

STRUCTURAL REHABILITATION CHECKLIST

Bridge No.:	A7453		Job No.:	SL0060 SL0035	
Route:	MO 100 W		Over:	MOC RR	
County:	FRANKLIN		Date of Field Check:	MARCH 21, 2022	2
	* * * Please in	clude photog	graphs for all items that	apply. * * *	
VERLAY					
* Type of existing ov	erlay:	Asphalt	Low Slump Silica Fu	me Latex Epoxy C	Other:
* Existing overlay th	ickness:	"	* Year overlay was app	ied: Unl	known
* % of overlay repair	red or patched:	%	* Replace overlay:	Yes No	
* Notes: RECOMN	IEND EPO OVERLAY				
# DSCN 0764.0765.0	766,0767,0768,0769,0770				
, ,					
, ,	5		Deck Test request has been ord * Full-depth repai (round up to th		sq. ft.
* Half-sole repairs: (round up to the residue) * Slab edge repairs:	5	gq. ft.	* Full-depth repair (round up to the Superstructure in the superst	rs: <u>0</u>	sq. ft.
* Half-sole repairs: (round up to the residue) * Slab edge repairs:	nearest 50 sq. ft.) 4" of the slab edge) dge:	sq. ft.	* Full-depth repair (round up to the superstructure in (covers the remains as Existing Deck Page 2).	rs: 0 we nearest 25 sq. ft.) epair (Unformed): 0 maining slab cantilever beyond the or	sq. ft.
* Half-sole repairs: (round up to the repairs: (covers the outer * Clean & seal slab e (in lieu of edge re	nearest 50 sq. ft.) 4" of the slab edge) dge:	o sq. ft. lin. ft. lin. ft. Yes	* Full-depth repairer (round up to the superstructure in a covers the remains and up to the superstructure in a covers the remains and up to the superstructure in a cover sup	rs: 0 te nearest 25 sq. ft.) epair (Unformed): 0 naining slab cantilever beyond the or teching: 0 te nearest 25 sq. ft.)	sq. ft. uter 4") sq. ft.
* Half-sole repairs: (round up to the repairs: (covers the outer * Clean & seal slab e (in lieu of edge re * Total surface hydro (half-sole and ful) * Deck repairs with v (if applicable)	dge: codemolition bridge deck:	o sq. ft. in. ft. in. ft. Yes[* Full-depth repairer (round up to the superstructure in a covers the remains of the superstructure in a covers the remains of the superstructure in the s	rs: 0 e nearest 25 sq. ft.) epair (Unformed): 0 naining slab cantilever beyond the or tching: 0 e nearest 25 sq. ft.) ement (redeck): Yes ✓ 1 eplacement: Yes ✓ 1	sq. ft. uter 4") sq. ft. No Opt No Opt
* Half-sole repairs: (round up to the repairs: (covers the outer * Clean & seal slab e (in lieu of edge re * Total surface hydro (half-sole and ful) * Deck repairs with v (if applicable)	dge: epairs) demolition bridge deck: depth repair quantities state voided tube replacement: ft.	o sq. ft. lin. ft. lin. ft.	* Full-depth repaire (round up to the superstructure in (covers the remains) * Existing Deck Paragram (round up to the superstructure in the superstructu	rs: 0 e nearest 25 sq. ft.) epair (Unformed): 0 naining slab cantilever beyond the or tching: 0 en nearest 25 sq. ft.) ement (redeck): Yes ✓ 1 eplacement: Yes ✓ 1	sq. ft. sq. ft. sq. ft. No Opti
* Half-sole repairs: (round up to the repairs: (covers the outer * Clean & seal slab e (in lieu of edge re * Total surface hydro (half-sole and ful) * Deck repairs with v (if applicable) sq * How were the quant * Notes: RECOMM	dge: c demolition bridge deck: d depth repair quantities state of the slaber of the sl	sq. ft. lin. ft. lin. ft. Yes Yes Yes Sual	* Full-depth repaire (round up to the superstructure in (covers the renain state) * Existing Deck Paragram (round up to the superstructure in superstructure in (Deck repaire quantity) * Full bridge replaced (Deck repaire quantity) * Gege Inspection Report Southers and Curbs of the superstructure in superstructure	rs: 0 te nearest 25 sq. ft.) epair (Unformed): 0 naining slab cantilever beyond the or tching: 0 te nearest 25 sq. ft.) ement (redeck): Yes ✓ 1 eplacement: Yes ✓ 1 neeplacement: Yes ✓ 1	sq. ft. uter 4") sq. ft. No Opt No Opt No Opt No Opt Alternatives)
* Half-sole repairs: (round up to the repairs: (covers the outer * Clean & seal slab e (in lieu of edge re * Total surface hydro (half-sole and ful) * Deck repairs with v (if applicable) sq * How were the quant * Notes: RECOMM	dge: c demolition bridge deck: d depth repair quantities state of the slaber of the sl	sq. ft. lin. ft. lin. ft. Yes Yes Yes Sual	* Full-depth repaire (round up to the superstructure in (covers the renain state) * Existing Deck Paragram (round up to the superstructure in superstructur	rs: 0 te nearest 25 sq. ft.) epair (Unformed): 0 naining slab cantilever beyond the or tching: 0 te nearest 25 sq. ft.) ement (redeck): Yes ✓ 1 eplacement: Yes ✓ 1 neeplacement: Yes ✓ 1	sq. ft. uter 4") sq. ft. No Opti No Opti No Opti

			Location in Span	Deterior	ration	Describe
	At	Btwn (mid)		Туре	Amount	
	Panel Jt.	Panel Jt.	End Mid E	End 	sq. ft.	
	_ 🗆				sq. ft.	
					sq. ft.	
					sq. ft.	
				<u> </u>	sq. ft.	
					sq. ft.	
	•		, efflorescence, rust stainin panel joints. The location a			
joints, etc. 1	may include v Yypically obse		**			
joints, etc. 1	may include v Typically obse		panel joints. The location a	and "Type" of deteriora		
joints, etc. 1 ROACH SL Is there a b	may include v Typically obse ABS	rved at or near	e?	and "Type" of deteriora	tion should be recorded.	alt Other
ROACH SL. Is there a b.	may include v Typically obse ABS ridge approach	rved at or near	e? ✓ Yes	and "Type" of deteriora	tion should be recorded.	alt Other
ROACH SL Is there a b Is there a real of the approximation of the second of the seco	may include v Typically obse ABS ridge approact they, approact pach slab sinl	ch slab in place ch pavement in king at the end	e? ✓ Yes	No * Type: No * Type: Yes No	tion should be recorded.	alt Other
ROACH SL	may include v Typically obse ABS	rved at or near	e?	and "Type" of deteriora	tion should be recorded.	alt Other

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* Is the drainage system	working adequately? Yes J No
_	DRAIN BASIN OR FLUME NEEDED TO DIRECT WATER AWAY FROM SLOPE DOWN TO RAIL TRACK MT ISSUE TO PREVENT MUD & EROSION COVERING RAIL TRACKS UNDER STRUCTURE
#	
URBS & RAILS	
* Existing curb (left side)	: Safety Barrier Curb Curb/parapet Blockouts Thrie Beam Baluster Steel Chann
	Other Handrail Fence
	* Does curb need repair Yes No * Curb repair lin. ft.
	* Remove hand rail
* Existing curb (right side):	Safety Barrier Curb Curb/parapet Blockouts Thrie Beam Baluster Steel Chann
	Other Handrail Fence
	* Does curb need repair Yes No * Curb repair 10 lin. ft.
	* Remove hand rail Yes No * Add curb blockout Yes No
* Existing median curb:	Type: Width " Height "
	* Does curb need repair Yes No * Curb repairlin. ft.
* Approach rail attachme	ent: None Not attached 4 Hole 5 Hole Turn-down Other
* If the existing handrails	s will be removed, does the local maintenance supervisor wish to keep them?
Storage address: <u>l</u>	ocation:
<u>a</u>	address:
	rity: state: zip:

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Picture #

Bent	Туре	Recommendations	Gap Left	Gap Right	Temperature & Other Info
			"	"	
				"	
		USE-IN-PLACE REPAIR REPLACE REPLACE	"	"	
		E-IN-PLA REPAIR REPLACE REPLACE			
			"	"	
		_	"		
* Notes:	N/A				
·e #					
BEARINGS					
Bent	Coating	Recommenda	tions	Notes (indicate	e which bearings at each bent)
	1/1 		MAKE END BENT SLIDING SLAB MAKE END BENT INTEGRAL MAKE END BENT INTEGRAL		
	CLEAN & OVERCOAT CLEAN & OVERCOAT AST CLEAN & RECOAT CLEAN & COAT		LIDIN		
	OVE]	USE-IN-PLACE REPAIR RESET RESET REPLACE	NT SI		
		SE-II			
	CLEA		□ ke e □		
			¥ 4		
				-	
* Notes:	ENCASED				
* Notes:					
	ENCASED				
	ENCASED				
e # (Provide	ENCASED				
e # (Provide	ENCASED Pictures of Each Bearing			green gray	other
ce # (Provide COATING S * Existing	ENCASED Pictures of Each Bearing SYSTEM (PAINT) g coating system:				
* Existing	ENCASED Pictures of Each Bearing SYSTEM (PAINT) g coating system: st coated:	* Is existing co	ating peeling?	Yes (Overcoat is n	ot an option) No
* Existing	ENCASED Pictures of Each Bearing SYSTEM (PAINT) g coating system:	* Is existing co	ating peeling?	Yes (Overcoat is n	ot an option) No
* Existing	ENCASED Pictures of Each Bearing SYSTEM (PAINT) g coating system: st coated:	* Is existing co	ating peeling?	Yes (Overcoat is n Clean o	ot an option) No
* Existing	ENCASED Pictures of Each Bearing SYSTEM (PAINT) g coating system: st coated:	* Is existing co Blast clean & Blast clean & locations	ating peeling? recoat all steel recoat only at joint st required for overce	Yes (Overcoat is n Clean o Blast &	ot an option) No No vercoat all steel recoat at joint locations and clean
* Existing	ENCASED Pictures of Each Bearing SYSTEM (PAINT) g coating system: st coated: g recommendation:	* Is existing co Blast clean & locations Note: Pull off tes	ating peeling? recoat all steel recoat only at joint st required for overce	Yes (Overcoat is n Clean o Blast &	ot an option) No No vercoat all steel recoat at joint locations and clean coat all other steel

(Example:	Slab Superstructure of Deck solid slabs, voiders & prestressed girder	ed slabs, box girder,	e the bearings) - -		
	xample: Beams, string (Check all that apply)	gers, girders, diaphragi) (Attach pictures)	ns, cross-frames, mis	c. steel)	Describe & Locate
	Section	n Loss %	Cracks	in.	
	Section	n Loss %	Cracks	in.	
	Section	n Loss %	Cracks	in.	
	Section	n Loss %	Cracks	in.	
	NT/A				
Notes:	N/A				
•#	TURE REPAIR				
•#		Unformed Repair	Seal Concrete Beam Cap Bts.	Coat Exposed Pile @ Int. Pile Cap Bts.	Describe (Beam, Backwall, Wing, etc
ubstruct	TURE REPAIR	Unformed Repair sq. ft.		=	Describe (Beam, Backwall, Wing, etc
ubstruct	FURE REPAIR Formed Repair	•	Beam Cap Bts.	@ Int. Pile Cap Bts.	Describe (Beam, Backwall, Wing, etc
ubstruct	FORMET REPAIR Formed Repair sq. ft.	sq. ft.	Beam Cap Bts. Yes No	@ Int. Pile Cap Bts. Yes No	Describe (Beam, Backwall, Wing, etc
ubstruct	FORMET REPAIR Formed Repair sq. ft. sq. ft.	sq. ft.	Beam Cap Bts. Yes No Yes No	@ Int. Pile Cap Bts. Yes No Yes No	Describe (Beam, Backwall, Wing, etc
ubstruct	Formed Repair sq. ft. sq. ft. sq. ft.	sq. ftsq. ftsq. ft.	Beam Cap Bts. Yes No Yes No Yes No	@ Int. Pile Cap Bts. Yes No Yes No Yes No	Describe (Beam, Backwall, Wing, etc.

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1 SIGNS, SIGNALS &/OR LIGHTING A	TTACHED TO STR	UCTURE		
* Are there signs attached directly to	this structure?	Yes No	quantityl	location
* Describe proposed work to be done	to signs.			
* Are there signals attached directly	to this structure?	Yes No	quantity 1	location
* Describe proposed work to be done			quantity	ocation
Describe proposed work to be done				_
* Is there aviation lighting attached t	o this structure?	Yes No	o N/A	Red Green
* Is there navigational lighting attach	ed to this structure?	Yes No	o N/A 1	Red Green
* Is there roadway lighting attached	to this structure?	Yes No	o N/A	
* Describe proposed work to be done	to lighting.			
ure # UTILITIES ATTACHED TO STRUCTU	JRE			
Туре	Qty. Size	Owner		Condition
Conduit Pipeline Other			Repaint	
Conduit Tipeline Other		-	Kepaint	Repair Replace Remove
Conduit Pipeline Other			Repaint Repaint	Repair Replace Remove Repair Replace Remove
Conduit Pipeline Other			Repaint	Repair Replace Remove
Conduit Pipeline Other Conduit Pipeline Other			Repaint Repaint	Repair Replace Remove Repair Replace Remove
Conduit Pipeline Other Conduit Pipeline Other Conduit Pipeline Other			Repaint Repaint	Repair Replace Remove Repair Replace Remove

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* Is there a cathodic system on this stru	icture? Yes	No Remove D	o not alter Abandon in place (grooved syste
* Is it on and working?	No Unknown		
* Notes: N/A			
?#			
HANNEL ALIGNMENT, SLOPE PROT	TECTION & SCOUR		
* Is channel aligned to bridge opening?	Yes No	Describe N/A	
* Is drift a continual problem?	Yes No	Describe & Locate N/A	
* Is erosion a problem?	✓ Yes No	Describe & Locate BOTH	EAST AND WEST SLOPES
* Describe slope protection in place.	EARTH		
* Scour At Footing At I	Piling Depth	Bent	Recommendation
			<u> </u>
			· · · · · · · · · · · · · · · · · · ·
	S NEEDED TO SLOPE A		ATE SOME TYPE OF FROSION RI ANK
ROCK NEAR ABUTMENT, BUT RITHAT WONT REQUIRE VEGETA	EMAINING EARTH SLO FION - TOO SHADY UN	PE ERODES. INVESTIGA	ATE SOME TYPE OF EROSION BLANK DE DOWN TO TRACKS, NOT SURE IF
ROCK NEAR ABUTMENT, BUT RI	EMAINING EARTH SLO TION - TOO SHADY UN FE TREATMENT	PE ERODES. INVESTIGA DERNEATH. STEEP GRA	
ROCK NEAR ABUTMENT, BUT RI THAT WONT REQUIRE VEGETA' ROCK BLANKET IS APPROPRIAT	EMAINING EARTH SLO TION - TOO SHADY UN TE TREATMENT ACH SLAB CORNERS N	PE ERODES. INVESTIGA DERNEATH. STEEP GRA	
ROCK NEAR ABUTMENT, BUT RI THAT WONT REQUIRE VEGETA' ROCK BLANKET IS APPROPRIAT VOIDS UNDER NE & NW APPROA	EMAINING EARTH SLO TION - TOO SHADY UN TE TREATMENT ACH SLAB CORNERS N	PE ERODES. INVESTIGA DERNEATH. STEEP GRA	
ROCK NEAR ABUTMENT, BUT RI THAT WONT REQUIRE VEGETA' ROCK BLANKET IS APPROPRIAT VOIDS UNDER NE & NW APPROA	EMAINING EARTH SLO TION - TOO SHADY UN TE TREATMENT ACH SLAB CORNERS N	PE ERODES. INVESTIGA DERNEATH. STEEP GRA	
ROCK NEAR ABUTMENT, BUT RI THAT WONT REQUIRE VEGETA' ROCK BLANKET IS APPROPRIAT VOIDS UNDER NE & NW APPROA	EMAINING EARTH SLO TION - TOO SHADY UN TE TREATMENT ACH SLAB CORNERS N	PE ERODES. INVESTIGA DERNEATH. STEEP GRA	
ROCK NEAR ABUTMENT, BUT RI THAT WONT REQUIRE VEGETA' ROCK BLANKET IS APPROPRIAT VOIDS UNDER NE & NW APPROA ## DSCN 0774,0775,0776,0777,0778,0779	EMAINING EARTH SLO TION - TOO SHADY UN TE TREATMENT ACH SLAB CORNERS N	PE ERODES. INVESTIGA DERNEATH. STEEP GRA	DE DOWN TO TRACKS, NOT SURE IF
ROCK NEAR ABUTMENT, BUT RI THAT WONT REQUIRE VEGETA' ROCK BLANKET IS APPROPRIAT VOIDS UNDER NE & NW APPROA # DSCN 0774,0775,0776,0777,0778,0779 RAFFIC LANES * Number of lanes striped:	EMAINING EARTH SLO FION - TOO SHADY UN TE TREATMENT ACH SLAB CORNERS NI 9,0780	PE ERODES. INVESTIGA DERNEATH. STEEP GRA EED FLOWABLE FILL	DE DOWN TO TRACKS, NOT SURE IF
ROCK NEAR ABUTMENT, BUT RI THAT WONT REQUIRE VEGETA' ROCK BLANKET IS APPROPRIAT VOIDS UNDER NE & NW APPROA # DSCN 0774,0775,0776,0777,0778,0779 RAFFIC LANES * Number of lanes striped:	EMAINING EARTH SLO FION - TOO SHADY UN TE TREATMENT ACH SLAB CORNERS NI 9,0780 on structure 2	DPE ERODES. INVESTIGA DERNEATH. STEEP GRA EED FLOWABLE FILL under str	DE DOWN TO TRACKS, NOT SURE IF
ROCK NEAR ABUTMENT, BUT RI THAT WONT REQUIRE VEGETA' ROCK BLANKET IS APPROPRIAT VOIDS UNDER NE & NW APPROA 2 # DSCN 0774,0775,0776,0777,0778,0779 RAFFIC LANES * Number of lanes striped:	EMAINING EARTH SLO FION - TOO SHADY UN TE TREATMENT ACH SLAB CORNERS NI 9,0780 on structure 2 on structure 4'	DEE ERODES. INVESTIGA DERNEATH. STEEP GRA EED FLOWABLE FILL under str 10' under str	ucture
ROCK NEAR ABUTMENT, BUT RITHAT WONT REQUIRE VEGETA' ROCK BLANKET IS APPROPRIAT VOIDS UNDER NE & NW APPROA # DSCN 0774,0775,0776,0777,0778,0779 ** Number of lanes striped: * Shoulder width: None * Sidewalk widths:	emaining Earth SLO FION - TOO SHADY UN FE TREATMENT ACH SLAB CORNERS NI 9,0780 on structure 2 on structure 4' (left) on structure (left)	DPE ERODES. INVESTIGA DERNEATH. STEEP GRA EED FLOWABLE FILL under str 10' (right) under str	ucture
ROCK NEAR ABUTMENT, BUT RITHAT WONT REQUIRE VEGETA' ROCK BLANKET IS APPROPRIAT VOIDS UNDER NE & NW APPROATE BOSCN 0774,0775,0776,0777,0778,0775 * Page 1	EMAINING EARTH SLO FION - TOO SHADY UN TE TREATMENT ACH SLAB CORNERS NI 9,0780 on structure 2 on structure 4' (lefi) on structure	DPE ERODES. INVESTIGA DERNEATH. STEEP GRA EED FLOWABLE FILL under str 10' (right) under str	ucture
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GENERAL AREA CONDITIONS	
* Primary area: Commercial Industrial	Residential Agricultural Military Other
* Posted speed limit on structure: mph	
	@mph
	@mph
* Do pedestrians and/or bicyclists regularly use this structur	e? Yes ✓ No Undetermined
* Notes:	
Picture #	
MAINTENANCE * What work has been done to this structure that may not be 2012 - Seal with Silane 2019 - Seal with Silane Picture #	e reflected on existing bridge plans?
riciure #	
ADDITIONAL FIELD NOTES RECOMMEND FULL EPO	D, SLOPE EROSION REPAIR, AND CUT BRUSH AND REMOVE IT.
Picture #	

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19 STACING	C / DETOLID						
	G / DETOUR						
* Traf	fic Control: Close structure	Stage construction on structure Cross over traff	fic to adja	cent st	ructure	Det	our
	Other option						
* Defi	ne probable detour route. Use this	structure for cross over for H0353 re-deck (one lane e	ach way)			
ı <u> </u>							
l							
20 DEDSON							
	S ASSISTING WITH CHECKLIST						
Name	JOSEPH RIDENHOUR	Title	Ph.	(3	314) 6	24 -	9566
Name		Title	Ph.	()	-	
Name		Title	Ph.	()	-	
Name		Title	Ph.	()		
Name		Title	Ph.	()		
REQUIRI	ED SIGNATURES						
	I have reviewed the information on th	his checklist and believe it to be as accurate as possible.					
Name			Date_				
	Transportation Project Manager						
			- .				
Name	District Bridge Engineer		Date _				
	District Draige Engineer						

The structural rehabilitation checklist indicates how the bridge is functioning and aging.

All deterioration should be noted, even if it is known that the work will not be completed under the proposed project.

Send NEW Structural Rehabilitation Checklist by email

To: "Bridge Survey Processor"

Cc: Structural Project Manager or Structural Resource Manager

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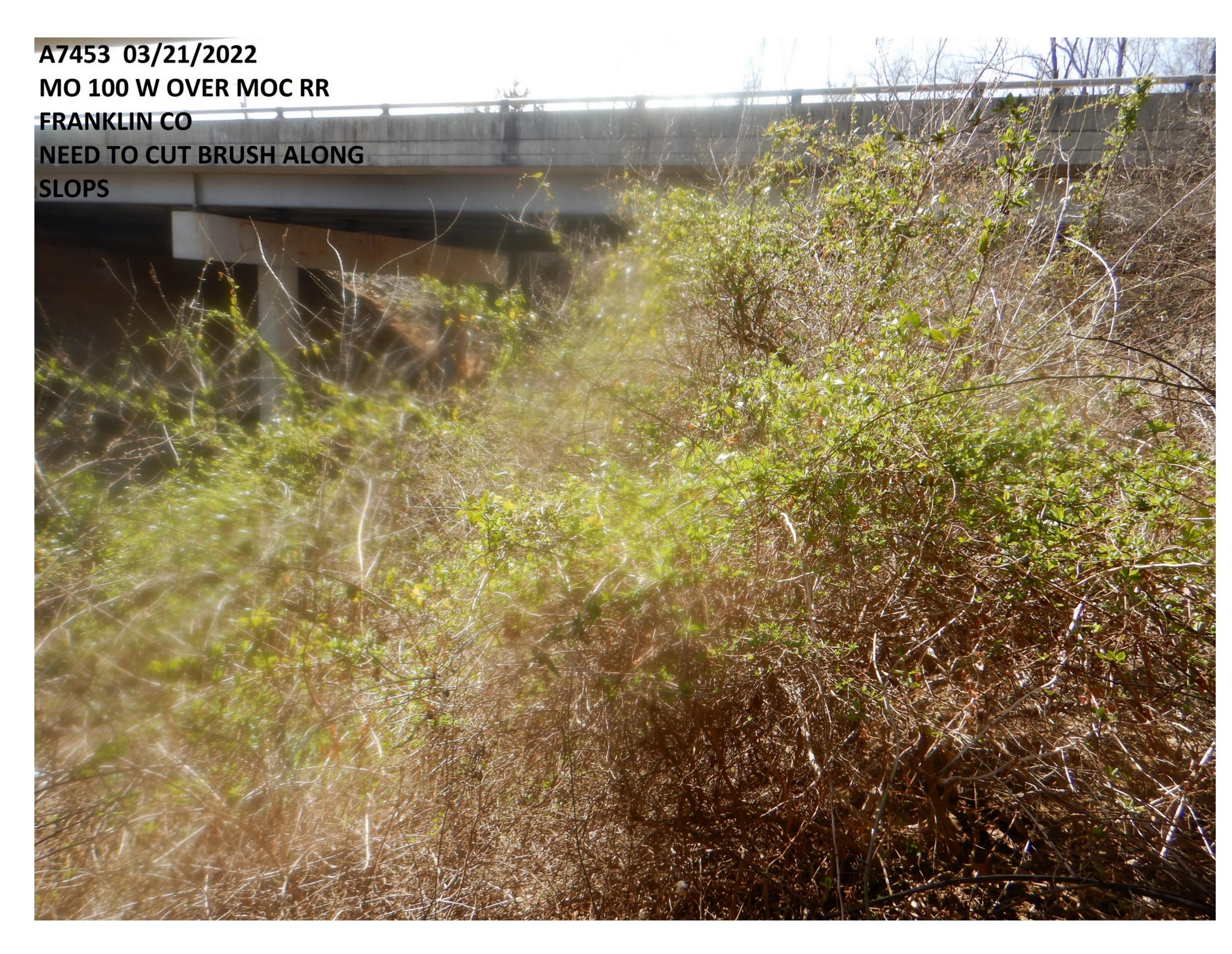




















A7453 MO 100 W

2 images, March 2022





13'-0"

18" Type I Rock Blanket with Permanent Erosion Control Geotextile

(Roadway Item)

obtained.

€ Structure

-€ Travelway Rte. 100 WBL

-Profile Grade Line

-Fill Face End Bent 2

-Fill Face End Bent 2 End Sta. 1664+55.92 Grade Elev. 702.46

73°21′00″-

2,9906

Sta. 1664+55.40, Grade Elev. 702.46 @ & Travelway Rte.100 WBL @ End of Slab

Existing RR R/W (50'-0" Rt. of © RR)-

Sta. 796+14.15

-Sta. 1663+95.78 € Travelway

Rte. 100 WBL = Sta. 796+31.91 & Existing Tracks

B-3 **●**

@ € Existing Tracks

25'-0" (Min. Horiz. Clearance) (2)

22,5%

Existing RR R/W-

(Normal to € Track)

2:1 Normal

FINAL PLANS

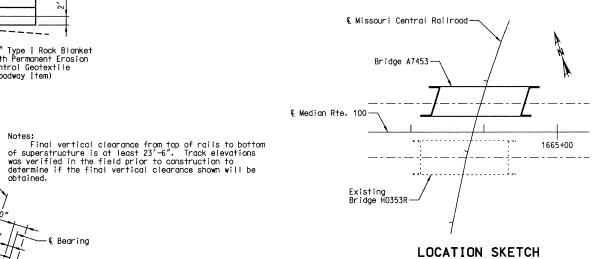
___ 16° 39′ 00"

~-- 90° 00′ 00′

MO 100 BR JOB NO. J6P1004 CONTRACT ID 080425-605 PROJECT NO.FAF100-1(51

COUNTY FRANKLIN DATE 12/14/07

SEC. 11 TWP. 43N RGE. 1E



RR CURVE DATA 4° 24' C.L. Δ = 13° 48' I = 23° 28' S.E. = 0.25' PCC 793+45.90 PCC 796+59.50

B.M. 702.08 "() On Top of A Curb NE Quad"

123'-73 Fill Face End Bent 1 Beg. Sta. 1663+32.27 Grade Elev. 704.19— -Sta. 1663+85.02 € Median Rte. 100 = Sta. 796+72.38 € Existing Tracks • Median Rte. 100 SPAN (1-2) PLAN

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° و

œ,

-Sta. 1663+32.79, Grade Elev. 704.18 @ & Travelway Rte.100 WBL @ End of Slab

Existing Ground Line (Survey Data 2006)

-2:1 Normal

-Existing RR R/W (50'-0" Lt. of © RR)

25'-0" (Min. Horiz. Clearance)

(Normal to € Track)

-Finished Grade

6'-0"

(Normal

€ Missouri Central Railroad-

50'-0"

Point of Min.

Vert. Clearance-

Zone of

Min. Vert. Clearance

GENERAL ELEVATION

-1.40%

1 6'-0"

- € Existing RR

(Normal)

Top of West Rail

13'-0"

1

€ Bearina

End of Slab

Fill Face

End Bent

Existing RR R/W

18" Type I Rock Blanket with Permanent Erosion Control Geotextile

Notice and Disclaimer Regarding Boring Log Data

23'-4"

Indicates location of borings.

The locations of all subsurface borings for this structure are shown on the bridge plan sheets for this structure. Boring data for the numbered locations is shown on Sheet No. 3 thru 5. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by the department for the design of the project, is available from the Project Contact upon written request as autilined in the Project Special Provisions. No greater significance or weight should be given to the boring data depicted on the plan sheets than is subsurface data available from the district or elsewhere.

The Commission does not represent or warrant that any such boring data accurately depicts the conditions to be encountered in constructing this project. A contractor assumes all risks it may encounter in basing its bid prices, time or schedule of performance on the boring data depicted here or those available from the district, or on any other documentation not expressly warranted, which the contractor may obtain from the Commission.

All Bents are parallel. All dimensions are horizontal.

All dimensions are horizontal.

Roadway fill was completed to the final roadway section and up to the elevation of the bottom of the concrete beam within the limits of the structure and for not less than 25 feet in back of the fill face of the end BRIDGE OVER MISSOURI CENTRAL RAILROAD STATE ROAD: FROM WASHINGTON EAST AND WEST

ABOUT 8.0 MILES S.E. OF WASHINGTON

JOB NO. J6P1004

STA. 1663+32.27 <

STD. 609.00 STD. 617.10 STD. 706.35 A7453

AUG 2007 HNTB Detailed

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 1 of 28

PROJECT NO. -

RTE. 100 -

bents before any piles are driven for any bents falling within the embankment section.

WBL denotes West Bound Lane.

1 C		STATE MO	BR	SHEET NO.	
JOB	NO.	J6P	1004 /		

CONTRACT ID 080425-605 PROJECT NO.FAF100-1(51

COUNTY FRANKLIN

DATE 12/14/07

GENERAL NOTES:

Design Specifications:
2006 - AASHTO LRFD 3rd Edition and 2006 Interims (Superstructure)
Load and Resistance Factor Design
2002 - AASHTO 17th Edition (Substructure) 2002 - AASHTO 17th Edition (Substructure)
Load Factor Design
Seismic Performance Category A

Design Loading:
HL-93 (LRFD Superstructure, LFD Substructure)
35#/Sq. ft. Future Wearing Surface
Earth 120#/Cu. ft. Equivalent Fluid Pressure 60#/Cu. ft.
Superstructure: Simply-supported, non-composite for dead load.
Composite for live load. Design Unit Stresses:
Class B Concrete (Substructure)
Class B Concrete (Substructure)
Class B-2 Concrete (Superstructure, except Prestressed Girders and Safety Barrier Curb)
Class B-1 Concrete (Safety Barrier Curb)
Reinforcing Steel (Grade 60)
Structural Carbon Steel (ASTM A709 Grade 36)
Steel Pile (ASTM A709 Grade 36)
For precast prestressed panel stresses, see Sheet No. 17.
For prestressed girder stresses, see Sheet No. 14.
Neoprene Pads: f'c = 4.000 psify = 60.000 psi fy = 36.000 psi fb = 9.000 psi fy = 36.000 psi Neoprene Pads:

Neoprene Pads:
Bearings are 60 durometer neoprene pads.

Joint Filler:
All joint filler is in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

Reinforcing Steel:
Minimum clearance to reinforcing steel shall be 1-1/2", unless otherwise shown.

Miscellaneous:

A minimum vertical clearance of 21'-0" from top of rails and a minimum lateral clearance of 12'-0" from the centerline of track to nearest temporary construction falsework shall be maintained at all times during construction. See Special Provisions for flagging requirements and railroad

insurance. "Sec" refers to the sections in the standard and supplemental specifications unless specified otherwise.

Abbreviations:
E.F. denotes Each Face
N.F. denotes Near Face
F.F. denotes Far Face

	FINAL PAY QUAN	NTITIES			
Line No.	Item		Substr.	Superstr.	Total
2650	Bridge Approach Slab (Bridge)	sq. yard		218	218
2660	Structural Steel Piles (12 in.)	linear foot	708		708
2670	Pre-Bore for Piling	linear foot	441		441
2680	Pile Point Reinforcement	each	18		18 🖊
2690	Class B Concrete (Substructure)	cu. yard	51.6		\$ 51.6 /
2710	Slab on Concrete NU Girder	sq. yard		554	554
270₩	Safety Barrier Curb	linear foot		299	V 299 🗸
2720	Prestressed Concrete NU Girder, 120 ft Span	linear foot	605		605 🗸
2740	Steel Intermediate Diaphragm for P/S Concrete Girders	each		8	8 /
2750	Vertical Drain at End Bents	each			2 /
2760	Laminated Neoprene Bearing Pad (Tapered)	each		10	10 -
2630	Conduit System on Structure	lump sum		1	1 /

Notes:

- Notes:

 All concrete above the construction joint in the end bents is included in the Quantities for Slab on Concrete NU Girder.

 All reinforcement in the end bents is included in the Quantities for Slab on Concrete NU Girder.

 Laminated Neoprene Bearing Pads (Tapered) is in accordance with Sec 716.

 * Safety barrier curb is slip-form option.

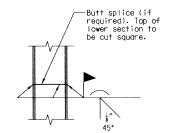
QUANTITIES FOR ON CONCRETE NU (
Item		Total
Class B-2 Concrete	cu. yard	165.9
Reinforcing Steel	pound	12,410
Reinforcing Steel (Epoxy Coated)	pound	25,580

PILE DATA									
	Bent No. 1 2								
	Pile Type and Size		HP12x53	HP12x53					
	Number		9	9					
Bearing Pile									
1110	Pre-Bore Elevation		645.00						
	Design Bearing	ton	70	70					
	Hammer Energy Required	foot-pound	15,800	15,800					

Minimum energy requirement of hammer is based on plan length and design bearing value of piles.

All piles were driven to practical refusal.

Manufactured pile point reinforcement was used on all piles in this structure.



STEEL PILE SPLICE

DEPTH	RECOVERY	STANDARD PENETRATION		
ft.	in.	BLOWS/ft.	Elev. 693.00	
1.0	12	7	Elev. 690.00	POSSIBLE FILL: LEAN TO FAT CLAY.
	46	4.4	21000	WITH ROCK FRAGMENTS, brown
6.0	16	14		LEAN CLAY, brown and gray, very stiff to
8.5	18	9		hard
13.5	17	11	Elev. 680.00	-with weathered rock 11 to 13 feet
			Elev. 676.00	<u>FAT CLAY</u> , brown, hard
18.5	18	18		
23.5	15	28		<u>SILTY CLAY</u> , tan, stiff to very stiff (possible highly weathered bedrock)
28.5	14	10	Elev. 666.00	LEAN TO FAT CLAY, WITH GRAVEL,
			Elev. 661.00	brown, medium stiff (possible highly weathered bedrock)
33.5	14	50/6"		SILT, brown, medium stiff to hard
70.5	40	17		(possible highly weathered bedrock)
38.5	12	11		with gravel
43.5	18	12	Elev. 651.00	LEAN TO FAT CLAY, WITH SAND,
73.3		12		brown, medium stiff
			Elev. 646.00	(possible highly weathered bedrock)
48.5	15	53		SANDY SILT, brown, hard
50.5	5	50/5"	Elev. 642.00	(possible highly weathered bedrock)
				Auger refusal at 50.5 feet Sampler refusal at 50.9 feet

BORING NO. B-1 (Sta. 1663+31.18, 15.09' Lt.)

DEPTH	RECOVERY	STANDARD PENETRATION	*	•
ft.	in.	BLOWS/ft.	Elev. 687.00	
1.0	14	14	-	SILTY CLAY, brown, very stiff to hard
6.0	16	19		
8.5	17	12	Elev. 678.50	
13.5	15	50/5"	Elev. 675.00	FAT CLAY, WITH SAND AND GRAVEL, brown, very stiff
16.0	60%	RQD	Elev. 671.00	APPARENT WEATHERED SANDSTONE & DOLOMITE*** + dn
10.0	00%	0%	F164. 011.00	
21.0	40%	RQD		Auger refusal at 16 feet <u>DDLOMITE AND SANDSTONE#908</u> , highly weathered, tan
		0%		-clay seam from 17 to 18.5 feet
26.0	80%	RQD		-clay seam from 21 to 22 feet
		0%		Cray Soull It on 21 10 22 1001
31.0	7%	RQD	Elev. 656.00	
		0%		DOLONY TENDRE Live Live Live Live Live Live Live Live
36.0	60%	RQD	Elev. 651.00	DOLOMITE###, highly weathered, gray
30.0	00%	0%	21011 031100	FAT CLAY WITH GRAVEL AND
44.0	4000		E1 C4C 00	WEATHERED ROCK, brown
41.0	100%	RQD 15%	Elev. 646.00	
				DOLOMITE***, moderately weathered, tan
46.0	60%	RQD	Elev. 641.00	
		13%		
51.0	27%	RQD		
		0%		DOLOMITE***, moderately to highly
56.0	53%	RQD		weathered, tan
		8%		
			Elev. 626.00	DOLOMITE***, moderately weathered, tan DOLOMITE***, moderately to highly weathered, tan
			E164. 626.00	Bottom of Boring at 61 feet
				bottom of botting at at feet

BORING NO. B-2 (Sta. 1663+38.58, 65.71' Lt.)

Note: For location of borings, see Sheet No. 1.

Detailed Aug 2007 HNTB

MON Classification based upon observation of cored and disturbed samples. Petrographic analysis may reveal other rock types.

DEPTH	RECOVERY,	STANDARD PENETRATION				
ft.	in.	BLOWS/ft.	Elev.	693.50		
1.0	6	7	Elev.	690.50		FILL: LEAN CLAY, TRACE GRAVEL AND ORGANICS, brown
6.0	15	6			Ì	
8.5	15	9				LEAN CLAY, brown, very stiff to hard
			Elev.	681.50		
13.5	17	12		V///		FAT CLAY, TRACE SAND AND
18.5	100%	ROD	Elev	675.00		GRAVEL, brown, hard
10.5	100%	13%	LIEV.	013.00		Auger refusal at 18.7 feet
		13%				DOLOMITE AND SANDSTONE***
			Elev.	670.00		moderately weathered, brown and gray
						Bottom of Boring at 23.7 feet
						*****Classification based upon observation of cored and disturbed samples. Petrographic analysis may reveal other rock types.

BORING NO. B-3
(Sta. 1664+28.43, 24.28' Lt.)

DEPTH	RECOVERY.	STANDARD PENETRATION	
ft.	in.	BLOWS/ft.	Elev. 689.50 FILL: LEAN CLAY, TRACE SAND,
1.0	13	10	Elev. 686.50 GRAVEL, AND ORGANICS, brown
6.0	12	11	LEAN CLAY, WITH SAND AND Elev. 682.50 GRAVEL, brown, stiff
8.5	16	9	Elev. 681.50 FAT CLAY, TRACE SAND, GRAVEL, AND
13.5	18	12	Elev. 677.50 WEATHERED ROCK, brown, very stiff LEAN CLAY, brown, stiff
17.0	0	50/1"	LEAN TO FAT CLAY, TRACE GRAVEL, brown, very stiff
			Auger refusal at 17 feet Sampler refusal at 17.1 feet

BORING NO. B-4
(Sta. 1664+37.40, 70.15' Lt.)

Note: For location of borings, see Sheet No. 1.

	ROUTE	STATE	DISTRICT	SHEET NO.		
	100	MO	BR	5		
	JOB NO.	J6P1	1004			
	CONTRAC	80 di T				
/	PROJECT	NO.FA	1(51)			
	COUNTY	FRAN	KLIN		DATE_	12/14/07

DEPTH	RECOVERY.	STANDARD PENETRATION		
ft.	in.	BLOWS/ft.	Elev. 687.00	- 1223
3.5	18	22	Elev. 686.75	/ 📓
8.5	18	14	Elev. 680.00	
0.3	10	14		
13.5	18	42	Elev. 674.00	
		50.40#	Elev. 670.00	
18.5	0	50/0"		岜
23.5	10	39		畠
20.5	0	50/2"		閨
28.5	0	5072		臣
				辯
				圉
				畠
				辪
				臣
				圉
				벍
				田
				畕
				曽
				曽
			Elev. 625.00	

Auger refusal at 62 feet Boring terminated at 62 feet

-clay seam from about 36 to 38 feet

Approx. 3 inches of topsoil

FAT CLAY, WITH SAND AND WEATHERED ROCK FRAGMENTS, reddish brown, very stiff

****APPARENT DOLOMITE, highly weathered, tan
-clay seam from about 18 to 18.5 feet -clay seam from about 21 to 21.5 feet -clay seam from about 23 to 23.5 feet

SILT, tan, dense

LEAN CLAY, brown and gray, very stiff

**MAKClassification of rock based upon the observation of disturbed samples. Petrographic analysis may reveal other rock types.

BORING NO. B-5 (Sta. 1663+38.99, 64.80' Lt.)

DEPTH	RECOVERY,	STANDARD PENETRATION	
ft.	in.	BLOWS/ft.	Elev. 693.00
3.5	12	13	Elev. 692.75 Approx. 3 inches of topsoil
8.5	12	19	<u>LEAN CLAY</u> , brown and gray, very stiff
13.5	18	14	Elev. 682.00 Elev. 681.00 POSSIBLE DOLOMITE, highly weathered
18.5	18	14	FAT CLAY, WITH SAND AND WEATHERED ROCK FRAGMENTS, reddish brown, very stiff
23.5	18	20	SILTY CLAY, WITH SAND AND WEATHERED ROCK FRAGMENTS, tan
28.5	18	14	and reddish brown, very stiff to stiff to very stiff
33.5	18	26	-hard drilling noted at 32 feet
38.5	18	52	
43.5	16	14	Elev. 651.00 APPARENT DOLOMITE, highly
48.5	1	50/1"	weathered, tan
49.5	0	50/0"	Elev. 643.50 🛱 —hard drilling noted at 46 feet
			Auger refusal at 49.5 feet Boring terminated at 49.5 feet

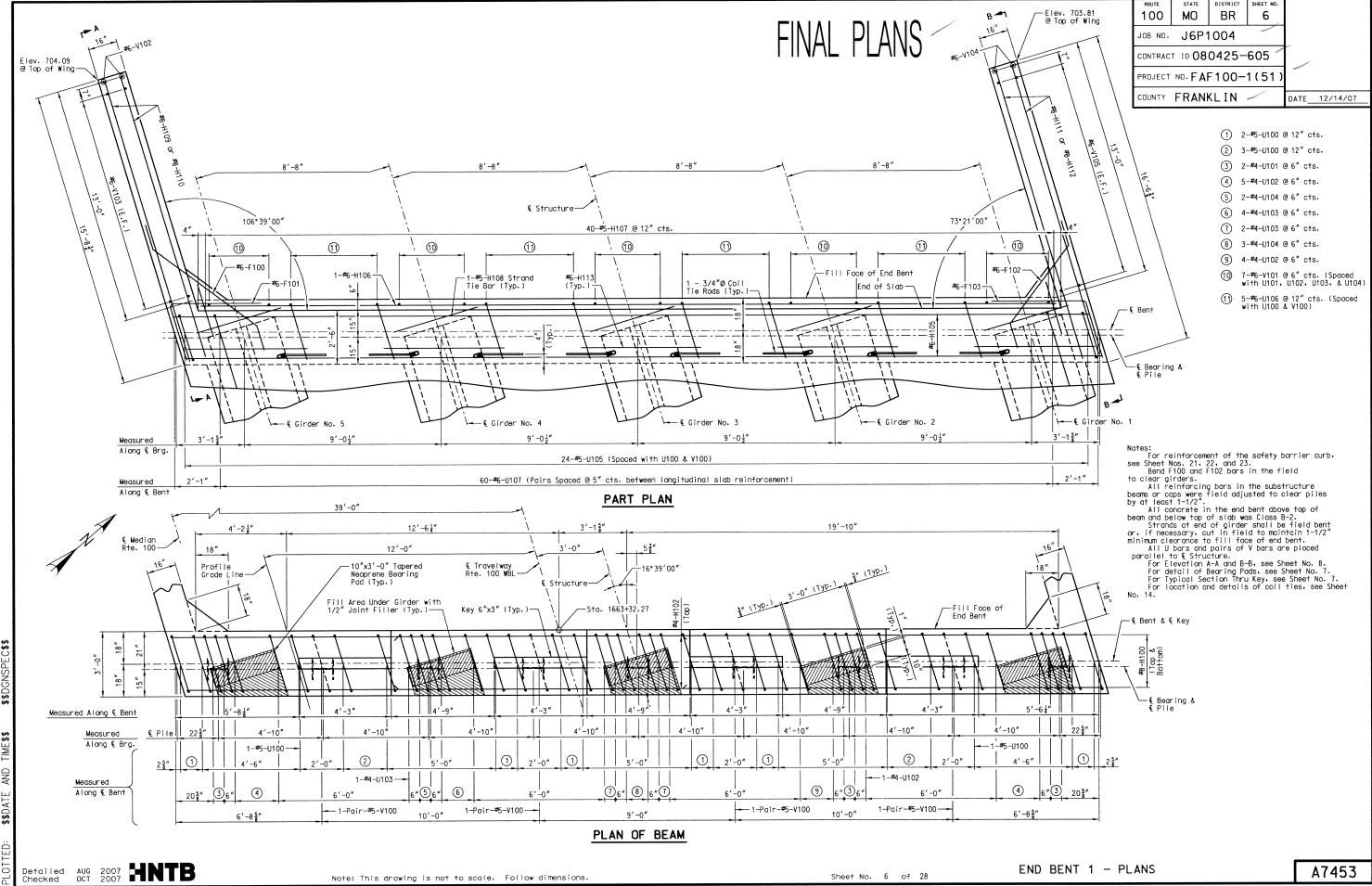
MClassification of rock based upon the observation of disturbed samples. Petrographic analysis may reveal other rock types.

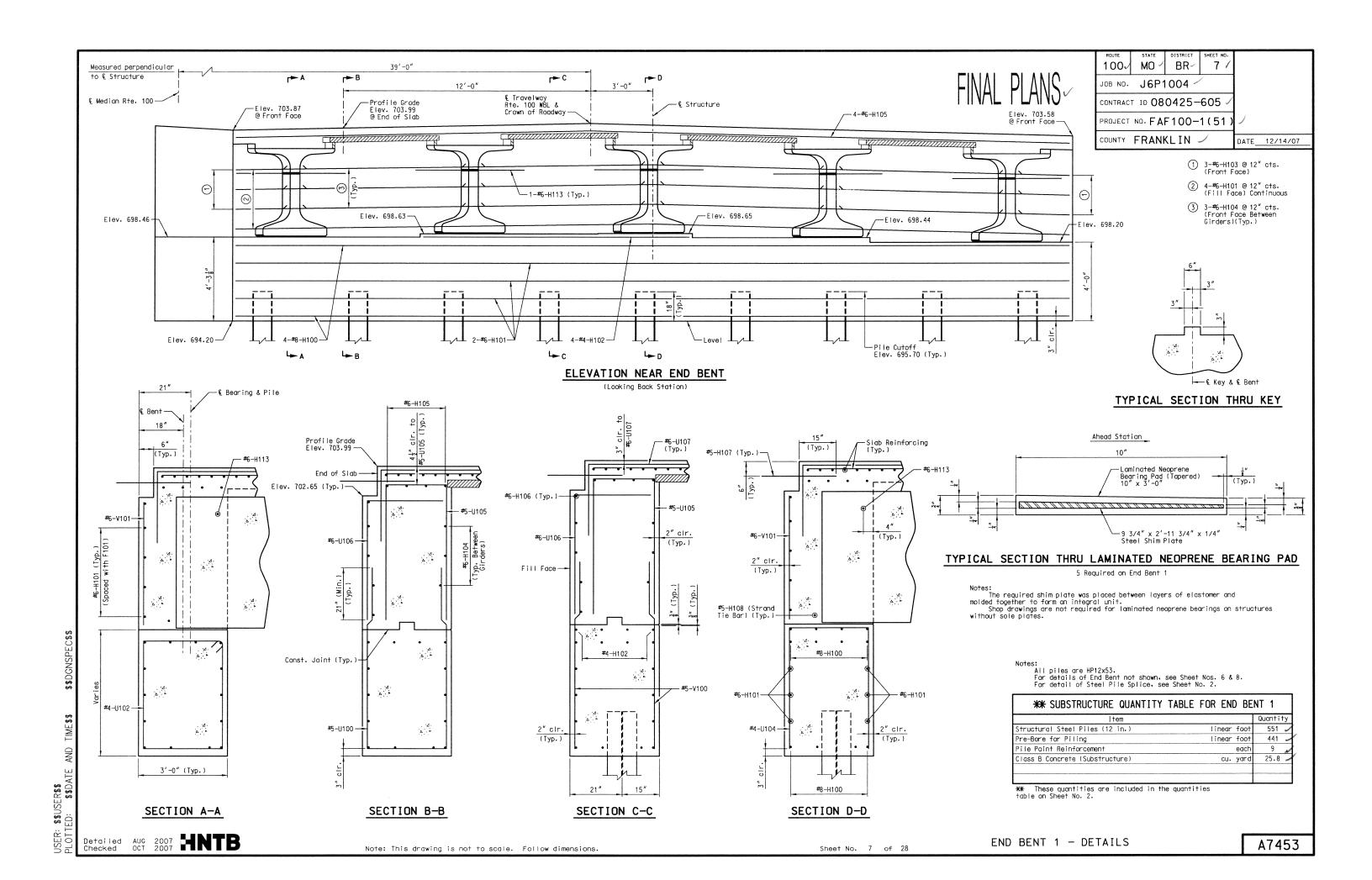
BORING NO. B-6

(Sta. 1663+30.48, 13.22' Lt.)

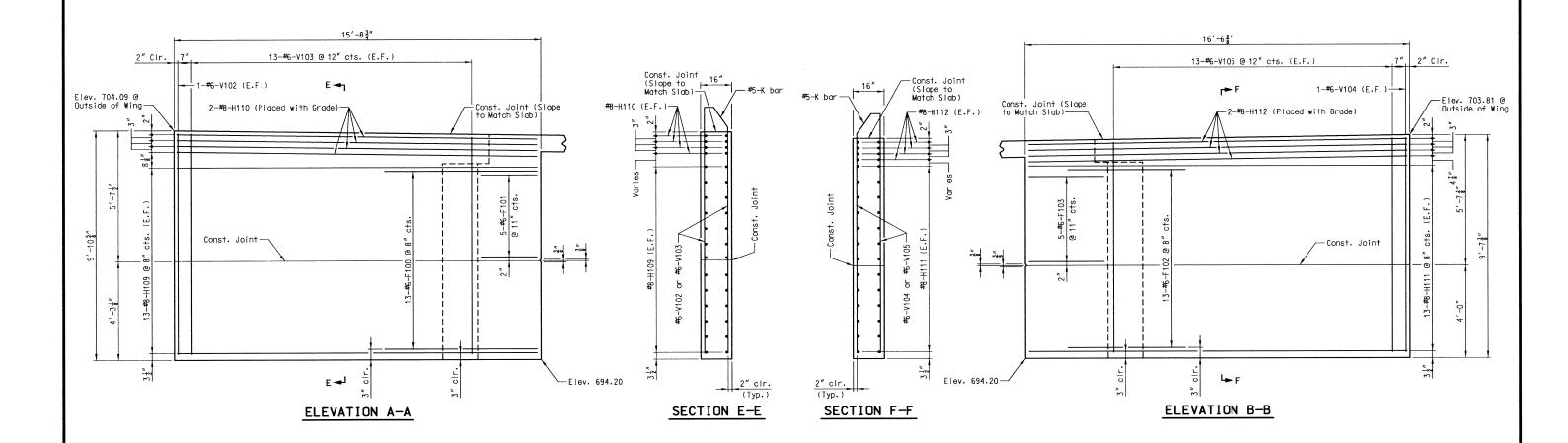
Note: For location of borings, see Sheet No. 1.

Detailed AUG 2007 HNTB





100 MO BR 8 JOB NO. J6P1004 CONTRACT ID 080425-605 PROJECT NO.FAF100-1(51 COUNTY FRANKLIN DATE___12/14/07



Notes:

For reinforcement of the safety barrier curb, see Sheet Nos. 21, 22, and 23.

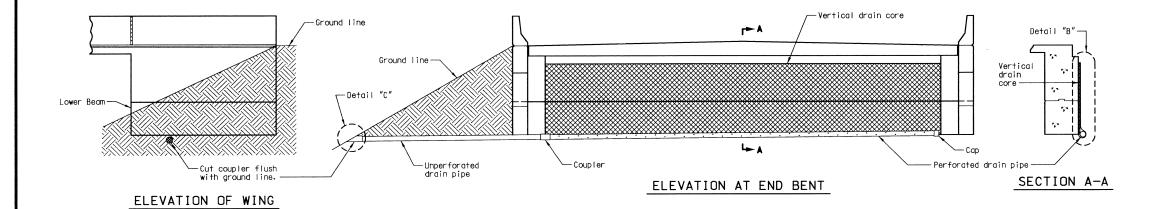
For location of Elevations A-A and B-B, see Sheet No. 6.

For details of conduit, see Sheet No. 20.

Detailed AUG 2007 HNTB

END BENT 1 - WING DETAILS

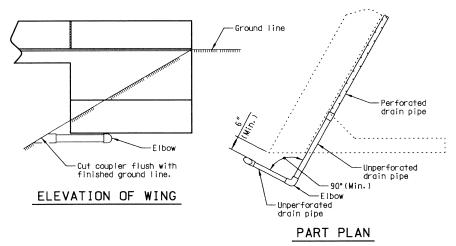
A7453



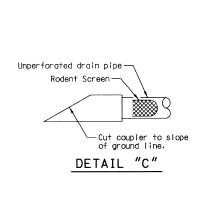
Note:
Drain pipe may be either 6" diameter corrugated
metallic-coated steel pipe underdrain, 4" diameter
corrugated polyvinyl chloride (PVC) drain pipe, or
4" diameter corrugated polyethylene (PE) drain pipe.

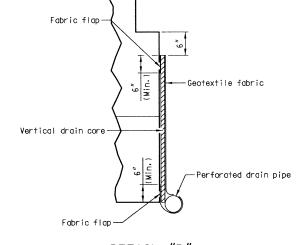
Placed drain pipe at fill face of end bent and slope to lowest grade of ground line, also missing the lower beam of end bent by $1\frac{1}{2}''$. (See elevation at end bent.)

Perforated pipe was placed at fill face side at the bottom of end bent and plain pipe was used where the vertical drain ends to the exit at ground line.



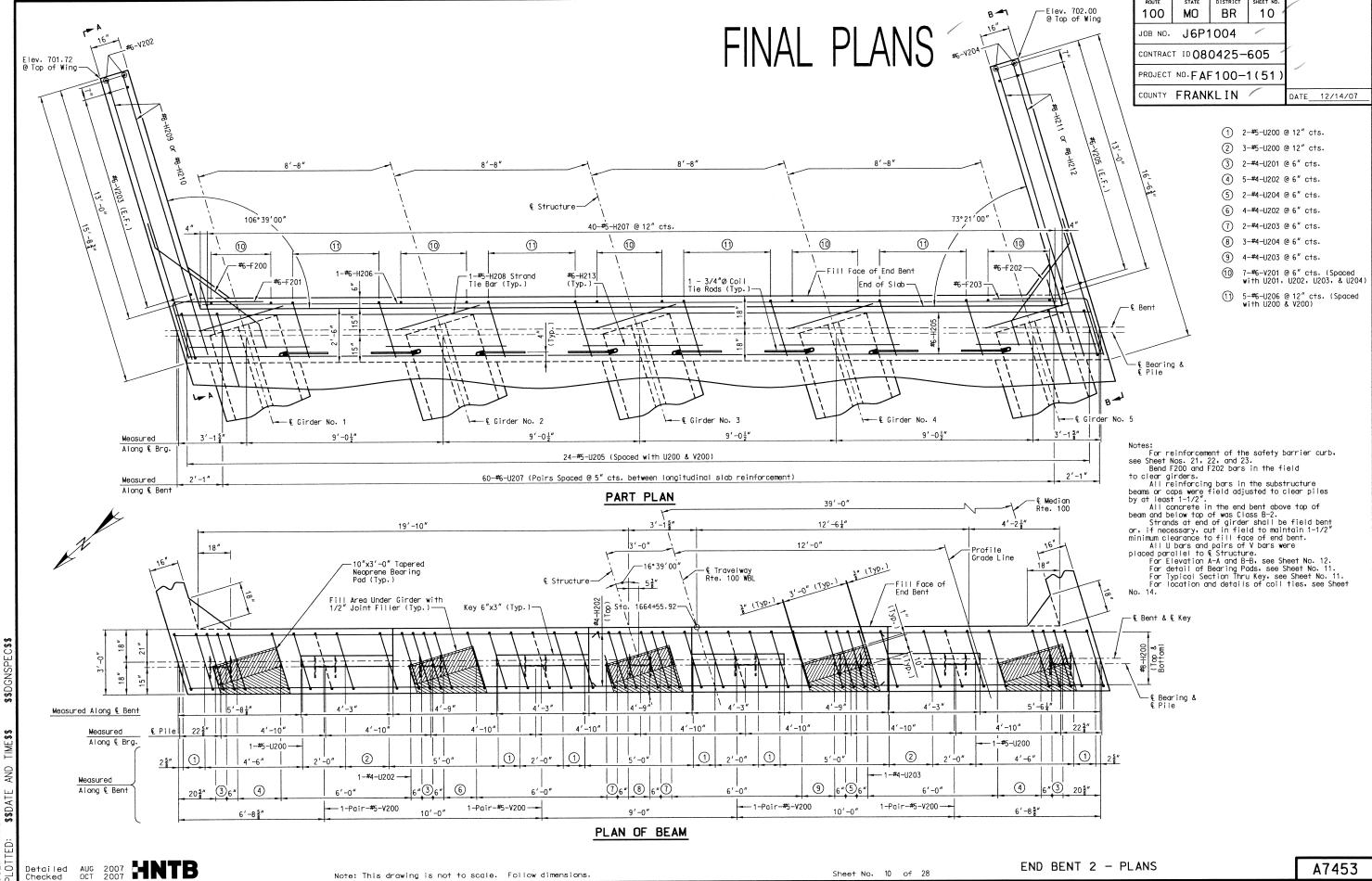
OPTIONAL BENT DRAIN (*) (*) Only if rock is encountered at outside of wing.

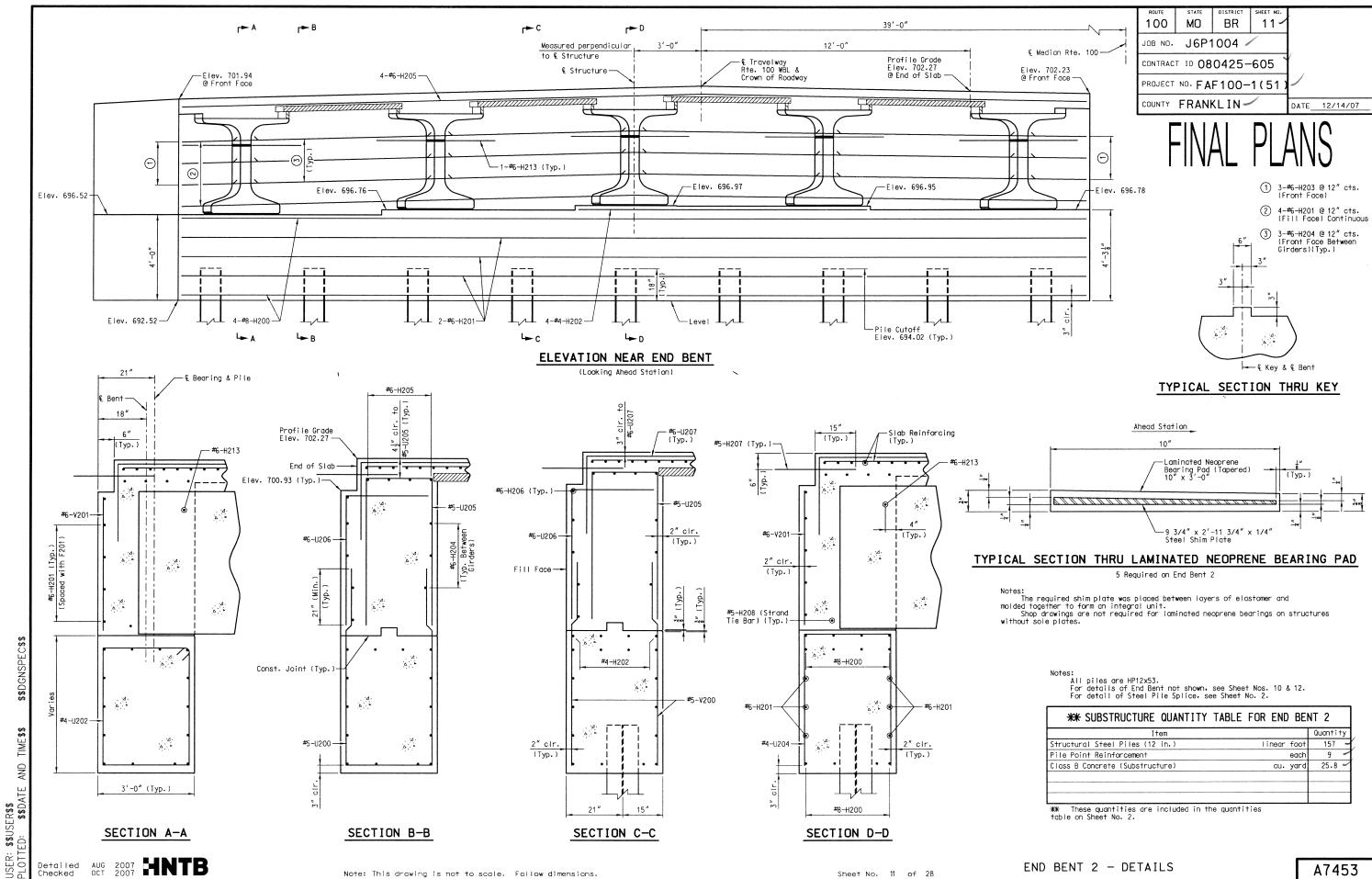


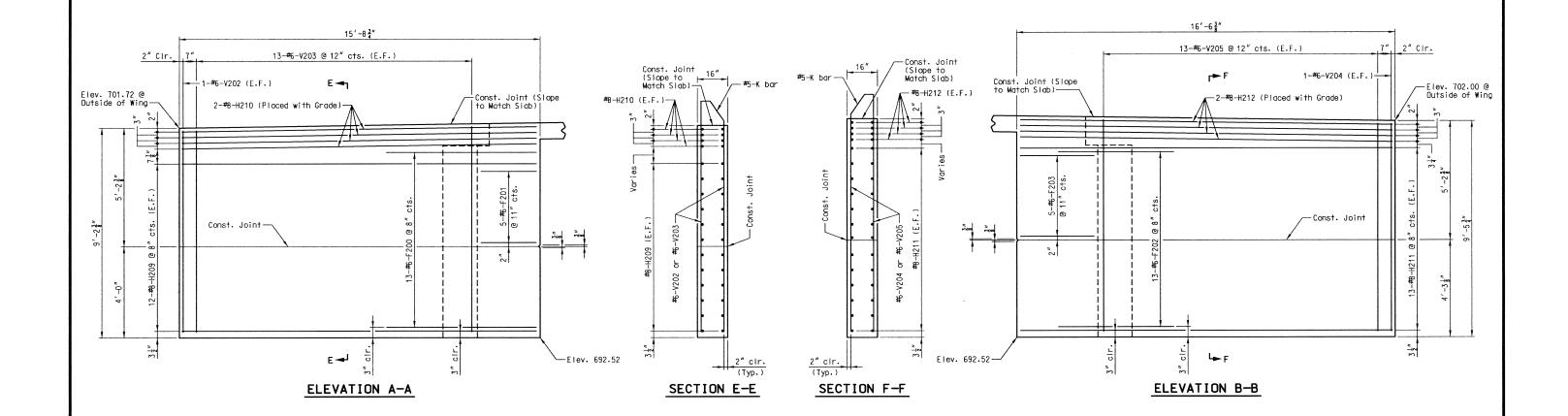


DETAIL "B"

Detailed AUG 2007 HNTB







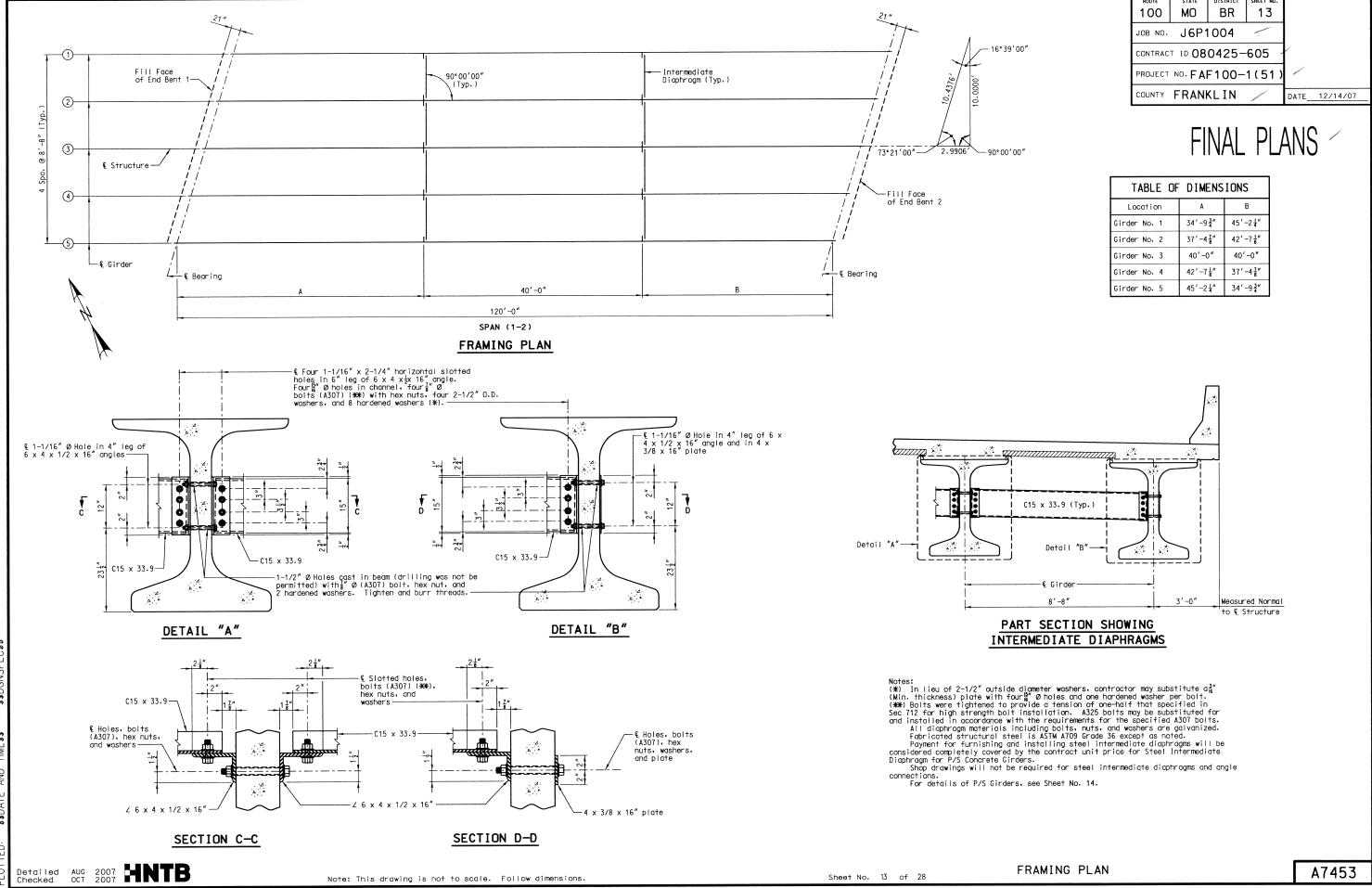
Notes:

For reinforcement of the safety barrier curb, see Sheet Nos. 21, 22, and 23. For location of Elevations A-A and B-B, see Sheet No. 10. For details of conduit, see Sheet No. 20.

Detailed AUG 2007 HNTB

END BENT 2 - WING DETAILS

Sheet No. 12 of 28



— € Girde

(Typ.)

R=7 1" (Typ.)

R=7 7" (Typ.)

<u>_</u>³" Chamfer (Typ.)

DIMENSIONS

R=2" (Typ.

(+) indicates prestressing strand.

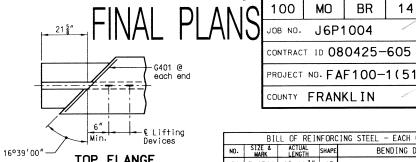
Concrete for prestressed girders is Class A-1 with $f^\prime c$ = 8000 psi and $f^\prime ci$ = 6500 psi.

Girders were lifted by devices designed by the fabricator.

*** At the contractor's option the location for bent-up strands may be varied from that shown. The total number of bent-up strands were not be changed. One strand tie bar is required for each layer of bent-up strands except at end bents which require one bar on the bottom layer of strands only. No additional payment will be made if additional strand tie bars are required.

(Typ.)

****** Girder top flange was steel troweled to a smooth finish for $8^{\prime\prime}$ at the edges, as shown. Bond breaker are applied to this region only. The center portion was rough finished by scarifying the surface transversely with a wire brush, and no laitance remains on the surface.



TOP FLANGE BLOCK OUT DETAIL

REINFORCING STEEL NOTES: Reinforcing steel does! conform to the requirements of AASHTO M 31. Grade 60. Welded Wire Reinforcement (WWR) does conform to the requirements of AASHTO

All dimensions are out to out.

Hooks and bends are in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Minimum clearance to reinforcing is 1". unless otherwise shown.

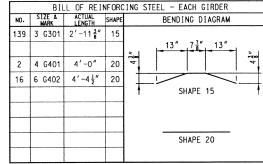
C Girder --

WWR1. WWR2

Actual lengths are measured along centerline of bar to the nearest inch.

SECTION B-B

Strands not shown for clarity.



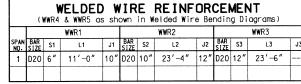
MO

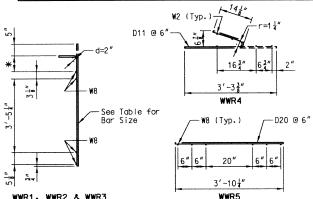
J6P1004

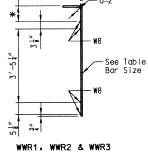
BR

14

DATE 12/14/07







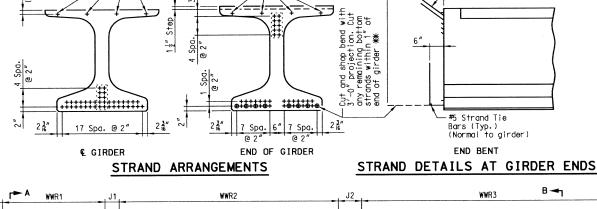
WELDED WIRED BENDING DIAGRAMS

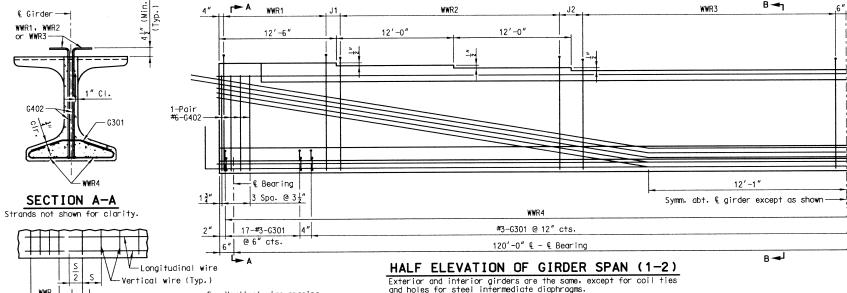
Notes: Cost of 3/4" Ø coil tie rods placed in diaphragms will be considered completely covered by the contract unit price for Prestressed Concrete NU Girder. Coil ties shall be held in place in the forms by

slotted wire-setting-studs projecting through forms. Studs are to be left in place or replaced with temporary plugs until girders are erected, then replaced by coil tie rods.

For location of coil ties, see Sheets No. 6 & 10.

For details of 1-1/2" Ø holes cast in web for Intermediate diaphragms, see Sheet No. 13. For Girder Camber Diagram, see Sheet No. 16.





-Additional Strands tensioned to 2.02 Kips/strand

placed symm, about &

L = Length of WWR mats

J = Distance between WWR mats REINFORCEMENT PLACEMENT " ├── € Bearing DETAIL ├── € Girder 1/2" Bearing Plate (ASTM A709 - & Two Welded Studs (1/2" x 5") Plate (ASTM End of girder 3/4" x 3/4" x 18" chamfer block out (Typ.)— Four Welded 8" 8" 8" 3'-013" 18" FND VIEW SIDE VIEW BEARING PLATE DETAILS

S = Vertical wire spacing

Galvanized½ bearing plate (ASTM A709 Grade 36) in accordance with ASTM A123.

Cost of furnishing, galvanizing, and installing the ½ bearing plate (ASTM A709 Grade 36) and welded studs in the prestressed girder are considered completely covered by the contract unit price for Prestressed Concrete NU-Girder per each.

€ 1" Ø hole cast horizontally in beam (skewed) for #6 bar 5'-6" long (Clear strands and reinforcing steel by 1-1/2" min.) Coil Tie Rods Typ. 1

EXTERIOR GIRDERS

INTERIOR GIRDERS

DETAILS OF COIL TIES

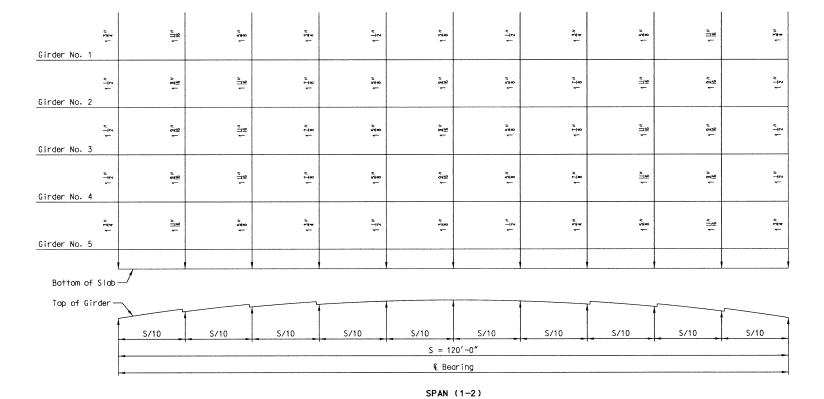
Cut top 2 rows of strands with a 12" projection and bend in shop.

Cut any remaining top strands within 1" of end of girder. (Typ.)

AND

Detailed AUG 2007 Checked OCT 2007

FINAL PLANS



\$\$DGNSPEC\$\$

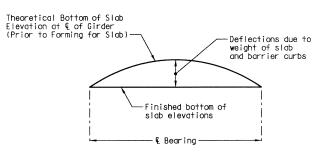
TTED: \$\$DATE AND TIME\$\$

Detailed AUG 2007 HNTB

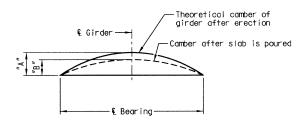
PROJECT NO.FAF100-1(51

COUNTY FRANKLIN DATE 12/14/07

FINAL PLANS



TYPICAL SLAB ELEVATIONS DIAGRAM



	Span	(1-2)
	"A"	"B"
Girder No. 1	4 H″	2 ¼"
Girder No. 2	4 11″	1 출"
Girder No. 3	4 ¹¹ / ₁₆ "	1 5 "
Girder No. 4	4 ¹¹ / ₁₆ "	1 5 "
Girder No. 5	4 11 "	2 16"

Conversion factors for girder camber 0.1 pt. = 0.314 × 0.5 pt. 0.2 pt. = 0.593 × 0.5 pt. 0.3 pt. = 0.813 × 0.5 pt. 0.4 pt. = 0.852 × 0.5 pt.

GIRDER CAMBER DIAGRAM

Detailed AUG 2007 HNTB

THEORETICAL BOTTOM OF SLAB ELEVATIONS AND GIRDER CAMBER DIAGRAM

** THEORETICAL BOTTOM OF SLAB ELEVATIONS AT & OF GIRDER

(PRIOR TO FORMING FOR SLAB)

0.40 0.50

702.52 702.36

702.75 702.61

702.96 702.82

702.95 702.80

0.10

703.09

703.30

703.36 703.28 703.18 703.08

702.96

703.17

703.38

Girder 1

Girder 2

Girder 3

0.20 0.30

702.99 702.88

703.20 703.09

702.87 702.76 702.64

Span (1-2) (₡ Brg. - ₡ Brg.)

703.22 703.13 703.03 702.91 702.78 702.62 702.44 702.24 702.02 701.79 701.54

0.60

702.18

702.21

702.42

702.63

0.70 0.80 0.90 & Brg.

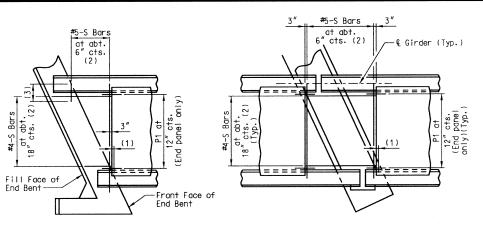
701.97 701.75 701.52 701.28

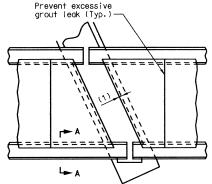
702.42 702.19 701.95 701.70

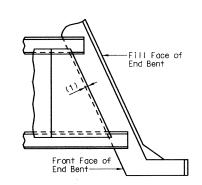
701.74 701.49

701.98

702.61 702.40 702.18 701.94 701.68



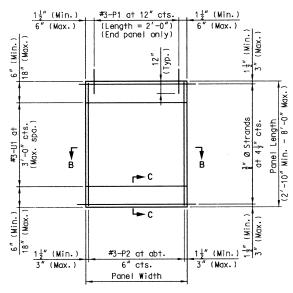


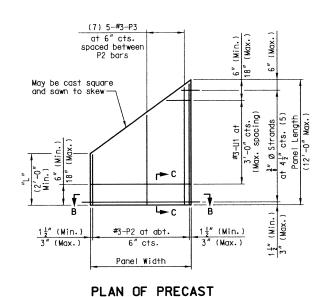


PANELS-SQUARED ENDS

PANELS-SKEWED ENDS

PLAN OF PRECAST PRESTRESSED PANELS PLACEMENT





PRESTRESSED PANEL

1/2" x 45° Chamfer one

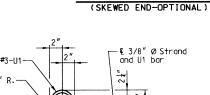
or both sides (optional)

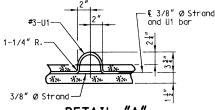
3" (Typ.) 1년" (Typ.) -P/S Panel -1" (Min.) Preformed fiber expansion joint material in accordance with Sec 1057 AX: 1 expanded or extruded polystyrene bedding material with Sec 1073 (6) 44: 4.4

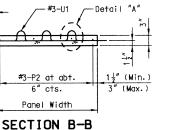
SECTION A-A

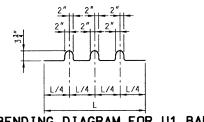
Note: Use slab haunching diagram on Sheet No. 15 for determining thickness of preformed fiber expansion joint material or polystyrene bedding material within the limits noted in general notes.

PLAN OF PRECAST PRESTRESSED PANEL









BENDING DIAGRAM FOR U1 BAR (U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars to location and spacing shown. Ushall be placed between P1 bars).



SECTION C-C

NOTES:

Cost of S-bars will be considered completely covered by the contract unit price for the slab.

S-bars are not listed in the bill of reinforcing.

- (1) End panels are dimensioned 1" min. to 1-1/2" max. from the inside face of diaphragm.
- (2) S-bars shown are bottom steel in slab between panels and used with squared end panels only.
- (3) Extend S-bars 18 inches beyond the front face of end bents
- (4) In order to maintain minimum slab thickness, it may be necessary to raise the grade uniformly throughout the structure. No payment will be made for additional labor or materials required for necessary grade adjustment
- (5) Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.
- (6) All panel support pads are glued to the girder. When support thickness exceeds 1-1/2 inches, the pads are glued top and bottom. The glue used are the type recommended by the panel support pads manufacturer.
- (7) Use #3-P3 bars if panel is skewed 45° or greater.

100-MO 🗸 BR 🗸 17. JOB NO. **J6P1004**...

CONTRACT ID 080425-605

PROJECT NO.FAF100-1(51

COUNTY FRANKLIN DATE 12/14/07

GENERAL NOTES: PRESTRESSED PANELS:

Concrete for prestressed panels was Class A-1 with f'c = 6.000 psi, f'ci = 3.500 psi.

The top surface of all panels did receive a scored finish with a depth of scoring of $\frac{1}{8}''$ perpendicular to the prestressing strands in the panels.

Prestressing tendons are high-tensile strength uncoated seven-wire, low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270. With nominal diameter of strand = % and nominal area = 0.085 sq. in. and minimum ultimate strength = 22.95 kips (270 ksi).

Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands were shown on the shop drawings.

Suitable anchorage devices for lifting panels were cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths was be determined by the contractor and shown on the shop drawings.

When square end panels are used at skewed bents, the skewed portion was cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms was required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.

Minimum preformed fiber expansion joint material or polystyrene bedding material thickness was 1 inch. Thicker material may be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances. No more than 2 inches total thickness was used

The same thickness of preformed fiber expansion joint material was used under any one edge of any panel except at locations where top flange thickness may be stepped. The maximum change in thickness between adjacent panels was tinch. The polystyrene bedding material was cut with a transition to match haunch height above top of flange.

Slab thickness over prestressed panels varies due to girder

At the contractor's option, the variation in slab thickness over prestressed panels was eliminated or reduced by increasing and varying the girder top flange thickness. Dimensions was shown on the shop drawings.

REINFORCING STEEL:

All dimensions are out-to-out.

Minimum clearance to reinforcing steel is 1-1/2", unless

Hooks and bends are in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures. Stirrup and Tie Dimensions

Actual lengths are measured along centerline of bar to the

The prestressed panel quantities are not included in the table of estimated quantities for slab.

If U1 bars interfere with placement of slab steel. U1 loops may be bent over, as necessary, to clear slab steel.

Welded wire fabric or welded deformed bar mats providing a welded wire fabric of welded deformed but mars providing a minimum area of reinforcing perpendicular to strands of 0.22 sq. in./ft., with spacing parallel to strands sufficient to insure proper handling, may be used in lieu of the #3-P2 bars shown. Wire or bar diameter is not be larger than 0.375 inches. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.

The reinforcing steel is tied securely to the $^3_6{''}$ Ø strands with the following maximum spacing in each direction: #3-P2 bars at 16 inches. Welded wire fabric or welded deformed bar mats at 2'-0".

Tie the #3-U1 bars to the #3-P2 bars, to the welded wire fabric, or the welded deformed bar mats at about 3^\prime -0 $\!''$ centers.

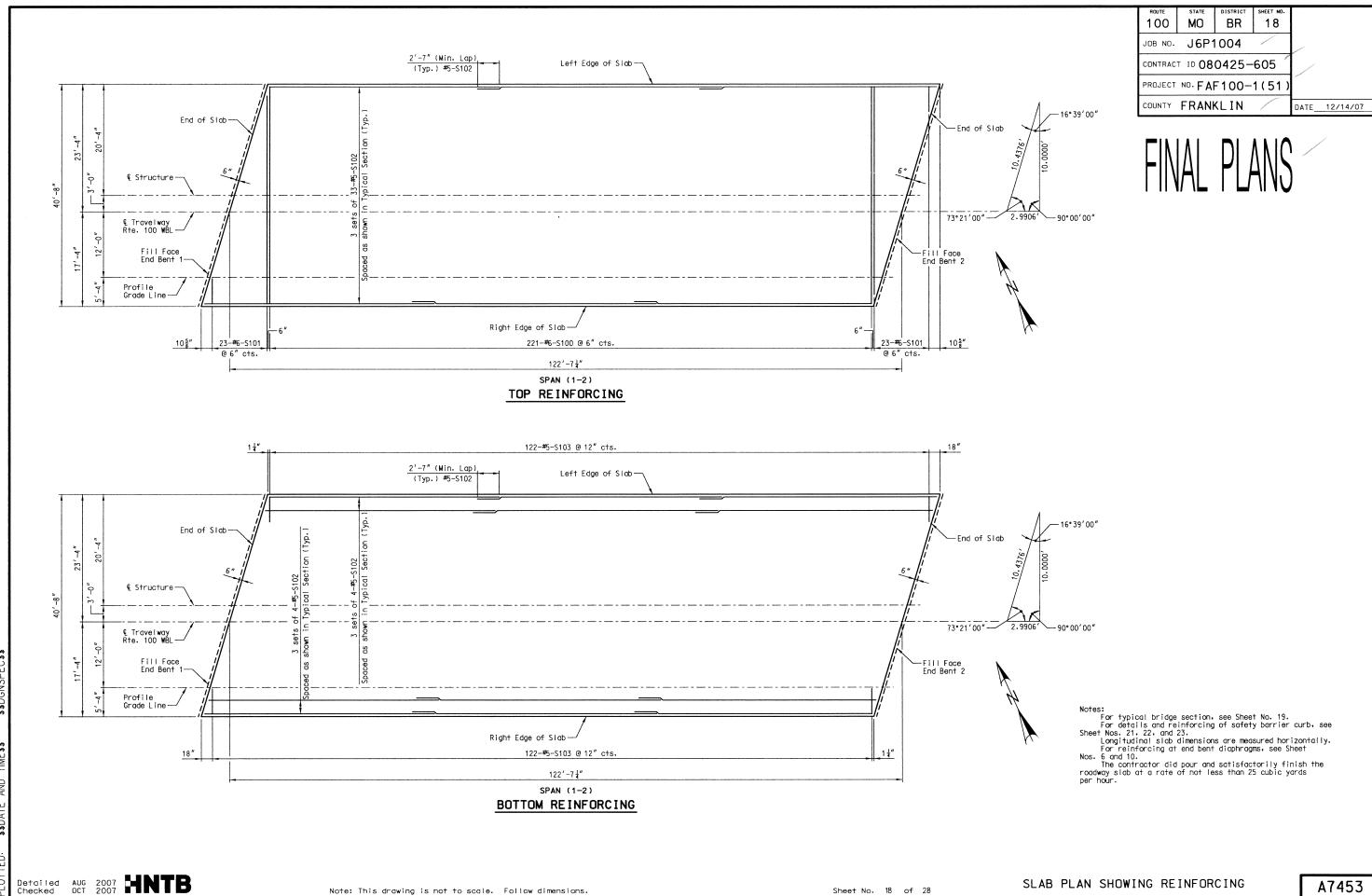
All reinforcement other than prestressing strands are epoxy

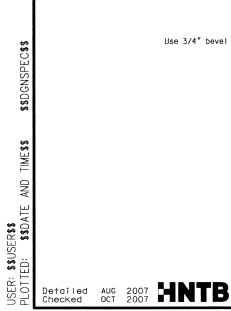
Precast panels are in contact with stirrup reinforcing in

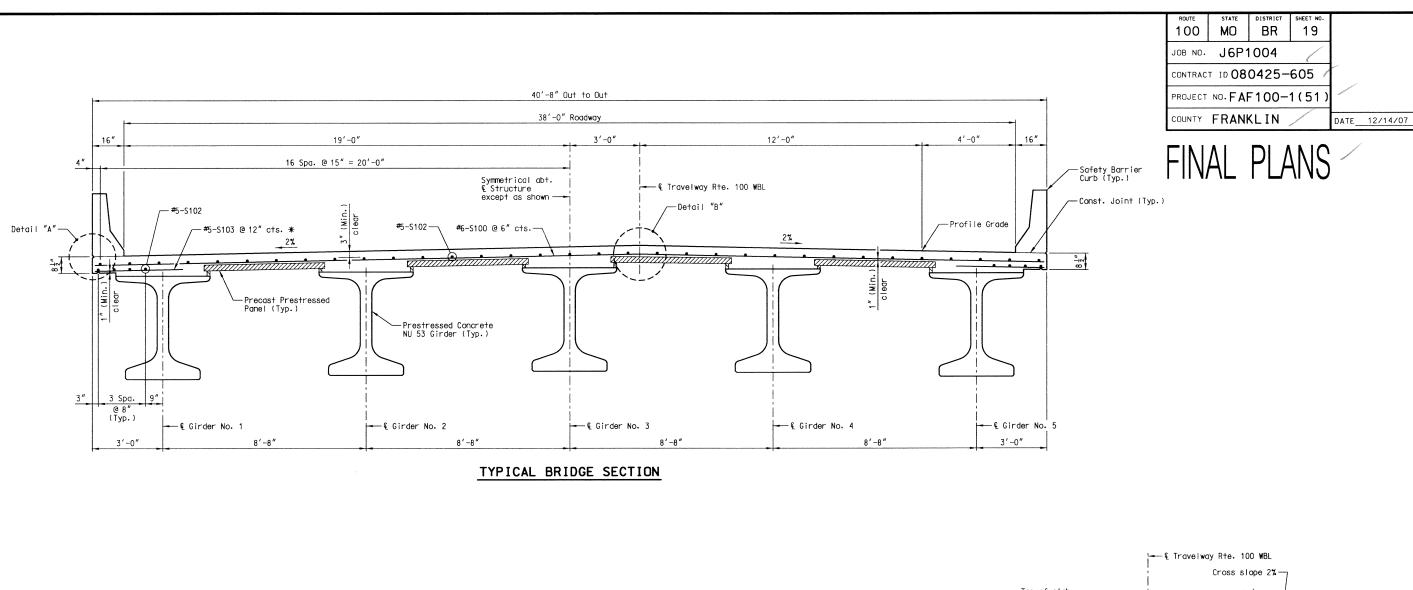
6" (Typ.)

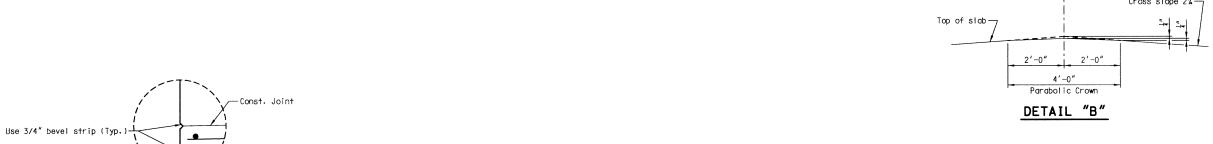
 $\frac{1\frac{1}{2}'' \text{ (Min.)}}{3'' \text{ (Max.)}}$

3/8" Ø Strand-







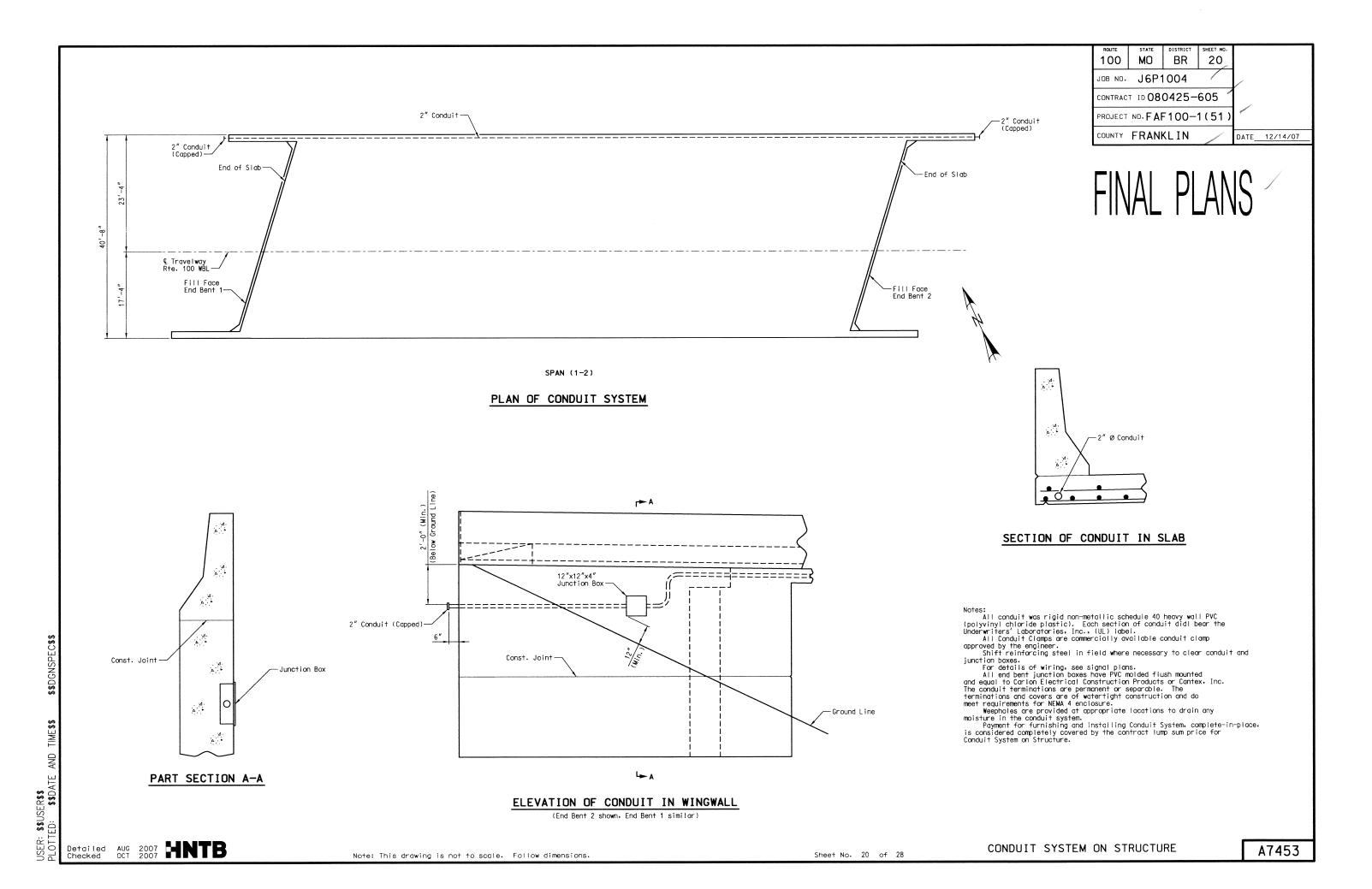


DETAIL "A"

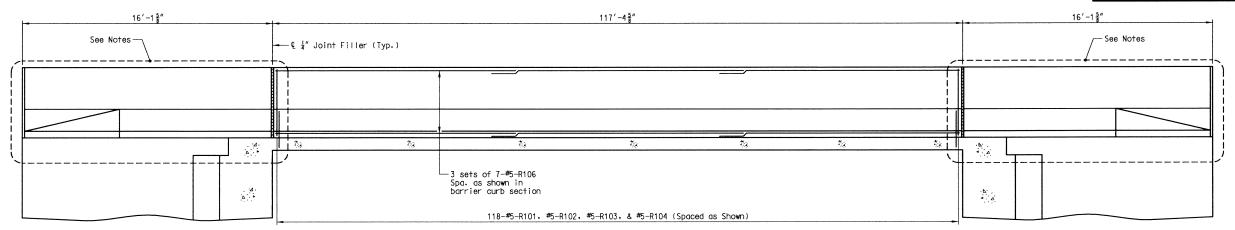
Notes:

Transverse slab dimensions are measured horizontally.
For Theoretical Slab Haunching Diagram, see Sheet No. 15.
For details and reinforcement of safety barrier curb, see Sheet Nos. 21. 22. and 23.

* Alternate bar shape available, see Safety Barrier Curb Sheets.



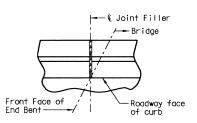
100 MO BR 21 JOB NO. J6P1004 ✓ CONTRACT ID 080425-605" PROJECT NO. FAF 100-1 (51 COUNTY FRANKLIN DATE 12/14/07



SPAN (1-2)

SECTION NEAR LEFT BARRIER CURB

(Right Barrier Curb Similar)

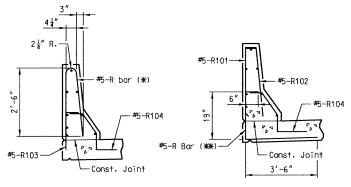


Joint Filler

FILLED JOINT

DETAIL

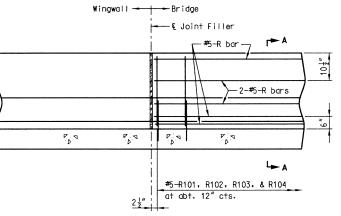
PART PLAN SHOWING SAFETY BARRIER CURB JOINT



R-BAR PERMISSIBLE ALTERNATE SHAPE

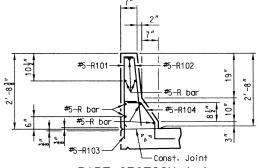
(*) The R101 and R102 bar combination is furnished as one bar, as shown, at the contractor's option. (All dimensions are out-to-out.)

(***) The R103 bar and #5 bottom transverse slab bar in cantilever (P/S panels only) combination is furnished as one bar as shown, at the contractor's



PART SECTION NEAR LEFT SAFETY BARRIER CURB

(Cast-in-Place Conventional Forming Option)



PART SECTION A-A

Notes: Use a minimum lap of 2'-11" for #5 horizontal safety barrier curb bars.
The cross-sectional area above the slab = 2.28 sq. ft.

Notes:

Top of safety barrier curb is built parallel to grade with barrier curb joints (except at end bents) normal to grade.

All exposed edges of safety barrier curb do have either $a_2^{\prime\prime\prime}$ radius or $a_8^{\prime\prime\prime\prime}$ bevelunless otherwise noted.

unless otherwise noted.
Payment for all concrete and reinforcement,
complete—in-place, gas considered completely
covered by the contract unit price for Safety Barrier
Curb per linear foot.
Concrete in the safety barrier curb is Class B-1.
Measurement of safety barrier curb is to the
nearest linear foot for each structure, measured along
the outside top of slab from end of wing to end of wing.
Concrete traffic barrier delineators are placed
on top of the safety barrier curb as shown on Missouri

on top of the safety barrier aelineators are placed on top of the safety barrier curb as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Concrete traffic barrier delineators are considered completely covered by the contract unit price for "Safety Barrier Curb".

Harrier Curb.

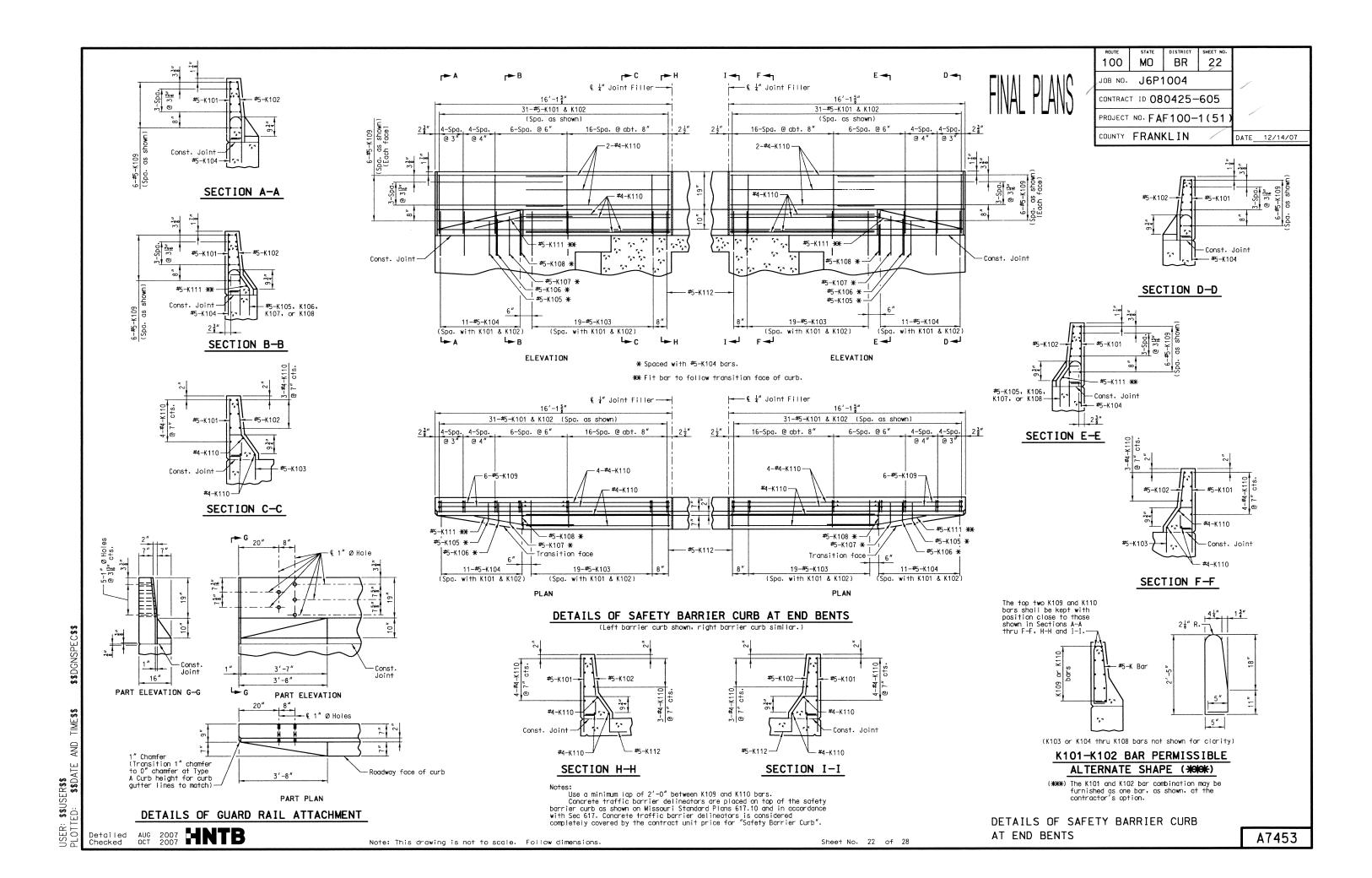
The curb was cured by application of Type 1-D or
Type 2 Liquid Membrane-Forming Compound in accordance
with Sec 1055. Surface sealing for concrete in accordance
with Sec 703 is not required. Application of linseed oil at
the contractor's expense is permitted.

Longitudinal dimensions are horizontal dimensions. For Safety Barrier Curb at End Bents, see Sheet No. 22.

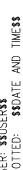
SAFETY BARRIER CURB

A7453

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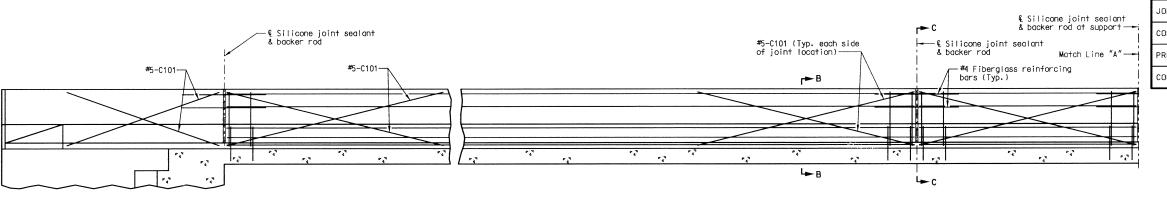






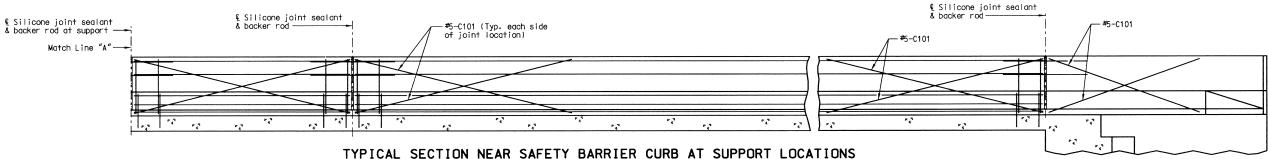
AUG 2007 HNTB Detailed Checked

Notes:



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FINAL PLANS



Notes:

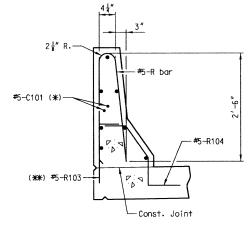
Top of safety barrier curb is built parallel to grade with barrier curb joints (except at end bents) normal to grade.

Payment for all concrete and reinforcement, completein-place, is considered completely covered by the contract unit price for Safety Barrier Curb per linear foot.

Concrete in the safety barrier curb is Class B-1.

Measurement of safety barrier curb is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing.

The curb shall be cured by application of Type 1-D or Type 2 Liquid Membrane-Forming Compound in accordance with Sec 1055. Surface sealing for concrete in accordance with Sec 703 is not required. Application of linseed oil at the contractor's expense is permitted.



PART SECTION B-B

(*) Each side of joint location.

(***) The R103 bar and #5 bottom transverse slab bar in cantilever (P/S panels only) combination may be furnished as one bar at the contractor's option.

Notes:

2" (Typ.

Joint sealant and backer rods was used on all slip-form barrier curbs instead of joint filler and is accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

(Optional Slip-Form Bridge Safety Barrier Curb)

Plastic waterstop was not be used with slip-form option.

C Bars (Slip-form Option only) was used in addition to cast-in-place conventional forming reinforcement for bridge safety

For Slip-Form Option, all sides of the safety barrier curb do have a vertically broomed finish and the curb top does have a transversely broomed finish.

-3/8" Bevel, 1/2" Radius or alternate as approved

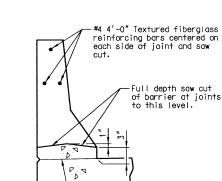
Silicone ioint

Backer rod

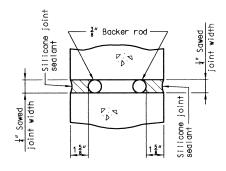
Concrete traffic barrier delineators are placed on top of the safety barrier curb as shown on Missouri Standard Plans 617.10 and in accordance with Sec 617. Concrete traffic barrier delineators are considered completely covered by the contract unit price for "Safety Barrier Curb".

by the engineer

SECTION THRU JOINT

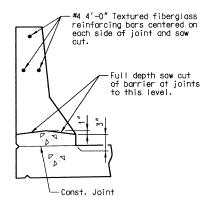


PART SECTION C-C



SECTION A-A

Note: Cost of silicone joint sealant and backer rod, complete-in-place, will be considered completely covered by the contract unit price for Safety Barrier Curb.

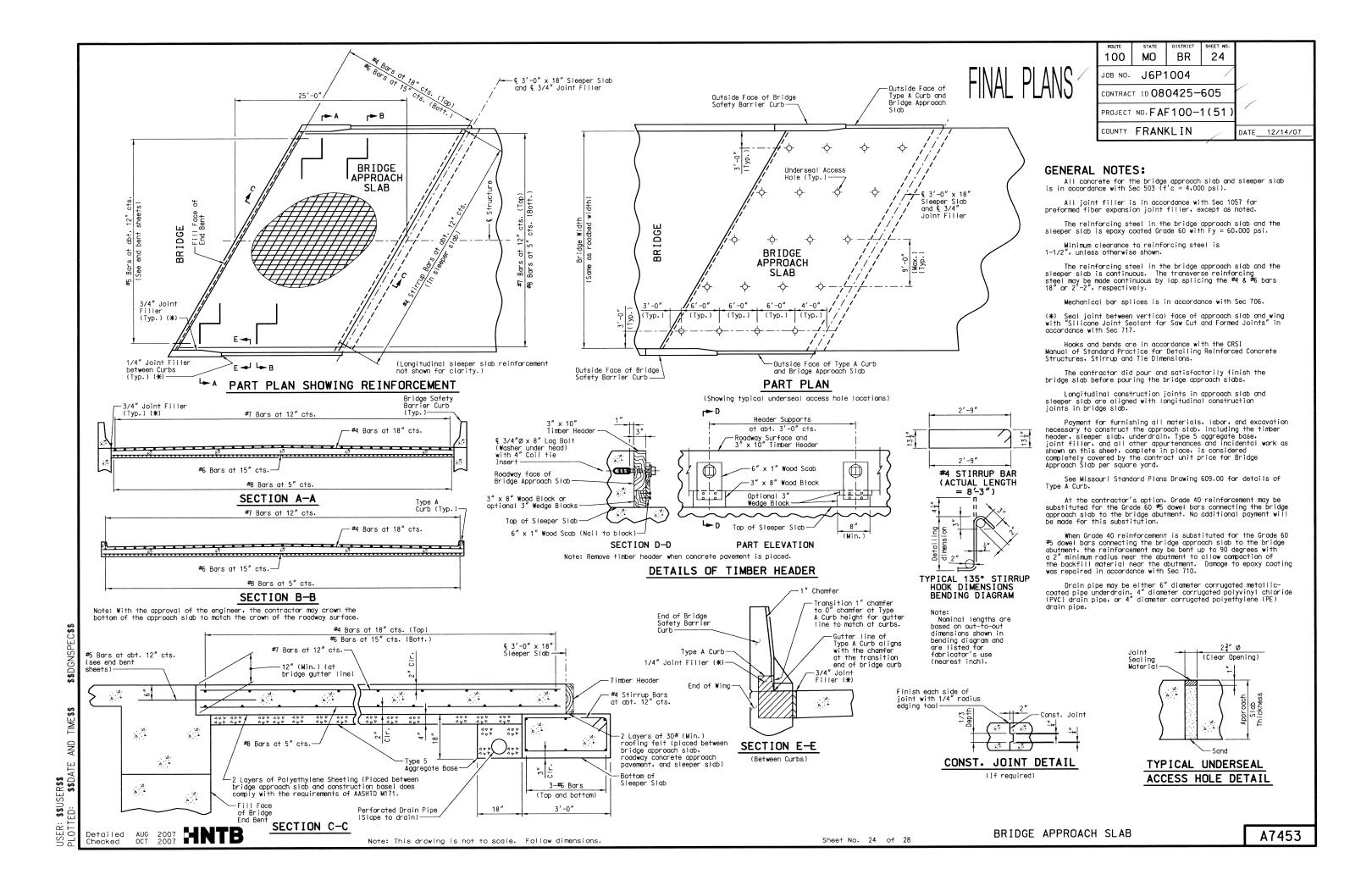


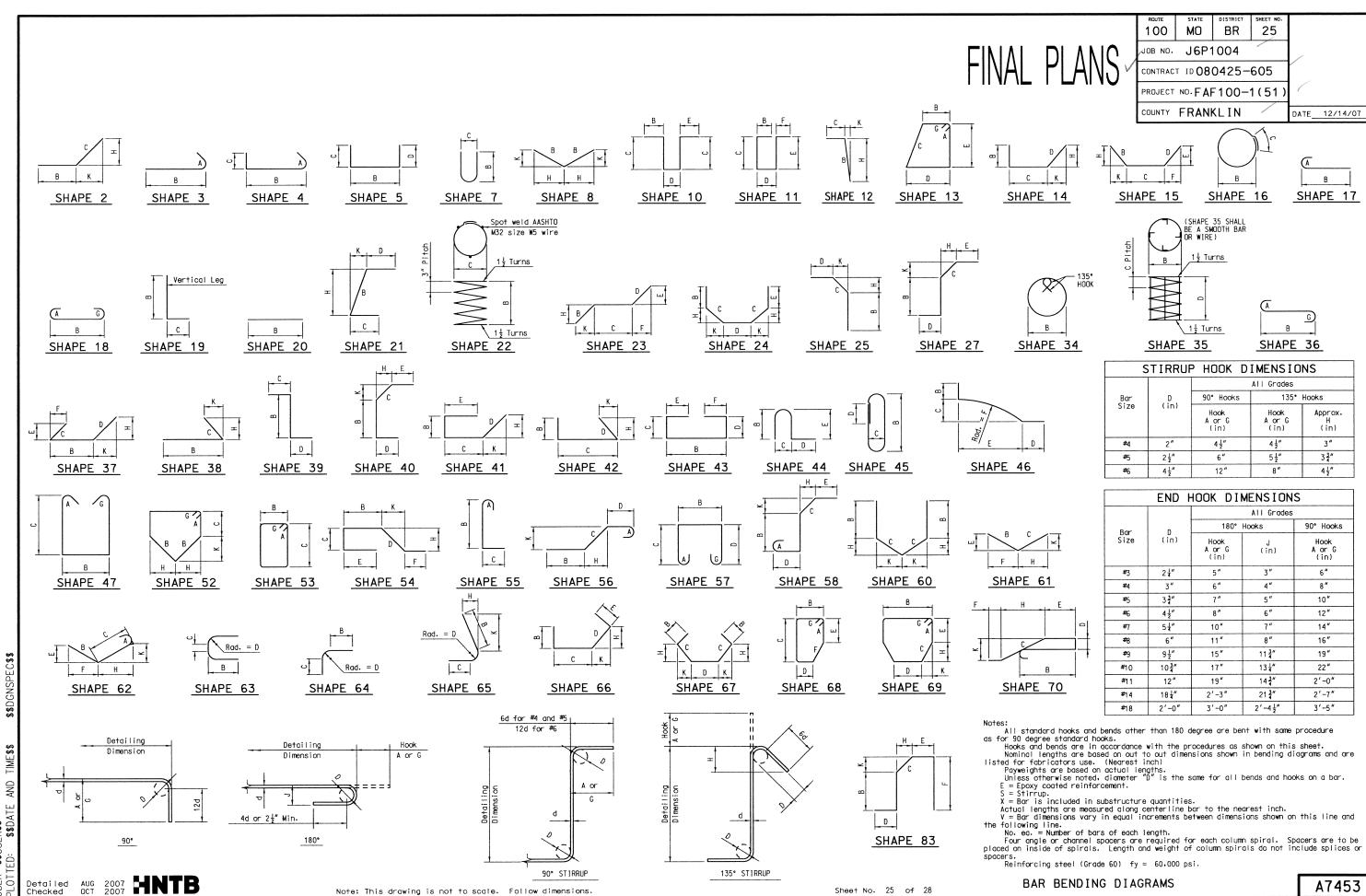
OPTIONAL SLIP-FORM

PART SECTION B-B

(Optional #5-R bar shown)

Const. Joint





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9	SIZE		EPC	SH/	STIF	SUBS	VAR	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	FT. IN.	LBS.
		END BENT 1	Ţ				1										
13	6F100	Wingwall	+	23	Н	Н	+	14"	6'-0"	14"	8 <u>3</u> "	11 1/4"	83"	11 4"	8'-4"	8'-4"	16
5	6F101	Diaphragm		38			I	4'-9"	2'-91"				2'-8"	9 1 "	7'-7"	7'-7"	5
13	6F102	Wingwall	_	23	Ш		\perp	14"	4'-61"	14"	11 ¼"	8 <u>3</u> "	11 1 "	83"	6'-11"	6'-11"	13
5	6F103	Diaphragm	+	2	H	\dashv	+	4'-9"	2'-91/2"				2'-8"	91"	7'-7"	7'-7"	5
8	8H100	Beam	+	20	H	H	+	42'-1"	 	 	 	<u> </u>			42'-1"	42'-1"	89
10	6H101	Beam	T	20	П	H	\top	42'-1"							42'-1"	42'-1"	63
4	4H102	Beam		20				13'-5"							13'-5"	13'-5"	3
6	6H103	Diaphragm	+	20	Ш	\sqcup	4	2'-6"	<u> </u>	-	ļ			ļ	2'-6"	2'-6"	2
12	6H104 6H105	Diaphragm Diaphragm	E	20	Н	\dashv	+	8'-2" 42'-1"	 	1		 	 		8'-2" 42'-1"	8'-2" 42'-1"	25
1	6H105	Appr. Seat	+=	20	Н	\dashv	+	39'-4"	1	 	 		 		39'-4"	39'-4"	5
40	5H107	Appr. Seat	E	20	H	\vdash	+	2'-6"	 		†		 		2'-6"	2'-6"	10
5	5H108	Diaphragm	Ī	20			土	4'-2"							4'-2"	4'-2"	2
26	8H109	Wingwall	I	20	П		\perp	15'-5"							15'-5"	15'-5"	1,07
10	8H110	Wingwall *	E	20	\sqcup	\sqcup	4	15'-5"		-	ļ	ļ			15'-5"	15'-5"	41
26 8	8H111 8H112	Wingwall Wingwall	E	20	Н	\dashv	+	15'-10"							15'-10" 15'-10"	15'-10" 15'-10"	1.09
5	6H113	Diaphragm	+=	20	H	\vdash	+	5'-6"	-	†	 	-	 	 	5'-6"	5'-6"	33
<u> </u>	011113	o rapin agiii	+	1-0	H	\vdash	+	1 3		<u> </u>		 	 	1	1	ا ت	† ⁻
20	5U100	Beam	I	5	S		士	2'-91"	6'-2"	6'-2"					15'-2"	14'-11"	31
6	4U101	Beam		5	S			2'-91"	3'-7"	3'-7"					10'-0"	9'-9"	3
15	4U102	Beam	1	53	S	Ц	\perp	2'-91"	3'-7"	ļ					13'-6"	13'-3"	13
9	4U103	Beam	+	53	S	\dashv	+	2'-9½"	4'-0"	4'-0"	 			 	14'-4"	14'-1"	8
5 24	4U104 5U105	Beam Diaphragm	E	5	S	\dashv	+	2'-9'2	4'-11"	4'-11"	 	 	 	 	12'-1"	11'-10"	29
20	6U106	Diaphragm	+	19	S	\dashv	+	3'-9"	2'-91"	' ''	1			1	6'-7"	6'-5"	19
60	6U107	Diaphragm	E	19	S		_	3'-10"	5'-0"						8'-10"	8'-9"	78
					П		T										
8	5V100	Beam	+	20	Н	\sqcup	\perp	6'-2"							6'-2"	6'-2" 3'-8"	5
35 2	6V101 6V102	Diaphragm Wingwall	+	20	Н	\dashv	+	3'-8" 9'-6"	_	<u> </u>	 	 	 	 	3'-8" 9'-6"	9'-6"	19
26	6V102	Wingwall	+	20	Н	\dashv	+	9'-5"	 	 	 	 	†	<u> </u>	9'-5"	9'-5"	36
2	6V104	Wingwall	T	20	Н	\dashv	\top	9'-2"		1				1	9'-2"	9'-2"	2
26	6V105	Wingwall		20	П		\perp	9'-1"							9'-1"	9'-1"	35
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FINAL PLANS

STATE MO DISTRICT BR 26 100 JOB NO. J6P1004 CONTRACT ID 080425-605 PROJECT NO. FAF100-1(51

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		END BENT 2	\vdash		H	\vdash	+	+														+		
13	6F200	Wingwall		23			土	1	14"	6'-0"		14"		8 3 "		11 ¼"		8 <u>3</u> "		11 🕌 "	8'-4'		8'-4"	163
5	6F201	Diaphragm		38	Ш	Ц	\perp	\perp	4'-9"	2'-91"						7.0		′-8″		9 1 "	7'-7'		7'-7"	57
13 5	6F202 6F203	Wingwall Diaphragm	┞	23	Н	Н	+	+	14" 4'-9"	$\begin{array}{c} 4' - 6\frac{1}{2}'' \\ 2' - 9\frac{1}{2}'' \end{array}$		14"		11 4"		8 <u>3</u> "		11 4"	ļ	83" 91"	6'-11' 7'-7'		6'-11" 7'-7"	135 57
-	6F 2U3	Draphragiii			Н	\vdash	+	+	4 -5	2 -9 2								-6	<u> </u>	3 8		+		
8	8H200	Beam	T	20	H	П	\top	T	42'-1"										l		42'-1'	"	42'-1"	899
10	6H201	Beam & Diaph		20		\Box	\perp	I	42'-1"												42'-1'		42'-1"	632
4	4H2O2	Beam		20	Ш	Н	4	+	13'-5"										ļ		13'-5' 2'-6'		13'-5" 2'-6"	36 23
6 12	6H2O3 6H2O4	Diaphragm Diaphragm	H	20	Н	Н	+	+	2'-6" 8'-2"												8'-2'		8'-2"	147
4	6H2O5	Diaphragm	Ε	20	Н	H	+	+	42'-1"												42'-1'	_	42'-1"	253
1	6H2O6	Appr. Seat		20			土	I	39'-4"												39'-4'		39'-4"	59
40	5H2O7	Appr. Seat	E	20	Ш	Ц	\perp	1	2'-6"										ļ		2'-6'		2'-6"	104
5	5H208	Diaphragm	H	20	H	H	+	+	4'-2" 15'-5"												4'-2' 15'-5'		4'-2" 15'-5"	22 988
24 8	8H209 8H210	Wingwall Wingwall	E	20	Н	H	+	+	15'-5"												15'-5'		15'-5"	329
26	8H211	Wingwall	-	20	Н	H	十	+	15'-10"										ļ		15'-10'		15'-10"	1.099
8	8H212	Wingwall	Ε	20			I		15'-10"												15'-10'		15'-10"	338
5	6H213	Diaphragm	L	20	Ш	Н	+	4	5'-6"				ļ								5'-6'	"-	5'-6"	41
20	5U200	Beam	\vdash	5	S	H	+	+	2'-91"	6'-2"		6'-2"	<u> </u>								15'-2'	"	14'-11"	311
6	4U201	Beam	\vdash	5	S	H	+	+	2'-91"	3'-7"		3'-7"							<u> </u>		10'-0'		9'-9"	39
15	4U202	Beam	T	53	S	П	\top		2'-91"	3'-7"											13'-6'		13'-3"	133
9	4U203	Beam		53	S	П	\perp	1	2'-91"	4'-0"											14'-4'		14'-1"	85
5	4U204	Beam	-	5	S	\vdash	+	+	2'-9½" 2'-3"	4'-0" 4'-11"		4'-0" '-11"									10'-10'		10'-7" 11'-10"	35 296
24	5U205 6U206	Diaphragm Diaphragm	E	19	S	\vdash	+	+	3'-9"	2'-9\frac{1}{2}"	4	-11							ļ		6'-7'		6'-5"	193
60	6U207	Diaphragm	Ε		S	H	十	\dagger	3'-10"	5'-0"	 										8'-10'		8'-9"	789
						П	\perp	I														\perp		
8	5V200	Beam	<u> </u>	20	\sqcup	Н	+	+	6'-2"		<u> </u>		ļ								6'-2' 3'-8'		6'-2"	51
35 2	6V201 6V202	Diaphragm Wingwall	├	20	₽	\vdash	+	+	3'-8" 8'-9"				 						-		8'-9'		3'-8" 8'-9"	193 26
26	6V203	Wingwall	╁	20	М	H	十	T	8'-10"		 		l								8'-10'	_	8'-10"	345
2	6V204	Wingwall		20			I	I	9'-0"												9'-0'		9'-0"	27
26	6V205	Wingwall	L	20	L	Ш	4	1	9'-1"		<u> </u>		ļ								9'-1'	"—	9'-1"	355
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Note:
For bar bending diagram, see Sheet No. 25.

Detailed AUG 2007 HNTB

* Two additional #8-H110 are included in the bar bill for testing.

BILL OF REINFORCING STEEL

223	6S100	Slab *	E	20		\Box	\top	40'-4"							40'-4"	40'-4"	13,509
46	6S101	Slab	E		+	\vdash	1 2								39'-0"	39'-0"	1,422
1		Increment = $20\frac{1}{8}$ "	╀			++	+-	2'-2"							2'-2"	2'-2"	
123	5S102	Slab	E	20	+	\vdash	+	42'-6"							42'-6"	42'-6"	5,452
I			E		+	⊢⊹	+	3'-6"							3'-6"	3'-6"	891
244	5S103	Slab	15	20	\vdash	\vdash	+-	3 -6							3 -6	3 -6	031
			↓_	ļ	-	\vdash	+										
		BARRIER CURB	1	<u> </u>	\perp	\sqcup	4										
			1			\sqcup	_										
236	5R101	Barrier Curb	E			Ш		2'-6"	3½"						2'-10"	2'-8"	656
236	5R102	Barrier Curb	E	12		Ш	_	2'-61"	3 ½"				2'-6"	3"	2'-10"	2'-10"	697
236	5R103	Barrier Curb	E	19	S			17"	6"						23"	22"	451
236	5R104	Barrier Curb	Ε	27	S		T	7"	11 ¼″	12"	6"		63"	9∦"	3'-1"	2'-9"	677
44	5R106	Barrier Curb *	E	20	П	П	T	41'-0"							41'-0"	41'-0"	1.882
			Т			П	T										
16	5C101	Slip Form Option	E	20	T	\sqcap	\top	10'-0"							10'-0"	10'-0"	167
			T			\Box	\top										
124	5K101	Barrier Curb	E	19	S	H	+	2'-5"	5 ½"						2'-11"	2'-9"	356
124	5K102	Barrier Curb	E			H	+	5 ½"	11 ½"	18"			2"	17 ½"	2'-11"	2'-9"	356
76	5K103	Barrier Curb	E	40	S	\vdash	+	5 ½"	12"	3'-0"	2'-2\frac{1}{8}"		91"	67"	6'-8"	6'-4"	502
44	5K103	Barrier Curb	E	7	1	\vdash	+	3'-0"	6"		8		38		6'-3"	6'-3"	287
			E	25	c	\vdash	+	2'-61"	6 ³ / ₄ "	4 3 "			5½"	4"	3'-6"	3'-4"	14
4	5K105	Barrier Curb	+			$\vdash \vdash$	+-	2'-5½"	77 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 8 4 3 "			$6\frac{1}{2}$	4 4 4 7 1	3'-6"	3'-5"	14
4	5K106	Barrier Curb	E	25	S	\vdash	+-										
4	5K107	Barrier Curb	E	25	S	\vdash	+-	2'-4\frac{1}{8}"	95"	4 3 "			7 7 7 1 1 1	5½"	3'-7"	3'-5"	14
4	5K108	Barrier Curb	E	25	S	\sqcup	4_	2'-23"	11 🕌	4 3 "			911"	6 ½"	3'-7"	3'-5"	14
48	5K109	Barrier Curb	E	20		Ш		5'-7"							5'-7"	5'-7"	280
42	4K110	Barrier Curb *	E	20		Ш		12'-3"							12'-3"	12'-3"	344
4	5K111	Barrier Curb	E	8				2'-21"					2'-2"	2 3 "	4'-5"	4'-5"	18
4	5K112	Barrier Curb	Ε	83	S			7 1 "	12"	12"	5 "	17"	6 <u>1</u> "	9 7 "	4'-6"	4'-1"	17
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		BARRIER CURB	Τ		T	П	Т										
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BILL OF REINFORCING STEEL

DIMENSIONS

ACTUAL LENGTH

FINAL PLANS

100 мо BR 27 JOB NO. J6P1004 CONTRACT ID 080425-605 PROJECT NO. FAF 100-1 (51

																СО	UNTY	FF	RANK	LIN	۷ _	/	D	ATE_	12/	/14/07
					-		В:	[LL	OF	RE	INF	ORC	ING	ST	EEL											
	MARK NO.		_		S)	⊋:	—	т						DIMEN								A	Ξ	۱۹۲	프	노
NO. REQ'D.	NU.	LOCATION	EPOXY (E)	SHAPE NO.	RUP (F 5	EAGL		В				D	E		F	-		Н	ŀ	· · · · · ·	NOMINAL	LENGTH	ACTU	LENGTH	WEIGHT
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Note:
For bar bending diagram, see Sheet No. 25.

Detailed AUG 2007 HNTB

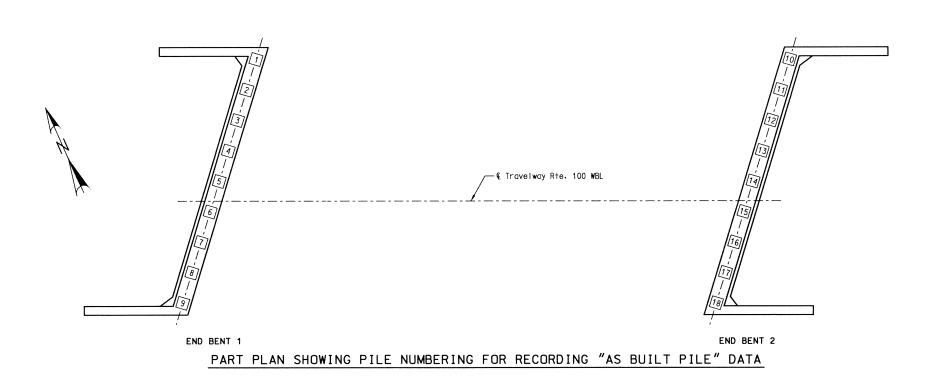
* Two additional #4-K110, #5-R106, and #6-S100 are included in the bar bill for testing.

LOCATION

SLAB

BILL OF REINFORCING STEEL

A7453



"AS BUILT PILE" DATA

			No Bollet File Birth	1			
PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS	PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS
			END BENT 1				END BENT 2
1	57 /	ROR		10	18 /	ROR /	
2	62 /	ROR	1 - SPLICE (8') 12" H PILE	11	18 /	ROR	
3	66 /	ROR <	1 - SPLICE (8') 12" H PILE	12	17 /	ROR	
4	70 /	ROR /	1 - SPLICE (8') 12" H PILE	13	18	ROR	
5	57	ROR /		14	17	ROR	
6	56 /	ROR /		15	20 -	ROR 🦟	
7	51 /	ROR /		16	17	ROR _	
8	58 🖊	ROR C		17	16	ROR /	
9	50 /	ROR		18	16	ROR /	
		<u> </u>					
			·	4			

PILE IND. COMPUTED BEARING (TONS) REMARKS REMARKS				"AS BUILT PILE" DATA
	PILE NO.	LENGTH IN PLACE (FT.)	COMPUTED BEARING (TONS)	REMARKS

BR 28

FINAL PLANS

DATE 12/14/07

STATE MO

JOB NO. J6P1004

COUNTY FRANKLIN

CONTRACT ID 080425-605 PROJECT NO. FAF 100-1 (51

100

Note: Indicate in remark column:

A.) If piling were driven to practical refusal.

B.) Pile batter if other than shown on bent detail sheet.

C.) Type of piling used.

NOTE: THIS SHEET TO BE COMPLETED BY MODOT CONSTRUCTION PERSONNEL.

Detailed AUG 2007 HNTB

"AS BUILT PILE" DATA

AS BUILT PILE DATA

A7453



STRUCTURAL REHABILITATION CHECKLIST

	MO 100 E		Over:	MOC RR
County:	FRANKLIN		Date of Field Check:	03/21/2022
	* * * Please in	clude photograp	ohs for all items that ap	ply. * * *
VERLAY				
* Type of existing of	overlay: None [✓ Asphalt Lov	w Slump Silica Fume	Latex Epoxy Other:
* Existing overlay	thickness: 2.5	"	* Year overlay was applied:	2011 Unknown
* % of overlay rep	aired or patched: 4	<u>) </u> %	* Replace overlay:	Yes V No
	HAS MANY FULL AND I		ES	
2#				
ECK REPAIRS	Deck repair quantities are re	quired even if a Deck	k Test request has been ordered	I for this structure.)
* Half-sole repairs	• •		k Test request has been ordered * Full-depth repairs: (round up to the ne	sq. ft.
* Half-sole repairs: (round up to th * Slab edge repairs	e nearest 50 sq. ft.)	90 sq. ft.	* Full-depth repairs:	2000 sq. ft.
* Half-sole repairs: (round up to th * Slab edge repairs	the nearest 50 sq. ft.) the nearest 50 sq. ft.) the squarest 50 sq. ft.) the enearest 50 sq. ft.) the enearest 50 sq. ft.)	sq. ft.	* Full-depth repairs:	2000 sq. ft.
* Half-sole repairs: (round up to th * Slab edge repairs (covers the oute * Clean & seal slab (in lieu of edge * Total surface hyo	the nearest 50 sq. ft.) the nearest 50 sq. ft.) the squarest 50 sq. ft.) the enearest 50 sq. ft.) the enearest 50 sq. ft.)	sq. ft.	* Full-depth repairs:	2000 sq. ft. arest 25 sq. ft.) ir (Unformed): 0 sq. ft. ing slab cantilever beyond the outer 4") ng: 600 sq. ft. arest 25 sq. ft.) nt (redeck): ✓ Yes ☐ No ☐ Opt
* Half-sole repairs: (round up to th * Slab edge repairs (covers the oute * Clean & seal slab (in lieu of edge * Total surface hyo (half-sole and f) * Deck repairs with (if applicable)	te nearest 50 sq. ft.) te 1 of the slab edge) edge: 10 repairs) Iro demolition bridge deck:	sq. ft.	* Full-depth repairs:	2000 sq. ft. arest 25 sq. ft.) ir (Unformed): 0 sq. ft. ing slab cantilever beyond the outer 4") ng: 600 sq. ft. arest 25 sq. ft.) nt (redeck): ✓ Yes ☐ No ☐ Optoneement: ☐ Yes ✓ No ☐ Optoneement: ☐ Optoneement ☐ Yes ✓ No ☐ Optoneement: ☐ Yes ✓ Yes ☐ Yes ✓ No ☐ Optoneement: ☐ Yes ✓ Yes
* Half-sole repairs: (round up to th * Slab edge repairs (covers the oute * Clean & seal slab (in lieu of edge * Total surface hyo (half-sole and f) * Deck repairs with (if applicable)	te nearest 50 sq. ft.) i: 60 er 4" of the slab edge) redge: 10 repairs) Iro demolition bridge deck: full depth repair quantities sti a voided tube replacement: sq. ft.	0 sq. ft. 1 lin. ft. 1 lin. ft. 1 Yes ✓ 1 lin. ft. 1 Yes ✓ 1	* Full-depth repairs:	2000 sq. ft.
* Half-sole repairs: (round up to th * Slab edge repairs (covers the oute * Clean & seal slab (in lieu of edge * Total surface hyo (half-sole and f) * Deck repairs with (if applicable) * How were the qu	te nearest 50 sq. ft.) i: 60 er 4" of the slab edge) redge: 10 repairs) Iro demolition bridge deck: full depth repair quantities stite a voided tube replacement: sq. ft. antities obtained? Vis	sq. ft. lin. ft. lin. ft. Yes Yes Yes Bridge In	* Full-depth repairs:	2000 sq. ft.

Spans			Location in S	pan	Deterior	ation	Describe
	At	Btwn (mid)			Туре	Amount	
	Panel Jt.	Panel Jt.	End Mid	End		sq. ft.	
						sq. ft.	
	_ 🗆					sq. ft.	
						sq. ft.	
	_ 🗆					sq. ft.	
						sq. ft.	
Deterioration		vater saturation		aining, crackii	ng, spalling, ex	sposed steel, disintegrati ion should be recorded.)	
joints, etc.	Typically obse	vater saturation	ı, efflorescence, rust sta	aining, crackii	ng, spalling, ex		
Deterioration joints, etc.	Typically obse	vater saturation	n, efflorescence, rust sta panel joints. The locat	aining, crackii ion and "Type	ng, spalling, ex		
Deterioration joints, etc. ROACH SI	Typically obse	water saturation rved at or near	e? Ves	aining, crackii ion and "Type	ng, spalling, ex	ion should be recorded.)	lt Other
ROACH SI Is there a	Typically obse	water saturation rved at or near ch slab in place	e? Ves	aining, crackinion and "Type No '	ng, spalling, ex" of deteriorat * Type:	Concrete Aspha	lt Other
ROACH SI Is there a Is the app	LABS bridge approaction approaction slab sinkers needed to the	water saturation rved at or near ch slab in place th pavement in king at the end e bridge appro	e? Ves	aining, crackinion and "Type No ' Yes ace?	* Type: * Type: Yes Yes	Concrete Aspha	lt Other
ROACH SI Is there a Is the appropriate the app	LABS bridge approaction approaction slab sinkers needed to the	water saturation rved at or near ch slab in place ch pavement in king at the end e bridge appro n but will be rep	e?	aining, crackinion and "Type No 3 No 3 Yes acc? Bridge Memo	* Type: * Type: V No Yes randum.)	Concrete Aspha	lt Other

Effective: 2013 June 4 Supersedes: 2009 May 1 2 of 9

* Is the drainage system v	working adequately? Yes 🗸 No
* Recommendations: D	rain basin/flume to direct water away from slopes down to rail road
e #	
URBS & RAILS	
* Existing curb (left side):	Safety Barrier Curb
	Other Handrail Fence
	* Does curb need repair Yes No * Curb repair 40 lin. ft.
	* Remove hand rail Yes No * Add curb blockout Yes No
* Existing curb (right side):	Safety Barrier Curb
	Other Handrail Fence
	* Does curb need repair Yes No * Curb repair 40 lin. ft.
	* Remove hand rail
* Existing median curb:	Type: Width " Height "
8	* Does curb need repair Yes No * Curb repair lin. ft.
* Approach rail attachme	· ·
* If the existing handrails	will be removed, does the local maintenance supervisor wish to keep them?
Storage address: <u>lo</u>	ecation: St. Clair bridge
ac	ddress:
<u>ci</u>	ty: <u>state:</u> <u>zip:</u>
* Notes: Recommend re	placing with safety barrier curb during brideg deck replacement

Effective: 2013 June 4 Supersedes: 2009 May 1 3 of 9

Bent	Type	Recommendations	Gap Left	Gap Right	Temperature & Other Info
1	Flat plate (removed)			"	
2		m			
3		USE-IN-PLACE			
4	Filled joint	E-IN-PLAV	"	"	
			"	"	
			"	"	
* Notes:	Abut. 1 joint removed or co	vered with asphalt overlay.	Look at making abi	utments integral or S	emi-integral
· #					
EARINGS					
Bent	Coating	Recommenda	ations	Notes (indicate	e which bearings at each bent)
1			SLAB Stab	Consider making	neoprene bearings
2	N & OVERCOAT CLEAN & RECOAT		AKE END BENT SLIDING SLA MAKE END BENT INTEGRAL]	
3	CLEAN & OVERCOAT AST CLEAN & RECO,	USE-IN-PLACE]	
4	N & OV	E-IN-PLA REPAIR RESET RESET REPLACE		Consider making	neoprene bearings
	CLEAN]	
				' 1	
* Notes:	Consider making abutment	s 1 and 4 integral or semi into		ıst, depending on co	ndition after clean up
	may need to replace if not s			,,	
# (Provide	Pictures of Each Bearing)				
,	, ,				
OATING S	YSTEM (PAINT)				
	coating system: A system	n		green 🗸 gray	other
	<u> </u>				
* Date las	t coated: 1970	* Is existing c	oating peeling?	Yes (Overcoat is n	ot an option) No
* Coating	recommendation:	✓ Blast clean &	k recoat all steel	Clean	& overcoat all steel
		Blast clean & locations	& recoat only at joint		r recoat at joint locations and clea coat all other steel
		Note: Pull off to request pull off		coat (Calcium Sulfona	te) option. Bridge Division will
* Notes:	Recommend blasting and re	ecoating girders, diaphrams,	and bearings.		

(Example:	Slab Superstruct Deck solid slabs,	voided slabs,		ove the b	pearings)			
deck girdei	rs & prestressed g	girders)						
	Example: Beams, s (Check all that a			gms, cro	oss-frames, mis	sc. steel)		Describe & Locate
1	<u> </u>	Section Loss	<1	<u>%</u>	Cracks	in.	at girder ends	S
2	<u> </u>	Section Loss		<u>%</u>	Cracks	in.		
3	<u> </u>	Section Loss		<u>%</u>	Cracks	in.		
4	<u> </u>	Section Loss	<1	<u>%</u>	Cracks	in.	at girder ends	s
N. T	Minou nook mis	a4 a4 aiudau au	ds with ini	tial secti	on loss.			
Notes:	Minor pack rus	st at girder en						
Notes:	Minor pack rus	st at girder en						
Notes:	Minor pack rus	st at girder en						
	WIMOT PACK FUS	st at girder en						
	MINOT PACK FUS	st at girder en						
#	TURE REPAIR				al Concrete	Coat Exp	osed Pile	
#			rmed Repai	Sea	al Concrete am Cap Bts.	•	osed Pile e Cap Bts.	Describe (Beam, Backwall, Wing, e
# JBSTRUC	TURE REPAIR	air Unfor		Sea r Be:		•		Describe (Beam, Backwall, Wing, e
# JBSTRUC	TURE REPAIR Formed Repa	air Unfor	rmed Repai	Ser Be:	am Cap Bts.	@ Int. Pil	e Cap Bts.	Describe (Beam, Backwall, Wing, e
# JBSTRUC	TURE REPAIR Formed Repa	air Unfor	rmed Repai	Sear Bea	Yes No	@ Int. Pil	e Cap Bts.	Describe (Beam, Backwall, Wing, e
# JBSTRUC	TURE REPAIR Formed Repa sq. f	air <u>Unfor</u> ft. <u>1</u> ft.	rmed Repai	Sear Bear	Yes No	@ Int. Pil Yes Yes	No No	Describe (Beam, Backwall, Wing, e
# JBSTRUC	TURE REPAIR Formed Repa sq. f sq. f	air Unfor ft ft ft	rmed Repai	Sea r Bea	am Cap Bts. Yes No Yes No Yes No	@ Int. Pil Yes Yes Yes	No No No No	Describe (Beam, Backwall, Wing, e

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SIGNS, SIGNALS &/OR LIGHTING A'	TTACHED TO STR	UCTURE		
* Are there signs attached directly to	this structure?	Yes No	quantity	location
* Describe proposed work to be done	to signs.			
* Are there signals attached directly	to this structure?	Yes No	quantity	location
* Describe proposed work to be done		I CS INU	quantity	location
Describe proposed work to be done				
* Is there aviation lighting attached t	o this structure?	Yes N	o N/A	Red Green
* Is there navigational lighting attach	ed to this structure?	Yes N	o N/A	Red Green
* Is there roadway lighting attached	to this structure?	Yes N	o N/A	
* Describe proposed work to be done	to lighting.			
ure # UTILITIES ATTACHED TO STRUCTU	JRE			
Туре	Qty. Size	Owner		Condition
Conduit Pipeline Other			Repaint	Repair Replace Remove
Conduit Pipeline Other			Repaint	Repair Replace Remove
		·		Kepan Kepiace Kemove
Conduit Pipeline Other			Repaint	
Conduit Pipeline Other Conduit Pipeline Other			Repaint	Repair Replace Remove
				Repair Replace Remove
Conduit Pipeline Other				Repair Replace Remove

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* Is it on and working? Yes	No Unknown		
* Notes: N/A			
?#			
HANNEL ALIGNMENT, SLOPE PROT	FECTION & SCOUR		
* Is channel aligned to bridge opening?	Yes No 1	Describe N/A	
* Is drift a continual problem?	Yes No	Describe & Locate N/A	
* Is erosion a problem?	✓ Yes No	Describe & Locate Slope er	osion down onto RR tracks
* Describe slope protection in place.	Earth		
* Scour At Footing At F	Piling Depth	Bent	Recommendation
			-
		•	w bridge. Cut brush along slope.
	ROSION BLANKET THAT	Γ WONT REQUIRE VEGE	TATION - TOO SHADY UNDERNEATE
INVESTIGATE SOME TYPE OF EI	ROSION BLANKET THAT	Γ WONT REQUIRE VEGE	TATION - TOO SHADY UNDERNEATE
INVESTIGATE SOME TYPE OF EI STEEP GRADE DOWN TO TRACK	ROSION BLANKET THAT	Γ WONT REQUIRE VEGE	TATION - TOO SHADY UNDERNEATE
INVESTIGATE SOME TYPE OF EI	ROSION BLANKET THAT	Γ WONT REQUIRE VEGE	TATION - TOO SHADY UNDERNEATE
INVESTIGATE SOME TYPE OF EI STEEP GRADE DOWN TO TRACK	ROSION BLANKET THAT	Γ WONT REQUIRE VEGE	TATION - TOO SHADY UNDERNEATE
INVESTIGATE SOME TYPE OF EI STEEP GRADE DOWN TO TRACK # RAFFIC LANES	ROSION BLANKET THAT	Γ WONT REQUIRE VEGE	TATION - TOO SHADY UNDERNEATE
INVESTIGATE SOME TYPE OF EI STEEP GRADE DOWN TO TRACK	ROSION BLANKET THAT	Γ WONT REQUIRE VEGE	TATION - TOO SHADY UNDERNEATI TE TREATMENT
INVESTIGATE SOME TYPE OF EI STEEP GRADE DOWN TO TRACK # RAFFIC LANES	on structure 9 1/2'	T WONT REQUIRE VEGE BLANKET IS APPROPRIA under stru under stru	CTATION - TOO SHADY UNDERNEATI TE TREATMENT cture 0
INVESTIGATE SOME TYPE OF EI STEEP GRADE DOWN TO TRACK # RAFFIC LANES * Number of lanes striped: * Shoulder width: None	on structure 2 on structure 9 1/2' (left)	under stru 9' (right) under stru	cture
# # RAFFIC LANES * Number of lanes striped:	on structure 9 1/2'	T WONT REQUIRE VEGE BLANKET IS APPROPRIA under stru under stru	cture
# # RAFFIC LANES * Number of lanes striped: * Shoulder width: None	on structure 2 on structure 9 1/2' on structure	under stru y' (right) under stru	cture

GENERAL AREA CONDITIONS			
* Primary area: Commercial	Industrial Residential	Agricultural	Military Other
* Posted speed limit on structure:	55 mph		
* Posted load on structure:	tons @	mph	* Are both signs in place?
Single Unit: Semi (tractor/trailer):	tons @	mph NA	Yes No
* Do pedestrians and/or bicyclists regula		Yes No	Undetermined
	.,		
Picture #			
17			
MAINTENANCE * What work has been done to this struct	ure that may not be reflected on o	existing bridge plans?	
2003 - built mat gutters 2005 - repair >50 SF deck			
2008 - paint bearings & beam ends 2012 - overlay deck with UBAWS, clear	1 & seal abuts., Clean, paint & re	set abut. bearings	
2013 - mudjack under east abut., place	rock on slope		
2018 - 200+ SF deck repair 2019 - install silt fence & straw bales fo	r erosion control		
2020 - 50 SF deck repair, 2021 - 150+ S		repair (so far)	
Picture #			
18			
ADDITIONAL FIELD NOTES			
			_
Picture #			

Effective: 2013 June 4 Supersedes: 2009 May 1 8 of 9

STAGING / DET	COUR			
* Traffic Cor		Stage construction on structure	✓ Cross over traffic to adjacent structure ☐ Dete	our
		t bridge is 38 ft curb to curb, shou	ld accommodate 2 - 12' lanes and 2 - 7 ft shoulders.	
- Treated spe		000000000000000000000000000000000000000	14 12 17 17 17 17 17 17 17 17 17 17 17 17 17	
PERSONS ASSI	STING WITH CHECKLIST			
Name	Joseph Ridenhour	Title	Ph. () -	
Name		Title	Ph. () -	
Name		Title	Ph. () -	
Name		Title	Ph. () -	
Name		Title	Ph. () -	
REQUIRED SIG I have		is checklist and believe it to be as a	ccurate as possible.	
Name Trans	portation Project Manager		Date	
Name			Date	
Distri	ct Bridge Engineer			

The structural rehabilitation checklist indicates how the bridge is functioning and aging.

All deterioration should be noted, even if it is known that the work will not be completed under the proposed project.

Send **NEW** Structural Rehabilitation Checklist by email

To: "Bridge Survey Processor"

Cc: Structural Project Manager or Structural Resource Manager













































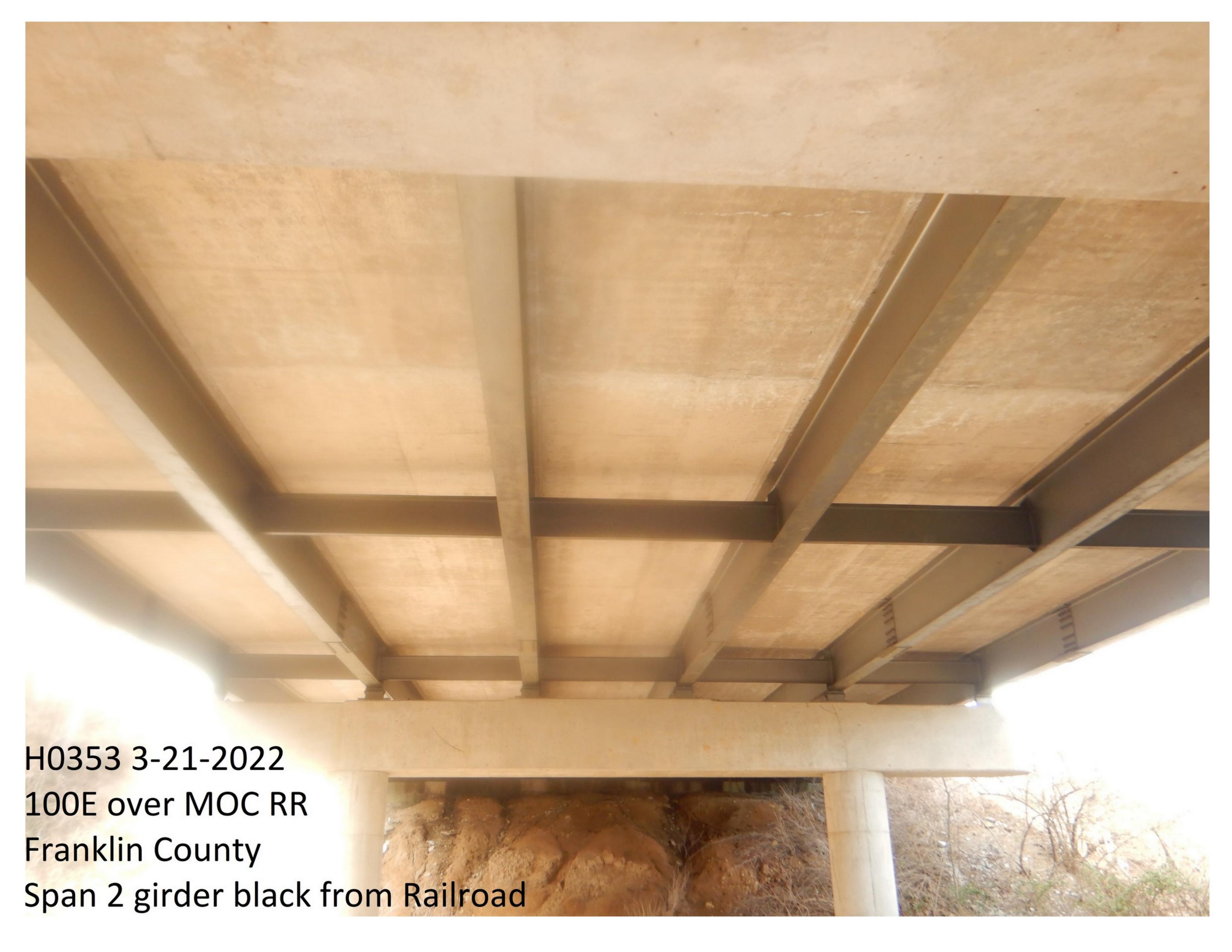












H0353 MO 100 E

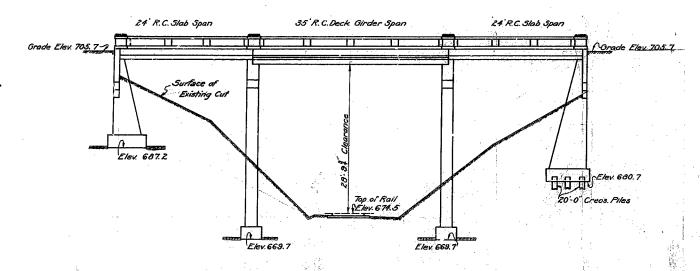
3 images, March 2022



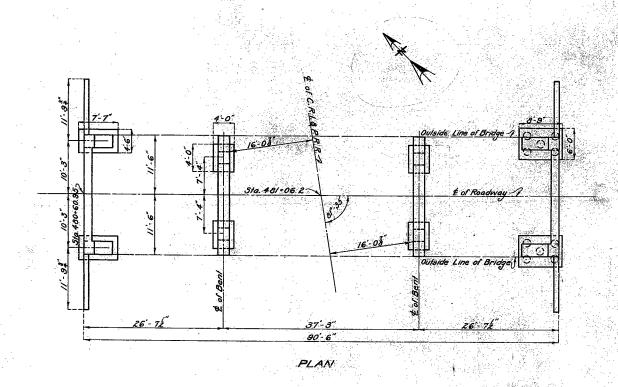


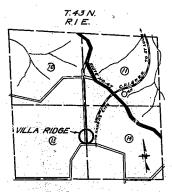


MISSOURI STATE HIGHWAY DEPARTMENT



GENERAL ELEVATION





LOCATION SKETCH

Note: M.P. \$50-15 is located 90'-0 ... West

医视器 数据的自动对此中间的 计模式	Superstr.	Substr.	Total
Excavation Cu. Yds.		350	350
Concrete 1:2:3 mix. Cu.Yds.	9.4	2.1	9.4
Concrete 1:2:3½ mix. Cu.Yds.	113.6		//3.6
Concrete 1:2:4 mix. Cu.Yds	arta.	105.3	105.3
Reinforcing Steel Lbs.	20020	6980	27000
Creosoted Piles Lin.Ft.		200	200
Creosoted Pile Cut-offs Lin Ft.		30	30

PRELIMINARY LAYOUT FOR

BRIDGE OVER C.R.I.GP R.R. TRACK

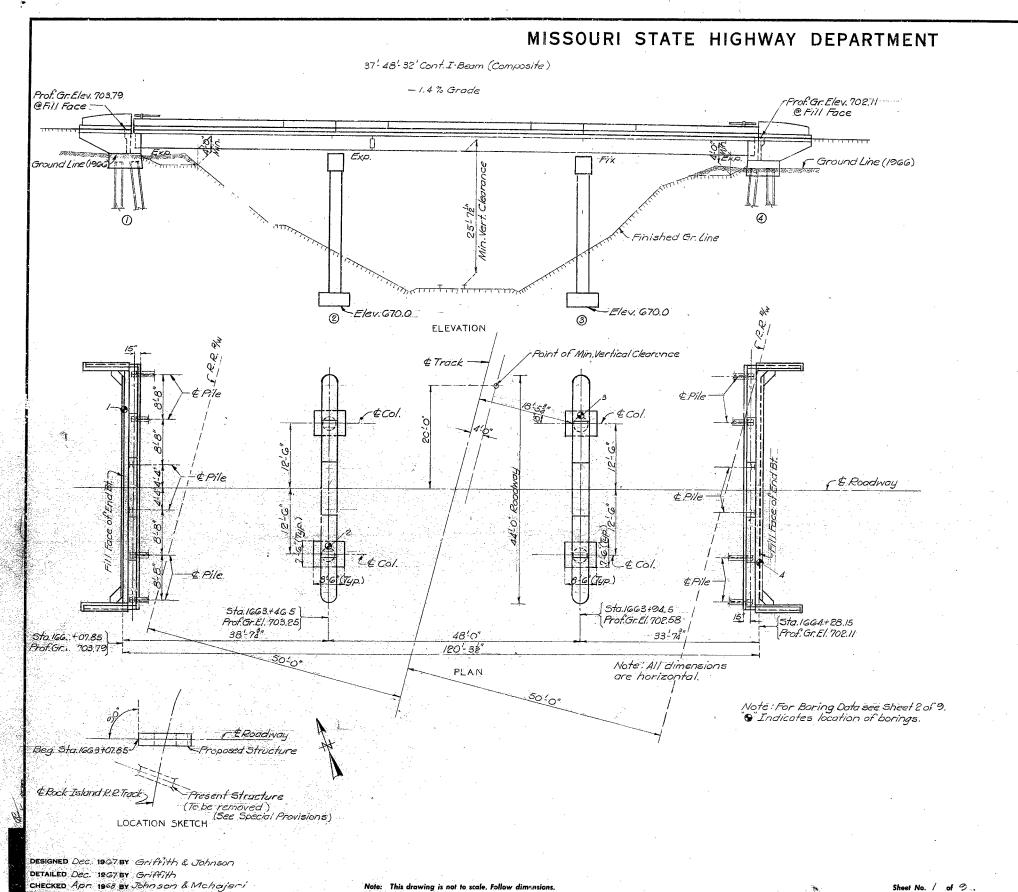
STATE ROAD FROM WARRENTON TO ROUTES NOS 12 8 14 ABOUT I MI. N.E. OF VILLA RIDGE

PROJECT NO R. 47.

STA 480+60.85

FRANKLIN COUNTY

Trawn Jan. 1926 By W.S.M. Thecked Jan. 1926 By A.J.D.



FED. ROAD	STATE	FED. AID	FISCAL	SHEET	TOTAL
DIST. NO.		PROJ. NO.	YEAR	NO,	SHEETS
5	MO.		19	94	

GENERAL NOTES:

Design Specifications: A.A.S.H.O. - 1965

Design Loading:

H20-44 i5#/sq.ft. Future Wearing Surface Earth 120# Equivalent Fluid Pressure 30# Fatigue Stress - Case I

Design Unit Stresses:

Class B Concrete (substructure) fc = 1,200 psi Class BI Concrete (superstructure) fc = 1,600 psi Reinforcing Steel fs = 20,000 psi Structural Steel (A.S.T.M. A.36-66) fs = 20,000 psi Steet Pile (A.S.T.M. A-36-GG Fb 9 000)

Surface Seal:

Superstructure deck to be surface sealed.

Fabricated Steel

Field connections, High Strength Bolts ³4"¢, holes ¹³16"¢ except as noted.

Paint:

Shop, none: Field, by contractor in accordance with Stcl. Spec.55,4.10.

	PILE & FOOTING DATA							
	BENT NO.	1	2	3	4			
	Pile Type and Size	10"BP@42"	i ——	14 2 3 3	IO"BRE42"			
BEARING PILE	Number	8			8			
	Approximate Length Ft.	25		E. J. 2849.	25			
	Design Bearing Tons	26.5			26.5			
	Hammer Energy reald. Ft.Lbs.	7,000			7,000			
SPREAD	Foundation Material		Rock	Rock				
FOOTINGS	Design Bearing Tons/5q.Ft.		3. <i>0</i>	3,0				

Minimum energy requirement of hammer based on plan length and design bearing value of piles. Increase by the factor (W+w)/2W when the weight of the ram (W) is less than the weight of the pile (W). All pile shall be driven to practical refusal,

ESTIMATED QUANTITI	ES				1
ITEM	13	SUBSTR.	SUPERSTR.	TOTAL	1
Class I Excavation for Structures Cui	Υd.	-250		250	1
Steel Piles in place (10") Lin.	Ft.	400		400	1
Class B Concrete Cu.	Yd.	140.7		140.7	1
Class B-1 Concrete Cu.	Yd.		160.3	160.3	1
Reinforcina Steel Li	bs,	16,770	46,340	65,110	1
Fabricated Structural Carbon Steel L	<i>b</i> 5		84,680	84,680	1
	. F4.	A 2 5	235	235	1
Paintina Toi	กร	1, 14	41.8	41.8	1
Removal of Bridge Lump St	m			1	1

All concrete and reinforcement in End Post and Curbs is included with superstructure quantities.

B.M. \$57 Elev 703.80 Spike in S. Post of 30" Elm. 5" Lt. Sta. 1661 + 55

BRIDGE OVER C.R.I. & P. RAILROAD

STATE ROAD FROM WASHINGTON EAST AND WEST

ABOUT 8.0 MILES S.E. OF WASHINGTON

PROJECT NO (C036-100(4)) (RTE.100) STA. 1663+07.85

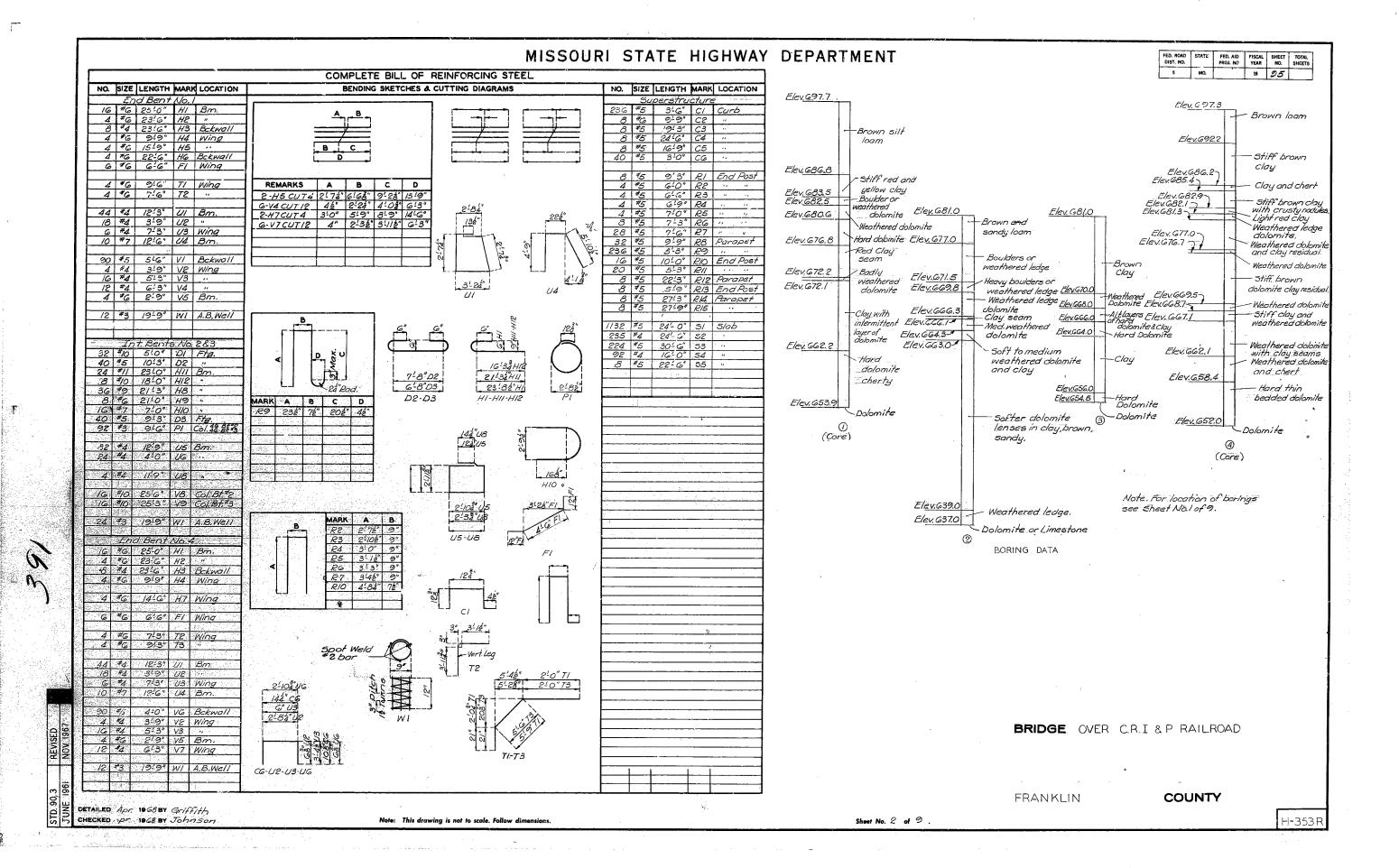
FRANKLIN F-FG-100-16

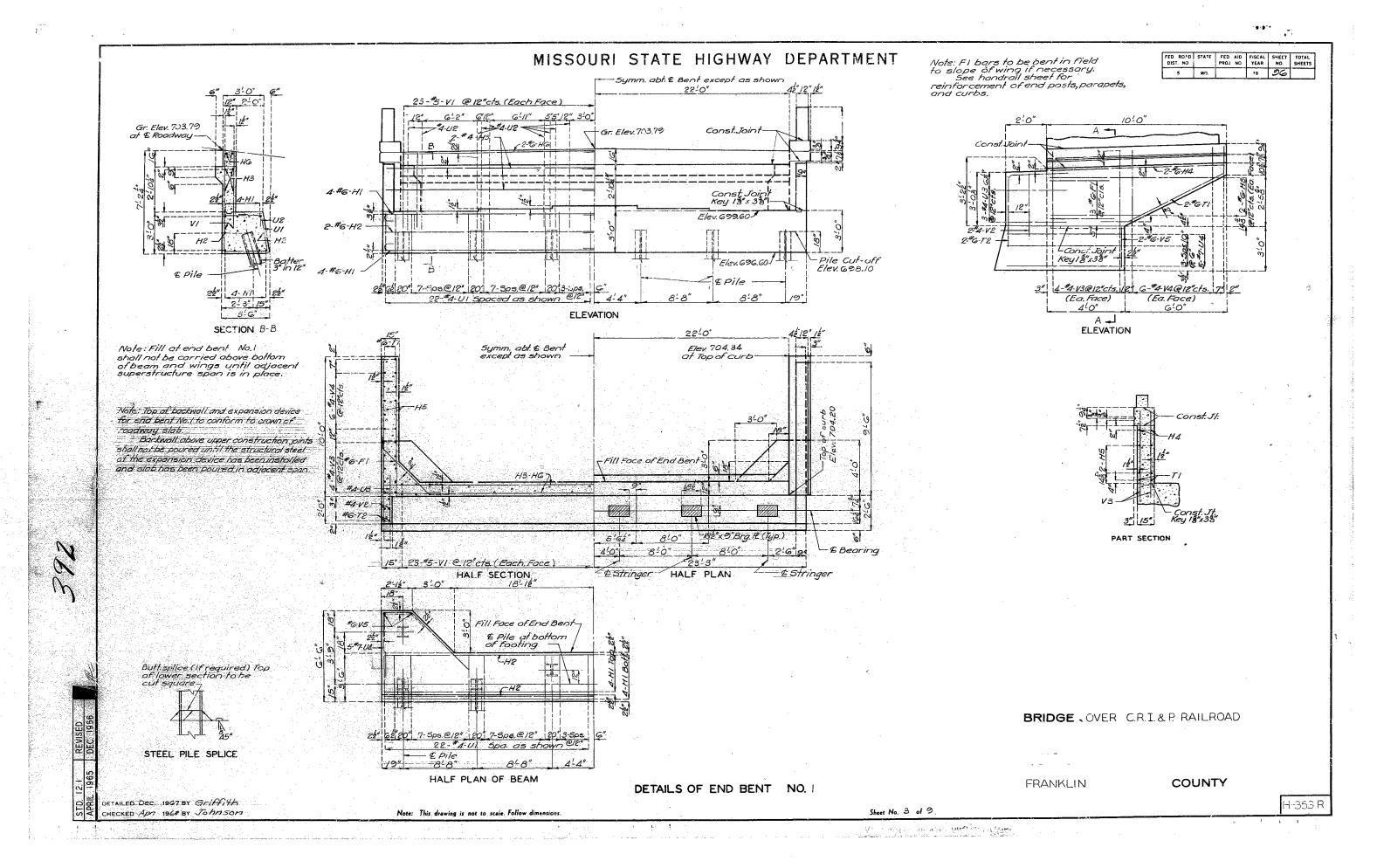
COUNTY

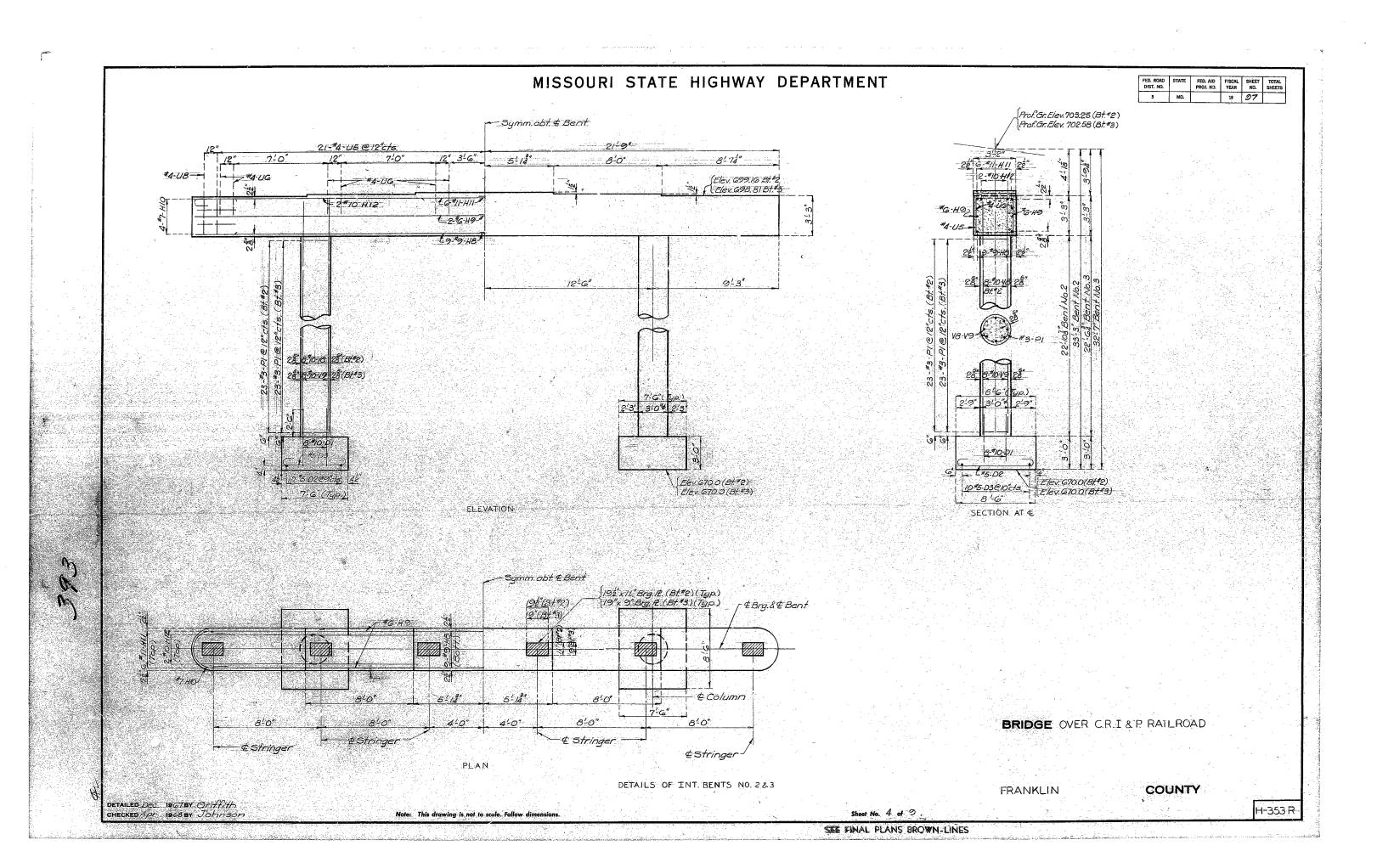
anily DATE 12-31-68

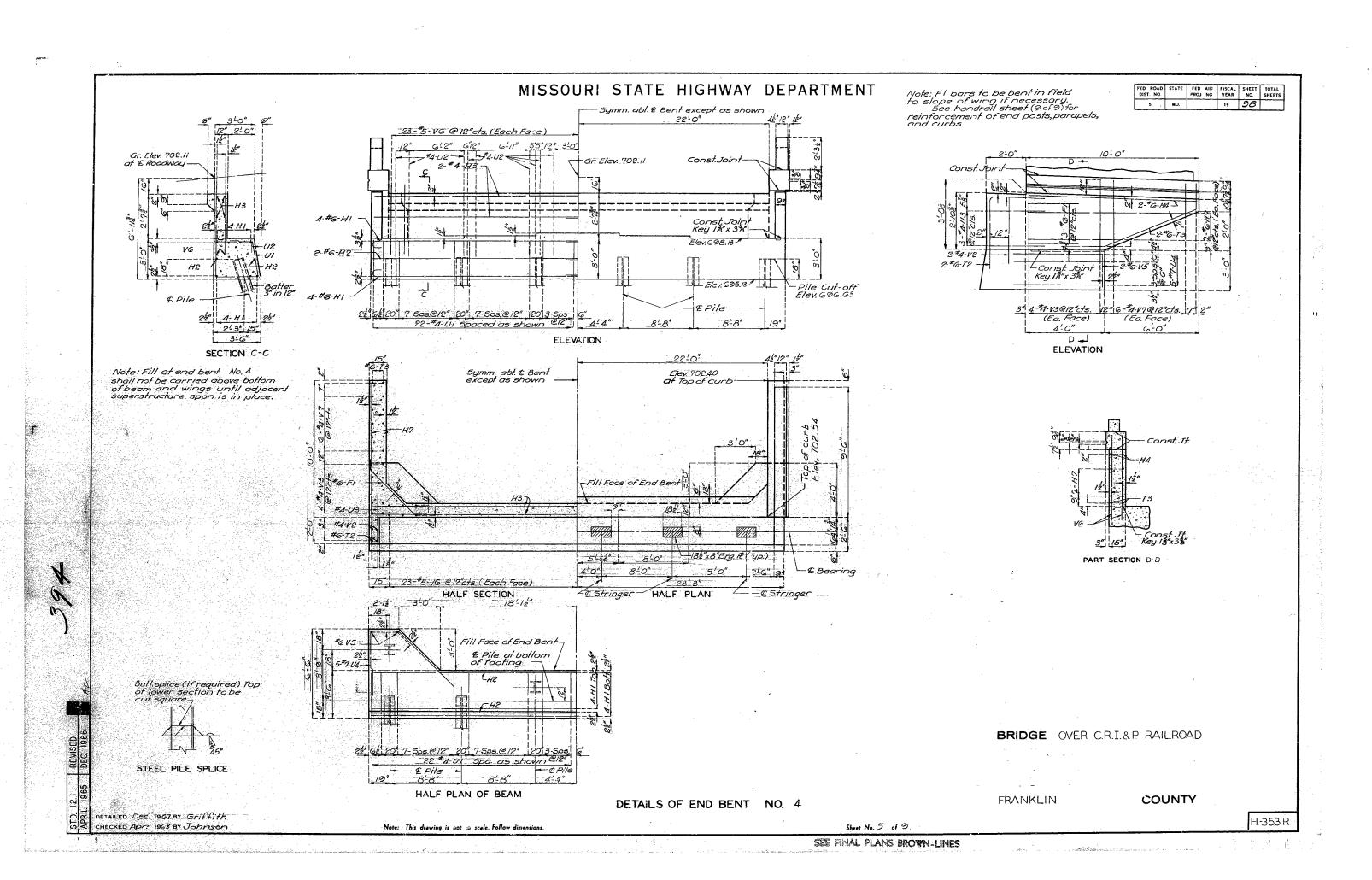
STD: 54:00 H-353

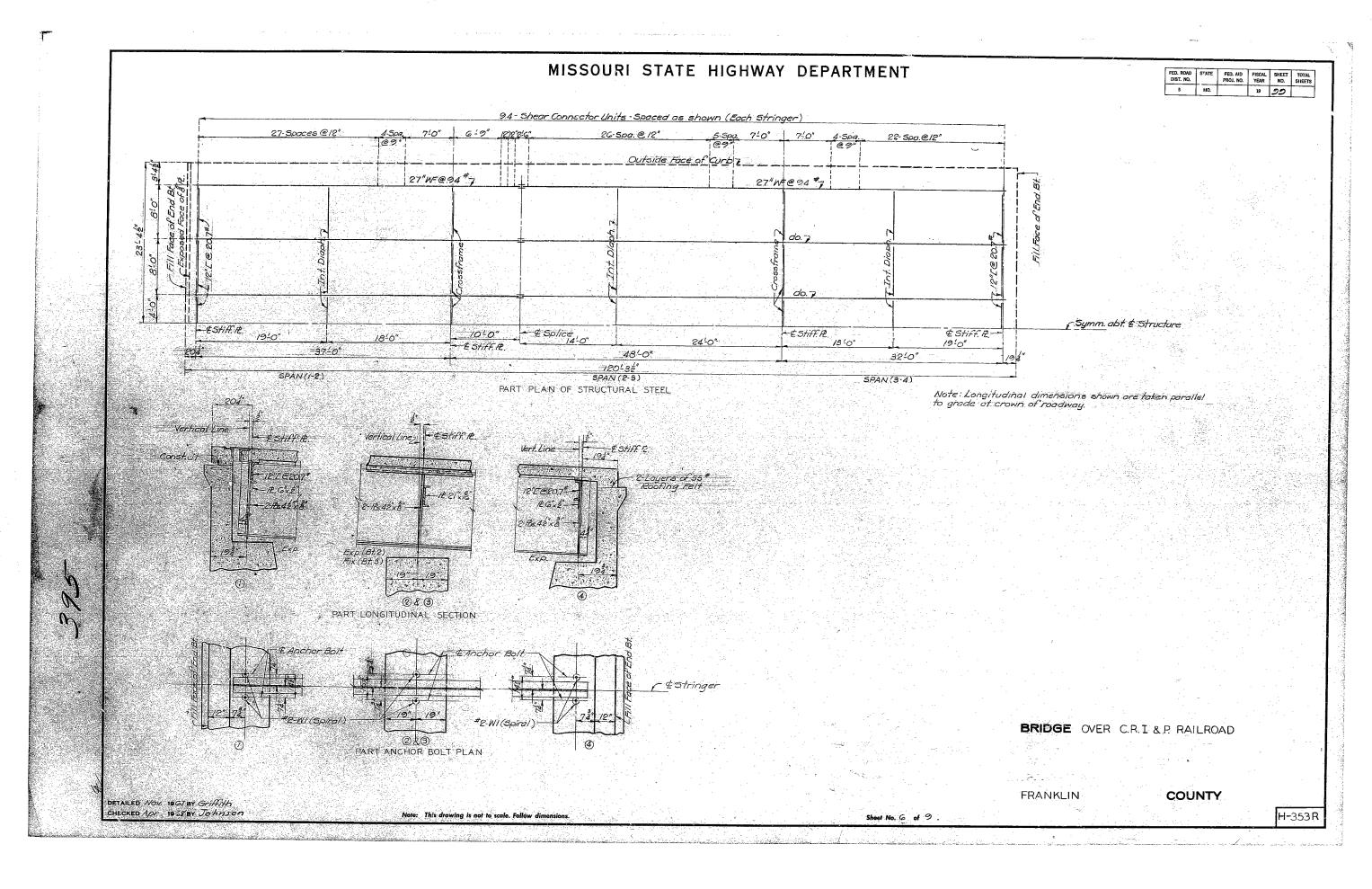
SEE FINAL PLANS BROWN-LINES

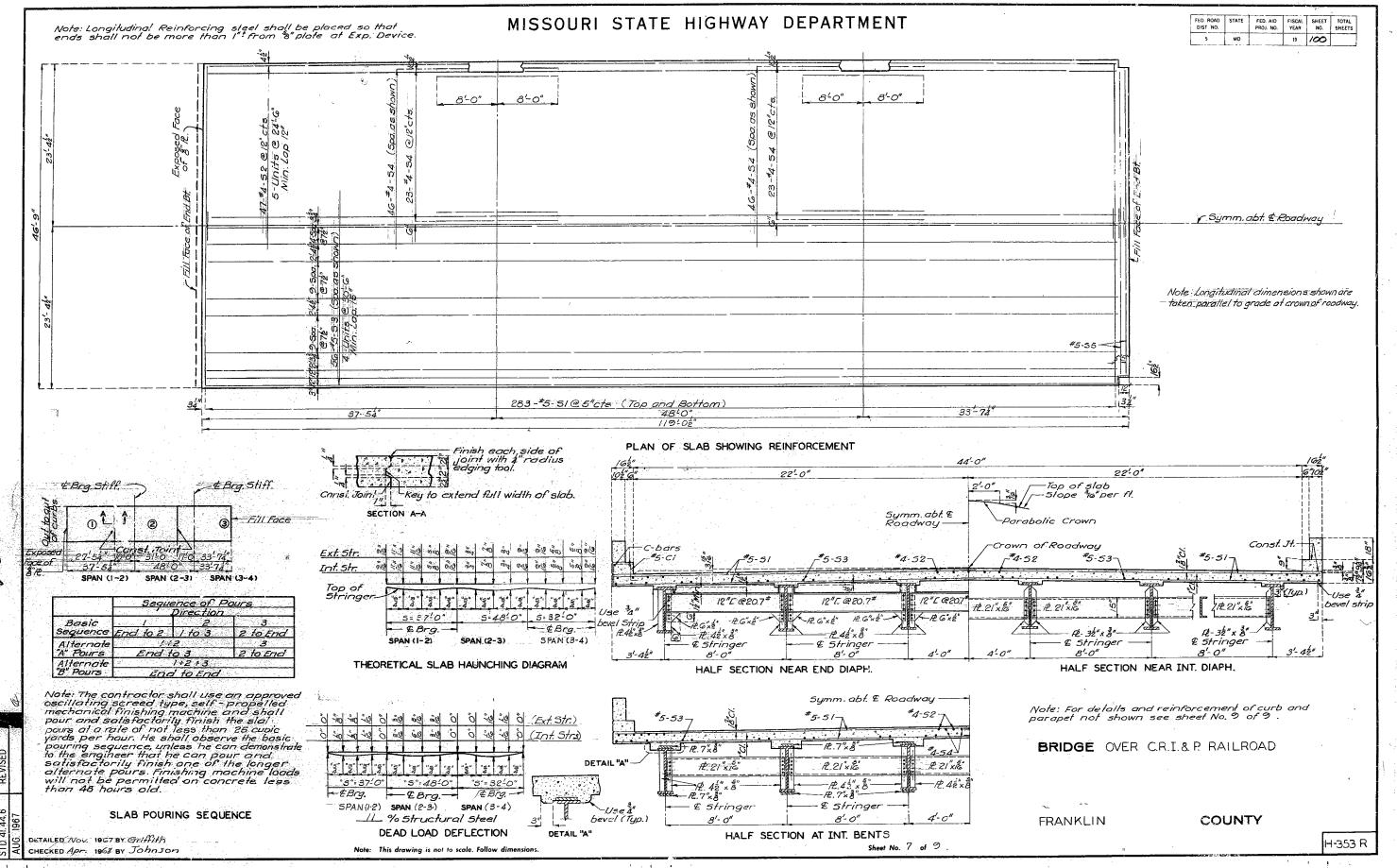


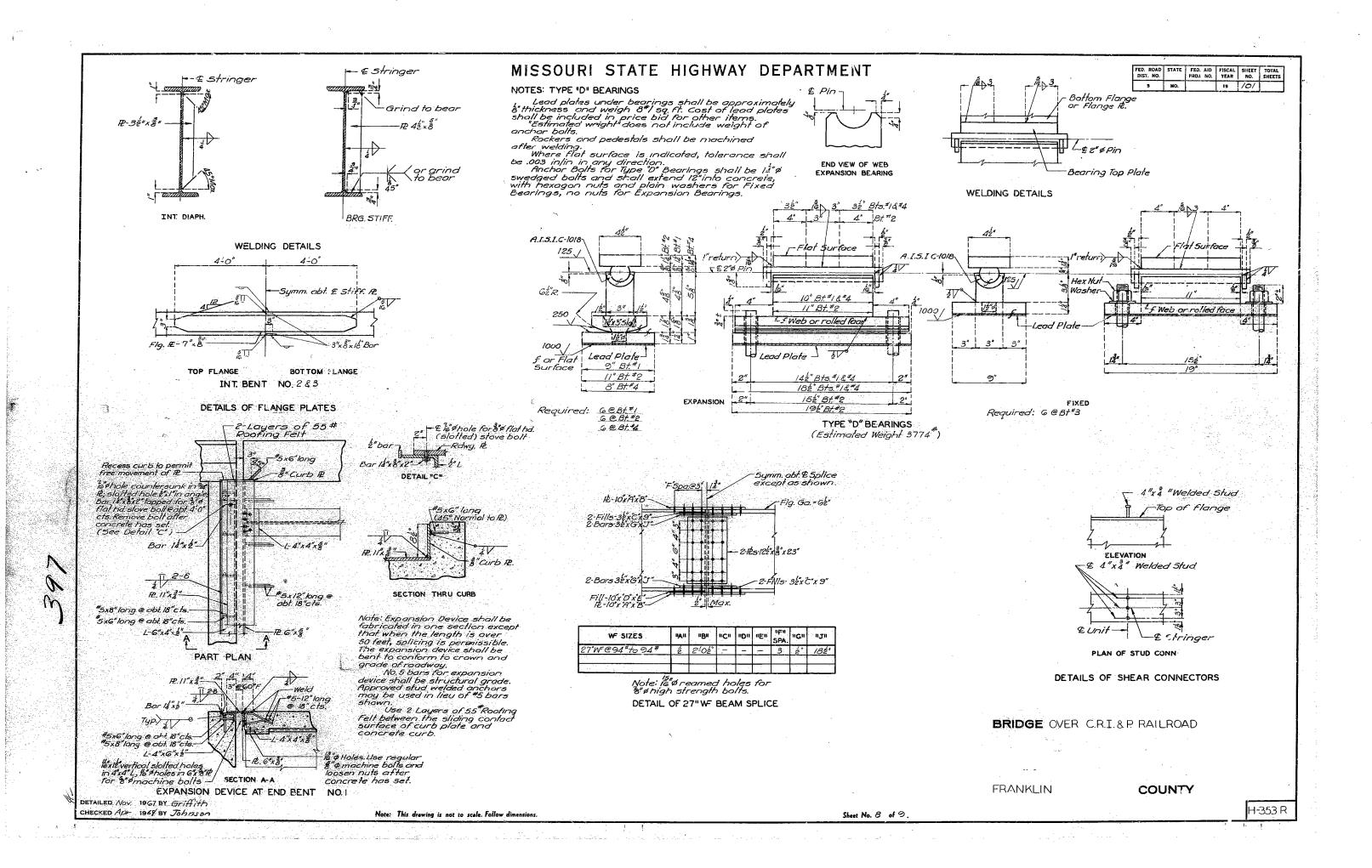


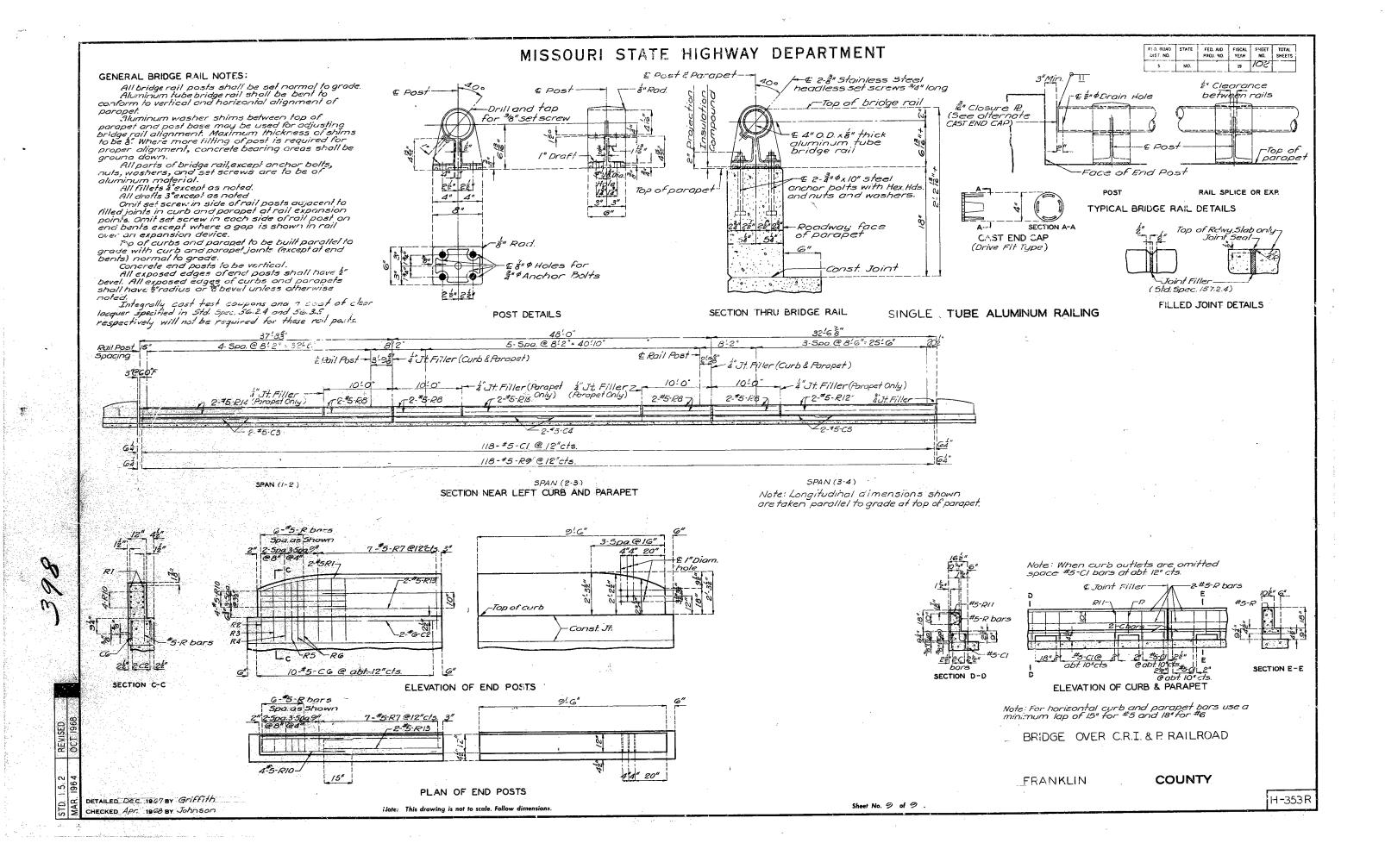


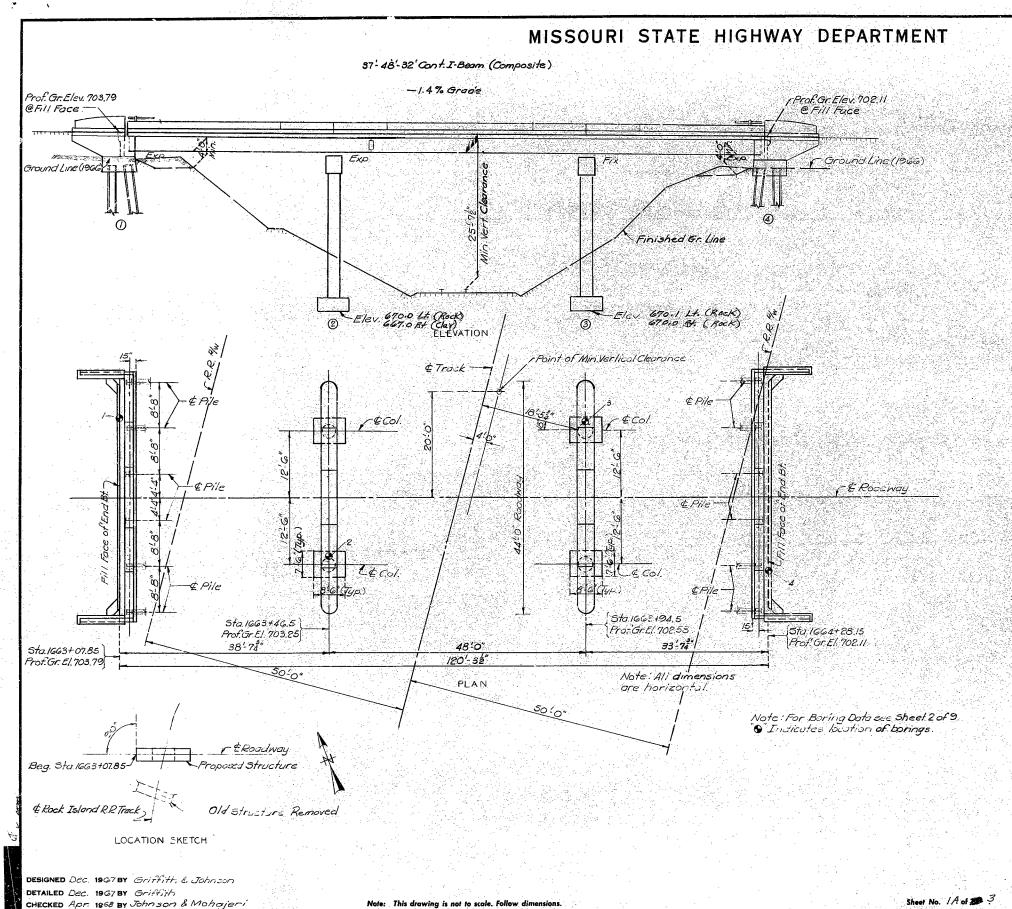












FED. ROAD DIST. NO.	STATE	FED. AID.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	3
5.	MO.	F-FG-100-1	3) 19	94	136-55.	7

GENERAL NOTES:

Design Specifications: A.A.S.HO: 1965

Design Loading:

H20-44 | 15#/sq ft Future Wearing Surface Earth 120# Equivalent Fluid Pressure 30# Fatigue Stress-Case I

Design Unit Stresses:

Surface Seal:

Superstructure deck was surface sealed.

Fabricated Steel

Field connections, High Steength Bolts %**, notes '%'* except as noted

Paint

Shop, none: Field, by contractor in accordance with 5td. Spec. 55.4.10:

(2) (4) (4) (4) (4) (4)	소아 (1945년 1947년 - 1947년 - 1925년 - 1945년 - 1945년 - 1947년	 3.5 p. 0.33 (2007) 8.8 p. 1 (2007) 1.3 (2007) 1.3 (2007) 1.3 (2007) 1.3 (2007) 1.3 (2007) 1.3 (2007)
	PILE & FOO	DTING DATA
	BENT NO.	/ 2 3 4
	Pile Type and Size	10°BP@42" 10°54'E42"
BEARING	Number	
PILE	Approximate Length Ft.	25 25
	Design Bearing Tons	265 265
	Hammer Energy req'd. Ft.Lbs.	7,000
SPREAD	Foundation Material	Rock Rock -
FOOTINGS	Design Bearing Tons / Sq. Ft.	3.0 3.0

Minimum energy requirement of hommer based on plan length and design bearing value of piles. Increase by the factor (W+w)/2W when the weight of the ram (W) is less than the weight of the pile (w). All pile were. "driven to practical refusal.

FLNAL QUANTITIES							
TIEM	SUBSTR.	SUPERSTR.	TOTAL				
Class Execuation for Structures CUS	2/3	25 TO 10	2/3				
	335	等性 高級	335				
Class B Concrete (Sub). Cuid	141.5		141.5				
Closs B: I Concrete CuYd.	深度特别	160.3	160,3				
Reinforc'ny Steel Lts	18130	45140	6327C				
Fabricated Structural Carbon Steel Lbs		84560	84560				
Bridge Roil (Single tube) Lin. Ft	NULSE.	235					
Pointing Tons		41.8	41.8				
Removal of Bridge Lump Sum	1.25. 1991		-1				
Foundation Test Holes Lin. F.	12	Sec.	12				
Prima Handling Link	25		25				
Class / Excavation Below Plan Elev. Culd	13.5	KAGGE!	. <i>13</i> .5				

All concrete and reinforcement in Bild Pest and Curb is included with superstructure quantities.

B.M. Elev 10425 - on wingwell 23 Lt 1663+77

BRIDGE OVER CRI&PRAILROAD

STATE ROAD FROM WASHINGTON EAST AND WEST ABOUT 8.0 MILES S.E. OF WASHINGTON

PROJECT NO. C036-100(4) RTE.100) STA.1663+07.85

FRANKLIN

COUNTY

BRIDGE ENGINEER

CHIEF ENGINEER

CHIEF ENGINEER

FINAL PLANS

STD. 54.00 H-353 R

