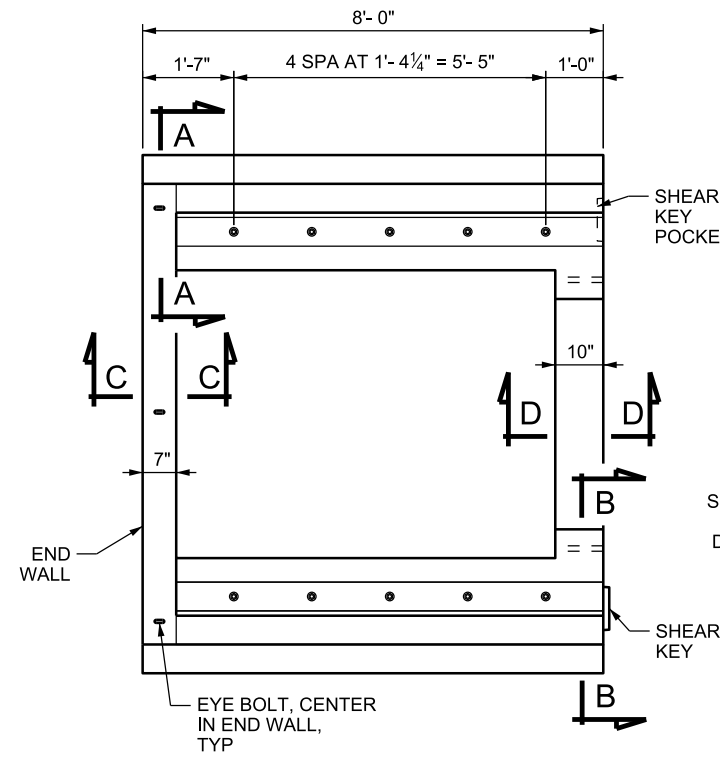
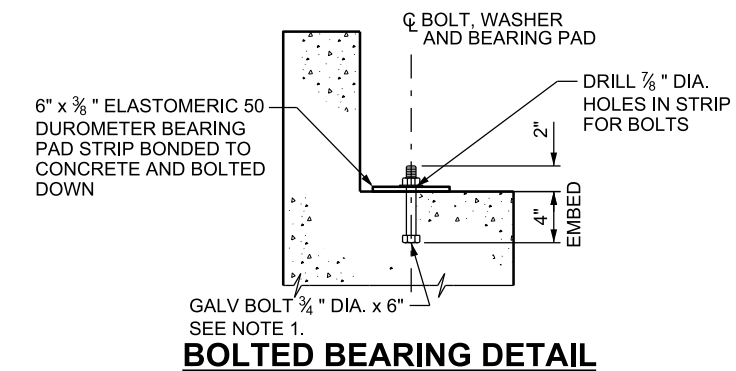
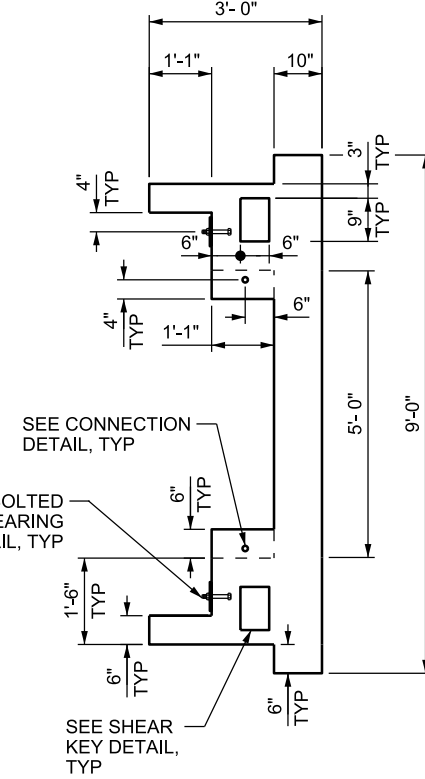


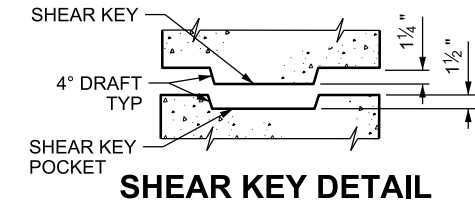
(3) - 5/8" DIA. STEEL EYE BOLT WITH HOLE EXCEEDING 5/8" BOLT DIAMETER, EMBED 4" MIN. SEE NOTE 1.



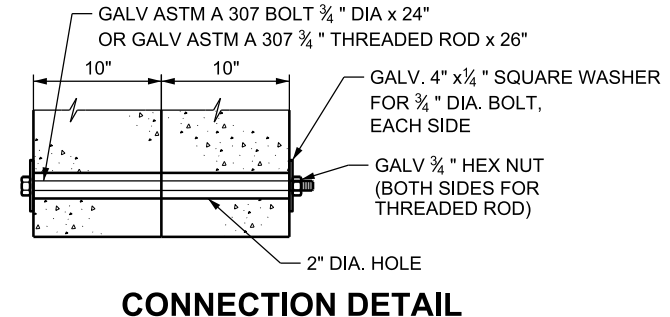
8'-0" END UNIT



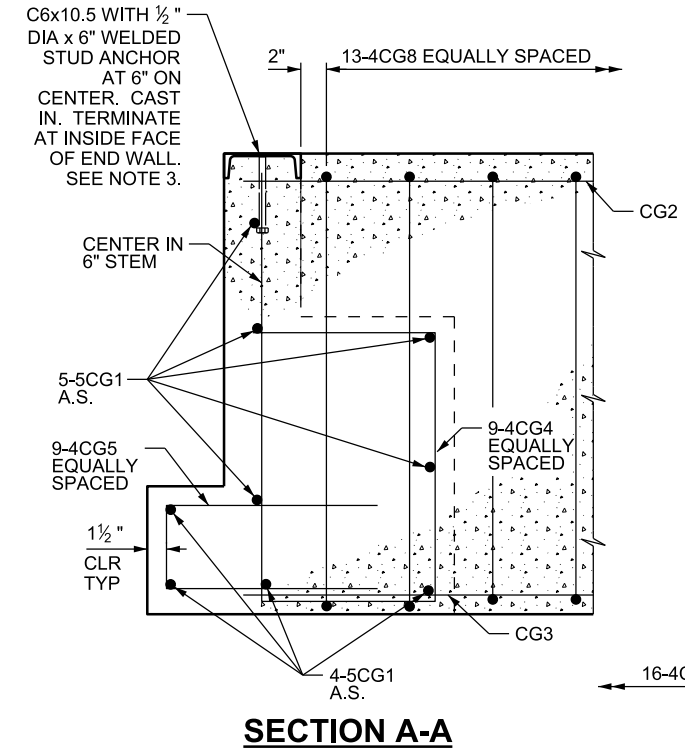
BOLTED BEARING DETAIL



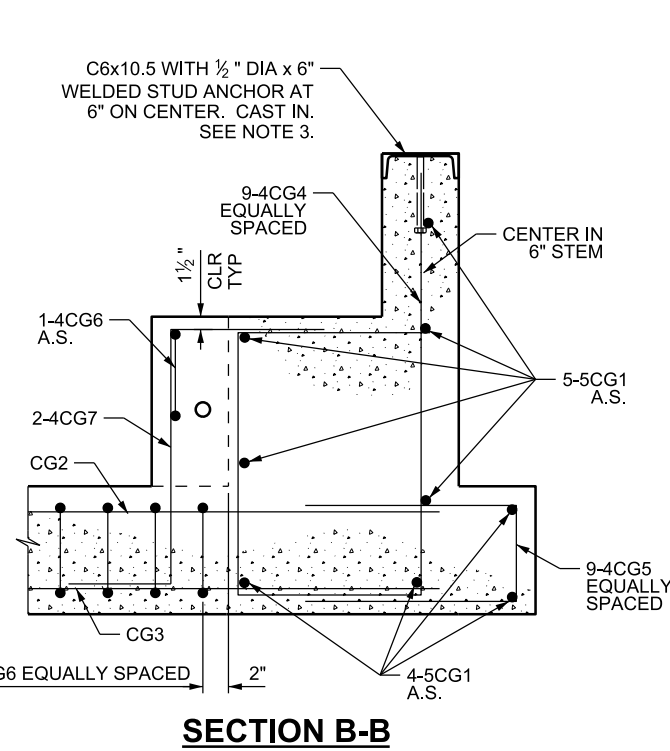
SHEAR KEY DETAIL



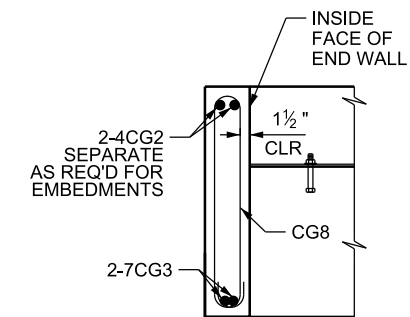
CONNECTION DETAIL



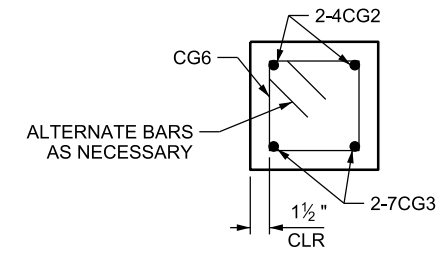
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

REINFORCING STEEL SCHEDULE FOR END UNIT

MARK	LOCATION	SIZE	REQ'D	LENGTH	TOTAL	SKETCH	MARK	LOCATION	SIZE	REQ'D	LENGTH	TOTAL	SKETCH
CG1	CATTLE GUARD	5	18	7'-8"	138'-0"		CG6	CATTLE GUARD	4	16	3'-1"	49'-4"	
CG2	CATTLE GUARD	4	4	7'-8"	30'-8"								
CG3	CATTLE GUARD	7	4	7'-8"	30'-8"								
CG4	CATTLE GUARD	4	18	6'-11"	124'-6"		CG7		CATTLE GUARD	4	4	3'-6"	14'-0"
CG5	CATTLE GUARD	4	18	3'-5"	61'-6"		CG8	CATTLE GUARD	4	13	6'-10"	88'-10"	180° STD. HOOK

STRUCTURAL STEEL PER UNIT

ITEM	REQ'D	SIZE	LENGTH
CHANNEL	2	C6x10.5	7'-5"
STUD ANCHOR	30	1/2" DIA	0'-6"

- NOTES:**
- FERRULE LOOP INSERTS SIZED FOR A BOLT OF EQUIVALENT DIAMETER TO THAT SHOWN MAY BE USED INSTEAD OF EMBEDDED BOLTS. FABRICATOR TO INCLUDE ASSOCIATED BOLT, OR EYE BOLT, OF LENGTH APPROPRIATE FOR FERRULE.
 - PROVIDE EMBEDDED LIFTING DEVICES CAPABLE OF SUPPORTING 20,000 LB MINIMUM TO LIFT THE PRECAST CATTLE GUARD UNIT INTO ITS FINAL POSITION.
 - WEEPHOLES ARE PERMITTED IN THE CHANNEL SECTION TO RELEASE ENTRAPPED AIR.

SUPPLEMENTAL DRAWING

NO.	DATE	APPR.	REMARKS
1	10/25/18	JWC	COMPLETE REVISION TO CATTLE GUARD

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH

RECOMMENDED FOR APPROVAL
Randy P. Park
CHAIRMAN STANDARDS COMMITTEE

APPROVED
[Signature]
DEPUTY DIRECTOR

DATE: OCT. 25, 2018
DATE: OCT. 25, 2018

8'-0" PRECAST CONCRETE CATTLE GUARD END UNIT

STANDARD DRAWING TITLE

STD. DWG. NO. SW 1B

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