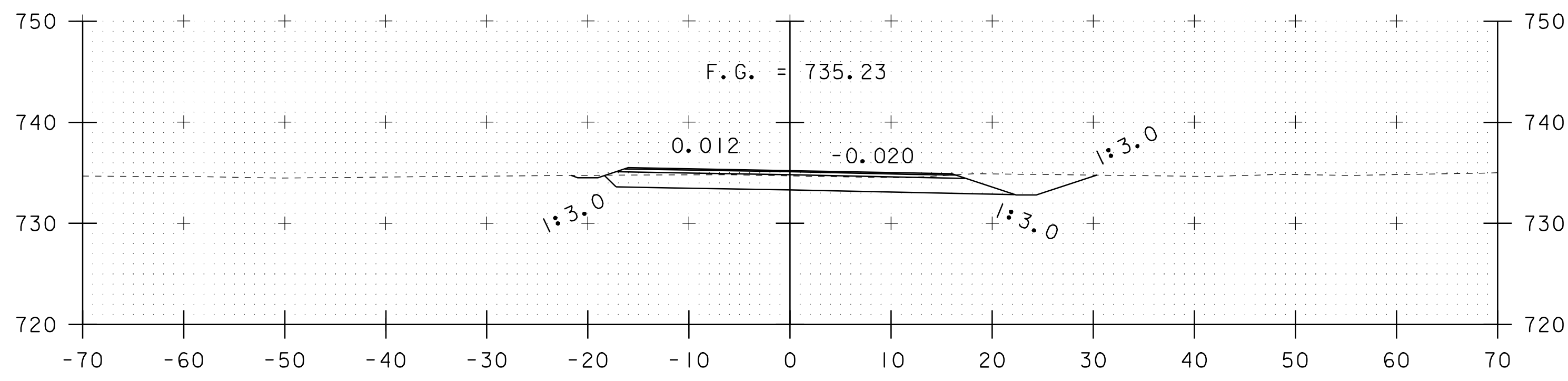
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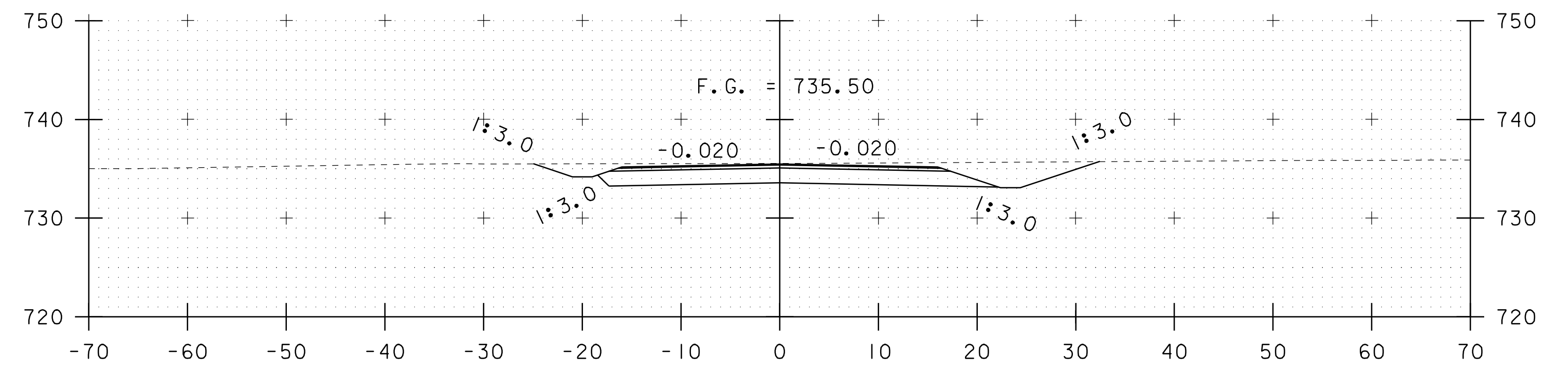
94+00



95+50



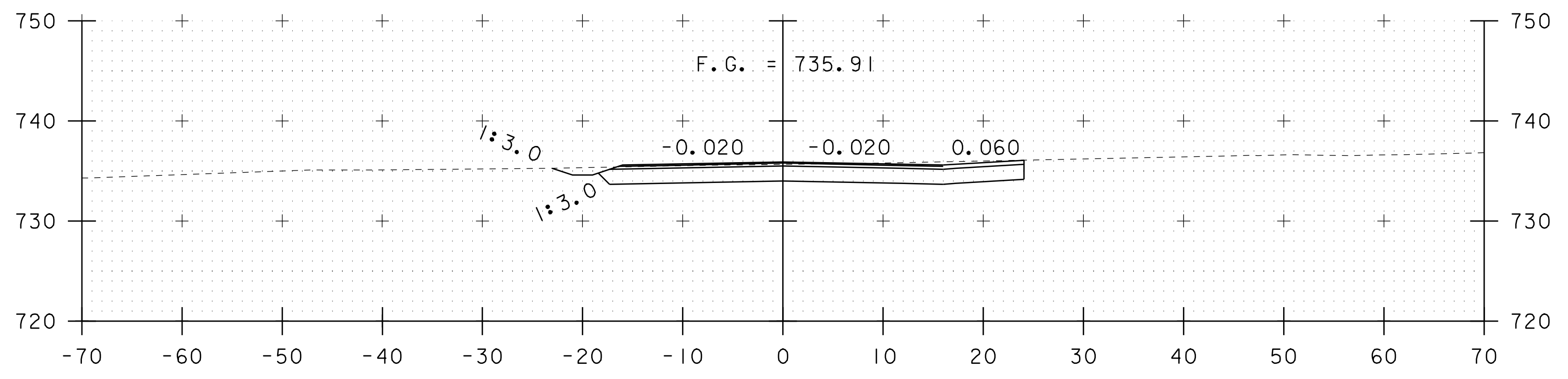
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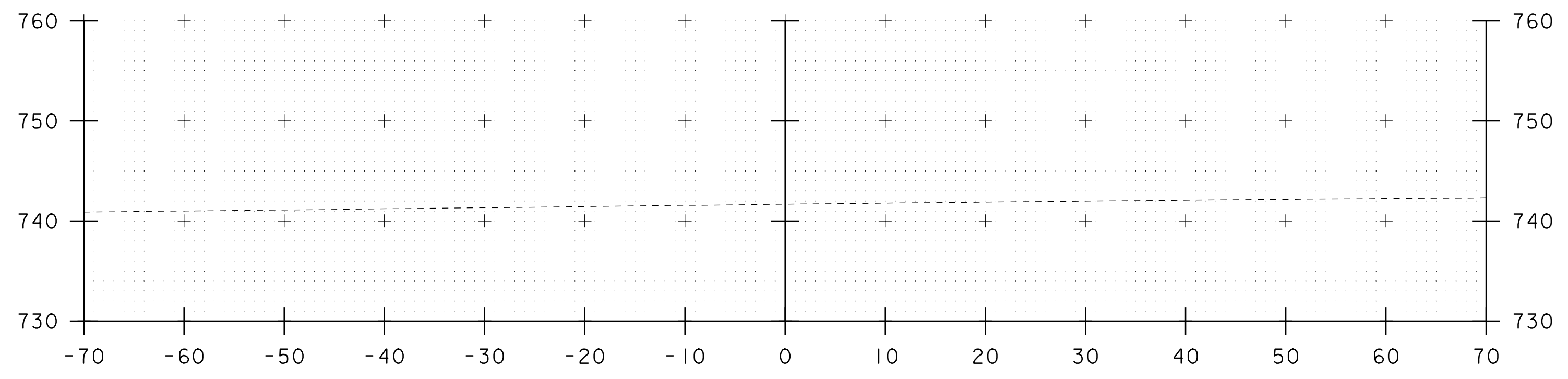
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FRONTAGE ROAD CROSS-SECTION SHEET #2

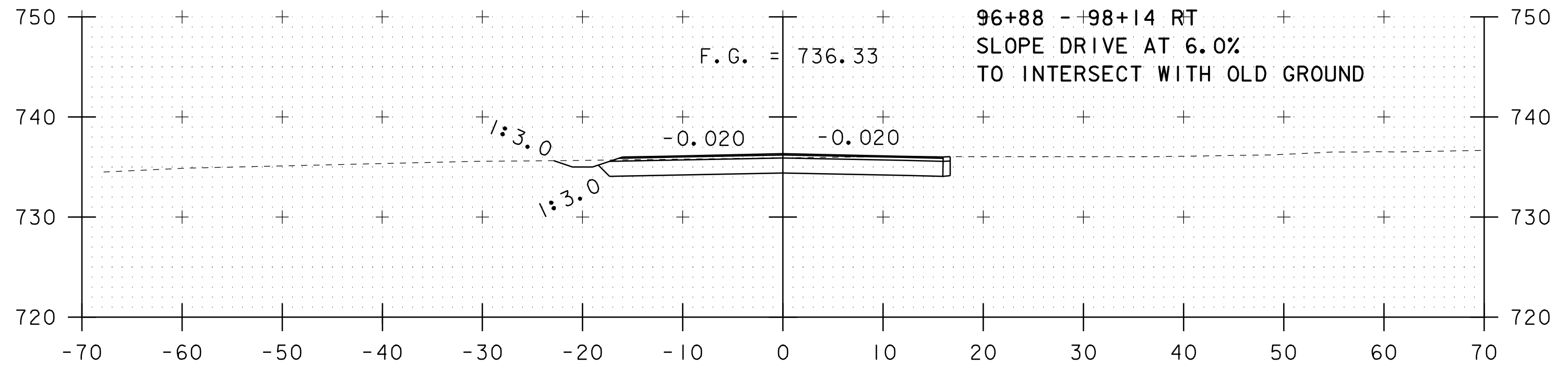
PROJECT NAME: BARRE TOWN	PLOT DATE: 18-MAR-2008
PROJECT NUMBER: ST 0147(16)	DRAWN BY: P. BEYOR
FILE NAME: 05E290/Design/D05E290NUI	CHECKED BY:
PROJECT LEADER: R. THOMPSON	SHEET 23 OF 26
DESIGNED BY: P. BEYOR	
D05E290XS2.I	



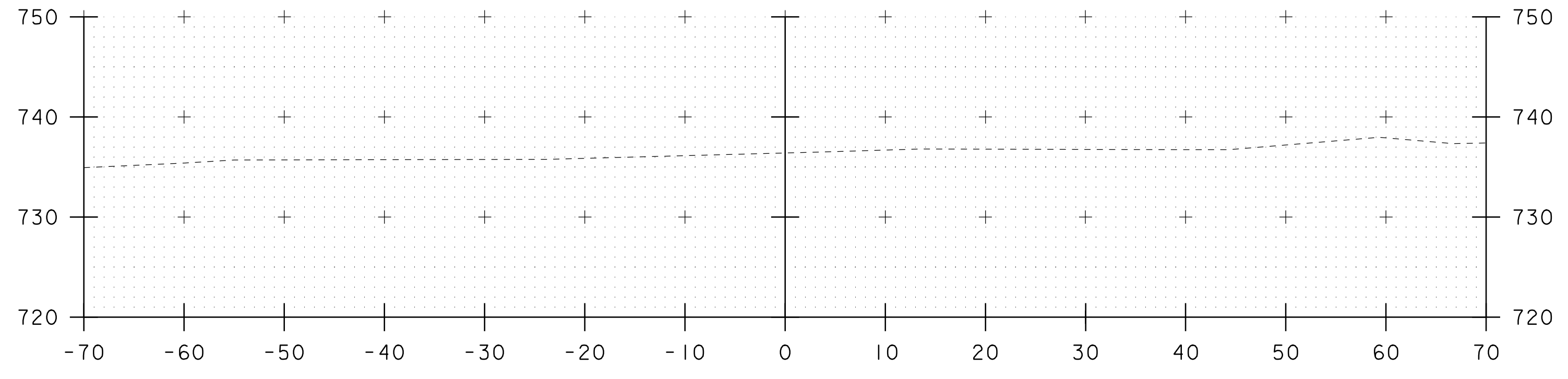
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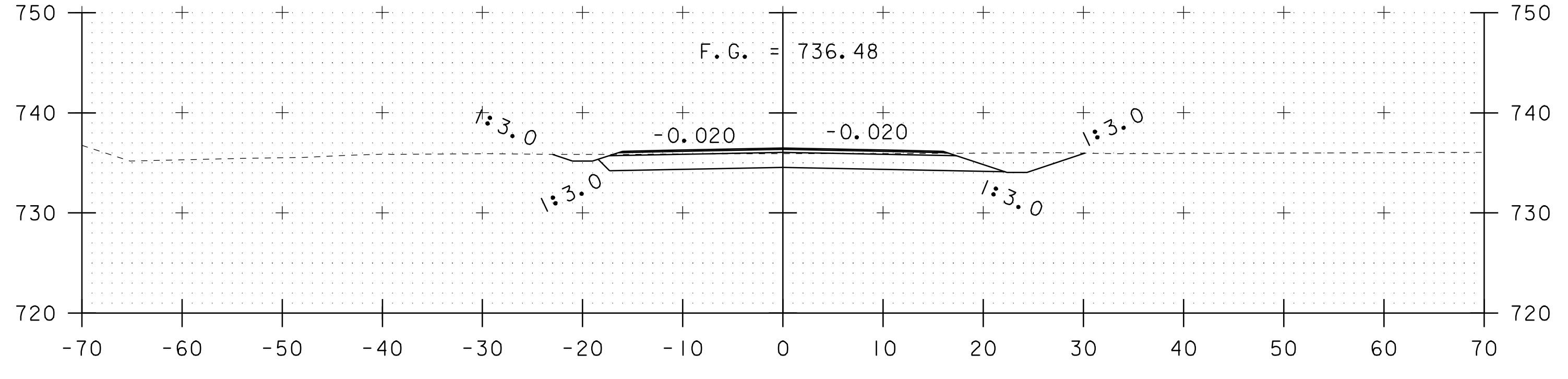
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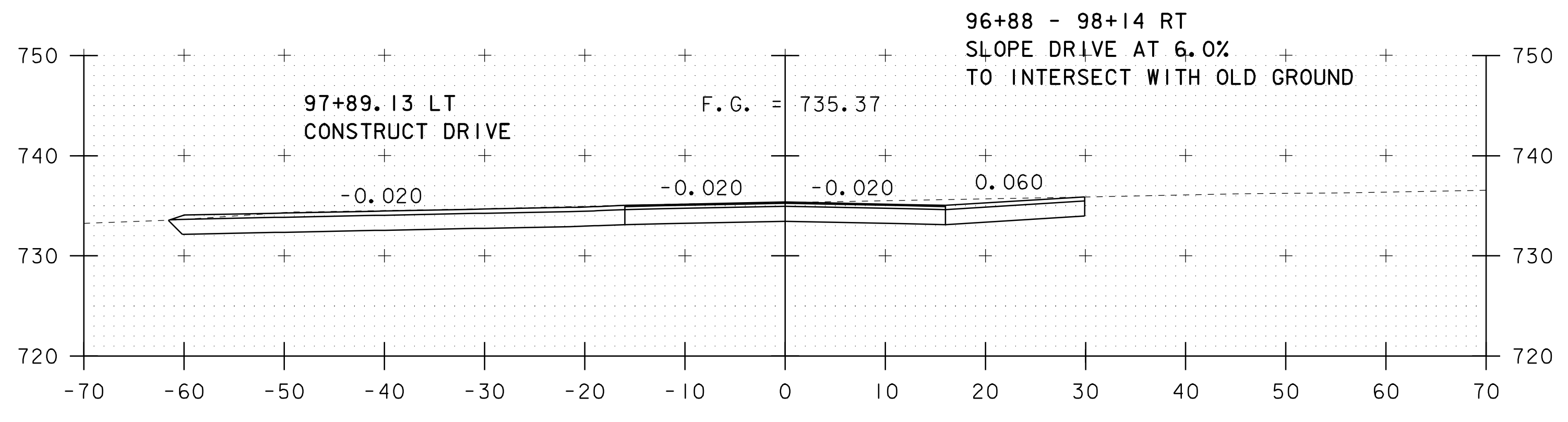
97+00



98+50



96+50



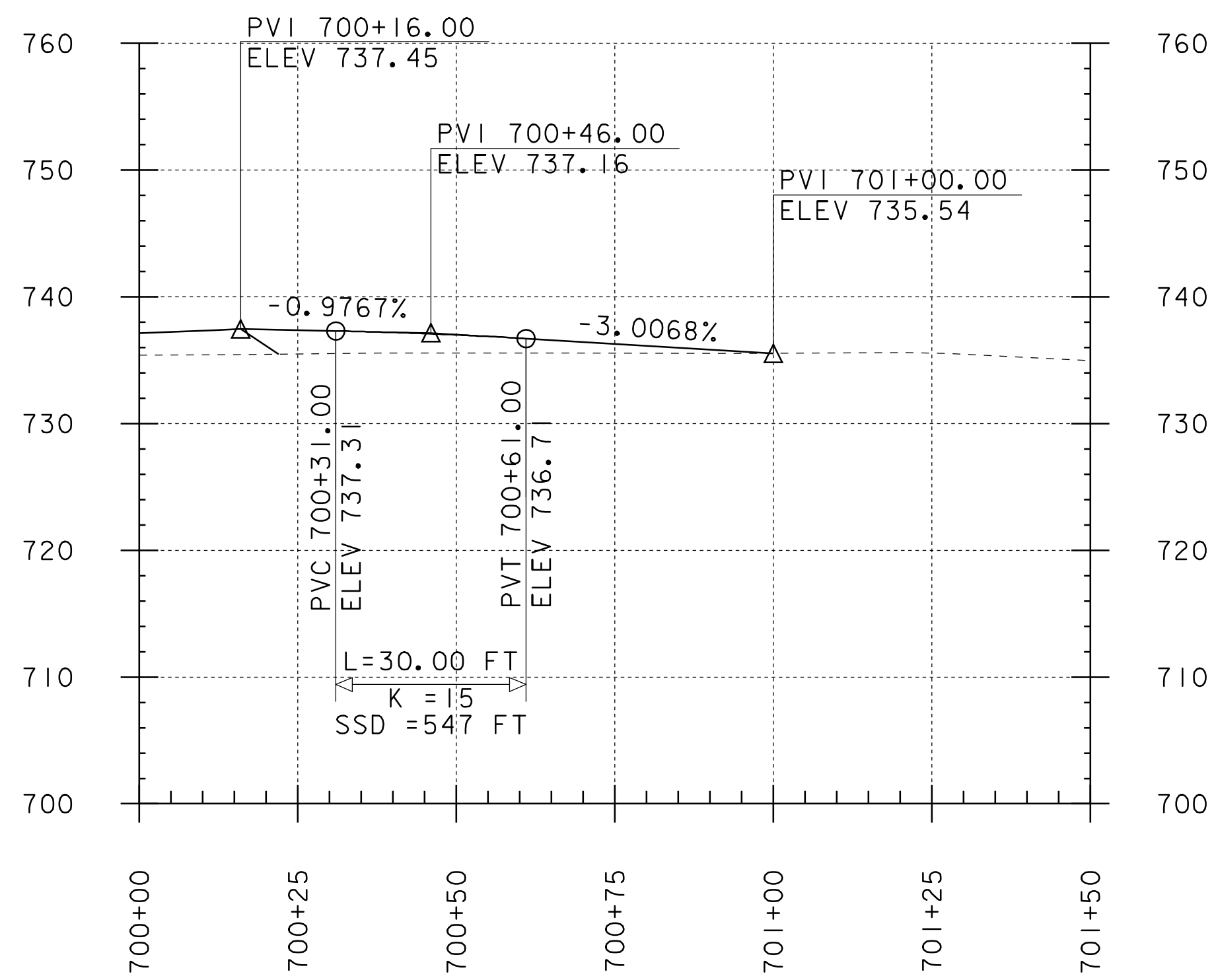
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FRONTAGE ROAD CROSS-SECTION SHEET #3

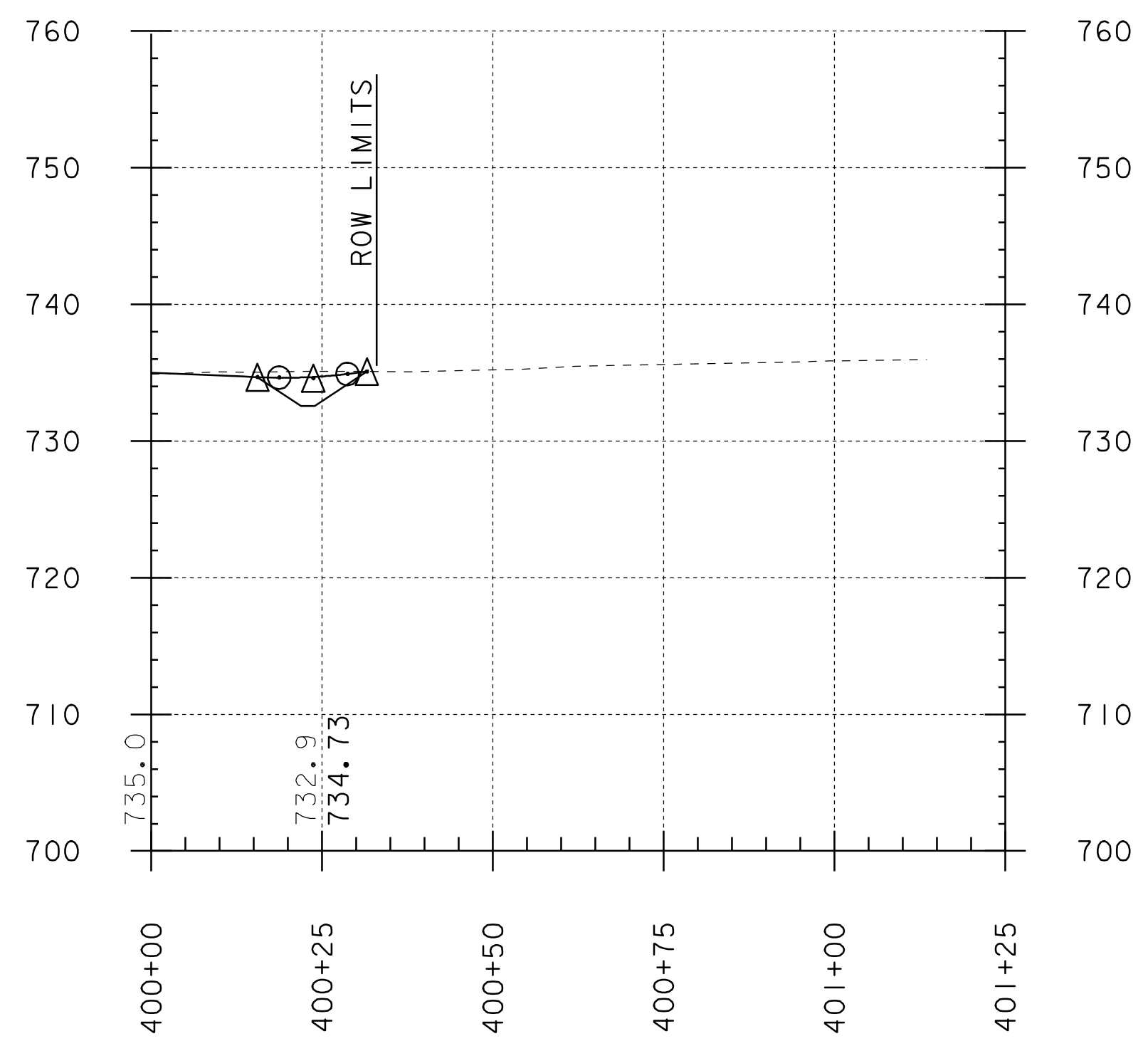
PROJECT NAME: BARRE TOWN
PROJECT NUMBER: ST 0147(16)

FILE NAME: 05E290/Design/D05E290NUI
PROJECT LEADER: R. THOMPSON
DESIGNED BY: P. BEYOR
D05E290XS3.I

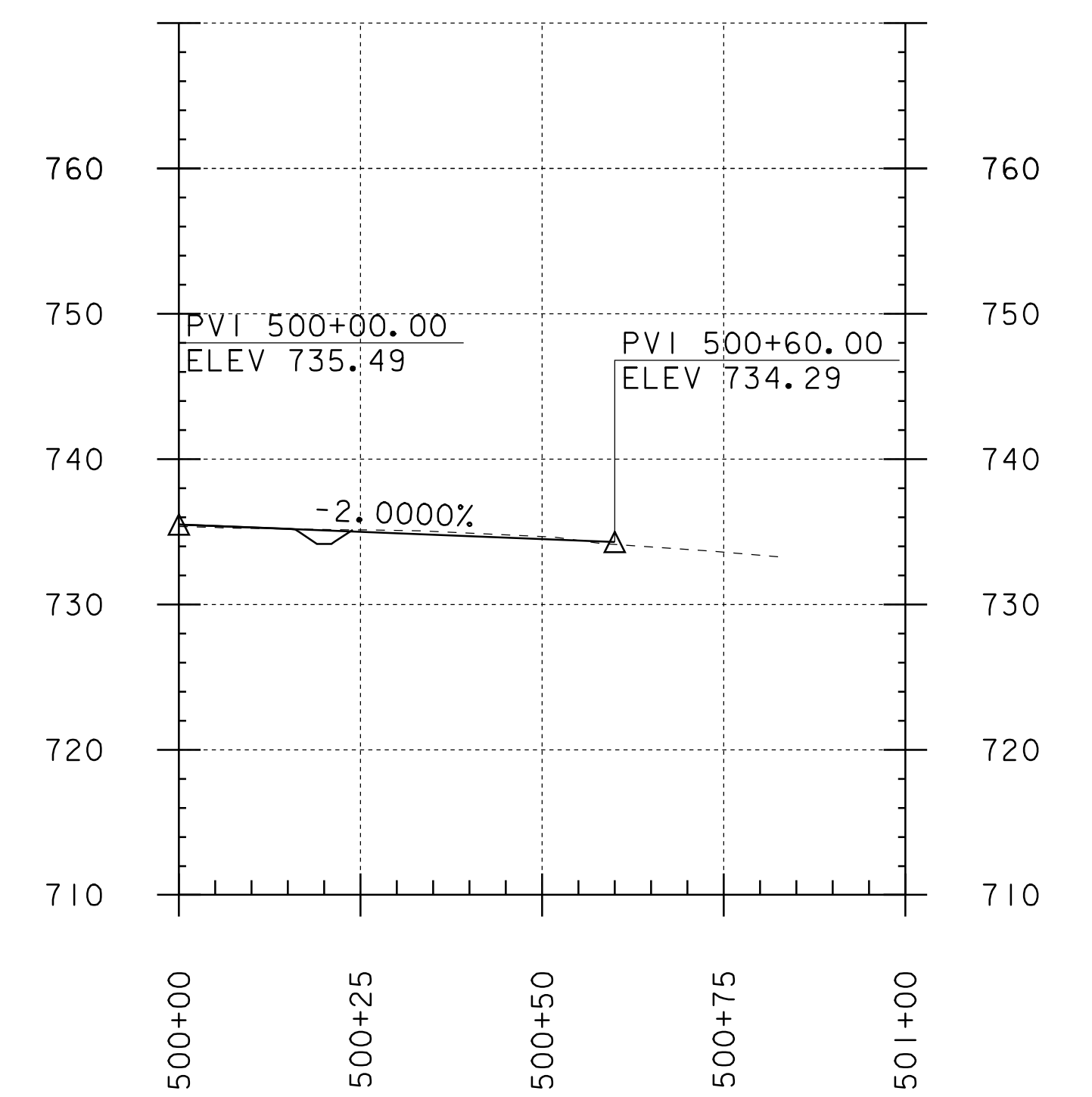
PLOT DATE: 18-MAR-2008
DRAWN BY: P. BEYOR
CHECKED BY:
SHEET 24 OF 26



Drive - Ford
FR 92+40.00 LT



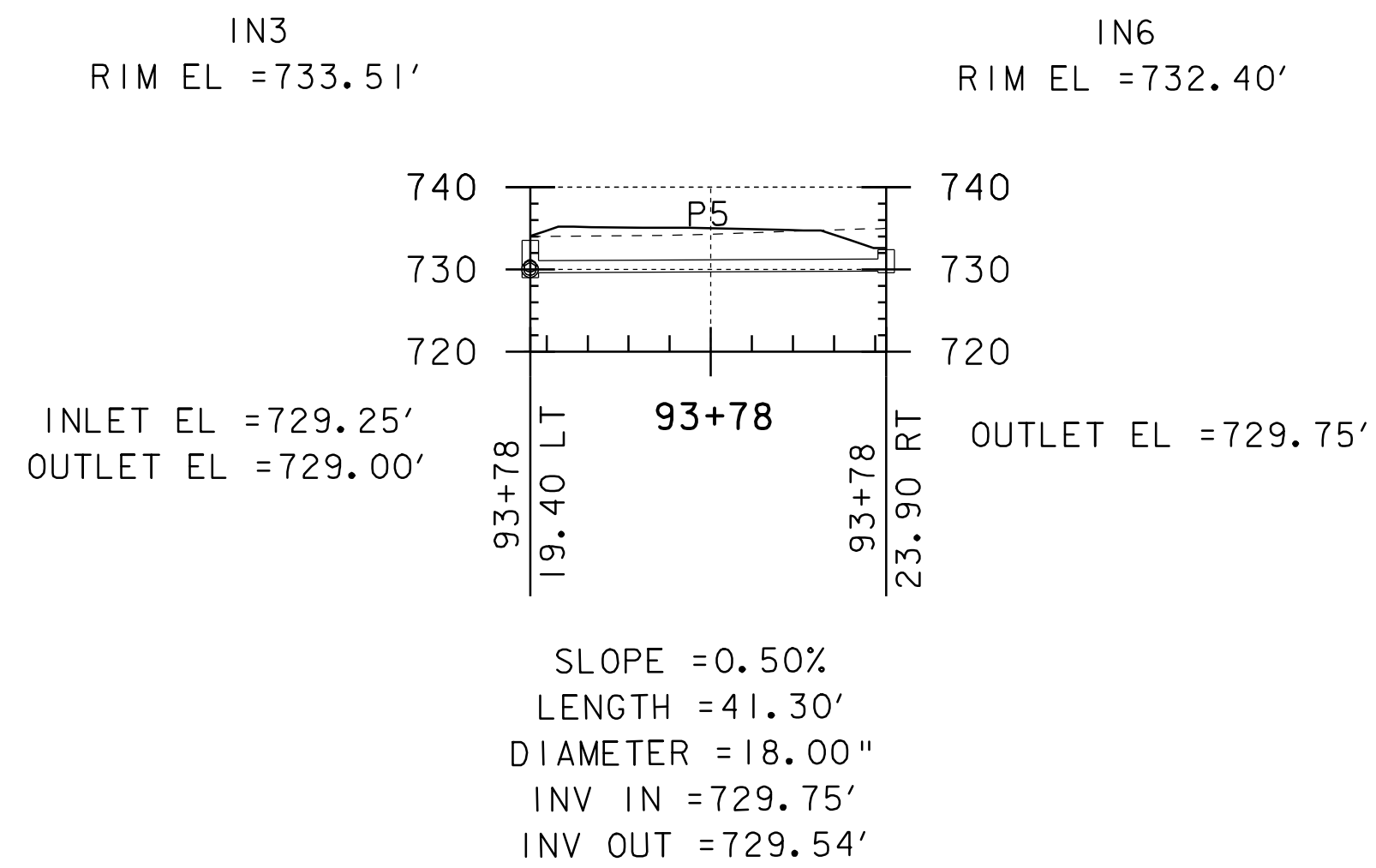
Drive - Bond
FR 94+39.32 RT



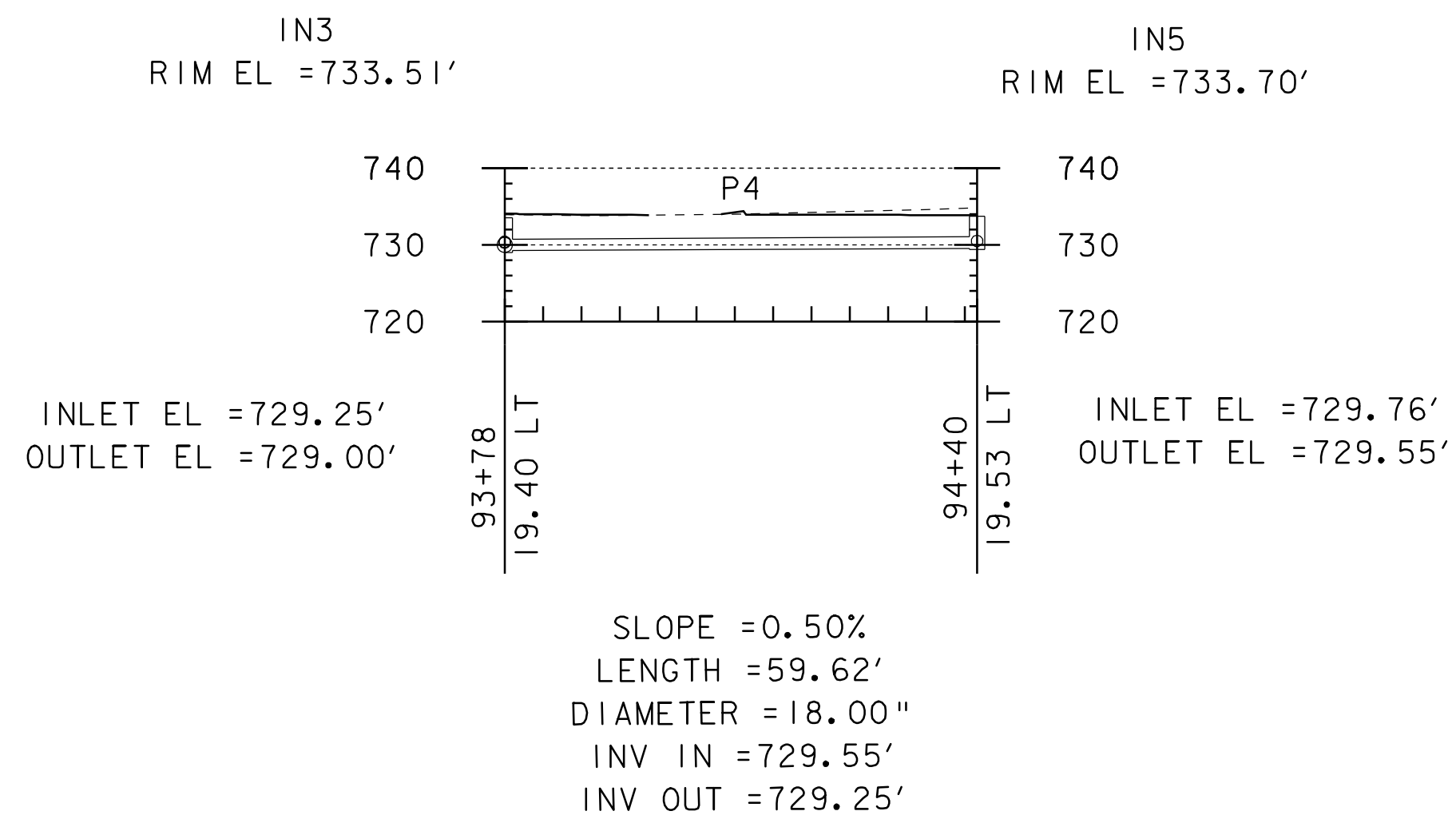
Drive - Turn
FR 97+89.13 LT

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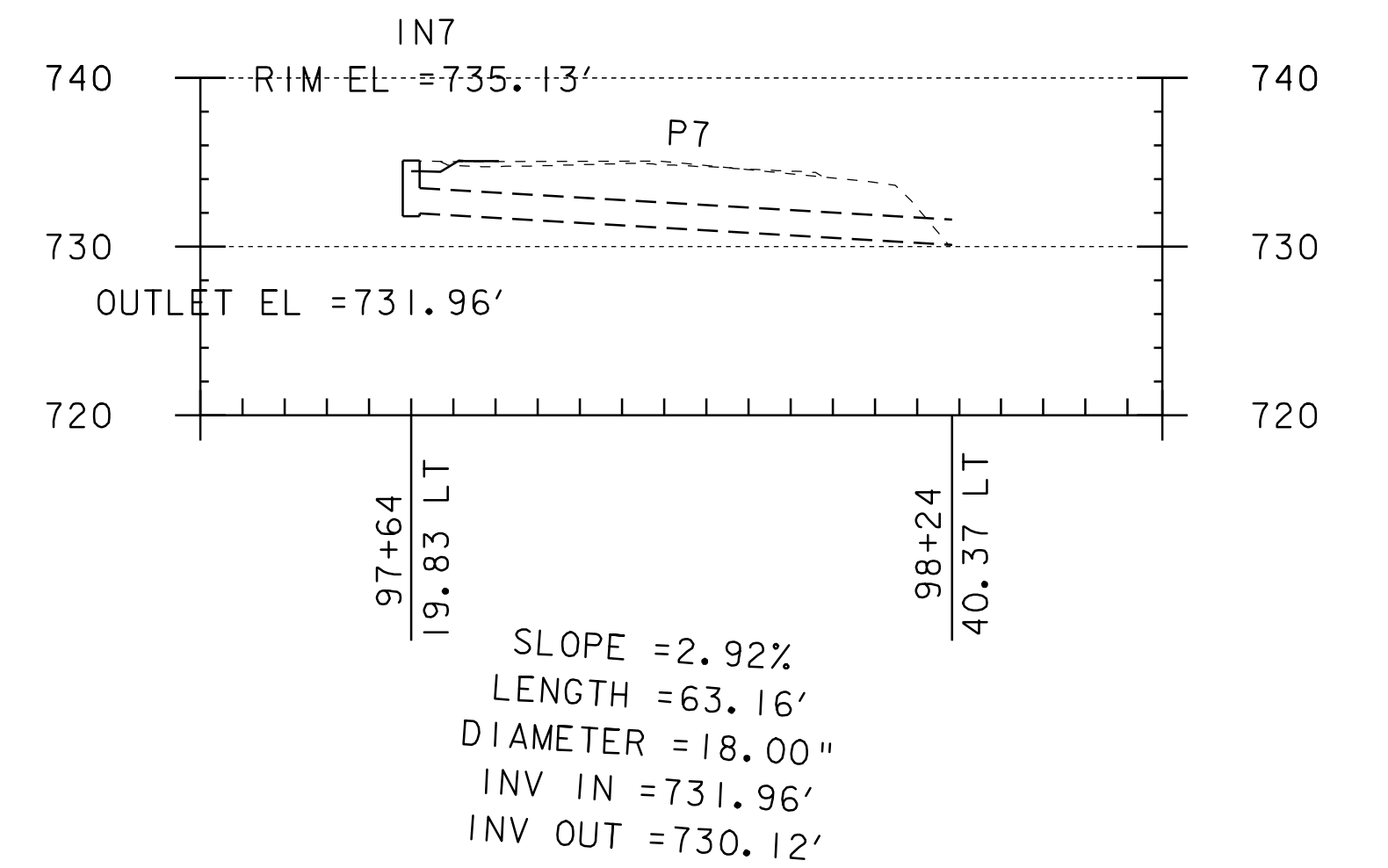
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PROJECT NUMBER:	ST 0147(16)	
FILE NAME:	D05E290/Design/D05E290NUI	PLOT DATE:
PROJECT LEADER:	R. THOMPSON	DRAWN BY:
DESIGNED BY:	P. BEYOR	CHECKED BY:
D05E290xs4.1		SHEET 25 OF 26



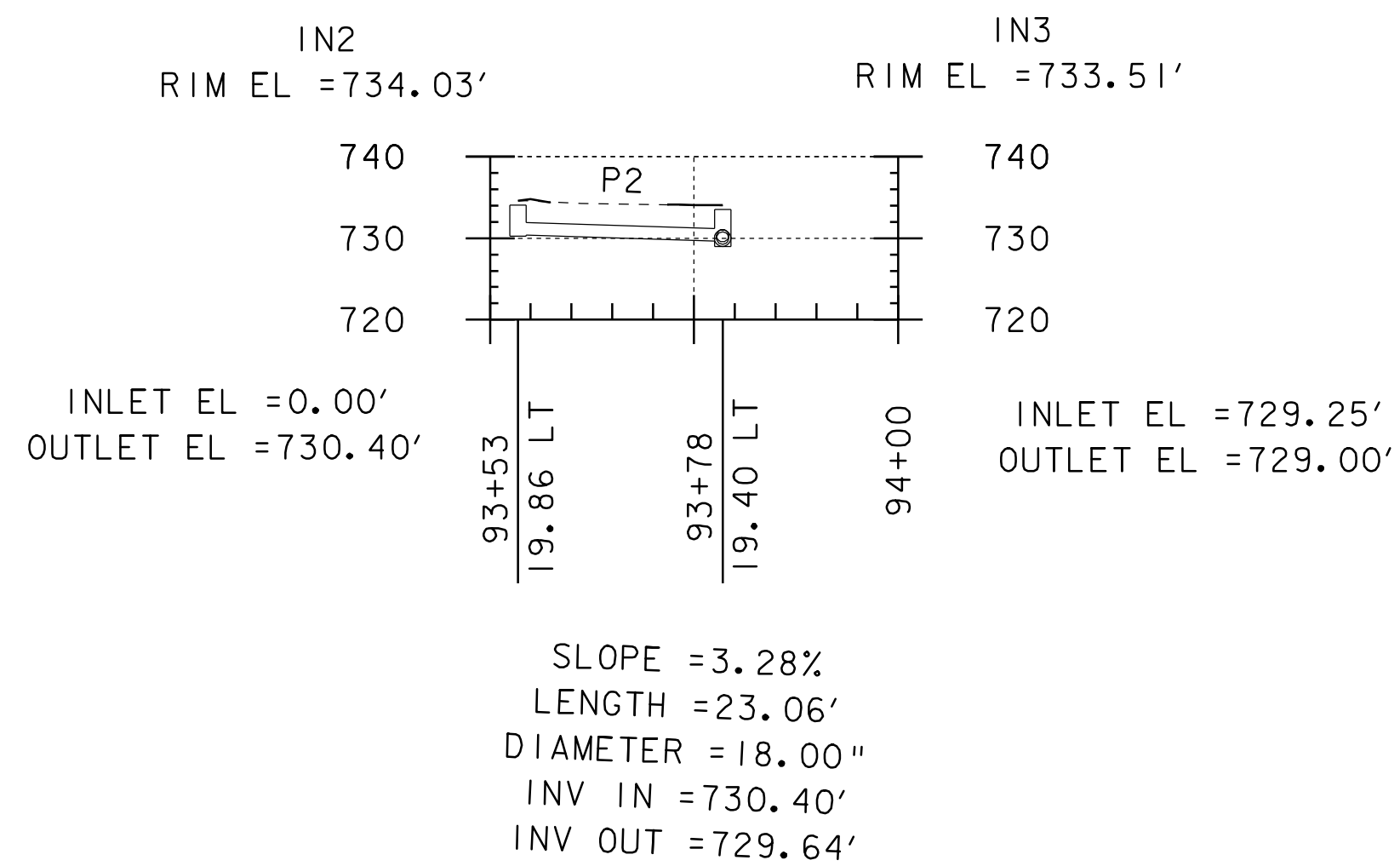
93+78 RT - 93+78 LT
NEW 18" X 42' CPEP



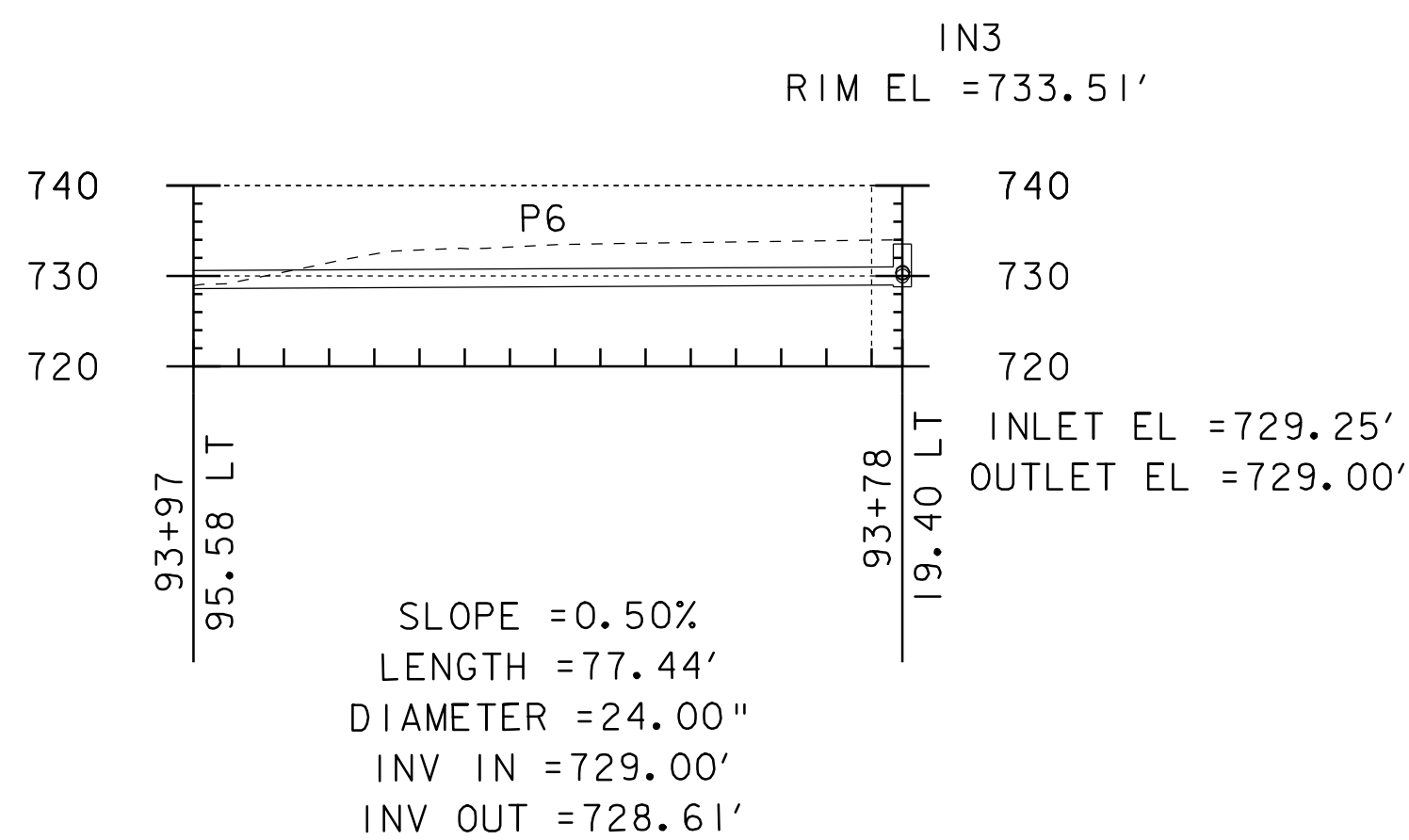
93+78 LT - 94+40 LT
NEW 18" X 60' CPEP



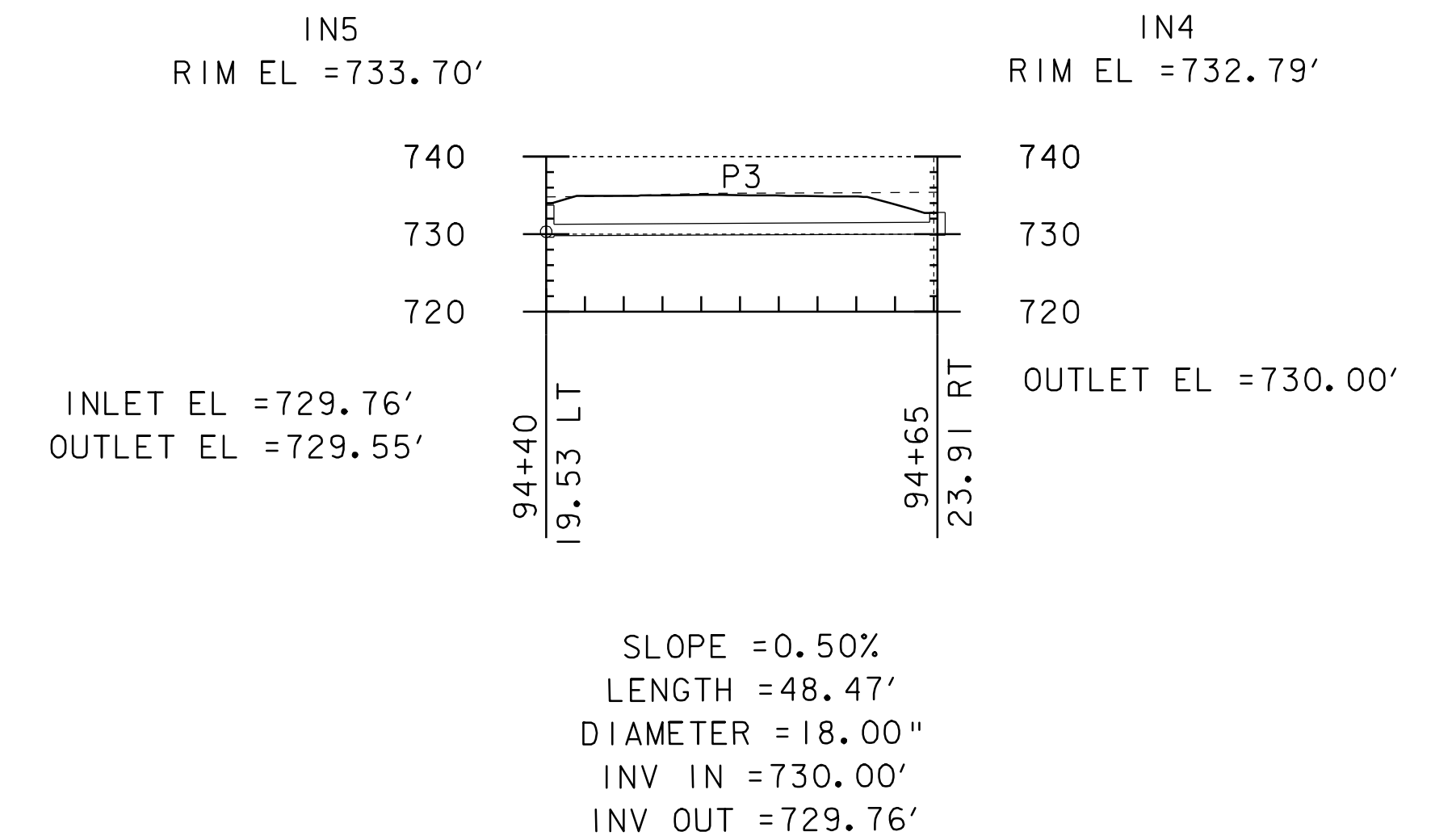
97+64 LT - 98+24 LT
NEW 18" X 64' CPEP



93+53 LT - 93+78 LT
NEW 18" X 24' CPEP



93+78 LT - 93+97 LT
NEW 24" X 78' CPEP



94+40 LT - 94+65 RT
NEW 18" X 48' CPEP

DRAINAGE PROFILE SHEET

PROJECT NAME: BARRE TOWN
PROJECT NUMBER: ST 0147(16)

FILE NAME: 05E290/Design/D05E290NUI
PROJECT LEADER: R. THOMPSON
DESIGNED BY: P. BEYOR
D05E290xs5.1

PLOT DATE: 18-MAR-2008
DRAWN BY: P. BEYOR
CHECKED BY:
SHEET 26 OF 26