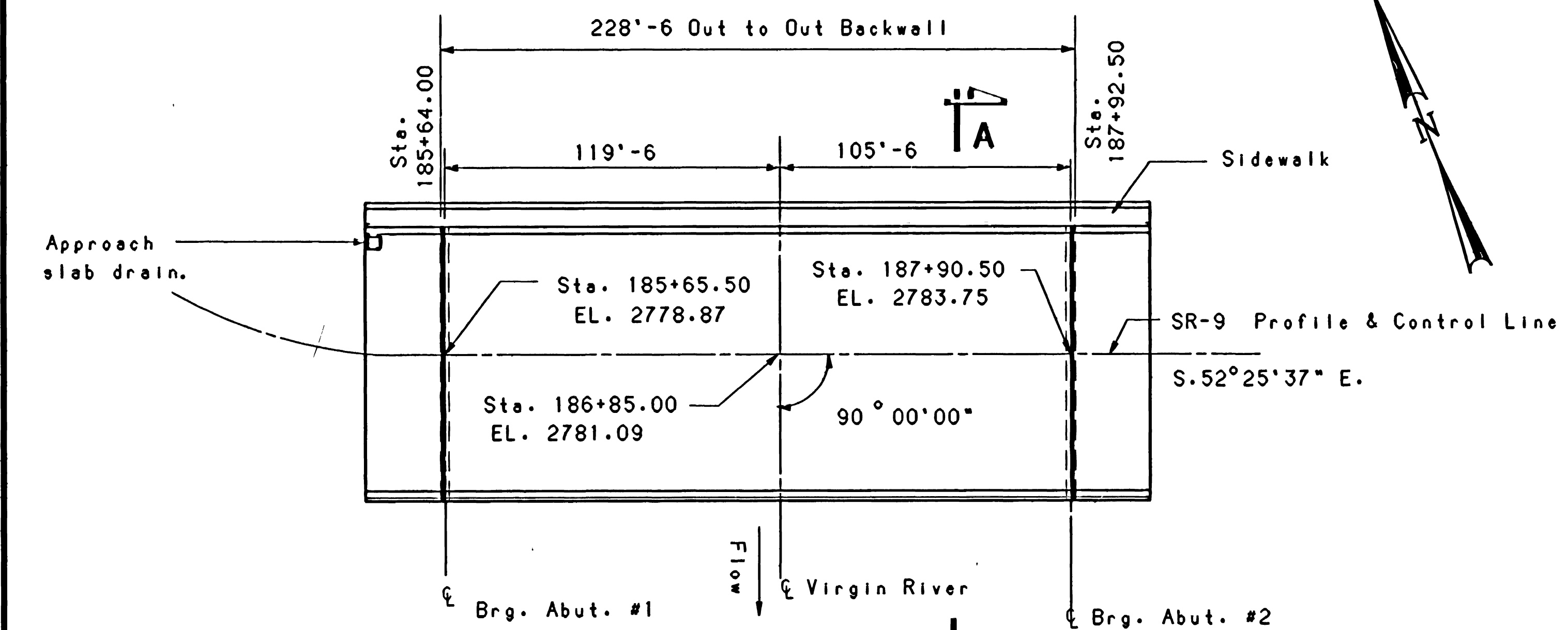
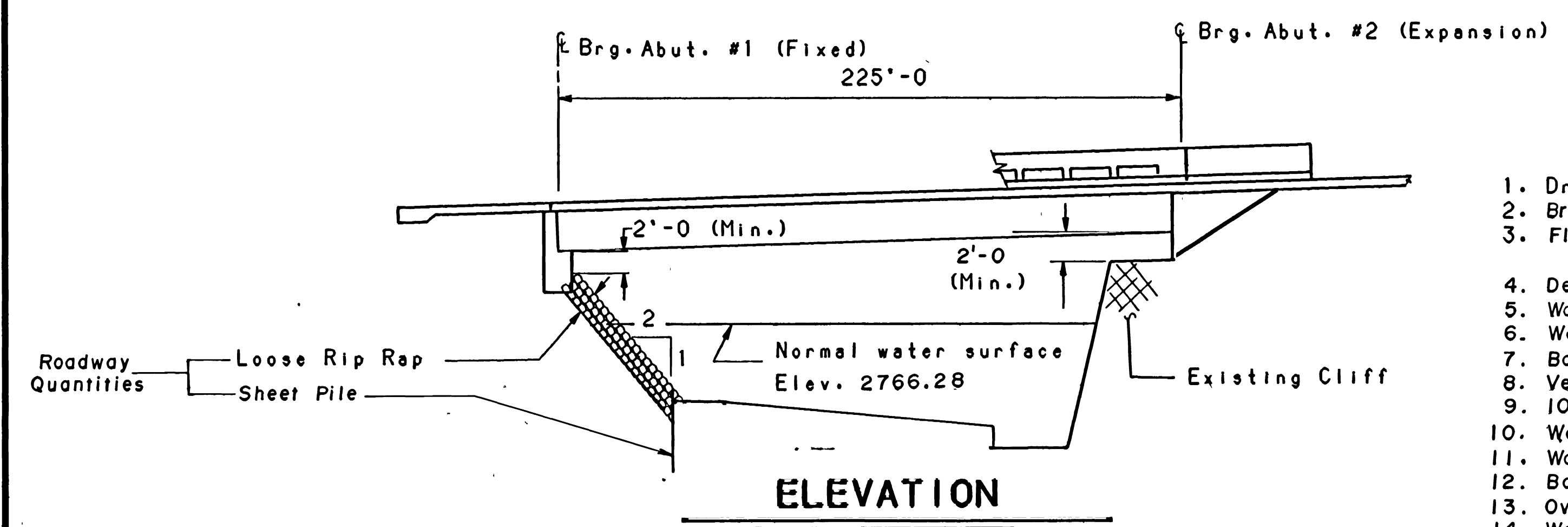


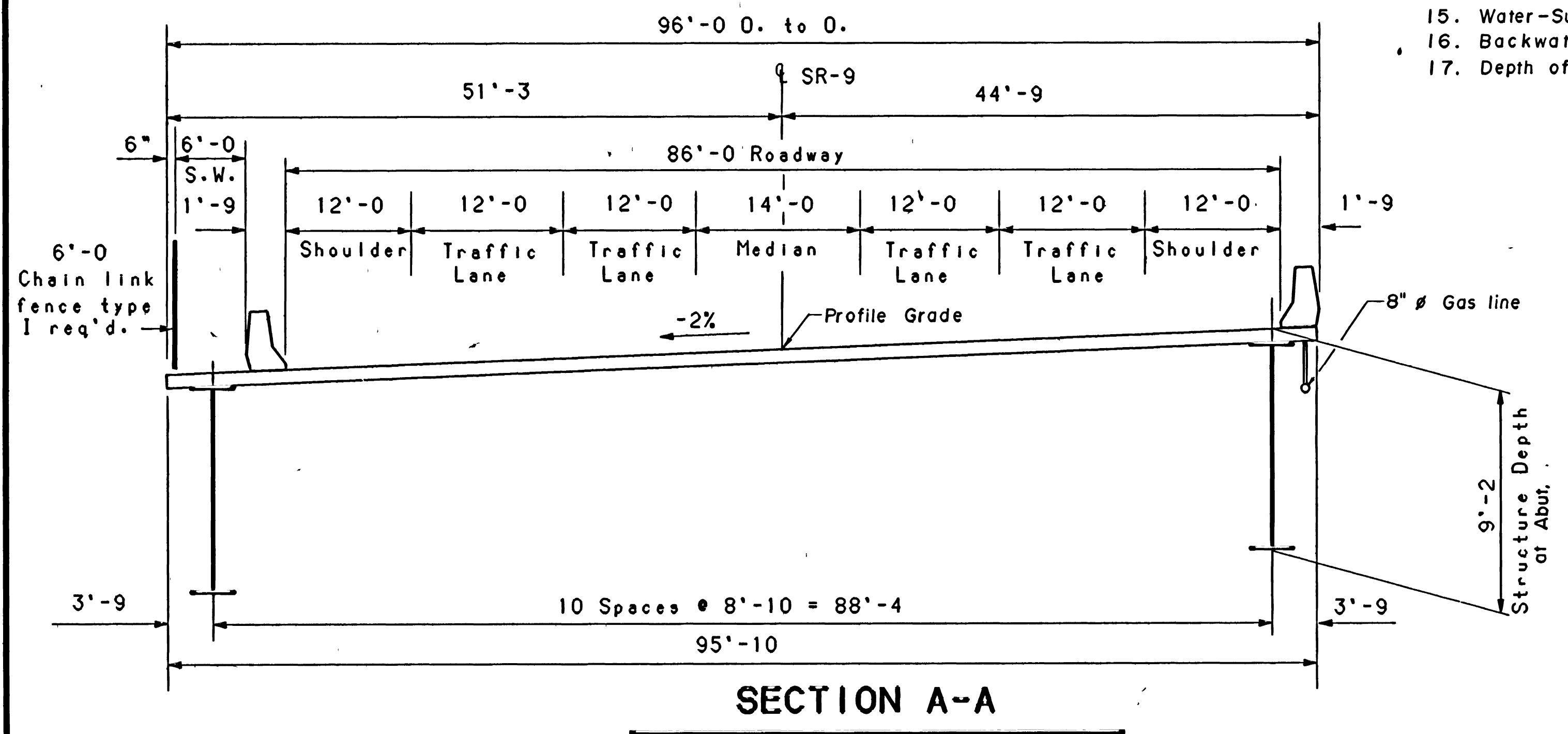


NOTE: Abutments are parallel to Brg. N. 37° 34' 23" E.

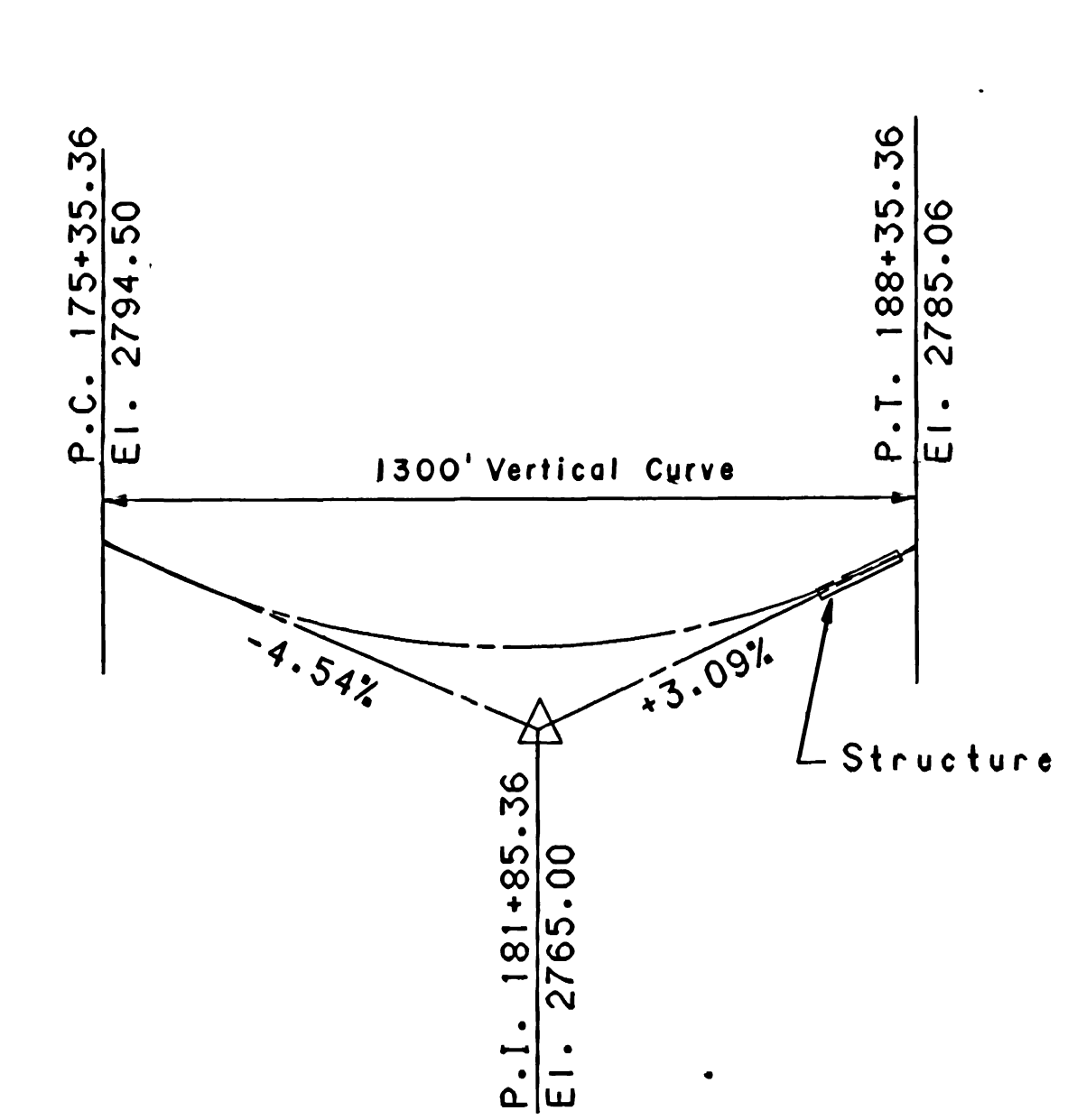
PLAN



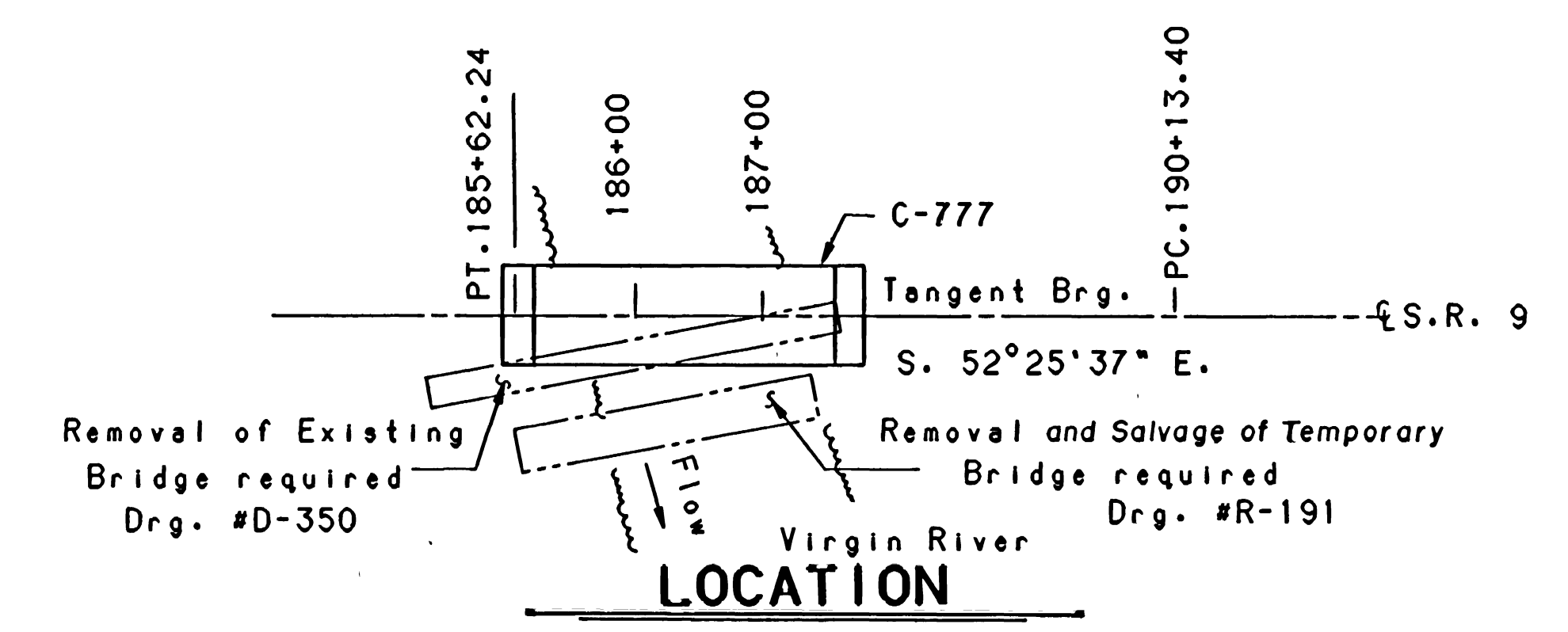
ELEVATION



SECTION A-A



S.R. 9 PROFILE



GENERAL NOTES

1. Materials, construction, and workmanship shall be in accordance with the Utah Department of Transportation Standard Specifications for Road and Bridge Construction, Edition of 1979, and Supplements thereto which are in effect at the date of request for bids.
2. All reinforcing steel shall be epoxy-coated deformed billet steel bars conforming to AASHTO M 31 Grade 60.
3. All structural steel shall be structural carbon steel conforming to AASHTO designation M-270 Grade 50W except where noted otherwise.
4. Exposed concrete corners shall be chamfered 3/4" except where noted otherwise.
5. Cover to reinforcing steel shall be 2" except where noted otherwise.
6. All cast-in-place concrete shall be Class AA(AE) except where specified otherwise.

DESIGN DATA

HS 20-44 or Interstate Alternate Loading in Accordance with current AASHTO and Interim Specifications.
cast-in-place concrete: $f_c=1400$ psi, f_s (Reinf.)=24000 psi, $n=8$
Structural Steel: $f_s=27,000$ psi
Design Speed: 60 mph
Wearing Surface: 1/2" Concrete (35 PSF) Future

QUANTITIES

ITEM	ESTIMATED	UNIT	AS CONST.
Concrete Class AA(AE) (Est. Qty. 1185Yd.)	1	Lump	
Reinforcing Steel (Epoxy Coated)	227799	Lb.	
* Structural Steel (Est. Qty. 1517536 Lb.)	1	Lump	
Granular Backfill Borrow	385	Cu.Ft.	
Drilled Caissons (3'-6")	470	Lin.Ft.	
6" Chain Link Fence Type I	273	Lin.Ft.	
Expansion Joints	95	Lin. Ft.	
Removal of Bridges	1	Each	
Removal of Temporary Bridge	1	Each	
Excavation for Structures	600	Cu. Yd.	

* Specialty Item

INDEX OF SHEETS

1. Situation And Layout
2. Soil Data
3. Soil Data
4. Foundation Plan
5. Abutment #1 Details
6. Abutment #2 Details
7. Framing Plan & Camber Dia.
8. Girder Details
9. Steel Details
10. Splice & Diaphragm Details
11. Deck Plan & Sections
12. Expansion Joint & Deck Details
13. Utility Details
14. Screed Elevations
15. Parapet Details
16. Approach Slab Drain Details
17. Chain Link Fence Details
18. Reinforcing Steel Schedule
19. Structure Removal Details
20. Temporary Structure Removal

UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
STRUCTURES DIVISION
SR-9 OVER THE VIRGIN RIVER

SITUATION AND LAYOUT

DESIGN DN.	5/90	CHECK	Cy 7. 7/18/91	186+85.00
DRAWN	L.B. 5/23/90	CHECK	TJ 5/16/91	
QUANT. MPP	5/15/91	CHECK	TJ 5/16/91	
APPROVAL	5-16-91	DATE	5/16/91	WASHINGTON
APPROVED	7-19-91	DATE	7/19/91	COUNTY
F-ER-16 (4)				C-777
PROJECT NUMBER				SHT. 1 OF 20

NO.	BY	DATE	REVISIONS

Drill Hole
No. 1

Station 185 + 85
On E of SR - 9

Elevations

Depths

B.P.F.

Ground Line

2752

2745

2740.9

2727

2707.5

2699

2689

7

10

11.1

14

20

25

30

40

44.5

50

53

60

63

Casing

Sand and gravel with silt, some cobbles and boulders

31 A-1-a 25-6-12

V-6-22-90

Sand with some silt and gravel

28 A-3 --NP-17

Loose to medium-sand and fine gravel with some silt, cobbles and boulders

9

Loose to medium-sand and fine gravel with some silt, clay, cobbles and lenses of sandy silt and clayey silt

6

19 and lenses of sandy silt and clayey silt

A-1-b 18-0-16

5 Lenses of sandy silt and clayey silt

6 Lenses of sandy silt and clayey silt

A-2-4 17-3-10

Medium-sand and fine gravel with silt and traces of clay

16

20 A-2-4 --NP-9

50/0* -Moenave Formation-Ref.

Fine grained sandstone with a few very thin beds of shale and siltstone

BX Core

NOTE: COBBLE - A ROCK FRAGMENT WITH AN
AVERAGE DIMENSION BETWEEN
3 AND 12 INCHES

Drill Hole
No. 3

Station 186 + 15
31 Ft. Lt. of ζ SR -9

Elevations

Depths B.P.F. Ground Line

2751

2745

2742.4

2728.5

2723

2705.5

2694

6

8

10

22

24

24

30

28

30

40

45.5

50

57

60

Sand with gravel, silt and cobbles

A-4 (2) 26-9-9

V 6-28-90

A-1-a --NP-13

Sand with fine gravel and silt

Medium-sand and gravel with silt, cobbles, traces of clay and possible boulders

Clayey silt

Sand with some silt, clayey silt and traces of gravel

Sand with some fine gravel and silt

Sand and gravel with some silt and cobbles, possible boulders

Sand with fine gravel, some silt and traces of clay

Sand and gravel with silt and cobbles

-Moeneve Formation-
Fine grained Sandstone

NOTE: THE WATER TABLE DEPTHS SHOWN ON THE DRILL LOGS REPRESENT HOLE CONDITIONS ON THE DATE SHOWN, EITHER WITH CASING STILL IN PLACE OR WITH PERFORATED PLASTIC PIPE INSTALLED. IT SHOULD BE NOTED HOWEVER, THAT OTHER LOCATIONS AWAY FROM THE TEST HOLES OR AT OTHER TIMES OF THE YEAR THE WATER TABLE ELEVATION MAY VARY SIGNIFICANTLY.

Drill Hole
No. 2

Station 186 + 60
On E of SR - 9

Elevations

Depths

B.P.F.

Ground Line

2749

2744.9

4.1

16

A-1-b --NP-19

10

Sand with some silt

11

50/1" Ref.

Medium-sand and gravel with some silt, cobbles and boulders

2730.5

18.5

20

50/1" Ref.

Sand with some gravel, silt and cobbles

2724

25

29

A-1-b --NP-16

30

11

Medium-sand and gravel with some silt, cobbles, boulders and traces of clay

2715

34

12

Medium-lenses of sandy silt and sand and gravel with silt

2709

40

22

Medium to very dense sand and gravel with silt, some clay and cobbles, possible boulders

52

50/2" Ref.

50

53

2696

-Moenave Formation-
Fine grained Sandstone

60

BX Core

Case 10
20
30
33
35

cobbles

BX Core

Jointed Basalt

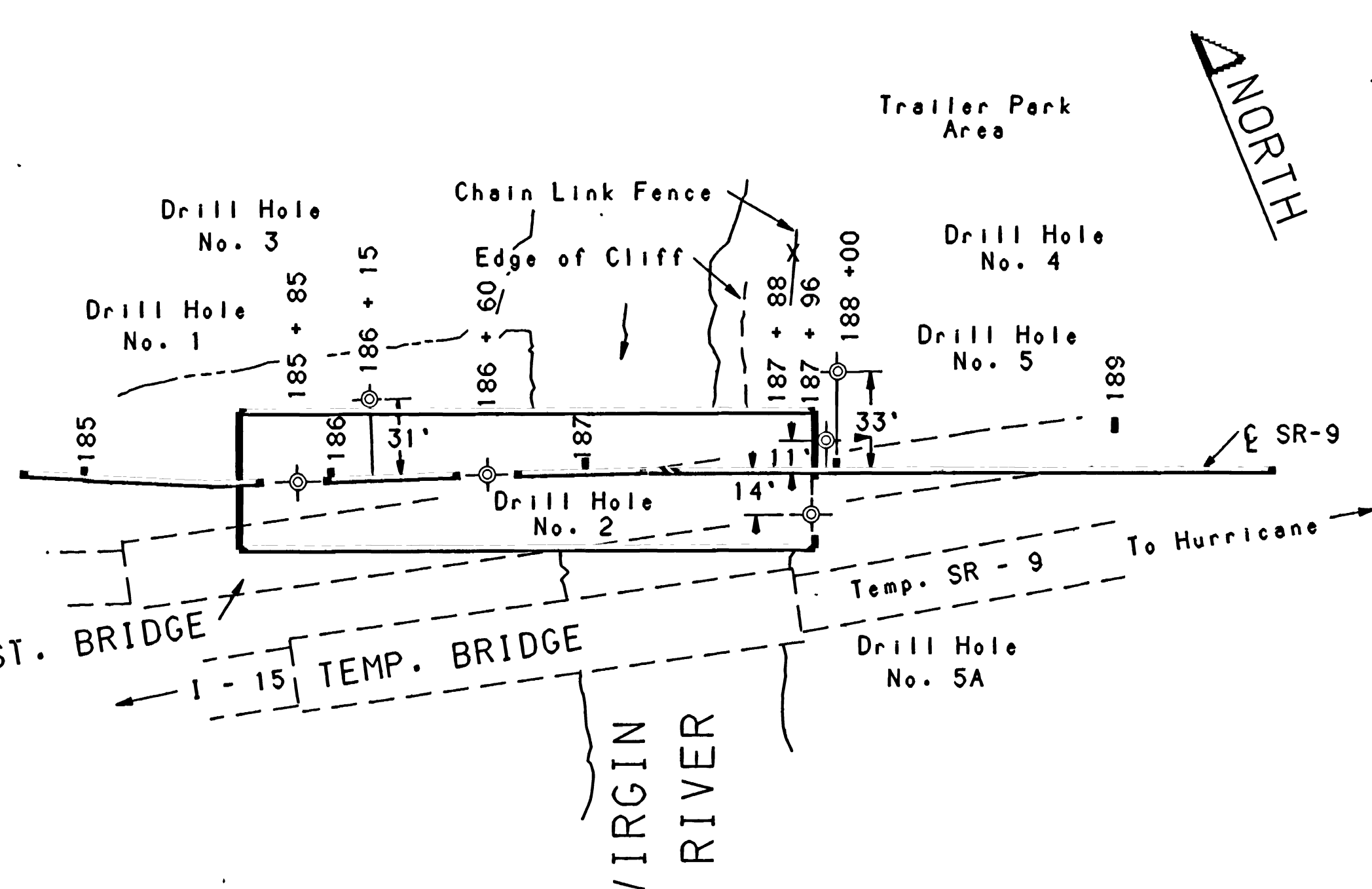
2747 — 33
2745 — 35

Sand and gravel with silt and cobbles

NOTE: A water table was not encountered.

NOTE: Complete loss of circulation water at 16 Ft.

DATE DRILLED: JUNE 1990



DRILL HOLE NO. _____
 STATION _____ O+00 & OR LT. OR RT. IN FT. OFFSET _____
 ELEVATIONS _____ B.P.F. _____
 GROUND _____
 DEPTHS _____
 ELEVATION _____
 GROUND 4552 14' _____
 WATERTABLE _____
 STRATA 4545 20' _____
 CHANGE 21' _____
 LOCATION 30' _____
 OF SAMPLER _____
 SAMPLE NOT _____
 RECOVERED _____
 BOTTOM 4521 45' _____
 OF HOLE _____
 NO. OF BLOWS OF A _____
 140 LB. HAMMER FALLING _____
 30 INCHES REQUIRED TO _____
 DRIVE A STD. 1-3/8" I.D., _____
 2" O.D. SAMPLE TUBE 1 FT. _____

10' _____
 5 _____
 2 _____
 DATE _____
 THIN WALL SHELBY _____
 TUBE - UNDISTURBED _____
 SAMPLER USED. _____
 16 _____
 10 _____
 14 _____
 AASHTO LL - PI - W _____
 A-6 (9) 37 - 14 - 30 _____
 25 _____
 33 _____
 R _____
 SPLIT BARREL _____
 UNDISTURBED _____
 SAMPLER WITH LINER _____
 RINGS OR CALIFORNIA _____
 TYPE SAMPLER _____
 44 _____
 REASON NOT _____
 RECOVERED _____

L.L. - LIQUID LIMIT IN %
P.I. - PLASTIC INDEX
W. - NATURAL MOISTURE CONTENT IN %
Ref. - REFUSAL GREATER THAN 50 BLOWS PER 6"
PEN. - PENETRATION
G.W.T. - GROUND WATER TABLE
B.P.F. - BLOWS PER FOOT
N.P. - NON PLASTIC
AASHTO - SOIL CLASSIFICATION SYSTEM

UTAH DEPARTMENT OF TRANSPORTATION
SALT LAKE CITY, UTAH
MATERIALS & RESEARCH DIVISION
VIRGIN RIVER BRIDGE REPLACEMENT
SR-9 OVER VIRGIN RIVER

DESIGN <i>2-2-91</i>	CHECK _____	187 + 00
DRAWN <i>Kristie</i>	CHECK _____	
FOUNDATION FILE NO.		
APPROVAL RECV'D <i>5-2-91 Loren H. Rautke</i>	DATE <i>5-2-91</i>	STATION WASHINGTON COUNTY
APPROVED <i>7-19-91 J. J. J.</i>	DATE <i>7-19-91</i>	DRG. NO. C-777
F-E-R-16(4)		
PROJECT NUMBER		
SHT. 2		OF 20