INTERNATIONAL ROAD DYNAMICS INC.

LTPP SPS PHASE II

WEIGH-IN-MOTION SITE ACCEPTABILITY ASSESSMENT REPORT

ARKANSAS SPS-2
LTPP ID 050200
JULY 19, 2006
CLIN 2001 TASK ORDER 15

CONTRACT NO. DTFH61-05-D-00001

U.S. Department of Transportation
Federal Highway Administration

LONG TERM Pavement PERFORMANCE

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1.0 EXECUTIVE SUMMARY

The Arkansas SPS-2 (Strategic Study of Structural Factors for Rigid Pavements) test site was visited on July 19th, 2006, by the CLIN 1 Team and a Weigh-in-Motion (WIM) site acceptability assessment was performed. The pavement which includes the SPS-2 test sections, constructed in 1993, is located in the Westbound outside lane on Interstate 30 (I-30) between Mile Posts (MP) 110.4 and 106.0 approximately 28 miles West of central Little Rock near Benton in Saline County. The State had advised that this pavement is not structurally sound and suggested that better PCC pavement would be found downstream near MP 102. The State advised that there were no significant truck route exits or entrances between the test section location and MP 102 and further advised that an existing piezo WIM system with power and phone had been installed near MP 102. As such, the Team's search for a suitable WIM site started at this recommended location.

This assessment resulted in the selection and evaluation of a WIM site for the Westbound outside lane at MP 101.8, approximately 6 miles downstream of the end of the last SPS-2 test section (050221). The new scales would be installed approximately 225 feet in advance of the existing piezo array (installed in all four lanes). According to the State, the PCC pavement in which it is proposed to install the WIM scales is 13 inches thick and was installed in 1996. This PCC pavement exhibits, based upon observation, excellent structural soundness and the site meets other WIM site selection criteria. Although the existing PCC pavement is reasonably smooth through the selected scale area, some preparation of the existing PCC pavement surface will be necessary.

The selected WIM site is located on a tangent section of the roadway and the grade is relatively flat (<0.5%). There are no on or off facilities in the vicinity of the selected WIM site and all vehicles track smoothly through this area at speeds between 60 and 70 MPH. The posted speed limits are 70 MPH for autos and 65 MPH for trucks. There is a high volume of truck traffic flow in both the inside and outside lanes of this four lane interstate highway.

Although it will entail boring beneath the Westbound roadway for the in-road sensor leads, it is proposed to install the new WIM controller cabinet adjacent to the inside lane's shoulder behind existing metal beam guard railing. This location provides easy access, safe parking adjacent to the cabinet behind the guard railing, and facilitates relatively easy extensions of existing power and phone services to the cabinet by the State.

Based upon the CLIN 1 Team's site evaluation and discussions with the State, it is recommended that a new WIM system utilizing Bending Plate technology be installed in the Westbound outside lane. However, based upon the Team's on-site observations, it is recommended that the existing PCC pavement be blanket ground from 325 feet upstream to 75 feet downstream of the proposed scale location prior to the installation of the new WIM system. The smoothness of the

existing PCC pavement's profile is questionable and as a result WIM accuracy may or may not be met. Upon completion of corrective actions to improve pavement profile smoothness, a follow-up evaluation of the pavement should be made. Such evaluation should confirm, by visual observation, the PCC pavement's structural stability as well as its smoothness. Upon confirmation that corrective actions have brought the pavement up to acceptable condition in terms of smoothness such that the pavement is adequate for the WIM system to meet accuracy requirements, this site can be instrumented with WIM.

2.0 EXISTING ROADWAY

2.1 PAVEMENT AND GEOMETRICS

The proposed WIM site is located approximately 6 miles downstream from the last SPS-2 test section. The SPS-2 test sections and the proposed new WIM site are in the Westbound outside lane of I-30, which through this area consists of four lanes (two Eastbound and two Westbound).

The Westbound PCC pavement approaching, through, and departing the proposed WIM site was installed in 1996. This pavement is plain jointed with a thickness of 13 inches and perpendicular transverse weakened plane joints on nominal 15 foot centers. These joints are doweled and are well sealed. Both inside and outside lanes are 12 feet wide with an estimated 1.5% cross slope toward the outside shoulder. The outside shoulder is striped at 10 feet wide and the inside shoulder is 4 foot feet wide.

2.2 OBSERVED TRAFFIC OPERATING CHARACTERISTICS

No detrimental traffic flow conditions were evident during the team's site visit. The traffic flow, which contains a high volume of heavy trucks, exhibited good lane discipline, staying well within the lane and shoulder line markings except for an occasional truck hugging the right shoulder stripe with its right wheels. Traffic is free flowing at all times at speeds between 60 and 70 MPH (posted speed limit is 70 MPH for autos and 65 MPH for trucks). Trucks are cruising at light throttle.

There are no interchanges or merging conditions in the WIM site vicinity. In that there are no significant truck route entrance or exit locations through the 6 mile section of roadway between the WIM site and the SPS-2 site, the truck traffic composition at the WIM site is the same as that at the test site. Although there is a major truck stop facility at Exit 106, which is between the test sections and the proposed WIM site, the westbound trucks exiting at this location eventually re-enter the westbound roadway. It was noted that for the entire stretch of I-30 between Little Rock and the selected WIM site a large number of trucks travel in the inside lane as opposed to the typical truck characteristic of occasionally using the inside lane to pass slow moving vehicles.

3.0 SITE CONFORMANCE TO EVALUATION CRITERIA

3.1 PAVEMENT TYPE AND CONDITION- PASS

The existing PCC pavement and shoulders approaching, through, and departing the selected WIM site visually display excellent structural soundness. The transverse weakened plane joints are sealed and in excellent condition. This pavement is structurally adequate for the installation of bending plate scales.

3.2 OBSERVED PAVEMENT SMOOTHNESS- REQUIRES ATTENTION

Based upon the CLIN 1 Team's on-site observations, the adequacy of the profile smoothness of the 400 foot portion of the existing PCC pavement designated as the "WIM Pavement" (325 feet upstream to 75 feet downstream of the selected scale location) is questionable and as a result WIM accuracy may or may not be met. As such, it is recommended that the existing PCC pavement be blanket ground from 325 feet upstream to 75 feet downstream of the new scale location prior to the installation of a new WIM system. Following pavement grinding, a reassessment of both the pavement's structural stability and smoothness should be made.

3.3 ANALYSIS OF PAVEMENT PROFILE DATA- PENDING

An analysis of pavement profiling data has not been performed for the proposed WIM site. Following corrective action to improve the profile smoothness of the "WIM Pavement" section as recommended under Section 3.2 above, a decision can be made as to whether or not obtaining profiling data for analysis is necessary.

3.4 ROADWAY GEOMETRICS- PASS

The WIM site is located within a tangent section of the roadway, grade is minimal, and the lane in which the sensors are to be installed is 12 feet wide. The pavement cross slope is adequate for proper roadway drainage.

3.5 TRAFFIC OPERATING CHARACTERISTICS- PASS

The general traffic pattern is free flowing with good lane discipline. There are no interchanges or signals affecting traffic flow. The truck traffic is cruising through the site and staying within the lane lines.

3.6 TRUCK TRAFFIC COMPARISON BETWEEN WIM AND TEST SITE- PASS

There are no significant exit/entrance locations between the proposed WIM site location and the SPS-2 pavement test sections that would alter the truck traffic composition between the WIM site and the test sites.

3.7 POTENTIAL WIM INTERFERENCE SOURCES- PASS

Service type overhead power lines cross the roadway at the County Road 74 overcrossing over 300 feet downstream from the proposed cabinet location. This line will not affect the operation of the WIM electronics.

3.8 ACCESS TO POWER AND PHONE SERVICES- PASS

The State has already confirmed that the power and phone services for the existing WIM system can be extended to the proposed new WIM's cabinet location.

3.9 EQUIPMENT INSTALLATION CAPABILITY- PASS

There is an excellent location for the new WIM controller cabinet behind the existing metal beam guard rail adjacent to the Westbound inside lane's shoulder. This location affords easy access, good visibility of the sensors and approaching vehicles, and safe parking adjacent to the cabinet behind the guard rail. Although this location will necessitate boring under the Westbound roadway to extend the outside lane's in-road sensor leads to the cabinet, it will greatly simplify the State's providing power and phone services to the cabinet. Roadway and overall site drainage appears to be good and there is adequate topography for scale pit drainage. The 4 foot wide median shoulder will accommodate a lane closure traffic shift.

3.10 POTENTIAL TRAFFIC CONTROL / WORK ZONE SAFETY ISSUES- PASS

The traffic control should go smoothly, given the good approaching sight distance, the lack of nearby interchanges, and the ability to move traffic's left wheels onto the adjacent lane's median shoulder. The high volume of high speed truck traffic at this site will probably require reduced speed limits through the work zone to provide a safe condition for both the motorists as well as the WIM installation crew.

3.11 TRUCK CIRCUIT – PASS

The nearest usable Westbound truck turnaround is Exit 99 (Route 270 East, and Malvern) which is located 2.2 miles downstream of the WIM site.

The nearest useable Eastbound truck turnaround is Exit 106 (Old Military Road) which is located 4.2 miles upstream of the WIM site.

The test truck round trip circuit route is approximately 14 miles and the estimated lap time is 20 minutes. There are no foreseen potential restrictions. Both of these turnaround locations are full interchanges and are easily maneuvered.

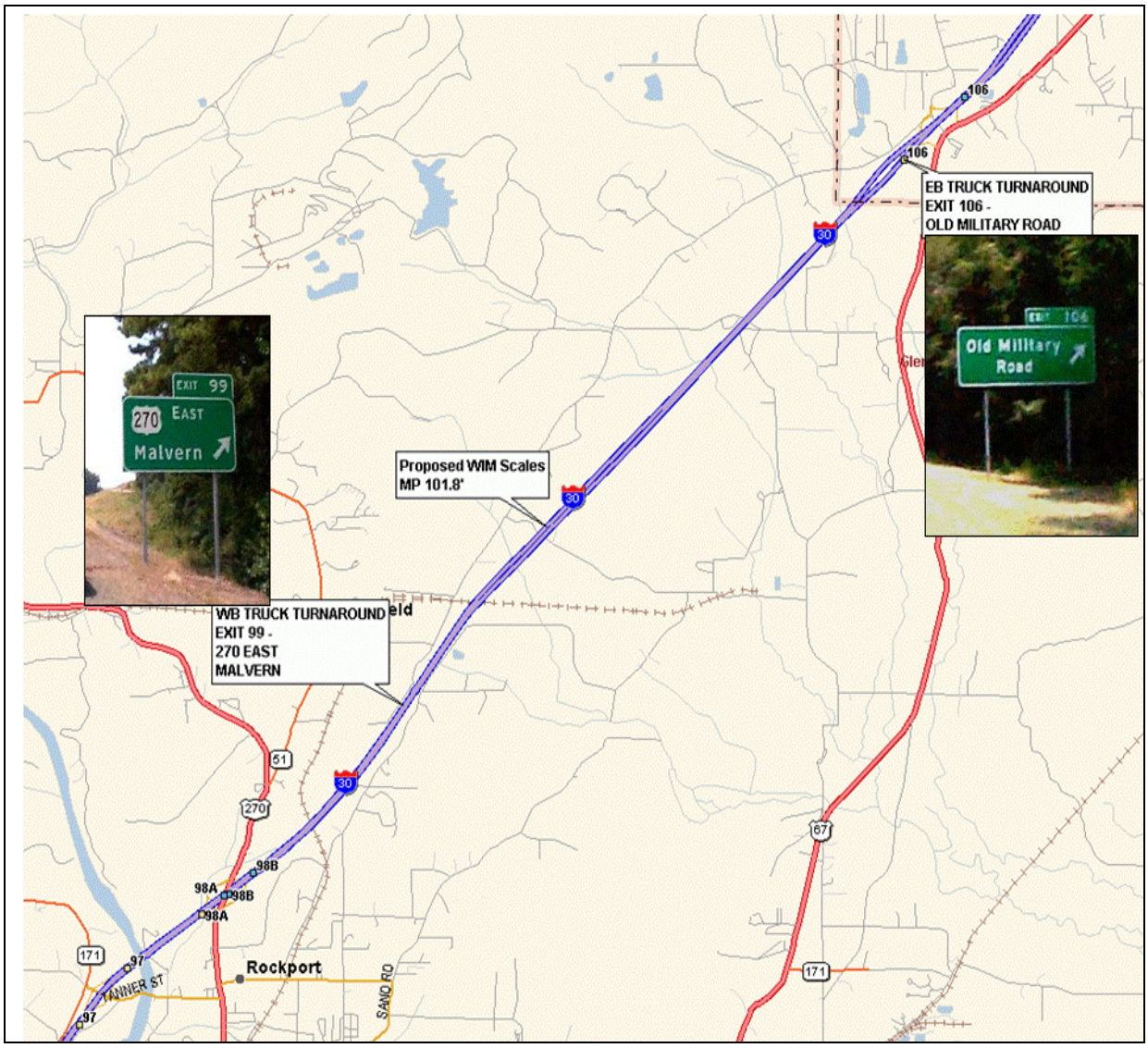


Figure 1: Truck Circuit Map, SPS-2 WIM Site on I-30

3.12 RECOMMENDATIONS ON SITE ACCEPTANCE / CORRECTIVE ACTIONS

The State will need to provide power and phone services to service points within 25 feet of the proposed WIM cabinet location.

The existing PCC pavement through the recommended WIM site appears to be in excellent structural condition and a portion of this pavement can be utilized for the 400 foot “WIM Pavement” in which the system’s bending plates can be installed.

Based upon on-site visual observations, there is indication that the lack of adequate surface smoothness of the existing PCC pavement may cause suspension dynamics in the trucks traversing the site sufficiently large enough to cause inaccurate weight estimate measurements by the WIM system. Due to this, corrective action to the smoothness of the 400 foot “WIM Pavement” portion of the existing PCC slab prior to the installation of the WIM system’s scales should be performed. Such corrective action should be a blanket grinding of the PCC slab from 325 feet in advance of to 75 feet following the new scale location. This recommended pavement corrective action, properly carried out, should satisfy FHWA’s recommendation and preference that the WIM system’s scales be installed in PCC pavement with such pavement being structurally sound and smooth 325 ft. prior to and 75 ft. following the scales.

Upon completion of corrective actions to improve pavement profile smoothness, a follow-up evaluation of the pavement should be made. Such evaluation should confirm, by visual observation, the PCC pavement’s structural stability as well as its smoothness. Upon confirmation that corrective actions have brought the pavement up to acceptable condition in terms of smoothness such that the pavement is adequate for the WIM system to meet accuracy requirements, this site can be instrumented with WIM.

4.0 TRAFFIC DATA REVIEW

Vehicle distributions of all trucks (FHWA Class 4 and higher)
(Not Available)

Vehicle distributions for heavy trucks (FHWA Class 6 and higher)
(Not Available)

Volume of trucks comprising of 10 % or more of truck population
(Not Available)

Volume of trucks comprising 10 % or more of heavy truck population
(Not Available)

The 2005 Traffic Volumes AADT at this location is 30,800

The above noted data has been compiled based upon classification count data provided by the Arkansas State Highway and Transportation Department.

5.0 PAVEMENT EVALUATION

In determining WIM site acceptability, visual on-site observation of the existing PCC pavement approaching, through, and following the selected WIM site location was made by the CLIN 1 Team. Additionally, the SPS-2 Construction Report (November, 1997) was reviewed in preparation for the site assessment.

The State had advised that the section of PCC pavement installed in 1993 between Mile Posts 106.0 and 110.4 for the SPS-2 study (8 to 11 inches in thickness) is not in good structural condition and recommended a section installed in 1996 between Mile Posts 104 to 98 which is between 13 and 15 inches in thickness. It is in this newer section that it is proposed to install the new WIM system's scales.

5.1 SURFACE CONDITION

The site evaluation concentrated efforts on the range of pavement from 900 feet prior to and 100 feet following the proposed WIM scale location. Pictures were taken to document the surface condition, several of which are presented in Appendix E.

5.1.1 PCC PAVEMENT 325 FEET IN ADVANCE OF AND 75 FEET FOLLOWING THE PROPOSED WIM SCALE LOCATION (" WIM PAVEMENT")

This pavement is plain jointed with a thickness of 13 inches (per the State). The perpendicular transverse weakened plane joints are on nominal 15 foot centers, doweled (per the State), well sealed, and in excellent condition with no noticeable spalling. The structural soundness of this pavement, based upon visual observation, is excellent.

5.1.2 PCC PAVEMENT UPSTREAM AND DOWNSTREAM OF "WIM PAVEMENT" SECTION

As exists, there are no discernable differences between the 400 foot "WIM Pavement" section and its approach and departure pavements included in the 1000 foot evaluation section. The start of the existing WIM's piezo sensor array is approximately 225 feet downstream from the proposed new scales location.

5.1.3 SHOULDER CONDITION

This roadway section's outside and inside shoulders are PCC and exhibit the same excellent structural condition as the mainline's pavement.

5.1.4 SURFACE PROFILE

Initially the 400 foot "WIM Pavement" section of this pavement was determined by positioning the scale location opposite the best location for the cabinet and

marking off 325 feet in advance of and 75 feet following this location. However, in observing traffic through this marked "WIM Pavement" section it was apparent that there was a slight "dip" in the pavement profile right at the marked scale location which was inducing body motion in the vehicles. This was confirmed by the CLIN 1 Team's making several auto "drive throughs". The initial scale location was relocated 100 feet upstream such that this pavement long wavelength profile problem would be beyond the "WIM Pavement" section and have no detrimental affect on the WIM's data accuracy.

Observations of trucks and other vehicle types approaching and passing through the selected "WIM Pavement" section displayed only some minor body motion. The aforementioned automobile "drive throughs" by the Team members confirmed the lack of body motion in advance of and through the "WIM Pavement" section but some suspension "chatter" could be felt. Based upon the CLIN 1 Team's observations, the site pavement does exhibit some short wavelength profile problems and its smoothness does not ensure that WIM accuracies meeting SPS performance requirements are achievable. Profile data or further visual evaluation is not required until such time that corrective action is taken to smooth out the 400 foot "WIM Pavement" portion of the existing PCC pavement. This should be performed using a blanket grinder.

5.2 PAVEMENT EVALUATION SUMMARY

Based upon the on-site observations of the CLIN 1 Team, it is recommended that the pavement profile smoothness of the 400 foot "WIM Pavement" portion of the existing PCC pavement be improved by blanket grinding.

Upon completion of corrective actions to improve pavement profile smoothness, a follow-up evaluation of the pavement should be made. Such evaluation should confirm, by visual observation, that the PCC pavement is structural sound and that its smoothness meets requirements for installation of an SPS WIM site.

6.0 PROPOSED WIM SITE- INFORMATION

6.1 LOCATION – I-30, MP 101.8

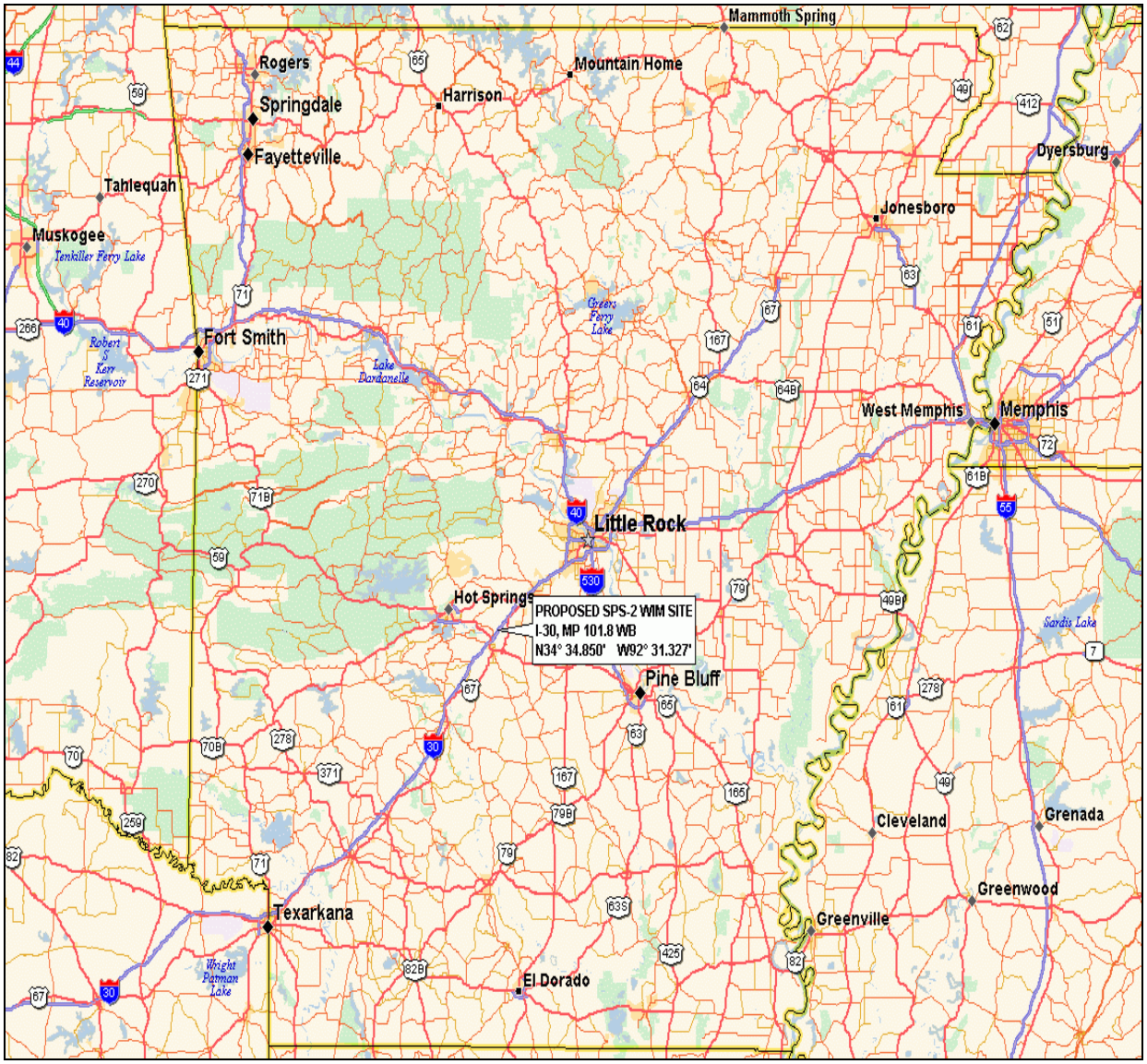


Figure 2: Location of the I-30 SPS-2 WIM Site

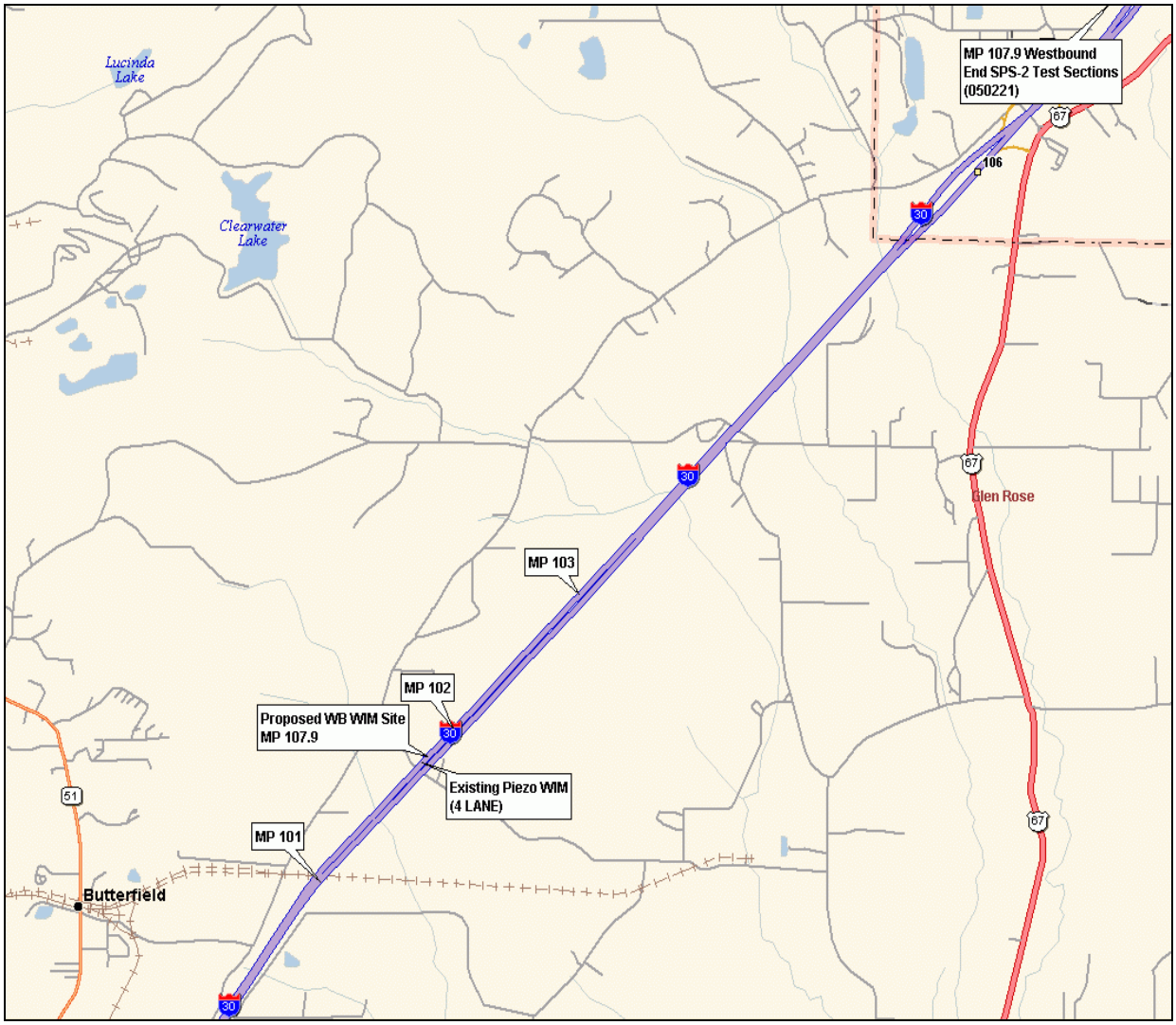


Figure 3: I-30 SPS-2 WIM Site at Milepost 101.8 (Westbound)

The pavement test sections are located in the Westbound outside lane on Interstate 30 between Mile Posts 110.4 and 107.9 approximately 28 miles west of central Little Rock near Benton in Saline County. The location for the proposed WIM site is the Westbound outside lane at Mile Post 101.8 (in Hot Springs County) approximately 6 miles downstream from the last test section. The bending plate scales would be installed approximately 225 feet upstream of the start of the existing WIM's piezo sensor array.

The WIM system's controller cabinet can be located behind the existing metal beam guard rail adjacent to the Westbound inside lane's shoulder approximately 100 feet downstream from the scales location.

7.0 RECOMMENDED WIM TECHNOLOGY

Based upon the site conditions and discussions with the State, the bending plate technology is recommended for use at this site. It will fit the accuracy expectations of the State and provide the best value in terms of performance with minimal down time.

The centerline of the staggered bending plate weigh pads should be installed in the westbound lane approximately 225 feet upstream of the first piezo sensor of the existing westbound lane's WIM system piezo array. This proposed scale location has been marked with a "CL WIM" in white paint on the outside shoulder. During the WIM system installation, the layout of the existing transverse weakened plane joints will be analyzed to best fit the in-road sensors among the joints to optimize constructability and structural stability.

7.1 RECOMMENDED LOCATION AND LAYOUT FOR THE WIM SYSTEM

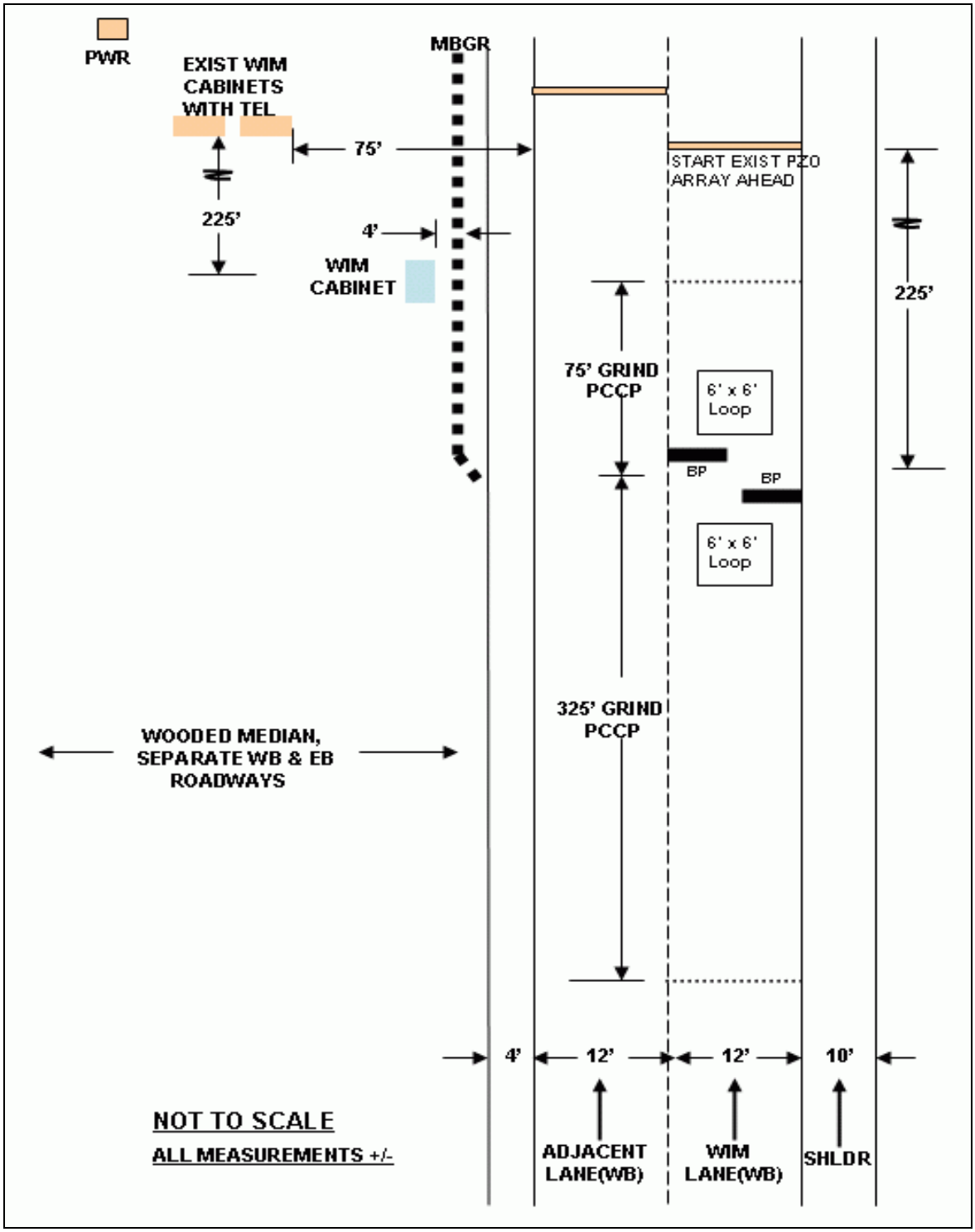


Figure 4: Proposed I-30 SPS-2 WIM Site Layout

GPS Coordinates for Scales: N34° 26.265', W92° 46.855'

A.0 COORDINATION DETAILS

Task Order #15, which authorized the CLIN 2001 "Determine Acceptability of Proposed Site" for the Arkansas SPS-2 Site (LTPP ID 050200), was effective June 26, 2006.

Contacts were made with interested parties as follows:

- Contracting Officer's Technical Representative (COTR)
  - Debbie Walker – FHWA-LTPP ph: 202-493-3068
  - Initial contact made July 6, 2006

- State Highway Agency (SHA)
  - Mark Greenwood – AHTD ph: 501-569-2552
  - Initial contact made July 6, 2006

- LTPP Regional Support Contractor (RSC)
  - Mark Gardner – Fugro Consultants LP ph: 512-977-1800
  - Initial contact made July 6, 2006

- FHWA Division Office
  - Lester Frank – FHWA Div Rep ph: 501-324-6428
  - Initial contact made July 6, 2006

The "Pre-Visit Handout Guide" was distributed on July 14, 2006, to the following individuals:

- Debbie Walker
- Mark Greenwood
- Mark Gardner
- Lester Frank

A briefing session meeting was held at 8:30 AM on July 19th, 2006, at the Arkansas State Highway and Transportation (ASHT) Building, 10324 Interstate 30, Little Rock, AR, 72209.

The site was visited on the same day by Roy Czinku (IRD) and Rich Quinley (WIMTECH). FHWA's COTR, Debbie Walker, was also present during the site assessment.

INTERNATIONAL ROAD DYNAMICS INC.

LTPP SPS PHASE II

WEIGH-IN-MOTION SITE ACCEPTABILITY PRE-VISIT HANDOUT GUIDE

ARKANSAS SPS-2
LTPP ID 050200

Date: July 14, 2006

CONTRACT NO. DTFH61-05-D-00001

U.S. Department of Transportation
Federal Highway Administration

LONG TERM PAVEMENT PERFORMANCE

B.0 PRE-VISIT HANDOUT GUIDE

B.1 SCHEDULE

a. Briefing session
   i. Meeting scheduled for 8:30 AM on July 19th, 2006, at the Arkansas State Highway and Transportation (ASHT) Building, 10324 Interstate 30, Little Rock, AR, 72209.
b. Site visit
   i. July 19th, 2006

B.2 POINTS OF CONTACT, PHONE NO

a. Contracting Officer's Technical Representative (COTR)
   i. Debbie Walker – FHWA-LTPP ph: 202-493-3068
b. State Highway Agency (SHA)
   i. Mark Greenwood – AHTD ph: 501-569-2552
c. LTPP Regional Support Contractor (RSC)
   i. Mark Gardner – Fugro Consultants LP ph: 512-977-1800
d. FHWA Division Office
   i. Lester Frank – FHWA Div Rep ph: 501-324-6428

B.3 INFORMATION REQUESTS

a. From COTR
   i. FHWA Division contact person
   ii. New pavement profile from RSC if recent profile data unavailable
b. From RSC
   i. SHA contact person
   ii. SPS roadway section layouts (plan view and/or stationing or mileposts)
   iii. Recent pavement profile data (within the past year)
c. From SHA
   i. As-built info on roadway at proposed site
   ii. Pavement cross section and structural section
   iii. Alignment and grade
   iv. Any utilities located in WIM install work area
   v. Location and general availability of power and phone services, service providers, service provider contacts and phone numbers (may be beneficial if power and phone utility reps be requested to participate in briefing session and/or site visit)
   vi. Will SHA agree to extend power and phone services from existing available access points to demarcation points near planned controller cabinet location?
   vii. If existing roadway pavement is AC or inadequate PCC will SHA consider replacement with 400' PCC slab if recommended per site assessment?

viii. What permits will be needed to install equipment and what are procedures and time frames for obtainment?
ix. Required cabinet clear zone from edge of traveled way?
x. If no detour routing available at proposed site (or three or more adjacent lanes), will SHA permit shifting inside lane traffic partially onto inside shoulder to provide safe clearance during installation in outside lane?
xi. Historic truck traffic data?

B.4 SITE LOCATION INFORMATION

a. Proposed WIM site—
I-30, vicinity Mile Post 104, WB Outside Lane
b. Briefing session location—
Arkansas State Highway and Transportation (ASHT) Building, 10324 Interstate 30, Little Rock, AR, 72209.
c. Nearest major airports--
1) Little Rock National (LIT), Little Rock, AR. – Approx 50 miles from site
2) Memphis Int'l, Memphis, TN. - Approx 190 miles from site

Distribution --- COTR, RSC, SHA, FHWA Division, Site Assessment Team

INTERNATIONAL ROAD DYNAMICS INC.

LTPP SPS PHASE II

WEIGH-IN-MOTION SITE ACCEPTABILITY

SITE VISIT EVALUATION FORM

ARKANSAS SPS-2
LTPP ID 050200

Date of Site Visit: July 19, 2006

CONTRACT NO. DTFH61-05-D-00001

U.S. Department of Transportation
Federal Highway Administration

LONG TERM Pavement PERFORMANCE

C.0 SITE EVALUATION FORM

C.1 PROPOSED WIM LOCATION

Proposed WIM Site Location – 4 Lane Roadway (2 Lanes each Direction)

Cnty: Hot Springs Rte: I-30 Direction: WB MP: 101.8 Ln: Outside

Proposed WIM Scale location is 6 miles downstream from the end of SPS-2 section 050221 (MP 107.9).

C.1.1 EXISTING ROADWAY SURROUNDING THE PROPOSED WIM SITE

Type Pvmnt: PCC Yr Const: 1996 Ln Width: 12' Thick: 13"
Plain jointed, joints perpendicular 15' oc, dowelled, well sealed, no spalling, exc cond.

Observed Structural Soundness: Excellent

Observed Smoothness: Some minor long and short wavelength

Outside Shldr Type: PCC Width: Striped 10 ' Cond: Excellent

Inside Shldr Type: PCC Width: 4' Cond: Excellent

C.1.2 PAVEMENT 325' PRIOR AND 75' FOLLOWING WIM SCALES

Type Pvmnt: PCC Yr Const: 1996 Ln Width: 12' Thick: 13"
Plain jointed, joints perpendicular 15' oc, dowelled, well sealed, no spalling, exc cond.

Observed Structural Soundness: Excellent

Observed Smoothness: Some minor long and short wavelength

Outside Shldr Type: PCC Width: 8 ' Cond: Excellent

Inside Shldr Type: PCC Width: 4 ' Cond: Excellent

Notes/Comments on Pavement:
A blanket grind of the PCC pavement 325' in advance and 75' trailing the proposed WIM scales location will be required to eliminate short wavelength profile problems.

C.1.3 OTHER ROADWAY GEOMETRICS

Horizontal Align: Tangent Grade: Minimal, <0.5% Cross-slope: est. +/- 1.5%

Striping: WB outside lane long. joints at 14' wide and shldr at 8' wide; 4" solid shldr stripe delineates as 12' lane and 10' shldr.

C.1.4 OBSERVED TRAFFIC OPERATING CHARACTERISTICS

Posted Speed Limit, MPH: Autos _70_ Trucks _65_

Observed Speed Range, MPH: Autos 60 – 70 Trucks _60 -- 70_

Passing, merging, not following lane lines? Good Lane Discipline - occasional passing

Stop and go traffic, congestion periods? Free flowing at all times during assessment

Traffic signals or interchanges affecting traffic flow? None

Other adverse traffic flow conditions? None, but high percentage trucks; also noted that many trucks traveling in inside lane

Truck traffic at "cruising" speed and no lugging? Yes, as observed

Truck traffic staying within lane lines? Yes, but occasional truck hugging shoulder stripe

Observed truck suspension or body motion dynamics? Minor body motion observed

Drive-thru noted suspension or body motion dynamics? Some suspension chatter noted-need blanket grind WIM Pavement. Only minor body motion detected.

Truck traffic composition same at WIM site and SPS site? Yes

Truck traffic on/off locations between WIM site and SPS site? No; major truck stop at Exit 106 but exiting WB trucks eventually re-enter WB.

Notes/Comments on Geometrics and/or Traffic Operating Characteristics:

_____.

C.1.5 ACCESS TO UTILITY SERVICES

Potential source(s) for power: Power service point installed for existing WIM cabinets can be utilized for proposed new WIM cabinet. State will extend service.

Potential source(s) for telephone: Telephone service point installed in existing WIM cabinet has spare pair which State will extend to proposed new WIM cabinet location.

C.1.6 EQUIPMENT INSTALLATION CAPABILITY

Adequate location for controller cabinet? Yes, behind MBGR adjacent WB inside lane's shoulder. Easy access and safe off-shoulder parking. Will require boring under both lanes to extend sensor leads, but facilitates State's providing pwr and phone services.

Distance from edge of traveled way to R/W? NA; separate WB and EB roadways separated by large wooded area.

Distance from edge of traveled way to cabinet? +/-14'; behind MBGR

Visibility from cabinet of sensors and approaching vehicles? Good, but may be occasional impairment of visibility from heavy traffic in inside lane.

Adequate location for service facilities? Yes, adjacent planned cabinet location

Adequate drainage for scale pits? Yes

Adequate roadway and overall site drainage? Yes

Potential for ponding or flooding at cabinet or pullboxes? Minimal

Potential for traffic control problems during installation? Minimal; can use inside lane's shoulder to accommodate traffic shift for outside lane's closure with wide work area. Will probably be necessary to require reduced speed due to heavy truck volumes through site.

Ability to provide safe clearance in work zone from live traffic via:

- ☑ OK from State Agency to use opposite shoulder for traffic shift
- ☐ Multiple Adjacent Lanes

Notes/Comments on Equipment Installation Capability:
Lane closures will have to be well coordinated with the State.

C.1.7 POTENTIAL WIM SENSOR/EQUIPMENT INTERFERENCE SOURCES

Overhead power lines? Service type lines >300' downstream from cabinet location at CR 74 Overcrossing- not a problem.

Adjacent railroad? None

C.1.8 CONDITIONS FOR USE OF TEST TRUCKS FOR CALIBRATION AND EVALUATIONS

Direction WB - Nearest usable truck turnaround location: Exit 99, to Route 270 East and Malvern Distance from WIM Site: 2.2 Mi

Direction EB - Nearest usable truck turnaround location: Exit 106, to Old Military Road Distance from WIM Site: 4.2 Mi

Circuit travel distance: 14 Miles Estimated lap time: 20 Minutes

Potential circuit route restrictions? None foreseen- these are well signed full interchanges which should be easily maneuvered.

C.1.9 LOCATION OF TRUCKING FIRM AND CERTIFIED STATIC SCALES:

Trucks: Firm __McConnell Heavy Hauling_____ Contact ___Gary Hix _____

Address __5500 Hwy 365 South, Little Rock, AR 72206_____

Phone _501-490-1481_____ Hours __8:00 am – 5:00 pm_____

Scales: JJ's Truck Stop_____ Contact _Truck Scale_____

Address _6106 Interstate 30, Benton, AR 72019_____

Phone __501-778-2295____ Fax _____ Hours __7:00 am – 11:00 pm

Cost per initial weighing per truck: $_8.50_

Cost per additional weighings per same truck: $_1.00 each for 3 more_

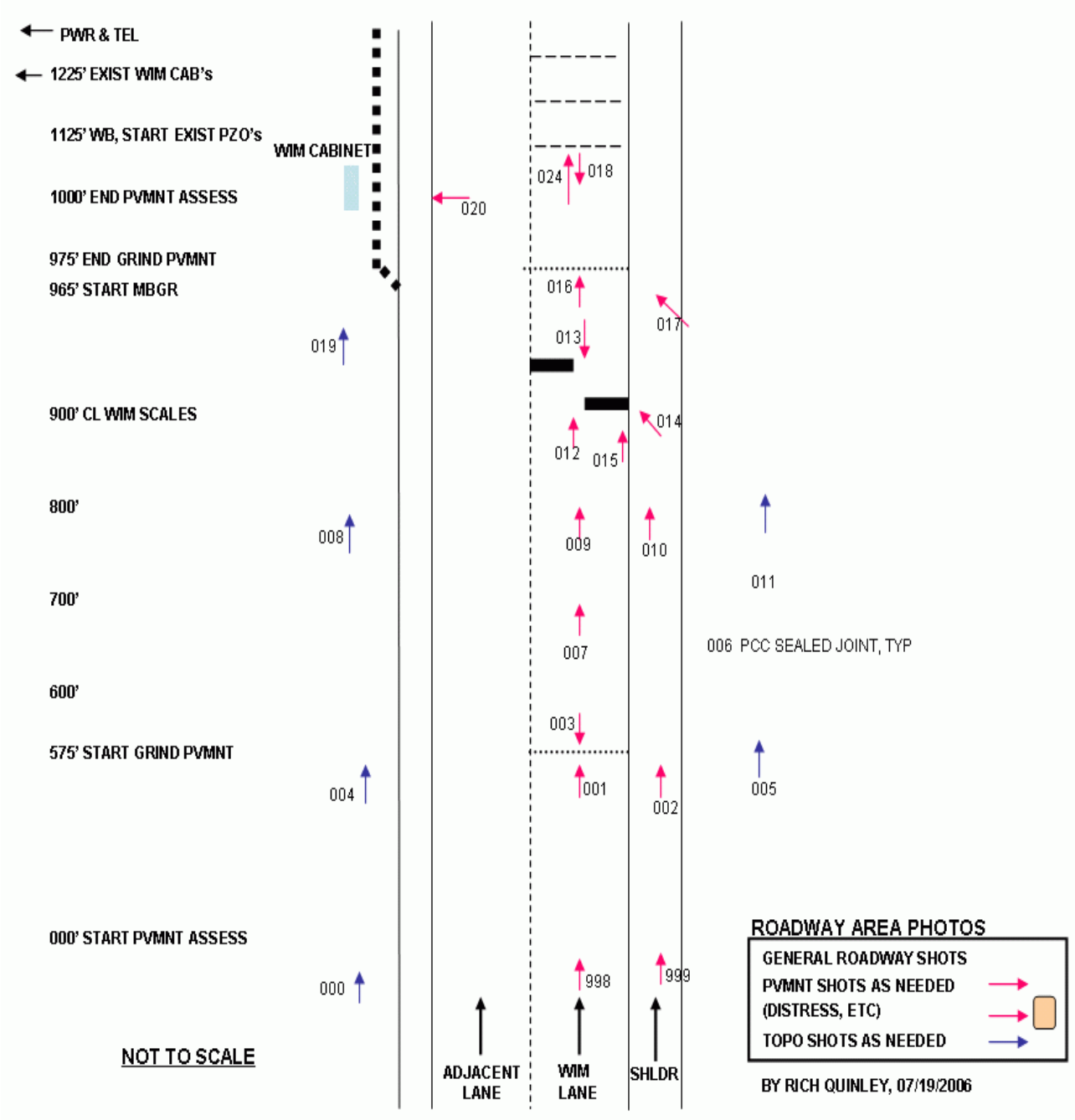
C.1.10 GPS RECORDINGS

ROADWAY LOCATION (WB)		GPS RECORDINGS	
WIM Scales			
New scale location		N34° 26.265’	W92° 46.855’
New cabinet location		N34° 26.248’	W92° 46.863’
Roadway Mile Posts			
MP 108 WB		N34° 30.023’	W92° 42.325’
MP 103 WB		N34° 26.944’	W92° 46.002’
MP 102 WB		N34° 26.382’	W92° 46.715’
MP 106 EB		N34° 28.716’	W92° 43.754’
MP 101 EB		N34° 25.739’	W92° 47.461’
SPS Pavement Test Sections *			
SPS-2 050215	Start	N34° 31.726’	W92° 40.788’
SPS-2 050221	End	N34° 29.963’	W92° 42.381’
Test Truck Turnaround Locations			
WB, Exit 99		N34° 25.077’	W92° 48.103’
EB, Exit 106		N34° 28.716’	W92° 43.754’
Other Locations			
WB PCCP start		N34° 31.745’	W92° 40.773’
Exist first pzo location		N34° 26.239’	W92° 46.887’
Exist WIM cabinet (with TELCO jack)		N34° 26.218’	W92° 46.890’
Power breaker box, approx		N34° 26.210’	W92° 46.895’

* Note: None of the test section numbers displayed in the “Final Report” for SPS-2 Project 0502 (November 1997) matched the test section numbers on either the SHRP signs or pavement markings found at the site. The RSC was contacted by phone and the correct numbering (which did match the signing and pavement markings) was provided.

BY Rich Quinley 07/19/2006

C.2 LOCATION LOG OF PHOTOS



C.3 EQUIPMENT AND MATERIALS

☑ Site Evaluation Forms
☑ Graph paper and note paper
☑ Clipboard
☑ Pens & pencils
☐ Small stapler
☑ Digital camera, with PC cable
☑ GPS receiver
☑ Notebook PC
☑ Calculator
☑ Cell phone
☑ Site Pre-visit Handout Guide
☑ Metal tape measure (25 ft.)
☑ Measuring wheel (ft.) and/or 100 ft. rag tape
☑ Folding rule (6 foot)
☑ Hand level
☑ Small torpedo level
☑ Keel markers
☑ Spray can white paint
☑ String Line
☑ Line Level
☑ Hammer and Concrete Nails
☐ _____

Request furnish on-site by Highway Agency:
☐ Spray can white paint
☐ Lath, 4 ft.
☐ Hammer
☐ Misc. small tools
☐ Keys for known Agency service cabinets
Note: Key for existing cabinet is a standard Type II

Proper attire for field work and expected weather:
☑ Durable shoes
☐ Cold weather layering
☑ Rain gear
☐ _____

Safety equipment per State Highway Agency requirements:
☑ Hard hat
☑ Safety vest – type Hi-Vis Safety Yellow
☑ Steel toe shoes
☐ Other required equipment _____

D.0 SHEET 17

Sheet 17	*STATE_CODE	05
LTPP Traffic Data	*SPS PROJECT ID	050200
WIM SITE INVENTORY	*SPS WIM_ID	SPS-2

1.* ROUTE I-30 MILEPOST 101.8 LTPP DIRECTION - W

2.* WIM SITE DESCRIPTION - Grade <0.5 % Sag vertical N
Nearest SPS-2 section upstream of the site 050221
Distance from sensor to nearest upstream SPS Section 6 miles from end of 050221

3.* LANE CONFIGURATION
Lanes in LTPP direction 2 Lane width 12 ft

Median -
1 – painted
2 – physical barrier
3 – ~~grass~~ wooded
4 – none

Shoulder -
1 – curb and gutter
2 – paved AC
3 – paved PCC
4 – unpaved
5 – none

Shoulder width 10 ft

4.* PAVEMENT TYPE PCC

8. RAMPS OR INTERSECTIONS
Intersection/driveway within 300 m upstream of sensor location N
Intersection/driveway within 300 m downstream of sensor location N
Is shoulder routinely used for turns or passing? N

COMPLETED BY Rich Quinley DATE COMPLETED July 19, 2006

E.0 PHOTOGRAPHS

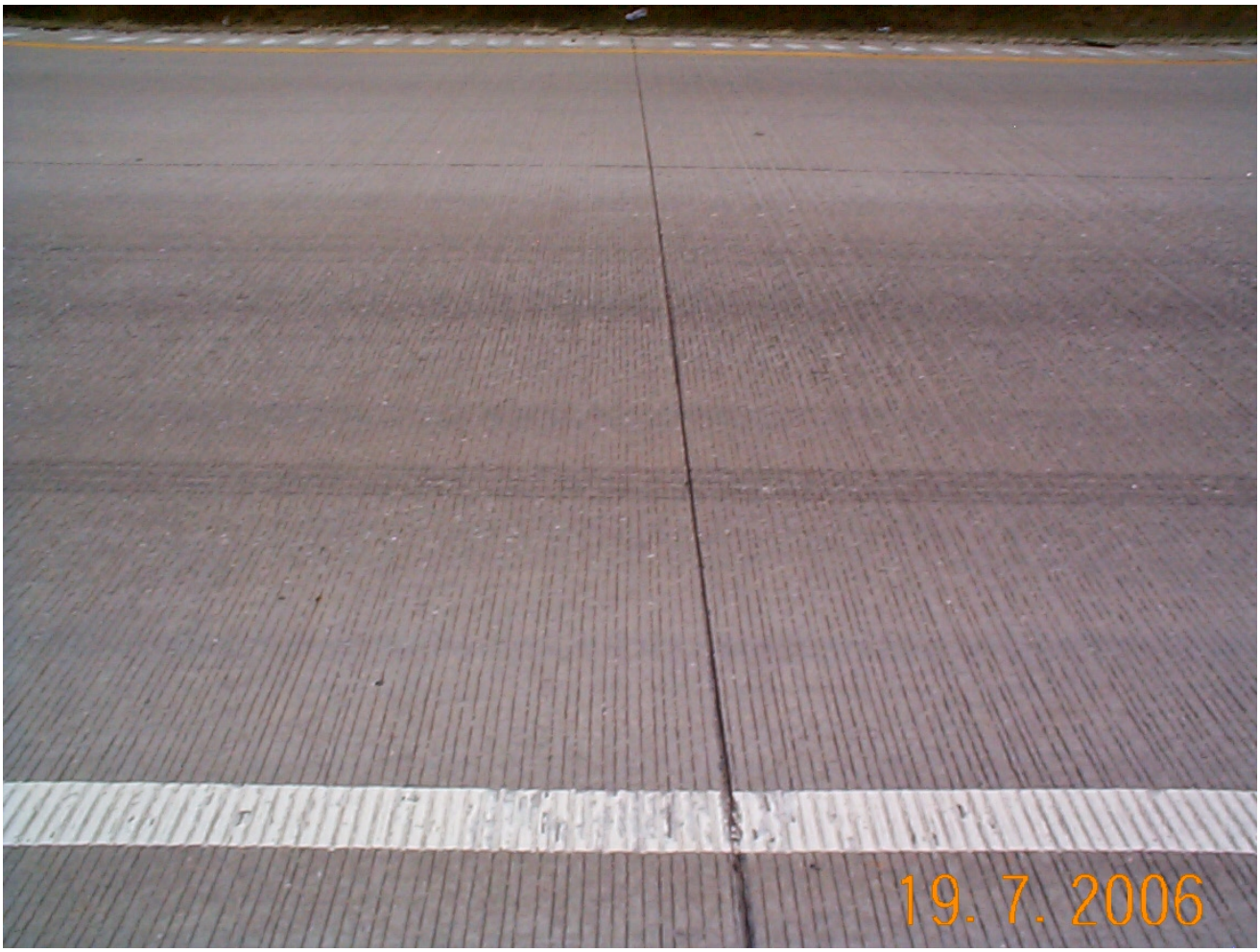
E.1.1 FIRST SPS-2 TEST SECTION'S MARKER 8.6 MILES UPSTREAM FROM WIM SITE

E.1.2 FACING DOWNSTREAM 900 FEET IN ADVANCE OF WIM SCALE LOCATION

E.1.3 FACING DOWNSTREAM AT START OF 400 FOOT WIM PAVEMENT SECTION

E.1.4 FACING UPSTREAM AT START OF 400 FOOT WIM PAVEMENT SECTION

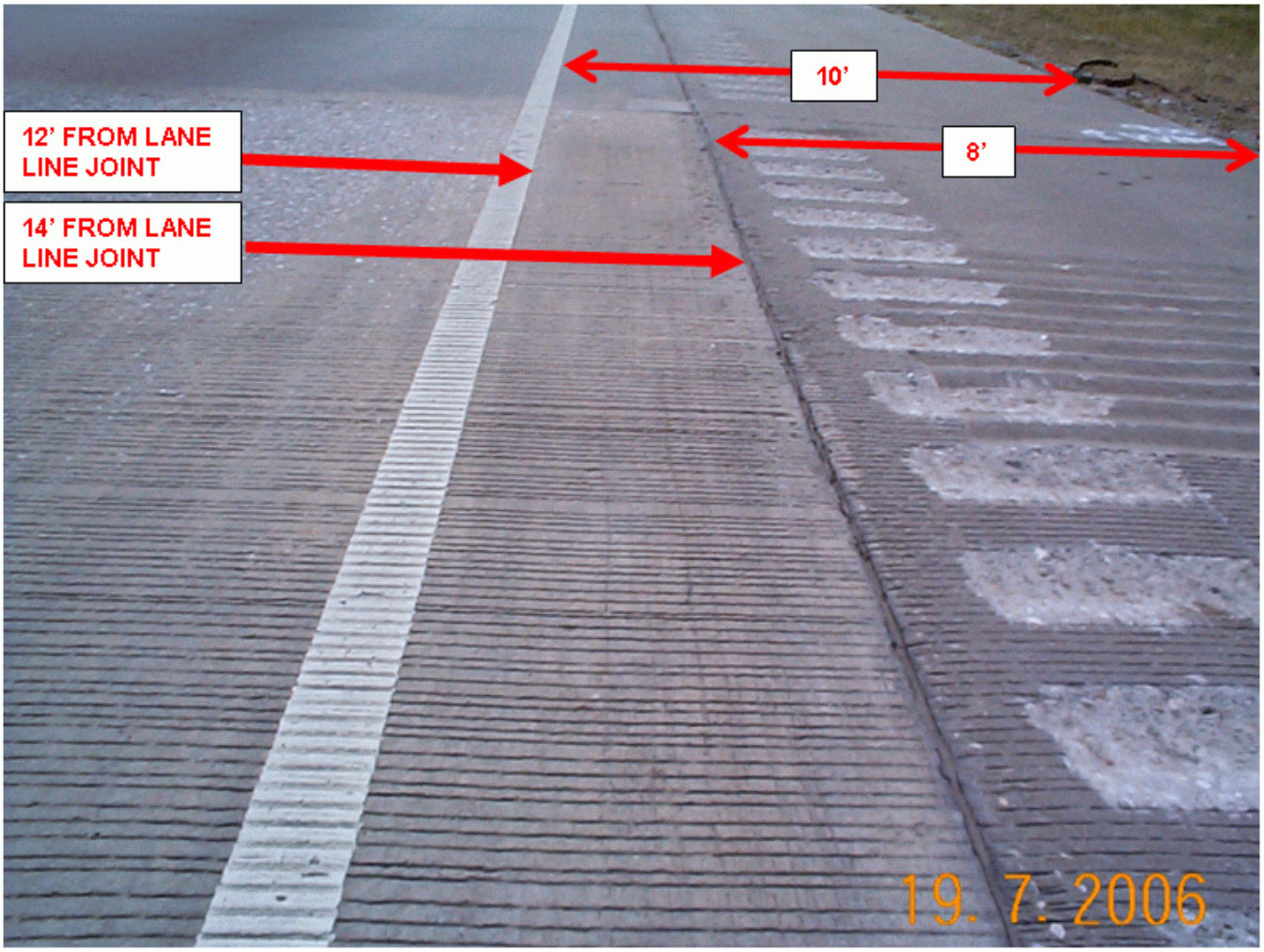
E.1.5 WIM PAVEMENT, SEALED JOINTS (TYPICAL)



E.1.6 WIM PAVEMENT, FACING DOWNSTREAM 100 FEET IN ADVANCE OF SCALES

E.1.7 RECOMMENDED SCALES LOCATION

E.1.8 SHOULDER STRIPING DETAIL AT WIM SCALE LOCATION



E.1.9 FACING UPSTREAM FROM RECOMMENDED SCALES LOCATION

E.1.10 END WIM PAVEMENT SECTION, FACING DOWNSTREAM

E.1.11 RECOMMENDED LOCATION FOR NEW CABINET

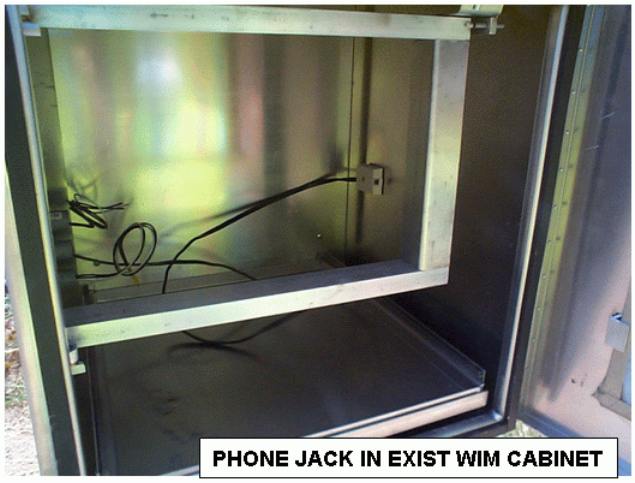
E.1.12 EXISTING WIM SYSTEM

EXISTING WIM CABINETS

EXISTING PIEZO ARRAY, DOWNSTREAM

E.1.13 POWER AND PHONE SOURCES

POWER PANEL UNDER CONSTRUCTION



PHONE JACK IN EXIST WIM CABINET