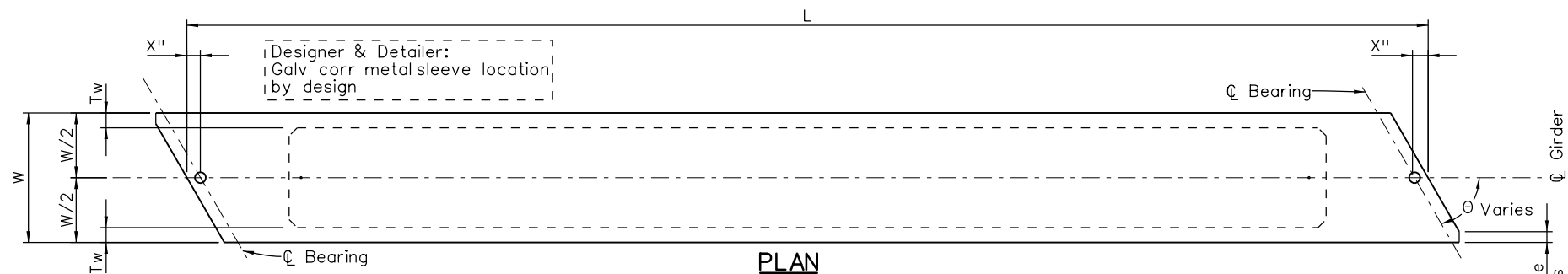


NOTES:

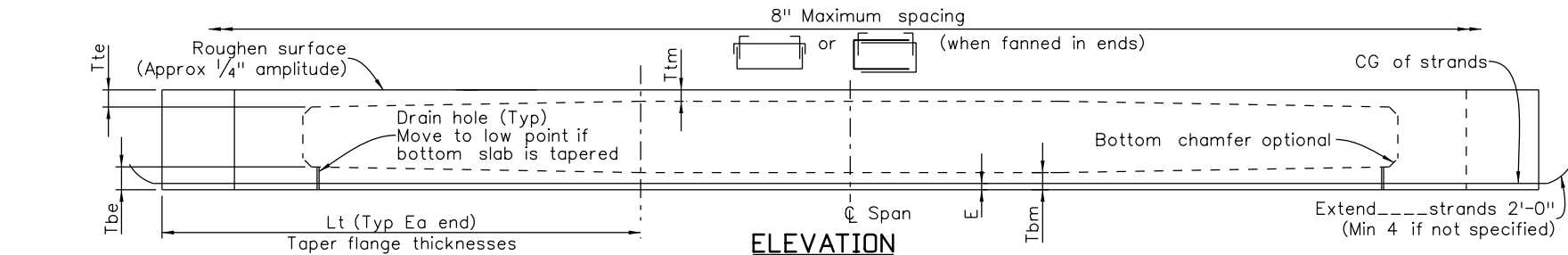
- All work necessary to fabricate and install the integral parts of the girder (including the intermediate diaphragms, if any, and leveling pads), as shown on the plans, shall be included in the bid price for Item No. 618, Prestressed Concrete Box (), with a pay unit of SF measured by L x W.
- When approved by the Engineer, a minimum of tack welding will be permitted on ASTM A706 uncoated reinforcing steel.
- Reinforcing projecting from the top of the girder and reinforcing within eight feet of an expansion device in the bridge deck shall be epoxy coated. The minimum cover for reinforcing steel is 1".
- Welded wire fabric may be used with D20 wires in lieu of the #4 bars shown.
- At girder ends not embedded in concrete diaphragms, cut strands off 1" below the surface of the concrete and finish with an approved epoxy grout. At girder ends embedded in concrete diaphragms, cut strands to project 3", except as shown. Do not make cosmetic repairs (damage less than 1/2" deep) to the parts of the girders embedded in concrete.
- Use low relaxation strands meeting the requirements of ASTM A-416 Grade 270. The minimum clear distance between groups or individual strands shall be $2.3(d)$ but not less than 1/4". The minimum cover for prestressing steel is 2".
- Concrete shall be Class PS. Entrained air is not required for girder concrete.
- End blocks shall be used on all girders unless otherwise noted.
- Use 3/4" chamfer on all corners except as noted.
- Predicted camber is the camber for the girder alone at 60 days. Acceptable camber variability is limited to 50% over the predicted camber and 50% under the predicted camber or 1 inch, whichever is greater. The Contractor shall report to the Engineer values of camber which require remedial measures. The remedial measures shall be reviewed and approved by the Engineer. The costs associated with all remedial measures shall be borne by the Contractor. Girders with negative camber shall be rejected.
- Side by side boxes placed over roads or pedestrian facilities shall not have cambers of adjacent boxes differ by more than 1" before the deck pour. Prior to placing deck reinforcing, the Contractor shall adjust this differential to within this limit by sorting the boxes to minimize differentials, or by pulling the high boxes down and low boxes up.
- Depth (D) tolerance shall be +1/2", -1/4".
- The Contractor is responsible for determining necessary bracing requirements, and for providing adequate bracing for the specific wind and weather conditions to be encountered for each specific project.
- Debonding shall extend in uniformly varying lengths, but not closer than 17 feet to the center of the span.

As* = Minimum area of the prestressing steel
 ds = Nominal strand diameter, 0.6" unless noted otherwise
 f's = Ultimate strength of prestressing steel
 Fj = Jacking force per girder
 Ff = Final force per girder after all losses
 f'ci = Required concrete strength at release of prestress force
 f'c = Required concrete strength at 28 days of age
 L = Length of girder along the grade of the girder
 Δ = Deflection at centerline of span due to cast-in-place slab, diaphragms, asphalt, curbs, rails, and walks
 θ = Bridge bent angle

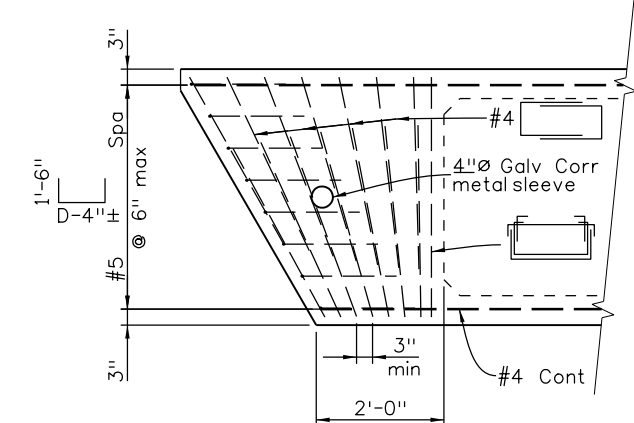
Designer & Detailer:
 Provide appropriate design data and verify X values.
 Harped designs shall not be used. Provide design data for straight strand debonded designs only.
 Keyways for side by side boxes shall not be used.
 Exterior strands are not debonded to provide shear anchoring and torsional resistance.
 Check conflicts between strands and metal sleeve. Eliminate metal sleeve when not required by the design.



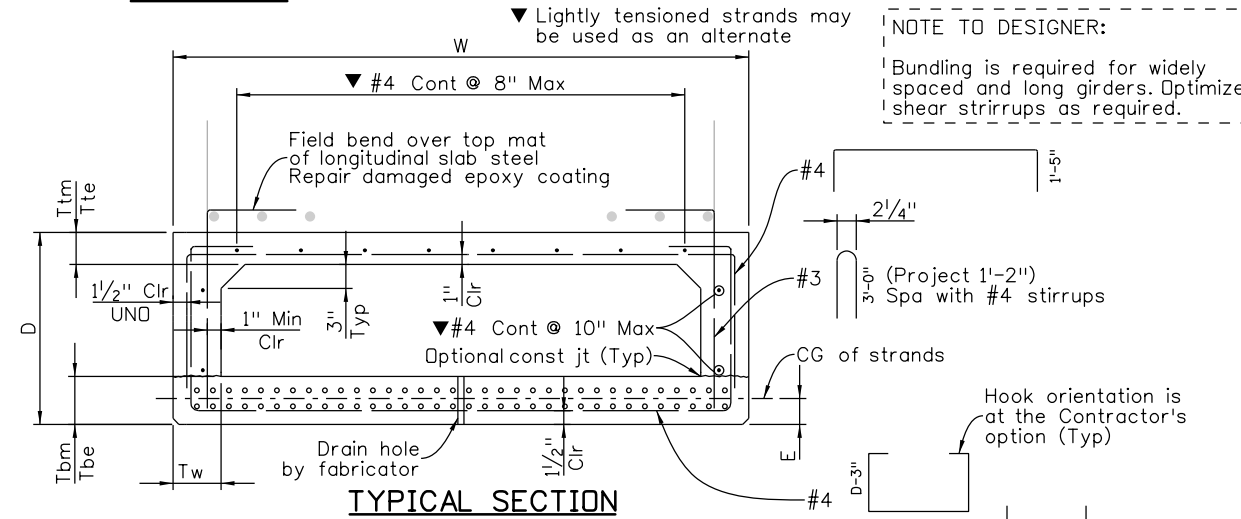
PLAN



ELEVATION



END DETAIL (PLAN)



TYPICAL SECTION

Designer & Detailer:
 Tbm/Tbe minimum is 6" when using #4 stirrups. If using larger stirrups Tbm/Tbe needs to be increased.

NOTE:
 Exterior strand shall not be debonded and should be placed adjacent to anchor stirrups

Designer: Check horizontal stress, at Optional construction joint

Designer: Bundling is required for widely spaced and long girders - Optimize shear stirrups as required

GIRDER SCHEDULE

Span No	Girder Letter	L (Ft)	W (In)	D (In)	θ (Deg)	Tw (In)	Tbm (In)	Ttm (In)	Tbe (In)	Tte (In)	Lt (Ft)	As* (Sq In)	Debonded Strands (percent)	E (In)	Fj (Kip)	Ff (Kip)	Concrete Strength		Δ (In)	Predicted Release Camber (In)	Predicted Camber (In)	
																	f'ci (psi)	f'c (psi)				
						6	6	4	6	4	0											

Revision Dates (Preliminary Stage Only)	5/00	4/02	9/02	2/06	3/07	10/13	9/15	3/23
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INITIALS	DESIGN	DATE	DETAIL	DATE	QUANTITY	DATE
By						
Checked By						

All seals for this set of drawings are applied to the cover page(s)	Print Date: \$DATE\$	Sheet Revisions			Colorado Department of Transportation			As Constructed		PRESTRESSED CONCRETE BOX				Project No./Code	
	File Name: Sheet_B-618-BX.dgn	Date:	Comments	Init.	2829 West Howard Place, 3rd Floor Denver, CO 80204 Phone: 303-512-4079 FAX: 303-757-9197			No Revisions:		Designer: XXXXXXXX Structure X-XX-XX Detailer: XXXXXXXX Numbers X-XX-XX				Project Number	
	Horiz. Scale: Not to Scale Vert. Scale: As Noted	Unit Information		Unit Leader Initials				Revised:						Sheet Subset: BRIDGE	
								Void:						Sheet Number	



Staff Bridge Branch

Initials