

Chapter 10

Transportation Management Plan

The following are changes, additions or deletions to the January 2014, Topic #625-000-007, Plans Preparation Manual (PPM), for use on Turnpike projects only.

10.2 References

Add the following reference

7. FDOT, Drainage Manual

10.3.1.1 Temporary Traffic Control (TTC) Plans

Add the following sentence to item 9

9. Consideration should take into account all affected lanes, i.e., mainline, auxiliary lanes, acceleration/deceleration, ramps, etc.

Add the following paragraphs

Project specific conditions associated with milling and resurfacing require the designer to develop project specific notes for the plans. Generally these notes are part of the TCP.

It is the Turnpike's policy **not** to allow ponding conditions during the milling and resurfacing. The Traffic Control Plan may require alternate stages/notes within a milling and resurfacing phase to meet this requirement.

The plan may require the contractor to alternate stages or pave multiple lifts during the same work period to comply with ponding avoidance and drop off restrictions.

It is the designer's responsibility to evaluate his/her plans and to incorporate notes or phasing such that the contractor clearly understands the conditions associated with milling and resurfacing in order to adhere to the Turnpike's policy.

10.3.1.1.1 TTC Plan Development

Add the following as bullets to the end of Step #2

10. Maintain drainage conveyance and spread.
11. Maintaining traffic at interchange locations, ie. need for auxiliary lane(s), lengths of acceleration and deceleration lane(s).

Add the following as bullet #13 to end of Step #6

13. Detail temporary drainage and maintenance of offsite drainage plans.

10.4 Coordination

Add the following paragraph

Refer to TPPPH Volume 1, section 16.2.6.1, for specific coordination and preliminary traffic control plan requirements.

10.7 Signs

Add the following paragraph

The Designer shall prepare details for nonstandard TTC signs that do not have a standard MUTCD or FTP number. Provide the details on guide sign worksheets in the plans.

10.7.3 Project Information Sign

Add the following paragraph

Project Information Signs and Toll Dollars At Work Signs are required for all projects with more than 90 days of contract time. Placement of the Project Information Sign and Toll Dollars At Work Sign should be in advance of the first advance warning sign or as close to the beginning of the project as practice on each mainline approach. Ensure proper sign spacing criteria is maintained as described in section 7.2.1. The Project Information Sign should precede the Toll Dollars At Work Sign. See Index 600 and the Guide Drawings for sign layout details.

10.8.3 Portable Changeable Message Signs

Add the following paragraph

For planned lane closures and detours, a portable changeable message sign shall be placed and shall display an advanced notification message a minimum of one week prior to lane closure or detour. The message shall include the month and day(s) of the implementation of the closure or detour.

10.10 Pavement Markings

Add the following paragraph

All proposed, temporary, or pavement markings to be removed shall be detailed completely in the plans for a proper layout. This includes either dimensions to physical features or stations and offsets.

10.10.1 Removing Pavement Markings

Add the following paragraphs

The PPM and the Design Standards present positive options to control conflicting and misleading pavement scars created from water blasting as well as multiple pavement markings associated with multiple phase contracts.

The Turnpike is advising all consultants that overlays or milling with overlays will be the only acceptable method(s) to achieve a positive means for the obliteration of existing pavement markings in areas such as long term crossovers, diversions and in some cases tangent sections that provide a rough riding pavement.

High pressure water blasting is the only acceptable method for the removal of conflicting pavement markings in those areas not mentioned above. When removing pavement messages via water blasting, the entire area within the pavement message, including the interior of the message that is not painted or have thermoplastic, shall be water blasted so that the message outline is completely obliterated and drivers are not able to read or see the scar outlining the former message.

10.12 Temporary Traffic Control Plan Details

Add the following as bullet #11

11. Temporary pavement and drainage maintenance details.

10.12.5 Superelevation

Add the following paragraphs

The transition from existing to temporary pavements is a critical area. These areas are prone to flooding since all of the permanent construction features do not exist. These incomplete features include final pavement elevations and drainage facilities. Frequently, these temporary pavement transitions are superelevated with almost flat profiles. Elevations and grades with all superelevation data are required to be shown to ensure the intended design is constructed.

On Turnpike Facilities, diversions with construction speeds of 50 mph or greater are considered high speed facilities. Curvature and superelevation criteria for open highway conditions apply and shall meet superelevation criteria described in the PPM Volume 1, Chapter 2.9.

10.12.6 Lane Widths

Add the following paragraph

Shoulder widths associated with the travel lanes shall be designed to achieve a minimum of two feet in width (paved). Spread must be checked to verify that the provided shoulder width complies with the criteria in Chapter 3.9.1 of the Drainage Manual. Any deviation from the two feet shall be justified to and approved by the Turnpike Design Engineer.

Milling and resurfacing of Turnpike's mainline and maintained facilities (SR 417, Veterans Expressway, Sawgrass Expressway, etc.) should utilize a minimum offset of four feet from Turnpike Traffic and the milling operation or the resurfacing operation. Where a four feet

shoulder (buffer) cannot be maintained, an acceptable buffer space must be approved by the Turnpike Design Engineer.

Add the following section

10.12.6.1 Emergency Pull Off Area

All capacity improvement (widening, reconstruction, etc.) or interchange projects that are greater than one mile in length along the mainline, and reduce the outside mainline shoulder width less than eight feet wide, shall include provisions for an emergency pull off area. The emergency pull off area shall be located to the right of the outside travel lane for use by patrons and emergency management personnel. The emergency pull off area shall be a minimum of twelve feet wide and 500 feet long located every one-half to one mile and no closer than one-half mile from an interchange. The emergency pull off area should maintain the adjacent lane or paved shoulder cross slope and be paved with chevron pavement markings at 60 foot spacing. The emergency pull off area should not be designated as an ingress/egress location for the contractor.

10.12.7 Lane Closure Analysis

Replaced paragraph 4 with the following

Closing a traffic lane on Interstate or Limited Access facilities can have a significant operational impact in terms of reduced capacity and delay. Operational impact can occur when lane closure(s) of any of the following occur; mainline, interchange ramp(s), auxiliary lane(s), acceleration or deceleration lane(s). ~~There will be no daytime lane closures allowed on Florida's Turnpike unless it is approved in writing by the Deputy Executive Director and Chief Operating Officer.~~ Other districts have adopted similar policy for Interstate daytime lane closures; therefore, it is recommended the Designer verify the District's lane closure policy at the beginning of the design process.

Add the following paragraphs

The Turnpike System is a major intrastate facility that is vital in the case of evacuations due to weather and other disasters. The Turnpike also serves as a diversion route for various Interstates, including I-95 and I-4. It is essential that the Turnpike be able to reopen its facilities to all lanes even within construction zones. The development of a traffic control plan shall not include prolonged lane reductions on mainline, ramps, auxiliary lanes, etc. The staging of a particular construction project shall permit the roadway to be restored to its original number of lanes within 24 hours. If necessary the use of temporary bridges shall be included in the traffic control plans to avoid prolonged lane closures due to work on the bridge.

Turnpike lane closure traffic data shall be obtained from Turnpike Traffic and Planning Departments including a growth rate factor and peak seasonal factor for all production design projects. See Florida's Turnpike Lane Closure Policy for additional information and guidance for non production projects (Permit and Maintenance). The design consultant will be responsible for developing analysis for both the begin construction year and the end construction year for projects twenty four months and longer. Lane closure analyses are to be submitted for review in electronic format and include traffic data as attachment for reference. If a detour and/or a

prolonged closure is proposed on a project, the lane closure analysis should also include traffic analysis of the affected ramps. In terms of prolonged closure, include analysis and effect of closure(s) on the capacity and operations at the interchange. Once reviewed and approval is provided, a signed and sealed Lane Closure Analysis will be requested by Project Manager for filing in the project folder.

The use of **daytime lane closures** cannot be incorporated into the design plans without an official request by the designer and approval by the Turnpike as outlined in Florida's Turnpike Lane Closure Policy. Even though the lane closure analysis may support a daytime closure, approval must be obtained.

Daytime closures will be considered/allowed if the EOR for the design makes a recommendation to the Project Manager that a closure is more beneficial to the Turnpike, its customers and adjacent property owners. For example, driving guardrail posts at night adjacent to homes is not as desirable as daytime closures which would support the work during the day and minimize the noise pollution and complaints from the adjacent property owners.

In addition to daytime lane closures, Florida's Turnpike prohibits lane closures from sunup Friday until sundown Sunday (weekend). Weekend lane closures will also be considered/allowed if the EOR for the design makes a recommendation to the Project Manager that a closure is more beneficial to the Turnpike, its customers and adjacent property owners. A weekend lane closure request shall follow the same process as a daytime lane closure request.

The day time lane closure process starts with the Project Manager and the EOR for the design. The EOR for the design will be required to provide all supporting documentation including, but not limited to, lane closure analysis and the specific reasons why the request is being made to the Project Manager. On certain projects, daytime lane closures may not be applicable throughout the entire project. This aspect has to be considered by the EOR for the design when making his recommendation. The EOR for the design shall evaluate adjacent projects for their closure hours and provide that information along with their analysis and recommendation.

Add the following section

10.12.7.1 Exit Ramp Lane Closure

Work in the vicinity of an exit ramp shall follow the latest MUTCD requirements with the following modification:

1. Minimum Ramp Opening of 200 feet.

10.12.8 Traffic Pacing Design

Add the following paragraphs

Index 655 also includes a design table applicable to most work times of 20 minutes or less. The table is based on a pacing speed of 20 mph. Slower pacing speeds are not recommended but can be selected by the designer when necessary to shorten the pacing distance. See section IV

Traffic Pacing of the Florida's Turnpike Enterprise Lane Closure Policy for additional guidelines on Traffic Pacing.

Site specific conditions will dictate whether a pacing operation can be implemented; therefore, it is necessary that the designer coordinate with Florida's Turnpike Enterprise at the time the Traffic Control Plan is being developed. The type of work will determine the construction equipment and required staging areas the contractor will need, particularly for placing bridge beams. Review of these issues with Florida's Turnpike Enterprise will determine if lane closures will need to be used along with the pacing operation, or if the traffic will have to be detoured instead of paced. If it is determined that a pacing operation will be used, the designer should obtain concurrence from the Captain of the Florida Highway Patrol troop (Troop K) who will assist in the operation.

Exhibit 10-C, sheets 5 - 12 will not be applicable. See Florida's Turnpike Enterprise Lane Closure Policy for allowable hours of Traffic Pacing.

10.12.12 Narrow Bridges and Roadways

Add the following paragraph

In the development of the detailed traffic control plan, any existing guardrail and barrier wall end treatments shall be compared with standards to ensure the current standards are met. If the traffic control plan impacts these end treatments, then protective device upgrades will be necessary.

10.12.13 Existing Highway Lighting

Replace the first paragraph with the following

Temporary lighting systems are required for all roadways where existing lighting is being replaced or new lighting is being constructed. The designer shall prepare a specification that completely describes what is to be done during all phases of construction. Give detailed information on poles, conduit, and/or conductors that would have to be installed. A field survey should be conducted to establish the condition of any existing system(s) and what responsibility the contractor will have in bringing the existing lighting system(s) back to an acceptable condition.

Add the following section

10.12.18 Temporary Drainage

The Designer is responsible for designing the temporary drainage facilities necessary during construction. This includes designing temporary ditches, the size and length of pipes, placement of inlets and where necessary calculating spread where water may pool along temporary barrier wall or curbing adjacent to an inside lane. All quantities associated with temporary drainage shall be quantified.

Add the following section

10.12.19 Friction Course on Temporary Pavement

New structural asphalt has similar friction factors as friction course. The use of friction course asphalt on temporary pavement during construction will be used on a case by case basis and consider the duration of the construction phase, drainage, cross slope, operating speed and horizontal curvature.

Add the following section

10.12.20 Temporary Barrier Wall Tape

During the development of traffic control plans on major projects it is not unusual for traffic phasing to require the implementation of traffic crossovers / transitions. Typically, the design requires the installation of concrete barrier wall on both sides of the travel way including minimum shoulder width through the transitions. Transitions of this type require the designer to evaluate a multiple of measures and provide as much delineation through the transition area as possible. These measures are extremely important to guide the driver during low light and or adverse weather conditions.

One such temporary measure is the application of yellow tape to the face of the barrier wall. The purpose of the tape is to high light the face of the wall through the transition areas. The **yellow tape** is applied as a warning device on the upper reaches of the barrier (either side of the travel way), warning the drivers they are in a transition or lane shift area and to assist in guiding the drivers. The tape is not to be placed near the bottom of the wall indicating the tape serves as a substitute for line striping. It is the designer's responsibility to evaluate the need for temporary tape on temporary concrete barrier wall at transition locations within their TCP and include the appropriate notes, pay items, call outs and details in the plans.

For temporary barrier wall tape guide, refer to Turnpike Design website, under TPPPH manual, Roadway guide drawings:

http://design.floridasturnpike.com/prod_design/roadway/roadwayguidedrawings.html

Add the following section

10.12.21 Reflective Pavement Markers

Reflective Pavement Markers (RPM) used to delineate traffic control lane lines shall be installed in conjunction with lane stripes. The use of RMP's independent of pavement stripes must be approved by the Turnpike Design Engineer.

Add the following section

10.12.22 Standard MOT General Notes

See Roadway Guide Drawings for standard MOT General Notes that shall be shown on traffic control plans as applicable. Roadway Guide Drawings are at the following link on the Turnpike Design Website:

http://design.floridasturnpike.com/prod_design/roadway/roadwayguidedrawings.html

10.13.1 Regulatory Speeds in Work Zones

Add the following paragraph

All transitions and tapers for work zones shall be based upon the preconstruction speed limits. For any locations incorporating speed reductions, speed limit signs shall be installed departing the work zone to "restore" the speed limit to its preconstruction limit. During non-construction periods the speed limits shall be restored to preconstruction limits.

10.14.2 Use of Traffic Control Officer

Add the following paragraphs

All lane closures on a FTE mainline facility require the use of Traffic Control Officers for the duration of the closure. The designer needs to coordinate the use of additional Traffic Control Officers with FTE Construction at the preliminary TCP submittal, or at a minimum, prior to the Phase II submittal. This should be an item of discussion at the 45% Traffic Control Meeting.

The locations and/or need for additional traffic control, must be outside of the four conditions called out in the Specification 102-7 and shall be brought to the Turnpike's attention by memo identifying the additional locations and the corresponding considerations of a safety issue to the motorist and workers.

A matrix indicating the estimated hours for traffic control should be developed and provided to FTE Construction during coordination of law enforcement personnel. Coordination with FTE Construction should include discussion on placement of the matrix within the plans and/or the Computation Book.

FHP TRAFFIC CONTROL OFFICER ESTIMATE				
Direction/Phase	Number Work Periods	Hours/Work Period	No. Troopers Required	Total FHP Hours
NB Phase I	2	8	1	16
NB Phase II	2	8	1	16
SB Phase I	2	8	1	16
SB Phase II	2	8	1	16
Total FHP				64

This matrix is an example and shall be modified as required for each project.

Upon concurrence with the designer's recommendation for the use of additional traffic control officers on the project, review MOT General Notes and incorporate in plans the applicable traffic control officer notes and Regional contact information:

http://design.floridasturnpike.com/prod_design/roadway/roadwayguidedrawings.html

~~**Note 1.** FHP Troop K is the official law enforcement troop for the Florida's Turnpike Enterprise. FHP shall serve as the point of contact and scheduling for all law enforcement needs on the Turnpike System. The contractor shall make provisions for a traffic control officer for traffic control at the specific locations called out in the plans, by contacting the regional district (The designer is required to insert the appropriate District and remove all other references).~~

The District Contacts for all Turnpike roads are as follows:

- | | |
|---|-------------------------|
| 1. Palm Beach County | 561-357-4294 |
| 2. St. Lucie/Okeechobee/Indian River/Martin Counties | 772-873-6541 |
| 3. Broward County | 954-321-2713 |
| 4. Miami Dade County | 305-378-4235 |
| 5. Osceola/Orange/Lake/Sumter/Seminole Counties | 407-264-3222 |
| 6. Pasco/Hillsborough/Hernando/Polk Counties | 813-558-1117 |

~~**Note 2.** Make provisions for a traffic control officer (FHP Troop K) for all lane closures and/or as directed by the Engineer. All costs are included in 102-14. If the Contractor elects to use officers for any other activity, include the cost in lump sum MOT, pay item 102-1.~~

10.15 Motorist Awareness System

Add the following paragraph

All lane closures on an FTE mainline facility require the use of Index 670 – Motorist Awareness System.