INTERNATIONAL ROAD DYNAMICS INC.

LTPP SPS PHASE II

WEIGH-IN-MOTION SITE ACCEPTABILITY ASSESSMENT REPORT

ARIZONA SPS-2
LTPP ID 040200
JUNE 28, 2005
CLIN 1001 TASK ORDER 3

CONTRACT NO. DTFH61-05-D-00001

U.S. Department of Transportation
Federal Highway Administration

LONG TERM Pavement PERFORMANCE

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY

The Arizona SPS-2 pavement test site was visited on July 21st, 2005, by the CLIN 1 team. The team performed a search for a suitable Weigh-in-Motion (WIM) site and a site acceptability assessment was performed at the selected location. The selected WIM site is located 38 miles West of Phoenix on I-10 at Mile Post 108.6 between the I-10/SR-85 intersection and Tonopah in Maricopa County. It is proposed to install a WIM system for the Eastbound outside lane in SPS-2 pavement test section 040267 approximately 209 feet downstream of the start of the section. Grinding a portion of the test section's pavement's surface and installing the scales within the test section was verbally approved by the RSC. Based upon our site evaluation and discussions with the State, it is recommended that a new WIM system utilizing Bending Plate technology be installed after corrective action has been taken to address pavement smoothness issues.

The selected WIM site is located within a tangent section of roadway with a relatively flat grade 335 feet downstream of the State's existing WIM system. Vehicles track smoothly through this section at a relatively high speed. Traffic flow is medium on this four lane Interstate. The existing roadway pavement at this location consists of structurally sound 11 inch thick Portland Cement Concrete (PCC). As such, it not necessary that the State replace the existing pavement with a 400 foot PCC slab to accommodate the WIM system's in-pavement sensors.

Power should be available from existing overhead lines crossing the highway 100 feet East of the proposed WIM cabinet location. The nearest available telephone service point that could be located is 3000 feet South of the cabinet location. However, It would appear feasible to utilize the existing power poles in extending a phone service point to the WIM site. The State will need to provide power and phone service points within 25 feet of the proposed new WIM cabinet location.

Based upon the CLIN 1 team's on-site observations and review of the Phase I contractor's analyses of profiler data, the adequacy of the pavement smoothness from 325 feet upstream to 75 feet downstream of the proposed WIM scale location ("WIM Pavement") is currently questionable and, as a result, WIM accuracy may or may not be met. As such, it is recommended that blanket grinding of the existing pavement's surface be performed prior to the installation of the new WIM system. Upon completion of this corrective action, a follow-up evaluation of the pavement smoothness should be made. Such evaluation should include visual observation of trucks passing through the site as well as an analysis of new pavement profile data by our team. Upon confirmation that the pavement smoothness 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 SPS-2 is a rigid pavement study. A 2.8 mile length of PCC pavement was constructed (1993) in the Eastbound lanes for the study. Otherwise, both Eastbound and Westbound pavements of I-10 in the general vicinity are asphalt concrete (AC). The existing roadway pavement as well as the outside and inside (median) shoulders approaching, through, and departing the proposed WIM site are PCC. The two Eastbound lanes are each 12 feet wide with a 10 foot wide outside shoulder and a 4 foot wide inside (median) shoulder. The roadway's PCC pavement thickness at the selected WIM site is 11 inches, however the SPS test section pavement thicknesses vary from 8 to 12 inches. The grade is relatively flat (< 0.5%). Existing IRD bending plates (out of service) are currently located between the end of the 040266 test section and the start of the 040267 section. These plates were one of several considerations in determining the location of the proposed 400 foot "WIM Pavement" section in that proper blanket pavement grinding could not be performed across these plates. In regard to cross slope, the two adjacent lanes slope +/- 1.5% toward the outside shoulder.

It is noted that at the selected WIM site location, conditions are favorable for installing WIM weighing sensors in the Westbound lanes, subject to installing blanket ground PCC WIM slabs, should the State desire at some time to instrument all four lanes with equipment capable of meeting ASTM E-1318 Type I data accuracies.

2.2 OBSERVED TRAFFIC OPERATING CHARACTERISTICS

The medium traffic flow exhibited good lane discipline, staying within the lane and shoulder line markings. A number of the heavy vehicles were observed "hugging" the inside of the shoulder stripe. Traffic is free flowing at all times at speeds between 70 and 80 MPH (posted speed limit is a maximum 75 MPH for all traffic). There are no signals or merging in the WIM site vicinity. Trucks are "cruising" through the site at constant speeds. In that there are no on/off locations between the WIM site and SPS site, the truck traffic composition at the WIM site is the same as that at the SPS site.

3.0 SITE CONFORMANCE TO EVALUATION CRITERIA

3.1 PAVEMENT TYPE AND CONDITION- PASS

The PCC approach, WIM, and departure pavements are in very good condition.

3.2 OBSERVED PAVEMENT SMOOTHNESS- REQUIRES ATTENTION

Although the PCC approach, WIM, and departure pavements are in very good condition and would visually appear to be smooth, the smoothness of the 400 foot WIM pavement needs to be improved to facilitate the new WIM system's meeting accuracy requirements. The existing pavement, from 325 feet in advance of to 75 feet following the proposed WIM scale location, should be blanket ground. Following pavement grinding, a reassessment of the pavement should be made.

3.3 ANALYSIS OF PAVEMENT PROFILE DATA- REQUIRES ATTENTION

Profile data was collected by the RSC on 2/12/2004 at the existing WIM site and a profile data analysis was performed by the Phase I contractor (Phase 1 Contractor Assessment Report 3/15/2004). The Phase I contractor concluded that this pavement does not meet the smoothness requirements for an SPS WIM site. Corrective action will be required to smooth out the existing pavement. It is recommended that the 400 foot WIM pavement be ground with a blanket grinder prior to installation of the scales. This will meet FHWA's recommendation and preference that the WIM system scales be installed in PCC pavement with such pavement being structurally sound and smooth 325 feet prior to and 75 feet following the WIM scales.

3.4 ROADWAY GEOMETRICS- PASS

The selected WIM site is located within a long 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 exit/entrance locations between the WIM site and the SPS-2 pavement test sections.

3.7 POTENTIAL WIM INTERFERENCE SOURCES- PASS

Overhead power lines cross the roadway 100 feet away from the proposed WIM system location. These are the standard “service” lines and will not interfere with system performance.

3.8 ACCESS TO POWER AND PHONE SERVICES- NEEDS ATTENTION

Power lines cross the roadway 100 feet South of the cabinet location and appear to be readily accessible for a service drop. The nearest potentially accessible phone service that could be found is located 3000 feet South of the WIM site on Yuma Road. It would appear that it may be feasible to utilize existing power poles to extend the service to the WIM site. The State will need to explore available options for extending existing phone services. It will be necessary that the State provide both power and phone service points within 25 feet of the proposed WIM cabinet location.

3.9 EQUIPMENT INSTALLATION CAPABILITY- PASS

There is an adequate location for the WIM controller cabinet opposite the scale location between the roadway and the right-of-way fence. The cabinet should be installed at 30 foot clearance from the edge of traveled way to utilize the higher ground, minimizing the chance of ponding water. Visibility from the cabinet location of the sensors and approaching vehicles is adequate, although somewhat obscured by brush. There is adequate room adjacent to the cabinet location for service facilities. Roadway and overall site drainage is very good. There is only minimal potential for ponding or flooding at the recommended cabinet and pullbox locations. There is adequate topography for scale pit drainage. The width and structural stability of the adjacent lane and median shoulder allow a lane closure and traffic shift which will provide safe clearance in the work zone from live traffic during installation of the WIM system.

3.10 POTENTIAL TRAFFIC CONTROL / WORK ZONE SAFETY ISSUES- PASS

The traffic control should go smoothly, given the good approach sight distance, the lack of nearby intersections or interchanges, and the ability to move traffic’s left wheels onto the adjacent lane’s median shoulder. No other work zone safety issues are foreseen at this rural site.

3.11 TRUCK CIRCUIT- PASS

The nearest usable EB truck turnaround is I-10 Exit 109 (Sun Valley Parkway and S. Palo Verde Rd.), which is located 0.8 miles downstream of the WIM site.

The nearest useable WB truck turnaround is I-10 Exit 103 (339th Ave.), which is located 4.8 miles upstream of the WIM site.

The test truck round trip circuit route is 11.2 miles. There are no foreseen potential restrictions and the turnaround locations are easily accessed and maneuvered. The estimated lap time is 15 minutes or less.

Figure 1: Truck Circuit Map

3.12 RECOMMENDATIONS ON SITE ACCEPTANCE / CORRECTIVE ACTIONS

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

In addition, based upon both on-site visual observations and an analysis of the pavement profiling data, there is indication that the lack of adequate pavement smoothness may cause suspension dynamics in the trucks traversing the site sufficiently large enough to cause inaccurate WIM weight estimate measurements. Due to this, corrective action is necessary to the pavement smoothness prior to the installation of the WIM system to ensure that the system will meet the specified accuracy requirements. Such corrective action should be a blanket grinding of the

existing PCC pavement from 325 feet upstream to 75 feet downstream of the proposed WIM scale location.

This recommended pavement smoothness corrective action, properly carried out, will 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.

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)

After discussions with the State, it has been determined that current traffic data containing the above mentioned information is not available.

5.0 PAVEMENT EVALUATION

In determining WIM site acceptability, visual on-site observation of the existing PCC pavement was made by the CLIN 1 Team. Additionally, the analysis of the then current profile data performed by the Phase I contractor (Phase 1 Contractor Assessment Report 3/15/2004) was reviewed.

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 PROPOSED WIM SCALE LOCATION ("WIM PAVEMENT")

The PCC pavement was constructed in 1993. The structural condition of the PCC pavement and shoulder throughout the 400 foot section appear to be excellent. This existing pavement has dowelled perpendicular transverse weakened plane joints with a spacing pattern of 15–13–15-17 feet. These joints are sealed and in excellent condition. The pavement at the selected scale location is over 11 inches thick according to LTPP records.

5.1.2 PCC PAVEMENT UPSTREAM AND DOWNSTREAM OF WIM PAVEMENT

There are no discernable differences between the 400 foot "WIM Pavement" section and the "WIM Pavement" approach and departure pavements included in the 1000 foot evaluation section. The entire 1000 foot section was constructed in 1993. No distress conditions of any consequence could be observed. These pavements are in excellent condition and the joints are well maintained.

5.1.3 SHOULDER CONDITION

The roadway shoulders are PCC throughout the study area and were constructed in 1993 in conjunction with the traveled way pavement. No distress conditions of any consequence could be observed in the shoulder pavement. This pavement is in excellent condition and the joints are well maintained.

5.2 SURFACE PROFILE

Although the pavement surface appears to be quite smooth, experience indicates that it must be blanket ground to ensure that the system can be properly calibrated and that accurate WIM estimates of static loads can be made. This is supported by the findings of the Phase I contractor based upon analysis of the profile data.

Observations of trucks and other vehicle types approaching and passing through the selected scale location area indicated only minimal body motion, indicating that there are no existing significant "long wavelength" profile problems which might be difficult to correct with blanket grinding of the pavement. Proper blanket grinding should minimize detrimental suspension dynamics effected by any existing "short wavelength" profile problems.

Several automobile "drive throughs" by the CLIN 1 team members appeared to confirm the above noted observations. Only minimal vehicle body motion could be felt, but there was some minor suspension "chatter".

The most recent Profile data was collected by the RSC on 2/04/2004. Based upon the profile evaluation performed by the Phase I contractor, (Assessment Report 3/152004), the Arizona SPS-2 WIM site pavement smoothness does not ensure that WIM accuracies meeting SPS accuracies are achievable. More current profile data or evaluation is not required until such time that corrective action is taken to smooth out the existing pavement. This should be performed by means of blanket grinding.

5.3 PAVEMENT EVALUATION SUMMARY

Based upon our on-site observations and the Phase 1 evaluation of the pavement profile data, it is recommended that corrective action to the smoothness of the pavement surface be performed prior to the installation of the WIM system.

Upon completion of this corrective action, new profiling data will need to be collected. At this time the site will need to be re-evaluated and the new profiling data be provided to our team to confirm the pavement smoothness has been remedied and is now adequate for the installation of the WIM system. Once this is performed and deemed acceptable, this site can be instrumented WIM.

6.0 PROPOSED WIM SITE- INFORMATION

6.1 LOCATION – I-10 MP 108.6

Figure 2: Map of the I-10 WIM Site

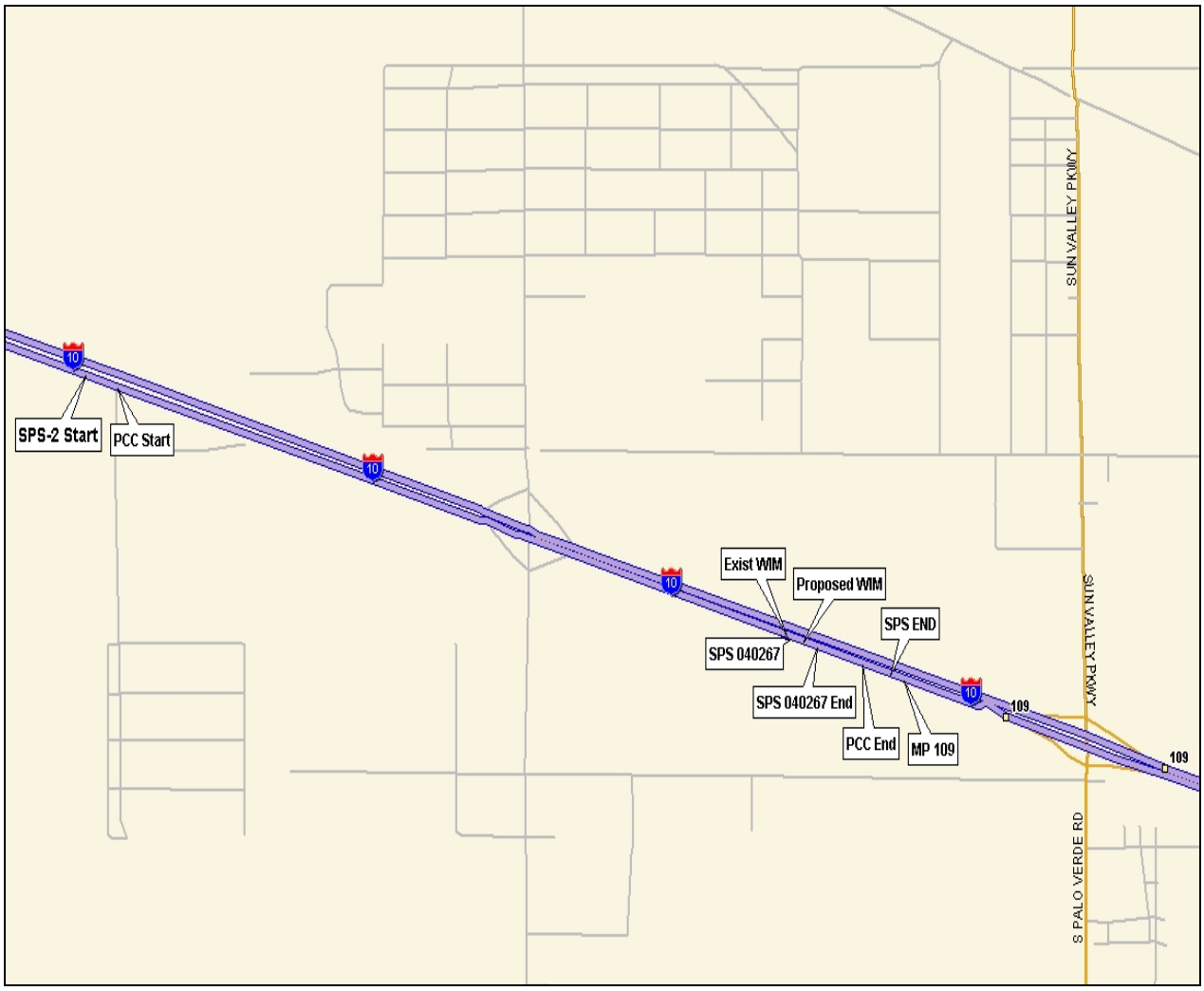


Figure 3: Map of the I-10 WIM Site at Milepost 108.6

The LTPP SPS-2 test sections are located approximately 38 miles West of central Phoenix in the Eastbound outside lane of Interstate 10 between exits 103 and 109, just East of Tonopah.

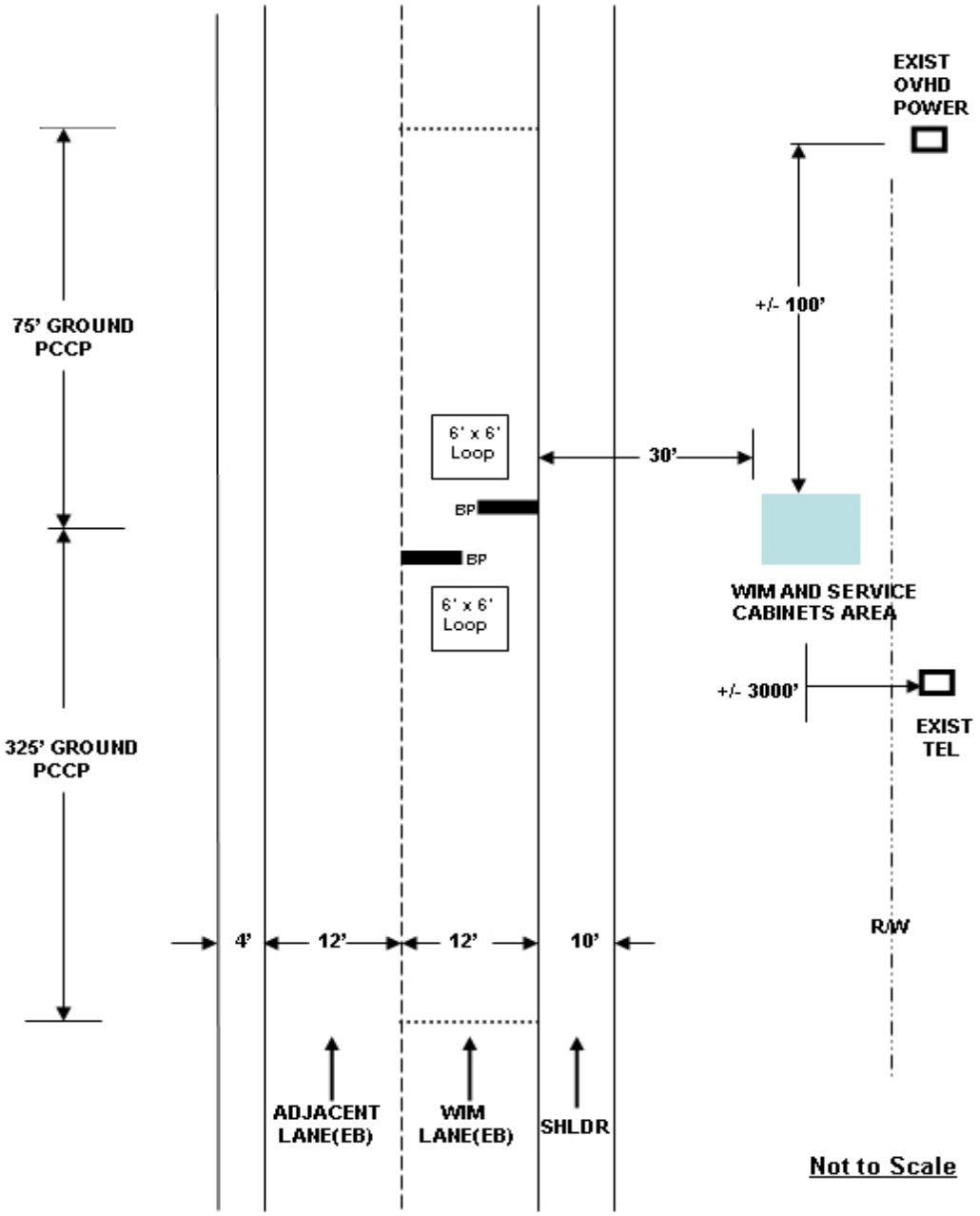
The location for the proposed WIM site is the Eastbound outside lane at milepost 108.6 which is 335 feet East of the existing WIM scales. The proposed WIM controller cabinet will be located opposite the scales at 30 feet from the edge of traveled way.

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 meet the accuracy expectations of the State and provide the best value in terms of performance with minimal down time.

The centerline of the Bending Plate weigh pads should be installed approximately 335 feet following the existing WIM scales. This location has been marked with a "WIM" in white paint on the outside shoulder. During the CLIN 2 design stage, 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



Proposed WIM Scales Location

N33° 26.58', W112° 41.71

Figure 4: Proposed WIM Site Layout

A.0 COORDINATION DETAILS

Task Order #3, which authorized the CLIN 1001 "Determine Acceptability of Proposed Site" for the Arizona SPS-5 Site (LTPP ID 040500), was issued on May 27, 2005.

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 5, 2005

- State Highway Agency (SHA)
  - Estomih (Tom) Kombe – ADOT ph: 602-712-3135
  - Initial contact made July 5, 2005

- LTPP Regional Support Contractor (RSC)
  - Jason Puccinelli – RSC/Nichols ph: 775-329-4955
  - Initial contact made July 5, 2005

- FHWA Division Office
  - Alan Hansen – FHWA Div Rep ph: 602-379-3645 x108
  - Initial contact made July 5, 2005

The "Pre-Visit Handout Guide" was distributed on July 5, 2005, to the following individuals:

- Debbie Walker
- Estomih (Tom) Kombe
- Jason Puccinelli
- Alan Hansen

A briefing session was held on July 19, 2005, at 1:30 PM at the Arizona Transportation Research Center, 2739 East Washington Street, Phoenix, Arizona. Roy Czinku (IRD) and Estomih (Tom) Kombe (ADOT) were in attendance.

The site was visited on July 21st, 2005, by Roy Czinku (IRD) and Rich Quinley (WIMTECH). Roy Czinku.

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INTERNATIONAL ROAD DYNAMICS INC.

LTPP SPS PHASE II

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

ARIZONA SPS-2
LTPP ID 040200

Date: July 19, 2005

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 is scheduled for 1:30 p.m. July 19, 2005 at the Arizona Transportation Research Center, 2739 East Washington Street, Phoenix, Arizona
b. Site visit
   i. July 21, 2005

B.2 BRIEFING SESSION JULY 19, 2005, 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. Estomih (Tom) Kombe – SHA/ADOT ph: 602-712-3135
c. LTPP Regional Support Contractor (RSC)
   i. Jason Puccinelli – RSC/Nichols ph: 775-329-4955
d. FHWA Division Office
   i. Alan Hansen – FHWA Div Rep ph: 602-379-3645 x108

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
      1. Pavement cross section and structural section
      2. Alignment and grade
      3. Any utilities located in WIM install work area
   ii. 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)
   iii. Will SHA agree to extend power and phone services from existing available access points to demarcation points near planned controller cabinet location?
   iv. If existing roadway pavement is AC or inadequate PCC will SHA consider replacement with 400' PCC slab if recommended per site assessment?

v. What permits will be needed to install equipment and what are procedures and time frames for obtainment?
vi. Required cabinet clear zone from edge of traveled way?
vii. 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?
viii. Historic truck traffic data?

B.4 SITE LOCATION INFORMATION

a. Existing WIM site
   i. I-10 Mile Post 108.55 EB Outside Lane
b. Briefing session location
   i. Arizona Transportation Research Center, 2739 East Washington Street, Phoenix, Arizona 1:30 p.m. July 19, 2005
c. Nearest major airport
   i. Phoenix Sky Harbor International Airport, Phoenix, AZ

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

KANSAS SPS-2
LTPP ID 040200

Date of Site Visit: July 21, 2005

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)

Route: I-10 Mile Post: 108.6 Direction: EB Lane: Outside

Proposed WIM Site is located within the SPS Test Section 040267 approximately 209 feet downstream of the start of SPS Test Section 040267. The Site is located in Maricopa County.

C.1.1 EXISTING ROADWAY SURROUNDING THE PROPOSED WIM SITE

Type Pavement: PCC

Pavement Age: 12 years old

Lane Width: 12 feet

Thickness: 11 inches

Observed Structural Soundness: Excellent

Observed Smoothness: Fair

Outside EB Shoulder Type: PCC

Width: 10 feet

Outside EB Shoulder Condition: Excellent

Inside EB Shoulder Type: PCC

Width: 4 feet

Inside EB Shoulder Condition: Excellent

C.1.2 PAVEMENT 325' PRIOR AND 75' FOLLOWING WIM SCALE LOCATION

Type: PCC Structural Soundness: Excellent Smoothness: Fair

Thickness: 11 inches Jointed or Continuous: Jointed

Notes/Comments on Pavement:
Transverse joints are perpendicular to the roadway and vary between 13 thru 17 feet (17-15-13-15-17-15-13 etc.). The SPS-2 PCC Test Section is located within an AC roadway on I-10 Eastbound. The entire length of this PCCP is 2.8 miles. The existing PCC Pavement will accommodate WIM, although blanket grinding will be required. Westbound Lanes are AC and reasonably smooth and can be instrumented with WIM if desired by the State (400 foot PCC slab would need to be installed and blanket ground).

C.1.3 ROADWAY GEOMETRICS

Horizontal Alignment: Tangent Grade: Minimal (Less than 0.5 %)

Cross-slope: Both lanes slope to Outside shoulder 1.5% Lane width: 12 feet

C.1.4 OBSERVED TRAFFIC OPERATING CHARACTERISTICS

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

Stop and go traffic, congestion periods? Free Flowing at all Times

Traffic signals/interchanges affecting traffic? No Signals or Merging

Other adverse traffic flow conditions? Traffic Flow is Medium

Truck traffic at "cruising" speed (no lugging)? No Lugging, Smooth Flow

Truck traffic staying within lane lines? Yes

Observed truck suspension or body motion dynamics? Some, blanket grinding is required.

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

Truck traffic on/off locations between WIM site and SPS site? None

Posted speed limit: 75 MPH

Observed truck speeds: 70 – 80 MPH

Notes/Comments on Geometrics and/or Traffic Operating Characteristics:
Vehicles track smoothly through this area at speeds between 70 and 80 MPH (posted speed is 75 MPH for all traffic). There is very good lane discipline at this site. Traffic flow is medium on this four lane, two direction Interstate. It should be noted that heavy trucks tend to hug the outside shoulder strip. Trucks and other vehicles approaching and departing proposed WIM location do exhibit minor body motion and suspension chatter. Drive though over the site location confirms this. Blanket grinding is required

C.1.5 ACCESS TO UTILITY SERVICES

Potential source(s) for power: Overhead power lines are visible 100 feet from the proposed WIM site location.

Potential source(s) for telephone: Closest observed telephone service is located on Yuma Road approximately 3000 feet South of the proposed WIM location. It may be possible to share the poles used for the overhead power lines that are existing and run right beside this telephone service.

C.1.6 EQUIPMENT INSTALLATION CAPABILITY

Adequate location for controller cabinet? Yes, large area between roadway and right of way fence

Distance from edge of traveled way to cabinet? 30 feet, please ensure cabinet is not installed on the low ground beyond this location.

Visibility from cabinet of sensors and approaching vehicles? Fair, somewhat obscured by shrubs

Adequate location for service facilities? Yes, adjacent cabinet or right-of-way fence

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

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:
The roadway traffic flow is medium. We will have to work closely with the State to coordinate lane closures. There is 4 feet available on inside lane shoulder to accommodate a traffic shift.

C.1.7 POTENTIAL WIM SENSOR/EQUIPMENT INTERFERENCE SOURCES

Overhead power lines? 100 feet east of proposed WIM location, not a problem
Adjacent railroad? No railroad tracks near the proposed WIM location

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

Direction WB - Nearest usable truck turnaround location:

Exit 103, I-10 Distance from WIM: 4.8 Miles

Direction EB - Nearest usable truck turnaround location:

Exit 109, I-10 Distance from WIM: 0.8 Miles

Circuit travel distance: 11.2 Miles Estimated lap time: 15 Minutes

Potential circuit route restrictions? None

Identification and location of trucking firm and certified static scales:

Name Lowe's Country Store Contact Kevin Kobel

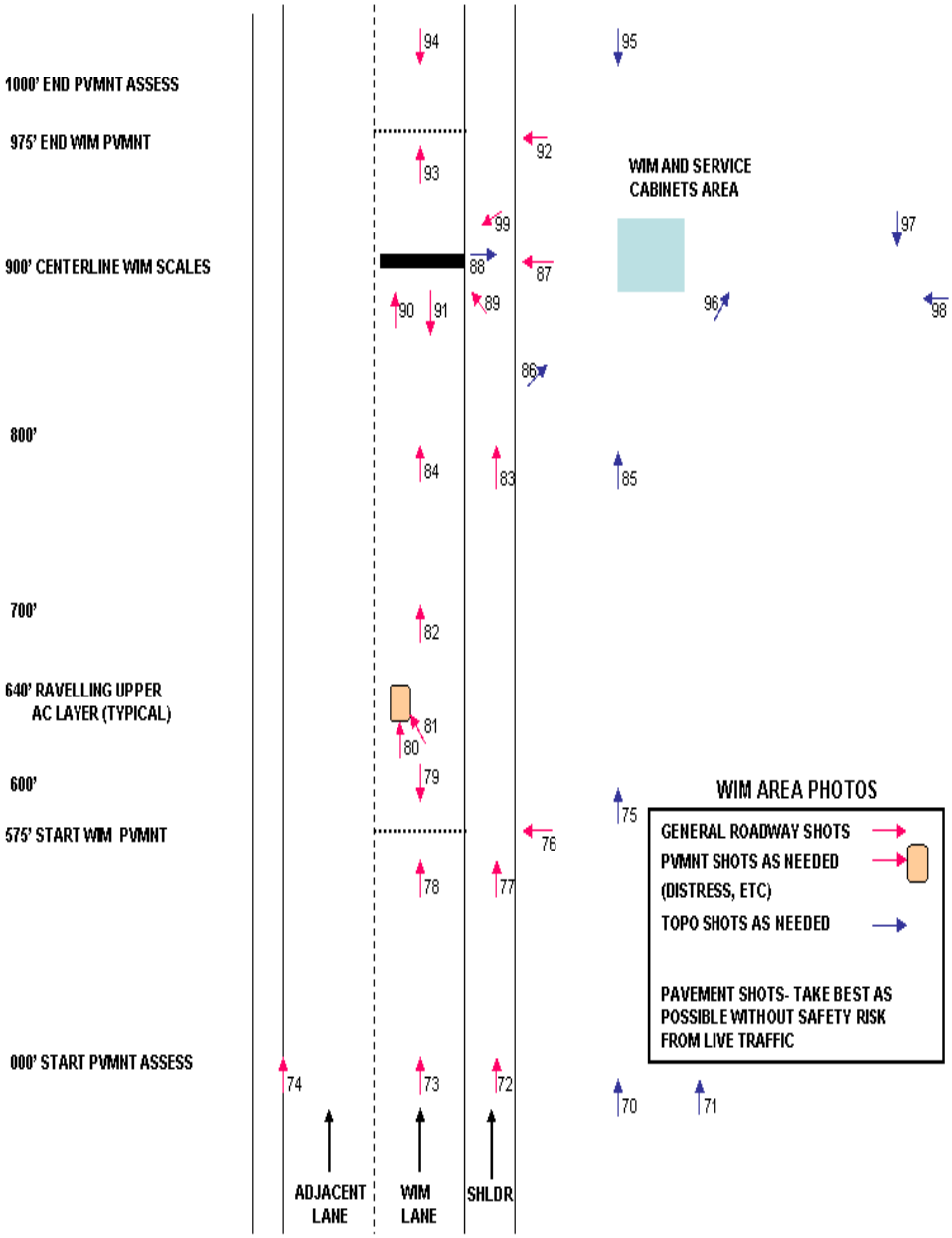
Address I-10 Exit 114, Buckeye, Arizona 85326

Phone 623-386-6926 Hours 24 hour

Notes/Comments on Test Truck Circuit and Static Weighing Facility

Lowe's County Store is located approximately 6 miles from the Proposed WIM Site. They can recommend hauling companies that have 3S2 Tractor Trailer Air Ride vehicles and drivers available given 2-3 weeks notice. They have a certified static scale located at their facility.

C.1.9 LOCATION LOG OF PHOTOS



C.2 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	LTPP
LTPP Traffic Data	*SPS PROJECT ID	040200
WIM SITE INVENTORY	*SPS WIM ID	SPS-2

1.* ROUTE I-10 MILEPOST 108.6 LTPP DIRECTION - N S E W

2.* WIM SITE DESCRIPTION - Grade < 0.5 % Sag vertical Y / N

Nearest SPS section upstream of the site 040267

Distance from sensor to nearest upstream SPS Section Within Test Section

3.* LANE CONFIGURATION

Lanes in LTPP direction 2 Lanes EB Lane width 12 ft

Median -
1 – painted
2 – physical barrier
→ 3 – grass
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 Pavement

8. RAMPS OR INTERSECTIONS

Intersection/driveway within 300 m upstream of sensor location Y / N - distance No

Intersection/driveway within 300 m downstream of sensor location Y / N- distance No

Is shoulder routinely used for turns or passing? Y / N No

Form completed by: Roy Czinku - IRD Date: June 21, 2005

E.0 PHOTOGRAPHS

E.1.1 GENERAL SITE VIEW OF THE ROADWAY APPROACHING WIM SITE

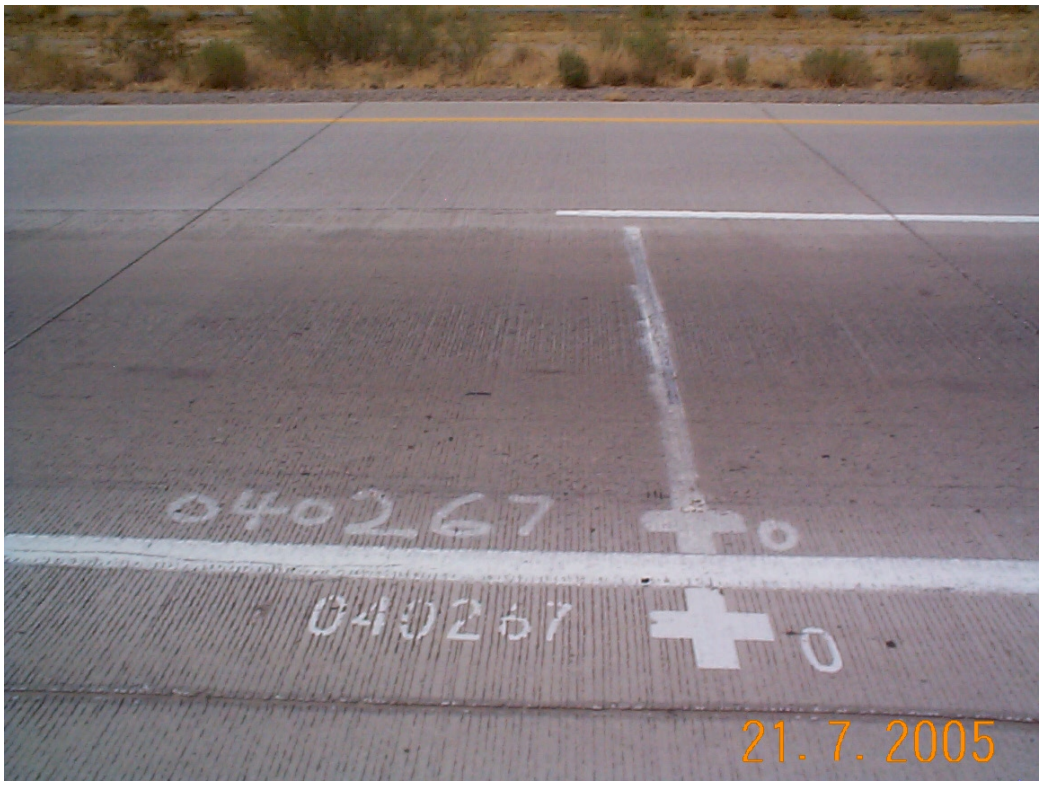
E.1.2 EXISTING BENDING PLATES IIN ADVANCE OF WIM PAVEMENT SECTION

E.1.3 DOWNSTREAM VIEW OF ROADWAY AT START OF WIM PAVEMENT SECTION

E.1.4 UPSTREAM VIEW OF ROADWAY APPROACHING WIM PAVEMENT SECTION

E.1.5 PAVEMENT JOINT DETAIL

E.1.6 START OF 040267 TEST SECTION



E.1.7 RECOMMENDED SCALE LOCATION

E.1.8 END OF WIM PAVEMENT SECTION, FACING UPSTREAM

E.1.9 RECOMMENDED CABINET LOCATION OPPOSITE SCALES

E.1.10 EXISTING OVERHEAD POWER LINES AT WIM SITE (FACING TEL SERVICE POINT)

E.1.11 EXISTING TELEPHONE SERVICE ON YUMA ROAD (FACING WIM SITE)

E.1.12 EXISTING WIM CABINET AND WEATHER STATION