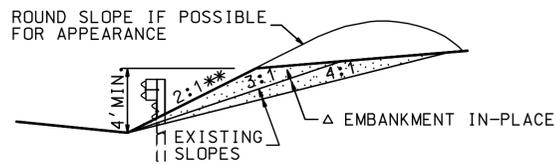
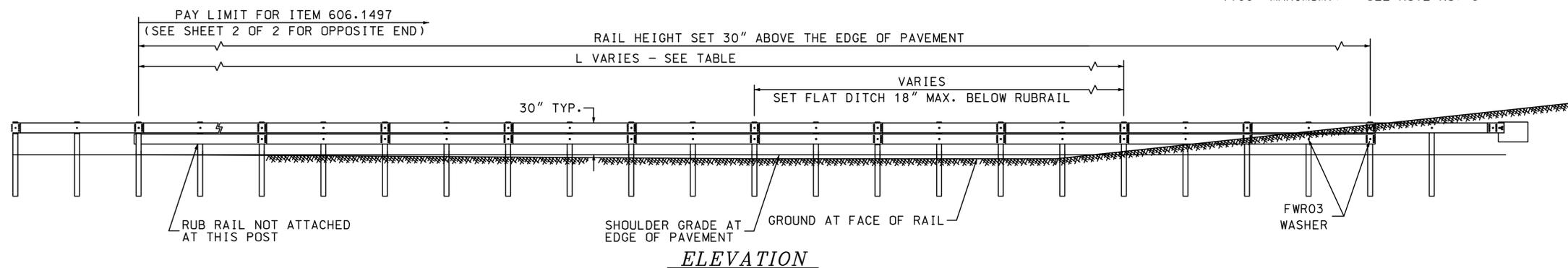
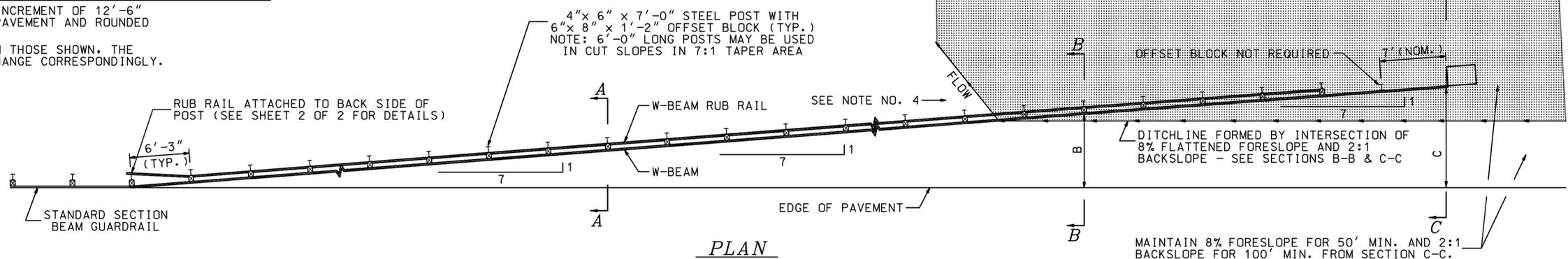


TYPICAL SECTION	TYPICAL DITCH WIDTH	L	B*	C*	RUB RAIL LENGTH	CALCULATED LENGTH ITEM 606.1497
11-4-4 (EARTH)	6'-0"	62'-6"	8'-11"	17'-10"	112'-6"	127'-0"
12-4-4 (EARTH)	12'-0"	125'-0"	17'-10"	26'-10"	175'-0"	189'-6"
12-10-10 (ROCK)	10'-0"	87'-6"	12'-6"	23'-3"	150'-0"	164'-6"
12-10-12 (EARTH)	14'-6"	137'-6"	19'-8"	30'-4"	200'-0"	214'-6"
12-10-12 (ROCK)	12'-0"	112'-6"	16'-1"	25'-0"	162'-6"	177'-0"
12-10-12 (ROCK)	18'-0"	162'-6"	23'-3"	33'-11"	225'-0"	239'-6"

RAIL LENGTHS ROUNDED TO NEAREST INCREMENT OF 12'-6"
 * OFFSETS MEASURED FROM EDGE OF PAVEMENT AND ROUNDED TO NEAREST INCH
 NOTE: FOR DITCH WIDTHS OTHER THAN THOSE SHOWN, THE LENGTHS AND OFFSETS WILL CHANGE CORRESPONDINGLY.

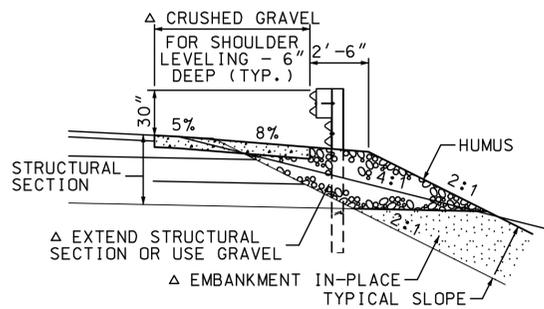


SLOPE STEEPENING DETAIL
(WHERE REQUIRED)

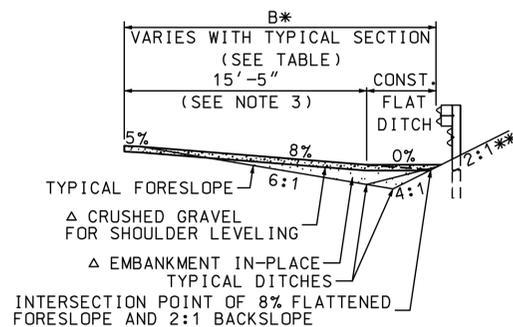
30 MPH - 7:1 TAPER RATE

TERMINAL SECTION TYPE E-2 MODIFIED

ITEM 606.1497 - BEAM GUARDRAIL TERMINAL SECTION, TYPE E-2 MODIFIED
 PAID: LINEAR FOOT (INCLUDES RUB RAIL AND ANCHOR)
 USE: AT BEGINNING OR END OF STANDARD SECTION GUARDRAIL

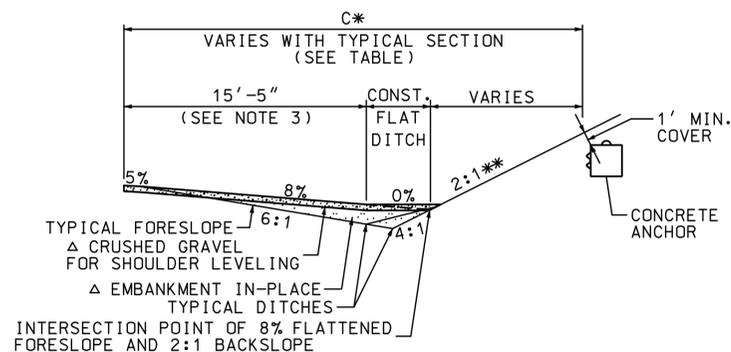


SECTION A-A



SECTION B-B

▲ SEE NOTE 6 FOR ALL HATCHED AREAS



SECTION C-C

** THE BACK SLOPE SHALL BE 2:1 OR STEEPER APPROACHING THE ANCHOR. IT IS NOT THE INTENT TO FLATTEN AN EXISTING BACKSLOPE THAT IS STEEPER THAN 2:1 UNLESS SO NOTED ON THE PLANS OR PROPOSAL.

GENERAL NOTES

- THIS TERMINAL IS DESIGNED FOR USE PRIMARILY AT SITES WHERE THE TERRAIN CHANGES ABRUPTLY FROM A CUT TO A STEEP FILL, AND WHERE THEORETICAL LENGTH OF NEED WOULD EXTEND INTO THE CUT SECTION FOR A CONSIDERABLE DISTANCE. THE DESIGN SPEED FOR THIS TERMINAL IS 30 MPH.
- SEE STANDARD NO. GR-6 FOR E-2 HARDWARE DETAILS. SEE STANDARDS NO. GR-1 OR GR-2 FOR ADDITIONAL DETAILS OF COMMON HARDWARE.
- A RUB RAIL IS REQUIRED WHEN THE BOTTOM OF THE W-BEAM IS GREATER THAN 18" HIGH ABOVE THE GROUND. A MAXIMUM OFFSET FROM THE E.P. OF 15'-5" MAINTAINS A SINGLE RUB RAIL HEIGHT. FOR ANY PORTION OF A DITCH OFFSET GREATER THAN 15'-5" CONSTRUCT A FLAT BOTTOMED DITCH TO THE 2:1 BACK SLOPE.
- CONSTRUCT OUTLET DITCH TO FIT SITE CONDITIONS OR USE DROP INLET AND PIPE IF LARGE FLOWS ARE ANTICIPATED OR IF DITCHLINE BECOMES FLATTER THAN 0.4% (PAY UNDER BID ITEMS).
- FOR INSTALLATIONS IN ROCK CUT EARTH BERMS, EXCAVATE A SUFFICIENT QUANTITY OF ROCK TO PERMIT POST DRIVING, AND ANCHOR THE TERMINAL BY ONE OF THE FOLLOWING METHODS:
 A) EXCAVATE ROCK TO PERMIT INSTALLATION OF PRECAST ANCHOR
 B) CONSTRUCT CAST-IN-PLACE ANCHOR WITH SAME MASS AS PRECAST ANCHOR AND 4 S.F. CROSS-SECTIONAL AREA TO FACE OF ANCHOR (SUBSIDIARY TO ITEM 606.1497).
 C) ATTACH W-BEAM TERMINAL CONNECTOR DIRECTLY TO ROCK FACE BY AN APPROVED ROCK BOLT METHOD (SUBSIDIARY TO ITEM 606.1497).
- ANY COMMON EXCAVATION, EMBANKMENT IN-PLACE, AND CRUSHED GRAVEL FOR SHOULDER LEVELING REQUIRED WILL BE PAID UNDER ITEM 203.5596 - GUARDRAIL E-2 PLATFORMS. ROCK EXCAVATION WILL BE PAID AS ITEM 206.2 - ROCK STRUCTURE EXCAVATION.

GUARDRAIL STANDARD
BEAM GUARDRAIL TERMINAL
SECTION TYPE E-2 MODIFIED 30

STANDARD NO. GR-7
REVISION DATE
03-01-2006
06-16-2010
*DGN FILE NAME
GR-7

STANDARD PLANS



STANDARD NO. GR-7