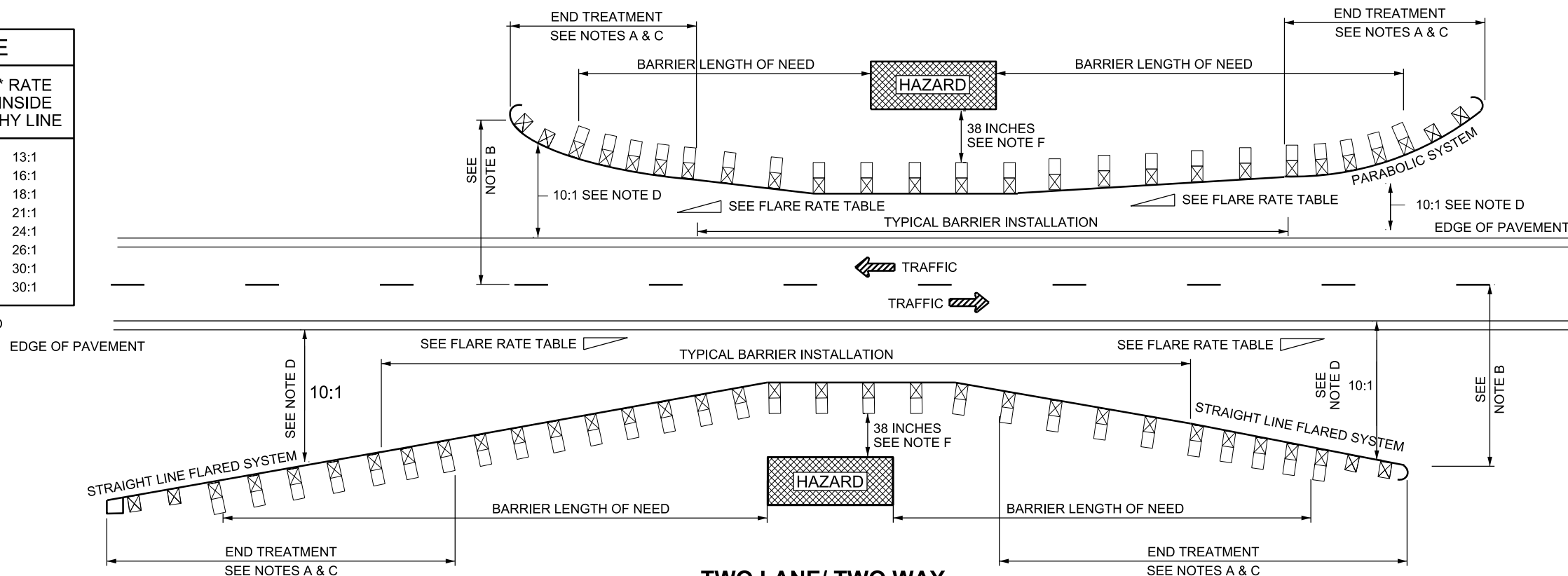


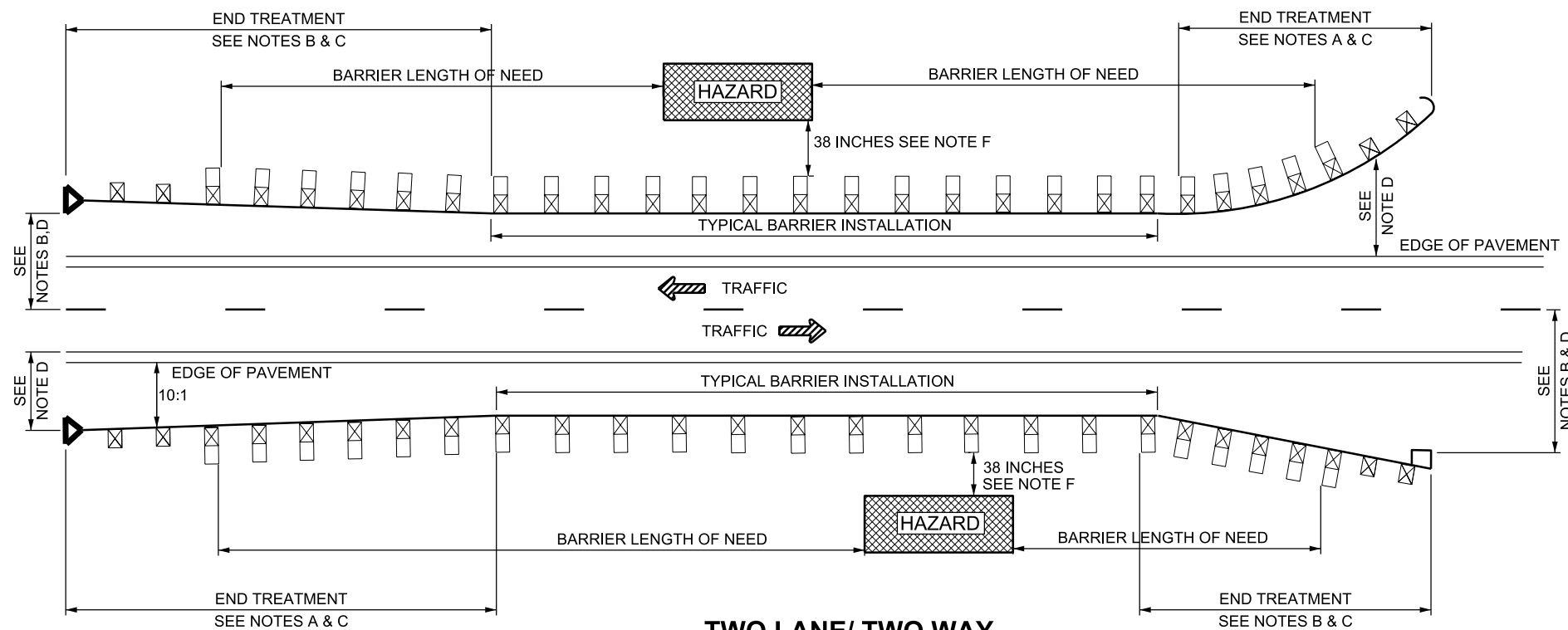
FLARE RATE TABLE		
SPEED (MPH)	RATE OUTSIDE SHY LINE	* RATE INSIDE SHY LINE
≤ 35	7:1	13:1
40	8:1	16:1
45	10:1	18:1
50	11:1	21:1
55	12:1	24:1
60	14:1	26:1
65	15:1	30:1
≤ 70	15:1	30:1

\* DESIGN EXCEPTION REQUIRED



**TWO LANE/ TWO WAY  
FLARED GUARDRAIL INSTALLATION**

(DETAIL BA 4J3-2)



**TWO LANE/ TWO WAY  
TANGENT GUARDRAIL INSTALLATION**

(DETAIL BA 4J3-1)

**DESIGN-ONLY NOTES**

- A. APPROACH END:  
USE AN APPROVED END TREATMENT, AS APPROVED IN THE GUIDELINES FOR CRASH CUSHION AND BARRIER END TREATMENTS OR A BURIED IN BACK SLOPE TERMINAL (BA 4F SERIES STD DWGS), AN ANCHOR TYPE II PERMITTED WHEN DESIGN SPEED IS 40 MPH OR LESS.
- B. TRAILING END:  
1. USE AN END TREATMENT AS APPROVED IN GUIDELINES FOR CRASH CUSHION AND BARRIER END TREATMENTS CURRENT EDITION, OR A BURIED IN BACK SLOPE TERMINAL WITHIN CLEAR ZONE AS DEFINED IN THE UDOT ROADWAY DESIGN MANUAL AND AASHTO ROADSIDE DESIGN GUIDE.  
2. USE AN ANCHOR TYPE II, STD DWG BA 4C2.AT OR BEYOND. MINIMUM CLEAR ZONE AS DEFINED IN THE UDOT ROADWAY DESIGN MANUAL AND AASHTO ROADSIDE DESIGN GUIDE.
- C. END TREATMENTS SHOWN ARE FOR ILLUSTRATION. TYPES "G" AND "H" CAN BE USED ON TANGENT OR FLARED GUARDRAIL INSTALLATIONS.
- D. USES OF MGS W-BEAM GUARDRAIL INSTALLATION PERMITTED ON A SLOPE NO STEEPER THAN 10:1. MATCH ROADWAY CROSS-SLOPE IF SUPERELEVATED MORE THAN 2 PERCENT. REFER TO STD DWG BA 4D SERIES.
- E. CONSULT GUIDELINES FOR CRASH CUSHIONS AND END TREATMENTS CC SERIES STANDARD DRAWINGS, FOR PROPER END TREATMENT SELECTION AND INSTALLATION REQUIREMENTS.
- F. REFER TO STD DWG 4H3 FOR REDUCED DEFLECTION REQUIREMENTS WHEN 38 INCHES CANNOT BE MAINTAINED BEHIND W-BEAM GUARDRAIL POST TO FACE OF HAZARD. USE 42 INCHES DEFLECTION FOR INITIAL LONG POST 2:1 FILL SLOPE INSTALLATION WITH STANDARD POST SPACING.

SUPPLEMENTAL DRAWING

DESIGN-ONLY DRAWING

NO.	DATE	APPR.	REMARKS

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

RECOMMENDED FOR APPROVAL  
*Randall J. Park*  
CHAIRMAN STANDARDS COMMITTEE  
APPROVED  
DEPUTY DIRECTOR

DATE  
AUG 30, 2018  
DATE  
AUG 30, 2018

MIDWEST 31 INCH W-BEAM  
GUARDRAIL  
TYPICAL  
2 LANE 2 WAY

STANDARD DRAWING TITLE  
STD. DWG. NO.  
BA 4J3