

**ORIGINAL** NEW APPLICATION



0000149894

**ADOT**

Intermodal Transportation

RECEIVED

Janice K. Brewer, Governor  
John S. Halikowski, Director  
Jennifer Toth, State Engineer

Robert Samour, Senior Deputy State Engineer, Operations  
Dallas Hammit, Senior Deputy State Engineer, Development

December 11, 2013

2013 DEC 13 A 10 31

Arizona Corporation Commission  
Office of Railroad Safety  
Attn: Chris Watson  
1200 W Washington Street  
Phoenix, AZ 85007

AZ CORP COMMISSION  
DOCKET CONTROL

RR-03639A-13-0440

RE: Application to upgrade existing railroad signals and surface  
Project: University Drive in Tempe, Arizona  
Federal Project #STP-000-6(171)A  
ADOT TRACS # 0940 MA TMP SR191 01C  
University Drive Crossing AAR/DOT # 741-560C

Mr. Watson,

Please find enclosed the original and 13 copies of the application to allow UPRR to furnish and install 4 gate and flasher units on the University Drive/UPRR highway-rail crossing and constant warning circuitry. Also enclosed is a copy of the addendum and agreement between ADOT and the UPRR Railroad, and excerpt from City of Tempe final plans (Gannett-Fleming Project 5405361, Sheets 5 & 6). I have also included pictures of both road approaches to this crossing for reference.

Feel free to contact me if you have any questions.

Sincerely,

Jason Pike  
Railroad and Utility Coordinator  
Arizona Department of Transportation  
205 S. 17th Ave, Room 357 MD 618E  
Phoenix, AZ 85007  
Phone: 602-712-7149 jpike@azdot.gov

Arizona Corporation Commission  
**DOCKETED**

DEC 13 2013

DOCKETED BY



Intermodal Transportation

Janice K. Brewer, Governor

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December 11, 2013

Arizona Corporation Commission  
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1200 W Washington Street  
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RE: Application to upgrade existing railroad signals and surface  
Project: University Drive in Tempe, Arizona  
Federal Project #STP-000-6(171)A  
ADOT TRACS # 0940 MA TMP SR191 01C  
University Drive Crossing AAR/DOT # 741-560C

Mr. Watson,

This application is being submitted to allow the Union Pacific Railroad (UPRR) to furnish and install 4 gate and flasher units on University Dr. and constant warning circuitry.

**1. Project Location and Description**

The project is located at the crossing of UPRR on University Dr. in Tempe, Arizona. This crossing consists of one mainline with daily usage and one siding for UPRR. University is an at-grade roadway and is used for 2 way traffic, consisting of 2 thru eastbound lanes, 1 two way left turn lane, and 2 thru westbound lanes.

The project consists of installing two gate and flasher units on the outside edge of University, installing two new gate and flasher units within new raised medians along University, and installing constant warning. The City of Tempe will also construct civil improvements including adjusting sidewalks, installing raised medians, re-striping, and improving the road approaches on University, these civil improvements will help facilitate the necessary railroad safety improvements at the crossing.

**2. Why the crossing is needed**

Based on the 2002 crossing improvement array, the University crossing was selected for upgrades by installing lights and gates on the outside edges of the roadway and within proposed raised medians and constant warning.

**3. Construction Phasing**

Once the utility, environmental, and right-of-way clearances are obtained, ADOT can apply for and receive FHWA construction authorization and authorize UPRR to order their signal materials and authorize the City of Tempe to construct their civil improvements. Once an Opinion and Order is issued and the City of Tempe constructs the civil improvements on University, UPRR will install the signal equipment. The railroad signal improvements will be installed by UPRR within 12-15 months of the receipt of an Opinion and Order from the ACC.

**4. Maintenance of the crossing**

UPRR will be responsible for installing and maintaining the railroad signal and surface equipment. The City of Tempe will be responsible for maintaining the road approaches outside of UPRR responsibility, sidewalks and medians.

**5. Project Funding**

100% of the funding will be provided thru the Federal Highway Administration thru their Section 130/highway-railroad crossing safety improvement program.

Costs are as follows:

Preliminary and Construction Engineering	\$47,000.00
UPRR Furnish and Install Flashers and Gates and Constant Warning	\$550,000.00
City of Tempe Construction of Civil Improvements	<u>\$125,000.00</u>
Total Cost	\$722,000.00

**6. Other information (based on typical Staff Data Requests):**

1. Provide Average Daily Traffic Counts for each of the locations.  
Per City of Tempe:  
University Drive-2010 Traffic Count = 26,921 vehicles per day
2. Please describe the current Level of Service (LOS) at each intersection.  
The City of Tempe stated that University Dr. has a current Level of Service of B.
3. Provide any traffic studies done by the road authorities for each area.  
The City of Tempe stated that no traffic studies have been completed recently for University Dr. or the area around this crossing.
4. Provide the population of the City the crossing is located in.  
2010 census: 161,719 persons.

5. Provide what warning devices are currently installed at the crossing.  
Currently there are flashing lights and gates on the outside edges of the roadway for both eastbound and westbound traffic. These lights do not cover all of the lanes currently at the crossing.
6. Provide distances in miles to the next public crossing on either side of the proposed project location. Are any of these grade separations?  
5<sup>th</sup> Street ( 741 561J) is an at-grade crossing 0.30 miles to the North. Broadway Rd (741 565L) is an at-grade crossing 1.0 miles to the south. Mill Ave ( 741 584R) is a grade separated crossing 0.2 miles east and 0.8 miles south of the University crossing. There are three at-grade crossings in between and through the residential area to the south (741 562R, 741 563X, 741 564E).
7. How and why was grade separation not decided on at this time? Please provide any studies that were done to support these answers.  
Grade separation was not considered as part of this Section 130 safety upgrade due to the proximity of the crossing to the Arizona State University campus and Mill Avenue a major street in Tempe and the overall high cost to complete a grade separation at this location.
8. If this crossing was grade separated, provide a cost estimate of the project.  
Estimate \$30,000,000++ due to urbanized location.
9. Please describe what the surrounding areas are zoned for near this intersection. i.e. Are there going to be new housing developments, industrial parks etc.  
The areas adjacent to the University Drive railroad crossing are zoned as Mixed Used (MU-4), City Center (CC), Commercial Shopping & Services (CSS) and General Industrial District (GID).
10. Please supply the following: number of daily train movements through the crossing, speed of the trains, and the type of movements being made (i.e. thru freight or switching). Is this a passenger train route?  
Per FRA website, there are a total of 8 train movements over the crossing including 2 switching movements and 4 daytime thru movements. The trains move over the crossing at speeds between 5 mph and 20 mph, with a maximum time table speed of 20mph.  
  
This is not a passenger train route.

11. Please provide the names and locations of all schools (elementary, junior high and high school) within the area of the crossing.

- Tempe Elementary School            1115 W. 5th St., Tempe
- Phoenix Metro Islamic School       125 E. 6th St. , Tempe
- Gilliland Middle School            1025 S. Beck Ave., Tempe
- School of Rock (Mill Ave.)        411 S. Mill Ave., Tempe
- ASU (Arizona State University)    1111 S. Union Dr., Tempe

12. Please provide school bus route information concerning the crossing, including the number of times a day a school bus crosses this crossing.

Per Tempe Union High School District and Tempe Elementary School District, school buses do not utilize this crossing.

13. Please provide information about any hospitals in the area and whether the crossing is used extensively by emergency service vehicles.

- Tempe St. Luke's Hospital – 1500 South Mill Avenue, Tempe  
University Dr. is a major emergency service route for the hospital.

14. Please provide total cost of the railroad improvements to each crossing.

Cost described above.

15. Provide any information as to whether vehicles carrying hazardous materials utilize this crossing and the number of times a day they might cross it.

The City of Tempe stated that the City is not aware of any vehicles carrying hazardous materials that utilize this crossing.

16. Please provide the posted vehicular speed limit for the roadway.

University Drive  
35 MPH (East of RR Tracks) and  
40 MPH (West of RR Tracks)

17. Do any buses (other than school buses) utilize the crossing, and how many times a day do they cross the crossing. Bus traffic varies depending on sporting events.

The City of Tempe stated that Valley Metro Bus Route 30 crosses the tracks a total of 80 times a day (includes EB and WB).

18. Please indicate whether any spur lines have been removed within the last three years inside a 10 mile radius of any crossings covered in this application. Please include the reason for the removal, date of the removal and whether an at-grade crossing or crossings were removed in order to remove the spur line.

None

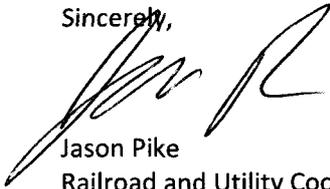
19. Please fill in the attached FHWA Grade Separation Guidelines Table, (from FHWA's 2007 revised second edition Railroad Highway Grade-Crossing Handbook, page 151) with a yes or no answer as to whether each item applies. Also, please provide all information to support your answers of yes or no (i.e. vehicle delay numbers, any calculations that were performed to get the answers).

20. Based on the current single track configuration at the crossings specified by this application, please provide the current traffic blocking delay per train. Please indicate the time in which vehicular traffic is delayed (1) to allow the train to pass at a crossing and (2) due to trains stopped on the track for any purpose. The delay is measured from the point that the warning devices are activated at the crossing to the time after the train has cleared the crossing and the warning devices are reset.

The City of Tempe stated that the delay at the crossing is really a function of the average length of the train and the average speed that is traveling.

FOR EXAMPLE: 7,000 ft. train traveling 30mph (44 fps) would result in 160 seconds or a little over 3.5 minutes of delay.

Sincerely,

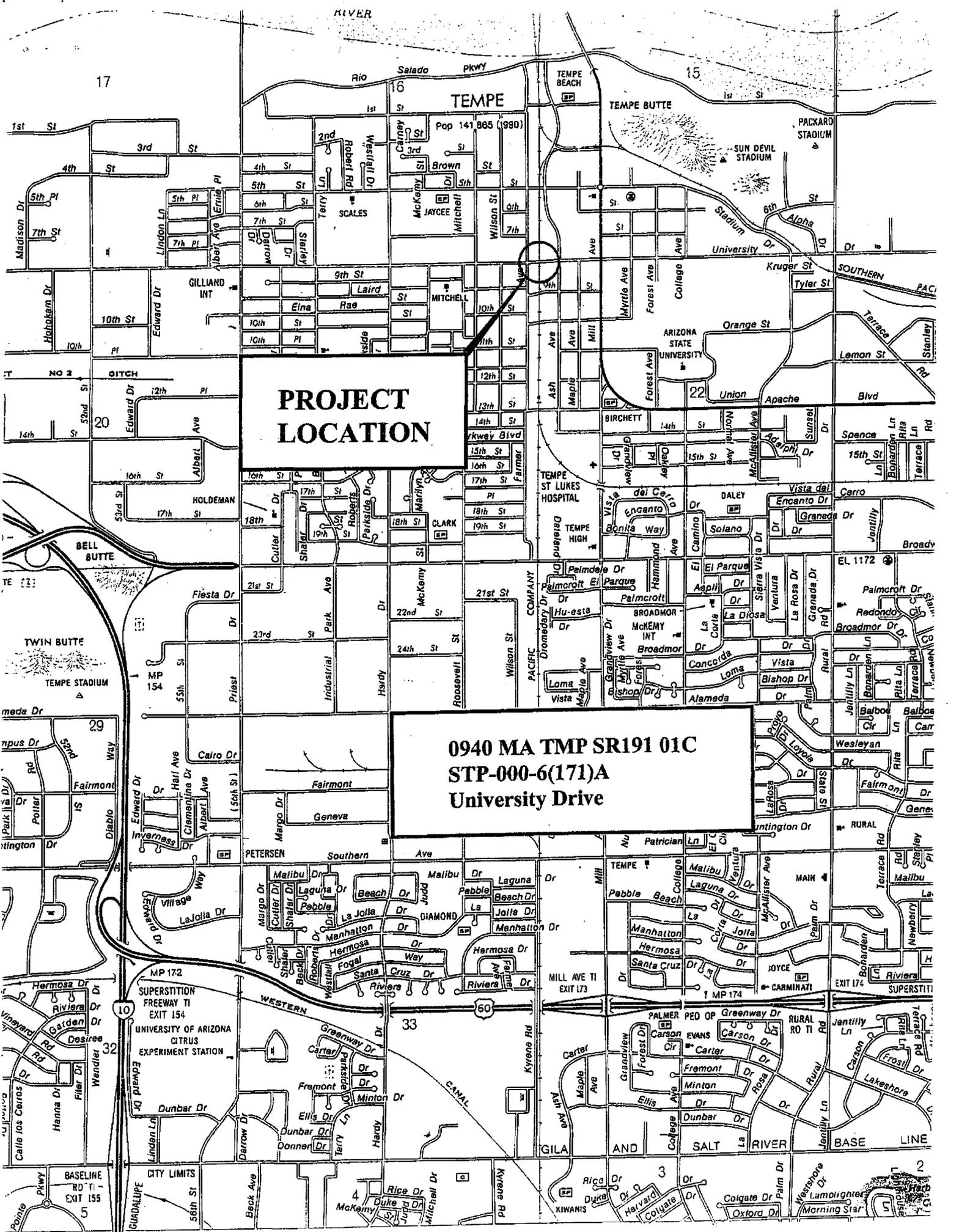


Jason Pike  
Railroad and Utility Coordinator  
Arizona Department of Transportation  
205 S. 17th Ave, Room 357 MD 618E  
Phoenix, AZ 85007  
Phone: 602-712-7149  
jpik@azdot.gov

**FHWA - GRADE SEPARATION GUIDELINES**

Highway-rail grade crossings should be considered for grade separation or otherwise eliminated across the railroad right of way whenever one or more of the following conditions exist:

		University Dr		
The highway is a part of the designated Interstate Highway System	Crossing Currently meets the criteria	N		
	Crossing meets the criteria by 2030	N		
The highway is otherwise designed to have full controlled access	Crossing Currently meets the criteria	N		
	Crossing meets the criteria by 2030	N		
The posted highway speed equals or exceeds 70 mph	Crossing Currently meets the criteria	N		
	Crossing meets the criteria by 2030	N		
AADT exceeds 100,000 in urban areas or 50,000 in rural areas	Crossing Currently meets the criteria	N		
	Crossing meets the criteria by 2030	N		
Maximum authorized train speed exceeds 110 mph	Crossing Currently meets the criteria	N		
	Crossing meets the criteria by 2030	N		
An average of 150 or more trains per day or 300 million gross tons/year	Crossing Currently meets the criteria	N		
	Crossing meets the criteria by 2030	N		
Crossing exposure (trains/day x AADT) exceeds 1M in urban or 250k in rural; or passenger train crossing exposure exceeds 800k in urban or 200k in rural	Crossing Currently meets the criteria	N		
	Crossing meets the criteria by 2030	N		
Expected accident frequency for active devices with gates, as calculated by the US DOT Accident Prediction Formula including five-year accident history, exceeds 0.5	Crossing Currently meets the criteria	N		
	Crossing meets the criteria by 2030	N		
Vehicle delay exceeds 40 vehicle hours per day	Crossing Currently meets the criteria	N		
	Crossing meets the criteria by 2030	N		



**PROJECT  
LOCATION**

**0940 MA TMP SR191 01C  
STP-000-6(171)A  
University Drive**

17

15

TEMPE

TEMPE BUTTE

RIVER

Rio Salado Pkwy

TEMPE BEACH

1st St, 2nd St, 3rd St, 4th St, 5th St, 6th St, 7th St, 8th St, 9th St, 10th St, 11th St, 12th St, 13th St, 14th St, 15th St, 16th St, 17th St, 18th St, 19th St, 20th St, 21st St, 22nd St, 23rd St, 24th St, 25th St, 26th St, 27th St, 28th St, 29th St, 30th St, 31st St, 32nd St, 33rd St, 34th St, 35th St, 36th St, 37th St, 38th St, 39th St, 40th St, 41st St, 42nd St, 43rd St, 44th St, 45th St, 46th St, 47th St, 48th St, 49th St, 50th St, 51st St, 52nd St, 53rd St, 54th St, 55th St, 56th St, 57th St, 58th St, 59th St, 60th St, 61st St, 62nd St, 63rd St, 64th St, 65th St, 66th St, 67th St, 68th St, 69th St, 70th St, 71st St, 72nd St, 73rd St, 74th St, 75th St, 76th St, 77th St, 78th St, 79th St, 80th St, 81st St, 82nd St, 83rd St, 84th St, 85th St, 86th St, 87th St, 88th St, 89th St, 90th St, 91st St, 92nd St, 93rd St, 94th St, 95th St, 96th St, 97th St, 98th St, 99th St, 100th St

BELL BUTTE

TWIN BUTTE

MP 154

MP 172

MP 174

MP 174

MP 174

MP 174

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MP 174

SUPERSTITION  
FREEWAY TI  
EXIT 154

UNIVERSITY OF ARIZONA  
CITRUS  
EXPERIMENT STATION

BASELINE  
RD TI  
EXIT 155

WESTERN

GREENWAY DR

CITY LIMITS

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CAMAL

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MILL AVE TI  
EXIT 173

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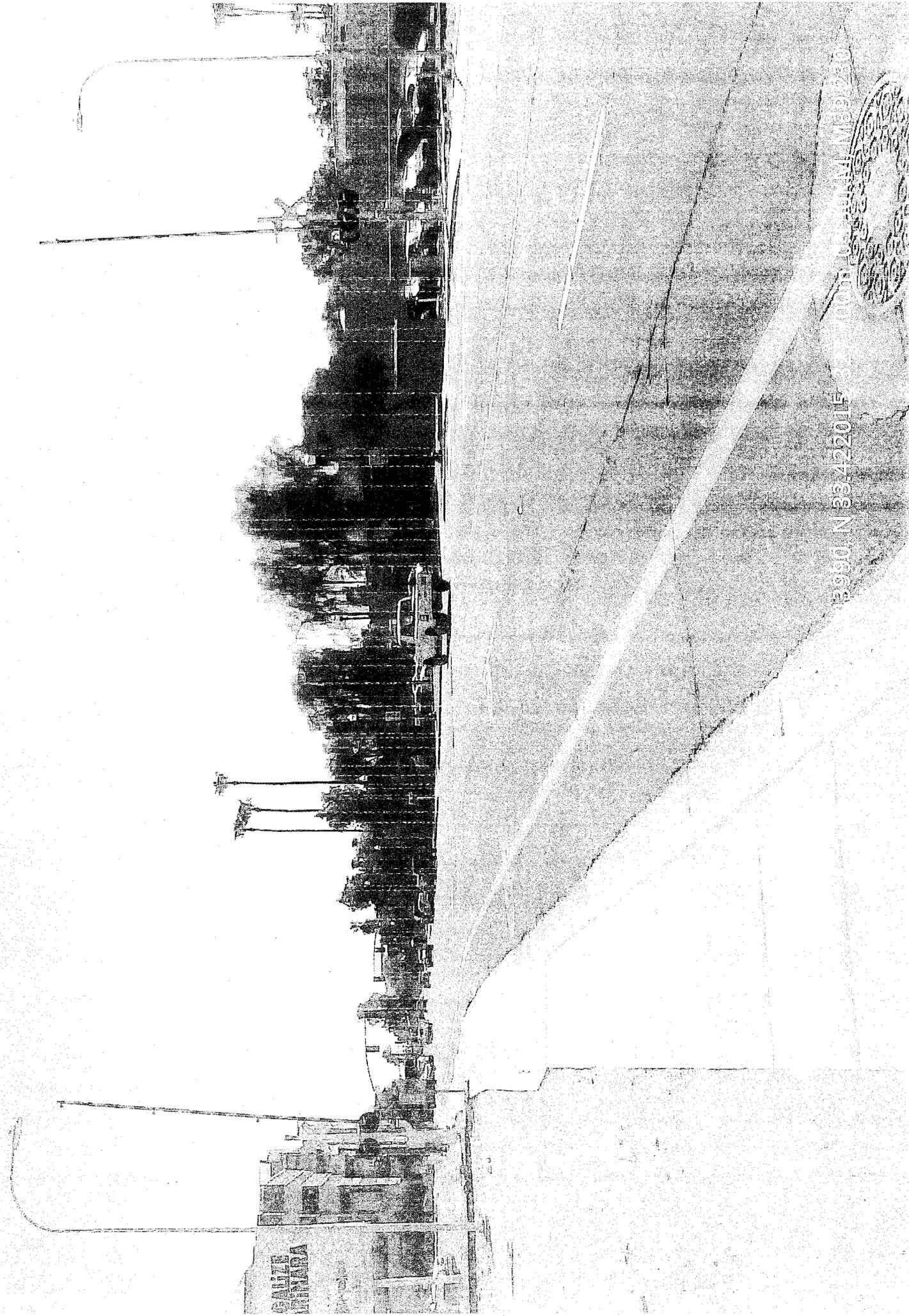
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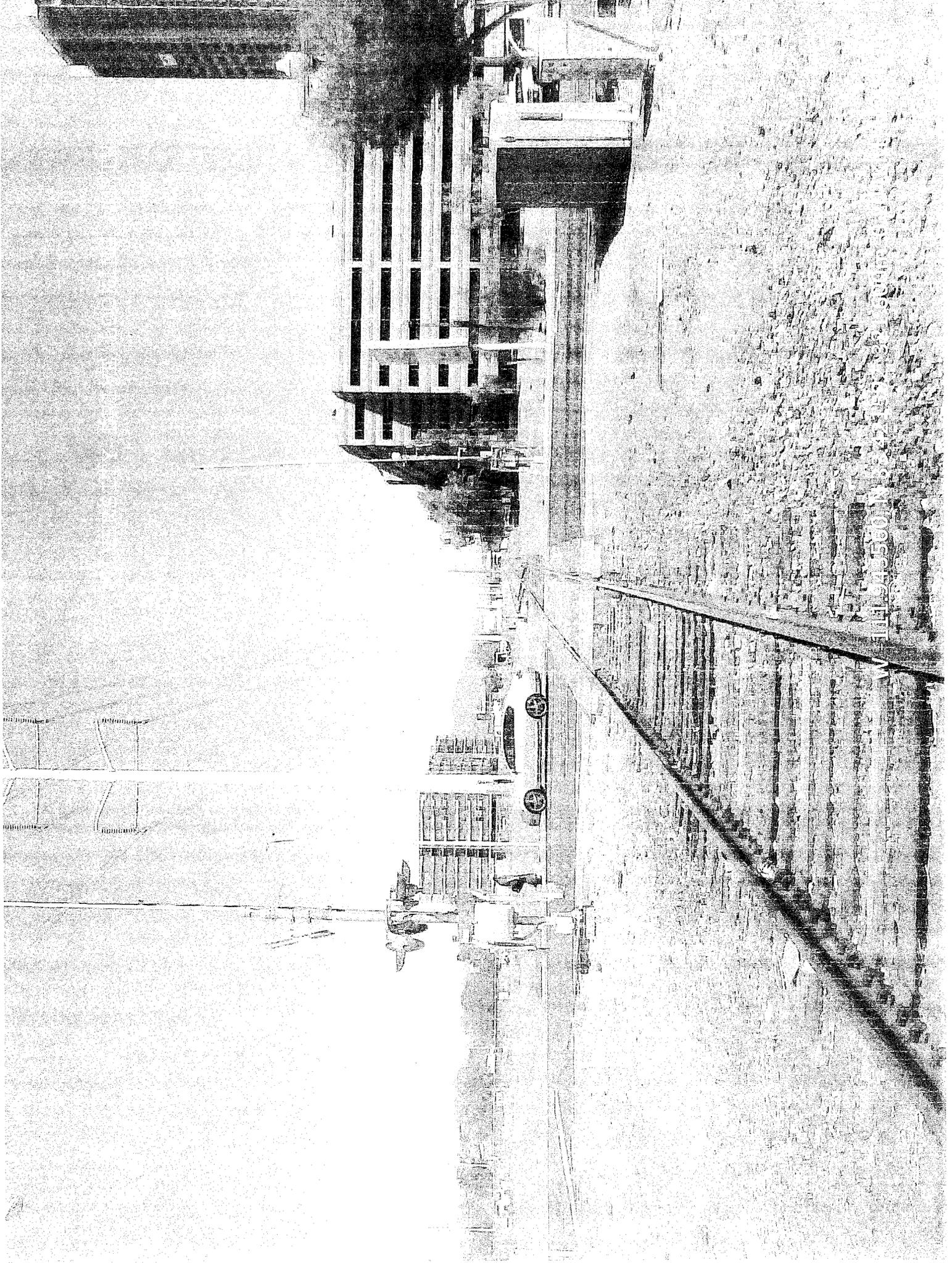




CALLE PINARA

3990, N 33-42201F

SECTION 16, T33N, R18W, S10





Intermodal Transportation

Janice K. Brewer, Governor

John S. Halikowski, Director

Jennifer Toth, State Engineer

Robert Samour, Senior Deputy State Engineer, Operations

Dallas Hammit, Senior Deputy State Engineer, Development

December 6, 2013

## **RAILROAD CROSSING PROJECT**

TRACS No.: 0940 MA TMP SR191 01C

Project No.: STP-000-6(171)A

Location: University Drive (Tempe)

DOT No.: 741-560C

RRMP: 914.82 Phoenix Subdivision

ADOT Accounting No: R1532JD13

### **RAILROAD AGREEMENT**

**For**

**FEDERAL AID**

**Railroad Crossing Projects**

**THE UNION PACIFIC RAILROAD COMPANY**

**Agreement No. 1532-91-SPTC**

**RAIL/HIGHWAY SAFETY PROGRAM**

EXHIBIT A  
Agreement 1532-91-SPTC  
TRACS No. 0940 MA TMP SR191 01C  
PROJECT STP-000-6(171)A  
ADOT Accounting Number R1532JD13

SUMMARY OF ESTIMATE

	Total
<hr/>	
Construction:	
Signals	
Construction Engineering	\$30,706.00
Labor	\$169,563.00
Materials	<u>\$192,278.00</u>
Signal Subtotal	\$392,547.00
Surface (inc misc. signal)	
Construction Engineering	\$14,851.00
Labor	\$92,373.00
Materials	<u>\$29,307.00</u>
Surface Subtotal	\$136,531.00
	<u><u>*\$529,078.00</u></u>

\* Railroad will invoice ADOT for 100% of total work.  
Railroad will separate Preliminary Engineering costs  
from Construction costs. Costs include installation of  
signals and providing power to the site.

DATE: 2013-11-14

ESTIMATE OF MATERIAL AND FORCE ACCOUNT WORK  
 BY THE  
 UNION PACIFIC RAILROAD

THIS ESTIMATE GOOD FOR 6 MONTHS EXPIRATION DATE IS :2014-05-15

DESCRIPTION OF WORK:  
 2013 RECOLLECTIBLE PROGRAM  
 PHOENIX SUBDIVISION  
 MP 914.82 DOT # 741560C UNIVERSITY DRIVE  
 INSTALL 16 FT OF NEW CROSSING PADS TO EXISTING 80 FT ROAD CROSSING  
 INSTALL 30 NEW TIES IN THE TRACK UNDER NEW AND EXISTING ROAD CROSSINGS

PID: 71933 AWO: 07260 MP, SUBDIV: 914.82, PHOENIX  
 SERVICE UNIT: 16 CITY: TEMPE STATE: AZ

DESCRIPTION	QTY	UNIT	LABOR	MATERIAL	RECOLL	UPRR	TOTAL
ENGINEERING WORK							
ENGINEERING			6086		6086		6086
LABOR ADDITIVE 144%			8765		8765		8765
TOTAL ENGINEERING			14851		14851		14851
TRACK & SURFACE WORK							
BALAST	2.00	CL	2688	1831	4519		4519
BILL PREP FEE				900	900		900
ENVIRONMENTAL - PERMITS				10	10		10
EQUIPMENT RENTAL				10000	10000		10000
FOREIGN LINE FREIGHT				574	574		574
HOMELINE FREIGHT				900	900		900
LABOR ADDITIVE 144%			44667		44667		44667
MATL STORE EXPENSE				23	23		23
OTM			3045	461	3506		3506
RDXING, PUB-R			12865	2560	15425		15425
SALES TAX				264	264		264
SWTIE	30.00	EA	23863	1784	25647		25647
TRACK-RETIRE			553	10000	10553		10553
TRK-SURF, LIN			4560		4560		4560
WORK TRAIN			32		32		32
WT/CS ADDITIVE 310%			100		100		100
TOTAL TRACK & SURFACE			92373	29307	121680		121680
LABOR/MATERIAL EXPENSE			107224	29307			
RECOLLECTIBLE/UPRR EXPENSE					136531	0	
ESTIMATED PROJECT COST							136531
EXISTING REUSEABLE MATERIAL CREDIT					0		
SALVAGE NONUSEABLE MATERIAL CREDIT					0		
RECOLLECTIBLE LESS CREDITS							

THE ABOVE FIGURES ARE ESTIMATES ONLY AND SUBJECT TO FLUCTUATION. IN THE EVENT OF AN INCREASE OR DECREASE IN THE COST OR QUANTITY OF MATERIAL OR LABOR REQUIRED, UPRR WILL BILL FOR ACTUAL CONSTRUCTION COSTS AT THE CURRENT EFFECTIVE RATE.

EXHIBIT A  
 PAGE 2 OF 5  
 TRACS# 0940 MA TMP SR191 01C  
 PROJECT# STP-000-6(171)A  
 AGREEMENT 1532-91-SPTC

DATE: 2013-11-19

ESTIMATE OF MATERIAL AND FORCE ACCOUNT WORK  
 BY THE  
 UNION PACIFIC RAILROAD

THIS ESTIMATE GOOD FOR 6 MONTHS EXPIRATION DATE IS :2014-05-20

DESCRIPTION OF WORK:

INSTALL AUTOMATIC FLASHING LIGHT CROSSING SIGNALS  
 WITH GATES AND REMOTE LOCATION AT TEMPE, AZ.  
 UNIVERSITY DRIVE M.P. 914.82 PHOENIX SUB DOT# 741560C  
 WORK TO BE PERFORMED BY RAILROAD WITH EXPENSE AS BELOW:  
 SIGNAL - STATE - 100%  
 ESTIMATED USING FEDERAL ADDITIVES - 109.54%

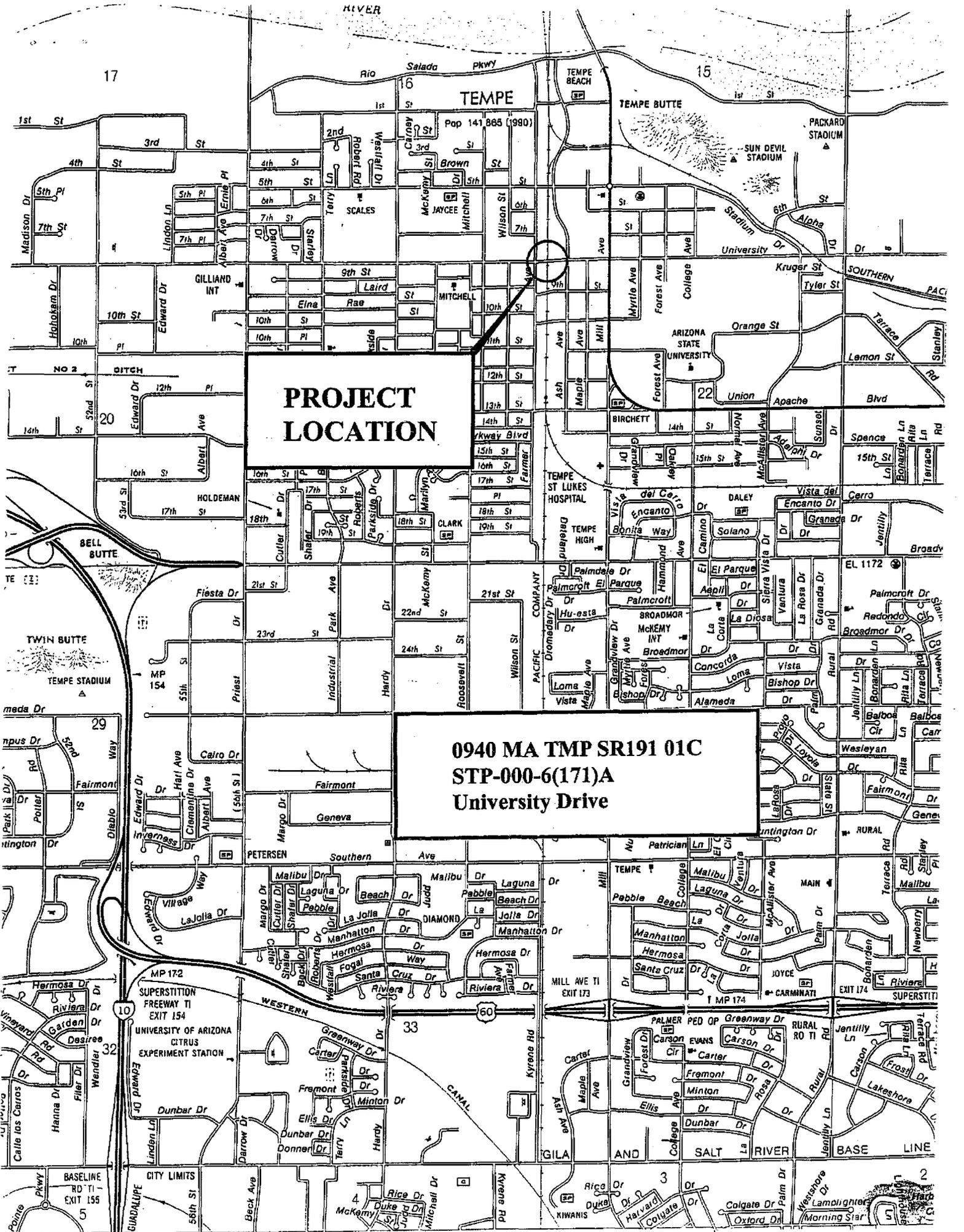
FID: 71934 AWO: 07261 MP,SUBDIV: 914.82, PHOENIX  
 SERVICE UNIT: 16 CITY: TEMPE STATE: AZ

DESCRIPTION	QTY	UNIT	LABOR	MATERIAL	RECOLL	UPRR	TOTAL
<b>ENGINEERING WORK</b>							
ENGINEERING			9871		9871		9871
LABOR ADDITIVE 109.54%			16014		16014		16014
SIG-HWY XNG			4821		4821		4821
<b>TOTAL ENGINEERING</b>			<b>30706</b>		<b>30706</b>		<b>30706</b>
<b>SIGNAL WORK</b>							
BILL PREP			900		900		900
CONTRACT				10218	10218		10218
LABOR ADDITIVE 109.54%			88641		88641		88641
MATL STORE EXPENSE				11	11		11
METER SERVICE				15000	15000		15000
N/S BI.DIR.COUP. 790HZ				880	880		880
PERSONAL EXPENSES				39774	39774		39774
ROCK/GRAVEL/FILL				6000	6000		6000
SALES TAX				4087	4087		4087
SIGNAL			80022	102181	182203		182203
TRANSP/IB/OB/RCLW CONTR				14117	14117		14117
ENVIRONMENTAL - PERMITS				10	10		10
<b>TOTAL SIGNAL</b>			<b>169563</b>	<b>192278</b>	<b>361841</b>		<b>361841</b>
<b>LABOR/MATERIAL EXPENSE</b>			<b>200269</b>	<b>192278</b>			
<b>RECOLLECTIBLE/UPRR EXPENSE</b>					<b>392547</b>	<b>0</b>	
<b>ESTIMATED PROJECT COST</b>							<b>392547</b>

THE ABOVE FIGURES ARE ESTIMATES ONLY AND SUBJECT TO FLUCTUATION. IN THE EVENT OF AN INCREASE OR DECREASE IN THE COST OR QUANTITY OF MATERIAL OR LABOR REQUIRED, UPRR WILL BILL FOR ACTUAL CONSTRUCTION COSTS AT THE CURRENT EFFECTIVE RATE.

EXHIBIT A  
 PAGE 3 OF 5  
 TRACS# 0940 MA TMP SR191 01C  
 PROJECT# STP-000-6(171)A  
 AGREEMENT 1532-91-SPTC





17

15

TEMPE

TEMPE BUTTE

SUN DEVIL STADIUM

PACKARD STADIUM

Pop 141,865 (1980)

**PROJECT  
LOCATION**

**0940 MA TMP SR191 01C  
STP-000-6(171)A  
University Drive**

UNIVERSITY OF ARIZONA  
CITRUS  
EXPERIMENT STATION

GILBERT

BASE LINE

STATE OF ARIZONA  
DEPARTMENT OF TRANSPORTATION

Agreement No. 1532-91-SPTC

Agreement Addendum No. 1

Company's Name: The Union Pacific Railroad Company  
Address: 101 S. Watson Road, Arlington, TX 76010

The purpose of this addendum is to modify the Company name as stated herein:

WHEREAS: Agreement No. 1532-91-SPTC terms the "RAILROAD" as SOUTHERN PACIFIC TRANSPORTATION COMPANY.

WHEREAS: Agreement No. 1532-91-SPTC is revised to term the "RAILROAD" as the UNION PACIFIC RAILROAD COMPANY.

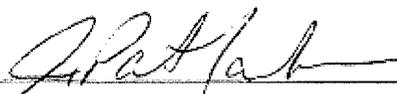
THEREFORE: The parties hereto agree that Agreement No. 1532-91-SPTC is hereby amended as shown herein. All other provisions of Agreement No. 1532-91-SPTC shall remain unabrogated.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

ARIZONA DEPARTMENT OF TRANSPORTATION

UNION PACIFIC RAILROAD COMPANY

By



WILLIAM R. BRISCOE, P.E.

Utility & Railroad Engineering Section

Date

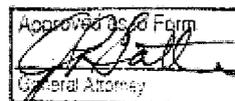
2-18-99

By



CHIEF ENGINEER

Date



A. G. CONTRACT NO. KR95-1689-TF

**ARIZONA DEPARTMENT OF TRANSPORTATION**  
**HIGHWAYS DIVISION**  
UTILITY AND RAILROAD ENGINEERING SECTION

MASTER  
RAILROAD AGREEMENT  
For  
FEDERAL AID  
Railroad Crossing Projects

SOUTHERN PACIFIC TRANSPORTATION COMPANY  
Agreement No. 1532-91-SPTC  
RAIL/HIGHWAY SAFETY PROGRAM

THIS AGREEMENT by and between SOUTHERN PACIFIC TRANSPORTATION COMPANY, a Delaware corporation, herein termed "RAILROAD," and STATE OF ARIZONA, DEPARTMENT OF TRANSPORTATION, HIGHWAYS DIVISION, herein termed "STATE".

WITNESSETH:

The parties hereto desire to set forth by this instrument their understanding and agreements with respect to the installation, at various times, of railroad warning devices and/or surface crossing materials with track rehabilitation, if required, throughout the State of Arizona, where a roadway crosses the property and tracks of RAILROAD.

AGREEMENT:

NOW THEREFORE, it is mutually agreed as follows:

1. The work to be performed by RAILROAD under this agreement is hereinafter referred to as "PROJECT".

2. RAILROAD agrees to furnish all labor, materials, tools, and equipment necessary to install such warning devices including necessary actuating and operating circuits and adequate instrument housing and/or roadway crossing materials with track rehabilitation, if required, upon its property at certain designated grade crossings.

Said installation shall comply with the latest standards prescribed by the Association of American Railroads and the Manual On Uniform Traffic Control Devices, Part VIII.

3. RAILROAD will prepare both a cost estimate, marked Exhibit "A" and a location plan marked, Exhibit "B", showing the general details of each PROJECT and send them to STATE for acceptance.

4. It is agreed that the work to be performed by RAILROAD is a part of a Federal-Aid project. Pursuant to the provisions of Federal-Aid Policy Guide Subchapter G, Part 646 Subpart B, there is no ascertainable net benefit to RAILROAD, and STATE agrees to reimburse RAILROAD for one hundred percent (100%) of the cost and expense incurred by RAILROAD in furnishing of materials and performing the work as described in the Cost Estimate, marked EXHIBIT "A", attached to and made a part hereof.

5. It is understood and agreed that the STATE is acting solely as an agent for the project sponsor in securing and administering Federal funds and STATE assumes no other liability hereunder for the project sponsor.

6. Prior to commencing construction of each PROJECT, Railroad agrees to notify STATE, in writing, of the actual construction start date. Upon completion of each PROJECT, RAILROAD agrees to notify STATE, in writing, of the actual completion date. The construction start date shall not be prior to receiving a notice to proceed from STATE. Construction progress payments shall not be made without the actual construction start date. Final payment shall not be made without the actual construction completion date.

7. The work for each PROJECT shall be performed by RAILROAD forces on an actual cost basis, and as supported by the analysis of estimated costs set forth in Exhibit "A". The actual cost shall be payable in payments as follows:

- a. RAILROAD will order the materials for each PROJECT, and may invoice the STATE upon receipt, for materials and related costs, as set forth in Exhibit "A".
- b. RAILROAD may submit monthly invoices for work performed and materials installed unless invoiced under subparagraph a.
- c. Minimum payment, except for final invoice, is \$5,000.
- d. Upon completion of all work under each PROJECT, RAILROAD shall arrange for a joint close-out inspection of the completed PROJECT. Upon determination by STATE that the work has been completed in accordance

with Exhibits "A" and "B", RAILROAD will submit final and complete invoice to the STATE. STATE agrees to pay RAILROAD the difference between the final invoice and any previous payments for PROJECT. Any amount with which STATE disagrees shall be paid under protest, subject to resolution.

- e. All invoices will be paid by STATE within sixty (60) days of receipt.

All expenses incurred by RAILROAD for work which STATE is obligated to reimburse RAILROAD hereunder, including all work incidental to such work but not specifically mentioned herein, shall be subject to the provisions of the Federal-Aid Policy Guide Subchapter B Part 140 Subpart I.

8. Pursuant to A.R.S. Sections 35-214, 35-215 and 41-1279.04, the books of RAILROAD shall be open for inspection and audit by authorized representatives of STATE and the Federal Government for a period of not less than five (5) years from the date final payment has been received by RAILROAD. State agrees to pay RAILROAD any sums found to be owing as a result of an audit within sixty (60) days of receipt of the audit by the Utility and Railroad Engineering Section of STATE. RAILROAD agrees to reimburse STATE, within sixty (60) days of notification for any amount STATE disallows as a result of its audit. Any audit exceptions with which RAILROAD disagrees shall be paid to STATE under protest subject to resolution.

9. All invoices shall contain STATE's project number and agreement number. The invoice shall be sent to:

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ARIZONA DEPARTMENT OF TRANSPORTATION  
Utility and Railroad Engineering Section  
205 South 17th Ave. Mail Drop 618E  
Phoenix, Arizona 85007-3212

10. Once installation of railroad warning devices and/or roadway crossing material has been completed, RAILROAD shall maintain, in kind, the railroad warning devices and the crossing material two feet outside of each rail as long as they remain in place. However, RAILROAD shall be entitled to receive any contribution toward the cost of such maintenance as may be now or hereafter made available by means of any law, ordinance, regulation, order, grant or by other means or sources.

11. Claims and disputes between STATE and RAILROAD involving sums less than \$100,000 and arising out of the terms of this Agreement relating to work performed, invoicing and similar matters, shall be subject to arbitration, at the request of either party, in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then obtaining; provided, however, that claims or disputes arising out of personal injury, death, property damage, or environmental incidents shall not be subject to arbitration without the concurrence of both parties, except to the extent otherwise required by the rules of Arizona courts.

12. In compliance with the regulations of the United States Department of Transportation, RAILROAD hereby agrees to comply fully with all of the provisions of Appendix "A", attached hereto and by this reference made a part of this Agreement; provided, however, that Appendix "A" shall be applicable only in those cases where RAILROAD does not perform the work contemplated in this Agreement with its own forces.

13. This Agreement is subject to the budgetary limitations set forth in Arizona Revised Statutes Subsection 28-1823 through 28-1826 inclusive and is further subject to the provisions of Chapter 1 of Title 35, Arizona Revised Statutes.

14. STATE and RAILROAD each agrees to be liable to the other party for its own acts of negligence and the negligence of its own employees.

15. This Agreement shall inure to the benefit of and be binding upon the successors and assigns of RAILROAD and the assigns of STATE.

16. RAILROAD is required to comply with Executive Order 75-5, "Non-Discrimination in Employment by Government Contractors and Subcontractors," which is hereby included in its entirety by reference and considered a part of this Agreement.

17. Pursuant to A.R.S. Subsection 38-511, STATE may cancel this Agreement, without penalty or further obligation, if any person significantly involved in initiating, negotiating, securing, drafting or creating the Agreement on behalf of STATE or any of its departments or agencies is, at any time while this Agreement or any extension of it is in effect, an employee of any other party to this Agreement with respect to the subject matter of this Agreement.

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IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year signed by both parties.

SOUTHERN PACIFIC  
TRANSPORTATION COMPANY

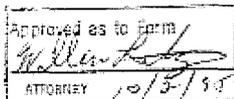
ARIZONA DEPART. OF TRANSPORTATION  
HIGHWAY DIVISION

By J. L. Miller  
Its MANAGER-CONTRACTS

By William R. Briscoe  
Manager of Utility & Railroad  
Engineering Section

Date October 2, 1995

Date 10-17-95



STATE OF COLORADO        )  
  ) ss.  
COUNTY of DENVER        )

The foregoing instrument was acknowledged before me this 2nd day of October, 1995, by Ms. J. L. Miller, the MANAGER-CONTRACTS of SOUTHERN PACIFIC TRANSPORTATION COMPANY, a Delaware corporation, on behalf of the corporation.

My Commission Expires  
2-11-97  
ALISON DILGES  
NOTARY PUBLIC  
STATE OF COLORADO

Notary Public Alison Dilges

My Commission Expires 2-11-97

STATE OF ARIZONA        )  
  ) ss.  
COUNTY of MARICOPA    )

The foregoing instrument was acknowledged before me this 17 day of October, 1995, by William R. Briscoe, the Manager of Utility and Railroad Engineering Section of the Arizona Department of Transportation, on behalf of the STATE.

My Commission Expires:

Commission Expires 2-11-97

Connie Marie  
Notary Public

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APPENDIX A  
(Revised)

II EQUAL OPPORTUNITY

1. Selection of Labor:

During the performance of this contract, the contractor shall not discriminate against labor from any other State, possession or territory of the United States.

2. Employment Practices:

During the performance of this contract, the contractor agrees as follows:

a. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoffs or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the State highway department setting forth the provisions of this nondiscrimination clause.

b. The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

c. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the State highway department advising the said labor union or workers' representative of the contractor's commitments under this section II-2 and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

d. The contractor will comply with all provisions of Executive Order 11246 of September 24, 1963, and of the rules, regulations (41 CFR, Part 60) and relevant orders of the Secretary of Labor.

e. The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1963, and by rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records and accounts by the Federal Highway Administration and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

f. In the event of the contractor's noncompliance with the non-discrimination clauses of this contract or with any of the said rules, regulations or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or Federally-assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.

g. The contractor will include the provisions of this Section II-2 in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the State highway department or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event a contractor becomes involved in, or is threatened with litigation with a subcontractor or vendor as a result of such direction by the Federal Highway Administration, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

### 3. Selection of Subcontractors, Procurement of Materials, and Leasing of Equipment:

During the performance of this contract, the contractor, for itself, its assigns and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

a. Compliance With Regulations: The contractor shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

b. Nondiscrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

c. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

d. Information and Reports: The contractor shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the State highway department or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the State highway department, or the Federal Highway Administration as appropriate, and shall set forth what efforts it has made to obtain the information.

e. Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the State highway department shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

- (1) withholding of payments to the contractor under the contract until the contractor complies, and/or
- (2) cancellation, termination or suspension of the contract, in whole or in part.

f. Incorporation of Provisions: The contractor shall include the provision of this paragraph 3 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontractor or procurement as the State highway department or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the State highway department to enter into such litigation to protect the interests of the State, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.