

## SECTION 905 -- PROPOSAL (CONTINUED)

I (We) hereby certify by digital signature and electronic submission via Bid Express of the Section 905 proposal below, that all certifications, disclosures and affidavits incorporated herein are deemed to be duly executed in the aggregate, fully enforceable and binding upon delivery of the bid proposal. I (We) further acknowledge that this certification shall not extend to the bid bond or alternate security which must be separately executed for the benefit of the Commission. This signature does not cure deficiencies in any required certifications, disclosures and/or affidavits. I (We) also acknowledge the right of the Commission to require full and final execution on any certification, disclosure or affidavit contained in the proposal at the Commission's election upon award. Failure to so execute at the Commission's request within the time allowed in the Standard Specifications for execution of all contract documents will result in forfeiture of the bid bond or alternate security.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO. <u>  1  </u>	DATED <u>  6/14/2021  </u>	ADDENDUM NO. <u>          </u>	DATED <u>          </u>
ADDENDUM NO. <u>  2  </u>	DATED <u>  6/16/2021  </u>	ADDENDUM NO. <u>          </u>	DATED <u>          </u>
ADDENDUM NO. <u>          </u>	DATED <u>          </u>	ADDENDUM NO. <u>          </u>	DATED <u>          </u>

Number	Description
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- 1 Revised Table of Contents; Revised NTB No. 2902; Added NTB Nos. 2906 & 3511; Revised Bid Items; Revised Progress Schedule; Revised or Added Plan Sheet Nos. 1-2, 5-7, 10, 15-20, 51, 88.1 & 89; Amendment EBSx Download Required.
- 2 Revised Table of Contents; NTB No. 447 replaces NTB No. 446; Revised NTB No. 2902; Added NTB Nos. 3513 & 3514; Revised Bid Items; Revised or Added Plan Sheet Nos. 2,4,15-18,22,44,49-50,7501,7504-7510,7515-7517,7524-7525,7556-7557,7562-7563; Amendment EBSx Download Required.

TOTAL ADDENDA:   2    
(Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE \_\_\_\_\_

\_\_\_\_\_  
Contractor

BY \_\_\_\_\_

Signature

TITLE \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY, STATE, ZIP \_\_\_\_\_

PHONE \_\_\_\_\_

FAX \_\_\_\_\_

E-MAIL \_\_\_\_\_

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of \_\_\_\_\_ and the names, titles and business addresses of the executives are as follows:

President	Address
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Secretary	Address
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Treasurer	Address
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The following is my (our) itemized proposal.  
 HSIP-0040-03(021)/ 106857301000  
 Tishomingo County(ies)

Revised 01/26/2016

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
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**PROJECT: HSIP-0040-03(021)/106857301 - Tishomingo**

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(REVISIONS TO THE ABOVE WILL BE INDICATED ON THE SECOND SHEET  
OF SECTION 905 AS ADDENDA)

06/17/2021 09:23 AM

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 447**

**CODE: (SP)**

**DATE: 10/18/2017**

**SUBJECT: Traffic on Milled Surface in Rural Areas**

Bidders are hereby advised that when the main lanes of a roadway are fine milled, traffic will be allowed to run on a milled surfaces for up to seven (7) calendar days. The Contractor will be assessed a penalty of \$5,000 per calendar day afterwards until the milled surfaces are covered with the next lift of asphalt. It shall be the Contractor's responsibility to ensure that the milling operations do not commence until such time as forecasted weather conditions are suitable enough to allow the placement of the asphalt pavement after the milling operations.

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 2902

DATE: 06/17/2021

SUBJECT: Specialty Items

PROJECT: HSIP-0040-03(021)/106857301 - TISHOMINGO

Pursuant to the provisions of Section 108, the following work items are hereby designated as "Specialty Items" for this contract. Bidders are reminded that these items must be subcontracted in order to be considered as specialty items.

## CATEGORY: CURBING, SIDEWALKS, GUTTERS

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Line No	Pay Item	Description
0650	609-B002	Concrete Curb, Header
0660	609-B003	Concrete Curb, Special Design
0670	609-D003	Combination Concrete Curb and Gutter Type 2
0690	609-D008	Combination Concrete Curb and Gutter Type 3A
0700	609-D009	Combination Concrete Curb and Gutter Type 3A Mod1

## CATEGORY: DISPOSAL OF BUILDINGS, RIGHT OF WAY CLEARING & GRUBBING

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Line No	Pay Item	Description
0120	202-B240	Removal of Traffic Stripe

## CATEGORY: EROSION CONTROL

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Line No	Pay Item	Description
0210	213-C001	Superphosphate
0220	216-A001	Solid Sodding
0230	219-A001	Watering
0240	220-A001	Insect Pest Control
0250	221-A001	Concrete Paved Ditch
0260	223-A001	Mowing
0270	225-A001	Grassing
0280	225-B001	Agricultural Limestone
0290	225-C001	Mulch, Vegetative Mulch
0300	226-A001	Temporary Grassing
0310	234-A001	Temporary Silt Fence
0320	234-D001	Inlet Siltation Guard
0330	235-A001	Temporary Erosion Checks
0340	237-A002	Wattles, 20"
0350	245-A001	Silt Dike
0360	246-A002	Sandbags
0370	247-A001	Temporary Stream Diversion
0380	249-A001	Riprap for Erosion Control

CATEGORY: GUARDRAIL, GUIDERAIL

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Line No	Pay Item	Description
0630	606-B002	Guard Rail, Class A, Type 1, 'W' Beam
0640	606-E001	Guard Rail, Terminal End Section

CATEGORY: MISCELLANEOUS/ SPECIALTY WORK ITEMS

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Line No	Pay Item	Description
0460	423-A001	Rumble Strips, Ground In

CATEGORY: PAVEMENT STRIPING AND MARKING

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Line No	Pay Item	Description
0910	626-A003	6" Thermoplastic Traffic Stripe, Skip White
0920	626-C003	6" Thermoplastic Edge Stripe, Continuous White
0930	626-D004	6" Thermoplastic Traffic Stripe, Skip Yellow
0940	626-E003	6" Thermoplastic Traffic Stripe, Continuous Yellow
0950	626-F004	6" Thermoplastic Edge Stripe, Continuous Yellow
0960	626-G002	Thermoplastic Detail Stripe, White
0970	626-G003	Thermoplastic Detail Stripe, Yellow
0980	626-H004	Thermoplastic Legend, White
0990	626-H005	Thermoplastic Legend, White
1000	627-J001	Two-Way Clear Reflective High Performance Raised Markers
1010	627-K001	Red-Clear Reflective High Performance Raised Markers
1020	627-L001	Two-Way Yellow Reflective High Performance Raised Markers

CATEGORY: SURVEY AND STAKING

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Line No	Pay Item	Description
1200	699-A001	Roadway Construction Stakes

CATEGORY: TRAFFIC CONTROL - PERMANENT

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Line No	Pay Item	Description
1030	630-A001	Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness
1040	630-A003	Standard Roadside Signs, Sheet Aluminum, 0.125" Thickness
1050	630-A005	Standard Roadside Signs, Sheet Aluminum, 0.1" Thickness
1060	630-B002	Interstate Directional Signs, Bolted Extruded Aluminum Panels, Ground Mounted
1070	630-C001	Square Tube Posts, 4.0 lb/ft
1080	630-C003	Steel U-Section Posts, 3.0 lb/ft
1090	630-D007	Structural Steel Beams, W6 x 15
1100	630-D008	Structural Steel Beams, W6 x 9
1110	630-E001	Structural Steel Angles & Bars, 3 1/2" x 3 1/2" x 1/4" Angles
1120	630-F006	Delineators, Guard Rail, White
1130	635-A059	Traffic Signal Head, Type 1
1140	635-A065	Traffic Signal Head, Type 2 FYA

CATEGORY: TRAFFIC CONTROL - PERMANENT

Line No	Pay Item	Description
1150	635-A070	Traffic Signal Head, Type 3
1160	635-A073	Traffic Signal Head, Type 4
1170	638-A003	Flashing Assembly, Be Prepared to Stop When Flashing
1180	647-A001	Removal of Existing Traffic Signal Equipment
1190	660-A003	Equipment Cabinet, Type B
1240	907-632-A007	Solid State Traffic Cabinet Assembly, Type III Cabinet, Type 1 Controller
1250	907-632-J001	Power Service Pedestal
1260	907-634-A041	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 25' Arm
1270	907-634-A043	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 35' Arm
1280	907-634-A044	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 40' Arm
1290	907-634-A048	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 60' Arm
1300	907-634-A050	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 70' Arm
1310	907-634-A051	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 75' Arm
1320	907-634-A052	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 80' Arm
1330	907-634-A053	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 85' Arm
1340	907-634-C001	Pole Foundations, Class "B" Concrete
1350	907-634-E003	Camera Pole with Foundation, 70' Pole
1360	907-634-F002	Detector Pole with Foundation, 35' Pole
1362	907-636-B003	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 10, 2 Conductor
1370	907-636-B014	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 5 Conductor
1380	907-636-B016	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 8 Conductor
1390	907-636-B025	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 6, 3 Conductor
1400	907-636-B047	Electric Cable, Underground in Conduit, THHN, AWG #3, 3 Conductor
1410	907-637-A002	Pullbox Enclosure, Type 2
1420	907-637-A003	Pullbox Enclosure, Type 3
1430	907-637-A004	Pullbox Enclosure, Type 4
1440	907-637-C028	Traffic Signal Conduit, Underground, Type 4, 2"
1450	907-637-D003	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 3"
1460	907-637-I002	Traffic Signal Conduit Bank, Underground, Drilled or Jacked, Rolled Pipe, 2"
1470	907-641-A002	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2
1480	907-641-B002	Signal Advanced Radar Vehicle Detection Sensor, Type 2
1490	907-641-D001	Radar Vehicle Detection Cable
1500	907-653-B001	Street Name Sign
1510	907-662-A002	Radio Interconnect, Signal Control, Installed in New Controller Cabinet
1520	907-663-A001	Network Switch, Type A
1530	907-663-C001	Cellular Modem
1540	907-663-D001	Category 6 Cable, Installed in Conduit
1550	907-670-A001	Roadway Weather Information System
1560	907-670-B002	Warning Sign with Flashing Beacon
1570	907-670-C001	Roadway Weather Information System Training

CATEGORY: TRAFFIC CONTROL - TEMPORARY

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Line No	Pay Item	Description
0750	619-A1002	Temporary Traffic Stripe, Continuous White
0760	619-A2002	Temporary Traffic Stripe, Continuous Yellow
0770	619-A3002	Temporary Traffic Stripe, Skip White
0780	619-A5001	Temporary Traffic Stripe, Detail
0790	619-A6002	Temporary Traffic Stripe, Legend
0800	619-D1001	Standard Roadside Construction Signs, Less than 10 Square Feet
0810	619-D2001	Standard Roadside Construction Signs, 10 Square Feet or More
0820	619-D3001	Remove and Reset Signs, All Sizes
0830	619-F1001	Concrete Median Barrier, Precast
0840	619-F2001	Remove and Reset Concrete Median Barrier, Precast
0850	619-G4001	Barricades, Type III, Double Faced
0860	619-G4005	Barricades, Type III, Single Faced
0870	619-G5001	Free Standing Plastic Drums
0880	619-G7001	Warning Lights, Type "B"
0890	619-J1004	Impact Attenuator, 60 MPH
1230	907-619-E3001	Changeable Message Sign



**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 3513**

**CODE: (SP)**

**DATE: 6/15/2021**

**SUBJECT: Box Culvert Standards**

**PROJECT: HSIP-0040-03(021) / 106857301 – Tishomingo County**

Bidders are hereby advised that box culvert standard drawings have been added to the contract plans for the box extension of the 12' x 7' single barrel box culvert at Station 535+25.40. The standards include information for concrete and reinforcement for a 12' x 8' box culvert. Some field and reinforcement modifications will be required due to this standard being intended for a larger box. Any work regarding these modifications should be absorbed in other items bid.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 3514**

**CODE: (SP)**

**DATE: 06/17/2021**

**SUBJECT: Combination Concrete Curb and Gutter Corrections**

**PROJECT: HSIP-0040-03(021) / 106857301 – Tishomingo County**

The Bidder is hereby advised that the Contract Plans show some areas as having Combination Concrete Curb and Gutter, Type 2 Modified. This is in error. Anywhere the Contract Plans show Combination Concrete Curb and Gutter, Type 2 Modified it shall be understood to mean Combination Concrete Curb and Gutter, Type 2. The updated quantities regarding pay item no. 609-D003 and pay item no. 609-D004 are shown in the table below. The Bid Sheets are correct.

<b>Pay Item No.</b>	<b>Description</b>	<b>Original Quantity</b>	<b>Revised Quantity</b>
609-D003	Combination Concrete Curb and Gutter, Type 2	1,606 LF	1,711 LF
609-D004	Combination Concrete Curb and Gutter, Type 2 Modified	105 LF	0 LF

The Bidder is hereby advised of the following corrections regarding how Type 2 Curb and Gutter is detailed in the Contract Plans.

Changes to Plan Working Sheet TS-3 (Sheet Number 9)

- The width of Type 2 curb & gutter is incorrectly shown as 2’6”. The correct width of Type 2 curb & gutter is 2’9”. Type 2 curb & gutter on this sheet will be placed on 19-mm MT Asphalt.

Changes to Plan Working Sheet TS-4 (Sheet Number 10) and TS-8 (Sheet Number 14)

- The width of Type 2 curb & gutter is incorrectly shown as 2’6”. The correct width of Type 2 curb & gutter is 2’9”.

Safety Improvements along SR 25, known as Federal Aid Project No. HSIP-0040-03(021) / 106857301 in Tishomingo County.

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
<b>Roadway Items</b>					
0010	201-A001		1	Lump Sum	Clearing and Grubbing
0020	201-C002		2	Acre	Random Clearing and Grubbing
0030	202-B004		932	Square Yard	Removal of Asphalt Driveways, All Depths
0040	202-B007		4,797	Square Yard	Removal of Asphalt Pavement, All Depths
0050	202-B052		60	Square Yard	Removal of Concrete Driveways, All Depths
0060	202-B088		274	Linear Feet	Removal of Curb & Gutter, All Types
0070	202-B165		1	Each	Removal of Inlets, All Sizes
0080	202-B191		127	Linear Feet	Removal of Pipe, 8" And Above
0090	202-B193		2	Each	Removal of Power Pole
0100	202-B208		456	Square Yard	Removal of Riprap
0110	202-B215		70	Each	Removal of Sign Including Post & Footing
0120	202-B240		2,850	Linear Feet	Removal of Traffic Stripe
0130	203-A001	(E)	3,150	Cubic Yard	Unclassified Excavation, FM, AH
0140	203-B001	(E)	1,000	Cubic Yard	Rock Excavation, FM, AH
0150	203-EX020	(E)	2,650	Cubic Yard	Borrow Excavation, AH, FME, Class B9
0160	203-G001	(E)	9,950	Cubic Yard	Excess Excavation, FM, AH
0170	206-A001	(S)	1,501	Cubic Yard	Structure Excavation
0180	206-B001	(E)	78	Cubic Yard	Select Material for Undercuts, Contractor Furnished, FM
0190	209-A005		10,126	Square Yard	Geotextile Stabilization, Type V, Non-Woven
0200	211-B001	(E)	372	Cubic Yard	Topsoil for Slope Treatment, Contractor Furnished
0210	213-C001		38	Ton	Superphosphate
0220	216-A001		1,120	Square Yard	Solid Sodding
0230	219-A001		23	Thousand Gallon	Watering [\$20.00]
0240	220-A001		19	Acre	Insect Pest Control [\$30.00]
0250	221-A001	(S)	7	Cubic Yard	Concrete Paved Ditch
0260	223-A001		152	Acre	Mowing [\$50.00]
0270	225-A001		38	Acre	Grassing
0280	225-B001		38	Ton	Agricultural Limestone
0290	225-C001		76	Ton	Mulch, Vegetative Mulch
0300	226-A001		38	Acre	Temporary Grassing
0310	234-A001		11,863	Linear Feet	Temporary Silt Fence
0320	234-D001		2	Each	Inlet Siltation Guard
0330	235-A001		167	Each	Temporary Erosion Checks

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
0340	237-A002		247	Linear Feet	Wattles, 20"
0350	245-A001		247	Linear Feet	Silt Dike
0360	246-A002		370	Each	Sandbags
0370	247-A001		3	Each	Temporary Stream Diversion
0380	249-A001		7	Ton	Riprap for Erosion Control
0390	304-A002	(GY)	4,710	Cubic Yard	Granular Material, LVM, Class 3, Group C
0400	403-A002	(BA1)	1,303	Ton	12.5-mm, MT, Asphalt Pavement
0410	403-A005	(BA1)	1,182	Ton	19-mm, MT, Asphalt Pavement
0420	403-A006	(BA1)	2,296	Ton	19-mm, ST, Asphalt Pavement
0430	403-A014	(BA1)	3,642	Ton	9.5-mm, MT, Asphalt Pavement
0440	406-D001		18,324	Square Yard	Fine Milling of Bituminous Pavement, All Depths
0450	407-A001	(A2)	3,363	Gallon	Asphalt for Tack Coat
0460	423-A001		3	Mile	Rumble Strips, Ground In
0462	503-C010		3,372	Linear Feet	Saw Cut, Full Depth
0470	601-A001	(S)	98	Cubic Yard	Class "B" Structural Concrete
0480	601-B001	(S)	29	Cubic Yard	Class "B" Structural Concrete, Minor Structures
0490	602-A001	(S)	20,201	Pounds	Reinforcing Steel
0492	603-A047	(S)	104	Linear Feet	36" Steel Pipe, Jacked or Bored
0500	603-ALT003	(S)	212	Linear Feet	18" Type A Alternate Pipe
0510	603-CA011	(S)	777	Linear Feet	18" Reinforced Concrete Pipe, Class III
0520	603-CA026	(S)	192	Linear Feet	24" Reinforced Concrete Pipe, Class III
0530	603-CA040	(S)	92	Linear Feet	30" Reinforced Concrete Pipe, Class III
0540	603-CA055	(S)	16	Linear Feet	36" Reinforced Concrete Pipe, Class III
0560	603-CB003	(S)	2	Each	18" Reinforced Concrete End Section
0570	603-CB005	(S)	5	Each	30" Reinforced Concrete End Section
0580	603-CB006	(S)	4	Each	36" Reinforced Concrete End Section
0590	603-CE023	(S)	48	Linear Feet	51" x 31" Concrete Arch Pipe, Class A III
0600	603-CF006	(S)	3	Each	51" x 31" Concrete Arch Pipe End Section
0610	604-A001		797	Pounds	Castings
0620	604-B001		1,600	Pounds	Gratings
0630	606-B002		100	Linear Feet	Guard Rail, Class A, Type 1, 'W' Beam
0640	606-E001		2	Each	Guard Rail, Terminal End Section
0650	609-B002	(S)	805	Linear Feet	Concrete Curb, Header

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
0660	609-B003	(S)	100	Linear Feet	Concrete Curb, Special Design
0670	609-D003	(S)	1,711	Linear Feet	Combination Concrete Curb and Gutter Type 2
0690	609-D008	(S)	2,070	Linear Feet	Combination Concrete Curb and Gutter Type 3A
0700	609-D009	(S)	807	Linear Feet	Combination Concrete Curb and Gutter Type 3A Mod1
0710	612-B001		28	Cubic Yard	Flowable Fill, Non-Excavatable
0720	616-A001	(S)	893	Square Yard	Concrete Median and/or Island Pavement, 10-inch
0730	616-A004	(S)	85	Square Yard	Concrete Median and/or Island Pavement, 4-inch
0740	618-A001		1	Lump Sum	Maintenance of Traffic
0750	619-A1002		19,124	Linear Feet	Temporary Traffic Stripe, Continuous White
0760	619-A2002		11,846	Linear Feet	Temporary Traffic Stripe, Continuous Yellow
0770	619-A3002		7,640	Linear Feet	Temporary Traffic Stripe, Skip White
0780	619-A5001		40,490	Linear Feet	Temporary Traffic Stripe, Detail
0790	619-A6002		3,018	Linear Feet	Temporary Traffic Stripe, Legend
0800	619-D1001		479	Square Feet	Standard Roadside Construction Signs, Less than 10 Square Feet
0810	619-D2001		1,651	Square Feet	Standard Roadside Construction Signs, 10 Square Feet or More
0820	619-D3001		30	Each	Remove and Reset Signs, All Sizes
0830	619-F1001		520	Linear Feet	Concrete Median Barrier, Precast
0840	619-F2001		200	Linear Feet	Remove and Reset Concrete Median Barrier, Precast
0850	619-G4001		168	Linear Feet	Barricades, Type III, Double Faced
0860	619-G4005		220	Linear Feet	Barricades, Type III, Single Faced
0870	619-G5001		255	Each	Free Standing Plastic Drums
0880	619-G7001		6	Each	Warning Lights, Type "B"
0890	619-J1004		6	Each	Impact Attenuator, 60 MPH
0900	620-A001		1	Lump Sum	Mobilization
0910	626-A003		7,640	Linear Feet	6" Thermoplastic Traffic Stripe, Skip White
0920	626-C003		19,124	Linear Feet	6" Thermoplastic Edge Stripe, Continuous White
0930	626-D004		880	Linear Feet	6" Thermoplastic Traffic Stripe, Skip Yellow
0940	626-E003		11,846	Linear Feet	6" Thermoplastic Traffic Stripe, Continuous Yellow
0950	626-F004		5,288	Linear Feet	6" Thermoplastic Edge Stripe, Continuous Yellow
0960	626-G002		25,509	Linear Feet	Thermoplastic Detail Stripe, White
0970	626-G003		22,716	Linear Feet	Thermoplastic Detail Stripe, Yellow
0980	626-H004		945	Square Feet	Thermoplastic Legend, White
0990	626-H005		2,316	Linear Feet	Thermoplastic Legend, White
1000	627-J001		219	Each	Two-Way Clear Reflective High Performance Raised Markers

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
1010	627-K001		377	Each	Red-Clear Reflective High Performance Raised Markers
1020	627-L001		586	Each	Two-Way Yellow Reflective High Performance Raised Markers
1030	630-A001		542	Square Feet	Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness
1040	630-A003		1,134	Square Feet	Standard Roadside Signs, Sheet Aluminum, 0.125" Thickness
1050	630-A005		471	Square Feet	Standard Roadside Signs, Sheet Aluminum, 0.1" Thickness
1060	630-B002		809	Square Feet	Interstate Directional Signs, Bolted Extruded Aluminum Panels, Ground Mounted
1070	630-C001		3,275	Linear Feet	Square Tube Posts, 4.0 lb/ft
1080	630-C003		264	Linear Feet	Steel U-Section Posts, 3.0 lb/ft
1090	630-D007		166	Linear Feet	Structural Steel Beams, W6 x 15
1100	630-D008		122	Linear Feet	Structural Steel Beams, W6 x 9
1110	630-E001		423	Pounds	Structural Steel Angles & Bars, 3 1/2" x 3 1/2" x 1/4" Angles
1120	630-F006		7	Each	Delineators, Guard Rail, White
1130	635-A059		12	Each	Traffic Signal Head, Type 1
1140	635-A065		6	Each	Traffic Signal Head, Type 2 FYA
1150	635-A070		4	Each	Traffic Signal Head, Type 3
1160	635-A073		2	Each	Traffic Signal Head, Type 4
1170	638-A003		4	Each	Flashing Assembly, Be Prepared to Stop When Flashing
1180	647-A001		1	Lump Sum	Removal of Existing Traffic Signal Equipment
1190	660-A003		3	Each	Equipment Cabinet, Type B
1200	699-A001		1	Lump Sum	Roadway Construction Stakes
1210	815-A007	(S)	50	Ton	Loose Riprap, Size 300
1220	815-E001	(S)	75	Square Yard	Geotextile under Riprap
1230	907-619-E3001		4	Each	Changeable Message Sign
1240	907-632-A007		2	Each	Solid State Traffic Cabinet Assembly, Type III Cabinet, Type 1 Controller
1250	907-632-J001		2	Each	Power Service Pedestal
1260	907-634-A041		1	Each	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 25' Arm
1270	907-634-A043		1	Each	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 35' Arm
1280	907-634-A044		1	Each	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 40' Arm
1290	907-634-A048		1	Each	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 60' Arm
1300	907-634-A050		1	Each	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 70' Arm
1310	907-634-A051		1	Each	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 75' Arm
1320	907-634-A052		1	Each	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 80' Arm
1330	907-634-A053		1	Each	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 85' Arm

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
1340	907-634-C001		26	Cubic Yard	Pole Foundations, Class "B" Concrete
1350	907-634-E003		1	Each	Camera Pole with Foundation, 70' Pole
1360	907-634-F002		2	Each	Detector Pole with Foundation, 35' Pole
1362	907-636-B003		2,015	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 10, 2 Conductor
1370	907-636-B014		2,496	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 5 Conductor
1380	907-636-B016		1,708	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 8 Conductor
1390	907-636-B025		186	Linear Feet	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 6, 3 Conductor
1400	907-636-B047		1,670	Linear Feet	Electric Cable, Underground in Conduit, THHN, AWG #3, 3 Conductor
1410	907-637-A002		19	Each	Pullbox Enclosure, Type 2
1420	907-637-A003		4	Each	Pullbox Enclosure, Type 3
1430	907-637-A004		1	Each	Pullbox Enclosure, Type 4
1440	907-637-C028		2,433	Linear Feet	Traffic Signal Conduit, Underground, Type 4, 2"
1450	907-637-D003		1,000	Linear Feet	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 3"
1460	907-637-I002		1,670	Linear Feet	Traffic Signal Conduit Bank, Underground, Drilled or Jacked, Rolled Pipe, 2"
1470	907-641-A002		10	Each	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2
1480	907-641-B002		4	Each	Signal Advanced Radar Vehicle Detection Sensor, Type 2
1490	907-641-D001		3,171	Linear Feet	Radar Vehicle Detection Cable
1500	907-653-B001		58	Square Feet	Street Name Sign
1510	907-662-A002		5	Each	Radio Interconnect, Signal Control, Installed in New Controller Cabinet
1520	907-663-A001		5	Each	Network Switch, Type A
1530	907-663-C001		2	Each	Cellular Modem
1540	907-663-D001		335	Linear Feet	Category 6 Cable, Installed in Conduit
1550	907-670-A001		1	Each	Roadway Weather Information System
1560	907-670-B002		2	Each	Warning Sign with Flashing Beacon
1570	907-670-C001		1	Lump Sum	Roadway Weather Information System Training
<b>ALTERNATE GROUP AA NUMBER 1</b>					
1580	304-F001	(GT)	4,050	Ton	3/4" and Down Crushed Stone Base
<b>ALTERNATE GROUP AA NUMBER 2</b>					
1590	304-F002	(GT)	4,050	Ton	Size 610 Crushed Stone Base
<b>ALTERNATE GROUP AA NUMBER 3</b>					
1600	304-F003	(GT)	4,050	Ton	Size 825B Crushed Stone Base

**ADDENDUM**

DESCRIPTION OF SHEET

DESCRIPTION OF SHEET

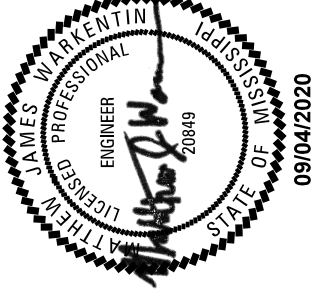
STATE PROJECT NO.  
MISS. HSIP-0040-03(016)

WKG. SH.  
NO. NO.

WKG. SH.  
NO. NO.

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STANDARD ROADSIDE SIGNS	EQ-6	PAVEMENT MARKING DETAIL - SR 25 AT CR 186 (RUTLEDGE SALEM RD) - STA. 285+85 TO STA. 297+00	PMD-5	87
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STANDARD ROADSIDE SIGNS	EQ-8	PAVEMENT MARKING DETAIL - IUKA: SR 25 AT US72 INTERCHANGE	PMD-7A	88.1
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		EROSION CONTROL PLAN - STATE ROUTE 25 AT VO TECH - STA. 87+00 TO 93+00	EC-12	103
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STATE ROUTE 25 AT CONSTITUTION DR				
STATE ROUTE 25 AT CR 321 - REMOVAL OF SIGNAL POLE AND CABINET				
STATE ROUTE 25 AT CR 333				
STATE ROUTE 25 AT STATE ROUTE 350				
STATE ROUTE 25 AT PICKWICK LAKE CORRIDOR				

DATE	SHEET NO.	BY
12/7/20	20, 21, 31, 33, 49, 20001, 20002	MJW
6/3/2021	1, 2, 6, 7, 10, 15, 16, 17, 18	DSP
6/14/21	2, 5, 6, 15, 16, 17, 18, 19, 20, 51, 88, 189	DSP
6/16/21	4, 15, 16, 17, 18, 22, 44, 49, 50, 7501, 7504, 7505, 7506, 7507, 7508, 7509	DSP
	7556, 7557, 7562, 7563	



MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
**DETAILED INDEX**

COUNTY: TISHOMINGO  
PROJ. NO.: HSIP-0040-03(016)

FILENAME: dt-sh.dgn DATE 9/4/2020  
DESIGN TEAM PICKERING CHECKED

WORKING NUMBER: DJ-1  
SHEET NUMBER: 2



**ADDENDUM**

DESCRIPTION OF SHEET

DESCRIPTION OF SHEET

WKG. NO. SH. NO.

WKG. NO. SH. NO.

STANDARD DRAWINGS (cont.)

STANDARD ROADSIDE SIGNS	SN-3A	6304	CR 23 SOUTH AT SR 25	9001
STANDARD ROADSIDE SIGNS	SN-3B	6305	SR 4 AT SR 25	9002
STANDARD ROADSIDE SIGN ASSEMBLY AND INSTALLATION	SN-4	6306	SR 25 AT VOC TECH	9003-9013
STANDARD ROADSIDE SIGN ASSEMBLY AND INSTALLATION	SN-4A	6307	SR 25 AT CR 186 (RUTLEDGE SALEM RD)	9014-9017
STANDARD ROADSIDE SIGN ASSEMBLY AND INSTALLATION	SN-4B	6308	SR 25 AT BATTLEGROUND DR	9018-9024
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TRAFFIC CONTROL PLAN FOR POSTED SPEED LIMIT LESS THAN 65 MPH (4-LANE: MEDIAN LANE OR OUTSIDE LANE CLOSURE)	TCP-3	6353		
SHORT DURATION CLOSING OF TWO-LANE TWO-WAY HIGHWAYS	TCP-6	6356		
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PIPE CULVERT INSTALLATION	PI-1	6501		
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CONCRETE PIPE COLLAR	PC-1	6503		
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BOX CULVERT STANDARD DRAWINGS (17)

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SINGLE CELL - H = 6 FT. - SPANS = 6-20 FT.	IBS-6-2W-97	7508
SINGLE CELL - H = 8 FT. - SPANS = 8-20 FT.	IBS-8-2W-97	7509
SINGLE CELL - H = 8 FT. - SPANS = 8-20 FT.	IBS-8-2W-97	7510
WINGS WITH 3:1 SLOPE - H = 6-12 FT. - SPANS 6-24 FT.	IWS-3-97	7515
WINGS WITH 3:1 SLOPE - H = 6-12 FT. - SPANS 6-24 FT.	IWS-3-97	7516
WINGS WITH 3:1 SLOPE - H = 6-12 FT. - SPANS 6-24 FT.	IWS-3-97	7517
IBS MODIFIED FOR HIGH COVER	IBSM-3W-97	7524
30 DEG. SKEW DETAIL FOR WING WALLS	IBSM-3W-97	7525
45 DEG. SKEW DETAIL FOR WING WALLS	IBSM-3W-97	7556
45 DEG. SKEW DETAIL FOR WING WALLS	ISK-30-3W-97	7557
45 DEG. SKEW DETAIL FOR WING WALLS	ISK-30-3W-97	7562
45 DEG. SKEW DETAIL FOR WING WALLS	ISK-45-3W-97	7562
45 DEG. SKEW DETAIL FOR WING WALLS	ISK-45-3W-97	7563

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CR 23 SOUTH AT SR 25	9001
SR 4 AT SR 25	9002
SR 25 AT VOC TECH	9003-9013
SR 25 AT CR 186 (RUTLEDGE SALEM RD)	9014-9017
SR 25 AT BATTLEGROUND DR	9018-9024
SR 25 AT SR 172	9025-9028

TOTAL SHEETS =

297

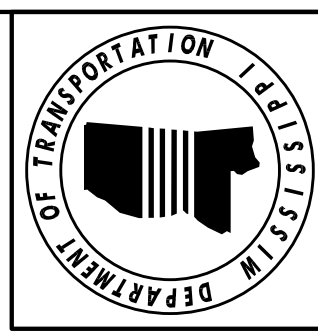
6/16/21	REVISOR	
DATE	BY	DSP
REVISOR'S NAME		
REVISOR'S TITLE		
REVISOR'S SIGNATURE		
REVISOR'S ORGANIZATION		

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
**DETAILED INDEX**

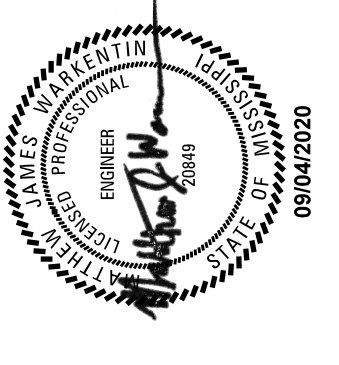
COUNTY: TISHOMINGO  
PROJ. NO.: HSIP-0040-03(016)

FILENAME: dt-sh.dgn  
DESIGN TEAM: PICKERING - CHECKED

DATE: 9/4/2020



WORKING NUMBER  
DI-3  
SHEET NUMBER  
4



**ADDENDUM**

STATE	PROJECT NO.
MISS	HSIP-0040-03(021)

**SUMMARY OF QUANTITIES (SHEET 1)**

PAY ITEM NO.	PAY ITEM	UNIT	TISHOMINGO : 106857-301000	
			Prelim	Final
201-A001	Clearing and Grubbing	LS	1	
201-C002	Random Clearing and Grubbing	ACRE	2	
202-B004	Removal of Asphalt Driveways, All Depths	SY	932	
202-B007	Removal of Asphalt Pavement, All Depths	SY	4,797	
202-B052	Removal of Concrete Driveways, All Depths	SY	60	
202-B088	Removal of Curb & Gutter, All Types	LF	274	
202-B165	Removal of Inlets, All Sizes	EA	1	
202-B191	Removal of Pipe, 8" And Above	LF	127	
202-B193	Removal of Power Pole	EA	2	
202-B208	Removal of Riprap	SY	456	
202-B215	Removal of Sign Including Post & Footing	EA	70	
202-B240	Removal of Traffic Stripe	LF	2,850	
203-A001	Unclassified Excavation, FM, AH	CY	3,150	
203-B001	Rock Excavation, FM, AH	CY	1,000	
203-EX020	Borrow Excavation, AH, FME, Class B9	CY	2,650	
203-G001	Excess Excavation, FM, AH	CY	9,950	
206-A001	Structure Excavation	CY	1,501	
206-B001	Select Material for Undercuts, Contractor Furnished, FM	CY	78	
209-A005	Geotextile Stabilization, Type V, Non-Woven	SY	10,126	
211-B001	Topsoil for Slope Treatment, Contractor Furnished	CY	372	
213-C001	Superphosphate	TON	38	
216-A001	Solid Sodding	SY	1,120	
219-A001	Watering	KGAL	23	
220-A001	Insect Pest Control	ACRE	19	
221-A001	Concrete Paved Ditch	CY	7	
223-A001	Mowing	ACRE	152	
225-A001	Grassing	ACRE	38	
225-B001	Agricultural Limestone	TON	38	
225-C001	Mulch, Vegetative Mulch	TON	76	
226-A001	Temporary Grassing	ACRE	38	
234-A001	Temporary Silt Fence	LF	11,863	
234-D001	Inlet Siltation Guard	EA	2	
235-A001	Temporary Erosion Checks	EA	167	
237-A002	Wattles, 20"	LF	247	
245-A001	Silt Dike	LF	247	
246-A002	Sandbags	EA	370	
247-A001	Temporary Stream Diversion	EA	3	
249-A001	Riprap for Erosion Control	TON	7	
304-A002	Granular Material, LVM, Class 3, Group C	CY	4,710	
304-F001	3/4" and Down Crushed Stone Base	TON	4,050	
304-F002	OR			
	Size 610 Crushed Stone Base	TON	4,050	
	OR			

- ① INCLUDES 4,000 TONS FOR ROADWAYS AND 50 TONS FOR DRIVEWAYS. INCREASED BY 20% FOR SHRINKAGE AND ROUNDED TO THE NEAREST 50.
- ② INCLUDES 402 CUBIC YARDS FOR PIPE CULVERTS AND 1,099 CUBIC YARDS FOR BOX CULVERTS
- ③ 25% SHRINKAGE FACTOR APPLIED AND ROUNDED TO THE NEAREST 50.
- ④ STATE ROUTE 25 AND CR 78 (RIDGE ROAD) SITE ONLY.



Date	Revision
12/07/2020	QUANTITY REVISIONS
06/14/2021	REVISED QUANTITIES

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**  
**SUMMARY OF QUANTITIES**

PROJ NO: HSIP-0040-03(021)  
 COUNTY: TISHOMINGO

Working Number  
**SQ-1**

Design Team  
 Picking

Checked  
 NJW

Date  
 09/04/2020

Sheet Number  
**15**

FILENAME: sqs



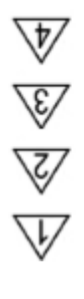
**ADDENDUM**

STATE	PROJECT NO.
MISS	HSIP-0040-03(021)


**SUMMARY OF QUANTITIES (SHEET 2)**

PAY ITEM NO.	PAY ITEM	UNIT	TISHOMINGO : 106857-301000	
			Prelim	Final
304-F003	Size 825B Crushed Stone Base	TON	4,050	
403-A002	12.5-mm, MT, Asphalt Pavement	TON	1,303	
403-A005	19-mm, MT, Asphalt Pavement	TON	1,182	
403-A006	19-mm, ST, Asphalt Pavement	TON	2,296	
403-A014	9.5-mm, MT, Asphalt Pavement	TON	3,642	
406-D001	Fine Milling of Bituminous Pavement, All Depths	SY	18,324	
407-A001	Asphalt for Tack Coat	GAL	3,363	
423-A001	Rumble Strips, Ground In	MI	3	
503-C010	Saw Cut, Full Depth	LF	3,372	
601-A001	Class "B" Structural Concrete	CY	98	
601-B001	Class "B" Structural Concrete, Minor Structures	CY	29	
602-A001	Reinforcing Steel	LBS	20,201	
603-ALT003	18" Type A Alternate Pipe	LF	212	
603-CA011	18" Reinforced Concrete Pipe, Class III	LF	777	
603-CA026	24" Reinforced Concrete Pipe, Class III	LF	192	
603-CA040	30" Reinforced Concrete Pipe, Class III	LF	92	
603-CA055	36" Reinforced Concrete Pipe, Class III	LF	16	
603-CA065	36" Reinforced Concrete Pipe, Class V, Jacked or Bored	LF	104	
603-CB003	18" Reinforced Concrete End Section	EA	2	
603-CB005	30" Reinforced Concrete End Section	EA	5	
603-CB006	36" Reinforced Concrete End Section	EA	4	
603-CE023	51" x 31" Concrete Arch Pipe, Class A III	LF	48	
603-CF006	51" x 31" Concrete Arch Pipe End Section	EA	3	
604-A001	Castings	LBS	797	
604-B001	Gratings	LBS	1,600	
606-B002	Guard Rail, Class A, Type 1, 'W' Beam	LF	100	
606-E001	Guard Rail, Terminal End Section	EA	2	
609-B002	Concrete Curb, Header	LF	805	
609-B003	Concrete Curb, Special Design	LF	100	
609-D003	Combination Concrete Curb and Gutter Type 2	LF	1,606	
609-D004	Combination Concrete Curb and Gutter Type 2 Modified	LF	105	
609-D008	Combination Concrete Curb and Gutter Type 3A	LF	2,070	
609-D009	Combination Concrete Curb and Gutter Type 3A Mod1	LF	807	
612-B001	Flowable Fill, Non-Excavatable	CY	28	
616-A001	Concrete Median and/or Island Pavement, 10-inch	SY	893	
616-A004	Concrete Median and/or Island Pavement, 4-inch	SY	85	
618-A001	Maintenance of Traffic	LS	1	
619-A1002	Temporary Traffic Stripe, Continuous White	LF	19,124	
619-A2002	Temporary Traffic Stripe, Continuous Yellow	LF	11,846	
619-A3002	Temporary Traffic Stripe, Skip White	LF	7,640	
619-A5001	Temporary Traffic Stripe, Detail	LF	40,490	
619-A6002	Temporary Traffic Stripe, Legend	LF	3,018	
619-D1001	Standard Roadside Construction Signs, Less than 10 Square Feet	SF	479	

- ① INCLUDES 4,000 TONS FOR ROADWAYS AND 50 TONS FOR DRIVEWAYS. INCREASED BY 20% FOR SHRINKAGE AND ROUNDED TO THE NEAREST 50.
- ② INCLUDES 959 TONS FOR ROADWAYS AND 344 TONS FOR DRIVEWAYS.
- ③ INCLUDES 3,384 TONS FOR ROADWAYS AND 258 TONS FOR DRIVEWAYS.
- ④ 212 LINEAR FEET FOR DRIVEWAYS
- ⑤ INCLUDES 1,682 POUNDS FOR PIPE CULVERTS, 17,882 POUNDS FOR BOX CULVERTS, AND 637 POUNDS FOR SIGNS.
- ⑥ LOCATION USED: STA 199+50 AT SR 4 / SR 25
- ⑦ INCLUDES 22 CUBIC YARDS FOR PIPE CULVERTS AND 7 CUBIC YARDS FOR SIGNS.
- ⑧ LOCATION OF SLOTTED CURB SHOWN ON WORKING SHEET NO. 5.



**MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
SUMMARY OF QUANTITIES**

	
Working Number	SQ-2
Design Team	sqgs
Pickering	TISHOMINGO
Checked	NJW
Date	09/04/2020
Sheet Number	16

PROJ NO: HSIP-0040-03(021)  
COUNTY: TISHOMINGO

FILENAME: sqgs

Date	Revision
06/15/2021	REVISED QUANTITIES
06/14/2021	REVISED QUANTITIES
06/03/2021	ADDED PAY ITEM
12/07/2020	QUANTITY REVISIONS

**ADDENDUM**

STATE	PROJECT NO.
MISS	HSIP-0040-03(021)

**SUMMARY OF QUANTITIES (SHEET 3)**

PAY ITEM NO.	PAY ITEM	UNIT	TISHOMINGO : 106857-301000	
			Prelim	Final
619-D2001	Standard Roadside Construction Signs, 10 Square Feet or More	SF	1,651	
619-D3001	Remove and Reset Signs, All Sizes	EA	30	
907-619-E3001	Changeable Message Sign	EA	4	
619-F1001	Concrete Median Barrier, Precast	LF	520	
619-F2001	Remove and Reset Concrete Median Barrier, Precast	LF	200	
619-G4001	Barricades, Type III, Double Faced	LF	168	
619-G4005	Barricades, Type III, Single Faced	LF	220	
619-G5001	Free Standing Plastic Drums	EA	255	
619-G7001	Warning Lights, Type "B"	EA	6	
619-J1004	Impact Attenuator, 60 MPH	EA	6	
620-A001	Mobilization	LS	1	
626-A003	6" Thermoplastic Traffic Stripe, Skip White	LF	7,640	
626-C003	6" Thermoplastic Edge Stripe, Continuous White	LF	19,124	
626-D004	6" Thermoplastic Traffic Stripe, Skip Yellow	LF	880	
626-E003	6" Thermoplastic Traffic Stripe, Continuous Yellow	LF	11,846	
626-F004	6" Thermoplastic Edge Stripe, Continuous Yellow	LF	5,288	
626-G002	Thermoplastic Detail Stripe, White	LF	25,509	
626-G003	Thermoplastic Detail Stripe, Yellow	LF	22,716	
626-H004	Thermoplastic Legend, White	SF	945	
626-H005	Thermoplastic Legend, White	LF	2,316	
627-J001	Two-Way Clear Reflective High Performance Raised Markers	EA	219	
627-K001	Red-Clear Reflective High Performance Raised Markers	EA	377	
627-L001	Two-Way Yellow Reflective High Performance Raised Markers	EA	586	
630-A001	Standard Roadside Signs, Sheet Aluminum, 0.080" Thickness	SF	542	
630-A003	Standard Roadside Signs, Sheet Aluminum, 0.125" Thickness	SF	1,134	
630-A005	Standard Roadside Signs, Sheet Aluminum, 0.1" Thickness	SF	471	
630-B002	Interstate Directional Signs, Bolted Extruded Aluminum Panels, Ground Mounted	SF	809	
630-C001	Square Tube Posts, 4.0 lb/ft	LF	3,275	
630-C003	Steel U-Section Posts, 3.0 lb/ft	LF	264	
630-D007	Structural Steel Beams, W6 x 15	LF	166	
630-D008	Structural Steel Beams, W6 x 9	LF	122	
630-E001	Structural Steel Angles & Bars, 3 1/2" x 3 1/2" x 1/4" Angles	LBS	423	
630-F006	Delineators, Guard Rail, White	EA	7	
907-632-A007	Solid State Traffic Cabinet Assembly, Type III Cabinet, Type 1 Controller	EA	2	
907-632-J001	Power Service Pedestal	EA	2	
907-634-A041	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 25' Arm	EA	1	①
907-634-A043	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 35' Arm	EA	1	①
907-634-A044	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 40' Arm	EA	1	①
907-634-A048	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 60' Arm	EA	1	①
907-634-A050	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 70' Arm	EA	1	①
907-634-A051	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 75' Arm	EA	1	①
907-634-A052	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 80' Arm	EA	1	①
907-634-A053	Traffic Signal Equipment Pole, Type II(L), 30' Shaft, 85' Arm	EA	1	①
907-634-C001	Pole Foundations, Class "B" Concrete	CY	26	

① ALL SIGNAL POLES: STRAIGHT ARM AND BLACK FINISH.



QUANTITY REVISIONS	12/07/2020	RB
REVISED QUANTITIES	06/14/2021	DP
Revision		BY

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**  
**SUMMARY OF QUANTITIES**

PROJ NO: HSIP-0040-03(021)  
 COUNTY: TISHOMINGO

Working Number  
**SQ-3**

Design Team Pickering Checked NJW Date 09/04/2020

Sheet Number  
**17**



**ADDENDUM**

STATE	PROJECT NO.
MISS	HSIP-0040-03(021)

**SUMMARY OF QUANTITIES (SHEET 4)**

PAY ITEM NO.	PAY ITEM	UNIT	TISHOMINGO : 106857-301000	
			Prelim	Final
907-634-E003	Camera Pole with Foundation, 70' Pole	EA	1	
907-634-F002	Detector Pole with Foundation, 35' Pole	EA	2	
635-A059	Traffic Signal Head, Type 1	EA	12	
635-A065	Traffic Signal Head, Type 2 FYA	EA	6	
635-A070	Traffic Signal Head, Type 3	EA	4	
635-A073	Traffic Signal Head, Type 4	EA	2	
907-636-B003	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 10, 2 Conductor	LF	2,015	
907-636-B014	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 5 Conductor	LF	2,496	
907-636-B016	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 14, 8 Conductor	LF	1,708	
907-636-B025	Electric Cable, Underground in Conduit, IMSA 20-1, AWG 6, 3 Conductor	LF	186	
907-636-B047	Electric Cable, Underground in Conduit, THHN, AWG #3, 3 Conductor	LF	1,670	
907-637-A002	Pullbox Enclosure, Type 2	EA	19	
907-637-A003	Pullbox Enclosure, Type 3	EA	4	
907-637-A004	Pullbox Enclosure, Type 4	EA	1	
907-637-C028	Traffic Signal Conduit, Underground, Type 4, 2"	LF	2,433	
907-637-D003	Traffic Signal Conduit, Underground Drilled or Jacked, Rolled Pipe, 3"	LF	1,000	
907-637-I002	Traffic Signal Conduit Bank, Underground, Drilled or Jacked, Rolled Pipe, 2"	LF	1,670	
638-A003	Flashing Assembly, Be Prepared to Stop When Flashing	EA	4	
907-641-A002	Signal Stop Bar Radar Vehicle Detection Sensor, Type 2	EA	10	
907-641-B002	Signal Advanced Radar Vehicle Detection Sensor, Type 2	EA	4	
907-641-D001	Radar Vehicle Detection Cable	LF	3,171	
647-A001	Removal of Existing Traffic Signal Equipment	LS	1	
907-653-B001	Street Name Sign	SF	58	
660-A003	Equipment Cabinet, Type B	EA	3	
907-662-A002	Radio Interconnect, Signal Control, Installed in New Controller Cabinet	EA	5	
907-663-A001	Network Switch, Type A	EA	5	
907-663-C001	Cellular Modem	EA	2	
907-663-D001	Category 6 Cable, Installed in Conduit	LF	335	
907-670-A001	Roadway Weather Information System	EA	1	
907-670-B002	Warning Sign with Flashing Beacon	EA	2	
907-670-C001	Roadway Weather Information System Training	LS	1	
699-A001	Roadway Construction Stakes	LS	1	
815-A007	Loose Riprap, Size 300	TON	50	
815-E001	Geotextile under Riprap	SY	75	

- ① INCLUDES 12 EACH FOR TRAFFIC SIGNALS AND 7 EACH FOR ITS
- ② MDOT SUPPLIED. INCLUDES 1 EACH FOR TRAFFIC SIGNALS AND 1 EACH FOR ITS.
- ③ INCLUDES 2 EACH FOR TRAFFIC SIGNALS AND 3 EACH FOR ITS
- ④ FOR ROADWAY WEATHER INFORMATION SYSTEM.
- ⑤ ALL SIGNS FOR ROADWAY WEATHER INFORMATION SYSTEM TO BE ABSORBED INTO THIS ITEM.
- ⑥ EQUIPMENT TO BE INTEGRATED INTO THE MDOT TRAFFIC SYSTEM. COST TO BE ABSORBED IN THIS PAY ITEM.
- ⑦ REMOVAL OF ALL CONCRETE FOUNDATIONS WILL BE INCLUDED IN THIS PAY ITEM.
- ⑧ ALL REMOVED SIGNAL EQUIPMENT WILL BECOME THE PROPERTY OF THE CONTRACTOR.

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<b>MISSISSIPPI DEPARTMENT OF TRANSPORTATION</b>	
<b>SUMMARY OF QUANTITIES</b>	
	Working Number <b>SQ-4</b>
PROJ NO: HSIP-0040-03(021) COUNTY: TISHOMINGO	
Date 06/14/2021	Sheet Number 18
Revision REVISED QUANTITIES	Design Team Bickering
FILENAME: sqs Checked: NJW Date: 09/04/2020	

ADDENDUM

FMS COM:106857/301000

STATE PROJECT NO. MISS. HSIP-0040-03(016)

PIPE CULVERT DRAINAGE STRUCTURES

Table with columns: WK. SH. NO., STATION TO STATION, TYPE, CL III, CL III, CL III, CL III, CL III, CL III, CL III, END SECTIONS (18", 30", 36", 51"x31"), SIZE (L, W, H), OPENINGS, DRAWINGS REQ'D, CLASS "B" CONC., REINF. STEEL, CASTING, GRAZING, PAVED APRON, STRUCTURE EXCAVATION (CU YD, EST. DEPTH), GEOTEXTILE (SQ FT), FILTER MATERIAL TYPE ("A", "B"), COVER, REMARKS.

Summary rows for UNITS and TOTALS.

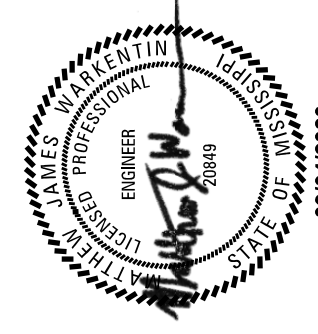
BOX CULVERTS REQUIRED

Table with columns: WORK NO., STATION, SIZE, LENGTH, STANDARD DRAWINGS REQUIRED, CLASS "B" CONCRETE, REINF. STEEL, STRUC. EXCAV. (EST. DEPTH, CUBIC YARDS), COVER, SELECT MAT'L., REMARKS.

GUARD RAIL REQUIRED

Table with columns: WK. NO., STATION, STATE STD. (INSTALL), GUARD RAIL LENGTHS (DIST. A, B, C, D), CABLE ANCHOR TYPE "1", SINGLE DELINEATORS (WHITE, YELLOW), REMARKS.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION ESTIMATED QUANTITIES PIPE CULVERT DRAINAGE STRUCTURES BOX CULVERTS REQ'D GUARD RAIL REQ'D COUNTY: TISHOMINGO PROJ. NO.: HSIP-0040-03(016)

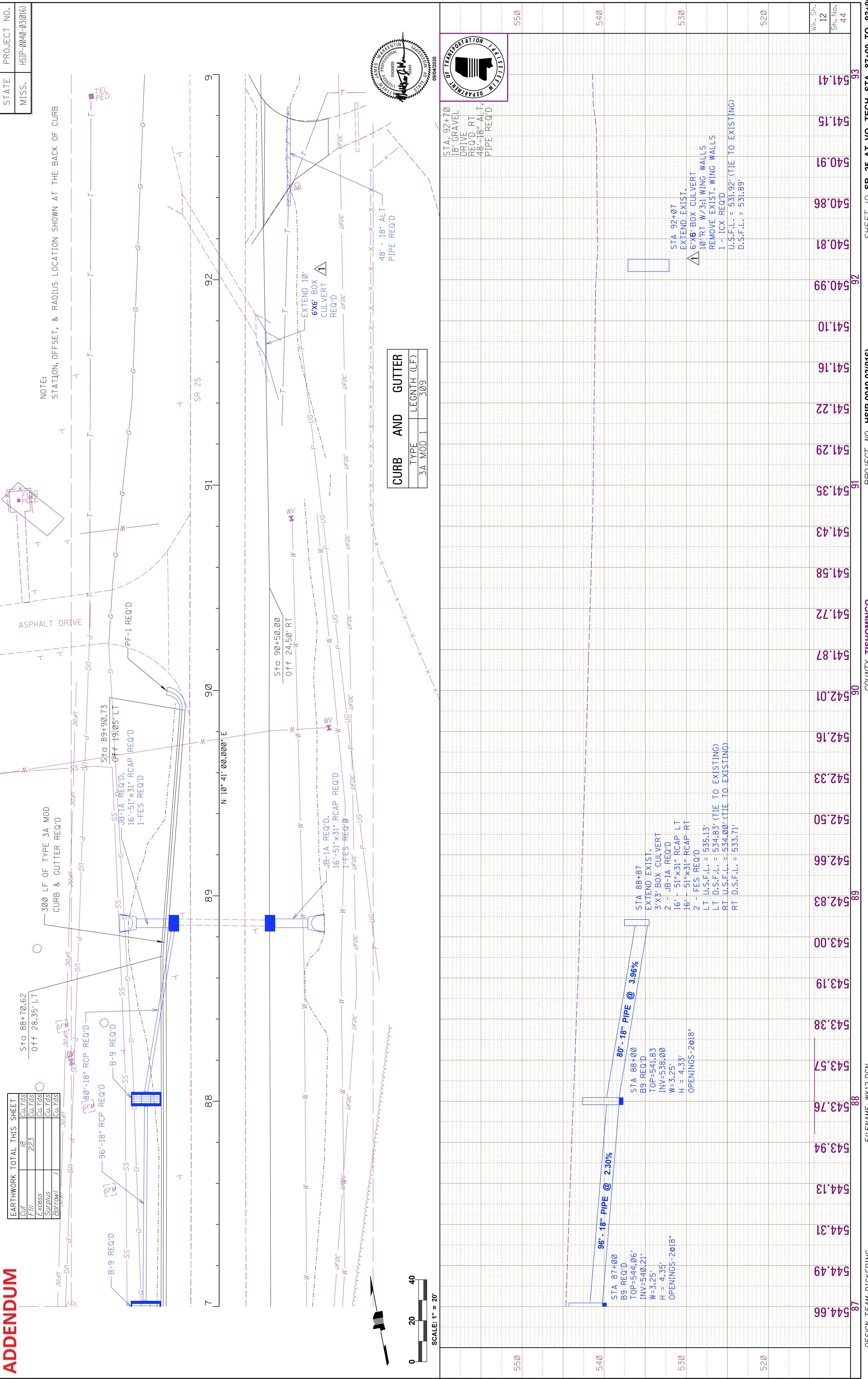


# ADDENDUM

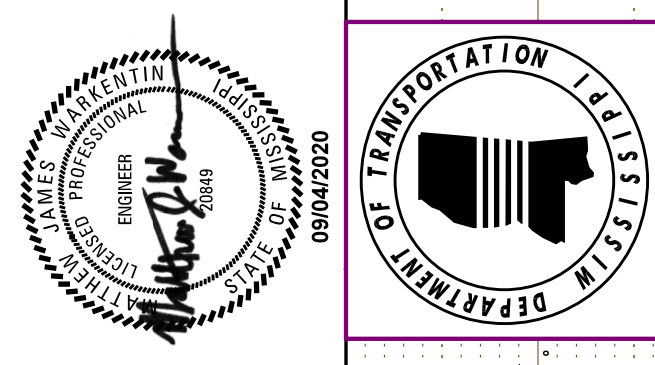
EARTHWORK TOTAL THIS SHEET	
Cut	18' Cu.Yds
Fill	223' Cu.Yds
Excess	Cu.Yds
Surplus	Cu.Yds
Barrowl	Cu.Yds

STATE	PROJECT NO.
MISS.	HSIP-0040-03(016)

NOTE:  
STATION, OFFSET, & RADIUS LOCATION SHOWN AT THE BACK OF CURB



TYPE	LENGTH (LF)
3A MOD 1	309



STA 87+00  
B9 REQ'D  
TOP=544.06'  
INV=540.21'  
W=3.25'  
H= 4.35'  
OPENINGS-2@18"

96' - 18" PIPE @ 2.30%

STA 88+00  
B9 REQ'D  
TOP=541.83  
INV=538.00  
W=3.25'  
H = 4.33'  
OPENINGS-2@18"

80' - 18" PIPE @ 3.96%

STA 92+07  
EXTEND EXIST  
6'X6' BOX CULVERT  
10'RT. W/3:1 WING WALLS  
REMOVE EXIST. WING WALLS  
1 - ICX REQ'D  
U.S.F.L. = 531.92' (TIE TO EXISTING)  
D.S.F.L. = 531.89'

550	541.41	541.15	540.91	540.86	540.81	540.99	541.10	541.16	541.22	541.29	541.35	541.43	541.58	541.72	541.87	542.01	542.16	542.33	542.50	542.66	542.83	543.00	543.19	543.38	543.57	543.76	543.94	544.13	544.31	544.49	544.66	544.84	545.02	545.20	545.38	545.56	545.74	545.92	546.10	546.28	546.46	546.64	546.82	547.00	547.18	547.36	547.54	547.72	547.90	548.08	548.26	548.44	548.62	548.80	548.98	549.16	549.34	549.52	549.70	549.88	550.06	550.24	550.42	550.60	550.78	550.96	551.14	551.32	551.50	551.68	551.86	552.04	552.22	552.40	552.58	552.76	552.94	553.12	553.30	553.48	553.66	553.84	554.02	554.20	554.38	554.56	554.74	554.92	555.10	555.28	555.46	555.64	555.82	556.00	556.18	556.36	556.54	556.72	556.90	557.08	557.26	557.44	557.62	557.80	557.98	558.16	558.34	558.52	558.70	558.88	559.06	559.24	559.42	559.60	559.78	559.96	560.14	560.32	560.50	560.68	560.86	561.04	561.22	561.40	561.58	561.76	561.94	562.12	562.30	562.48	562.66	562.84	563.02	563.20	563.38	563.56	563.74	563.92	564.10	564.28	564.46	564.64	564.82	565.00	565.18	565.36	565.54	565.72	565.90	566.08	566.26	566.44	566.62	566.80	566.98	567.16	567.34	567.52	567.70	567.88	568.06	568.24	568.42	568.60	568.78	568.96	569.14	569.32	569.50	569.68	569.86	570.04	570.22	570.40	570.58	570.76	570.94	571.12	571.30	571.48	571.66	571.84	572.02	572.20	572.38	572.56	572.74	572.92	573.10	573.28	573.46	573.64	573.82	574.00	574.18	574.36	574.54	574.72	574.90	575.08	575.26	575.44	575.62	575.80	575.98	576.16	576.34	576.52	576.70	576.88	577.06	577.24	577.42	577.60	577.78	577.96	578.14	578.32	578.50	578.68	578.86	579.04	579.22	579.40	579.58	579.76	579.94	580.12	580.30	580.48	580.66	580.84	581.02	581.20	581.38	581.56	581.74	581.92	582.10	582.28	582.46	582.64	582.82	583.00	583.18	583.36	583.54	583.72	583.90	584.08	584.26	584.44	584.62	584.80	584.98	585.16	585.34	585.52	585.70	585.88	586.06	586.24	586.42	586.60	586.78	586.96	587.14	587.32	587.50	587.68	587.86	588.04	588.22	588.40	588.58	588.76	588.94	589.12	589.30	589.48	589.66	589.84	590.02	590.20	590.38	590.56	590.74	590.92	591.10	591.28	591.46	591.64	591.82	592.00	592.18	592.36	592.54	592.72	592.90	593.08	593.26	593.44	593.62	593.80	593.98	594.16	594.34	594.52	594.70	594.88	595.06	595.24	595.42	595.60	595.78	595.96	596.14	596.32	596.50	596.68	596.86	597.04	597.22	597.40	597.58	597.76	597.94	598.12	598.30	598.48	598.66	598.84	599.02	599.20	599.38	599.56	599.74	599.92	600.10	600.28	600.46	600.64	600.82	601.00	601.18	601.36	601.54	601.72	601.90	602.08	602.26	602.44	602.62	602.80	602.98	603.16	603.34	603.52	603.70	603.88	604.06	604.24	604.42	604.60	604.78	604.96	605.14	605.32	605.50	605.68	605.86	606.04	606.22	606.40	606.58	606.76	606.94	607.12	607.30	607.48	607.66	607.84	608.02	608.20	608.38	608.56	608.74	608.92	609.10	609.28	609.46	609.64	609.82	610.00
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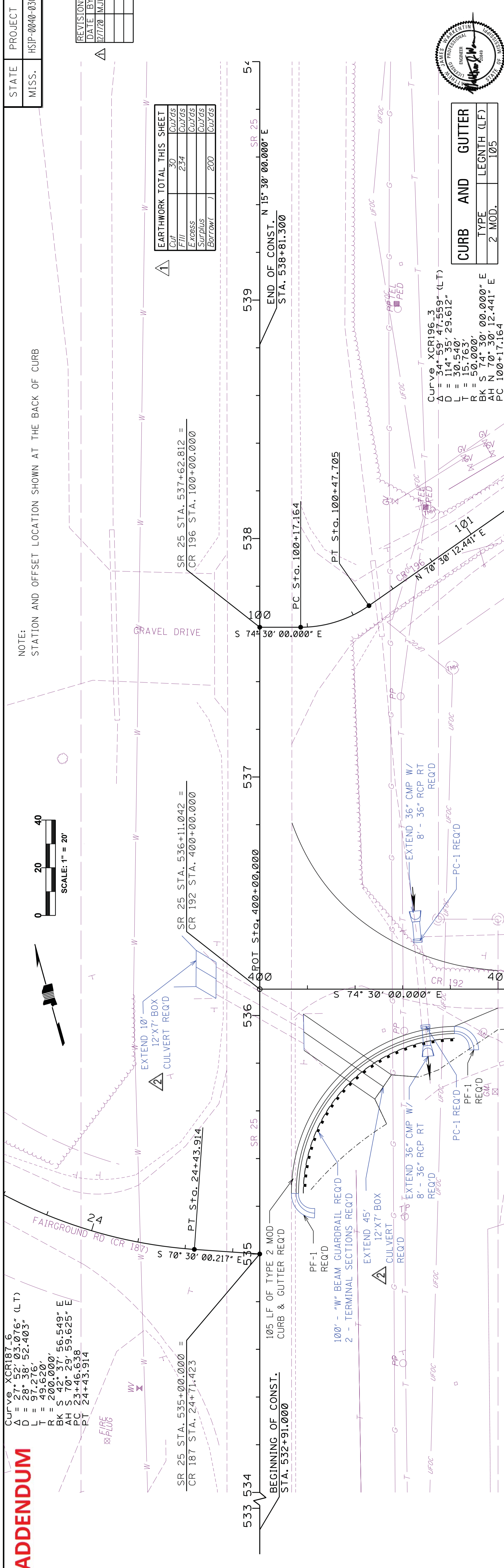
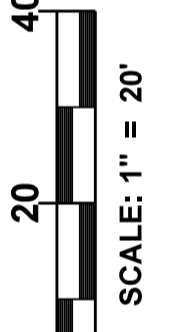
STATE PROJECT NO.  
MISS. HSP-0040-03(016)

REVISIONS	DATE	BY
	12/17/20	IMJW

EARTHWORK TOTAL THIS SHEET	
Cut	30 CU YDS
Fill	234 CU YDS
Excess	CU YDS
Surplus	CU YDS
Borrow	200 CU YDS

CURB AND GUTTER	
TYPE	LEGNTH (LF)
2 MOD.	105

NOTE:  
STATION AND OFFSET LOCATION SHOWN AT THE BACK OF CURB



565	565	557.14	557.14
560	560	556.76	556.76
555	555	556.42	556.42
550	550	556.08	556.08
545	545	555.74	555.74
540	540	555.41	555.41
535	535	555.08	555.08
530	530	554.78	554.78
525	525	554.47	554.47
520	520	554.16	554.16
		553.86	553.86
		553.61	553.61
		553.40	553.40
		553.19	553.19
		552.98	552.98
		552.77	552.77
		552.63	552.63
		552.52	552.52
		552.42	552.42
		552.31	552.31
		552.21	552.21
		552.13	552.13
		552.06	552.06
		551.99	551.99
		551.92	551.92
		551.85	551.85
		551.82	551.82
		551.79	551.79
		551.76	551.76
		551.72	551.72
		551.71	551.71





# ADDENDUM

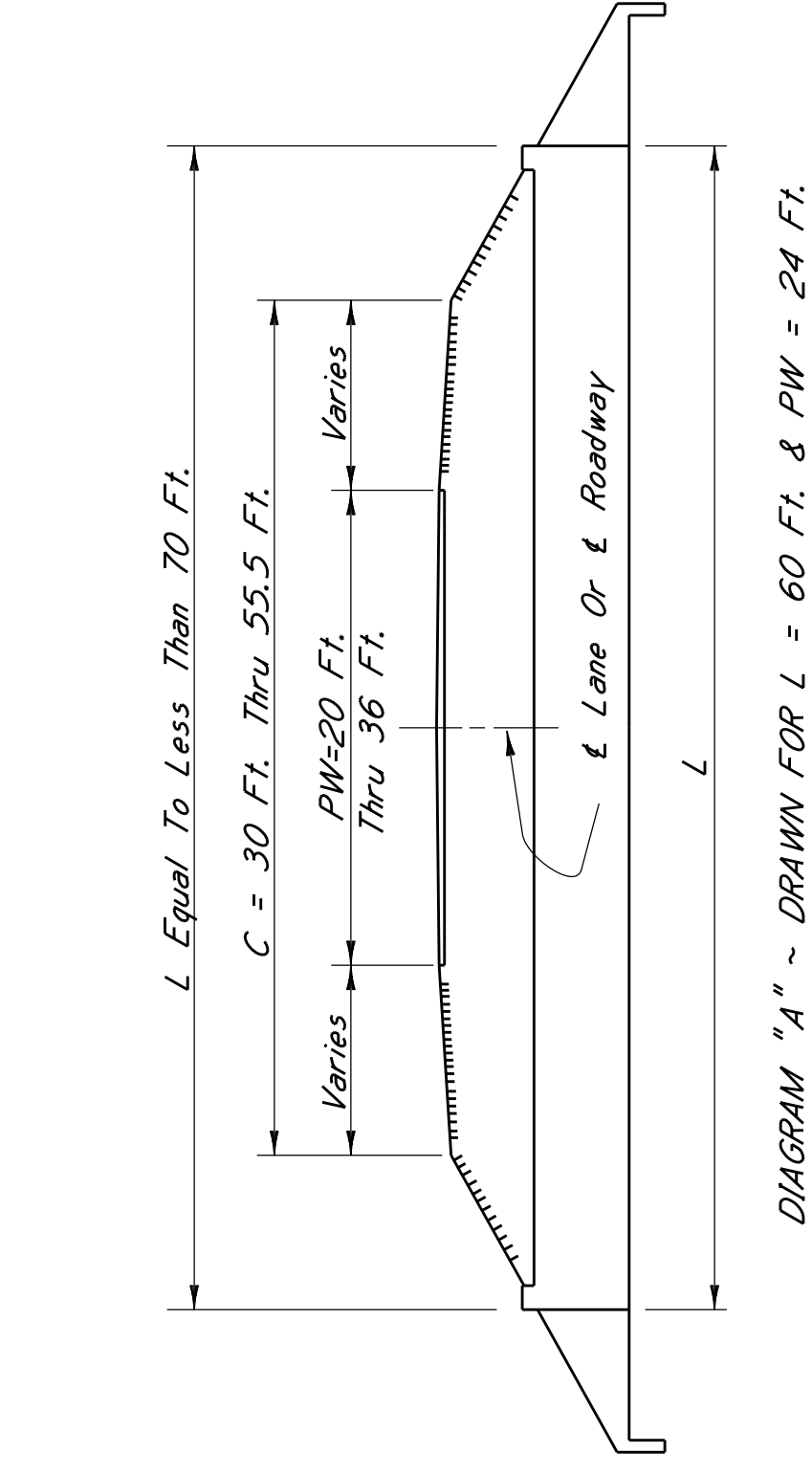


DIAGRAM "A" ~ DRAWN FOR L = 60 Ft. & PW = 24 Ft.

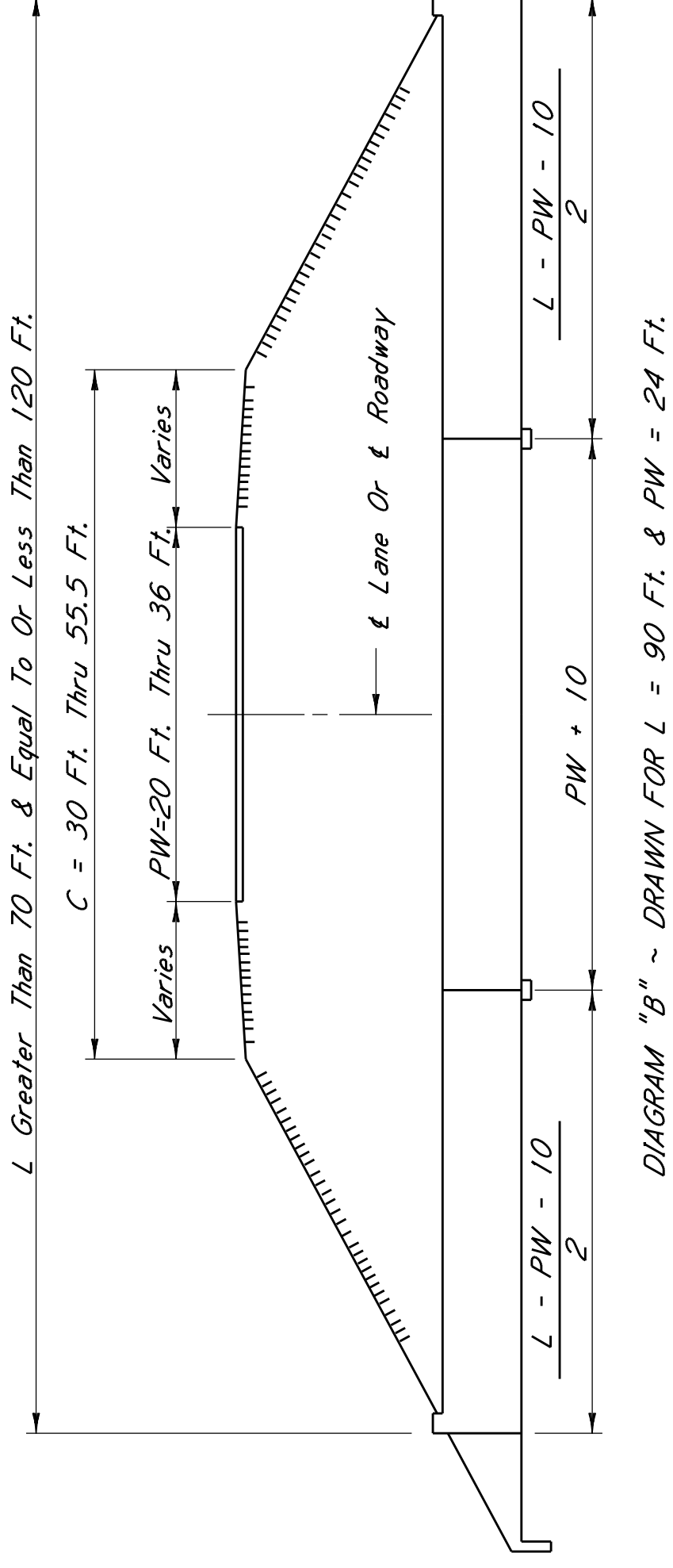


DIAGRAM "B" ~ DRAWN FOR L = 90 Ft. & PW = 24 Ft.

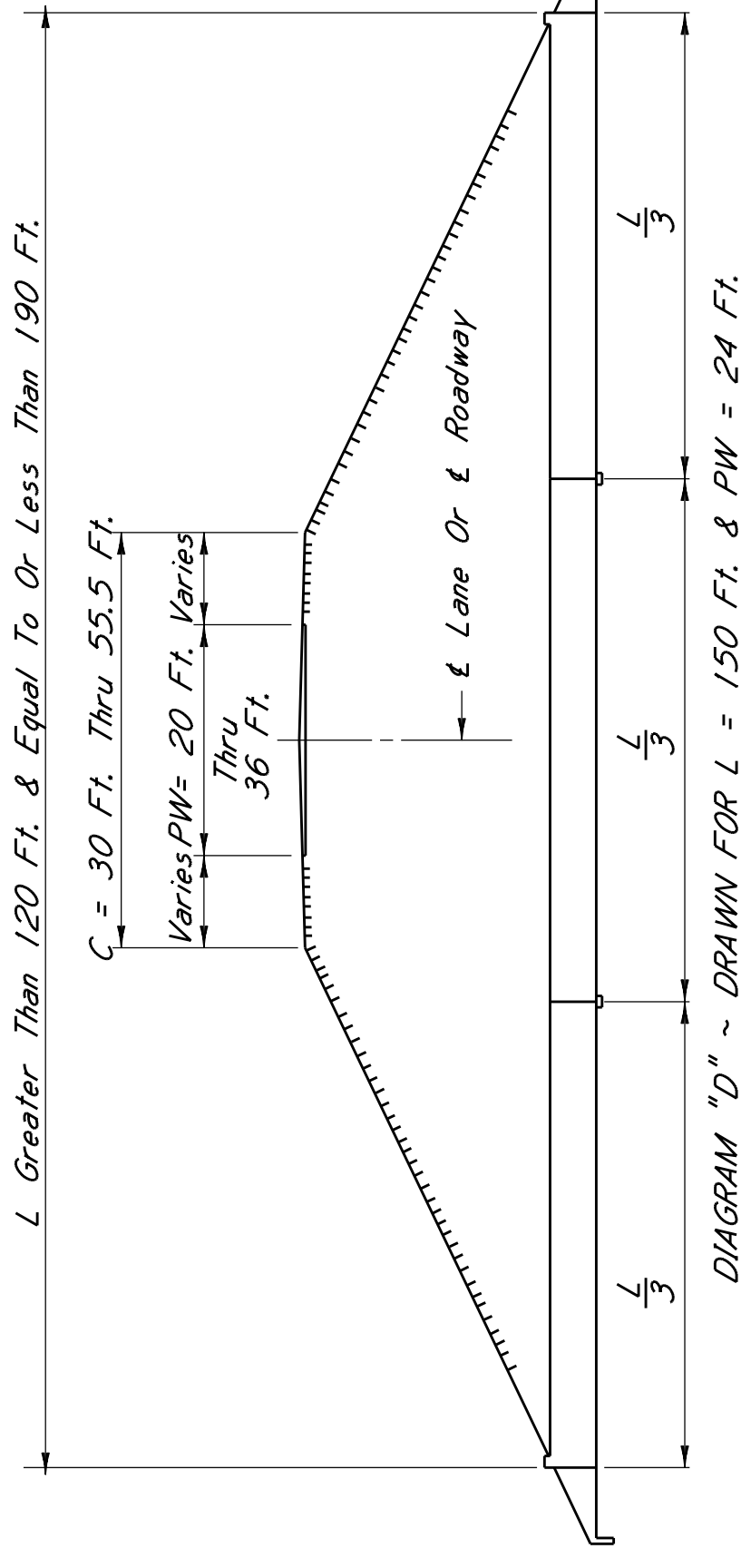


DIAGRAM "D" ~ DRAWN FOR L = 150 Ft. & PW = 24 Ft.

NOTE: These Joint Locations Are For Culverts Constructed Normal To  $\perp$  Of Roadway And Shall Be Adjusted For Skew Per Details In Group IV.

DIAGRAM "C" ~ DRAWN FOR L = 90 Ft. & PW = 24 Ft.  
L = Greater Than 190 Ft.

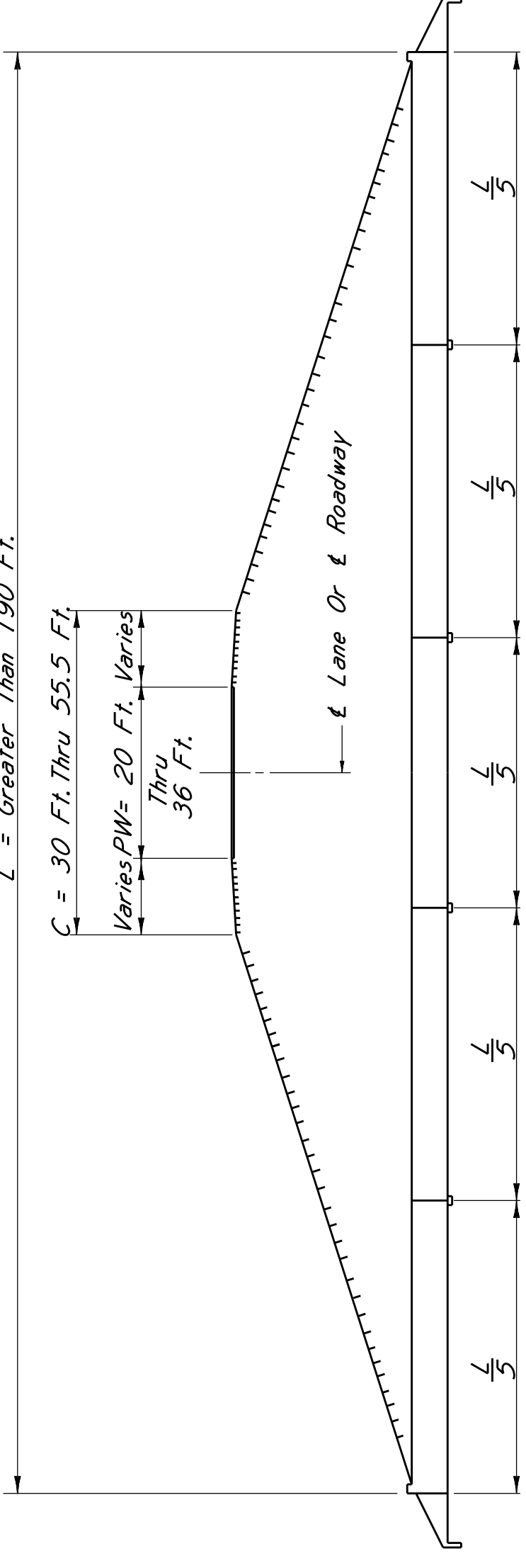


DIAGRAM "C" ~ DRAWN FOR L = 200 Ft. & PW = 24 Ft.

## SIDE ELEVATION OF CULVERTS CONSTRUCTED NORMAL TO $\perp$ ROADWAY

Showing Barrel Joint And Auxiliary Slobs "J".

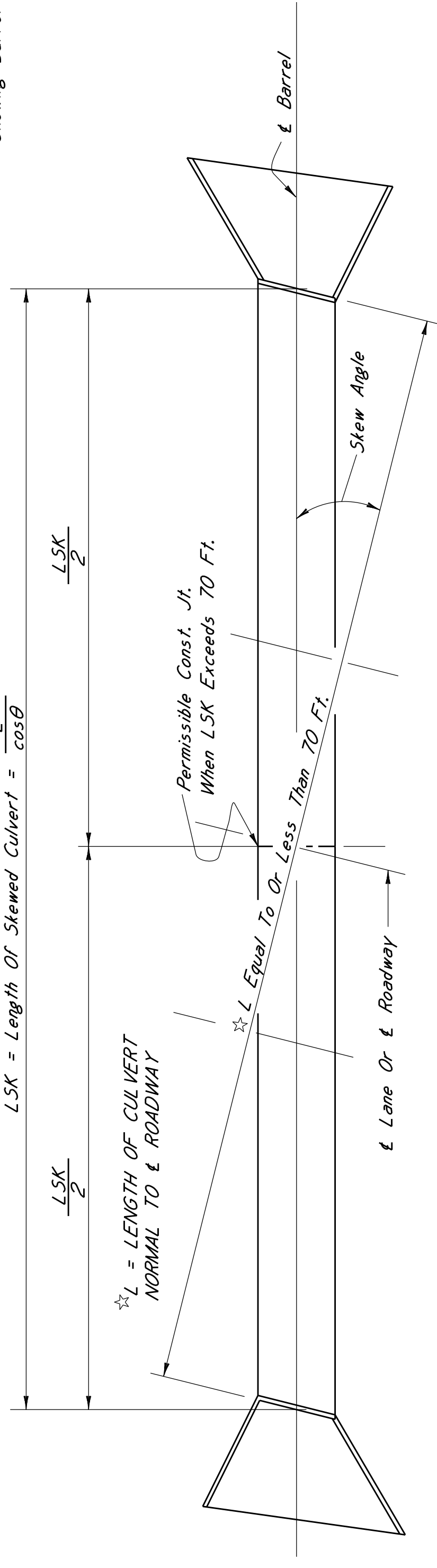


DIAGRAM "A"

## PLAN OF SKEWED CULVERT

TYPICAL FOR DIAGRAM "A" GROUP I AND SKEWED 15° RIGHT FORWARD (NO BARREL JOINTS REQUIRED)

NOTE: LSK =  $L / \cos \theta$  (FOR 15° SKEW).

## GROUP IV DIAGRAMS

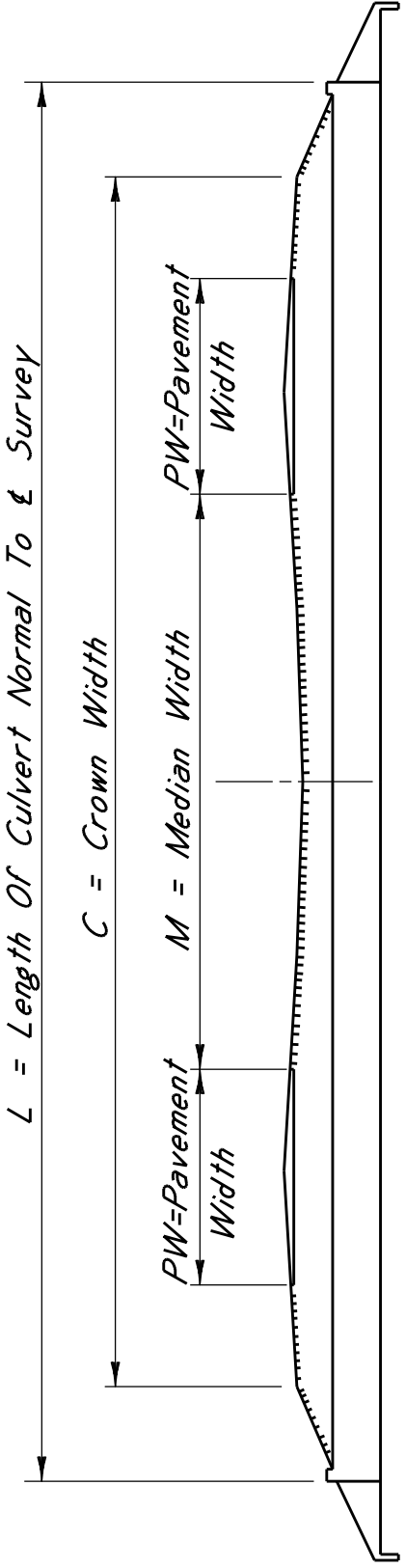
### TYPICAL DIAGRAMS FOR SKEWED CULVERTS

#### APPLICATION OF DIAGRAMS:

- The Following Diagrams Show The General Application Of JOINT LOCATION DIAGRAMS IN Groups I, II & III To Skewed Culverts Location Of Barrel Joints For Skewed Culverts Is Determined As Follows:
  - With LSK (Length Of Skewed Culvert Along  $\perp$  Barrel) Given And Number Of Joints And Length Of Barrel Sections Required, MULTIPLY LSK BY THE COSINE OF THE SKEW ANGLE  $\theta$  To Obtain L (Length Of Culvert Normal To  $\perp$  Roadway).
  - Enter Group I, II Or III (Determined By Roadway Cross Section) With L To Determine The Number Of Joints And Length Of Each Barrel Section For A Culvert Constructed Normal To  $\perp$  Roadway.
  - DIVIDE Each Length Of Section By The COSINE OF THE SKEW ANGLE  $\theta$  To Determine The Length Of Each Barrel Section Along  $\perp$  Barrel.
  - Place The Barrel Joints (Type Per Basic Dwg.) At These Locations. If The Length Of Any Section Exceeds 70 Ft. And A Construction Joint Is Desired (To Reduce Yardage Of Pour) Place A Construction Joint In Center Of Section.

## GENERAL NOTES:

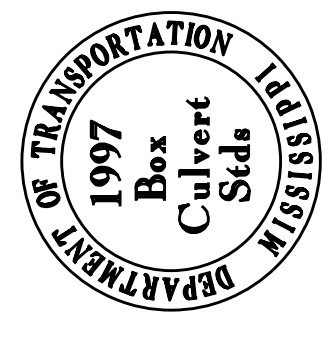
This Drawing Shows The Barrel Joint Locations For Box Culverts Constructed Normal To  $\perp$  Of Roadway And General Details Necessary To Locate Joints For Culverts On 15, 30 And 45° Skews. The Diagrams On This Sheet Show Joint Locations For Culverts Under Variable Amounts Of Cover, Crown Width And Side Slopes. Barrel Joints Shall Not Be Of Type Per Basic Drawing And Shall Be Placed Only At Locations Shown Unless Otherwise Stated. Joints Shall Not Be Located Closer Than 5 Ft. Outside Pavement For Cover Of 8 Ft. Or Less Except In Cases Where Median Is Less Than 10 Ft. Where Cover Is 8 Ft. Or Less And A Joint Occurs Within The Limits Of 5 Ft. Beyond Each Edge Of Pavement, Use Complete Collar At Joints Per Drawing IC-1 Or ICJ-1. Where Cover Exceeds 8 Ft., Joints May Be Located Without Regard To Pavement Edge. Construction Joints Per Group IV, If Required, Shall Have Reinforcement Continuous Thru Joint And Shall Be Placed Only At Locations Indicated. General Requirements Of Basic Culvert Drawings Shall Apply Except As Specifically Modified Hereon.



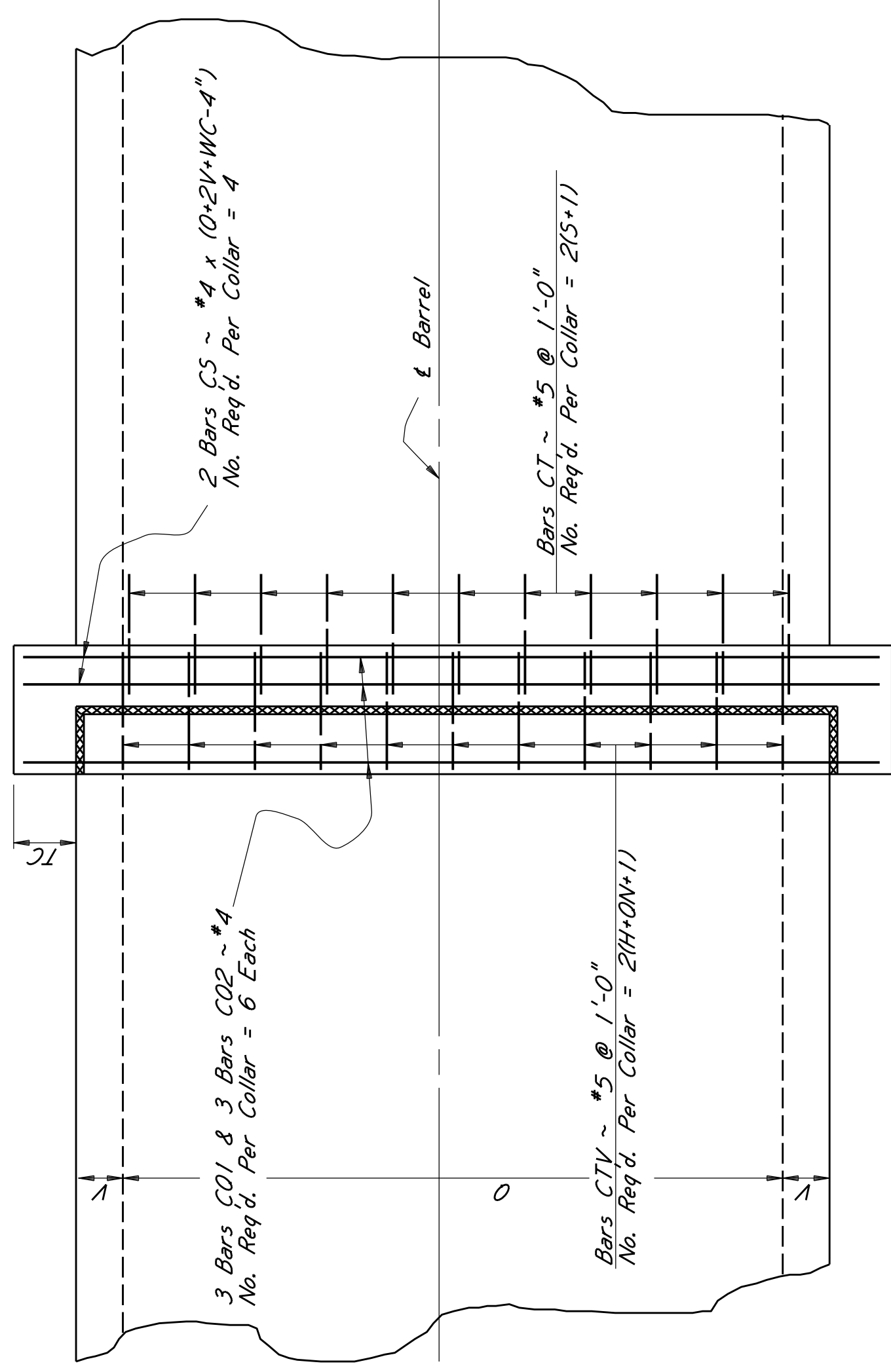
## SIDE ELEVATION OF CULVERTS CONSTRUCTED NORMAL TO $\perp$ SURVEY

Showing Variable For Diagrams In Group I.

Note: All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.



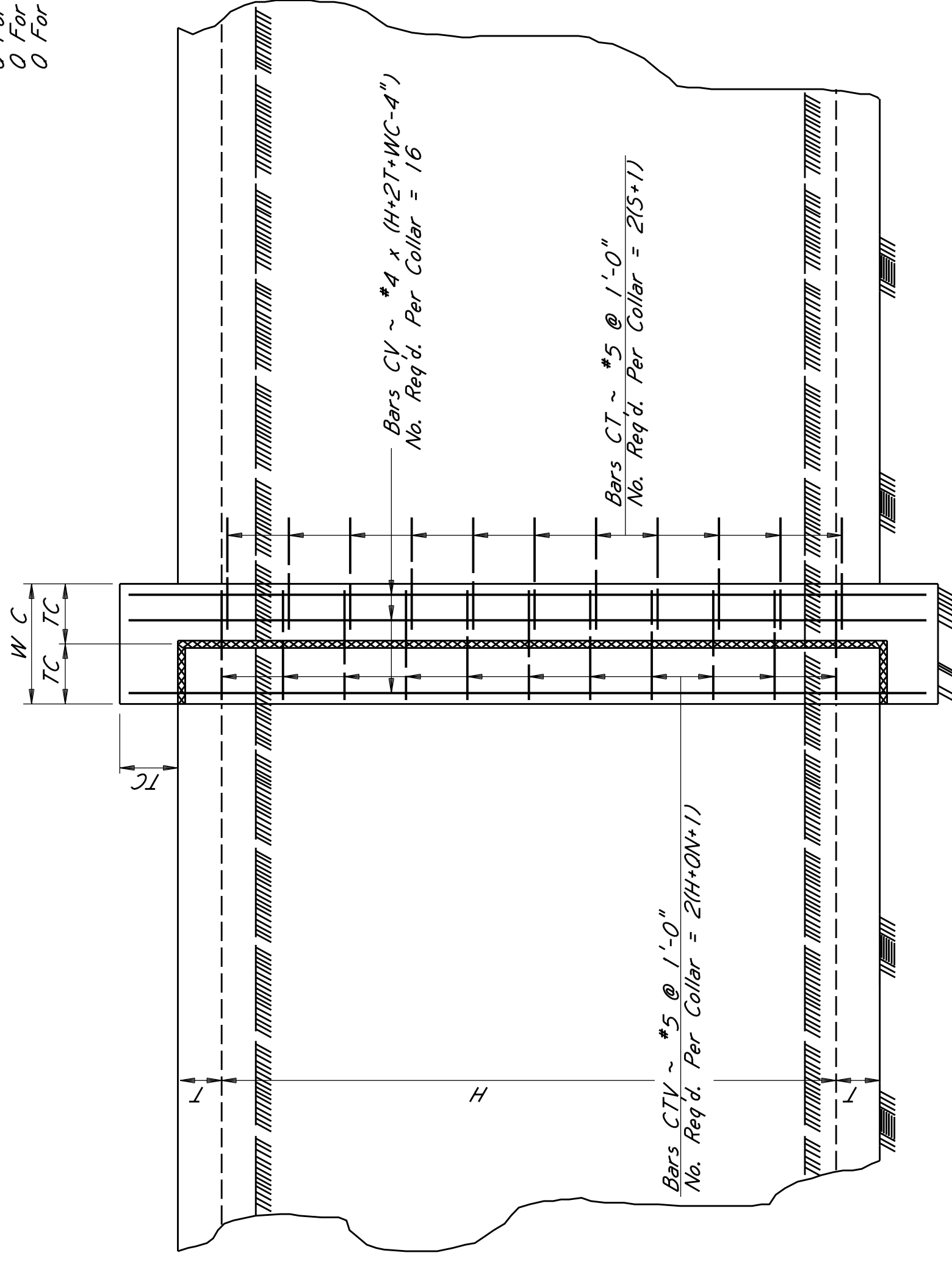
MISSISSIPPI DEPARTMENT OF TRANSPORTATION		WORKING NUMBER	
BASIC CULVERT DRAWING		IBJL-1-97	
BARREL JOINT LOCATIONS		SHEET NUMBER	
NORMAL AND SKEWED CULVERTS		7501	
GROUP I DIAGRAMS *			
DATE	DESIGNED	CHECKED	ISSUED
	MA	BJJ	TMT
	ALJ	ALT	DATE
			07-11-97
			08-01-97



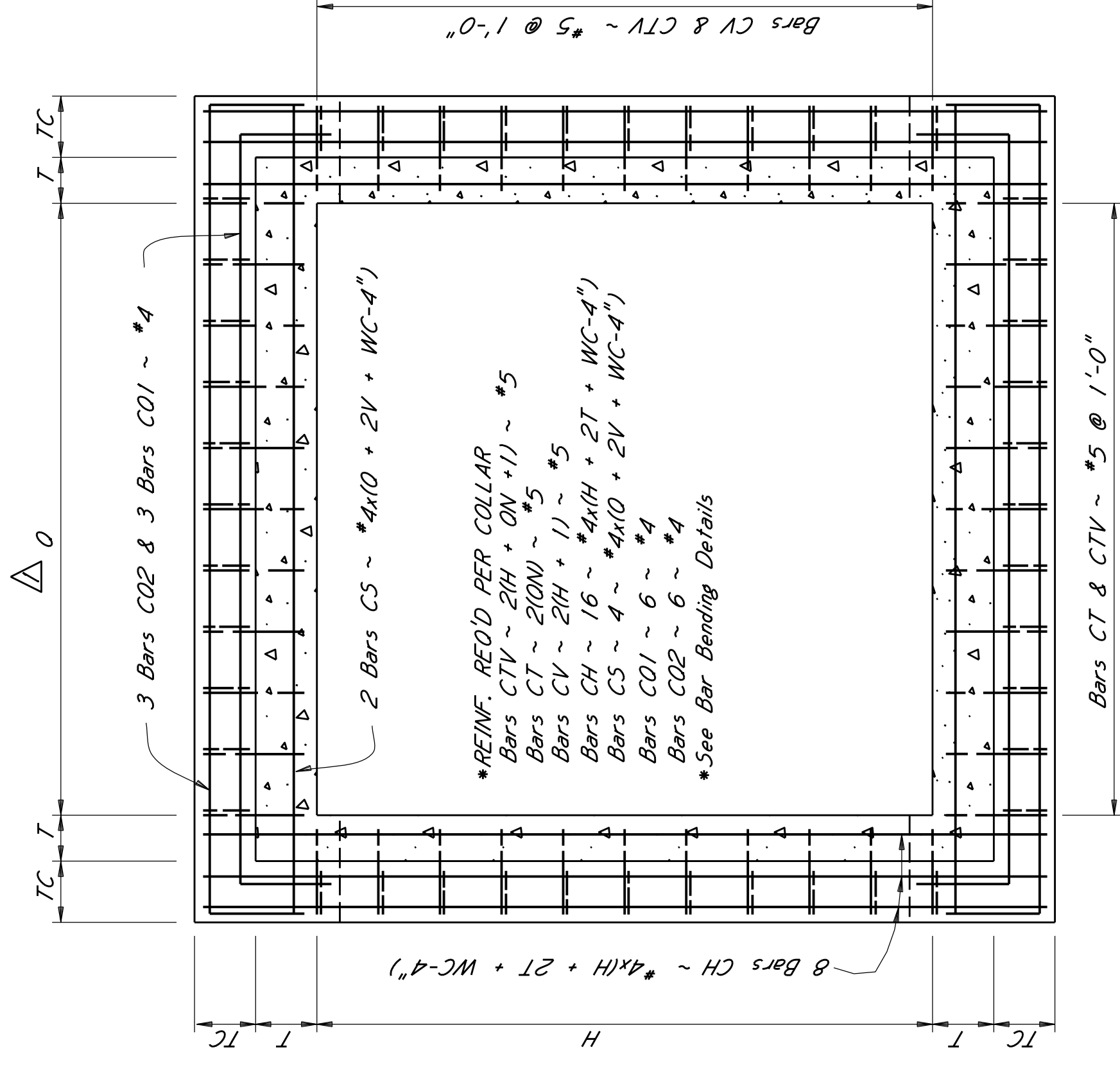
**PLAN OF COLLAR**

NOTE: For H = 6 Ft.  
TC = 9'-6"  
WC = 1'-6"

NOTE: 0 For Single Cell Box = 5 (Clear Span), ON = S+1  
0 For Double Cell Box = 2S + V, ON = 2(S+1)  
0 For Triple Cell Box = 3S + 2V, ON = 3(S+1)  
0 For Quadruple Cell Box = 4S + 3V, ON = 4(S+1)

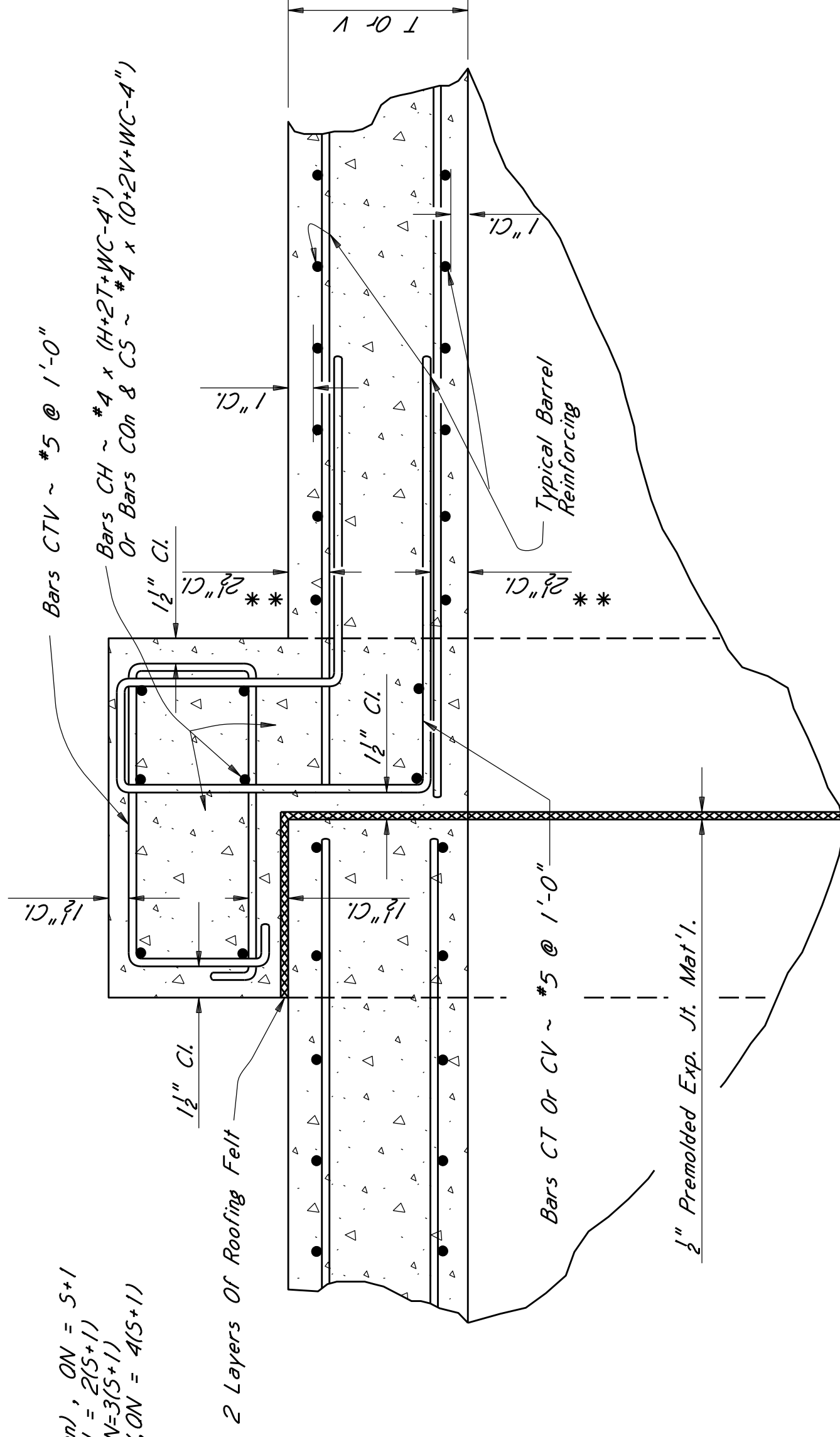


**ELEVATION OF COLLAR**



**SECTION A-A**

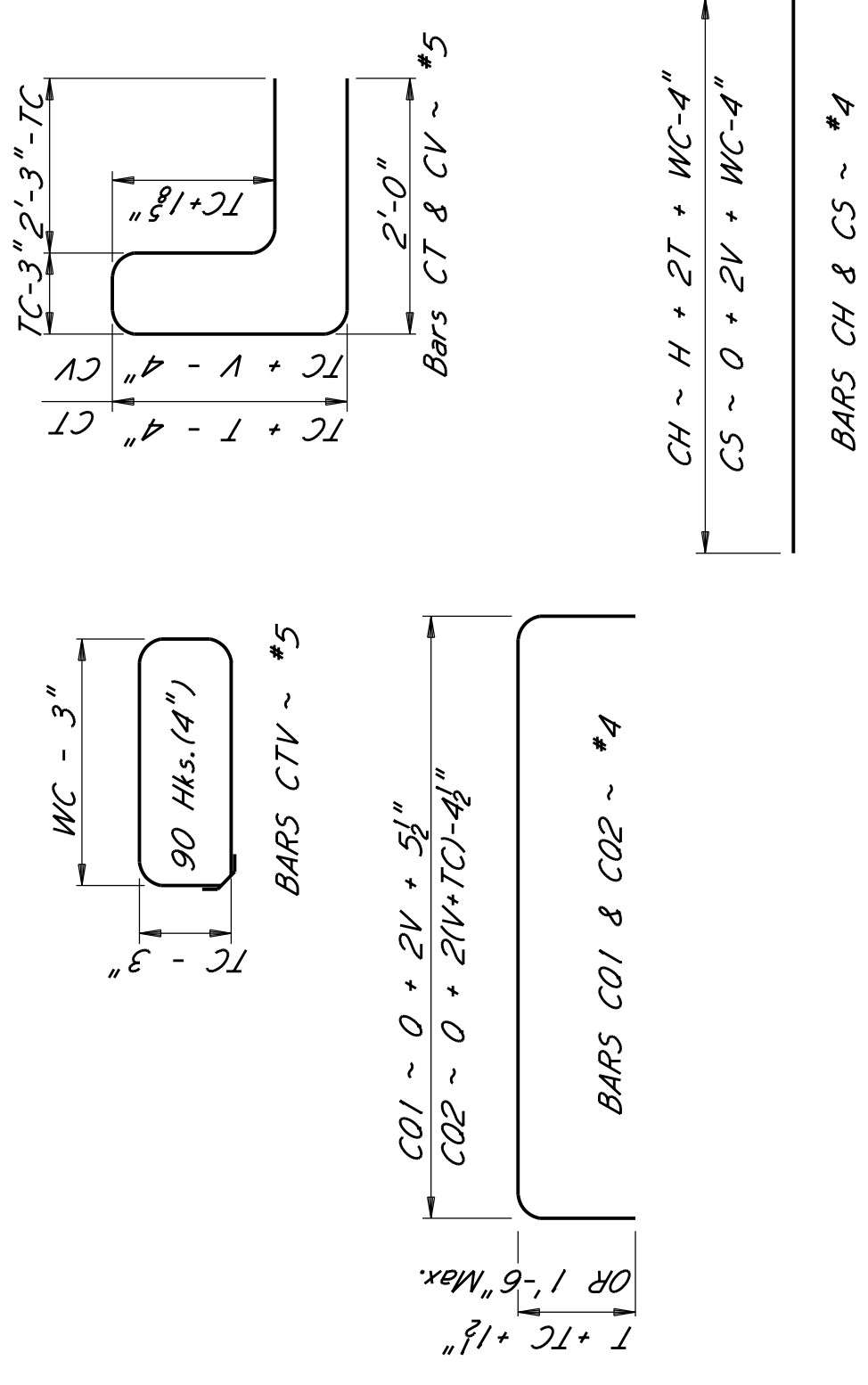
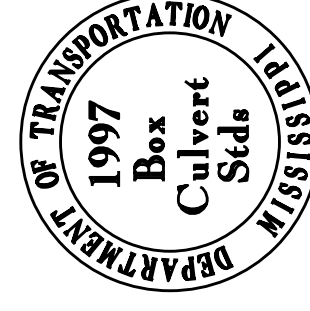
For H = 8 Ft. & Above  
TC = 1'-0"  
WC = 2'-0"



**TYPICAL SECTION OF COLLAR**

\*\* NOTE: 2 1/2" Cl. Based On 1" Cl. For Typ. Barrel Reinf.  
This Cl. Shall Be Adjusted For Cl. Other Than 1".

Note: All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.



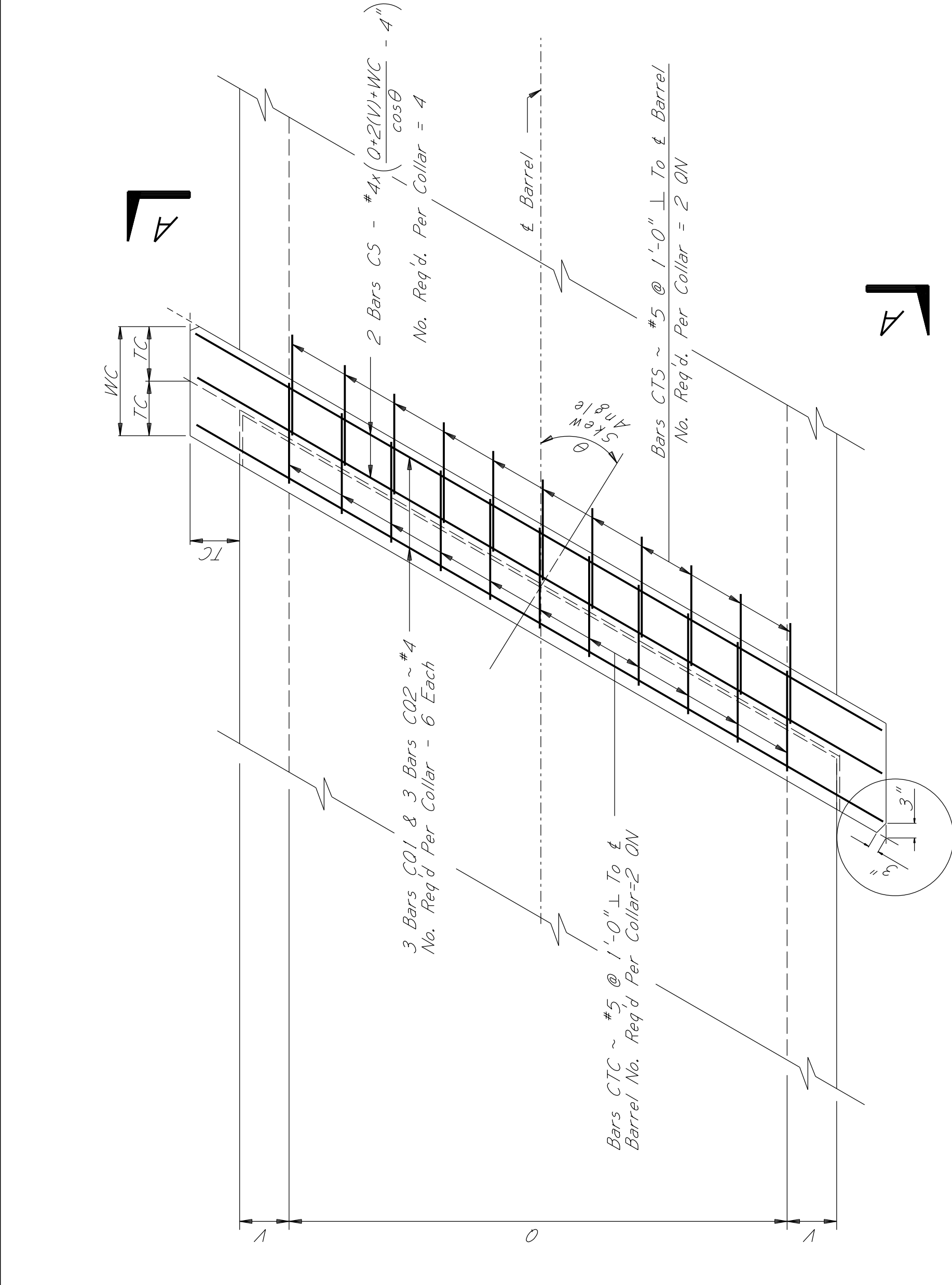
**BAR BENDING DETAILS**

NOTE: See \* Below

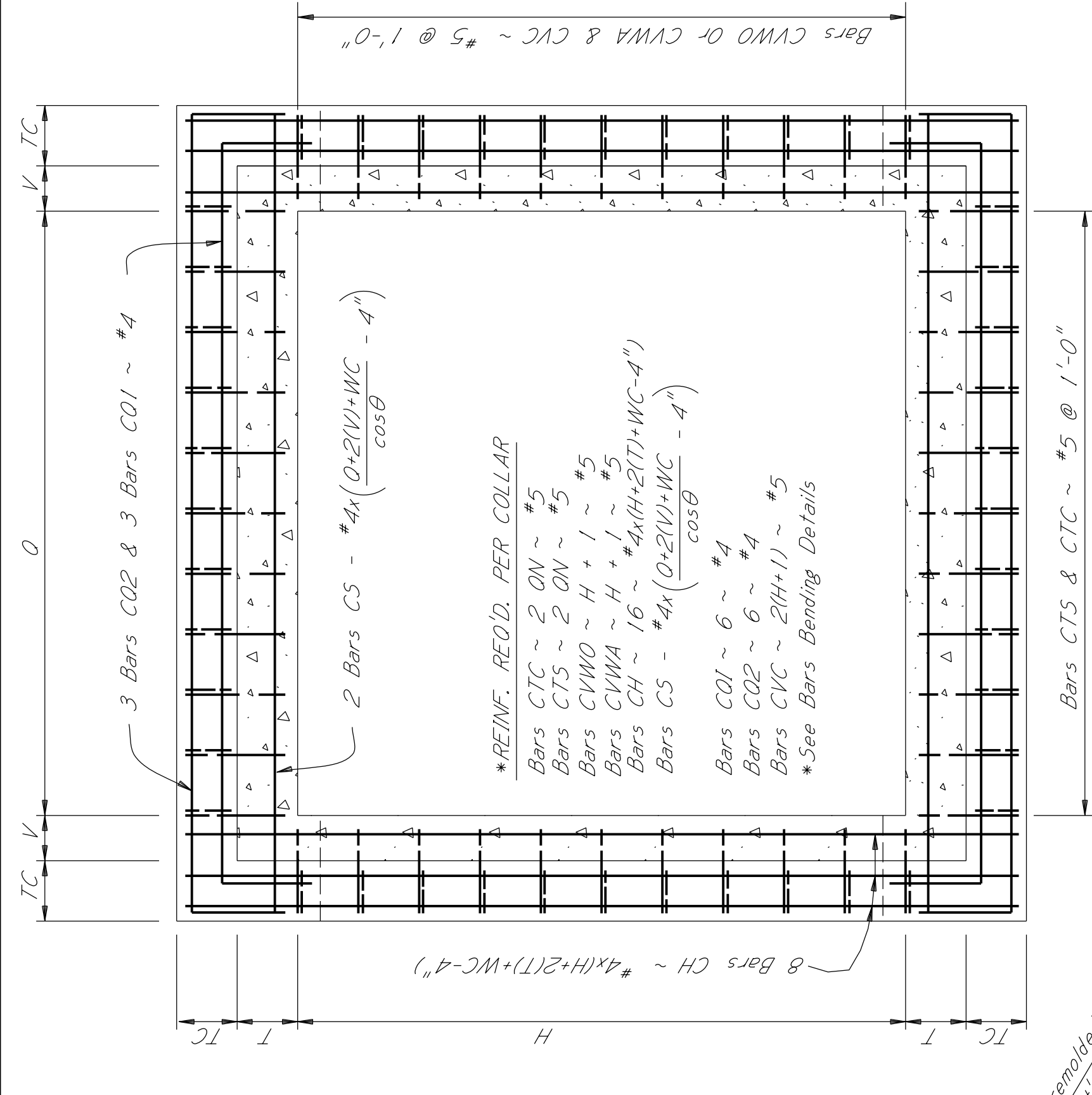
**GENERAL NOTES:**

This Drawing Shows The Details Necessary To Construct A Complete Collar Around Barrel At Expansion Joints For Single, Double, Triple And Quadruple Cell Box Structures. All Details And Requirements Not Shown Herein Shall Be As Per Specific Drawings Or Sheets As Listed In The Plan Assembly. This Drawing Is Detailed For A Single Cell Box Structure, And Multi-Cell Box Structures Shall Be Treated Similarly As Shown.

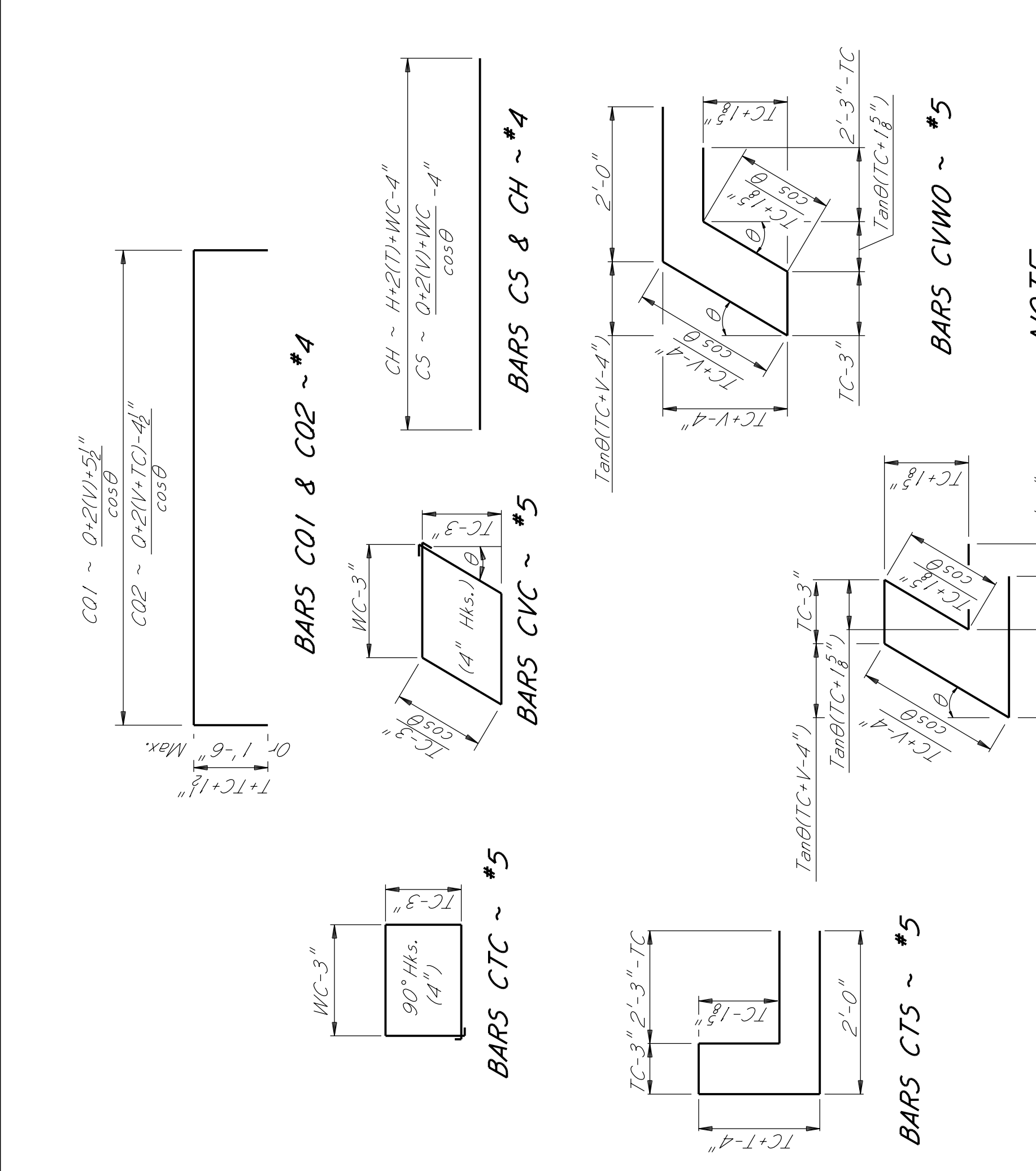
DESIGNED	MA	CHECKED	BUJ	ISSUED	ZMT
DATE	07/17/98	DATE	07/11/97	DATE	08-01-97
REVISIONS	Changed H To 0				
PR					
MISSISSIPPI DEPARTMENT OF TRANSPORTATION COLLAR DETAILS FOR BOX STRUCTURES (SINGLE, DOUBLE, TRIPLE & QUADRUPLE)					
WORKING NUMBER	ICJ-1-97				
SHEET NUMBER	7504				



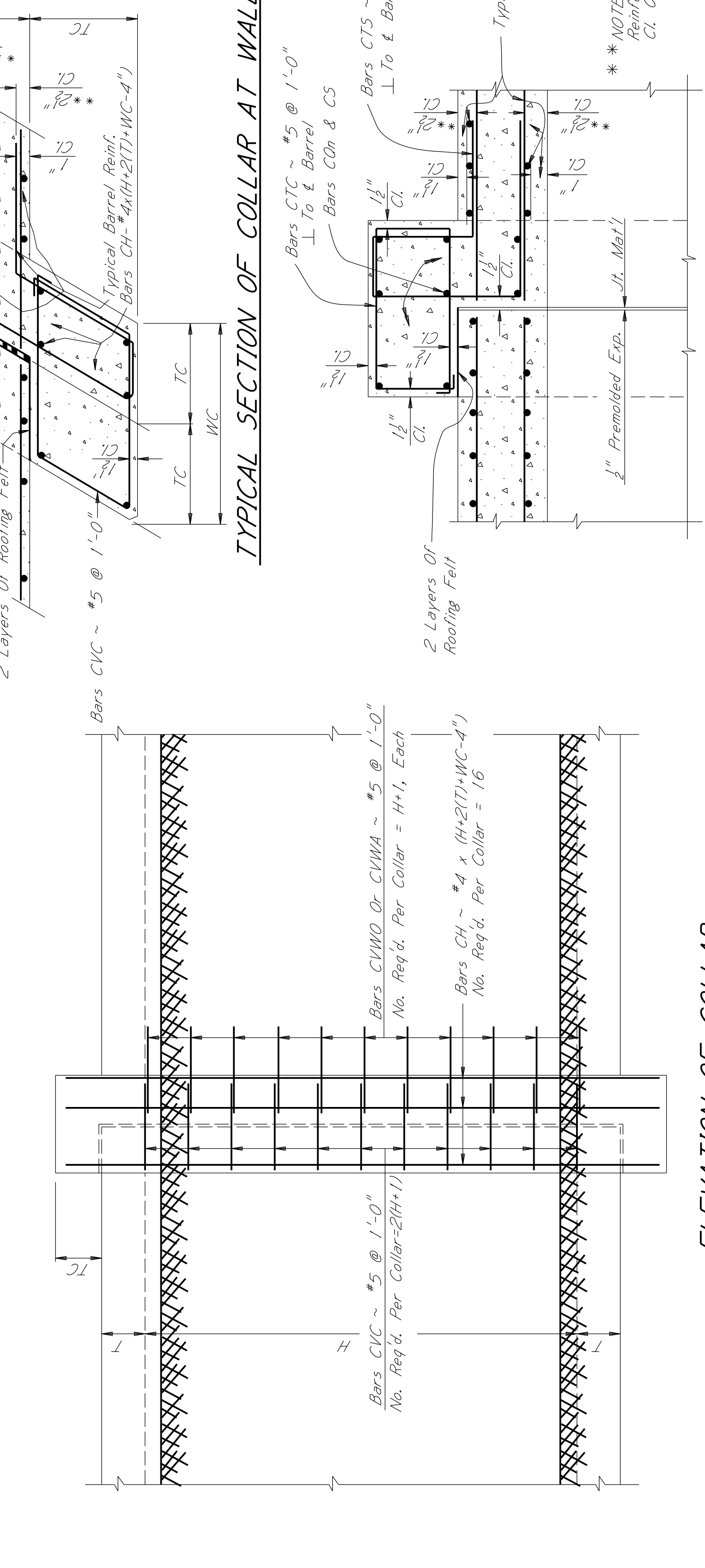
**PLAN OF COLLAR**



**SECTION A-A**



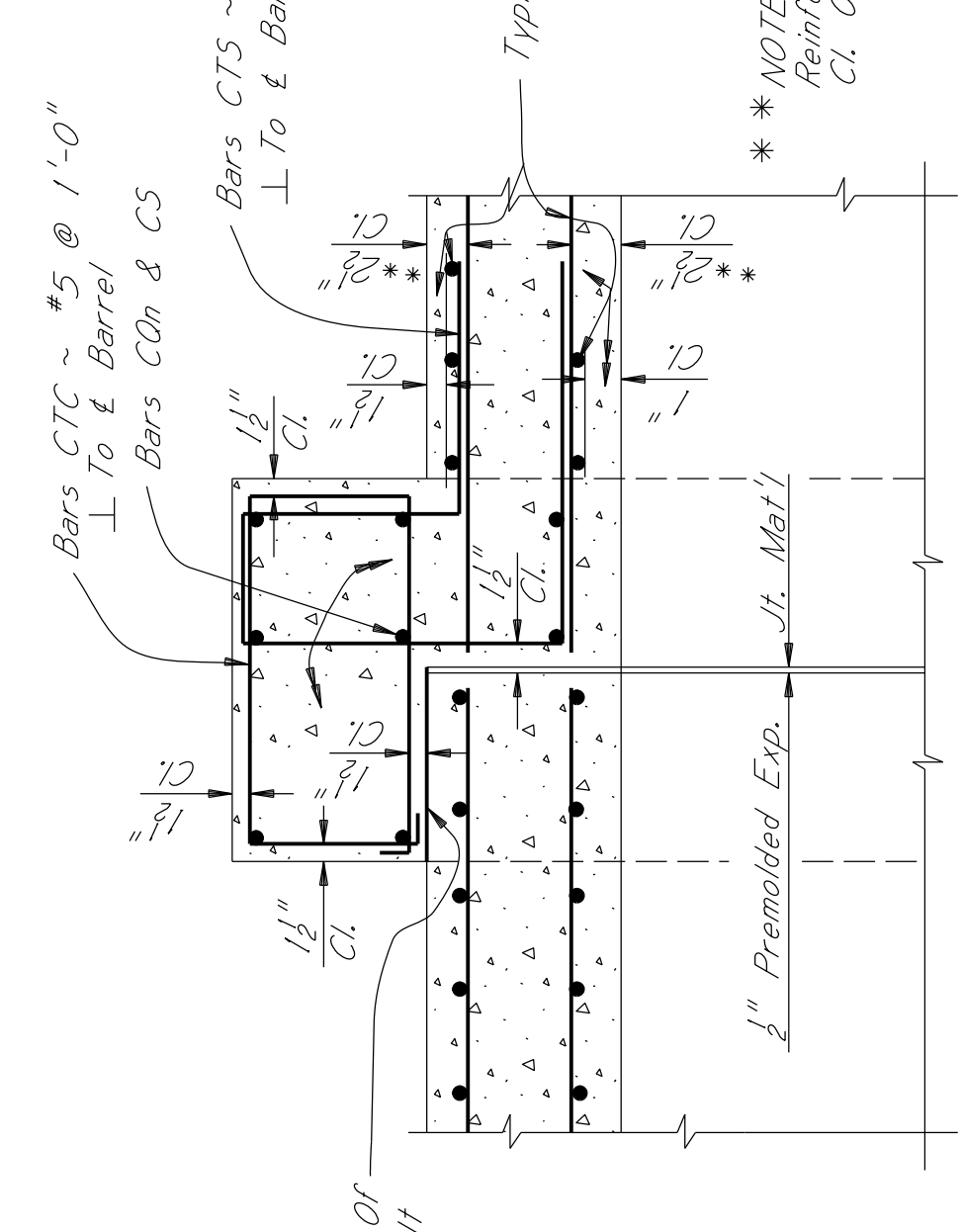
**BAR BENDING DETAILS**  
Dimensions Are Out To Out



**ELEVATION OF COLLAR**

**NOTE:**  
 O For Single Cell Box = S (Clear Span), ON = S+1  
 O For Double Cell Box = 2(S) + V, ON = 2(S+1)  
 O For Triple Cell Box = 3(S) + 2(V), ON = 3(S+1)  
 O For Quadruple Cell Box = 4(S) + 3(V), ON = 4(S+1)  
 θ = Skew Angle  
 For H = 8, F<sub>1</sub> & Above  
 TC = 9", WC = 2'-0"

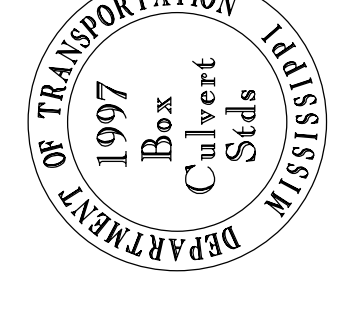
**TYPICAL SECTION OF COLLAR AT WALL**



\* NOTE: 2) Cl. Based On 1" Cl. For Typical Barrel Reinforcing, this Clearance Shall Be Adjusted For Cl. Other Than 1".

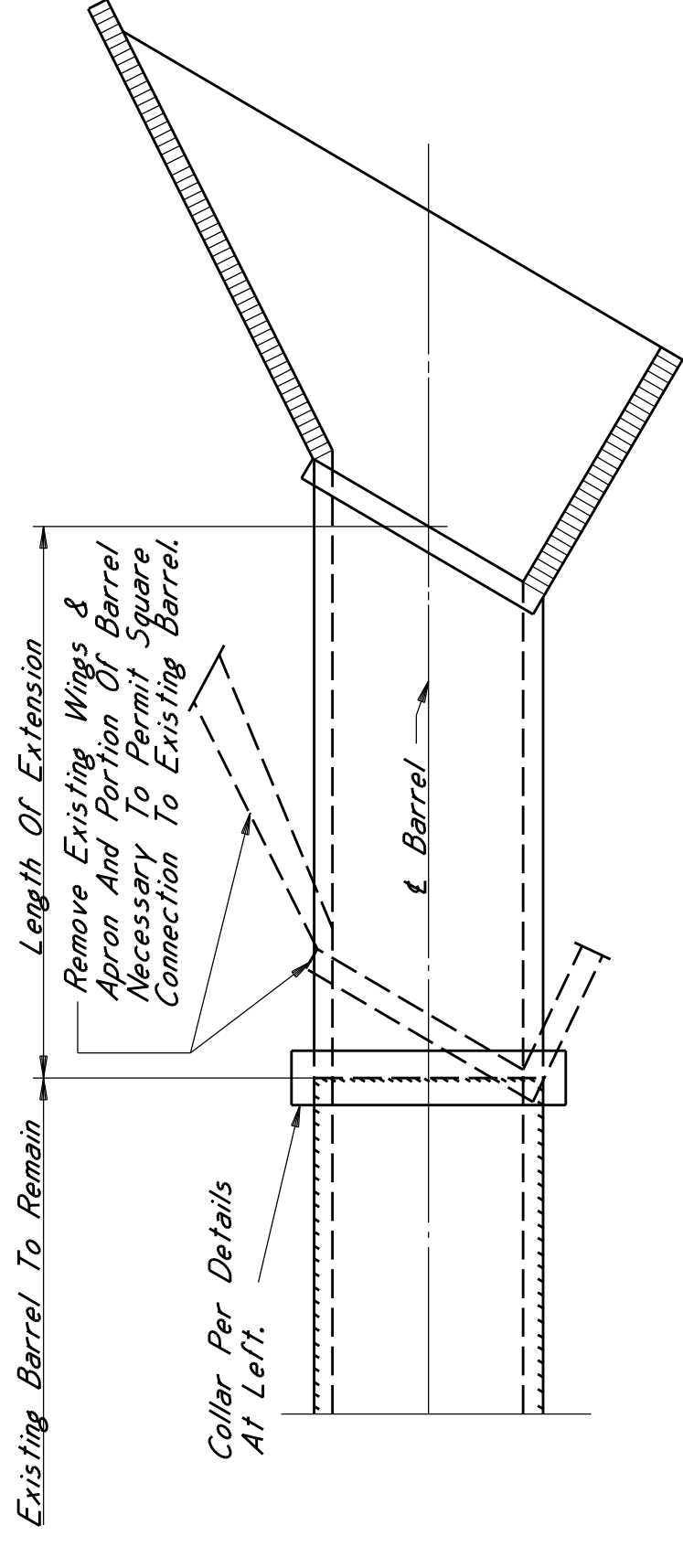
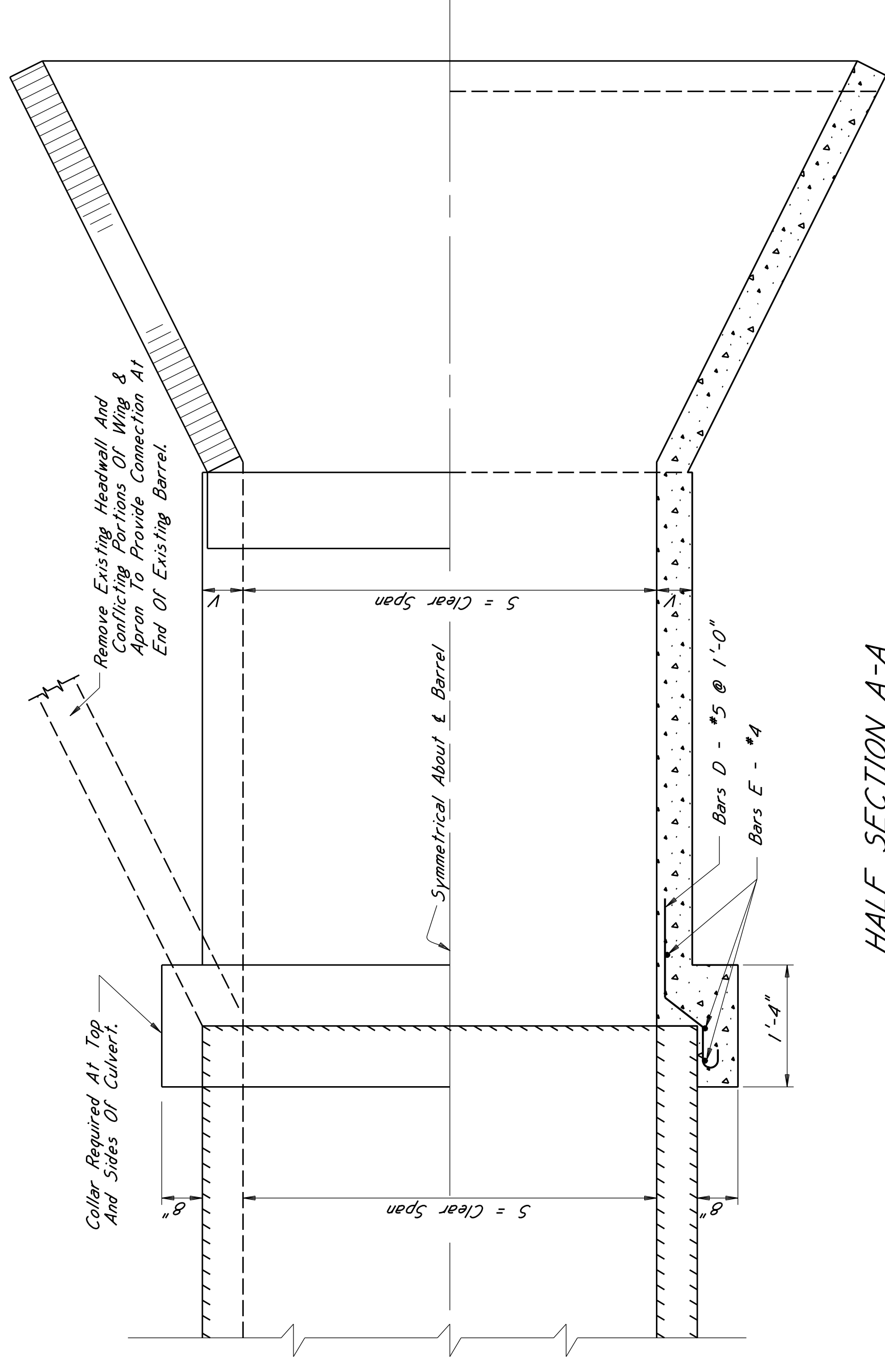
**GENERAL NOTES:**  
 This Drawing Shows The Details Necessary To Construct A Complete Collar Around Barrel At Expansion Joints For Single, Double, Triple, And Quadruple Cell Box Structures. All Details And Requirements Not Shown Hereon Shall Be As Per Specific Drawings Or Sheets As Listed In The Plan Assembly. This Drawing Is Detailed For A Single Cell Box Structure And Multi-Cell Box Structures Shall Be Treated Similarly As Shown.

**Note:** All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.

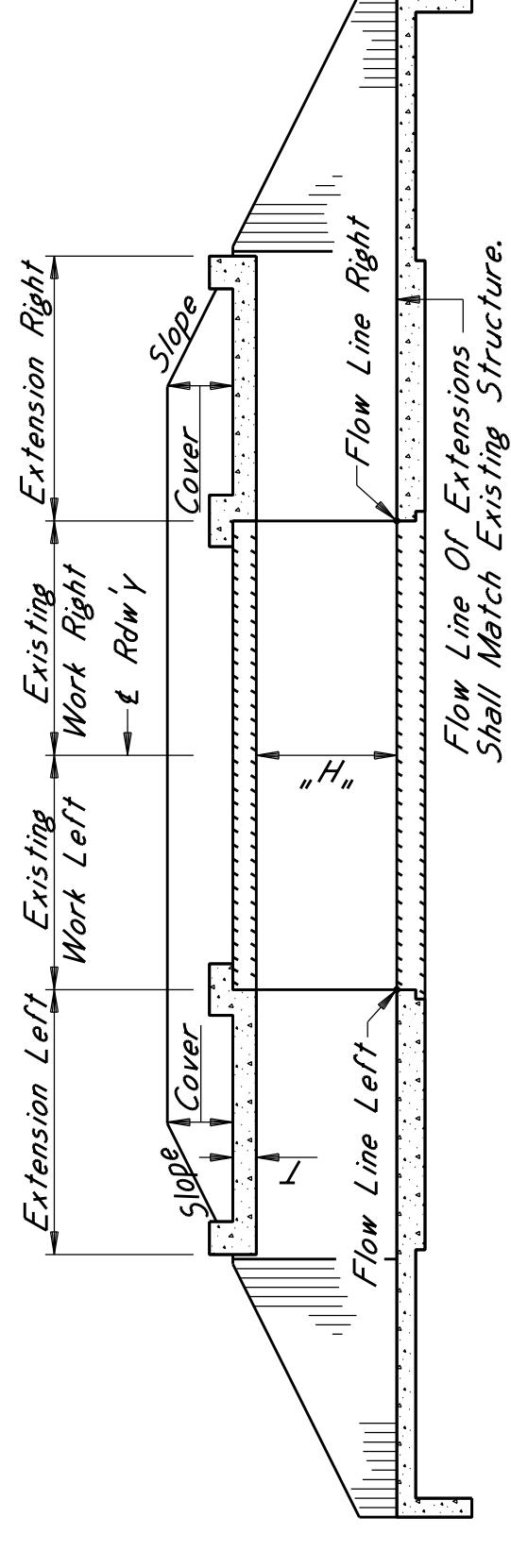


MISSISSIPPI DEPARTMENT OF TRANSPORTATION		WORKING NUMBER	ICJS-1-97
SKEWED COLLAR DETAILS		SHEET NUMBER	7505
FOR BOX STRUCTURES		ISSUED	TMT
(SINGLE, DOUBLE, TRIPLE & QUADRUPLE)		CHECKED	BJJ
		DESIGNED	MA
		Detailed	ALT
		DATE	07-11-97
		DATE	08-01-97
		Revised Note	
		Revisions	
BY			

HALF TOP PLAN

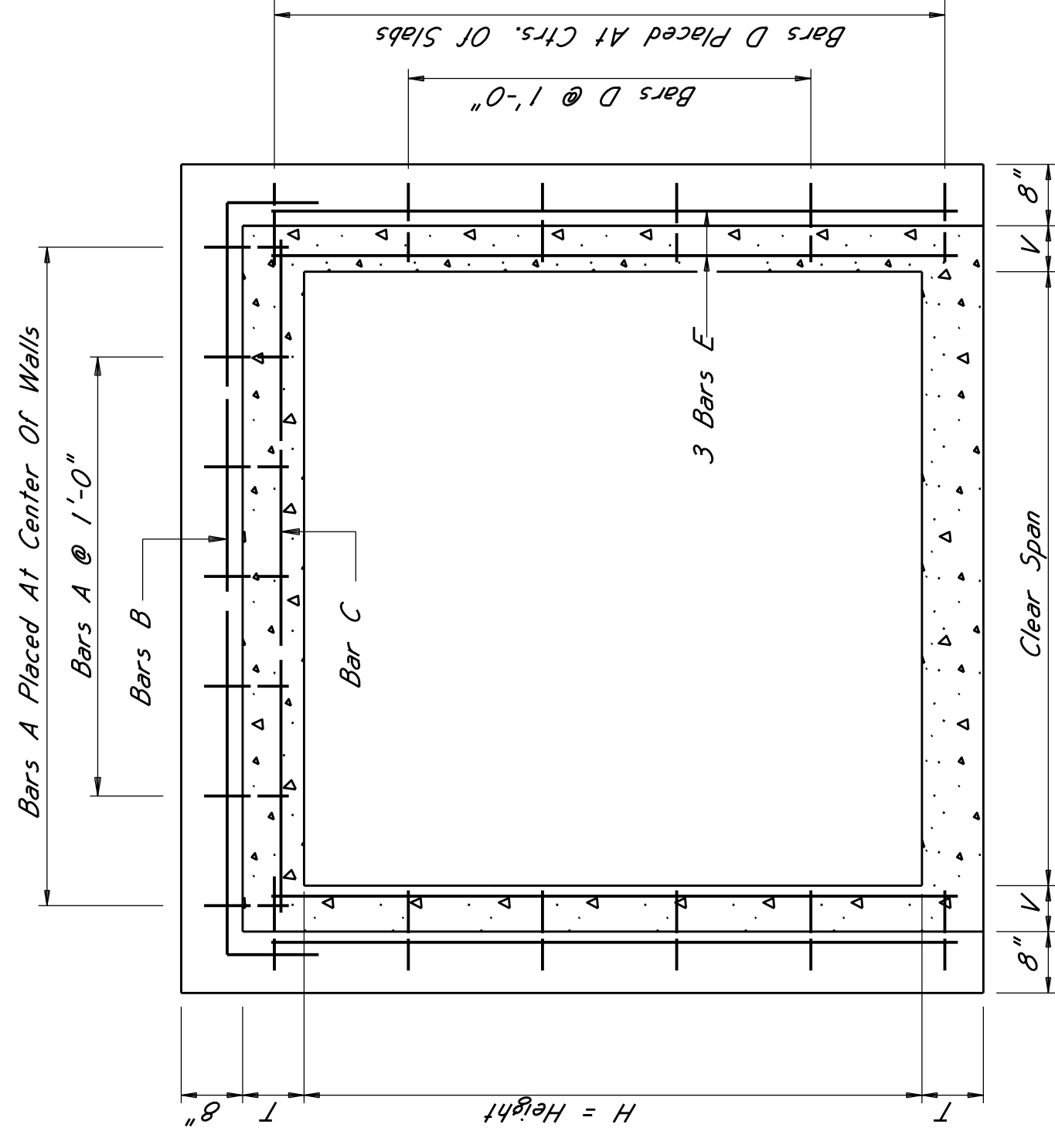


TYPICAL SKEW INSTALLATION



TYPICAL LONGITUDINAL SECTION

HALF SECTION A-A

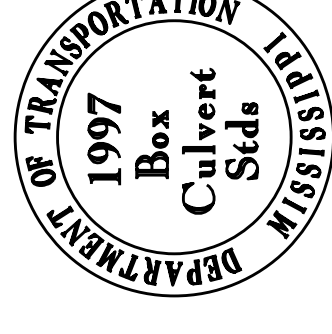


SECTION B-B

**GENERAL NOTES:**

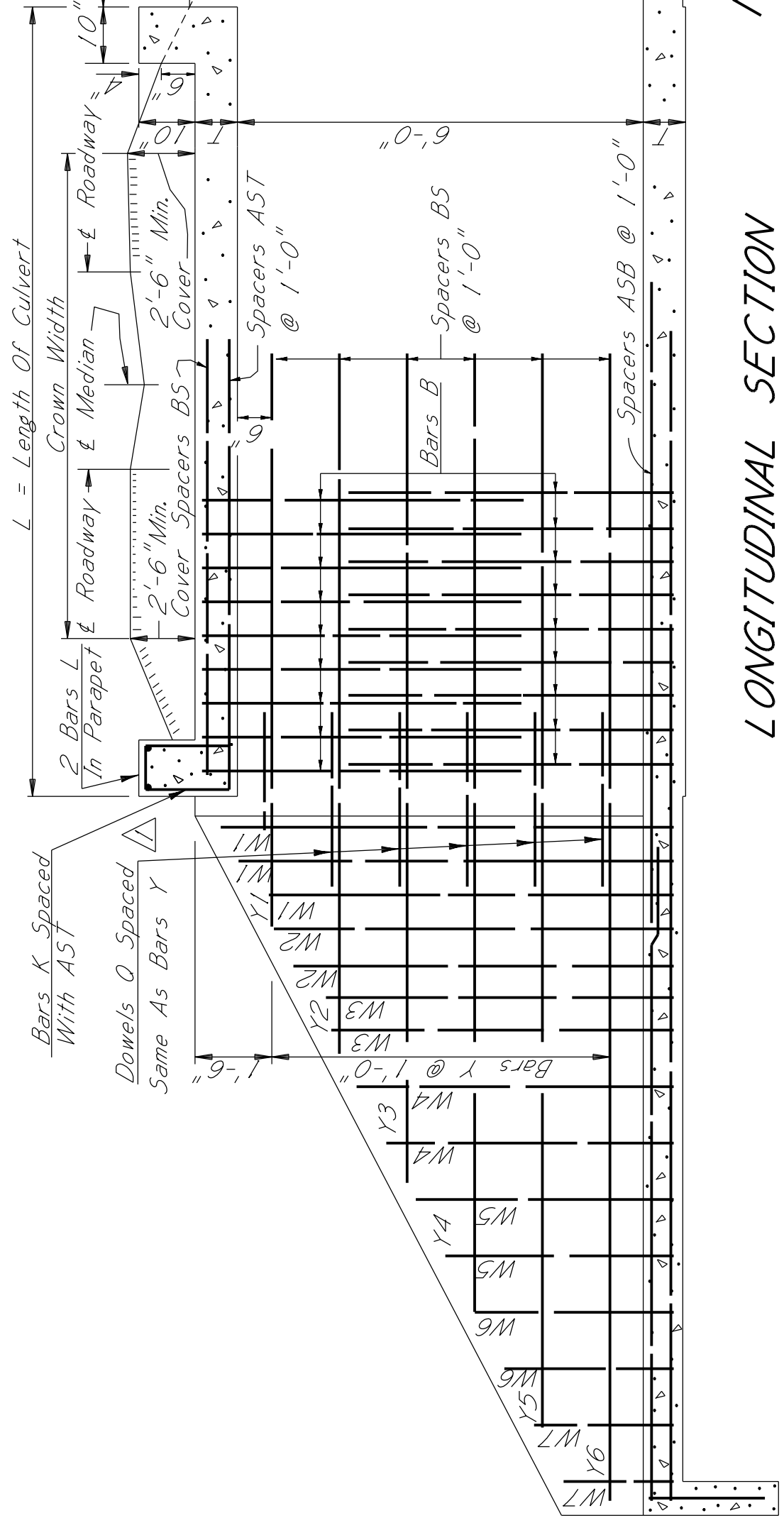
This Drawing Is Supplementary To Basic Culvert Drawings On The 105 And 100 Series And All Applicable Details And General Notes Therein. Each End Of The Culvert The Length Of Extensions For Each End Of The Culvert Shall Be Checked In The Field By The Project Engineer Before The Reinforcing Steel Is Ordered. Bar List Of Reinforcing Steel Shall Be Submitted To The Project Engineer Prior To Fabrication. Placing Plan Shall Be Furnished When Extensions Are Skewed. When The Length Of The Extension Is Less Than 10 Ft, The Vertical Construction Joints At The Junction Of The Barrel And Wings Shown On The Basic Culvert Drawings For Culvert Heights Of 8 Ft And Greater Shall Be Omitted. This Drawing Is Designed For A Single Cell Culvert And Double Cell Structure Shall Be Treated Similarly.

Note: All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.



MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
CULVERT DRAWING  
EXTENSION DETAILS  
FOR LENGTHENING  
EXISTING BOX CULVERTS

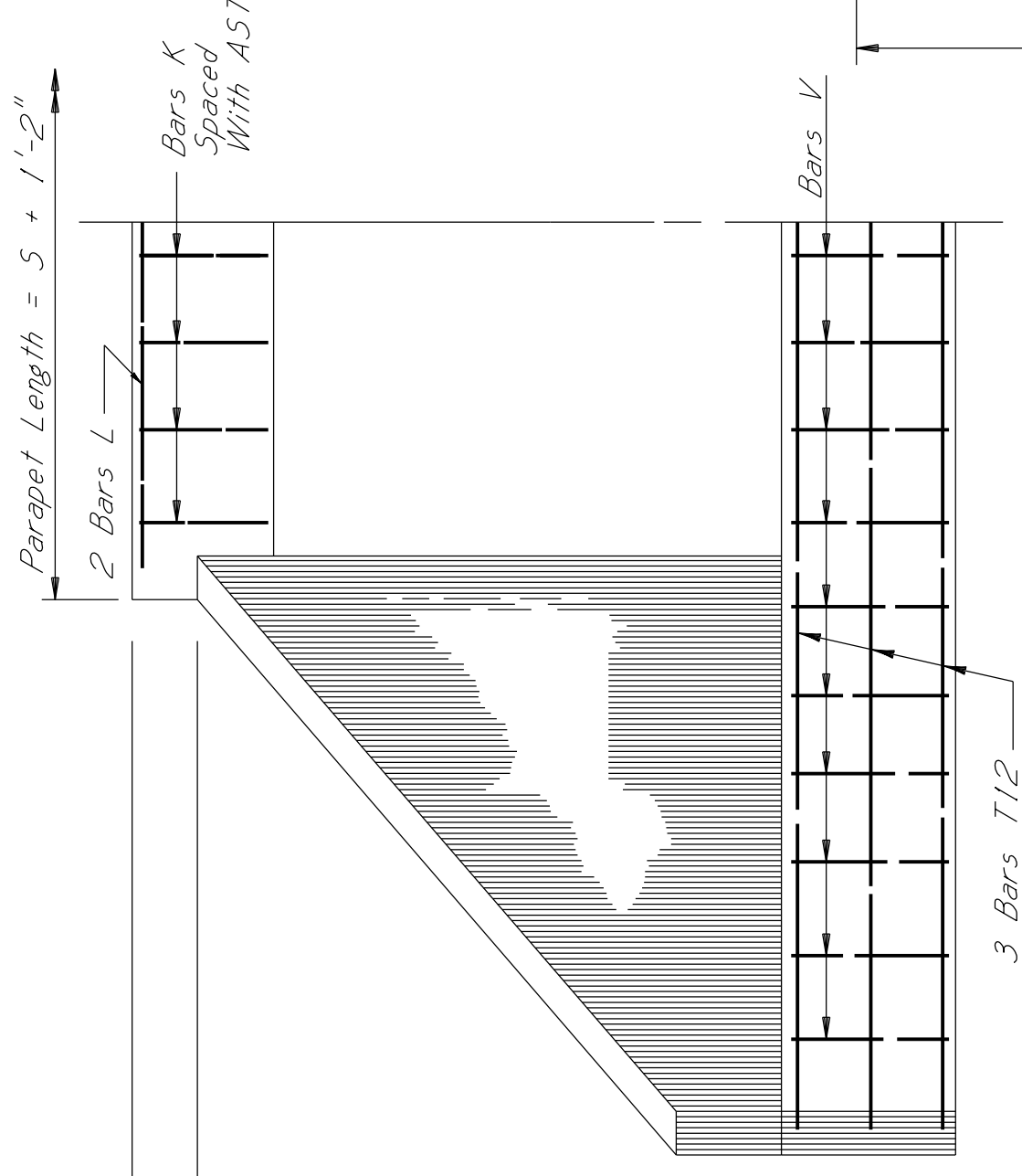
WORKING NUMBER ICX-1-97	ISSUED TMT	DATE 08-01-97
SHEET NUMBER 7506	CHECKED BJJ	DATE 07-11-97
DESIGNED MA	Detailed A.I.T.	DATE
REVISIONS		
DATE	BY	



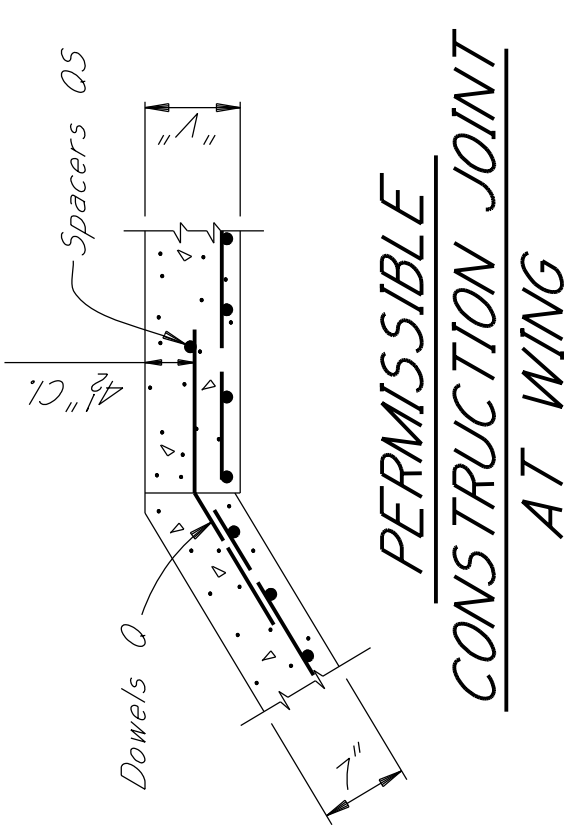
LONGITUDINAL SECTION

PLAN OF WING & PARAPET

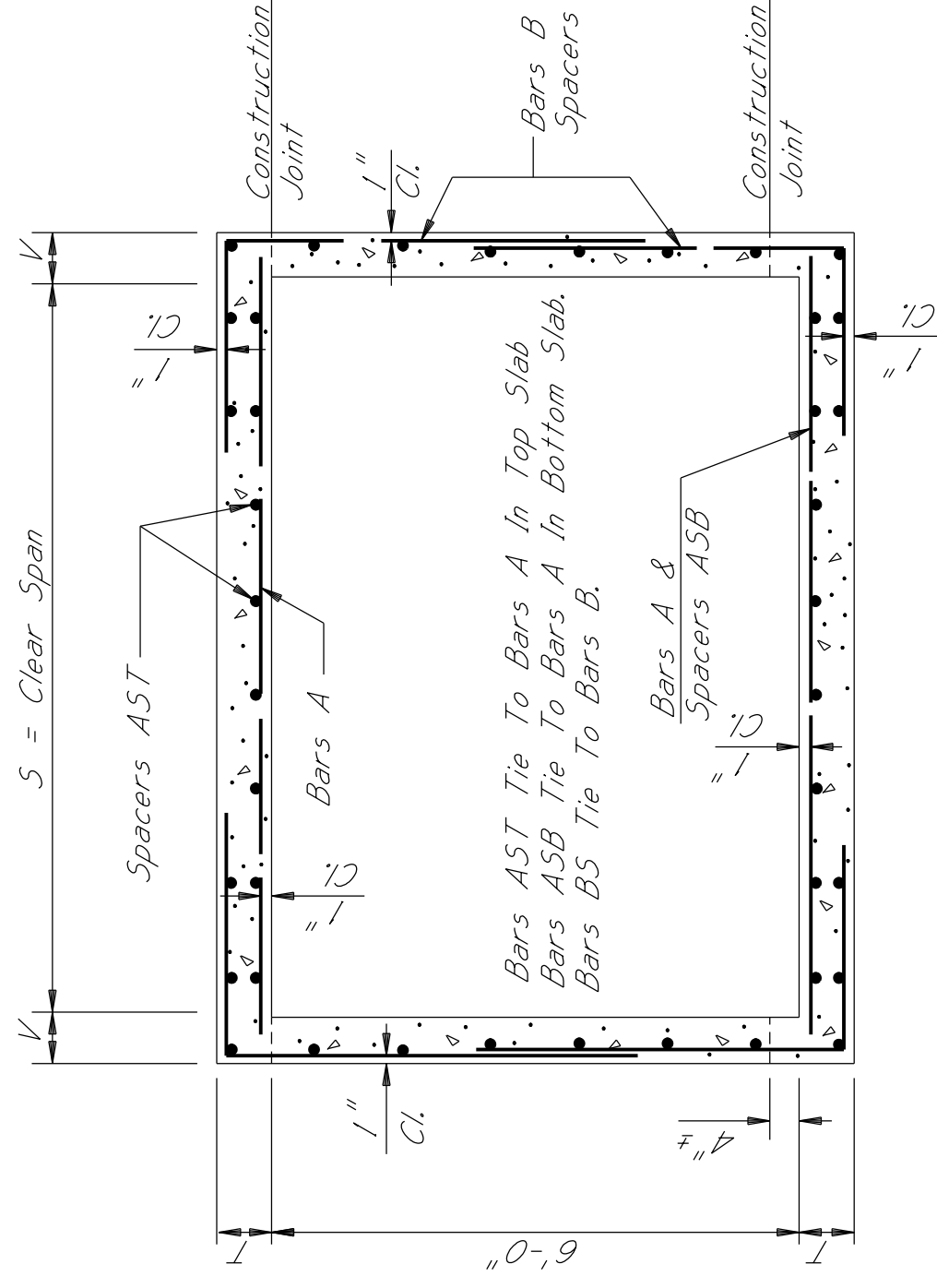
NOTE: Culvert Shall Be Sloped To Conform To Gradient Of Stream.



HALF END ELEVATION



PERMISSIBLE CONSTRUCTION JOINT AT WING



CROSS SECTION

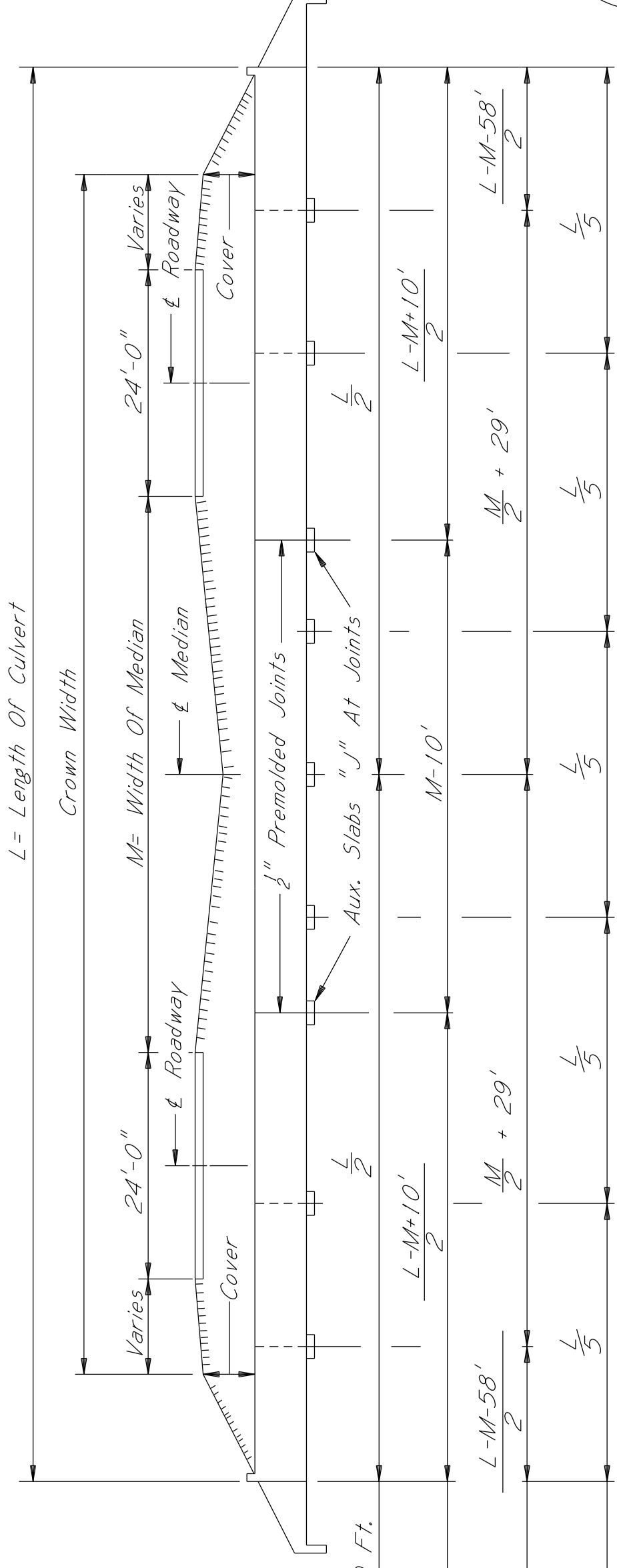
SECTION A-A

CULVERT DIMENSIONS		ESTIMATED QUANTITIES								
CLEAR SPAN	T	V	W	Y	CONC. cu. yd.	REINF. STEEL lb.	CONC. STEEL lb. cu. yd.	REINF. STEEL lb.	CONC. STEEL lb. cu. yd.	REINF. STEEL lb.
6'	14"	7"	1'-2 1/2"	18'-10 1/2"	101.85	14,258	0.5910	86.8	0.35	21
8'	10'	8 1/2"	1'-3 1/2"	20'-10 1/2"	129.16	18,948	0.7631	117.3	0.46	26
10'	8'	9 1/2"	1'-4 1/2"	22'-10 1/2"	160.31	25,194	0.9609	158.1	0.56	32
12'	7'	10 1/2"	1'-5 1/2"	24'-10 1/2"	195.30	31,113	1.1844	196.9	0.66	38
14'	7'	1'-0"	1'-7"	26'-10 1/2"	245.12	39,315	1.5062	250.3	0.77	44
16'	6'	1'-2"	1'-8"	28'-10 1/2"	288.88	45,780	1.7881	292.9	0.87	49
18'	6'	1'-1"	1'-9"	30'-10 1/2"	344.23	57,285	2.1471	368.7	0.98	55
20'	6'	1'-3"	1'-10"	32'-10 1/2"	403.75	67,670	2.5339	436.2	1.09	61

DESIGN DATA:

Specifications . . . . . A.A.S.H.O. 1969  
 Live Load . . . . . HS 20-44 Mod. For 2-24,000 lbs Axles  
 Unit Stresses . . . . . fs=20,000 psi, fc= 1,200 psi, n=10.

Note: All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.



SIDE ELEVATION OF CULVERT

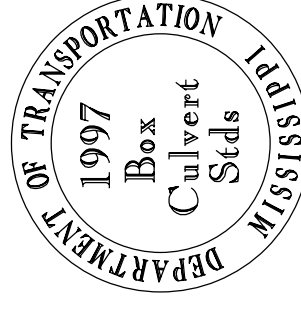
Showing 2" Joints And Auxiliary Slabs "J"  
 Drawn for L = 150 Ft. & M = 60 Ft.

NOTE: Joints Shall Not Be Located Closer Than 5 Ft. Outside Of Pavement For Cover Or 8 Ft. Or Less Except In Cases Where Median Is Less Than 10 Ft. Where Cover Exceeds 8 Ft., Joints May Be Located Without Regards To Pavement Edge.

L Equal To Or Less Than 140 Ft.; M=4 Ft. Thru 60 Ft.  
 L Greater Than 140 Ft. & Equal To Or Less Than 190 Ft.; M=40 Ft. Thru 60 Ft.  
 L Greater Than 140 Ft. & Equal To Or Less Than 190 Ft.; M=4 Ft. To 40 Ft.  
 L Greater Than 190 Ft.; M=4 Ft. Thru 60 Ft.

NOTE: Where Cover Is 8 Ft. Or Less And A Joint Occurs Within The Limits Of 5 Ft. Beyond Each Edge Of Pavement, Use Complete Collar At Joints Per Drawing (C.J.-1) Or (C.J.S-1).

NOTE: See Drawing (B.L.-1) For Additional Joint Locations.



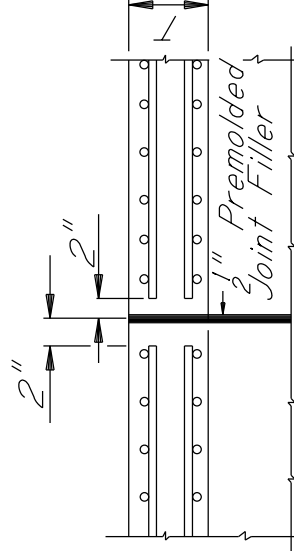
MISSISSIPPI DEPARTMENT OF TRANSPORTATION		BASIC CULVERT DRAWING		SINGLE CELL		HEIGHT 6 FT.		SPANS 6-20 FT.	
WORKING NUMBER	IBS-6-2W-97		SHEET NUMBER	7507		DESIGNED	MA	CHECKED	BUJ
DATE	07/17/98	DATE	07-11-97	ISSUED	TMT	DATE	08-01-97		

# ADDENDUM

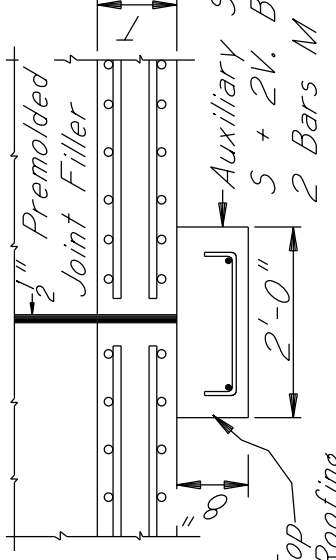
BAR LIST FOR BARREL (L = 150 FT.) PARAPETS & 2 AUXILIARY SLABS "J"														
CLEAR SPAN	BARS "A"			BARS "B"			DOWELS "O" ~ #4			BARS "N" ~ #4				
	NO.	SIZE	SPAC.	NO.	SIZE	SPAC.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.		
6'	600	#5	6"	6'-11"	1200	#4	6'-4"	24	2'-6"	4	5'-7"	6	152'-9"	
8'	480	#6	7 1/2"	9'-0"	960	#5	7'-1"	24	2'-6"	4	5'-7"	8	152'-9"	
10'	576	#6	6 1/2"	11'-1"	1152	#5	6 1/2"	7'-9"	24	2'-6"	4	5'-7"	10	152'-9"
12'	654	#6	5 1/2"	13'-2"	1308	#5	5 1/2"	8'-4"	24	2'-6"	4	5'-7"	12	152'-9"
14'	534	#7	6 3/4"	15'-4"	1068	#6	6 3/4"	9'-3"	24	2'-6"	4	5'-7"	14	152'-9"
16'	480	#8	7 1/2"	17'-5"	1152	#6	7 1/2"	9'-10"	24	2'-6"	4	5'-7"	16	152'-9"
18'	480	#8	7 1/2"	19'-8"	1440	#6	5"	10'-7"	24	2'-6"	4	5'-7"	18	152'-9"
20'	402	#9	9"	21'-11"	1200	#7	6"	11'-5"	24	2'-6"	4	5'-7"	20	152'-9"

**@ NOTE:**

The Number And Length Of Bars Are Listed For Sets Of Bars Composed Of Sections As Shown In Bar Bending Details See Elevation Of Culvert For Number Of Sections.

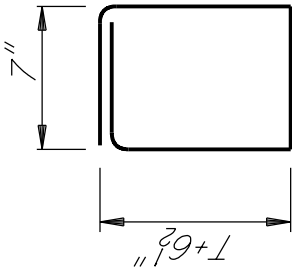


**TOP SLAB SIDE WALLS SIMILAR**

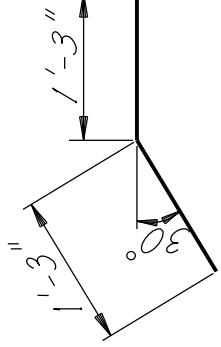


**BOTTOM SLAB DETAILS OF BARREL JOINT & AUXILIARY SLAB "J"**

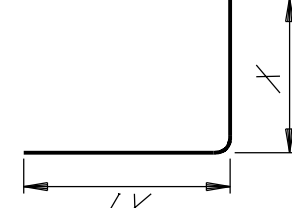
Trowel Finish Top & Cover With Roofing Felt.



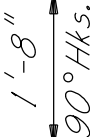
**BARS K - #4**



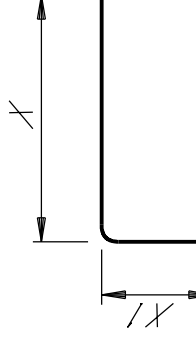
**DOWELS O ~ #4**



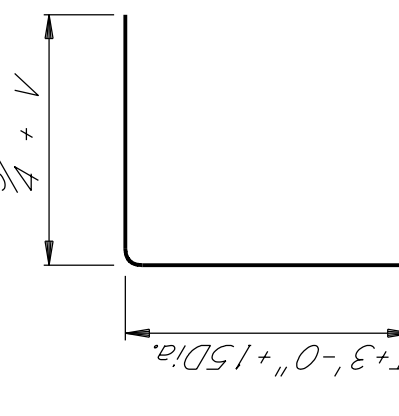
**BARS W - #4**



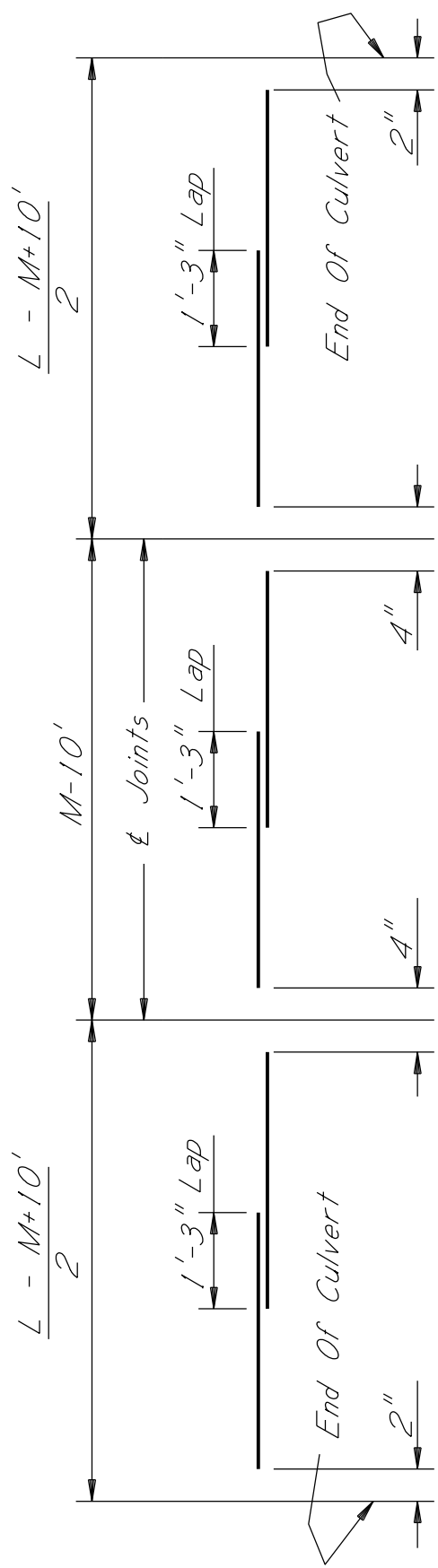
**BARS N - #4**



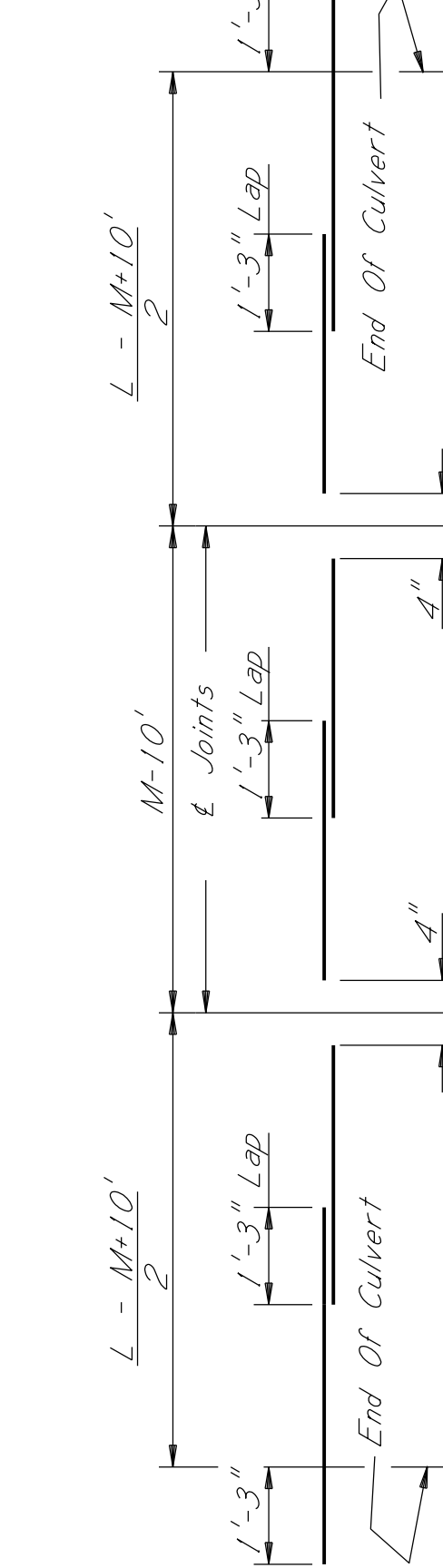
**BARS V - #4**



**BARS B**



**ONE SET OF BARS AST & BS ~ #4**



**ONE SET OF BARS ASB ~ #4**

**NOTE:** The Diagrams For Bars ASB, AST And BS Are For A Culvert Length Greater Than 140 Ft. And Equal To Or Less Than 190 Ft. With A Median Of 40 Ft. Thru 60 Ft. For Conditions Other Than These, Use Sections As Shown On Elevation Of Culvert.

**BAR BENDING DETAILS**

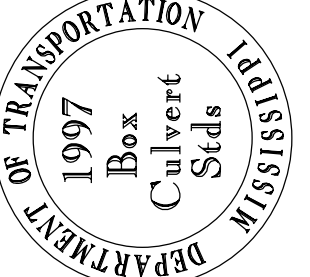
Dimensions Are Out To Out.

**Note:** All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.

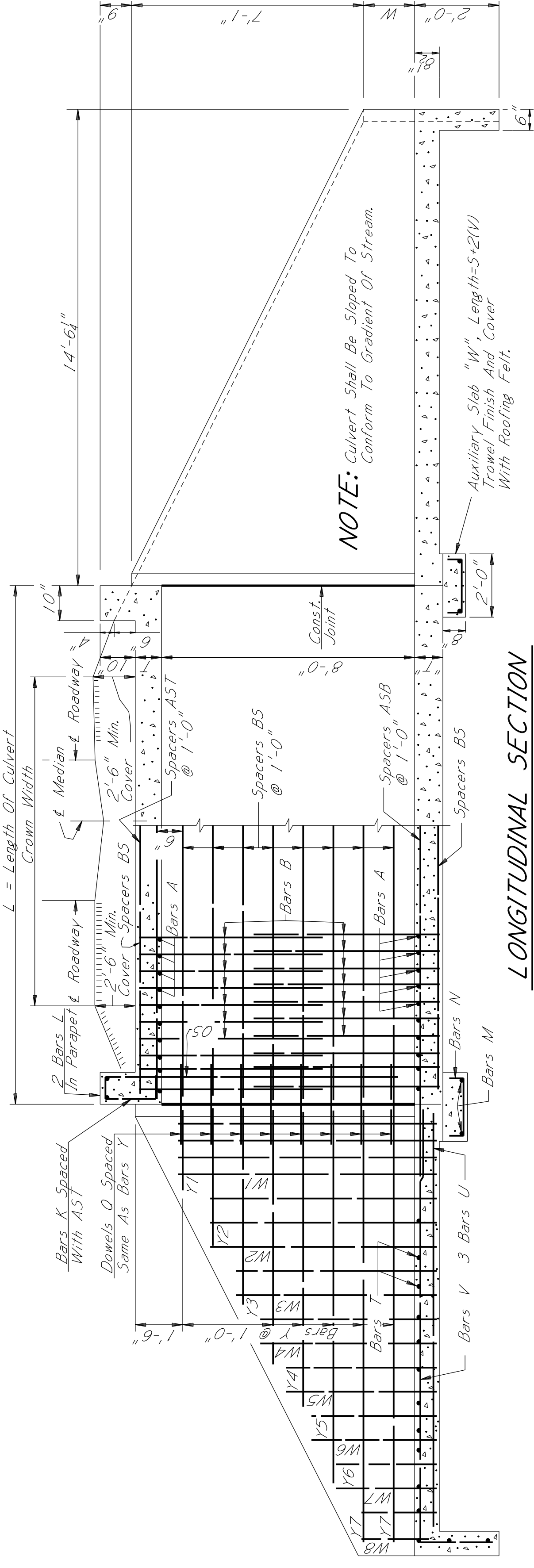
BAR LISTS FOR WINGS & APRONS											
BAR SIZE	NO. REQUIRED										
	SPAN										
	6'	8'	10'	12'	14'	16'	18'	20'	DIA. X	DIA. X/1	LENGTH
T1 #4	2	2	2	2	2	2	2	2			5'-1'-0"
T2 #4	2	2	2	2	2	2	2	2			5'-1'-7"
T3 #4	2	2	2	2	2	2	2	2			5'-2'-9"
T4 #4	2	2	2	2	2	2	2	2			5'-3'-11"
T5 #4	2	2	2	2	2	2	2	2			5'-5'-1"
T6 #4	2	2	2	2	2	2	2	2			5'-6'-3"
T7 #4	2	2	2	2	2	2	2	2			5'-7'-5"
T8 #4	2	2	2	2	2	2	2	2			5'-8'-7"
T9 #4	2	2	2	2	2	2	2	2			5'-9'-9"
T10 #4	2	2	2	2	2	2	2	2			5'-10'-11"
T11 #4	2	2	2	2	2	2	2	2			5'-12'-1"
T12 #4	6	6	6	6	6	6	6	6			5'-13'-3"
U #4	12	12	12	12	12	12	12	12			12'-5"
V1 #4	16	20	24	28	32	36	40	44	11'-0"	1'-8"	12'-8"
V2 #4	4	4	4	4	4	4	4	4	7'-4"	1'-8"	10'-9"
V3 #4	4	4	4	4	4	4	4	4	7'-4"	1'-8"	9'-0"
V4 #4	4	4	4	4	4	4	4	4	5'-7"	1'-8"	7'-3"
V5 #4	4	4	4	4	4	4	4	4	3'-10"	1'-8"	5'-6"
V6 #4	4	4	4	4	4	4	4	4	2'-1"	1'-8"	3'-9"
W2 #4	8	8	8	8	8	8	8	8	3'-8"	W4'-7"	W+8'-3"
W3 #4	8	8	8	8	8	8	8	8	3'-4"	W3'-11"	W+7'-3"
W4 #4	8	8	8	8	8	8	8	8	3'-0"	W3'-0"	W+6'-0"
W5 #4	8	8	8	8	8	8	8	8	2'-8"	W2'-2"	W+4'-10"
W6 #4	8	8	8	8	8	8	8	8	2'-4"	W1'-4"	W+3'-8"
W7 #4	8	8	8	8	8	8	8	8	2'-0"	W+6"	W+2'-6"
Y1 #4	4	4	4	4	4	4	4	4			2'-11"
Y2 #4	4	4	4	4	4	4	4	4			5'-3"
Y3 #4	4	4	4	4	4	4	4	4			7'-7"
Y4 #4	4	4	4	4	4	4	4	4			9'-10"
Y5 #4	4	4	4	4	4	4	4	4			12'-2"
Y6 #4	4	4	4	4	4	4	4	4			12'-5"

**GENERAL NOTES:**

Specifications: Mississippi Standard Specifications For Road And Bridge Construction, 1990.  
 All Concrete Shall Be Class "B".  
 Concrete Surfaces Shall Be Finished In Accordance With Sub-Section 804.03.19.  
 Expansion Joint Material Shall Be Bituminous Fiber Type Unless Otherwise Noted.  
 All Exposed Corners Shall Be Chamfered 3".  
 Reinforcing Steel Shall Be Placed 1" Clear Minimum From The Surface Of The Concrete And Shall Be Adequately Supported From The Forms.  
 All Bars Shall Be Accurately Spaced And Securely Wired At Each Intersection Before Placing Concrete.  
 Horizontal Construction Joints Shall Be Placed Only At The Locations Shown, And The Concrete Shall Be Allowed To Set A Minimum Period Of Two Hours Before Continuing The Pour.  
 The Quantities Shown Will Be Used As A Basis For Final Payment Unless This Drawing Is Modified.



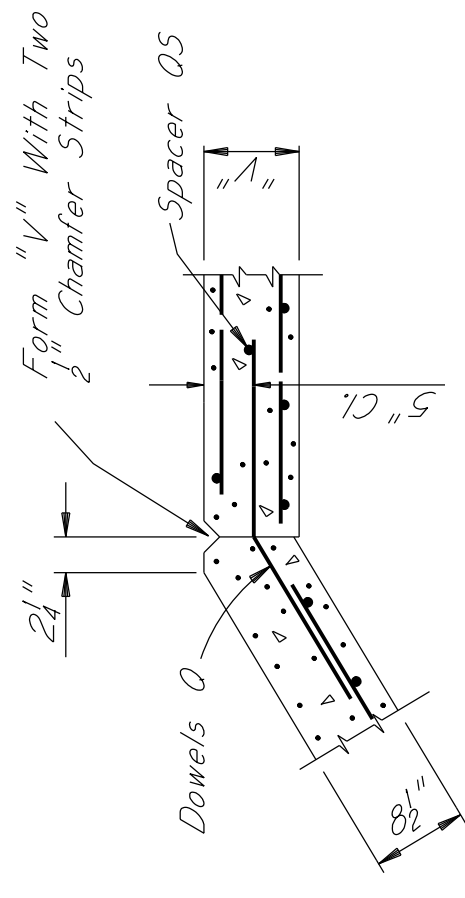
MISSISSIPPI DEPARTMENT OF TRANSPORTATION			BASIC CULVERT DRAWING		SINGLE CELL		HEIGHT 6 FT.	
REVISIONS			DESIGNED <u>MA</u>		CHECKED <u>BUJ</u>		ISSUED <u>TMT</u>	
DATE			DATE <u>02-11-97</u>		DATE <u>08-01-97</u>		SHEET NUMBER	
							WORKING NUMBER	
							IBS-6-2W-97	
							7508	



**LONGITUDINAL SECTION**  
Showing Bars in Fill Face Of Wall

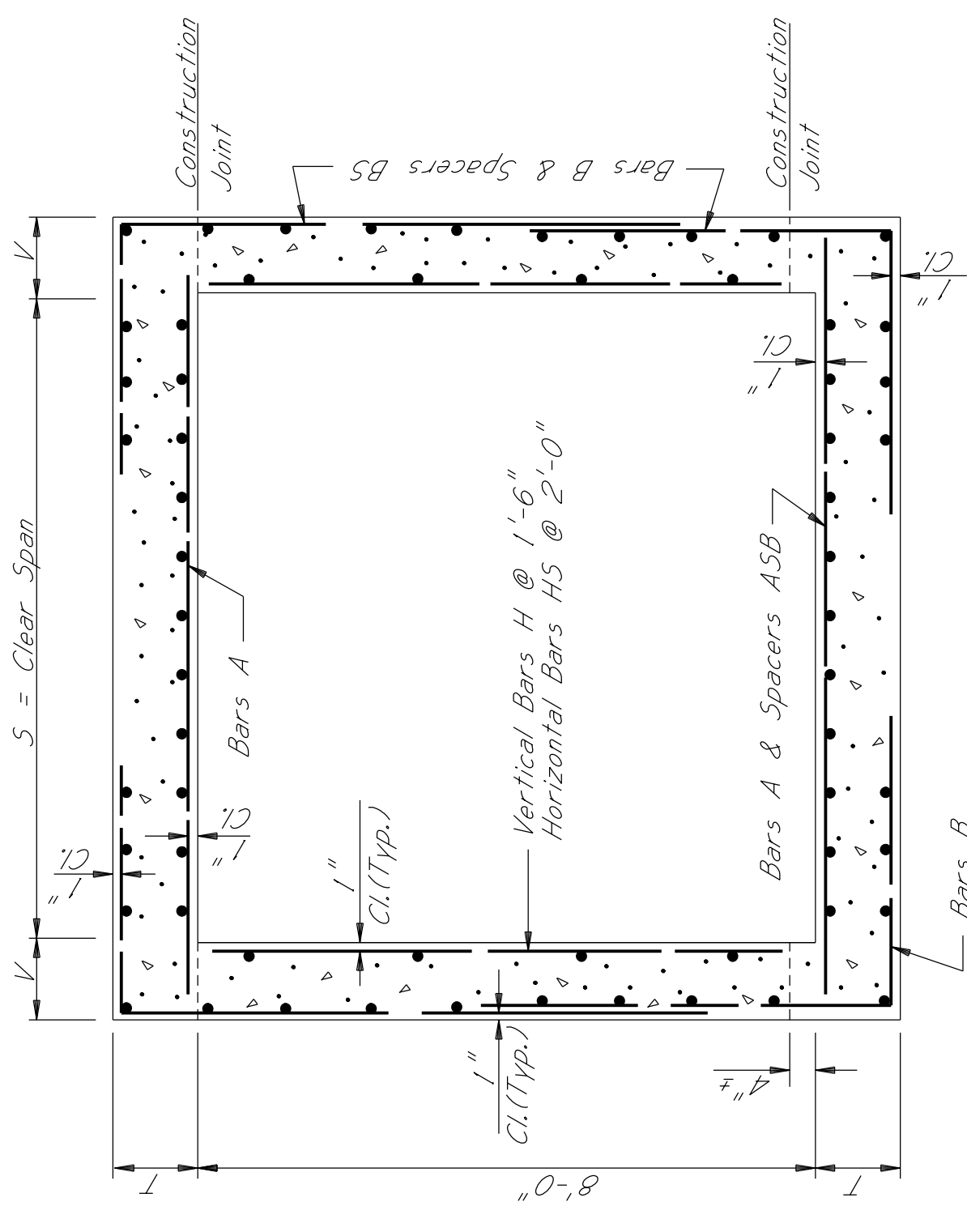
**NOTE:** Culvert Shall Be Slanted To Conform To Gradient Of Stream.

**CONSTRUCTION JOINT AT WING**



**PLAN OF WING & PARAPET**

Showing Bars in Fill Face Of Wall



**GROSS SECTION**

Bars ASB Tie To Bars A in Top Slab.  
Bars ASB Lie To Bars A in Bottom Slab.  
Bars BS Tie To Bars B.

CULVERT DIMENSIONS		ESTIMATED QUANTITIES					
CLEAR SPAN	T	V	W	Y	CULVERT L=150 FT. PER LIN. FT. BARREL 1 AUX. SLAB "J"	CONC. cu. yd.	REINF. STEEL lb.
8'	9"	8"	1'-9"	24'-6"	163.41	25,289	154.8
10'	9"	8"	1'-9"	26'-6"	191.99	28,639	176.2
12'	10"	9"	1'-10"	28'-6"	228.90	33,580	207.7
14'	10"	9"	1'-10"	30'-6"	281.66	41,042	256.9
16'	11"	11"	2'-1"	32'-6"	332.12	50,954	321.5
18'	11"	11"	2'-1"	34'-6"	386.61	60,691	385.3
20'	11"	11"	2'-1"	36'-6"	445.11	71,230	454.1

**DESIGN DATA:**

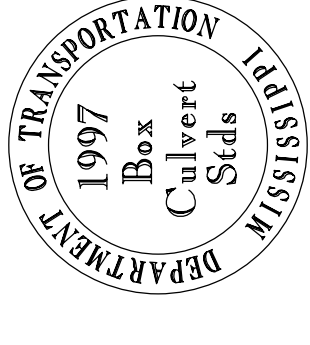
Specifications . . . . . A.A.S.H.O. 1969  
Live Load . . . . . HS 20-44 Mod. For 2-24,000 lbs Axles  
Unit Stresses . . . . .  $f_s=20,000$  psi,  $f_c=1,200$  psi,  $n=10$ .

**Note:** All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
BASIC CULVERT DRAWING  
SINGLE CELL  
HEIGHT 8 FT.  
SPANS 8-20 FT.

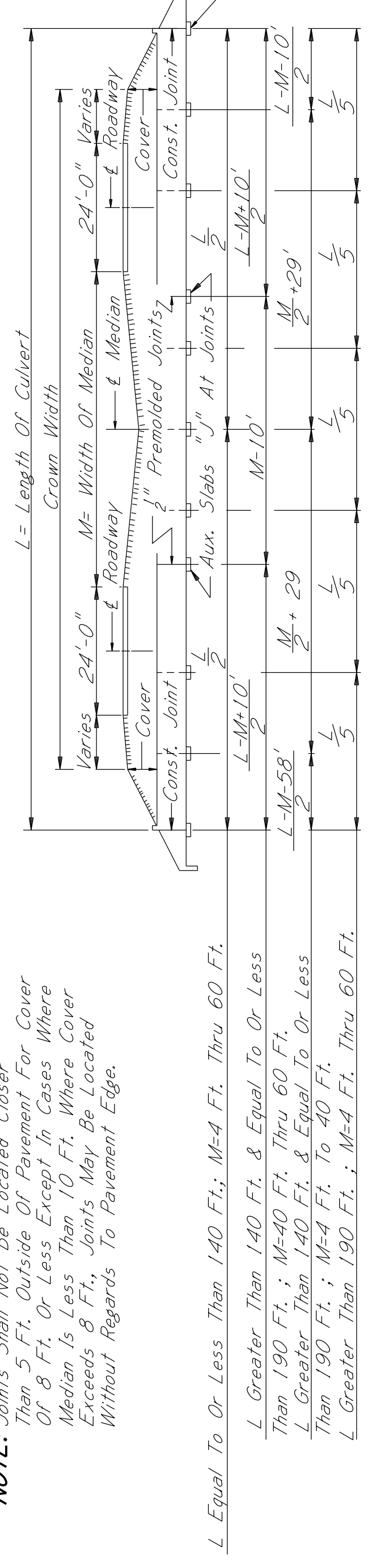
WORKING NUMBER  
IBS-8-2W-97

DESIGNED MA CHECKED BUJ ISSUED TMT  
DATE 07-11-97 SHEET NUMBER  
DATE 08-01-97 7509



**SIDE ELEVATION OF CULVERT**

Showing 3" Joints And Auxiliary Slabs "J"  
Drawn For L = 150 Ft. & M = 60 Ft.



**NOTE:** Joints Shall Not Be Located Closer Than 5 Ft. Outside Of Pavement For Cover Of 8 Ft. Or Less Except In Cases Where Median Is Less Than 10 Ft. Where Cover Exceeds 8 Ft., Joints May Be Located Without Regards To Pavement Edge.

L Equal To Or Less Than 140 Ft.; M=4 Ft. Thru 60 Ft.  
L Greater Than 140 Ft. & Equal To Or Less Than 190 Ft.; M=40 Ft. Thru 60 Ft.  
L Greater Than 140 Ft. & Equal To Or Less Than 190 Ft.; M=4 Ft. To 40 Ft.  
L Greater Than 190 Ft.; M=4 Ft. Thru 60 Ft.

**NOTE:** Where Cover Is 8 Ft. Or Less And A Joint Occurs Within The Limits Of 5 Ft. Beyond Each Edge Of Pavement, Use Complete Collar At Joints Per Drawing ICJ-1 Or ICJS-1.

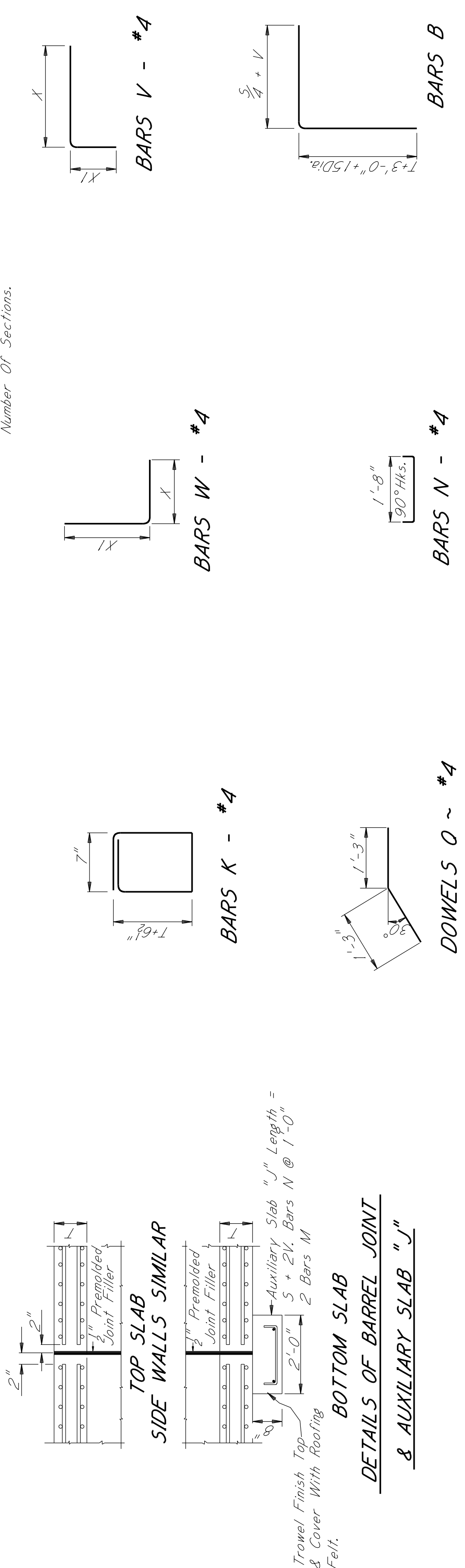
**NOTE:** See Drawing 1B-L-1 For Additional Joint Locations.



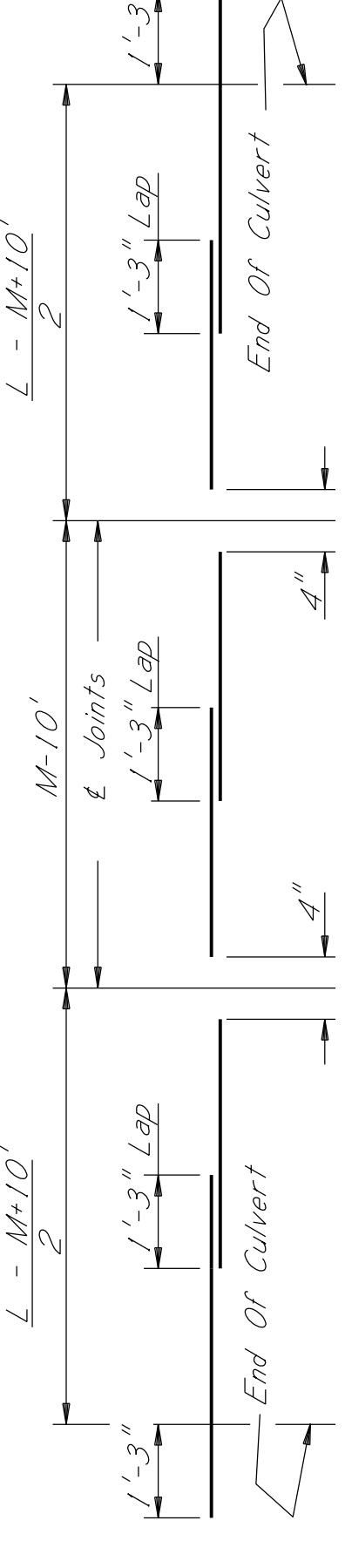
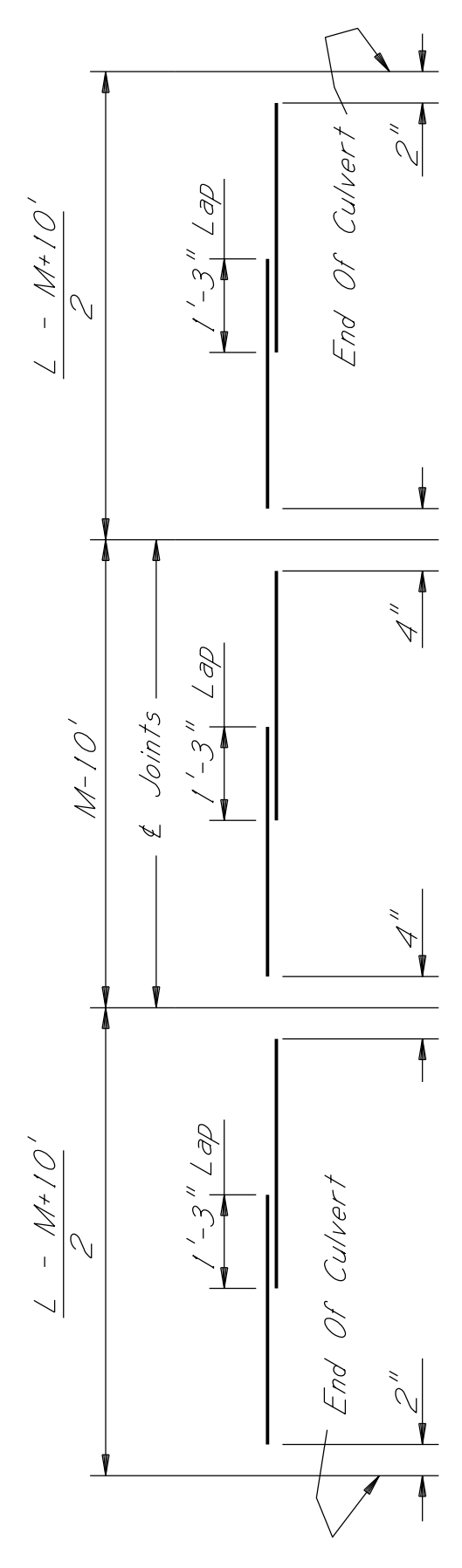
# ADDENDUM

BAR LIST FOR BARREL (L = 150 FT.) PARAPETS & 4 AUXILIARY SLABS (2 "J"s & 2 "W"s)																										
CLEAR SPAN	BARS "A"		BARS "B"		DOWELS "O" ~ #4		SETS OF BARS "AS" ~ #4		SETS OF BARS "ASB" ~ #4		SETS OF BARS "HS" ~ #4		BARS "K" ~ #4		BARS "L" ~ #4		BARS "M" ~ #4		BARS "N" ~ #4							
	NO.	SIZE	SPAC.	LGTH.	NO.	SIZE	SPAC.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.				
8'	552	#6	6 1/2"	9'-1"	1104	#5	6 1/2"	8'-2"	32	2'-6"	4	7'-7"	8	152'-9"	204	7'-7"	8	152'-9"	16	4'-4"	4	9'-1"	8	9'-0"	40	2'-2"
10'	552	#6	6 1/2"	11'-2"	1104	#5	6 1/2"	8'-9"	32	2'-6"	4	7'-7"	8	152'-9"	204	7'-7"	8	152'-9"	20	4'-5"	4	11'-1"	8	11'-1"	48	2'-2"
12'	600	#6	6"	13'-3"	1200	#5	6"	9'-5"	32	2'-6"	4	7'-7"	12	155'-7"	204	7'-7"	8	152'-9"	24	4'-7"	4	13'-1"	8	13'-2"	56	2'-2"
14'	684	#6	5 1/2"	15'-5"	1368	#5	5 1/2"	10'-1"	32	2'-6"	4	7'-7"	14	155'-7"	204	7'-7"	8	152'-9"	28	4'-10"	4	15'-1"	8	15'-4"	64	2'-2"
16'	576	#7	6 1/2"	17'-7"	1152	#6	6 1/2"	10'-11"	32	2'-6"	4	7'-7"	16	155'-7"	204	7'-7"	8	152'-9"	32	5'-0"	4	17'-1"	8	17'-6"	72	2'-2"
18'	480	#7	7 1/2"	19'-9"	960	#7	7 1/2"	11'-9"	32	2'-6"	4	7'-7"	18	155'-7"	204	7'-7"	8	152'-9"	36	5'-2"	4	19'-1"	8	19'-8"	80	2'-2"
20'	534	#8	6 3/4"	21'-11"	1068	#7	6 3/4"	12'-5"	32	2'-6"	4	7'-7"	20	155'-7"	204	7'-7"	8	152'-9"	40	5'-4"	4	21'-1"	8	21'-10"	88	2'-2"

@ NOTE: The Number And Length Of Bars Are Listed For Sets Of Bars Composed Of Sections As Shown In Bar Bending Details See Elevation Of Culvert For Number Of Sections.

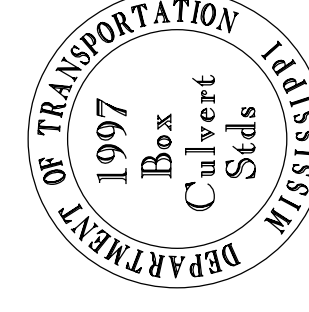


## DETAILS OF BARREL JOINT & AUXILIARY SLAB "J"



NOTE: The Diagrams For Bars ASB, AST And BS Are For A Culvert Length Greater Than 140 Ft. And Equal To Or Less Than 190 Ft. With A Median Of 40 Ft. Thru 60 Ft. For Conditions Other Than These, Use Sections As Shown On Elevation Of Culvert.

Note: All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.



## BAR BENDING DETAILS

Dimensions Are Out To Out.

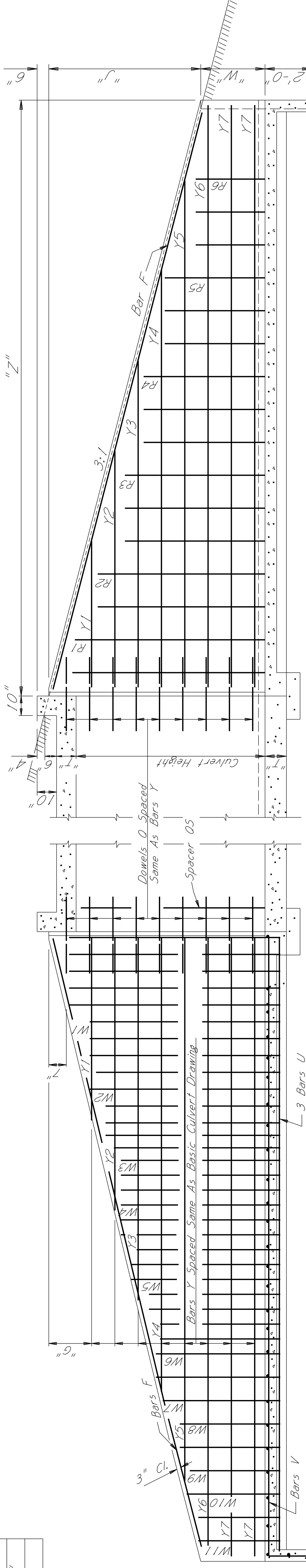
BAR SIZE	BAR LISTS FOR WINGS & APRONS										DIM X	DIM XI	LENGTH
	NO. REQUIRED												
	8'	10'	12'	14'	16'	18'	20'						
T1 #4	2	2	2	2	2	2	2	2	2	2			5+1'-0"
T2 #4	2	2	2	2	2	2	2	2	2	2			5+2'-2"
T3 #4	2	2	2	2	2	2	2	2	2	2			5+3'-4"
T4 #4	2	2	2	2	2	2	2	2	2	2			5+4'-6"
T5 #4	2	2	2	2	2	2	2	2	2	2			5+5'-8"
T6 #4	2	2	2	2	2	2	2	2	2	2			5+6'-10"
T7 #4	2	2	2	2	2	2	2	2	2	2			5+8'-0"
T8 #4	2	2	2	2	2	2	2	2	2	2			5+9'-2"
T9 #4	2	2	2	2	2	2	2	2	2	2			5+10'-4"
T10 #4	2	2	2	2	2	2	2	2	2	2			5+11'-6"
T11 #4	2	2	2	2	2	2	2	2	2	2			5+12'-8"
T12 #4	2	2	2	2	2	2	2	2	2	2			5+13'-10"
T13 #4	2	2	2	2	2	2	2	2	2	2			5+15'-0"
T14 #4	2	2	2	2	2	2	2	2	2	2			5+16'-2"
T15 #4	6	6	6	6	6	6	6	6	6	6			5+17'-0"
U #4	12	12	12	12	12	12	12	12	12	12			16'-1"
V1 #4	20	24	28	32	36	40	44	44	44	44	14'-2"	1'-8"	15'-10"
V2 #4	4	4	4	4	4	4	4	4	4	4	12'-3"	1'-8"	13'-11"
V3 #4	4	4	4	4	4	4	4	4	4	4	10'-6"	1'-8"	12'-2"
V4 #4	4	4	4	4	4	4	4	4	4	4	8'-10"	1'-8"	10'-6"
V5 #4	4	4	4	4	4	4	4	4	4	4	7'-1"	1'-8"	8'-9"
V6 #4	4	4	4	4	4	4	4	4	4	4	5'-5"	1'-8"	7'-1"
V7 #4	4	4	4	4	4	4	4	4	4	4	3'-8"	1'-8"	5'-4"
W1 #5	16	16	16	16	16	16	16	16	16	16	4'-6"	W+6'-7"	W+11'-1"
W2 #5	12	12	12	12	12	12	12	12	12	12	4'-1"	W+5'-8"	W+9'-9"
W3 #5	8	8	8	8	8	8	8	8	8	8	3'-8"	W+4'-9"	W+8'-5"
W4 #4	8	8	8	8	8	8	8	8	8	8	3'-4"	W+3'-11"	W+7'-3"
W5 #4	8	8	8	8	8	8	8	8	8	8	3'-0"	W+3'-0"	W+6'-0"
W6 #4	8	8	8	8	8	8	8	8	8	8	2'-8"	W+2'-0"	W+4'-10"
W7 #4	8	8	8	8	8	8	8	8	8	8	2'-4"	W+1'-4"	W+3'-8"
W8 #4	8	8	8	8	8	8	8	8	8	8	2'-0"	W+6"	W+2'-6"
Y1 #4	4	4	4	4	4	4	4	4	4	4			2'-11"
Y2 #4	4	4	4	4	4	4	4	4	4	4			5'-3"
Y3 #4	4	4	4	4	4	4	4	4	4	4			7'-7"
Y4 #4	4	4	4	4	4	4	4	4	4	4			9'-10"
Y5 #4	4	4	4	4	4	4	4	4	4	4			12'-2"
Y6 #4	4	4	4	4	4	4	4	4	4	4			14'-5"
Y7 #4	8	8	8	8	8	8	8	8	8	8			16'-1"

## GENERAL NOTES:

Specifications: Mississippi Standard Specifications For Road And Bridge Construction, 1990.  
All Concrete Shall Be Class "B".  
Concrete Surfaces Shall Be Finished In Accordance With Sub-Section 804.03.19.  
Expansion Joint Material Shall Be Bituminous Fiber Type Unless Otherwise Noted.  
All Exposed Corners Shall Be Chamfered 3/4".  
Reinforcing Steel Shall Be Placed 1" Clear Minimum From The Surface Of The Concrete And Shall Be Adequately Supported From The Forms.  
All Bars Shall Be Accurately Spaced And Securely Wired At Each Intersection Before Placing Concrete.  
Horizontal Construction Joints Shall Be Placed Only At The Locations Shown, And The Concrete Shall Be Allowed To Set A Minimum Period Of Two Hours Before Continuing The Pour.  
Auxiliary Slabs "W" And Vertical Construction Joints At The Wings Shall Be Placed In All Culverts Regardless Of Length.  
The Quantities Shown Will Be Used As A Basis For Final Payment Unless This Drawing Is Modified.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION		BASIC CULVERT DRAWING		SINGLE CELL		HEIGHT 8 FT.		SPANS 8-20 FT.	
DATE		DESIGNED MA		CHECKED BUJ		ISSUED TMT		SHEET NUMBER	
DATE 07-11-97		DATE 07-11-97		DATE 08-01-97		DATE		DATE	
WORKING NUMBER		IBS-8-2W-97							
								7510	

CULVERT HEIGHT "H"	"G"
6'	1'-9"
8'	1'-9"
10'	1'-11"
12'	2'-0"



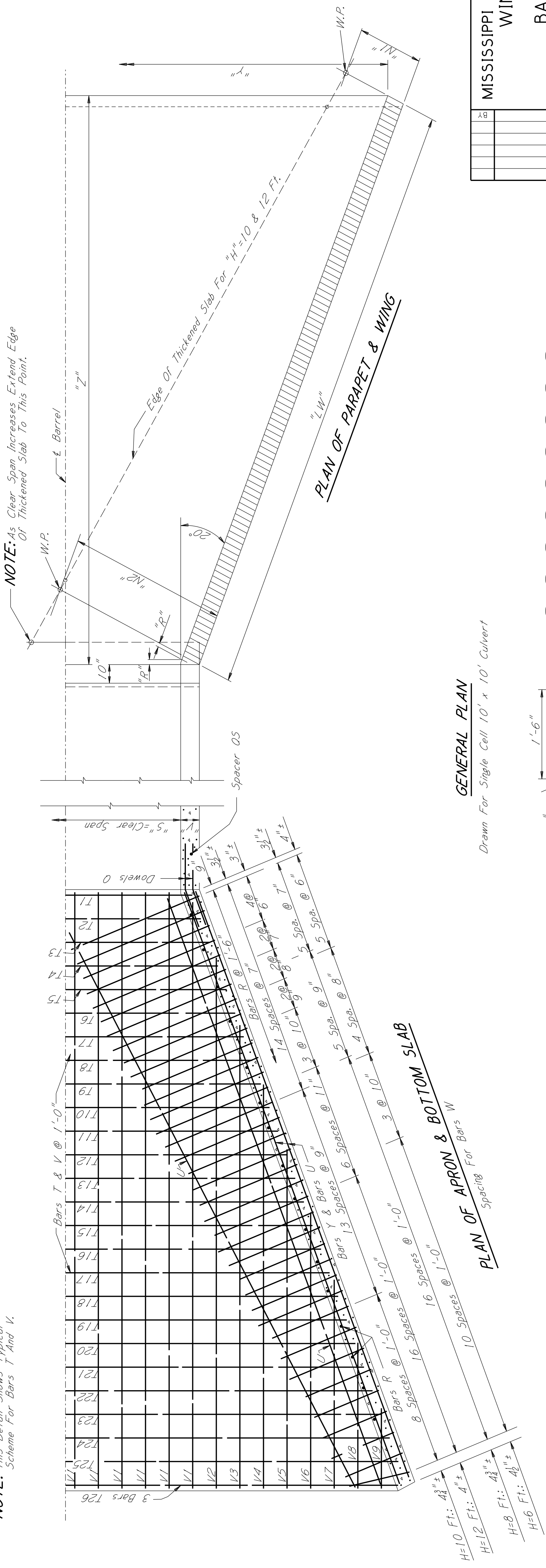
**LONGITUDINAL SECTION**  
Showing Bars In Both Faces Of Wall  
Drawn For Single Cell 10' x 10' Culvert

**STREAM SIDE**  
**NOTE:** Reinforcement In Stream Face Of Wall  
Required For H= 8, 10 & 12 Ft. Only.

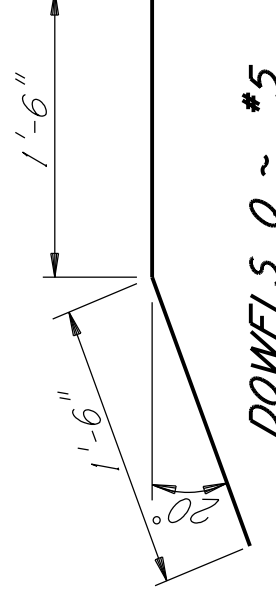
**FILL SIDE**

**NOTE:** This Detail Shows Typical  
Scheme For Bars W And Y.

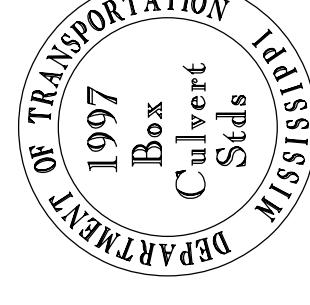
**NOTE:** This Detail Shows Typical  
Scheme For Bars T And V.



**GENERAL PLAN**  
Drawn For Single Cell 10' x 10' Culvert



**Note:** All working numbers referenced  
on this sheet are referencing the  
Box Culvert Standards issued in 1997.



BY	REVISIONS		DATE	DESIGNED	CHECKED	ISSUED	WORKING NUMBER
				MA	BUJ	TMT	IWS-3-97
				DATE	DATE	DATE	SHEET NUMBER
				07-11-97	08-01-97		7515

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
WINGS WITH 3:1 SLOPE  
FOR  
BASIC CULVERT DRAWING  
SINGLE CELL  
HEIGHTS 6-12 FT.  
SPANS 6-24 FT.





**ADDENDUM**

**GENERAL DATA & ESTIMATED QUANTITIES FOR BOX CULVERTS UNDER HIGH COVER**

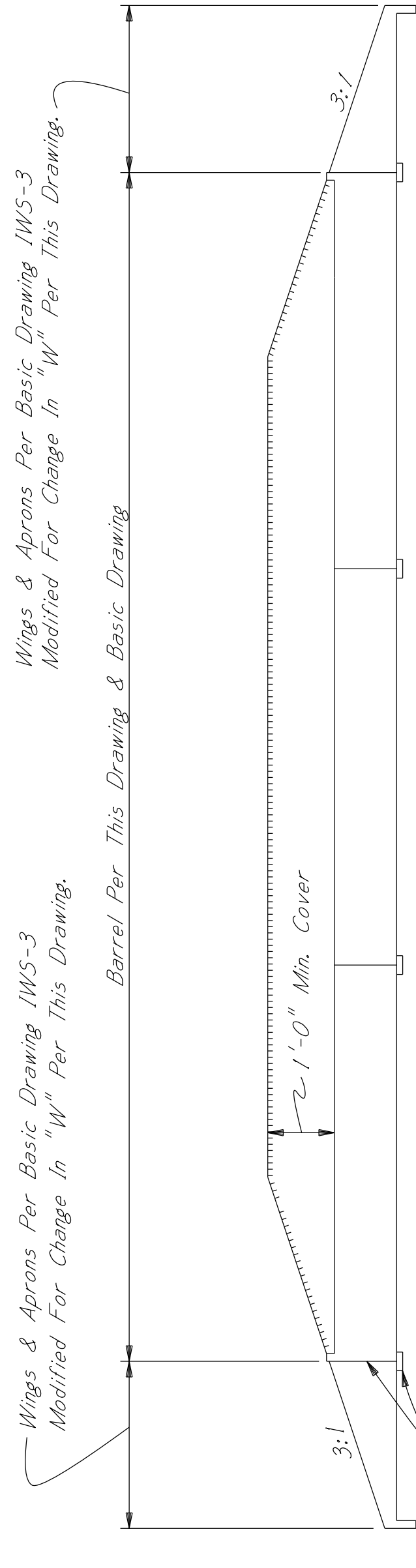
LESS THAN 2'-6" COVER ~ L=150 FT.

MAX. 10 FT. COVER ~ L=150 FT.

AREA OF OPENING sq ft.	SIZE OF CULVERT ft. x ft. "S" x "H"	"T"	"V"	"W"	BARS "A1"			BARS "A2"			BARS "B"			ESTIMATED QUANTITIES					
					SPACING	SIZE	SPACING	SIZE	SPACING	SIZE	SPACING	CONC. cu yd.	REINF. STEEL lb.	PER LIN. FT. BARREL	TOTAL CULVERT	CONC. cu yd.	REINF. STEEL lb.	AUX. SLAB "J"	REINF. STEEL lb.
36	6x6	7 1/2"	7"	1'-2 1/2"	#7	1'-4"	#7	1'-4"	#6	7"	107.46	24,232	0.5910	148.70	0.35	21			
48	8x6	8 1/2"	7 1/2"	1'-3 1/2"	#7	1'-4"	#7	1'-4"	#6	7"	135.35	27,665	0.7631	170.57	0.46	26			
60	10x6	10"	8 1/2"	1'-5"	#8	1'-4"	#8	1'-4"	#7	8"	175.92	37,495	1.0195	235.30	0.56	32			
72	12x6	12x6	10"	8 1/2"	#8	1'-4"	#8	1'-4"	#7	8"	196.36	41,365	1.1430	260.12	0.66	38			
84	14x6	14x6	11 1/2"	10"	#8	1'-2"	#8	1'-2"	#7	7"	249.42	51,691	1.4825	326.91	0.77	44			
96	16x6	16x6	11 1/2"	11 1/2"	#9	1'-4"	#9	1'-4"	#8	8"	308.74	63,079	1.8637	402.74	0.88	50			
108	18x6	18x6	1'-2 1/2"	1'-1"	#9	1'-2"	#9	1'-2"	#8	6"	374.31	82,725	2.2865	531.78	1.00	55			
120	20x6	20x6	1'-3 1/2"	1'-2"	#10	1'-4"	#10	1'-4"	#10	8"	431.68	102,396	2.6553	662.72	1.10	61			
64	8x8	9"	8"	1'-9"	#6	11"	#6	11"	#6	6 1/2"	174.41	33,785	0.9136	200.79	0.46	27			
80	10x8	9 1/2"	8 1/2"	1'-9 1/2"	#6	11"	#6	11"	#6	6 1/2"	199.40	37,613	1.0597	225.06	0.56	32			
96	12x8	11"	9"	1'-11"	#7	1'-0"	#7	1'-0"	#7	6"	248.03	46,176	1.3611	280.42	0.67	38			
112	14x8	1'-0 1/2"	10 1/2"	2'-0 1/2"	#8	1'-2"	#8	1'-2"	#7	6 1/2"	307.40	58,797	1.7338	363.17	0.78	44			
128	16x8	1'-2"	11 1/2"	2'-2"	#8	1'-0"	#8	1'-0"	#8	7 1/2"	368.22	71,924	2.1162	449.28	0.88	50			
144	18x8	1'-3"	1'-1"	2'-3"	#8	11"	#8	11"	#8	6 1/2"	430.59	85,897	2.5092	542.12	1.00	55			
160	20x8	1'-4"	1'-2 1/2"	2'-4"	#8	10"	#8	10"	#8	5 1/2"	507.66	103,667	2.9992	658.46	1.11	61			
100	10x10	9 1/2"	9"	2'-9 1/2"	#7	1'-2"	#7	1'-2"	#7	7"	238.01	43,978	1.2300	256.53	0.57	32			
120	12x10	11"	10"	2'-11"	#7	1'-0"	#7	1'-0"	#7	7"	288.34	54,124	1.5453	322.43	0.67	38			
140	14x10	1'-0 1/2"	11 1/2"	3'-0 1/2"	#7	10"	#7	10"	#7	6"	344.80	67,197	1.9007	408.57	0.78	44			
160	16x10	1'-2"	1'-0"	3'-2"	#8	1'-0"	#8	1'-0"	#8	7"	407.33	79,324	2.2963	487.12	0.89	50			
180	18x10	1'-4"	1'-1 1/2"	3'-4"	#9	1'-1"	#9	1'-1"	#9	6 1/2"	491.33	94,336	2.8334	588.09	1.00	56			
200	20x10	1'-5"	1'-3"	3'-5"	#9	1'-0"	#9	1'-0"	#9	5 1/2"	562.44	112,523	3.2870	706.45	1.11	61			
220	22x10	1'-6"	1'-4"	3'-6"	#9	11"	#9	11"	#9	5"	631.75	134,176	3.7284	849.34	1.22	67			
144	12x12	11 1/2"	10 1/2"	3'-8 1/2"	#7	11"	#7	11"	#7	6 1/2"	340.38	63,119	1.7539	368.01	0.68	38			
168	14x12	1'-3"	1'-1 1/2"	3'-11"	#8	1'-0"	#8	1'-0"	#8	7"	415.39	75,713	2.2273	449.40	0.79	44			
192	16x12	1'-3"	1'-0"	4'-0"	#8	11"	#8	11"	#8	7"	467.96	88,313	2.5556	531.12	0.89	50			
216	18x12	1'-4"	1'-1 1/2"	4'-1"	#8	10"	#8	10"	#8	6"	538.02	103,272	3.0000	643.11	1.00	56			
240	20x12	1'-6"	1'-3"	4'-3"	#9	11"	#9	11"	#9	5 1/2"	633.59	123,999	3.6111	766.88	1.11	61			
264	22x12	1'-7"	1'-4"	4'-4"	#11	1'-5"	#11	1'-5"	#10	8"	707.12	139,652	4.0782	871.98	1.22	67			
288	24x12	1'-8 1/2"	1'-5 1/2"	4'-5 1/2"	#10	1'-0"	#10	1'-0"	#9	6"	804.50	160,598	4.7024	1,006.78	1.33	73			

MAX. 15 FT. COVER ~ L=150 FT.

AREA OF OPENING sq ft.	SIZE OF CULVERT "S" x "H"	"T"	"V"	"W"	BARS "A1"			BARS "A2"			BARS "B"			ESTIMATED QUANTITIES					
					SPACING	SIZE	SPACING	SIZE	SPACING	SIZE	SPACING	CONC. cu yd.	REINF. STEEL lb.	PER LIN. FT. BARREL	TOTAL CULVERT	CONC. cu yd.	REINF. STEEL lb.	AUX. SLAB "J"	REINF. STEEL lb.
36	6x6	7 1/2"	7 1/2"	1'-3 1/2"	#7	1'-4"	#7	1'-4"	#6	7"	135.35	27,665	0.7631	170.57	0.46	26			
48	8x6	8 1/2"	8 1/2"	1'-5"	#8	1'-4"	#8	1'-4"	#7	8"	175.92	37,495	1.0195	235.30	0.56	32			
60	10x6	10"	9 1/2"	1'-6 1/2"	#8	1'-2"	#8	1'-2"	#7	7"	222.55	46,721	1.3161	294.86	0.67	38			
72	12x6	11"	10"	1'-8"	#9	1'-4"	#9	1'-4"	#8	7"	278.97	61,477	1.6780	392.44	0.78	44			
84	14x6	11 1/2"	10 1/2"	1'-9 1/2"	#9	1'-2"	#9	1'-2"	#8	6"	341.63	76,378	2.0815	490.61	0.89	50			
96	16x6	1'-2 1/2"	1'-0 1/2"	1'-10 1/2"	#10	1'-4"	#10	1'-4"	#9	7"	410.54	91,481	2.5267	590.02	1.00	56			
108	18x6	1'-5 1/2"	1'-3 1/2"	2'-0 1/2"	#10	1'-2"	#10	1'-2"	#10	8"	485.75	110,534	3.0157	715.73	1.12	62			
64	8x8	9"	8"	1'-9"	#6	11"	#6	11"	#6	6 1/2"	174.41	33,785	0.9136	200.79	0.46	27			
80	10x8	10 1/2"	9"	1'-10 1/2"	#7	1'-1"	#7	1'-1"	#6	5 1/2"	219.24	42,584	1.1898	258.13	0.57	32			
96	12x8	1'-0 1/2"	10 1/2"	2'-0 1/2"	#7	10"	#7	10"	#6	5"	276.56	53,785	1.5484	331.03	0.67	38			
112	14x8	1'-2"	11 1/2"	2'-2"	#8	1'-0"	#8	1'-0"	#7	5 1/2"	339.34	67,605	1.9434	421.88	0.79	44			
128	16x8	1'-3 1/2"	1'-0 1/2"	2'-3 1/2"	#9	1'-1"	#9	1'-1"	#8	6 1/2"	403.43	82,164	2.3475	518.98	0.89	50			
144	18x8	1'-4 1/2"	1'-2 1/2"	2'-4 1/2"	#9	1'-0"	#9	1'-0"	#8	5 1/2"	474.08	99,896	2.7955	634.54	1.01	56			
160	20x8	1'-6 1/2"	1'-4 1/2"	2'-6 1/2"	#9	11"	#9	11"	#8	5"	570.47	117,089	3.4129	747.86	1.12	62			
100	10x10	11"	10"	2'-11"	#7	1'-1"	#7	1'-1"	#7	7"	265.42	48,882	1.4095	289.13	0.58	33			
120	12x10	1'-1 1/2"	11"	3'-1 1/2"	#7	11"	#7	11"	#7	6"	332.26	60,374	1.8318	364.51	0.68	38			
140	14x10	1'-2"	1'-0 1/2"	3'-2"	#8	1'-0"	#8	1'-0"	#7	5 1/2"	384.54	72,962	2.1616	447.50	0.79	44			
160	16x10	1'-4"	1'-1 1/2"	3'-4"	#8	11"	#8	11"	#8	6"	459.08	88,960	2.6358	552.16	0.90	50			
180	18x10	1'-6"	1'-2 1/2"	3'-6"	#9	11"	#9	11"	#8	5 1/2"	541.71	109,929	3.1636	690.65	1.01	56			
200	20x10	1'-7"	1'-4 1/2"	3'-7"	#9	10"	#9	10"	#8	5"	623.28	128,496	3.6868	812.43	1.12	62			
220	22x10	1'-8 1/2"	1'-5 1/2"	3'-10"	#7	10"	#7	10"	#7	5 1/2"	714.81	147,782	4.2746	939.78	1.23	68			
144	12x12	1'-1"	11 1/2"	3'-10"	#7	10"	#7	10"	#7	5 1/2"	373.28	70,831	1.9686	418.68	0.69	38			
168	14x12	1'-3"	1'-0 1/2"	4'-0"	#8	10"	#8	10"	#7	5"	444.01	87,880	2.4151	530.35	0.79	44			
192	16x12	1'-5"	1'-1 1/2"	4'-2"	#8	10"	#8	10"	#8	6 1/2"	522.86	95,549	2.9152	580.63	0.90	50			
216	18x12	1'-6"	1'-3"	4'-3"	#9	11"	#9	11"	#8	5 1/2"	597.35	117,186	3.3899	722.86	1.01	56			
240	20x12	1'-8"	1'-4"	4'-5"	#9	10"	#9	10"	#8	5"	697.59	136,141	4.0309	846.88	1.12	62			
264	22x12	1'-9"	1'-5 1/2"	4'-6"	#11	1'-3"	#11	1'-3"	#10	7"	775.38	158,717	4.5262	994.05	1.23	68			



**SIDE ELEVATION OF CULVERT**

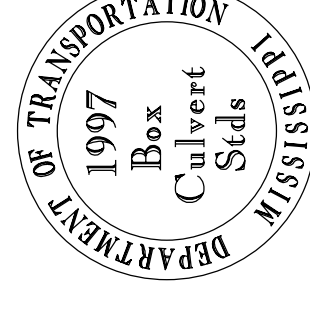
See Drawing No. 18-JL-1 For Joint Locations

**NOTE:** Auxiliary Slabs "W" And Vertical Construction Joints At The Wings Are Required Only Where Called For By The Basic Drawing And Auxiliary Slabs "W" Are Not To Be Used For Culvert Heights Of Less Than 8 Feet.

Wings & Aprons Per Basic Drawing IWS-3 Modified For Change In "W" Per This Drawing

Wings & Aprons Per Basic Drawing IWS-3 Modified For Change In "W" Per This Drawing

**Note:** All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.



MISSISSIPPI DEPARTMENT OF TRANSPORTATION		WORKING NUMBER	ISSUED	DATE
BOX CULVERT DRAWING		IBSM-3W-97	BJJ	08-01-97
IBS CULVERTS MODIFIED FOR HIGH COVER		DESIGNED	MJC	07-11-97
WINGS WITH 3:1 SLOPE		CHECKED	MJC	07-11-97
DATE	REVISIONS	DATE	ISSUED	DATE
			7M7	

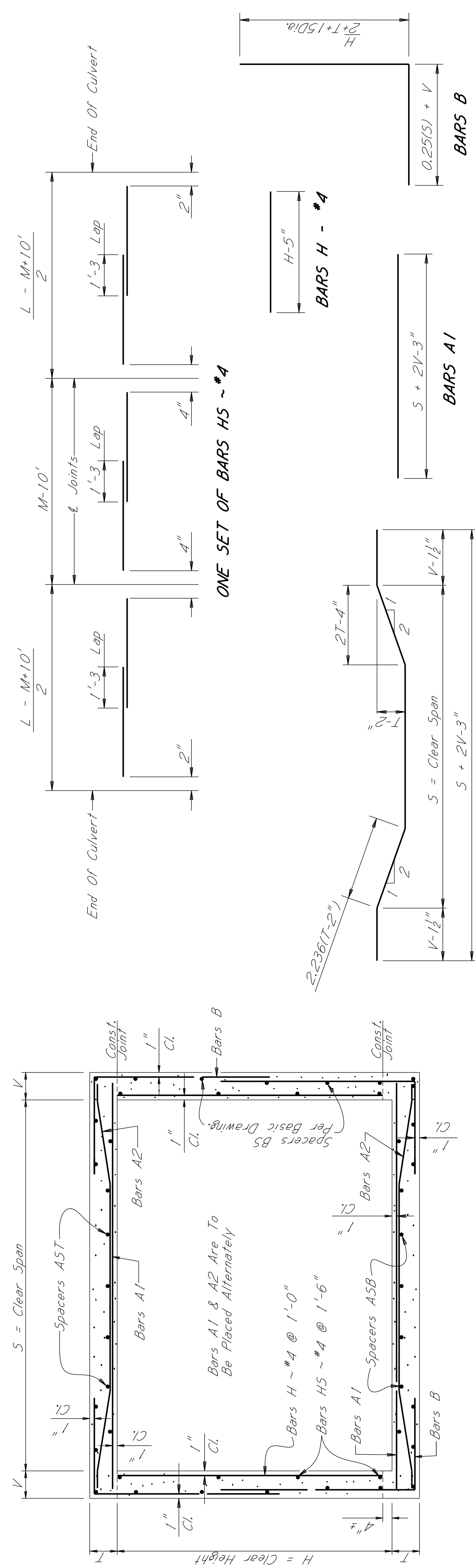
**GENERAL DATA & ESTIMATED QUANTITIES FOR BOX CULVERTS UNDER HIGH COVER**

MAX. 20 FT. COVER ~ L=150 FT.

MAX. 25 FT. COVER ~ L=150 FT.

AREA OF OPENING sq. ft.	SIZE OF CULVERT ft. x ft. "5" x "H"	"T"	"V"	"W"	BARS "A1"		BARS "A2"		BARS "B"		ESTIMATED QUANTITIES											
					SIZE	SPACING	SIZE	SPACING	SIZE	SPACING	TOTAL CULVERT	PER LIN. FT. BARREL	AUX. SLAB	"J"	CONC. cu. yd.	REINF. STEEL lb.	CONC. cu. yd.	REINF. STEEL lb.				
36	6x6	7 1/2"	7"	1'-2 1/2"	#7	1'-4"	#7	1'-4"	#6	7"	10.746	24,232	0.5910	148.70	0.35	21	1.1427	24,440	0.6358	150.06	0.36	21
48	8x8	9 1/2"	8"	1'-4 1/2"	#7	1'-2"	#7	1'-2"	#6	6"	14.756	31,102	0.8436	193.46	0.46	27	1.5552	31,343	0.8961	195.00	0.47	27
60	10x10	11 1/2"	9 1/2"	1'-6 1/2"	#8	1'-2"	#8	1'-2"	#7	7"	19.935	42,363	1.1742	266.92	0.57	32	2.0849	42,716	1.2346	269.21	0.58	33
72	12x12	14x6	1'-1 1/2"	1'-0 1/2"	#8	1'-0"	#8	1'-0"	#7	6"	24.920	53,634	1.4923	341.78	0.68	38	2.6980	54,382	1.6286	346.73	0.69	38
84	14x16	1'-2 1/2"	1'-0 1/2"	1'-9 1/2"	#9	1'-2"	#9	1'-2"	#8	7"	31.288	66,233	1.9026	423.43	0.79	44	3.4346	71,759	2.1050	460.81	0.80	44
96	16x16	1'-4"	1'-2"	1'-11"	#9	1'-0"	#9	1'-0"	#8	6"	37.902	82,947	2.3292	535.08	0.91	50	4.1294	90,984	2.5540	588.62	0.91	50
108	18x16	1'-6"	1'-6"	1'-3 1/2"	#10	1'-2"	#10	1'-2"	#10	8"	46.101	103,863	2.8611	672.31	1.02	56	5.0267	112,281	3.1374	727.13	1.03	56
120	20x16	1'-7 1/2"	1'-5"	2'-2 1/2"	#10	1'-0"	#10	1'-0"	#10	7"	54.070	127,776	3.3781	830.49	1.13	62	5.8582	138,954	3.6775	906.27	1.14	62
64	8x8	10"	9"	1'-10"	#6	1'-2"	#6	1'-2"	#6	6"	19.231	36,192	1.0309	216.15	0.47	27	2.0135	38,533	1.0903	232.30	0.47	27
80	10x8	11 1/2"	10 1/2"	1'-11 1/2"	#7	1 1/2"	#7	1 1/2"	#7	7"	23.938	47,131	1.3220	287.60	0.58	33	2.5513	49,452	1.4251	303.47	0.58	33
96	12x8	1'-1 1/2"	1'-1 1/2"	2'-1 1/2"	#9	1'-3"	#9	1'-3"	#7	6 1/2"	29.904	57,832	1.6960	358.43	0.68	38	3.2359	63,714	1.8565	396.44	0.69	38
112	14x8	1'-3 1/2"	1'-0 1/2"	2'-3 1/2"	#8	1 1/2"	#8	1 1/2"	#7	5"	37.171	73,706	2.1561	462.52	0.79	44	3.9691	80,869	2.3218	509.99	0.80	44
128	16x8	1'-5"	1'-2"	2'-5"	#9	1 1/2"	#9	1 1/2"	#8	6"	44.416	92,864	2.6152	588.95	0.91	50	4.8038	101,660	2.8534	647.44	0.91	50
144	18x8	1'-6 1/2"	1'-4"	2'-6 1/2"	#9	1 1/2"	#9	1 1/2"	#8	5 1/2"	52.800	109,784	3.1502	700.39	1.02	56	5.6775	119,371	3.4115	763.88	1.03	56
160	20x8	1'-8 1/2"	1'-6"	2'-8 1/2"	#9	1 1/2"	#9	1 1/2"	#9	5"	62.923	132,925	3.7994	853.28	1.14	62	6.2986	142,933	3.7500	816.77	1.03	56
100	10x10	11 1/2"	11"	2'-1 1/2"	#7	1 1/2"	#7	1 1/2"	#7	7"	28.215	53,328	1.5191	319.54	0.59	33	3.6851	59,478	2.0705	447.80	0.70	39
120	12x10	1'-1 1/2"	1'-0"	3'-1 1/2"	#8	1 1/2"	#8	1 1/2"	#8	6 1/2"	34.64	66,984	1.9074	408.58	0.69	39	4.4050	73,927	2.5278	550.15	0.81	45
140	14x10	1'-3 1/2"	1'-1 1/2"	3'-3 1/2"	#8	1 1/2"	#8	1 1/2"	#8	6 1/2"	41.912	79,930	2.3881	494.14	0.80	44	5.3267	84,927	3.1193	679.51	0.92	51
160	16x10	1'-5"	1'-3"	3'-5"	#9	1 1/2"	#9	1 1/2"	#9	7"	49.424	100,249	2.8673	627.36	0.91	50	6.3098	109,968	3.7500	816.77	1.03	56
180	18x10	1'-7 1/2"	1'-4"	3'-7 1/2"	#9	1 1/2"	#9	1 1/2"	#9	5"	58.912	120,876	3.4753	762.94	1.02	56	7.2981	130,884	4.2572	906.27	1.14	62
200	20x10	1'-9"	1'-6"	3'-9"	#10	1'-0"	#10	1'-0"	#9	5 1/2"	68.509	142,933	4.0926	908.83	1.14	62	8.4268	154,931	5.0108	1,074.75	1.14	62
144	12x12	1'-2"	1'-0 1/2"	3'-1 1/2"	#8	1 1/2"	#8	1 1/2"	#8	6 1/2"	39.991	76,761	2.1430	457.87	0.70	39	5.1008	80,572	2.8475	628.39	0.81	45
168	14x12	1'-4"	1'-2 1/2"	4'-1 1/2"	#8	1 1/2"	#8	1 1/2"	#8	6 1/2"	48.759	89,762	2.7006	543.52	0.81	45	5.9460	100,284	3.3851	738.79	0.92	50
192	16x12	1'-6"	1'-2 1/2"	4'-3"	#9	1 1/2"	#9	1 1/2"	#8	5 1/2"	55.414	109,631	3.1203	674.34	0.91	51	6.9170	121,660	4.2572	906.27	1.14	62
216	18x12	1'-7 1/2"	1'-4 1/2"	4'-4 1/2"	#9	1 1/2"	#9	1 1/2"	#8	5"	64.776	128,528	3.7199	797.69	1.02	56	8.1115	138,954	4.9077	1,074.75	1.14	62
240	20x12	1'-10"	1'-5 1/2"	4'-7"	#10	1 1/2"	#10	1 1/2"	#9	5 1/2"	75.225	156,303	4.4084	981.79	1.13	62	9.4268	167,301	5.7500	1,216.77	1.14	62

**GENERAL NOTES:**  
 This Drawing Shows The Additional Reinforcing Bars And The Increased Dimensions And Reinforcing Bar Sizes Necessary To Modify A Single Cell Culvert For Cover Less Than Or In Excess Of That Provided By Basic Culvert Drawings.  
 All Other Dimensions, Reinforcement Details And General Requirements Or Basic Culvert Drawings Shall Apply Except As Specifically Modified By This Drawing And Drawing IWS-3.  
 Barrel Details Shown On This Drawing Shall Be Used With Cover Less Than 2'-6" And More Than Maximum Shown On Basic Culvert Drawings Quantities Shown On This Drawing Are For Culverts With Barrels Per This Drawing And Wings With 3:1 Slope For This Drawing And Drawing IWS-3. Quantities Shown On This Drawing For Total Culvert Area For Complete Culvert Of The Length Noted And Include Barrel, Parapets, Wings And Aprons, Cut-Off Walls, Auxiliary Slabs Where Required And Two Quantities Shown On This Drawing Will Be Used As A Basis For Final Payment For Culverts Constructed In Accordance With This Drawing, Drawing IWS-3 And Basic Culvert Drawings.

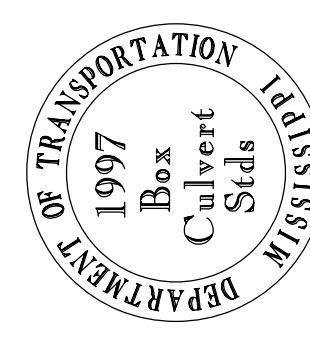


**GROSS SECTION**

Bars AST Tie To Bars A1 In Top Slab  
 Bars ASB Tie To Bars A1 In Bottom Slab  
 Bars BS Tie To Bars B

**BAR BENDING DETAILS**  
 Dimensions Are Out To Out

**Note:**  
 All working numbers referenced here on this sheet are referencing the Box Culvert Standards issued in 1997.



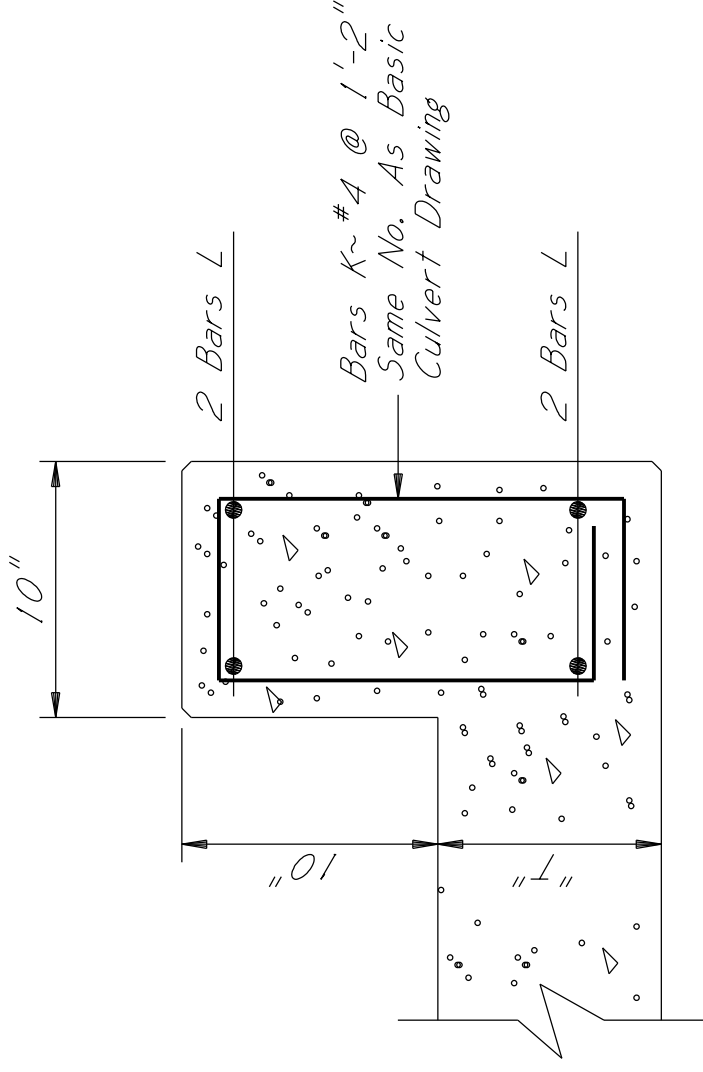
MISSISSIPPI DEPARTMENT OF TRANSPORTATION		BOX CULVERT DRAWING		IBS CULVERTS MODIFIED FOR HIGH COVER		WINGS WITH 3:1 SLOPE	
DATE	DESIGNED	CHECKED	ISSUED	DATE	DATE	DATE	DATE
	ALJ	BJJ	TMT	07-11-97	08-01-97		
WORKING NUMBER	SHEET NUMBER			7525			
IBSM-3W-97							

**TABLE OF DIMENSIONS**

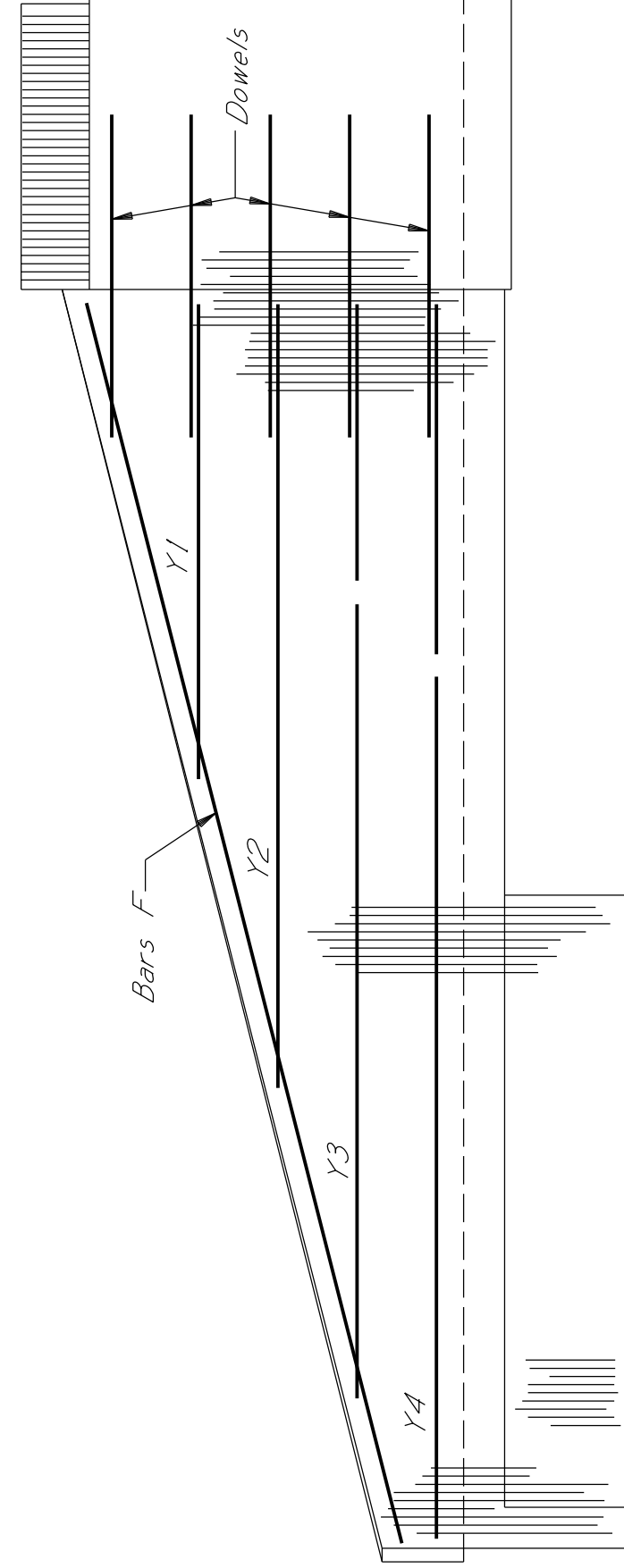
CULVERT HEIGHT "H"	"J"	"LW1"	"LW2"	"N1"	"N2"	"P"	"R1"	"R2"	"R3"	"U"	"W"	"Z"
6'	5'-9"	17'-4 1/2"	24'-4 1/2"			1.155(0)+1.32'	2 1/8"	5 1/8"	1 1/4"	7"		17'-3"
8'	7'-4"	22'-2 1/8"	31'-1 1/8"			1.155(0)+1.61'	3 1/8"	6 1/8"	1 1/2"	8 1/2"		22'-0"
10'	8'-4"	25'-2 1/8"	35'-4 1/8"	2'-11"	6'-6"	1.155(0)+1.89'	4"	8 1/8"	1 3/4"	10"		25'-0"
12'	9'-7"	29'-0 1/8"	40'-7 1/8"	3'-3"	7'-0"	1.155(0)+2.08'	4 1/8"	9"	1 5/8"	11"		28'-9"

Per Supplementary Drawing

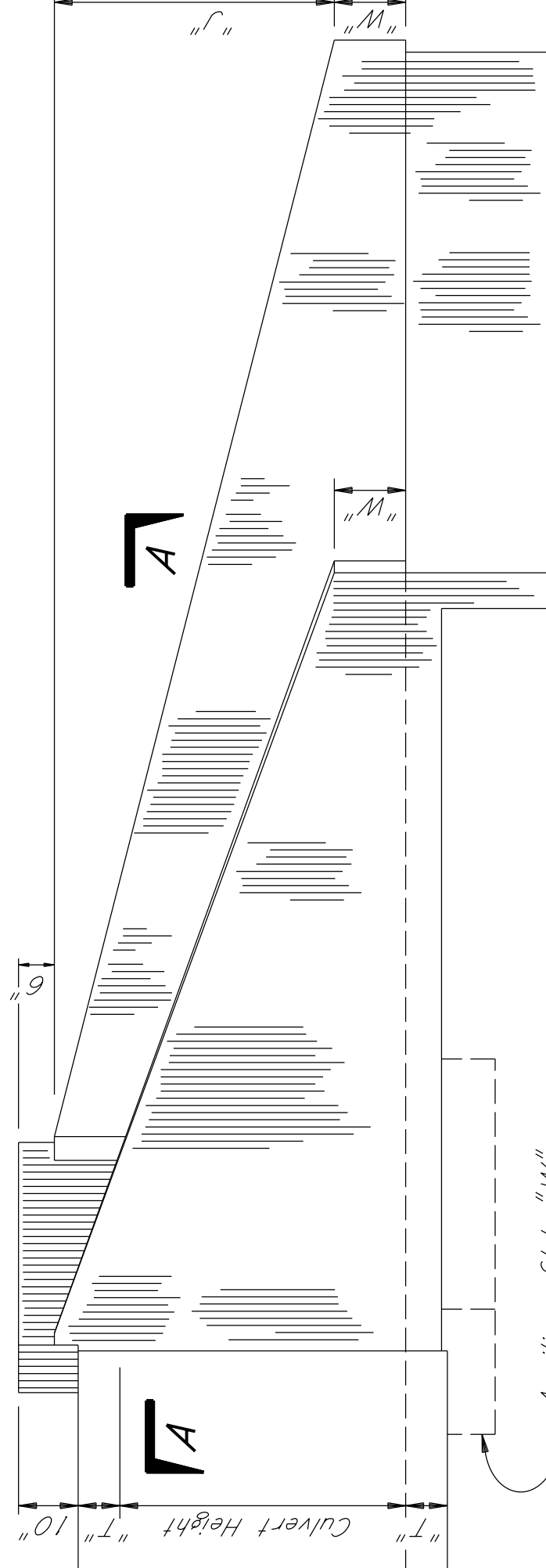
NOTE: 0 For Single Cell Culvert = S (Clear Span)  
 O For Double Cell Culvert = 2(S) + V



**PARAPET DETAIL**  
 Slab Steel Not Shown



**SIDE ELEVATION**

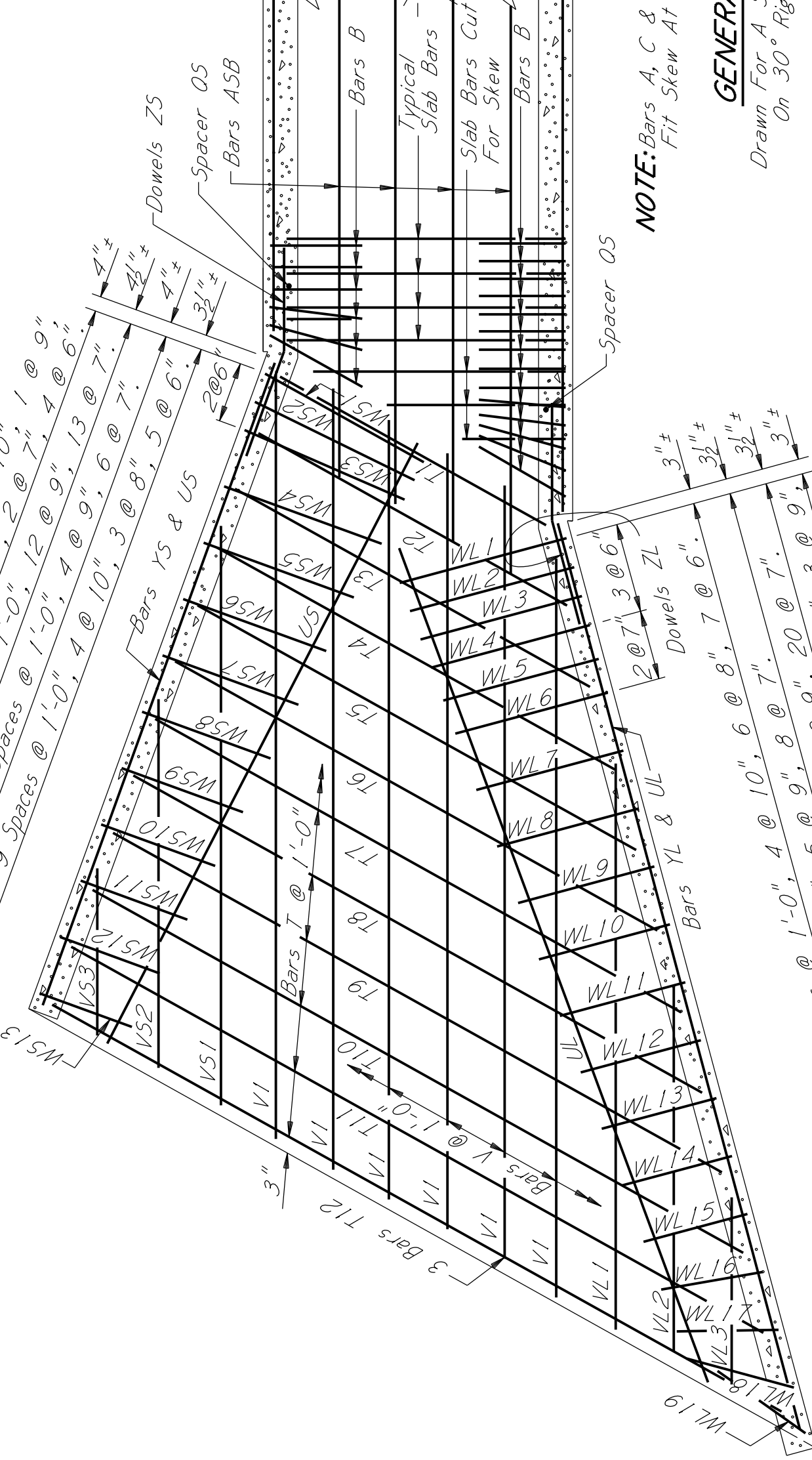


Auxiliary Slab "W"  
 For H=8 Ft., 10 Ft. & 12 Ft.



**PLAN OF APRON & BOTTOM SLAB**  
 Spacing For Bars WS

"H"=12 Ft.: 16 @ 1'-0", 5 @ 11", 3 @ 10", 1 @ 9"  
 "H"=10 Ft.: 8 Spacing @ 1'-0", 2 @ 7", 4 @ 6"  
 "H"=8 Ft.: 15 Spacing @ 1'-0", 12 @ 9", 13 @ 7"  
 "H"=6 Ft.: 9 Spacing @ 1'-0", 4 @ 9", 6 @ 7"



**GENERAL PLAN**  
 Drawn For A Single Cell Culvert  
 On 30° Right Forward Skew.

NOTE: Bars A, C & D Shall Be Cut To Fit Skew At End Of Barrel.

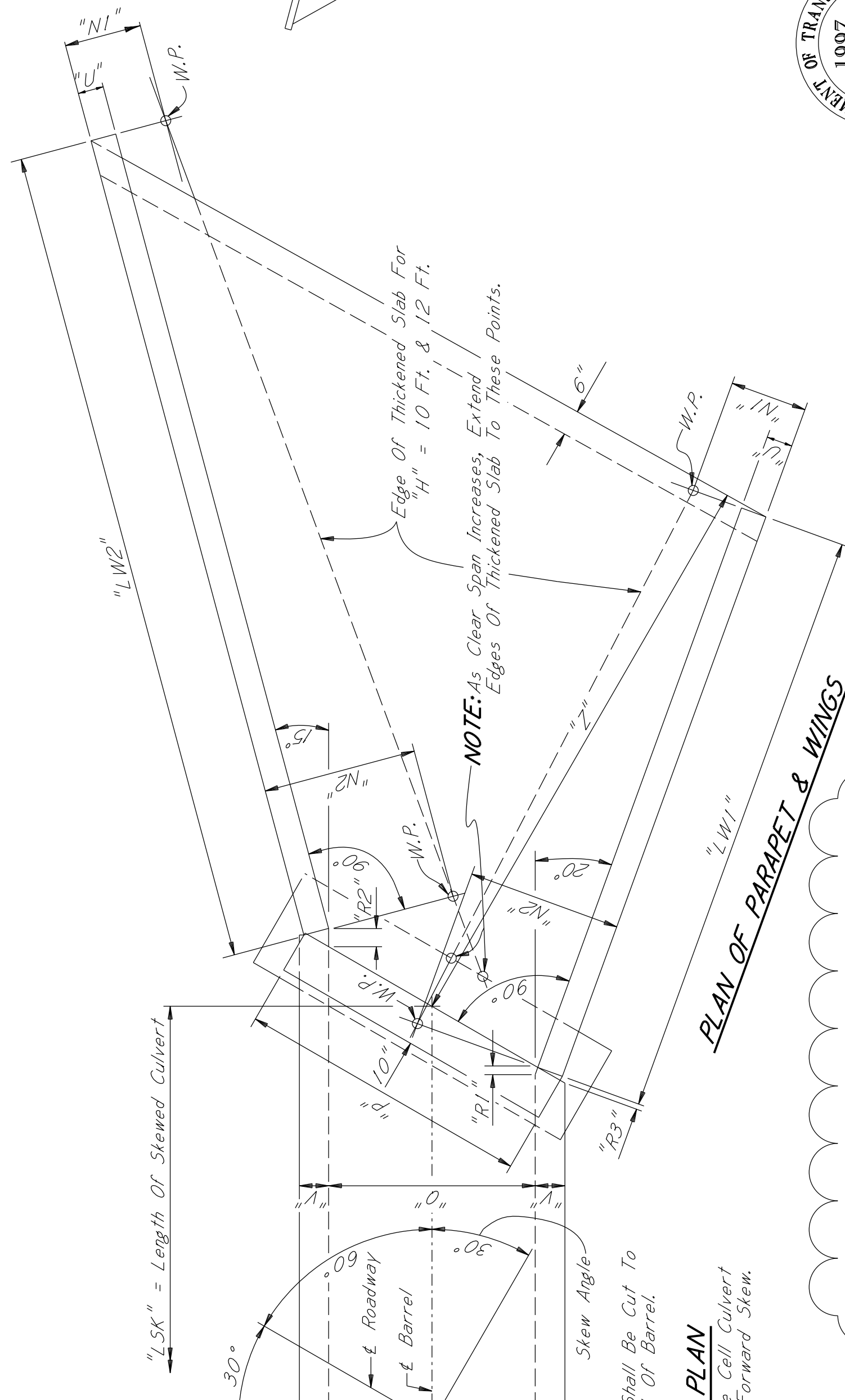


**PLAN OF APRON & BOTTOM SLAB**  
 Spacing For Bars WL

"H"=6 Ft.: 13 Spacing @ 1'-0", 4 @ 10", 6 @ 8", 7 @ 6"  
 "H"=8 Ft.: 22 Spacing @ 1'-0", 5 @ 9", 8 @ 9", 20 @ 7"  
 "H"=10 Ft.: 11 Spacing @ 1'-0", 8 @ 11", 5 @ 10", 3 @ 9"  
 "H"=12 Ft.: 3 @ 8", 3 @ 7", 5 @ 6"

Note: All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.

**PLAN OF PARAPET & WINGS**

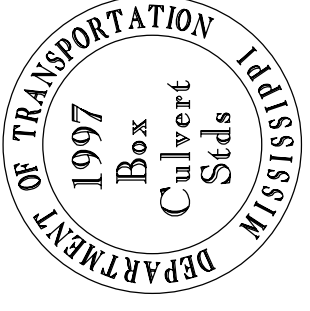


**GENERAL PLAN**  
 Drawn For A Single Cell Culvert  
 On 30° Right Forward Skew.

NOTE: As Clear Span Increases, Extend Edges Of Thickened Slab To These Points.

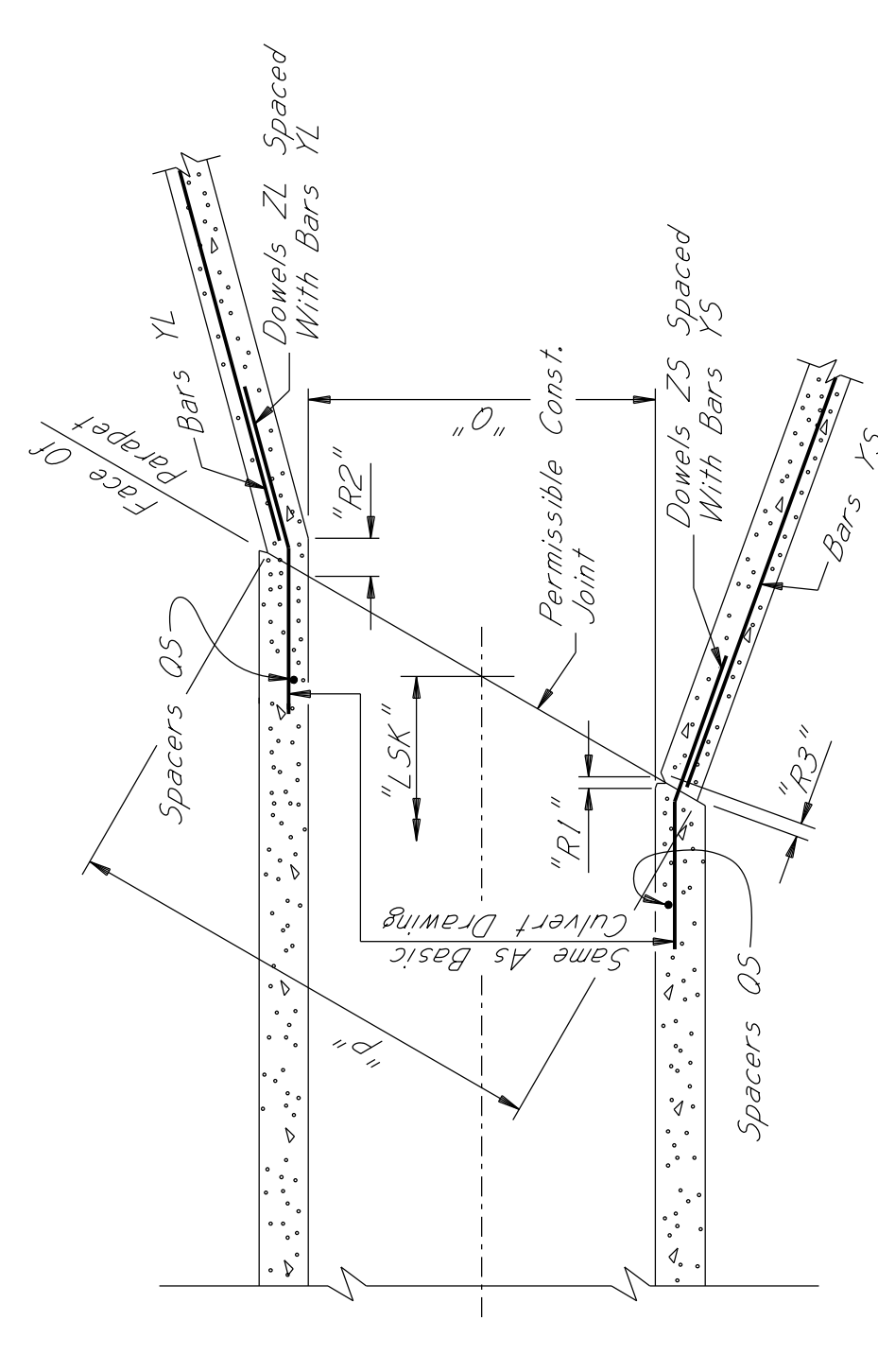
**PLAN OF PARAPET & WINGS**

Note: All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.

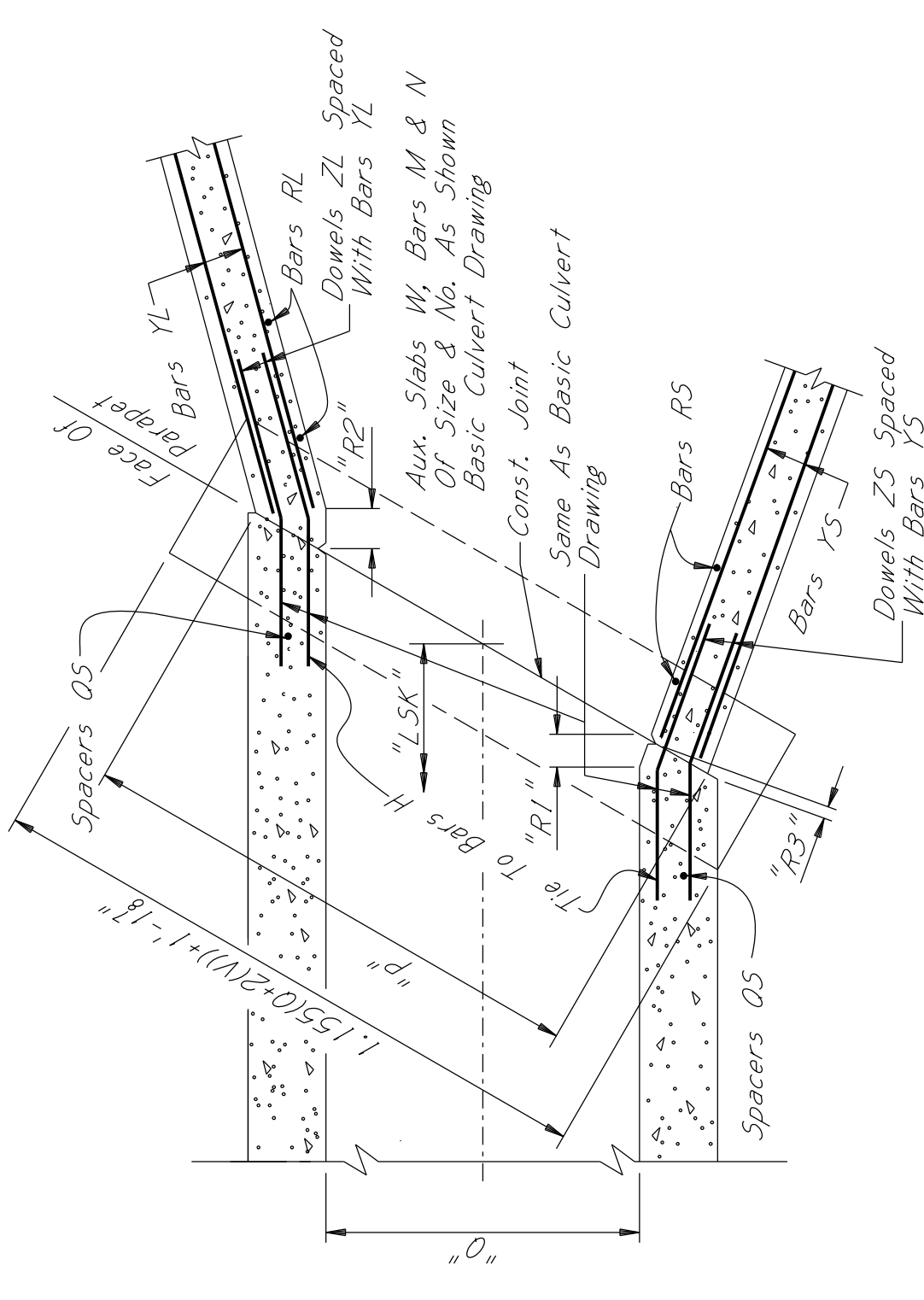


MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
 BOX CULVERT DRAWING  
 30° SKEW DETAILS  
 SINGLE & DOUBLE CELL CULVERTS

DATE	DESIGNED	CHECKED	ISSUED	WORKING NUMBER
	NA	BUJ	TMT	ISK-30-3W-97
REVISIONS	DATE	BY	DATE	SHEET NUMBER
	07-11-97	ALT	08-01-97	7556



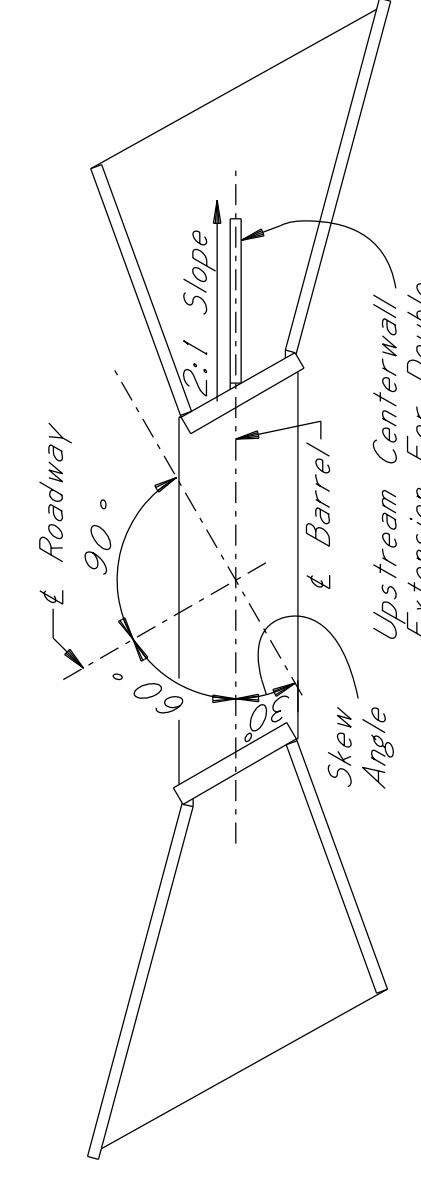
FOR "H"= 6 Ft.



FOR "H"=8 Ft. THRU 12 Ft.

NOTE: Reinforcement In Stream Face Of Wing Wall Required For H=8 Ft., 10 Ft. & 12 Ft. Only.

**SECTION A-A**



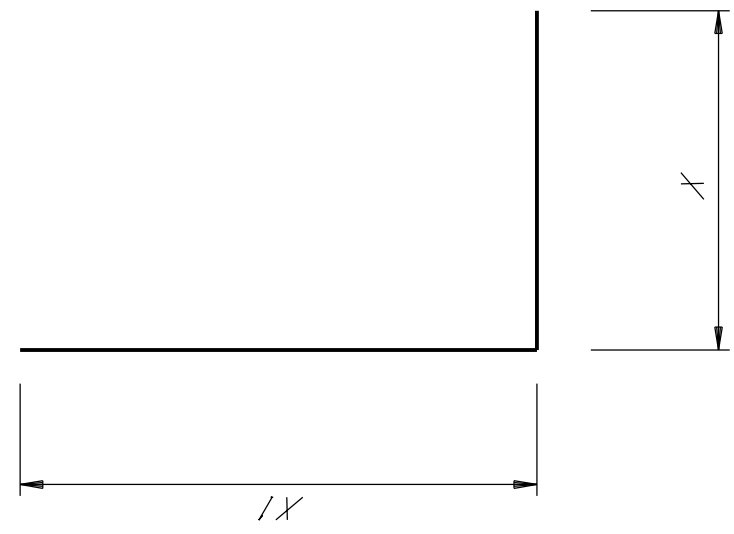
**PLAN OF 30° LEFT FORWARD SKEW**

# ADDENDUM

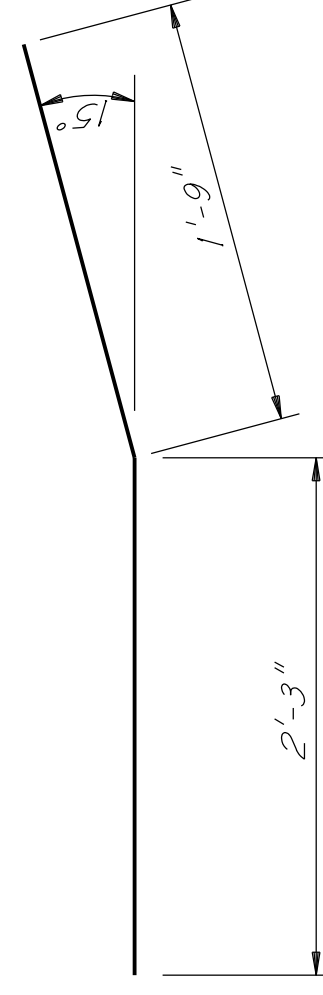
CULVERT HEIGHT "H"	TABLE OF BARS V ~ #4				
	BARS VI		BARS VSI - VS <sub>n</sub>		
	NO.	DIM. X	NO.	DIM. X	
6'					
8'	19'-6"	5	15'-10" To 3'-3"	5	15'-11" To 2'-7"
10'	25'-0"	7	21'-9" To 2'-10"	7	21'-10" To 1'-11"
12'	28'-5"	8	25'-7" To 3'-6"	8	25'-8" To 2'-5"
	32'-9"	9	30'-2" To 4'-11"	9	30'-4" To 3'-8"

Same As Basic Culvert As Drawing

CULVERT HEIGHT "H"	TABLE OF BARS R ~ #4	
	BAR	LENGTH
8'	RS1 To RS13 / Ea.	W+6'-7" To W+7"
	RL1 To RL19 / Ea.	W+6'-7" To W+3"
10'	RS1 To RS15 / Ea.	W+7'-6" To W+7"
	RL1 To RL22 / Ea.	W+7'-6" To W+1"
12'	RS1 To RS18 / Ea.	W+8'-10" To W+5"
	RL1 To RL25 / Ea.	W+8'-10" To W+4"



BARS WL & WS



BARS VI, VL & VS ~ #4

NOTE: Vertical Spacers OS And Dowels ZL And ZS Located Per Section A - A.

### BAR BENDING DETAILS

Dimensions Are Out To Out

CULVERT HEIGHT "H"	TABLE OF BARS FL, FS, OS, ZL & ZS					
	BARS FL ~ #4		BARS FS ~ #4		DOWELS ZL ~ #5	
	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.
6'	2	24'-8"	2	17'-11"	2	5'-7"
8'	2	31'-7"	2	23'-0"	2	7'-7"
10'	2	35'-11"	2	26'-2"	2	9'-7"
12'	2	41'-4"	2	30'-2"	2	11'-7"

NOTE: The Number Of Bars Shown In The Tables Is The Number Required For One Complete Headwall Assembly At One End Of Culvert.

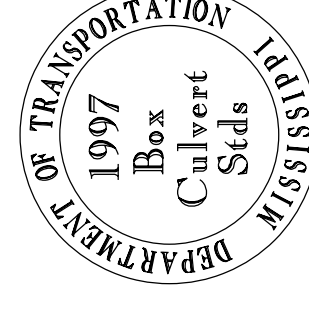
CULVERT HEIGHT "H"	TABLE OF BARS U ~ #4		
	UL, NO. & LENGTH	US, NO. & LENGTH	SHORT WING
6'	3 @ 24'-0"		3 @ 17'-0"
8'	3 @ 30'-9"		3 @ 21'-10"
10'	3 @ 35'-0"		3 @ 24'-10"
12'	3 @ 40'-3"		3 @ 28'-8"

CULVERT HEIGHT "H"	TABLE OF BARS WL			
	BAR	NO. SIZE	DIM. X	LONG WING DIM. X1
6'	WL1 To WL3 / Ea.	#4	4'-0" To 2'-0"	K+5'-7" To K
8'	WL1 To WL9 / Ea.	#5	4'-6" To 3'-4"	K+7'-1" To K+4'-0"
	WL20 To WL36 / Ea.	#4	3'-3" To 2'-0"	K+3'-9" To K
10'	WL1 To WL13 / Ea.	#6	5'-10" To 5'-3"	K+8'-2" To K+6'-6"
	WL14 To WL28 / Ea.	#5	5'-2" To 4'-4"	K+6'-4" To K+4'-2"
	WL29 To WL48 / Ea.	#4	4'-3" To 2'-8"	K+4'-0" To K
12'	WL1 To WL21 / Ea.	#7	6'-5" To 5'-3"	K+9'-4" To K+6'-2"
	WL22 To WL29 / Ea.	#6	5'-2" To 4'-7"	K+6'-0" To K+4'-5"
	WL30 To WL37 / Ea.	#5	4'-6" To 3'-11"	K+4'-2" To K+2'-7"
	WL38 To WL48 / Ea.	#4	3'-10" To 3'-0"	K+2'-4" To K

CULVERT HEIGHT "H"	TABLE OF BARS WS			
	BAR	NO. SIZE	DIM. X	SHORT WING DIM. X1
6'	WS1 To WS22 / Ea.	#4	4'-0" To 2'-0"	K+5'-6" To K
8'	WS1 To WS14 / Ea.	#5	4'-6" To 3'-4"	K+7'-1" To K+3'-11"
	WS15 To WS26 / Ea.	#4	3'-3" To 2'-0"	K+3'-7" To K
10'	WS1 To WS10 / Ea.	#6	5'-10" To 5'-1"	K+8'-2" To K+6'-4"
	WS11 To WS20 / Ea.	#5	5'-0" To 4'-3"	K+6'-2" To K+4'-2"
	WS21 To WS34 / Ea.	#4	4'-2" To 2'-8"	K+3'-11" To K
12'	WS1 To WS15 / Ea.	#7	6'-5" To 5'-2"	K+9'-4" To K+6'-2"
	WS16 To WS21 / Ea.	#6	5'-1" To 4'-6"	K+5'-11" To K+4'-4"
	WS22 To WS27 / Ea.	#5	4'-5" To 3'-10"	K+4'-0" To K+2'-4"
	WS28 To WS34 / Ea.	#4	3'-8" To 3'-0"	K+2'-0" To K

K = W+5" For "H" = 6'  
 X = W+6" For "H" = 8'  
 X = W+8" For "H" = 10'  
 X = W+9" For "H" = 12'

Note: All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.



CULVERT HEIGHT "H"	TABLE OF BARS T ~ #4		
	BAR	NO.	LENGTH
6'	T1 To T17	1 Ea.	P-4" To P+12'-10"
	T18	3	P+13'-7"
8'	T1 To T21	1 Ea.	P+1" To P+16'-6"
	T22	3	P+17'-3"
10'	T1 To T24	1 Ea.	P+1" To 19'-0"
	T25	3	P+19'-9"
12'	T1 To T28	1 Ea.	P To P+22'-2"
	T29	3	P+22'-11"

CULVERT HEIGHT "H"	TABLE OF BARS L & M			
	BARS L		BARS M	
	NO. SIZE	LENGTH	NO. SIZE	LENGTH
6'	4	#7	P-4"	NONE
8' - 12'	4	#8	P-4"	#4 1.155(0-2(N)) + 10"

Bars K & N Per Basic Culvert Drawing Except Spacing Shall Be 1'-2".

CULVERT HEIGHT "H"	TABLE OF BARS Y ~ #4			
	BAR	NO.	YL - LENGTH	YS - LENGTH
6'	Y1 To Y5	1 Ea.	6'-6" To 23'-6"	4'-7" To 16'-8"
	Y6	1	24'-0"	17'-0"
8'	Y1 To Y6	2 Ea.	6'-6" To 27'-9"	4'-7" To 19'-9"
	Y7	4	30'-9"	21'-10"
10'	Y1 To Y6	2 Ea.	7'-2" To 33'-9"	5'-1" To 24'-0"
	Y7	4	35'-0"	24'-10"
12'	Y1 To Y7	2 Ea.	7'-7" To 39'-4"	5'-4" To 28'-1"
	Y8	6	40'-3"	28'-8"

### GENERAL NOTES:

This Drawing Shows The General Details Necessary To Modify A Single Or Double Cell Culvert With Wings With 3:1 Slope For A 30° Skew.  
 All Governing Dimensions Reinforcement Details And General Requirements Of Basic Culvert Drawings, Drawings IWS-3 And IWD-3 And Or Drawings IBSM-3W And IBSM-3W Shall Apply Except As Specifically Modified Hereon.  
 A Complete Placing Plan Showing All Governing Dimensions, Bar List And Bending Details Shall Be Submitted To The Project Engineer For Approval Prior To Fabrication Of The Reinforcing Steel.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
 BOX CULVERT DRAWING  
 30° SKEW DETAILS  
 SINGLE & DOUBLE CELL CULVERTS

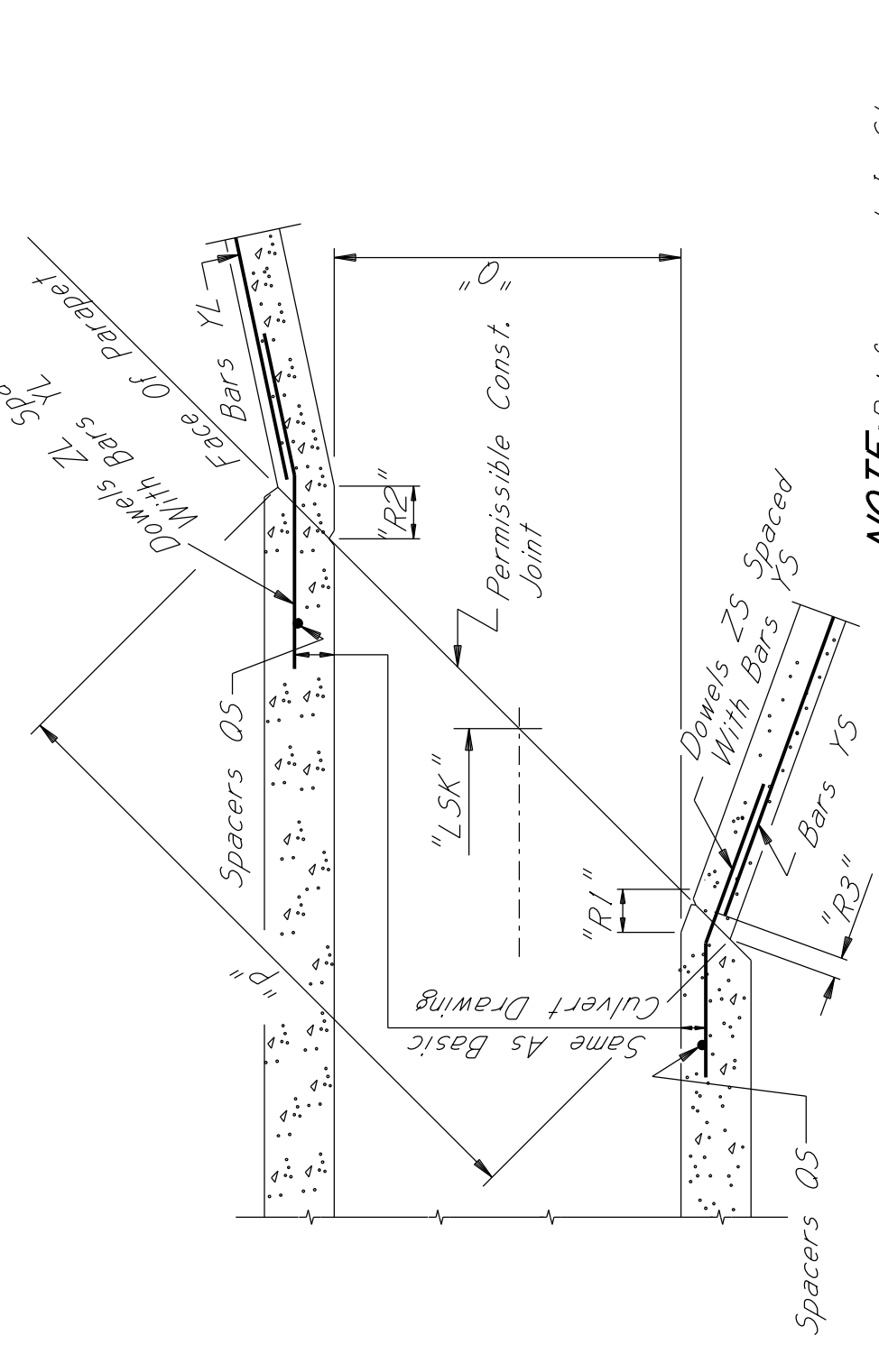
DATE	DESIGNED	CHECKED	ISSUED	WORKING NUMBER
	ALLI	BUJ	TMT	15K-30-3W-97
				SHEET NUMBER
				7557
				DATE
				07-11-97
				DATE
				08-01-97



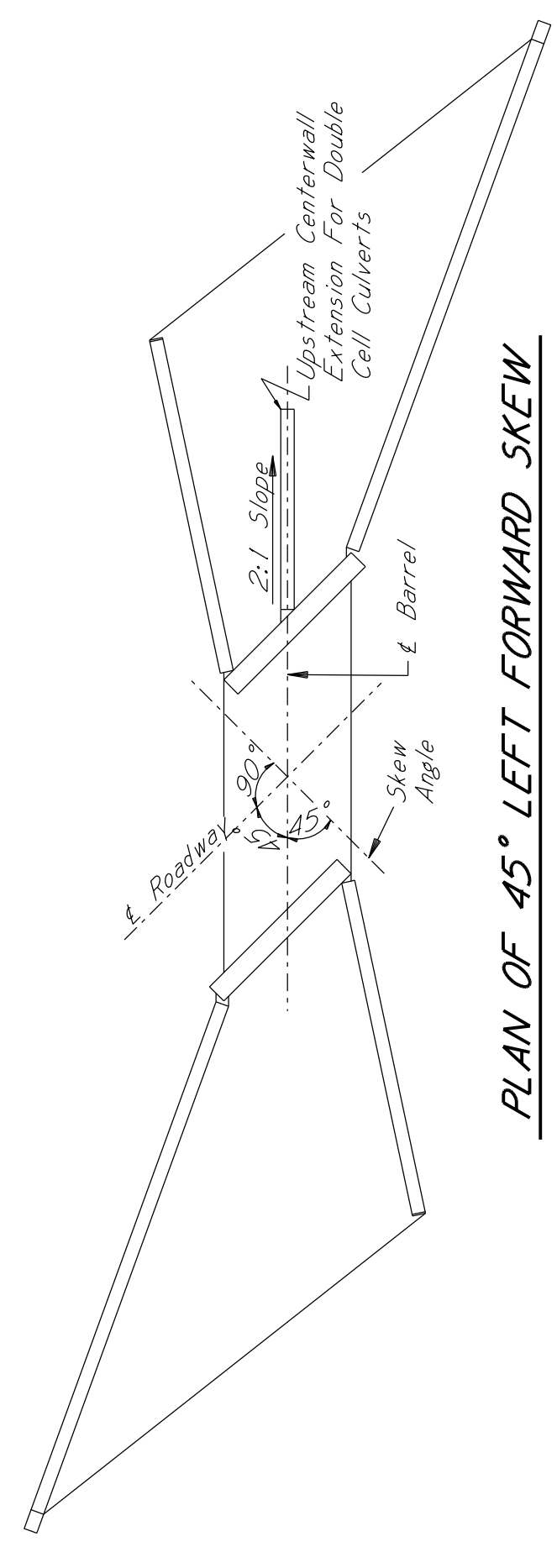
TABLE OF DIMENSIONS

CULVERT HEIGHT "H"	"J"	"LW1"	"LW2"	"N1"	"N2"	"P"	"R1"	"R2"	"R3"	"U"	"W"	"Z"
6'	5'-9"	18'-9 1/2"	31'-8 1/2"	3'-1'-8 1/2"	5'-3"	1.4140+1.63'	5 3/4"	8 3/8"	3 1/2"	7"	17'-3"	22'-0"
8'	7'-4"	23'-1 1/8"	40'-4 3/8"	4'-1'-8 1/2"	7"	1.4140+1.98'	7"	10 1/8"	3 3/8"	8 1/2"	22'-0"	25'-0"
10'	8'-4"	27'-2 3/8"	45'-10 3/8"	5'-1'-8 1/2"	8 1/4"	1.4140+2.33'	8 1/4"	11 7/8"	4 1/8"	10"	25'-0"	28'-9"
12'	9'-7"	31'-3 3/8"	52'-9 3/8"	6'-3"	9 1/2"	1.4140+2.56'	9 1/2"	1'-1 1/8"	5 1/8"	11"	28'-9"	

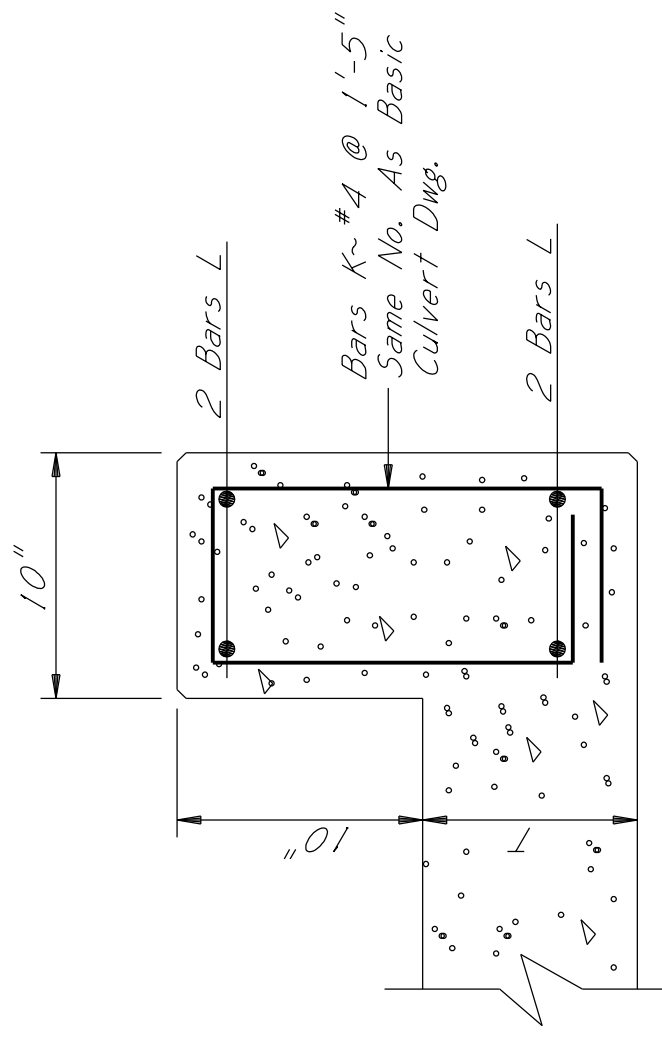
NOTE: 0 For Single Cell Culvert = S (Clear Span)  
 0 For Double Cell Culvert = 2S+V



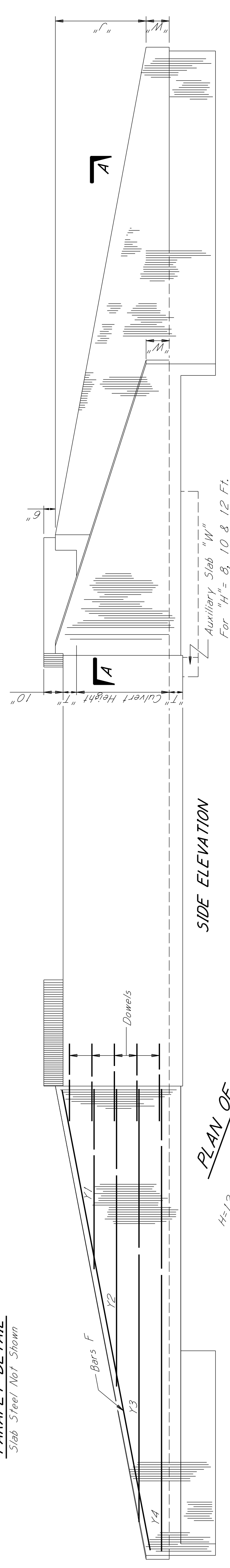
NOTE: Reinforcement in Stream Face Of Wing Wall Required For H= 8, 10 & 12 Ft. Only. FOR "H" = 6 Ft.



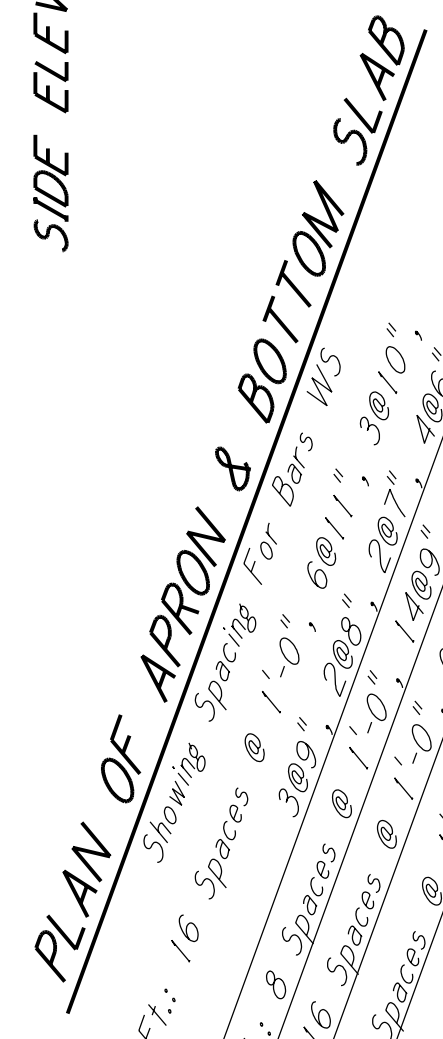
PLAN OF 45° LEFT FORWARD SKEW



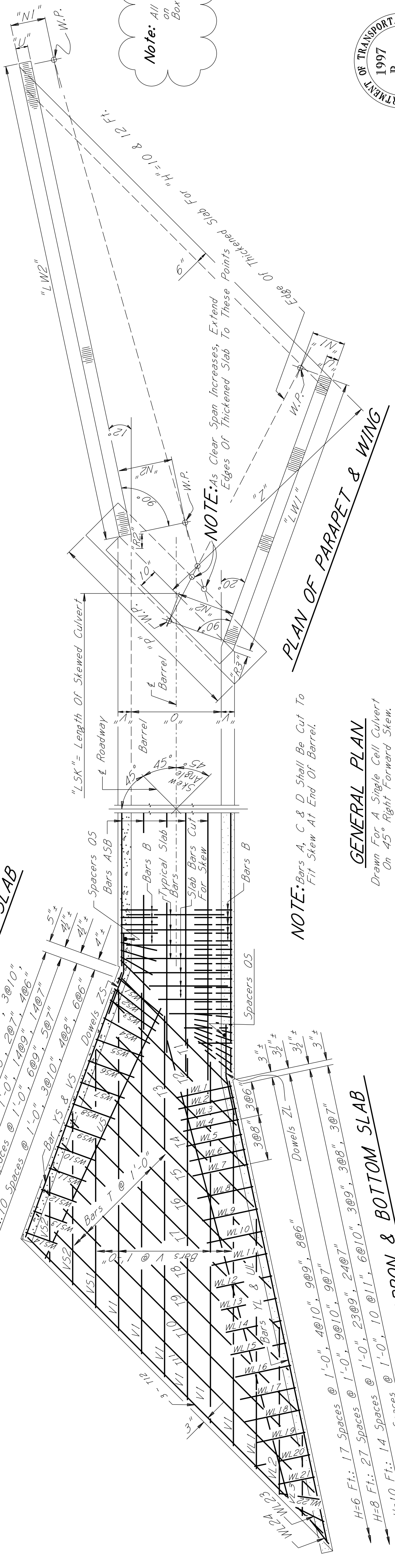
PARAPET DETAIL  
 Slab Steel Not Shown



SIDE ELEVATION

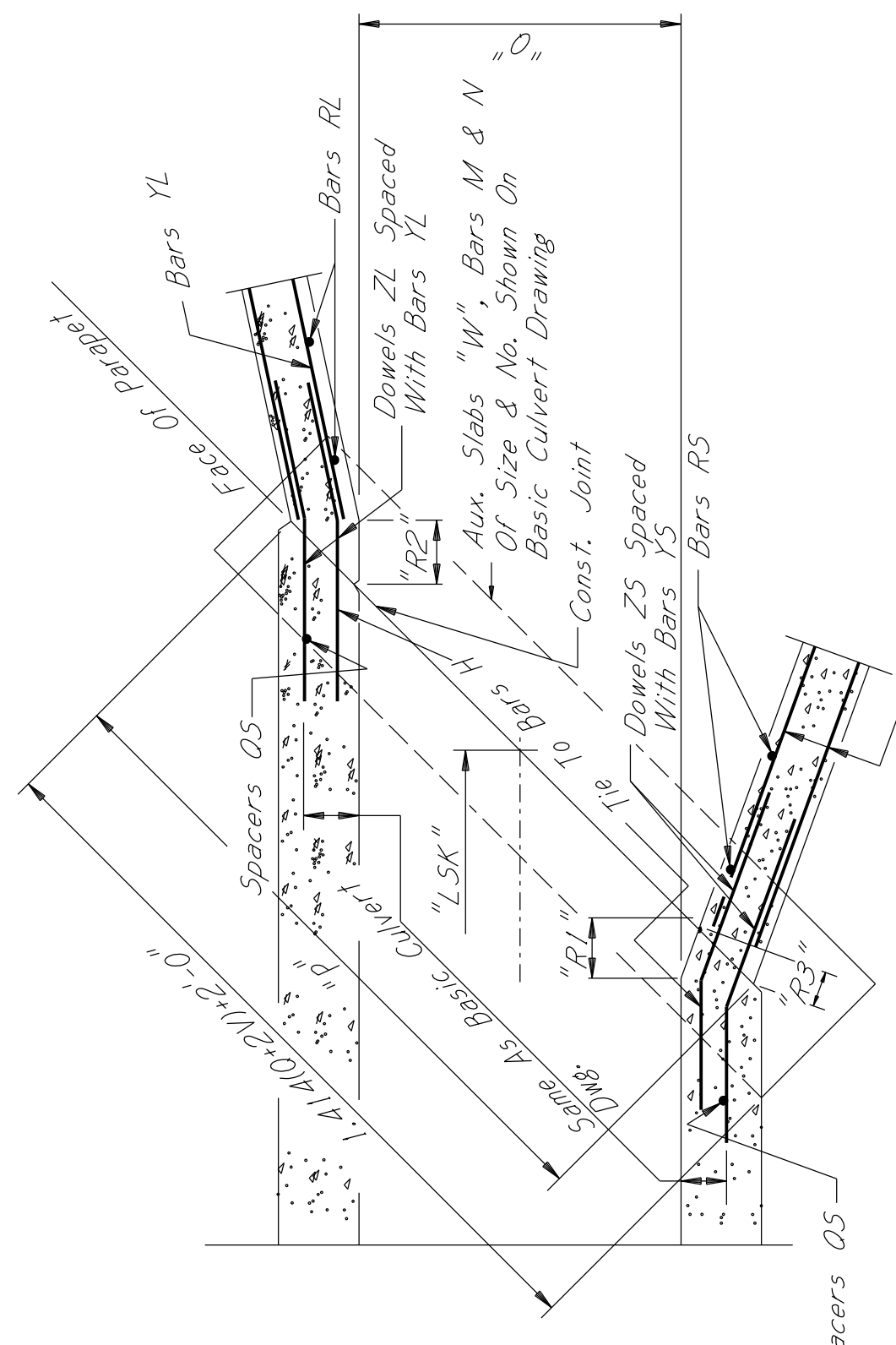


PLAN OF APRON & BOTTOM SLAB



NOTE: Bars A, C & D Shall Be Cut To Fit Skew At End Of Barrel.

GENERAL PLAN  
 Drawn For A Single Cell Culvert  
 On 45° Right Forward Skew.

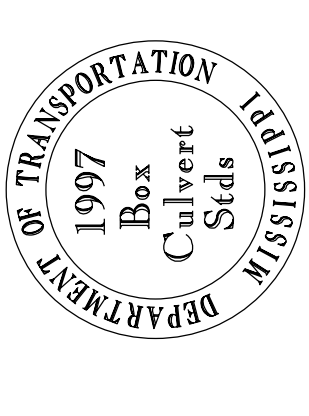


SECTION A-A

FOR "H" = 8 THRU 12 Ft.

Note: All working numbers referenced on this sheet are referencing the Box Culvert Standards issued in 1997.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION		WORKING NUMBER ISK-45-3M-97	
BOX CULVERT DRAWING		SHEET NUMBER 7562	
45° SKEW DETAILS		ISSUED TMT	
WINGS WITH 3:1 SLOPE		CHECKED BUJ	
SINGLE & DOUBLE CELL CULVERTS		DATE 07-11-97	
DESIGNED MA	Detailed MJC	DATE 07-11-97	



**ADDENDUM**

**TABLE OF BARS V ~ \*4**

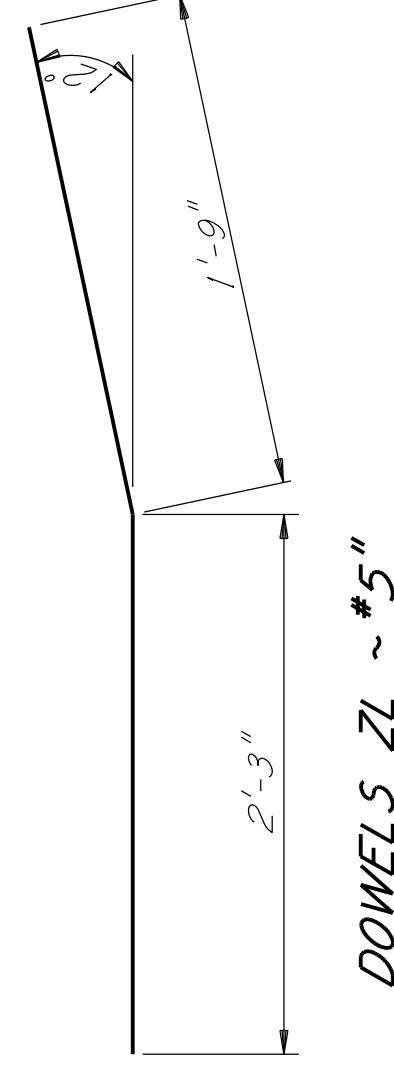
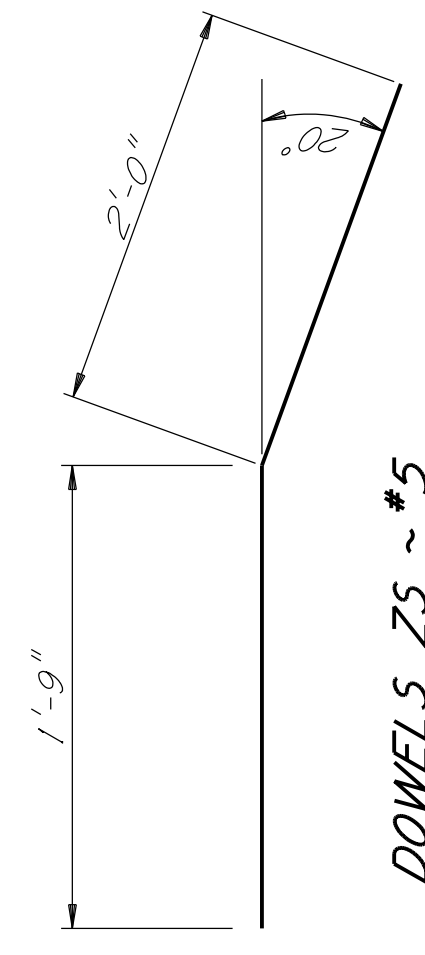
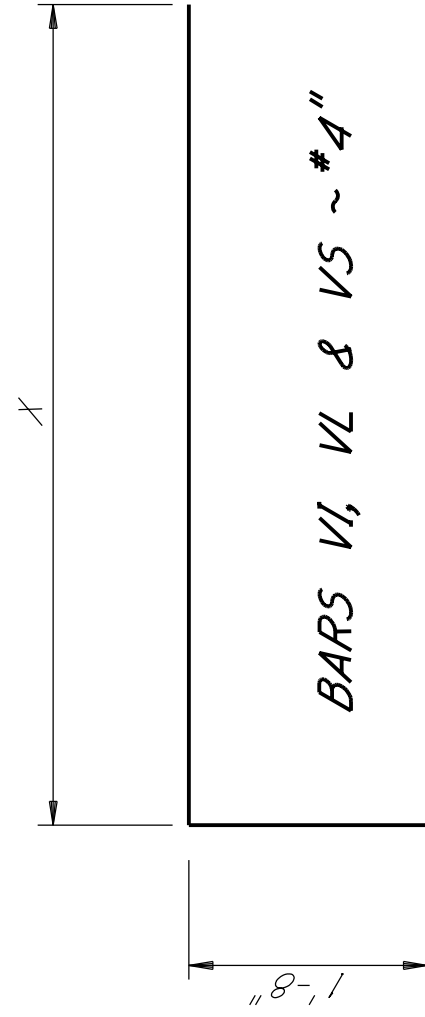
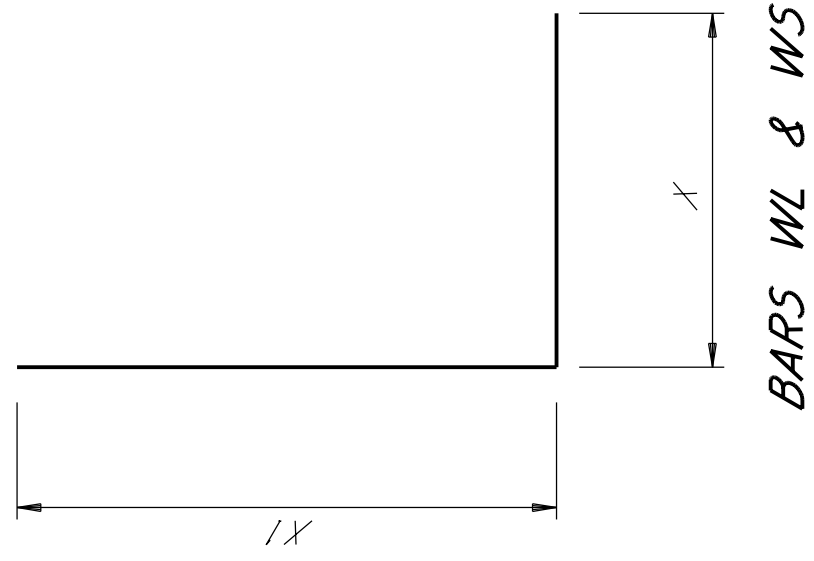
CULVERT HEIGHT "H"	BARS VI		BARS VLI - VLn		BARS VSI - VSn	
	NO.	DIM. X	NO.	DIM. X	NO.	DIM. X
6'			5	19'-6" To 4'-8"	5	19'-11" To 5'-0"
8'			7	26'-8" To 4'-6"	7	27'-2" To 4'-8"
10'			8	31'-5" To 5'-6"	8	31'-10" To 5'-7"
12'			10	37'-0" To 3'-8"	10	37'-6" To 3'-9"

*Some As Drawing Culvert*

**TABLE OF BARS R ~ \*4**

CULVERT HEIGHT "H"	BAR	NO.	LENGTH
8'	RS1 To RS14	1 Ea.	W+6'-7" To W+7"
	RL1 To RL25	1 Ea.	W+6'-8" To W+1"
10'	RS1 To RS16	1 Ea.	W+7'-7" To W+8"
	RL29 To RL29	1 Ea.	W+7'-8" To W+1"
12'	RS1 To RS19	1 Ea.	W+8'-10" To W+6"
	RL1 To RL33	1 Ea.	W+8'-11" To W+2"

K=W+5" For H= 6'  
 K=W+6" For H= 8'  
 K=W+8" For H= 10'  
 K=W+9" For H= 12'



**BAR BENDING DETAILS**  
 Dimensions Are Out To Out

**TABLE OF BARS Y ~ \*4**

CULVERT HEIGHT "H"	BAR	NO.	YL ~ LENGTH		YS ~ LENGTH	
			LONG WING	SHORT WING	LONG WING	SHORT WING
6'	Y1 To Y5	1 Ea.	8'-6" To 30'-6"	4'-11" To 18'-0"	18'-5"	
	Y6	1	31'-4"	4'-11" To 21'-3"	23'-7"	
8'	Y1 To Y6	2 Ea.	8'-6" To 36'-1"	5'-6" To 43'-10"	26'-10"	
	Y7	4	40'-0"	5'-9" To 51'-2"	30'-11"	
10'	Y1 To Y6	2 Ea.	9'-5" To 43'-10"	5'-6" To 25'-11"		
	Y7	4	45'-6"			
12'	Y1 To Y7	2 Ea.	9'-11" To 51'-2"	5'-9" To 30'-3"		
	Y8	6	52'-5"			

**TABLE OF BARS FL, FS, OS, ZL & ZS**

CULVERT HEIGHT "H"	BARS FL ~ *4		BARS FS ~ *4		SPACERS OS ~ *4		DOWELS ZL ~ *5		DOWELS ZS ~ *5	
	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.
6'	2	31'-10"	2	19'-3"	2	5'-7"	7	4'-0"	7	3'-9"
8'	2	40'-8"	2	24'-8"	2	7'-7"	18	4'-0"	18	3'-9"
10'	2	46'-3"	2	28'-1"	2	9'-7"	18	4'-0"	18	3'-9"
12'	2	53'-3"	2	32'-4"	2	11'-7"	22	4'-0"	22	3'-9"

**NOTE:** The Number Of Bars Shown In The Tables Is The Number Required For One Complete Headwall Assembly At One End Of Culvert.

**TABLE OF BARS L & M**

CULVERT HEIGHT "H"	BARS L		BARS M		
	NO.	SIZE	LENGTH	NO.	LENGTH
6'	4	#8	P-4"	NONE	
8'-12'	4	#9	P-4"	2	1'-4" (10x2) VU+1'-8"

Bars K & N Per Basic Culvert Drawing Except Spacing Shall Be 1'-5".

**NOTE:** Vertical Spacers OS And Dowels ZL And ZS Located Per Section A - A.

**TABLE OF BARS WL**

CULVERT HEIGHT "H"	BAR	NO.	LONG WING		DIM. XI
			SIZE	DIM. X	
6'	WL1 To WL39	1 Ea.	#4	4'-0" To 2'-0"	K+5'-7" To K
8'	WL1 To WL24	1 Ea.	#5	4'-6" To 3'-4"	K+7'-2" To K+3'-11"
	WL25 To WL46	1 Ea.	#4	3'-3" To 2'-0"	K+3'-9" To K
10'	WL1 To WL17	1 Ea.	#6	5'-10" To 5'-2"	K+8'-2" To K+6'-5"
	WL18 To WL36	1 Ea.	#5	5'-1" To 4'-3"	K+6'-4" To K+4'-2"
	WL37 To WL62	1 Ea.	#4	4'-2" To 2'-8"	K+4'-0" To K
	WL1 To WL28	1 Ea.	#7	6'-5" To 5'-2"	K+9'-4" To K+6'-0"
12'	WL29 To WL38	1 Ea.	#6	5'-1" To 4'-7"	K+5'-10" To K+4'-4"
	WL39 To WL48	1 Ea.	#5	4'-6" To 3'-11"	K+4'-2" To K+2'-6"
	WL49 To WL62	1 Ea.	#4	3'-10" To 3'-0"	K+2'-4" To K

**TABLE OF BARS WS**

CULVERT HEIGHT "H"	BAR	NO.	SHORT WING		DIM. XI
			SIZE	DIM. X	
6'	WS1 To WS24	1 Ea.	#4	4'-0" To 2'-0"	K+5'-6" To K
8'	WS1 To WS15	1 Ea.	#5	4'-6" To 3'-4"	K+7'-2" To K+3'-11"
	WS16 To WS28	1 Ea.	#4	3'-3" To 2'-0"	K+3'-8" To K
10'	WS1 To WS10	1 Ea.	#6	5'-10" To 5'-2"	K+8'-2" To K+6'-5"
	WS11 To WS22	1 Ea.	#5	5'-1" To 4'-2"	K+6'-3" To K+4'-0"
	WS23 To WS37	1 Ea.	#4	4'-1" To 2'-8"	K+3'-10" To K
12'	WS1 To WS17	1 Ea.	#7	6'-5" To 5'-2"	K+9'-4" To K+5'-11"
	WS18 To WS23	1 Ea.	#6	5'-1" To 4'-6"	K+5'-8" To K+4'-3"
	WS24 To WS29	1 Ea.	#5	4'-5" To 3'-10"	K+3'-11" To K+2'-5"
	WS30 To WS37	1 Ea.	#4	3'-9" To 3'-0"	K+2'-1" To K

**TABLE OF BARS U ~ \*4**

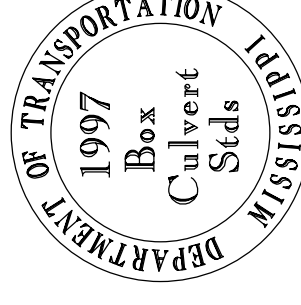
CULVERT HEIGHT "H"	LONG WING		SHORT WING
	UL, NO. & LENGTH	US, NO. & LENGTH	
6'	3 @ 31'-4"	3 @ 18'-5"	
8'	3 @ 40'-0"	3 @ 23'-7"	
10'	3 @ 45'-6"	3 @ 26'-10"	
12'	3 @ 52'-5"	3 @ 30'-11"	

**TABLE OF BARS T**

CULVERT HEIGHT "H"	BAR	NO.	LENGTH
	T18	3	P+17'-8"
8'	T1 To T21	1 Ea.	P+4" To P+21'-9"
	T22	3	P+22'-9"
10'	T1 To T24	1 Ea.	P+4" To P+25'-0"
	T25	3	P+26'-0"
12'	T1 To T28	1 Ea.	P To P+28'-11"
	T29	3	P+29'-11"

**GENERAL NOTES:**  
 This Drawing Shows The General Details Necessary To Modify A Single Or Double Cell Culvert With Wings With 3:1 Slope For A 45° Skew.  
 All Governing Dimensions, Reinforcement Details And General Requirements Of Basic Culvert Drawings, And Or Drawings (BSM-2W And (BDM-2W) Shall Apply Except As Specifically Modified Hereon.  
 A Complete Placing Plan Showing All Governing Dimensions, Bar List And Bending Details Shall Be Submitted To The Project Engineer For Approval Prior To Fabrication Of The Reinforcing Steel.

**Note:** All working numbers referenced the on this sheet are referencing the Box Culvert Standards issued in 1997.



MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
 BOX CULVERT DRAWING  
 45° SKEW DETAILS  
 WINGS WITH 3:1 SLOPE  
 SINGLE & DOUBLE CELL CULVERTS

WORKING NUMBER  
**ISK-45-3W-97**

SHEET NUMBER  
**7563**

DESIGNED MA CHECKED BUJ ISSUED TMT  
 DETAILED MJC DATE 07-11-97 DATE 08-01-97