

 $\frac{\text{SPLICE RAIL}}{\text{WITH} \frac{3}{4}"} \text{ STEEL BANDING}$ 

### NUTES:

- POST CONNECTIONS AT WALKING/ WORKING SURFACE VARIES DEPENDING ON APPLICATION.
- 2. POST CONNECTIONS MUST BE APPROVED BY QUALIFIED PERSON.
- RAILING MUST TERMINATE IN A WAY THAT THE WORKER IS NOT EXPOSED TO A FALL ≥6'.

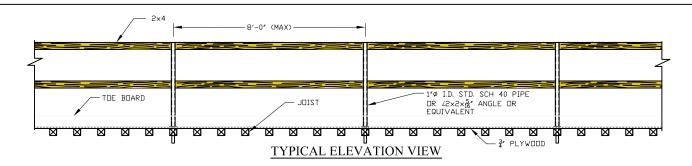


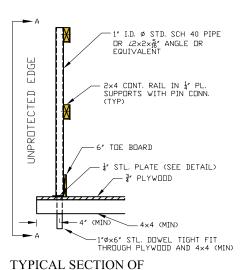
TYPICAL HANDRAIL (2x4 POSTS)

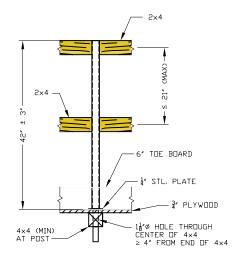
FALL PROTECTION

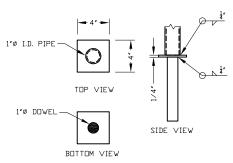
 DATE:
 10/01/10
 REVISIONS
 STANDARD NO.

 DWN:
 CCS
 FPHR2X-01



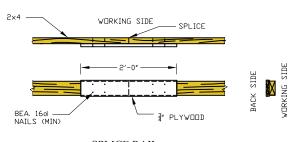




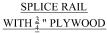


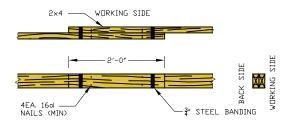
SECTION A-A

POST TO PLAT E CONNECTION DETAIL



HANDRAIL





 $\frac{\text{SPLICE RAIL}}{\text{WITH } \frac{3}{4}"} \text{ STEEL BANDING}$ 

#### NULES:

- POST CONNECTIONS AT WALKING/ WORKING SURFACE VARIES DEPENDING ON APPLICATION.
- 2. POST CONNECTIONS MUST BE APPROVED BY QUALIFIED PERSON.
- RAILING MUST TERMINATE IN A WAY THAT THE WORKER IS NOT EXPOSED TO A FALL ≥6'.



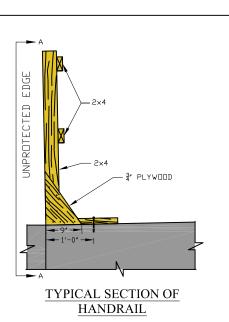
# Austin Bridge & Road An Austin Industries Company FIRM NO. 11355

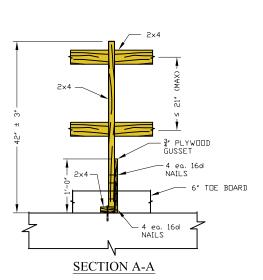
TYPICAL HANDRAIL (W PIPE OR ANGLE POSTS)

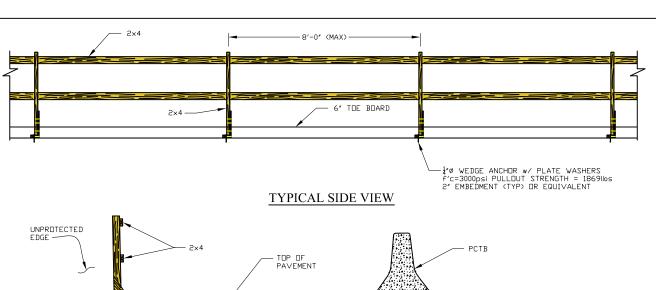
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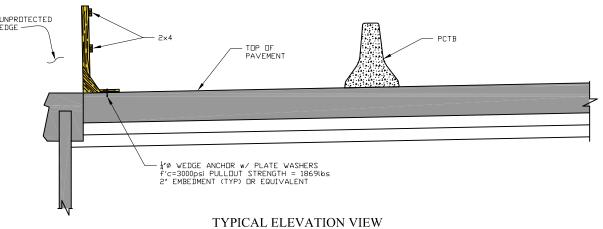
DATE:	10/01/10	
DWN:	CCS	
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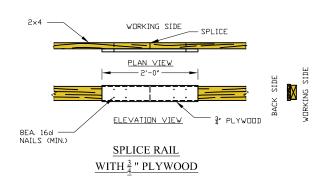
STANDARD NO.
FPHRSP-01

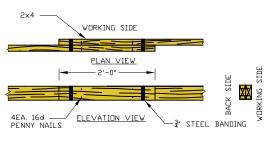












 $\frac{\text{SPLICE RAIL}}{\text{WITH } \frac{3}{4}" \text{ STEEL BANDING}}$ 



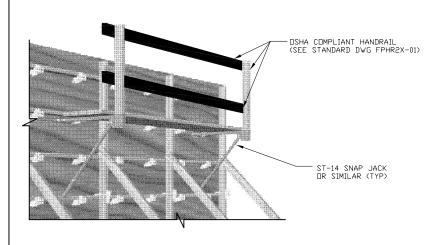
ACTIVE EDGE HANDRAIL (2x4 POSTS)

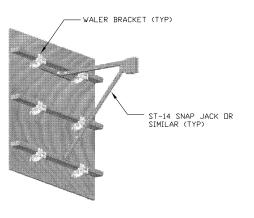
FALL PROTECTION

DATE: 10/01/10 REVISI

STANDARD NO. FPAE2X-01

# NDTES: 1. RAILING MUST TERMINATE IN A WAY THAT THE WORKER IS NOT EXPOSED TO A FALL ≥6'



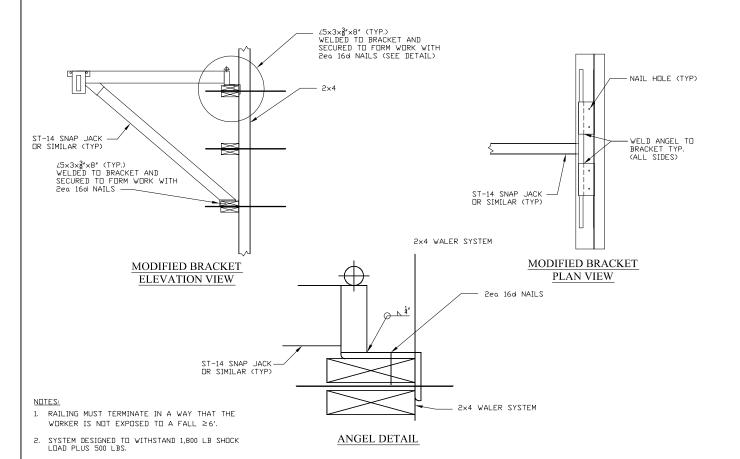


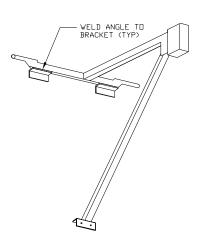
RDUND BAR AT EACH END

WALKWAY ON WALER WALL

BRACKET ATTACHED TO WALER WALL

WALKWAY BRACKET





MODIFIED BRACKET FOR WALER SYSTEM



Austin Bridge & Road An Austr Industries Company IRM NO. 11355

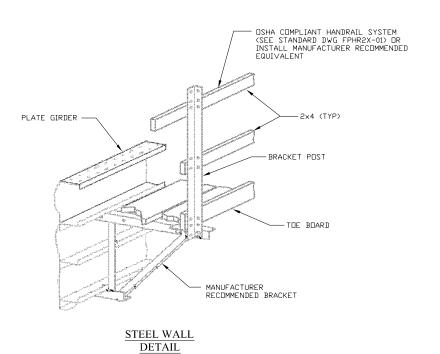
WOOD FORM WALKWAY

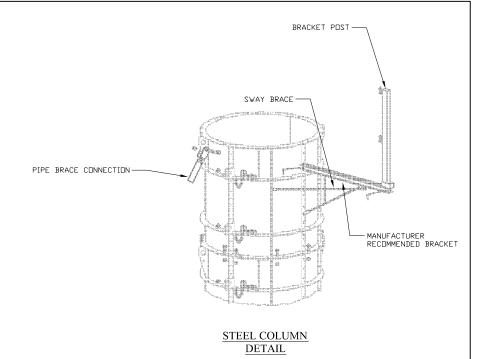
FALL PROTECTION

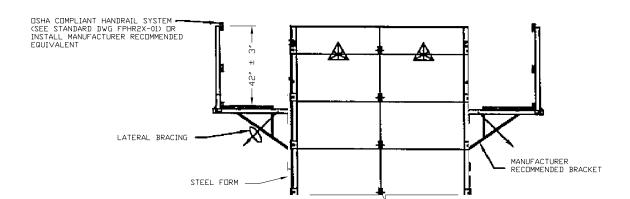
DATE: 10/01/10 REVISIONS
DWN: CCS

STANDARD NO.

FPWF-01







 $\frac{\text{WALKWAY SECTION}}{\text{VIEW}}$ 

### NOTES:

- 1. RAILING MUST TERMINATE IN A WAY THAT THE WORKER IS NOT EXPOSED TO A FALL  $\geq 6'$ .
- 2. SYSTEM DESIGNED TO WITHSTAND 1,800 LB SHOCK LOAD PLUS 500 LBS.



### Austin Bridge & Road An Austin Industries Company IRM NO. 11355

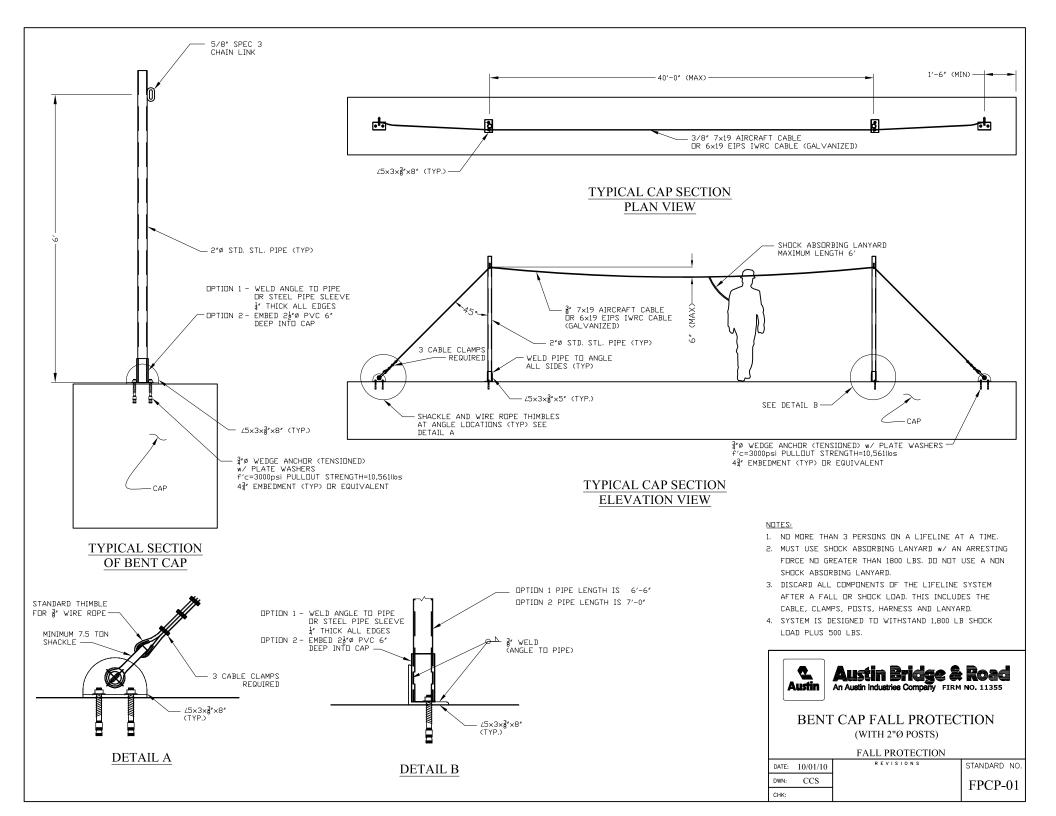
STEEL FORM WALKWAY

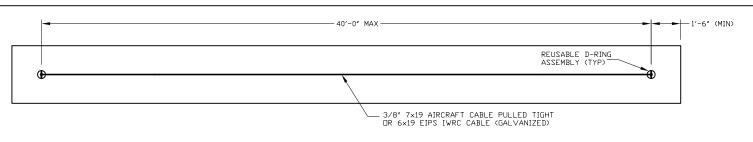
FALL PROTECTION

DATE: 10/01/10 REVISIONS
DWN: CCS

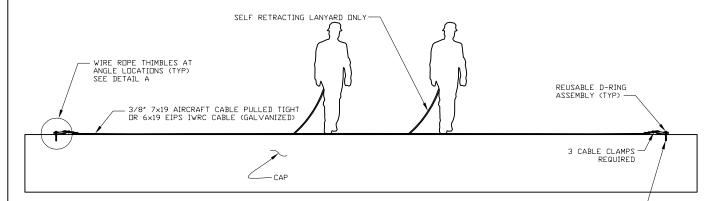
STANDARD NO.

FPSF-01



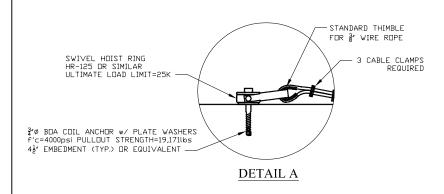


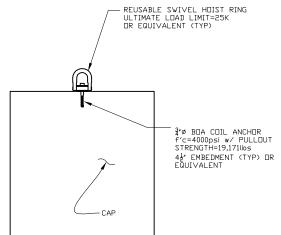
### TYPICAL CAP SECTION PLAN VIEW



 $\frac{2}{4}$ °Ø BOA COIL ANCHOR w/ PLATE WASHERS f'c=4000psi PULLOUT STRENGTH=19,171 $\log$  4 $\frac{1}{4}$ ° EMBEDMENT (TYP.) OR EQUIVALENT

### TYPICAL CAP SECTION ELEVATION VIEW





### TYPICAL SECTION OF BENT CAP

### NOTES:

- THIS STANDARD TO BE USED <u>ONLY</u> UNDER SITE SPECIFIC FALL PROTECTION PLAN IN ACCORDANCE WITH 29CFR 1926.502(k).
- 2. NO MORE THAN 3 PERSONS ON A LIFELINE AT A TIME.
- 3. MUST USE RETRACTABLE LANYARD w/ AN ARRESTING FORCE NO GREATER THAN 1800 LBS.
- 4. DISCARD ALL COMPONENTS OF THE LIFELINE SYSTEM
  AFTER A FALL OR SHOCK LOAD. THIS INCLUDES THE
  CABLE, CLAMPS, POSTS, HARNESS AND LANYARD.
- 5. SYSTEM IS DESIGNED TO WITHSTAND 1,800 LB SHOCK LOAD PLUS 500 LBS.



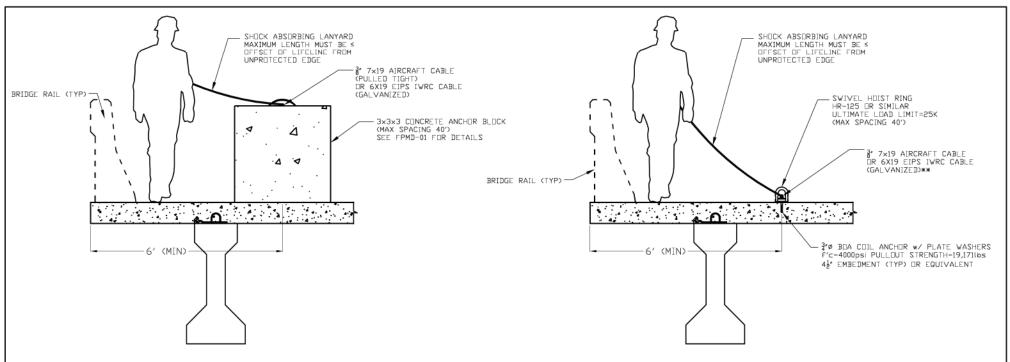
BENT CAP FALL PROTECTION (GROUND LINE)

FALL PROTECTION

DATE: 10/01/10
DWN: CCS

REVISIONS STANDARD NO.

FPCS-01



DSHA COMPLIANT HANDRAIL SYSTEM (SEE STANDARD DWG FPHR2X-01) DR

OR INSTALL MANUFACTURER

RECOMMENDED EQUIVALENT

INSTALL MANUFACTURER RECOMMENDED

### ANCHOR BLOCK SYSTEM \*

SELF RETRACTING LANYARD

LANYARD W/ FIXED LENGTH THAT IS ≤ DFFSET OF LIFELINE FROM

- 7×19 AIRCRAFT CABLE OR 6X19 EIPS IWRC CABLE

HR-125 □R SIMILAR

(MAX SPACING 40')

(GALVANIZED)\*\*

OR USE SHOCK ABSORBING

UNPROTECTED EDGE

. . . . . . . .

# EQUIVALENT -SWIVEL HOIST RING TOE BOARD ULTIMATE LOAD LIMIT=25K DAYTON C-52 GUARDRAIL . WITH 2×4 HANDRAIL SYSTEM

TYPICAL OVERHANG DESIGN

ANCHOR BOLT SYSTEM \*

- 1.\* THIS STANDARD TO BE USED DNLY IN A CONTROLLED ACCESS ZONE PER THE SITE SPECIFIC FALL PROTECTION PLAN IN ACCURDANCE WITH USHA 29CFR 1926.502(k).
- NO MORE THAN 3 PERSONS ON A LIFELINE AT A TIME
- MUST USE SHOCK ABSORBING LANYARD w/ AN ARRESTING FORCE NO GREATER THAN 1800 LBS. SYSTEM IS DESIGNED TO WITHSTAND 1,800 LB SHOCK LOAD PLUS 500 LBS.
- 4. DISCARD ALL COMPONENTS OF THE LIFELINE SYSTEM AFTER A FALL OR SHOCK LOAD. THIS INCLUDES THE CABLE, CLAMPS, POSTS, HARNESS AND LANYARD.
- CABLE MUST TERMINATE AT INTERVALS ≤ 100' (MAX) UNLESS NOTED IN SITE SPECIFIC FALL PROTECTION PLAN.



RAIL PLACEMENT OR WORKING NEAR AN EDGE

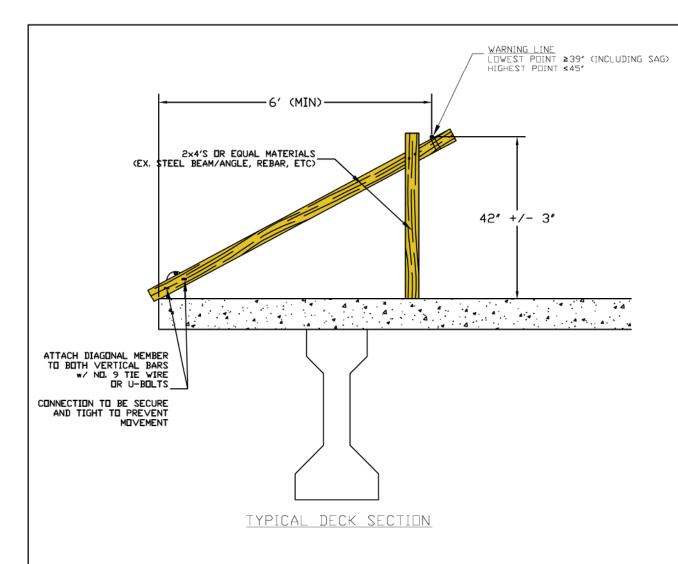
FALL PROTECTION

DATE: 10/01/10 CCS

REVISIONS STANDARD NO.

FPRP-01

CTB/ANCHORED RAIL SYSTEM \* HANDRAIL SYSTEM



#### NOTES

- 1. THE SHOWN SUPPORTS ARE FOR A <u>CONTROLLED ACCESS ZONE</u> AS DEFINED BY OSHA 1926.502(g) WHICH MUST BE DOCUMENTED BY THE SITE SPECIFIC FALL PROTECTION PLAN
- 2. THE CONTROL LINE SHALL BE CONNECTED ON EACH END TO A GUARDRAIL SYSTEM OR WALL (OR EQUIVALENT)
- 3. CONTROL LINE SHALL CONSIST OF ROPES, WIRES, TAPES, OR EQUIVALENT MATERIALS, MINIMUM BREAKING STRENGTH OF 200 LBS
- 4. EACH LINE SHALL BE FLAGGED OR OTHERWISE CLEARLY MARKED AT NOT MORE THAN 6-FOOT INTERVALS WITH HIGH-VISIBILITY MATERIAL.
- 5. SUPPERTS SPACED AT 30' E.C. (MAX)



CONTROLLED ACCESS ZONE LINE SUPPORTS

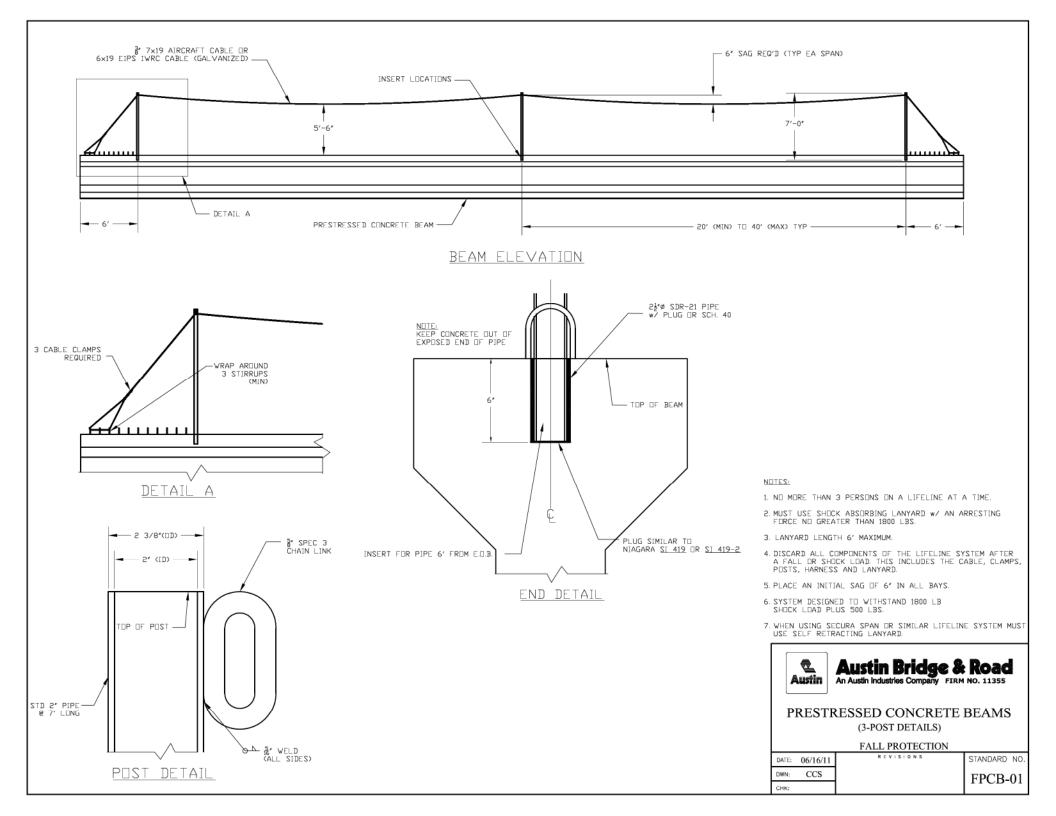
FALL PROTECTION

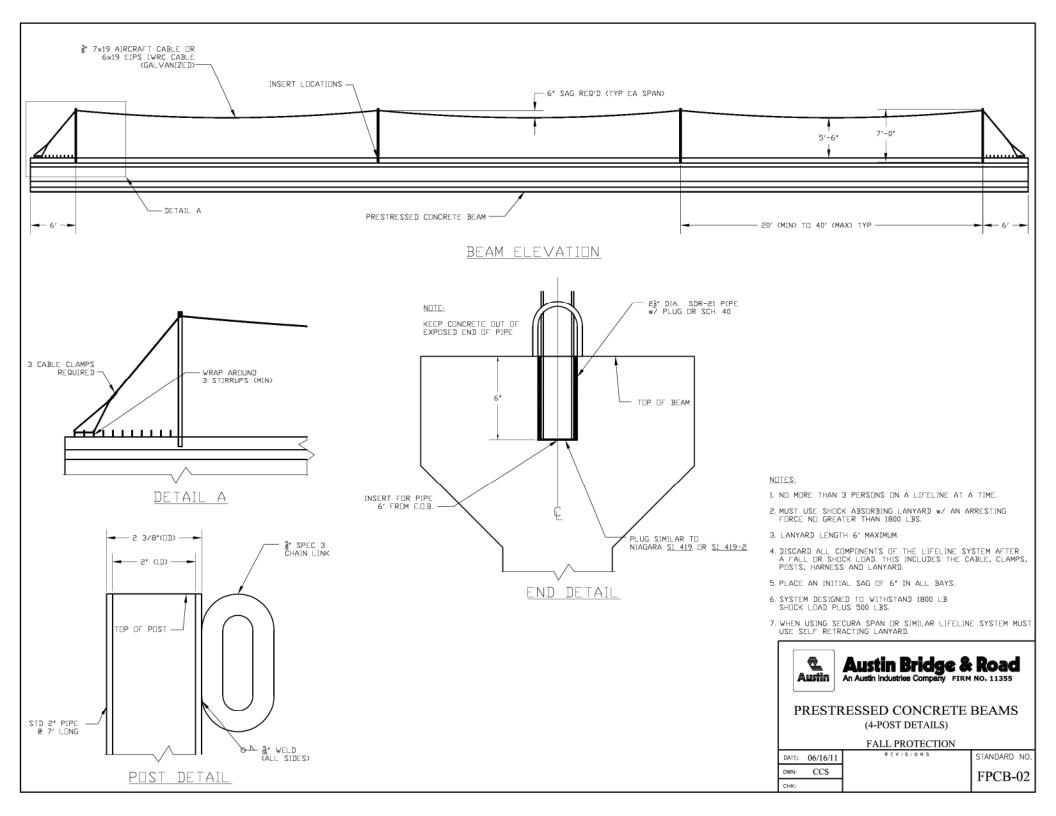
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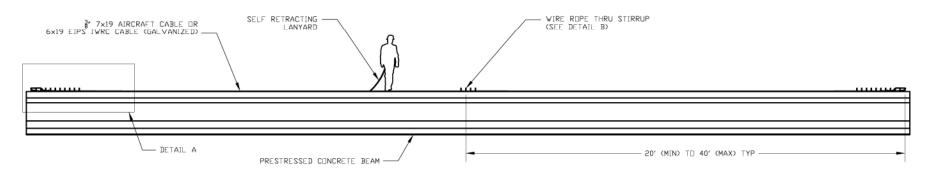
DWN: LGS

REVISIONS STANDARD NO.

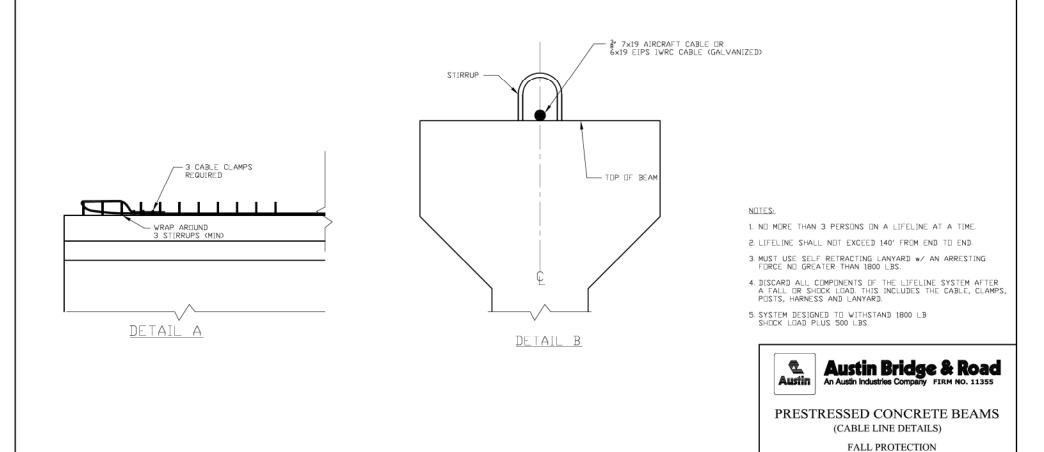
FPWL-01







### BEAM ELEVATION



REVISIONS

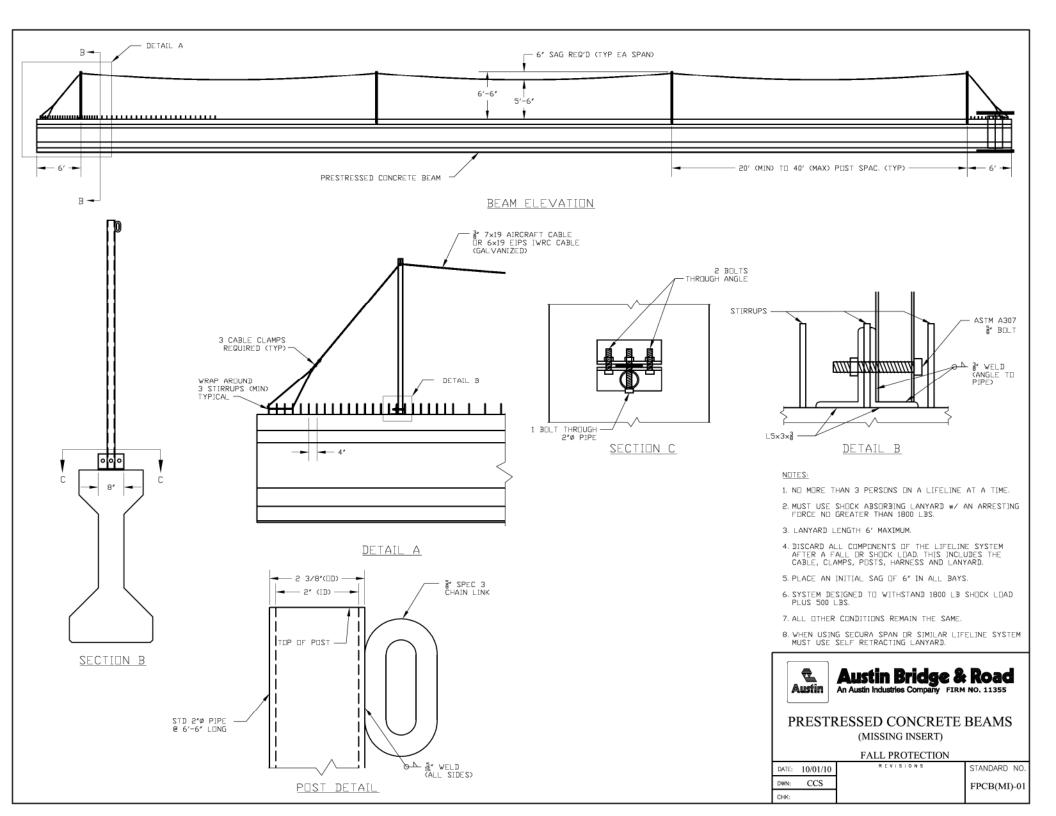
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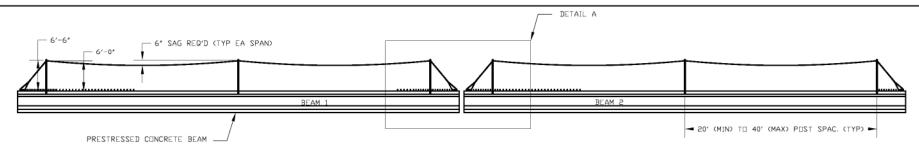
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CHK:

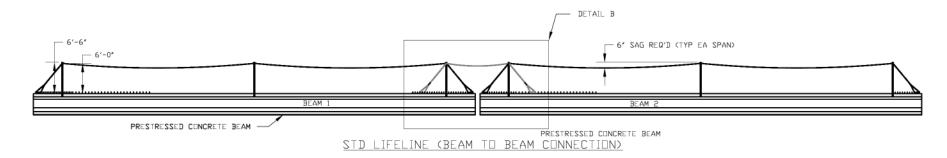
STANDARD NO.

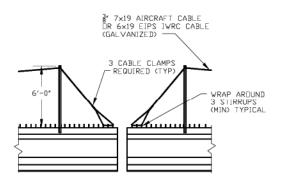
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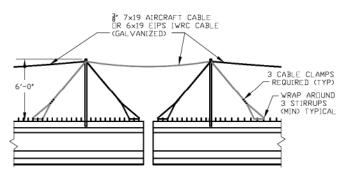


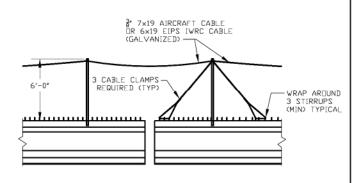


### STD LIFELINE (ONE BEAM)









DETAIL A - CABLE CONNECTION OPTION

DETAIL B - CABLE CONNECTION

### EXCESS CABLE CONNECTION

#### NOTES:

- 1. NO MORE THAN 3 PERSONS ON A LIFELINE AT A TIME.
- 2. MUST USE SHOCK ABSORBING LANYARD w/ AN ARRESTING FORCE NO GREATER THAN 1800 LBS.
- 3. LANYARD LENGTH 6' MAXIMUM.
- 4. DISCARD ALL COMPONENTS OF THE LIFELINE SYSTEM AFTER A FALL OR SHOCK LOAD. THIS INCLUDES THE CABLE, CLAMPS, POSTS, HARNESS AND LANYARD.
- 5. PLACE AN INITIAL SAG OF 6' IN ALL BAYS.
- 6. WHEN USING SECURA SPAN OR SIMILAR LIFELINE SYSTEM MUST USE SELF RETRACTING LANYARD.

#### BEAM TO BEAM CONNECTION:

THE BEAM TO BEAM CONNECTION CAN BE MADE BY SIMPLY DETACHING THE CABLE AT BEAM 2 AND RUNNING IT THROUGH THE POST ON BEAM 1 AND CLAMPING IT TO THE STIRRUPS ON BEAM 1

ALL OF THIS CAN BE DONE WHILE LANYARD IS ATTACHED TO THE CABLE ON BEAM 1

NO ONE IS TO BE CONNECTED TO LIFELINE ON BEAM 2 DURING THIS PROCESS



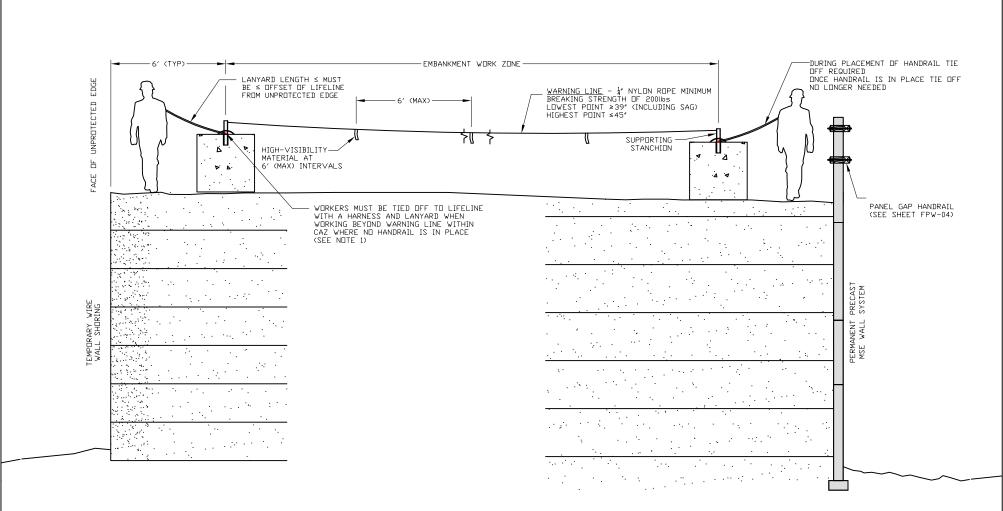
### Austin Bridge & Road An Austin Industries Company FIRM NO. 11355

PRESTRESSED CONCRETE BEAMS (BEAM TO BEAM)

FALL PROTECTION

DATE: 10/01/10 CCS

REVISIONS STANDARD NO. FPCB(BB)-01



### SECTION VIEW FALL PROTECTION DURING WALL CONSTRUCTION

#### NOTES:

- 1. THIS STANDARD TO BE USED <u>ONLY</u> UNDER SITE SPECIFIC FALL PROTECTION PLAN (SSFPP) IN ACCORDANCE WITH 29CFR 1926.502(k).
- 2. ALL WORK IN THIS AREA TO BE RESTRICTED BY CONTROLLED ACCESS ZONE (CAZ) REQUIREMENTS PER SSFPP.
- 3. MOVE LIFELINE, DEADMEN (REFER TO FPMD-01 FOR DETAILS), AND EDGE PROTECTION SYSTEM AS NEEDED DURING EMBANKMENT OPERATIONS.



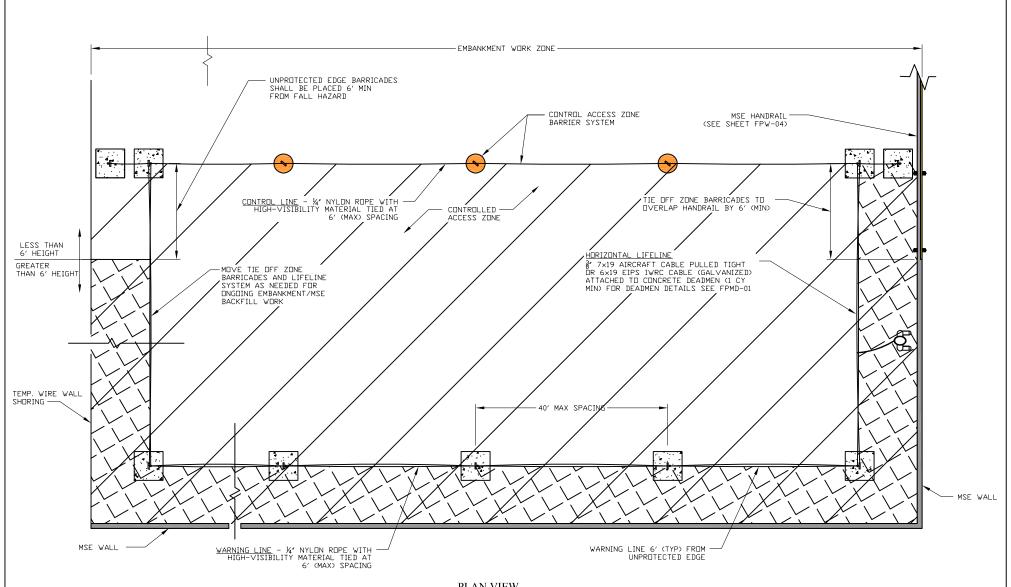
WIRE AND PANEL RETAINING WALLS

FALL PROTECTION

DATE:	06/15/11
DWN:	CCS

REVISIONS

STANDARD NO.



CONTROLLED ACCESS ZONE (CAZ)

TIE OFF ZONE (TOZ)

### NOTES:

- 1. THIS STANDARD TO BE USED ONLY UNDER SITE SPECIFIC FALL PROTECTION PLAN (SSFPP) IN ACCORDANCE WITH 29CFR 1926.502(k).
- 2. ALL WORK IN THIS AREA TO BE RESTRICTED BY CONTROLLED ACCESS ZONE (CAZ) REQUIREMENTS PER SSFPP.
- 3. MOVE LIFELINE, DEADMEN (REFER TO FPMD-01 FOR DETAILS), AND EDGE PROTECTION SYSTEM AS NEEDED FOR EMBANKMENT OPERATIONS.
- 4. INDIVIDUALS MUST BE TIED OFF PRIOR TO ENTERING TIE OFF ZONE.
- 5. LANYARD LENGTH MUST BE ≤ DFFSET DF LIFELINE FROM UNPROTECTED EDGE.

### PLAN VIEW CONTROLLED ACCESS ZONE



DWN:

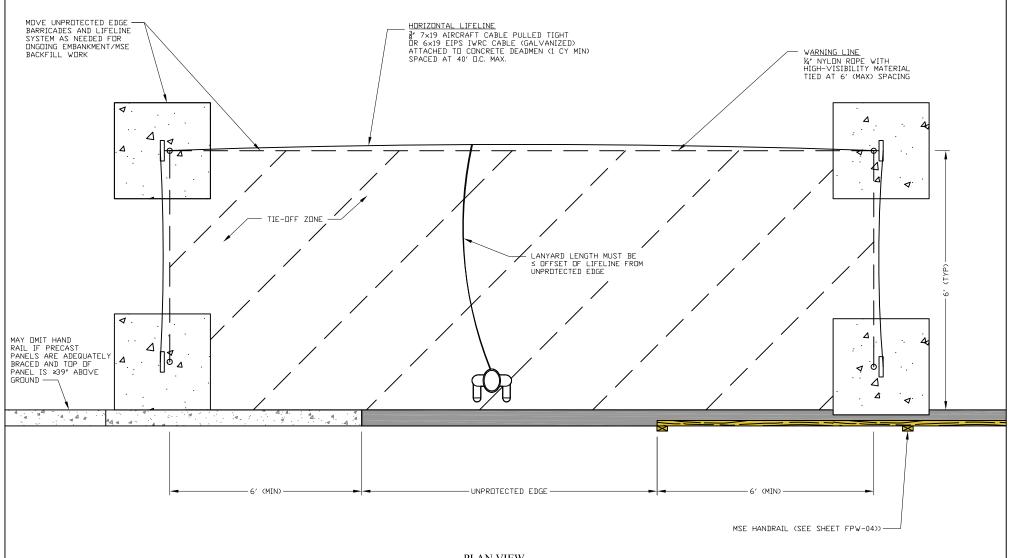
## Austin Bridge & Road An Austin Industries Company FIRM NO. 11355

WIRE AND PANEL RETAINING WALLS

FALL PROTECTION

REVISIONS DATE: 06/15/11 CCS

STANDARD NO.



### PLAN VIEW UNPROTECTED EDGE

### NOTES:

- THIS STANDARD TO BE USED <u>ONLY</u> UNDER SITE SPECIFIC FALL PROTECTION PLAN IN ACCORDANCE WITH 29CFR 1926.502(k).
- 2. ALL WORK IN THIS AREA TO BE RESTRICTED BY CONTROLLED ACCESS ZONE (CAZ) REQUIREMENTS PER SITE SPECIFIC FALL PROTECTION PLAN.
- MOVE LIFELINE, DEADMEN (REFER TO FPMD-01 FOR DETAILS), AND UNPROTECTED EDGE SYSTEM AS NEEDED FOR EMBANKMENT OPERATIONS.



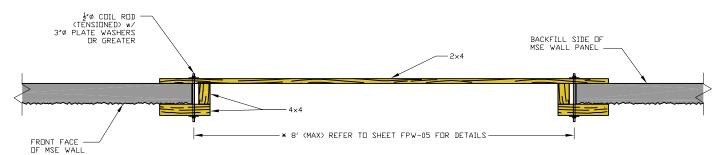
MSE RETAINING WALL

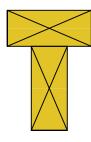
FALL PROTECTION
REVISIONS

DATE: 06/15/11

DWN: CCS

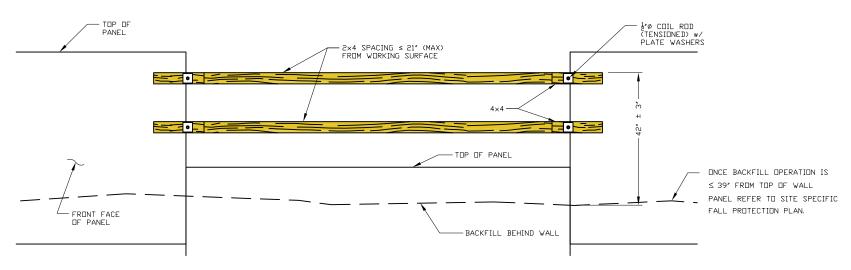
STANDARD NO.





\* WHERE PANEL WIDTH EXCEEDS 8' ADD TOP PLATE TO TOP RAIL (SEE DETAIL)

TYPICAL PANEL GAP PLAN VIEW  $\frac{\text{TOP RAIL SECTION}}{\text{w/ TOP PLATE}}$ (for L > 8' not to exceed 10')



### TYPICAL FRONT FACE OF MSE WALL w/ PANEL GAP ELEVATION VIEW

#### NOTES:

1. ONCE BACKFILL OPERATION IS  $\leq$  39' FROM TOP OF WALL PANEL REFER TO SITE SPECIFIC FALL PROTECTION PLAN.



MSE WALL HANDRAIL PANEL GAP

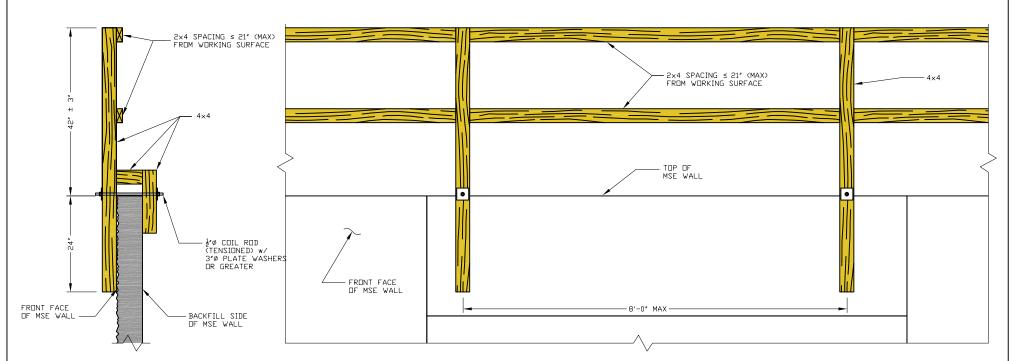
FALL PROTECTION

DATE: 06/15/11 REVISIONS

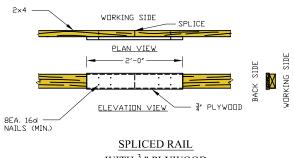
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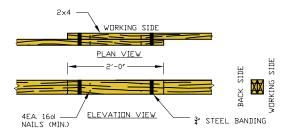
STANDARD NO.



TYPICAL SECTION OF MSE WALL PANEL TYPICAL FRONT FACE OF MSE WALL ELEVATION VIEW



WITH  $\frac{3}{4}$  " PLYWOOD



SPLICED RAIL WITH  $\frac{3}{4}$ " STEEL BANDING

#### NOTES:

1. ONCE BACKFILL OPERATION IS ≤ 39" FROM TOP OF WALL PANEL REFER TO SITE SPECIFIC FALL PROTECTION PLAN.



CCS

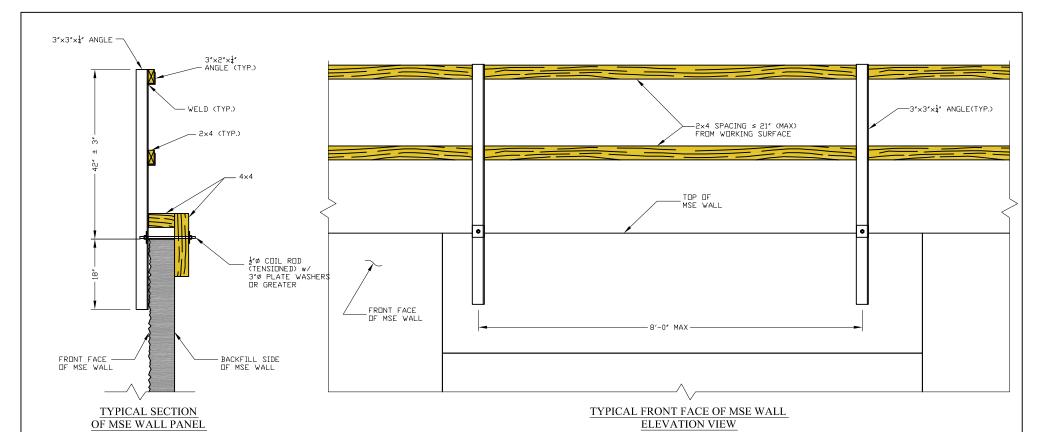
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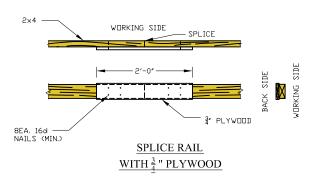
Austin Bridge & Road
An Austin Industries Company FIRM NO. 11355

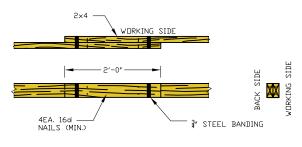
MSE WALL HANDRAIL (4x4 Posts)

FALL PROTECTION REVISIONS DATE: 06/15/11

STANDARD NO.







 $\frac{\text{SPLICE RAIL}}{\text{WITH} \frac{3}{4}" \text{ STEEL BANDING}}$ 

### NOTES:

 ONCE BACKFILL OPERATION IS ≤ 39° FROM TOP OF WALL PANEL REFER TO SITE SPECIFIC FALL PROTECTION PLAN.



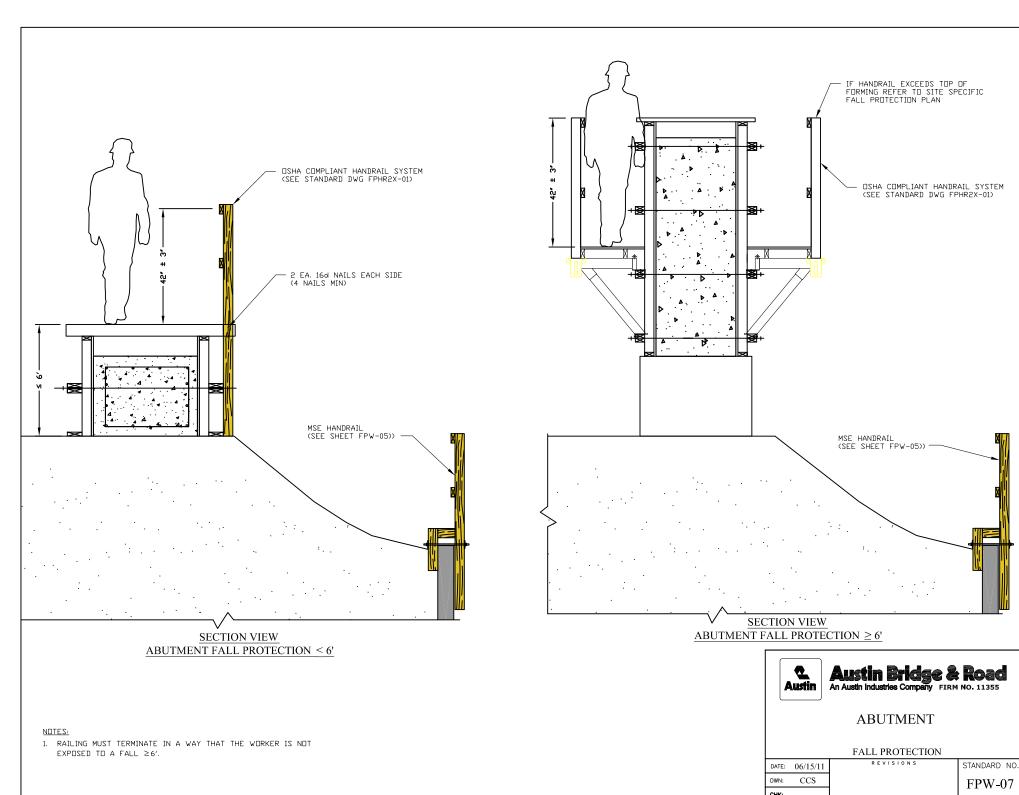
MSE WALL HANDRAIL (3x3 ANGLE POSTS)

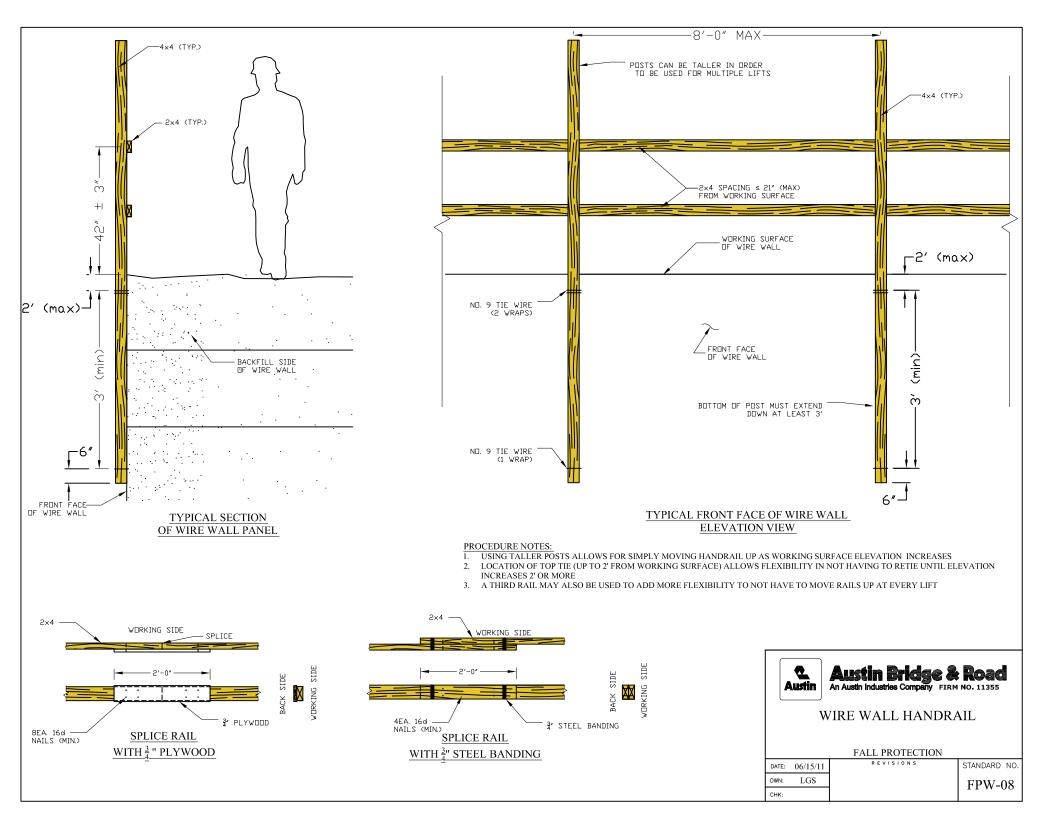
FALL PROTECTION

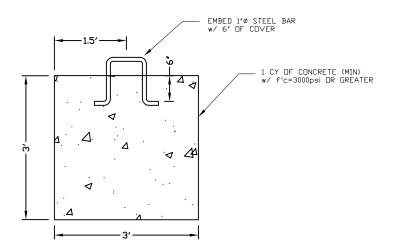
DATE: 06/15/11

DWN: CCS

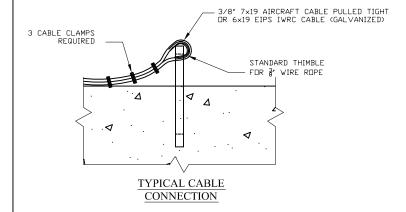
STANDARD NO.







### TYPICAL DEADMAN





**MISCELLANEOUS DETAILS** 

FALL PROTECTION

REVISIONS STANDARD NO. DATE: 06/15/11 CCS

FPMD-01