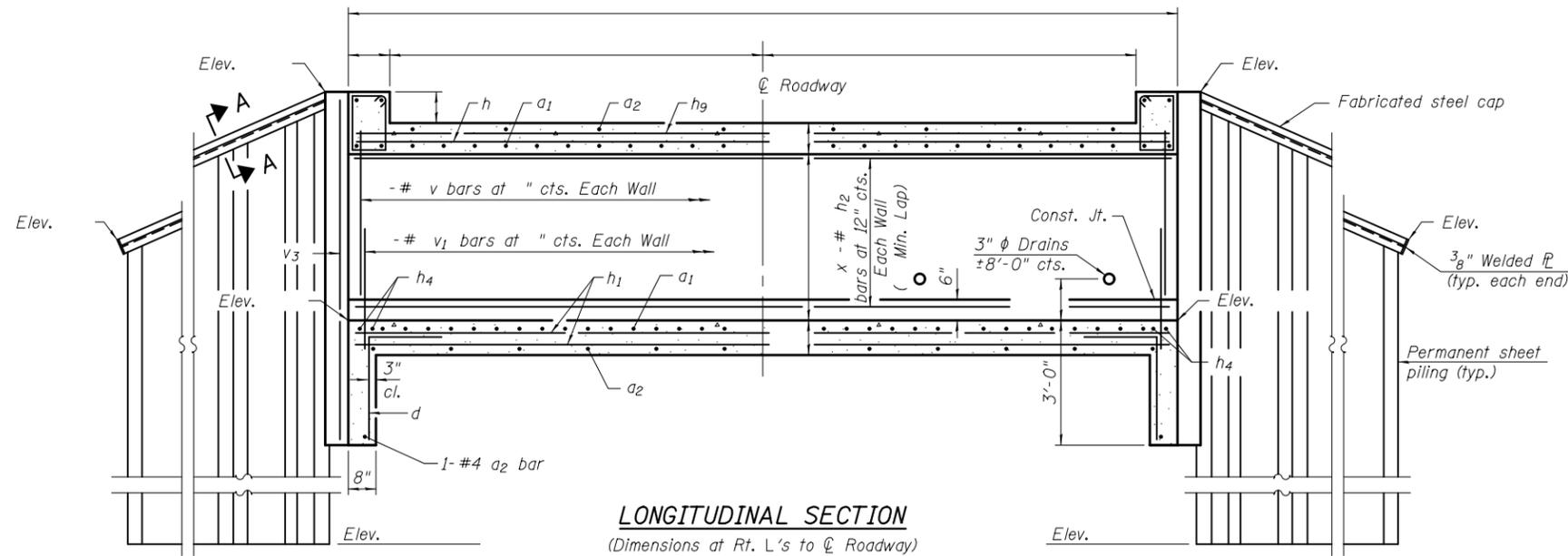
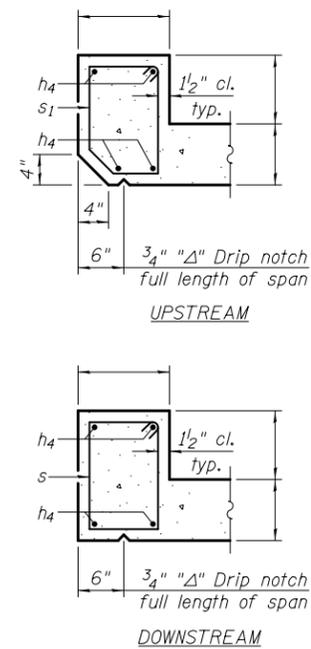


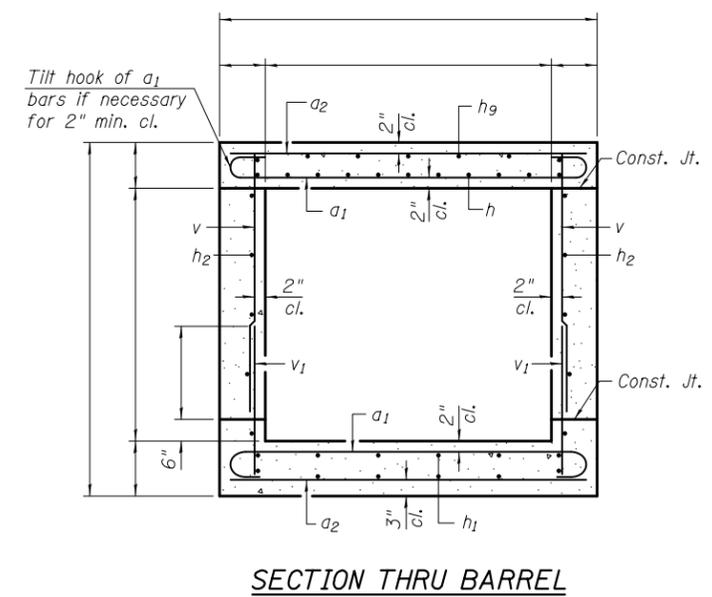
CELL / MODEL NAME	DESCRIPTION	DATE
TSA-SB-PSSP-LS	2 rows of reinf in top slab; 1 row of reinf in each sidewall; Permanent Steel Sheet Pile Wingwalls, Left Skew	10/15/2016
TSA-SB-PSSP-RS	2 rows of reinf in top slab; 1 row of reinf in each sidewall; Permanent Steel Sheet Pile Wingwalls, Right Skew	10/15/2016
TSA-SB-PSSP-ZS	2 rows of reinf in top slab; 1 row of reinf in each sidewall; Permanent Steel Sheet Pile Wingwalls, Zero Skew	10/15/2016
TSA-SC-PSSP-LS	2 rows of reinf in top slab; 2 rows of reinf in each sidewall; Permanent Steel Sheet Pile Wingwalls, Left Skew	10/15/2016
TSA-SC-PSSP-RS	2 rows of reinf in top slab; 2 rows of reinf in each sidewall; Permanent Steel Sheet Pile Wingwalls, Right Skew	10/15/2016
TSA-SC-PSSP-ZS	2 rows of reinf in top slab; 2 rows of reinf in each sidewall; Permanent Steel Sheet Pile Wingwalls, Zero Skew	10/15/2016
TSB-SB-PSSP-LS	1 row of reinf in top slab; 1 row of reinf in each sidewall; Permanent Steel Sheet Pile Wingwalls, Left Skew	10/15/2016
TSB-SB-PSSP-RS	1 row of reinf in top slab; 1 row of reinf in each sidewall; Permanent Steel Sheet Pile Wingwalls, Right Skew	10/15/2016
TSB-SB-PSSP-ZS	1 row of reinf in top slab; 1 row of reinf in each sidewall; Permanent Steel Sheet Pile Wingwalls, Zero Skew	10/15/2016
TSB-SC-PSSP-LS	1 row of reinf in top slab; 2 rows of reinf in each sidewall; Permanent Steel Sheet Pile Wingwalls, Left Skew	10/15/2016
TSB-SC-PSSP-RS	1 row of reinf in top slab; 2 rows of reinf in each sidewall; Permanent Steel Sheet Pile Wingwalls, Right Skew	10/15/2016
TSB-SC-PSSP-ZS	1 row of reinf in top slab; 2 rows of reinf in each sidewall; Permanent Steel Sheet Pile Wingwalls, Zero Skew	10/15/2016



LONGITUDINAL SECTION
(Dimensions at Rt. L's to C Roadway)



SECTION THRU HEADWALL

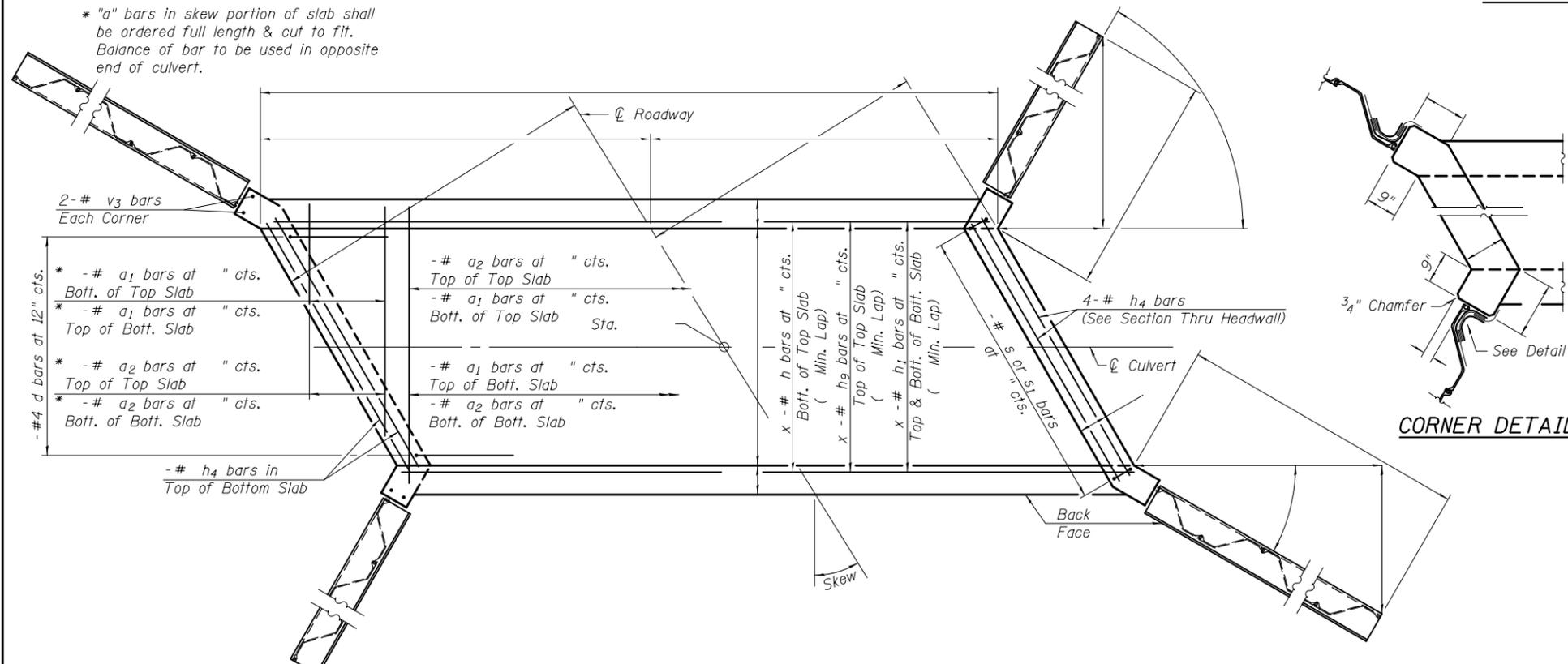


SECTION THRU BARREL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁	#			
a ₂	#			
d	#4	4'-5"		
h	#			
h ₁	#			
h ₂	#			
h ₄	#			
h ₉	#			
s	#			
s ₁	#			
v	#			
v ₁	#			
v ₃	#			
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Permanent Sheet Piling			Sq. Ft.	

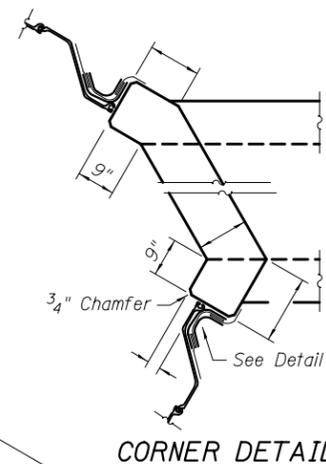
* "a" bars in skew portion of slab shall be ordered full length & cut to fit. Balance of bar to be used in opposite end of culvert.



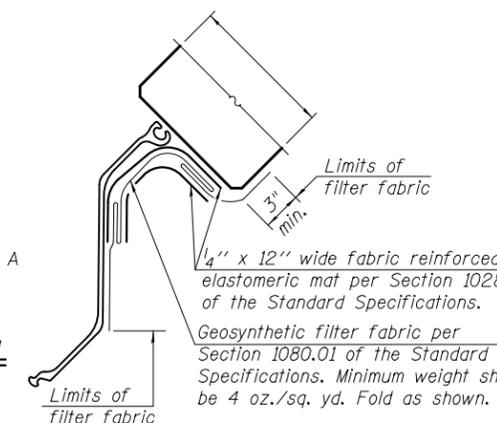
SHOWING TOEWALL

PLAN

SHOWING HEADWALL

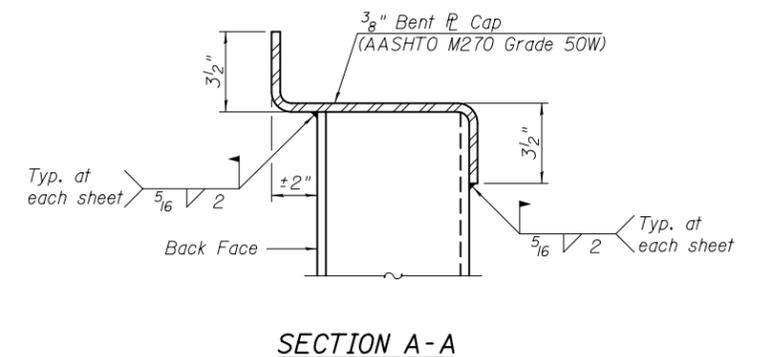
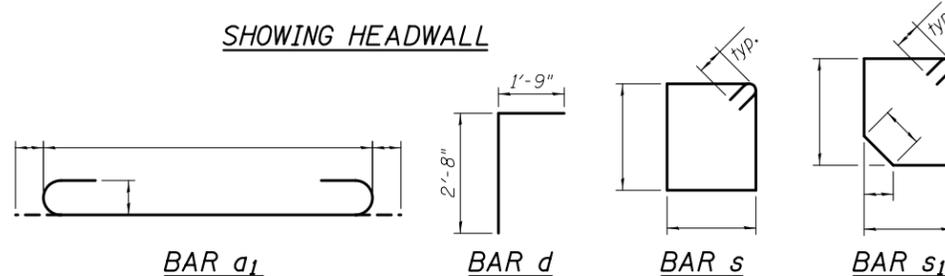


CORNER DETAIL



DETAIL A

Notes:
 Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
 At the Contractor's option, a longer v₁ bar may be ordered to replace the v bar. No reduction in quantities shall be made for this substitution.
 The minimum effective section modulus of the permanent steel sheet pile wall shall be in.³/ft.
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 The cost of furnishing and installing the fabricated steel cap, elastomeric mat, and filter fabric shall be included in the cost of Permanent Sheet Piling.



SECTION A-A

TSA-SB-PSSP-LS

10-15-2016

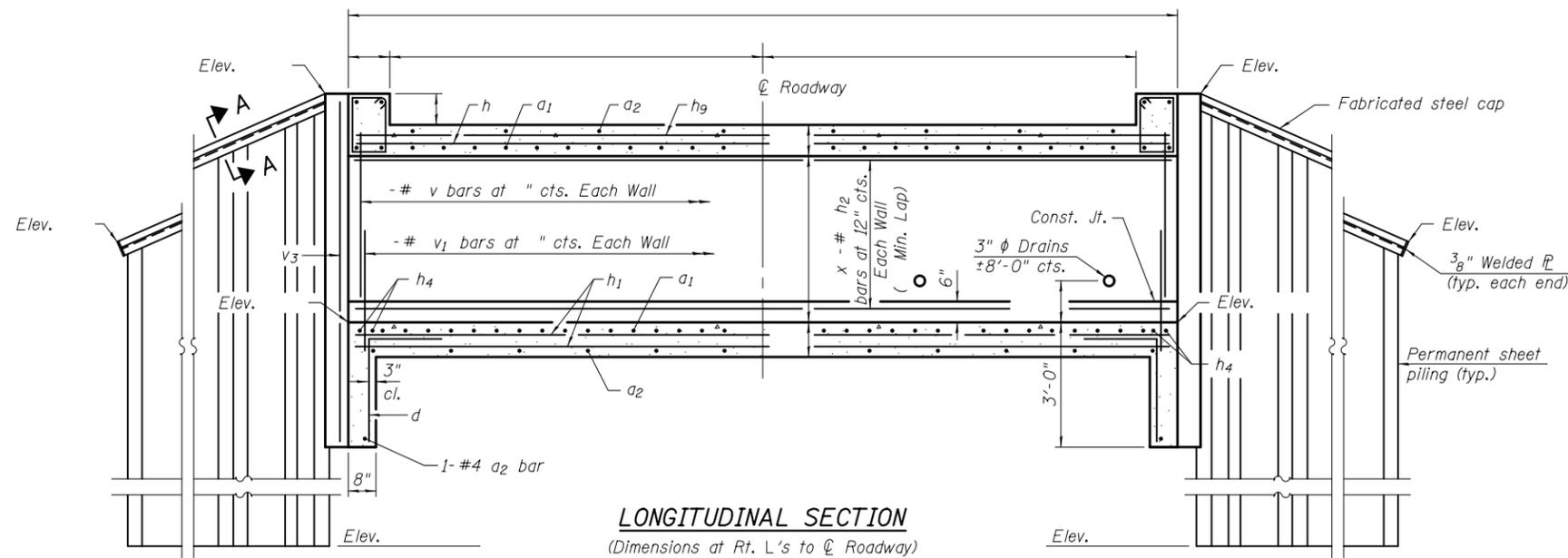
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		DRAWN -	REVISD
		CHECKED -	REVISD

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

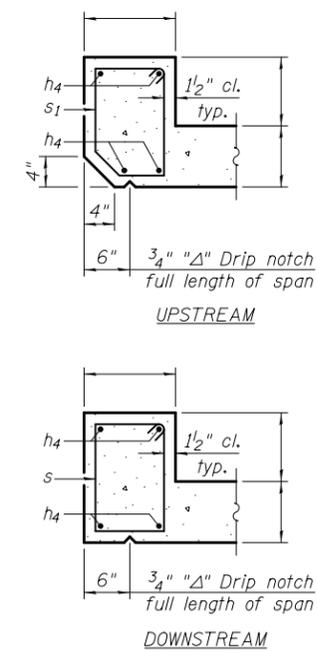
**CULVERT DETAILS
STRUCTURE NO.**

SHEET NO. OF SHEETS

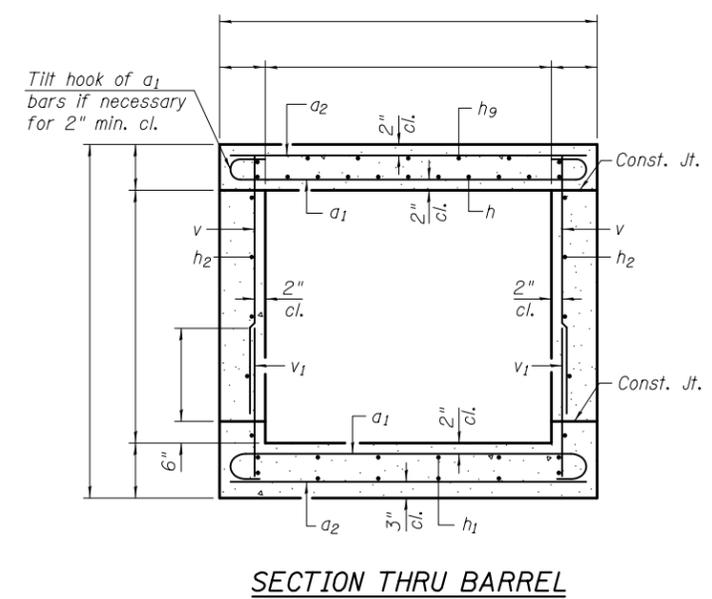
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



LONGITUDINAL SECTION
(Dimensions at Rt. L's to C Roadway)



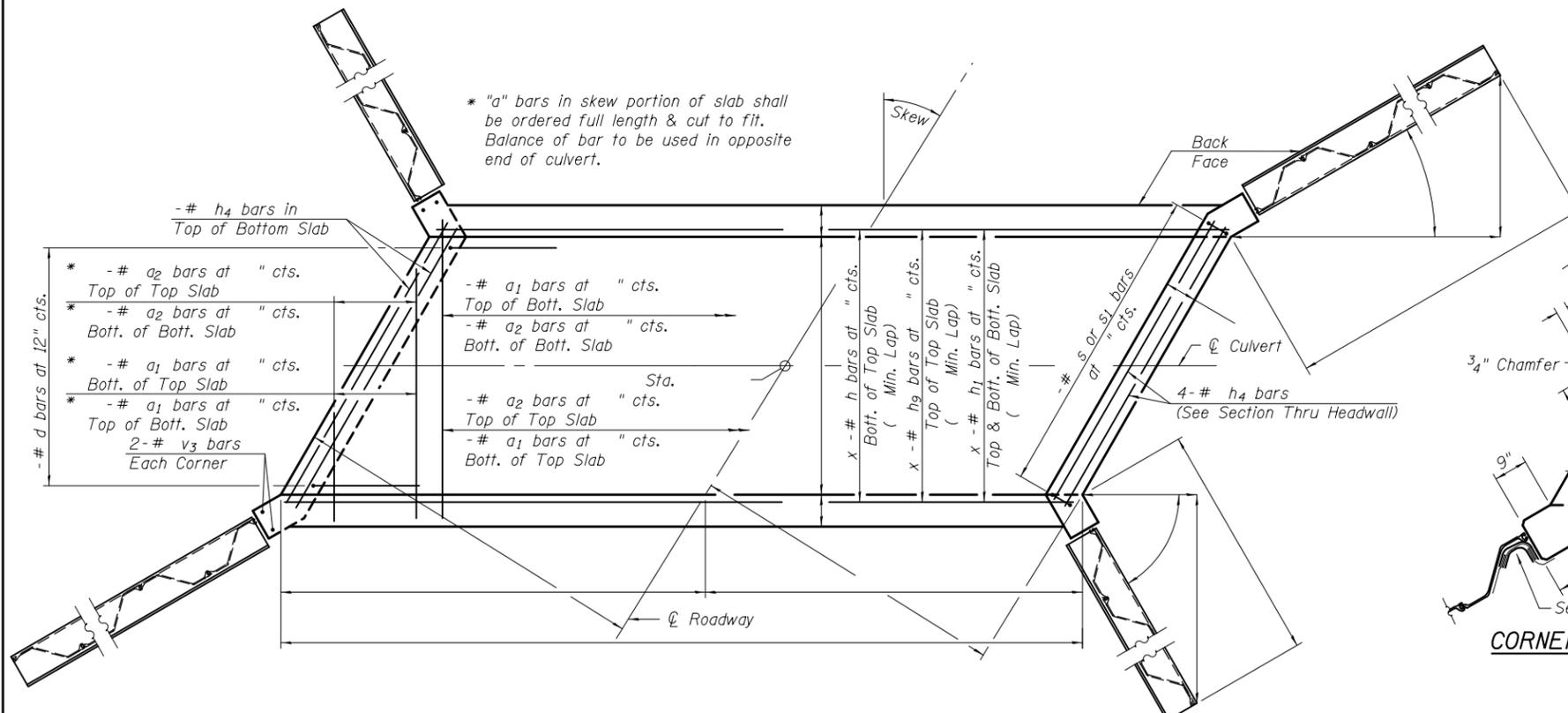
SECTION THRU HEADWALL



SECTION THRU BARREL

BILL OF MATERIAL

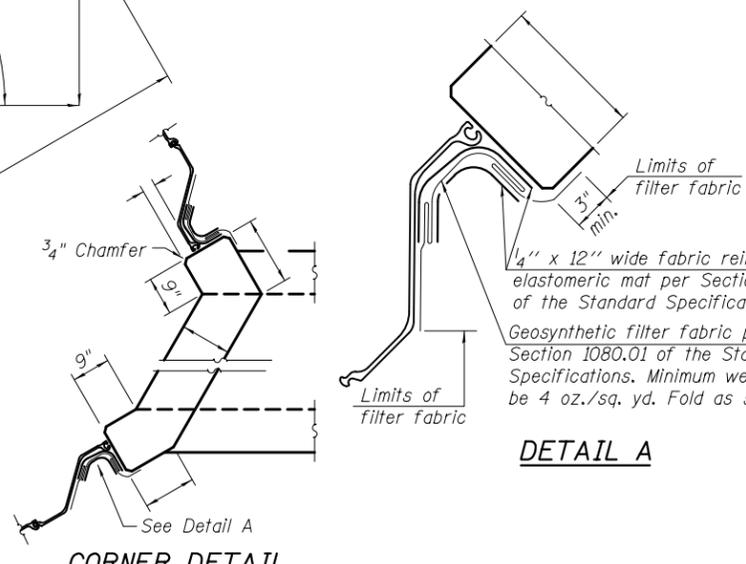
Bar	No.	Size	Length	Shape
a ₁		#		
a ₂		#		
d		#4	4'-5"	
h		#		
h ₁		#		
h ₂		#		
h ₄		#		
h ₉		#		
s		#		
s ₁		#		
v		#		
v ₁		#		
v ₃		#		
Concrete Box Culverts				Cu. Yd.
Reinforcement Bars				Pound
Permanent Sheet Piling				Sq. Ft.



SHOWING TOEWALL

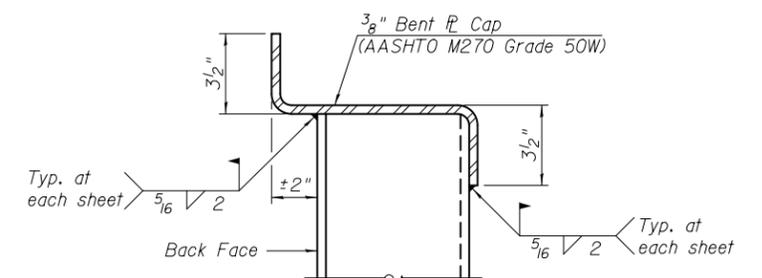
PLAN

SHOWING HEADWALL



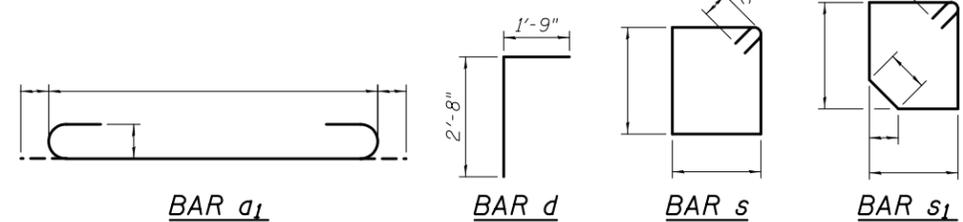
CORNER DETAIL

DETAIL A



SECTION A-A

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TSA-SB-PSSP-RS

10-15-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISD
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		CHECKED -	REVISD

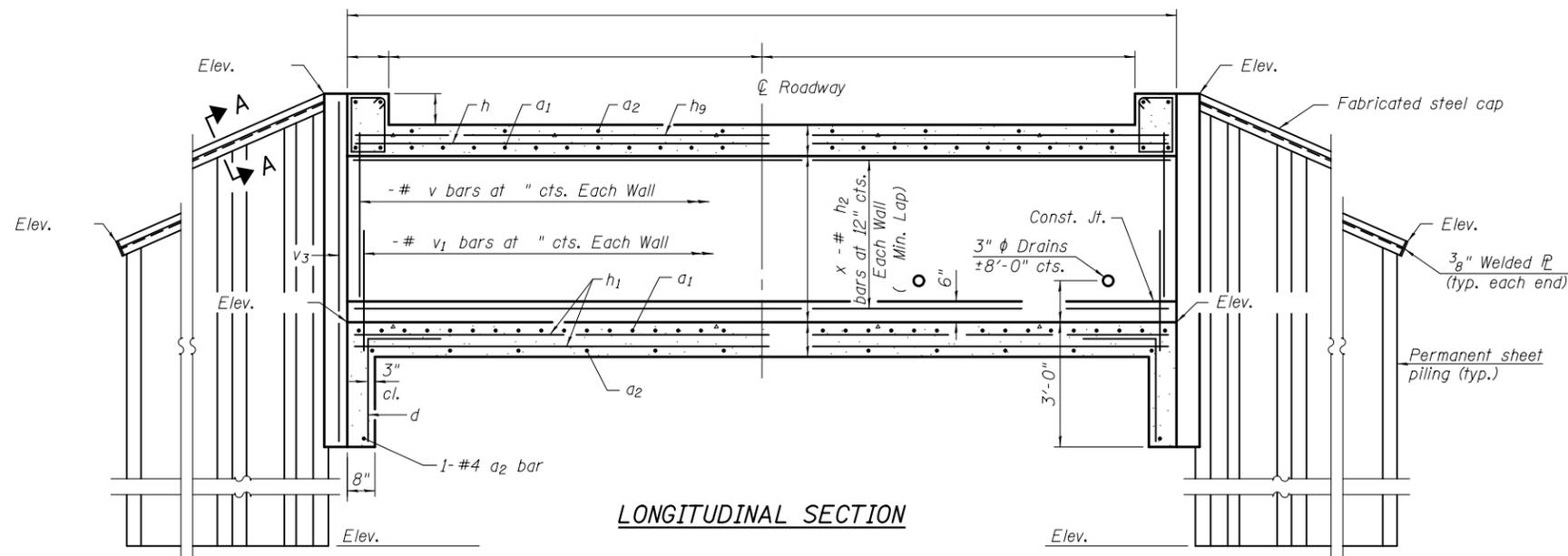
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS
STRUCTURE NO.**

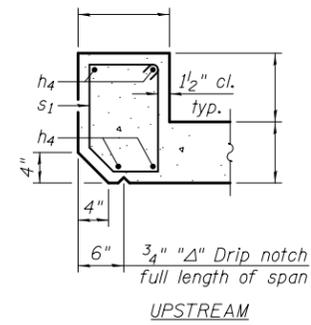
SHEET NO. OF SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				

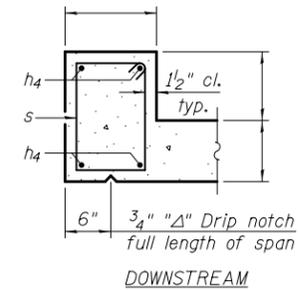
ILLINOIS FED. AID PROJECT



LONGITUDINAL SECTION

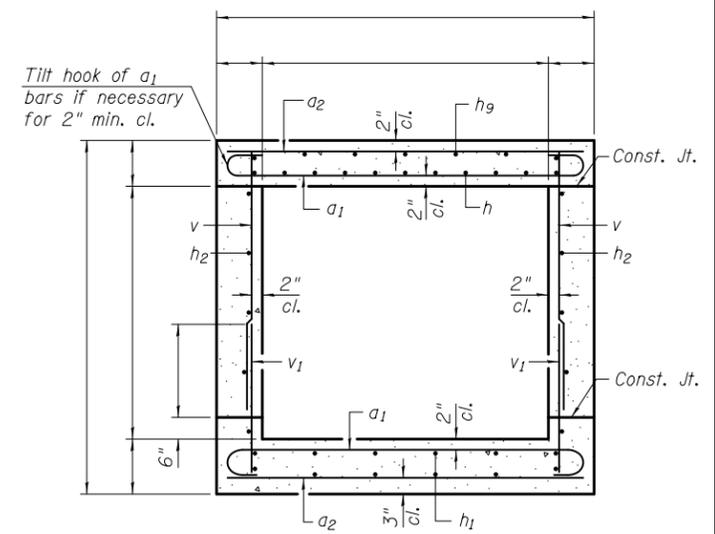


UPSTREAM

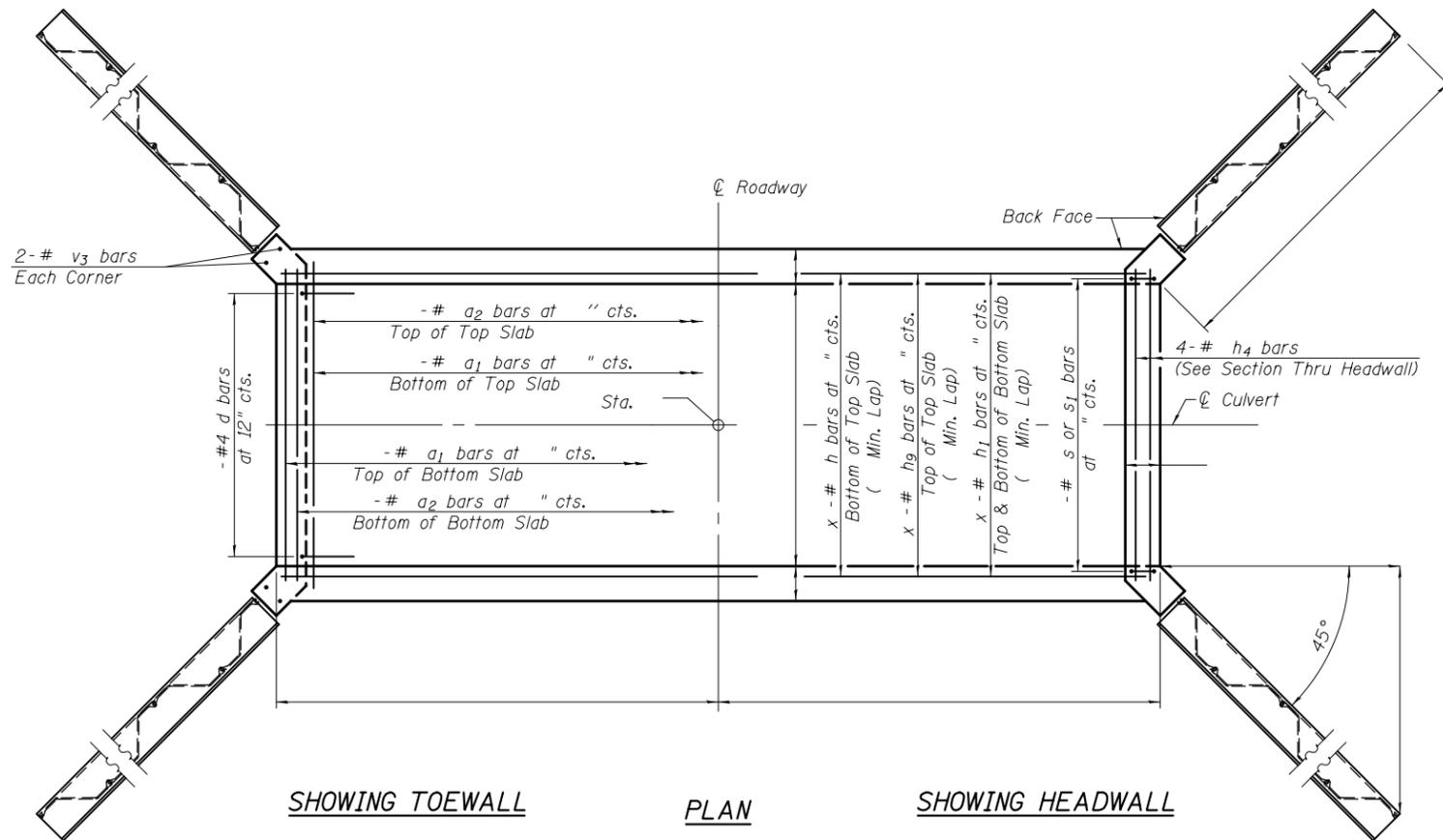


DOWNSTREAM

SECTION THRU HEADWALL



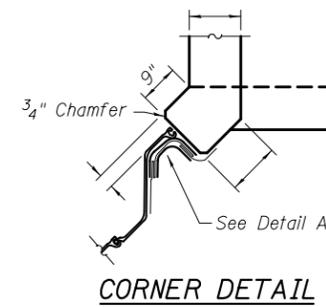
SECTION THRU BARREL



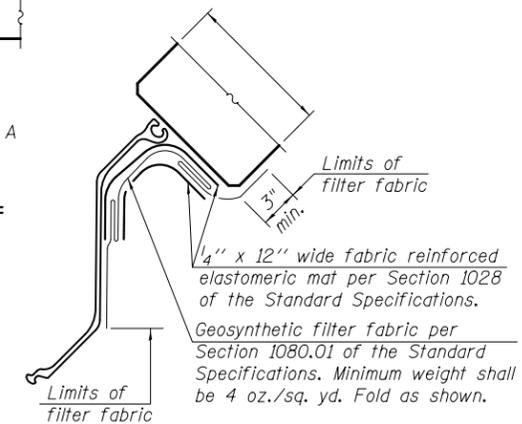
SHOWING TOEWALL

PLAN

SHOWING HEADWALL



CORNER DETAIL

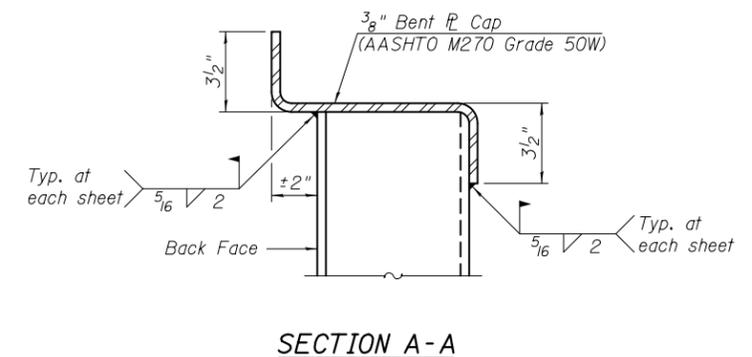
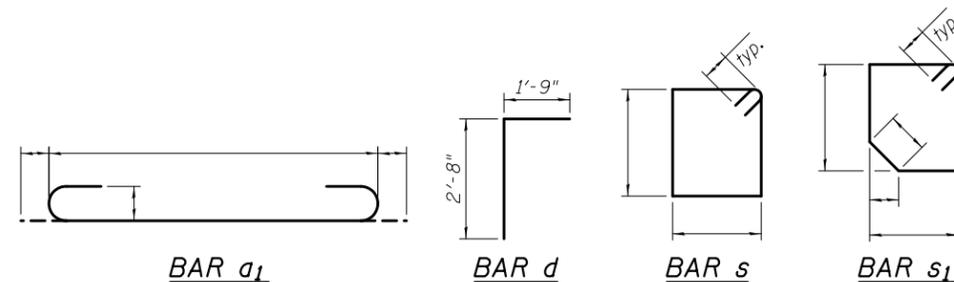


DETAIL A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁		#		
a ₂		#		
d		#4	4'-5"	
h		#		
h ₁		#		
h ₂		#		
h ₄		#		
h ₉		#		
s		#		
s ₁		#		
v		#		
v ₁		#		
v ₃		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Permanent Sheet Piling			Sq. Ft.	

Notes:
 Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
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SECTION A-A

TSA-SB-PSSP-ZS

10-15-2016

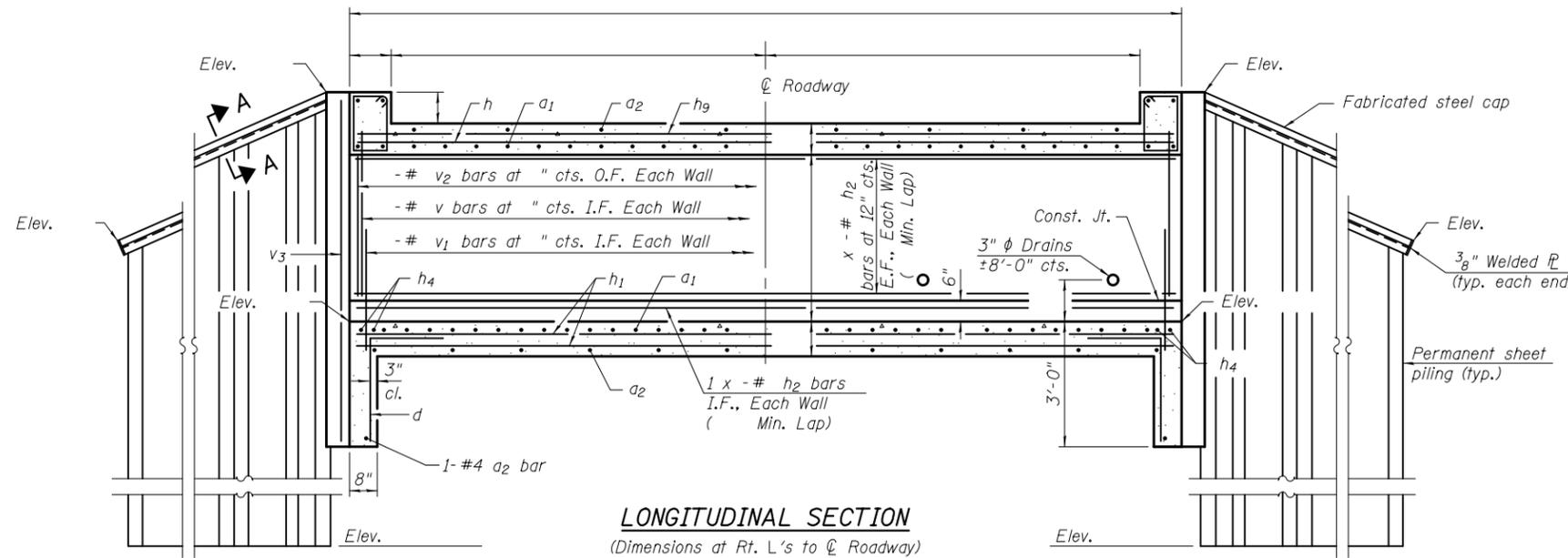
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

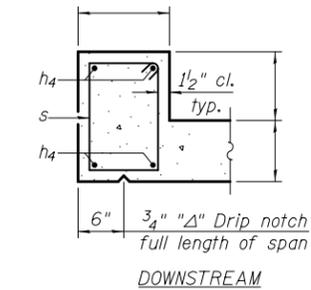
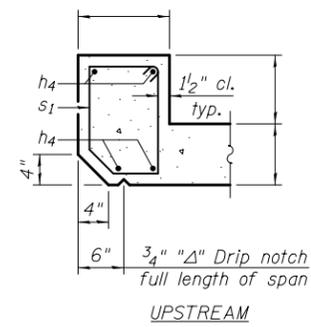
**CULVERT DETAILS
 STRUCTURE NO.**

SHEET NO. OF SHEETS

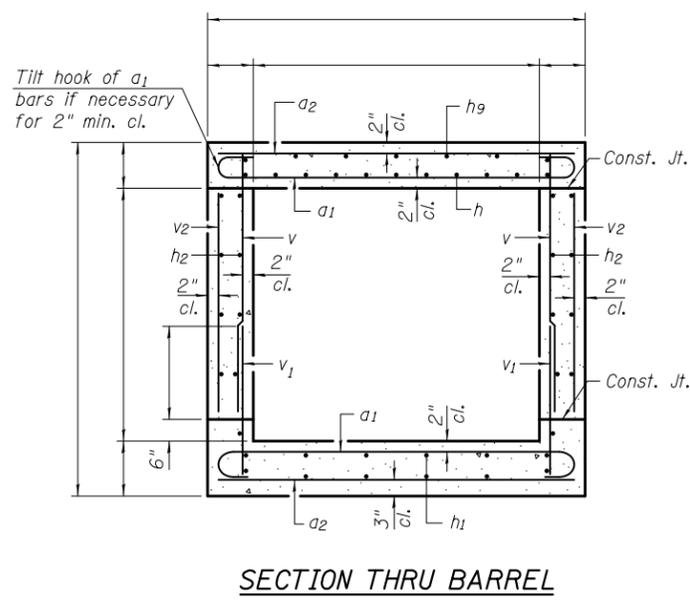
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



LONGITUDINAL SECTION
(Dimensions at Rt. L's to C Roadway)



SECTION THRU HEADWALL

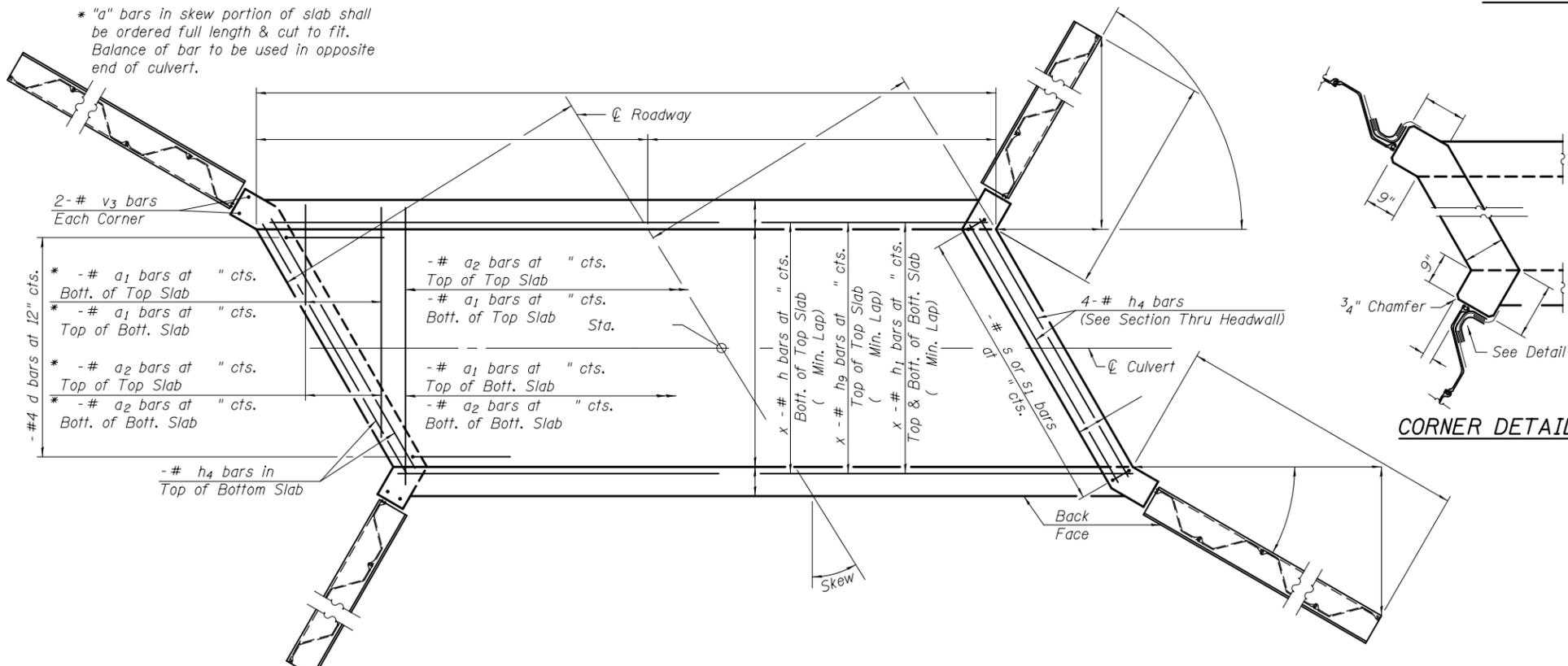


SECTION THRU BARREL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h4		#		
h9		#		
s		#		
s1		#		
v		#		
v1		#		
v2		#		
v3		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Permanent Sheet Piling			Sq. Ft.	

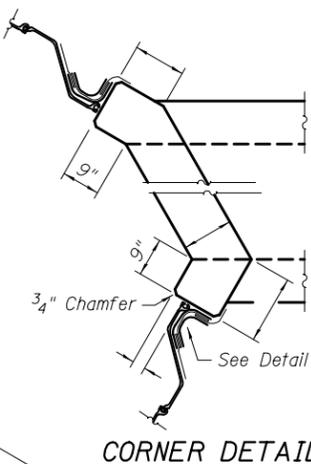
* "a" bars in skew portion of slab shall be ordered full length & cut to fit. Balance of bar to be used in opposite end of culvert.



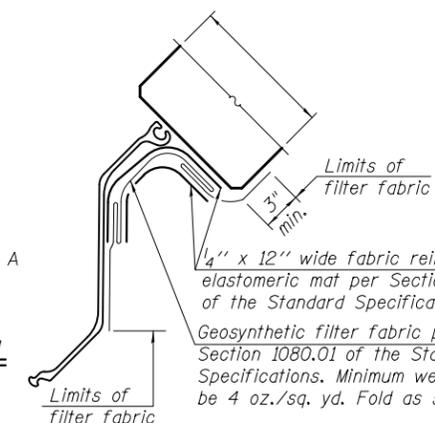
SHOWING TOEWALL

PLAN

SHOWING HEADWALL

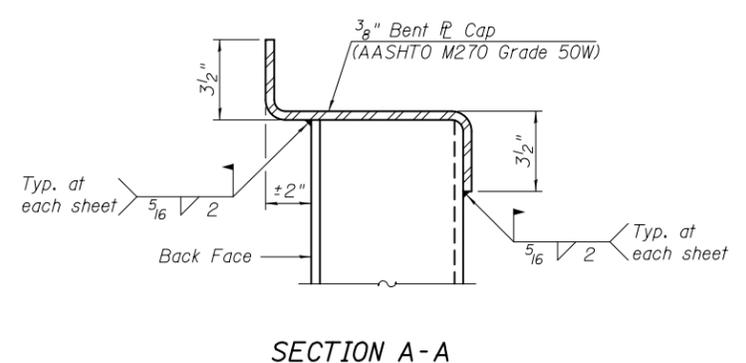
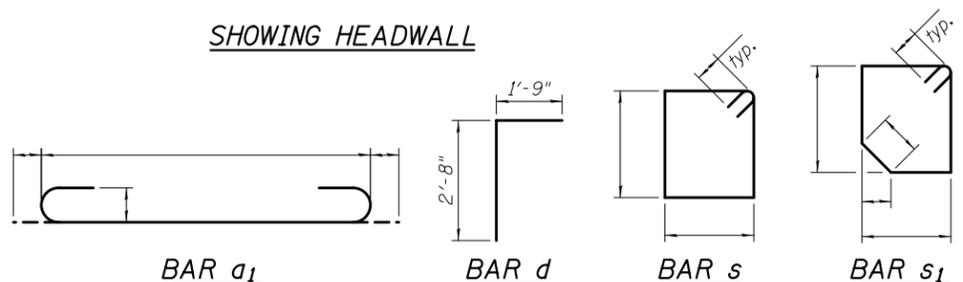


CORNER DETAIL



DETAIL A

Notes:
 Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
 At the Contractor's option, a longer v1 bar may be ordered to replace the v bar. No reduction in quantities shall be made for this substitution.
 The minimum effective section modulus of the permanent steel sheet pile wall shall be in.³/ft.
 Sheet piling shall not be driven until the concrete strength has attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.
 The cost of furnishing and installing the fabricated steel cap, elastomeric mat, and filter fabric shall be included in the cost of Permanent Sheet Piling.



SECTION A-A

TSA-SC-PSSP-LS

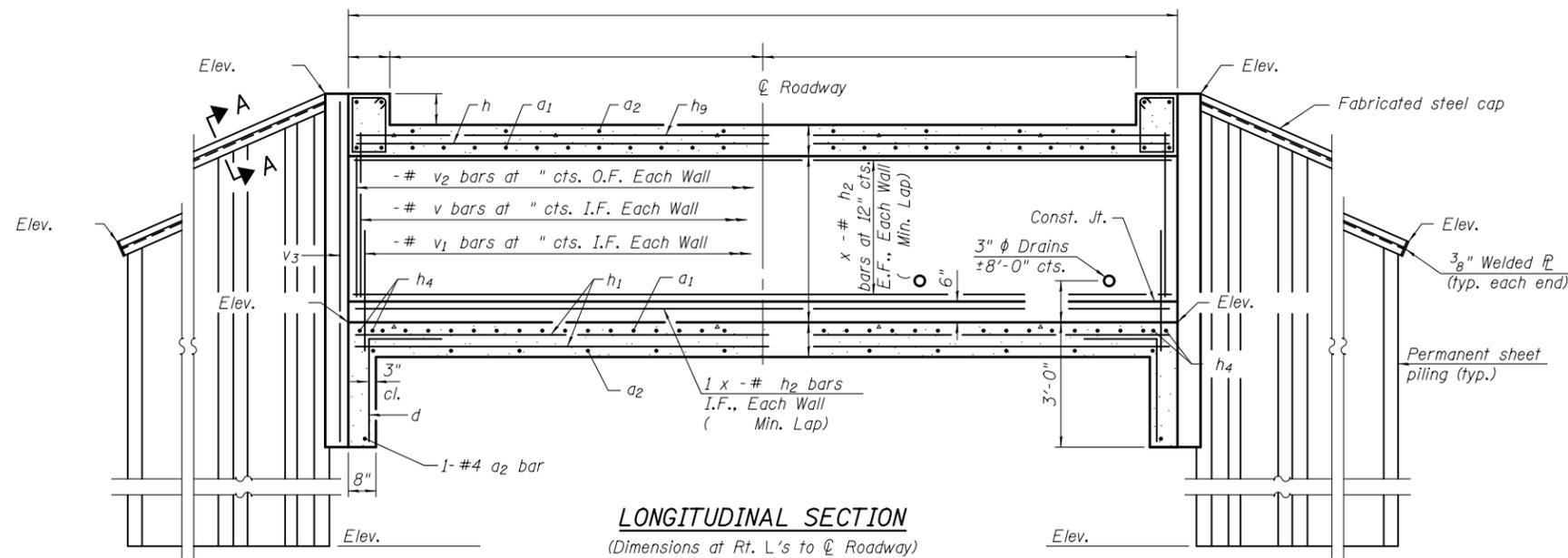
10-15-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISD
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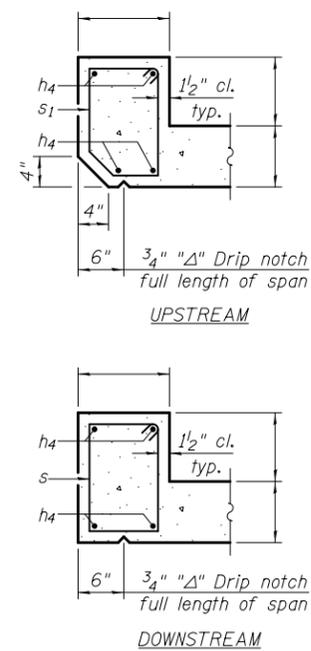
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS
STRUCTURE NO.
SHEET NO. OF SHEETS

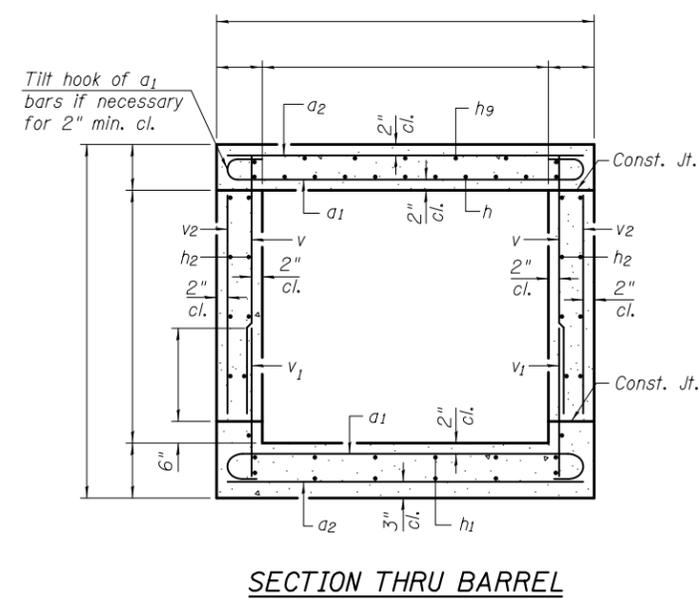
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



LONGITUDINAL SECTION
(Dimensions at Rt. L's to C Roadway)



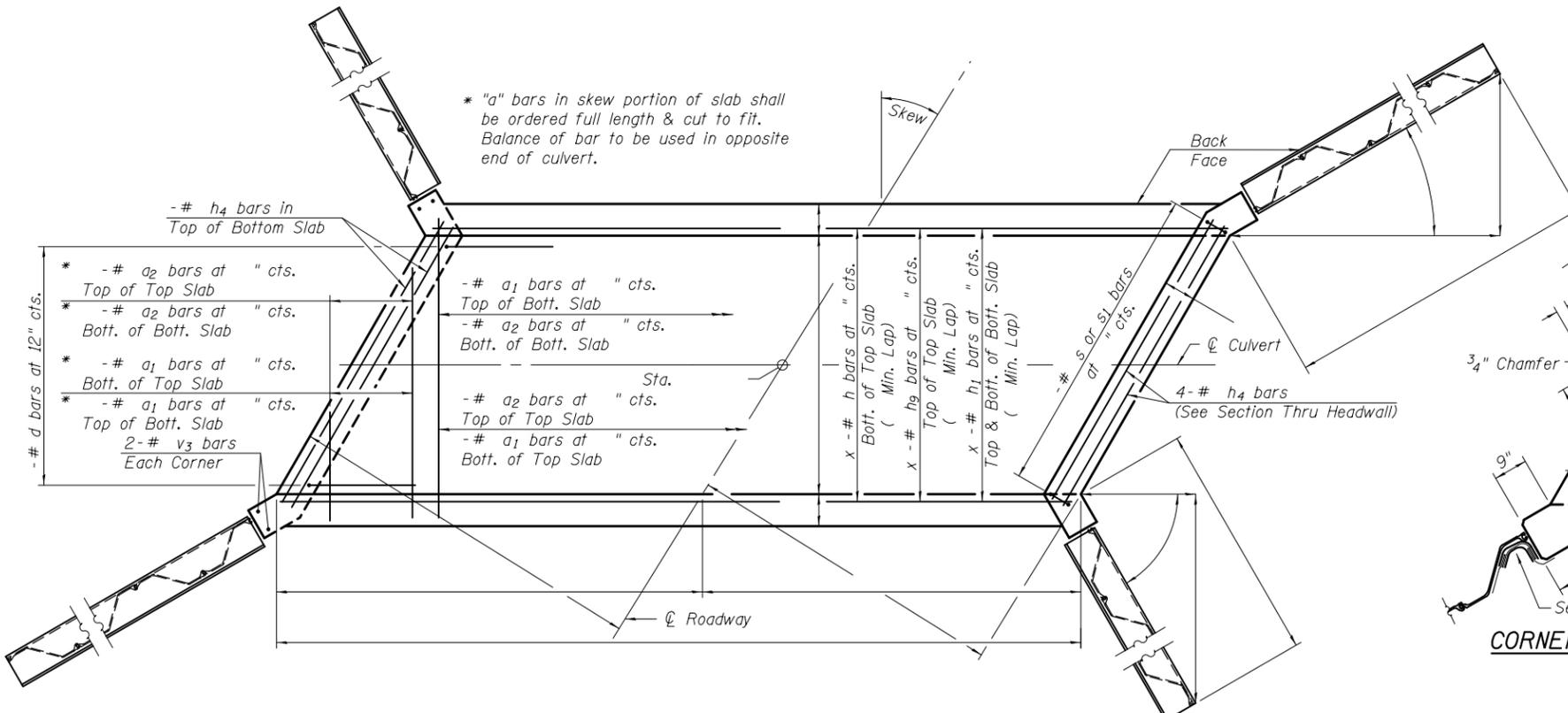
SECTION THRU HEADWALL



SECTION THRU BARREL

BILL OF MATERIAL

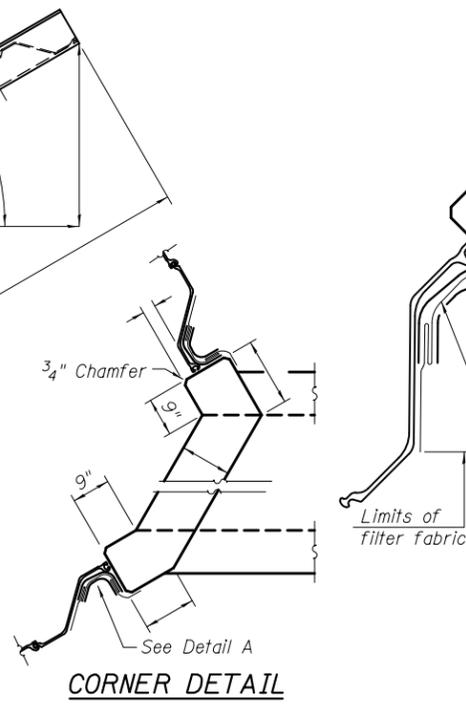
Bar	No.	Size	Length	Shape
a ₁		#		
a ₂		#		
d		#4	4'-5"	
h		#		
h ₁		#		
h ₂		#		
h ₄		#		
h ₉		#		
s		#		
s ₁		#		
v		#		
v ₁		#		
v ₂		#		
v ₃		#		
Concrete Box Culverts				Cu. Yd.
Reinforcement Bars				Pound
Permanent Sheet Piling				Sq. Ft.



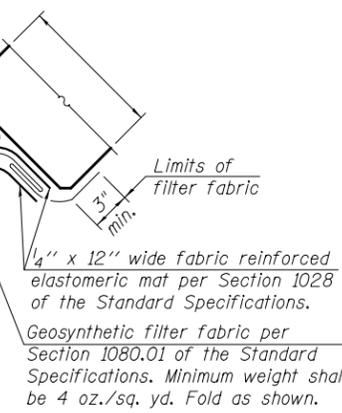
SHOWING TOEWALL

PLAN

SHOWING HEADWALL

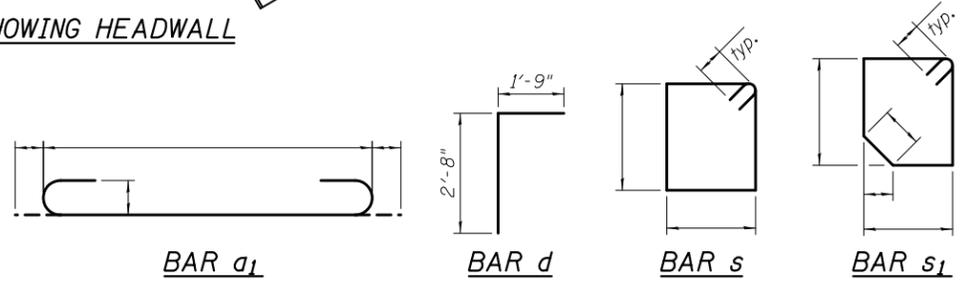


CORNER DETAIL



DETAIL A

Notes:
 Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
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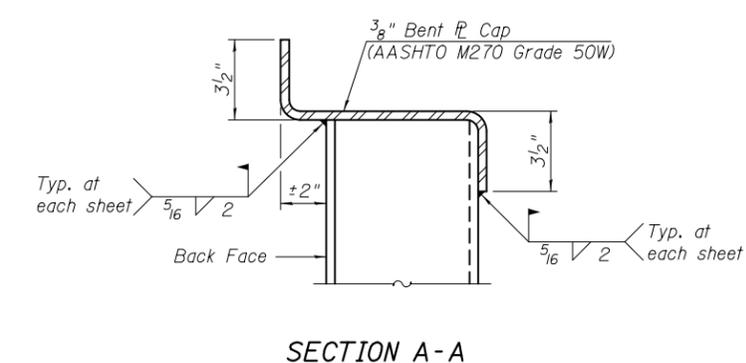


BAR a₁

BAR d

BAR s

BAR s₁



SECTION A-A

TSA-SC-PSSP-RS

10-15-2016

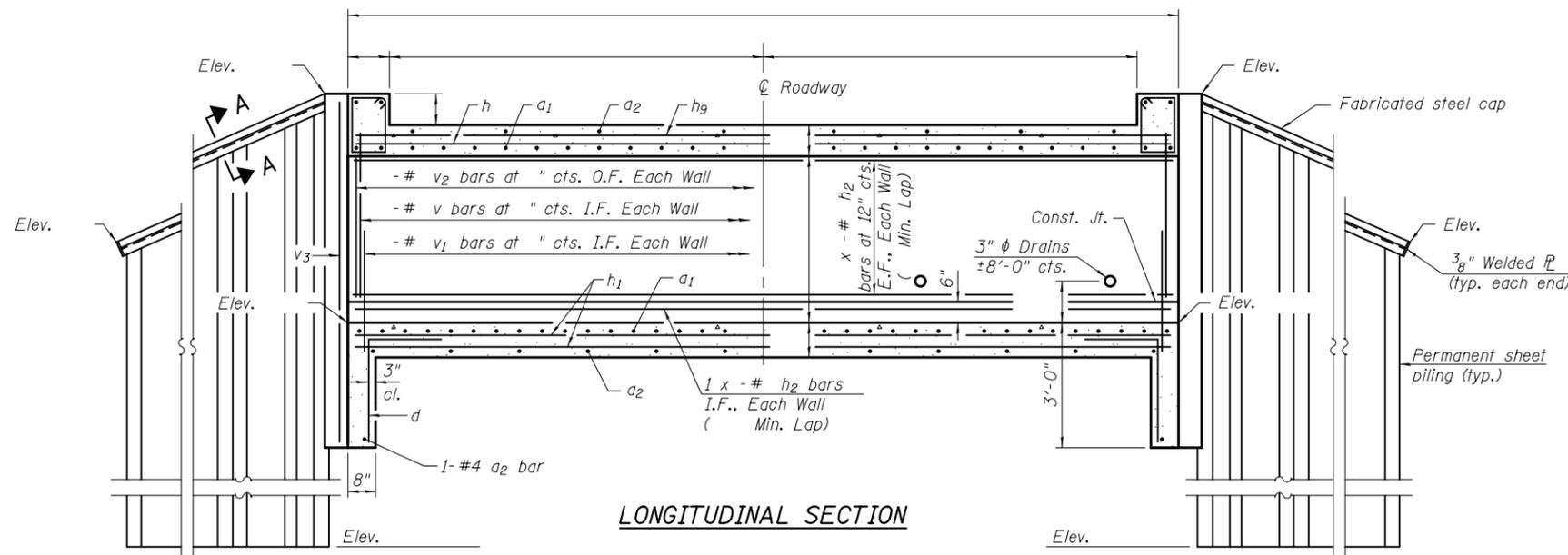
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		PLOT DATE =	REVISIONS

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

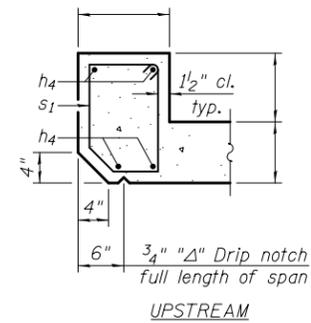
**CULVERT DETAILS
STRUCTURE NO.**

SHEET NO. OF SHEETS

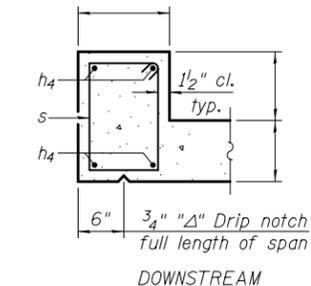
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CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



LONGITUDINAL SECTION

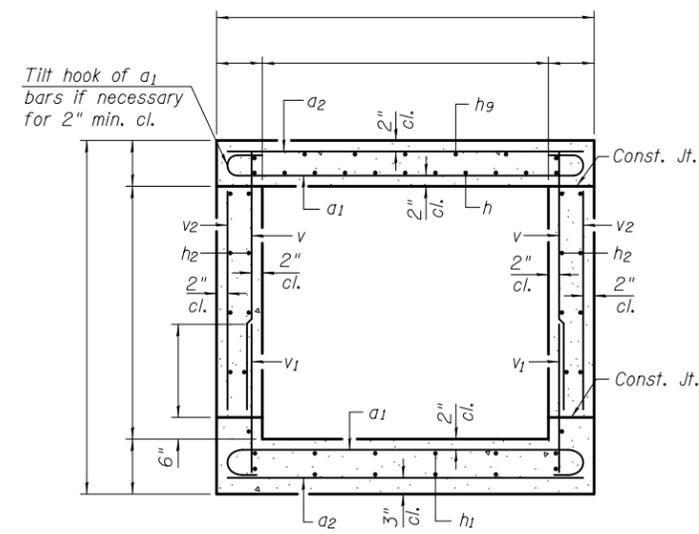


UPSTREAM

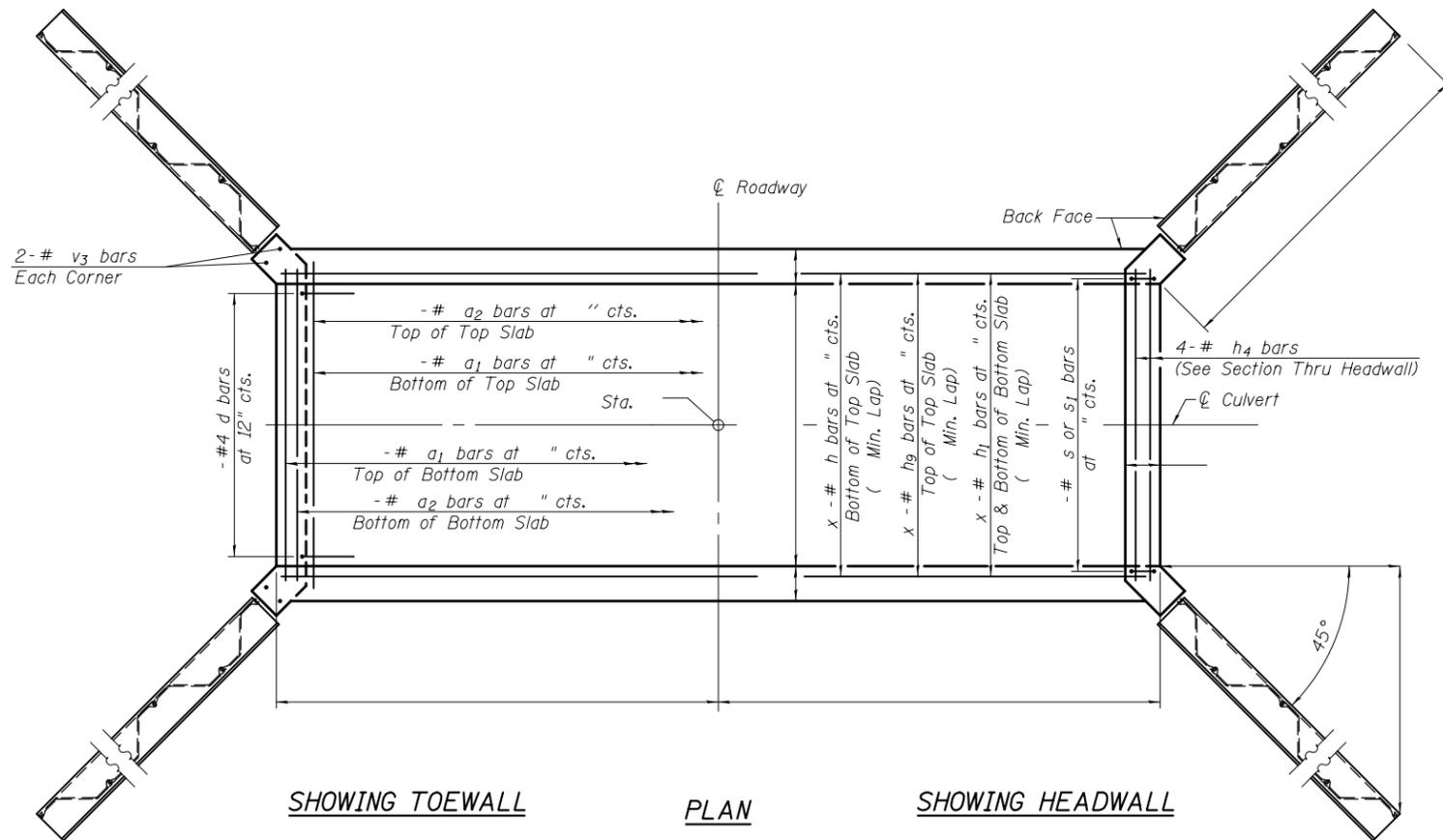


DOWNSTREAM

SECTION THRU HEADWALL



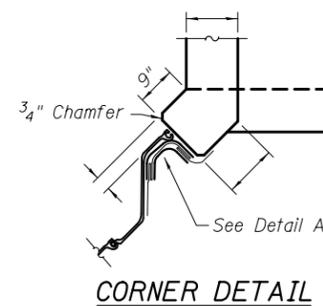
SECTION THRU BARREL



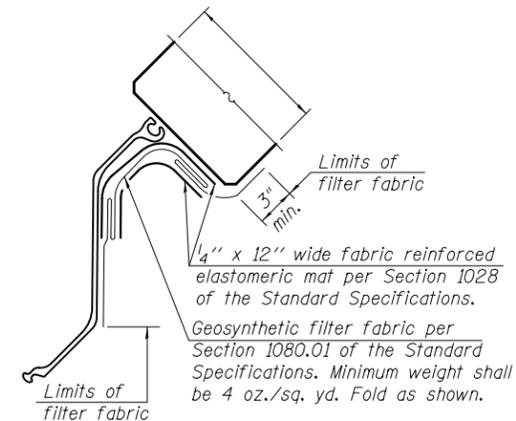
SHOWING TOEWALL

PLAN

SHOWING HEADWALL



CORNER DETAIL

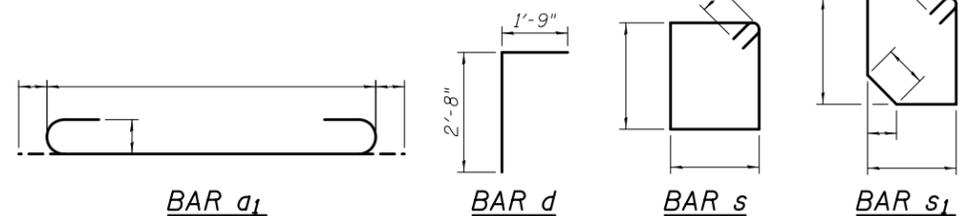


DETAIL A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁		#		
a ₂		#		
d		#4	4'-5"	
h		#		
h ₁		#		
h ₂		#		
h ₄		#		
h ₉		#		
s		#		
s ₁		#		
v		#		
v ₁		#		
v ₂		#		
v ₃		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Permanent Sheet Piling			Sq. Ft.	

Notes:
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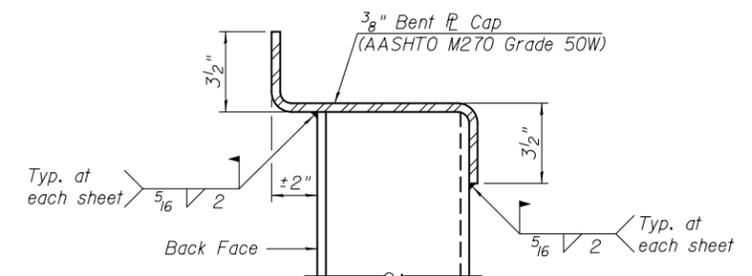


BAR a₁

BAR d

BAR s

BAR s₁



SECTION A-A

TSA-SC-PSSP-ZS

10-15-2016

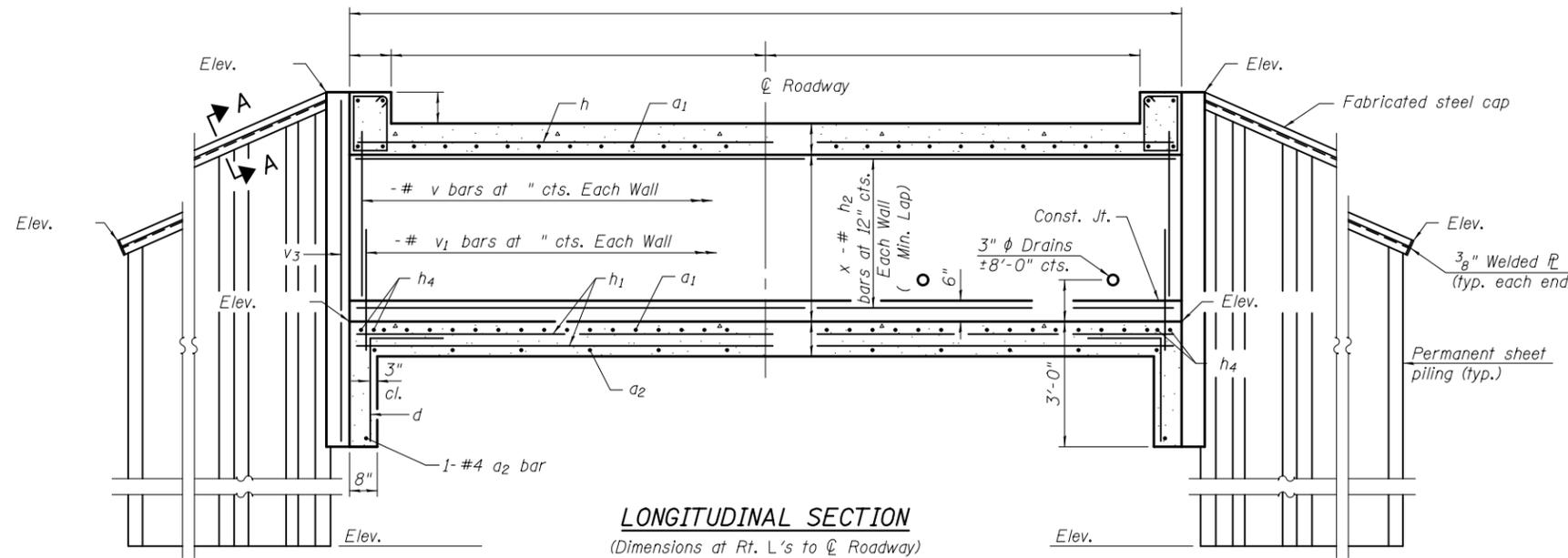
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		CHECKED -	REVISIONS

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

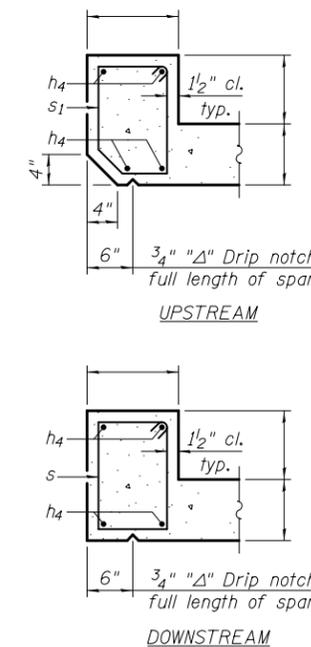
**CULVERT DETAILS
 STRUCTURE NO.**

SHEET NO. OF SHEETS

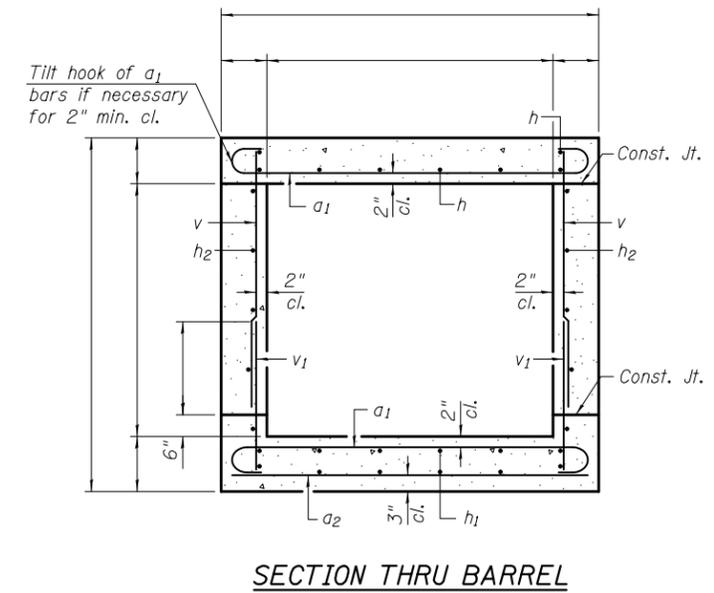
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



LONGITUDINAL SECTION
(Dimensions at Rt. L's to C Roadway)

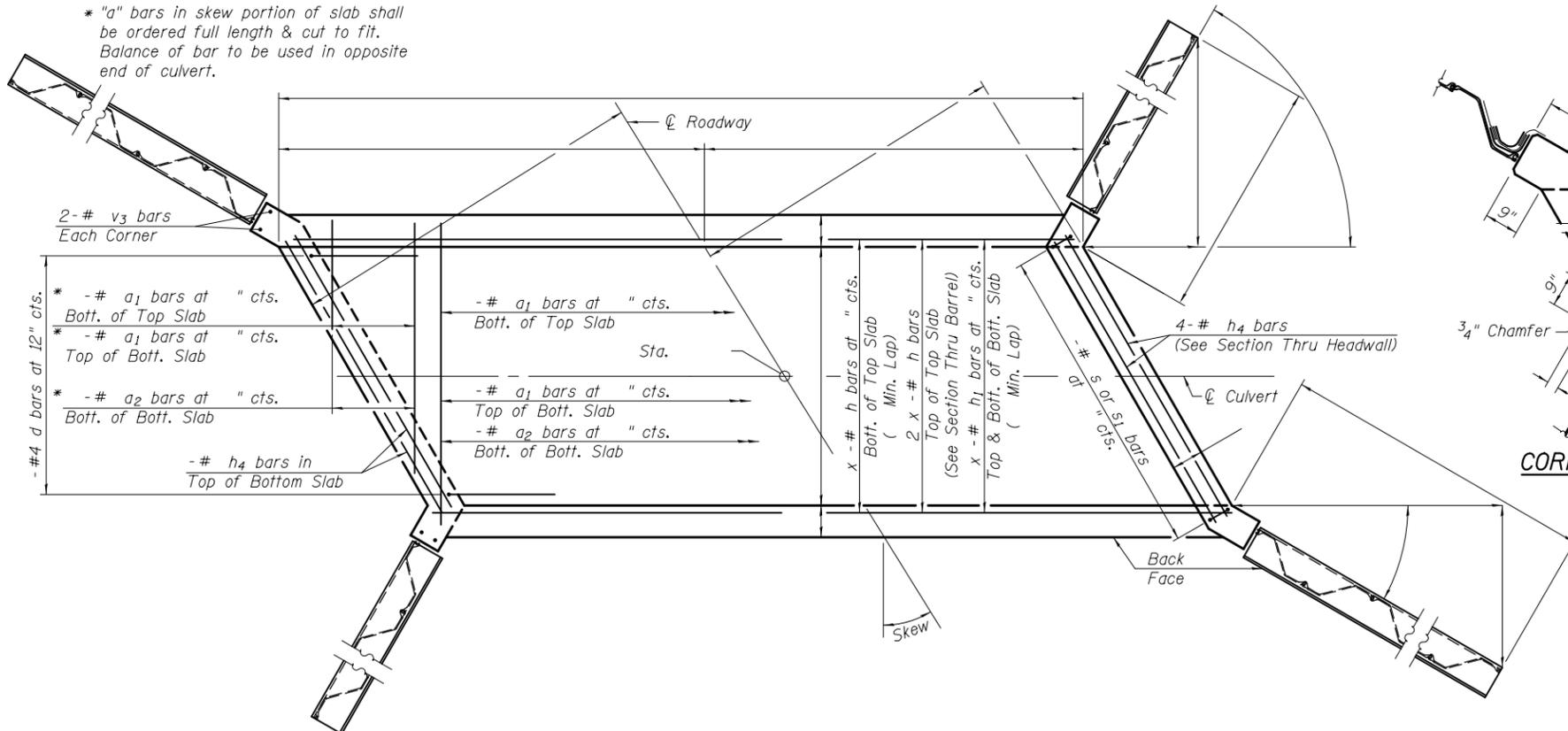


SECTION THRU HEADWALL



SECTION THRU BARREL

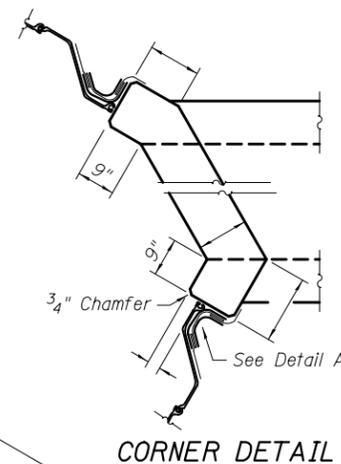
* "a" bars in skew portion of slab shall be ordered full length & cut to fit. Balance of bar to be used in opposite end of culvert.



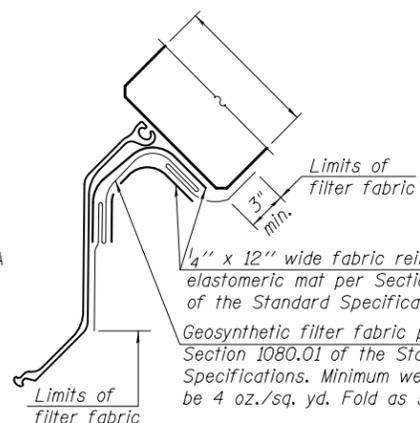
SHOWING TOEWALL

PLAN

SHOWING HEADWALL



CORNER DETAIL

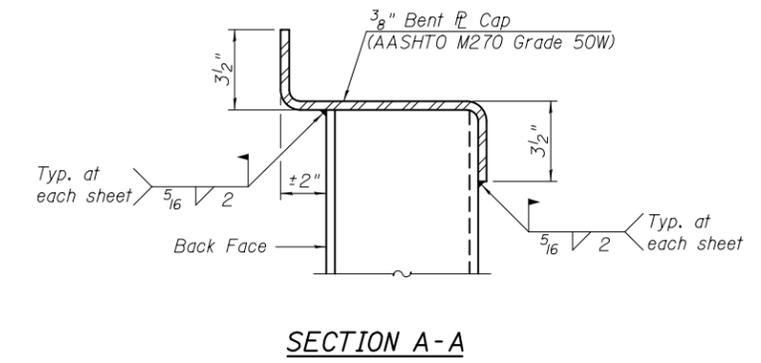
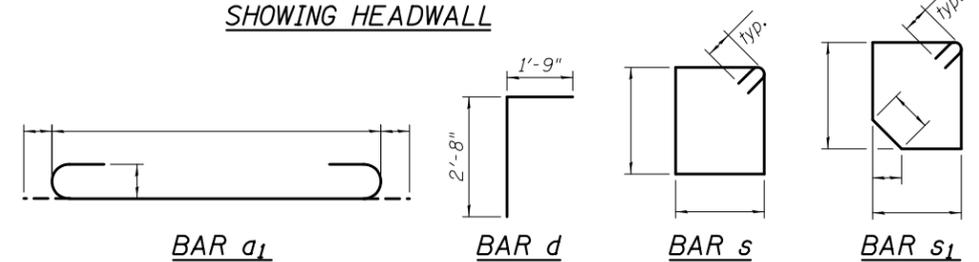


DETAIL A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h4		#		
s		#		
s1		#		
v		#		
v1		#		
v3		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Permanent Sheet Piling			Sq. Ft.	

Notes:
 Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
 At the Contractor's option, a longer v1 bar may be ordered to replace the v bar. No reduction in quantities shall be made for this substitution.
 The minimum effective section modulus of the permanent steel sheet pile wall shall be in.³/ft.
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 The cost of furnishing and installing the fabricated steel cap, elastomeric mat, and filter fabric shall be included in the cost of Permanent Sheet Piling.



SECTION A-A

TSB-SB-PSSP-LS

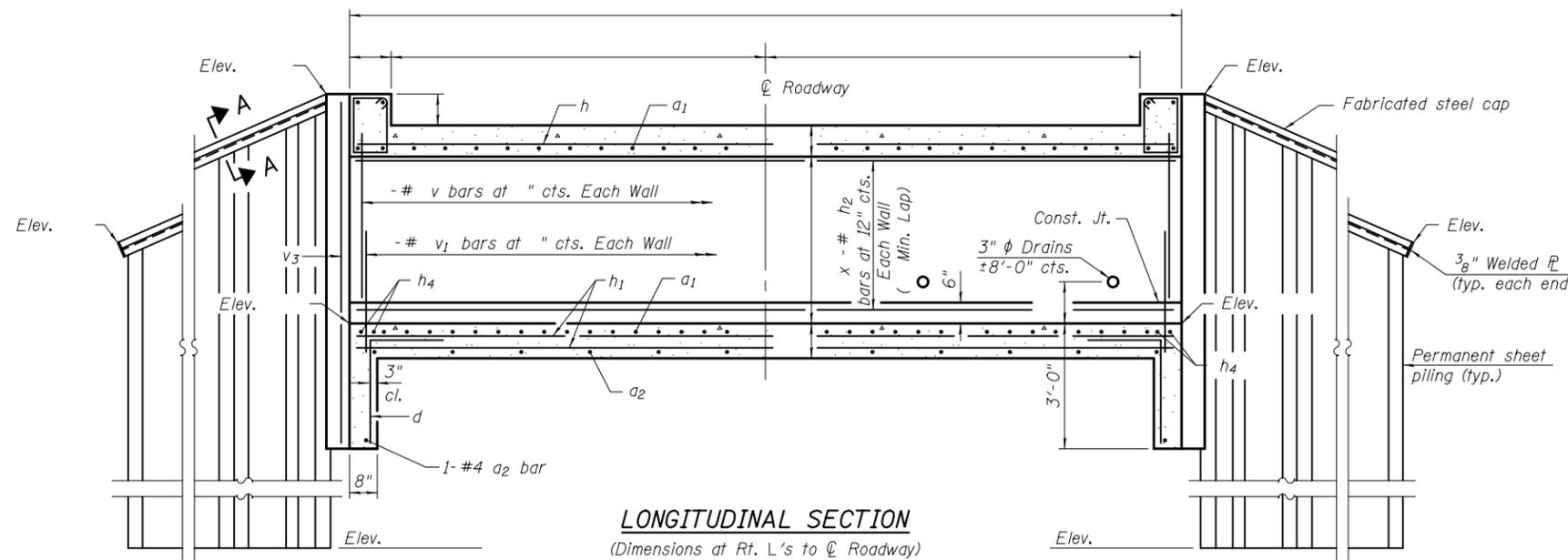
10-15-2016

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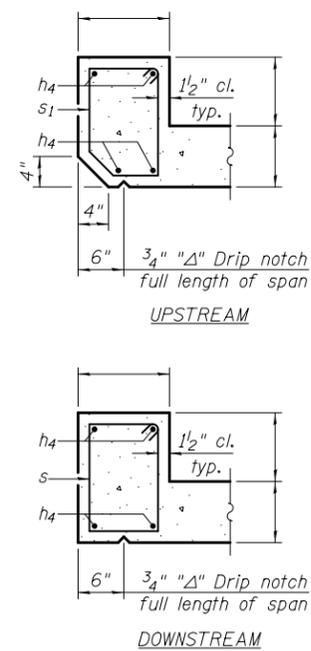
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS
STRUCTURE NO.**
SHEET NO. OF SHEETS

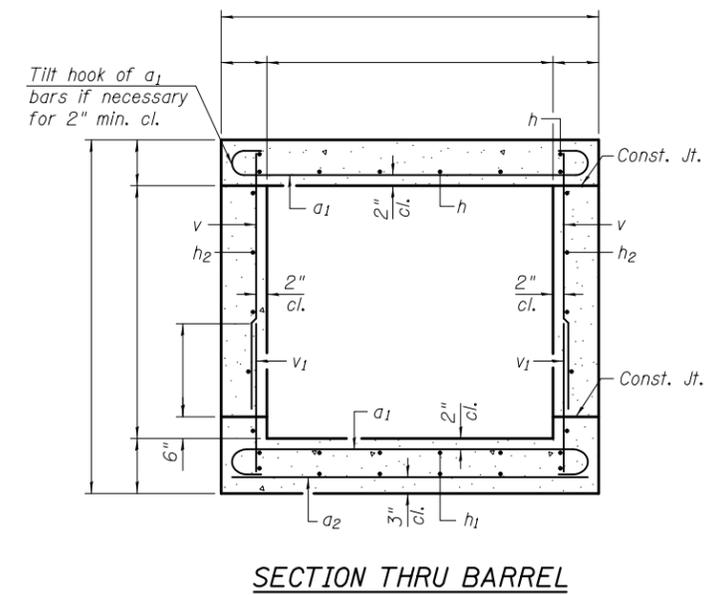
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



LONGITUDINAL SECTION
(Dimensions at Rt. L's to C Roadway)



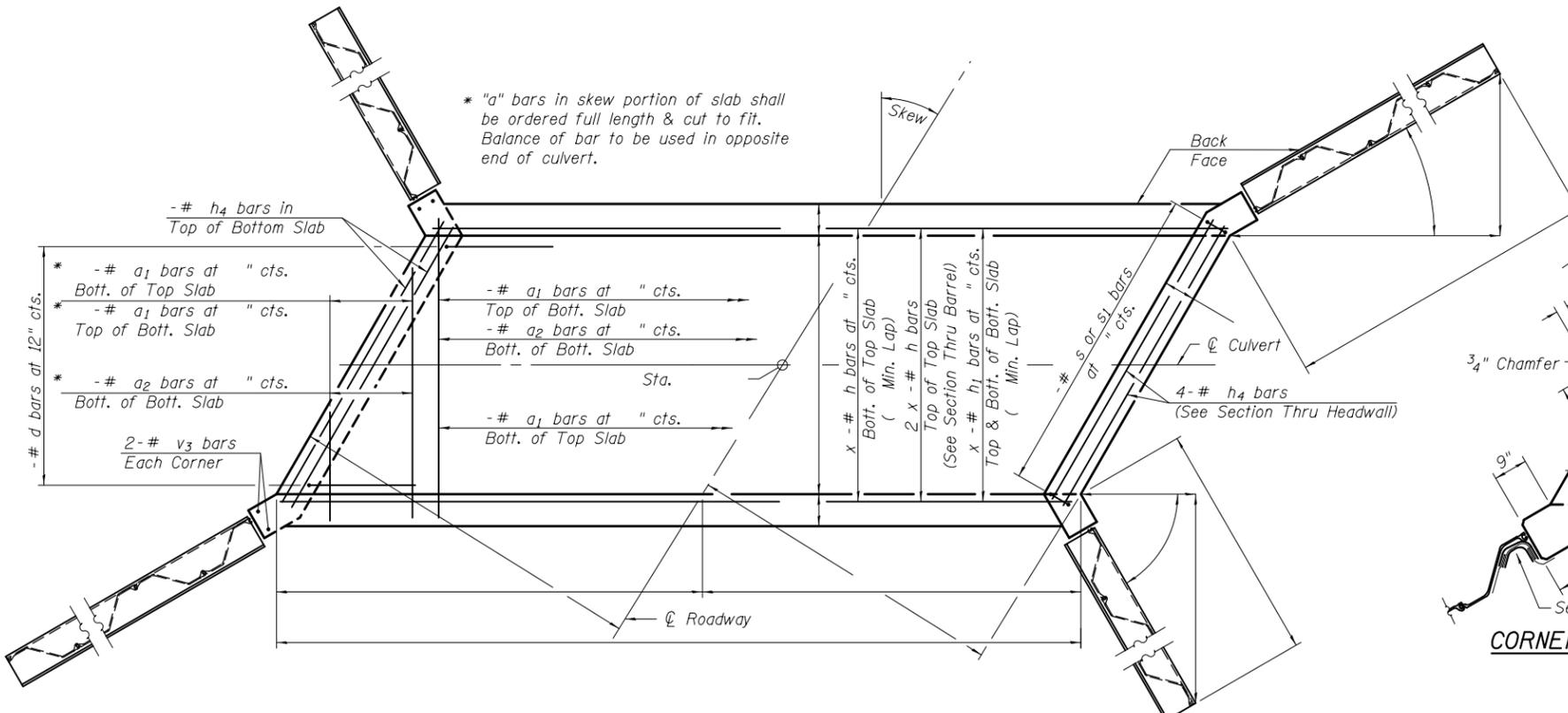
SECTION THRU HEADWALL



SECTION THRU BARREL

BILL OF MATERIAL

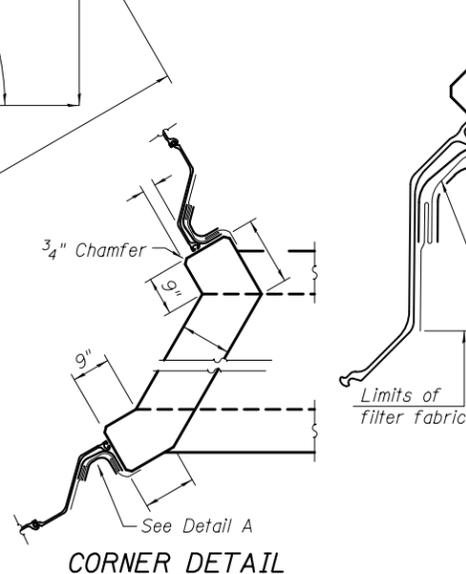
Bar	No.	Size	Length	Shape
a ₁		#		
a ₂		#		
d		#4	4'-5"	
h		#		
h ₁		#		
h ₂		#		
h ₄		#		
s		#		
s ₁		#		
v		#		
v ₁		#		
v ₃		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Permanent Sheet Piling			Sq. Ft.	



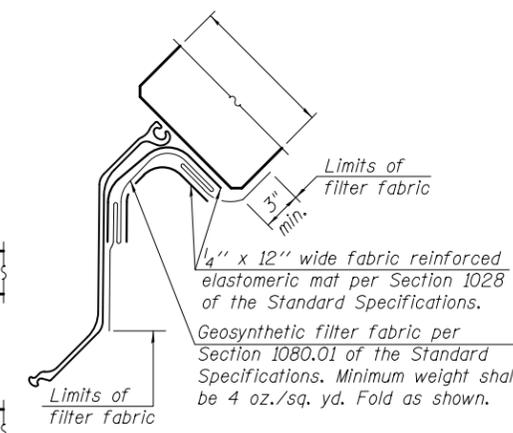
SHOWING TOEWALL

PLAN

SHOWING HEADWALL

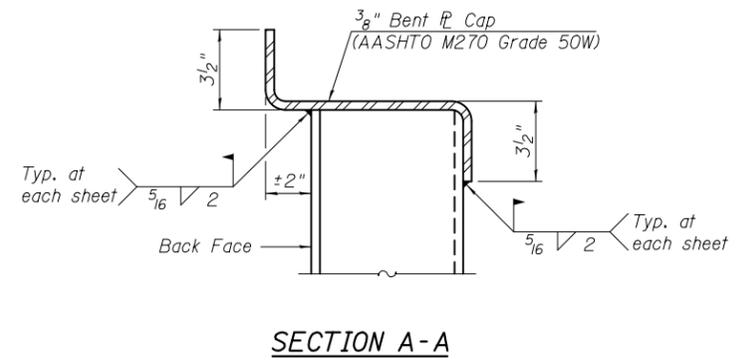
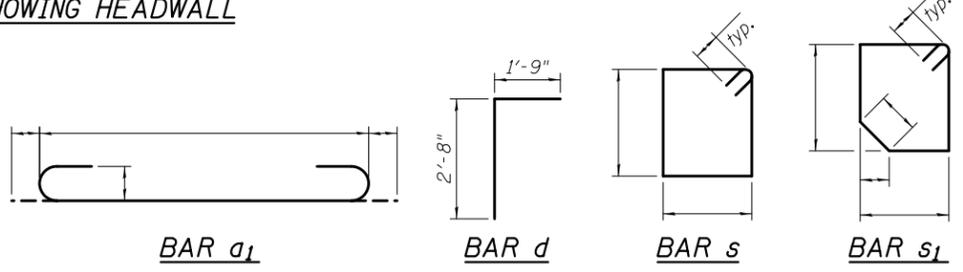


CORNER DETAIL



DETAIL A

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SECTION A-A

TSB-SB-PSSP-RS

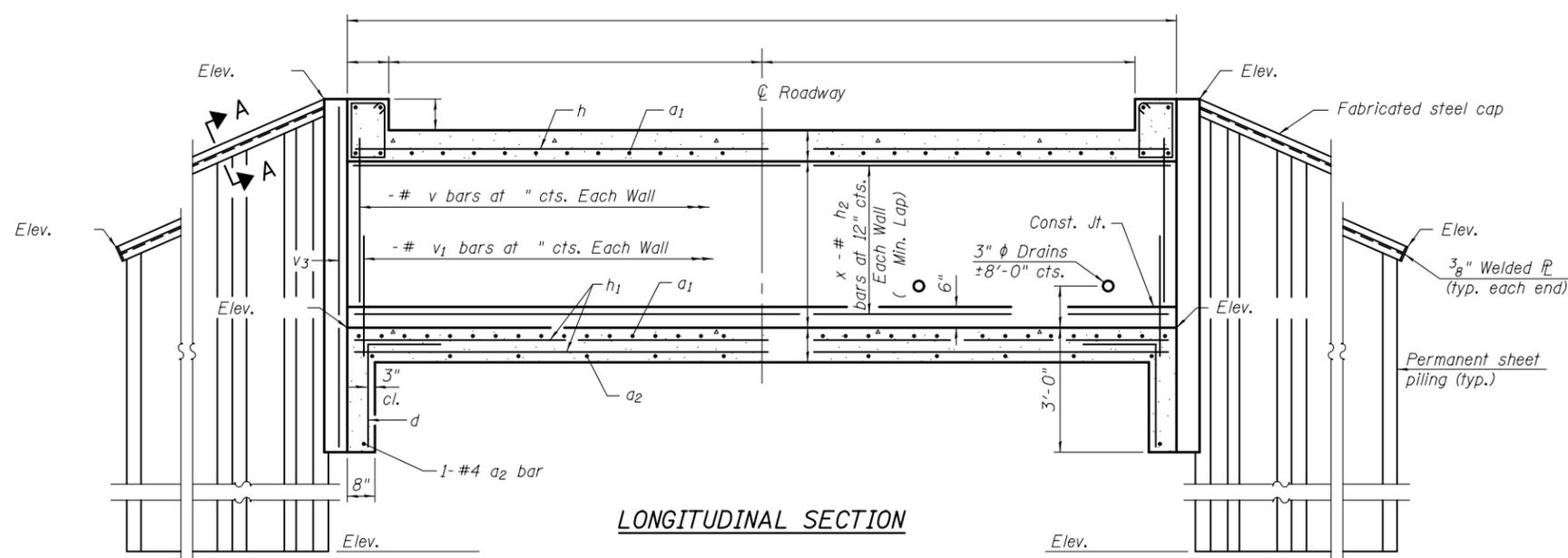
10-15-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISIONS
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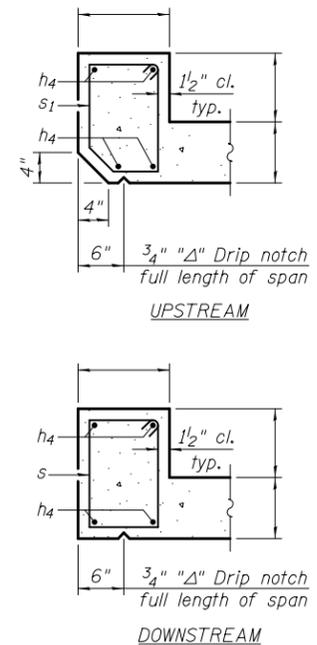
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS
STRUCTURE NO.**
SHEET NO. OF SHEETS

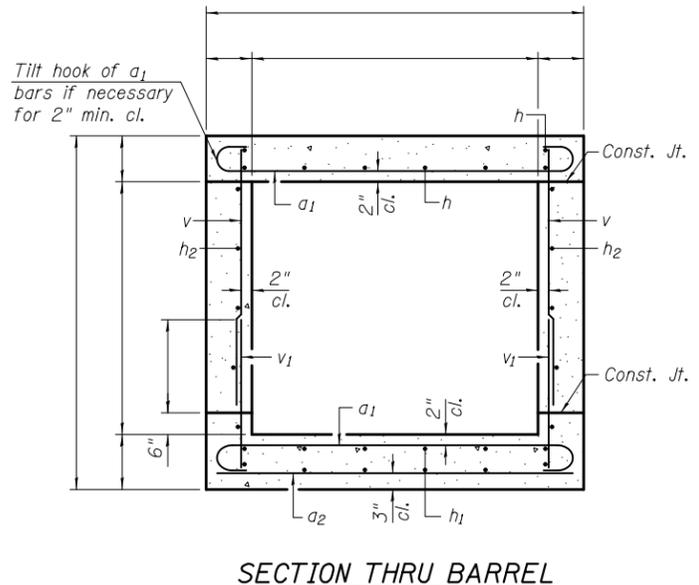
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CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



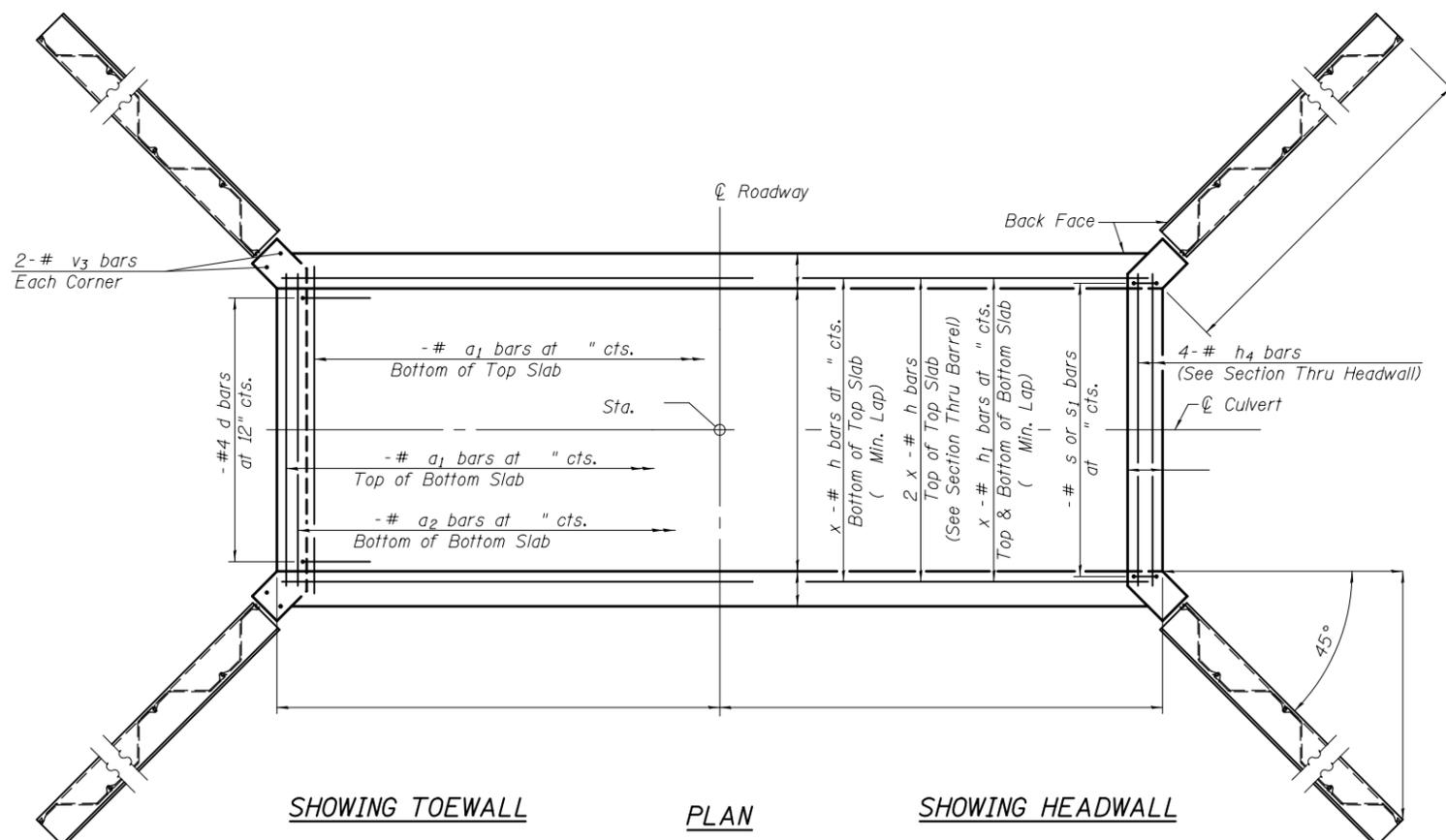
LONGITUDINAL SECTION



SECTION THRU HEADWALL



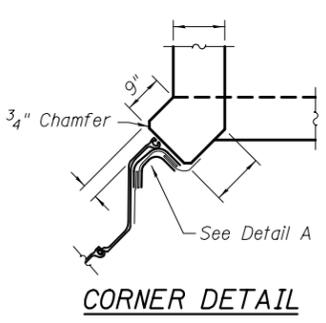
SECTION THRU BARREL



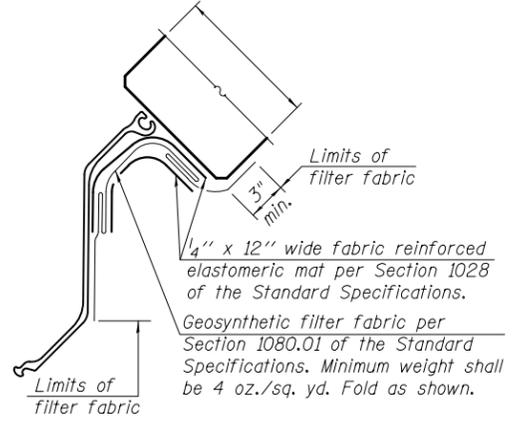
SHOWING TOEWALL

PLAN

SHOWING HEADWALL



CORNER DETAIL

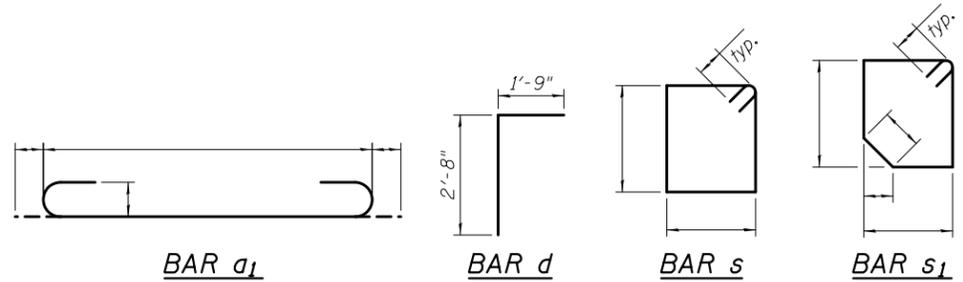


DETAIL A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁		#		
a ₂		#		
d		#4	4'-5"	
h		#		
h ₁		#		
h ₂		#		
h ₄		#		
s		#		
s ₁		#		
v		#		
v ₁		#		
v ₃		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Permanent Sheet Piling			Sq. Ft.	

Notes:
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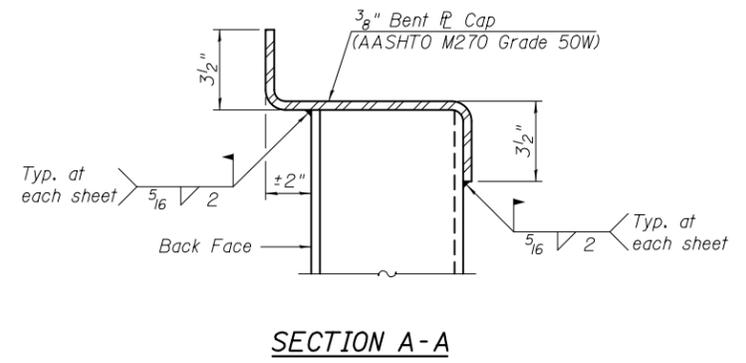


BAR a₁

BAR d

BAR s

BAR s₁



SECTION A-A

TSB-SB-PSSP-ZS

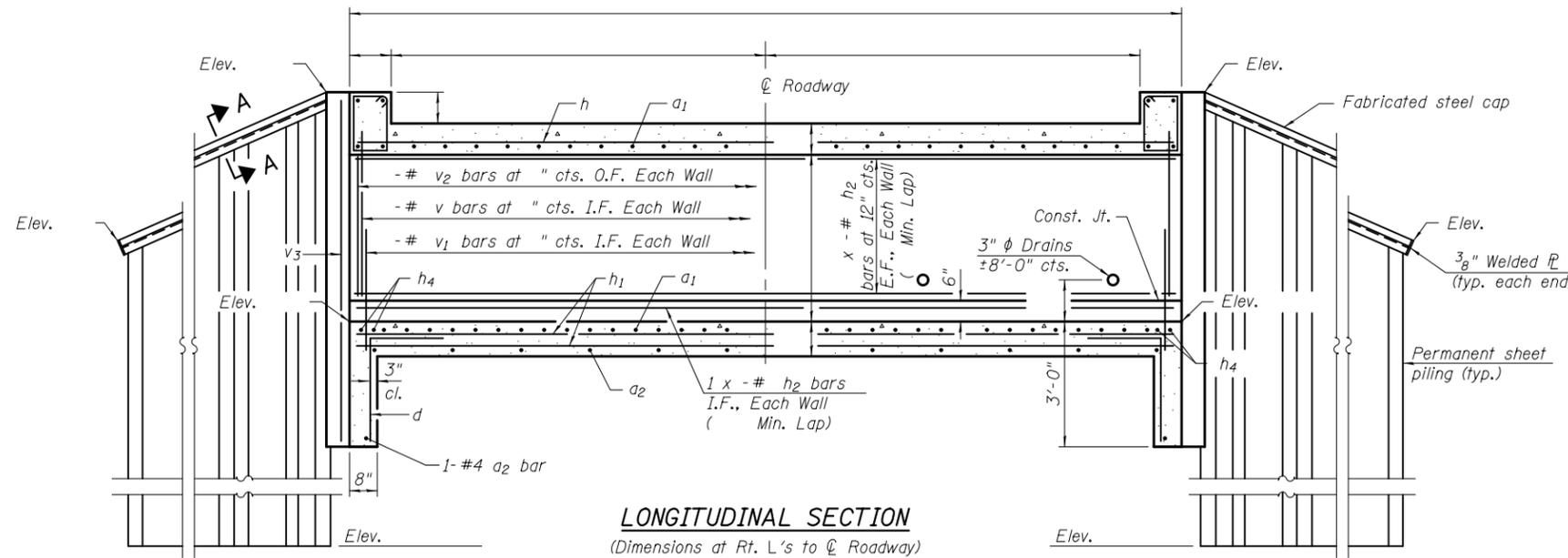
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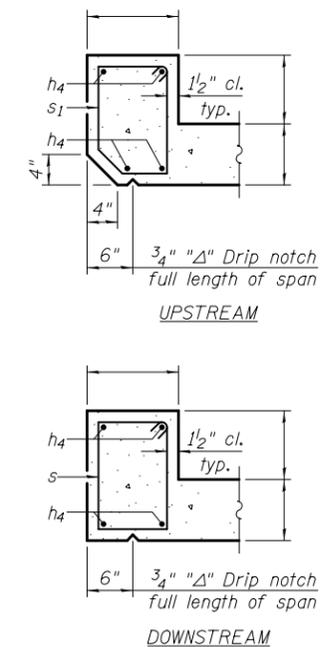
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS
 STRUCTURE NO.**
 SHEET NO. OF SHEETS

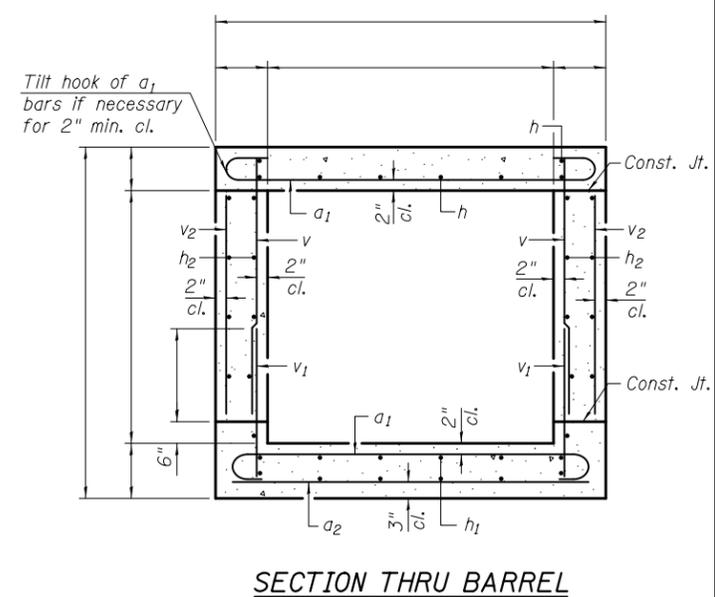
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



LONGITUDINAL SECTION
(Dimensions at Rt. L's to C Roadway)

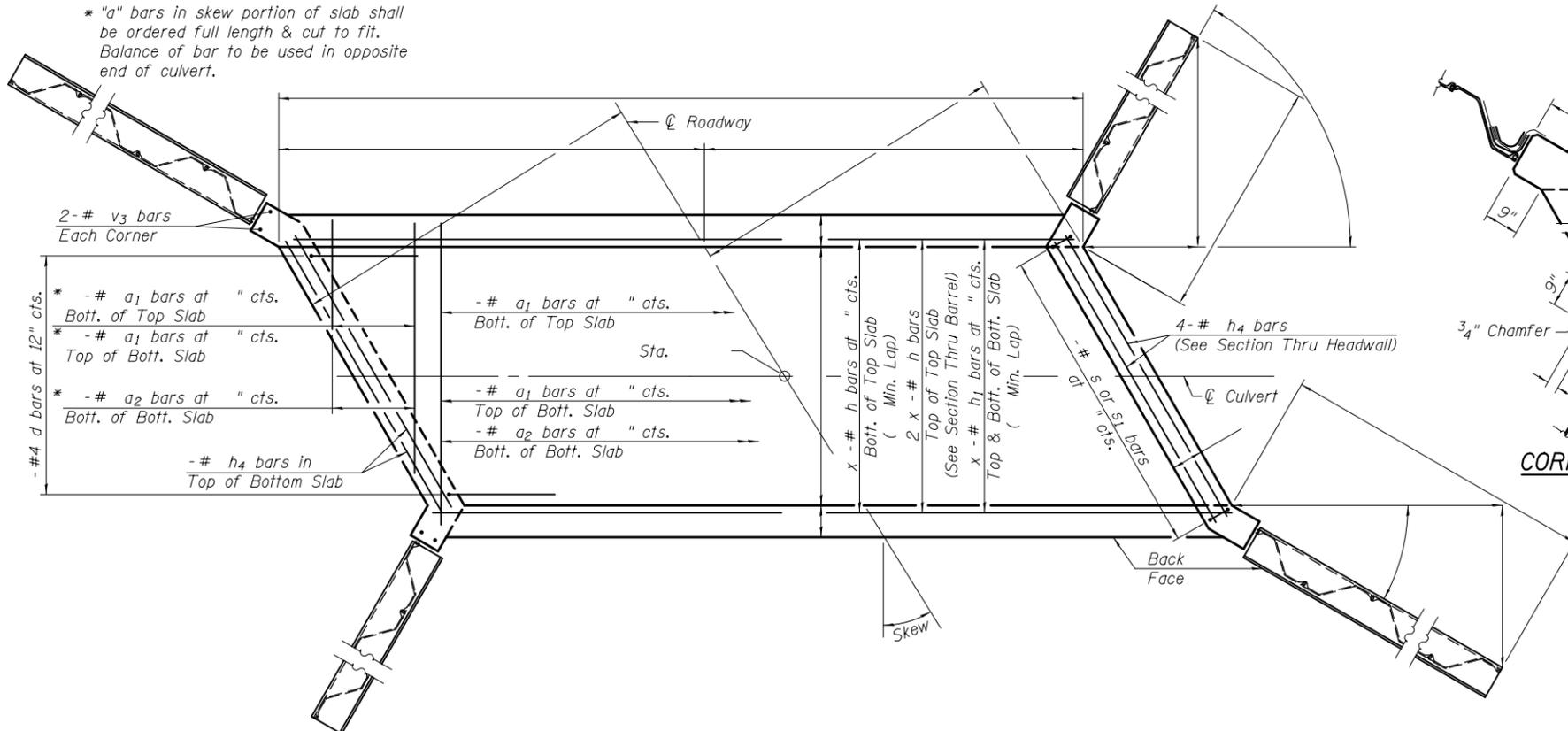


SECTION THRU HEADWALL



SECTION THRU BARREL

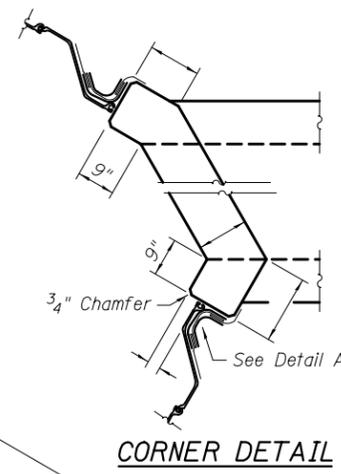
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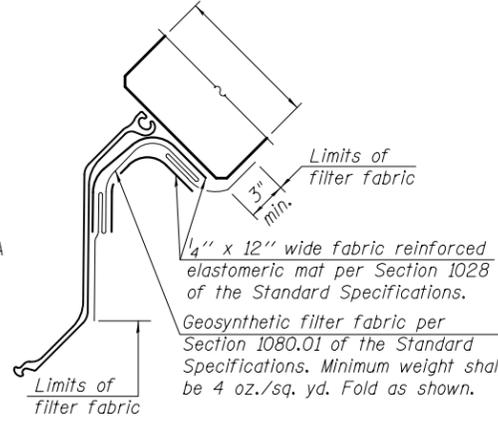
SHOWING TOEWALL

PLAN

SHOWING HEADWALL



CORNER DETAIL

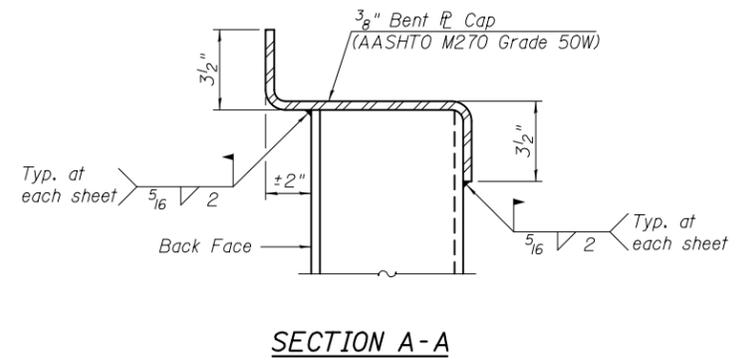
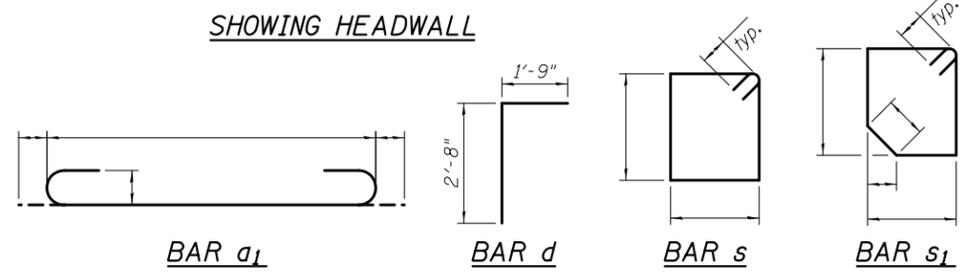


DETAIL A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁		#		
a ₂		#		
d		#4	4'-5"	
h		#		
h ₁		#		
h ₂		#		
h ₄		#		
s		#		
s ₁		#		
v		#		
v ₁		#		
v ₂		#		
v ₃		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Permanent Sheet Piling			Sq. Ft.	

Notes:
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SECTION A-A

TSB-SC-PSSP-LS

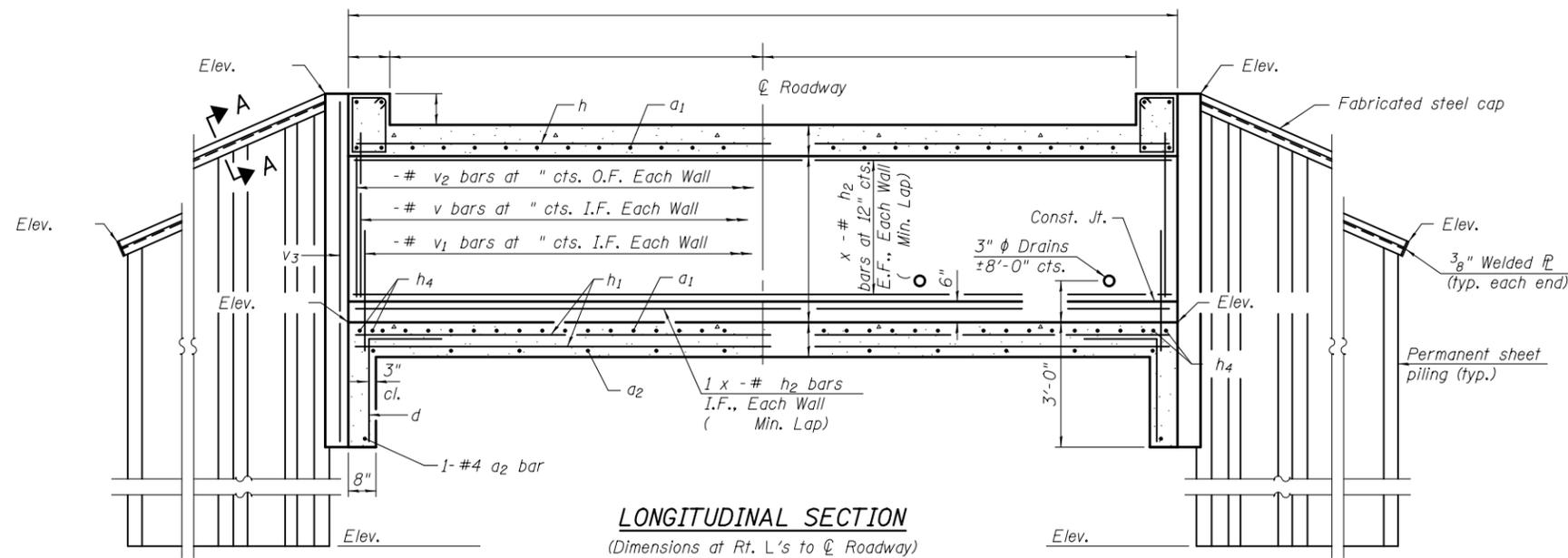
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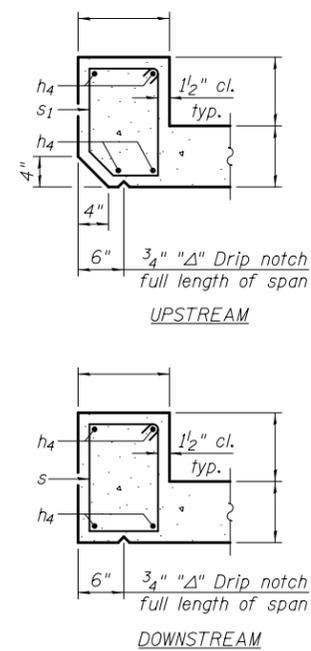
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS
STRUCTURE NO.**
SHEET NO. OF SHEETS

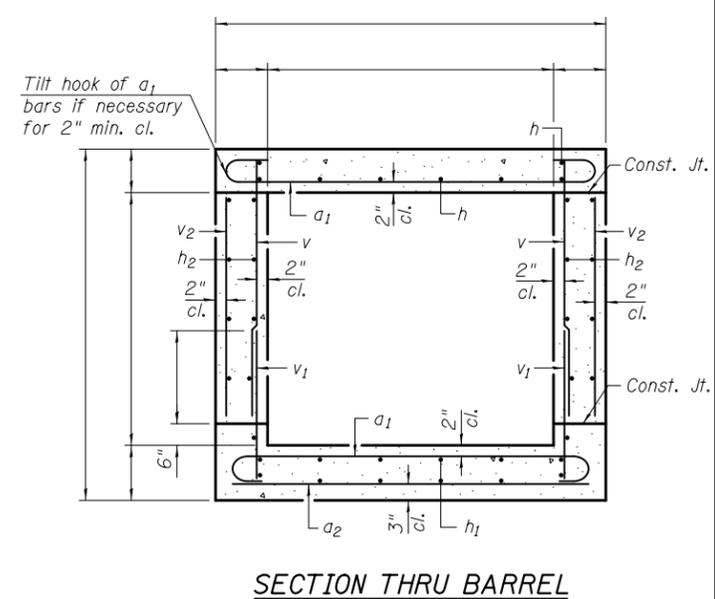
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



LONGITUDINAL SECTION
(Dimensions at Rt. L's to C Roadway)



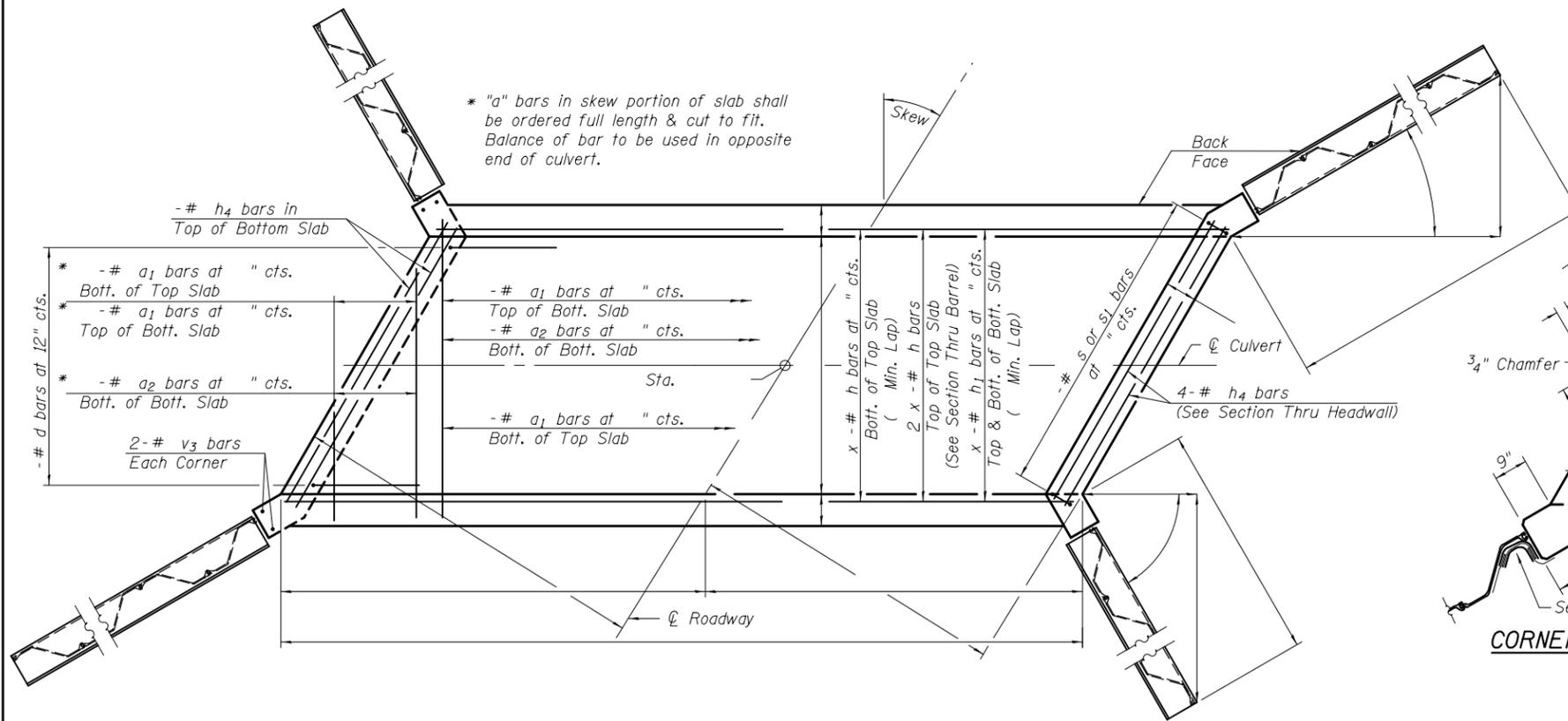
SECTION THRU HEADWALL



SECTION THRU BARREL

BILL OF MATERIAL

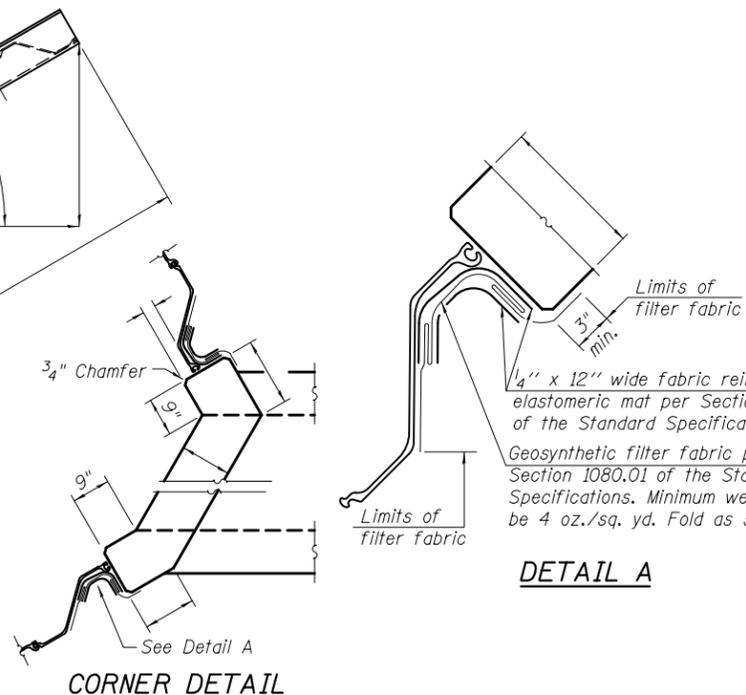
Bar	No.	Size	Length	Shape
a1		#		
a2		#		
d		#4	4'-5"	
h		#		
h1		#		
h2		#		
h4		#		
s		#		
s1		#		
v		#		
v1		#		
v2		#		
v3		#		
Concrete Box Culverts				Cu. Yd.
Reinforcement Bars				Pound
Permanent Sheet Piling				Sq. Ft.



SHOWING TOEWALL

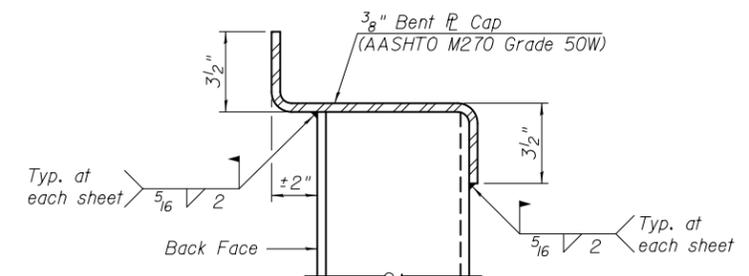
PLAN

SHOWING HEADWALL



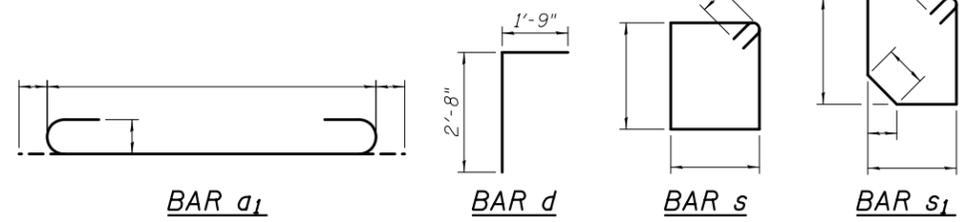
CORNER DETAIL

DETAIL A



SECTION A-A

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TSB-SC-PSSP-RS

10-15-2016

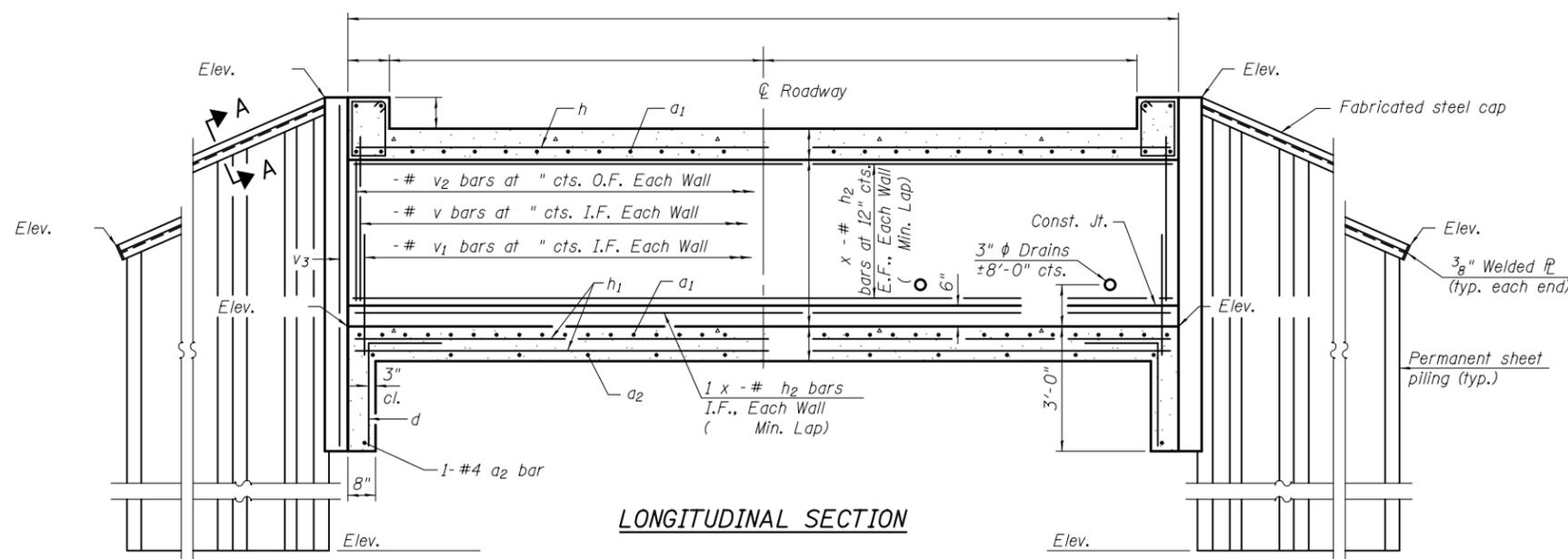
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		CHECKED -	REVISIONS

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

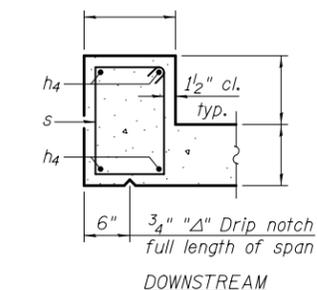
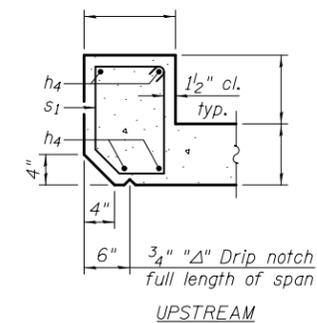
**CULVERT DETAILS
STRUCTURE NO.**

SHEET NO. OF SHEETS

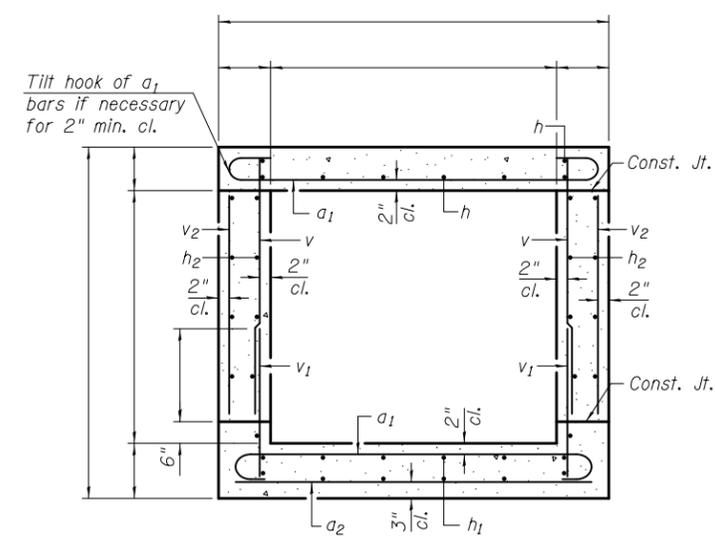
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



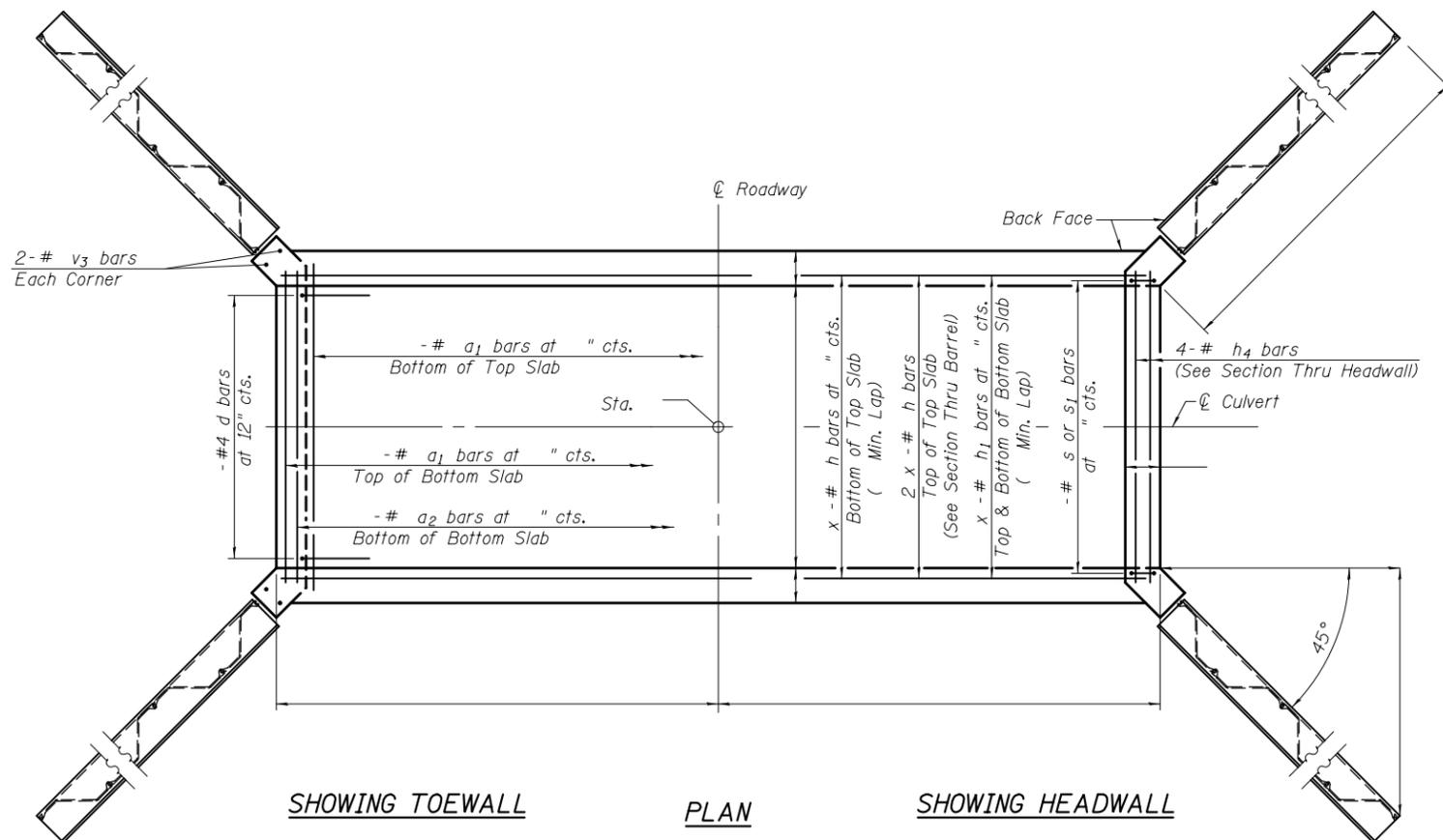
LONGITUDINAL SECTION



SECTION THRU HEADWALL



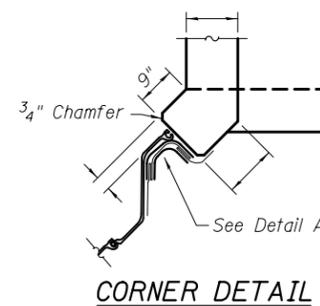
SECTION THRU BARREL



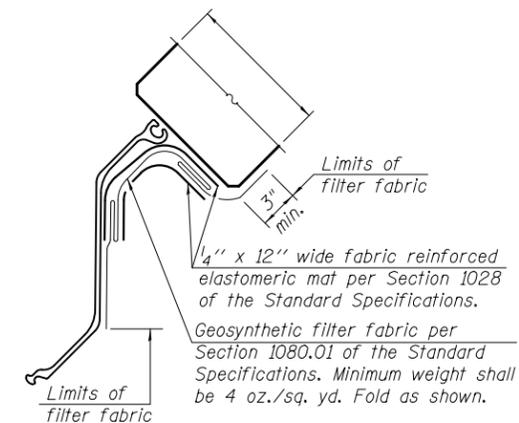
SHOWING TOEWALL

PLAN

SHOWING HEADWALL



CORNER DETAIL

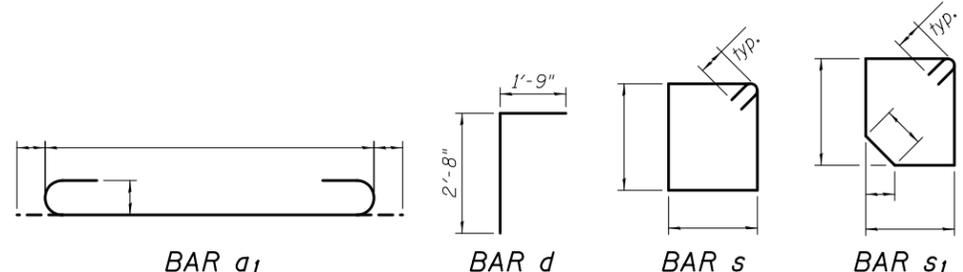


DETAIL A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁		#		
a ₂		#		
d		#4	4'-5"	
h		#		
h ₁		#		
h ₂		#		
h ₄		#		
s		#		
s ₁		#		
v		#		
v ₁		#		
v ₂		#		
v ₃		#		
Concrete Box Culverts			Cu. Yd.	
Reinforcement Bars			Pound	
Permanent Sheet Piling			Sq. Ft.	

Notes:
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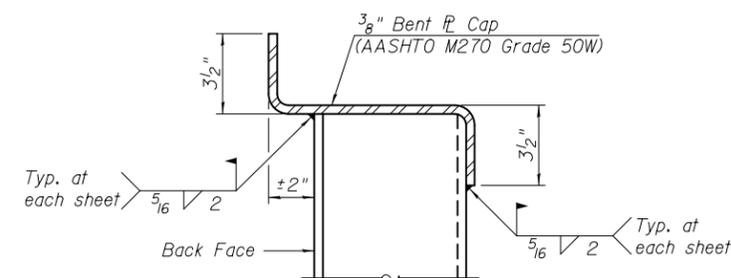


BAR a₁

BAR d

BAR s

BAR s₁



SECTION A-A

TSB-SC-PSSP-ZS

10-15-2016

FILE NAME =	USER NAME =	DESIGNED -	REVISD -
		CHECKED -	REVISD -
		DRAWN -	REVISD -
		CHECKED -	REVISD -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CULVERT DETAILS
 STRUCTURE NO.**

SHEET NO. OF SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				