MISSISSIPPI DEPARTMENT OF TRANSPORTATION INTERSTATE 59 LANE REVERSAL HURRICANE EVACUATION PLAN





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TRANSPORTATION OPERATIONS I-59 LANE REVERSAL HURRICANE EVACUATION PLAN

I. INITIAL DEVELOPMENT

A. Introduction & Purpose

- 1. The responsibility for the state highway system in Mississippi rests directly with the Mississippi Department of Transportation.
- 2. In response to a request from the State of Louisiana to meet the needs of the traveling public evacuating the greater New Orleans area during a hurricane emergency, the Mississippi Department of Transportation (MDOT) has developed this Lane Reversal Plan for Interstate 59 (I-59).
- 3. Experiences with past hurricane evacuations have revealed the need to investigate the logistics involved in reversing one direction of traffic to facilitate evacuation traffic flow. This CONTRAFLOW process will be called "Lane Reversal".
- 4. It is estimated that approximately 1.4 million persons reside in southeast Louisiana. This region is generally defined as Jefferson, Lafourche, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John and St. Tammany Parishes. Primary evacuation routes out of the area are limited to I-10, I-12, I-55 and I-59. The I-59 route is the primary north/south interstate out of the east side of New Orleans, St. Bernard, Plaquemines and the southeast portion of St. Tammany Parishes.
- 5. Southwest Mississippi, including coastal Hancock County uses I-59 as their primary means for evacuation. The population of Hancock County is approximately 42,000. State routes serving as feeder arteries funneling traffic onto I-59 include Mississippi highways 607, 43, 603 and 53.
- 6. The initial process is to define the scope and to take the initial steps to develop a transportation plan for lane reversal. A basic course of action will be developed in this first section of the plan and will then be further developed in more detail in later sections.

B. Current Evacuation Route Identification

Certain strategic routes have been historically identified as hurricane evacuation routes, and are identified as shown in Appendix A. These hurricane routes are "signed on the ground" as such and have been presented to the public in various manners for their knowledge and use. This hurricane evacuation route network begins with state and county routes in coastal areas that then feed into predominately north-south State routes and ultimately tying into north-south United States (US) and Interstate routes. Any impact the Lane Reversal Plan will have on the existing evacuation routes and their use must be identified and mitigated.

C. Lane Reversal Route Identification

1. Fully Controlled Access Routes

- a. Fully controlled access routes, or Interstates, have the best potential for use in any lane reversal scenario. By the very nature of their controlled access, the traffic control necessary to reverse the normal traffic flow on Interstate routes can be accomplished by concentrating on the interchange and termini areas.
- b. The geographic area of southwest coastal Mississippi and southeastern Louisiana, encompassing the greater New Orleans area, is deemed necessary to provide a reverse lane capability. In this area there are four Interstate routes, I-10, I-55, I-12 and I-59. Interstate 10 (I-10) runs east and west through Louisiana and Mississippi. Interstate 55 (I-55) runs north and south through Louisiana and Mississippi. Interstate 12 (I-12) runs westward from Sildel, Louisiana to Baton Rouge, Louisiana. Interstate 59 (I-59) originates at the junction of I-10 and I-12 near Sildel, Louisiana and runs northeasterly into Mississippi and beyond into Alabama.
- c. A Lane Reversal Plan involving I-10 and I-55 has been determined to be impractical and unnecessary at this point due to various considerations. Use of I-10 would put additional evacuation traffic eastward into the Mississippi coastal risk area and westward affecting the west New Orleans evacuation traffic. Use of I-55 is logistically not practical due to the inability to extend the lane reversal operation from I-10 west onto I-55 at LaPlace, Louisiana.

d. I-59, however, is a practical candidate for lane reversal. The east half of the New Orleans evacuating eastward on I-10 can be easily directed onto I-59 at the junction of I-10 / I-12. Louisiana is also considering using I-12 to reverse lane some portion of the I-10 east traffic westward north of Lake Pontchartrain. The low sea level and the storm surge potential of this area dictate expediting evacuation traffic flow as much as possible. Therefore, due to historical experience with traffic delays, the potential for large numbers of Louisiana evacuees and its being a designated evacuation route, a Lane Reversal Plan will be developed utilizing I-59 into Mississippi.

2. Limited Controlled Access Routes

No other north/south routes were considered for lane reversal due to the fact that these routes are limited controlled access. Limited controlled access routes have numerous entrance and exit points, i.e. numerous intersections with state routes, county routes, city streets, private commercial access points and personal driveways that cannot be easily controlled, an example of which is US 49. The logistics involved with providing traffic control devices and the manpower to assist and enforce the traffic control measures necessary to reverse lane prove to make limited controlled access routes impractical for the lane reversal strategy. Therefore, only fully controlled access routes are to be considered for lane reversal.

D. Lane Reversal Route Termini

I-59 has been selected as the practical candidate for implementation of the lane reversal strategy. The next step is to identify the beginning and ending points to convert from two-way traffic to one-way traffic traveling north. See the lane reversal plan limits for Mississippi in Appendix B.

1. Southern Terminus (Beginning)

a. The State of Louisiana will initiate the lane reversal strategy. Previous discussion noted that, historically, traffic congestion has occurred during hurricane evacuations on I-59 at its junction with I-10 and I-12. Therefore, it is in the State of Louisiana that the I-10 lane reversal operations will begin at the I-10 / I-510 junction (Exit 246) south of its intersection with I-59 and I-12.

b. Louisiana will construct and operate the southern (beginning) terminus crossover that will move all existing I-10 northbound traffic onto the northbound and southbound I-59 traffic lanes. Louisiana traffic control devices and law enforcement officers will be required to facilitate and enforce this movement.

2. Northern Terminus (Ending)

- a. The State of Mississippi will terminate the lane reversal operations south of Laurel, which is positioned at mile marker 90 just south of Exit 90 at the junction of I-59 and United States Route 11 (US 11). MDOT will construct and operate the northern (ending) terminus crossover, returning I-59 traffic to normal flow prior to the Laurel interchanges.
- b. In order to implement lane reversal to Laurel, MDOT will require the full support and cooperation of all supporting State agencies/organizations.

E. Southbound Traffic and Emergency Vehicle Access

- 1. Out of practical necessity, during the identification and development of the limits of the Lane Reversal Plan, consideration must be given to maintaining the availability of a southbound traffic facility. This was a consideration when selecting the beginning and ending termini.
- 2. US 11 runs parallel to I-59 throughout the limits of the Lane Reversal Plan, and therefore will serve as the general southbound detour for I-59. Normal southbound traffic and emergency vehicles will be required to exit I-59 and follow US 11.
- 3. During normal interstate traffic flow official and emergency vehicles are allowed access between northbound and southbound lanes by way of signed Emergency Vehicle Crossings. *During lane reversal operations these emergency vehicle crossings will be barricaded and closed to all evacuation traffic.* There are five (5) signed Emergency Vehicle Crossings between Hattiesburg and Picayune located at the following mile markers > 22.6, 38.2, 44.1, 47.7 and 54.4.
- 4. It also will be necessary to close two (2) welcome/rest areas and one (1) truck scale to prevent the potential for the introduction of wrong way traffic into I-59 lane reversal operations.

F. Crossover Ramp Movements

- In addition to the northern and southern termini crossover ramps previously discussed, additional crossovers will be constructed. These additional crossovers may be used to allow vehicles to move from the northbound roadway to the southbound. This will ensure an equal distribution of traffic onto both roadways and will allow for lane reversal termination, should traffic flow warrant. These additional crossovers will be identified as Intermediate Crossovers.
- 2. Traffic control devices and law enforcement officers will be required at intermediate crossovers to facilitate their operation, should they become necessary.
- 3. Two considerations influence where these crossover ramps should be located:
 - a. At locations where a significant increase in evacuation traffic merging onto I-59 can be anticipated.
 - b. The equal spacing of crossovers along the lane reversal route to facilitate the equalization of traffic loading on both sides of the Interstate.
- 4. With the designation of Laurel as the ending (northern) terminus, two intermediate crossovers will be placed at the following locations:
 - a. Six miles south of Poplarville near mile marker 21
 - b. Three miles south of Hattiesburg near mile marker 55.

G. Interchange Control

The total number of I-59 interchanges between the LA / MS State Line and the city limits of Laurel is **twenty-four (24)**. These interchanges will be classified as "SERVICE", full access to travel services, "NON-SERVICE", no access to travel services, or "SOUTHBOUND DETOUR" access. (Travel Services refers to the availability of fuel, food & lodging.) All interchanges will be manned with law enforcement and MDOT personnel.

1. There are fourteen (14) **Service Interchanges**, classified as such due to their proximity to exits that offer access to alternate routes and/or travel services. These service interchanges, proceeding north from the LA/MS State Line, are located at the following I-59 Exits: 1, 4, 6, 15, 27, 29, 41, 51, 58, 60, 65, 67A, 67B, 88.

Evacuees will be provided full access on and off the evacuation route at these service interchanges, with a few exceptions due to the logistics of lane reversal in the southwest quadrants.

- 2. There are nine (9) **Non-Service Interchanges**, classified as such due to their remote locations, congestion potential and lack of travel services. These non-service interchanges, proceeding north from the LA/MS State Line, are located at the following I-59 Exits: 10, 19, 35, 69, 73, 76, 78, 80, 85. The southwest quadrants of these interchanges will be closed to traffic. Law enforcement vehicles will be used in conjunction with "road closed barricades" to effect closure of the southbound exit ramps. Signs will be placed ahead of the closed interchanges advising the evacuees that the next exit(s) are closed and/or offer no travel services. Traffic will be allowed to exit from the northbound lanes.
- 3. There is one (1) **Southbound Detour Interchange** that will assist with the operation of the ending termini. This southbound detour interchange is at Exit 90, just north of the I-59 ending termini.

H. Manpower Requirements

- MDOT personnel will, at a minimum, be required to setup the traffic control devices that have been previously mentioned at the State Line and northbound termini and at the route interchanges within the Lane Reversal Plan limits. They will also be available to provide emergency roadside assistance, as needed.
- 2. MHSP and MDOT Law Enforcement officers will facilitate and enforce traffic control along the Lane Reversal Plan route. Where available local law enforcement will assist with traffic control within their individual jurisdictional limits.
- 3. It is anticipated that other personnel may be required to supplement law enforcement and perform other ancillary functions, i.e., emergency roadside assistance.

I. Traffic Control Device Requirements

1. Signing

Existing traffic signing along I-59 is oriented to be viewed from the normal direction of traffic. Therefore, traffic utilizing the southbound roadway for northbound movements under the reverse lane strategy will need some additional signage oriented so it can be viewed from their direction of travel. Additional signage would

consist of signs pertaining to interchange and exit locations, service and non-service interchanges, as well as detour signs that may be necessary. The *Traffic Plan* section of this plan will determine the types, locations and numbers of signs required.

2. Variable Message Boards and Arrow Boards

Another use of traffic control devices will be the use of Variable Message Boards and Arrow Boards to notify the evacuating public along the evacuation route corridor of the plan implementation, which exits are capable of providing services and which lanes/exits are closed.

- a. Variable Message Boards (VMB) will be placed on I-20 either side of the I-20 / I-59 junction, US 84 at Laurel and US 98 / US 49 at Hattiesburg. Placing these VMBs before motorists reach I-59 will allow the motorists the opportunity to take an alternate route toward their destination and avoid the reverse lane route operations. VMB's will also me stationed along the reverted corridor to inform the evacuees of what lies ahead. Nineteen (19) VMBs are scheduled for use in this plan.
- b. Arrow Boards will be used to direct traffic flow as a result of closed lanes/exits particularly around crossovers and termini. Ten (10) arrow boards are scheduled for use in this plan.

J. Sequence of Events

An integral part of the lane reversal implementation is the identification of circumstances or sequence of events that would call for plan implementation.

1. Plan Implementation

Once plan implementation is called for, field personnel need a written *sequence of events* to follow in regard to the erection and enforcement of traffic control to insure that no conflicting traffic movements are allowed. By its very nature, the Lane Reversal Plan is introducing traffic movements contrary to normal. Particular attention will be necessary to eliminate the potential for introducing "head-on" traffic patterns. The *Implementation Strategy* section of this plan will be distributed to personnel in the field describing the sequence of events for plan implementation.

2. Plan Termination

Just as a sequence of events must be followed during the erection and enforcement of traffic control to implement lane reversal, so as to insure that no conflicting traffic movements are allowed, a sequence of events will also be required when taking the Lane Reversal Plan out of operation. The criteria calling for plan termination is contained within the *Implementation Strategy* section of this plan.

K. Public Information

- For successful implementation of the Lane Reversal Plan to become a reality, adequate public notification of the plan and its contents will be imperative.
- The routine ongoing dissemination of plan information prior to storm events should be evaluated. Forms of notification will include press releases, flyers, TV and radio commercials, as well as other public information dissemination methods. MDOT Welcome Centers and Rest Areas will be supplemental locations for the display of plan information.
- 3. As an actual hurricane event approaches the area, the routine dissemination of plan information will be stepped up in conjunction with other methods. These other methods could include the running of a lane reversal hurricane evacuation video at the MDOT Welcome Centers and Rest Areas, the use of variable message boards to convey specific site information, and the use of "low-band" radio transmitters located along the plan route to convey information about current storm strength and direction, shelter locations, medical center locations, etc. Historical responses to hurricane evacuations reveal a particular dissatisfaction by the travelling public with the lack of timely information available.

L. Summary & Conclusion

- 1. Here in this first section of the Lane Reversal Plan, general physical boundaries and the basic conceptual strategy have been defined.
- 2. The use of I-10 and I-55 and limited controlled access routes has been eliminated from further consideration. However, I-59 has been identified as a candidate for lane reversal.

- 3. Historical experience revealed that traffic congestion has occurred during hurricane evacuations on I-59 at its junction with I-10 and I-12. Therefore, it is in this area that the lane reversal strategy should begin. Furthermore, the geographic area of Mississippi where it is deemed necessary to provide a reverse lane capability is limited to that area of the state serviced by an Interstate System. Hattiesburg was considered as an ending termini, but carrying the Louisiana evacuees past Hattiesburg would facilitate less of an impact on the MS Gulf Coast hurricane evacuation that normally precedes or follows. Therefore, it is the Laurel metropolitan area that will be considered for ending the lane reversal strategy.
- 4. I-59 Interchanges will be classified as either *service* or *non-service* depending on their location to alternate routes and travel services.
- 5. Consideration was also given to maintaining the availability of a southbound traffic facility. US 11 is relatively parallel to I-59 throughout the limits of the Lane Reversal Plan and would be used for emergency and routine southbound traffic.
- 6. Other factors, such as the manpower, signing and traffic control device requirements will receive further evaluation and in depth analysis later in this plan.
- 7. Equally important are the identification of circumstances that would call for the implementation and the termination of the lane reversal operations. This will receive further evaluation and in depth analysis later in this plan
- 8. In order to implement the Lane Reversal Plan to Laurel, MDOT must have the cooperation and support of other State agencies.

II. TRAFFIC PLAN

A. Introduction & Purpose

To successfully implement this plan, there will be a need for a significant amount of additional traffic control devices and considerable manpower resources. This section will focus on detailing the capital improvements (crossovers, ending termini, etc.), traffic control measures and the staffing requirements to implement the plan.

B. Beginning and Ending Termini

- 1. The State of Louisiana will initiate the lane reversal operations. The beginning termini will be located in Louisiana at the I-10 / I-510 junction (Exit 246) south of its intersection with I-59 and I-12. Louisiana will assist traffic flow into Mississippi by managing traffic flow in the northbound contraflow (reverted lanes) as follows:
 - a. Wide and over-weight vehicles will be parked and denied access to the contraflow lanes.
 - b. A higher percentage of evacuees will be directed onto the northbound contraflow lane, in lieu of the normal northbound lanes.
- 2. The <u>ending termini</u> will be located in Mississippi at I-59 mile marker 90, just south of Laurel, Mississippi. The conceptual design of the ending termini location can be seen in Appendix I.

C. Intermediate Crossovers

- 1. Two (2) Intermediate Crossovers are to be positioned at the following locations:
 - a. Six miles south of Poplarville at mile marker 21
 - b. Three miles south of Hattiesburg at mile marker 55
- 2. To aid in the identification of the intermediate crossovers, a strip map of I-59 has been modified and included in this plan as Appendix D.
- Traffic control devices and staffing will be required at the intermediate crossovers in order to aid in the safe operation of the crossover during plan operation. The typical conceptual designs for the intermediate crossovers are shown in Appendices G and H.

D. Interchanges

- 1. Twenty-four (24) interchanges are located along I-59 from the LA State Line to the city limits of Laurel within the limits of the Lane Reversal Plan. Fourteen (14) of these will be classified as SERVICE, nine (9) will be classified as NON-SERVICE and one (1) is listed as a SOUTHBOUND DETOUR. Additional traffic control devices and/or staffing will be required for these locations in order to aid in the safe operation of these interchanges during plan operation.
- 2. To aid in the identification of the I-59 interchanges, a strip map of I-59 has been modified and included in this plan as Appendix D.
- 3. The design of the additional traffic control devices and staffing requirements for each of the I-59 interchanges is contained in Appendices E and F.

E. Manpower Requirements

The design of the ending termini, intermediate crossovers and I-59 interchanges has been presented in this document. These designs specified the staffing requirements for each, which will be summarized in the following two sections. (Note that employees will need to be prepared for up to 24 to 36 hours at their respective positions. Preparations for this time should include - food that does not need preparation; water; clothing and rainsuits; flashlights; personal items, medication and other supplies that might be deemed appropriate.)

1. Mississippi Department of Transportation (MDOT)

- a. MDOT personnel, including maintenance, law enforcement and administrative staff will be required at the ending termini, intermediate crossovers, interchanges and command/control locations to ensure that the required traffic control devices are in place and in good working order throughout the duration of the lane reversal operation.
- b. MDOT Maintenance personnel (labeled on diagrams as MDOT) will be required at the following locations:
 - 1) **Two (2)** at each of the fourteen (14) Service Interchanges (28 total staff).
 - 2) **Three (3)** at each of the nine (9) Non-Service Interchanges (27 total staff).

- 3) **Three (3)** at the Exit 90 Southbound Detour Interchange (3 total staff).
- 4) **Four (4)** at each of the two (2) Intermediate Crossovers (8 total staff).
- 5) **One (1)** at each of the five (5) Emergency Vehicle Crossings (5 total staff).
- 6) **Sixteen (16)** for placement of Variable Message & Arrow Boards (16 total staff).
- 7) **Five (5)** additional personnel to man those unusually designed interchanges (5 total staff).
- 8) **Five (5)** at the Ending Termini (5 total staff).
- c. MDOT Law Enforcement officers (labeled on diagrams as DOT) will be required at the following locations:
 - 1) **Four (4)** at each of the nine (9) Non-Service Interchanges. (36 total staff).
 - 2) **Two (2)** DOT supervisors at a minimum will be required to support field operations (2 total staff).
 - 3) **Ten (10)** DOT officers will be on standby in the area to provide assistance where needed (10 total staff).
- d. **Four (4)** MDOT Supervisory personnel, one each from District's 6, 7 & 5 and one from MDOT Law Enforcement will be on duty at the District 6 Office in Hattiesburg. The District 6 office will serve as the MDOT Area Emergency Operations Center (AEOC) to provide command & control and other supervisory/managerial functions (4 total staff).
- e. **One (1)** MDOT manager will be located in the State Emergency Operations Center (SEOC) in Jackson to coordinate lane reversal operations with the Mississippi Emergency Management Agency (1 total staff).
- f. One hundred fifty (150) total MDOT staff is required to implement the Lane Reversal Plan for a single 12-hour shift. (300 MDOT staff would be required for 24-hour coverage.) A detailed initial staffing plan for the MDOT is included in this document as Appendix L.

2. Mississippi Highway Safety Patrol (MHSP)

- a. MHSP officers will be required at the beginning termini, ending termini, intermediate crossovers, interchanges and command/control locations to enforce the traffic control plan.
- b. MHSP officers (labeled on diagrams as MHP) will be required at the following locations:
 - 1) **Six (6)** at each of the fourteen (14) Service Interchanges with the exception of 5 each at 2 sites and 8 each at 2 sites (86 total staff).
 - 2) **Six (6)** at the Exit 90 Southbound Detour Interchange (6 total staff).
 - 3) **Four (4)** at each of the two (2) intermediate crossovers (8 total staff).
 - 4) **Six (6)** at the ending termini (6 total staff).
 - 5) **Two (2)** at the beginning termini in Louisiana to coordinate traffic control and to implement termination of the lane reversal operations when ordered (2 total staff).
 - 6) **Six (6)** MHSP supervisors at a minimum will be required to support field operations (6 total staff).
- c. **Thirty (30)** additional MHSP officers will be required to patrol surrounding routes as a result of the substantially increased traffic, i.e. US 11, US 49, US 98, US 84 and I-20 (30 total staff).
- d. **One (1)** MHSP supervisor will be on duty at the MDOT District 6 Office in Hattiesburg to provide command & control and coordinate MHSP operations (1 total staff).
- e. **One (1)** MHSP officer is located at the SEOC in Jackson to coordinate the lane reversal operations with MEMA (1 total staff).
- f. One hundred- forty-six (146) total MHSP staff is required to implement the Lane Reversal Plan for a single 12-hour shift. (292 MHSP staff would be required for 24-hour coverage.) Note that although the predicted duration of this operation is twelve hours or less, the possibility that the

evacuation could exceed that estimate would require the dedication of MHSP personnel to accommodate 24-hour coverage. A detailed initial staffing plan for the MHSP is included in this document as Appendix M.

g. Extended distances for personnel to travel will dictate a response time of five hours or more for many MHSP officers and a briefing will be virtually mandatory. Accordingly, a minimum advance notice of eight hours is needed.

3. Staging Areas

Staging areas will provide for personnel briefings, issue and/or change assignments, coordinate operations with personnel from other state agencies. The staging areas will also provide shelter accommodations for those personnel coming off a shift that will be required to pull another.

- a. MDOT Staging Area > District 6 Office, Hattiesburg
- b. MHSP Staging Area > Troop J Headquarters, Hattiesburg

F. Command and Control

- The MDOT District 6 Headquarters office in Hattiesburg will assume command and control of Lane Reversal operations. This location will serve as the MDOT Area Emergency Operations Center (AEOC) for the purpose of overseeing hurricane evacuation activities and will be staffed by MDOT and MHSP supervisory personnel.
- 2. Field staff will report to the AEOC in Hattiesburg. The AEOC staff, both MDOT and MHSP, will coordinate emergency response activities with the State EOC (SEOC) in Jackson. Coordination of the overall emergency response activities will occur at the SEOC.

G. Traffic Control Device Requirements

 Variable Message Board signs will be placed along the I-59 corridor to advise the evacuating public of the availability of travel services at particular interchanges or the lack thereof. The design of the ending termini, crossovers and interchanges will require different types of traffic control devices. 2. "Secondary traffic locations" outside of the actual Lane Reversal Plan limits need to be identified for the placement of variable message board signs. These variable message board signs would be placed in advance of the actual Lane Reversal Plan limits notifying the travelling public of the existence and enactment of the plan. This would allow the travelling public to select an alternate route to reach their destination prior to encountering the lane reversal operation. The placement of these variable message board signs would be on I-20 east and west of its junction with I-59, US 84 east and west of Laurel, US 98 east and west of Hattiesburg and US 49 north and south of Hattiesburg. Additional MDOT employees will be required to monitor the operation of these variable message boards.

H. Summary & Conclusion

- 1. This section has located the ending termini and I-59 Service and Non-Service interchanges. It has also provided the conceptual design for the capitol improvements required and the traffic control devices required for the operation of the plan, and furthermore, provided detailed initial staffing plans for plan operation.
- 2. <u>Eight (8) hours advance notice</u> from the State of Louisiana is needed prior to Louisiana's implementation of lane reversal operations in order for Mississippi to place this plan into operation.
- 3. The Implementation Strategies section will deal with the conditions, processes and procedures under which the Lane Reversal Plan could be implemented.

III. IMPLEMENTATION STRATEGY

A. Introduction & Purpose

Implementation Strategies, concentrates on the process and procedures under which this Lane Reversal Plan can be implemented. However, it must be remembered that any plan of this type may be amended or changed during the course of an actual emergency situation to address the actual conditions encountered in the field.

B. Division of Responsibility

- In order to successfully implement an operation of this type, a well defined and coordinated effort crossing state and state agency boundaries is essential. Input and assistance is needed from the State of Louisiana, the Mississippi Emergency Management Agency (MEMA), the Mississippi Department of Public Safety (MDPS) / Mississippi Highway Safety Patrol (MHSP) as well as the Mississippi Department of Transportation (MDOT), and possibly other agencies, state and county/city.
- 2. Upon receiving a request from the State of Louisiana to implement the Lane Reversal Plan the MDOT Director will contact MEMA, who in turn will contact the Governor to request the plan implementation in Mississippi. The Governor in turn would make the announcement to implement the Lane Reversal Plan.
 - a. MEMA will provide information and guidance to the MDOT Director and coordinate the overall State emergency response activities. MEMA is equipped, staffed with its own personnel as well as representatives from each of the other supporting state agencies during times of disasters, and trained to gather and disseminate information and coordinate relief assistance.
 - b. The MDPS through the MHSP will have the primary responsibility for enforcement of the traffic control provisions called for within this plan. The MHSP may, due to manpower limitations, and at their discretion, call for the assistance of local law enforcement officials to man key strategic locations along the Lane Reversal Plan limits.
 - c. MDOT will have the responsibility of constructing the needed capitol improvements, procuring and installing the necessary traffic control devices, and maintaining these assets both prior to and during implementation of the plan.

C. Before "Hurricane Season" Considerations

There are some considerations that ideally need to be addressed prior to the possibility of implementing the Lane Reversal Plan.

1. Personnel Assignments

- a. The various State agencies with responsibilities under this plan must identify and assign personnel. MEMA has an established emergency response coordination structure. MDPS needs to select and assign MHSP officers to man key strategic traffic control locations. MHSP has the choice of either assigning individual officers or coordinating this task with other local law enforcement agencies within the city limits of the affected cities. MDOT also needs to identify and assign personnel to key strategic traffic monitoring and traffic control points prior to and throughout the limits of the plan.
- b. Initial key personnel assignments and the total estimated manpower requirements have been identified in detail in the Traffic Plan section of this plan. However, personnel changes are inevitable and the constant monitoring of staffing will be necessary.
- c. Designate staging areas for personnel assigned responsibilities under this plan.
- d. A minimum of eight (8) hours advance notice, prior to Louisiana ordering lane reversal activation, is needed for Mississippi to notify and activate personnel.

2. Communications

- a. The communication of administrative officials with field staff, both within and between states and state agencies will be essential to provide the information necessary to ensure the proper implementation and operation of this plan. Currently, each of the state agencies has reliable communications within its own agency. However, it has been demonstrated that communication between field personnel of different agencies can be troublesome and problematic.
- b. It is advised that key personnel be provided access to shared radio frequencies to facilitate "cross-agency" and "cross-state" communications.

c. MDOT will utilize its satellite radio network to augment in place ground communications (low band, high band and 800 MHz). MHSP units in proximity to MDOT satellite radios will also be able to utilize the MDOT satellite communications network.

3. Field Implementation

- a. A field implementation guide will be developed to provide clear and concise written procedures for MDOT that will guide personnel through the sequence of events to establish and operate the Lane Reversal Plan. This guide will contain personnel assignments by position and classification, station assignments and contact numbers, and must also contain clear, concise written procedures that would direct field personnel through the sequence of events to terminate the plan and return traffic operation back to normal flow. The Implementation Strategy, Section III of this plan will serve as this field implementation guide.
- b. Periodic training and "mock" testing of this plan would be advisable to insure its smooth implementation. This kind of periodic training could discover areas where amendments and changes to the plan may be warranted.

4. Emergency Activities

The MHSP has the legal authority to remove a vehicle that has broken down and/or been involved in an accident affecting the evacuation route. In certain situations MHSP can delegate this authority to MDOT in order to clear the roadway. The State will approach local jurisdictions along the I-59 corridor to see whether or not they can provide emergency assistance at certain interchanges in the form of fire/EMS and wrecker service.

5. Public Education

An early education program will be developed for the travelling public to explain the existence of the Lane Reversal Plan. Educational efforts could include television, radio and print media, distribution of informational flyers at special events as well as at regular distribution points such as Mississippi welcome centers/rest areas, drivers' license offices, etc. The more the travelling public knows about the plan and its provisions the better they could be expected to react if the plan has to be implemented.

D. Pre-Staging of Assets

- The goal of pre-staging assets is to have the necessary manpower prepared to act and the equipment on-hand and available, prior to the actual call to implement the Lane Reversal Plan. Essential manpower and equipment should be placed at predetermined strategic locations prior to the call for plan implementation in order to reduce the chance of needing to mobilize into the plan area after severe traffic congestion has already occurred and gotten out-of-hand.
- These assets may include vehicles with motorist assistance capability (gasoline & water), traffic counting equipment, variable message boards and other traffic control equipment, and low-band AM radio transmitters. Convenient locations to store these assets, or otherwise make sure these are readily available, need to be selected and provisions made to acquire whatever space, transportation, etc. may be required.

E. Operating Conditions

Operating condition levels have been identified that specify what actions are to be taken when certain external conditions occur. These external conditions are based on the start of hurricane season and whether or not the State of Louisiana orders an evacuation of the metropolitan New Orleans area. The operating levels are described below: (It should be noted that criteria specified to call a level into operation are general in nature and other conditions may arise which necessitate placing a certain level into operation.)

1. LEVEL 1

This operating condition level refers to *NORMAL* activities during the year from December 1st to May 31st. There is no threat of tropical storm or hurricane activity. Actions during Level 1 include:

- a. Review and update plans / procedures
- b. Review all personnel staffing assignments
- c. Identify and evaluate bottlenecks that may affect evacuation flow such as roadway construction, traffic signals, etc.
- d. Organize multi-agency meeting for reviewing the plan.

2. LEVEL 2

This operating condition level is enacted during the hurricane season, June 1st through November 30th. Typical day-to-day operations will be maintained, and any development of tropical disturbances in the Gulf of Mexico or Caribbean Ocean will be monitored. Actions during Level 2 include:

- a. Weather information sources (National Hurricane Center advisories) shall be continuously monitored for the development of tropical disturbances and storms.
- b. District and State offices will review personnel assignments with staff and adjustments/updates made as necessary.
- c. All necessary materials shall be inventoried to insure that they are placed at their required staging areas and are in proper working condition. These materials are to include barricades, cones, signs, trailers, etc. All permanently mounted and installed signs will be inventoried and inspected, then cleaned and replaced as necessary.
- d. Review necessary assets and make provisions to ensure that all equipment in the predetermined staging locations and are in good working order. This will include but is not limited to, checking the operation of variable message boards, arrow boards, generators (both portable and stationary) and communications equipment. Electronic components will be periodically checked and routine operational checks performed to assure reliability. Variable message and arrow boards called for in this plan must be made available to District 6 at any time during the hurricane season, even if this means pulling them off another job site.
- e. Level 2 status will remain in effect unless the next level is enacted or until the end of the hurricane season.

3. **LEVEL 3**

When the National Weather Service issues an advisory indicating that a hurricane or tropical storm has entered or developed in the Gulf of Mexico, the following <u>Level 3</u> actions will be initiated:

- The MDOT Area Emergency Operations Center (AEOC) at the District 6 office in Hattiesburg is activated and partially staffed.
- b. All personnel with responsibilities under this plan are notified and placed on stand-by status.
- c. Any materials that have not been pre-positioned in the field shall be moved into place.
- d. All supervisors are to review this plan and their specific procedures with employees.
- e. All fuel storage tanks in the District shall be filled.
- f. Communications equipment will be checked for proper operation.
- g. Level 3 status will remain in effect unless the next level is enacted or until the end of the hurricane season.

4. **LEVEL 4**

When the Louisiana Department of Transportation and Development notifies the MDOT Director that they intend to implement lane reversal operations and request Mississippi's assistance, the following <u>Level 4</u> actions will take place:

a. The MDOT Director, when notified that the State of Louisiana is about to implement the Lane Reversal Plan, will contact MEMA. MEMA will advise the Governor, who in turn will make the official announcement and inform the Directors of the Mississippi Department of Public Safety (MDPS), the Mississippi Emergency Management Agency (MEMA) and MDOT of the decision to implement the Lane Reversal Plan. In turn the respective directors would then notify their own agency personnel to proceed with the Lane Reversal Plan implementation. The MDOT Director will place operating condition Level 4 into effect at this time.

- b. All MDOT staff with responsibilities under this plan will be notified and will report to the staging area for assignment.
- c. This Lane Reversal Plan will be implemented per the sequence of events listed within this section.
- d. The MDOT Director will make the decision to terminate lane reversal operations. Level 4 would stay in effect until a call for Lane Reversal Plan termination is received from the MDOT Director. This determination would be based on New Orleans area evacuation operations and weather/traffic congestion information gathered by MDOT / MDPS field personnel monitoring the evacuation and transmitted to the MDOT / MDPS decision-makers. The MDOT and MDPS decision-makers would then contact their field personnel and notify them of the decision to terminate the lane reversal operations.
- e. Level 4 status will remain in effect until the termination of lane reversal operations or until the end of the hurricane season.

F. Sequence of Events

The section is to provide clear and concise written procedures guiding MDOT field personnel through the sequence of events to establish, operate and terminate the Lane Reversal Plan in the field and should be consulted for a complete explanation of this process. The following discussion presents the concept of putting this process into use.

1. Plan Implementation

- a. Upon receiving a request from the State of Louisiana to implement the Lane Reversal Plan the MDOT Director will contact MEMA, who in turn will contact the Governor to request the plan implementation in Mississippi. The Governor in turn would make the announcement to implement the Lane Reversal Plan.
- b. At the inception of Level 4 operation, all assigned personnel will be notified to report to their staging area for briefing prior to departure for assigned traffic control stations.

- c. The MDOT personnel assigned to traffic control device operation and maintenance shall place and anchor all variable message boards into position and position all "flip-down" signs so they may be read by the lane reversal traffic. The variable message boards will not be turned on, as there will not be any lane reversal traffic as of yet. Each MDOT employee will have specific sign / message board assignments.
- d. Each traffic control location (interchange, intermediate crossover, etc.) will have a Crew Leader assigned. Once each MDOT employee completes his tasks under Level 4, he/she will report to the Crew Leader. Once all tasks have been completed and the Crew Leader notified, the Crew Leader will in turn notify the MDOT Lane Reversal Supervisor.
- e. The MDOT Lane Reversal Supervisor will keep a checklist of each traffic control location. Not until all traffic control locations have reported that Level 4 tasks are completed will the MDOT Lane Reversal Supervisor confirm that they are ready for plan implementation.
- f. Once the Governor calls for the Lane Reversal Plan to be implemented, MDOT employees will barricade the southbound entrance ramp at each I-59 interchange. At this same time other MDOT employees will position all I-59 South detour "flip-down" signs so that the motorist may read them. At this point in time no new traffic will be allowed to enter I-59 southbound, but rather will follow the designated I-59 southbound detours.
- g. After each I-59 interchange southbound entrance ramp has been barricaded, one MHSP officer shall be located at the southbound exit ramp gores. These MHSP officers are to direct all southbound I-59 traffic off I-59 and up the exit ramp. There they may follow the I-59 South detour. At this same time the other MHSP officer at each interchange is to proceed south on I-59 and ensure that all southbound I-59 traffic is cleared between that starting location and the next interchange. Once reaching the next interchange that officer shall pass the officer at the southbound exit ramp, proceed up the exit ramp and position him/herself at the junction of the southbound exit and entrance ramps. The MHSP officer is then to notify the MDPS Lane Reversal Supervisor that the section is clear and ready for lane reversal.

- h. The MDPS Lane Reversal Supervisor will keep a checklist of each section of I-59. Not until <u>all</u> Mississippi sections of I-59 have been cleared for lane reversal, will the MDPS Lane Reversal Supervisor confirm that they are ready to introduce northbound traffic flow onto the southbound I-59 traffic lanes.
- i. Once this occurs, the MDPS and MDOT Lane Reversal Supervisors shall confer and ensure that both parties are ready to introduce northbound traffic flow onto the southbound I-59 traffic lanes. When both parties are ready, they shall notify their field personnel by radio that the introduction of northbound traffic flow onto the southbound I-59 traffic lanes is about to begin. The MDPS Lane Reversal Supervisor shall then contact the MHSP officers, who are positioned at the beginning crossover in Louisiana and instruct them to request that the crossover be placed into operation and thereby introduce northbound traffic flow onto the southbound I-59 traffic lanes. One of the MHSP officers shall then lead the initial traffic onto the southbound I-59 traffic lanes northeastward into Mississippi. (NOTE: In lieu of positioning at the beginning termini on I-10, MHSP officers will position at I-59 Exit 11 crossover at the Pearl River Bridge in Louisiana. Two officers will be present, one to start the lane reversal process into Mississippi and the other to remain behind to terminate the process.)
- j. For the **Service Interchanges** MDOT personnel are to man the southwest quadrant ramps and shall only allow vehicles to exit I-59 from the reverted (southbound) roadway. MHSP officers and MDOT crews are to continue to pay particular attention to these locations to prevent the introduction of southbound traffic onto the reverted lanes of I-59. MDOT personnel are to monitor the operation of all traffic control devices and ensure their proper operation throughout the duration of the Lane Reversal operation.
- k. For the **Non-Service Interchanges** MDOT personnel are to man the barricaded southwest quadrant ramps and <u>are not</u> to allow vehicles to exit I-59 from the reverted (southbound) roadway. MHSP officers and MDOT crews are to continue to pay particular attention to these locations to prevent the introduction of southbound traffic onto the reverted lanes of I-59. MDOT personnel are to monitor the operation of all traffic control devices and ensure their proper operation throughout the duration of the Lane Reversal operation.

- I. MHSP officers are to remain at their stations at the junctions of the exit/entrance ramps and enforce the traffic control provisions. Again, paying particular attention to preventing the introduction of southbound traffic onto I-59.
- m. During operation of the plan it is envisioned that MHSP officers and/or possibly an MDPS helicopter unit monitor the plan route to confirm its proper operation, as weather conditions allow.
- n. It is also envisioned that additional MHSP officers and MDOT employees be assigned to monitor the I-59 South detour routes to ensure proper operation.
- o. Traffic is to be observed by MDOT personnel and MHSP officers throughout plan operation. Significant traffic problems/congestion are to be reported to either the MDPS Lane Reversal Supervisor or MDOT Lane Reversal Supervisor. MDOT and MDPS vehicles shall be stationed along the plan route to assist disabled motorists and clear the route as necessary.
- p. If it becomes apparent that the northbound traffic lanes are experiencing a much heavier traffic volume the MDOT Lane Reversal Supervisor is to call for the operation of one or more of the intermediate crossovers. This will shift a portion of the northbound traffic from the northbound lanes onto the southbound lanes or visa-versa, equally distributing the traffic load. It will be at the discretion of the MDOT Lane Reversal Supervisor to call into service or take out of service any intermediate crossover.

2. Plan Termination

There could be two instances that can cause the Lane Reversal Plan to be taken out of operation and traffic flow returned to normal. The first is the decision by Louisiana to terminate the plan and the second would be a decision by Mississippi that traffic conditions do not warrant reverse-lane operations. Once the MDOT Director calls for the Lane Reversal Plan to be taken out of service the termination of the lane reversal operations would generally follow the following procedures:

a. Louisiana notifies Mississippi that they are about to take the Lane Reversal Plan out of operation. The MDOT Lane Reversal Supervisor shall confer with the MDPS Lane

Reversal Supervisor and notify him/her of the decision to take the plan out of operation. Both supervisors shall notify their field personnel by radio that the Lane Reversal Plan is about to be taken out of operation. The MDPS Lane Reversal Supervisor shall then contact the Louisiana State Police officer at the beginning crossover to confirm when the crossover will be taken out of operation thereby restricting the northbound traffic flow to the northbound I-59 traffic lanes. The MHSP officer that was stationed at the beginning crossover is then to proceed northbound on the southbound traffic lanes ensuring that all northbound traffic is cleared behind him/her. As the MHSP Clearance Officer passes an interchange, that interchange may be placed back into normal operation. This procedure is to continue northward until the entire Lane Reversal Plan limits have been returned to normal operation.

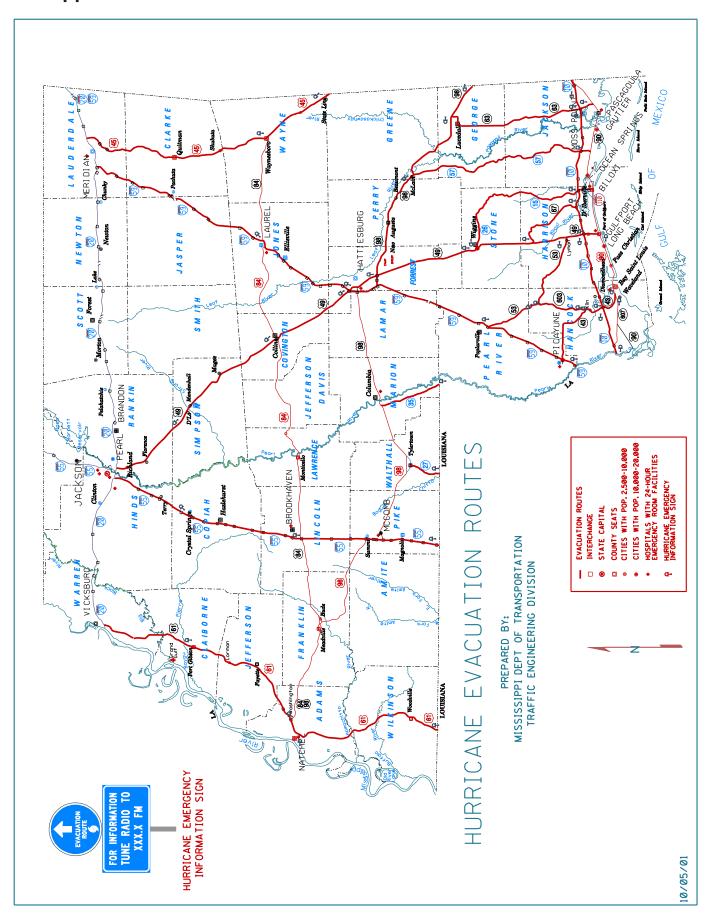
b. Mississippi elects to terminate lane reversal operations due to insufficient traffic volume prior to that decision being made by Louisiana. One of the intermediate crossovers will be selected to serve as the ending termini. The MDOT Lane Reversal Supervisor shall confer with the MDPS Lane Reversal Supervisor and notify him/her of the decision to take the plan out of operation. Both supervisors shall notify their field personnel by radio that the Lane Reversal Plan is about to be taken out of operation. The MDPS Lane Reversal Supervisor shall then contact MHSP officer at the selected intermediate crossover and instruct him/her to take the crossover out of operation and thereby restricting the northbound traffic flow to the northbound I-59 traffic lanes. One of the two MHSP officers at this crossover is then to proceed northbound on the southbound traffic lanes ensuring that all northbound traffic is cleared behind him/her. As the MHSP Clearance Officer passes an interchange, that interchange may be placed back into normal operation. This procedure is to continue northward until the entire Lane Reversal Plan limits from the selected intermediate crossover have been returned to normal operation.

G. Summary & Conclusion

1. The Implementation Strategy section has attempted to describe the process and procedures under which the Lane Reversal Plan could be implemented. It has tried to stress the importance of a well-defined and coordinated effort involving the State of Louisiana and various Mississippi State agencies and the need to assign

- individuals to key strategic traffic control locations and obtain dedicated material and equipment needed for plan implementation and staging it near where it would be needed.
- 2. An Operating Condition Level structure has been defined that is generally based on the beginning of hurricane season and notification of impending New Orleans area evacuation. The structure identifies what measures are to be taken based on these external conditions. And finally a general sequence of events has been presented which outlines the steps to be taken to place the plan into operation once called for by the Governor.
- 3. This document has identified the need for implementation procedures to provide clear and concise written information that would guide MDOT field personnel through the sequence of events to establish and operate the Lane Reversal Plan in the field, and a comprehensive public education program for the travelling public.
- 4. It is important that periodic training and "mock" testing of this plan take place to insure smooth implementation, when the Governor calls for it to be implemented. As with any plan of this scope and type, this kind of training could identify areas where amendments and changes to the plan may be warranted.
- 5. This Lane Reversal Plan addresses only the transportation operational aspects of the I-59 reverse-lane evacuation operations. Any other evacuation planning considerations resulting from the implementation of this Plan will be addressed by the Mississippi Emergency Management Agency (MEMA).

Appendix A - EXISTING HURRICANE EVACUATION ROUTES



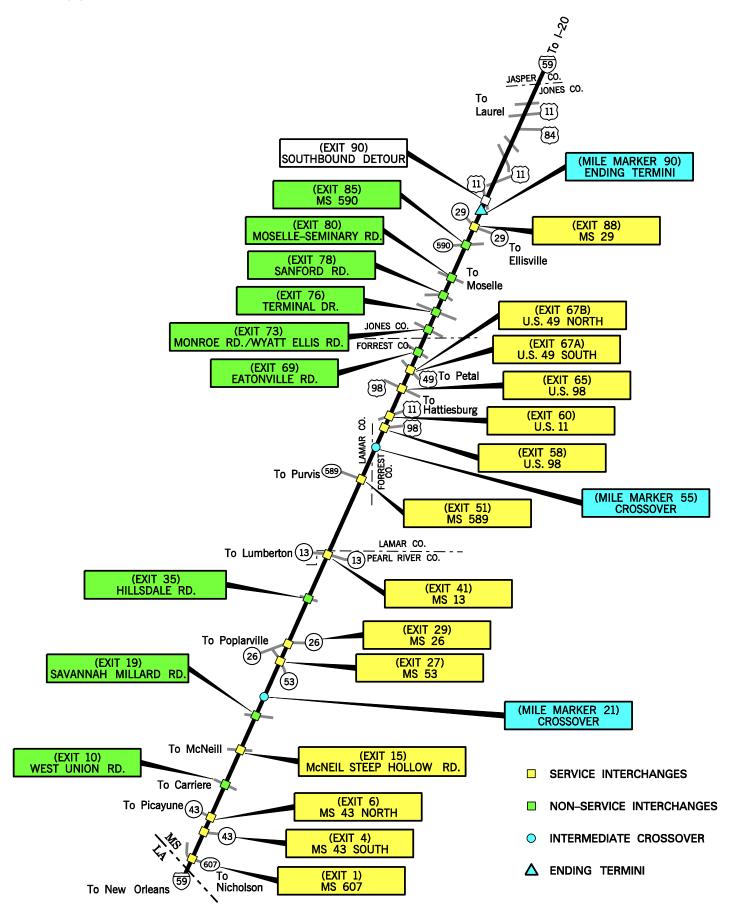
Appendix B - I-59 LANE REVERSAL LIMITS



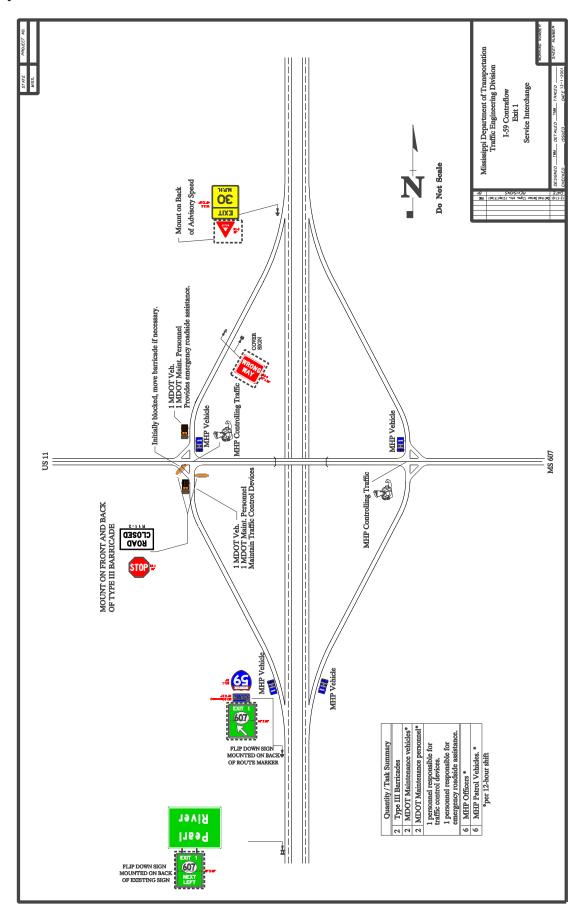
Appendix C - CROSSOVER & INTERCHANGE IDENTIFICATION

LOCATION #	<u>IDENTIFICATION</u>	<u>DESCRIPTION</u>	<u>STATUS</u>
1	EXIT 1	INTERCHANGE	SERVICE
2	EXIT 4 (Picayune)	INTERCHANGE	SERVICE
3	EXIT 6 (Picayune)	INTERCHANGE	SERVICE
4	EXIT 10	INTERCHANGE	NON-SERVICE
5	EXIT 15	INTERCHANGE	SERVICE
6	EXIT 19	INTERCHANGE	NON-SERVICE
7	Mile Marker 21	CROSSOVER	INTERMEDIATE
8	Mile Marker 22.6	Emergency Vehicle	Crossing
9	EXIT 27	INTERCHANGE	SERVICE
10	EXIT 29	INTERCHANGE	SERVICE
11	EXIT 35	INTERCHANGE	NON-SERVICE
12	Mile Marker 38.2	Emergency Vehicle	Crossing
13	EXIT 41 (Lumberton)	INTERCHANGE	SERVICE
14	Mile Marker 44.1	Emergency Vehicle	Crossing
15	Mile Marker 47.7	Emergency Vehicle	Crossing
16	EXIT 51	INTERCHANGE	SERVICE
17	Mile Marker 54.4	Emergency Vehicle	Crossing
18	Mile Marker 55	CROSSOVER	INTERMEDIATE
19	EXIT 58 (Hattiesburg)	INTERCHANGE	SERVICE
20	EXIT 60 (Hattiesburg)	INTERCHANGE	SERVICE
21	EXIT 65 (Hattiesburg)	INTERCHANGE	SERVICE
22	EXIT 67A (Hattiesburg)	INTERCHANGE	SERVICE
23	EXIT 67B (Hattiesburg)	INTERCHANGE	SERVICE
24	EXIT 69	INTERCHANGE	NON-SERVICE
25	EXIT 73	INTERCHANGE	NON-SERVICE
26	EXIT 76	INTERCHANGE	NON-SERVICE
27	EXIT 78	INTERCHANGE	NON-SERVICE
28	EXIT 80	INTERCHANGE	NON-SERVICE
29	EXIT 85	INTERCHANGE	NON-SERVICE
30	EXIT 88 (Ellisville)	INTERCHANGE	SERVICE
31	Mile Marker 90	CROSSOVER	ENDING TERMINI
32	EXIT 90	INTERCHANGE	SOUTHBOUND DETOUR

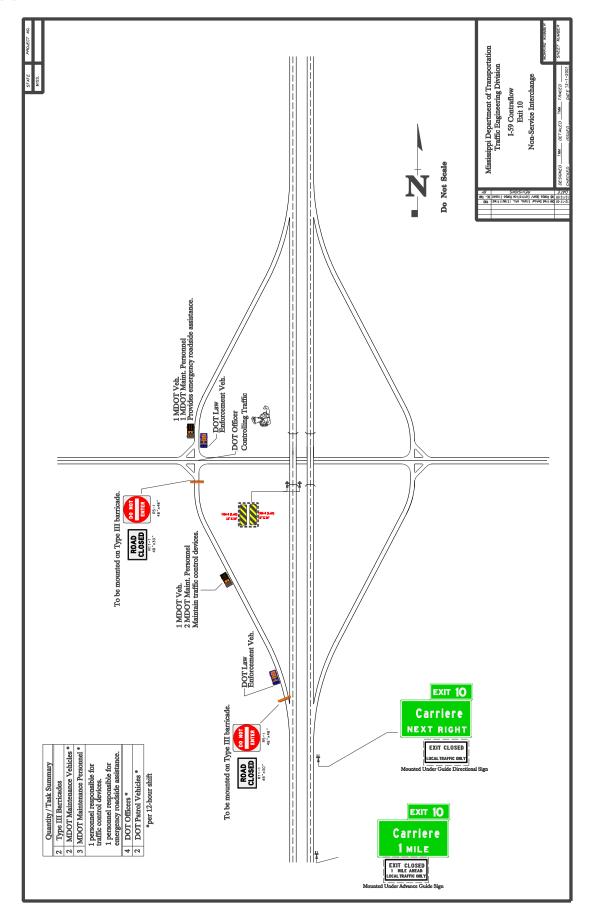
Appendix D - CROSSOVER & INTERCHANGE STRIP MAP



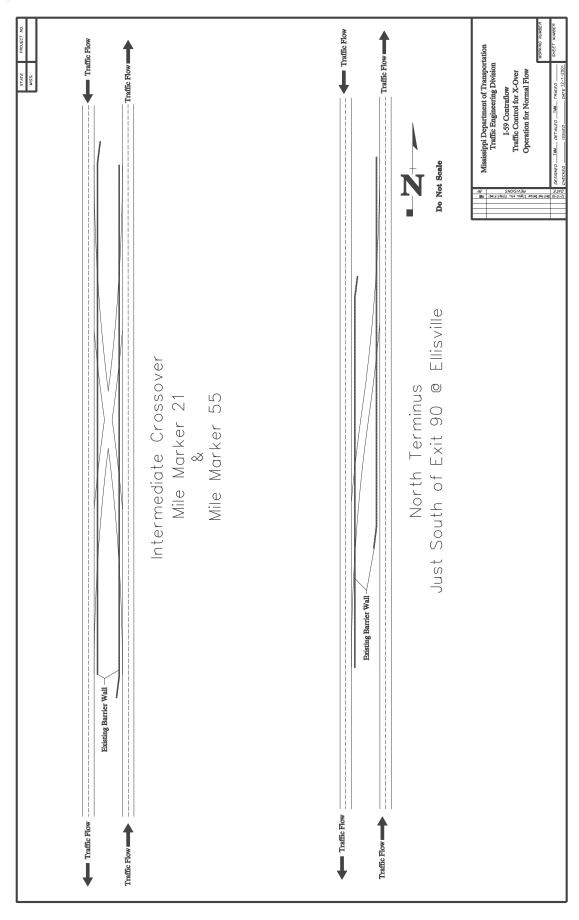
Appendix E - SERVICE INTERCHANGE DESIGN



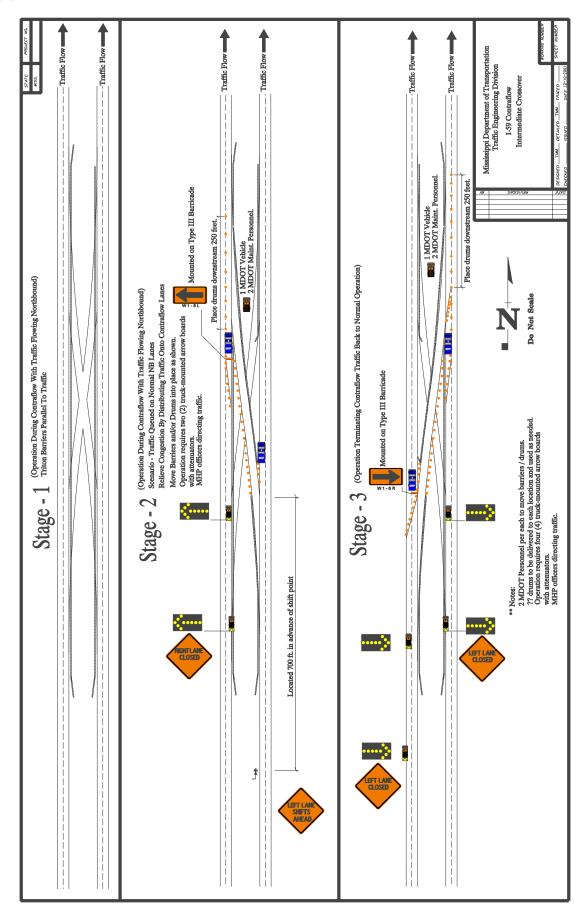
Appendix F - NON-SERVICE INTERCHANGE DESIGN



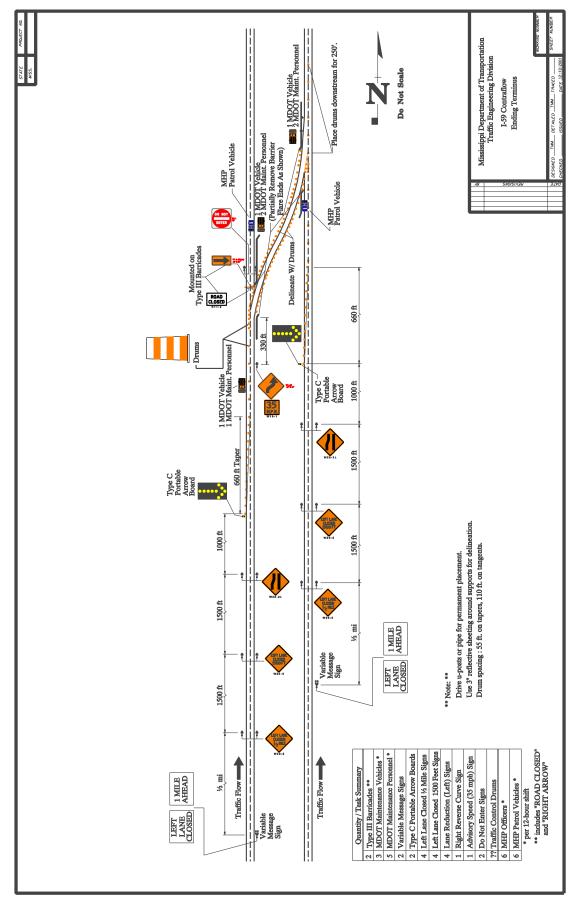
Appendix G - CROSSOVER TRAFFIC CONTROL DESIGN



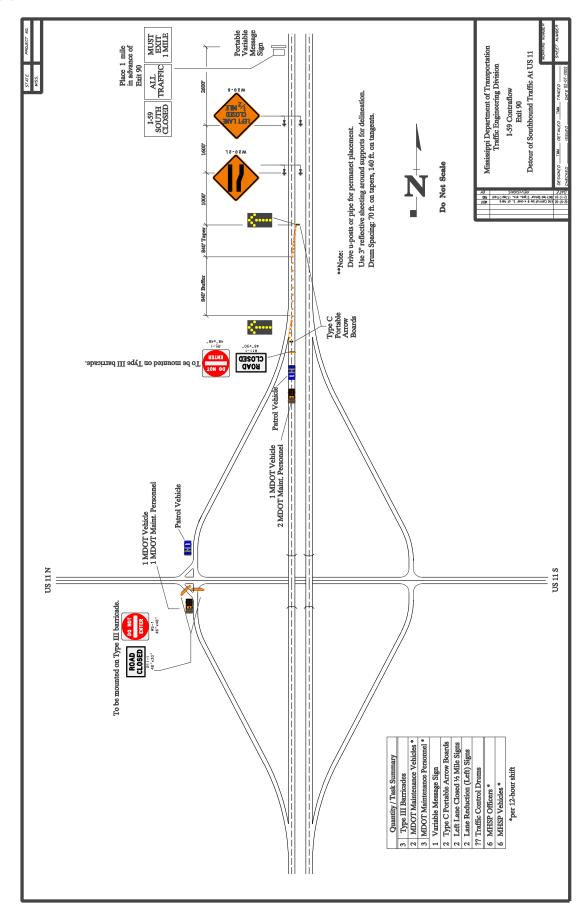
Appendix H - INTERMEDIATE CROSSOVER DESIGN



Appendix I - ENDING TERMINI DESIGN



Appendix J - SOUTHBOUND DETOUR INTERCHANGE DESIGN



Appendix K - LANE REVERSAL STAFFING REQUIREMENTS

<u>M</u>	eridian/I-20 Ending Termini	MDOT Staff Maint/Admin (vehicles)	DOT Law Enforcement (vehicles)	MHP Officers (<u>vehicles)</u>
•	SERVICE Interchanges (14) (2 ea MDOT / MHP > 5@2; 6@10; 8@2)	28 (28)	-	86 (86)
•	NON-SERVICE Interchanges (9) (3 ea MDOT / 4 ea DOT)	27 (18)	36 (18)	-
•	Southbound Detour Interchange (3 ea MDOT / 6 ea MHP)	3 (2)	-	6 (6)
•	Intermediate Crossovers (2) (4 ea MDOT / 4 ea MHP) @ Poplarville & Hattiesburg	8 (4)	-	8 (8)
•	Emergency Vehicle Crossings (5)	5 (5)	-	-
•	Placement of Variable Message (19) & Arrow (10) Boards	16 (10)	-	-
•	Additional Personnel where needed	5 (4)	10 (10)	30 (<i>30</i>)
•	Ending Termini @ Laurel (5 MDOT / 6 MHP)	5 (3)	-	6 (6)
•	Beginning Termini in Louisiana	-	-	2 (2)
•	Supervising/Support Staff	-	2 (2)	6 (6)
•	MDOT Area EOC @ Hattiesburg	3	1 (1)	1 (1)
•	SEOC @ Jackson	1	-	1 (1)
	>12 Hour Shift:	101 (74)	49 (31)	146 (146)
	>24 Hour Shift:	202	98	292

Appendix L - <u>MISSISSIPPI DEPARTMENT OF TRANSPORTATION</u> STAFFING PLAN

OUTLINE:

I. District 6 Personnel

Responsible for staffing personnel from State Line to south of Hattiesburg

II. District 5 Personnel

Responsible for staffing personnel from Hattiesburg to the Ending Termini

III. District 7 Personnel

Responsible for augmenting District 6 staffing

IV. District 3 Personnel

Assisting with personnel staffing where needed.

V. MDOT Law Enforcement Officers

Available resources:

- 100 Officers
- 50 vehicles
- VI. Traffic Engineering Personnel

Appendix M - MISSISSIPPI DEPARTMENT OF PUBLIC SAFETY STAFFING PLAN

The complexity of some Service Interchanges would demand additional personnel to maintain safety standards, and consideration of the two crossovers required additional staffing. A minimum of one officer per service interchange has been added as a safety net in case of unexpected vacancies due to illness, injury, etc., and, because of the anticipated 12-hour shifts, to provide some accommodation for break rotations without weakening the needs of the site. (Note MDOT Law Enforcement will staff the Non-Service Interchanges and be available to provide support, if needed.)

Number of Officers

•	Traffic Control Location		
	1. Beginning Termini		

Beginning Termini in Lou	uisiana 2
2. Exit # 1	6
3. Exit # 4	6
4. Exit # 6	6
5. Exit # 15	6
6. Crossover @ mm 21	4
7. Exit # 27	6
8. Exit # 29	6
9. Exit # 41	6
10.Exit # 51	6
11. Crossover @ mm 55	4
12.Exit # 58	6
13.Exit # 60	8
14.Exit # 65	8
15.Exit # 67	10
16.Exit # 88	6
17. Ending Termini @ mm 9	0 6
18.Exit # 90	6

Additional Patrolling Personnel
 30

• Supervisory/Admin. Personnel

1.	District Supervisory Staff	6
2.	Area EOC- Hattiesburg	1
3.	SEOC – Jackson	1

TOTAL PERSONNEL:

146 PER SHIFT (292 for two 12-hour shifts) *

* The MHSP has a staff of 350 officers statewide.

Appendix N - LANE REVERSAL OPERATIONAL ASSIGNMENTS

To be Developed by MDOT