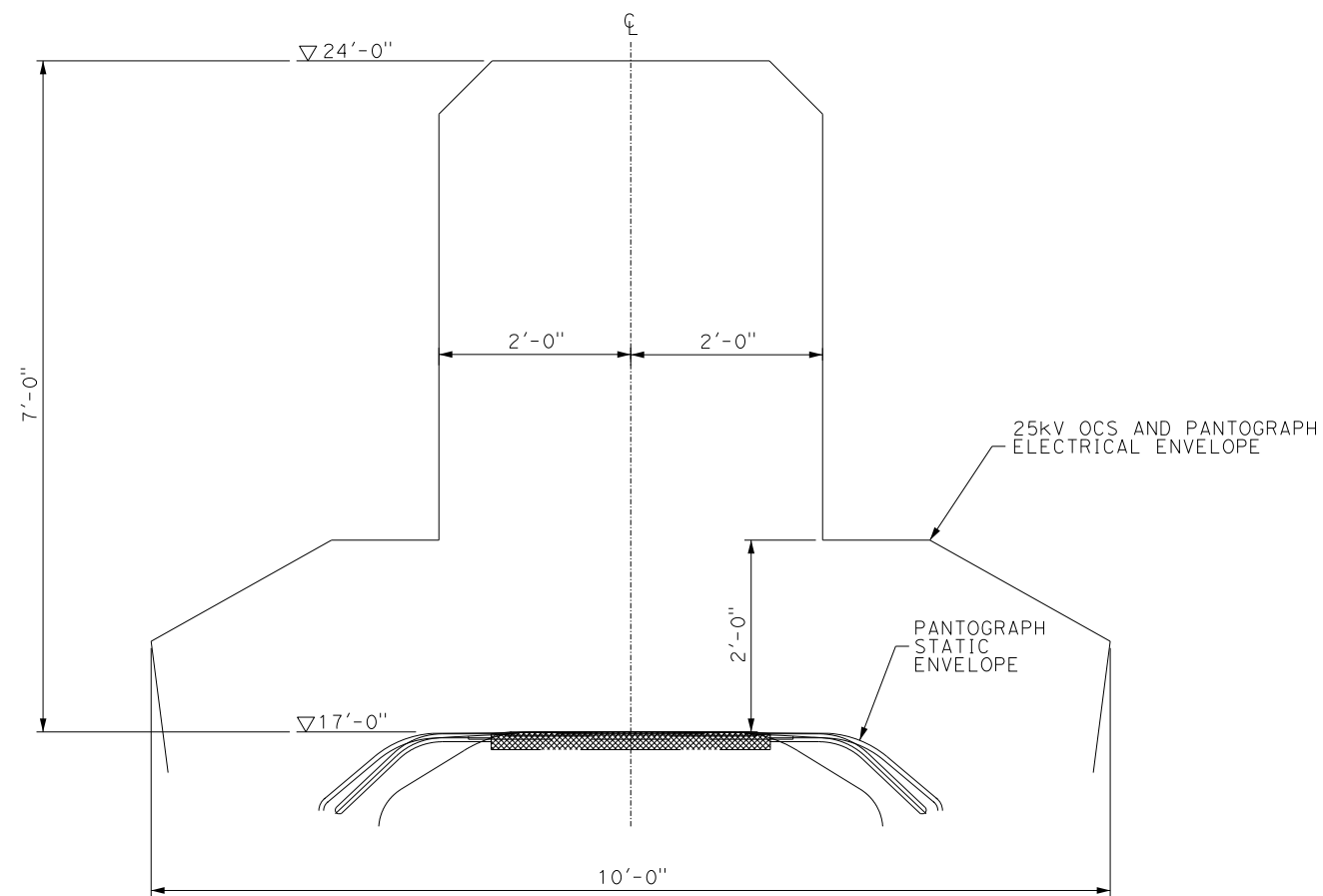
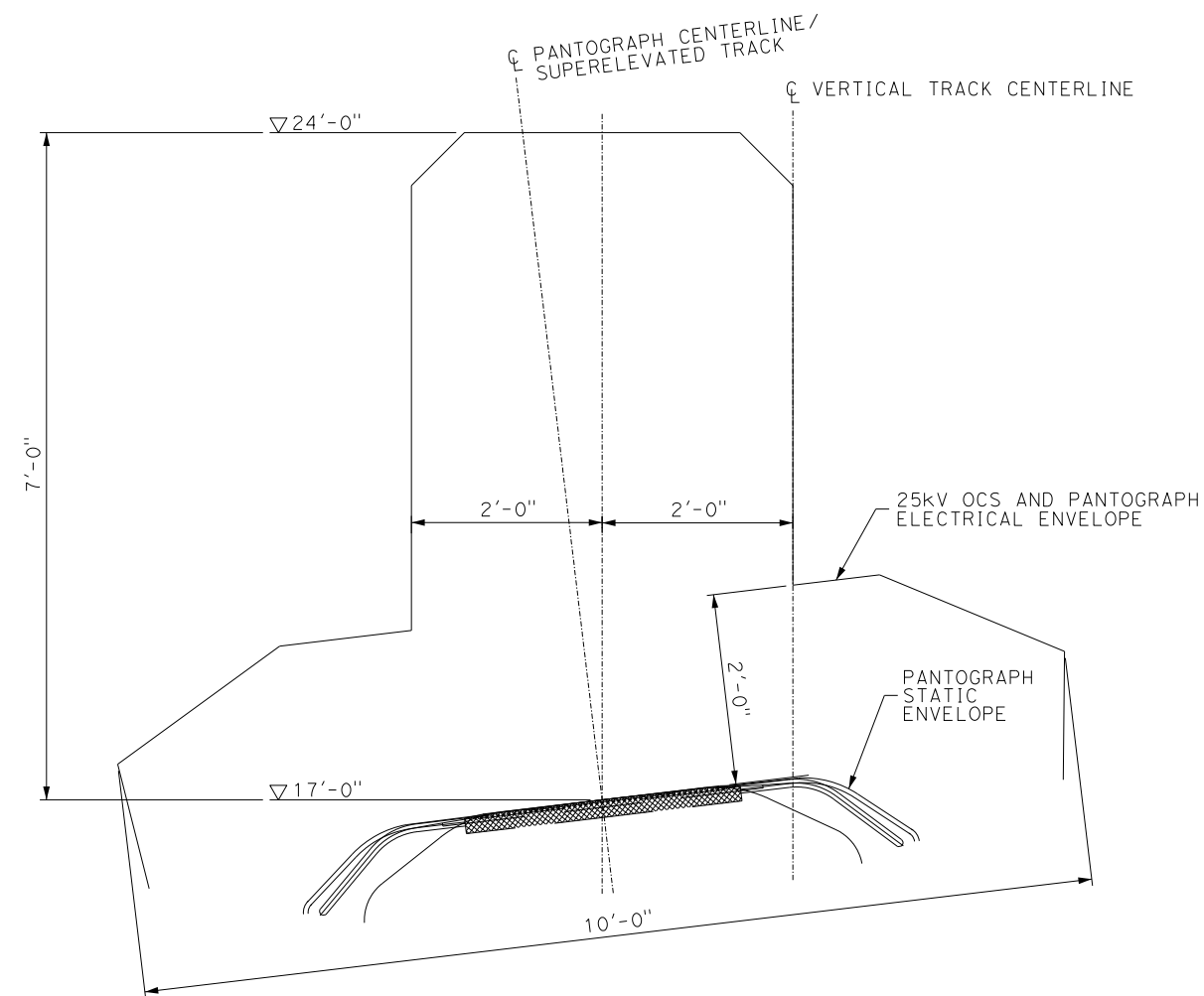


10/14/2009 4:51:41 PM T:\13259B_Calif_High_Speed_Rail\CADD\Directive Drawings\3.2.3 - Pantograph\3.2.3-A.dgn



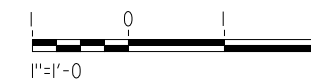
SPACE NECESSARY FOR 25kV OVERHEAD CONTACT SYSTEM
FOR CHSTP SECTIONS DEDICATED TO HIGH SPEED
FOR CONTACT WIRE HEIGHT OF 17'-0" IN OPEN ROUTE ALIGNMENT



SPACE NECESSARY FOR 25kV OVERHEAD CONTACT SYSTEM
FOR CHSTP SECTIONS DEDICATED TO HIGH SPEED
FOR CONTACT WIRE HEIGHT OF 17'-0"
IN OPEN ROUTE ALIGNMENT FOR SUPERELEVATED TRACK

NOTE:

1. THE 25kV OCS ELECTRICAL ENVELOPE DOES NOT INCLUDE THE NECESSARY SPACE REQUIREMENT FOR THE 25kV NEGATIVE FEEDER WIRE IN PHASE OPPOSITION TO THE 25kV CONTACT WIRE.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
E. SCOTSON
DRAWN BY
J. LAU
CHECKED BY
A. MURPHY
IN CHARGE
E. SCOTSON
DATE
07/07-09

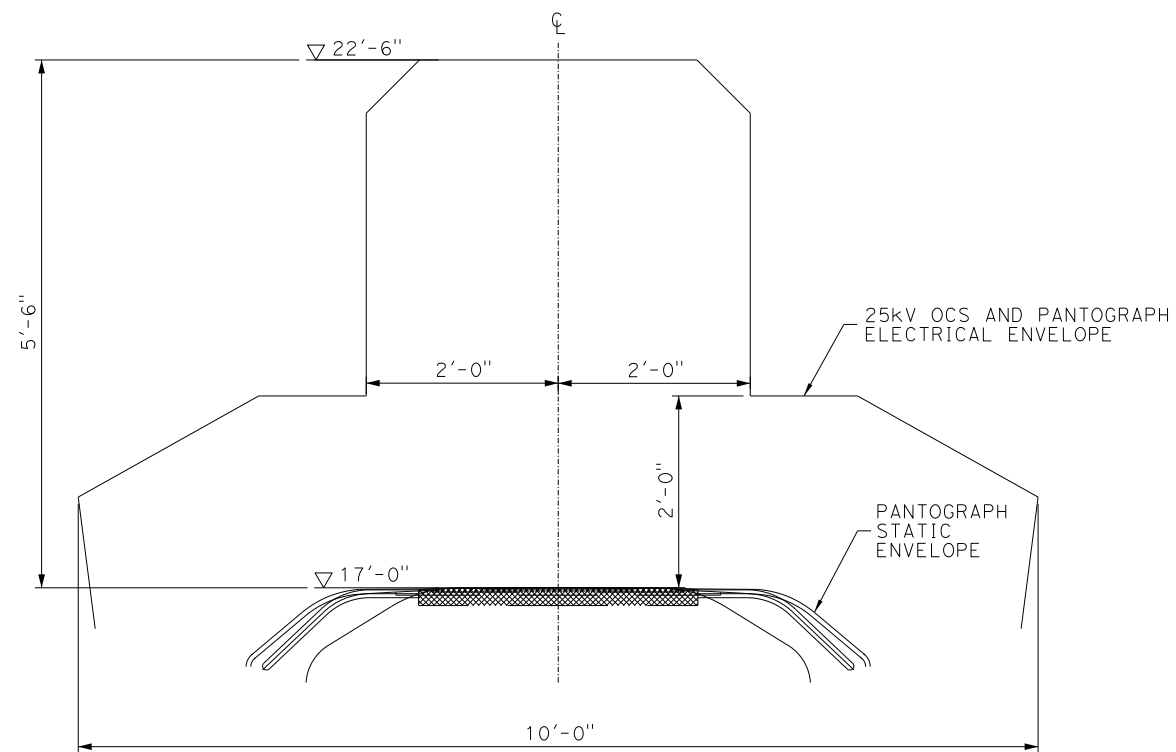


CALIFORNIA HIGH-SPEED TRAIN PROJECT

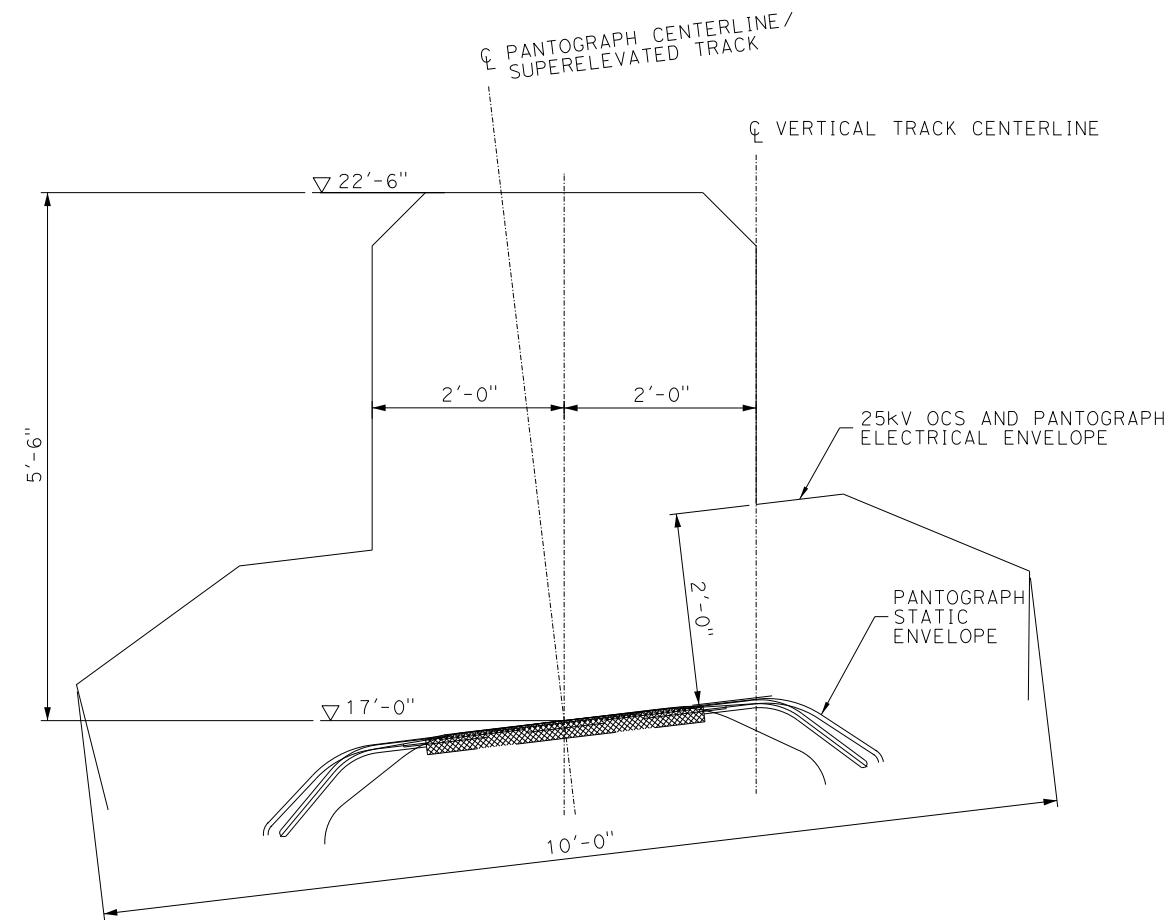
25kV OVERHEAD CONTACT SYSTEM AND
PANTOGRAPH CLEARANCE ENVELOPE
SHEET 1 OF 4

CONTRACT NO.
13259B
DRAWING NO.
TM 3.2.3-A
SCALE
1"=1'-0"
SHEET NO.

10/14/2009 4:55:39 PM T:\13259B_Calif_High_Speed_Rail\CADD\Directive Drawings\3.2.3-B.dgn



SPACE NECESSARY FOR 25kV OVERHEAD CONTACT SYSTEM
FOR CHSTP SECTIONS DEDICATED TO HIGH SPEED
FOR CONTACT WIRE HEIGHT OF 17'-0"
ALIGNMENT IN TUNNEL OR STRUCTURE



SPACE NECESSARY FOR 25kV OVERHEAD CONTACT SYSTEM
FOR CHSTP SECTIONS DEDICATED TO HIGH SPEED
FOR CONTACT WIRE HEIGHT OF 17'-0"
IN TUNNEL OR STRUCTURE FOR SUPERELEVATED TRACK

NOTE:

1. THE 25kV OCS ELECTRICAL ENVELOPE DOES NOT INCLUDE THE NECESSARY SPACE REQUIREMENT FOR THE 25kV NEGATIVE FEEDER WIRE IN PHASE OPPOSITION TO THE 25kV CONTACT WIRE.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
E. SCOTSON
DRAWN BY
J. LAU
CHECKED BY
A. MURPHY
IN CHARGE
E. SCOTSON
DATE
07-07-09

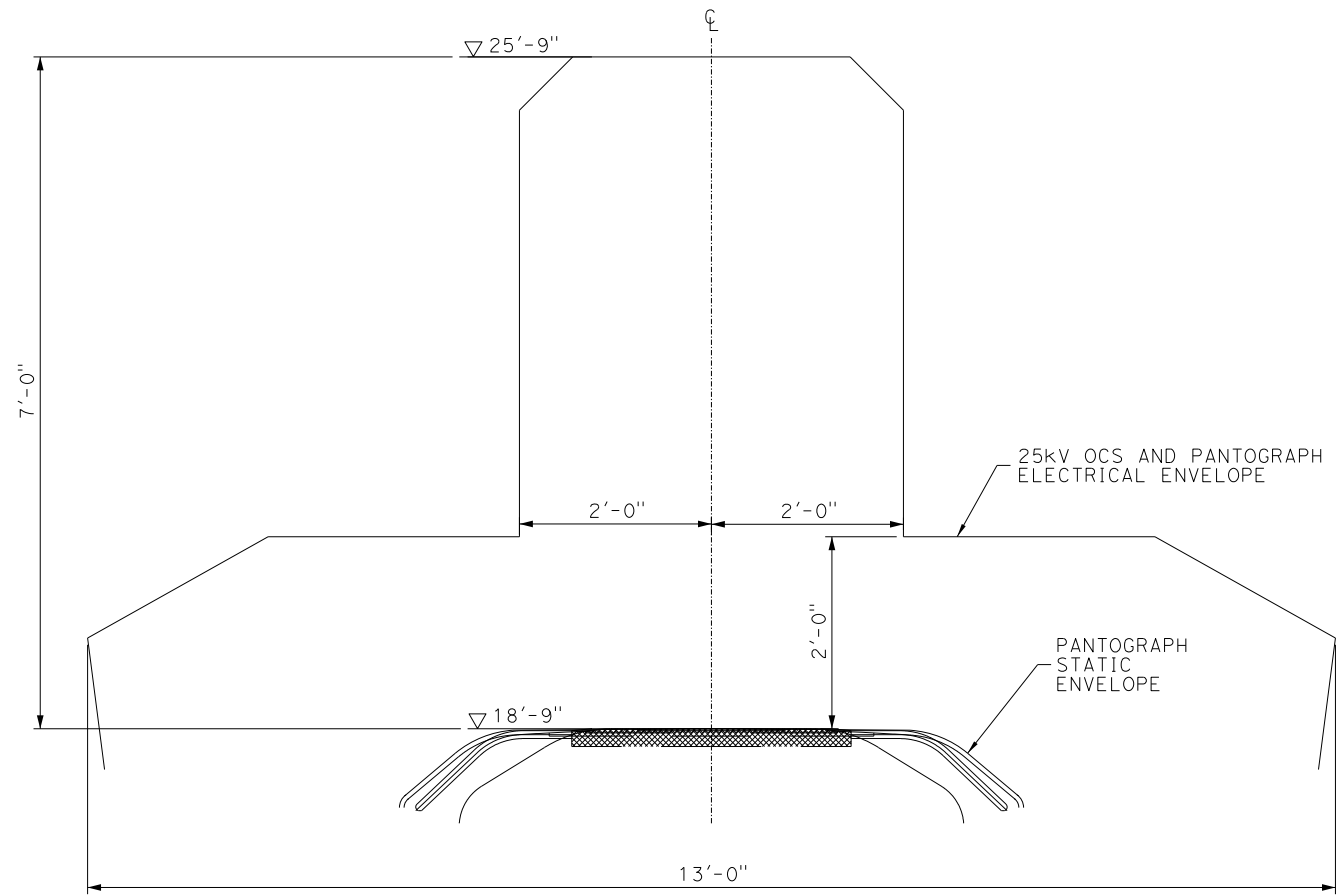


CALIFORNIA HIGH-SPEED TRAIN PROJECT

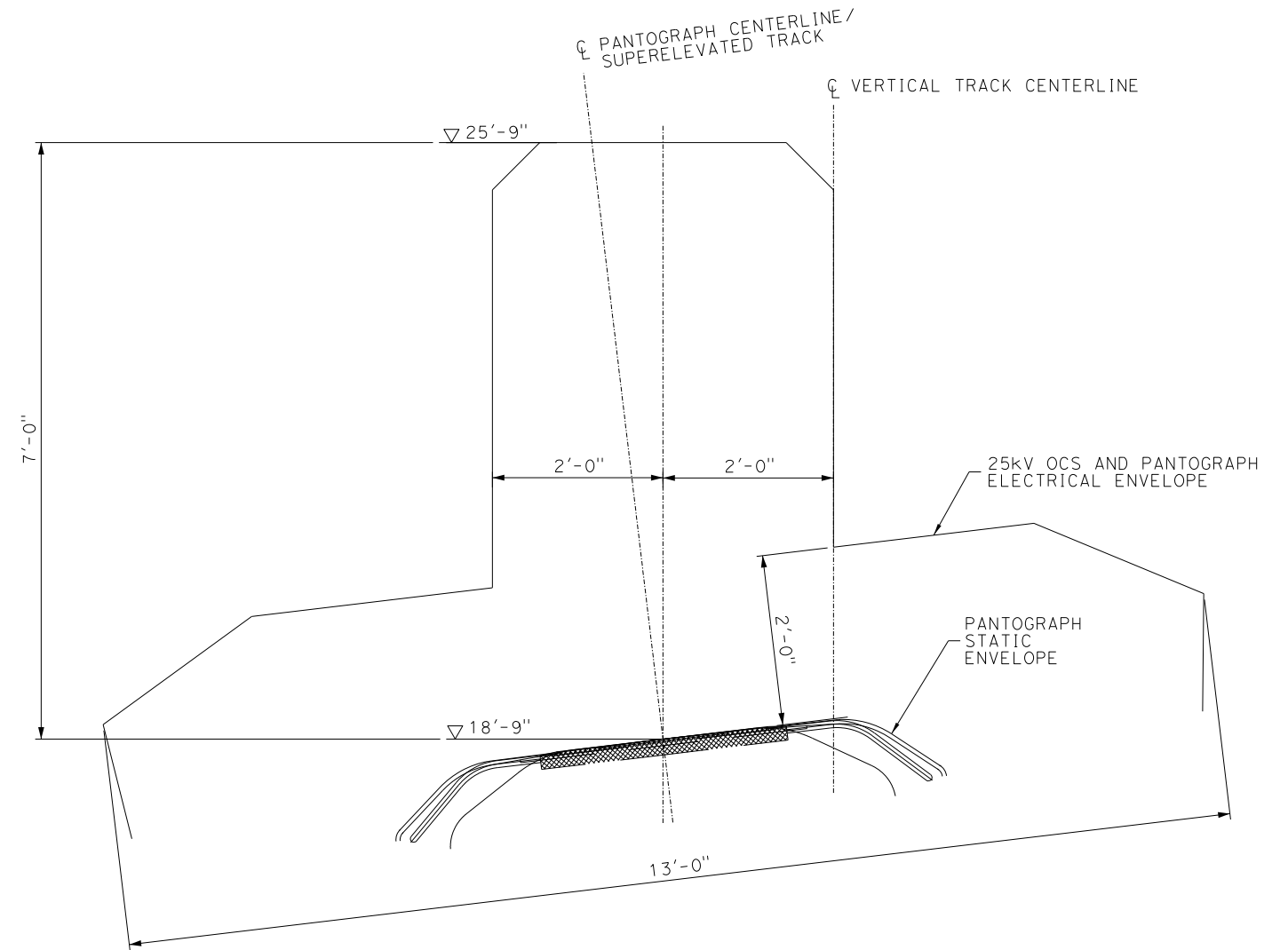
25kV OVERHEAD CONTACT SYSTEM AND
PANTOGRAPH CLEARANCE ENVELOPE
SHEET 2 OF 4

CONTRACT NO.
13259B
DRAWING NO.
TM 3.2.3-B
SCALE
1"=1'-0"
SHEET NO.

10/14/2009 4:58:52 PM T:\13259B_Calif High Speed Rail\CADD\Directive Drawings\3.2.3 - Pantograph\3.2.3-C.dgn



SPACE NECESSARY FOR 25kV OVERHEAD CONTACT SYSTEM
FOR CHSTP SECTIONS DEDICATED TO HIGH SPEED
FOR CONTACT WIRE HEIGHT OF 18'-9" IN OPEN ROUTE ALIGNMENT



SPACE NECESSARY FOR 25kV OVERHEAD CONTACT SYSTEM
FOR CHSTP SECTIONS DEDICATED TO HIGH SPEED
FOR CONTACT WIRE HEIGHT OF 18'-9"
IN OPEN ROUTE ALIGNMENT FOR SUPERELEVATED TRACK

NOTE:

1. THE 25kV OCS ELECTRICAL ENVELOPE DOES NOT INCLUDE THE NECESSARY SPACE REQUIREMENT FOR THE 25kV NEGATIVE FEEDER WIRE IN PHASE OPPOSITION TO THE 25kV CONTACT WIRE.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY
E. SCOTSON
DRAWN BY
J. LAU
CHECKED BY
A. MURPHY
IN CHARGE
E. SCOTSON
DATE
07-07-09

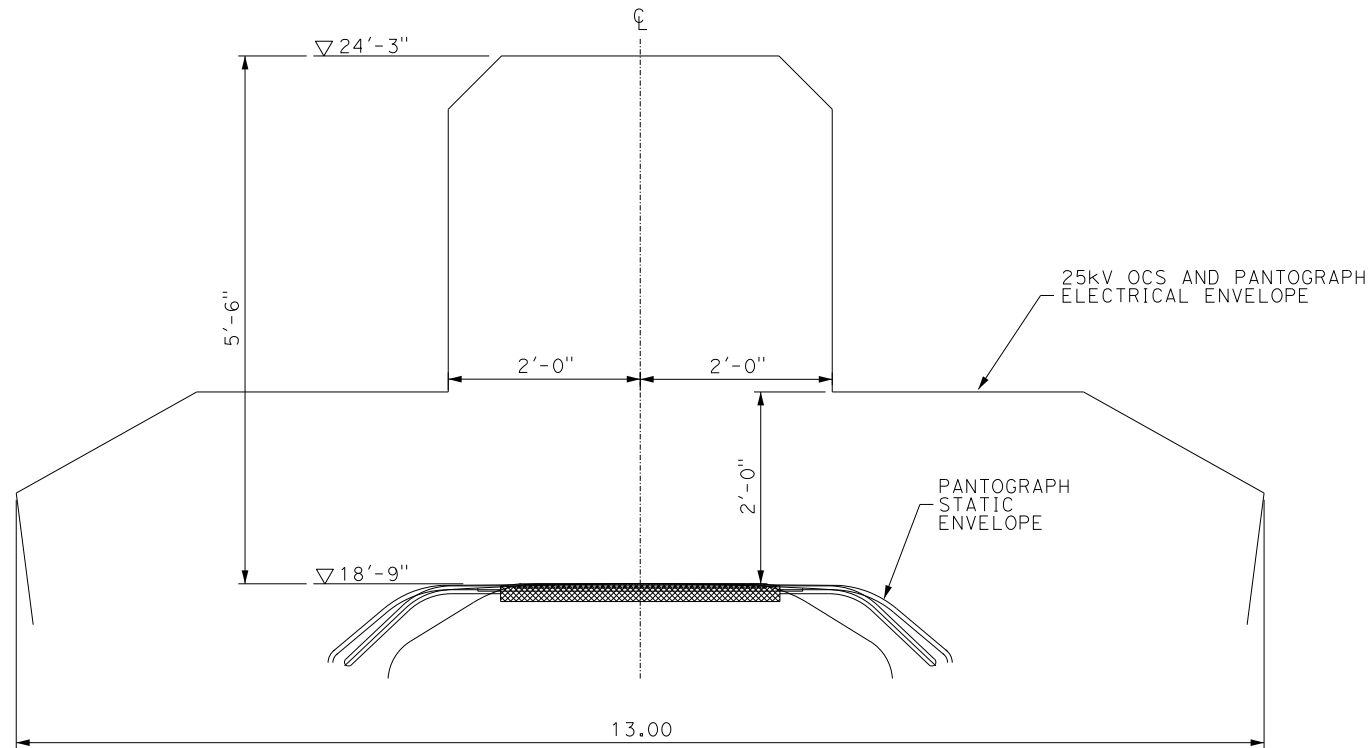


CALIFORNIA HIGH-SPEED TRAIN PROJECT

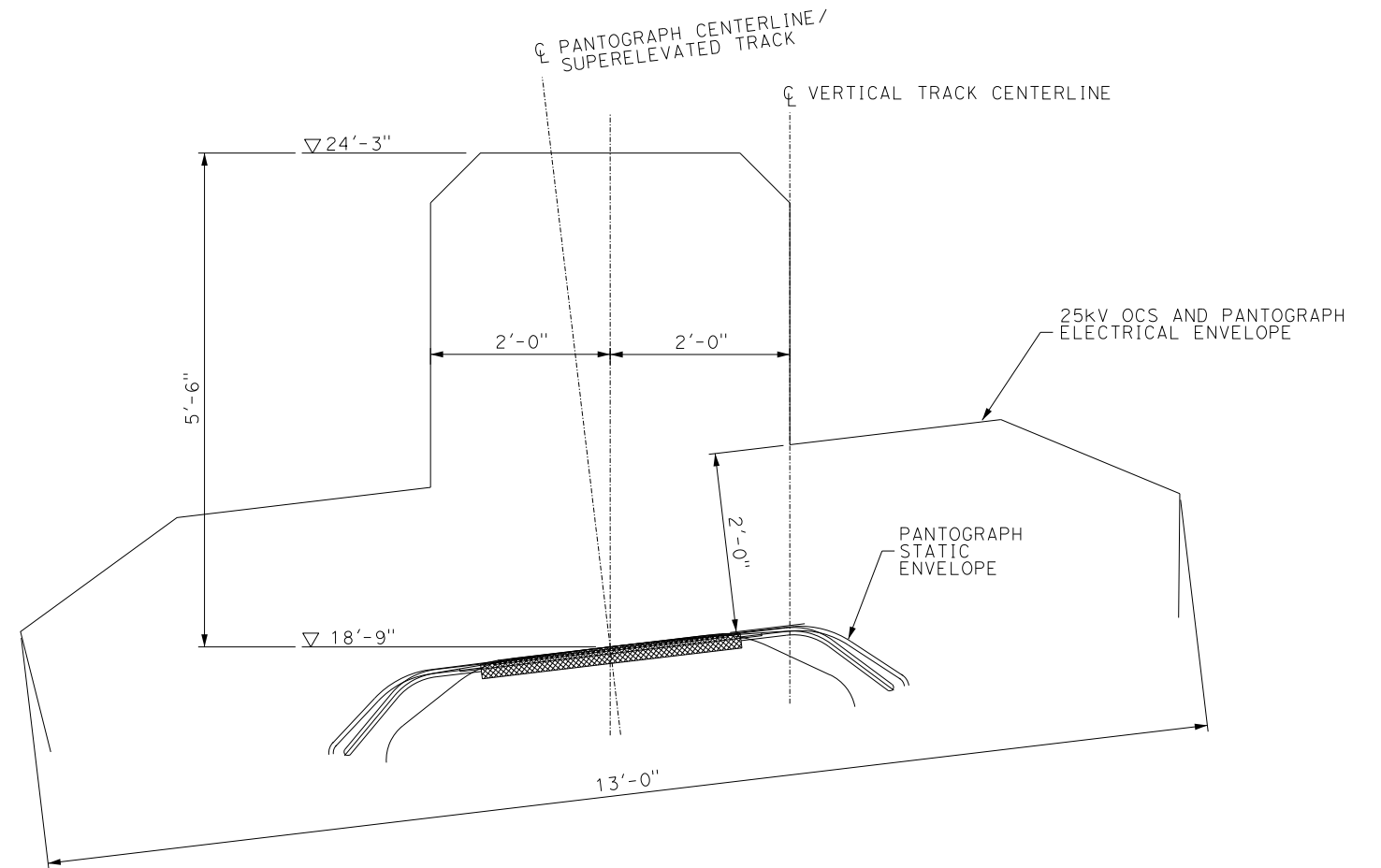
25kV OVERHEAD CONTACT SYSTEM AND
PANTOGRAPH CLEARANCE ENVELOPE
SHEET 3 OF 4

CONTRACT NO.
13259B
DRAWING NO.
TM 3.2.3-C
SCALE
1"=1'-0"
SHEET NO.

10/14/2009 5:06:27 PM T:\13259B Calif High Speed Rail\CADD\Directive Drawings\3.2.3 - Pantograph\3.2.3-D.dgn



SPACE NECESSARY FOR 25kV OVERHEAD CONTACT SYSTEM
FOR CHSTP SECTIONS DEDICATED TO HIGH SPEED
FOR CONTACT WIRE HEIGHT OF 18'-9"
ALIGNMENT IN TUNNEL OR STRUCTURE



SPACE NECESSARY FOR 25kV OVERHEAD CONTACT SYSTEM
FOR CHSTP SECTIONS DEDICATED TO HIGH SPEED
FOR CONTACT WIRE HEIGHT OF 18'-9"
IN TUNNEL OR STRUCTURE FOR SUPERELEVATED TRACK

NOTE:

1. THE 25kV OCS ELECTRICAL ENVELOPE DOES NOT INCLUDE THE NECESSARY SPACE REQUIREMENT FOR THE 25kV NEGATIVE FEEDER WIRE IN PHASE OPPOSITION TO THE 25kV CONTACT WIRE.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY E. SCOTSON
DRAWN BY J. LAU
CHECKED BY A. MURPHY
IN CHARGE E. SCOTSON
DATE 07-07-09



CALIFORNIA HIGH-SPEED TRAIN PROJECT

25kV OVERHEAD CONTACT SYSTEM AND
PANTOGRAPH CLEARANCE ENVELOPE
SHEET 4 OF 4

CONTRACT NO. 13259B
DRAWING NO. TM 3.2.3-D
SCALE 1"=1'-0"
SHEET NO.