

# WINSOME FILING NO. 3 CULVERT CONSTRUCTION DOCUMENTS

A PORTION OF SECTIONS 13 AND 24, TOWNSHIP 11 SOUTH, RANGE 65 SOUTH, AND  
A PORTION OF THE WEST HALF SECTION 19, TOWNSHIP 11 SOUTH, RANGE 64 WEST OF THE 6TH P.M  
COUNTY OF EL PASO, STATE OF COLORADO

## CONTACTS:

**DEVELOPER:**  
WINSOME, LLC  
1824 WOODMOOR DRIVE, SUITE 100  
MONUMENT, CO 80132  
TEL: (719) 476-0800  
CONTACT: JOSEPH DESJARDIN

**SURVEY:**  
EDWARD JAMES SURVEYING, INC.  
926 ELKTON DRIVE  
COLORADO SPRINGS, CO 80907  
TEL: (719) 576-1216  
CONTACT: JONATHAN TESSIN

GILBERTLAFORCE@ELPASOCO.COM  
**EPC DPW STORMWATER TEAM:**  
CHRISTINA FURCHAK  
(719) 433-4863  
EMAIL:  
CHRISTINAFURCHAK@ELPASOCO.COM

**PLANNER/LANDSCAPE ARCHITECT:**  
NES, INC  
619 N CASCADE AVENUE, SUITE 200  
COLORADO SPRINGS, CO 80903  
TEL: (719) 471-0073  
EMAIL: ABARLOW@NESCOLORADO.COM  
CONTACT: ANDREA BARLOW

EL PASO COUNTY PLANNING  
DEPARTMENT  
2880 INTERNATIONAL CIRCLE, SUITE  
110  
COLORADO SPRINGS, CO 80910

**EPC PCD INSPECTIONS SUPERVISOR:**  
TEM: BRAD WALTERS  
(719) 520-6819  
EMAIL: BRADWALTERS@ELPASOCO.COM

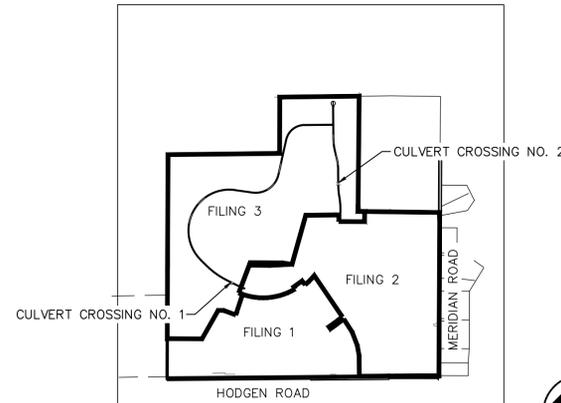
**ENGINEER:**  
KIMLEY-HORN AND ASSOCIATES, INC.  
2 NORTH NEVADA, SUITE 300  
COLORADO SPRINGS, CO 80903  
(719) 453-0180  
EMAIL:  
KEVIN.KOFFORD@KIMLEY-HORN.COM  
CONTACT: KEVIN KOFFORD

**PLANNING REVIEWER:**  
NINA RUIZ  
TEL: (719) 520-6313  
EMAIL: NINARUIZ@ELPASOCO.COM

**FALCON FIRE DEPARTMENT:**  
AREA: FAL D2  
FIRE CHIEF T. HARWIG  
7030 OLD MERIDIAN ROAD  
PAYTON, CO 80831  
TEL: (719) 495-4050  
EMAIL:  
FALCONFIRE@FALCONFIREPD.ORG

**ENGINEERING REVIEWER:**  
GILBERT LAFORCE  
TEL: (719) 520-7945  
EMAIL:

**COLORADO DEPARTMENT OF PUBLIC  
HEALTH AND ENVIRONMENT:**  
WATER QUALITY CONTROL DIVISION  
4300 CHERRY CREEK DRIVE SOUTH  
DENVER, CO 80246  
TEL: (303) 692-3500



VICINITY MAP  
1"=2,000'



## FLOODPLAIN NOTE

FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP, MAP NUMBER 08041C0350G, EFFECTIVE DECEMBER 7, 2018 INDICATES THE AREA IN THE VICINITY OF THIS PARCEL OF LAND TO BE IN ZONE X (AREA DETERMINED TO BE OUT OF THE 500 YEAR FLOODPLAIN). A CONDITIONAL LETTER OF MAP REVISION HAS BEEN PROCESSED AND APPROVED FOR THIS REACH OF WEST KIOWA CREEK.

## SHEET INDEX:

SHEET NO.	SHEET TITLE
1	COVER SHEET
2	HORIZONTAL CONTROL
3	SITE PLAN
4	SITE PLAN
5	CULVERT 1-PLAN & PROFILE
6	CULVERT 2-PLAN & PROFILE
7	ALAMAR WAY PROFILE
8	TWINKLING STAR LANE PROFILE
9	CULVERT DETAILS
10	CULVERT DETAILS
11	CULVERT DETAILS

## LEGAL DESCRIPTION

COMMENCING AT THE WEST QUARTER CORNER OF SAID SECTION 24, SAID POINT BEING THE POINT OF BEGINNING; THENCE N00°14'25"E ON THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 24, SAID LINE ALSO BEING ON THE WEST BOUNDARY OF PARCEL 4, AS RECORDED UNDER RECEPTION NUMBER 218900072, A DISTANCE OF 2636.99 FEET TO THE NORTHWEST CORNER OF SAID SECTION 24; THENCE N89°21'38"E ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 24, A DISTANCE OF 2633.02 FEET TO THE NORTH QUARTER CORNER OF SAID SECTION 24; THENCE N00°10'29"E ON THE WEST LINE OF THE SOUTH HALF OF THE SOUTH EAST QUARTER OF SECTION 13, TOWNSHIP 11 SOUTH, RANGE 65 WEST, A DISTANCE OF 1321.95 FEET TO THE NORTHWEST CORNER OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SAID SECTION 13; THENCE N89°20'26"E ON THE NORTH LINE OF THE SOUTH HALF OF THE SOUTHWEST QUARTER OF SAID SECTION 13, A DISTANCE OF 1873.37 FEET; THENCE S00°34'43"W A DISTANCE OF 2,706.21 FEET; THENCE S89°15'17"E A DISTANCE OF 769.17 FEET TO A POINT ON THE WEST LINE OF SECTION 19 TOWNSHIP 11 SOUTH, RANGE 64 WEST; THENCE S89°15'18"E A DISTANCE OF 1,158.32 FEET TO THE EAST LINE OF THE WEST HALF OF THE WEST HALF OF SAID SECTION 19; THENCE S00°17'06"W ON THE EAST LINE OF THE WEST HALF OF THE WEST HALF OF SAID SECTION 19, A DISTANCE OF 3,838.66 FEET TO A POINT 30.00 FEET NORTH OF THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 19; THENCE S89°55'06"W, ON A LINE 30.00 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 19, ON SAID NORTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 30.00 FEET TO A POINT ON THE BOUNDARY LINE PARCEL NUMBER RW-36 AS SHOWN IN THE WARRANTY DEED AS RECORDED UNDER RECEPTION NUMBER 213096397; THENCE ON THE BOUNDARY OF SAID PARCEL THE FOLLOWING (3) THREE COURSES:

1. N00°17'06"E, 30.00 WEST OF AND PARALLEL WITH THE EAST LINE OF THE WEST HALF OF THE WEST HALF OF SAID SECTION 19, A DISTANCE OF 5.25 FEET
2. N89°47'54"W A DISTANCE OF 368.05 FEET
3. S89°14'50"W A DISTANCE OF 603.68 FEET TO A POINT BEING 30.00 FEET NORTH OF THE SOUTH LINE OF SOUTHWEST QUARTER OF SAID SECTION 19;

THENCE S89°55'06"W ON A LINE 30.00 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 19, ON SAID NORTHERLY RIGHT-OF-WAY LINE A DISTANCE OF 173.03 FEET TO A POINT ON THE EAST LINE OF SAID SECTION 24; THENCE S89°30'15"W ON A LINE 30.00 FEET NORTH OF AND PARALLEL WITH THE SOUTH LINE OF SAID SECTION 24, A DISTANCE OF 5238.44 FEET TO A POINT ON THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 24; THENCE N00°14'17"E ON THE WEST LINE OF SOUTHWEST QUARTER A DISTANCE OF 2,606.92 FEET TO THE POINT OF BEGINNING.

CONTAINING A CALCULATED AREA OF 33,455,315 SQUARE FEET OR 768.028 ACRES.  
COLORADO.

## BENCHMARK

A 2.5" ALUMINUM CAP BEING A 30 FOOT WITNESS CORNER NORTH OF THE SOUTHWEST CORNER OF SECTION 24, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN.

## BASIS OF BEARING

THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 24, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE 6TH/ PRINCIPAL MERIDIAN BEING MONUMENTED ON THE SOUTHERLY END BY A 2-1/2" ALUMINUM CAP STAMPED 'LS 28658" AND AT THE NORTHERLY END BY A 3-1/2" ALUMINUM CAP STAMPED 'LS 12103" BEING ASSUMED TO BEAR N00°14'25"E A DISTANCE OF 2636.99 FEET AS SHOWN IN LAND SURVEY PLAT RECORDED UNDER RECEPTION 218900072 RECORDS OF EL PASO COUNTY.

REFERENCE TO  
THE GEC PLAN  
ON THE PLANS

Provide Grading and Erosion Control Plan with the culvert construction unless it's detailed in the early GEC request. In which case add a reference on the plans to said GEC.

ADDED TO THE  
PLANS

Add Developer's Signature  
Block

ADDED TO THE  
PLANS

Engineer's Statement

ADDED TO THE  
PLANS

County Engineer signature block

ADDED TO THE  
PLANS

Including legends on sheets would help with  
the various linetypes throughout the plan set.

NO.	REVISION	BY	DATE	APPR.

**Kimley»Horn**  
2021 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: JRH  
CHECKED BY: KRK  
DATE: 9/3/2021

WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
CONSTRUCTION DOCUMENTS  
COVER SHEET

PRELIMINARY  
FOR REVIEW ONLY  
NOT FOR  
CONSTRUCTION  
**Kimley»Horn**  
Kimley-Horn and Associates, Inc.

PROJECT NO.  
196106001

SHEET

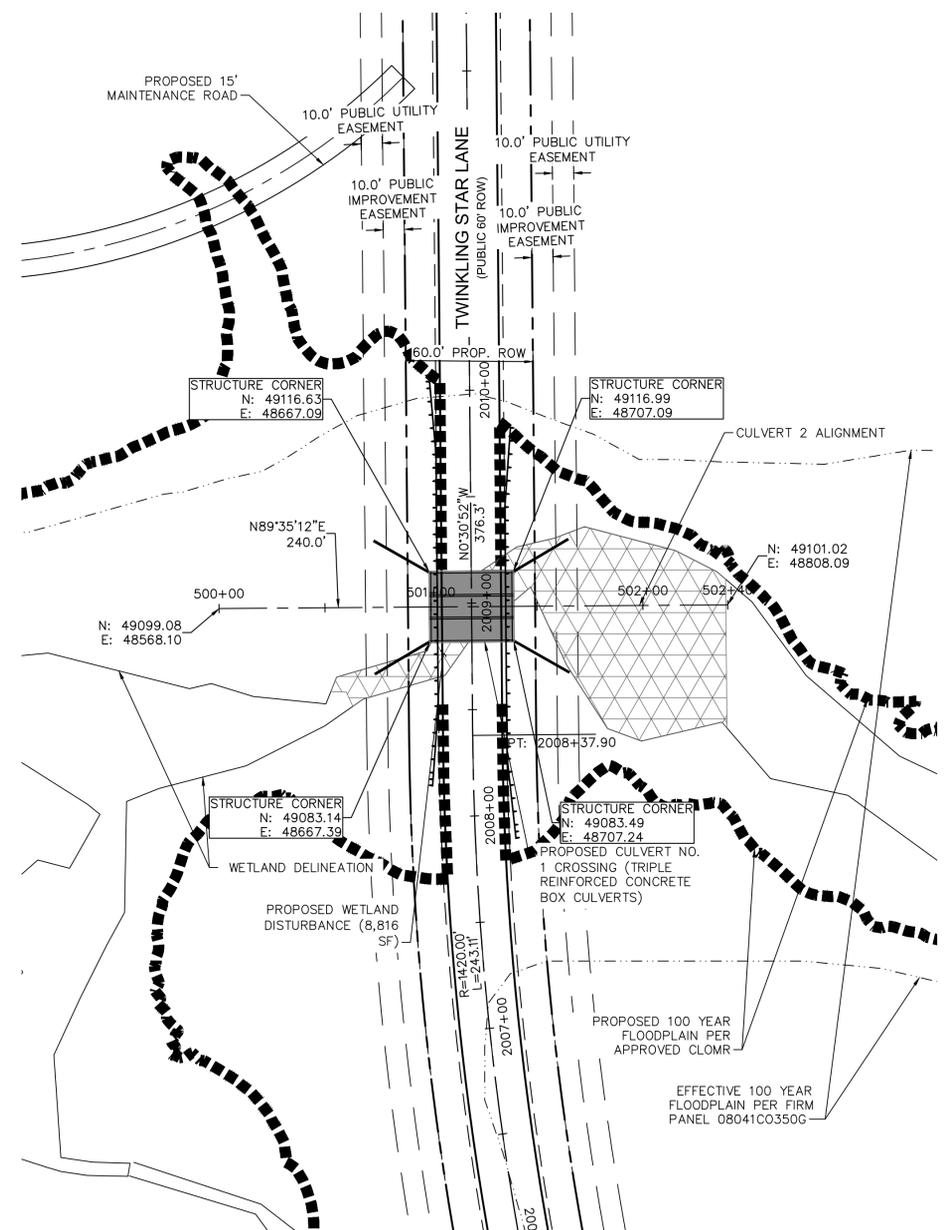
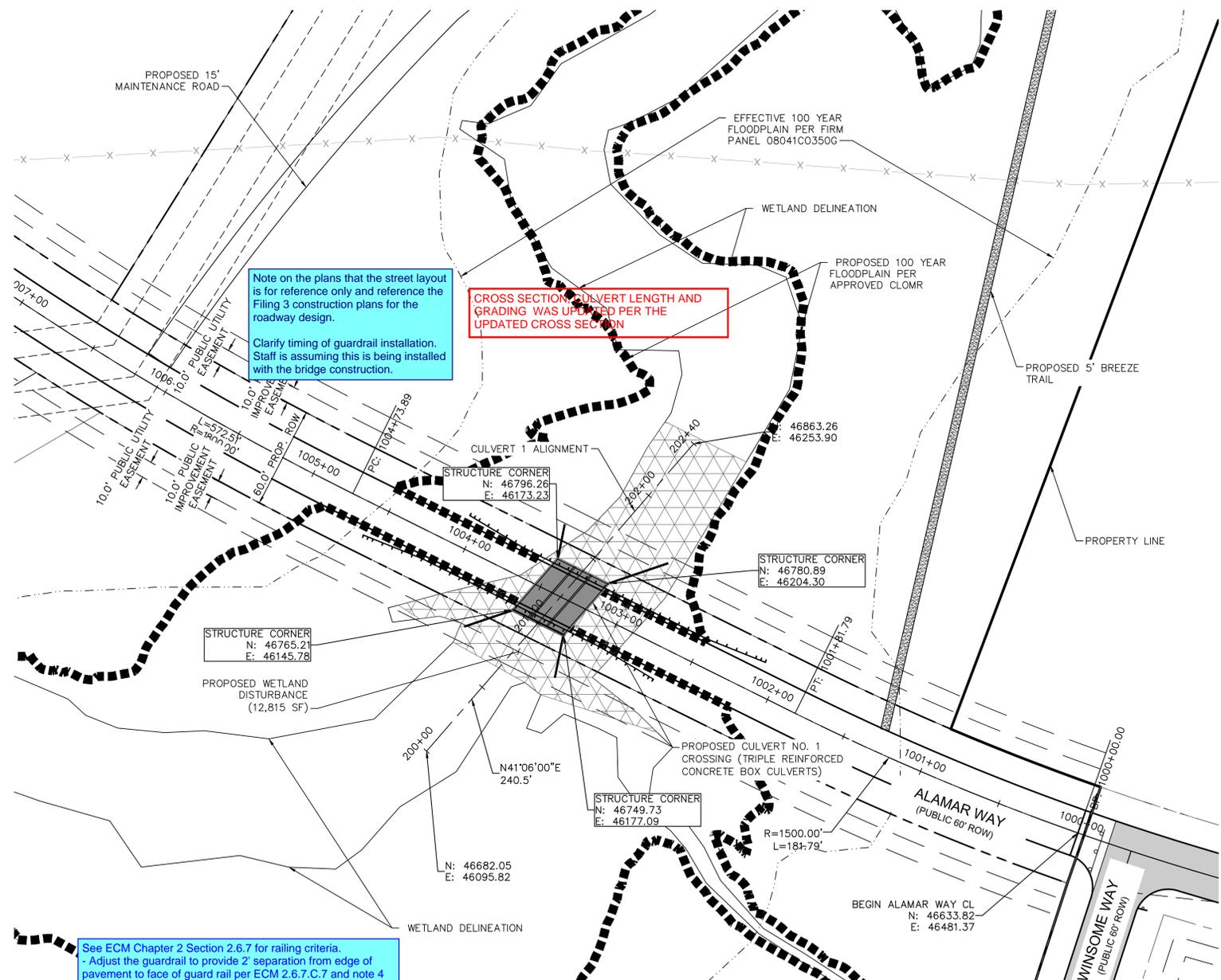
1

ADDED

Add "PCD File No. CDR-21-012"



K:\COS\_Civil\196106001\_Winsome Filing No. 3\CADD\PlanSheets\Culvert CDs\196106001\_HC.dwg Kofford, Kevin 9/7/2021 12:58 PM



Note on the plans that the street layout is for reference only and reference the Filing 3 construction plans for the roadway design.

Clarify timing of guardrail installation. Staff is assuming this is being installed with the bridge construction.

CROSS SECTION, CULVERT LENGTH AND GRADING WAS UPDATED PER THE UPDATED CROSS SECTION

See ECM Chapter 2 Section 2.6.7 for railing criteria.

- Adjust the guardrail to provide 2' separation from edge of pavement to face of guard rail per ECM 2.6.7.C.7 and note 4 on CDOT Detail M-606-1.
- Provide a minimum of 2 feet of barrier-to-embankment distant (bench) to prevent the posts from coming out of the side slope upon impact per ECM Figure 2-43 and CDOT Detail M-606-1 Note 5.

Update the typical cross section and culvert length accordingly.

CROSS SECTION, CULVERT LENGTH AND GRADING WAS UPDATED PER THE UPDATED CROSS SECTION

Label the slope

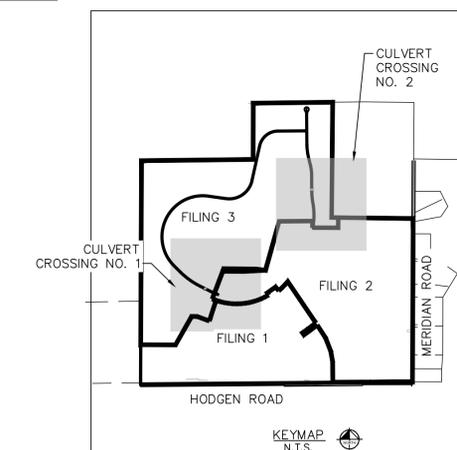
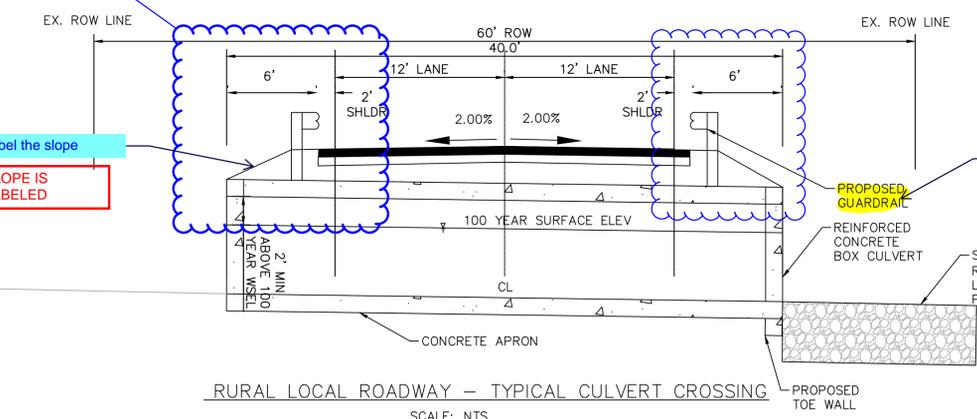
SLOPE IS LABELED

LABEL WAS ADJUSTED

Update note to "Proposed CDOT Type 3 Guardrail"

CROSS SECTION WAS CHANGED TO TYPE L TO MATCH THE HYDRAULIC REPORT

Hydraulics report has outlet protection listed as Type L riprap. Update so plan and report match



CALL UTILITY NOTIFICATION CENTER OF COLORADO 1-800-922-1987

CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

NO.	REVISION	BY	DATE	APPR.

**Kimley»Horn**  
2021 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

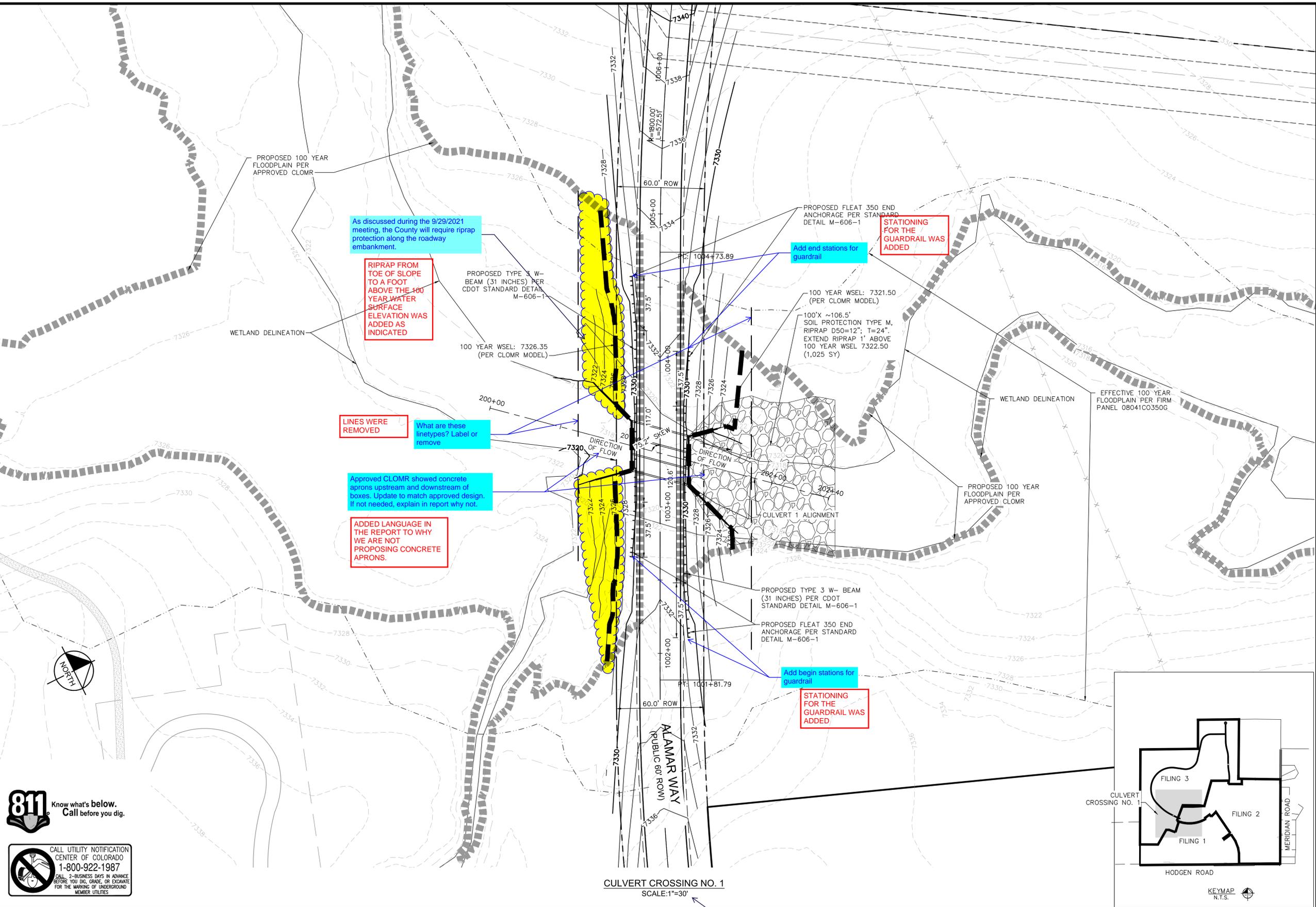
DESIGNED BY: KRK  
DRAWN BY: JRH  
CHECKED BY: KRK  
DATE: 9/3/2021

WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
CONSTRUCTION DOCUMENTS  
HORIZONTAL CONTROL

PRELIMINARY  
FOR REVIEW ONLY  
NOT FOR CONSTRUCTION

PROJECT NO. 196106001  
SHEET 2

K:\COS\_Civil\196106001\_Winsome Filing No. 3\CADD\PlanSheets\Culvert CDs\196106001\_SP-Exhibit.dwg Kofford, Kevin 9/7/2021 12:58 PM



CALL UTILITY NOTIFICATION CENTER OF COLORADO 1-800-922-1987

NO.	REVISION	BY	DATE	APPR.

**Kimley»Horn**  
2021 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: JRH  
CHECKED BY: KRK  
DATE: 9/3/2021

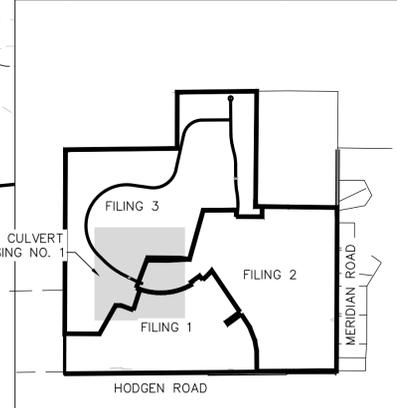
WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
CONSTRUCTION DOCUMENTS  
SITE PLAN

PRELIMINARY  
FOR REVIEW ONLY  
NOT FOR CONSTRUCTION  
**Kimley»Horn**  
Kimley-Horn and Associates, Inc.

PROJECT NO.  
196106001

SHEET

3



CULVERT CROSSING NO. 1  
SCALE: 1"=30'

Add bar scale.  
Typical for all plan  
sheets

SCALE BAR WAS  
ADDED FOR  
EACH PLAN

As discussed during the 9/29/2021 meeting, the County will require riprap protection along the roadway embankment.

RIPRAP FROM TOE OF SLOPE TO A FOOT ABOVE THE 100 YEAR WATER SURFACE ELEVATION WAS ADDED AS INDICATED

LINES WERE REMOVED

What are these linetypes? Label or remove

Approved CLOMR showed concrete aprons upstream and downstream of boxes. Update to match approved design. If not needed, explain in report why not.

ADDED LANGUAGE IN THE REPORT TO WHY WE ARE NOT PROPOSING CONCRETE APRONS.

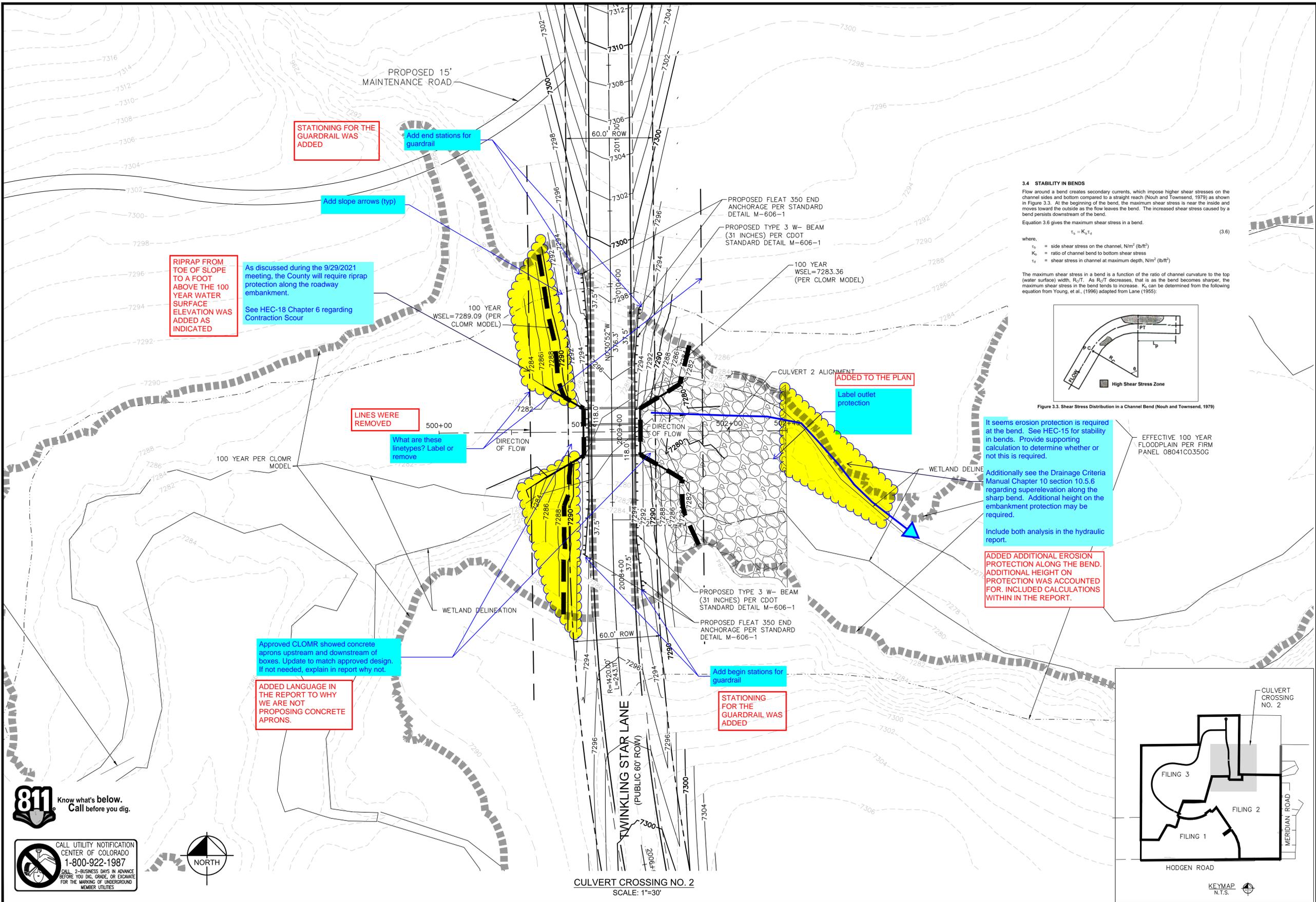
Add end stations for guardrail

STATIONING FOR THE GUARDRAIL WAS ADDED

Add begin stations for guardrail

STATIONING FOR THE GUARDRAIL WAS ADDED

K:\COS\_Civil\196106001\_Winsome Filing No. 3\CADD\PlanSheets\Culvert CDs\196106001\_SP-Exhibit.dwg Kofford, Kevin 9/7/2021 12:58 PM



**3.4 STABILITY IN BENDS**  
 Flow around a bend creates secondary currents, which impose higher shear stresses on the channel sides and bottom compared to a straight reach (Nouh and Townsend, 1979) as shown in Figure 3.3. At the beginning of the bend, the maximum shear stress is near the inside and moves toward the outside as the flow leaves the bend. The increased shear stress caused by a bend persists downstream of the bend.  
 Equation 3.6 gives the maximum shear stress in a bend.  

$$\tau_b = K_b \tau_d \quad (3.6)$$
  
 where,  
 $\tau_b$  = side shear stress on the channel,  $N/m^2$  ( $lb/ft^2$ )  
 $K_b$  = ratio of channel bend to bottom shear stress  
 $\tau_d$  = shear stress in channel at maximum depth,  $N/m^2$  ( $lb/ft^2$ )  
 The maximum shear stress in a bend is a function of the ratio of channel curvature to the top (water surface) width,  $R_c/T$ . As  $R_c/T$  decreases, that is as the bend becomes sharper, the maximum shear stress in the bend tends to increase.  $K_b$  can be determined from the following equation from Young, et al., (1996) adapted from Lane (1955):

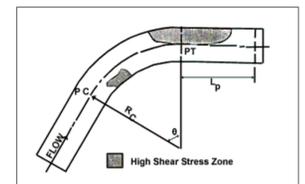


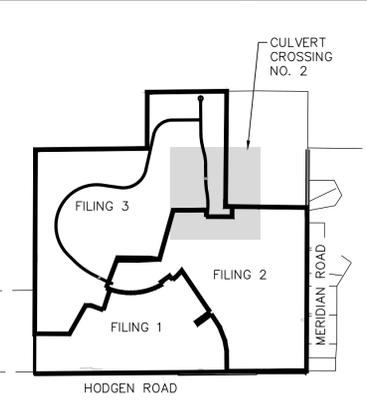
Figure 3.3. Shear Stress Distribution in a Channel Bend (Nouh and Townsend, 1979)

It seems erosion protection is required at the bend. See HEC-15 for stability in bends. Provide supporting calculation to determine whether or not this is required.

Additionally see the Drainage Criteria Manual Chapter 10 section 10.5.6 regarding superlevation along the sharp bend. Additional height on the embankment protection may be required.

Include both analysis in the hydraulic report.

EFFECTIVE 100 YEAR FLOODPLAIN PER FIRM PANEL 08041C0350G



**811** Know what's below. Call before you dig.

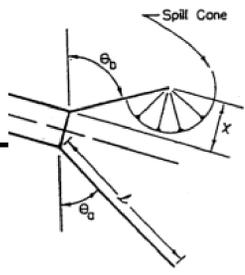
CALL UTILITY NOTIFICATION CENTER OF COLORADO 1-800-922-1987  
 CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES



CULVERT CROSSING NO. 2  
 SCALE: 1"=30'

<p>2021 KIMLEY-HORN AND ASSOCIATES, INC.                  2 North Nevada Avenue Suite 300                  Colorado Springs, Colorado 80903 (719) 453-0180</p>		NO.	REVISION	BY	DATE	APPR.
WINSOME FILING NO. 3 EL PASO COUNTY, COLORADO CONSTRUCTION DOCUMENTS <b>SITE PLAN</b>						
DESIGNED BY: KRK DRAWN BY: JRH CHECKED BY: KRK DATE: 9/3/2021						
PRELIMINARY FOR REVIEW ONLY NOT FOR CONSTRUCTION Kimley-Horn and Associates, Inc.						
PROJECT NO. 196106001						
SHEET <b>4</b>						

CDOT DESIGN HAS THE VARIABLE K AT 4' WHICH IS THE HEIGHT OF THE WALL. THE REMAINING GRADE IS TO SPILL AROUND THE WALL IN A SPILL CONE PER THE DETAIL. REFERENCE THE DETAIL FOR THE HEIGHT.



based on the contour it appears the wingwall needs to be extended. Update all wingwall lengths.

Check that this label is pointing to the correct data/line  
**LABEL WAS ADJUSTED**

**ADD SHEET #**  
**ADDED**

**Label ROW**  
**ROW IS NOT LABELED**

**WETLAND IS NOW LABELED**

**Show the 100yr WSEL**

Hydraulics report has outlet protection listed as Type L riprap. Update so plan and report match

**RIPRAP WAS UPDATED TO TYPE L TO MATCH**

**THIS WAS UPDATED TO THE 0.5% SLOPE**

Hydraulic report shows 0.50% slope. Revise report or plan to match

**100 YR WSEL IS NOW SHOWN ON THE PROFILE**

Show the 100yr WSEL on the profile.

update the note. Is the 7322.50 the WSEL.  
 Maybe "Extend riprap to 7322.50 to provide 1 foot of freeboard"

**LANGUAGE WAS UPDATED TO CLARIFY THAT THE RIPRAP WILL BE INSTALLED 1' ABOVE THE 100 WSEL**

Add reference to riprap detail on detail sheet

**REFERENCE TO THE RIPRAP DETAIL WAS ADDED.**

**Label proposed and existing ground**

**PROPOSED AND EXISTING GRADE ARE NOW LABELED.**

Toe wall now shown along with outlet protection

Show and label outlet protection and toewall

**EXTRA LINE WAS REMOVED**

Remove "extra" profile line

**REVISED**

Label grade break

Extend alignment past improvements

**ALIGNMENT WAS EXTENDED BEYOND RIPRAP**

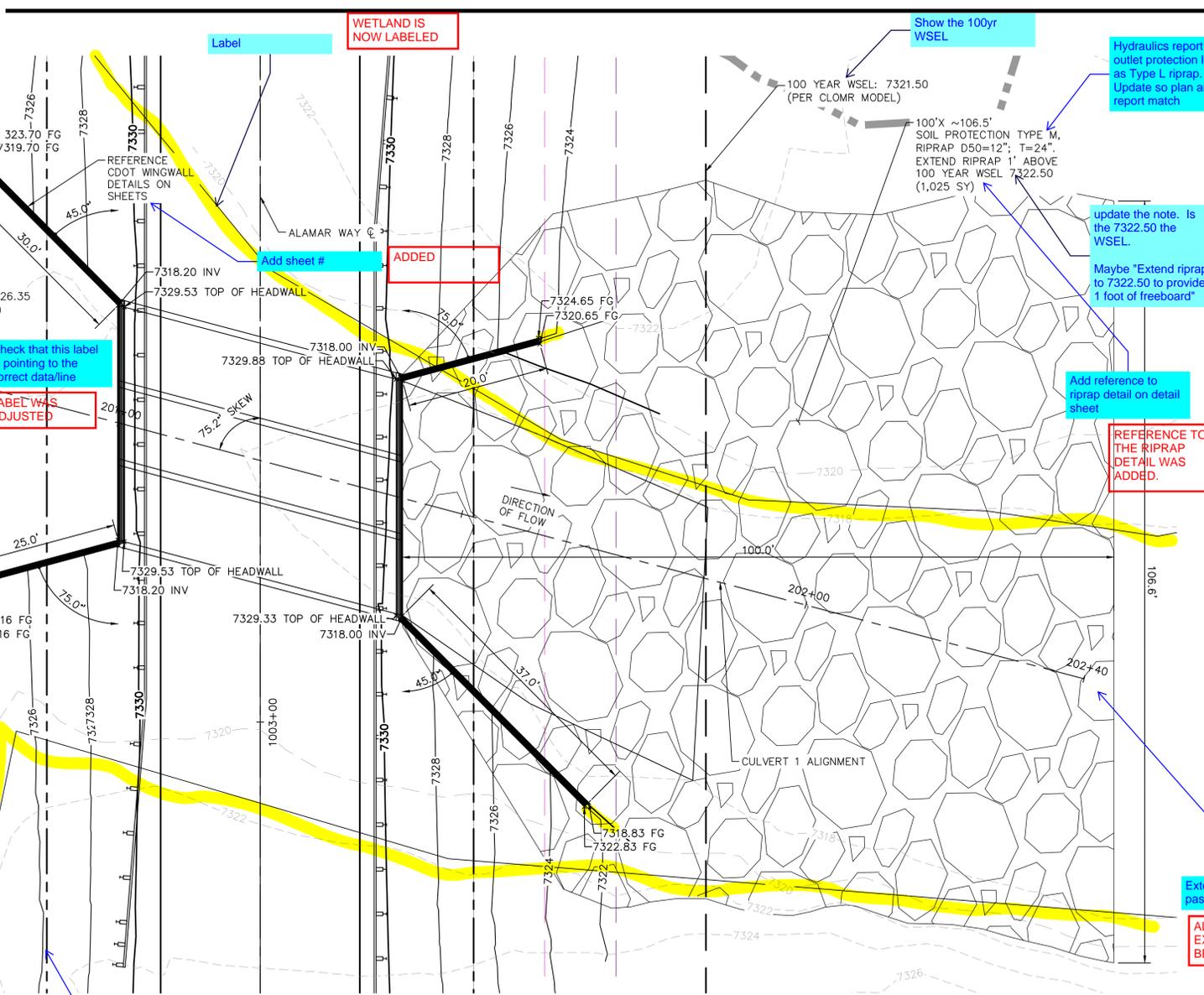
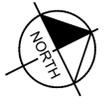
Show the riprap

Riprap now shown on the plan

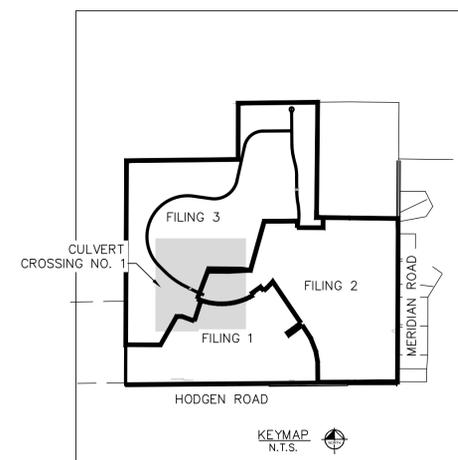
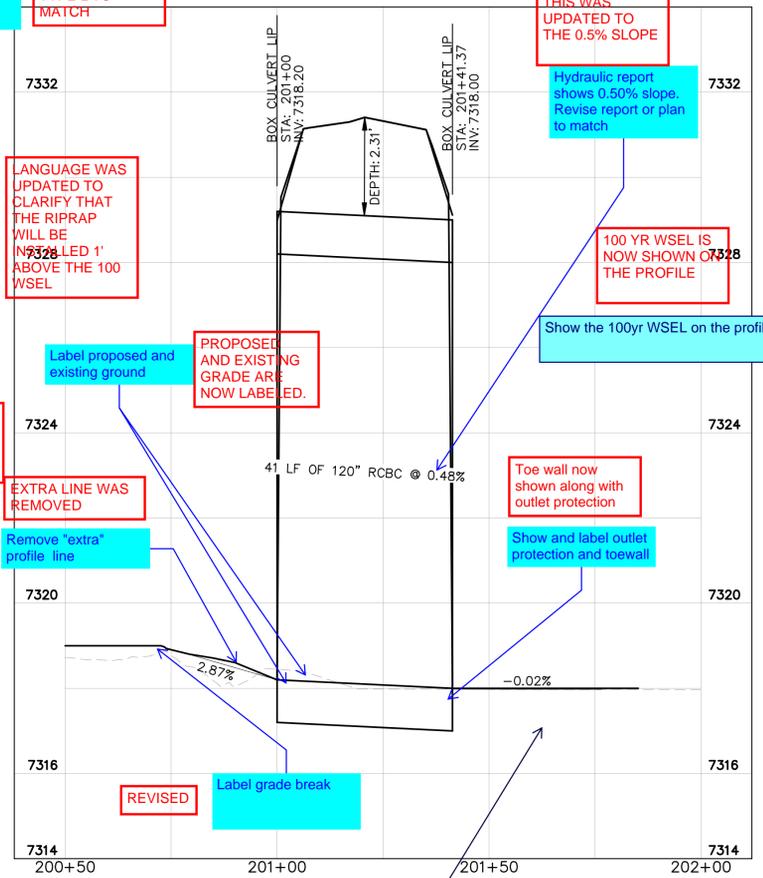
Label profile horizontal and vertical scale.

**HORIZONTAL AND VERTICAL SCALE ARE NOT PROVIDED**

K:\COS\_Civil\196106001\_Winsome Filing No. 3\CADD\PlanSheets\Culvert CDs\196106001\_SF.dwg Kofford, Kevin 9/7/2021 12:59 PM



CULVERT CROSSING NO. 1  
 SCALE: 1"=10'



NO.	REVISION	DATE	APPR.

**Kimley»Horn**  
 2021 KIMLEY-HORN AND ASSOCIATES, INC.  
 2 North Nevada Avenue Suite 300  
 Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
 DRAWN BY: JRH  
 CHECKED BY: KRK  
 DATE: 9/3/2021

WINSOME FILING NO. 3  
 EL PASO COUNTY, COLORADO  
 CONSTRUCTION DOCUMENTS  
**CULVERT 1-PLAN & PROFILE**

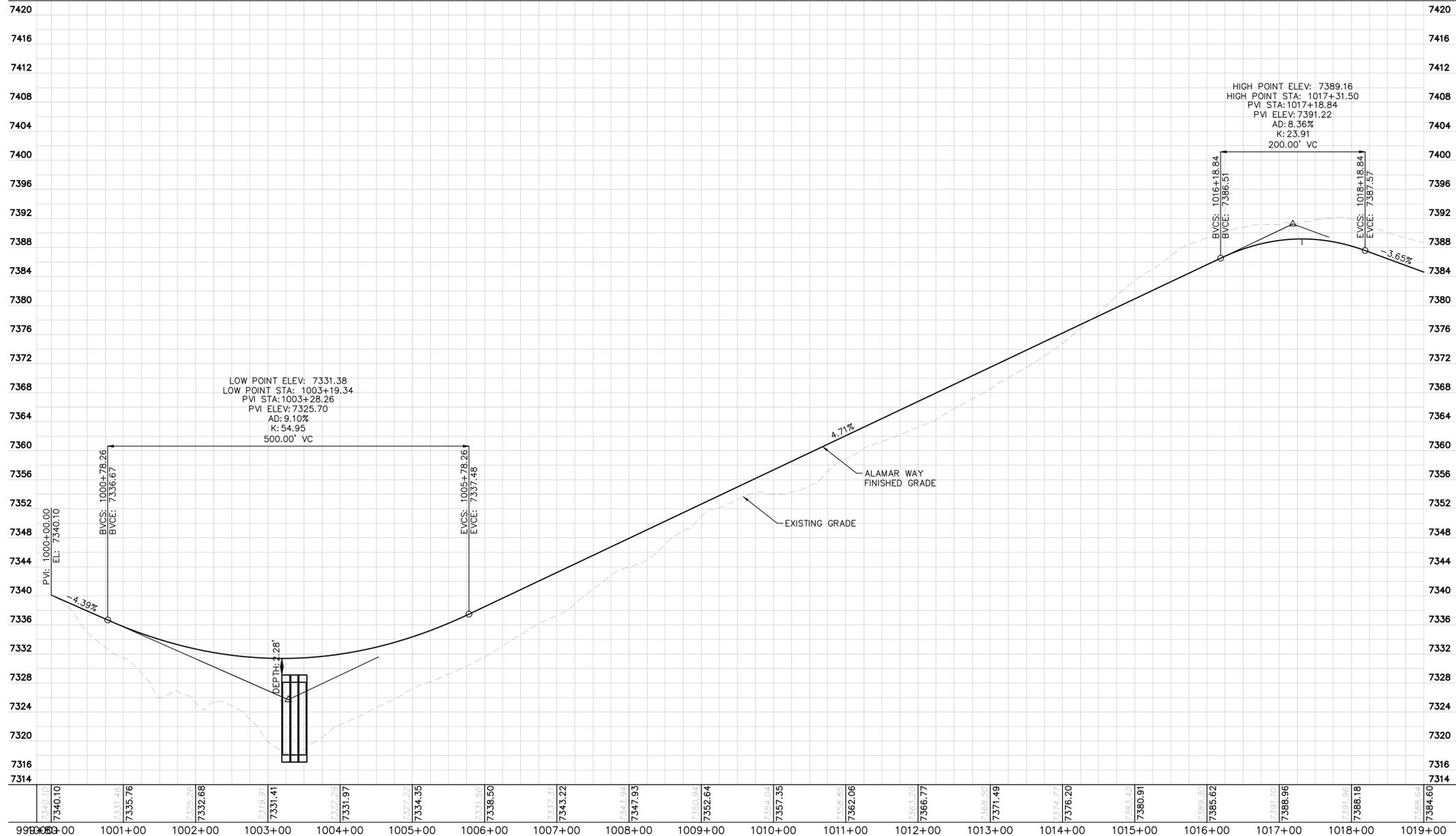
**PRELIMINARY**  
 FOR REVIEW ONLY  
 NOT FOR CONSTRUCTION  
**Kimley»Horn**  
 Kimley-Horn and Associates, Inc.

PROJECT NO.  
 196106001

SHEET  
**5**



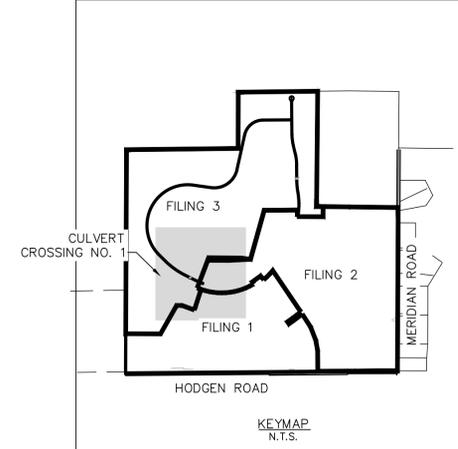
K:\COS\_Civil\196106001\_Winsome Filing No. 3\CADD\PlanSheets\Culvert CDs\196106001\_RD.dwg Kofford, Kevin 9/7/2021 12:59 PM



CULVERT CROSSING NO. 1- PROFILE  
SCALE: 1"=80'

Label vertical scale

VERTICAL SCALE  
NOW PROVIDED



NO.	REVISION	BY	DATE	APPR.

**Kimley»Horn**  
2021 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: JRH  
CHECKED BY: KRK  
DATE: 9/3/2021

WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
CONSTRUCTION DOCUMENTS  
ALAMAR WAY PROFILE

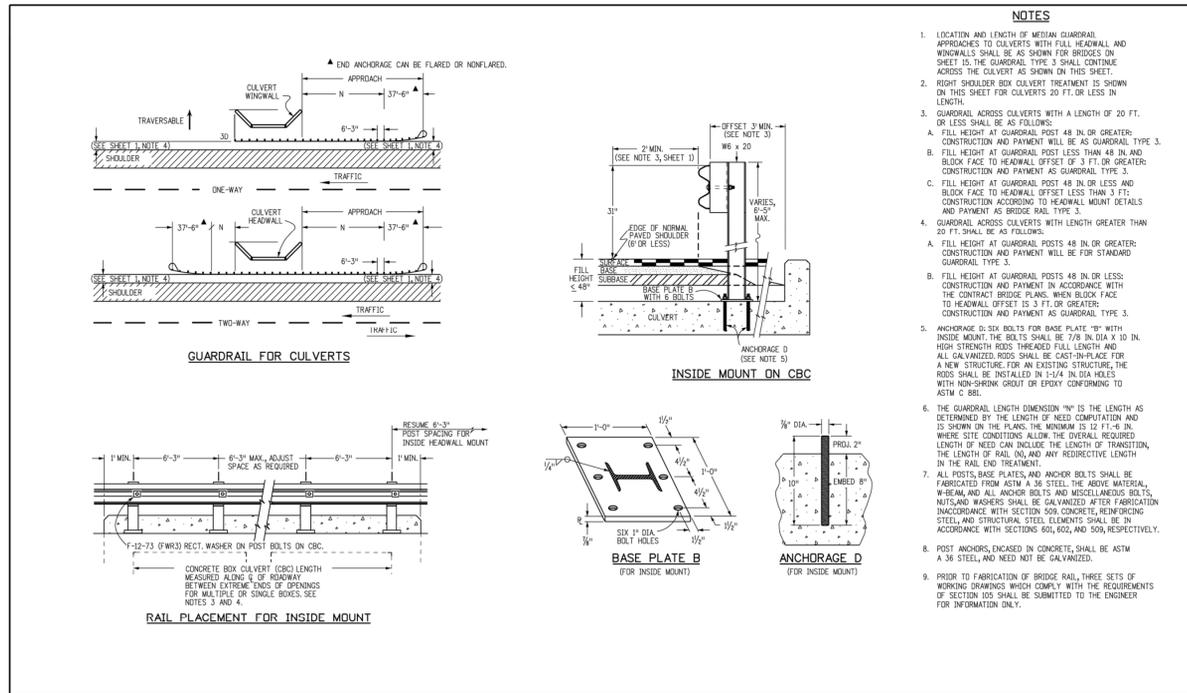
PRELIMINARY  
FOR REVIEW ONLY  
NOT FOR CONSTRUCTION  
**Kimley»Horn**  
Kimley-Horn and Associates, Inc.

PROJECT NO.  
196106001  
SHEET  
7



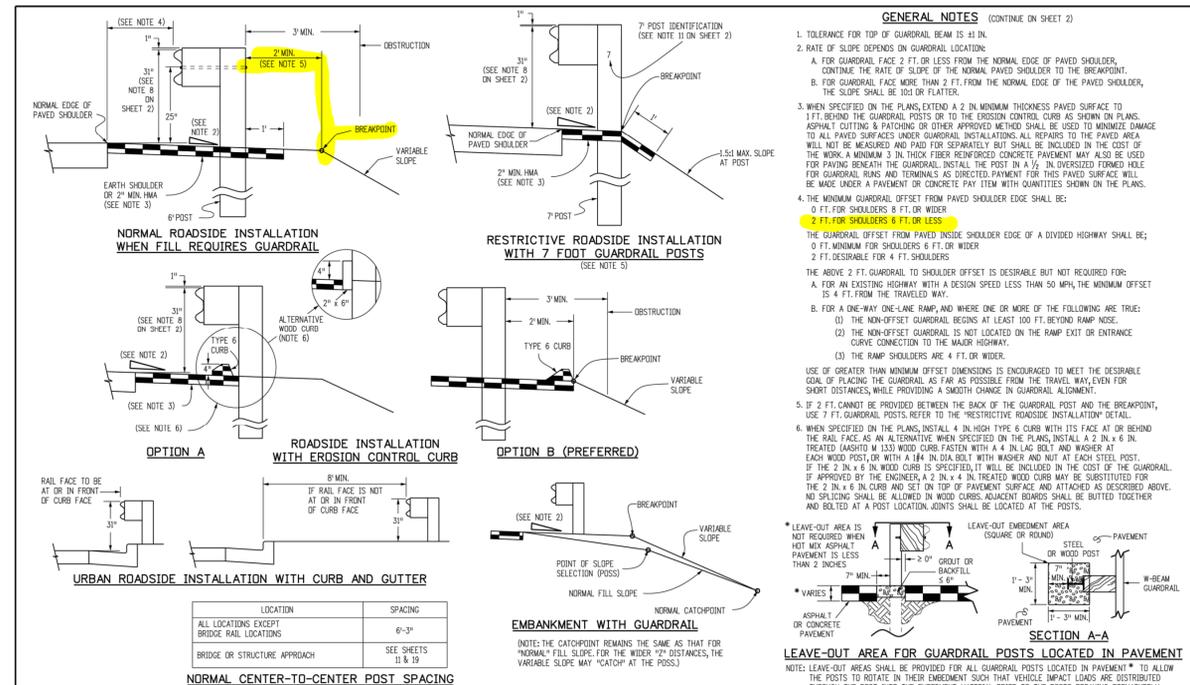






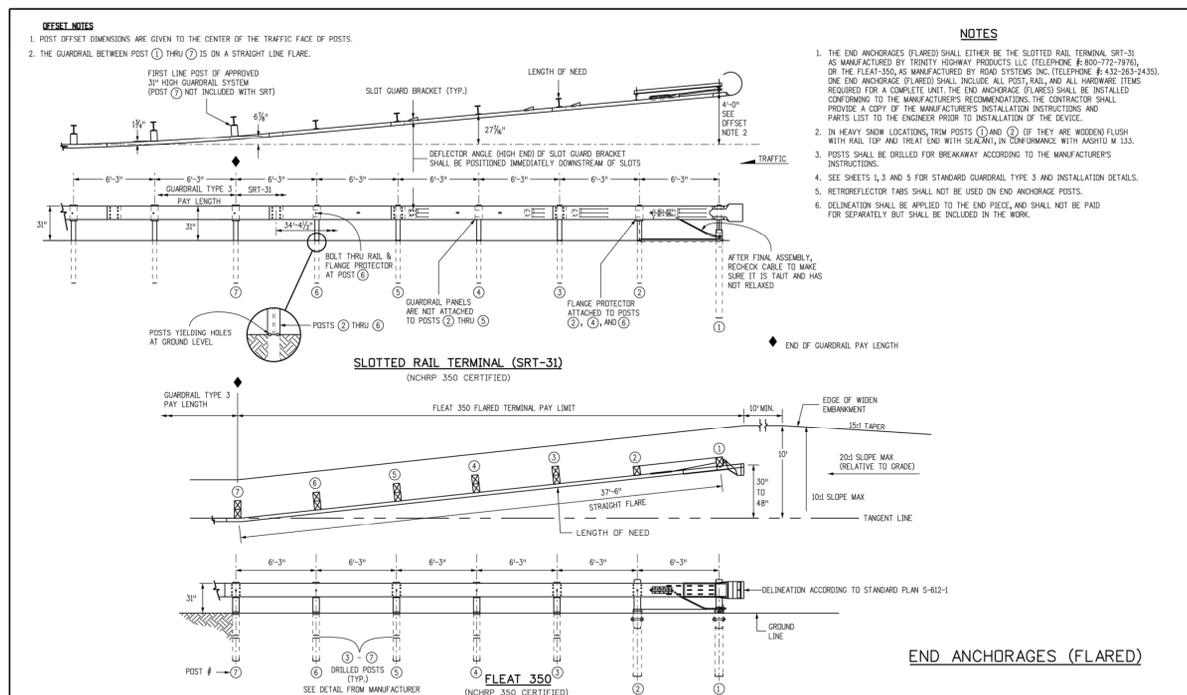
- NOTES**
- LOCATION AND LENGTH OF MEDIAN GUARDRAIL APPROACHES TO CULVERTS WITH FULL HEADWALL AND WINGWALLS SHALL BE AS SHOWN FOR BRIDGES ON SHEET 15. THE GUARDRAIL TYPE 3 SHALL CONTINUE ACROSS THE CULVERT AS SHOWN ON THIS SHEET.
  - RIGHT SHOULDER BOX CULVERT TREATMENT IS SHOWN ON THIS SHEET FOR CULVERTS 20 FT. OR LESS IN LENGTH.
  - GUARDRAIL ACROSS CULVERTS WITH A LENGTH OF 20 FT. OR LESS SHALL BE AS FOLLOWS:
    - FILL HEIGHT AT GUARDRAIL POST 48 IN. OR GREATER: CONSTRUCTION AND PAYMENT WILL BE AS GUARDRAIL TYPE 3.
    - FILL HEIGHT AT GUARDRAIL POST LESS THAN 48 IN. AND BLOCK FACE TO HEADWALL OFFSET OF 3 FT. OR GREATER: CONSTRUCTION AND PAYMENT AS GUARDRAIL TYPE 3.
    - FILL HEIGHT AT GUARDRAIL POST 48 IN. OR LESS AND BLOCK FACE TO HEADWALL OFFSET LESS THAN 3 FT.: CONSTRUCTION ACCORDING TO HEADWALL MOUNT DETAILS AND PAYMENT AS BRIDGE RAIL TYPE 3.
  - GUARDRAIL ACROSS CULVERTS WITH LENGTH GREATER THAN 20 FT. SHALL BE AS FOLLOWS:
    - FILL HEIGHT AT GUARDRAIL POSTS 48 IN. OR GREATER: CONSTRUCTION AND PAYMENT WILL BE FOR STANDARD GUARDRAIL TYPE 3.
    - FILL HEIGHT AT GUARDRAIL POSTS 48 IN. OR LESS: CONSTRUCTION AND PAYMENT IN ACCORDANCE WITH THE CONTRACT BRIDGE PLANS, WHEN BLOCK FACE TO HEADWALL OFFSET IS 3 FT. OR GREATER; CONSTRUCTION AND PAYMENT AS GUARDRAIL TYPE 3.
    - ANCHORAGE D BOX BOLTS FOR BASE PLATE "B" WITH INSIDE MOUNT. THE BOLTS SHALL BE 7/8" DIA. X 10" IN. HIGH STRENGTH RODS THREADED FULL LENGTH AND ALL GALVANIZED RODS SHALL BE CAST-IN-PLACE FOR A NEW STRUCTURE. FOR AN EXISTING STRUCTURE, THE RODS SHALL BE INSTALLED IN 1/4" DIA. HOLES WITH NON-SHRINK GROUT OR EPOXY CONFORMING TO ASTM C 881.
    - THE GUARDRAIL LENGTH DIMENSION "N" IS THE LENGTH AS DETERMINED BY THE LENGTH OF NEED COMPUTATION AND IS SHOWN ON THE PLANS. THE MINIMUM IS 12 FT. ± 0 IN. WHERE SITE CONDITIONS ALLOW. THE OVERALL REQUIRED LENGTH OF NEED CAN INCLUDE THE LENGTH OF TRAVEL, THE LENGTH OF RAIL IN AND ANY REDUCTIVE LENGTH IN THE RAIL END TREATMENT.
    - ALL POSTS, BASE PLATES, AND ANCHOR BOLTS SHALL BE FABRICATED FROM ASTM A 36 STEEL. THE ANCHOR MATERIAL, W-BEAM AND ALL ANCHOR BOLTS AND MISCELLANEOUS BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION. IN ACCORDANCE WITH SECTION 509, CONCRETE, REINFORCING STEEL AND STRUCTURAL STEEL ELEMENTS SHALL BE IN ACCORDANCE WITH SECTIONS 601, 602, AND 508, RESPECTIVELY.
    - POST ANCHORS, ENCASED IN CONCRETE, SHALL BE ASTM A 36 STEEL, AND NEED NOT BE GALVANIZED.
    - PRIOR TO FABRICATION OF BRIDGE RAIL, THREE SETS OF WORKING DRAWINGS WHICH COMPLY WITH THE REQUIREMENTS OF SECTION 102 SHALL BE SUBMITTED TO THE ENGINEER FOR INFORMATION ONLY.

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>Colorado Department of Transportation</b>		<b>MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES</b>		<b>STANDARD PLAN NO.</b>	
Creation Date: 11/20/18	Initials: JJP	Date:	Comments:	2829 West Howard Place	CDOT HQ, 3rd Floor	Denver, CO 80204	Phone: 303-757-9921	FAX: 303-757-9868	M-606-1
Last Modification Date: 12/21/18	Initials: LTA	12/21/18	Revised the location type 3, and Guardrail Type 3 Approach, Headwall Mount on CBC, Headwall Mount, Box Culvert, End and Anchor Bolts, Headwall Protection, See Notes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.	Division of Project Support	JJP/LTA	Issued By: Project Development Branch	November 1, 2018	Sheet No. 19 of 19	
Full Path: www.codot.gov/business/designsupport									
Drawing File Name: 606010019.dgn									
CAD Ver: MicroStation V8	Scale: Not to Scale	Units: English							



- GENERAL NOTES (CONTINUE ON SHEET 2)**
- TOLERANCE FOR TOP OF GUARDRAIL BEAM IS ±1 IN.
  - RATE OF SLOPE DEPENDS ON GUARDRAIL LOCATION:
    - FOR GUARDRAIL FACE 2 FT. OR LESS FROM THE NORMAL EDGE OF PAVED SHOULDER, CONTINUE THE RATE OF SLOPE OF THE NORMAL PAVED SHOULDER TO THE BREAKPOINT.
    - FOR GUARDRAIL FACE MORE THAN 2 FT. FROM THE NORMAL EDGE OF THE PAVED SHOULDER, THE SLOPE SHALL BE 10:1 OR FLATTER.
  - WHEN SPECIFIED ON THE PLANS, EXTEND A 2 IN. MINIMUM THICKNESS PAVED SURFACE TO 1 FT. BEHIND THE GUARDRAIL POSTS OR TO THE CROSSING CONTROL CURB AS SHOWN ON PLANS. ASPHALT CUTTING AND PATCHING OR OTHER APPROVED METHOD SHALL BE USED TO MINIMIZE DAMAGE TO ALL PAVED SURFACES UNDER GUARDRAIL INSTALLATIONS. ALL REPAIRS TO THE PAVED AREA WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WORK. A MINIMUM 3 IN. THICK FIBER REINFORCED CONCRETE PAVEMENT MAY ALSO BE USED FOR PAVING BENEATH THE GUARDRAIL. INSTALL THE POST IN A 1/2 IN. OVERSIZED FERROUS HOLE FOR GUARDRAIL BEAMS AND TERMINALS AS DIRECTED. PAYMENT FOR THIS PAVED SURFACE WILL BE MADE UNDER A PAVEMENT OR CONCRETE PAY ITEM WITH QUANTITIES SHOWN ON THE PLANS.
  - THE MINIMUM GUARDRAIL OFFSET FROM PAVED SHOULDER EDGE SHALL BE:
    - 0 FT. FOR SHOULDER 6 FT. OR WIDER
    - 2 FT. FOR SHOULDER 6 FT. OR LESS
 THE GUARDRAIL OFFSET FROM PAVED INSIDE SHOULDER EDGE OF A DIVIDED HIGHWAY SHALL BE:
    - 0 FT. MINIMUM FOR SHOULDER 6 FT. OR WIDER
    - 2 FT. DESIRABLE FOR 4 FT. SHOULDER
 THE ABOVE 2 FT. GUARDRAIL TO SHOULDER OFFSET IS DESIRABLE BUT NOT REQUIRED FOR:
    - FOR AN EXISTING HIGHWAY WITH A DESIGN SPEED LESS THAN 50 MPH, THE MINIMUM OFFSET IS 4 FT. FROM THE TRAVELED WAY.
    - FOR A ONE-WAY ONE-LANE RAMP, AND WHERE ONE OR MORE OF THE FOLLOWING ARE TRUE:
      - THE NON-OFFSET GUARDRAIL BEGINS AT LEAST 100 FT. BEYOND RAMP NOSE.
      - THE NON-OFFSET GUARDRAIL IS NOT LOCATED ON THE RAMP EXIT OR ENTRANCE CURVE CONNECTION TO THE MAJOR HIGHWAY.
      - THE RAMP SHOULDERS ARE 4 FT. OR WIDER.
 USE OF GREATER THAN MINIMUM OFFSET DIMENSIONS IS ENCOURAGED TO MEET THE DESIRABLE GOAL OF PLACING THE GUARDRAIL AS FAR AS POSSIBLE FROM THE TRAVEL WAY, EVEN FOR SHORT DISTANCES, WHILE PROVIDING A SMOOTH CHANGE IN GUARDRAIL ALIGNMENT.
  - IF 2 FT. CANNOT BE PROVIDED BETWEEN THE BACK OF THE GUARDRAIL POST AND THE BREAKPOINT, IF APPROVED BY THE ENGINEER, A 2 IN. x 4 IN. TREATED WOOD CURB MAY BE SUBSTITUTED FOR THE 2 IN. x 6 IN. WOOD CURB. ADJACENT BORDERS SHALL BE BUTTED TOGETHER AND BOLTED AT A POST LOCATION, JOINTS SHALL BE LOCATED AT THE POSTS.
  - IF THE 2 IN. x 6 IN. WOOD CURB IS SPECIFIED, IT WILL BE INCLUDED IN THE COST OF THE GUARDRAIL. IF APPROVED BY THE ENGINEER, A 2 IN. x 4 IN. TREATED WOOD CURB MAY BE SUBSTITUTED FOR THE 2 IN. x 6 IN. WOOD CURB AND SET ON TOP OF PAVEMENT SURFACE AND ATTACHED AS DESCRIBED ABOVE. NO SLOPING SHALL BE ALLOWED IN WOOD CURBS. ADJACENT BORDERS SHALL BE BUTTED TOGETHER AND BOLTED AT A POST LOCATION, JOINTS SHALL BE LOCATED AT THE POSTS.
- LEAVE-OUT AREA FOR GUARDRAIL POSTS LOCATED IN PAVEMENT\*** TO ALLOW THE POSTS TO ROTATE IN THEIR EMBEDMENT SUCH THAT VEHICLE IMPACT LOADS ARE DISTRIBUTED THROUGH THE POST INTO THE EMBEDMENT MATERIAL PRIOR TO THE POSTS BREAKING PREMATURELY.

<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>Colorado Department of Transportation</b>		<b>MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES</b>		<b>STANDARD PLAN NO.</b>	
Creation Date: 11/20/18	Initials: JJP	Date:	Comments:	2829 West Howard Place	CDOT HQ, 3rd Floor	Denver, CO 80204	Phone: 303-757-9921	FAX: 303-757-9868	M-606-1
Last Modification Date: 12/21/18	Initials: LTA	12/21/18	Revised the location type 3, and Guardrail Type 3 Approach, Headwall Mount on CBC, Headwall Mount, Box Culvert, End and Anchor Bolts, Headwall Protection, See Notes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.	Division of Project Support	JJP/LTA	Issued By: Project Development Branch	November 1, 2018	Sheet No. 1 of 19	
Full Path: www.codot.gov/business/designsupport									
Drawing File Name: 606010019.dgn									
CAD Ver: MicroStation V8	Scale: Not to Scale	Units: English							



<b>Computer File Information</b>		<b>Sheet Revisions</b>		<b>Colorado Department of Transportation</b>		<b>MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 3 W-BEAM 31 INCHES</b>		<b>STANDARD PLAN NO.</b>	
Creation Date: 11/20/18	Initials: JJP	Date:	Comments:	2829 West Howard Place	CDOT HQ, 3rd Floor	Denver, CO 80204	Phone: 303-757-9921	FAX: 303-757-9868	M-606-1
Last Modification Date: 12/21/18	Initials: LTA			Division of Project Support	JJP/LTA	Issued By: Project Development Branch	November 1, 2018	Sheet No. 6 of 19	
Full Path: www.codot.gov/business/designsupport									
Drawing File Name: 606010019.dgn									
CAD Ver: MicroStation V8	Scale: Not to Scale	Units: English							

Add all the applicable CDOT Detail M-606-1 sheets

ADDED MORE APPLICABLE GUARDRAIL DETAILS.

K:\COS\_Civil\196106001\_Winsome Filing No. 3\CAD\PlanSheets\Culvert Cds\196106001\_DT.dwg Kofford, Kevin 9/7/2021 1:00 PM

NO.	REVISION	BY	DATE	APPR.

**Kimley-Horn**

2021 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: JRH  
CHECKED BY: KRK  
DATE: 9/3/2021

WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
CONSTRUCTION DOCUMENTS  
CULVERT DETAILS

PRELIMINARY  
FOR REVIEW ONLY  
NOT FOR CONSTRUCTION

**Kimley-Horn**  
Kimley-Horn and Associates, Inc.

PROJECT NO.  
196106001

SHEET

# Culvert CDs\_v1 redlines.pdf Markup Summary

CDurham (33)

Engineer's Statement

**Subject:** Text Box  
**Page Label:** 1  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:52:05 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Engineer's Statement

County Engineer signature block

**Subject:** Text Box  
**Page Label:** 1  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:52:17 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

County Engineer signature block

Including legends on sheets would help with the various linetypes throughout the plan set.

**Subject:** Text Box  
**Page Label:** 1  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:52:27 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Including legends on sheets would help with the various linetypes throughout the plan set.

Hydraulics report has outlet protection listed as Type L riprap. Update so plan and report match

Hydraulics report has outlet protection listed as Type L riprap. Update so plan and report match

**Subject:** Callout  
**Page Label:** 2  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:53:02 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Hydraulics report has outlet protection listed as Type L riprap. Update so plan and report match



**Subject:** Callout  
**Page Label:** 3  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:54:15 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Approved CLOMR showed concrete aprons upstream and downstream of boxes. Update to match approved design. If not needed, explain in report why not.



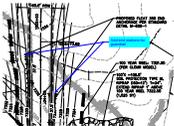
**Subject:** Callout  
**Page Label:** 3  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:55:06 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

What are these linetypes? Label or remove



**Subject:** Callout  
**Page Label:** 3  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:55:28 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Add begin stations for guardrail



**Subject:** Callout  
**Page Label:** 3  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:55:54 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Add end stations for guardrail



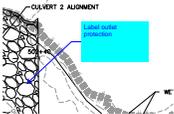
**Subject:** Callout  
**Page Label:** 4  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:56:31 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Approved CLOMR showed concrete aprons upstream and downstream of boxes. Update to match approved design. If not needed, explain in report why not.



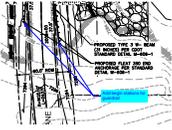
**Subject:** Callout  
**Page Label:** 4  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:57:21 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

What are these linetypes? Label or remove



**Subject:** Callout  
**Page Label:** 4  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:57:31 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Label outlet protection



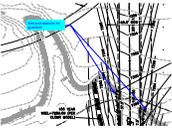
**Subject:** Callout  
**Page Label:** 4  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:57:55 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Add begin stations for guardrail



**Subject:** Callout  
**Page Label:** 4  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:58:07 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Add slope arrows (typ)



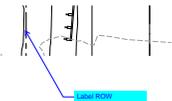
**Subject:** Callout  
**Page Label:** 4  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:58:25 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Add end stations for guardrail



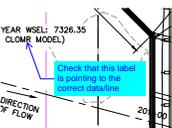
**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:59:13 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Add sheet #



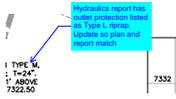
**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 11:59:34 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Label ROW



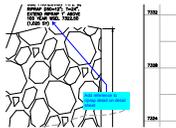
**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:00:10 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Check that this label is pointing to the correct data/line



**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:00:54 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Hydraulics report has outlet protection listed as Type L riprap. Update so plan and report match



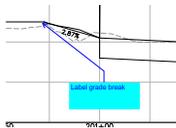
**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:01:48 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Add reference to riprap detail on detail sheet



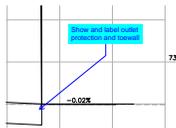
**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:02:11 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Extend alignment past improvements



**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:02:22 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Label grade break



**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:03:02 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Show and label outlet protection and toewall



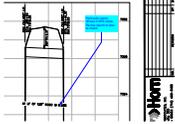
**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:03:21 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Label proposed and existing ground



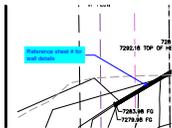
**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:03:24 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Remove "extra" profile line



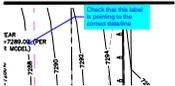
**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:03:34 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Hydraulic report shows 0.50% slope. Revise report or plan to match



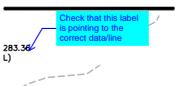
**Subject:** Callout  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:04:11 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Reference sheet # for wall details



**Subject:** Callout  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:04:22 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Check that this label is pointing to the correct data/line



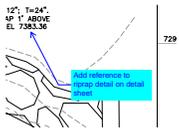
**Subject:** Callout  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:09:06 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Check that this label is pointing to the correct data/line



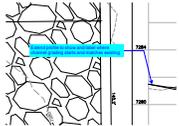
**Subject:** Callout  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:09:18 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Hydraulics report has outlet protection listed as Type L riprap. Update so plan and report match



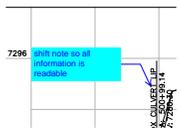
**Subject:** Callout  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:09:43 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Add reference to riprap detail on detail sheet



**Subject:** Callout  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:10:08 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Extend profile to show and label where channel grading starts and matches existing



**Subject:** Callout  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:10:36 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Shift note so all information is readable



**Subject:** Callout  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** CDurham  
**Date:** 10/25/2021 12:10:49 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Extend profile to show extents of outlet protection & label matching location

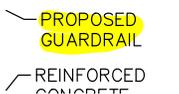
---

dsdlaforce (44)

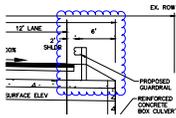


**Subject:** Text Box  
**Page Label:** 1  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 2:19:48 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Add "PCD File No. CDR-21-012"



**Subject:** Highlight  
**Page Label:** 2  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 2:41:03 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**



---

**Subject:** Cloud  
**Page Label:** 2  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 2:53:00 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**



---

**Subject:** Cloud  
**Page Label:** 3  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:16:00 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**



---

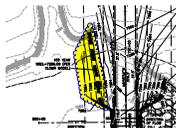
**Subject:** Cloud  
**Page Label:** 3  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:16:51 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**



---

**Subject:** Callout  
**Page Label:** 3  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:22:20 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

As discussed during the 9/29/2021 meeting, the County will require riprap protection along the roadway embankment.



---

**Subject:** Polygon  
**Page Label:** 4  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:23:45 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**



---

**Subject:** Polygon  
**Page Label:** 4  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:24:31 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**



**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:49:13 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

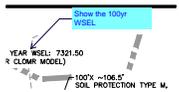
update the note. Is the 7322.50 the WSEL.

Maybe "Extend riprap to 7322.50 to provide 1 foot of freeboard"



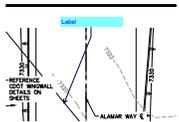
**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:53:01 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Show the riprap



**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:54:14 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Show the 100yr WSEL

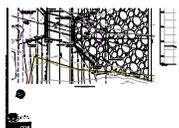


**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:54:27 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

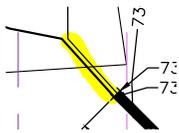
Label



**Subject:** Highlight  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:54:58 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

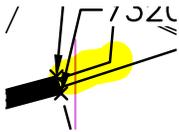


**Subject:** Highlight  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:55:09 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**



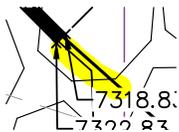
---

**Subject:** Highlight  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:56:05 PM  
**Status:**  
**Color:**   
**Layer:**  
**Space:**



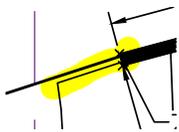
---

**Subject:** Highlight  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:56:38 PM  
**Status:**  
**Color:**   
**Layer:**  
**Space:**



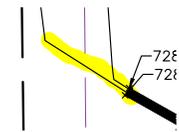
---

**Subject:** Highlight  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:56:46 PM  
**Status:**  
**Color:**   
**Layer:**  
**Space:**



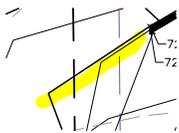
---

**Subject:** Highlight  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:57:27 PM  
**Status:**  
**Color:**   
**Layer:**  
**Space:**



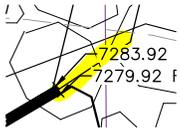
---

**Subject:** Highlight  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:59:12 PM  
**Status:**  
**Color:**   
**Layer:**  
**Space:**



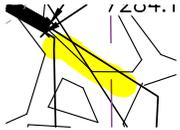
---

**Subject:** Highlight  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:59:20 PM  
**Status:**  
**Color:**   
**Layer:**  
**Space:**



-----

**Subject:** Highlight  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:59:39 PM  
**Status:**  
**Color:**   
**Layer:**  
**Space:**



-----

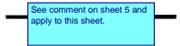
**Subject:** Highlight  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:59:42 PM  
**Status:**  
**Color:**   
**Layer:**  
**Space:**



-----

**Subject:** Callout  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 3:59:45 PM  
**Status:**  
**Color:**   
**Layer:**  
**Space:**

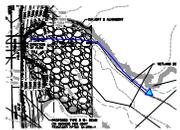
based on the contour it appears the wingwall needs to be extended.  
 Update all wingwall lengths.



-----

**Subject:** Text Box  
**Page Label:** 6  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/22/2021 4:00:51 PM  
**Status:**  
**Color:**   
**Layer:**  
**Space:**

See comment on sheet 5 and apply to this sheet.



-----

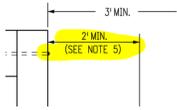
**Subject:** PolyLine  
**Page Label:** 4  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 1:03:21 PM  
**Status:**  
**Color:**   
**Layer:**  
**Space:**



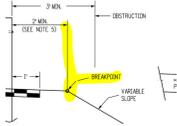
-----

**Subject:** Image  
**Page Label:** 4  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 1:03:46 PM  
**Status:**  
**Color:**   
**Layer:**  
**Space:**





**Subject:** Highlight  
**Page Label:** 11  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 10:35:20 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

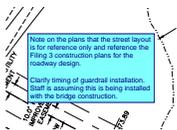


**Subject:** Highlight  
**Page Label:** 11  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 10:35:23 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**



**Subject:** Text Box  
**Page Label:** 11  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 10:35:54 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

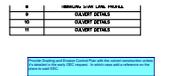
Add all the applicable CDOT Detail M-606-1 sheets



**Subject:** Text Box  
**Page Label:** 2  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 10:43:50 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

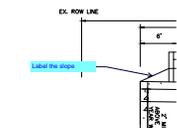
Note on the plans that the street layout is for reference only and reference the Filing 3 construction plans for the roadway design.

Clarify timing of guardrail installation. Staff is assuming this is being installed with the bridge construction.



**Subject:** Text Box  
**Page Label:** 1  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 10:56:07 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Provide Grading and Erosion Control Plan with the culvert construction unless it's detailed in the early GEC request. In which case add a reference on the plans to said GEC.



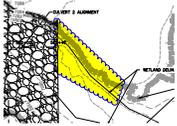
**Subject:** Callout  
**Page Label:** 2  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 10:57:42 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Label the slope

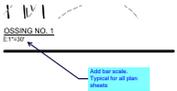
Add Developer's Signature Block

**Subject:** Text Box  
**Page Label:** 1  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 12:47:28 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Add Developer's Signature Block

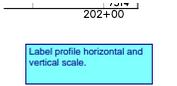


**Subject:** Cloud  
**Page Label:** 4  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 12:59:05 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**



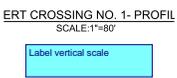
**Subject:** Callout  
**Page Label:** 3  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 2:27:31 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Add bar scale. Typical for all plan sheets



**Subject:** Text Box  
**Page Label:** 5  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 2:28:34 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Label profile horizontal and vertical scale.



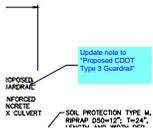
**Subject:** Text Box  
**Page Label:** 7  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 2:29:09 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Label vertical scale



**Subject:** Cloud+  
**Page Label:** 10  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 8:58:13 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Update to provide bench. See redline comments on sheet 2



**Subject:** Callout  
**Page Label:** 2  
**Lock:** Unlocked  
**Author:** dsdlaforce  
**Date:** 10/25/2021 9:10:47 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Update note to "Proposed CDOT Type 3 Guardrail"