FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

25

UNI-36-2.73

1.6 miles ± S.W. of Milford Center

EXISTING CURVE DATA

P.I. = Sta. 151+50.58
Δ = 6°-26'-30" Lt.
D = 1°-40'-43"
T = 192.08'
L = 383.75'
R = 3413.29'
E = 5.40'

PROPOSED CURVE DATA

P.I. = Sta. 151+50.58
Δ = 6°-26'-30" Lt.
D = 0°-28'
T = 690.91'
L = 1380.36'
R = 12277.67'
E = 19.42'

TREACLE CREEK
El. 983.5±
± Temporary Runaround (Grade same as existing pavement) 992.5
End Appr. Slab Sta. 148+93.95
Begin Appr. Slab Sta. 150+06.05
Gate
20°
50'±
2:1
4:1
3.5'
+82.64
+98.58
+101.61
+17.12
6" Conc. Field Tile
4" Tile
15" Tile
12" Willow
18" Thorn
12" Maple
15" Thorn
Triple 12" Maple
To Irwin 2.17 Mi.
N. 49°-07' E.
147
148
149
150
151
152
995.43
996.75
To Milford Center 1.50 Mi.
℄ CONSTRUCTION
℄ SURVEY
995.3
Clears 10-15 year highwater elevation 2.9'±
990.8
EARTHWORK limits shown are schematic.
Actual slopes shall conform to plan cross-sections.
El. 983.5

1964 TRAFFIC COUNT

P = 1520
A = 130
B = 740
C = 140

990.7

Total Drainage Area 33.0 Sq. Miles

BM. Painted Yellow Cross in ℄ US-36, 200 ft. North of Center of Bridge UNI-36-0282 Elevation 995.30

EXISTING BRIDGE DATA

Treacle Creek - Bridge No. UNI-36-0282
TYPE: Concrete Arch (Luten)
SPAN: Clear 36'6" ~ 38'9" ~ 36'6"
ROADWAY: 21'-10"
LOADING: H-15
SKEW: 22° Rt. Forward
ALIGNMENT: Bridge on Tangent ~ 2° Lt. Curve Forward Tangent Rear
CONDITION: Poor
DATE BUILT: 1921

PROPOSED STRUCTURE

TYPE: Continuous reinforced concrete slab with capped pile piers and abutments
SPANS: 34'-42.5'-34' c/c brgs.
ROADWAY: 44'-0" f/f guard rails
LOAD FREQUENCY: CF = 2000 (57)
SKEW: 20° R.F.
WEARING SURFACE: 1" monolithic concrete
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: 0° 28' curve left
SUPERELEVATION: None.

BRIDGE LIMITS
500' V.C.
P.V.I = Sta. 149+50
Elev. = 999.89
Sta. 148+93.95 999.25
Sta. 150+06.05 999.45
UNI-36-0282
+0.60% −0.24%
Proposed Profile - UNI-36
℄ Existing Profile Grade
Bench El. 995.34
Bench El. 995.54
HIGHWATER-1959 Elev. ~ 995.01 (Highway Records)
10-15 Yr. H.W. El. 994.38
2:1 Normal
Ex 4" Tile-Rt.
NOTE: All Piles Shall be 14" Cast-In-Place Reinforced concrete
Normal Water Elev. ~ 985.05
Est. Ave. Pay Length: 30'-Abuts. 35'-Piers
Excavate channel thru structure to El. 983.5 ±
4" Field Tile
℄ 6" Field Tile-Lt.
℄ 15" Tile-Lt.
Bearing Limit Sta. 148+97.75
150+15.25

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. UNI-36-0282
Over TREACLE CREEK
UNION CO. USR-36
SEC.
STA. 148+93.95 150+06.05
SCALE 1" = 20'

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	D.H.S.	D.H.S.	R.E.J.	P.E.S.

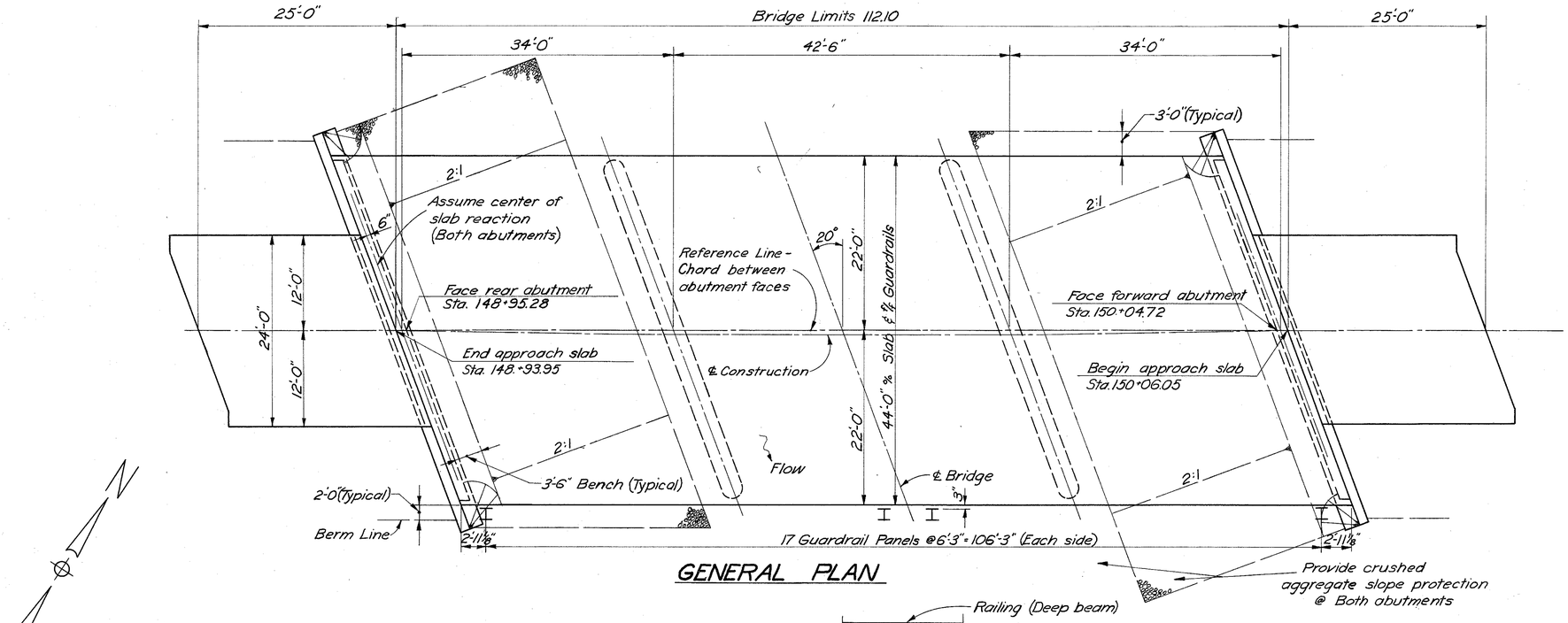
BFG 4-18-66

0649

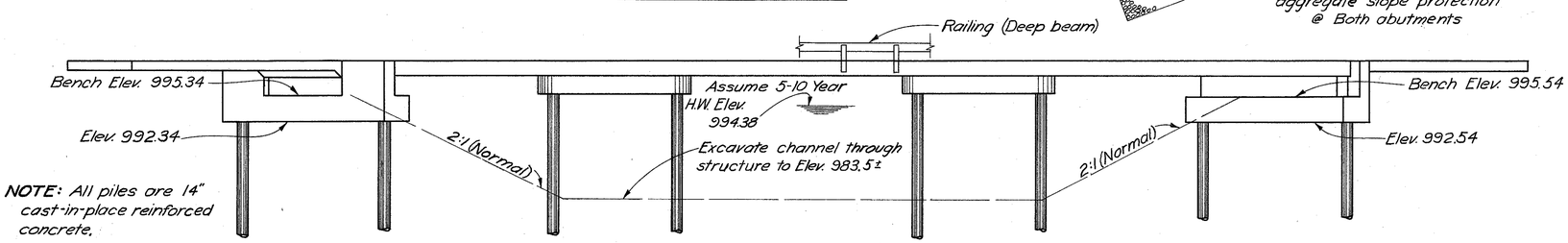
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

26/30

UNI-36-2.73



GENERAL PLAN



NOTE: All piles are 14" cast-in-place reinforced concrete.

ELEVATION

GENERAL NOTES

REFERENCE shall be made to Standard Drawings CS-1-65, dated 6-1-65, A-1-54, revised 11-8-65, P-1-54, revised 11-8-65, and to Supplemental Specifications 808, dated 2-7-66, and 825, dated 4-22-65.

DESIGN DATA:

Design Loading – CF 2000 (57)
Concrete Class C – Basic unit stress 1,333 p.s.i.
Concrete Class E – Basic unit stress 1,133 p.s.i.
Reinforcing Steel – ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i.

TEMPORARY RUN-AROUND, BRIDGE:
Load frequency for bridge, CF130, with unit stresses increased 25% as per the provisions for temporary bridges in the Design Specifications for Highway Structures. Bridge width shall be 24'.

REMOVAL OF EXISTING STRUCTURE:
When no longer need to maintain traffic, the existing structure shall be removed.

EXCAVATION QUANTITY for the abutments, in addition to that outlined in Sec. 503.10, includes the removal of material bounded by the proposed bench, by the front vertical plane described in Sec. 503.10, and by the finished slope of the cut.

PILES shall be driven to a minimum bearing capacity of 30 tons per pile for the abutments, and 42 tons per pile for the piers.

PIER PILE ENCASEMENT as shown on Standard Drawing No. P-1-54 may be omitted provided that the tapered portion, if any, of all pier piles does not extend above the stream bed or the proposed surface of the ground. If the tapered portion of any pile extends above these limitations, the encasement will be required for all the pier piles. If the encasement is omitted, the pile casings shall have a thickness of metal not less than No. 7 gauge, and the painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, the painting shall extend to at least one foot below the proposed surface of the ground.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Piers	Abuts.	Gen'l	AS Built	
202	Lump	Sum	Existing structure removed				Lump		
502	Lump	Sum	Temporary runaround bridge				Lump		
503	92	Cu. Yds.	Unclassified excavation			92			
505	Lump	Sum	First test pile				Lump		
507	1110	Lin. Ft.	14" cast-in-place reinforced concrete piles		630	480			
509	78,432	Lbs.	Reinforcing steel	67,750	4,790	5,892			
511	302	Cu. Yds.	Class C concrete, superstructure and pier caps	285	17				
511	56	Cu. Yds.	Class E concrete, abutments			56			
517	224.2	Lin. Ft.	Railing (Deep beam with steel posts and bolts)	224.2					
518	20	Cu. Yds.	Porous backfill			20			
601	371	Sq. Yds.	Crushed aggregate slope protection			371			
808	302	Units	Water-reducing, Set-retarding admixture	285	17				
825	587	Sq. Yds.	Concrete surface treatment	587					

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN & ELEVATION, NOTES & ESTIMATED QUANTITIES

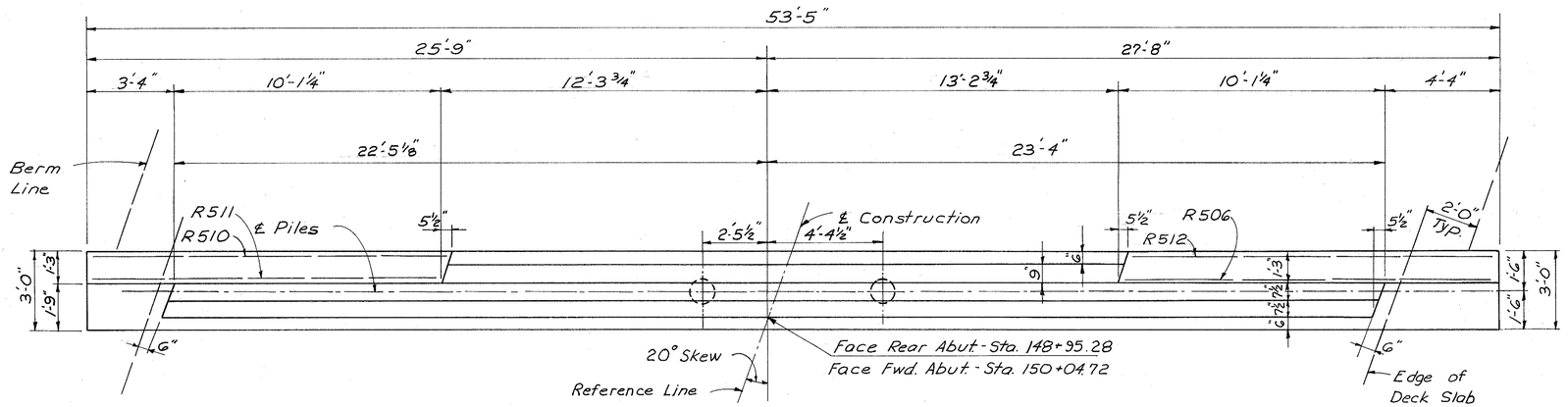
BRIDGE NO. UNI-36-0282
OVER TREACLE CREEK
UNION COUNTY
STA. 148+93.95
STA. 150+06.05

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SFC	SFC	C.E.H.	Ray	BFG	4-18-66	

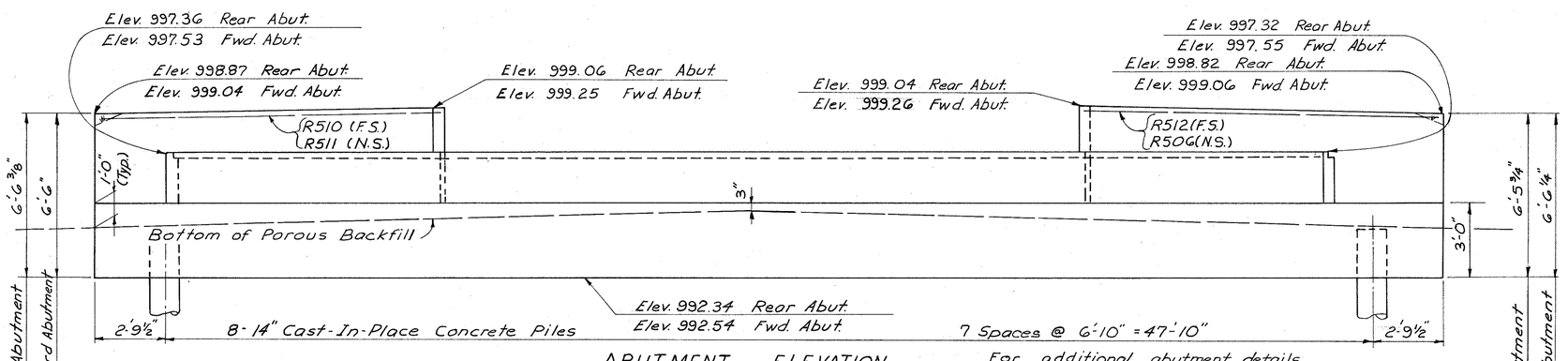
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

27/30

UNI-36-2.73

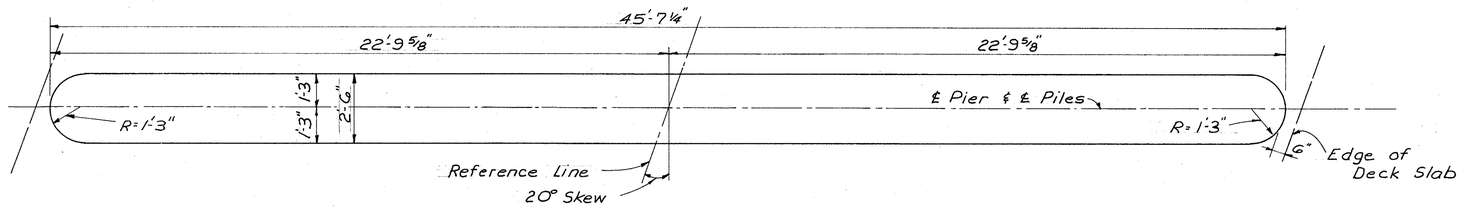


ABUTMENT PLAN

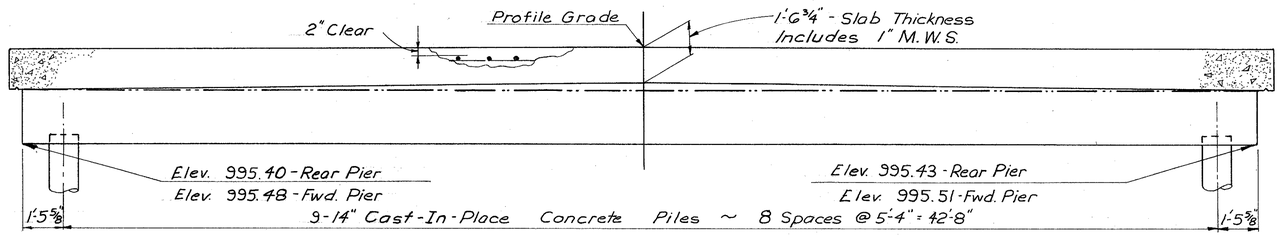


ABUTMENT ELEVATION

For additional abutment details see Standard Drawing A-1-54.



PIER PLAN



PIER ELEVATION

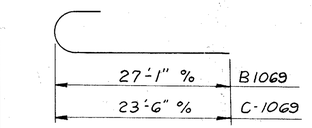
For additional pier details see Standard Drawing P-1-54.

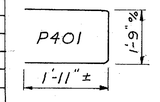
N.S. = Near Side
F.S. = Far Side

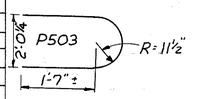
REINFORCING STEEL LIST

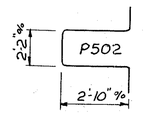
MARK	NO.	LENGTH	WEIGHT	SHP.
Superstructure				
A1069	120	39'-4"	20,310	S
B1069	38	28'-6"	4,660	B
C1069	40	24'-11"	4,289	B
D1069	19	25'-10"	2,112	S
E1069	20	18'-4"	1,578	S
F1069	98	32'-10"	12,433	S
G1069	42	17'-9"	3,208	S
H1069	44	13'-4"	2,524	S
M701	103	46'-4"	9,755	S
J601	46	22'-1"	1,526	S
K601	23	14'-0"	484	S
N601	70	46'-4"	4,871	S
Piers				
P1001	8	46'-4"	1,595	S
P901	8	43'-4"	1,179	S
P701	108	4'-0"	883	S
P501	4	43'-4"	181	S
P502	68	9'-0"	638	B
P503	8	6'-4"	53	B
P401	72	5'-5"	261	B
Abutments				
R1001	16	24'-5"	1,681	S
R801	16	27'-10"	1,189	S
R501	16	27'-4"	456	S
R502	156	6'-7"	1071	B
R503	8	23'-6"	196	S
R504	24	5'-4"	134	S
R505	34	7'-11"	280	B
R506	2	14'-0"	29	S
R507	16	5'-11"	99	S
R508	28	6'-8"	195	B
R509	28	8'-5"	246	B
R510	2	13'-4"	28	S
R511	2	13'-1"	27	S
R512	2	13'-8"	29	S
R401	64	5'-5"	232	B
Replacement Bars				
RE1001	3	7'-2"	-	S
RE901	1	6'-10"	-	S
RE801	1	6'-6"	-	S
RE701	1	6'-2"	-	S
RE601	1	5'-11"	-	S
RE501	1	5'-7"	-	S
RE401	1	5'-5"	-	B

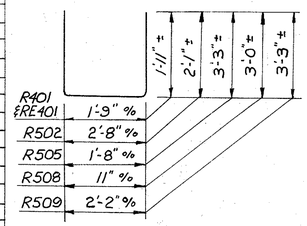
BENDING DIAGRAMS











STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIER & ABUTMENT DETAILS & REINFORCING STEEL LIST

BRIDGE NO. UNI-36-0282
OVER TREACLE CREEK

UNION COUNTY

STA. 148+93.95
150+06.05

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SFC	SFC	R.D.M.	Rwg	BFG	4-18-66	