

INDEX TO SHEETS

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2	GENERAL LAYOUT
3	SURVEY ALIGNMENT & CONTROL
4	GUARD RAIL DETAILS
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SHEET NO.	DESCRIPTION	REVISION DATE
301-310	GR-200	1-26-09
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319	HS-03	1-03-05
320-323	PM-01	1-21-98
324	SWBS-100	12-04-00

TOTAL SHEETS WITHOUT CROSS SECTIONS - 107
TOTAL SHEETS WITH CROSS SECTIONS - 107

TRAFFIC DATA:
2009 A.D.T. = 21,000 VPD
2029 A.D.T. = 28,900 VPD
D = 55%
K = 10%
T = 9%

ROADWAY CLASSIFICATION: RURAL MAJOR COLLECTOR

DATE	REVISION	DATE	RECOMMENDED	DATE	APPROVED
11/16/09	1, 1a, 101, 134	11/16/09	AP	11/16/09	WJS
10/15/09	11a, 5-8, 125	10/15/09	AP	10/15/09	WJS
9/15/09	11a, 102, 104	9/15/09	WJS	9/15/09	WJS

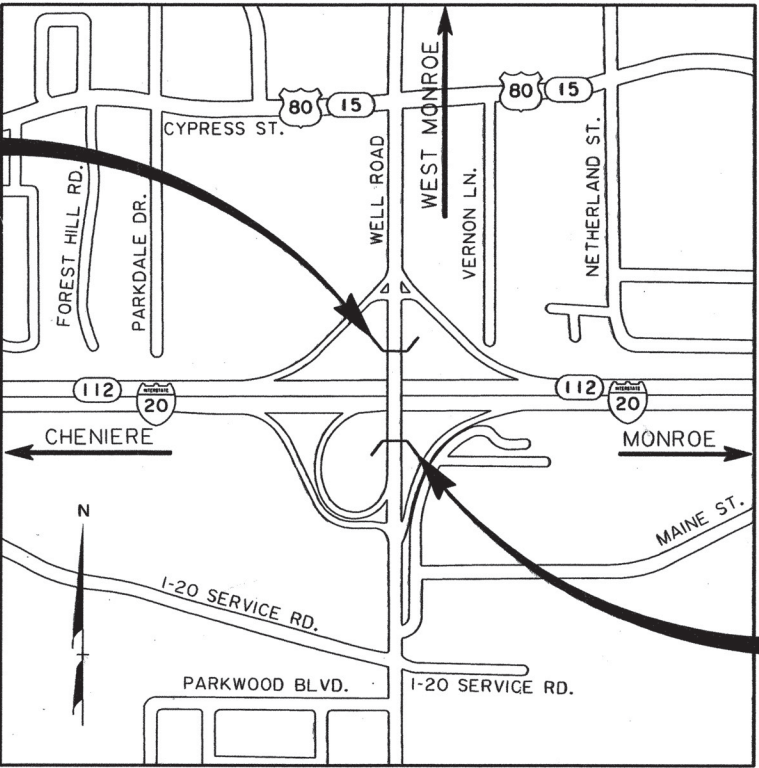
SCHEDULE OF REVISIONS

TYPE OF CONSTRUCTION:
REMOVAL OF EXISTING SUPERSTRUCTURE, SUBSTRUCTURE
REPAIRS, STEEL GIRDER SPANS, CONCRETE DECK

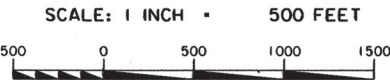
STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
PLANS OF PROPOSED
STATE HIGHWAY

STATE PROJECT NO. 451-06-0148
LA 3249 (WELL ROAD)
BRIDGE OVER I-20
OUACHITA PARISH
ROUTES LA 3249 & I-20

END PROJECT
STA. 51+77.34



LAYOUT MAP

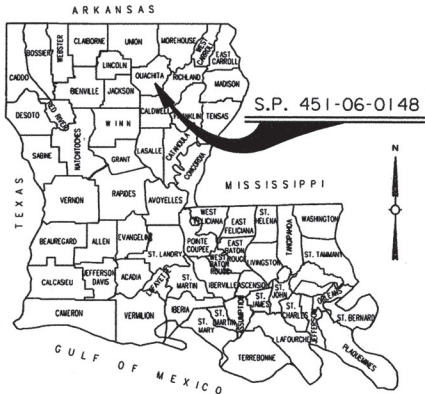


DATUM USED : OPUS
MAGNETIC VAR : N/A
BEARINGS ARE : N/A
TRANSIT BOOKS : N/A
LEVEL BOOKS : 188-093

SCALES:
PLAN - N/A
PROFILE HOR. - N/A
VERT. - N/A

NOTE:
THE 2006 EDITION OF THE LOUISIANA DOTD
STANDARD SPECIFICATIONS FOR ROADS AND
BRIDGES, AS AMENDED BY THE PROJECT
SPECIFICATIONS, SHALL GOVERN ON THIS PROJECT.

S.P. 451-06-0148



VICINITY MAP



SUBMITTED BY:
Donald F. Sorensen
MODJESKI and MASTERS, Inc.
DATE *August 14, 2009*

APPROVED:
W. H. Temple
DOTD CHIEF ENGINEER
DATE *8.19.09*

BEGIN PROJECT
STA. 49+15.26

LENGTH OF PROJECT

DESCRIPTION	ALGEBRAIC SUM OF ALL EQUATIONS	GROSS LENGTH	EXCEPTION	BRIDGE LENGTH		ROADWAY LENGTH	
				FEET	MILES	FEET	MILES
STATION TO STATION		FEET	FEET				
49+15.26 TO 51+77.34		262.08		262.08	0.050		
TOTAL LENGTH OF BRIDGES				262.08	0.050		
TOTAL LENGTH OF ROADWAY							
TOTAL MILES					0.050		

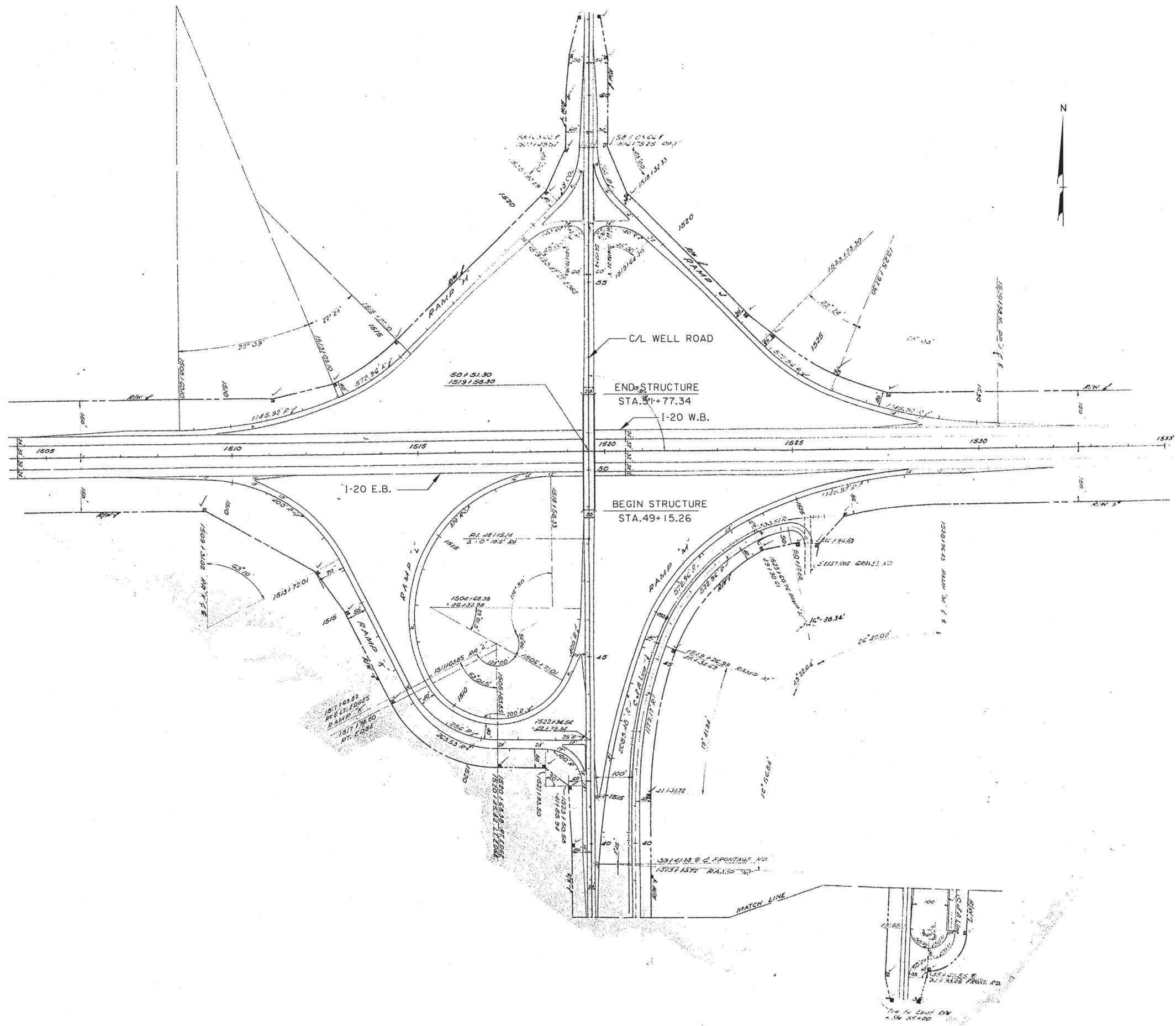
SHEET NUMBER	1
OUACHITA	PARISH
FEDERAL PROJECT	STATE PROJECT
DATE	08/17/09
SHEET	1 OF 1
NO.	3
11/16/09	REVISION
INDEX	DESCRIPTION
LA 3249 (WELL ROAD) BRIDGE OVER I-20	
TITLE SHEET	
MODJESKI and MASTERS	

SUMMARY OF ESTIMATED QUANTITIES

[illegible]

09/15/09, Rev.1, Deleted & Added Item 10/27/09, Rev.2, Revised Item. 11/16/09, Rev. 3, Added NS-Items.

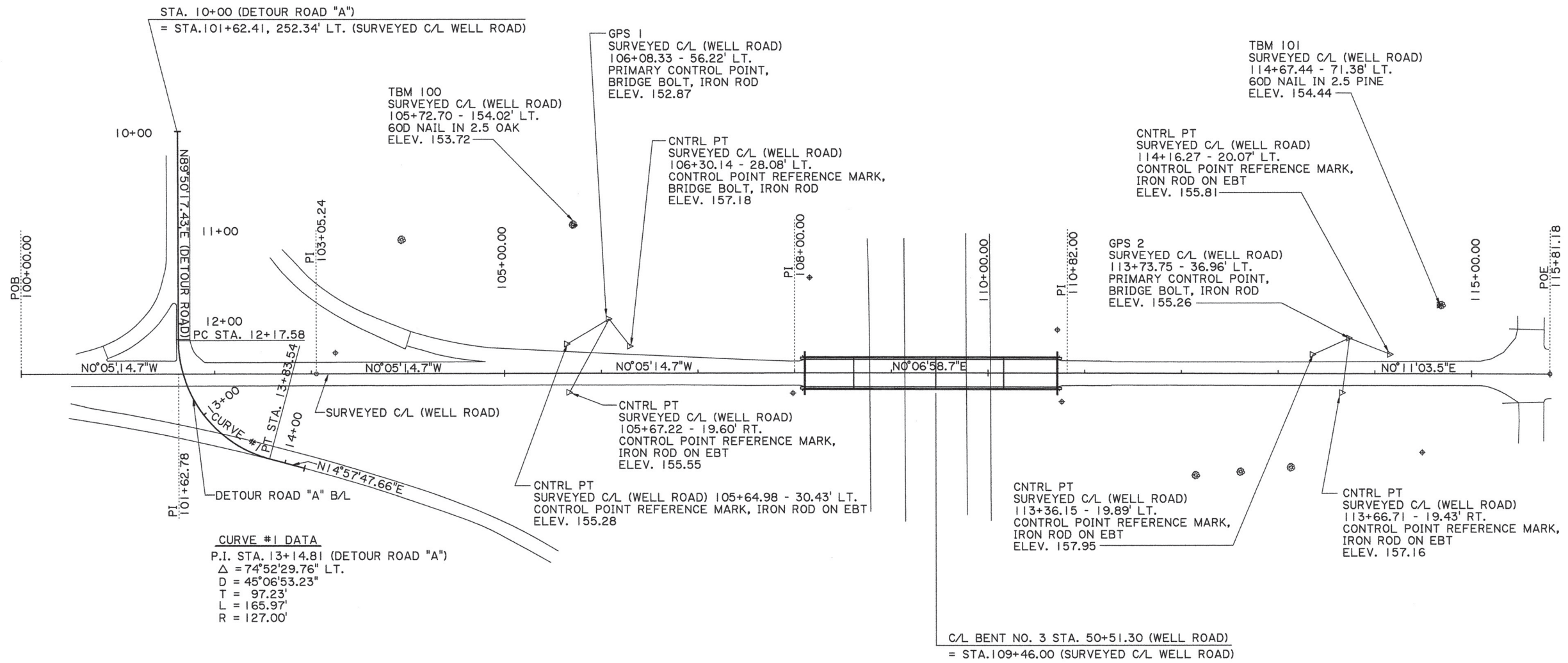
FOOTNOTE: STRUCTURAL METALWORK (FOR ESTIMATION PURPOSES ONLY) = 186,960 LBS. (GR.50W), 5,610 LBS. (GR.36) 1,020 LBS. (STAINLESS STEEL)



8/14/09

SHEET NUMBER		2	
PARISH		OUACHITA	
FEDERAL PROJECT		451-06-0148	
STATE PROJECT		451-06-0148	
DESIGNED	CUL	DATE	08/17/09
CHECKED	NS	SHEET	1 of 1
DETAILED	PMR		
CHECKED	CUL		
REVISION DESCRIPTION			
NO.	DATE	BY	
GENERAL LAYOUT			
LA 3249 (WELL ROAD) BRIDGE OVER I-20			

Scale : 1" = 60'



8/14/09

SHEET NUMBER		3	
PARISH		OUACHITA	
FEDERAL PROJECT		451-06-0148	
STATE PROJECT		451-06-0148	
DESIGNED	TAD	DATE	08/17/09
CHECKED	ICC	SHEET	1 of 1
DETAILED	TAD	BY	
CHECKED	ICC	REVISION DESCRIPTION	
DATE		NO.	
LA 3249 (WELL ROAD) BRIDGE OVER I-20		SURVEY ALIGNMENT & CONTROL	
MODJESKI & MASTERS		DOT	

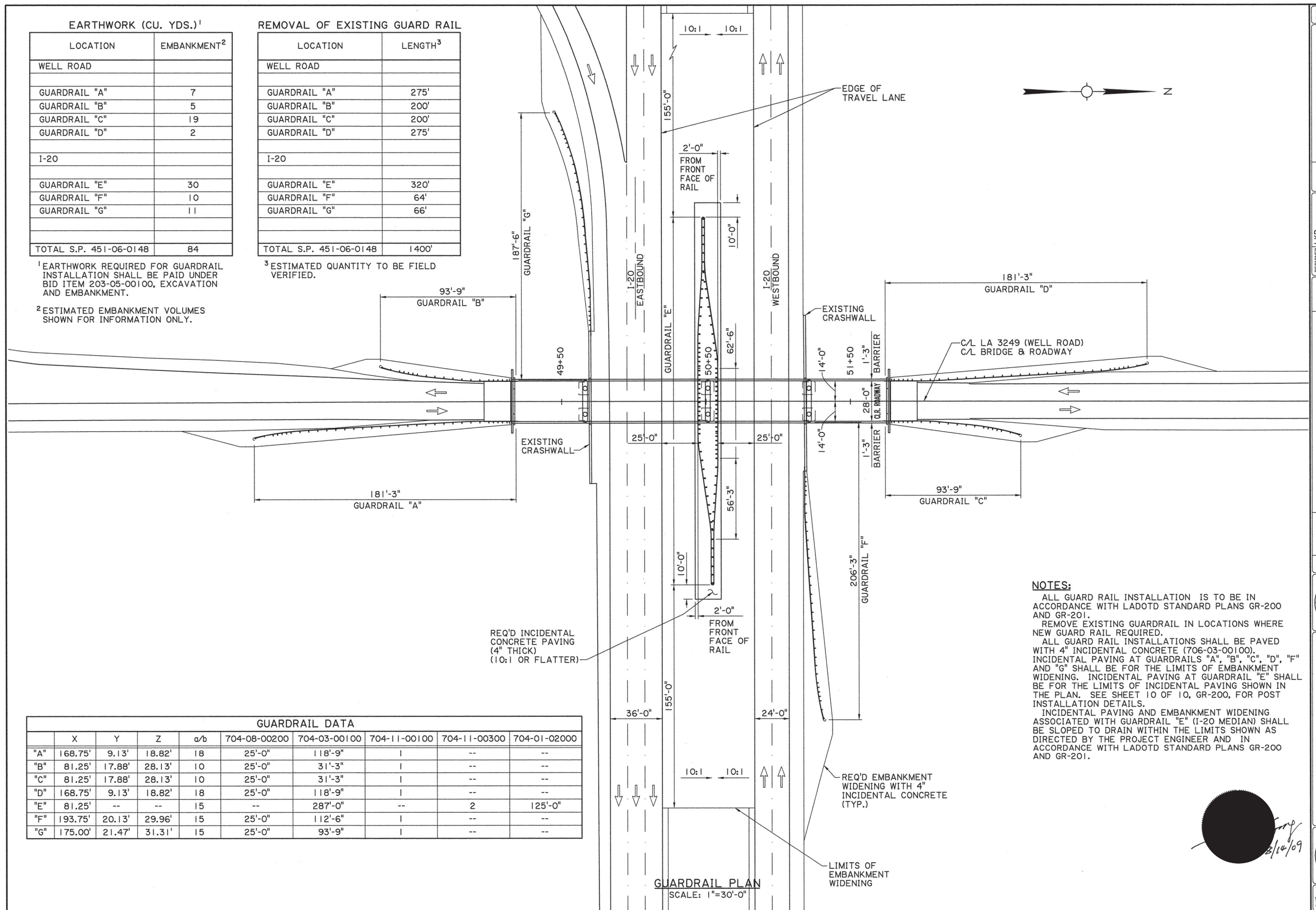
EARTHWORK (CU. YDS.) ¹	
LOCATION	EMBANKMENT ²
WELL ROAD	
GUARDRAIL "A"	7
GUARDRAIL "B"	5
GUARDRAIL "C"	19
GUARDRAIL "D"	2
I-20	
GUARDRAIL "E"	30
GUARDRAIL "F"	10
GUARDRAIL "G"	11
TOTAL S.P. 451-06-0148	84

¹ EARTHWORK REQUIRED FOR GUARDRAIL INSTALLATION SHALL BE PAID UNDER BID ITEM 203-05-00100, EXCAVATION AND EMBANKMENT.

² ESTIMATED EMBANKMENT VOLUMES SHOWN FOR INFORMATION ONLY.

REMOVAL OF EXISTING GUARD RAIL	
LOCATION	LENGTH ³
WELL ROAD	
GUARDRAIL "A"	275'
GUARDRAIL "B"	200'
GUARDRAIL "C"	200'
GUARDRAIL "D"	275'
I-20	
GUARDRAIL "E"	320'
GUARDRAIL "F"	64'
GUARDRAIL "G"	66'
TOTAL S.P. 451-06-0148	1400'

³ ESTIMATED QUANTITY TO BE FIELD VERIFIED.



GUARDRAIL DATA									
	X	Y	Z	a/b	704-08-00200	704-03-00100	704-11-00100	704-11-00300	704-01-02000
"A"	168.75'	9.13'	18.82'	18	25'-0"	118'-9"	1	--	--
"B"	81.25'	17.88'	28.13'	10	25'-0"	31'-3"	1	--	--
"C"	81.25'	17.88'	28.13'	10	25'-0"	31'-3"	1	--	--
"D"	168.75'	9.13'	18.82'	18	25'-0"	118'-9"	1	--	--
"E"	81.25'	--	--	15	--	287'-0"	--	2	125'-0"
"F"	193.75'	20.13'	29.96'	15	25'-0"	112'-6"	1	--	--
"G"	175.00'	21.47'	31.31'	15	25'-0"	93'-9"	1	--	--

NOTES:

ALL GUARD RAIL INSTALLATION IS TO BE IN ACCORDANCE WITH LADOTD STANDARD PLANS GR-200 AND GR-201.

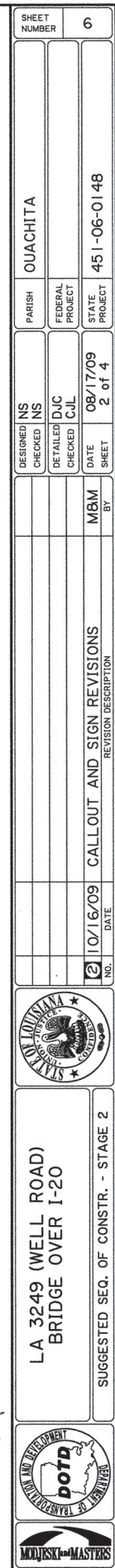
REMOVE EXISTING GUARDRAIL IN LOCATIONS WHERE NEW GUARD RAIL REQUIRED.

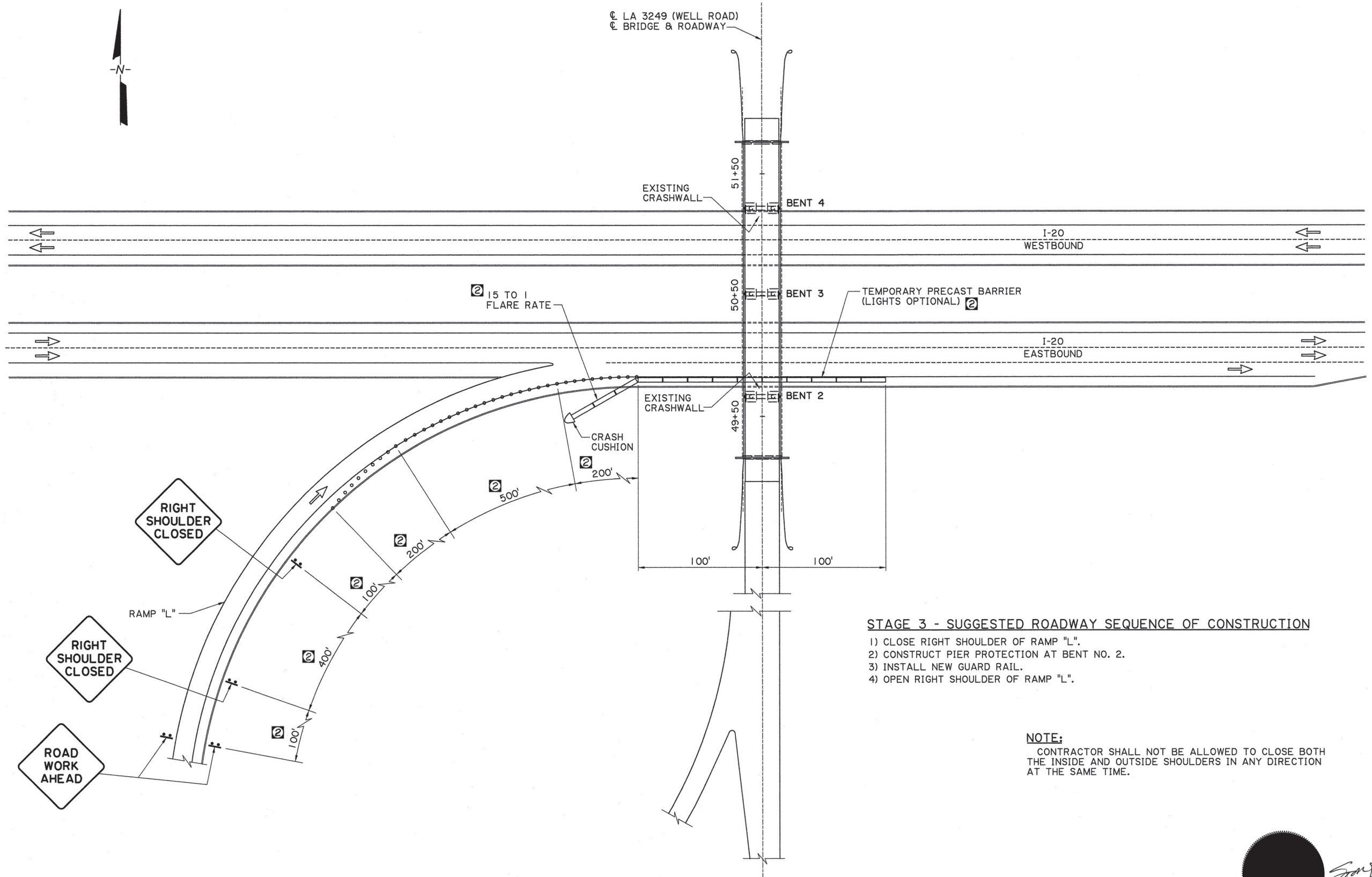
ALL GUARD RAIL INSTALLATIONS SHALL BE PAVED WITH 4" INCIDENTAL CONCRETE (706-03-00100). INCIDENTAL PAVING AT GUARDRAILS "A", "B", "C", "D", "F" AND "G" SHALL BE FOR THE LIMITS OF EMBANKMENT WIDENING. INCIDENTAL PAVING AT GUARDRAIL "E" SHALL BE FOR THE LIMITS OF INCIDENTAL PAVING SHOWN IN THE PLAN. SEE SHEET 10 OF 10, GR-200, FOR POST INSTALLATION DETAILS.

INCIDENTAL PAVING AND EMBANKMENT WIDENING ASSOCIATED WITH GUARDRAIL "E" (I-20 MEDIAN) SHALL BE SLOPED TO DRAIN WITHIN THE LIMITS SHOWN AS DIRECTED BY THE PROJECT ENGINEER AND IN ACCORDANCE WITH LADOTD STANDARD PLANS GR-200 AND GR-201.

GUARDRAIL PLAN
SCALE: 1"=30'-0"

SHEET NUMBER	4
PROJECT	LA 3249 (WELL ROAD) BRIDGE OVER I-20
DATE	08/17/09
BY	1 of 1
DESIGNED	LKD
CHECKED	MLS
DATE	08/17/09
BY	1 of 1
REVISION DESCRIPTION	
NO.	DATE
LA 3249 (WELL ROAD) BRIDGE OVER I-20	
GUARDRAIL DETAILS	





STAGE 3
EAST BOUND
PIER PROTECTION RECONSTRUCTION-BENT NO. 2
SCALE: 1" = 40'-0"

STAGE 3 - SUGGESTED ROADWAY SEQUENCE OF CONSTRUCTION

- 1) CLOSE RIGHT SHOULDER OF RAMP "L".
- 2) CONSTRUCT PIER PROTECTION AT BENT NO. 2.
- 3) INSTALL NEW GUARD RAIL.
- 4) OPEN RIGHT SHOULDER OF RAMP "L".

NOTE:

CONTRACTOR SHALL NOT BE ALLOWED TO CLOSE BOTH THE INSIDE AND OUTSIDE SHOULDERS IN ANY DIRECTION AT THE SAME TIME.

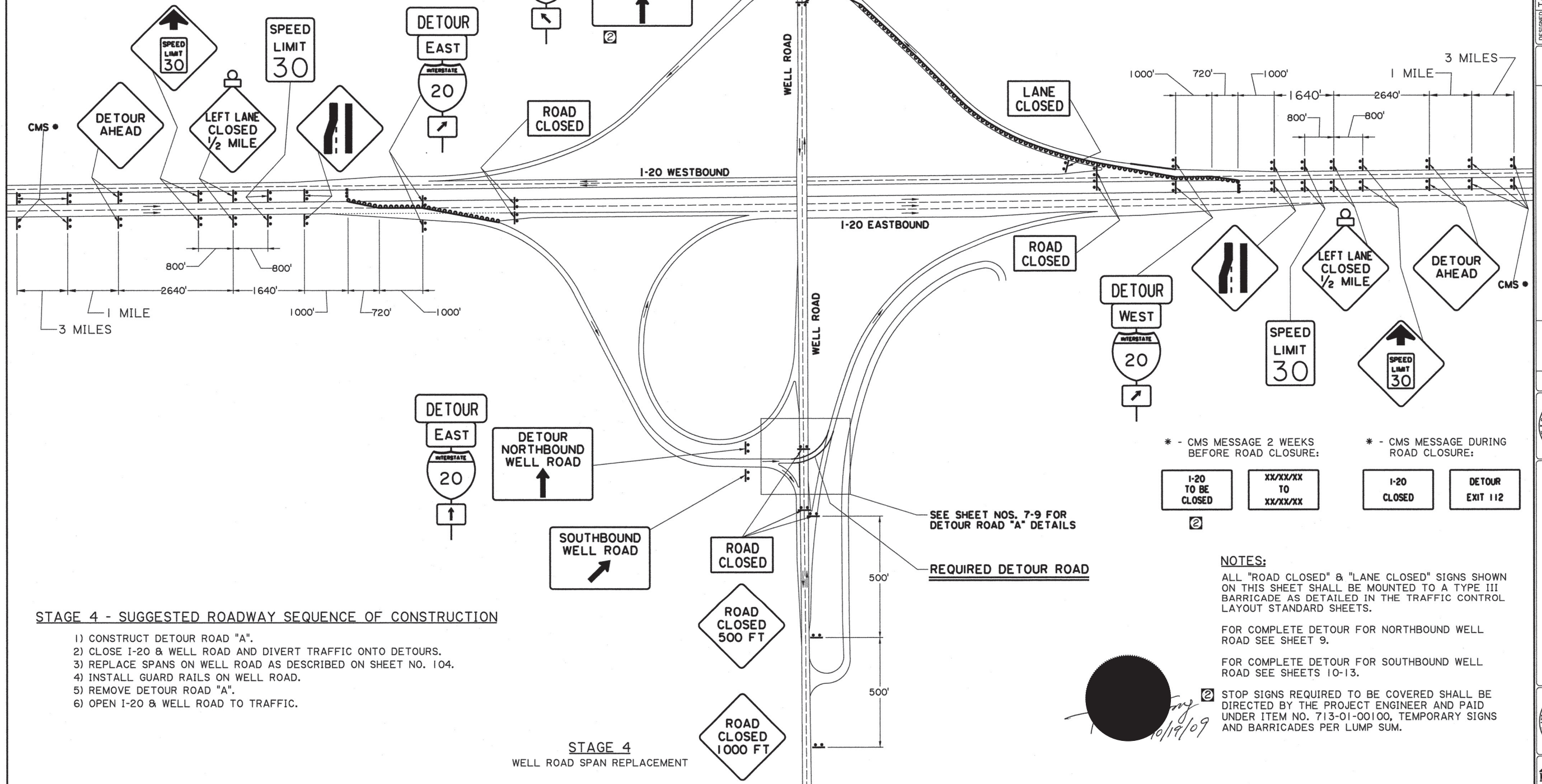
SHEET NUMBER	7
OUACHITA	
PARISH	
FEDERAL PROJECT	
STATE PROJECT	451-06-0148
DESIGNED NS	
CHECKED NS	
DATE	08/17/09
SHEET	3 of 4
BY	M8M
REVISION DESCRIPTION	
NO.	
DATE	10/16/09
CALLOUT AND SIGN REVISIONS	
SUGGESTED SEQ. OF CONSTR. - STAGE 3	
LA 3249 (WELL ROAD) BRIDGE OVER I-20	
botn	
MOJESKI+MASTERS	

* - CMS MESSAGE 2 WEEKS BEFORE ROAD CLOSURE:

I-20 TO BE CLOSED
XX/XX/XX TO XX/XX/XX

* - CMS MESSAGE DURING ROAD CLOSURE:

I-20 CLOSED
DETOUR EXIT 112



STAGE 4 - SUGGESTED ROADWAY SEQUENCE OF CONSTRUCTION

- 1) CONSTRUCT DETOUR ROAD "A".
- 2) CLOSE I-20 & WELL ROAD AND DIVERT TRAFFIC ONTO DETOURS.
- 3) REPLACE SPANS ON WELL ROAD AS DESCRIBED ON SHEET NO. 104.
- 4) INSTALL GUARD RAILS ON WELL ROAD.
- 5) REMOVE DETOUR ROAD "A".
- 6) OPEN I-20 & WELL ROAD TO TRAFFIC.

STAGE 4
WELL ROAD SPAN REPLACEMENT

* - CMS MESSAGE 2 WEEKS BEFORE ROAD CLOSURE:

I-20 TO BE CLOSED
XX/XX/XX TO XX/XX/XX

* - CMS MESSAGE DURING ROAD CLOSURE:

I-20 CLOSED
DETOUR EXIT 112

NOTES:

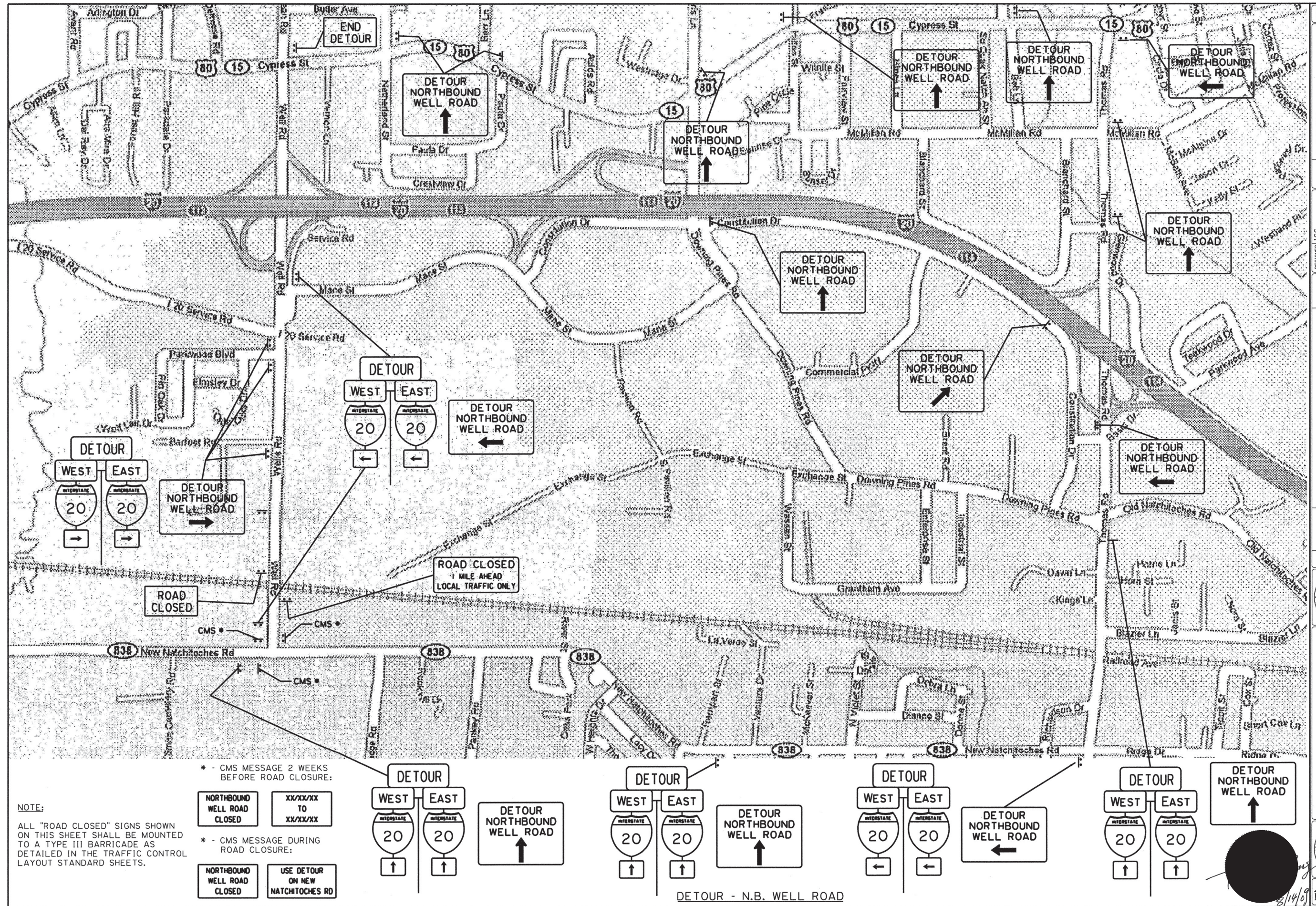
ALL "ROAD CLOSED" & "LANE CLOSED" SIGNS SHOWN ON THIS SHEET SHALL BE MOUNTED TO A TYPE III BARRICADE AS DETAILED IN THE TRAFFIC CONTROL LAYOUT STANDARD SHEETS.

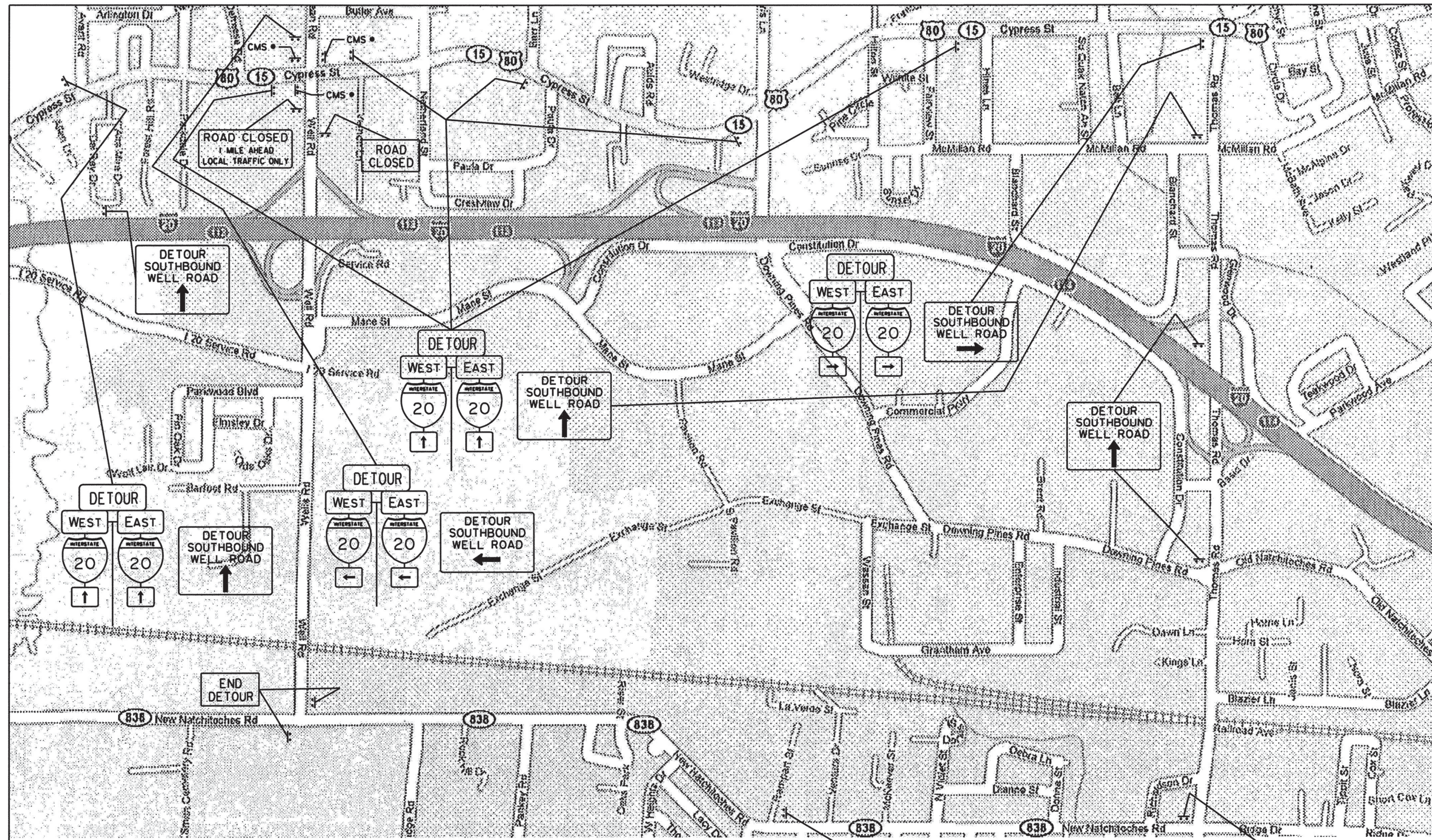
FOR COMPLETE DETOUR FOR NORTHBOUND WELL ROAD SEE SHEET 9.

FOR COMPLETE DETOUR FOR SOUTHBOUND WELL ROAD SEE SHEETS 10-13.

STOP SIGNS REQUIRED TO BE COVERED SHALL BE DIRECTED BY THE PROJECT ENGINEER AND PAID UNDER ITEM NO. 713-01-00100, TEMPORARY SIGNS AND BARRICADES PER LUMP SUM.

SHEET NUMBER	8
OUACHITA	
PARISH	
FEDERAL PROJECT	
STATE PROJECT	451-06-0148
DESIGNED	TAD
CHECKED	ICC
DATE	08/17/09
BY	4 of 4
REVISIONS	
NO.	DATE
1	10/16/09
2	10/19/09
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NOTE:

ALL "ROAD CLOSED" SIGNS SHOWN ON THIS SHEET SHALL BE MOUNTED TO A TYPE III BARRICADE AS DETAILED IN THE TRAFFIC CONTROL LAYOUT STANDARD SHEETS.

* - CMS MESSAGE 2 WEEKS BEFORE ROAD CLOSURE:

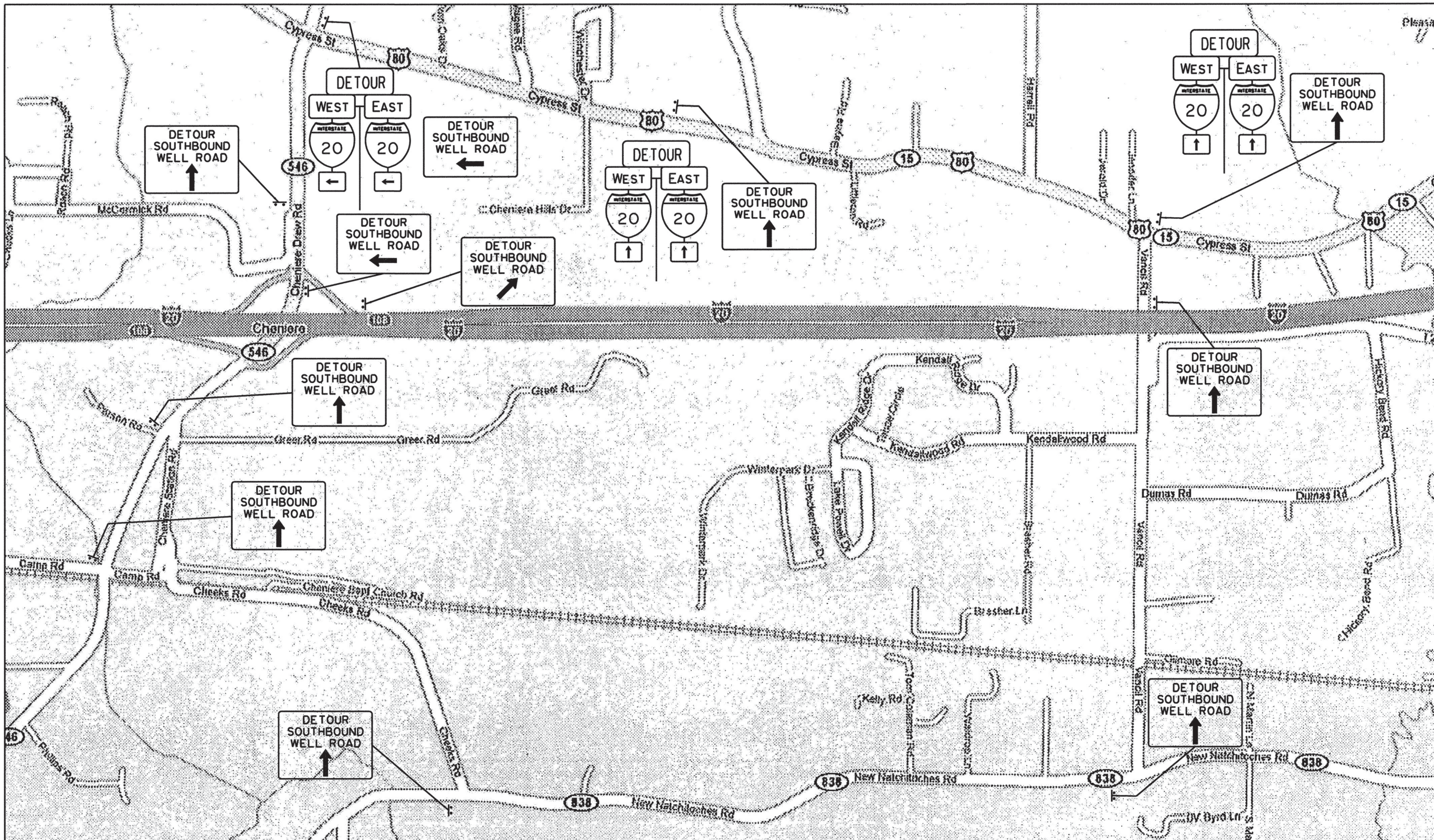
SOUTHBOUND WELL ROAD CLOSED	XX/XX/XX TO XX/XX/XX
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* - CMS MESSAGE DURING ROAD CLOSURE:

SOUTHBOUND WELL ROAD CLOSED	USE DETOUR ON CYPRESS ST
-----------------------------	--------------------------

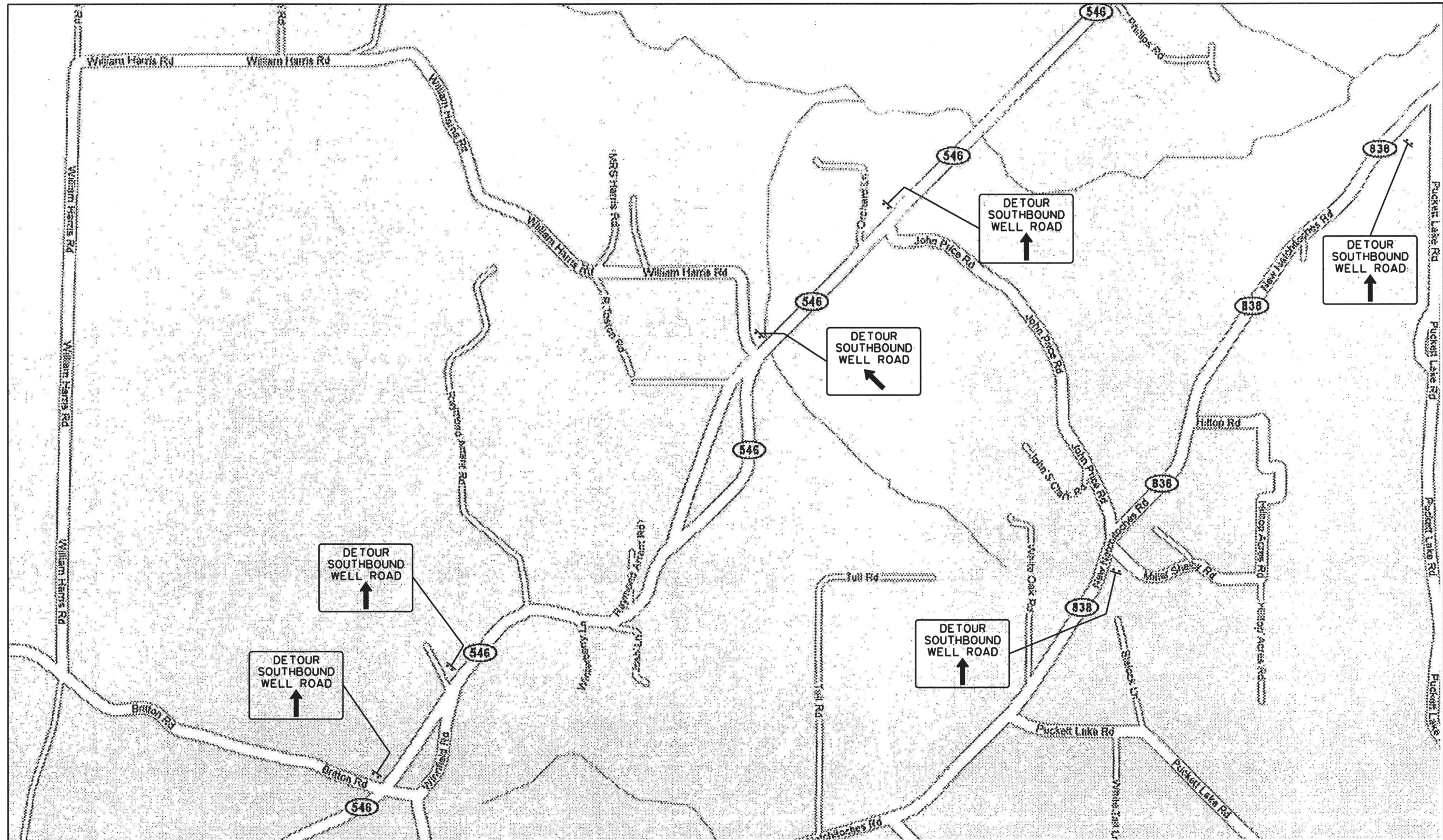
DETOUR - S.B. WELL ROAD

SHEET NUMBER 10	
OUACHITA	PARISH
DESIGNED	ICC
CHECKED	TAD
DETAILED	ICC
CHECKED	TAD
DATE 08/17/09	BY
SHEET 2 of 5	REVISION DESCRIPTION
NO. DATE	
LA 3249 (WELL ROAD) BRIDGE OVER I-20	
CONSTRUCTION SIGNING LAYOUT - 2	



DETOUR - S.B. WELL ROAD (CONT'D)

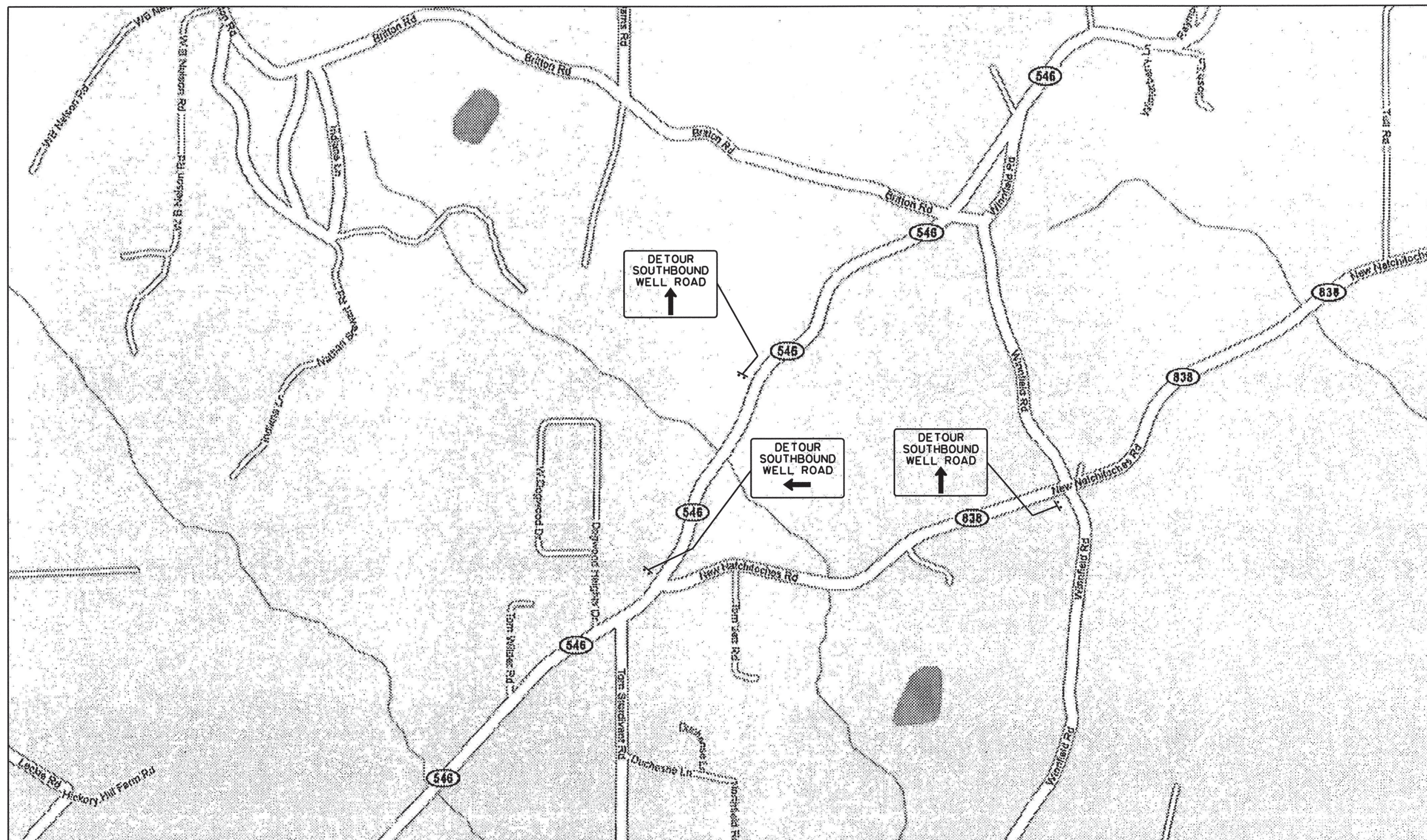
SHEET NUMBER 11	
PARISH	OUACHITA
DESIGNED	ICC
CHECKED	TAD
DATE	08/17/09
BY	3 of 5
REVISION DESCRIPTION	
NO. DATE	
LA 3249 (WEL ROAD) BRIDGE OVER I-20	
CONSTRUCTION SIGNING LAYOUT - 3	



DETOUR - S.B. WELL ROAD (CONT'D)

3/14/09

SHEET NUMBER 12	
OUACHITA	
DESIGNED ICC	TAD
CHECKED TAD	ICC
DATE 08/17/09	BY 4 of 5
REVISION DESCRIPTION	
LA 3249 (WELL ROAD) BRIDGE OVER I-20	
CONSTRUCTION SIGNING LAYOUT - 4	
bota	
MODJESKI+MASTERS	



DETOUR - S.B. WELL ROAD (CONT'D)

8/14/09

SHEET NUMBER 13	
PARISH	OUACHITA
FEDERAL PROJECT	
STATE PROJECT	451-06-0148
DESIGNED	ICC
CHECKED	TAD
DETAILED	ICC
CHECKED	TAD
DATE	08/17/09
SHEET	5 of 5
BY	
NO.	DATE
REVISION DESCRIPTION	
LA 3249 (WELL ROAD) BRIDGE OVER I-20 CONSTRUCTION SIGNING LAYOUT - 5	
DOTD DEPARTMENT OF TRANSPORTATION LOUISIANA	
MODJESKI+MASTERS	

GENERAL PROVISIONS

- All Temporary Traffic Control Devices used shall be in accordance with the LaDOTD Standard Specifications for Roads and Bridges, the Manual on Uniform Traffic Control Devices (MUTCD), and shall meet the National Cooperative Highway Research Program (NCHRP) 350 for Test Level 3 requirements.
- Materials used for Temporary Traffic Controls shall be in accordance with the LaDOTD Standard Specifications for Roads and Bridges and when applicable the LaDOTD Qualified Products List (QPL).
- No temporary traffic controls shall be erected without the approval of the Project Engineer and until work is about to begin, unless they are covered.
- No lane closures, lane shifts, diversions, or detours shall occur without the authorization of the Project Engineer.
- Responsibility is hereby placed upon the contractor for the installation, maintenance, and operation of all temporary traffic control devices called for in these plans or required by the Project Engineer for the protection of the traveling public as well as all Department and construction personnel.
- The contractor shall also be responsible for the maintenance of all permanent signs and pavement markings left in place as essential to the safe movement and guidance of traffic within the project limits.
- The District Traffic Operations Engineer (DTE) shall serve as a technical advisor to the Project Engineer for all Traffic Control matters.
- "Road Work Next XX Miles" sign shall be required on all projects equal to or greater than 2 miles and located at the beginning of the project unless otherwise noted. The distance on the sign shall be stated to the nearest whole mile. The sign shall be a minimum 36"x60" unless otherwise noted.
- Warning signs used for lane closures or lane shifts in which the roadway shall be returned to full public use within 12 hours or less may be placed on NCHRP350 approved portable sign frames.
- If the spacing on the plans need to be altered, the new spacings need to be approved by the Project Engineer.

SPEED LIMITS

- Speed limits shall be lowered by 10 mph for any construction, maintenance, or utility operation that requires one or more of the following:
 - (A) the condition of the original highway is degraded due to milled surfaces or uneven pavements;
 - (B) work is in progress in the immediate vicinity of the travel way requiring lane closures, lane width reductions, or low speed diversions; (C) workers present on the shoulder within 2' of the edge of traveled way without barrier protection.
- The reduced speed zone shall only apply to those portions of the project limits affected. The Project Engineer may allow SPEED LIMIT WHEN FLASHING signs to supplement reduced speed zones.
- At the end of the reduced speed zone, a speed limit sign displaying the original speed limit before construction shall be installed.
- If conditions warrant, the District Traffic Operations Engineer may authorize the reduction of the speed limit by more than 10 mph.

PAVEMENT MARKINGS (see QPL)

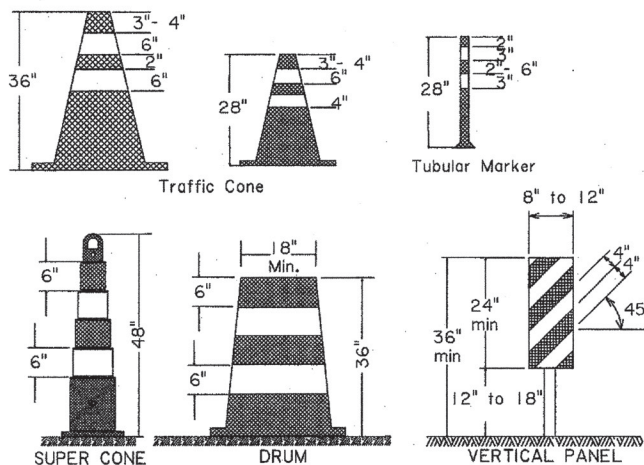
- All pavement markings within the limits of the project that are in conflict with the project signing or the required traffic movements shall be removed from the pavement by blast cleaning or grinding (Existing striping shall not be painted over with black paint or covered with tape).
- If special pavement markings are needed, they shall be reflectorized, removable, and accompanied by the proper signage.
- Temporary Raised Pavement Markers (RPMs) may be added to supplement temporary striping in areas of transition, in tapers, in detours, and in other areas of need as directed by the Project Engineer.
- Materials and placement of temporary pavement markings shall conform to section 713 of the Standard Specifications. If no pay item exists, temporary markings will be considered incidental to traffic control.

SIGNS

- All signs used for temporary traffic controls shall follow the Department's Traffic Control (TC) details and the MUTCD. Signs shown in the TC illustrations are typical and may vary with each specific condition.
- More appropriate signing for a specific condition may be required or substituted with the approval of the Project Engineer and reviewed by the District Traffic Operations Engineer.
- When projects are separated by less than one mile, they shall be signed as one project.
- At no time shall signs warning against a particular operation be left in place once the operation has been completed or where the obstacle has been removed.
- Signs over 10 sq ft shall be mounted on two post and signs over 20 sq ft shall be mounted on at least three post.
- Signs shall have a minimum of two bolts per post.
- Permanent signs no longer applicable or in conflict shall be removed or covered with a strong, lightweight, opaque material.
- Warning signs used for temporary traffic controls shall meet the following guidelines unless otherwise noted in the plans:
 - (A) size shall be 48" x 48", (B) see the Departments Standard Specifications and the QPL for sheeting information, (C) a minimum of a 2 lb U-Channel post shall be used driven to a minimum depth of 3', (D) sign height shall be a minimum of 5' above the roadway surface unless there is a concern for pedestrians or bicycle traffic in which it shall be a minimum of 7', (E) lateral distance of signs shall be a minimum of 6' from the edge of shoulder or edge of pavement if no shoulder exist and 2' from the back of curb in urban areas.
- Vinyl Roll Up signs will be allowed for short term (less than 12 hours) daytime work provided that they meet all size, color, retroreflectivity requirements, and NCHRP 350.
- Mesh rollup signs shall not be allowed on any project.
- All signs shall be removed or covered when no longer applicable.
- Contractor shall use caution not to damage existing signs which remain in place. Any DOTD signs damaged by work operations shall be replaced.

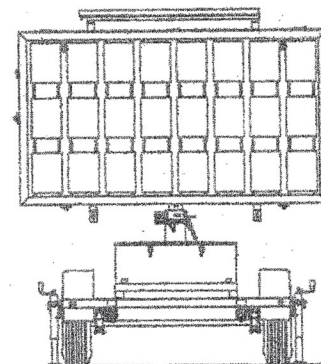
CHANNELIZING DEVICES

- The following devices may be used:
 - Tubular Markers, Vertical Panels, Cones, Drums, and Super Cones.
- Drums (at standard spacing) and Super Cones (at 1/2 standard spacing) are the only devices allowed to be used in taper areas on the interstate system during daylight hours. Only drums can be used in tapers during night operations.
- The spacing of channelizing devices in a taper should not exceed a distance in feet equal to 1.0 times the posted speed limit in mph (with a maximum of 50 feet).
- The spacing of channelizing devices in a tangent should not exceed a distance in feet equal to 2.0 times the posted speed limit in mph (with a maximum of 100 feet) unless otherwise noted.
- Retroreflective material pattern used on super cones shall match that used on drums.
- 28" traffic cones are not allowed on: 1) Interstates, 2) Highways with speeds greater than 40 mph. During night time operations: 1) 28" and 36" cones are not allowed, 2) drums are the only device allowed in the taper.



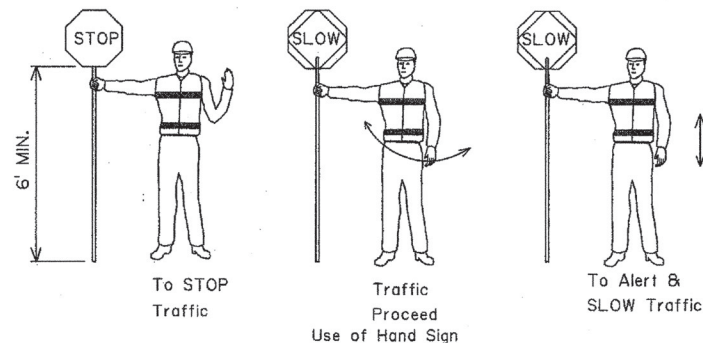
PORTABLE CHANGEABLE MESSAGE SIGNS

- When working within the traveled way, including shoulders and auxiliary lanes, Changeable Message Signs (CMS) shall be used on all Interstate Highways and on all other roadways (where space is available) with an ADT greater than 20,000 and should be delineated with retroreflective TTC devices. CMS will be paid for by each.
- When used in advance of a lane closure or a lane shift, the CMS should be placed on the right hand side of the road a minimum distance of 2 miles in advance of the taper for Interstates and to be determined by the Engineer on other highways.
- If vehicles are queuing beyond the 2 mile CMS, an additional CMS should be placed on the right hand side of the road approximately 5 miles in advance of the taper for Interstates.
- CMS messages shall be approved by the District Traffic Operations Engineer (DTE).
- When Portable Changeable Message signs are not being used, they should be removed; if not removed, they should be shielded by guardrail or barriers; or if the previous two options are not feasible, they should be delineated with retroreflective TTC devices.



FLAGGERS

- All flaggers must be qualified. The contractor shall be responsible for training or assuring that all flaggers are qualified to perform flagging duties. A Qualified Flagger is one that has completed courses such as those offered by the American Traffic Safety Services Association (ATSSA), The Associated General Contractors of America (AGC) or other courses approved by the Louisiana DOTD's Work Zone Task Force. The contractor shall be responsible for getting the flagger course approved.
- When utilized, a flagger shall use a minimum 18 inch octagonal shape sign on a minimum 6' stop/slow paddle and wear ANSI Class 2 Lime Green vest during day time operations and ANSI Class 3 Lime Green ensemble during night operations. In all flagging operations, the flagger must be visible from the flagger advance warning sign.



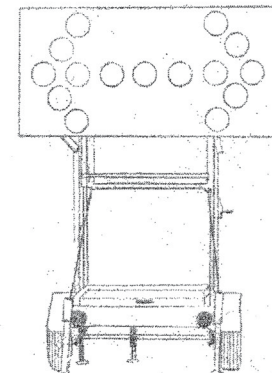
TYPE III BARRICADES

- All barricades shall use Type 3 High Intensity Sheeting on both sides of the barricade.
- All Type III Barricades shall be a minimum of 8 feet in length and must meet NCHRP 350 requirements.
- When signs and lights are to be mounted to a barricade, they must meet NCHRP 350 requirements.

MUTCD Website:
<http://mutcd.fhwa.dot.gov/>

FLASHING ARROW PANELS

- Flashing Arrow Panels shall be used for lane closures on all facilities with 2 or more lanes in a single direction and a speed limit greater than 35 mph.
- When used, flashing arrow panels should be located on the shoulder at the beginning of the taper.
- Where the shoulder width is limited, the flashing arrow panel should be placed within the closed lane as close to the beginning of the taper as practical.
- All Flashing Arrow Panels used on high speed roadways (45 mph and greater) shall be 4' x 8' Type C.
- When Flashing Arrow Panels signs are not being used, they should be removed; if not removed, they should be shielded by guardrail or barriers; or if the previous two options are not feasible, they should be delineated with retroreflective TTC devices.

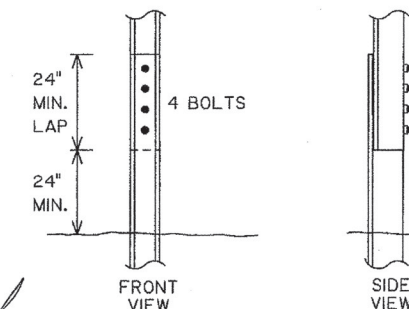


LIGHTING (see QPL)

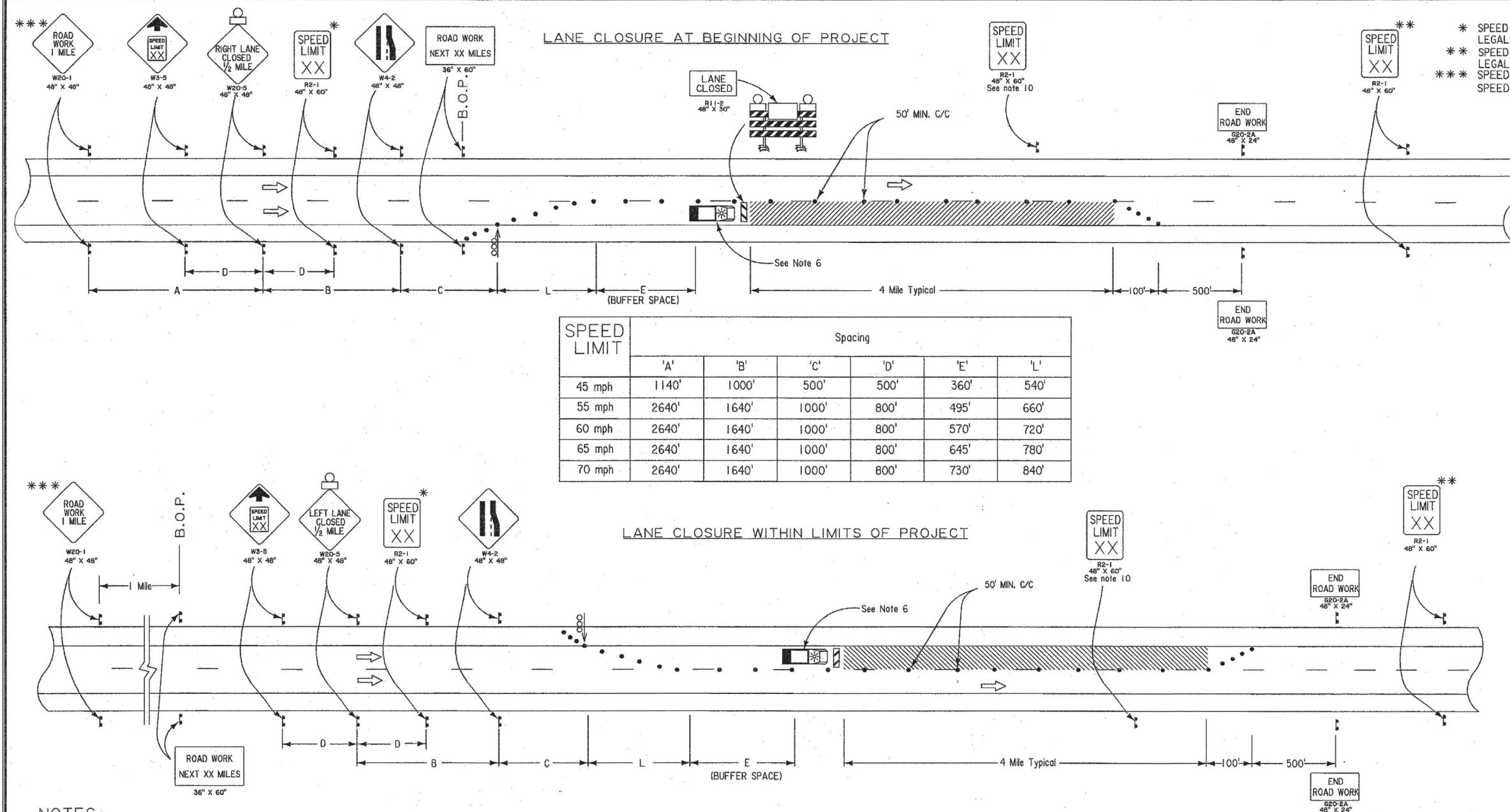
- When used for overnight closures, lighting shall supplement all barricades that are placed in a closed lane or that extend across a highway. Two Type B High Intensity lights shall be used per lane closed in rural areas. In urban areas two Type A Low Intensity Lights may be used where adequate ambient lighting is available.
- One Type B High Intensity light shall be used to supplement the first sign (or pair of signs) that gives warning about a lane closure during night time operations.
- Type C steady burn lights shall be used on all channelizing devices in the taper as well as the first two devices in the tangent, for night use.

ALLOWABLE LAP SPLICE FOR U-CHANNEL POST

- U-Channel posts may be spliced where long lengths are required. The upper section shall overlap the lower section by at least 24 inches. The bottom edge of the upper section of the splice shall be a minimum of 24 inches above the ground. The spliced sections shall be secured with at least four 5/16 inch diameter hex bolts spaced equally along the splice.



SHEET NUMBER	14
DESIGNED	E. COURVILLE
CHECKED	J. COLVIN
DATE	01/25/2008
PROJECT	451-06-0148
STATE	LA
REVISION	DESCRIPTION
NO.	DATE
TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET	
TC-00	
TRAFFIC ENGINEERING	



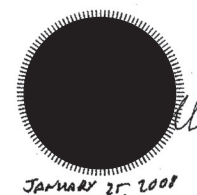
NOTES

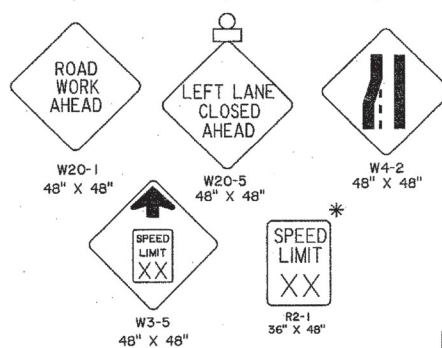
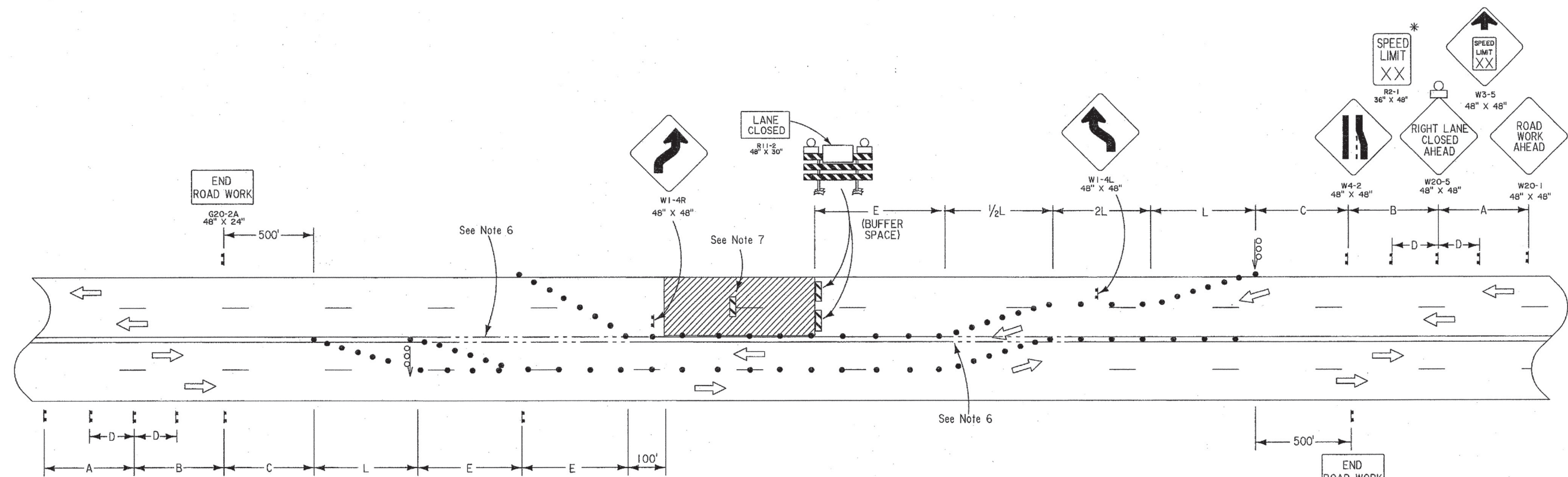
THIS SHEET SHALL BE USED WITH THE "TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET (TC-00)".

- SPEED LIMIT REFERS TO THE LEGALLY ESTABLISHED SPEED LIMIT BEFORE CONSTRUCTION.
- WHEN DOING ANY INTERSTATE WORK, A MINIMUM OF TWO DYNAMIC MESSAGE SIGNS PER DIRECTION SHALL BE PLACED IN ADVANCE OF THE LANE CLOSURE. GUIDANCE AS TO PLACEMENT IS SHOWN ON TC-00; HOWEVER, SPECIFIC DISTANCES TO BE SET BY THE PROJECT ENGINEER.
- DOWNSTREAM TAPERS SHALL BE 100' PER LANE WITH CHANNELIZING DEVICES SPACED AT A SPACING OF 20'.
- TYPE III BARRICADES SHALL BE PLACED IN THE CLOSED LANE AT A 1000' INTERVAL WHERE NO ACTIVE WORK IS ON GOING AND THE LANE MUST REMAIN CLOSED. TYPE III BARRICADES ARE ALSO REQUIRED BEFORE EACH OR GROUP OF UNFILLED HOLES OR HOLES FILLED WITH TEMPORARY MATERIAL, OR WHERE UNCURED CONCRETE EXISTS.
- IF A RAMP ENTRANCE OR EXIT TAPER FALLS WITHIN THE WORK AREA, REFER TO STANDARD ROAD PLANS TC-08 AND TC-09 FOR TRAFFIC CONTROL DETAILS.
- A VEHICLE WITH A FLASHING AMBER LIGHT AND A TRUCK MOUNTED ATTENUATOR SHALL BE USED IN ADVANCE OF AREAS WHERE WORKERS ARE PRESENT WITHOUT POSITIVE BARRIER PROTECTION.

- CHANNELIZING DEVICES MAY ENCOACH UP TO 2 FEET FROM CENTERLINE INTO THE OPEN LANE ONLY AT SPECIFIC LOCATIONS WHERE ACTUAL WORK ACTIVITY IS TAKING PLACE. CHANNELIZING DEVICES SHALL BE RETURNED TO TO THE CLOSED LANE WHEN THE WORK ACTIVITY HAS PASSED. IN NO CASE SHALL THE MAINLINE WIDTH OF THE TRAVEL LANE BE LESS THAN 10'.
- A FLAGGER SHALL BE USED TO ALERT MOTORISTS WHEN EQUIPMENT OR WORKERS ENCOACH WITHIN 2 FEET OF AN OPEN LANE. THE FLAGGER SHALL BE POSTED ADJACENT TO THE OPEN TRAVEL LANE AND IMMEDIATELY UPSTREAM OF EACH OPERATION. ENCOACHMENT SHALL BE HELD TO A MINIMUM.
- WHEN THE LENGTH OF CLOSURE IS GREATER THAN 1 MILE, INSTALL SPEED LIMIT SIGNS AT 1 MILE INTERVALS.
- IF CONDITIONS RESULT IN A DROPOFF OR RISE, BETWEEN LANE CLOSURE AND TRAVEL LANE, WHICH EXCEEDS 2 INCHES OVERNIGHT, THE CONTRACTOR SHALL PLACE A TEMPORARY EDGE LINE IN THE OPEN LANE, A MINIMUM OF 1 FOOT FROM THE DROPOFF OR RISE. IF THE CONTRACTOR CHOOSES TO USE DRUMS FOR THE CHANNELIZING DEVICES, THE TEMPORARY EDGE LINE MAY BE OMITTED AS LONG AS THE DEVICE SPACING IS 50' OR LESS. IN EITHER CASE, THE CHANNELIZING DEVICES SHALL BE PLACED IN THE CLOSED LANE DURING NONWORKING HOURS.

- HIGH INTENSITY FLASHING LIGHTS SHALL BE USED TO MARK THE SECOND ADVANCE WARNING SIGN (LANE CLOSED 1/2 MILE). LOW INTENSITY FLASHING LIGHTS SHALL BE USED TO MARK ALL OTHER HAZARDS OFF THE TRAVEL WAY. STEADY BURNING LIGHTS SHALL BE USED ON ALL TRAFFIC CONTROL DEVICES USED FOR MERGING TAPER, INCLUDING THE FIRST TWO DEVICES AFTER THE TAPER ENDS. FIRST LIGHT IN A MERGING TAPER SHALL BE FLASHING.
- THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A MERGING TAPER AND SHIFTING TAPER SHALL NOT BE GREATER THAN 50'.
- ANY SIGNS IN CONFLICT WITH CONSTRUCTION SIGNING SHALL BE REMOVED OR COVERED.
- MINIMUM CONSTRUCTION SIGNING: ANY ADDITIONAL SIGNS SHOWN IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND REQUIRED BY THE PROJECT ENGINEER SHALL BE INSTALLED UNDER ITEM 713-01.
- NEITHER WORK ACTIVITY NOR STORAGE OF EQUIPMENT, VEHICLES, OR MATERIALS SHALL OCCUR WITHIN THE BUFFER SPACE.





SPEED LIMIT	SPACING					
	'A'	'B'	'C'	'D'	'E'	'L'
25 mph	250'	250'	250'	n/a	155'	125'
35 mph	650'	500'	350'	n/a	250'	245'
45 mph	1140'	1000'	500'	500'	360'	540'
55 mph	2640'	1640'	1000'	800'	495'	660'

* SPEED LIMIT IS TO BE 10 MPH LESS THAN LEGALLY ESTABLISHED SPEED LIMIT FOR SPEEDS ≥ 45 MPH

- LEGEND**
- Traffic Sign
 - Channelizing Devices
 - Type III Barricades
 - Flashing Arrow Panel (Type "C")
 - Work Area
 - Type B Light

NOTES

- WHEN THIS LAYOUT IS AUTHORIZED TO BE USED DURING NIGHTTIME HOURS OR IF THE WIDTH OF THE TRAFFIC LANES ARE 11' OR LESS, THE CONTRACTOR SHALL BE REQUIRED TO USE FLEX POSTS OR SUPER CONES TO SEPARATE HEAD-TO-HEAD (TWO-LANE TWO WAY TRAFFIC). TO BE PLACED ON 1/2 DISTANCE SPACING.
- SPEED LIMIT REFERS TO THE LEGALLY ESTABLISHED SPEED LIMIT BEFORE CONSTRUCTION.
- THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE REDUCED SPEED LIMIT.
- CHANNELIZING DEVICES ON THE LANE LINE SHALL BE OF THE SAME TYPE. CHANNELIZING DEVICES IN EACH TAPER SHALL BE OF THE SAME TYPE.
- A FLAGGER SHALL BE USED TO ALERT MOTORISTS WHEN EQUIPMENT OR WORKERS ENCROACH WITHIN 2 FEET OF AN OPEN LANE. THE FLAGGER SHALL BE POSTED ADJACENT TO THE OPEN TRAFFIC LANE AND IMMEDIATELY UPSTREAM OF EACH OPERATION. ENCROACHMENT SHALL BE HELD TO A MINIMUM.
- WHEN TRAFFIC CONTROL IS PLANNED TO BE IN PLACE FOR MORE THAN 3 DAYS, CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED AND TEMPORARY MARKINGS ADDED.

- TYPE III BARRICADES SHALL BE PLACED IN THE CLOSED LANE AT A 1000' INTERVAL WHERE NO ACTIVE WORK IS ON GOING AND THE LANE MUST REMAIN CLOSED. TYPE III BARRICADES ARE ALSO REQUIRED BEFORE EACH OR GROUP OF UNFILLED HOLES OR HOLES FILLED WITH TEMPORARY MATERIAL, OR WHERE UNCURED CONCRETE EXISTS.
- ANY SIGNS IN CONFLICT WITH CONSTRUCTION SIGNING SHALL BE REMOVED OR COVERED.
- MINIMUM CONSTRUCTION SIGNING: ANY ADDITIONAL SIGNS SHOWN IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND REQUIRED BY THE PROJECT ENGINEER SHALL BE INSTALLED UNDER ITEM 713-01.
- THE "TWO-WAY TRAFFIC" SIGN SHALL BE INSTALLED IF ABOVE SETUP IS LONGER THAN 24 HOURS.
- HIGH INTENSITY FLASHING LIGHTS SHALL BE USED TO MARK THE SECOND ADVANCE WARNING SIGN (LANE CLOSED AHEAD). LOW INTENSITY FLASHING LIGHTS SHALL BE USED TO MARK ALL OTHER HAZARDS OFF THE TRAVEL WAY. STEADY BURNING LIGHTS SHALL BE USED ON ALL TRAFFIC CONTROL DEVICES USED FOR MERGING TAPER, INCLUDING THE FIRST TWO DEVICES AFTER THE TAPER ENDS. FIRST LIGHT IN A MERGING TAPER SHALL BE FLASHING.
- NEITHER WORK ACTIVITY NOR STORAGE OF EQUIPMENT, VEHICLES, OR MATERIALS SHALL OCCUR WITHIN THE BUFFER SPACE.

JANUARY 25, 2008

SHEET NUMBER 16

OUACHITA

DESIGNED BY E. COURVILLE
CHECKED BY J. COLVIN

DRAWN BY D. SOWARDS
CHECKED BY J. COLVIN

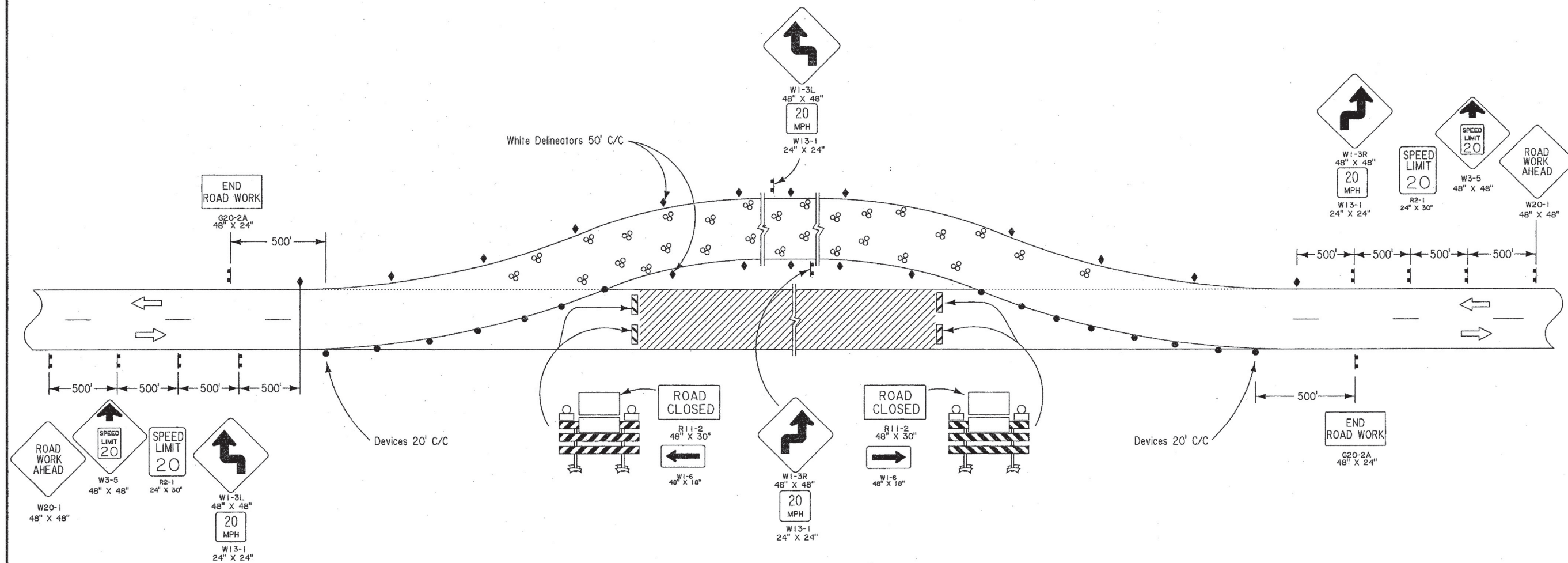
DATE 01/25/2008

PROJECT 451-06-0148

TRAFFIC CONTROL LAYOUT FOR CLOSURE OF TWO ADJACENT LANES ON FOUR-LANE UNDIVIDED HIGHWAYS

TC-12

TRAFFIC ENGINEERING

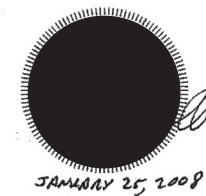


LEGEND

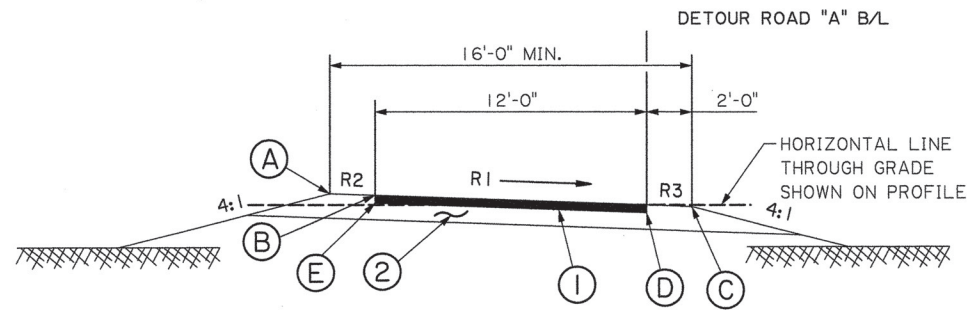
- Traffic Sign
- Channelizing Devices
- Type III Barricades
- Single White Delineators
- Type B Light
- Aggregate

NOTES

- THIS SHEET SHALL BE USED WITH THE "TEMPORARY TRAFFIC CONTROL GENERAL NOTES SHEET (TC-00)".
1. ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED.
2. ANY SIGNS IN CONFLICT WITH CONSTRUCTION SIGNING SHALL BE REMOVED OR COVERED.
3. MINIMUM CONSTRUCTION SIGNING: ANY ADDITIONAL SIGNS SHOWN IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND REQUIRED BY THE PROJECT ENGINEER SHALL BE INSTALLED UNDER ITEM 713-01.



SHEET NUMBER	17
DESIGNED	E. COURVILLE
CHECKED	J. COLVIN
DATE	01/25/2008
PROJECT	451-06-0148
PARISH	OUACHITA
FEDERAL PROJECT	
STATE PROJECT	
REVISION	
DESCRIPTION	
DATE	
NO.	
TRAFFIC CONTROL LAYOUT	TC-16
FOR AGGREGATE SURFACING ON SITE DIVERSION WITH TWO-WAY TRAFFIC	
TRAFFIC ENGINEERING	



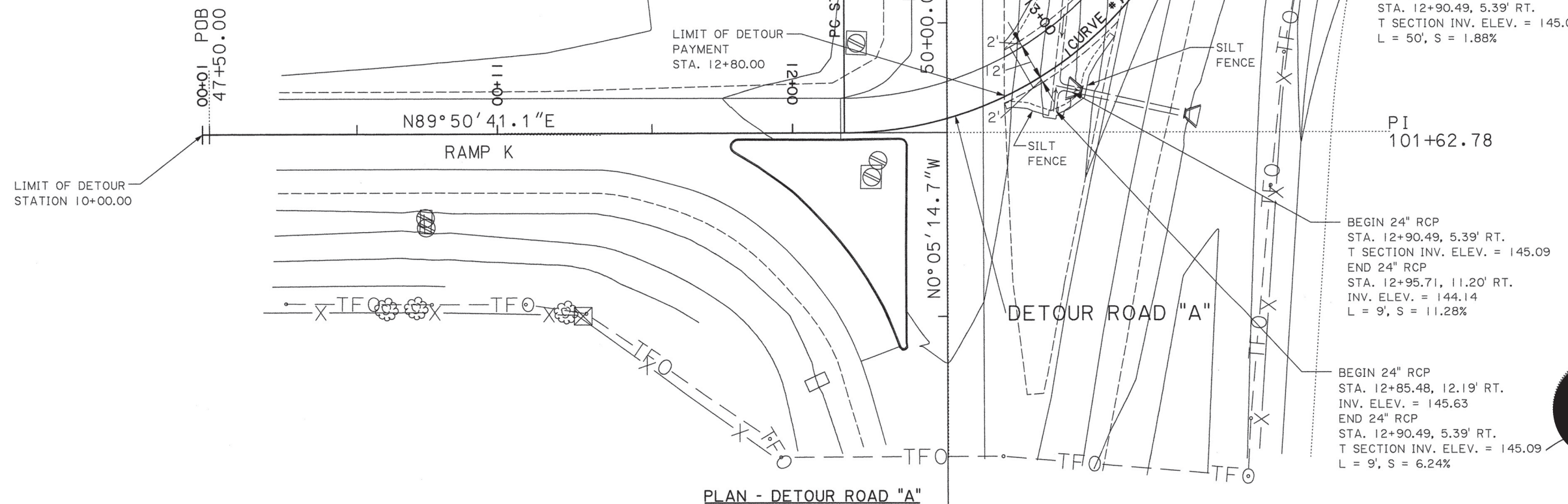
**TYPICAL SECTION
DETOUR ROAD "A"**

- ① 4" ASPHALTIC CONCRETE.
(2" WEARING COURSE) (2" BINDER COURSE)
SUPERPAVE INCIDENTAL PAVING (LEVEL A)
- ② 8 1/2" BASE COURSE CLASS II

SUPERELEVATION DETAILS (IN FEET) WITH REFERENCE TO
HORIZONTAL LINE THROUGH GRADE SHOWN ON PROFILE

STATION	R1	R2	R3	A	B	C	D	E	TRANSITION LENGTH
12+73.66	-3.43	-3.43	-3.43	0.48	0.41	-0.07	-	-	
12+81.25	-3.59	-3.59	-3.59	0.50	0.43	-0.07	-0.33	0.08	7.59 FT
13+19.77	-4.41	-4.41	-4.41	0.62	0.53	-0.09	-0.33	0.08	38.52 FT
13+23.20	-4.48	-4.48	-4.48	0.63	0.54	-0.09	-0.33	0.08	3.43 FT
13+27.09	-4.85	-4.85	-4.85	0.68	0.58	-0.10	-	0.08	3.89 FT
13+83.54	-4.79	-4.50	-5.93	0.66	0.57	-0.12	-	-	56.45 FT

NEGATIVE RATES DENOTE DOWN FROM LEFT TO RIGHT



PLAN - DETOUR ROAD "A"

CURVE #1 DATA

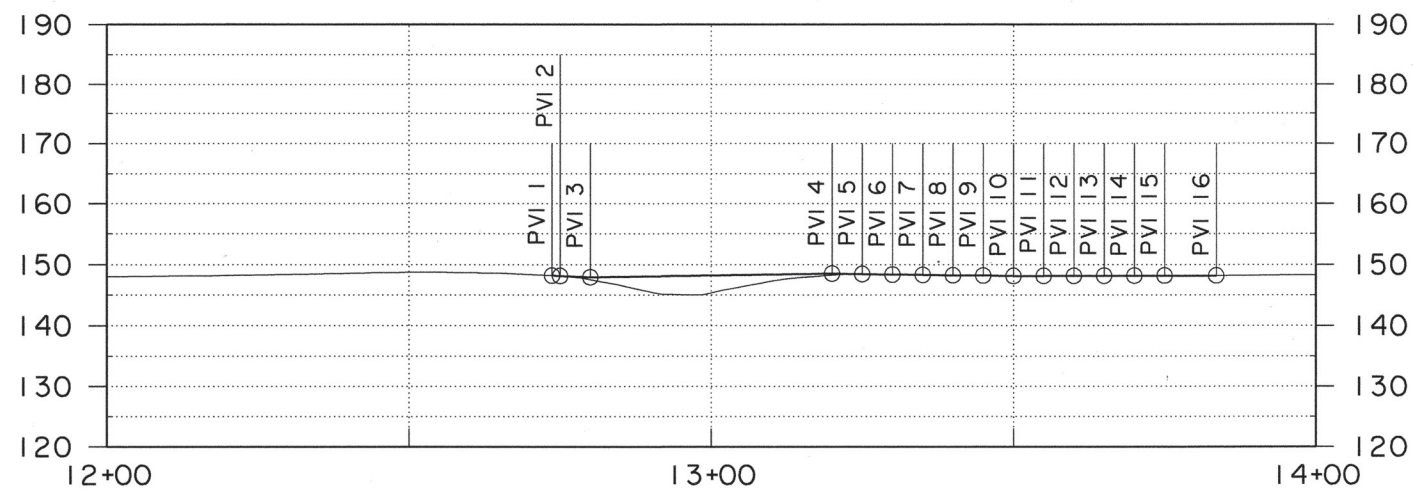
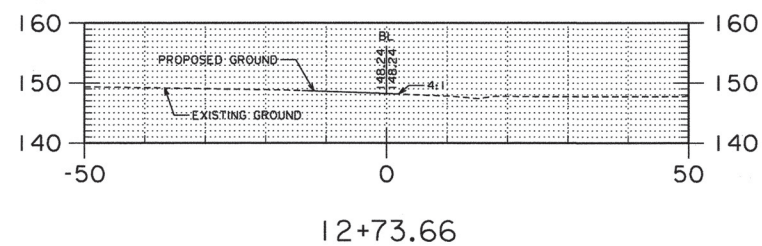
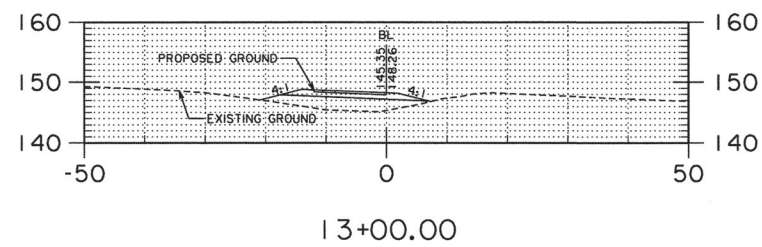
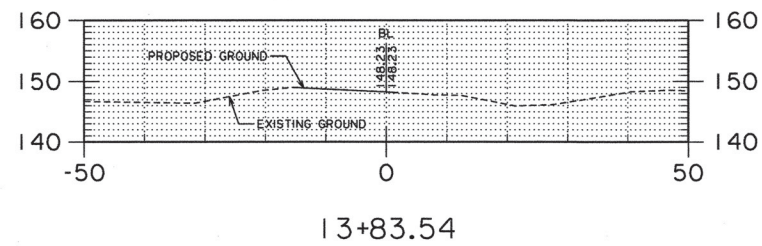
P.I. STA. 13+14.81
 $\Delta = 74^{\circ}52'29.76''$ LT.
 $D = 45^{\circ}06'53.23''$
 $T = 97.23'$
 $L = 165.97'$
 $R = 127.00'$

BEGIN 24" RCP
 STA. 13+31.24, 27.73' LT.
 INV. ELEV. = 146.02
 END 24" RCP
 STA. 12+90.49, 5.39' RT.
 T SECTION INV. ELEV. = 145.09
 $L = 50'$, $S = 1.88\%$

BEGIN 24" RCP
 STA. 12+90.49, 5.39' RT.
 T SECTION INV. ELEV. = 145.09
 END 24" RCP
 STA. 12+95.71, 11.20' RT.
 INV. ELEV. = 144.14
 $L = 9'$, $S = 11.28\%$

BEGIN 24" RCP
 STA. 12+85.48, 12.19' RT.
 INV. ELEV. = 145.63
 END 24" RCP
 STA. 12+90.49, 5.39' RT.
 T SECTION INV. ELEV. = 145.09
 $L = 9'$, $S = 6.24\%$

Scale : 1" = 20'



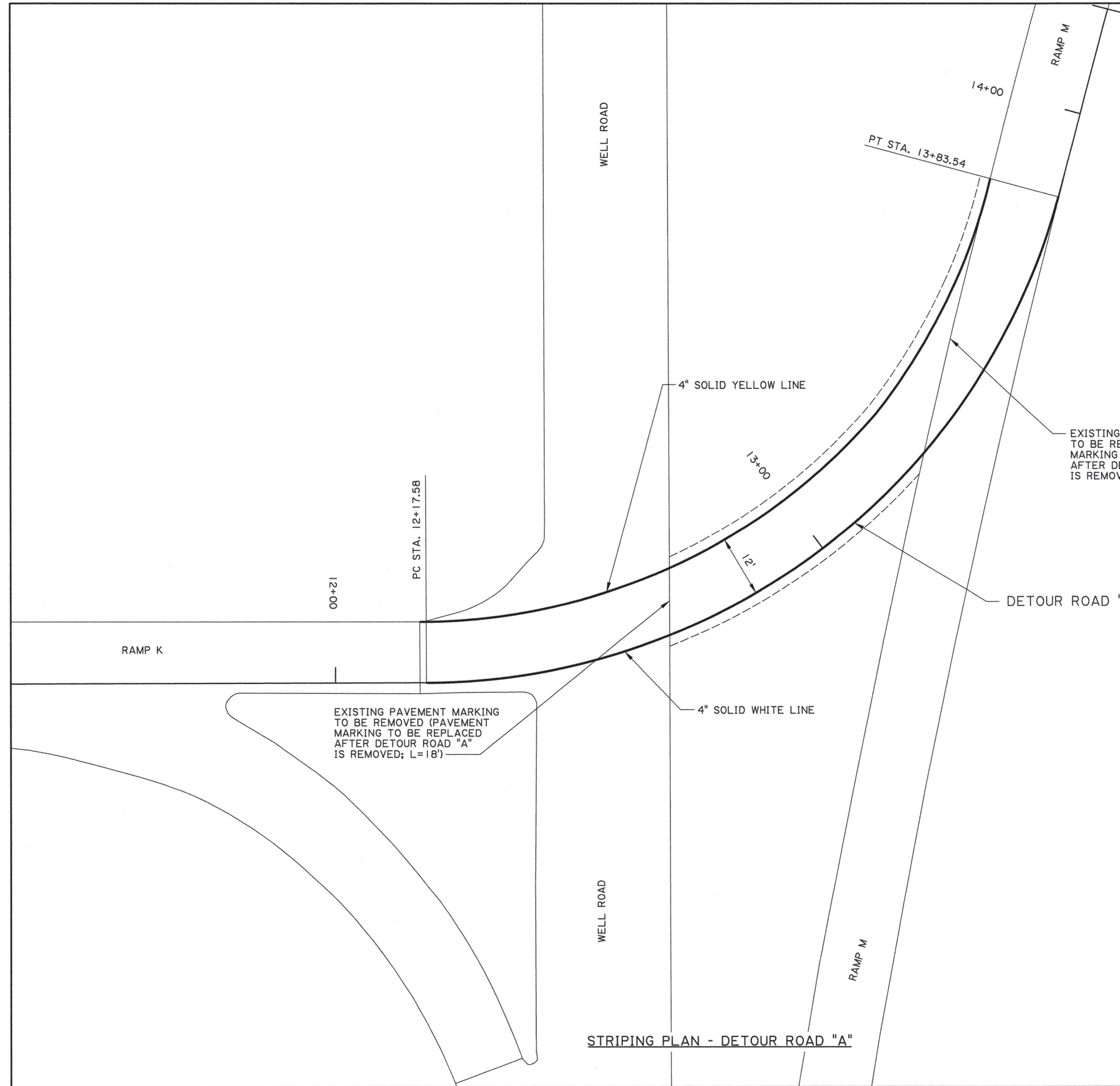
PROFILE - DETOUR ROAD "A"

BEGIN DETOUR ROAD "A"

END DETOUR ROAD "A"

POINT	STATION*	ELEVATION	SLOPE
PVI 1	12+73.66	148.24	-4.97%
PVI 2	12+75.00	148.17	-4.20%
PVI 3	12+80.00	147.96	+1.50%
PVI 4	13+20.00	148.56	-1.60%
PVI 5	13+25.00	148.48	-1.60%
PVI 6	13+30.00	148.40	-1.20%
PVI 7	13+35.00	148.34	-1.20%
PVI 8	13+40.00	148.28	-0.80%
PVI 9	13+45.00	148.24	-1.40%
PVI 10	13+50.00	148.17	+0.20%
PVI 11	13+55.00	148.18	+0.20%
PVI 12	13+60.00	148.19	+0.20%
PVI 13	13+65.00	148.20	+0.20%
PVI 14	13+70.00	148.21	+0.20%
PVI 15	13+75.00	148.22	+0.20%
PVI 16	13+83.54	148.23	+0.07%

* MEASURED ALONG RIGHT EDGE OF 12'-0" DETOUR ROAD "A"



STRIPING PLAN - DETOUR ROAD "A"

Scale : 1" = 10'

8/14/09

SHEET NUMBER		20	
PARISH		OUACHITA	
FEDERAL PROJECT		451-06-0148	
DESIGNED	ICC	DATE	08/17/09
CHECKED	TAD	SHEET	1 of 1
DETAILED	TAD	BY	
CHECKED	NS	REVISION DESCRIPTION	
NO.		DATE	
L A 3249 (WELL ROAD) BRIDGE OVER I-20		DETOUR ROAD "A" - STRIPING	

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS:

CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, OFFICE OF HIGHWAYS, STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2006, EXCEPT AS SUPPLEMENTED OR AMENDED BY THE PLANS, SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISIONS.

ELEVATIONS: ALL ELEVATIONS ARE BASED ON N.A.V.D. -88.

DIMENSIONS: ALL DIMENSIONS ARE GIVEN AT NORMAL TEMPERATURE (68°F).

DESIGN SPEED: 45 MPH.

DESIGN SPECIFICATIONS:

STRUCTURE DESIGN IS IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FOURTH EDITION, AND AS AMENDED BY THE 2008 AASHTO INTERM SPECIFICATIONS FOR BRIDGES. GEOMETRIC DESIGN IS IN ACCORDANCE WITH "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS 2004".

DESIGN CRITERIA:

THE BRIDGE IS DESIGNED FOR A FUTURE WEARING SURFACE EQUAL TO 12 PSF. LIVE LOAD SHALL BE HL-93.

CONCRETE:

BRIDGE DECK CONCRETE TO BE CLASS "AA(M)" CONCRETE. RAILING CONCRETE TO BE CLASS "AA" CONCRETE. ALL SUBSTRUCTURE CONCRETE REPAIRS TO BE CLASS "A" CONCRETE. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4" EXCEPT ALL CORNERS OF BENTS WHICH SHALL BE CHAMFERED 1 1/2" UNLESS OTHERWISE NOTED. NO DEDUCTIONS ARE TO BE MADE IN CONCRETE QUANTITIES FOR CHAMFERS 1 1/2" OR LESS. CONCRETE AND STEEL IN CONCRETE RAILING TO BE PAID FOR PER LINEAR FOOT OF CONCRETE RAILING INCLUDING NO. 5 BARS THAT PROJECT INTO RAILING.

FINISH OF CONCRETE:

SURFACE SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 805.13 "CONCRETE SURFACE FINISHES" OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.

YEAR PLATE:

DATE OF CONSTRUCTION IS REQUIRED AT EACH END OF BRIDGE FOR ONCOMING TRAFFIC LANES. IF THE EXISTING YEAR PLATE IS LOCATED WITHIN CONCRETE MARKED FOR REMOVAL, THE ORIGINAL YEAR OF CONSTRUCTION SHALL BE PLACED ON THE CAP EXTENSION AT EACH END OF THE BRIDGE. SEE STANDARD DETAIL YP-01.

PAVEMENT MARKINGS:

PAVEMENT MARKINGS AND MARKERS SHALL CONFORM TO LADOTD STANDARD PLAN PM-01. THE LOUISIANA STANDARD SPECIFICATIONS FOR ROAD AND BRIDGES, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

DRILLED SHAFTS:

DRILLED SHAFTS SIZE, TYPE, LENGTH, AND MAXIMUM DESIGN LOAD SHALL BE DESCRIBED IN THE PLANS AND PROJECT SPECIFICATIONS. ALL EXCAVATION OR FILL SHALL BE COMPLETE PRIOR TO THE INSTALLATION OF DRILLED SHAFTS AFFECTED.

STRUCTURAL METALWORK:

UNLESS INDICATED IN THE PLANS, ALL STRUCTURAL STEEL SHALL BE HIGH STRENGTH LOW-ALLOY STEEL IN ACCORDANCE WITH ASTM A709, GRADE 50W. ALL STEEL SHALL BE POSITIONED IN THE MEMBERS SO AS TO PLACE THE DIRECTION OF FINISH ROLLING PARALLEL TO THE DIRECTION OF PRIMARY STRESS. THE ENDS OF THE WEATHERING STEEL BEAMS SHALL BE PAINTED IN ACCORDANCE WITH SECTION 807.52(D) OF THE STANDARD SPECIFICATIONS EXCEPT FOR SURFACES IN CONTACT WITH THE CONCRETE DECK INCLUDING THE TOP SURFACE OF THE TOP FLANGE AND THE OUTSIDE EDGE OF THE TOP FLANGE OF THE EXTERIOR BEAMS. ALL OTHER EXPOSED SURFACES SHALL BE PREPARED IN ACCORDANCE WITH SECTION 807.52(D). PAYMENT FOR STRUCTURAL STEEL IS MADE UNDER ITEM 807-08-00100, STRUCTURAL METALWORK, PER LUMP SUM.

CONSTRUCTION JOINT:

WHERE CONSTRUCTION JOINTS ARE USED, NOT LESS THAN (7) SEVEN DAYS SHALL HAVE ELAPSED BETWEEN ADJACENT POURS. THE VERTICAL SURFACES OF THE CONSTRUCTION JOINTS BETWEEN ADJACENT POURS SHALL BE COATED PRIOR TO SUCCEEDING POURS WITH A TYPE II EPOXY RESIN SYSTEM IN ACCORDANCE WITH SUBSECTION 805.06(B)(2) OF THE STANDARD SPECIFICATIONS. EPOXY IS TO BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. NO DIRECT PAYMENT FOR THIS WORK.

CONCRETE BONDING:

WHERE NEW CONCRETE IS TO BE BONDED TO EXISTING CONCRETE SURFACES, THE CONTRACTOR SHALL COAT THE EXISTING CONCRETE SURFACE WITH A TYPE II EPOXY RESIN SYSTEM IN ACCORDANCE WITH SUBSECTION 805.06(B)(2) OF THE STANDARD SPECIFICATIONS PRIOR TO PLACING OF NEW CONCRETE. (NO DIRECT PAYMENT). AFTER POURING THE ENTIRE DECK, A MINIMUM OF THREE (3) DAYS MUST ELAPSE (OR CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 1600 PSI BEFORE PLACEMENT OF REINFORCING STEEL AND FORMS FOR BARRIER RAILING). THE SLAB SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3200 PSI BEFORE POURING THE BARRIER RAILING.

CONCRETE REMOVAL:

EXISTING CONCRETE TO BE REMOVED SHALL BE DESIGNATED IN THE PLANS. WHERE CONCRETE IS DESIGNATED TO BE REMOVED, A 1 IN. DEEP SAW CUT SHALL BE MADE ALONG THE FACE OF THE CONCRETE AROUND THE PERIMETER OF THE REMOVAL AREA. ALL EXISTING CONCRETE REMOVED FROM THE BRIDGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY.

EPOXY APPLICATION:

AN EPOXY RESIN SYSTEM FROM THE APPROVED QUALIFIED PRODUCTS LIST NO. 32 SHALL BE USED TO BOND THE NEW CONCRETE TO THE EXISTING CONCRETE. EPOXY SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

GALVANIZED STEEL:

ALL MISCELLANEOUS HARDWARE WHICH IS SPECIFIED TO BE GALVANIZED SHALL BE COATED IN ACCORDANCE WITH ASTM A153. ALL STRUCTURAL STEEL SHAPES WHICH ARE SPECIFIED TO BE GALVANIZED SHALL BE COATED IN CONFORMANCE WITH ASTM A123 AFTER FABRICATION. DAMAGED GALVANIZED COATS THAT ARE NOT TO BE EMBEDDED IN MORE THAN THREE INCHES OF CONCRETE SHALL BE REPAIRED WITH AN APPROVED COLD APPLIED, ZINC RICH, ORGANIC PAINT FROM THE APPROVED QUALIFIED PRODUCTS LIST OR ANY APPROVED METHOD OF REPAIR.

REINFORCING STEEL:

DIMENSIONS RELATING TO REINFORCING STEEL FABRICATION ARE OUT TO OUT OF BAR UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO REINFORCING STEEL SPACING ARE CENTER TO CENTER OF BAR. THE MINIMUM COVERING FROM THE SURFACE OF THE CONCRETE TO THE FACE OF ANY DEFORMED REINFORCING BAR SHALL NOT BE LESS THAN THE FOLLOWING:

TOP OF SLAB = 2", BOTTOM OF SLAB = 1"

ALL OTHER REINFORCING STEEL COVER SHALL BE 2" UNLESS OTHERWISE NOTED IN THE PLANS. SEE STANDARD PLANS SWBS-100 FOR BAR SUPPORTS FOR REINFORCING STEEL. ALL REINFORCING STEEL SHALL BE GRADE 60 STEEL. THE FIRST DIGIT OF REINFORCING BAR NUMBER INDICATES BAR SIZE.

ALL DECK REINFORCING STEEL TO BE EPOXY-COATED AS INDICATED IN THE PLANS/DETAILS. WHEN EPOXY-COATED REINFORCING STEEL IS SPECIFIED, ALL BAR SUPPORTS AND TIE WIRE IN CONTACT WITH THE EPOXY-COATED REBAR SHALL BE NON-CORROSIVE AND NON-CONDUCTIVE.

WELDING:

WELDING SHALL CONFORM TO SECTION 815 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES.

GALVANIZED STAY-IN-PLACE METAL FORMS:

THE CONTRACTOR WILL BE ALLOWED TO USE GALVANIZED STAY-IN-PLACE METAL FORMS PROVIDED THE USE OF THE FORMS DOES NOT ADD WEIGHT OR THICKNESS TO THE CONCRETE DECK. THE STAY-IN-PLACE FORMS SHALL CONFORM TO ASTM A653 (TABLE 1) DESIGNATION G165.

BOLTED CONNECTIONS:

ALL FIELD CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS IN ACCORDANCE WITH ASTM A325, TYPE 3. BOLT SPACING SHALL BE IN ACCORDANCE WITH DESIGN DRAWINGS, SHOP DRAWINGS AND THE REQUIREMENTS OF DESIGN SPECIFICATIONS. BOLTED CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH STRENGTH BOLTS UNLESS NOTED OTHERWISE. TYPE 3 DIRECT TENSION INDICATOR (DTI) WASHERS ARE USED IN HIGH STRENGTH CONNECTIONS FOR TENSION VERIFICATION. ONE WASHER WILL BE REQUIRED BENEATH THE TURNED ELEMENT. BOLTED CONNECTIONS ARE DESIGNED AS FRICTION TYPE.

CHARPY V-NOTCH TESTING:

STRUCTURAL MEMBERS DESCRIBED BELOW ARE DESIGNED AS PRIMARY MEMBERS AND SHALL MEET THE REQUIREMENTS OF THE V-NOTCH TEST DESCRIBED IN SUBSECTION 1013.01 OF THE STANDARD SPECIFICATIONS.

TENSION FLANGES & WEBS OF NEW BEAMS.

ANCHOR BOLTS:

ALL ANCHOR BOLTS, NUTS AND WASHERS SHALL BE STRUCTURAL STEEL (A36) OR (A307) HOT DIPPED GALVANIZED, EXCEPT AS SHOWN ON THE PLANS. ANCHOR BOLTS SHALL BE DRILLED AND SET PER SECTION 805.15 OF THE STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH A CONCRETE ANCHOR SYSTEM FROM THE APPROVED QUALIFIED PRODUCT LIST NO. 40.

REMOVAL OF EXISTING SUPERSTRUCTURE:

THE EXISTING SUPERSTRUCTURE TO BE REMOVED UNDER ITEM 202-02-04120, PER SQUARE FOOT, INCLUDES THE FOLLOWING STRUCTURE:

STRUCTURE NUMBER 05374510613171

THE EXISTING 260' SUPERSTRUCTURE CONSISTS OF A COMPOSITE STEEL GIRDER BRIDGE ON LOW-RISE STEEL BEARINGS WITH OUT-TO-OUT WIDTH OF 33'-6". AS-BUILT PLANS OF THE EXISTING BRIDGE ARE INCLUDED FOR INFORMATIONAL PURPOSES ONLY.

THE CONTRACTOR IS TO REMOVE ALL PARTS OF THE EXISTING SUPERSTRUCTURE INCLUDING THE BRIDGE DECK, RAIL, GIRDERS, AND BEARINGS AS STIPULATED IN THE CONSTRUCTION SPECIFICATIONS AND PLANS. THE EXISTING ANCHOR BOLTS ARE TO BE BURNED OFF FLUSH WITH THE SURFACE OF THE EXISTING SUBSTRUCTURE UNITS.

THE EXISTING SIGN STRUCTURE LOCATED ON THE WEST FACE OF THE EXISTING SUPERSTRUCTURE IS TO BE REMOVED AND THE SIGN SHALL BE MOUNTED ON NEW MOUNTING BRACKETS ON THE NEW SUPERSTRUCTURE ACCORDING TO THE CONTRACT DOCUMENTS.

SALVAGE:

THE CONTRACTOR SHALL SALVAGE REMOVED GUARD RAIL AS SHOWN ON THE PLANS AND DELIVER TO THE LADOTD DISTRICT 05 AS DIRECTED BY THE ENGINEER. ALL OTHER REMOVED MATERIAL NOT MARKED FOR RE-USE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF BY THE CONTRACTOR OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY.

BRIDGE INDEX

SHEET NUMBER

DESCRIPTION

101	GENERAL NOTES & BRIDGE INDEX
102	SUMMARY OF ESTIMATED BRIDGE QUANTITIES
103	GENERAL PLAN
104	CONSTRUCTION NOTES AND PROCEDURES
105	CONSTRUCTION DETAILS
106	BEARING SEAT REHABILITATION DETAILS
107	SUBSTRUCTURE CONCRETE REPAIRS
108	CAP EXTENSION DETAILS
109	DRILLED SHAFT DETAILS
110	COLLISION WALL DETAILS
111	PIER PROTECTION RECONSTRUCTION
112	FRAMING PLAN
113	BEAM DETAILS - SPAN NO. 1
114	BEAM DETAILS - SPAN NO. 2
115	BEAM DETAILS - SPAN NO. 3
116	BEAM DETAILS - SPAN NO. 4
117	BEARING LAYOUT
118	BEARING DETAILS
119	DECK DETAILS - SPAN NO. 1
120	DECK DETAILS - SPAN NO. 2
121	DECK DETAILS - SPAN NO. 3
122	DECK DETAILS - SPAN NO. 4
123	MISCELLANEOUS DECK DETAILS
124	DRAINAGE DETAILS
125	EXPANSION JOINT SEAL DETAILS
126	BR-01
127	CR-01
128-129	SSJ-4
130	YP-01
131-132	TRAFFIC SIGNS (SHEETS 19 & 20)
133	BRIDGE BORINGS
134	TEMPORARY PRECAST BARRIER
TOTAL NUMBER OF SHEETS IN BRIDGE PLANS = 34	

THE CONTRACTOR IS HEREBY WARNED THAT THE PAINT COATING OF THE EXISTING STRUCTURE CONTAINS LEAD. ACCORDINGLY, THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS, AMONG WHICH ARE OSHA "LEAD EXPOSURE IN CONSTRUCTION" CFRI926.62, THE EPA CLEAN AIR ACT, THE EPA CLEAN WATER ACT, AND THE RESOURCE CONSERVATION AND RECOVERY ACT. SEE SECTION 202.05(F) OF THE STANDARD SPECIFICATIONS FOR REQUIRED CONTRACTOR SUBMITTALS REGARDING THE TRANSPORTATION AND RECYCLING OF STEEL MEMBERS COATED WITH LEAD PAINT.

MAINTENANCE OF TRAFFIC:

BOTH LANES OF TRAFFIC MUST BE MAINTAINED ON THE BRIDGE DURING CONSTRUCTION EXCEPT AS NOTED WITHIN THE CONTRACT DOCUMENTS. THE NEW SUPERSTRUCTURE IS TO BE PRE-ASSEMBLED AT THE DESIGNATED STAGING LOCATIONS. THE EXISTING SUPERSTRUCTURE IS TO BE ROLLED OFF ALIGNMENT AND THE NEW SUPERSTRUCTURE ROLLED INTO PLACE DURING THE APPROVED CLOSURE. THE USE OF SELF PROPELLED MODULAR TRANSPORTERS IS THE RECOMMENDED METHOD OF TRANSPORTION.

TRAFFIC ON EASTBOUND AND WESTBOUND I-20 MUST BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION AS SHOWN ON THE PLANS.

THE CONTRACTOR SHALL SELECT ONE OF THE FOLLOWING BRIDGE CLOSURES WITH STATED TIME LIMITATIONS AND SUBMIT AS PART OF THE MOVEMENT PLAN, AS DISCUSSED ON SHEET NO. 104, TO THE DEPARTMENT FOR APPROVAL.

- WELL ROAD WOULD BE CLOSED TO TRAFFIC FOR FOUR CONSECUTIVE NIGHTS, MONDAY THRU THURSDAY, TO ACCOMMODATE ONE SPAN REPLACEMENT PER NIGHT. THE CLOSURE WOULD BEGIN AT 7:00 PM AND THE BRIDGE WOULD BE REOPENED TO TRAFFIC AT 7:00 AM. THIS OPTION WOULD REQUIRE THE CONTRACTOR TO PROTECT THE BRIDGE JOINTS OF THE REPLACED SPANS ADJACENT TO EXISTING SPANS WHICH WOULD BE SUBJECTED TO TRAFFIC PRIOR TO THE EXPANSION JOINT PLACEMENT AND PLACE TEMPORARY ASPHALT RAMPS ON THE ADJACENT EXISTING SPANS TO ACCOMMODATE THE NEW PROFILE GRADE. JOINT PROTECTION WOULD BE DESIGNED AND DETAILED BY A LICENSED PROFESSIONAL ENGINEER AND WOULD BE INCLUDED IN THE MOVEMENT PLAN. TEMPORARY ASPHALT RAMPS WOULD BE AS DIRECTED BY THE ENGINEER AND INCLUDED IN THE MOVEMENT PLAN.
- WELL ROAD WOULD BE CLOSED TO TRAFFIC OVER A WEEKEND PERIOD TO ACCOMMODATE THE COMPLETE SUPERSTRUCTURE REPLACEMENT. THE CLOSURE WOULD BEGIN AT 7:00 PM ON A FRIDAY AND THE BRIDGE WOULD BE REOPENED TO TRAFFIC AT 7:00 AM THE FOLLOWING MONDAY.

SHEET NUMBER	101
PARISH	OUACHITA
FEDERAL PROJECT	
STATE PROJECT	451-06-0148
DESIGNED	RLM
CHECKED	CDB
DETAILED	AEC
CHECKED	RLM
DATE	08/17/09
SHEET	1 of 1
BY	M&M
REVISION INDEX	
DATE	11/16/09
NO.	6
LA 3249 (WELL ROAD) BRIDGE OVER I-20	
GENERAL NOTES & BRIDGE INDEX	
DOTA	
MOD/ESK/M/MASTERS	

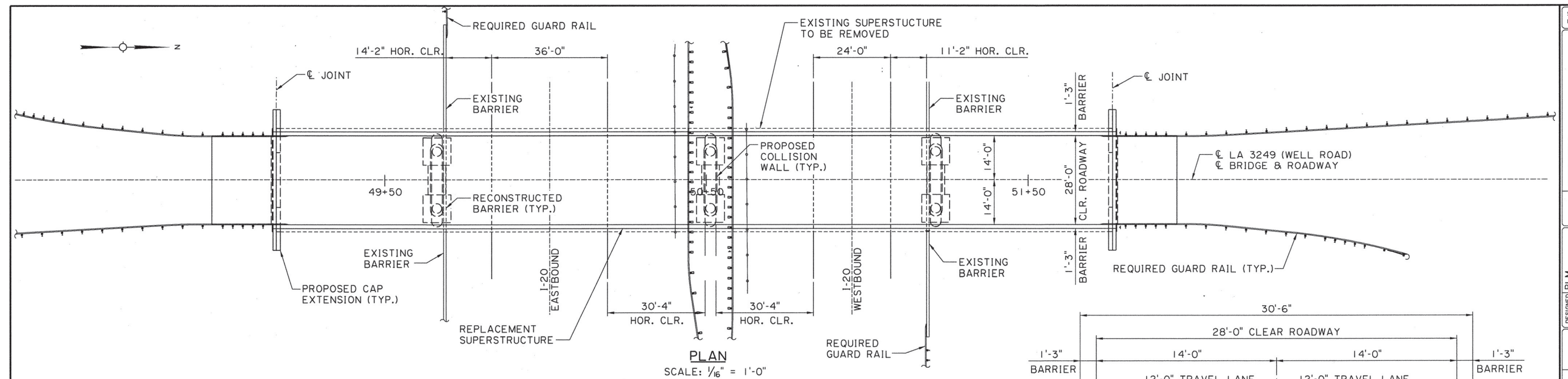
SUMMARY OF ESTIMATED BRIDGE QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
202-01-00100	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP SUM	LUMP
202-02-02020	REMOVAL OF ASPHALT PAVEMENT	SQUARE YARD	3.1
202-02-04120	REMOVAL OF BRIDGE SUPERSTRUCTURE (STEEL GIRDER SPAN)	SQUARE FOOT	8,710
202-02-38400	REMOVAL OF STRUCTURAL CONCRETE	LUMP SUM	LUMP
* 502-02-00100	SUPERPAVE ASPHALTIC CONCRETE	CUBIC YARD	1
* 509-01-00100	COLD PLANING ASPHALTIC PAVEMENT	SQUARE YARD	4
727-01-00100	MOBILIZATION	LUMP SUM	LUMP
729-13-00100	MOUNTING (BRIDGE FASCIA MOUNTED)	EACH	1
731-02-00100	REFLECTORIZED RAISED PAVEMENT MARKERS	EACH	19
732-02-02000	PLASTIC PAVEMENT STRIPING (SOLID LINE) (4" WIDTH) (THERMOPLASTIC 90 MIL)	MILE	0.199
802-01-00100	STRUCTURAL EXCAVATION	CUBIC YARD	29.4
802-02-00100	STRUCTURAL EXCAVATION FOR INTERMEDIATE BENTS	CUBIC YARD	56.1
805-01-00100	CLASS A CONCRETE	CUBIC YARD	99.07
805-01-00500	CLASS A CONCRETE (FOOTINGS)	CUBIC YARD	12.63
805-04-00100	CLASS AA(M) CONCRETE	CUBIC YARD	204.52
805-11-00100	STRIP SEAL JOINTS	LINEAR FOOT	84.00
806-01-00100	DEFORMED REINFORCING STEEL	POUND	5,290
806-02-00100	DEFORMED REINFORCING STEEL (EPOXY COATED)	POUND	64,744
⊗ 807-08-00100	STRUCTURAL METALWORK	LUMP SUM	LUMP
810-01-00100	CONCRETE RAILING (STANDARD BARRIER)	LINEAR FOOT	518.52
814-01-00400	DRILLED SHAFT (36" DIAMETER)	LINEAR FOOT	280.0
NS-602-00005	BENT PATCHING	SQUARE FOOT	10.0
NS-800-00120	PIER PROTECTION SYSTEM (STATION 49+66.30)	EACH	1
NS-800-00120	PIER PROTECTION SYSTEM (STATION 51+21.30)	EACH	1
NS-805-00002	JOINT REPAIRS (POLYMER CONCRETE)	LINEAR FOOT	56
NS-805-00005	JOINT SEALING SYSTEM (PREFORMED SILICONE)	LINEAR FOOT	56.00
1 NS-800-00001	SPAN MOVEMENT	EACH	8

⊗ STRUCTURAL METALWORK (FOR ESTIMATION PURPOSES ONLY.) = 186,960 LBS. (GR50W), 5,610 LBS. (GR 36), 1,020 LBS. (STAINLESS STEEL)

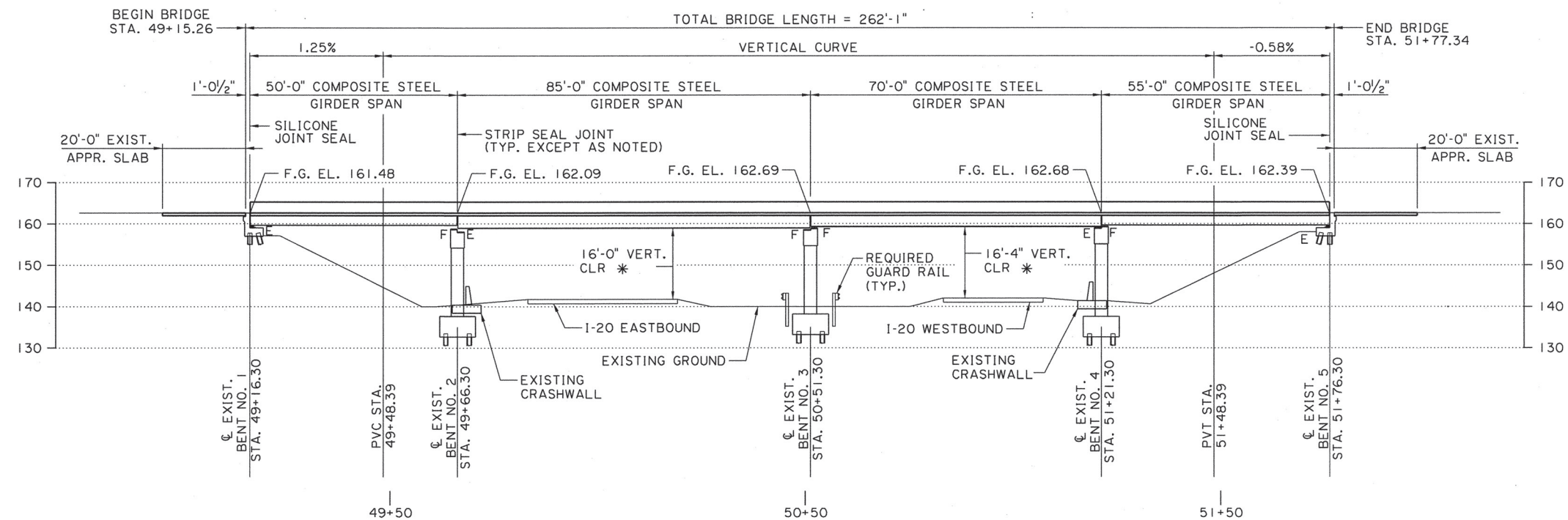
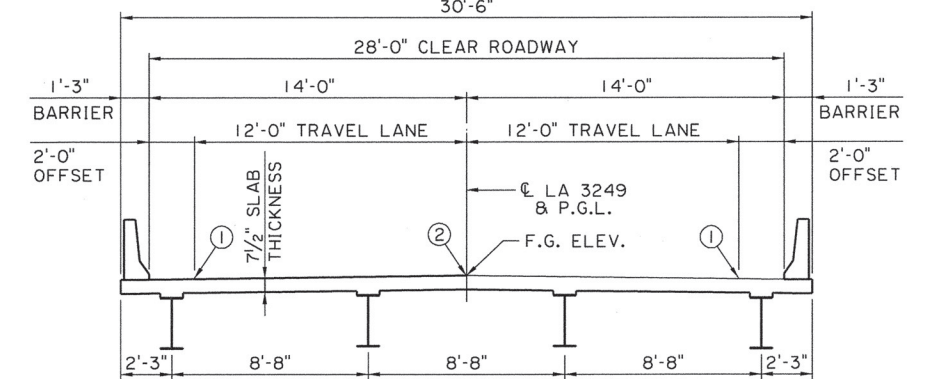
* SUPERPAVE ASPHALTIC CONCRETE AND COLD PLANING ASPHALTIC PAVEMENT ARE SHOWN FOR CONTINGENCY PURPOSES ONLY. THIS WORK MAY BE REQUIRED TO PROVIDE A SMOOTH TRANSITION FROM THE APPROACH TO THE BRIDGE. SHIMS ARE TO BE PROVIDED WITH THE BRIDGE BEARINGS WHICH WILL ALLOW THE CONTRACTOR TO MAKE VERTICAL ADJUSTMENTS TO THE STRUCTURE; THEREFORE, MINIMAL WORK, IF ANY, WOULD BE REQUIRED ON THE APPROACHES. ANY WORK PERFORMED ON THE APPROACHES MUST HAVE PRIOR APPROVAL BY THE ENGINEER. THIS WORK WILL BE MEASURED FOR PAYMENT IN PLACE AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE.

SHEET NUMBER		102	
QUACHITA		PARISH	
DESIGNED RLM		FEDERAL PROJECT	
CHECKED CDB		STATE PROJECT	
DATE		08/17/09	
SHEET		1 of 1	
H.G.		BY	
REVISED ITEM NUMBER		REVISION DESCRIPTION	
9/15/09		DATE	
NO.		1	
			
LA 3249 (WELL ROAD) BRIDGE OVER I-20			
SUMMARY OF ESTIMATED BRIDGE QUANTITIES			
			
MODJESKI+MASTERS			



NOTE:

IN PLACE TO BE REMOVED: STR. NO. 05374510613171, SUPERSTRUCTURE ONLY
STATION 49+15.26 TO STATION 51+77.34
33.5' WIDE COMPOSITE STEEL GIRDER SUPERSTRUCTURE.



LEGEND

- ① - 4" SOLID WHITE EDGE LINE
- ② - 4" SOLID DOUBLE YELLOW LINE WITH REFLECTORIZED MARKERS (SEE STD. PLAN PM-01)

VERTICAL CURVE INFO.

LENGTH = 200 FT.
PVI STA. = 50+48.39
PVI ELEV. = 163.16
G1 = 1.25%
G2 = -0.58%

* PROPOSED CLEARANCE PROJECTED FROM FIELD MEASUREMENTS TAKEN BY LADOT DISTRICT 05. ACTUAL CLEARANCE TO BE CONFIRMED BY THE CONTRACTOR DURING CONSTRUCTION. MINIMUM CLEARANCE OF 16'-0" MUST BE MAINTAINED OVER I-20. UTILIZE BEARING SHIM PACKS AS REQUIRED TO MEET THE CLEARANCE REQUIREMENT.

NOTES:
FOR GUARD RAIL DETAILS,
SEE SHEET NO. 4.

CONSTRUCTION NOTES AND PROCEDURES

SEQUENCE OF CONSTRUCTION:

THE SUPERSTRUCTURE SHALL BE REMOVED AND REPLACED USING ACCELERATED BRIDGE CONSTRUCTION METHODS. THE NEW SPANS ARE TO BE PRE-ASSEMBLED AT DESIGNATED BRIDGE STAGING AREAS NEAR THE STRUCTURE. WITHIN THE APPROVED CLOSURE FOR LA 3249, THE EXISTING SUPERSTRUCTURE IS TO BE REMOVED, THE NEW SPANS ARE TO BE MOVED INTO PLACE, THE SUPERSTRUCTURE IS TO BE COMPLETED, AND THE STRUCTURE SHALL BE OPENED TO TRAFFIC. SEE THE GENERAL NOTES AND CONSTRUCTION SIGNING SHEETS FOR ADDITIONAL INFORMATION REGARDING THE BRIDGE CLOSURE, TRAFFIC DETOURS, AND TIME LIMITATIONS.

THE SEQUENCE OF CONSTRUCTION IS AS FOLLOWS:

1. PREPARE THE BRIDGE STAGING AREA FOR CONSTRUCTION. REMOVAL OF TREES SHALL BE ON AN AS NEEDED BASIS AS APPROVED BY THE PROJECT ENGINEER.
2. CONSTRUCT THE NEW SPANS AT THE BRIDGE STAGING AREA AND COMPLETE ALL SUBSTRUCTURE REPAIRS AND MODIFICATIONS.
3. PREPARE THE PATHS OF TRAVEL FOR SPAN MOVEMENT, WHICH MAY INCLUDE GROUND COMPACTION, TEMPORARY PAVEMENT, AND STEEL PLATES.
4. REMOVE THE EXISTING SUPERSTRUCTURE AND BEARINGS.
5. INSTALL NEW BEARINGS.
6. MOVE PRE-ASSEMBLED SPANS INTO PLACE.
7. INSTALL EXPANSION JOINTS.
8. DISPOSE OF EXISTING SUPERSTRUCTURE AS DIRECTED BY THE ENGINEER.
9. RESTORE BRIDGE STAGING AREAS AND TRAVEL PATHS TO ORIGINAL CONDITION, EXCLUDING TREES. THE GRADED LOCATIONS SHALL BE SEEDED ACCORDING TO SECTION 739 OF THE STANDARD SPECIFICATIONS. THIS IS INCIDENTAL TO THE SPAN MOVEMENT AND IS NOT PAID FOR SEPARATELY.

NOTE: IF DAMAGE HAS OCCURRED TO THE NEW SPANS OR EXISTING SUBSTRUCTURE DURING MOVEMENT AND INSTALLATION, THE CONTRACTOR'S LICENSED PROFESSIONAL ENGINEER SHALL SUBMIT A REPORT OF FINDINGS AND PROPOSED SOLUTIONS TO THE DEPARTMENT FOR APPROVAL.

GENERAL NOTES:

THE DEPARTMENT HAS PRE-APPROVED FOUR (4) BRIDGE STAGING AREAS AS SHOWN IN THE PLAN VIEW FOR USE BY THE CONTRACTOR. THE CONTRACTOR IS UNDER NO OBLIGATION TO USE THESE LOCATIONS AND MAY SUGGEST AN ALTERNATE BRIDGE STAGING LOCATION AT NO ADDITIONAL COST TO THE DEPARTMENT.

THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER LICENSED WITH THE STATE OF LOUISIANA, SPECIALIZING IN GEOTECHNICAL ENGINEERING, TO ASSESS THE GROUND STABILITY OF THE BRIDGE STAGING AREAS AND THE PATHS OF TRAVEL.

THE CONTRACTOR SHALL RETAIN A PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER LICENSED WITH THE STATE OF LOUISIANA TO DESIGN, SEAL, AND MONITOR ALL STRUCTURAL ASPECTS OF THE ACCELERATED CONSTRUCTION PROCEDURES PERFORMED BY THE CONTRACTOR.

REQUIRED STRENGTHENING TO THE SUPERSTRUCTURE DUE TO CONSTRUCTION LOADS SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FOURTH EDITION, AND AS AMENDED BY THE 2008 AASHTO INTERIM SPECIFICATIONS. THE TEMPORARY SUPPORTS AND FOUNDATIONS SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO GUIDE DESIGN SPECIFICATIONS FOR BRIDGE TEMPORARY WORKS, FIRST EDITION, AND AS AMENDED BY THE 2008 AASHTO INTERIM SPECIFICATIONS.

THE SPANS SHALL BE CONSTRUCTED IN THE BRIDGE STAGING AREAS TO MATCH THE RELATIVE GRADE OF THE FINAL SPAN POSITIONS. THE SPANS SHALL NOT BE TILTED DURING CONSTRUCTION OR TRANSPORT.

BRIDGE STAGING AREAS AND PATHS OF TRAVEL SHALL BE RETURNED TO THEIR ORIGINAL CONDITION AFTER THE COMPLETION OF THE SUPERSTRUCTURE REPLACEMENT.

GEOTECHNICAL ENGINEER ROLE AND RESPONSIBILITIES:

THE GEOTECHNICAL ENGINEER SHALL EVALUATE THE EXISTING SOIL CONDITIONS FOR ADEQUATE BEARING OF THE BRIDGE STAGING AREAS AND THE PATHS OF TRAVEL. THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CONTRACTOR WITH A GROUND IMPROVEMENT PLAN AS NECESSARY.

THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CONTRACTOR WITH THE NECESSARY GEOTECHNICAL INFORMATION AND RECOMMENDATIONS REQUIRED TO DESIGN AND DETAIL THE TEMPORARY SUPPORTS AND FOUNDATIONS NEEDED TO CONSTRUCT THE NEW SPANS IN THE BRIDGE STAGING AREAS. THIS INFORMATION WILL INCLUDE AN EVALUATION OF SETTLEMENT OF THE TEMPORARY SUPPORTS AND FOUNDATIONS.

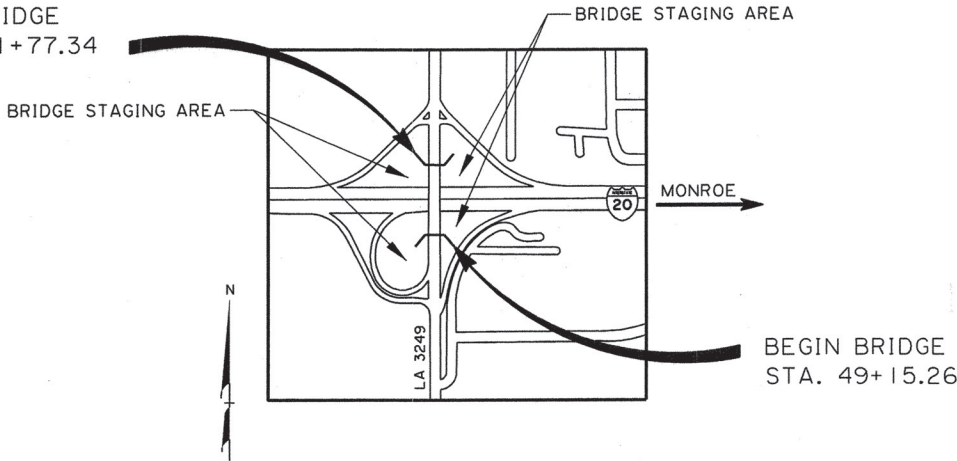
THE GEOTECHNICAL ENGINEER SHALL PERFORM SETTLEMENT MONITORING THROUGHOUT THE VARIOUS PHASES OF CONSTRUCTION.

LICENSED PROFESSIONAL ENGINEER ROLE AND RESPONSIBILITIES:

THE LICENSED PROFESSIONAL ENGINEER SHALL PREPARE, AT A MINIMUM, THE FOLLOWING REQUIRED SUBMISSIONS FOR REVIEW BY THE DEPARTMENT.

1. DESIGN AND DETAIL THE TEMPORARY SUPPORTS AND FOUNDATIONS FOR SPAN CONSTRUCTION IN THE BRIDGE STAGING AREAS.
2. EVALUATE AND DESIGN/DETAIL ANY NECESSARY STRENGTHENING TO THE PROPOSED SPANS DUE TO ADDED WEIGHT, STRESSES, AND DEFLECTIONS DURING LIFTING AND MOVEMENT, INCLUDING BUT NOT LIMITED TO NEGATIVE MOMENT REINFORCEMENT IN THE DECK, TEMPORARY BEARING STIFFENERS, DIAPHRAGMS AT THE LIFT POINTS, ADDITIONAL DIAPHRAGMS REQUIRED FOR TORSIONAL STABILITY DURING MOVEMENT, AND ADDITIONAL BARRIER JOINTS REQUIRED TO PREVENT BARRIER CRACKING DURING MOVEMENT.
3. ASSESS THE CONDITION OF THE EXISTING STRUCTURE AND EVALUATE THE STRENGTH AND STABILITY OF THE EXISTING STRUCTURE DURING SPAN DEMOLITION AND REPLACEMENT IF THE CONTRACTOR'S PROPOSED ACCELERATED BRIDGE CONSTRUCTION PLAN UTILIZES THE EXISTING STRUCTURE.
4. COMPUTE DEFLECTIONS/CAMBERS BEFORE AND AFTER LIFT TO VALIDATE SELECTED LIFT HEIGHTS.
5. MONITOR GEOMETRIC DISTORTION DURING MOVEMENT AND PLACEMENT. SEE CONSTRUCTION NOTES REGARDING MONITORING.

END BRIDGE
STA. 51+77.34



PLAN VIEW

MONITORING:

IN ORDER TO ENSURE THE INTEGRITY OF THE STRUCTURE AND AVOID OR MINIMIZE POTENTIAL DAMAGE DURING LIFTING, TRANSPORTATION, AND PLACEMENT, A CHECKING AND MONITORING SYSTEM, APPROVED BY THE DEPARTMENT, IS REQUIRED. THE FOLLOWING STEPS ARE CONSIDERED THE MINIMUM NECESSARY KEY FEATURES OF AN ACCEPTABLE CHECKING AND MONITORING SYSTEM.

1. FOR THE PURPOSE OF ON-SITE CHECKING AND MONITORING, PROVIDE SMALL PERMANENT STAINLESS STEEL BOLTS OR INSERTS SET INTO AND FLUSH WITH OR SLIGHTLY BELOW THE SURFACE OF THE DECK CONCRETE ON THE CENTERLINES OF THE EDGE BEAMS AND ESTABLISH A MINIMUM OF TEN (10) ELEVATION REFERENCE POINTS PER SPAN AT THE FOLLOWING LOCATIONS: FOUR (4) POINTS OVER THE PERMANENT BEARINGS, FOUR (4) POINTS OVER THE TEMPORARY SUPPORT (LIFT POINT) LOCATIONS, AND TWO (2) POINTS AT THE MID-SPAN.
2. IN THE STAGING AREA, RECORD THE ELEVATIONS OF THESE TEN REFERENCE POINTS IN THE CONDITION JUST PRIOR TO LIFTING (BEFORE LIFT CONDITION) THE SUPERSTRUCTURE. ALSO, CALCULATE THE ELEVATIONS RELATIVE TO EACH OTHER BY USING, AS A REFERENCE, THE AVERAGE ELEVATION OF TWO DIAGONALLY OPPOSITE CORNERS OVER THE BEARINGS.
3. RECORD THESE TEN REFERENCE ELEVATIONS AGAIN IMMEDIATELY AFTER LIFTING (AFTER LIFT CONDITION) THE SUPERSTRUCTURE. CALCULATE THE ELEVATIONS RELATIVE TO EACH OTHER BY USING AS A REFERENCE THE (LIFTED) AVERAGE ELEVATION OF THE SAME TWO DIAGONALLY OPPOSITE CORNERS OVER THE BEARINGS.
4. USING THE RELATIVE ELEVATIONS FROM THE BEFORE LIFT AND AFTER LIFT CONDITIONS, CHECK THE TWIST OF THE SPAN INDUCED BY LIFTING. PRIOR TO MOVING THE SPAN, ADJUST THE LIFTING MECHANISM TO REMOVE THE INDUCED TWIST.
5. CONTINUE THE PROCESS AS AND WHEN NECESSARY THROUGHOUT SUBSEQUENT TRANSPORTATION AND FOR FINAL SETTING OF THE SUPERSTRUCTURE IN THE BRIDGE.

SUBMITTAL REQUIREMENTS:

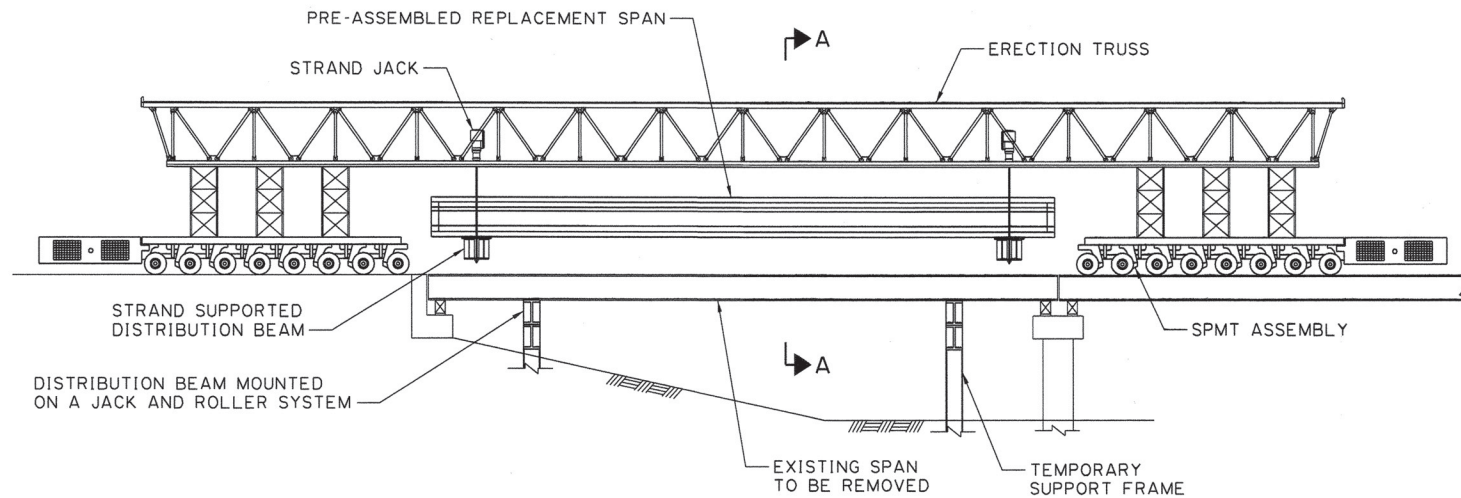
THE FOLLOWING CONTRACTOR SUBMITTALS ARE REQUIRED FOR APPROVAL BY THE DEPARTMENT:

1. PREFABRICATION PLAN
 - A. GEOTECHNICAL ASSESSMENT AT BRIDGE STAGING AREA
 - B. DESIGN/DETAILS OF TEMPORARY SUPPORTS AND FOUNDATIONS AT BRIDGE STAGING AREA
 - C. SETTLEMENT REPORT FOR TEMPORARY SUPPORTS/FOUNDATIONS
 - D. SETTLEMENT MONITORING
2. MOVEMENT PLAN
 - A. ERECTION TOLERANCES
 - B. AS-BUILT SURVEY
 - C. PRE-ASSEMBLED STRUCTURE DIMENSIONS AND WEIGHTS
 - D. SHOP DRAWINGS WITH LIFT POINT LOCATIONS AND DISTANCES FROM FACE OF OBSTACLES ALONG THE TRAVEL ROUTE TO LIFT POINTS
 - E. ANALYSIS OF TEMPORARY LOADS ON STRUCTURES
 - F. PATH AND DIRECTION OF MOTION
 - G. GEOTECHNICAL ASSESSMENT FOR MOVE
 - H. MOVING EQUIPMENT AND SERVICES
 - I. DISTORTION MONITORING DURING MOVE
 - J. CONTINGENCY PLANNING FOR INCIDENT MANAGEMENT
3. PERSONNEL PLAN
 - A. DEFINE PERSONNEL FOR ACTIVITIES OUTLINED IN PREFABRICATION AND MOVEMENT PLANS

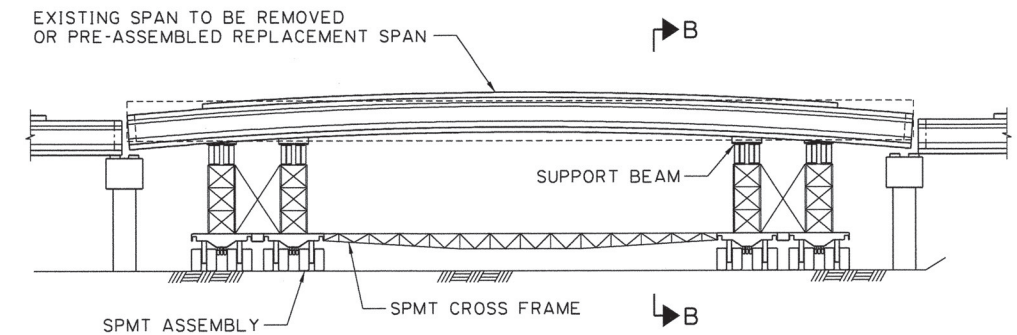
PAYMENT:

ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS PERTAINING TO THE OFF ALIGNMENT CONSTRUCTION AND MOVEMENT OF THE REPLACEMENT SUPERSTRUCTURE INCLUDING THE RESTORATION OF ALL AFFECTED AREAS SHALL BE PAID FOR UNDER ITEM NS-800-00001, SPAN MOVEMENT, PER EACH. A MOVEMENT IS DEFINED AS THE JACKING, TRANSPORTING, AND SETTING OF AN INDIVIDUAL SPAN, EXISTING OR NEW.

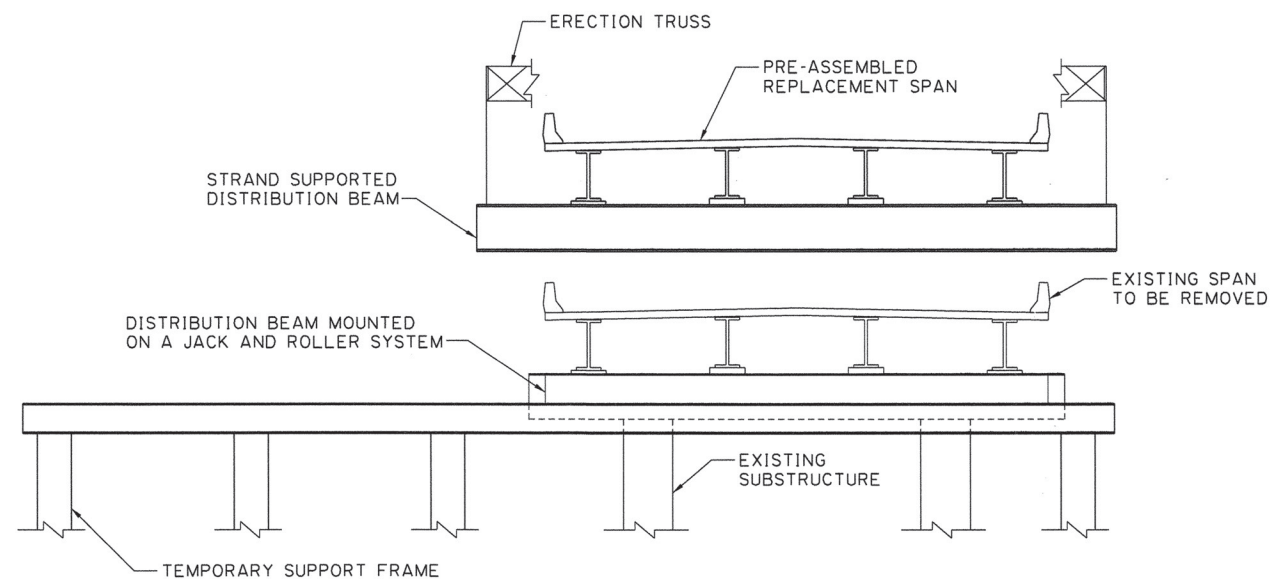
SHEET NUMBER		104	
OUACHITA		PARISH	
FEDERAL PROJECT		STATE PROJECT	
R/LM		DATE	
DESIGNED	CHECKED	DATE	SHEET
CDB	RLM	08/17/09	1 of 1
H.G.		BY	
REVISED		ITEM NUMBER	
DATE		REVISION DESCRIPTION	
9/15/09		NO.	
LOUISIANA		CONSTRUCTION NOTES & PROCEDURES	
LA 3249 (WELL ROAD) BRIDGE OVER I-20		MODJESKI+MASTERS	



POTENTIAL ACCELERATED END SPAN REPLACEMENT



POTENTIAL ACCELERATED INTERIOR SPAN REPLACEMENT

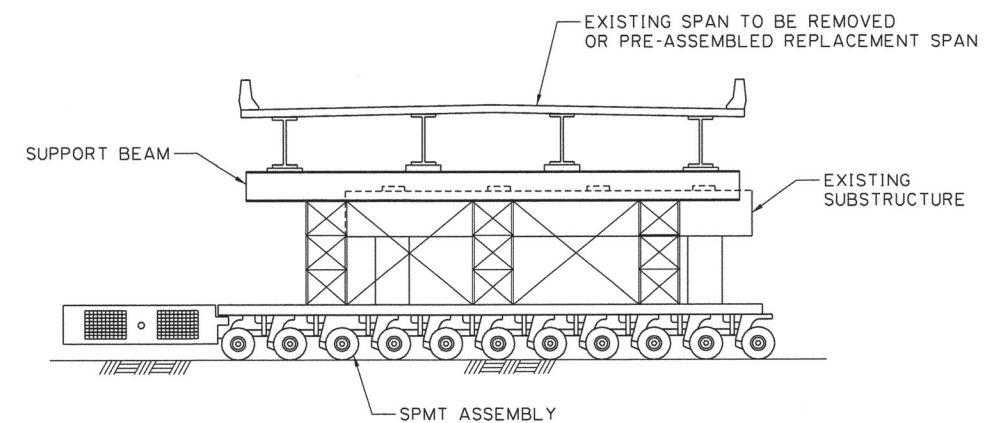


SECTION A-A

(SPMT ASSEMBLY NOT SHOWN FOR CLARITY.)

POTENTIAL END SPAN REPLACEMENT PROCEDURE (ABBREVIATED):

1. USE SPAN CARRIER (SPMT ASSEMBLIES AND ERECTION TRUSS) TO MOVE PRE-ASSEMBLED REPLACEMENT SPAN FROM STAGING AREA.
2. DRIVE SPAN CARRIER ONTO STRUCTURE UTILIZING THE EXISTING SUPERSTRUCTURE AND POSITION REPLACEMENT SPAN OVER THE EXISTING SPAN TO BE REMOVED.
3. JACK EXISTING SPAN AND ROLL TRANSVERSELY OFF OF ALIGNMENT ON THE TEMPORARY SUPPORT FRAMES.
4. LOWER PRE-ASSEMBLED REPLACEMENT SPAN INTO PLACE.
5. DRIVE THE SPAN CARRIER OFF OF THE STRUCTURE UTILIZING THE REPLACEMENT SPAN.
6. DISMANTLE EXISTING SPAN AND TEMPORARY SUPPORT FRAME.



SECTION B-B

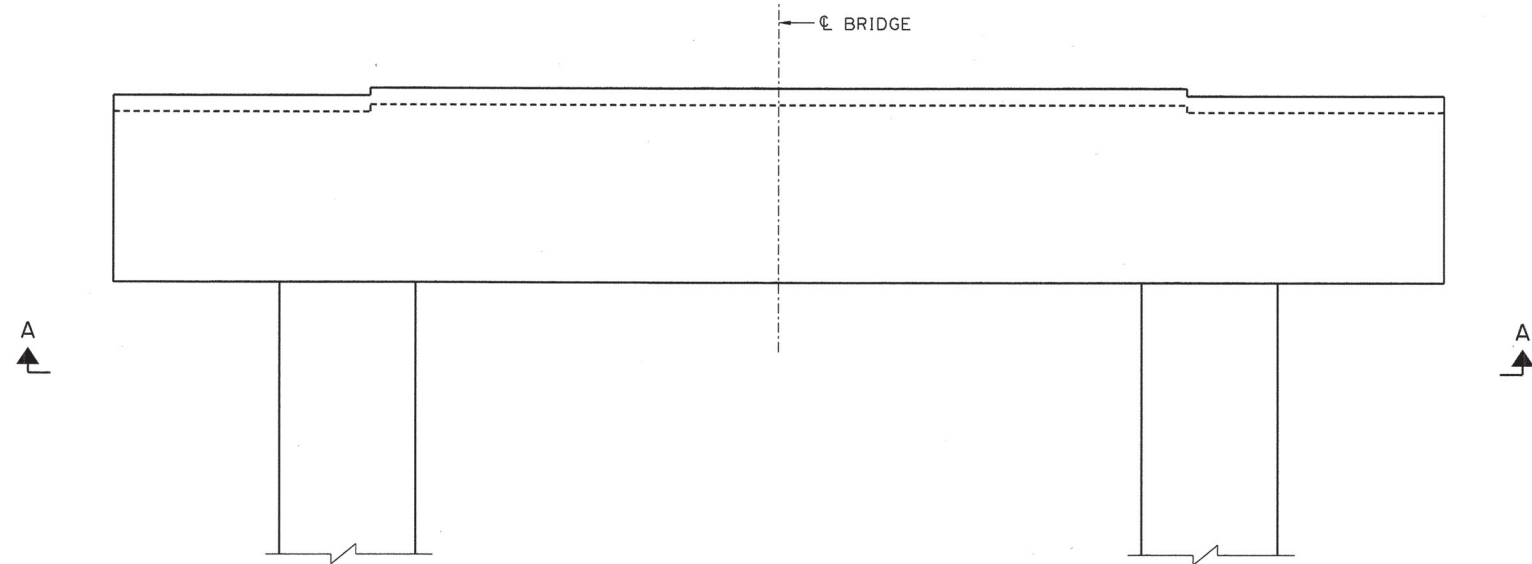
POTENTIAL INTERIOR SPAN REPLACEMENT PROCEDURE (ABBREVIATED):

1. DRIVE SPMT ASSEMBLIES UNDER EXISTING SPAN. JACK SPAN AND DRIVE OFF OF ALIGNMENT TO STAGING AREA TO BE DISMANTLED LATER.
2. DRIVE PRE-ASSEMBLED REPLACEMENT SPAN FROM STAGING AREA INTO POSITION.
3. LOWER PRE-ASSEMBLED REPLACEMENT SPAN INTO PLACE.
4. DRIVE SPMT ASSEMBLIES AWAY FROM STRUCTURE.

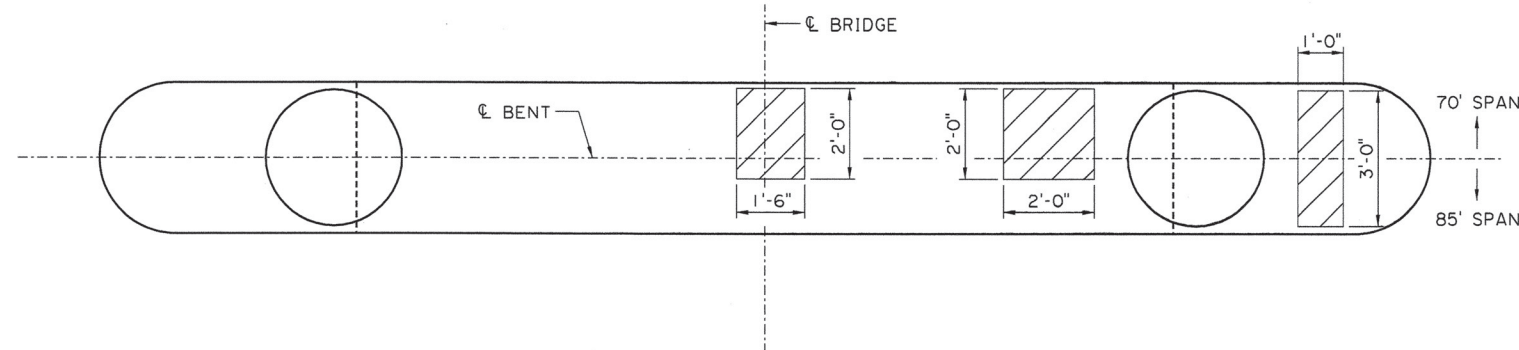
NOTE:

REPLACEMENT PROCEDURES SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE CONTRACTOR SHALL SELECT THE ACCELERATED REPLACEMENT METHOD AND SUBMIT AS PART OF THE MOVEMENT PLAN TO THE DEPARTMENT FOR APPROVAL.





BENT NO. 3



SECTION A-A

LEGEND

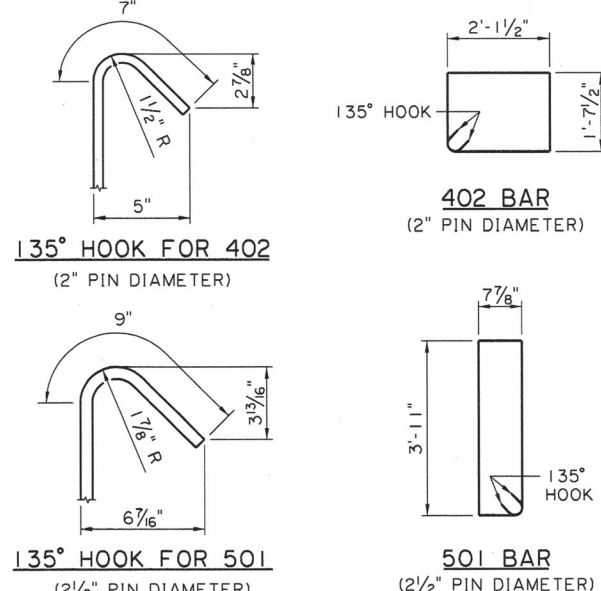
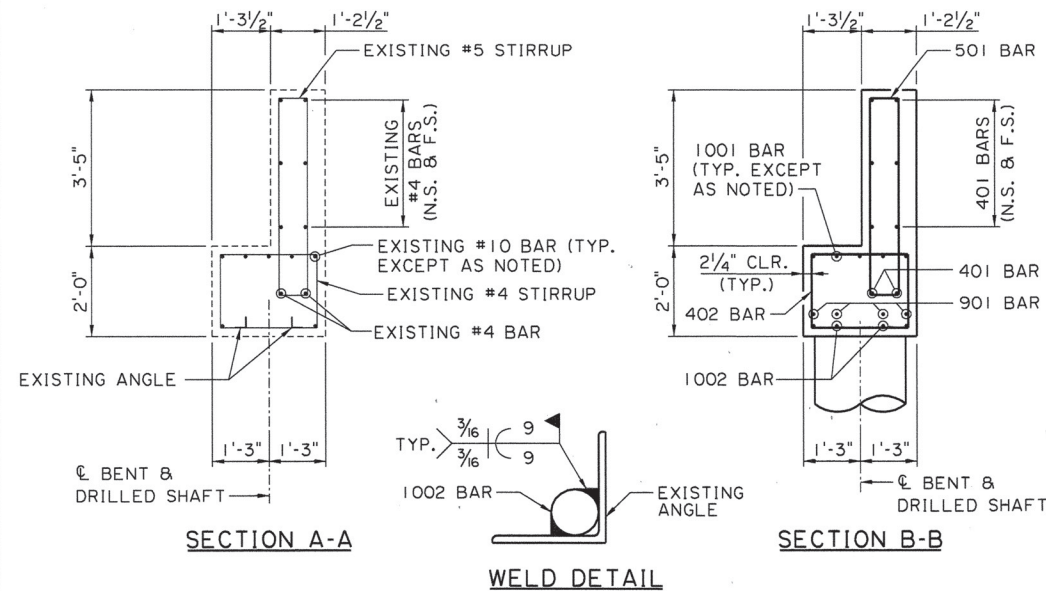


CONCRETE REPAIR AREA

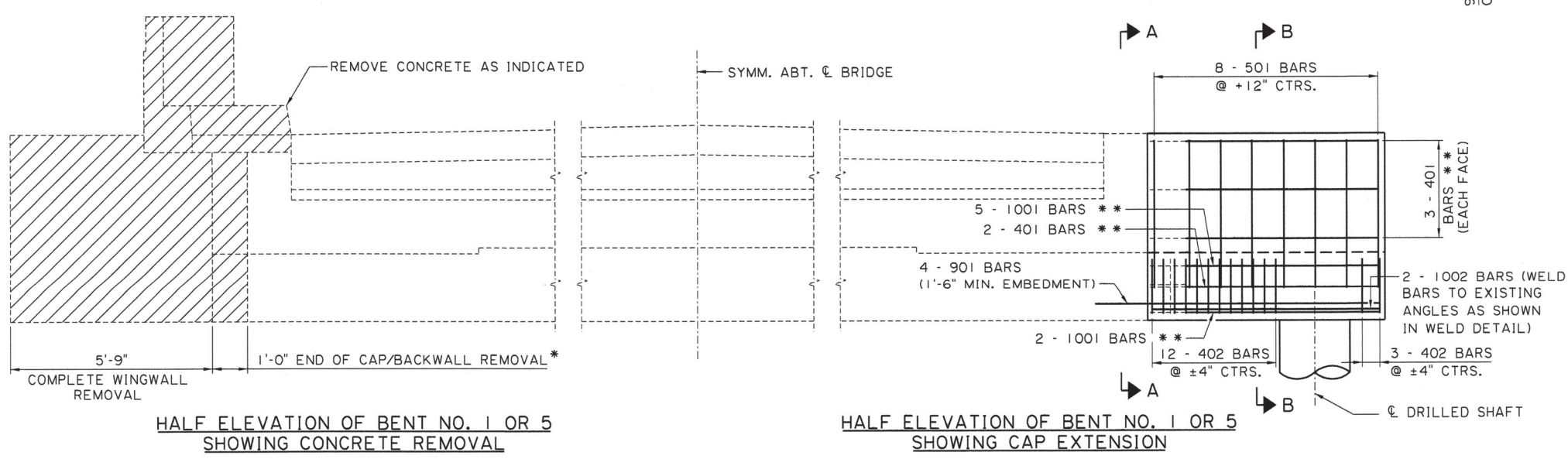
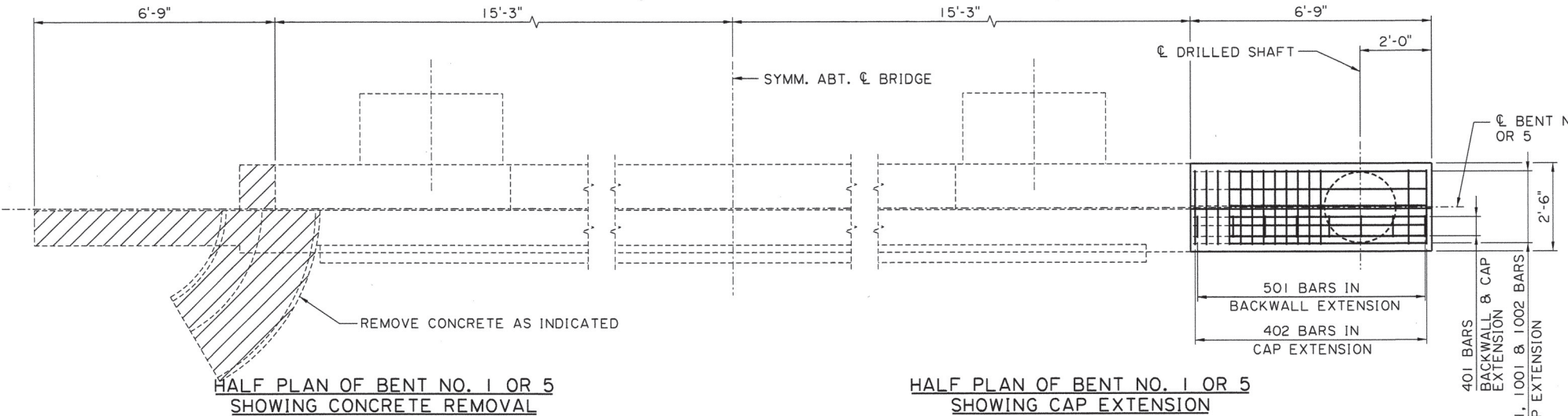
NOTES:

1. THE CONTRACTOR SHALL PROVIDE LADDERS OR OTHER APPROPRIATE EQUIPMENT FOR THE ENGINEER TO MARK THE REMOVAL AREAS.
2. SAW CUT PERIMETER OF REPAIR AREA TO A DEPTH OF $\frac{1}{2}$ ".
3. THE AREAS TO BE REPAIRED SHALL HAVE ALL LOOSE, UNSOUND CONCRETE REMOVED COMPLETELY BY THE USE OF CHIPPING HAMMERS OR OTHER METHODS APPROVED BY THE ENGINEER. THE OUTERMOST LAYER OF REINFORCEMENT BAR WITHIN THE REPAIR AREA SHALL BE UNDERCUT TO A DEPTH OF $\frac{3}{4}$ ". THE UNDERLYING TRANSVERSE REINFORCEMENT BAR SHALL ALSO BE UNDERCUT AS PREVIOUSLY DESCRIBED, UNLESS THE REINFORCEMENT IS NOT CORRODED, AND THE REINFORCEMENT BAR IS ENCASED AND WELL BONDED TO THE SURROUNDING CONCRETE.
4. IF SOUND CONCRETE IS ENCOUNTERED BEFORE EXISTING REINFORCEMENT BARS ARE EXPOSED, FURTHER REMOVAL OF CONCRETE SHALL NOT BE PERFORMED UNLESS THE MINIMUM REPAIR DEPTH IS NOT MET. THE MINIMUM REPAIR DEPTH SHALL BE 1".
5. PRIOR TO PLACING THE REPAIR MORTAR, THE CONTRACTOR SHALL PREPARE THE REPAIR AREA AND EXPOSED REINFORCEMENT BY BLAST CLEANING. THE BLAST CLEANING SHALL REMOVE ALL BOND INHIBITING CORROSION FROM THE REINFORCEMENT AND PROVIDE A SURFACE THAT IS FREE OF OIL, DIRT, AND LOOSE MATERIAL.
6. ALL REPAIR AREAS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF THE REPAIR MORTAR.
7. JUST PRIOR TO MORTAR PLACEMENT, SATURATE THE REPAIR AREA WITH WATER TO A SATURATED SURFACE DRY CONDITION. APPLY A SCRUB COAT TO THE SUBSTRATE, FILLING ALL PORES AND VOIDS.
8. PLACE THE REPAIR MORTAR ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND FINISH TO MATCH THE EXISTING SURFACE. THE REPAIR MORTAR SHALL BE A PATCHING MATERIAL FROM THE APPROVED QUALIFIED PRODUCT LIST NO. 49 SUITABLE FOR OVERHEAD APPLICATIONS.
9. AFTER CURING AND BEFORE FINAL ACCEPTANCE, ALL REPAIRED AREAS SHALL BE SOUNDED. ALL UNSOUND AND CRACKED AREAS SHALL BE REMOVED AND REPLACED AT NO COST TO THE OWNER.
10. THE REPAIR AREA MARKED BY THE ENGINEER SHALL BE MEASURED FOR PAYMENT. CONCRETE BROKEN OR REMOVED BY THE CONTRACTOR OUTSIDE OF THE LIMITS OF REPAIR SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER. THIS WORK WILL BE PAID FOR UNDER ITEM NS-602-00005, BENT PATCHING, PER SQUARE FOOT.

SHEET NUMBER		107
PARISH		OUACHITA
FEDERAL PROJECT		
STATE PROJECT		451-06-0148
DESIGNED	RLM	
CHECKED	COB	
DATE	08/17/09	
BY	1 OF 1	
REVISION DESCRIPTION		
NO.		
DATE		
LA 3249 (WELL ROAD) BRIDGE OVER I-20		
SUBSTRUCTURE CONCRETE REPAIRS		



ESTIMATED QUANTITIES (ONE BENT)				
BAR NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
401	16	5'-9"	92'-0"	BACKWALL EXTENSION
402	30	8'-5"	252'-6"	CAP EXTENSION
TOTAL NO. 4 BARS = 344'-6" = 231 LBS.				
501	16	10'-4"	165'-4"	BACKWALL EXTENSION
TOTAL NO. 5 BARS = 165'-4" = 173 LBS.				
901	8	8'-1"	64'-8"	CAP EXTENSION
TOTAL NO. 9 BARS = 64'-8" = 220 LBS.				
1001	14	5'-9"	80'-6"	CAP EXTENSION
1002	4	6'-6"	26'-0"	CAP EXTENSION
TOTAL NO. 10 BARS = 106'-6" = 459 LBS.				
DEFORMED REINFORCING STEEL ITEM 806-01-00100				= 1,083 LBS.
CLASS A CONCRETE ITEM 805-01-00100				= 4.56 CU. YDS.
STRUCTURAL EXCAVATION ITEM 802-01-00100				= 3.5 CU. YDS.



NOTES:

STRUCTURAL EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH SECTION 802 OF THE STANDARD SPECIFICATIONS AND WILL BE PAID FOR UNDER ITEM 802-01-00100, STRUCTURAL EXCAVATION, PER CUBIC YARDS. STRUCTURAL EXCAVATION SHALL BE MEASURED IN ITS ORIGINAL POSITION. HORIZONTAL DIMENSIONS WILL NOT EXTEND BEYOND VERTICAL PLANES 18 INCHES OUTSIDE OF THE EDGES OF THE CAP EXTENSION. THE VERTICAL DIMENSION FOR STRUCTURAL EXCAVATION WILL BE THE AVERAGE DEPTH FROM THE SURFACE OF THE MATERIAL TO BE EXCAVATED TO THE BOTTOM OF THE CAP EXTENSION.

EXISTING REINFORCING STEEL TO REMAIN SHALL PROJECT FROM THE CONCRETE SURFACE THE MINIMUM DISTANCE SHOWN IN THE PLANS. THIS STEEL SHALL BE STRAIGHTENED AND CLEANED OF OLD CONCRETE AND FOREIGN MATERIAL BEFORE THE NEW CONCRETE IS POURED. CARE SHALL BE TAKEN TO INSURE THAT THE EXISTING REINFORCING STEEL IS NOT BROKEN DURING CONCRETE REMOVAL, STRAIGHTENING, OR CLEANING. IN THE EVENT THAT ANY PROJECTING STEEL IS BROKEN, IT MUST BE REPAIRED EITHER BY WELDING AN EQUIVALENT SIZED BAR IN ACCORDANCE WITH AWS D1.4-92 OR BY USING AN APPROVED MECHANICAL SPLICE IN ACCORDANCE WITH QUALIFIED PRODUCT LIST NO. 44.

MECHANICAL SPLICES FOR REINFORCEMENT SHALL BE IN ACCORDANCE WITH SECTION 806.07 OF THE STANDARD SPECIFICATIONS AND FROM THE APPROVED QUALIFIED PRODUCT LIST NO. 44. ALL LABOR, MATERIALS, AND INCIDENTALS PERTAINING TO THE SPLICING OF REINFORCEMENT SHALL NOT BE MEASURED FOR PAYMENT AND WILL BE INCLUDED IN THE COST FOR ITEM 806-01-00100, DEFORMED REINFORCING STEEL.

REINFORCING BARS TO BE WELDED TO EXISTING ANGLES SHALL BE IN ACCORDANCE WITH ASTM A706. WELDING REINFORCING BARS TO THE EXISTING ANGLES SHALL NOT BE MEASURED FOR PAYMENT AND WILL BE INCLUDED IN THE COST FOR ITEM 806-01-00100, DEFORMED REINFORCING STEEL.

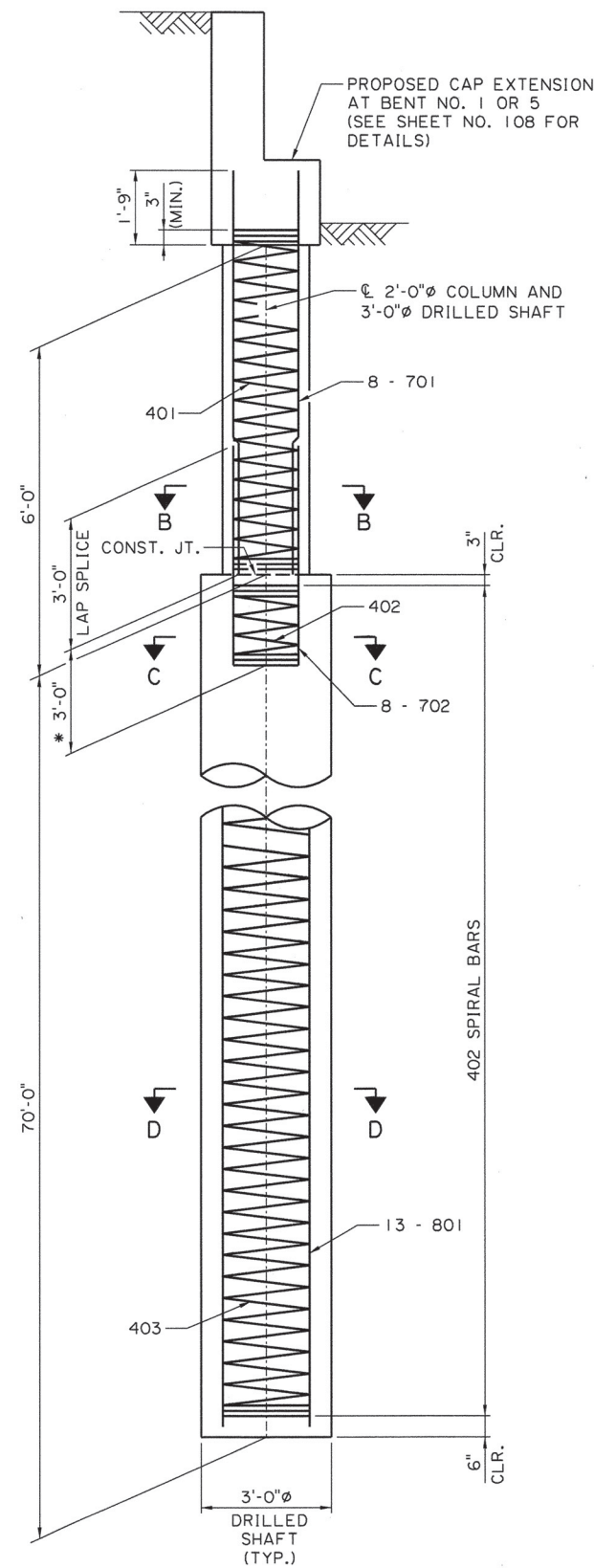
REINFORCING BARS TO BE EMBEDDED IN THE EXISTING CONCRETE SHALL BE DRILLED AND SET AS SHOWN ON THE PLANS WITH AN APPROVED CARTRIDGE OR INJECTION SYSTEM SUITABLE FOR ANCHORING REINFORCING BARS FROM THE QUALIFIED PRODUCT LIST NO. 40. ALL LABOR, MATERIALS, AND INCIDENTALS PERTAINING TO THE ANCHORING OF REINFORCEMENT IN EXISTING CONCRETE SHALL NOT BE MEASURED FOR PAYMENT AND WILL BE INCLUDED IN THE COST FOR ITEM 806-01-00100, DEFORMED REINFORCING STEEL.

CONCRETE REMOVAL SHALL BE PAID FOR UNDER ITEM 202-02-38400, REMOVAL OF STRUCTURAL CONCRETE, PER LUMP SUM.

FOR DRILLED SHAFT DETAILS, SEE SHEET NO. 109.

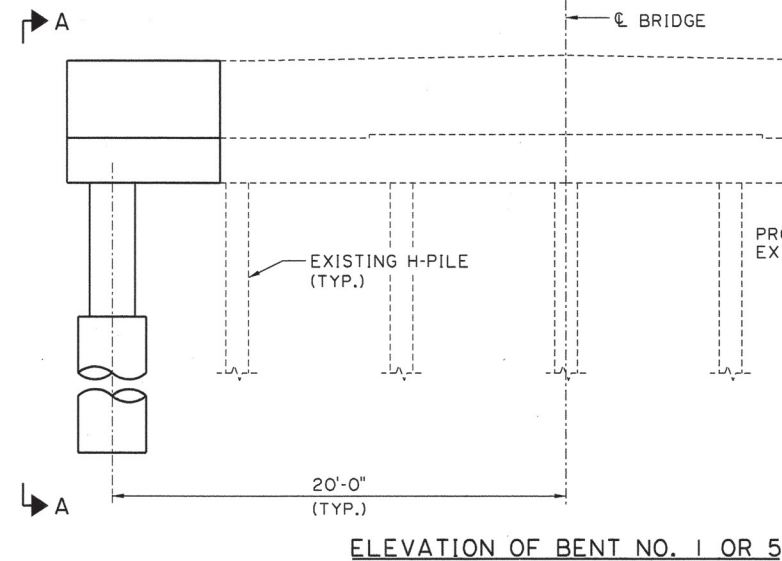
* EXISTING TRANSVERSE REINFORCEMENT TO REMAIN

** MECHANICALLY SPLICE NEW BARS WITH EXISTING BARS

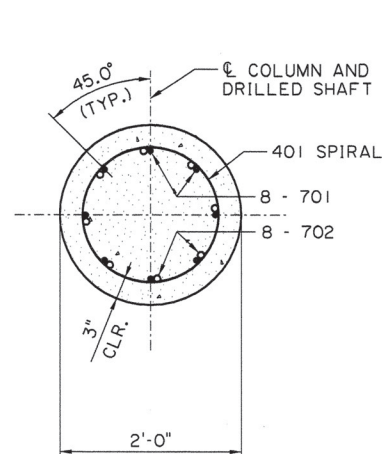


VIEW A-A

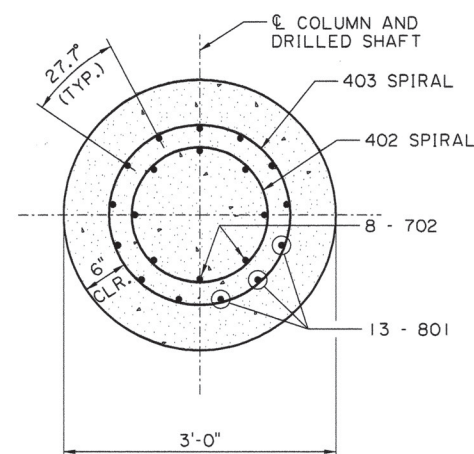
* 402 SPIRAL BAR AND 702 BAR EMBEDMENT



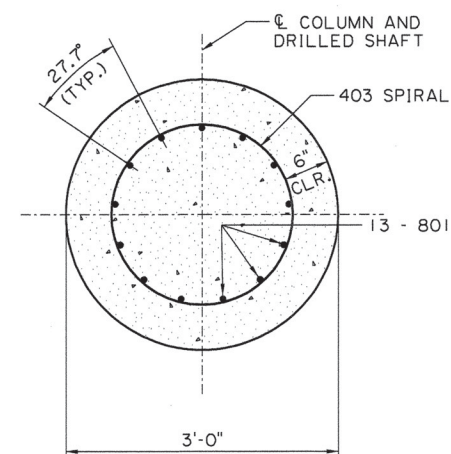
ESTIMATED QUANTITIES FOR DRILLED SHAFT				
BENT NO.	CUT OFF ELEV. (ft.)	TIP ELEV. (ft.)	MAX. AXIAL SERVICE LOAD (tons)	PLAN DRILLED SHAFT LENGTH (ft.)
1	149.62	79.62	46	70.0
5	150.42	80.42	46	70.0



SECTION B-B
(THRU 2'Ø COLUMN)

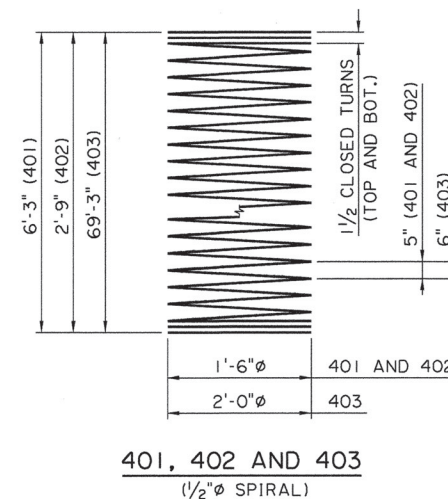


SECTION C-C
(THRU 3'Ø SHAFT)

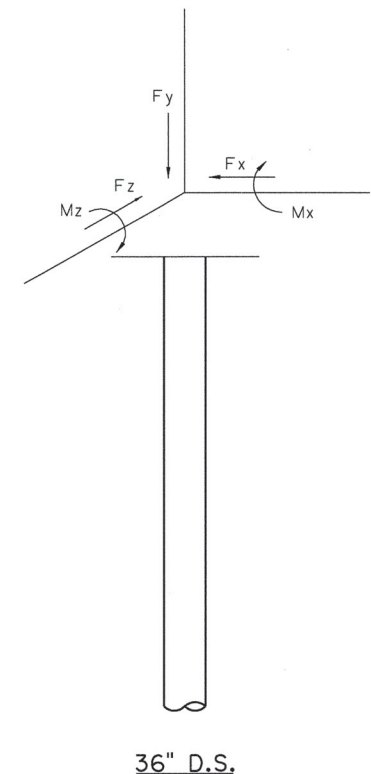


SECTION D-D
(THRU 3'Ø SHAFT)

ESTIMATED QUANTITIES (ONE BENT)					
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	TYPE	LOCATION
401	2	85'-2	170'-4	SPIRAL	COLUMN
TOTAL NO. 4 BARS = 170'-4 = 114 LBS.					
701	16	7'-8	122'-8	STRAIGHT	COLUMN
TOTAL NO. 7 BARS = 122'-8 = 252 LBS.					
DEFORMED REINFORCING STEEL ITEM 806-01-00100 = 366 LBS.					
CLASS A CONCRETE ITEM 805-01-00100 = 1.40 CU. YDS.					
STRUCTURAL EXCAVATION ITEM 802-01-00100 = 11.2 CU. YDS.					

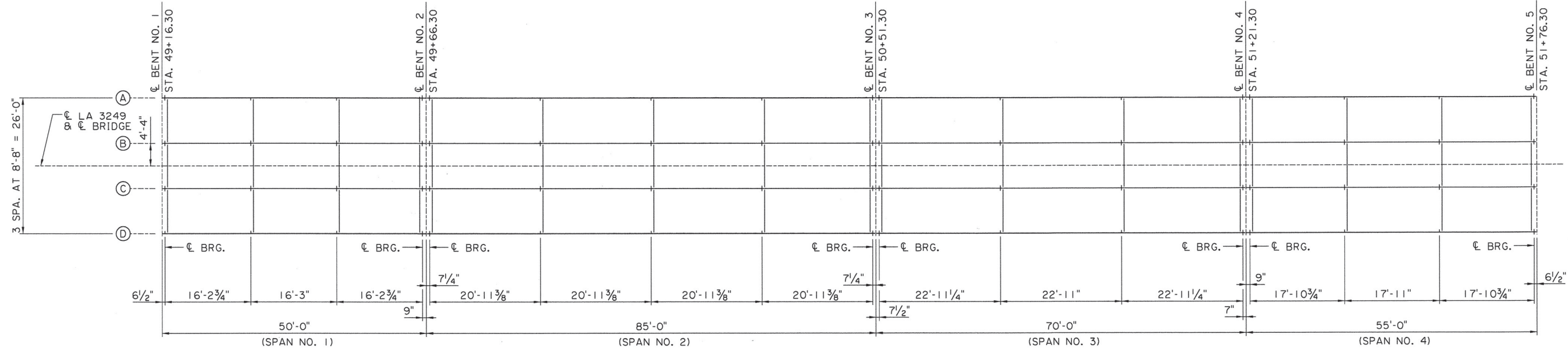


SPIRAL BARS MAY BE LAP SPLICED 1 1/2 TURNS MINIMUM AS REQUIRED AT NO ADDITIONAL PAY.



NOTES:

1. MAX. FACTORED AXIAL LOAD = 67 TONS.
2. MAX. FACTORED LATERAL = 4 TONS
3. MAX. FACTORED MOMENT = 13 FT-K

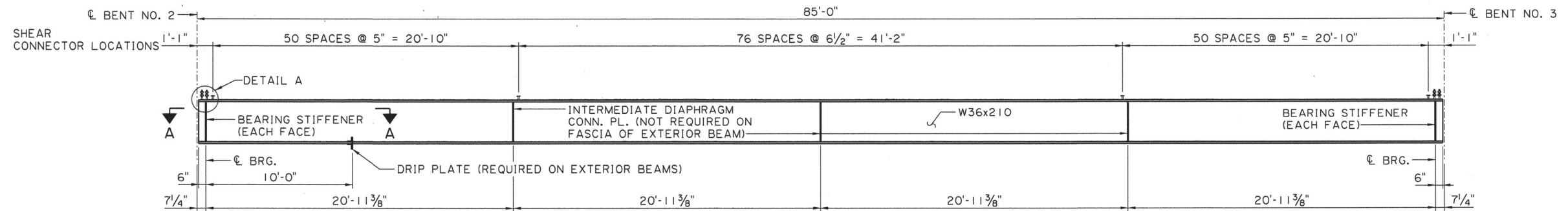


FRAMING PLAN
SCALE: 1" = 10'-0"

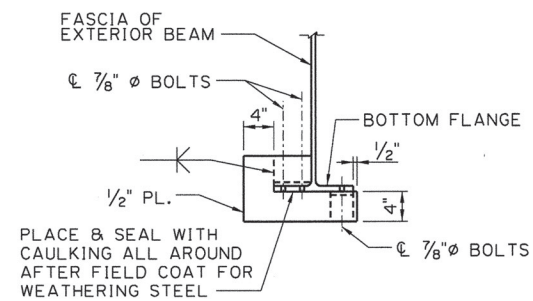
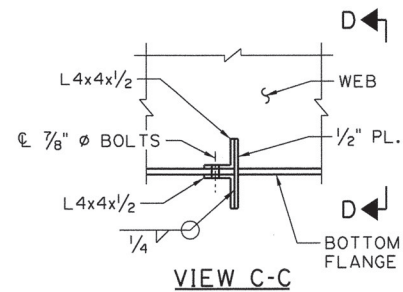
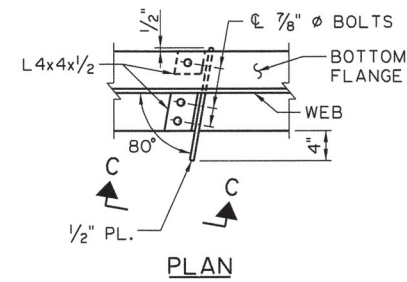
EXTERIOR GIRDER MOMENT TABLE					
		0.5 Span 1	0.5 Span 2	0.5 Span 3	0.5 Span 4
M_{DC1}	(k)	229	780	486	278
M_{DC2}	(k)	85	251	169	104
M_{DW}	(k)	25	74	50	31
M_{LL+IM}	(k)	710	1,564	1,181	824
M_u (STRENGTH I)	(k)	1,757	4,341	3,107	2,062
$\phi_f M_n$	(k)	2,579	5,411	3,868	2,579
V_f	(k)	25.2	31.4	29.5	26.6

EXTERIOR GIRDER REACTION TABLE					
		Bent 1/ Bent 2 Span 1	Bent 2/Bent 3 Span 2	Bent 3/Bent 4 Span 3	Bent 4/Bent 5 Span 4
R_{DC1}	(k)	18.7	37.1	28.2	20.6
R_{DC2}	(k)	7.0	11.9	9.8	7.7
R_{DW}	(k)	2.1	3.5	2.9	2.3
R_{LL+IM}	(k)	66.0	79.3	74.3	68.4
R_{TOTAL}	(k)	150.8	205.3	181.9	158.5

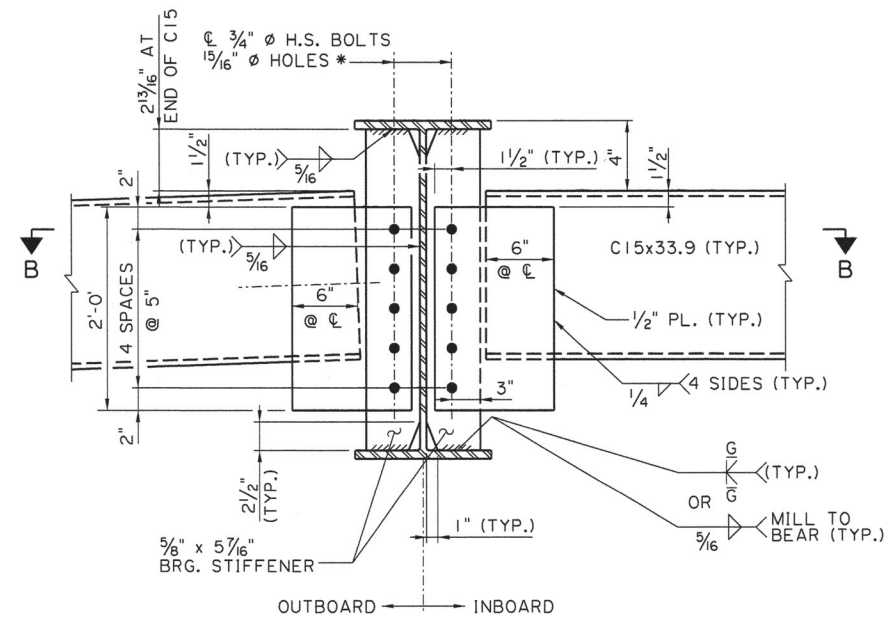
- M_{DC1} UN-FACTORED MOMENT DUE TO NON-COMPOSITE DEAD LOAD (KIP-FT.).
- M_{DC2} UN-FACTORED MOMENT DUE TO LONG-TERM COMPOSITE (SUPERIMPOSED EXCLUDING FUTURE WEARING SURFACE) DEAD LOAD (KIP-FT.).
- M_{DW} UN-FACTORED MOMENT DUE TO LONG-TERM COMPOSITE (SUPERIMPOSED FUTURE WEARING SURFACE ONLY) DEAD LOAD (KIP-FT.).
- M_{LL+IM} UN-FACTORED LIVE LOAD MOMENT PLUS DYNAMIC LOAD ALLOWANCE (IMPACT) (KIP-FT.).
- M_u (STRENGTH I) FACTORED DESIGN MOMENT (KIP-FT.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5M_{DW} + 1.75M_{LL+IM}$
- $\phi_f M_n$ COMPACT COMPOSITE POSITIVE MOMENT CAPACITY COMPUTED ACCORDING TO ARTICLE 6.10.7.1 (KIP-FT.).
- V_f MAXIMUM FACTORED SHEAR RANGE IN COMPOSITE PORTION OF SPAN COMPUTED ACCORDING TO ARTICLE 6.10.10.



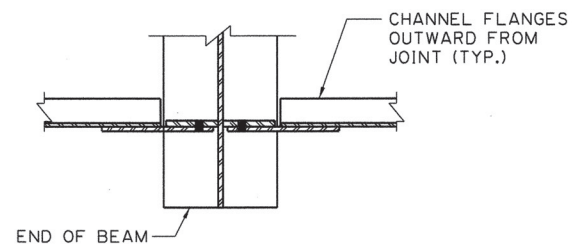
BEAM DETAILS



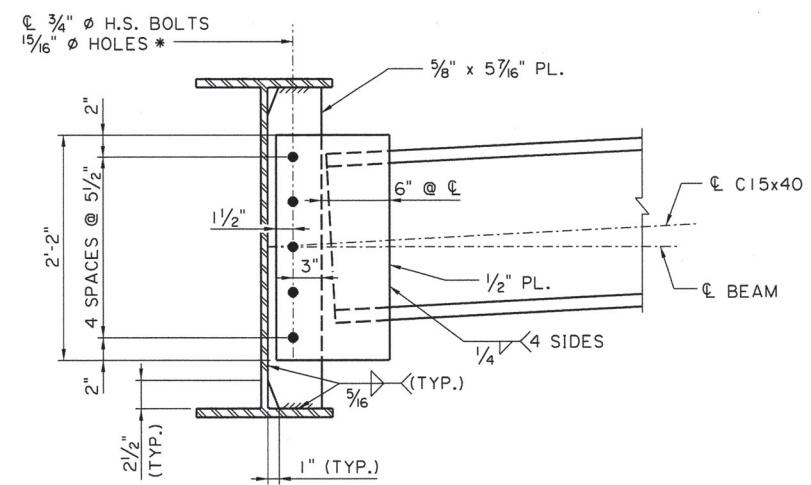
DRIP PLATE DETAILS



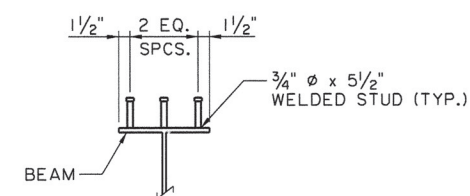
END DIAPHRAGM DETAIL
(INTERIOR BEAM SHOWN)
(EXTERIOR BEAM SIMILAR. DIMENSION FROM BOTTOM OF BEAM TOP FLANGE TO TOP OF C15 IS 3 1/2".)



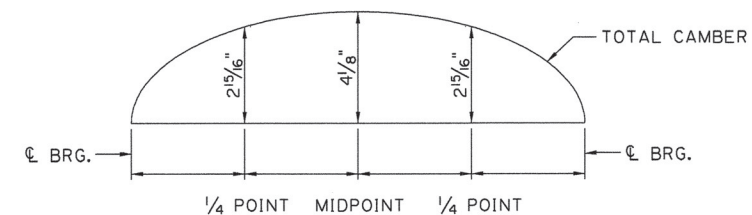
SECTION B-B



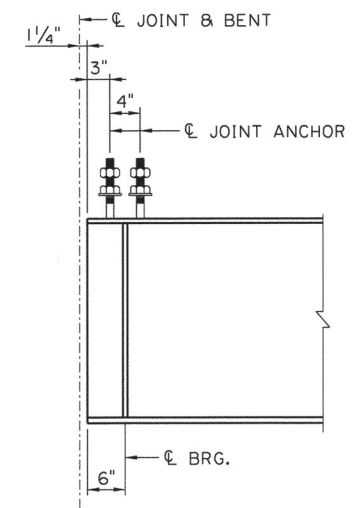
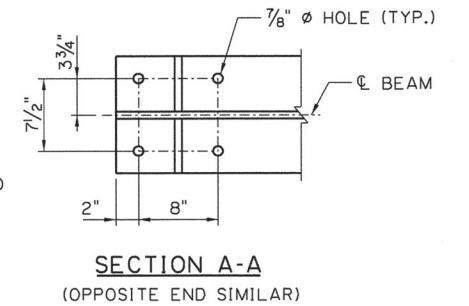
INTERMEDIATE DIAPHRAGM DETAIL
(EXTERIOR BEAM SHOWN - INTERIOR BEAM SIMILAR)



SHEAR CONNECTOR DETAIL

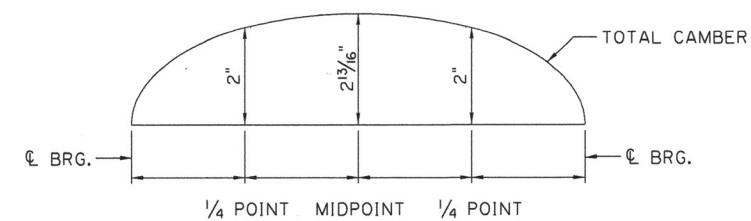
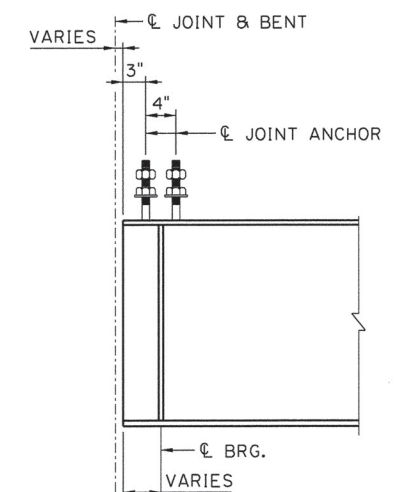
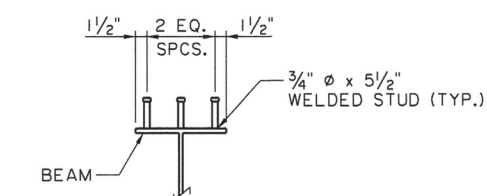
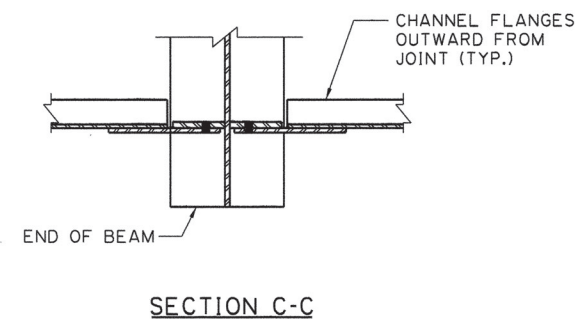
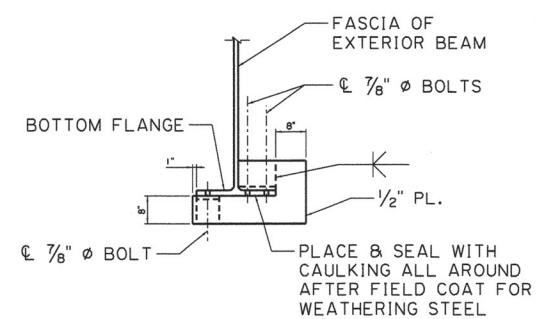
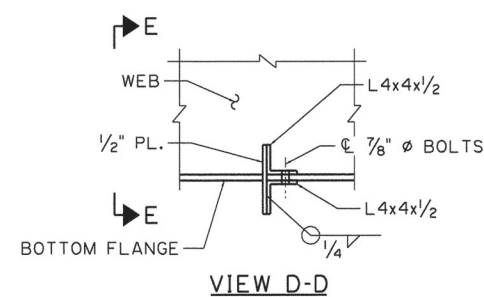
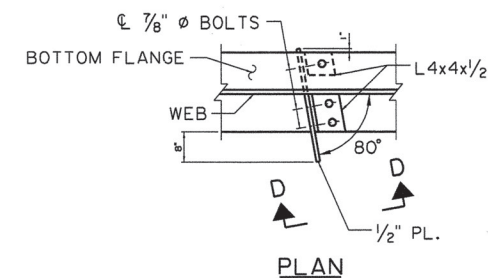
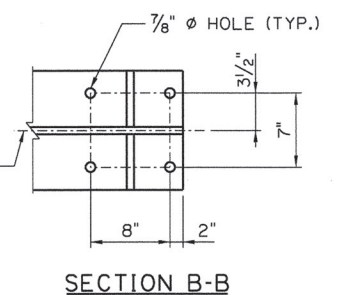
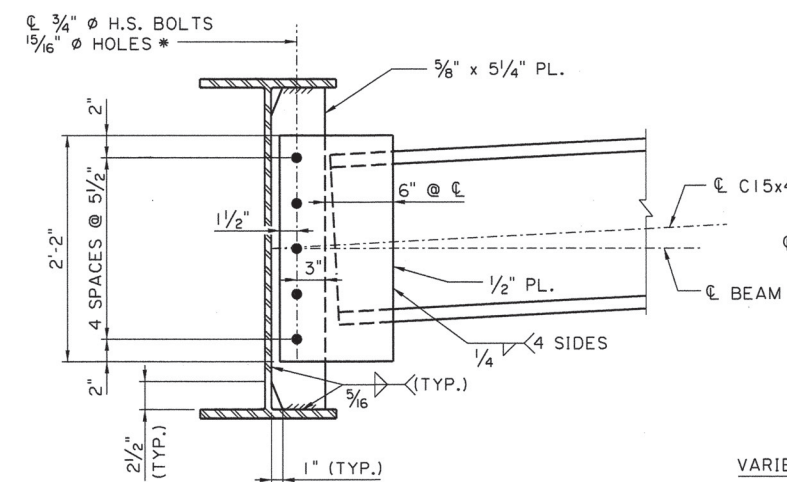
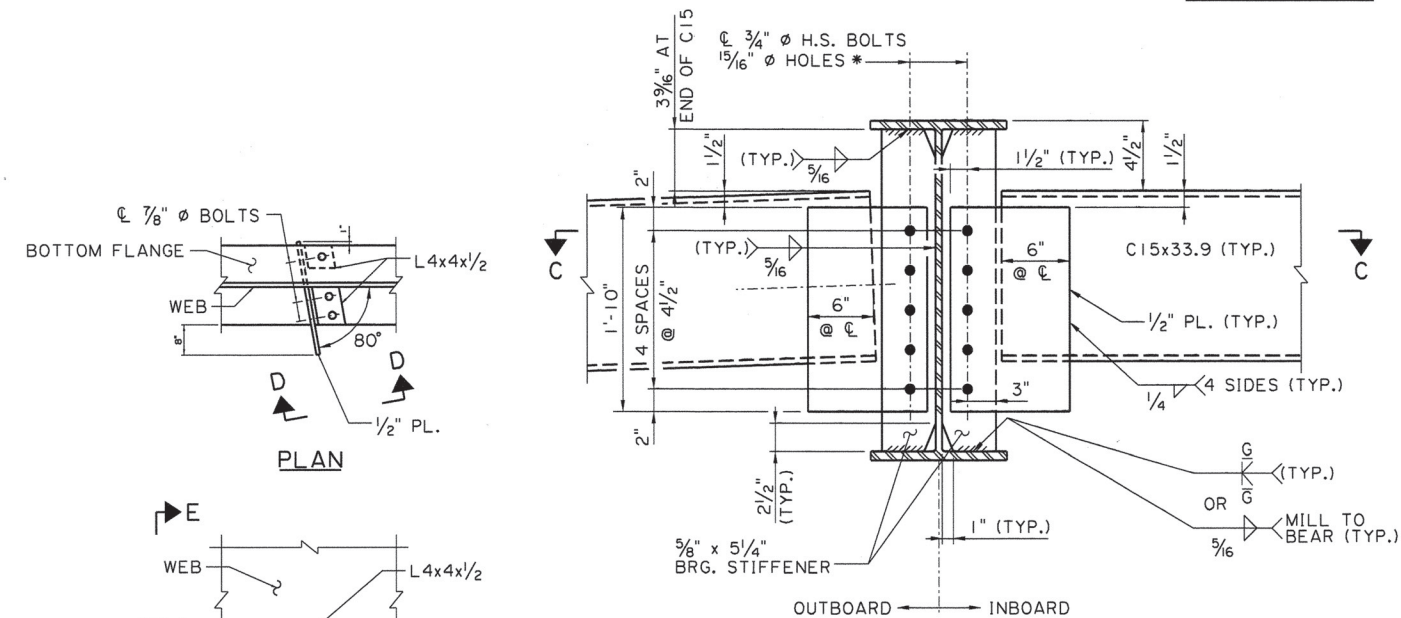
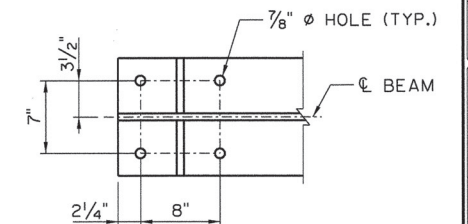
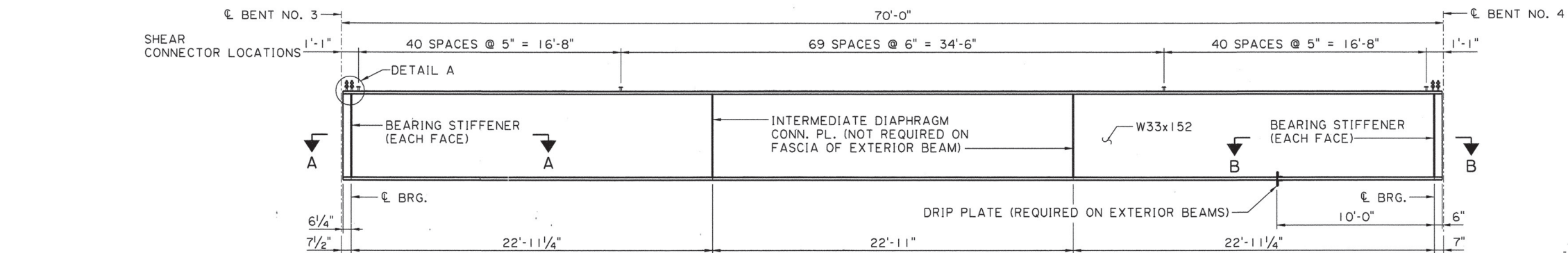


CAMBER DIAGRAM

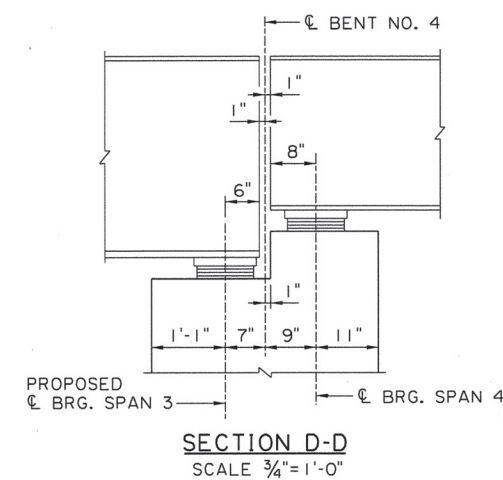
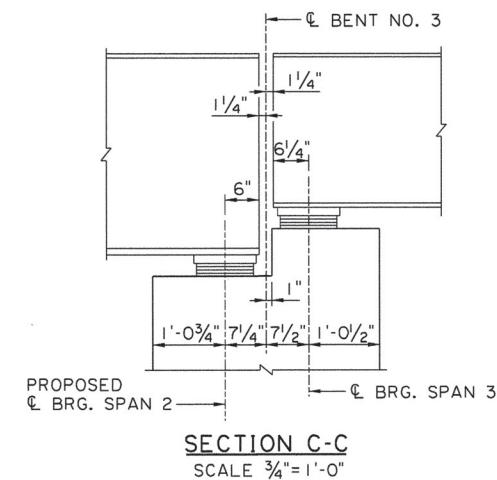
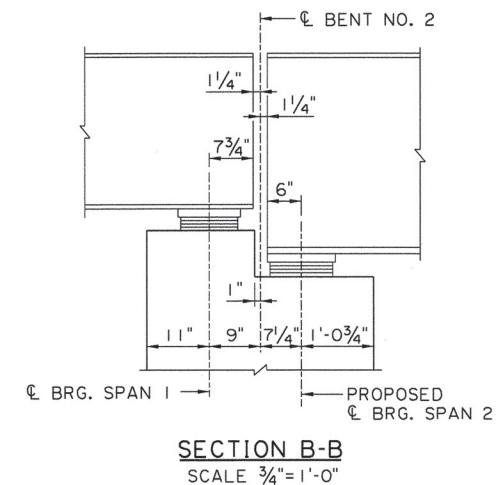
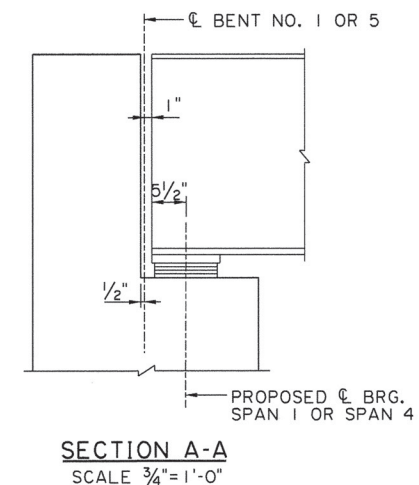
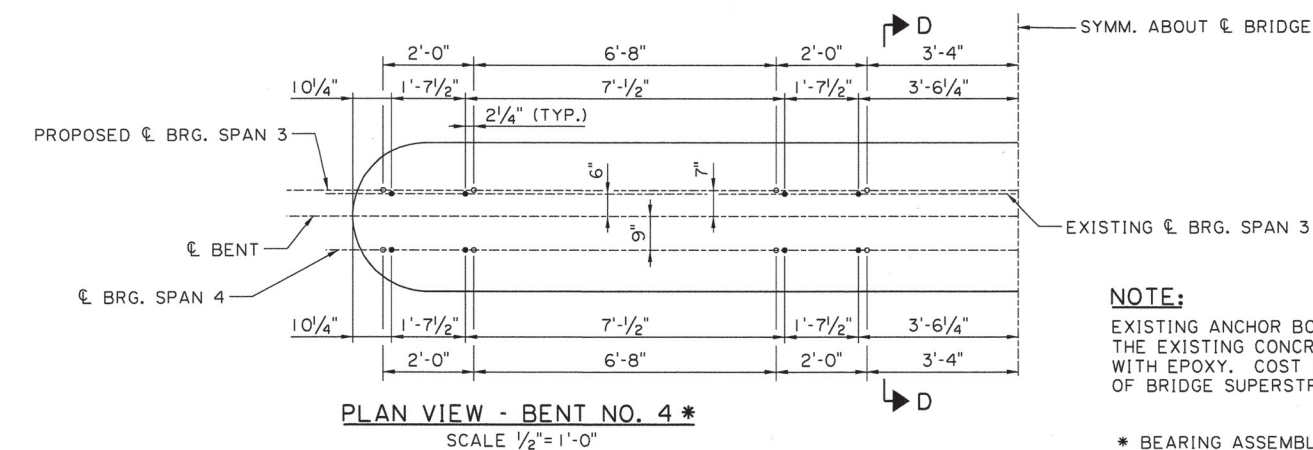
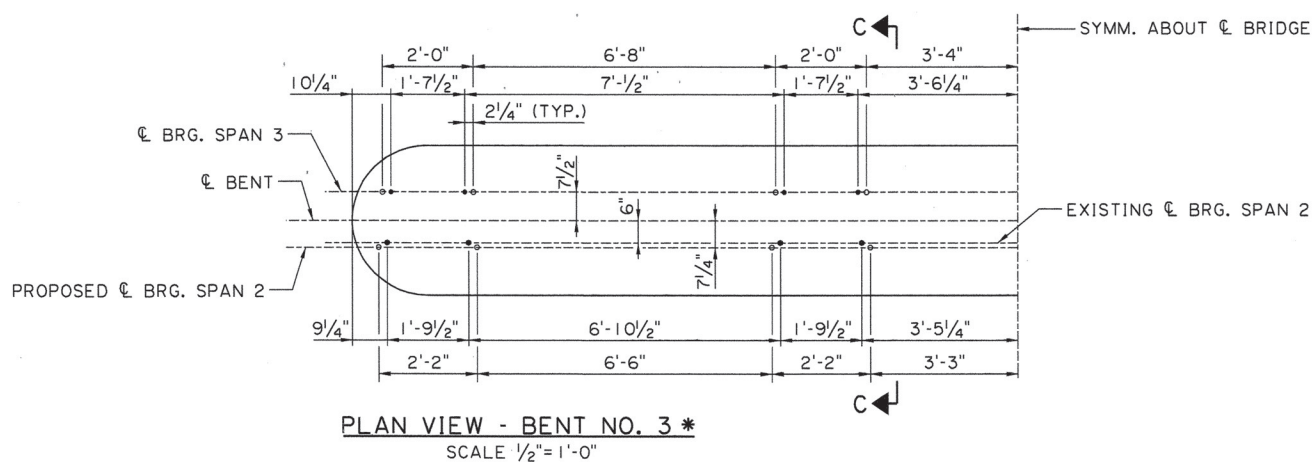
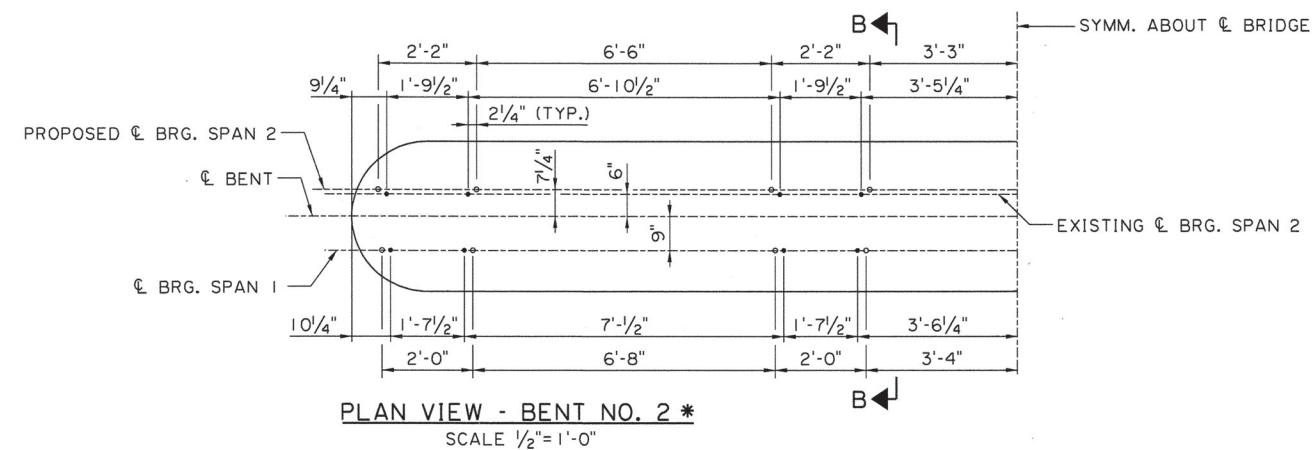
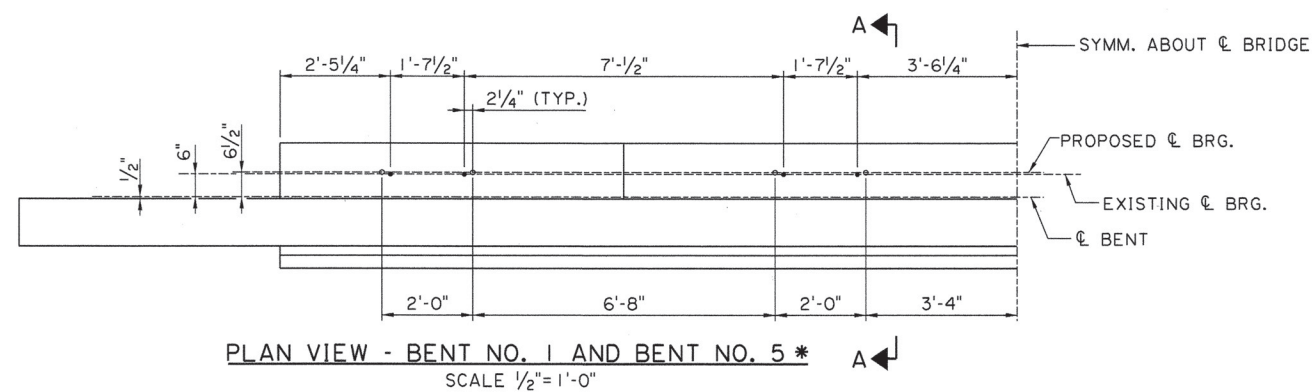


DETAIL A

* TWO HARDENED WASHERS REQUIRED FOR EACH SET OF OVERSIZED HOLES.



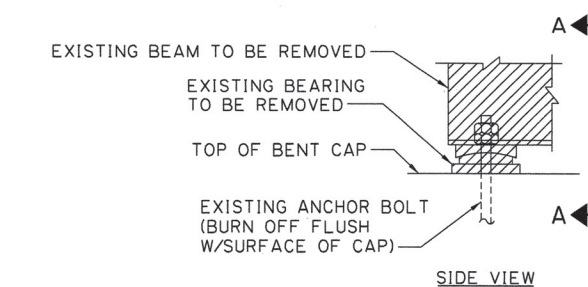
* TWO HARDENED WASHERS REQUIRED FOR EACH SET OF OVERSIZED HOLES.



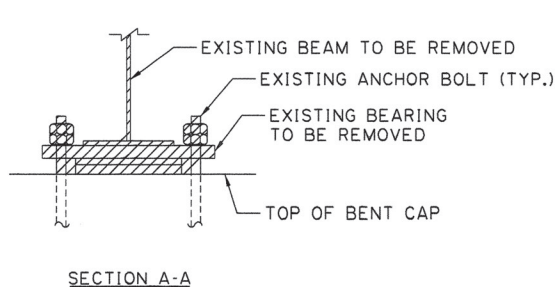
- LEGEND**
- EXISTING ANCHOR BOLT
 - PROPOSED ANCHOR BOLT

NOTE:
EXISTING ANCHOR BOLTS SHALL BE BURNED OFF FLUSH WITH THE EXISTING CONCRETE SURFACE, GROUND SMOOTH, AND SEALED WITH EPOXY. COST IS INCLUDED WITH ITEM 202-02-04120, REMOVAL OF BRIDGE SUPERSTRUCTURE (STEEL GIRDER SPAN).

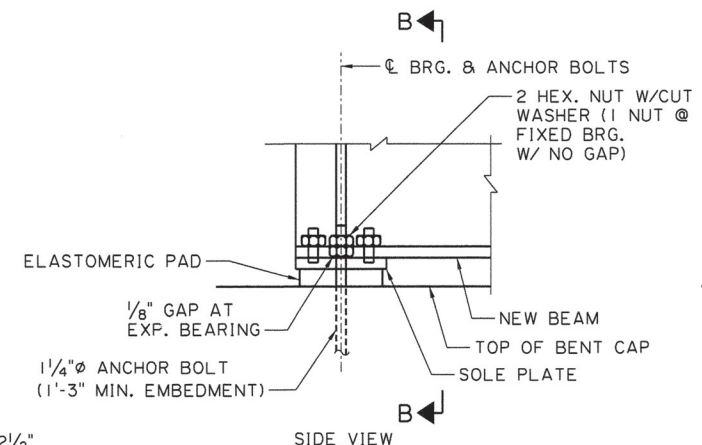
* BEARING ASSEMBLIES NOT SHOWN FOR CLARITY.



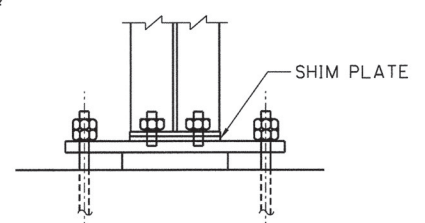
SIDE VIEW



SECTION A-A



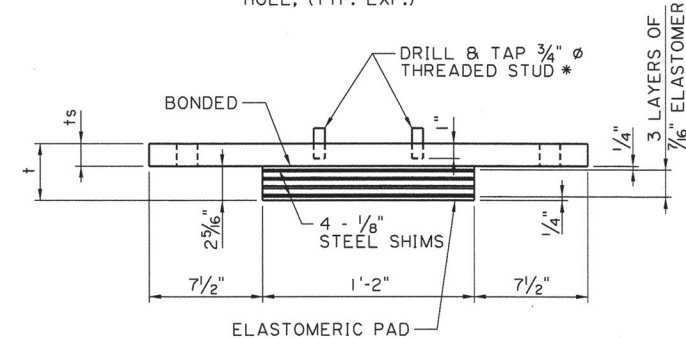
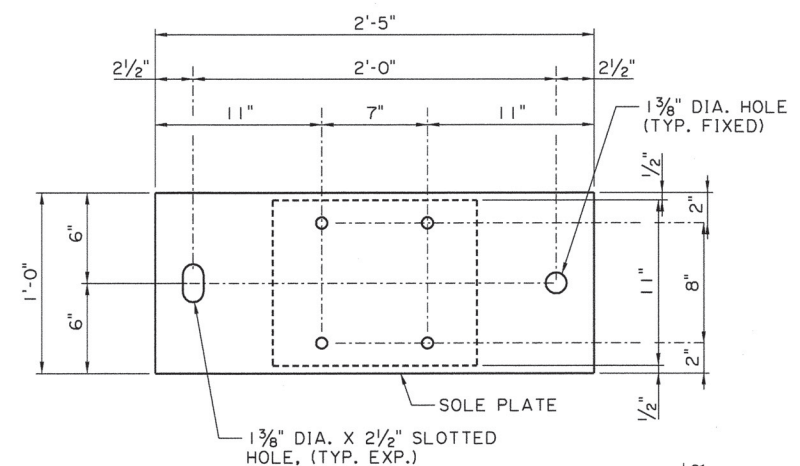
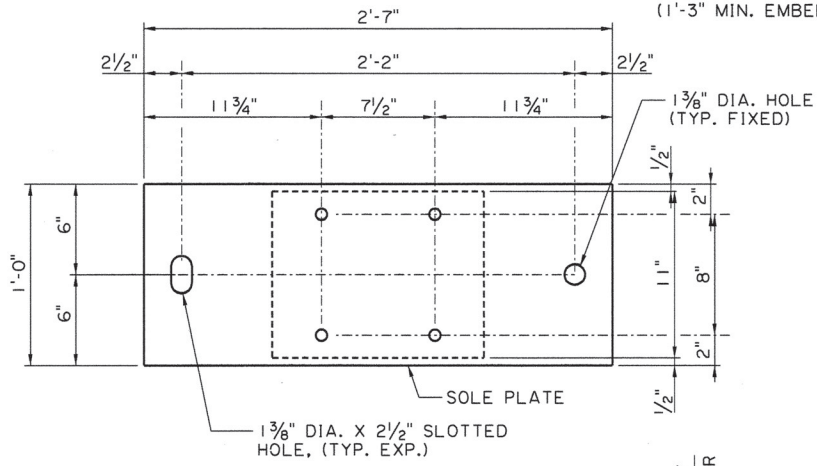
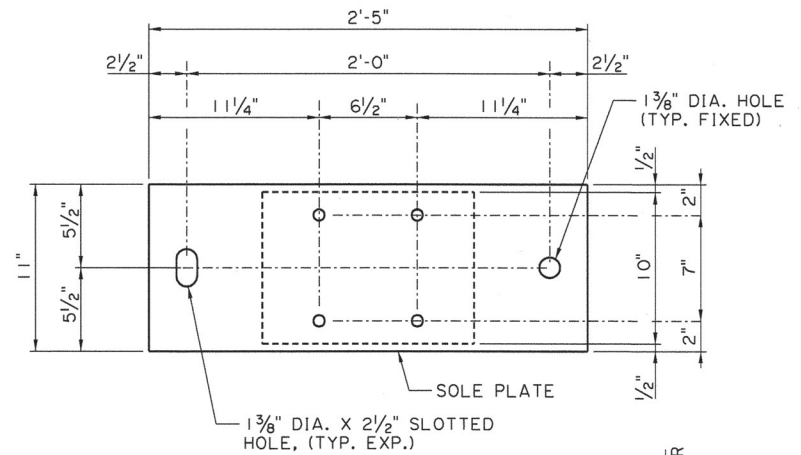
SIDE VIEW



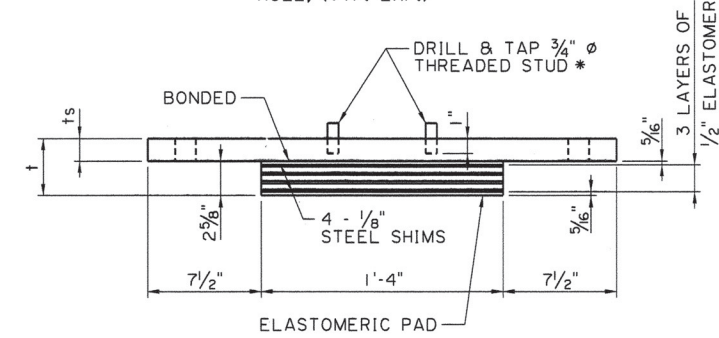
SECTION B-B

EXISTING BEARING REMOVAL DETAIL

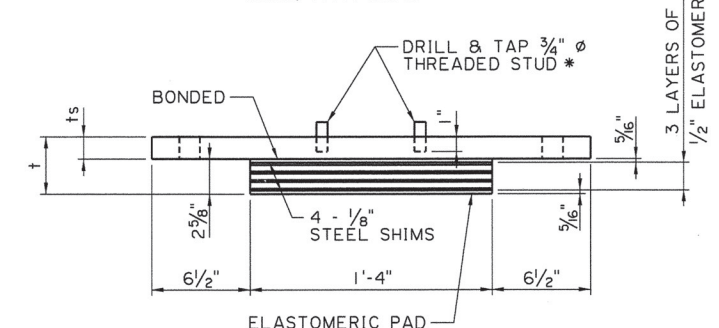
NEW BEARING DETAIL



BEARING ASSEMBLY DETAILS - SPANS 1 & 4
(8 INTERIOR BEAM BEARING ASSEMBLIES REQUIRED)
(8 EXTERIOR BEAM BEARING ASSEMBLIES REQUIRED)



BEARING ASSEMBLY DETAILS - SPAN 2
(4 INTERIOR BEAM BEARING ASSEMBLIES REQUIRED)
(4 EXTERIOR BEAM BEARING ASSEMBLIES REQUIRED)



BEARING ASSEMBLY DETAILS - SPAN 3
(4 INTERIOR BEAM BEARING ASSEMBLIES REQUIRED)
(4 EXTERIOR BEAM BEARING ASSEMBLIES REQUIRED)

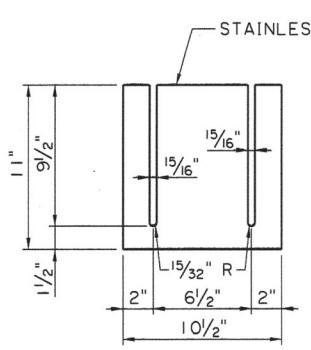
		ts		t		**	
		EXT. BEAM BRG.	INT. BEAM BRG.	EXT. BEAM BRG.	INT. BEAM BRG.	EXT. BEAM BRG.	INT. BEAM BRG.
SPAN NO. 1	BENT NO. 1	1 1/2"	1 3/4"	3 3/16"	4 1/16"	1/8"	-
	BENT NO. 2	2 3/4"	2 3/4"	5 1/16"	5 1/16"	-	3/16"
SPAN NO. 2	BENT NO. 2	2 3/4"	2 1/4"	5 3/8"	4 7/8"	-	3/16"
	BENT NO. 3	3 3/4"	3 1/2"	6 3/8"	6 1/8"	1/8"	1/16"
SPAN NO. 3	BENT NO. 3	2 3/4"	2 3/4"	5 3/8"	5 3/8"	-	3/16"
	BENT NO. 4	1 1/2"	1 3/4"	4 1/8"	4 3/8"	1/16"	-
SPAN NO. 4	BENT NO. 4	2 3/4"	3"	5 1/16"	5 5/16"	-	-
	BENT NO. 5	1 1/2"	1 3/4"	3 3/16"	4 1/16"	1/16"	-

** ADDITIONAL SHIM PLATE REQUIRED TO MAINTAIN PROPOSED PROFILE GRADE.

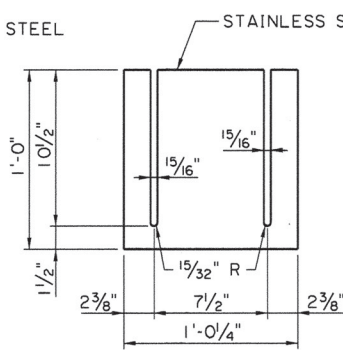
SHIM PACK SHALL CONSIST OF THE FOLLOWING:

2 - 1/16" THK. PLATE
1 - 1/8" THK. PLATE
1 - 1/4" THK. PLATE

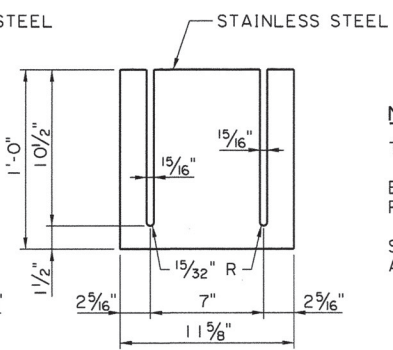
* PROVIDE A FLAT WASHER AND HEX NUT WITH EACH THREADED STUD. BURR THREADS AFTER BEARING INSTALLATION IS COMPLETE.



SHIM PACK DETAILS
(SPAN 1 & 4)
(16 REQUIRED)



SHIM PACK DETAILS
(SPAN 2)
(8 REQUIRED)



SHIM PACK DETAILS
(SPAN 3)
(8 REQUIRED)

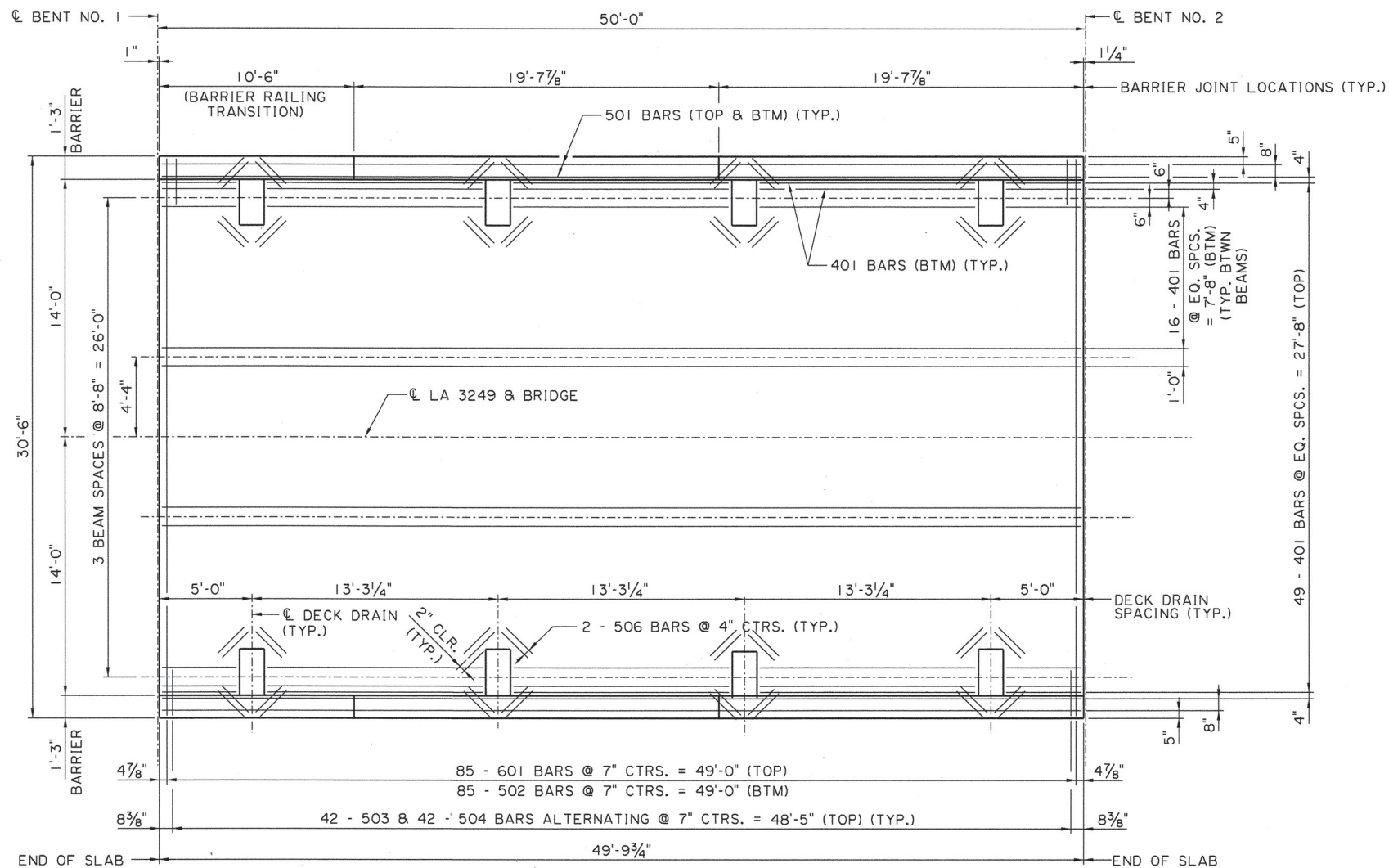
NOTES:

THE ELASTOMER SHALL HAVE A DUROMETER HARDNESS OF 60.

ELASTOMERIC PADS SHALL BE FROM THE APPROVED QUALIFIED PRODUCTS LIST NO. 3.

STAINLESS STEEL SHIM PLATES SHALL CONFORM TO ASTM A 276, TYPE 304.

TOP OF SLAB ELEVATIONS					
LOCATION	CENTERLINE BEARING	QUARTER POINT	MIDPOINT	QUARTER POINT	CENTERLINE BEARING
STATION	49+16.84	49+29.02	49+41.20	49+53.37	49+65.55
LEFT GUTTER	161.17	161.32	161.47	161.62	161.76
BASELINE	161.49	161.64	161.79	161.95	162.09
RIGHT GUTTER	161.17	161.32	161.47	161.62	161.76



DECK PLAN
SCALE: 1/4" = 1'-0"

REINFORCEMENT IN EDGE BEAMS NOT SHOWN FOR CLARITY. SEE SHEET NO. 123
FOR EDGE BEAM REINFORCEMENT.

ESTIMATED QUANTITIES					
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
(1)	401	101	51'-5	5,193'-1	LONGITUDINAL TOP & BOTTOM OF SLAB
TOTAL NO. 4 BARS = 5,193'-1 = 3,469 LBS.					
(2)	501	8	51'-11	415'-4	LONGITUDINAL TOP & BOTTOM UNDER BARRIER
	502	85	30'-3	2,571'-3	TRANSVERSE BOTTOM OF SLAB
	503	84	4'-2	350'-0	TRANSVERSE TOP OF SLAB UNDER BARRIER
	504	84	6'-2	518'-0	TRANSVERSE TOP OF SLAB UNDER BARRIER
	505	84	6'-5	539'-0	LONGITUDINAL BOTTOM OF EDGE BEAM
	506	64	2'-0	128'-0	AROUND DECK DRAINS
TOTAL NO. 5 BARS = 4,521'-7 = 4,716 LBS.					
	601	93	30'-3	2,813'-3	TRANSVERSE TOP OF SLAB
	602	24	10'-1	242'-0	TRANSVERSE BOTTOM OF EDGE BEAM
TOTAL NO. 6 BARS = 3,055'-3 = 4,589 LBS.					
DEFORMED REINFORCING STEEL (EPOXY COATED) ITEM 806-02-00100 = 12,774 LBS.					
CLASS AA(M) CONCRETE ITEM 805-04-00100 = 39.05 CU. YDS.					
CONCRETE RAILING (STANDARD BARRIER) ITEM 810-01-00100 = 99.63 LIN. FT.					

- (1) INCLUDES 1 (ONE) 2'-0" MIN. LAP SPLICE STAGGERED LOCATIONS
(2) INCLUDES 1 (ONE) 2'-6" MIN. LAP SPLICE STAGGERED LOCATIONS

NOTES:

FOR ADDITIONAL DECK DETAILS, SEE SHEET NO. 123.

FOR DECK DRAIN DETAILS, SEE SHEET NO. 124.

CUT REINFORCING BARS IN FIELD AS REQUIRED TO PROVIDE A 2" CLEARANCE FROM THE DECK DRAINS.

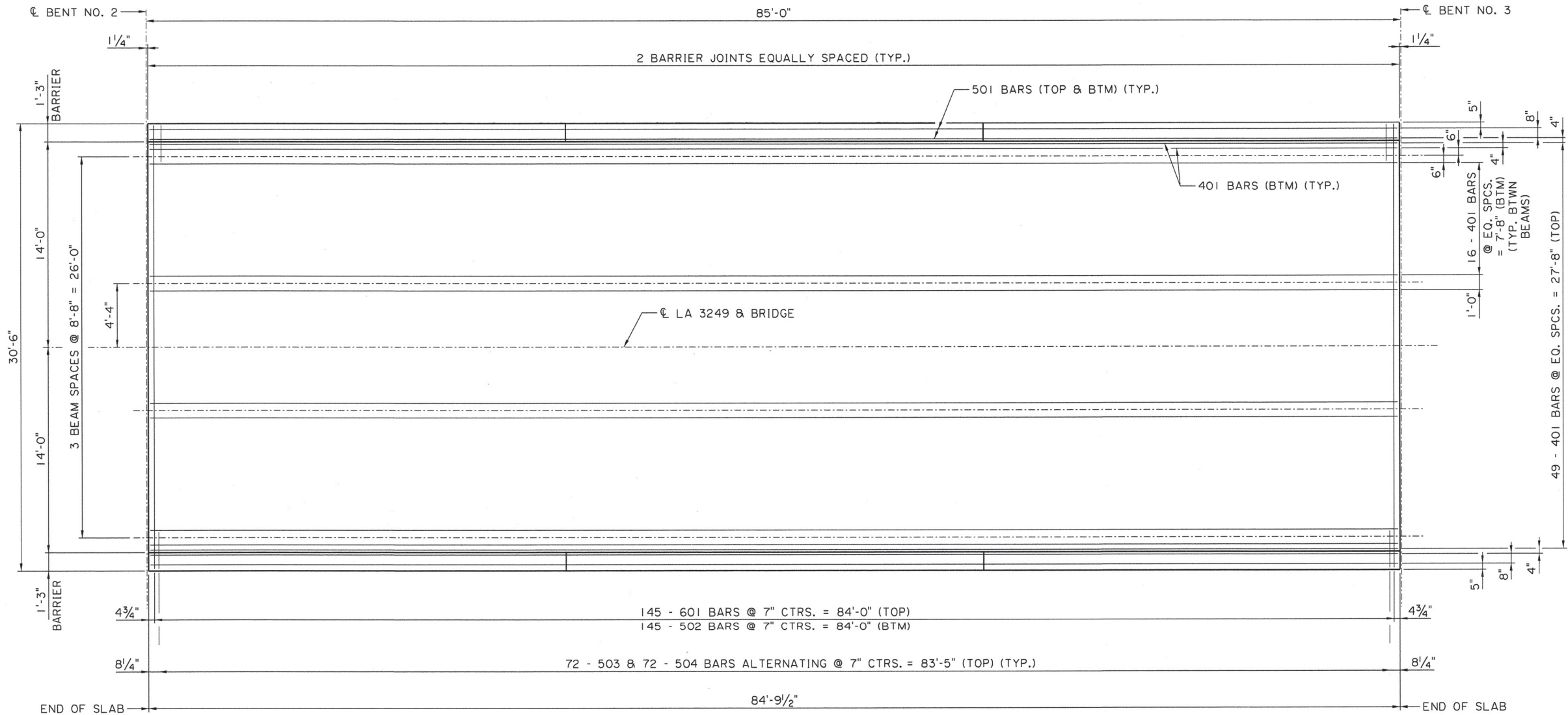
TIE 506 BARS TO BOTTOM OF TOP REINFORCEMENT MAT.

SHEET NUMBER	119
QUACHITA	451-06-0148
PARISH	STATE PROJECT
DESIGNED	DATE
CHECKED	DATE
REVISION DESCRIPTION	BY
LA 3249 (WELL ROAD) BRIDGE OVER I-20	DECK DETAILS - SPAN NO. 1
MODJESKI-MASTERS	

TOP OF SLAB ELEVATIONS					
LOCATION	CENTERLINE BEARING	QUARTER POINT	MIDPOINT	QUARTER POINT	CENTERLINE BEARING
STATION	49+66.90	49+87.85	50+08.80	50+29.75	50+50.70
LEFT GUTTER	161.78	161.98	162.15	162.27	162.36
BASELINE	162.10	162.31	162.47	162.60	162.68
RIGHT GUTTER	161.78	161.98	162.15	162.27	162.36

ESTIMATED QUANTITIES					
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
(1)	401	101	88'-5	8,930'-1	LONGITUDINAL TOP & BOTTOM OF SLAB
TOTAL NO. 4 BARS = 8,930'-1 = 5,966 LBS.					
(2)	501	8	89'-5	715'-4	LONGITUDINAL TOP & BOTTOM UNDER BARRIER
	502	145	30'-3	4,386'-3	TRANSVERSE BOTTOM OF SLAB
	503	144	4'-2	600'-0	TRANSVERSE TOP OF SLAB UNDER BARRIER
	504	144	6'-2	888'-0	TRANSVERSE TOP OF SLAB UNDER BARRIER
	505	84	6'-5	539'-0	LONGITUDINAL BOTTOM OF EDGE BEAM
TOTAL NO. 5 BARS = 7,128'-7 = 7,436 LBS.					
	601	153	30'-3	4,628'-3	TRANSVERSE TOP OF SLAB
	602	24	9'-1	218'-0	TRANSVERSE BOTTOM OF EDGE BEAM
TOTAL NO. 6 BARS = 4,846'-3 = 7,279 LBS.					
DEFORMED REINFORCING STEEL (EPOXY COATED) ITEM 806-02-00100 = 20,681 LBS.					
CLASS AA(M) CONCRETE ITEM 805-04-00100 = 67.28 CU. YDS.					
CONCRETE RAILING (STANDARD BARRIER) ITEM 810-01-00100 = 169.59 LIN. FT.					

(1) INCLUDES 2 (TWO) 2'-0" MIN. LAP SPLICE STAGGERED LOCATIONS
(2) INCLUDES 2 (TWO) 2'-6" MIN. LAP SPLICE STAGGERED LOCATIONS



DECK PLAN

SCALE: 1/4" = 1'-0"

NOTE:
FOR ADDITIONAL DECK DETAILS, SEE SHEET NO. 123.

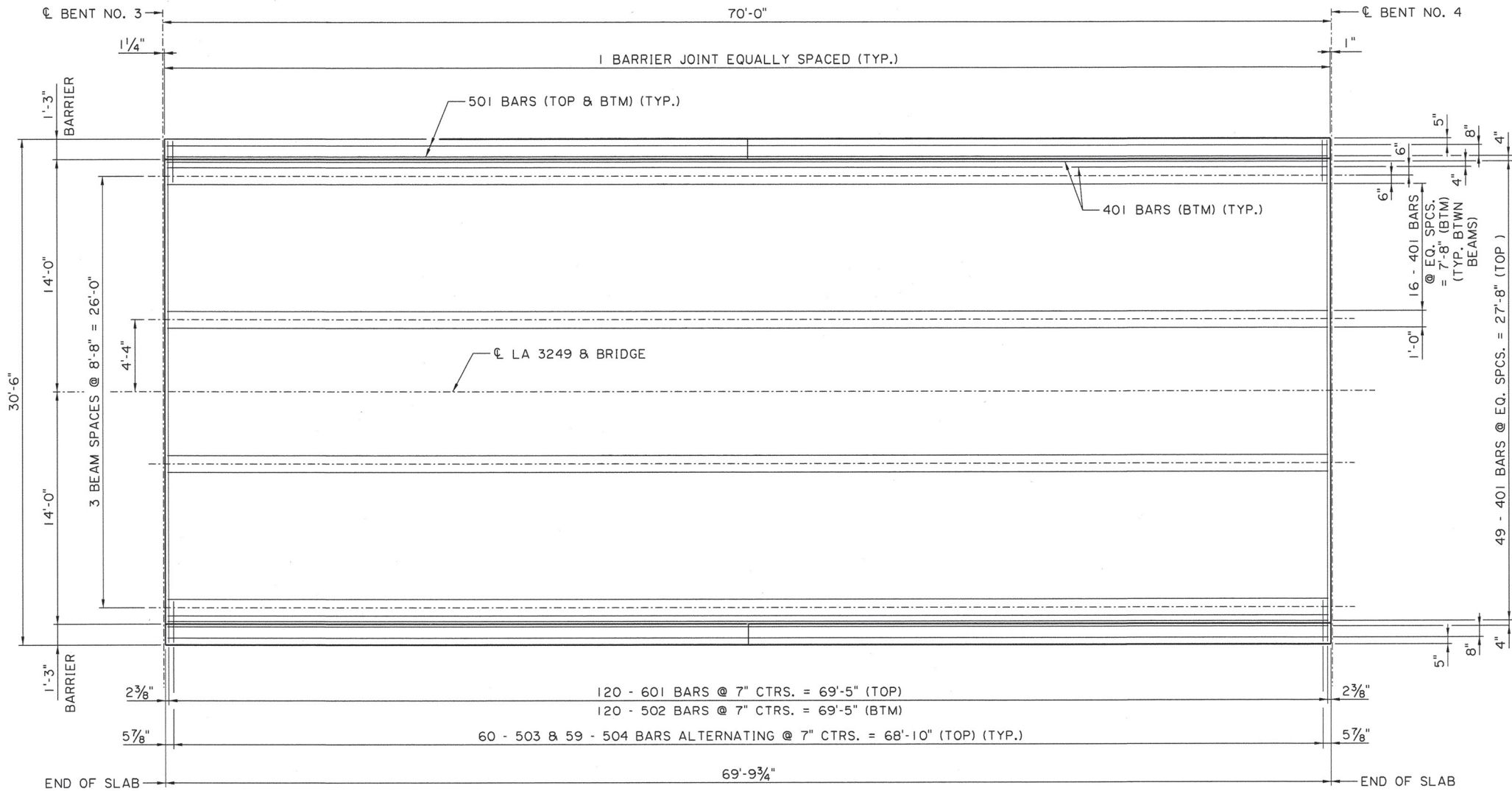
REINFORCEMENT IN EDGE BEAMS NOT SHOWN FOR CLARITY. SEE SHEET NO. 123
FOR EDGE BEAM REINFORCEMENT.

SHEET NUMBER	120
QUACHITA	451-06-0148
PARISH	STATE
DESIGNED RLM	CHECKED CDB
DATE	08/17/09
SHEET	1 OF 1
BY	
REVISION DESCRIPTION	
NO.	DATE
LA 3249 (WELL ROAD) BRIDGE OVER I-20	DECK DETAILS - SPAN NO. 2
DOT	
MOOREHEAD MASTERS	

TOP OF SLAB ELEVATIONS					
LOCATION	CENTERLINE BEARING	QUARTER POINT	MIDPOINT	QUARTER POINT	CENTERLINE BEARING
STATION	50+51.93	50+69.12	50+86.32	51+03.52	51+20.72
LEFT GUTTER	162.36	162.40	162.41	162.40	162.36
BASELINE	162.69	162.73	162.74	162.72	162.68
RIGHT GUTTER	162.36	162.40	162.41	162.40	162.36

ESTIMATED QUANTITIES					
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
(1)	401	101	73'-5"	7,415'-1"	LONGITUDINAL TOP & BOTTOM OF SLAB
TOTAL NO. 4 BARS = 7,415'-1" = 4,954 LBS.					
(2)	501	8	74'-5"	595'-4"	LONGITUDINAL TOP & BOTTOM UNDER BARRIER
	502	120	30'-3"	3,630'-0"	TRANSVERSE BOTTOM OF SLAB
	503	120	4'-2"	500'-0"	TRANSVERSE TOP OF SLAB UNDER BARRIER
	504	118	6'-2"	727'-8"	TRANSVERSE TOP OF SLAB UNDER BARRIER
	505	84	6'-5"	539'-0"	LONGITUDINAL BOTTOM OF EDGE BEAM
TOTAL NO. 5 BARS = 5,992'-0" = 6,250 LBS.					
	601	128	30'-3"	3,872'-0"	TRANSVERSE TOP OF SLAB
	602	24	9'-1"	218'-0"	TRANSVERSE BOTTOM OF EDGE BEAM
TOTAL NO. 6 BARS = 4,090'-0" = 6,143 LBS.					
DEFORMED REINFORCING STEEL (EPOXY COATED) ITEM 806-02-00100 = 17,347 LBS.					
CLASS AA(M) CONCRETE ITEM 805-04-00100 = 55.45 CU. YDS.					
CONCRETE RAILING (STANDARD BARRIER) ITEM 810-01-00100 = 139.63 LIN. FT.					

(1) INCLUDES 2 (TWO) 2'-0" MIN. LAP SPLICE STAGGERED LOCATIONS
(2) INCLUDES 2 (TWO) 2'-6" MIN. LAP SPLICE STAGGERED LOCATIONS



DECK PLAN

SCALE: 1/4" = 1'-0"

REINFORCEMENT IN EDGE BEAMS NOT SHOWN FOR CLARITY. SEE SHEET NO. 123
FOR EDGE BEAM REINFORCEMENT.

NOTE:
FOR ADDITIONAL DECK DETAILS, SEE SHEET NO. 123.

SHEET NUMBER121

QUACHITA

PARISH

FEDERAL PROJECT

STATE PROJECT

451-06-0148

DESIGNED RLM

CHECKED CDB

DATE

08/17/09

1 of 1

BY

REVISION DESCRIPTION

NO.

DATE

LA 3249 (WELL ROAD)
BRIDGE OVER I-20

DECK DETAILS - SPAN NO. 3

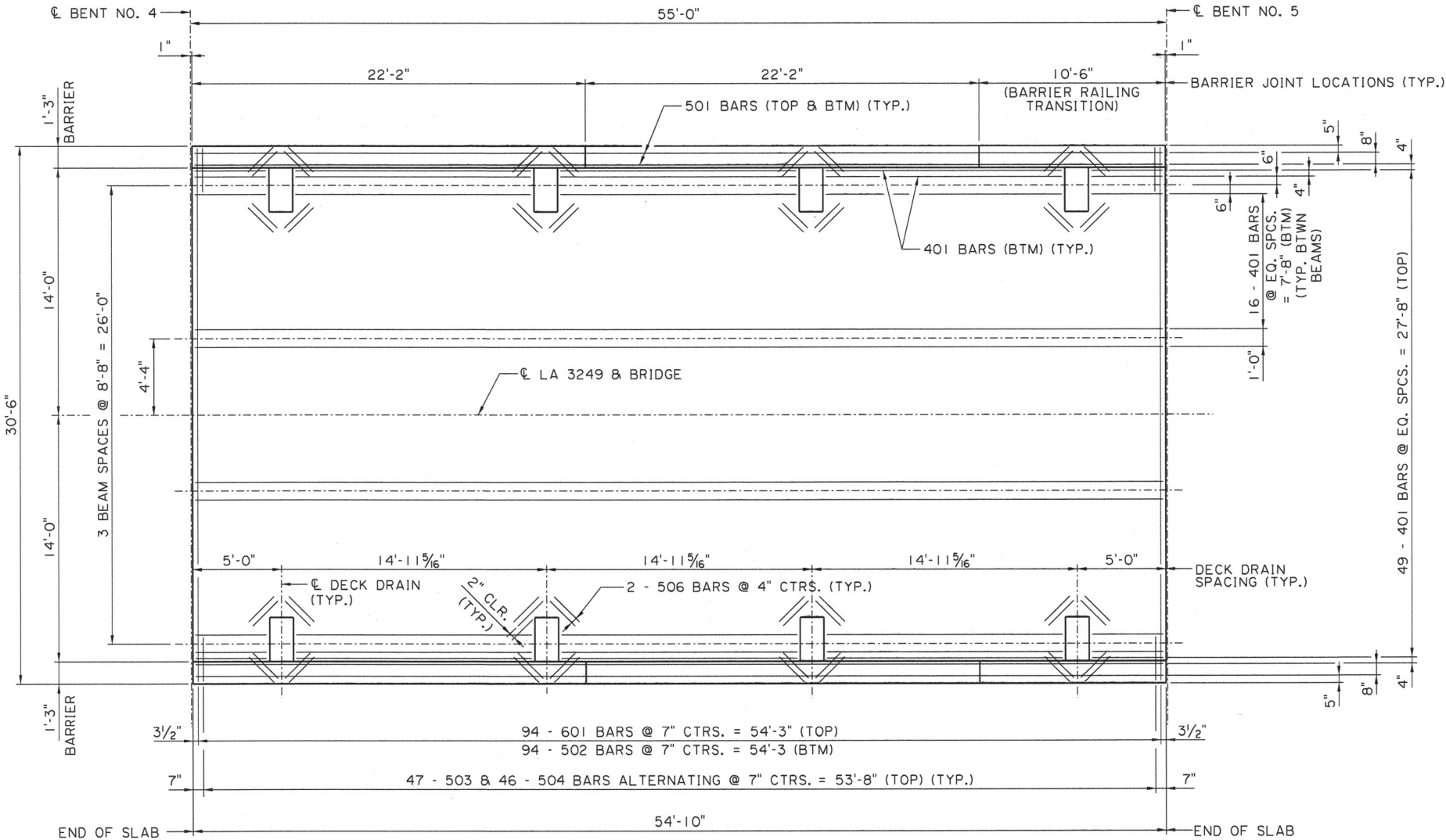
DOTD

MOD/ESK/MASTERS

TOP OF SLAB ELEVATIONS					
LOCATION	CENTERLINE BEARING	QUARTER POINT	MIDPOINT	QUARTER POINT	CENTERLINE BEARING
STATION	51+22.05	51+35.48	51+48.90	51+62.33	51+75.76
LEFT GUTTER	162.35	162.30	162.23	162.15	162.07
BASELINE	162.68	162.62	162.55	162.47	162.40
RIGHT GUTTER	162.35	162.30	162.23	162.15	162.07

ESTIMATED QUANTITIES					
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
(1)	401	101	56'-5"	5,698'-1"	LONGITUDINAL TOP & BOTTOM OF SLAB
TOTAL NO. 4 BARS = 5,698'-1" = 3,807 LBS.					
(2)	501	8	56'-11"	455'-4"	LONGITUDINAL TOP & BOTTOM UNDER BARRIER
	502	94	30'-3"	2,843'-6"	TRANSVERSE BOTTOM OF SLAB
	503	94	4'-2"	391'-8"	TRANSVERSE TOP OF SLAB UNDER BARRIER
	504	92	6'-2"	567'-4"	TRANSVERSE TOP OF SLAB UNDER BARRIER
	505	84	6'-5"	539'-0"	LONGITUDINAL BOTTOM OF EDGE BEAM
	506	64	2'-0"	128'-0"	AROUND DECK DRAINS
TOTAL NO. 5 BARS = 4,924'-10" = 5,137 LBS.					
	601	102	30'-3"	3,085'-6"	TRANSVERSE TOP OF SLAB
	602	24	10'-1"	242'-0"	TRANSVERSE BOTTOM OF EDGE BEAM
TOTAL NO. 6 BARS = 3,327'-6" = 4,998 LBS.					
DEFORMED REINFORCING STEEL (EPOXY COATED) ITEM 806-02-00100 = 13,942 LBS.					
CLASS AA(M) CONCRETE ITEM 805-04-00100 = 42.74 CU. YDS.					
CONCRETE RAILING (STANDARD BARRIER) ITEM 810-01-00100 = 109.67 LIN. FT.					

- (1) INCLUDES 1 (ONE) 2'-0" MIN. LAP SPLICE STAGGERED LOCATIONS
(2) INCLUDES 1 (ONE) 2'-6" MIN. LAP SPLICE STAGGERED LOCATIONS



DECK PLAN
SCALE: 1/4" = 1'-0"

REINFORCEMENT IN EDGE BEAMS NOT SHOWN FOR CLARITY. SEE SHEET NO. 123
FOR EDGE BEAM REINFORCEMENT.

- NOTES:
FOR ADDITIONAL DECK DETAILS, SEE SHEET NO. 123.
FOR DECK DRAIN DETAILS, SEE SHEET NO. 124.
CUT REINFORCING BARS IN FIELD AS REQUIRED TO PROVIDE A 2" CLEARANCE FROM THE DECK DRAINS.
TIE 506 BARS TO BOTTOM OF TOP REINFORCEMENT MAT.

SHEET NUMBER122

QUACHITA

PARISH

FEDERAL PROJECT

STATE PROJECT

451-06-0148

DESIGNED RLM

CHECKED CDB

DATE

08/17/09

BY

1 of 1

REVISION DESCRIPTION

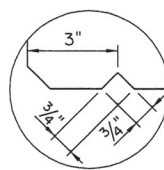
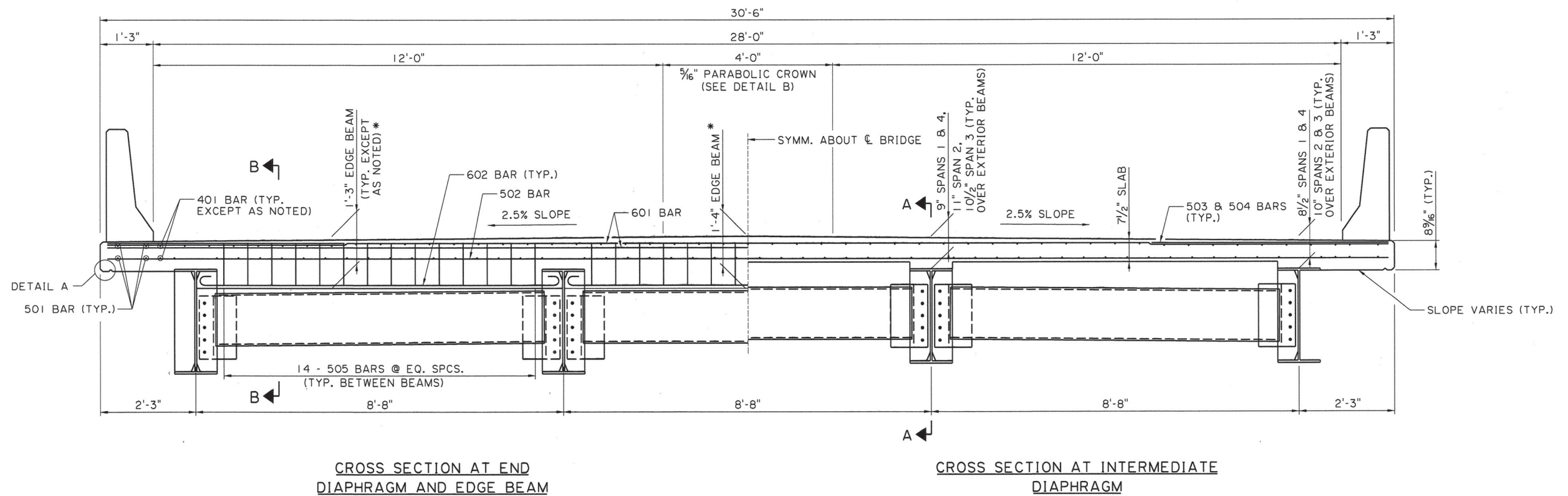
NO.

DATE

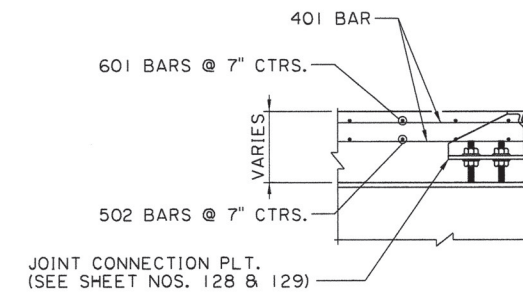
LA 3249 (WELL ROAD) BRIDGE OVER I-20

DECK DETAILS - SPAN NO. 4

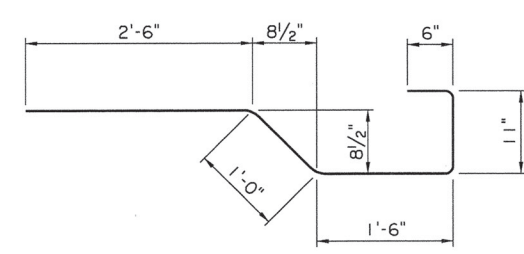
MODJESKI+MASTERS



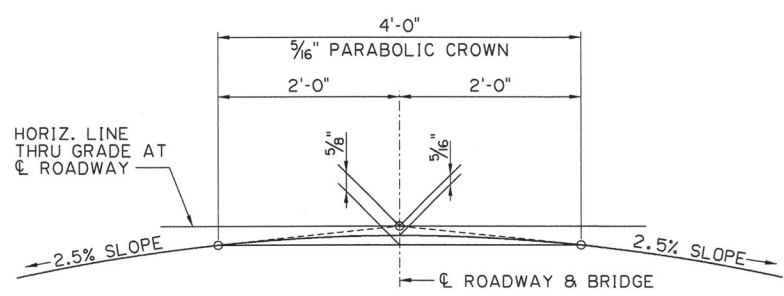
DETAIL A



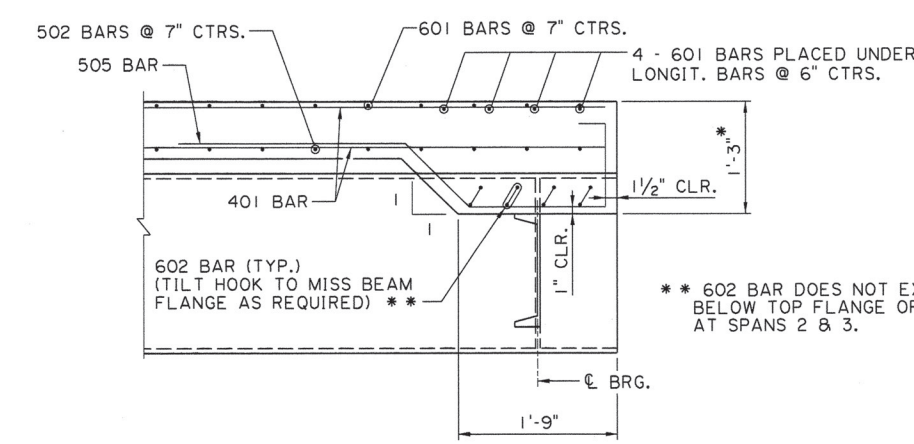
SECTION A-A
(SECTION THRU INTERIOR BENT SHOWN, SECTION THRU END BENT SIMILAR)



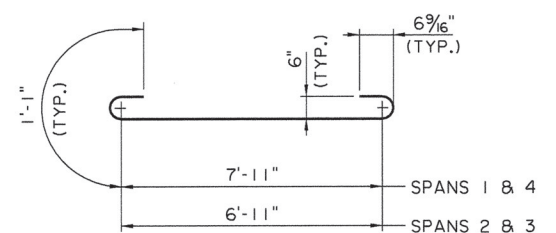
505 BAR
(3/4" PIN DIAMETER)



DETAIL B



SECTION B-B
EXPANSION JOINT NOT SHOWN FOR CLARITY.

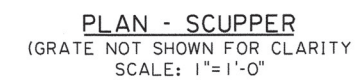


602 BAR
(4 1/2" PIN DIAMETER)

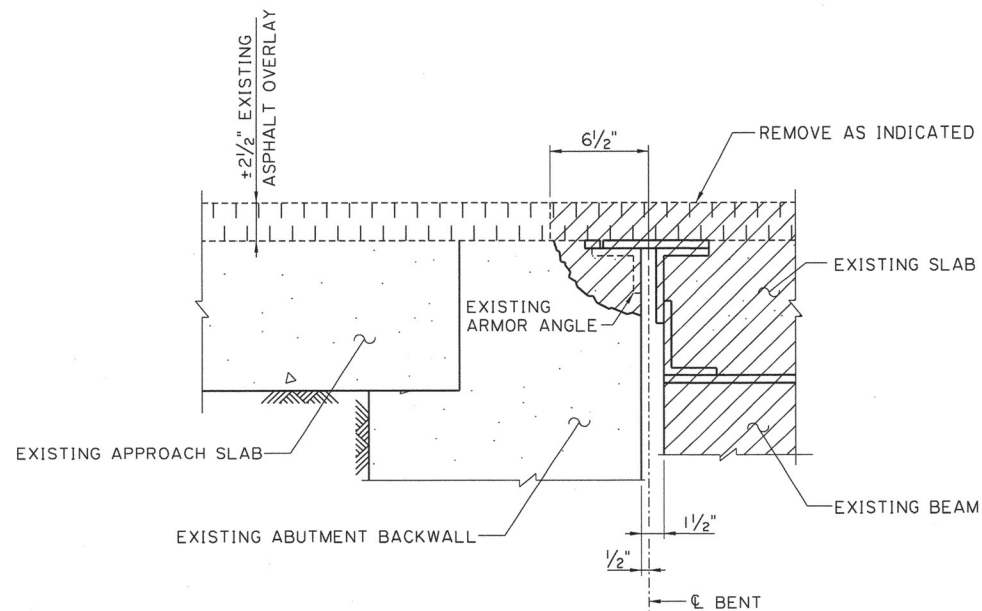
NOTE:
FOR DECK DRAINAGE DETAILS, SEE SHEET NO. 124

* THE EDGE BEAM WITHIN THE EXTERIOR BAYS IS SLOPED WITH THE ROADWAY AND HAS A UNIFORM DEPTH OF 1'-3". THE EDGE BEAM WITHIN THE INTERIOR BAY DOES NOT SLOPE WITH THE ROADWAY. THE DEPTH VARIES FROM 1'-3" MINIMUM AT THE BEAMS TO 1'-4" AT THE CENTERLINE OF STRUCTURE.

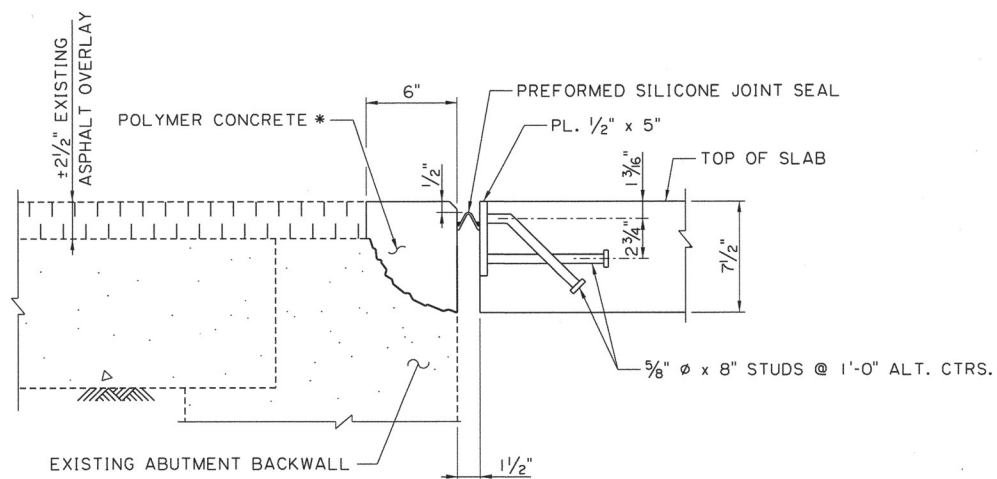
SHEET NUMBER	123
QUACHITA	
PARISH	
FEDERAL PROJECT	
STATE PROJECT	451-06-0148
DESIGNED RLM	
CHECKED CDB	
DATE	08/17/09
BY	1 of 1
REVISION DESCRIPTION	
NO.	
DATE	
BY	
LA 3249 (WELL ROAD) BRIDGE OVER I-20	
MISCELLANEOUS DECK DETAILS	
LA 3249 (WELL ROAD) BRIDGE OVER I-20	
MISCELLANEOUS DECK DETAILS	



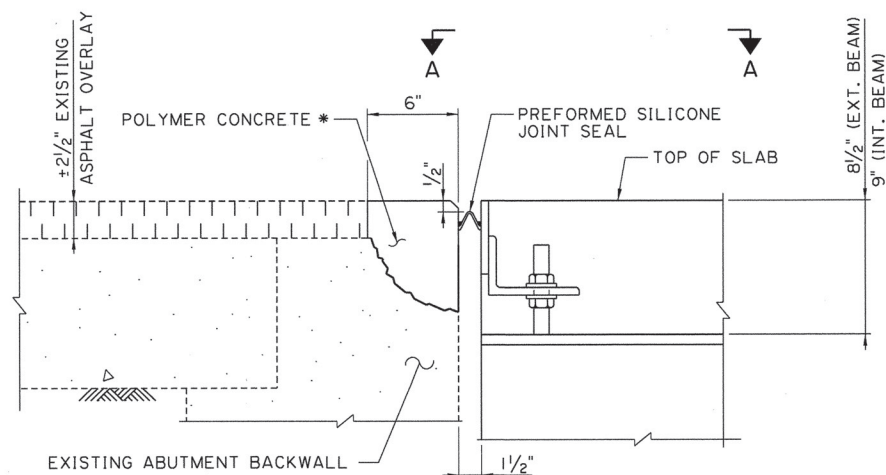
SCUPPERS ARE TO BE GRADE 36 STEEL
AND PAINTED TO MATCH WEATHERING
STEEL.
SCUPPERS ARE TO BE PAID UNDER
ITEM 807-08-00100, STRUCTURAL
METALWORK



② EXISTING JOINT @ BENT NOS. 1 & 5



② NEW JOINT @ BENT NOS. 1 & 5 BETWEEN BEAMS



② NEW JOINT @ BENT NOS. 1 & 5 @ BEAMS

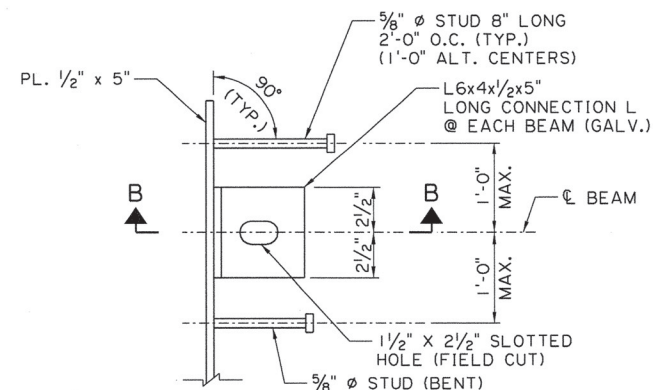
CONSTRUCTION PROCEDURE:

1. SAW CUT EXISTING ASPHALT OVERLAY FULL DEPTH AT LOCATION SHOWN ON PLANS.
2. REMOVE ASPHALT OVERLAY AS SHOWN ABOVE EXISTING ABUTMENT BACKWALL.
3. SANDBLAST VERTICAL FACE OF ASPHALT AND TOP OF ABUTMENT BACKWALL TO REMOVE UNSOUND MATERIAL.
- ② 4. REMOVE CONCRETE AROUND EXISTING ARMOR ANGLE, REMOVE THE EXISTING ARMOR ANGLE, AND ROUGHEN THE CONCRETE SURFACE. REINFORCING STEEL IN THE EXISTING BACKWALL TO REMAIN. REMOVAL OF CONCRETE TO BE PAID UNDER ITEM NO. 202-02-38400, REMOVAL OF STRUCTURAL CONCRETE PER LUMP SUM.
5. BLOW SANDBLASTED SURFACE AND JOINT OPENING WITH OIL-FREE COMPRESSED AIR.
6. INSTALL AN EXTRUDED POLYSTYRENE FOAM FORM IN JOINT OPENING TO A HEIGHT LEVEL WITH THE NEW BRIDGE GRADE. PRIME THE ASPHALT AND CONCRETE SURFACE OF THE REPAIR AREA WITH ONE LAYER OF THE SAME POLYESTER RESIN USED IN THE POLYMER CONCRETE.
7. MIX AND INSTALL POLYMER CONCRETE PER THE MANUFACTURER'S DIRECTIONS.
8. ALLOW THE POLYMER CONCRETE TO CURE FULL DEPTH PER THE MANUFACTURER'S DIRECTIONS.
9. REMOVE THE FOAM FORM FROM THE JOINT OPENING. USE AN ANGLE GRINDER TO GRIND A 3/8\"/>

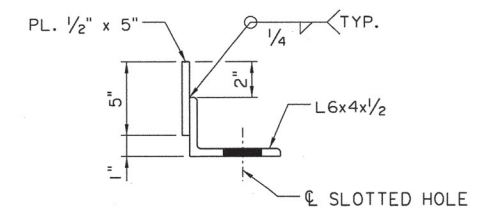
NOTES:

1. THE POLYMER CONCRETE SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION FOR NS PATCHING AND/OR JOINT REPAIRS (POLYMER CONCRETE).
2. THE PREFORMED SILICONE JOINT SEAL SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION FOR NS JOINT SEALING SYSTEM (PREFORMED JOINT).
3. THE PREFORMED SILICONE JOINT SEAL SHALL ACCOMMODATE A 2.0\"/>

* THE FINISHED SURFACE OF THE POLYMER CONCRETE IS TO BE LEVEL WITH THE NEW BRIDGE DECK. IF THE ADJACENT ASPHALT OVERLAY TO REMAIN ON THE APPROACHES DOES NOT PROVIDE A SMOOTH TRANSITION ONTO THE NEW JOINT, THE ADJACENT ASPHALT ELEVATION WILL BE ADJUSTED BY COLD PLANING OR ADDING ASPHALTIC CONCRETE.



SECTION A-A



SECTION B-B

TYPE M

TYPE A
(CURB USE ONLY)

* NOMINAL- LENGTH OF ANGLE
MUST BE ADJUSTED TO FIT
EACH PROJECT AND JOINT TYPE.

* L 6" X 6" X 1/2" X 10" LONG
CONNECTION L @ EACH
GIRDER (GALV.)

HALF SECTION SHOWING
CONCRETE GIRDERS

Technical drawing of a concrete curb cross-section. The drawing includes the following dimensions and specifications:

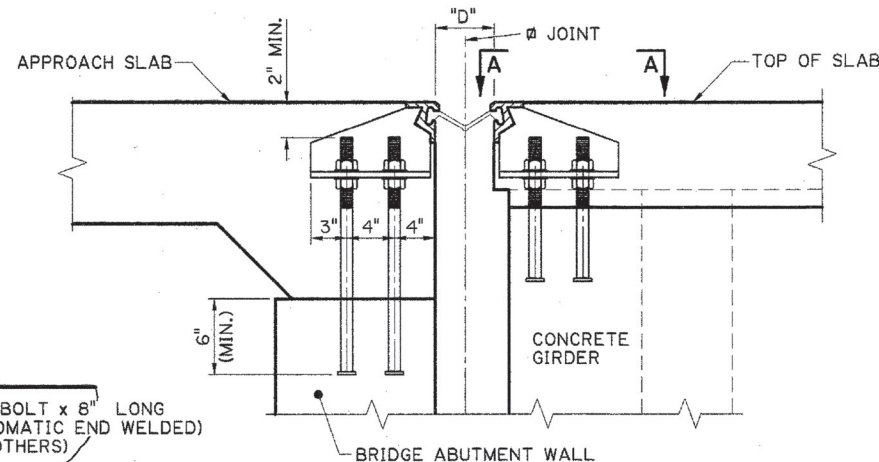
- Overall Height:** 8 3/8"
- Top Flange Thickness:** 2 1/8"
- Top Flange Width:** 3"
- Base Width:** 4"
- Rebar:** #5 REBAR 1'-0" O.C. A615-GRADE 60
- Steel Extrusion:** STEEL EXTRUSION
- Air Holes:** 9/16" AIR HOLES @ 12" O.C. (TYP.)
- Plate:** 1/2" Plate 1'-0" O.C.

Diagram illustrating a typical section between girders, showing a 135° angle and a 2" MIN. dimension.

TYPE SSCM 2

HALF SECTION SHOWING
STEEL GIRDERS

A-PLACE JOINT IN PLACE AS A UNIT (SPACER STILL IN PLACE).
B-ADJUST TO PROPER VERTICAL POSITION.
C-PRIOR TO POURING DECKS, REMOVE SPACER
D-JUST PRIOR TO POURING DECKS, SET JOINT TO PROPER OPENING RELATIVE TO THE
CURRENT TEMPERATURE, FROM THE DESIGN TEMPERATURE OF 68° F

[illegible]

SECTION A-A

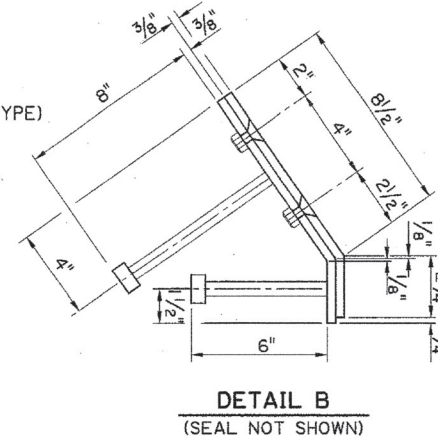
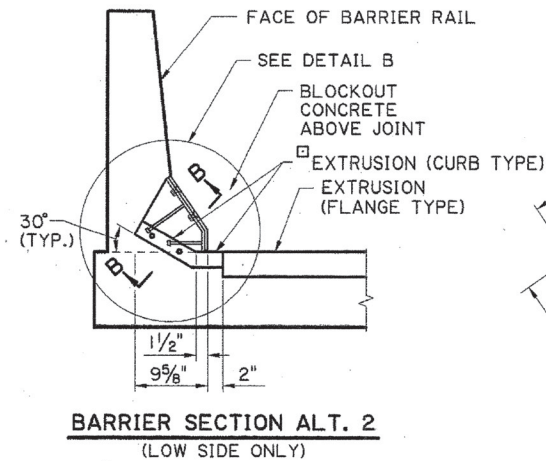
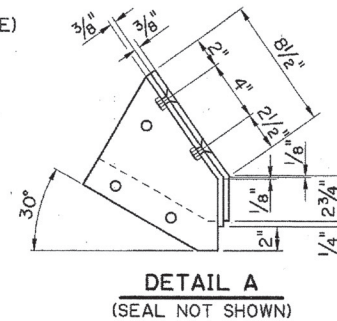
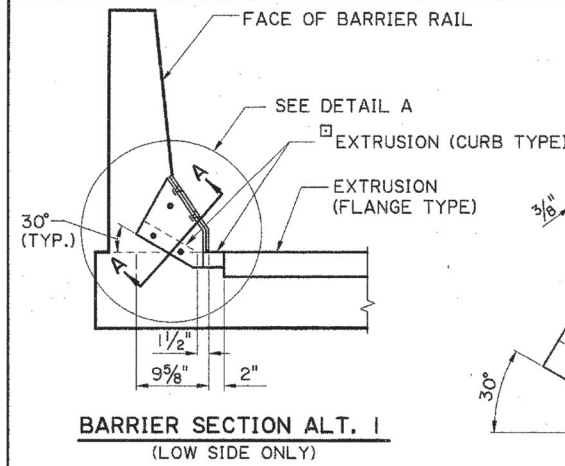
"D" VARIES (SIZE OF JOINT)

POLYURETHANE FILLER ROD IN PLACE WHEN JOINT IS INSTALLED

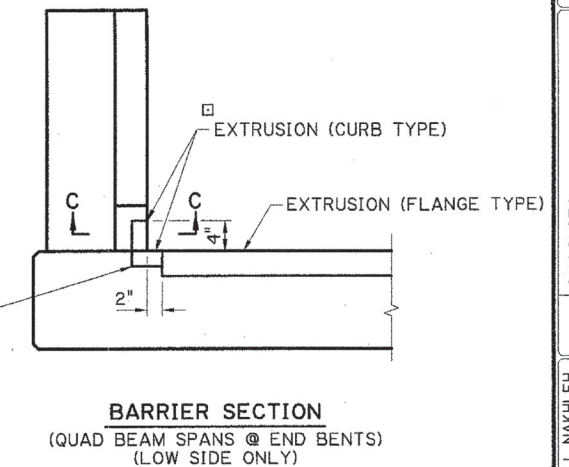
1 - 1/2" DIA. x 4" BOLT @ 5'-0" O.C. (MAX)
 1 - 1/2" DIA. HEX NUT, PER BOLT
 4 - 1/2" DIA. FLAT WASHERS, PER BOLT
 1 - 5/8" I.D. BLACK PIPE, PER BOLT

1. THE FOLLOWING MATERIALS ARE TO BE PAID FOR IN THE BID PRICE PER LINEAR FOOT OF " STRIP SEAL".
 - A. NEOPRENE EXTRUSION
 - B. STEEL EXTRUSIONS
 - C. $\frac{3}{8}$ " DIAMETER STUDS
 - D. ALL STEEL PLATES REQUIRED FOR BARRIER SECTION
 - E. CAP SCREWS AND NUTS, TEMPORARY STEEL SPACER BLOCKS AND POLYURETHANE FILLER ROD.
 - F. 6" x 6" x $\frac{3}{8}$ " x 6" CONNECTION PLATES.
 - G. No. 5 REBAR AND $\frac{1}{2}$ " PLATE.
2. STRUCTURAL STEEL SHALL CONFORM TO ASTM A-709, GRADE 36 OR GRADE 50.
3. THE MANUFACTURER'S RECOMMENDED CONSTRUCTION METHODS SHALL BE FOLLOWED.
4. A FACTORY REPRESENTATIVE IS TO BE PRESENT DURING THE INSTALLATION OF THE JOINT.
5. SHOP DETAILS OF JOINTS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.
6. STEEL EXTRUSIONS SHALL BE SHIPPED IN PAIRS.
7. POLYURETHANE FILLER ROD WILL BE PLACED IN STEEL EXTRUSION'S CAVITY PRIOR TO SHIPMENT. THIS ROD WILL BE REMOVED ONLY WHEN THE NEOPRENE EXTRUSION IS TO BE INSTALLED IN PLACE.
8. ALL WELDS SHALL CONFORM TO AWS D1.5-95 BRIDGE STRUCTURAL WELDING CODE AND D1.4-92 REINFORCING STEEL WELDING CODE.
9. WELDED SPLICES OF STEEL EXTRUSIONS SHALL BE SHOP SPLICES AND EACH PORTION OF THE EXTRUSION SHALL BE NOT LESS THAN 15 FEET IN LENGTH EXCEPT THAT ONE SECTION, NOT LESS THAN 4 FEET IN LENGTH WILL BE ALLOWED IN THE SHOULDER AREA IF REQUIRED TO MATCH THE ROADWAY CROSS SECTION. ALL SPLICES SHALL BE MADE SO AS TO OCCUR OUTSIDE THE WHEEL PATHS. (SEE DETAIL ON SHEET 2 OF 2.)

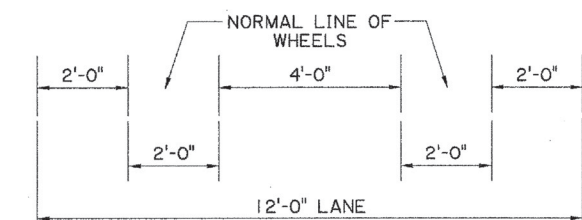
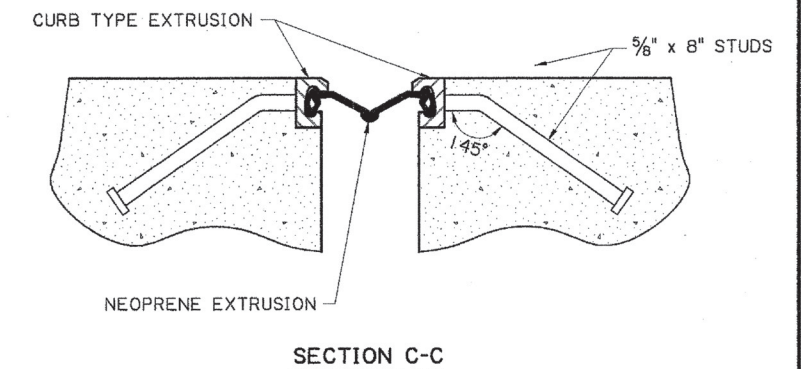
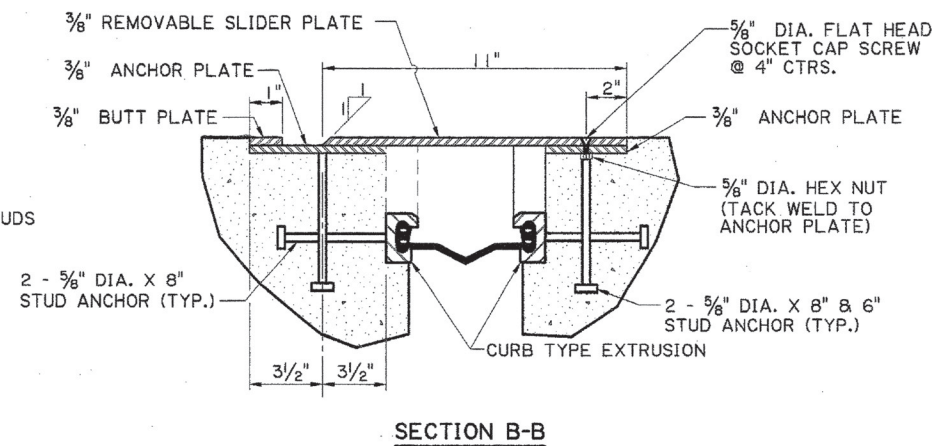
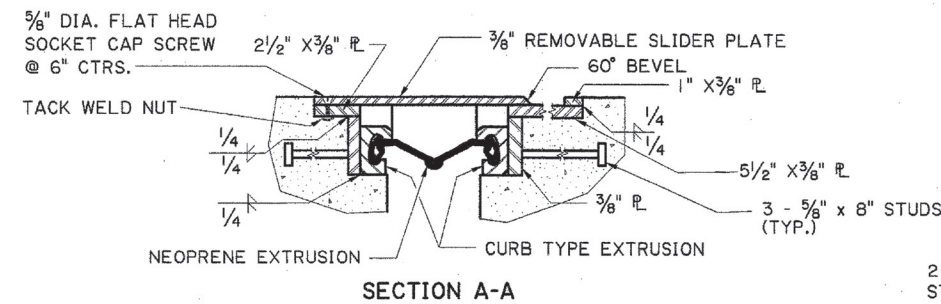
IF A SECTION LESS THAN 15 FEET IS USED, THE CONNECTION STUDS WILL BE SPACED AT 9 INCH ALTERNATE CENTERS. ALL SPLICE LOCATIONS WILL BE SHOWN ON THE SHOP DRAWINGS. DRAWINGS WILL NOT BE APPROVED UNLESS THE LOCATIONS ARE DESIGNATED ON THE DRAWINGS. THE LOCATIONS MAY BE DESIGNATED WITH A +/- 6 INCH TOLERANCE. WELDED SPLICES ARE ALSO REQUIRED WHERE TWO DIFFERENT STEEL SHAPES ARE JOINED AT THE CURB AREA AND WHERE THE CURB UNITS ARE TURNED UP. WELDED SPLICES WILL BE BUTT SPLICES AND CARE SHALL BE TAKEN NOT TO ALLOW WELD METAL TO INVADE THE GLAND CAVITY. WELD MATERIAL IN THE CAVITY WILL BE CAUSE FOR REJECTION. CONNECTION STUDS WILL BE LOCATED 3 INCHES EITHER SIDE OF WELDED SPLICES.
10. NEOPRENE EXTRUSIONS HAVE TO BE MANUFACTURED AS A CONTINUOUS PIECE WITH ONLY ONE (1) SHOP SPLICE PER JOINT ALLOWED WHEN LENGTH EXCEEDS 50 FEET. THE NEOPRENE STRIP SEAL SHALL BE AN EXTRUDED NEOPRENE MATERIAL CONFORMING TO ASTM DESIGNATION: D2628 MODIFIED TO OMIT RECOVERY TEST TO REVISE THE REQUIRED TYPE A HARDNESS TO 55 -5+/10 AS DETERMINED BY ASTM D2240.
11. SEAL SHALL BE BONDED TO STEEL WITH A PRE-MIXED LUBRICATING ADHESIVE SOLUTION WHICH SHALL BE USED TO FACILITATE THE SEAL INSTALLATION. THIS LUBRICANT ADHESIVE SHALL BE SELECTED FROM THE L.A. DOTD QUALIFIED PRODUCTS LIST, AS MAINTAINED BY THE DEPARTMENT'S MATERIALS SECTION. THE LUBRICANT SHOULD FLOW FREELY AND EVENLY COAT THE SEAL AND JOINT FACE. THE LUBRICANT SHOULD COMPLETELY COAT THE SEAL AND STEEL EXTRUSION CAVITY WHICH REMAIN IN CONTACT.
12. AFTER METAL SURFACES HAVE BEEN PREPARED FOR PAINTING AND PRIOR TO PAINTING, THE POLYURETHANE FILLER RODS ARE TO BE PLACED IN THE EXTRUSIONS. ALL METAL SURFACES NOT EMBEDDED IN CONCRETE SHALL BE SHOP PAINTED WITH TWO COATS OF AN APPROVED ZINC PAINT SYSTEM FROM QPL NO. 78, EXCEPT FOR THE STEEL PLATES REQUIRED FOR THE BARRIER SECTION, WHICH SHALL RECEIVE THREE COATS. THE STEEL EXTRUSION CAVITY MAY NOT BE PAINTED. IF PAINTED, CARE SHALL BE TAKEN THAT A PAINT BUILD-UP DOES NOT OCCUR IN THE BOTTOM.
13. IN LIEU OF PAINTING, EXPANSION JOINT ASSEMBLIES MAY BE HOT-DIP GALVANIZED AFTER FABRICATION AND ALL SHOP WELDING OPERATIONS, (INCLUDING STUD WELDING) HAVE BEEN COMPLETE, IN ACCORDANCE WITH SECTION 811 OF THE STANDARD SPECIFICATIONS. CARE SHALL BE TAKEN THAT A COATING BUILD-UP DOES NOT OCCUR IN THE BOTTOM OF THE CAVITY.
14. JOINTS UP TO FIFTY FOUR (54') FEET IN LENGTH SHALL BE DELIVERED TO THE JOB SITE IN ONE PIECE. JOINTS OVER FIFTY FOUR (54') FEET IN LENGTH MAY HAVE PROVISIONS FOR A FIELD SPLICE IN THE STEEL EXTRUSIONS PROVIDING THE SPLICE IS PERFORMED IN SHOP LIKE CONDITIONS IN THE PRESENCE OF A STATE INSPECTOR AND MEET THE REQUIREMENTS OF NOTE 8 ABOVE. ALL OTHER WELDED SPLICES OF STEEL EXTRUSIONS SHALL BE SHOP SPLICES.
15. ALL STUDS SHALL BE BENT PRIOR TO WELDING TO THE JOINT. NO FIELD BENDING OF STUDS WILL BE ALLOWED.
16. ALL LABOR, MATERIALS, EQUIPMENT, MANUFACTURER SUPERVISION AND INCIDENTALS PERTAINING TO THE INSTALLATION OF THE JOINT SHALL BE PAID FOR UNDER ITEM STRIP SEAL JOINTS, PER LINEAR FOOT. MEASUREMENT SHALL BE ALONG THE CENTERLINE OF THE JOINT, FROM GUTTER LINE TO GUTTER LINE ONLY, UNLESS SPECIFIED OTHERWISE IN THE PLANS.



SPECIAL SEAL SECTION REQUIRED FOR 90° VERTICAL SKEW. ALL SPLICES TO BE HEAT VULCANIZED IN FACTORY.



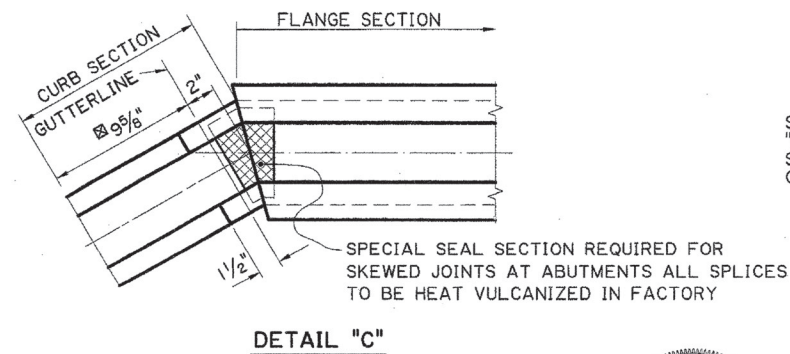
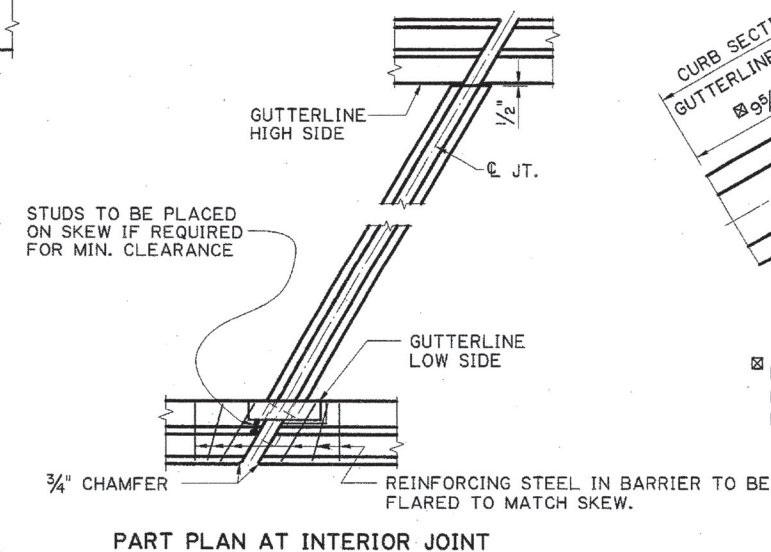
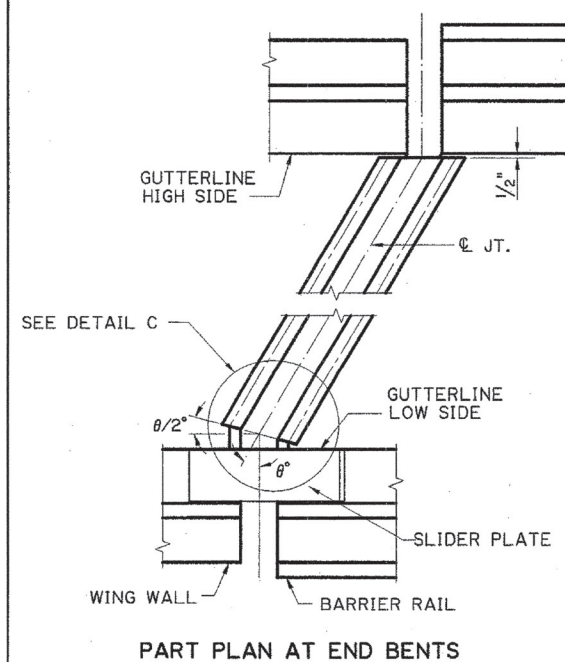
FLANGE TYPE EXTRUSION MAY BE USED IN LIEU OF CURB TYPE EXTRUSION IF SITE CONDITIONS PERMIT.



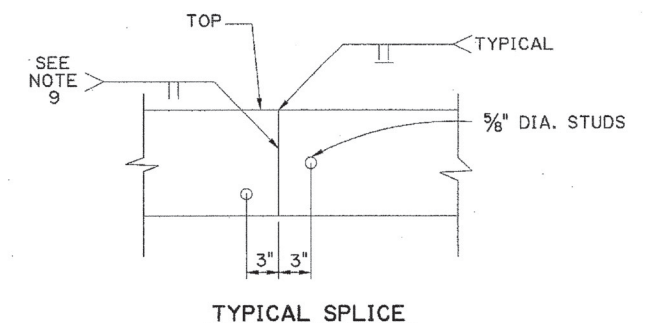
DIMENSIONS SHOWN ARE NORMAL TO ROADWAY WHEN JOINT IS PLACED ON SKEW. THE DIMENSIONS SHOWN WILL VARY TO MEET THE SKEW DIMENSIONS ALONG THE C/L OF THE JOINT.

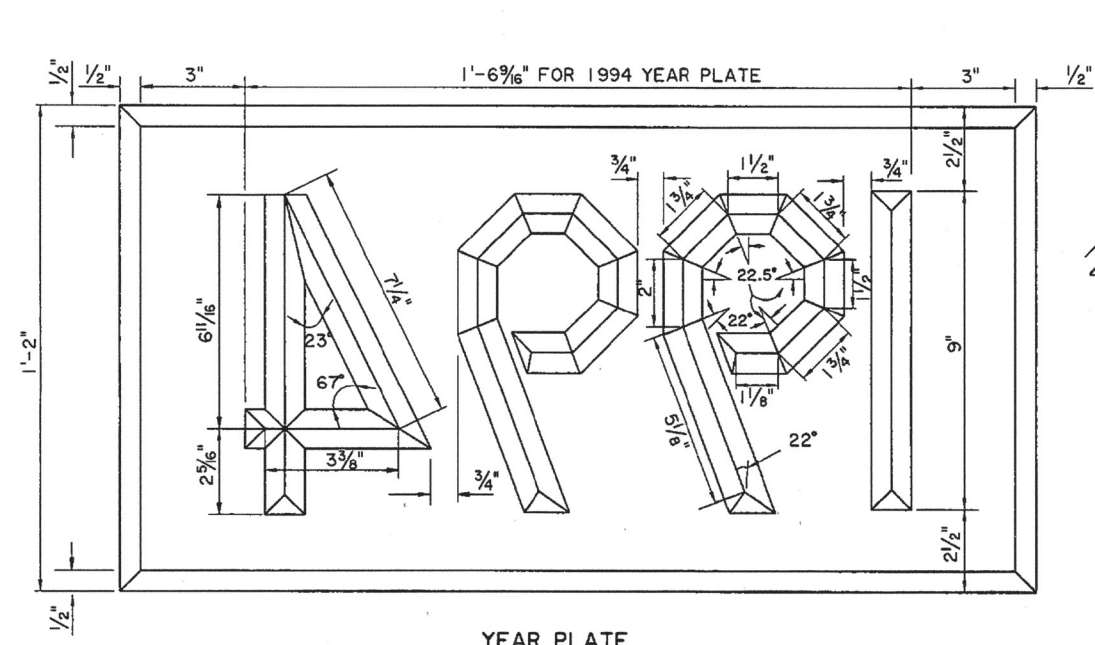
SPLICE LOCATIONS

SPLICE LOCATIONS SHALL BE LOCATED SO AS NOT TO FALL IN THE "NORMAL LINE OF WHEELS" EXCEPT FOR CURB SECTIONS, ALL EXTRUSIONS SHALL BE A MINIMUM OF 15 FT. BETWEEN SPLICES EXCEPT WHEN NOTED OTHERWISE ON THE SPAN SHEET.



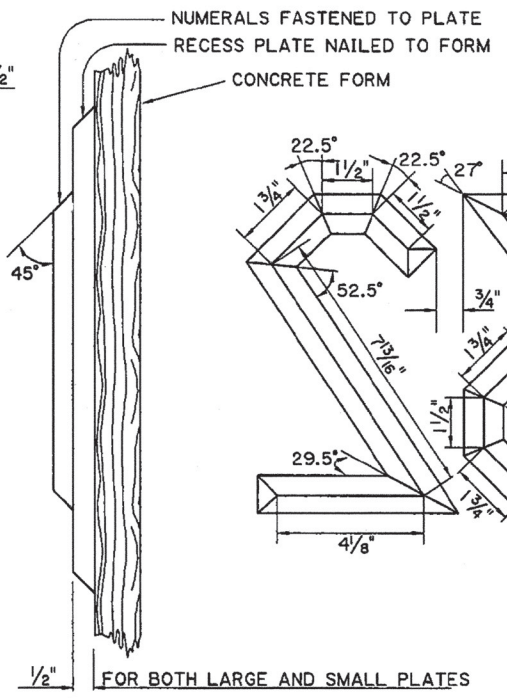
FOR QUAD BEAM SPANS, THIS DIMENSION SHALL BE THE HEIGHT OF THE EXTRUSION.





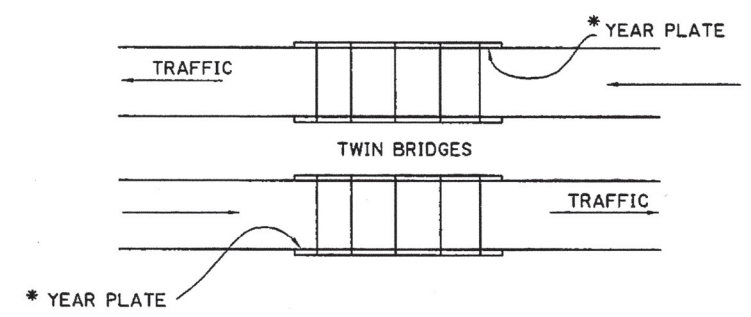
YEAR PLATE

DIMENSIONS SHOWN ARE FOR LARGE YEAR PLATE.
USE ONE HALF (1/2) ABOVE DIMENSIONS FOR SMALL YEAR PLATE.
YEAR PLATE TO CORRESPOND TO YEAR IN WHICH STRUCTURE IS COMPLETED.



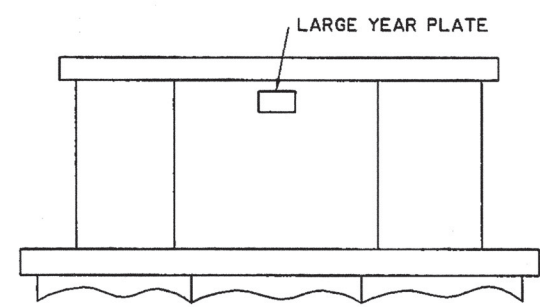
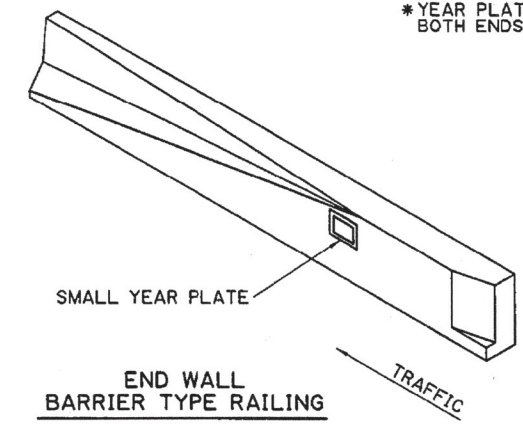
NUMERALS

NOTE:
FIGURE "6" TO BE "9" INVERTED.
FIGURE "0" TO BE MADE USING DASHED LINES INDICATED ON DETAIL OF FIGURE "8."
DIMENSIONS SHOWN ARE FOR LARGE YEAR PLATE.
USE ONE-HALF (1/2) ABOVE DIMENSIONS FOR SMALL YEAR PLATE.



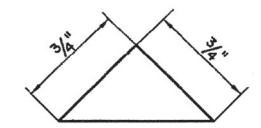
BRIDGE PLAN

* YEAR PLATE ON THE APPROACH SIDE OF BOTH ENDS ON TWO-WAY TRAFFIC BRIDGES.



PIER ELEVATION

SKETCHES SHOWING LOCATION OF YEAR PLATE ON VARIOUS CONCRETE STRUCTURES



FULL SIZE CROSS-SECTION OF 3/4" CHAMFER STRIP TO BE USED IN CONSTRUCTION OF ALL NUMERALS.

CHAMFER STRIP FOR LARGE YEAR PLATE

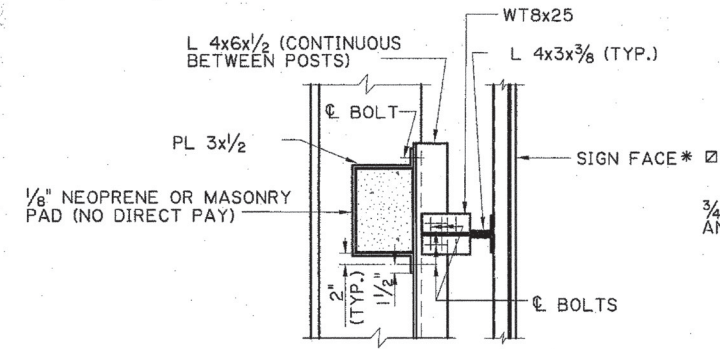


FULL SIZE CROSS SECTION OF 3/8" CHAMFER STRIP TO BE USED IN CONSTRUCTION OF ALL NUMERALS.

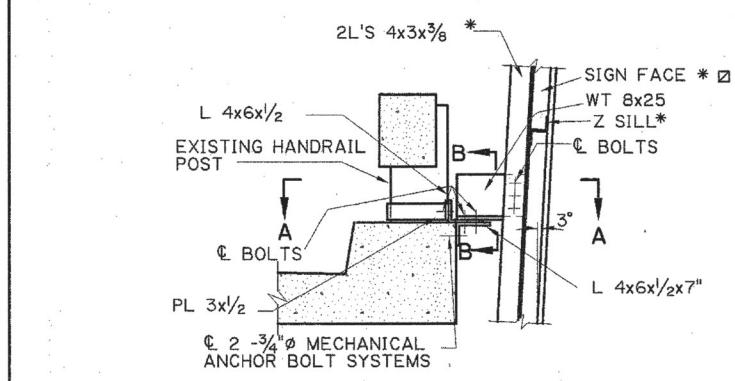
CHAMFER STRIP FOR SMALL YEAR PLATE

Paul B. Fossier
8/23/00

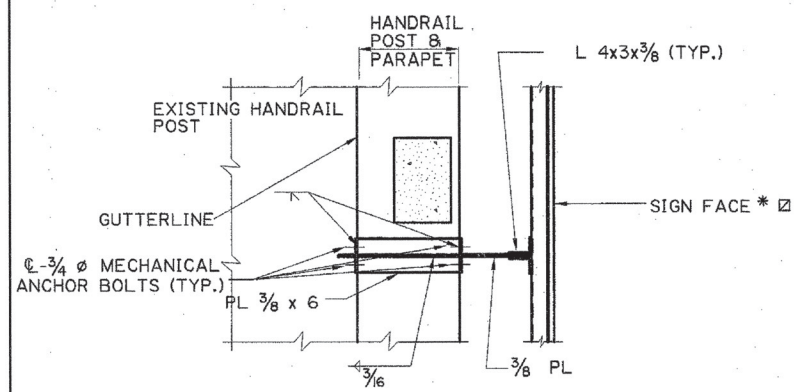
SHEET NUMBER	130
QUACHITA	
PARISH	QUACHITA
FEDERAL PROJECT	G. GRASS
STATE PROJECT	P. FOSSIER
DATE	JULY, 2000
SHEET	
REVISION DESCRIPTION	
NO.	
DATE	
BY	
YEAR PLATE FOR CONCRETE STRUCTURES	
STANDARD DETAIL	YP-01
BRIDGE AND STRUCTURAL DESIGN	



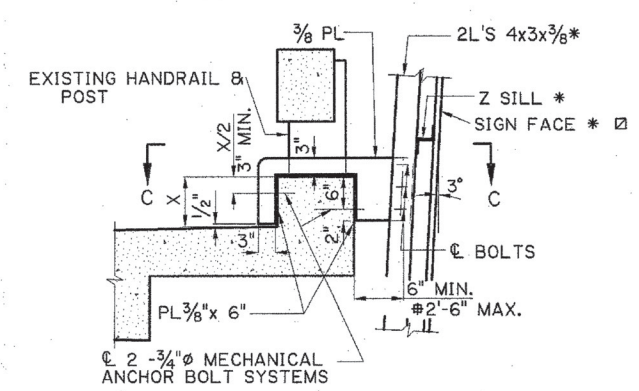
SECTION A-A



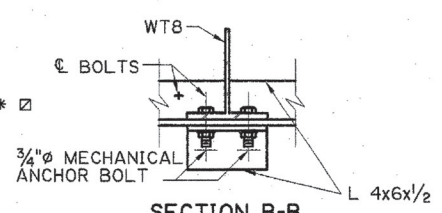
POST BRACKET



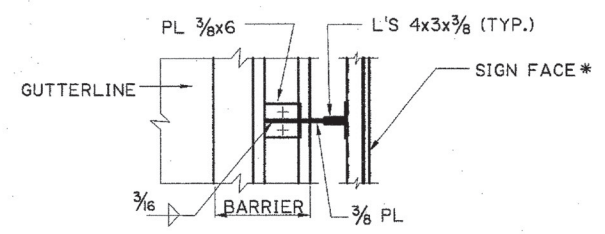
SECTION C-C



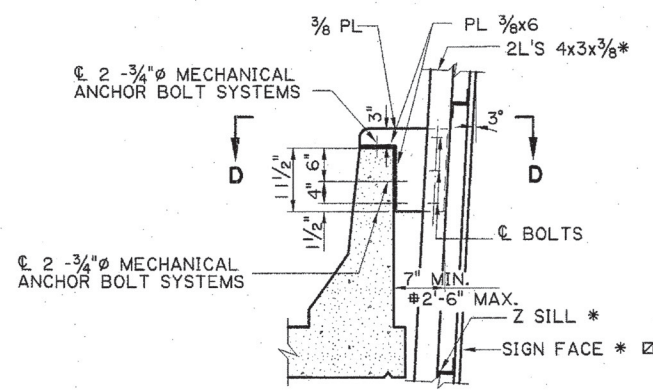
SIDEWALK BRACKET



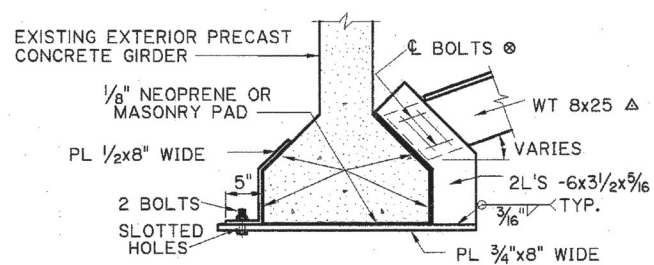
SECTION B-B



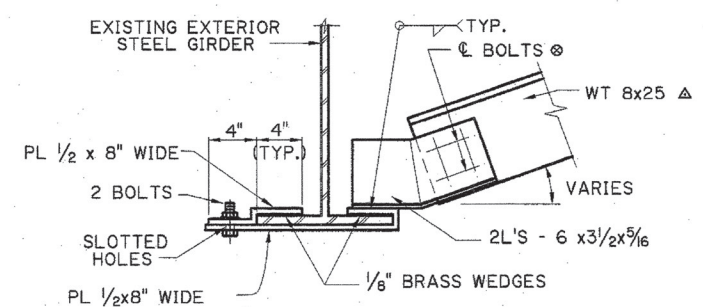
SECTION D-D



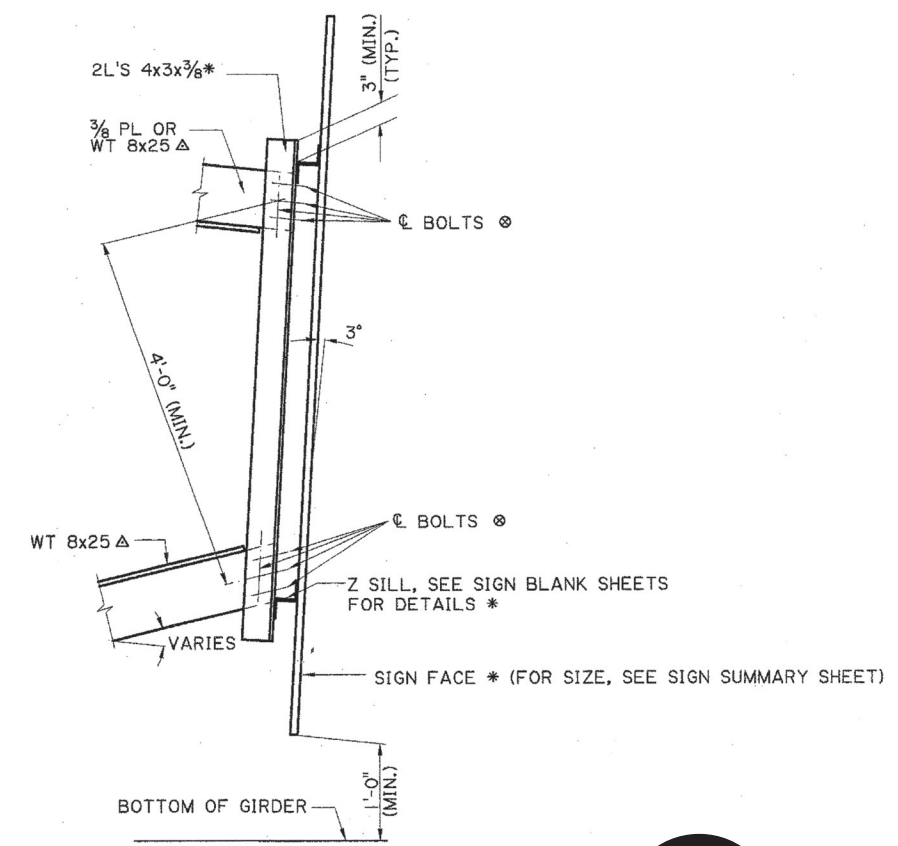
BARRIER RAIL BRACKET



PRESTRESSED CONCRETE GIRDER BRACKET



STEEL GIRDER BRACKET

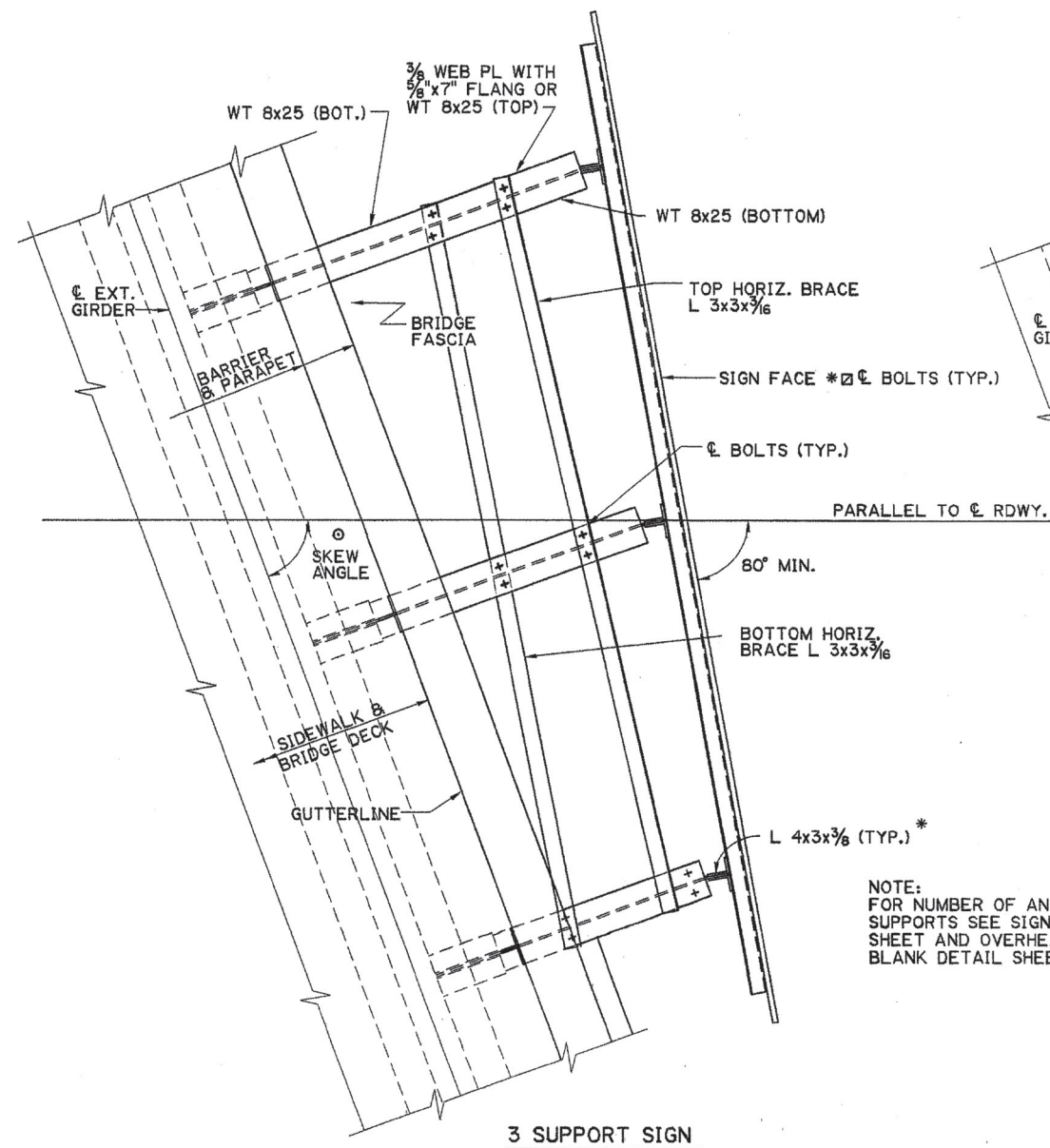


ELEVATION

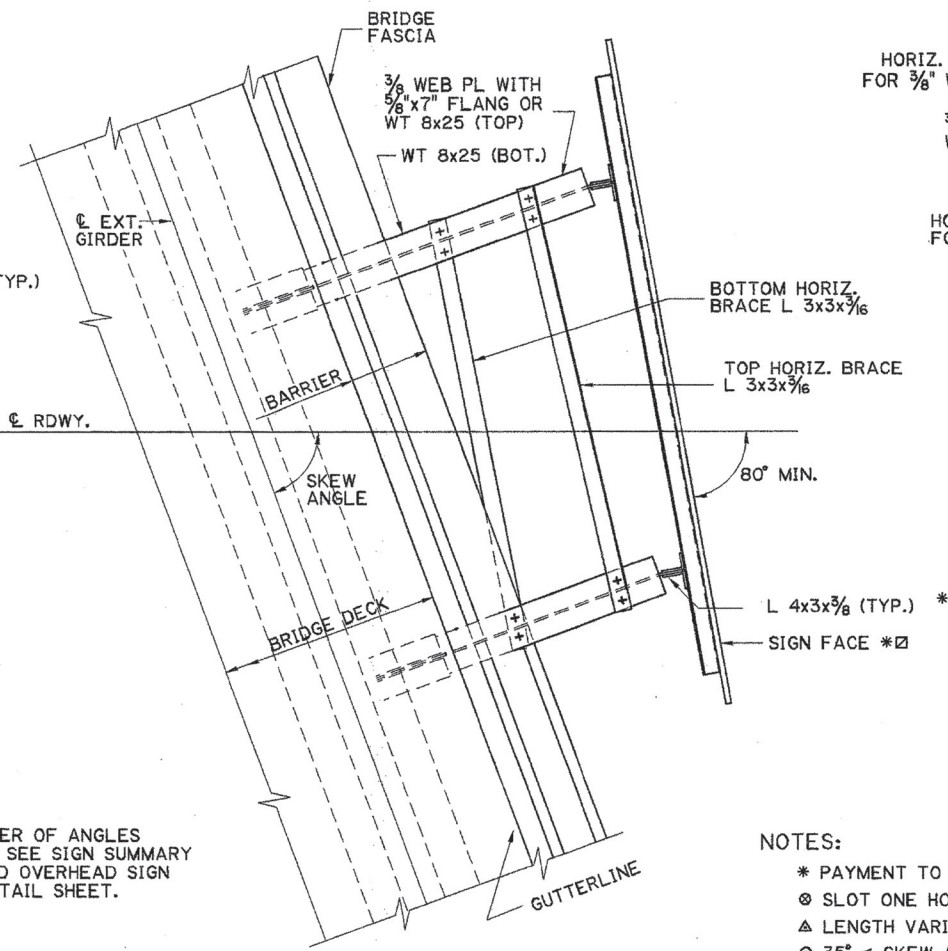
□ SIGN CONNECTION DETAIL

Paul R. Smith
11-10-08

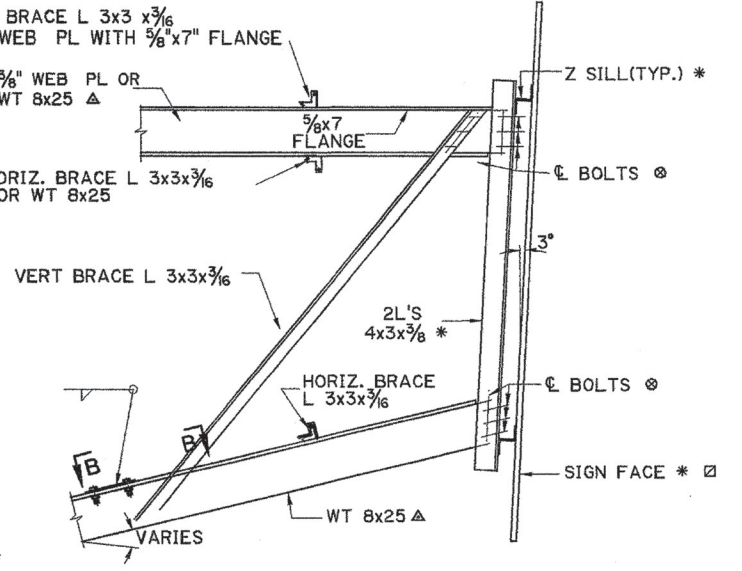
- NOTES:
- THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTES FOR GENERAL NOTES SEE SHEET NO.
 - ALL STEEL SHALL BE A-36, UNLESS OTHERWISE NOTED, BOLTS TO BE 3/4" ASTM A-325 AND BE GALVANIZED. BOLTS SHALL HAVE TWO (2) FLAT WASHERS, ONE (1) LOCK WASHER & ONE (1) HEX NUT. ALL GALVANIZED.
 - DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED IN ACCORDANCE WITH STA. SPECS. SUBSECTION 811.12.
 - DIMENSIONS OF EXISTING BRIDGE MEMBERS TO BE OBTAINED IN FIELD PRIOR TO FABRICATION OF MOUNTING BRACKET BY THE CONTRACTOR AND ADJUSTED AS DIRECTED BY THE PROJECT ENGINEER.
 - NUMBER OF POST, CURB OR GIRDER BRACKETS REQUIRED SHALL BE DETERMINED IN THE FIELD (WITH TWO (2) EACH MIN.) FOR EACH SIGN LOCATION, AS DIRECTED BY THE PROJECT ENGINEER.
 - UNLESS OTHERWISE NOTED, PAYMENT SHALL BE MADE UNDER ITEM 729-13-00100 MOUNTING (BRIDGE FASCIA MOUNTED) SIGN BRACKET, PER EACH.
 - MECHANICAL ANCHOR SYSTEM SHALL BE FROM QUALIFIED PRODUCTS LIST NO.40(A), SHALL BE GALVANIZED.
 - * PAYMENT TO BE UNDER ITEM 729-06-00100.
 - SLOT ONE HOLE AND FIELD DRILL THE OTHERS
 - △ LENGTH VARIES.
 - ⊕ WHEN DIMENSIONS EXCEED 2'-6", SEE SIDEWALK BARRIER RAIL BRACKET DETAIL, SHEET 20 OF 21.
 - FOR ALTERNATE SIGN PANEL DETAILS, SEE EXTRUDED ALUMINUM PANEL SHEET.



3 SUPPORT SIGN



2 SUPPORT SIGN

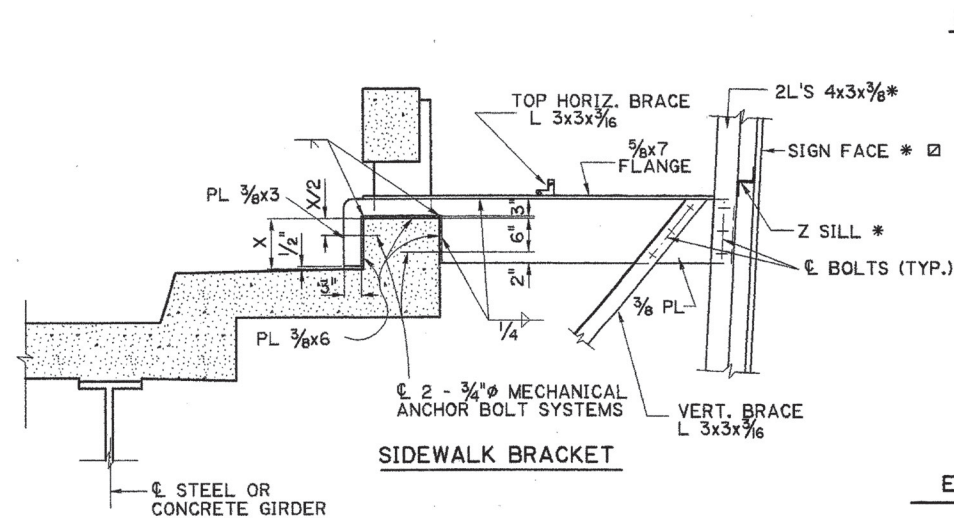


SIGN CONNECTION DETAIL

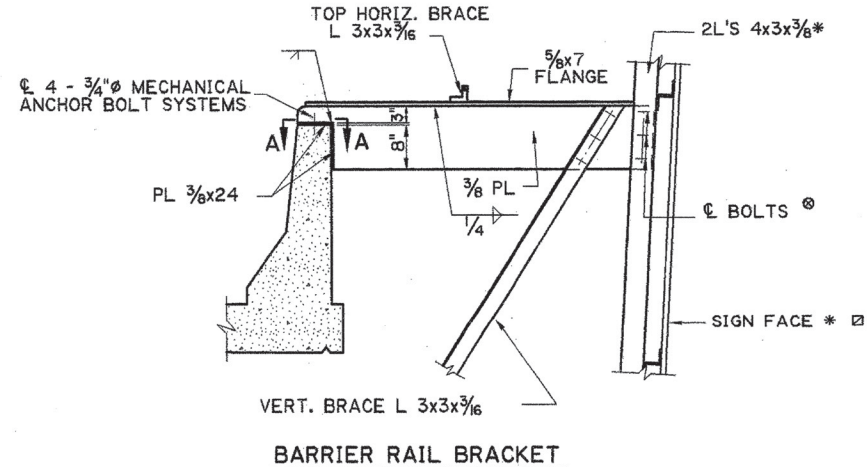
NOTE:
FOR NUMBER OF ANGLES
SUPPORTS SEE SIGN SUMMARY
SHEET AND OVERHEAD SIGN
BLANK DETAIL SHEET.

NOTES:

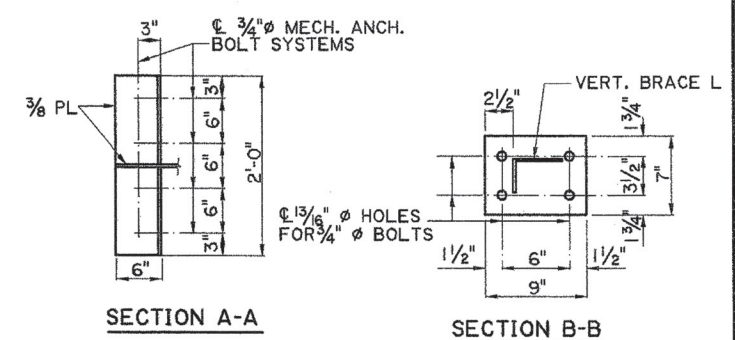
- * PAYMENT TO BE UNDER ITEM 729-06.
 - ⊙ SLOT ONE HOLE AND FIELD DRILL THE OTHERS
 - △ LENGTH VARIES
 - ⊙ 35° ≤ SKEW ANGLE ≤ 80°
 - ⊠ FOR ALTERNATE SIGN PANEL DETAILS, SEE EXTRUDED ALUMINUM PANEL SHEET.
- SEE SHEET 19 OF 21 FOR ADDITIONAL DETAILS & NOTES.
THIS SHEET TO BE USED WITH WIND LOAD MAP AND GENERAL NOTE SHEET.



SIDEWALK BRACKET



BARRIER RAIL BRACKET



SECTION A-A

SECTION B-B

LATERAL AND VERTICAL BRACING DETAILS

3/24/09 11:34

Report Form: LA_DOT_ENGLISH Project File: G:\08219\DOCS\LA 3249 WELL RD.GPJ

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	e	SPT or UU	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.		
												STA:	LOCATION:	TYPE OF PILE:
Reddish brown, silty, clayey sand	127	16	22	6		1.30	1	C-1	0	141.0				
Yellowish tan, gray & red, clayey sand	130	21	32	18		1.50	5	C-2						
Brown, beige, gray & tan, sandy lean clay		18						C-3	10	131.0				
Tan, beige & gray, sandy silt	129	19	30	17		1.90	14	C-4						
	130	17	21	2		3.50	18	C-5	20	121.0				
Brown, black & reddish orange, silty sand	112	13	N	P		5.00	23	C-6						
Yellowish beige, silty sand		17	N	P				C-7	30	111.0				
Tannish brown & gray, sandy lean clay	128	19	43	28		4.00	32	C-8						
Tan, gray & brown, clayey sand	115	31	36	19		1.60	35	C-9	40	101.0				
Dark gray, clayey sand	117	33	39	20		3.20	37	C-10						
Gray & dark gray, silty sand		34						C-11	50	91.0				
	109	31	29	3		3.20	41	C-12						
		32						C-13	60	81.0				
Boring Terminated @ 62.0'.														
									70	71.0				
									80	61.0				
									90	51.0				
									100	41.0				
									110	31.0				
									120	21.0				
									130	11.0				
									140	1.0				
BORING NO. B-1												STA: 49+61		
LATITUDE: N32°30'38"												LOCATION: 25' Rt. CL Well Rd.		
LONGITUDE: W92°11'31"												DATE TAKEN: 2/20/2009		
CONT. SECT.:												STR. NO.: 05374510613171		
												SOD. LDR.: S. Provance		

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	e	SPT or UU	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.		
												STA:	LOCATION:	TYPE OF PILE:
Gray & tan, sandy lean clay									0	140.0				
	133	18	26	9		1.80	6	C-1						
		18						C-2	10	130.0				
Tan, light gray, brown & gray, silty, clayey sand	123	23	27	7		1.80	15	C-3						
		24						C-4	20	120.0				
Dark gray, silty sand														
Dark gray, clayey sand	113	28	28	3		2.90	22	C-5						
Gray & dark beige, clayey sand		35	32	11		N=44		D-6	30	110.0				
Dark gray, silt with sand	116	32	32	11		2.60	28	C-7						
Dark gray, lean clay with sand	116	27	34	6		4.00	30	C-8	40	100.0				
Gray, fat clay with sand		39	44	25				C-9						
	112	35	50	28		4.30	33	C-10	50	90.0				
Dark gray, lean clay with sand	113	33	48	25		5.00	35	C-11						
Dark gray, fat clay with sand	113	33	55	27		5.60	37	C-12	60	80.0				
BORING TERMINATED @ 62.0'.														
									70	70.0				
									80	60.0				
									90	50.0				
									100	40.0				
									110	30.0				
									120	20.0				
									130	10.0				
									140	0.0				
BORING NO. B-2												STA: 50+62		
LATITUDE: N32°30'39"												LOCATION: 30' Rt. CL Well Rd.		
LONGITUDE: W92°11'31"												DATE TAKEN: 2/19/2009		
CONT. SECT.:												STR. NO.: 05374510613171		
												SOD. LDR.: S. Provance		

SOIL TYPE AND COLOR	WET DENSITY	MOISTURE CONTENT	LIQUID LIMIT	PLASTICITY INDEX	e	SPT or UU	FAILURE MODE	SAMPLE NUMBER	DEPTH	ELEVATION	WATER TABLE	TEST PILE NO.		
												STA:	LOCATION:	TYPE OF PILE:
Dark tan, beige & gray, clayey sand	131	14	25	13		1.20	1	C-1	0	139.0				
Tan, gray & light gray, clayey sand		12						C-2						
	126	21	23	6		0.60	10	C-3	10	129.0				
Gray, tan & dark beige, clayey sand		19						C-4						
	129	20	26	11		1.00	19	C-5	20	119.0				
Tan & gray, clayey sand	127	22	36	20		3.30	23	C-6						
Tan & gray, clayey sand	114	17	26	13		4.40	26	C-7						
	25							C-8						
Tan, gray & beige, clayey sand	118	23	33	17		3.20	30	C-9	40	99.0				
Dark gray, sandy lean clay		25						C-10						
	118	29	35	18		4.80	34	C-11	50	89.0				
Gray, sandy silt	120	30	29	5		5.30	36	C-12						
Dark gray, sandy silt		45				N=33		D-13	60	79.0				
BORING TERMINATED @ 61.5'.														
									70	69.0				
									80	59.0				
									90	49.0				
									100	39.0				
									110	29.0				
									120	19.0				
									130	9.0				
									140	-1.0				
BORING NO. B-3												STA: 51+26		
LATITUDE: N32°30'40"												LOCATION: 25' Rt. CL Well Rd.		
LONGITUDE: W92°11'31"												DATE TAKEN: 2/18/2009		
CONT. SECT.:												STR. NO.: 05374510613171		
												SOD. LDR.: S. Provance		

STANDARD ABBREVIATIONS & DEFINITIONS		
MATERIAL	COLOR	STRUCTURE
CL = Clay	BR = Brown	ALT. = Alternating
CONC. = Concrete	BL = Black	LAM. = Laminated
GRAV. = Gravel	BL = Blue	LEN. = Lens
LO. = Iron Ore	GR = Gray	LVR. = Layer
UG. = Lignite	GN = Green	MOT. = Mottled
N.P. = Non-Plastic	PK = Pink	PKT. = Pocket
ORG. = Organic	RD = Red	STK. = Streak
PT. = Peat	TN = Tan	STR. = Strata
RT. = Roots	WH = White	TR = Trace
SA = Sand	YE = Yellow	FAILURE MODE:
SH = Shell		M.S. = Multiple Shear
SI = Silt	CO. = Coarse	SL = Slump
VEG. = Vegetation	FL = Fine	S/S = Slickensides
WD. = Wood	MED. = Medium	V.S. = Vertical Shear
		YLD. = Yield
		60 S. = Shear Angle

SOIL PROPERTIES	
WET DENSITY	= Wet density of in-place soil, (pounds per cu. ft.) determined by AASHTO T208.
MOISTURE CONTENT	= Moisture Content of in-place soil, expressed as a percentage of the dry weight of the soil, (%), determined by DOTD TR 403, Method B.
LIQUID LIMIT & PLASTICITY INDEX	= Atterberg limits and indices, DOTD TR 428
qu	= Unconfined compressive strength, AASHTO T 208, (tons per sq. ft.)
SPT	= Standard Penetration Test, AASHTO T 206, number of blows, N = , per foot of penetration, unless amount of penetration is shown otherwise
UU	= Unconsolidated Undrained triaxial test, AASHTO T 296, compressive strength (tons per sq. ft.), of one specimen confined at noted pressure (pounds per sq. in.)
C	= Soil cohesion (tons per sq. ft.)
φ	= Soil angle of internal friction (degrees)
Δ	= Unconsolidated Undrained triaxial test, AASHTO T 296, three specimens, (c - φ) *
*	= Consolidated drained direct shear test, AASHTO T 236, (c - φ)
#	= Pocket penetrometer strength, (tons per sq. ft.)

MISCELLANEOUS	
C-1	= Location and Identification of thin-walled tube sample, AASHTO T 207
C-2	= Location and Identification of thin-walled tube sample, AASHTO T 207, with a portion of the sample saved for consolidation testing
N.C.	= Location and Identification of SPT sample, AASHTO T 206
NO REC.	= No Cut, no preliminary 6 in. driving prior to securing SPT data
24 HRS	= No Penetration, unable to drive split spoon sampler initial 6 inches of the Standard Penetration Test.
NO RECV.	= No Recovery, unable to recover sample for testing or classification.
ST	= Disturbed sample recovered with thin-walled tube sampler.
W	= Water Table depth below ground surface recorded at noted time after completion of bore hole.
⊙	= SOIL TYPE nomenclature is based on ASTM D 487
HORIZONTAL DATUM	= NAD83

