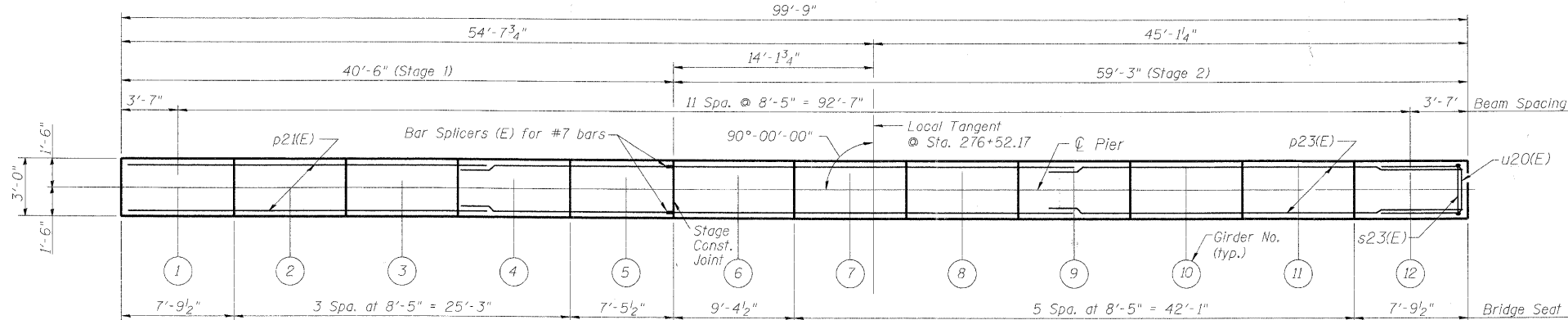


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

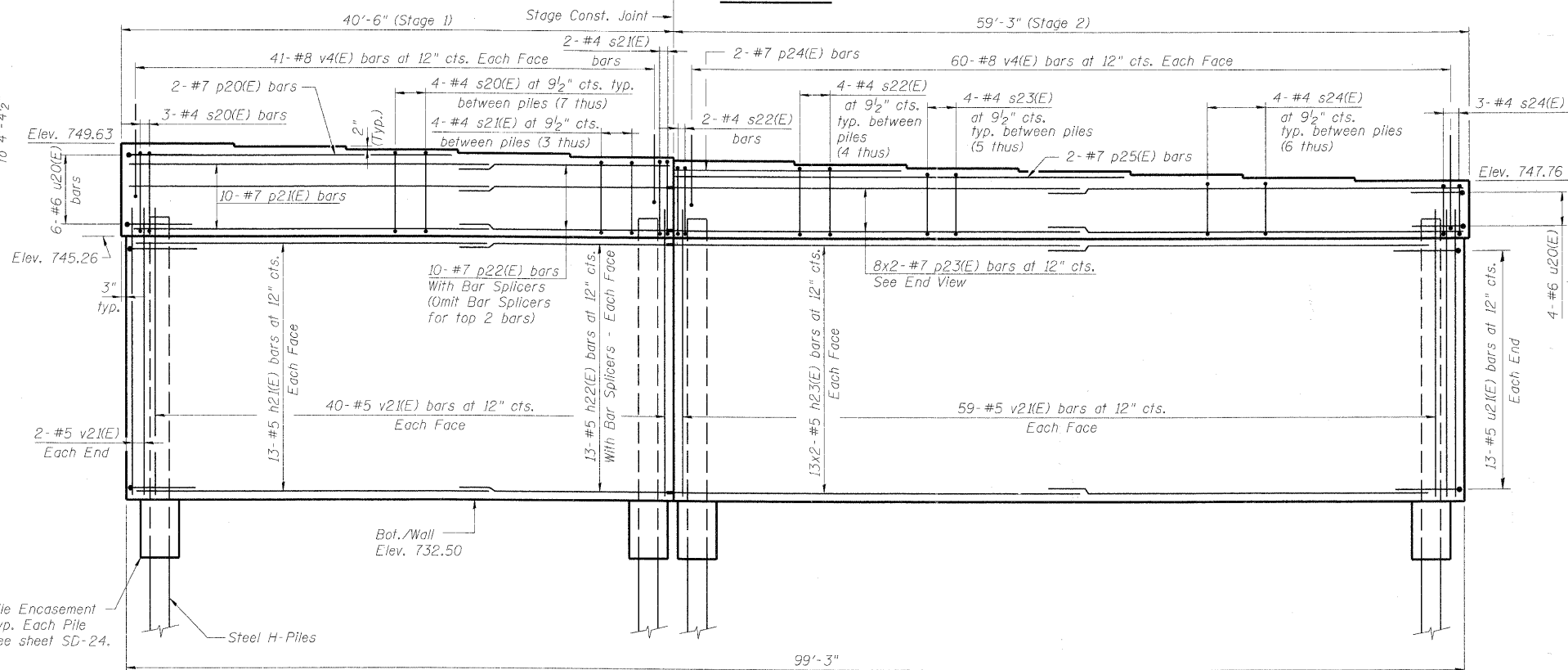
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		KANE	545	337
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET SD-22  
OF 34 SHEETS

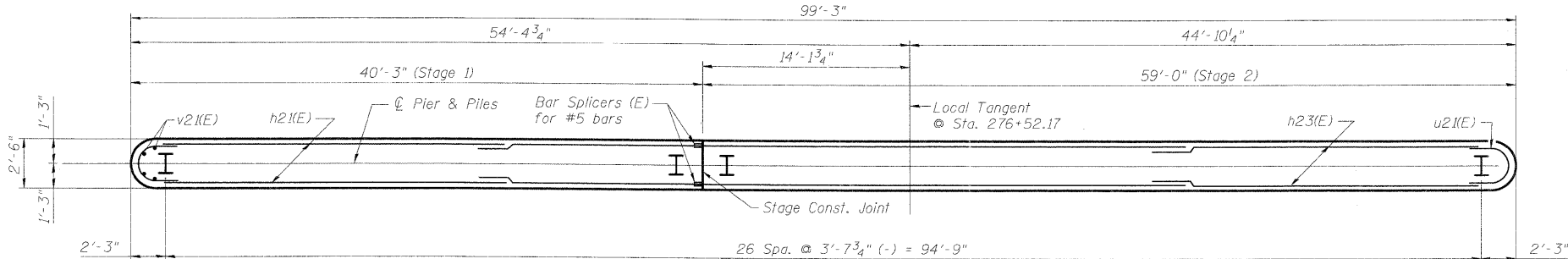
Contract # 63074



TOP PLAN



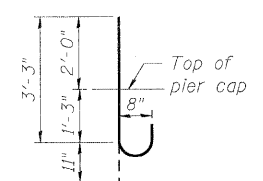
ELEVATION  
(Looking North)



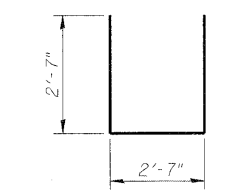
STEM PLAN

Notes:

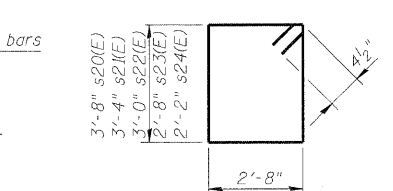
1. Space reinforcement in cap to miss anchor bolts.
2. Pour steps monolithically with cap.
3. For details of piles, see sheet SD-24.
4. Excavation protection shall be paid for as Underwater Structure Excavation Location 1. See sheet SD-3 for location. See Special Provisions.
5. If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed under water into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.



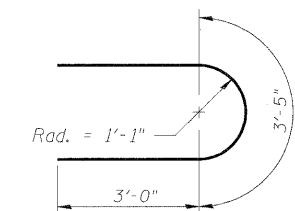
BAR v4(E)



BAR u20(E)



BARS s20(E) Thru s24(E)



BAR u2(E)

BEAM SEAT  
ELEVATION

1	749.63
2	749.46
3	749.29
4	749.12
5	748.95
6	748.78
7	748.61
8	748.44
9	748.27
10	748.10
11	747.93
12	747.76

BILL OF MATERIAL

(Stage 1)

Bar	No.	Size	Length	Shape
h21(E)	26	#5	32'-4"	—
h22(E)	26	#5	10'-0"	—
p20(E)	2	#7	24'-4"	—
p21(E)	10	#7	33'-9"	—
p22(E)	10	#7	10'-0"	—
s20(E)	31	#4	13'-5"	□
s21(E)	14	#4	12'-9"	□
u20(E)	6	#6	7'-9"	U
u21(E)	13	#5	9'-5"	U
v4(E)	82	#8	4'-2"	U
v21(E)	82	#5	14'-9"	—

Structure Excavation	Cu. Yd.	80
Concrete Structures	Cu. Yd.	65.7
Reinforcement Bars, Epoxy Coated	Pound	4,920
Furnishing Steel Piles, HP12x53	Foot	660
Driving Piles	Foot	660
Test Pile Steel, HP12x53	Each	1
Pile Shoes	Each	11
Concrete Encasement	Cu. Yd.	3.9
Bar Splicers	Each	34

BILL OF MATERIAL

(Stage 2)

Bar	No.	Size	Length	Shape
h23(E)	52	#5	30'-7"	—
p23(E)	16	#7	31'-3"	—
p24(E)	2	#7	17'-5"	—
p25(E)	2	#7	34'-3"	—
s22(E)	18	#4	12'-1"	□
s23(E)	20	#4	11'-5"	□
s24(E)	27	#4	10'-5"	□
u20(E)	4	#6	7'-9"	U
u21(E)	13	#5	9'-5"	U
v4(E)	120	#8	4'-2"	U
v21(E)	120	#5	14'-9"	—

Structure Excavation	Cu. Yd.	109
Concrete Structures	Cu. Yd.	89.6
Reinforcement Bars, Epoxy Coated	Pound	6,740
Furnishing Steel Piles, HP12x53	Foot	1,056
Driving Piles	Foot	1,056
Pile Shoes	Each	16
Concrete Encasement	Cu. Yd.	5.6

For details of Bar Splicers, see sheet SD-26.  
For details of piles and Concrete Encasement, see sheet SD-24.

PIER 1 PLAN AND ELEVATION  
IL 25/DUNHAM ROAD OVER THE  
EAST BRANCH OF BREWSTER CREEK  
F.A.P. 360 - SEC. 06-00214-15-BR  
KANE COUNTY  
STATION 276+36.96  
STRUCTURE NO. 045-2032

DESIGNED	AAY
CHECKED	AJK
DRAWN	VH
CHECKED	DMC

PILE DATA

Type: HP12x53  
Nominal Required Bearing: 288 kips  
Allowable Resistance Available: 96 kips  
Est. Length: 66.0 Feet  
No. Production Piles: 26  
No. Test Piles: 1

**benesch**  
Engineers • Surveyors • Planners  
205 North Michigan Avenue, Suite 2400  
Chicago, Illinois 60601  
312-565-0450  
Job # 3944

x:\3900s\3944\engineering\_documents\1125-dunham\_over\_brewster\_sn045-2032(nbl)\_sn045-2034(sbl)\_final\0452032-63074-022-pr1.dgn  
11/21/02 AM  
3/30/2009