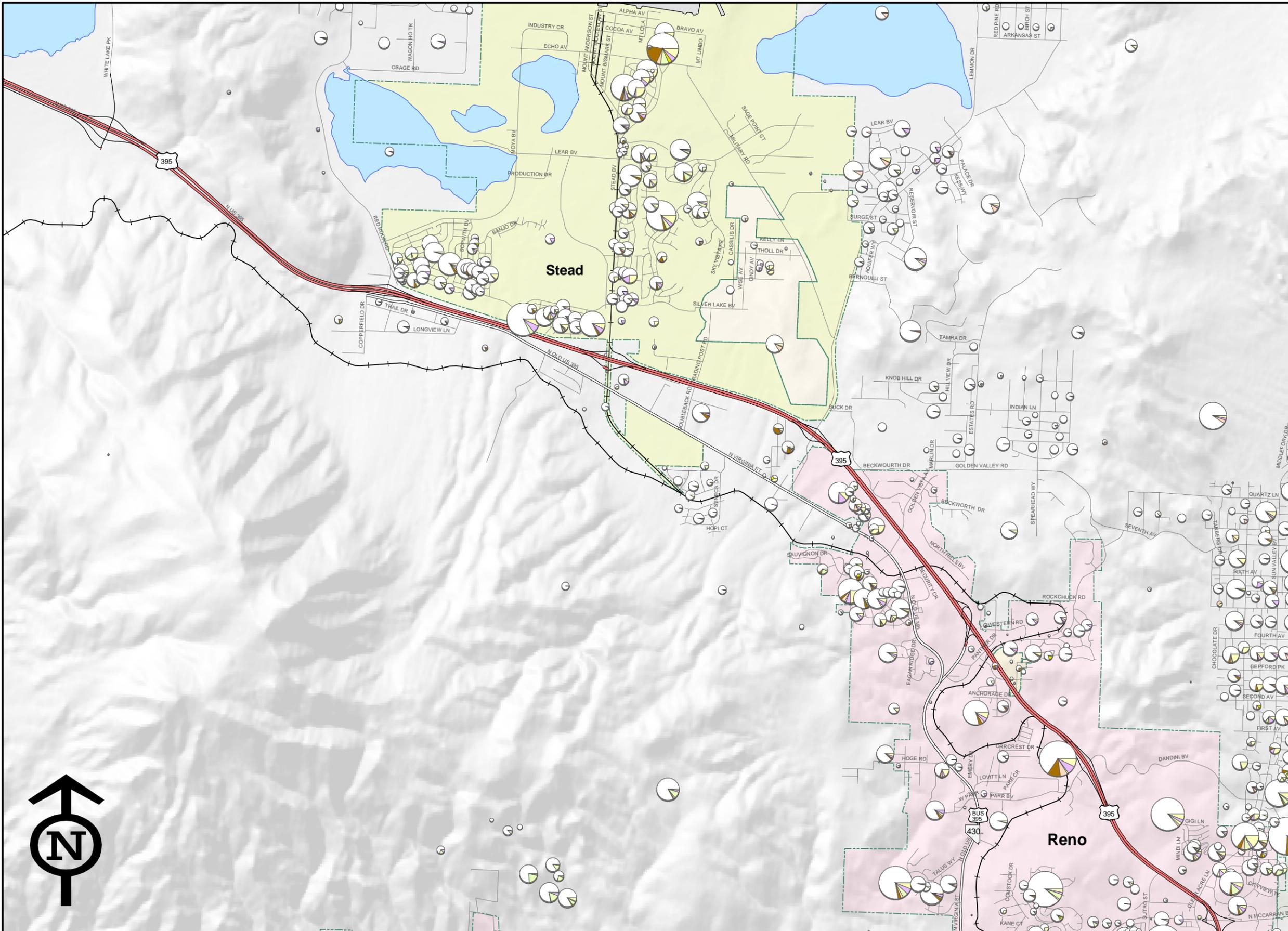


APPENDIX

POPULATION DISTRIBUTION BY RACE

Population and Race by Census Block

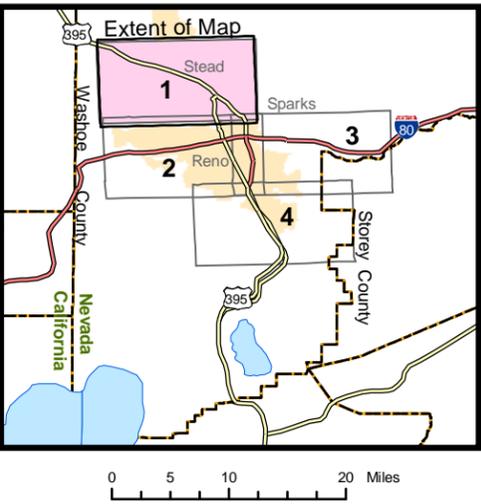


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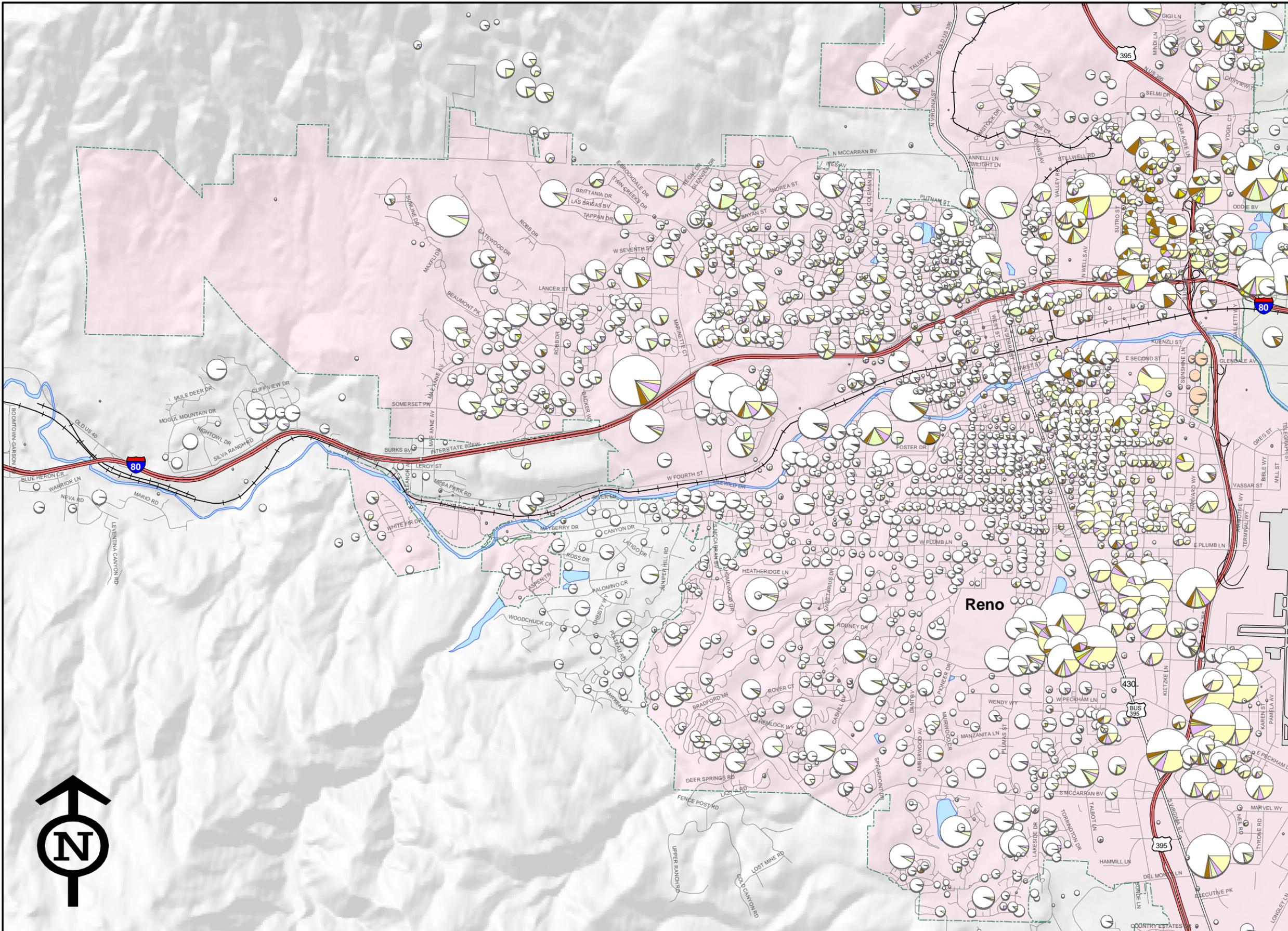
- Freeway
- Streets
- Railroads

Dot size is proportional to population of census blocks

- Population by Race
 - White
 - Black
 - American Indian/Eskimo
 - Asian
 - Hawaiian/Pacific Islander
 - Multiple Races
 - Other



Population and Race by Census Block

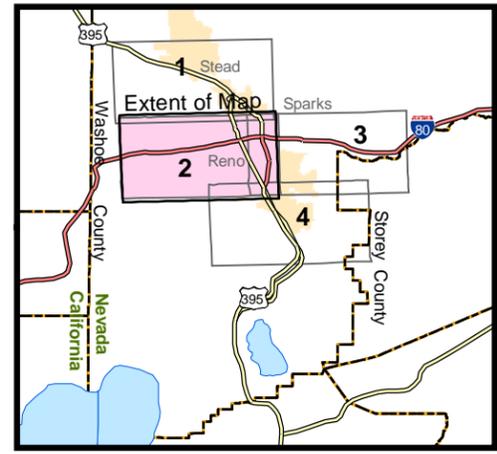


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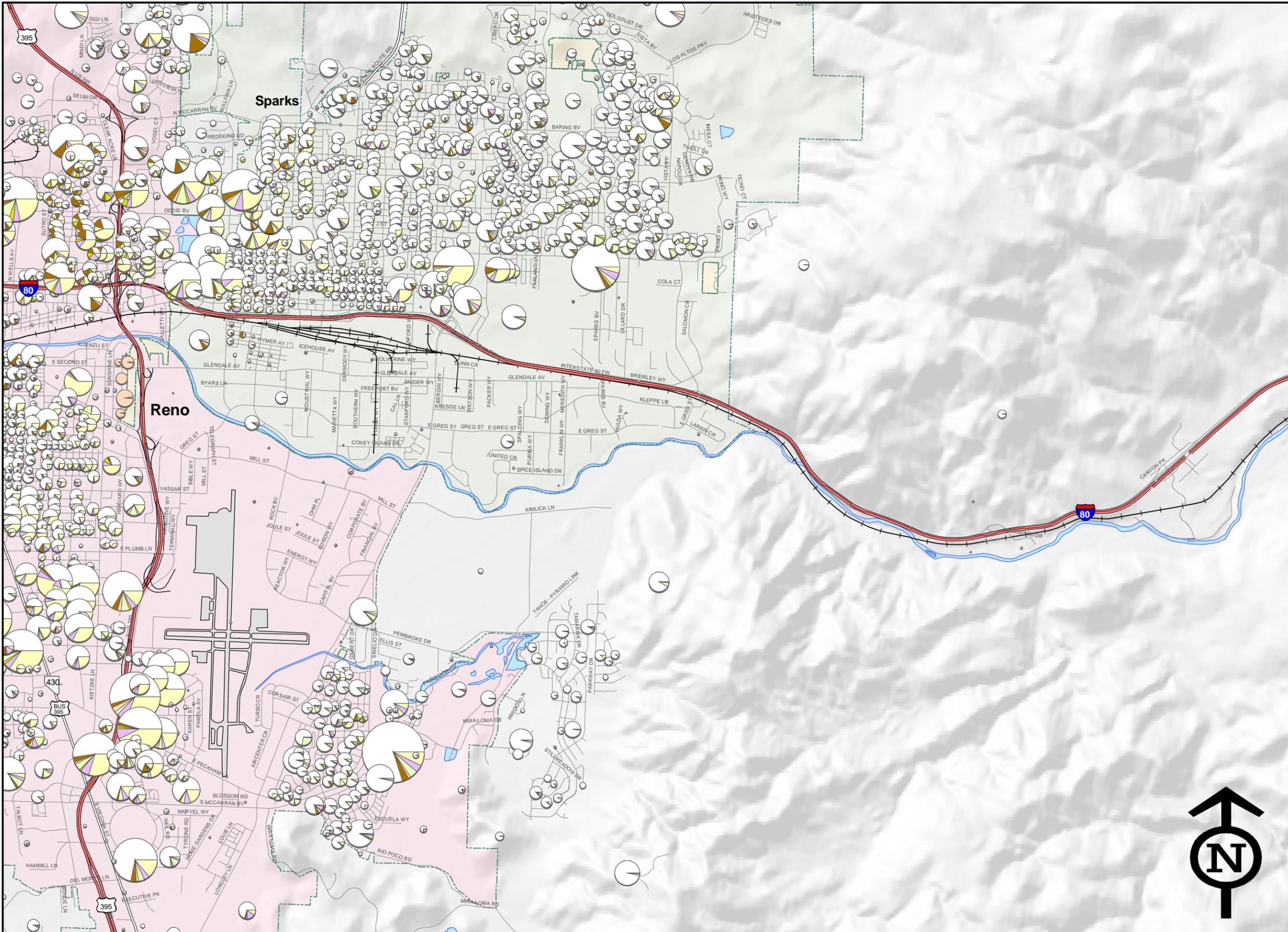
- Freeway
- Streets
- Railroads

Dot size is proportional to population of census blocks

- Population by Race
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- American Indian/Eskimo
- Asian
- Hawaiian/Pacific Islander
- Multiple Races
- Other



Population and Race by Census Block

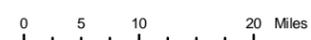
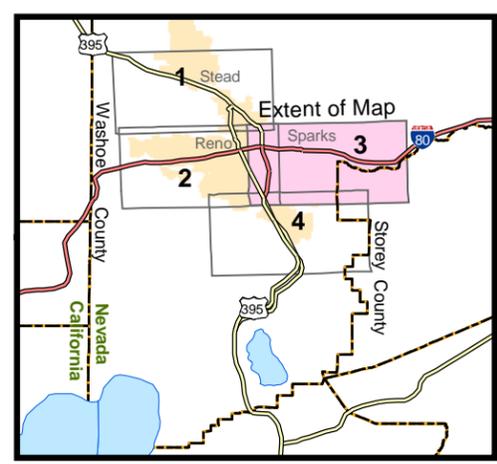


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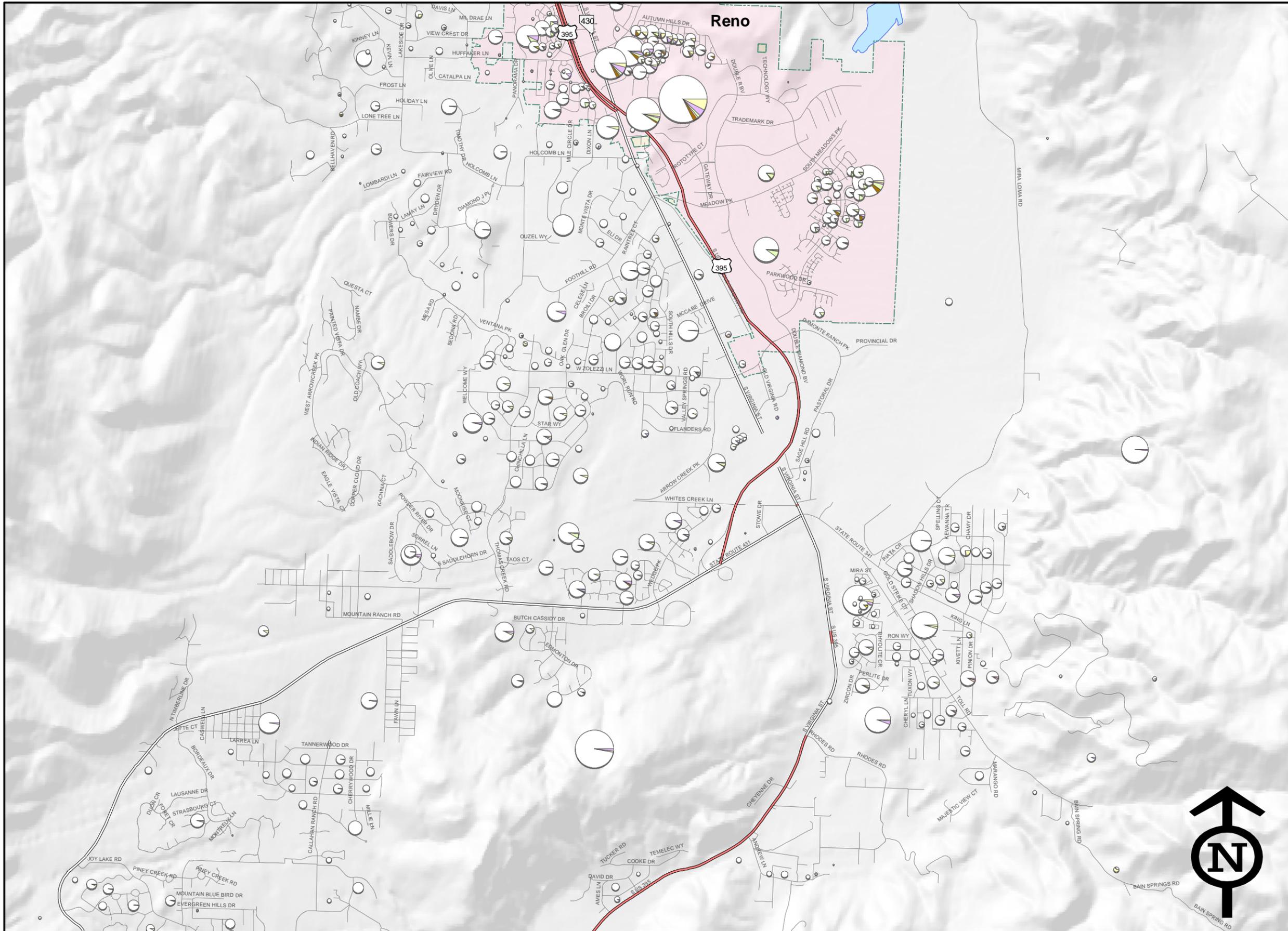
- Freeway
- Streets
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Dot size is proportional to population of census blocks

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- American Indian/Eskimo
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- Hawaiian/Pacific Islander
- Multiple Races
- Other



Population and Race by Census Block

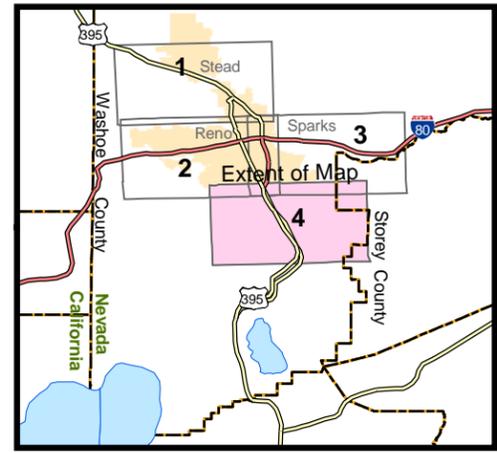


Legend

-  Freeway
-  Streets
-  Railroads

Dot size is proportional to population of census blocks

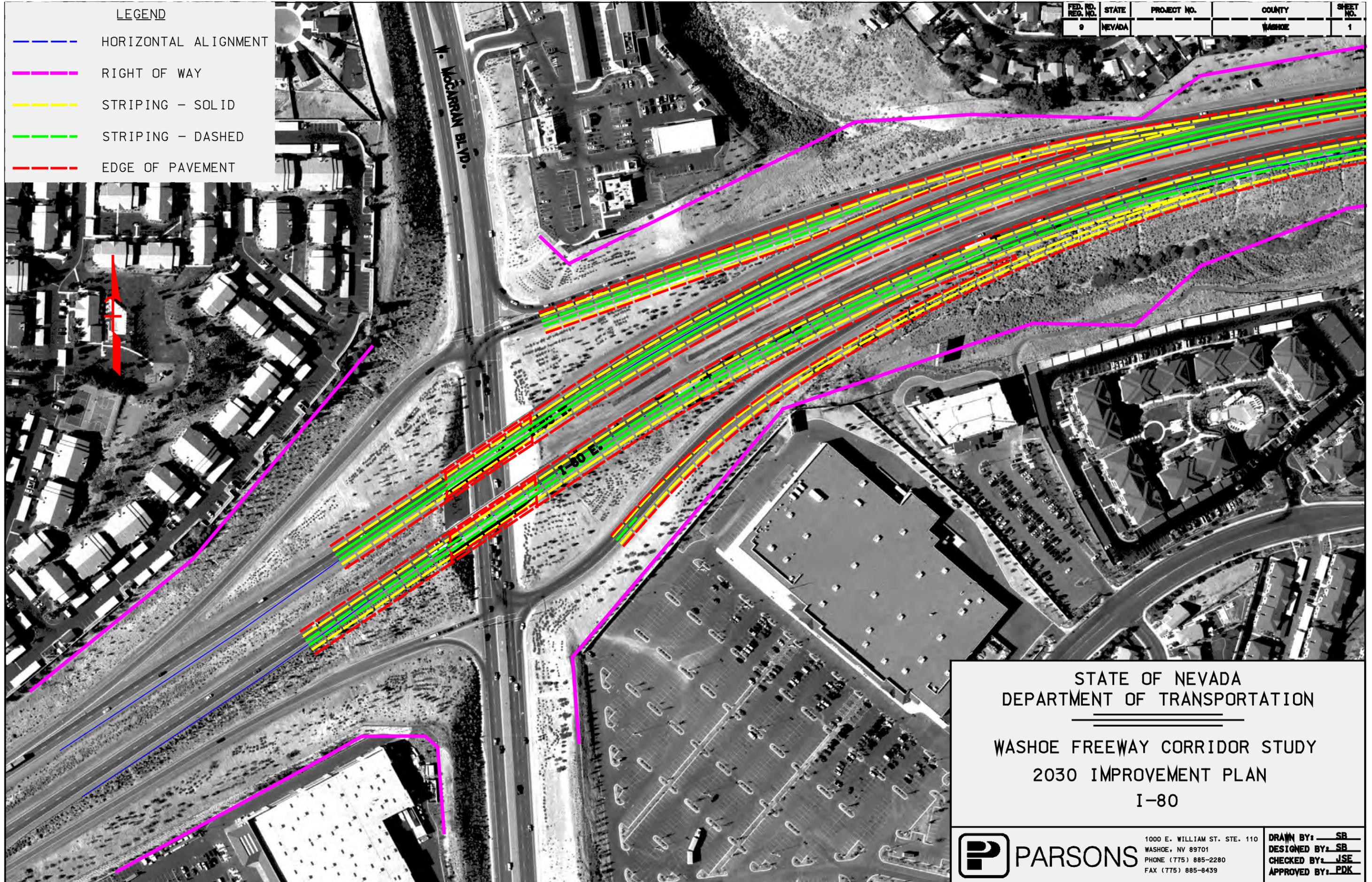
-  Population by Race
-  White
-  Black
-  American Indian/Eskimo
-  Asian
-  Hawaiian/Pacific Islander
-  Multiple Races
-  Other



RECOMMENDED ALTERNATIVE CONCEPTUAL DESIGN DRAWINGS

LEGEND

- HORIZONTAL ALIGNMENT
- RIGHT OF WAY
- STRIPING - SOLID
- STRIPING - DASHED
- EDGE OF PAVEMENT



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2030 IMPROVEMENT PLAN
I-80



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FAX (775) 885-8439

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DESIGNED BY: SB
CHECKED BY: JSE
APPROVED BY: PDK



LEGEND	
	HORIZONTAL ALIGNMENT
	RIGHT OF WAY
	STRIPING -- SOLID
	STRIPING -- DASHED
	EDGE OF PAVEMENT

STATE OF NEVADA
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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	3



LEGEND	
	HORIZONTAL ALIGNMENT
	RIGHT OF WAY
	STRIPING - SOLID
	STRIPING - DASHED
	EDGE OF PAVEMENT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
I-80

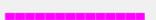
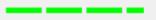


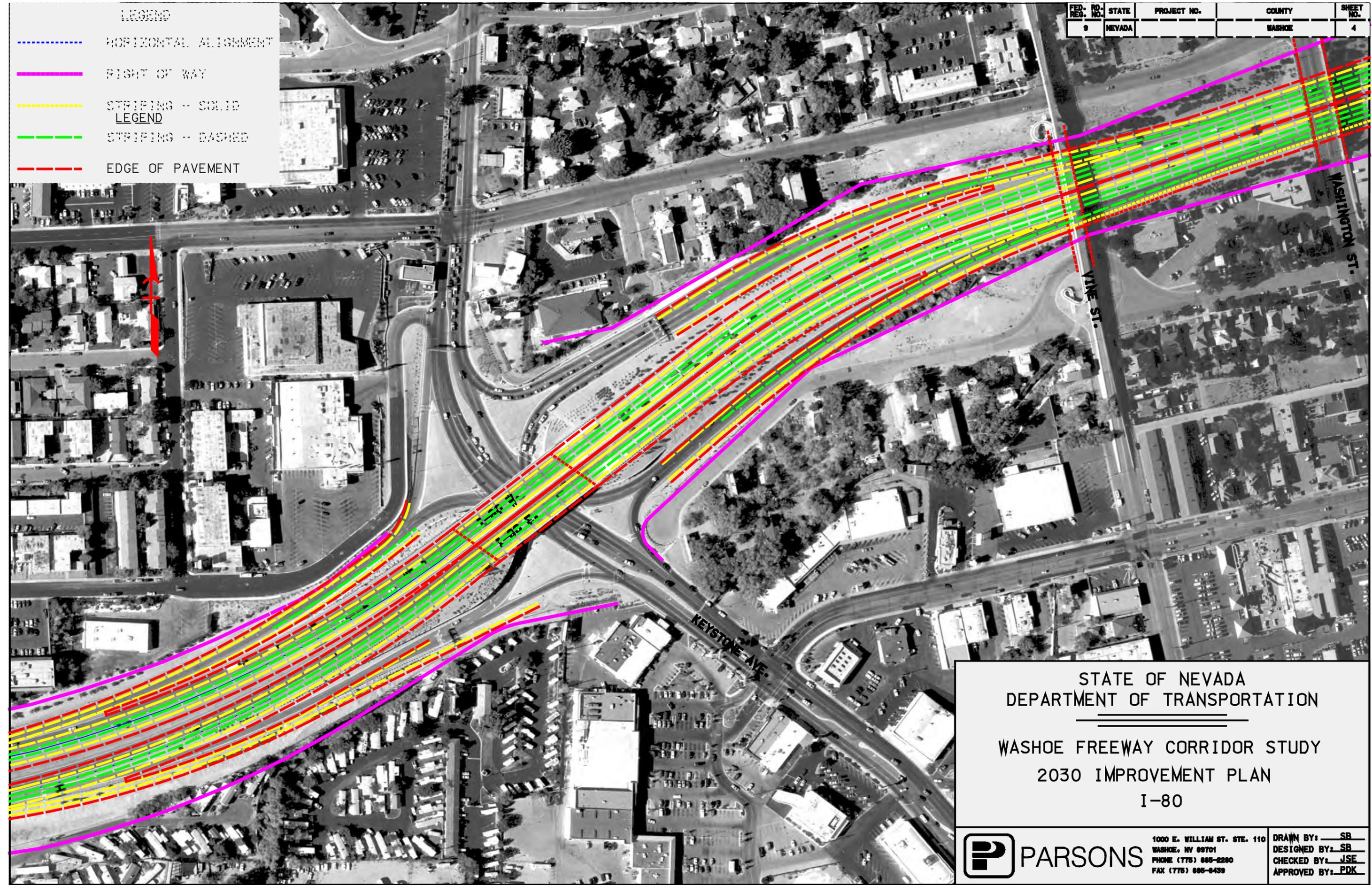
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APPROVED BY: PKD

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	4

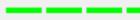
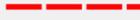
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	STRIPING -- DASHED
	EDGE OF PAVEMENT

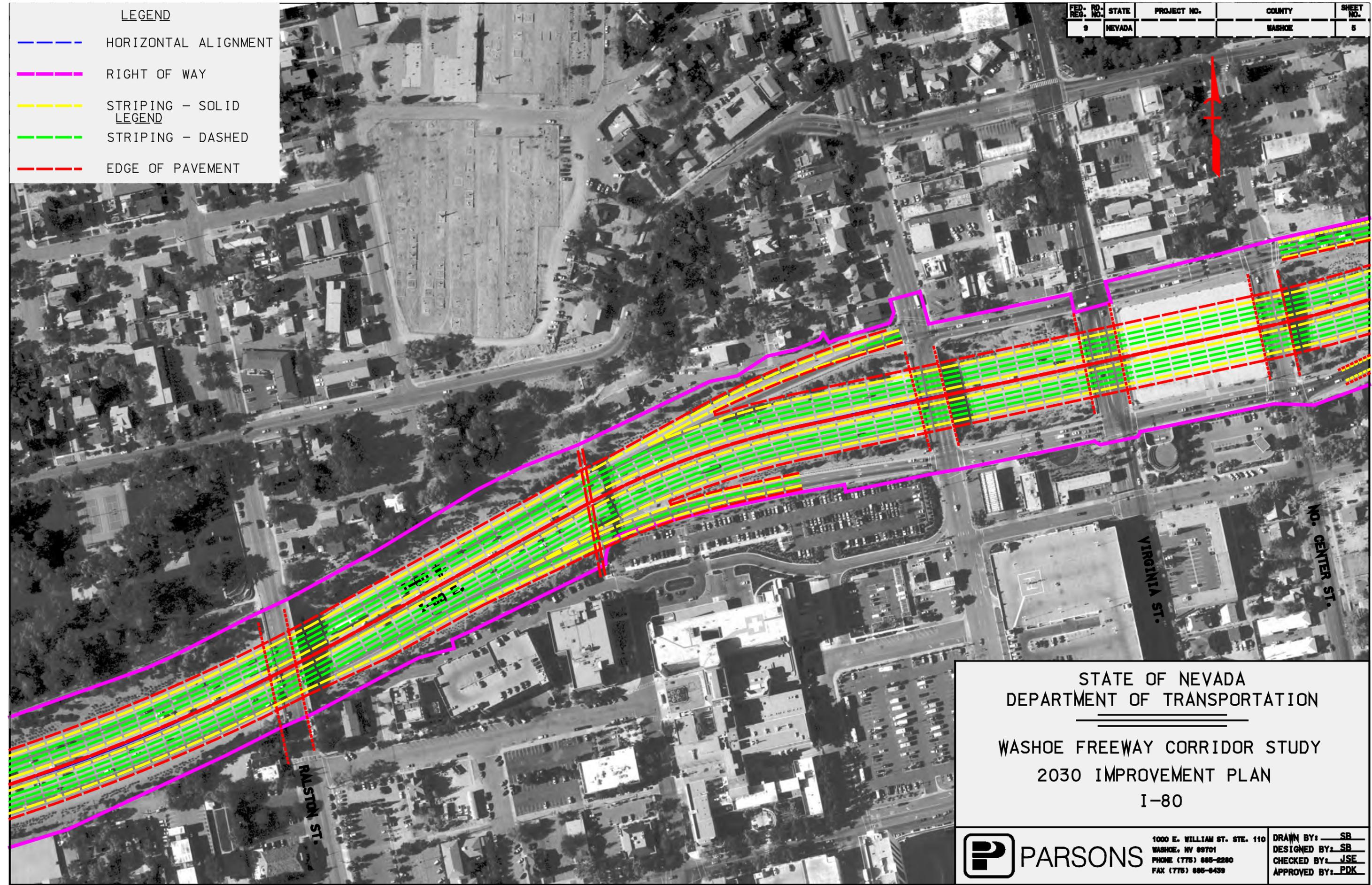


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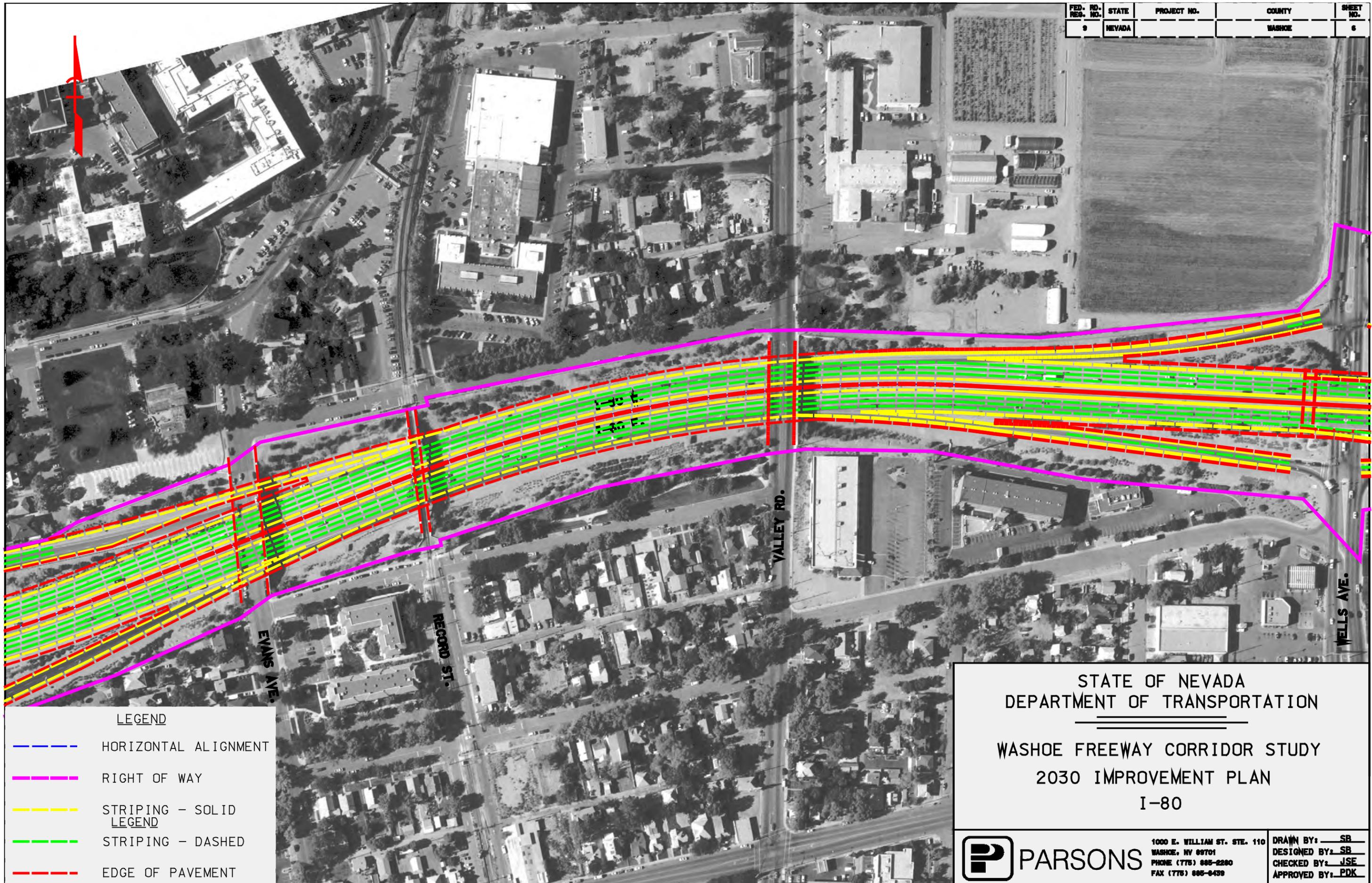
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	RIGHT OF WAY
	STRIPING - SOLID
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	EDGE OF PAVEMENT



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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	6



LEGEND	
	HORIZONTAL ALIGNMENT
	RIGHT OF WAY
	STRIPING - SOLID
	STRIPING - DASHED
	EDGE OF PAVEMENT

STATE OF NEVADA
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2030 IMPROVEMENT PLAN
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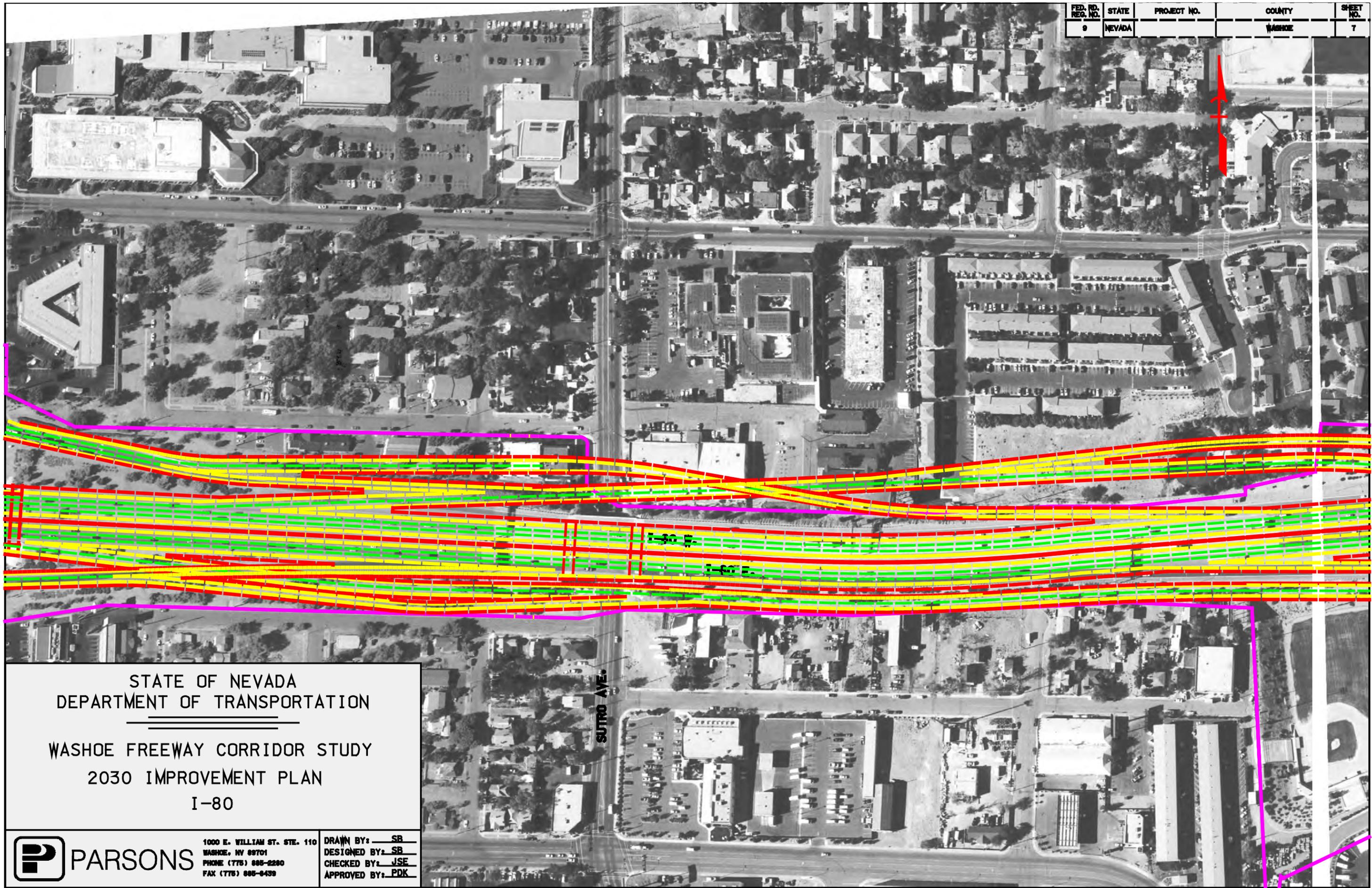


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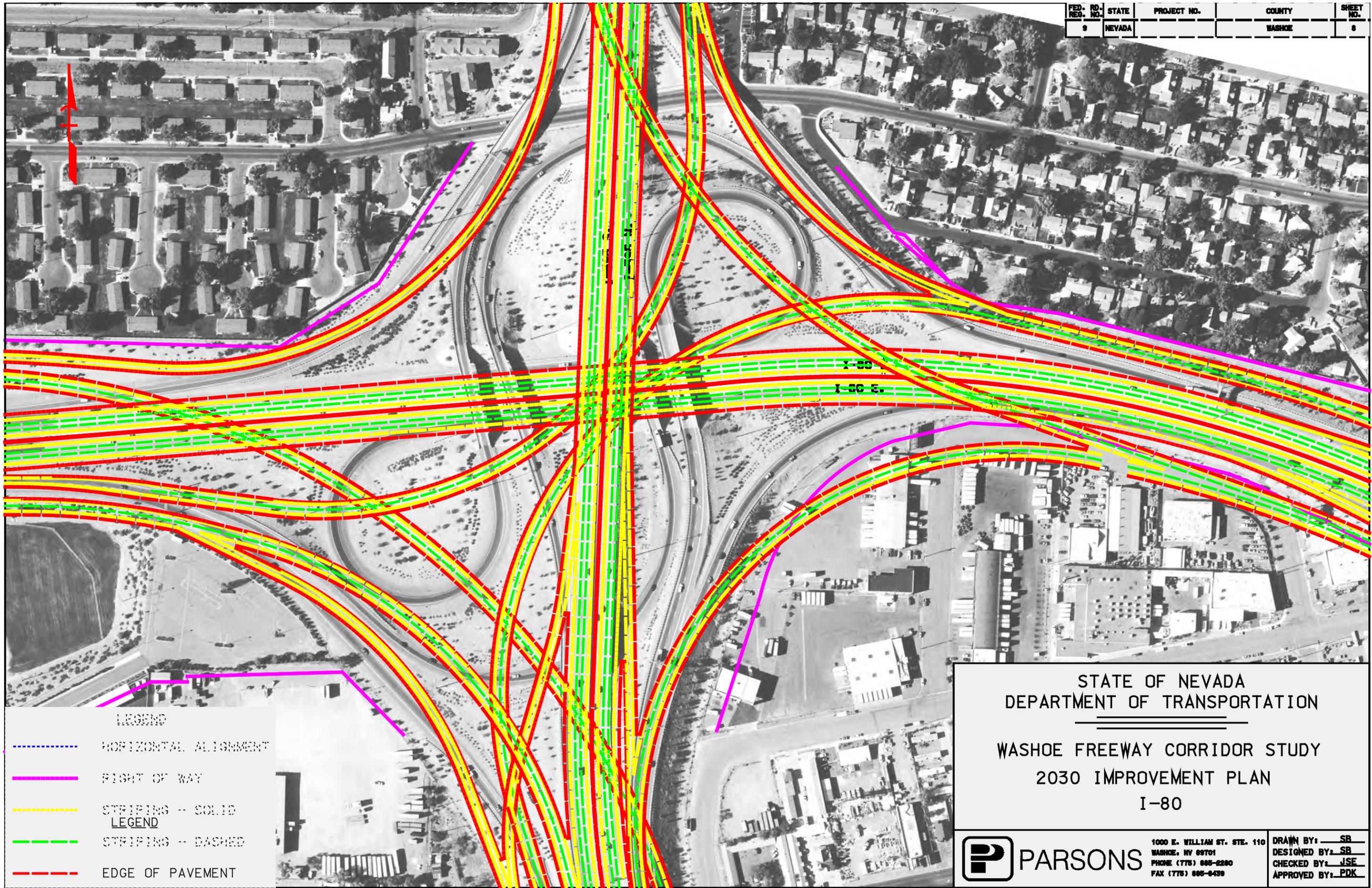
FED. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	7



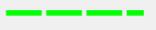
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LEGEND

	HORIZONTAL ALIGNMENT
	RIGHT OF WAY
	STRIPING -- SOLID
	STRIPING -- DASHED
	EDGE OF PAVEMENT

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WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
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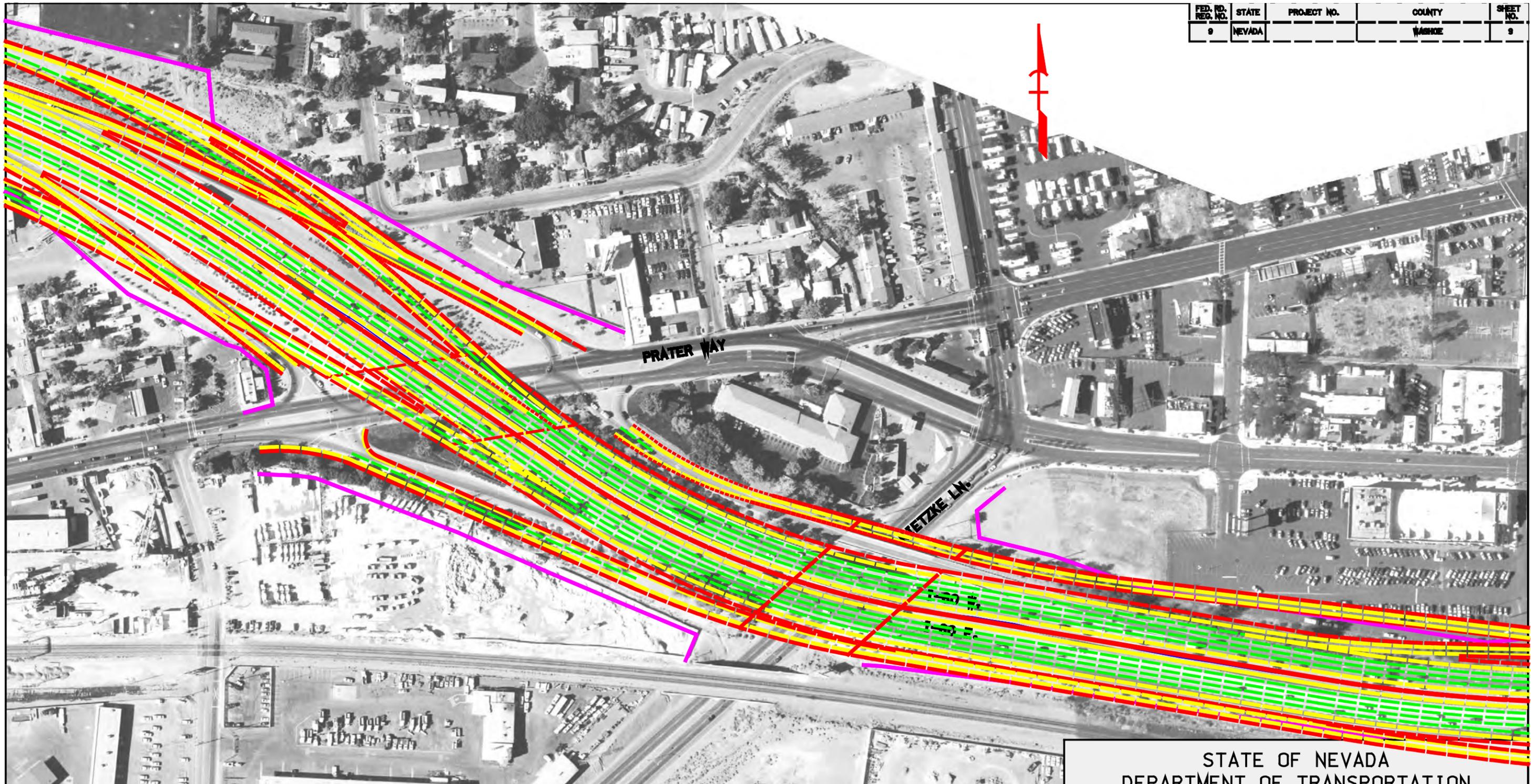


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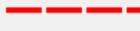
1000 E. WILLIAM ST. STE. 110
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FAX (775) 685-8439

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APPROVED BY: PDK

FED. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	9



LEGEND

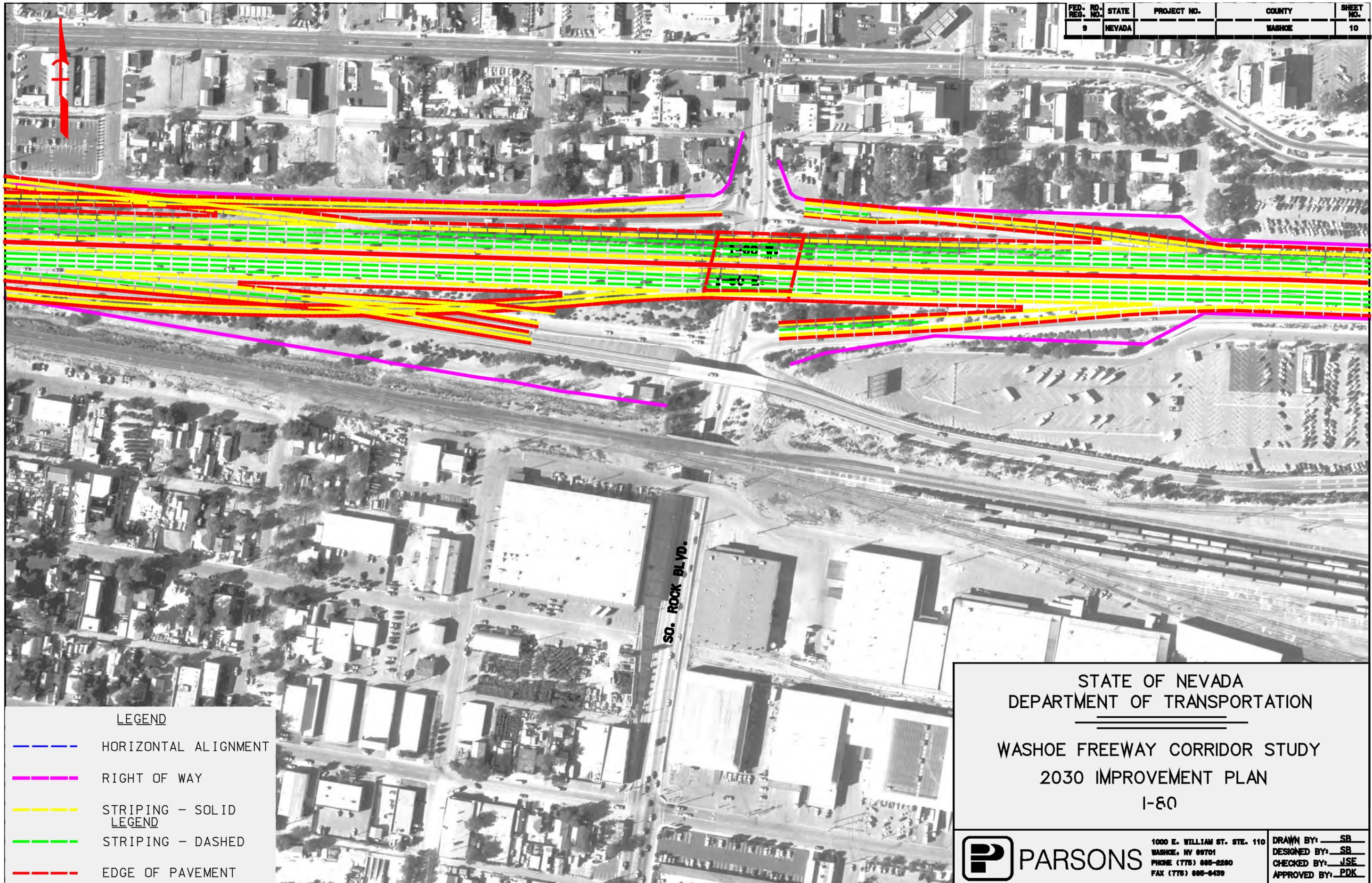
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	EDGE OF PAVEMENT

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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	10



LEGEND	
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	RIGHT OF WAY
	STRIPING - SOLID
	STRIPING - DASHED
	EDGE OF PAVEMENT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

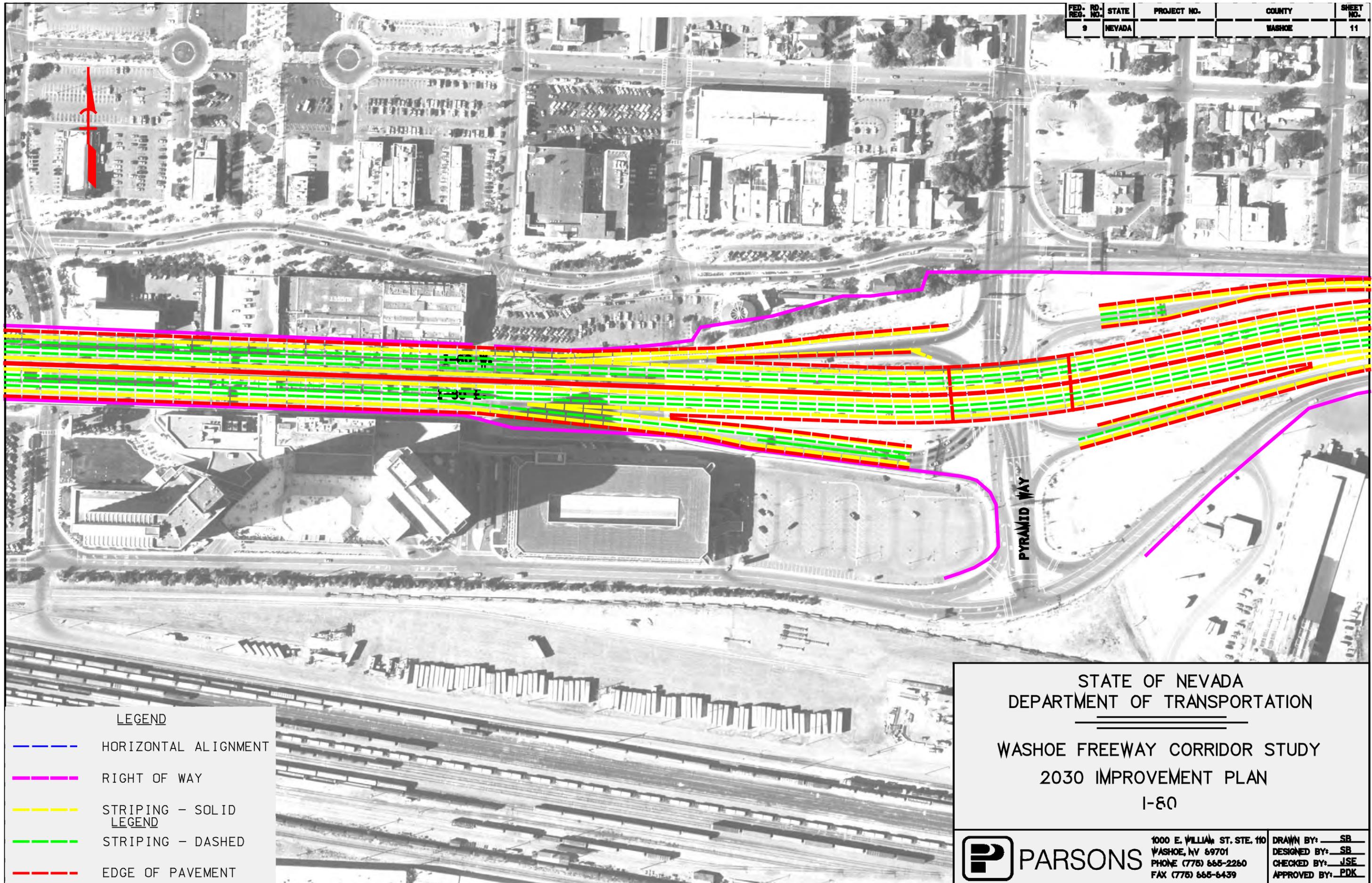
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LEGEND

- HORIZONTAL ALIGNMENT
- RIGHT OF WAY
- STRIPING - SOLID
- STRIPING - DASHED
- EDGE OF PAVEMENT

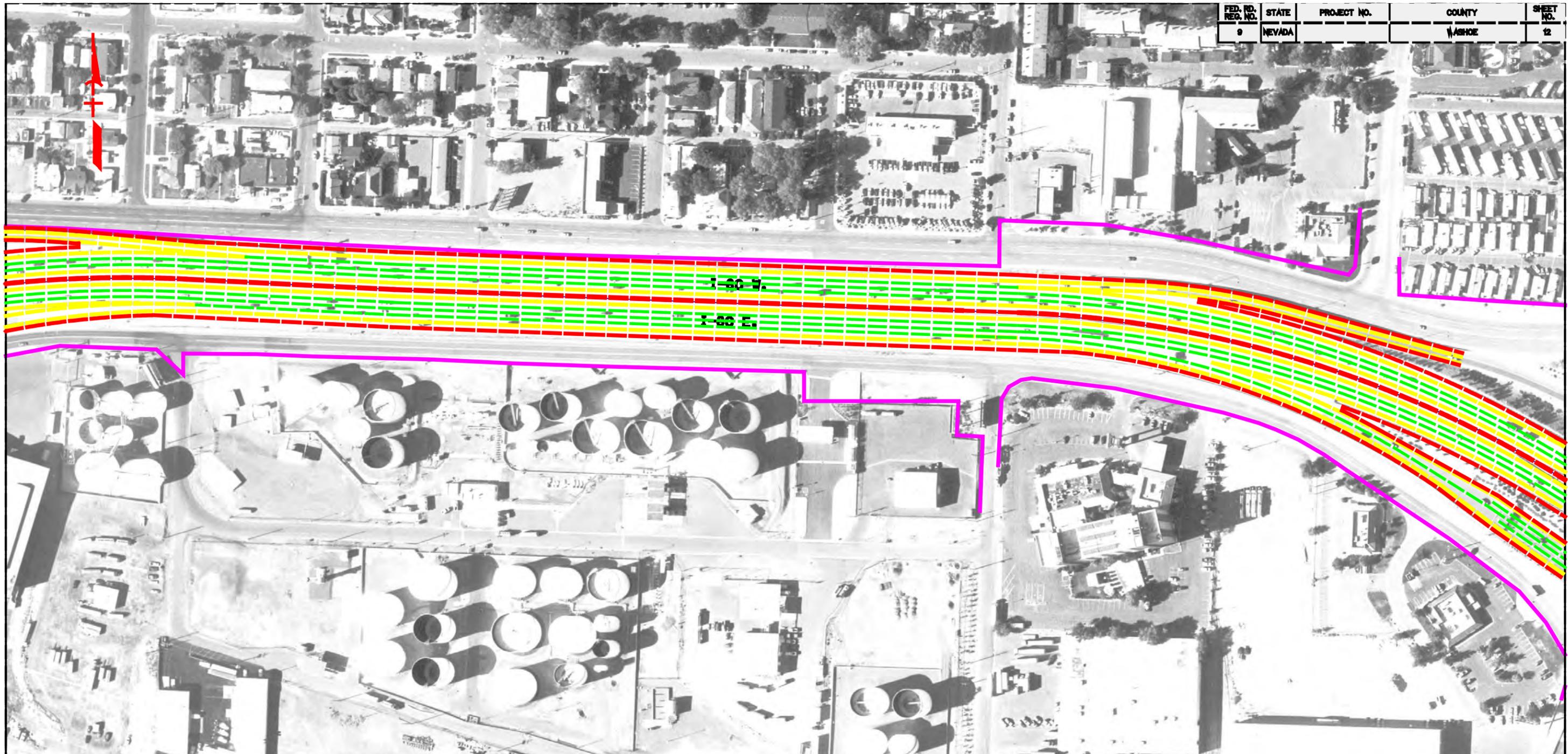
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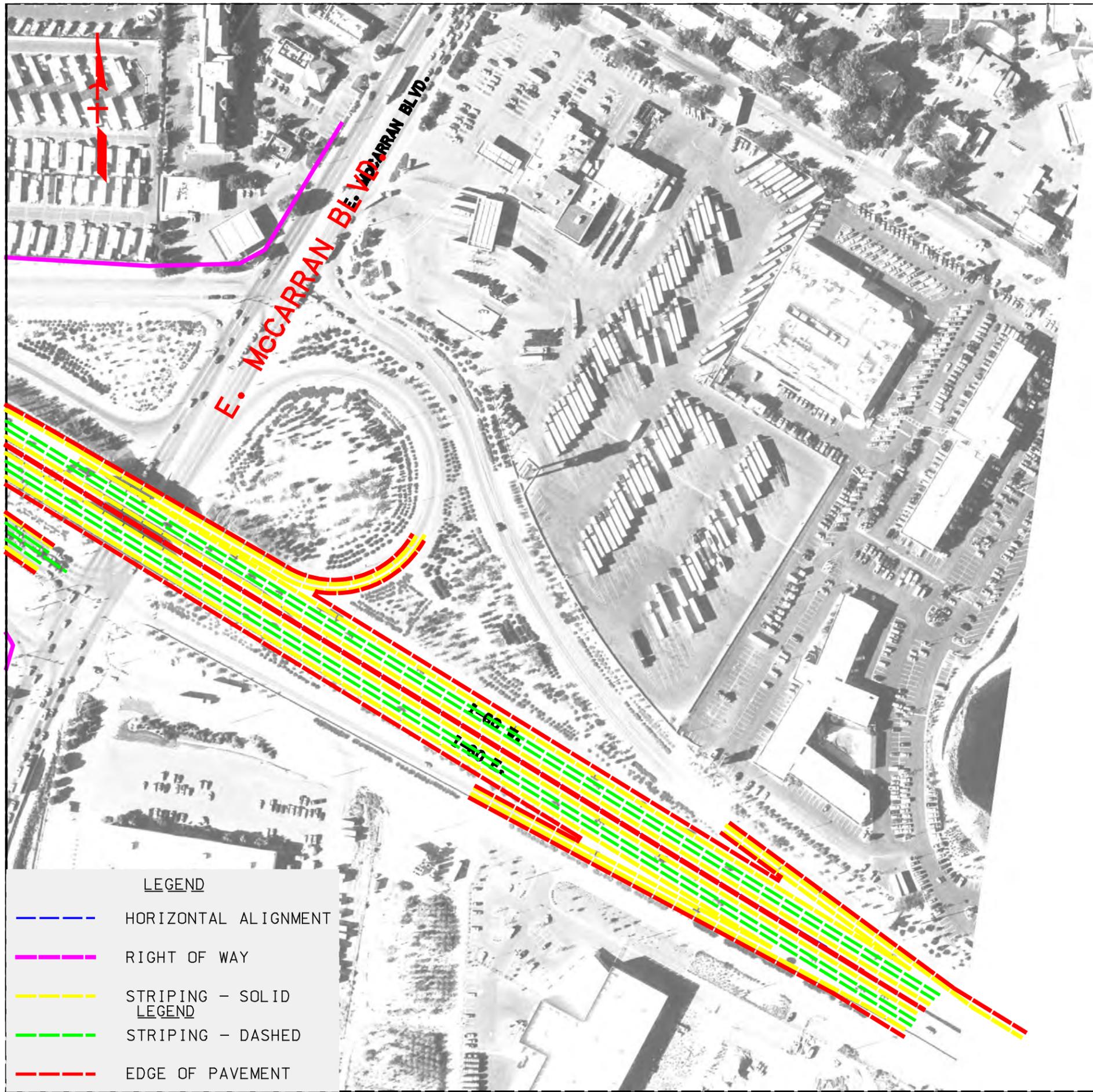
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	STRIPING - SOLID
	STRIPING - DASHED
	EDGE OF PAVEMENT

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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	13



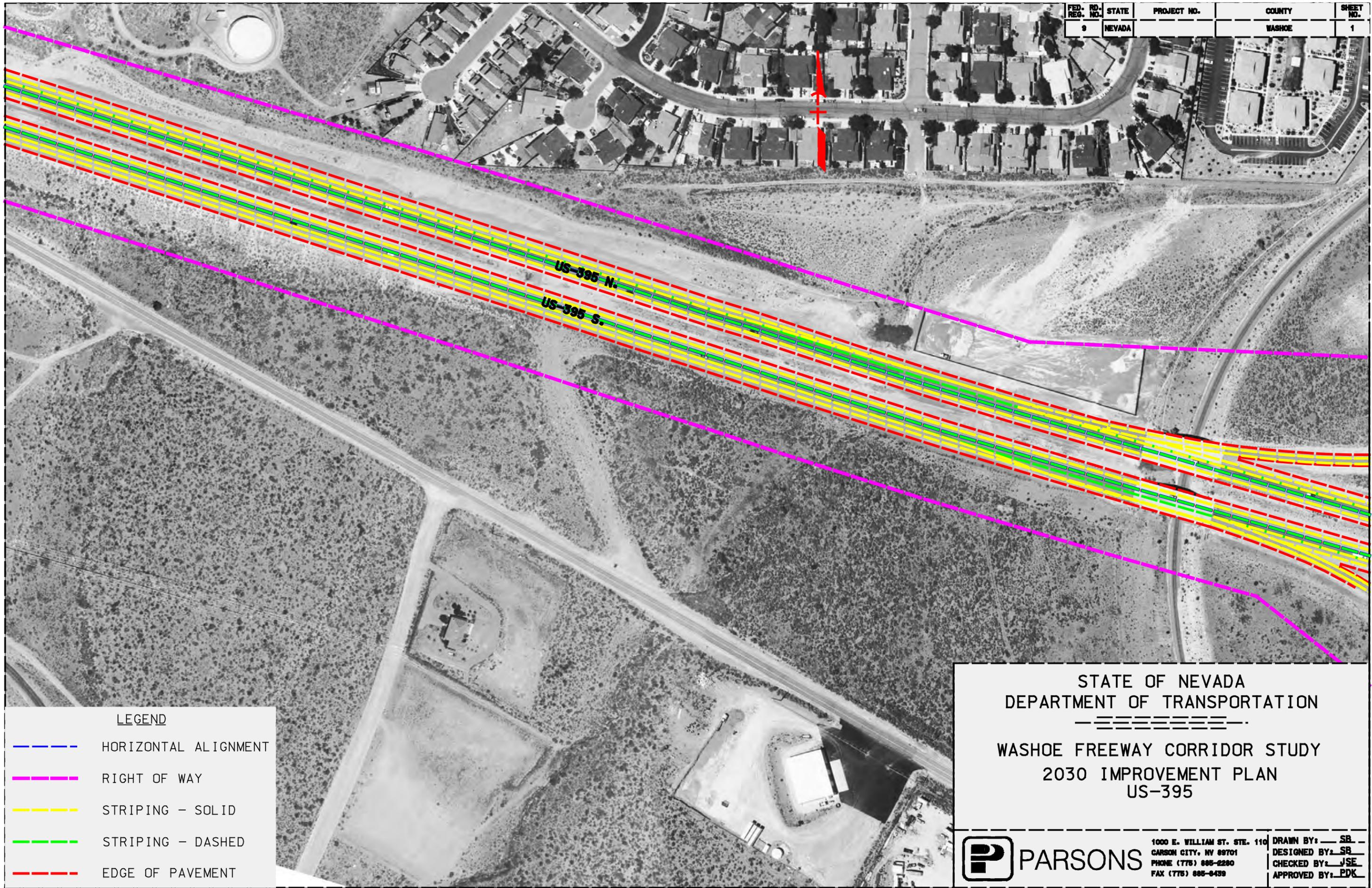
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	RIGHT OF WAY
	STRIPING - SOLID
	STRIPING - DASHED
	EDGE OF PAVEMENT

STATE OF NEVADA
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2030 IMPROVEMENT PLAN
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LEGEND

- — — — — HORIZONTAL ALIGNMENT
- — — — — RIGHT OF WAY
- — — — — STRIPING - SOLID
- — — — — STRIPING - DASHED
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STATE OF NEVADA
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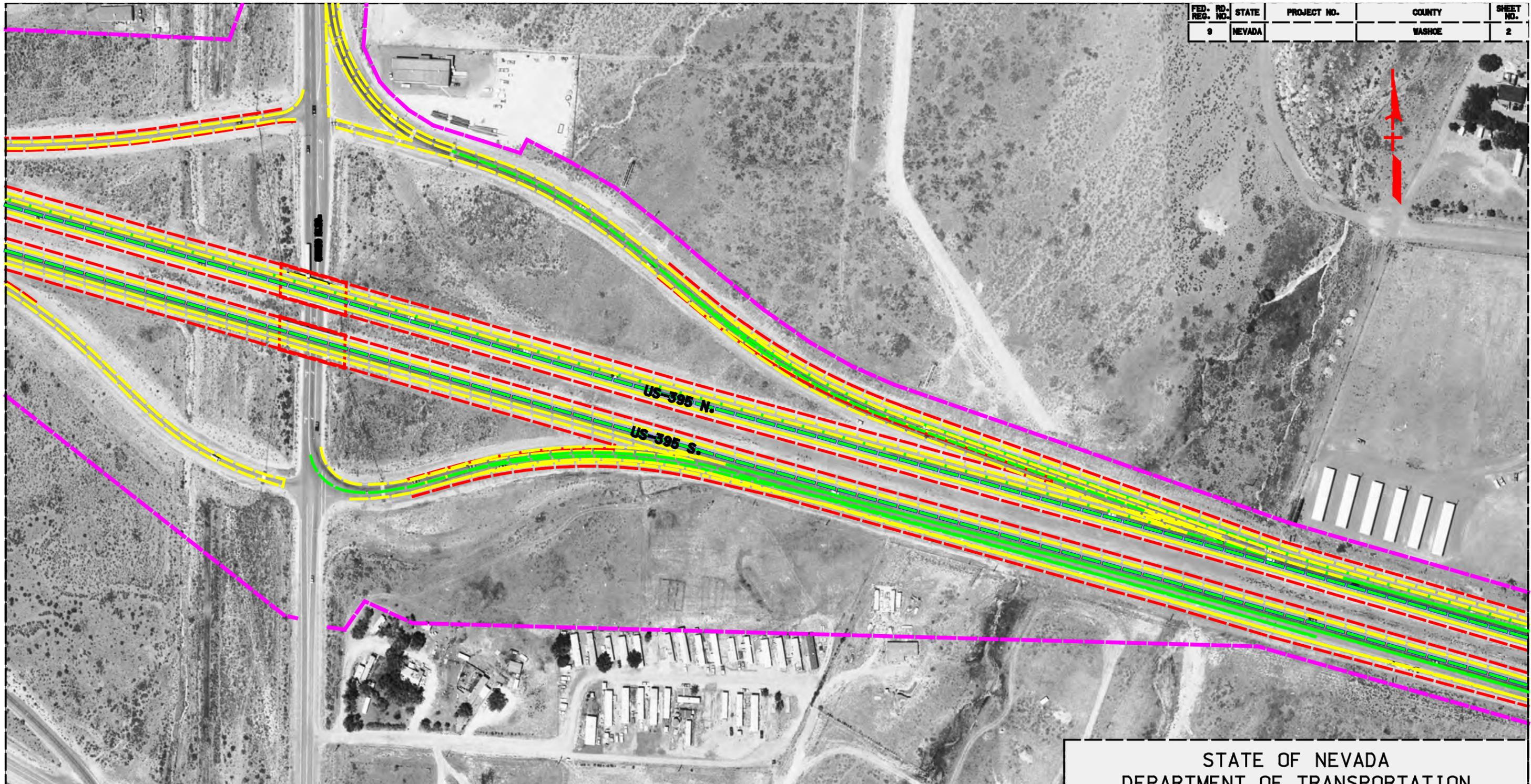
WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US-395



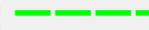
1000 E. WILLIAM ST. STE. 110
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FAX (775) 885-8439

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9	NEVADA		WASHOE	2



LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

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2030 IMPROVEMENT PLAN
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US-395 N.
US-395 S.

LEGEND

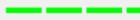
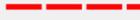
- HORIZONTAL ALIGNMENT
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- STRIPING - SOLID
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- EDGE OF PAVEMENT

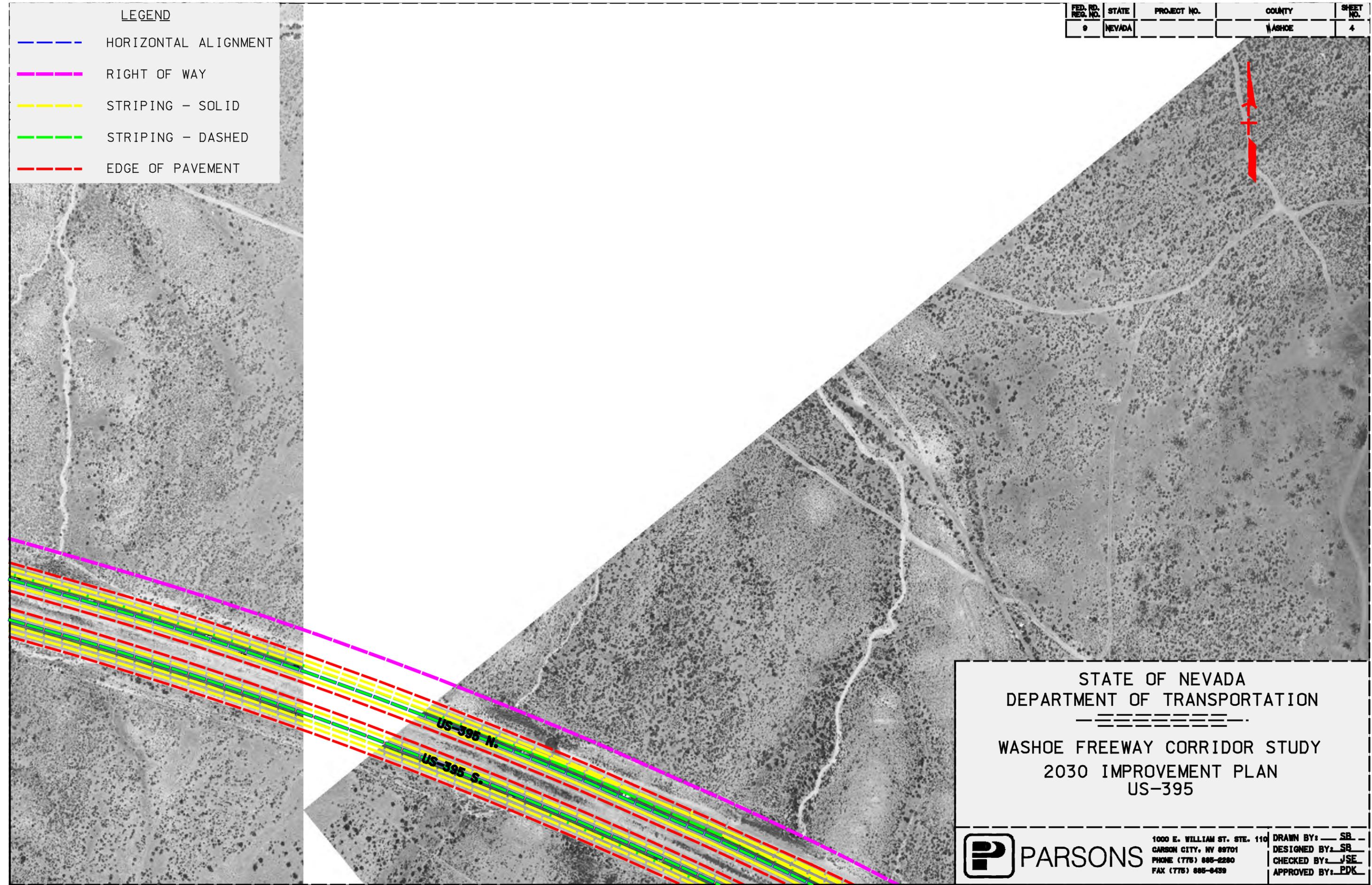
STATE OF NEVADA
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2030 IMPROVEMENT PLAN
US-395

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		DESIGNED BY: <u>SB</u>
		CHECKED BY: <u>JSE</u>
		APPROVED BY: <u>PDK</u>

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	4

LEGEND	
	HORIZONTAL ALIGNMENT
	RIGHT OF WAY
	STRIPING - SOLID
	STRIPING - DASHED
	EDGE OF PAVEMENT



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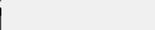
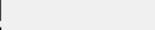
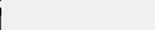
FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	5



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
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WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US-395

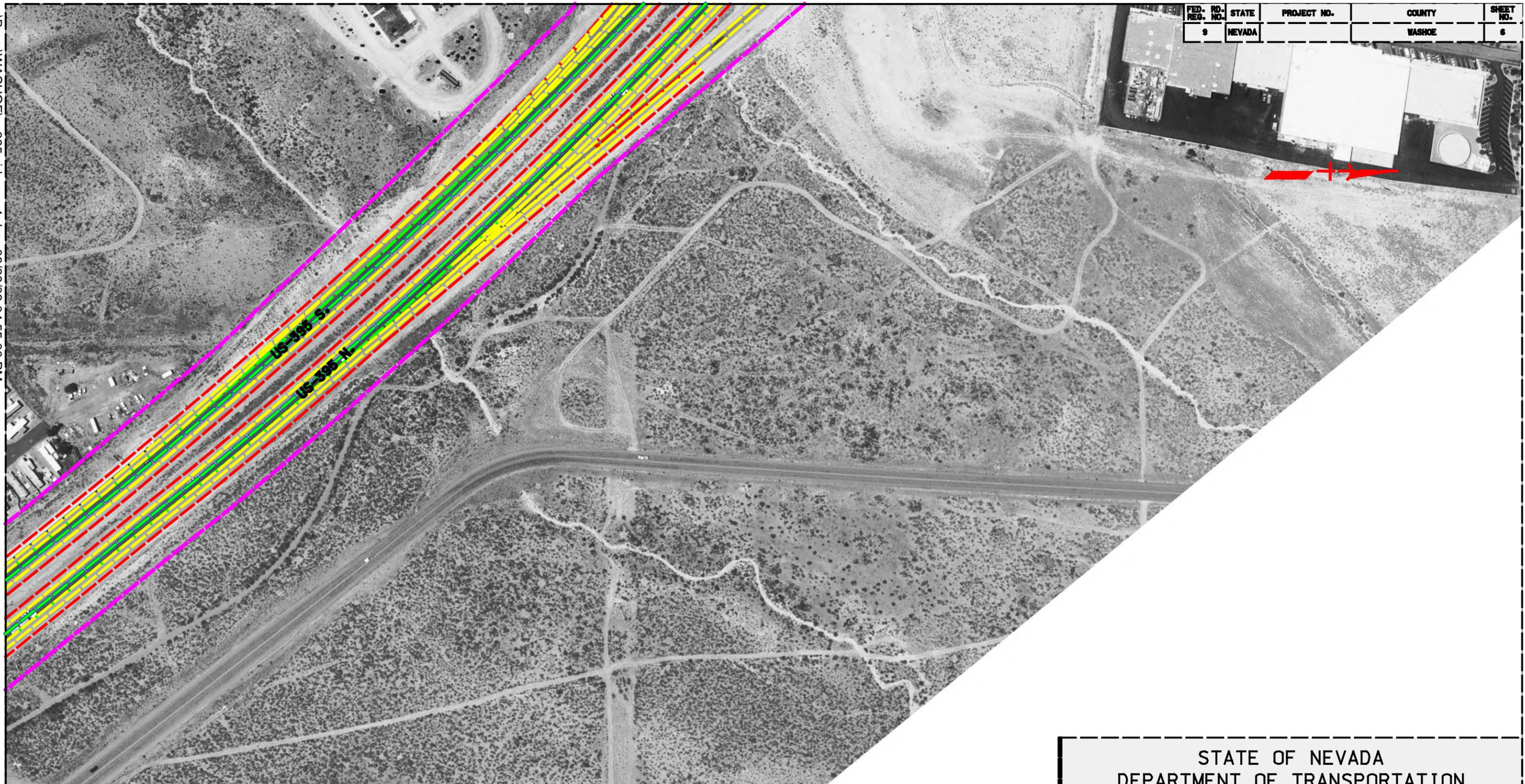
LEGEND

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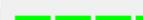
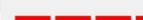
 PARSONS	1000 E. WILLIAM ST. STE. 110	DRAWN BY: <u>SB</u>
	CARSON CITY, NV 89701	DESIGNED BY: <u>SB</u>
	PHONE (775) 885-2280	CHECKED BY: <u>JSE</u>
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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	6



LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US-395



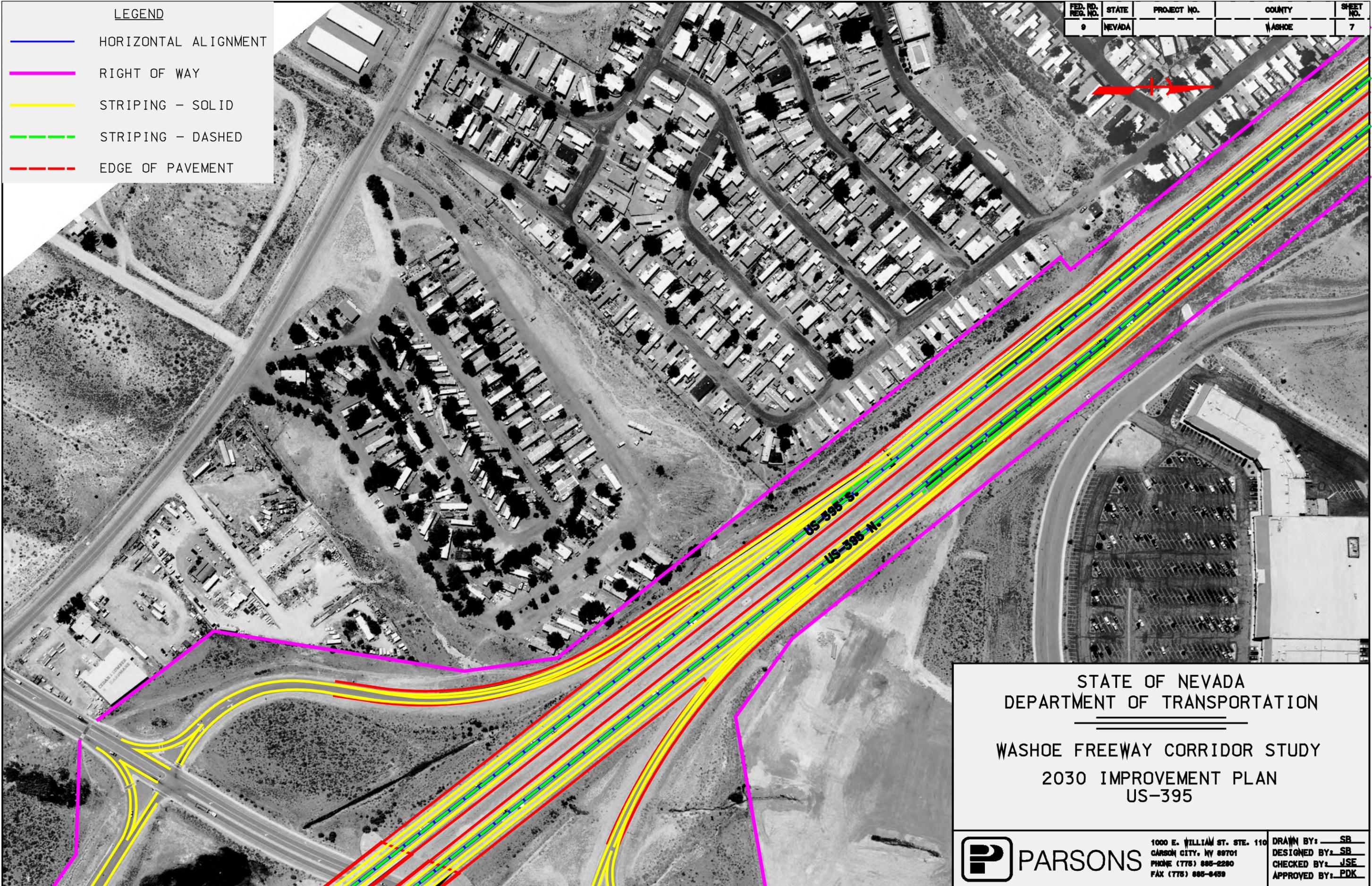
1000 E. WILLIAM ST. STE. 110
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PHONE (775) 885-2200
FAX (775) 885-8439

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APPROVED BY: PDK

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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	7

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	EDGE OF PAVEMENT



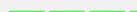
STATE OF NEVADA
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WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
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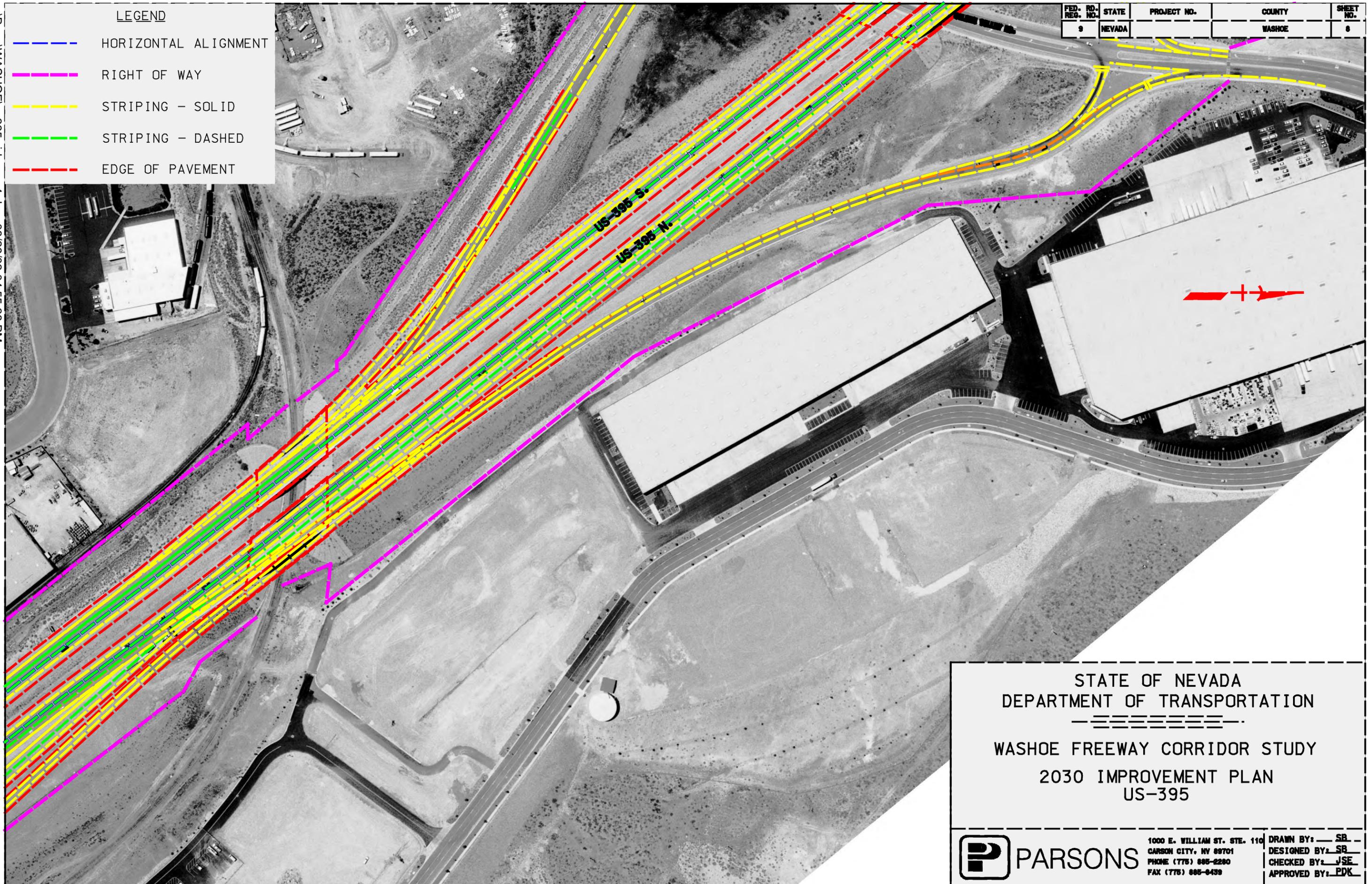
	1000 E. WILLIAM ST. STE. 110	DRAWN BY: <u>SB</u>
	CARSON CITY, NV 89701	DESIGNED BY: <u>SB</u>
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LEGEND

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-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

FED. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	8



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 DEPARTMENT OF TRANSPORTATION
 =====
 WASHOE FREEWAY CORRIDOR STUDY
 2030 IMPROVEMENT PLAN
 US-395



1000 E. WILLIAM ST. STE. 110
 CARSON CITY, NV 89701
 PHONE (775) 885-2280
 FAX (775) 885-8439

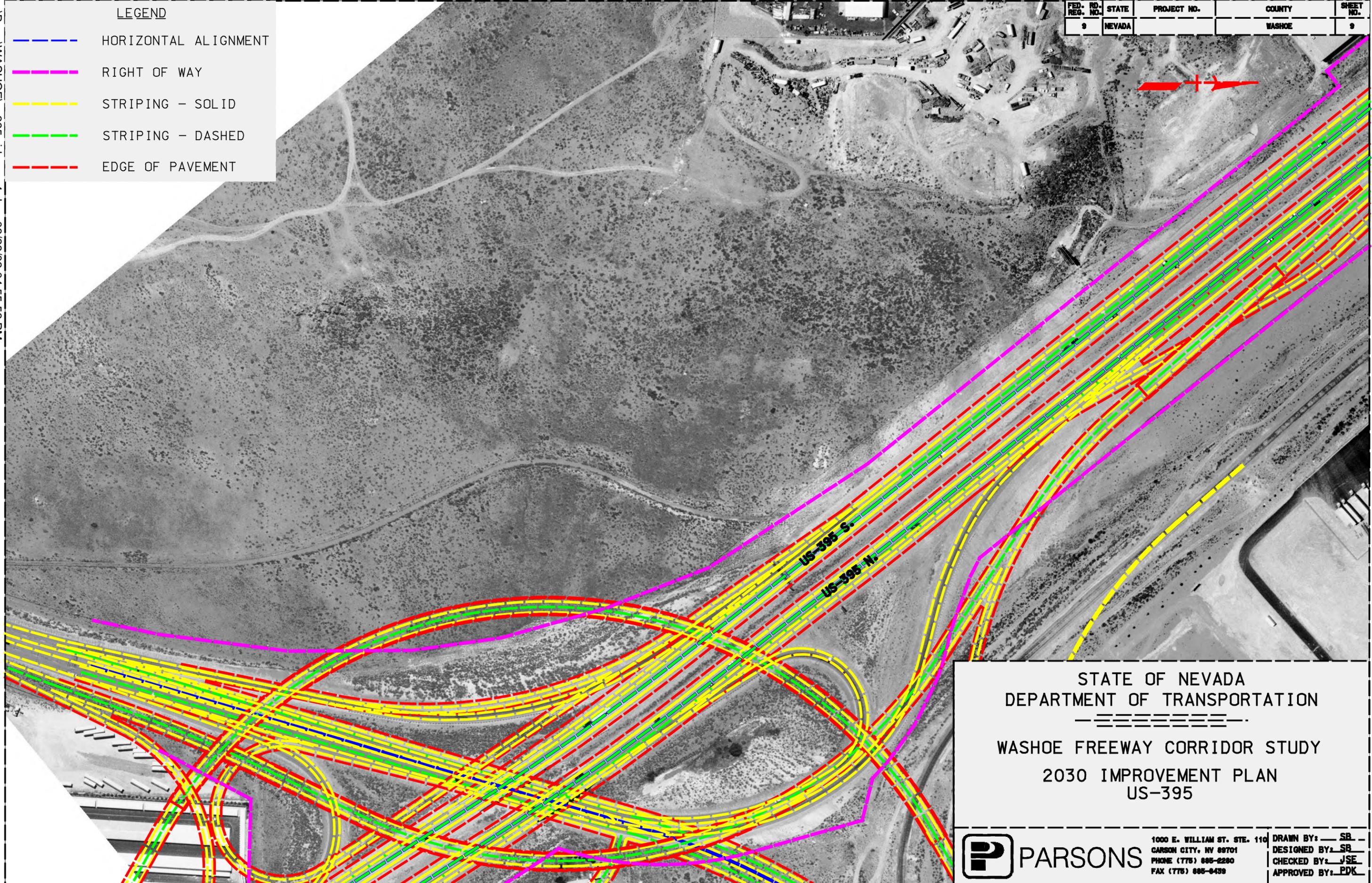
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 CHECKED BY: JSE
 APPROVED BY: PDK

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LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

FED. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	9



US-395 S.
US-395 N.

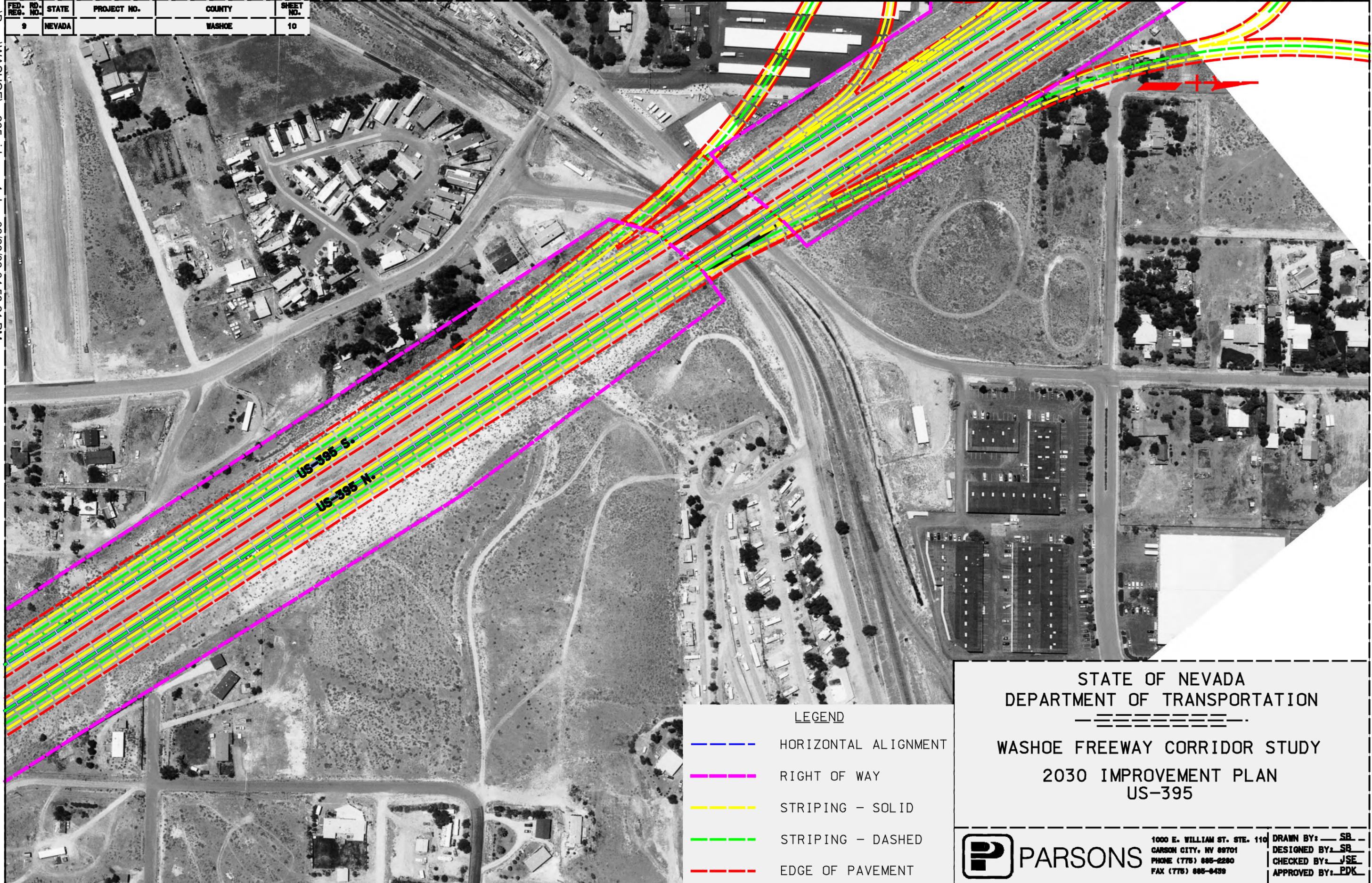
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
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WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US-395

	PARSONS	1000 E. WILLIAM ST. STE. 110	DRAWN BY: <u>SB</u>
		CARSON CITY, NV 89701	DESIGNED BY: <u>SR</u>
		PHONE (775) 885-2280	CHECKED BY: <u>JSE</u>
		FAX (775) 885-8439	APPROVED BY: <u>PDK</u>

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FED. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	10



LEGEND

	HORIZONTAL ALIGNMENT
	RIGHT OF WAY
	STRIPING - SOLID
	STRIPING - DASHED
	EDGE OF PAVEMENT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US-395

PARSONS

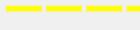
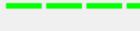
1000 E. WILLIAM ST. STE. 110 CARSON CITY, NV 89701
PHONE (775) 885-2200 FAX (775) 885-8439

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APPROVED BY: PDK

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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	11

LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT



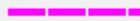
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
— — — — —
WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US-395

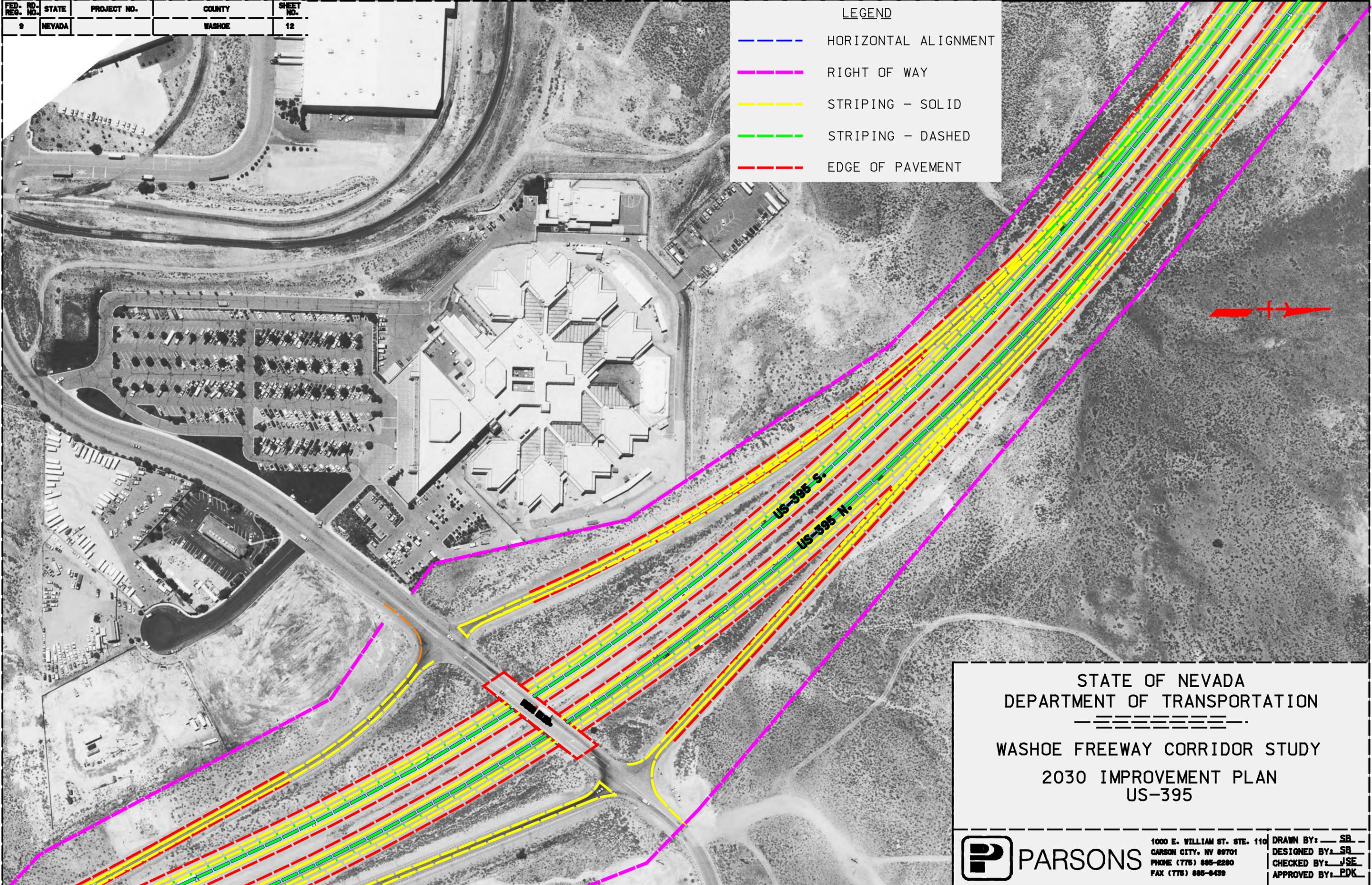
 PARSONS	1000 E. WILLIAM ST. STE. 110 CARSON CITY, NV 89701 PHONE (775) 885-2200 FAX (775) 885-6439	DRAWN BY: <u>SB</u> DESIGNED BY: <u>SB</u> CHECKED BY: <u>JSE</u> APPROVED BY: <u>PDK</u>
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FED. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	12

LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT



STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
 ————
 WASHOE FREEWAY CORRIDOR STUDY
 2030 IMPROVEMENT PLAN
 US-395

 **PARSONS**

1000 E. WILLIAM ST. STE. 110 CARSON CITY, NV 89701
 PHONE (775) 885-2200 FAX (775) 885-6439

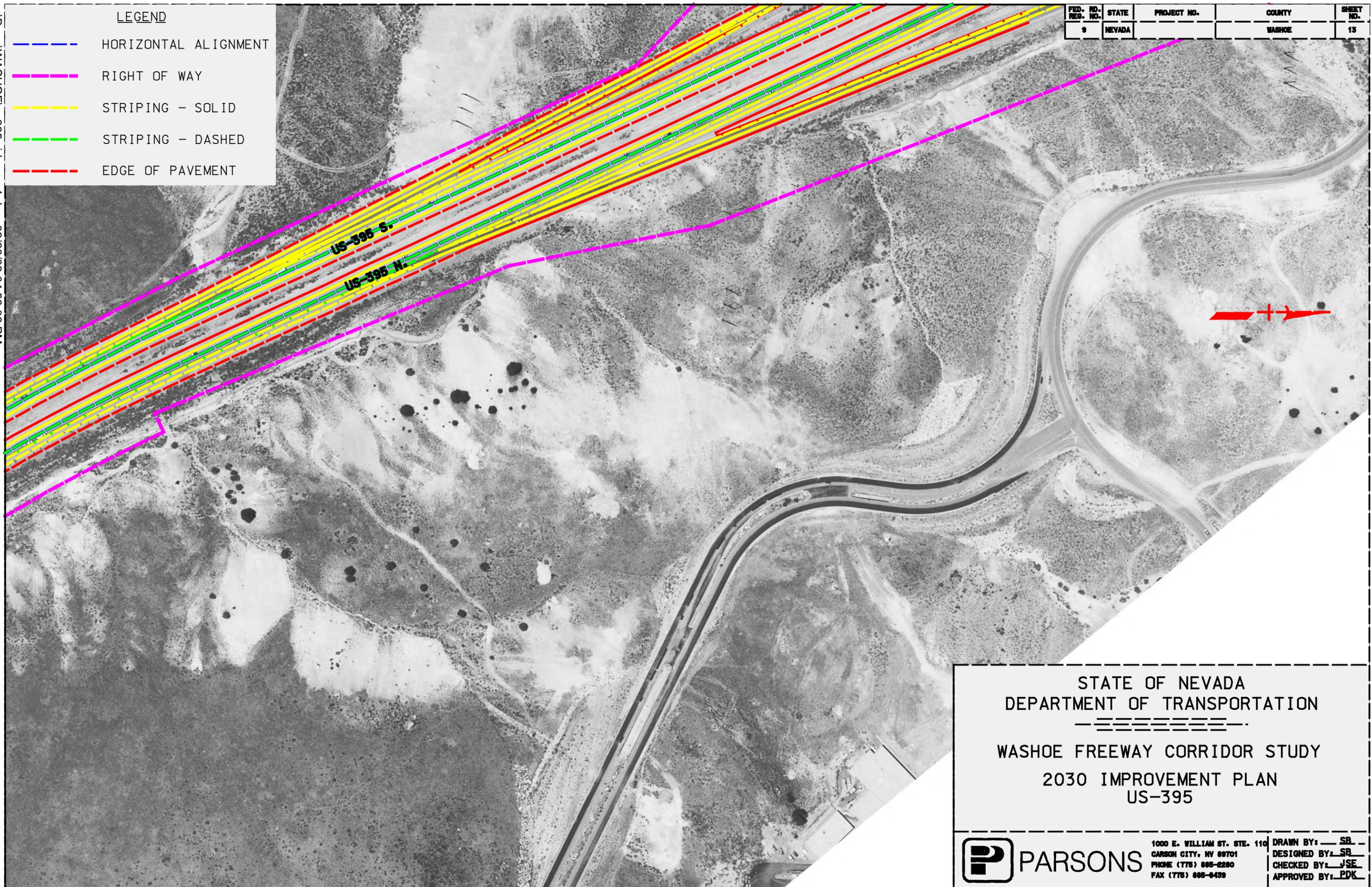
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LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

FED. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	13



STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
 ————
 WASHOE FREEWAY CORRIDOR STUDY
 2030 IMPROVEMENT PLAN
 US-395

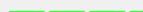


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LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	14



STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION

WASHOE FREEWAY CORRIDOR STUDY
 2030 IMPROVEMENT PLAN
 US-395



1000 E. WILLIAM ST. STE. 110
 CARSON CITY, NV 89701
 PHONE (775) 885-2200
 FAX (775) 885-8439

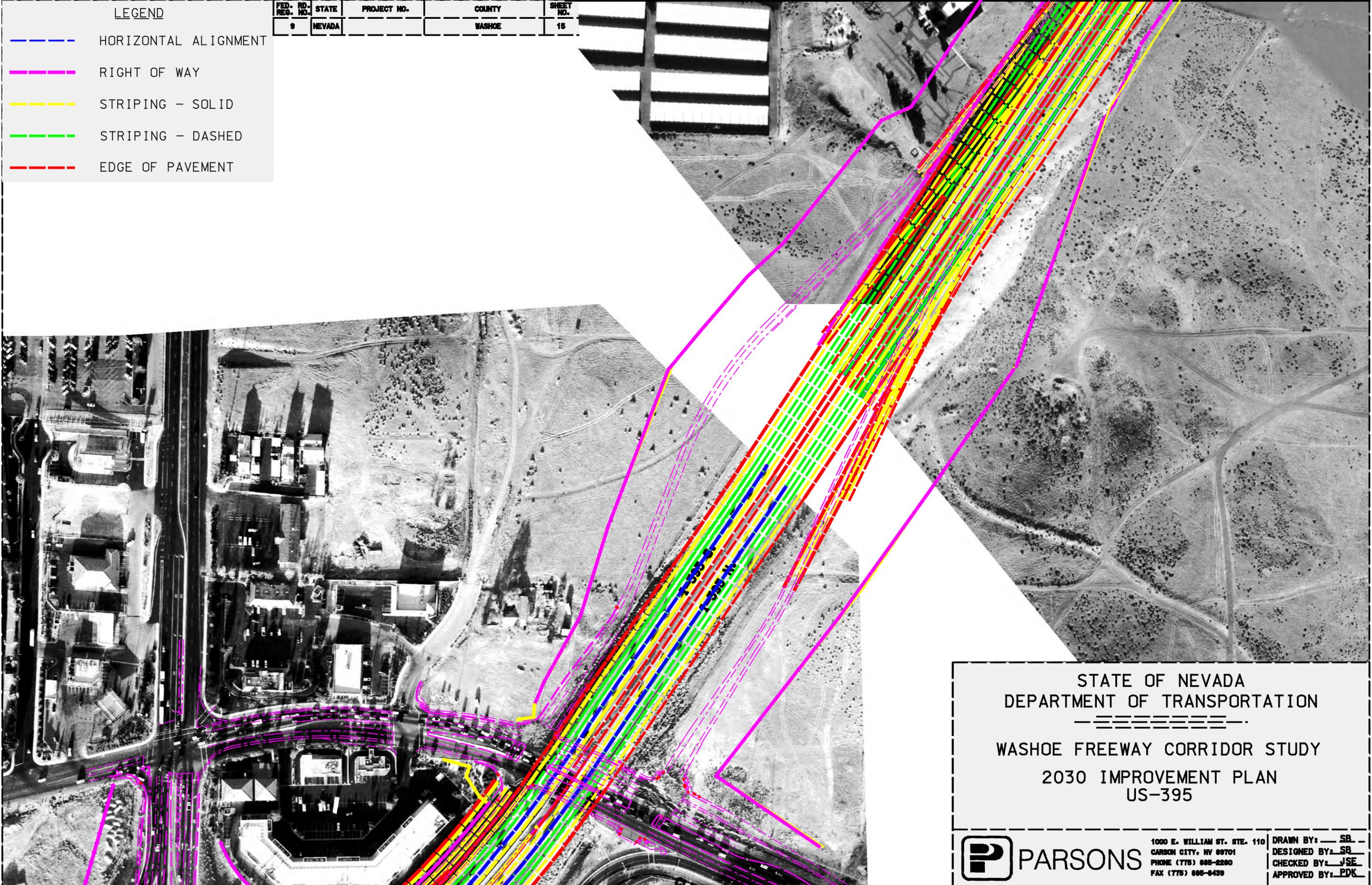
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LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	15



STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
 ————
 WASHOE FREEWAY CORRIDOR STUDY
 2030 IMPROVEMENT PLAN
 US-395

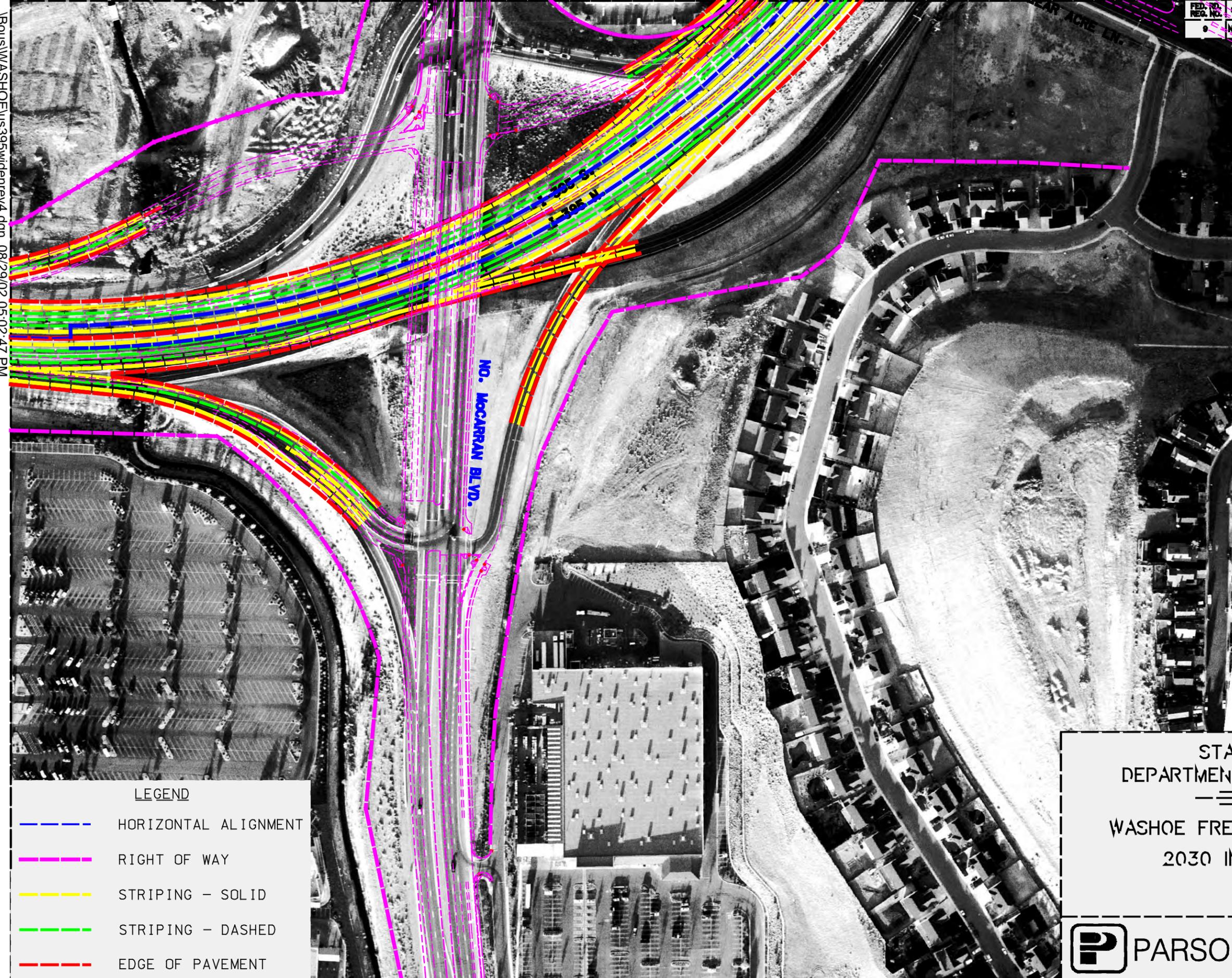


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 FAX (775) 885-8439

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 APPROVED BY: PDK

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FED. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	16



LEGEND

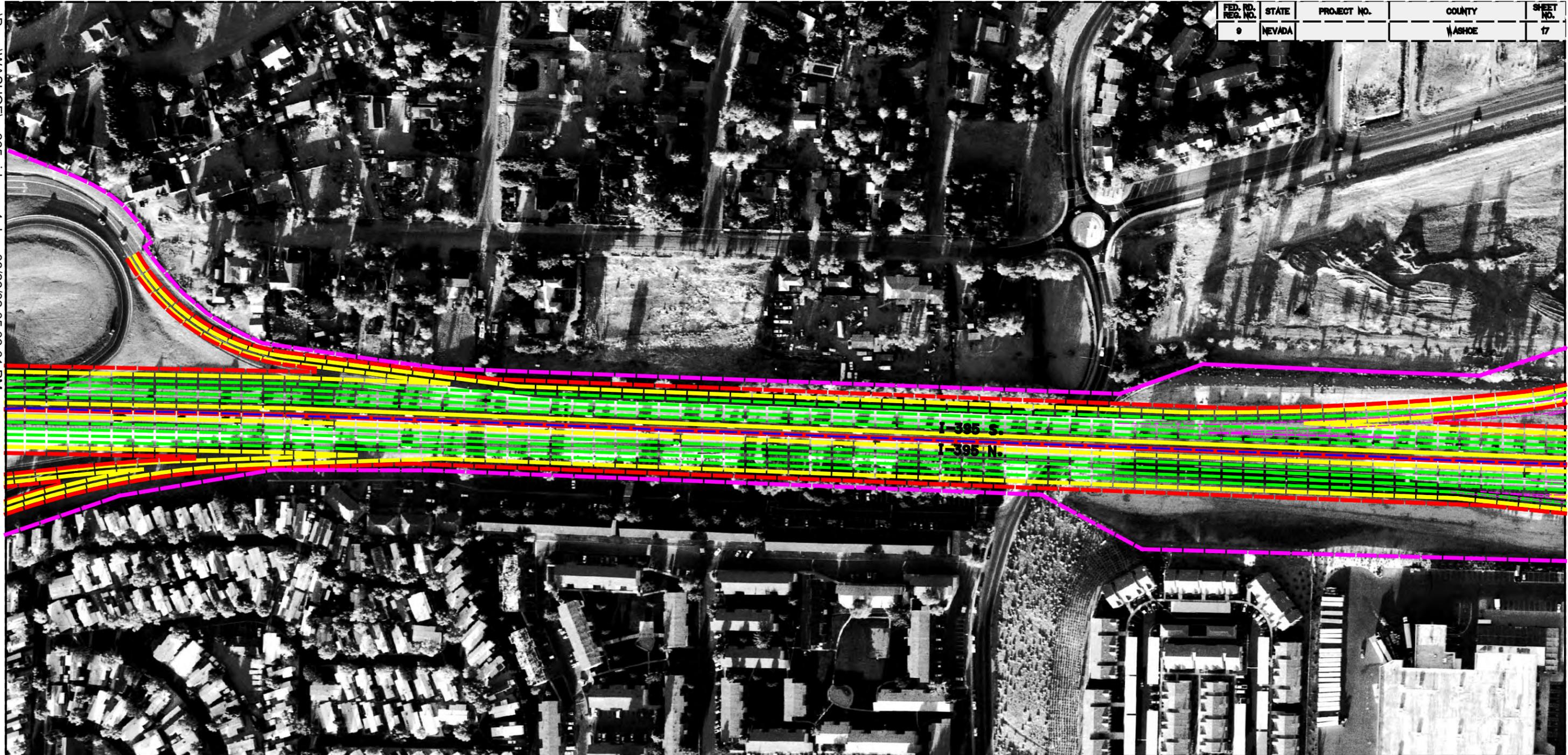
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- — — — — STRIPING - SOLID
- - - - - STRIPING - DASHED
- - - - - EDGE OF PAVEMENT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
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WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US-395

PARSONS	1000 E. WILLIAM ST. STE. 110 CARSON CITY, NV 89701 PHONE (775) 885-2280 FAX (775) 885-8439	DRAWN BY: <u>SB</u> DESIGNED BY: <u>SB</u> CHECKED BY: <u>JSE</u> APPROVED BY: <u>PDK</u>
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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	17

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I-395 S.
I-395 N.

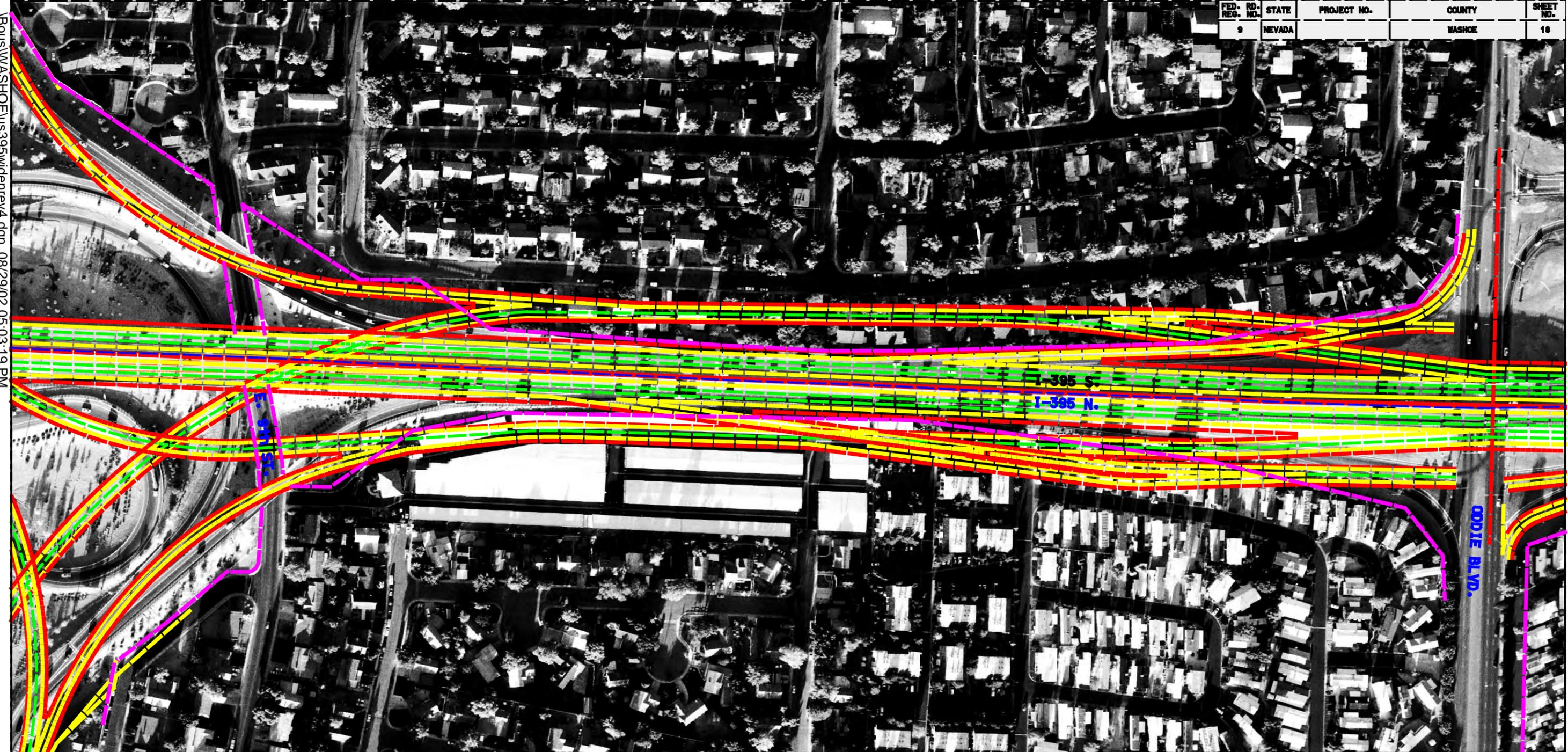
LEGEND	
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	RIGHT OF WAY
	STRIPING - SOLID
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	EDGE OF PAVEMENT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
— — — — —
WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US-395

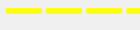
	1000 E. WILLIAM ST. STE. 110 CARSON CITY, NV 89701 PHONE (775) 885-2280 FAX (775) 885-8439	DRAWN BY: <u>SB</u> DESIGNED BY: <u>SB</u> CHECKED BY: <u>JSE</u> APPROVED BY: <u>PDK</u>
	PARSONS	

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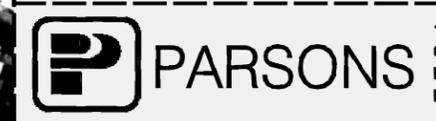
FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	18



LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
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 WASHOE FREEWAY CORRIDOR STUDY
 2030 IMPROVEMENT PLAN
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STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

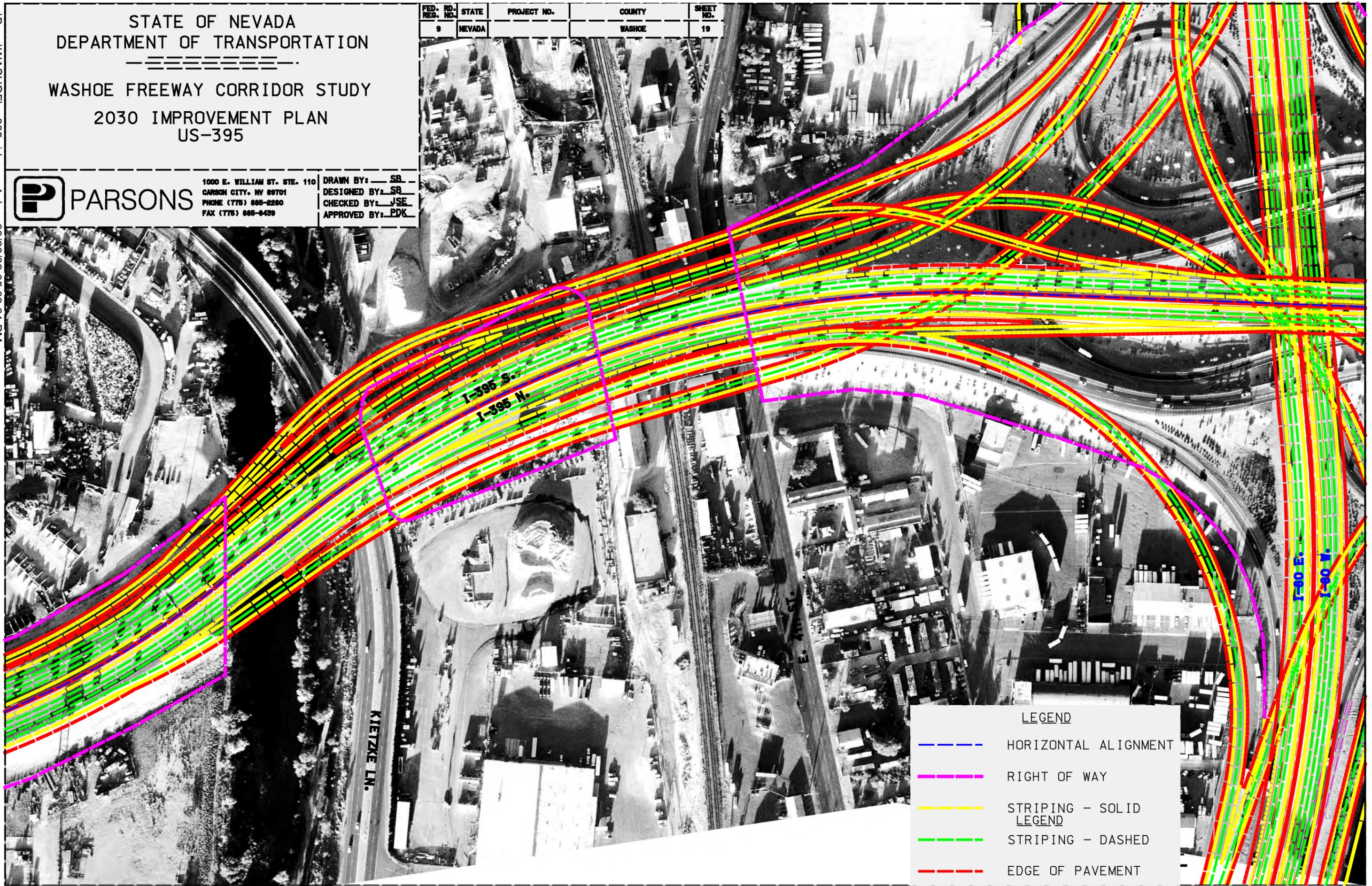
WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US-395

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	19



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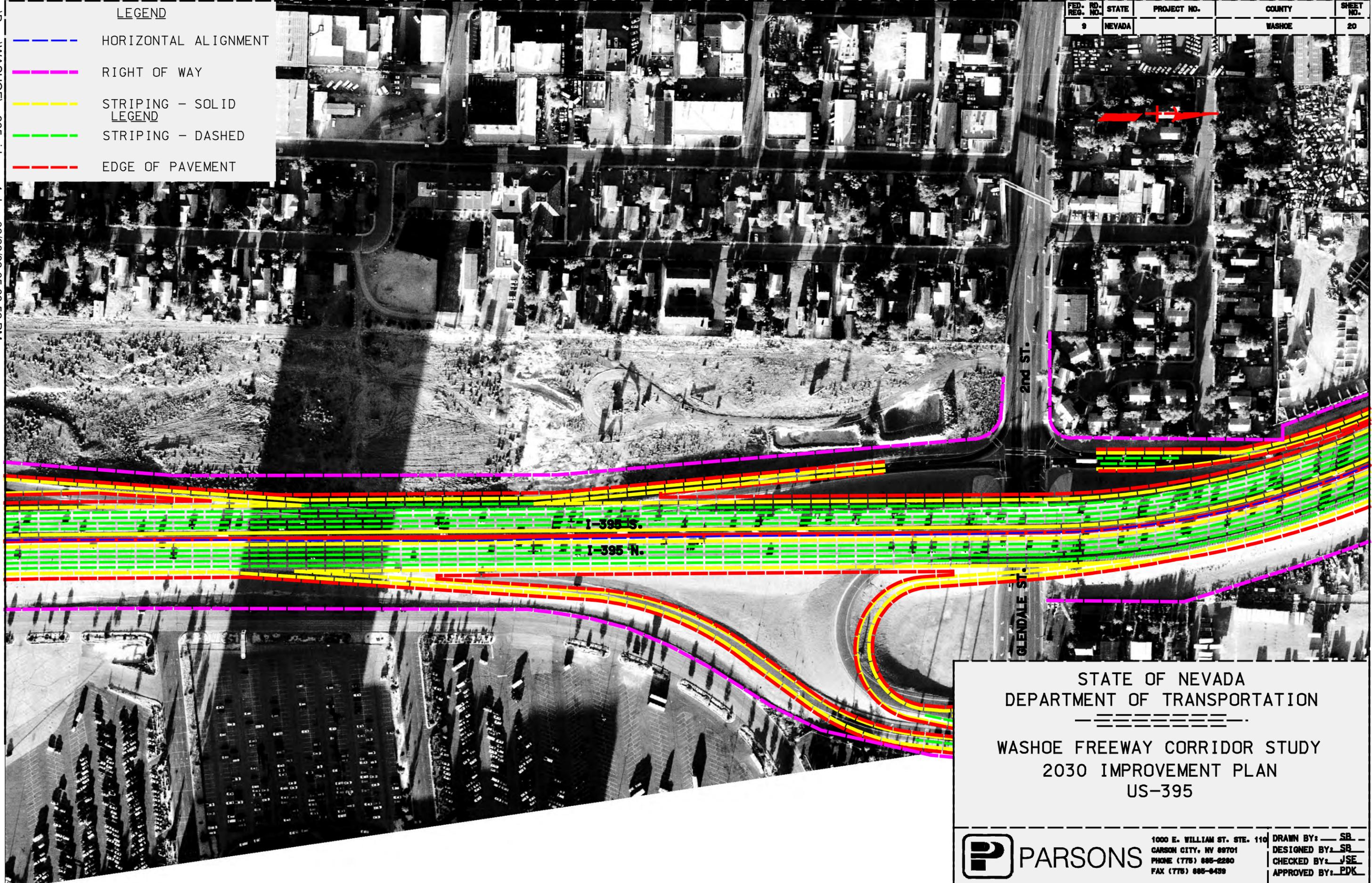
LEGEND	
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	RIGHT OF WAY
	STRIPING - SOLID
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	EDGE OF PAVEMENT

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LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	20



STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
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 WASHOE FREEWAY CORRIDOR STUDY
 2030 IMPROVEMENT PLAN
 US-395



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LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	21

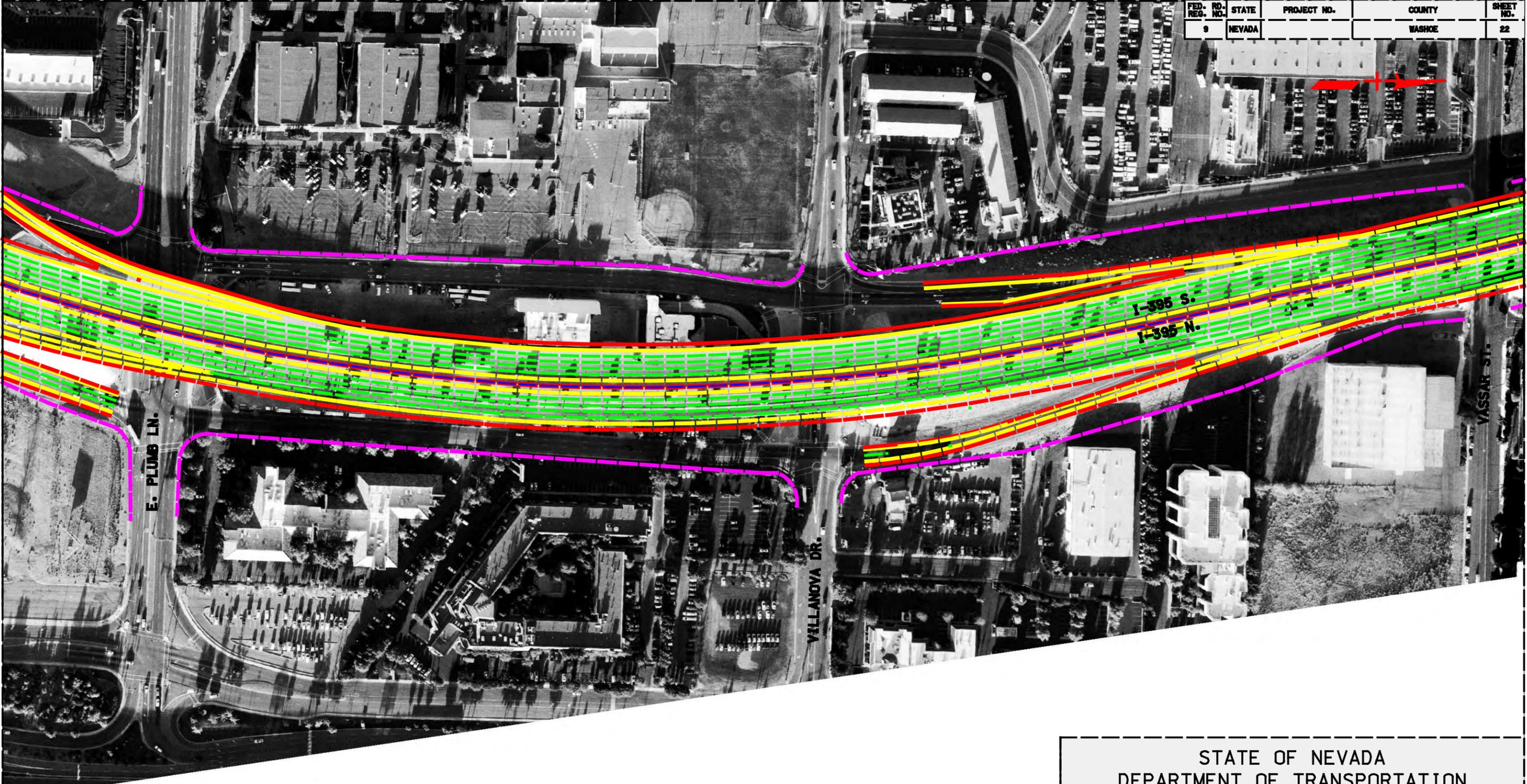


STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
 ————
 WASHOE FREEWAY CORRIDOR STUDY
 2030 IMPROVEMENT PLAN
 US 395

	1000 E. WILLIAM ST. STE. 110	DRAWN BY: <u>SB</u>
	CARSON CITY, NV 89701	DESIGNED BY: <u>SB</u>
	PHONE (775) 885-2280	CHECKED BY: <u>JSE</u>
	FAX (775) 885-8439	APPROVED BY: <u>PDK</u>

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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	22



LEGEND	
	HORIZONTAL ALIGNMENT
	RIGHT OF WAY
	STRIPING - SOLID
	STRIPING - DASHED
	EDGE OF PAVEMENT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

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WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US 395

	1000 E. WILLIAM ST. STE. 110 CARSON CITY, NV 89701 PHONE (775) 885-2200 FAX (775) 885-0439	DRAWN BY: <u>SB</u> DESIGNED BY: <u>SB</u> CHECKED BY: <u>JSE</u> APPROVED BY: <u>PDK</u>
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FED. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	23

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STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
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WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US 395

LEGEND	
	HORIZONTAL ALIGNMENT
	RIGHT OF WAY
	STRIPING - SOLID
	STRIPING - DASHED
	EDGE OF PAVEMENT



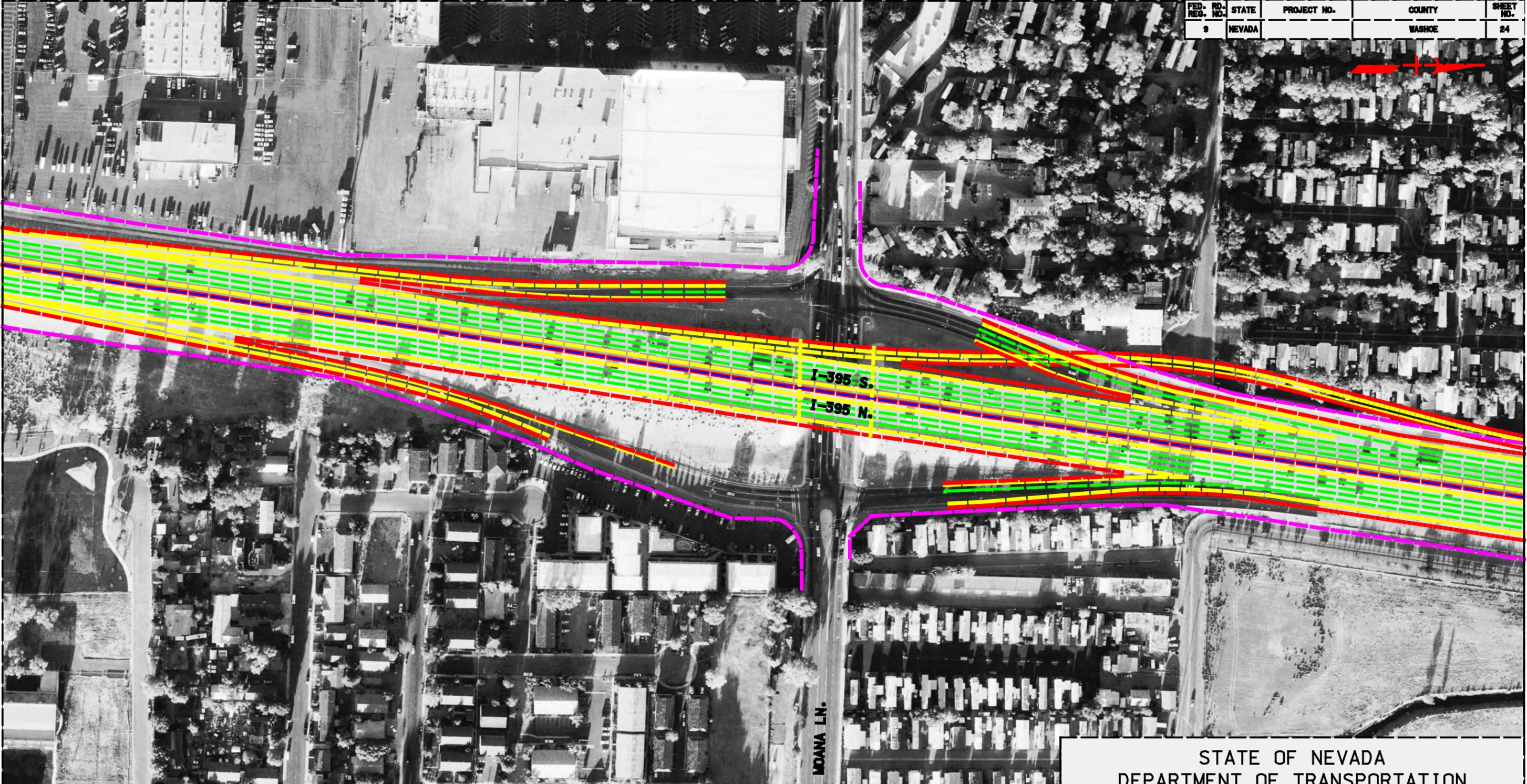
1000 E. WILLIAM ST. STE. 110
CARSON CITY, NV 89701
PHONE (775) 885-2280
FAX (775) 885-0439

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APPROVED BY: PDK

FED. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	24



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LEGEND	
	HORIZONTAL ALIGNMENT
	RIGHT OF WAY
	STRIPING - SOLID
	STRIPING - DASHED
	EDGE OF PAVEMENT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

— — — — —

WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US 395



PARSONS

1000 E. WILLIAM ST. STE. 110
CARSON CITY, NV 89701
PHONE (775) 885-2200
FAX (775) 885-0439

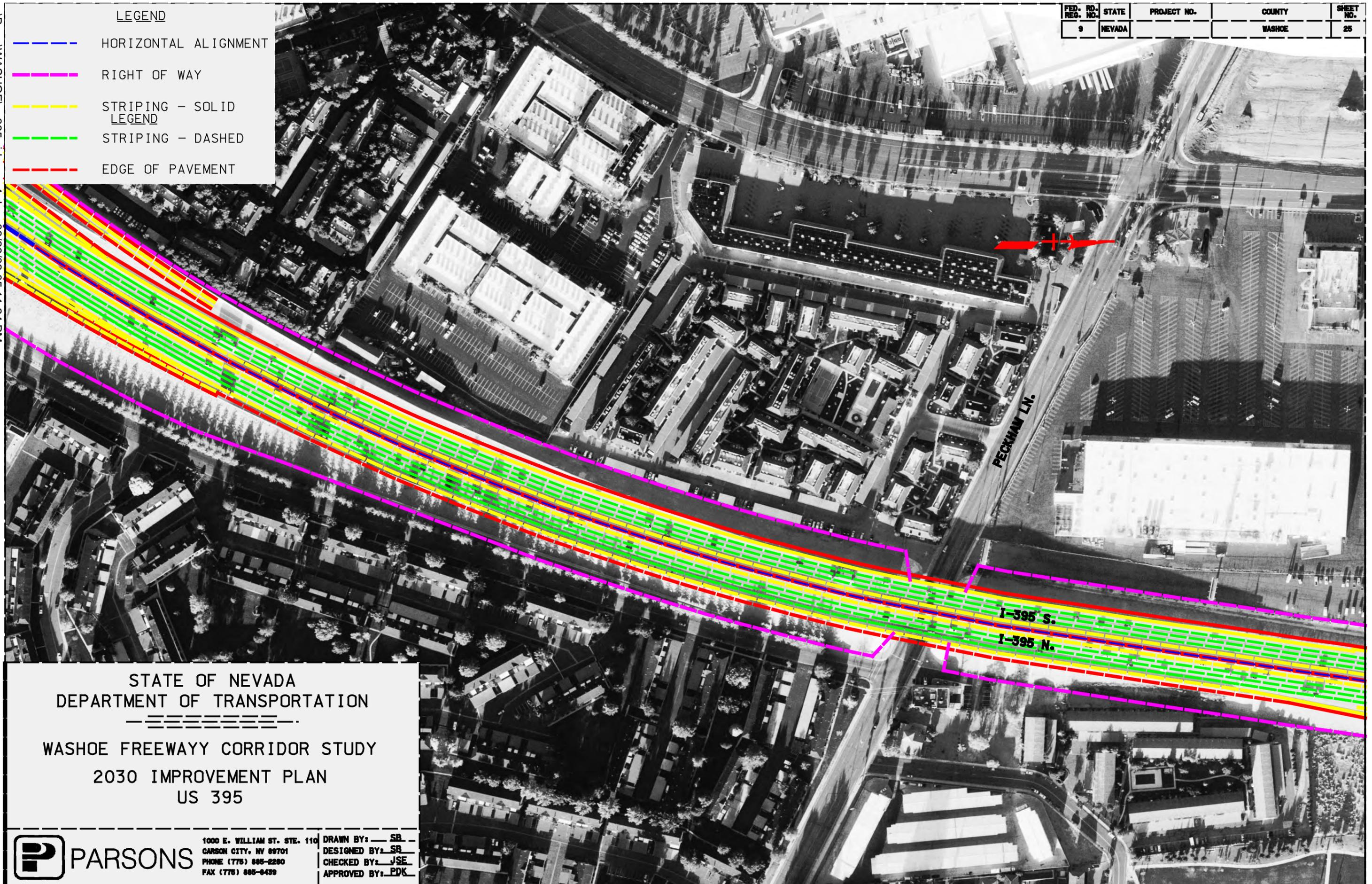
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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	25

LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

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I-395 S.
I-395 N.

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
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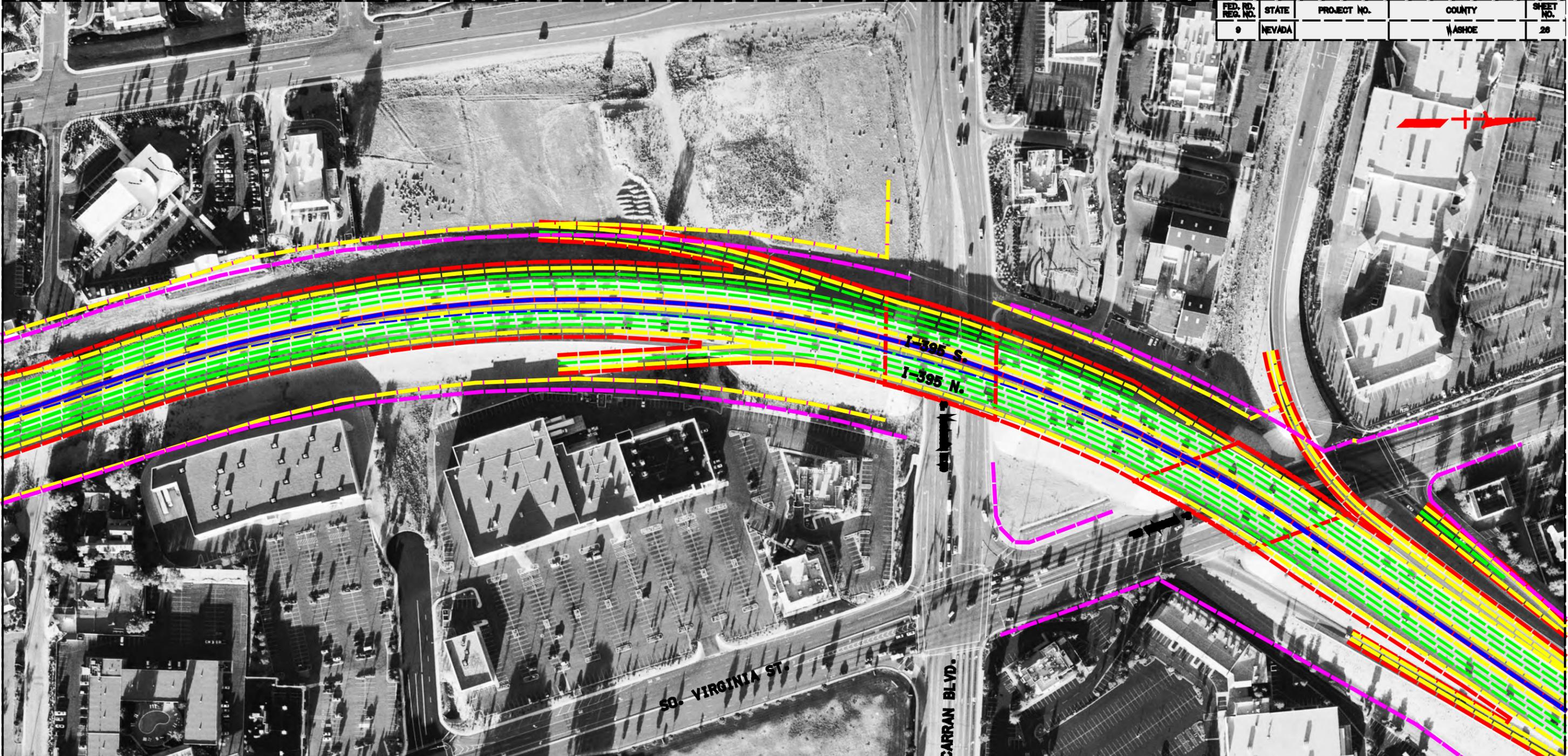
WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US 395

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1000 E. WILLIAM ST. STE. 110
CARSON CITY, NV 89701
PHONE (775) 885-2280
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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	26

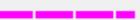
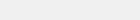
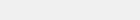
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STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
=====

WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US 395

LEGEND

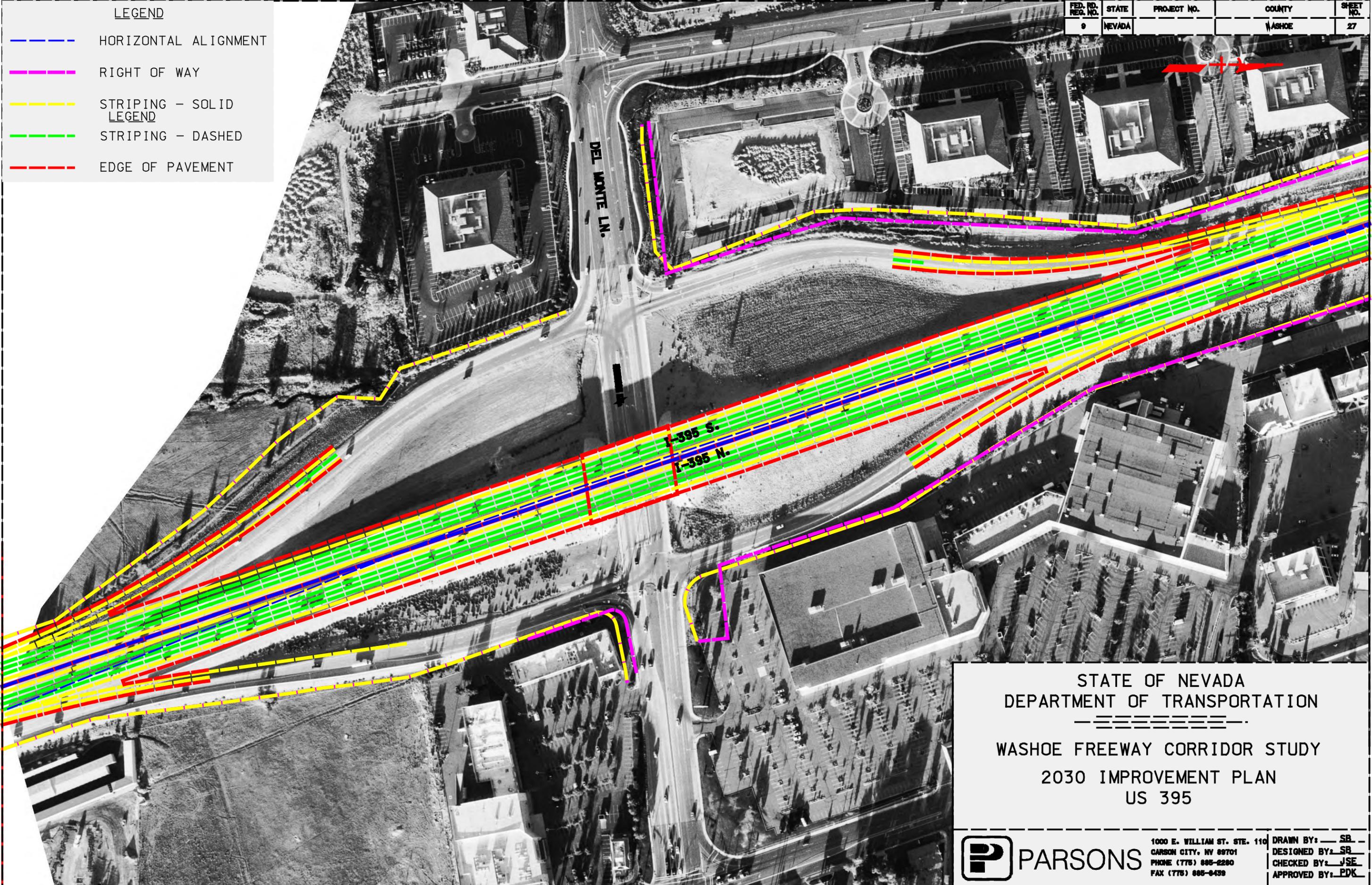
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	RIGHT OF WAY
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	STRIPING - DASHED
	EDGE OF PAVEMENT

 PARSONS	1000 E. WILLIAM ST. STE. 110	DRAWN BY: <u>SB</u>
	CARSON CITY, NV 89701	DESIGNED BY: <u>SB</u>
	PHONE (775) 885-2280	CHECKED BY: <u>JSE</u>
	FAX (775) 885-0439	APPROVED BY: <u>PK</u>

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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	27

- LEGEND**
-  HORIZONTAL ALIGNMENT
 -  RIGHT OF WAY
 -  STRIPING - SOLID
 -  STRIPING - DASHED
 -  EDGE OF PAVEMENT



STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
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 WASHOE FREEWAY CORRIDOR STUDY
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	PARSONS	1000 E. WILLIAM ST. STE. 110	DRAWN BY: <u>SB</u>
		CARSON CITY, NV 89701	DESIGNED BY: <u>SB</u>
		PHONE (775) 885-2280	CHECKED BY: <u>JSE</u>
		FAX (775) 885-6439	APPROVED BY: <u>PDK</u>

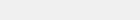
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9	NEVADA		WASHOE	28



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LEGEND

-  HORIZONTAL ALIGNMENT
-  LEGEND
-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
- STRIPING - SOLID
- STRIPING - DASHED

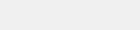
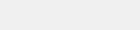
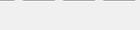
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

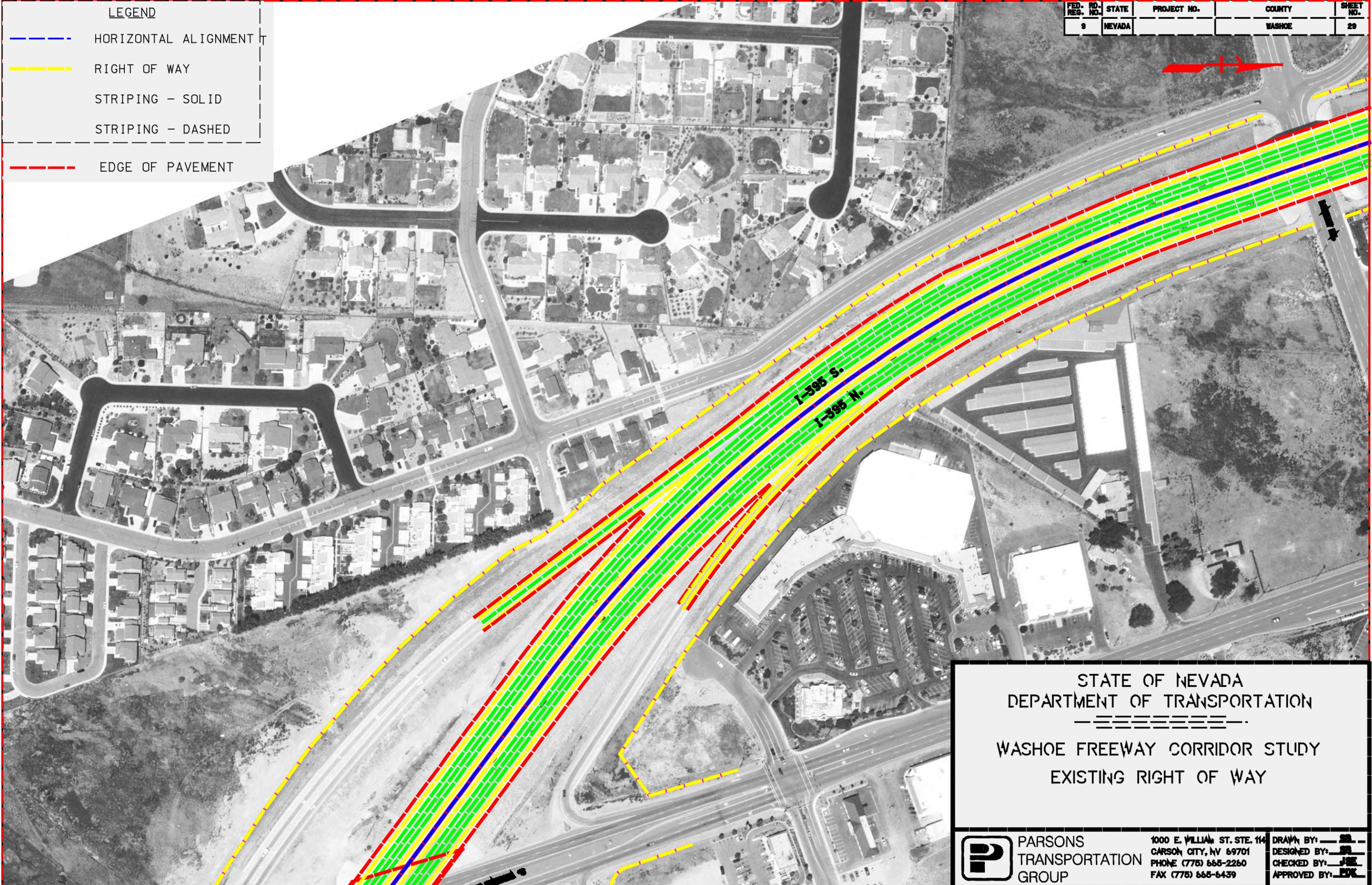
WASHOE FREEWAY CORRIDOR STUDY
EXISTING RIGHT OF WAY

 PARSONS TRANSPORTATION GROUP	1000 E. WILLIAM ST. STE. 114	DRAWN BY: <u>SA</u>
	CARSON CITY, NV 89701	DESIGNED BY: <u>SA</u>
	PHONE (775) 665-2260	CHECKED BY: <u>JSE</u>
	FAX (775) 665-6439	APPROVED BY: <u>PK</u>

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FED. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	29

LEGEND	
	HORIZONTAL ALIGNMENT
	RIGHT OF WAY
	STRIPING - SOLID
	STRIPING - DASHED
	EDGE OF PAVEMENT



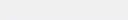
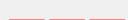
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
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WASHOE FREEWAY CORRIDOR STUDY
EXISTING RIGHT OF WAY

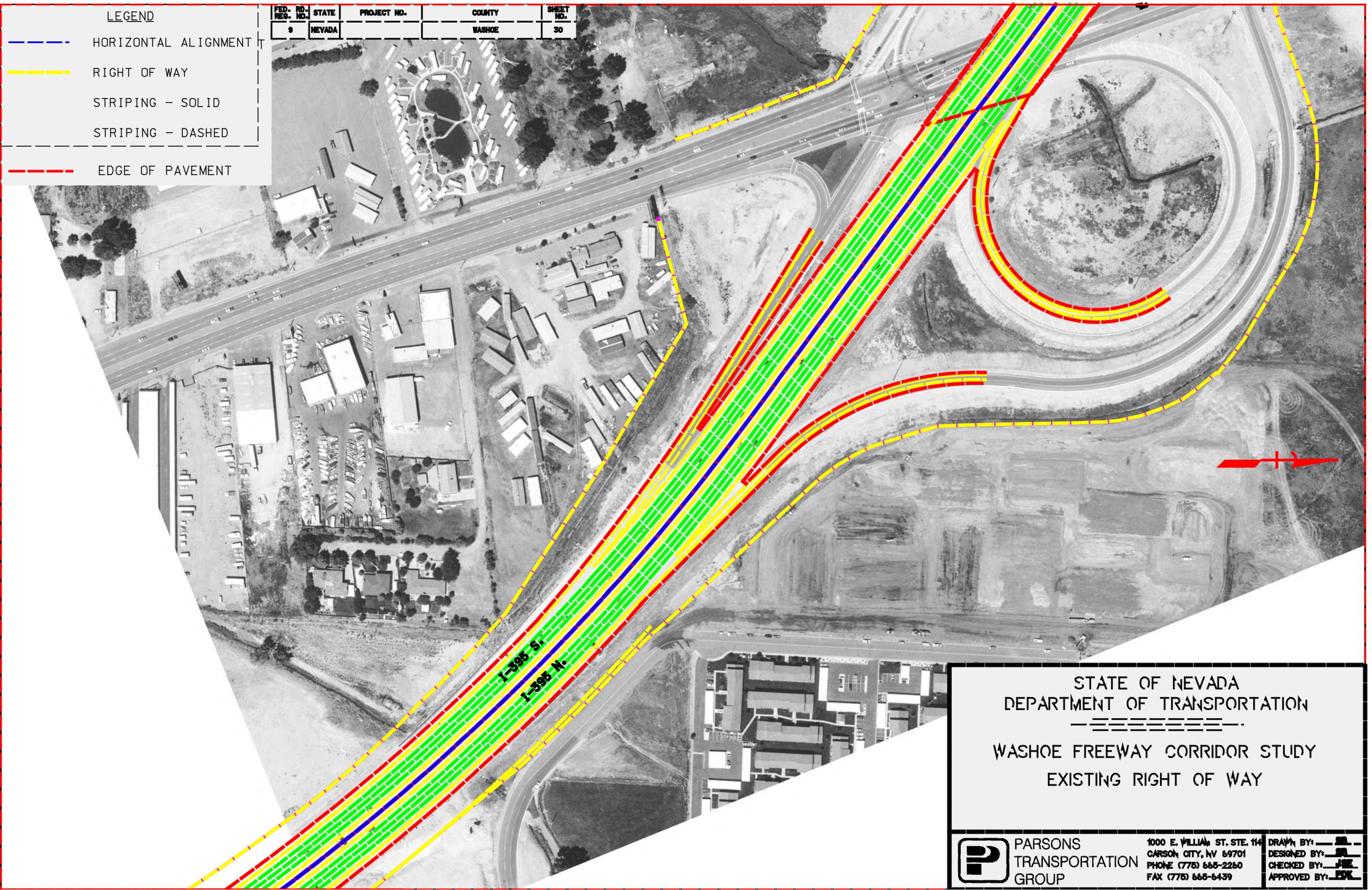
	PARSONS	1000 E. WILLIAM ST. STE. 114	DRAWN BY: <u>SA</u>
	TRANSPORTATION	CARSON CITY, NV 89701	DESIGNED BY: <u>SA</u>
	GROUP	PHONE (775) 665-2260	CHECKED BY: <u>JSE</u>
		FAX (775) 665-6439	APPROVED BY: <u>PKL</u>

...:\Bous\WASHOE\us395\widener\ev4.dgn 08/29/02 05:21:42 PM

LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
- STRIPING - SOLID
- STRIPING - DASHED
-  EDGE OF PAVEMENT

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	30



I-395 S.
I-395 N.

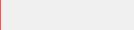
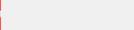
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
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WASHOE FREEWAY CORRIDOR STUDY
EXISTING RIGHT OF WAY

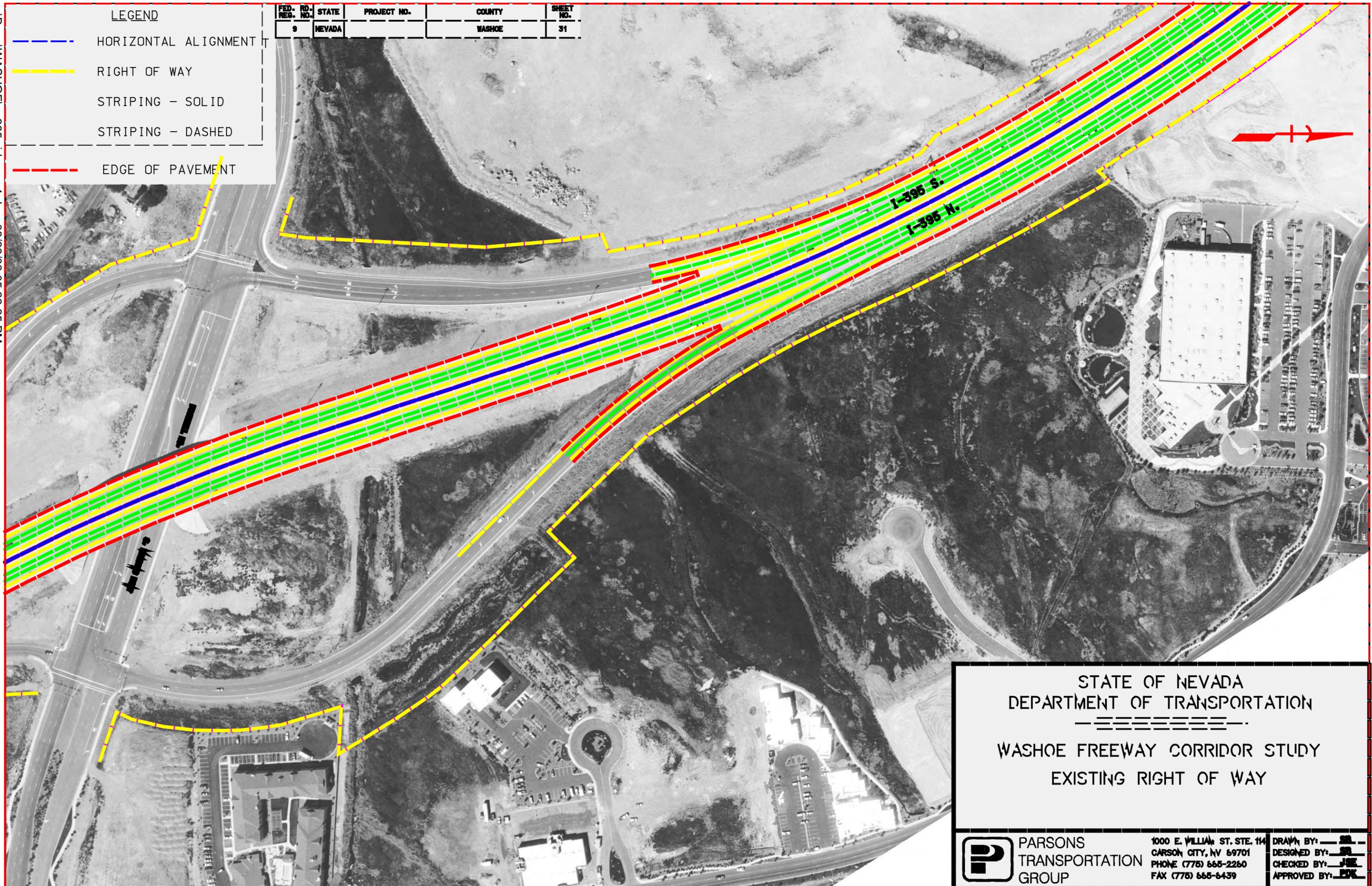
	PARSONS	1000 E. WILLIAM ST. STE. 114	DRAWN BY: <u>SA</u>
	TRANSPORTATION	CARSON CITY, NV 89701	DESIGNED BY: <u>SA</u>
	GROUP	PHONE (775) 665-2260	CHECKED BY: <u>JSE</u>
		FAX (775) 665-6439	APPROVED BY: <u>PKL</u>

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LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	31

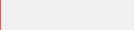
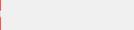


STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
 =====
 WASHOE FREEWAY CORRIDOR STUDY
 EXISTING RIGHT OF WAY

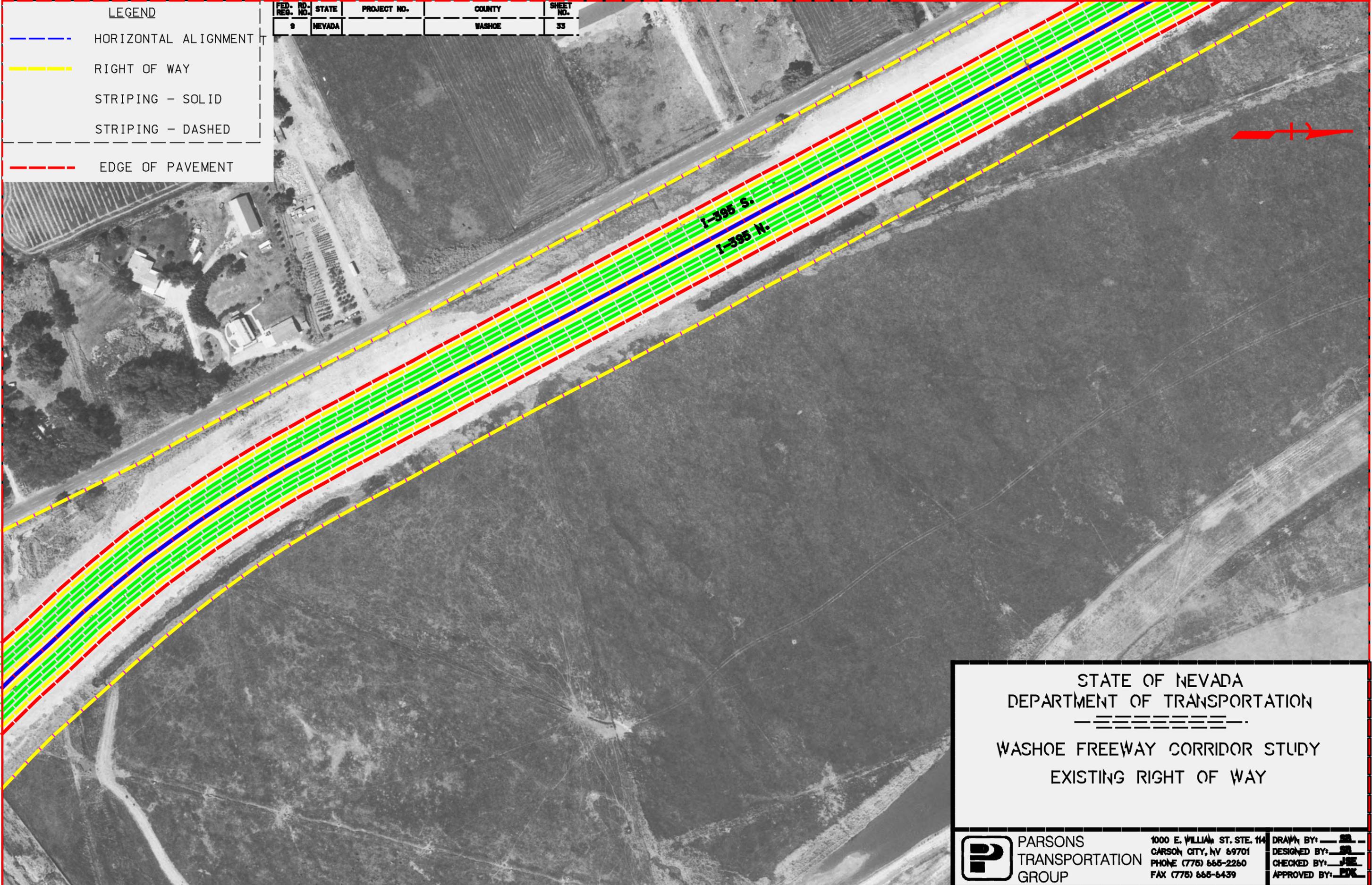
	PARSONS	1000 E. WILLIAM ST. STE. 114	DRAWN BY: <u>SA</u>
	TRANSPORTATION	CARSON CITY, NV 89701	DESIGNED BY: <u>SA</u>
	GROUP	PHONE (775) 665-2260	CHECKED BY: <u>JSE</u>
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LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	33

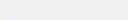
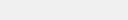
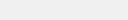
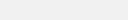


STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
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 WASHOE FREEWAY CORRIDOR STUDY
 EXISTING RIGHT OF WAY

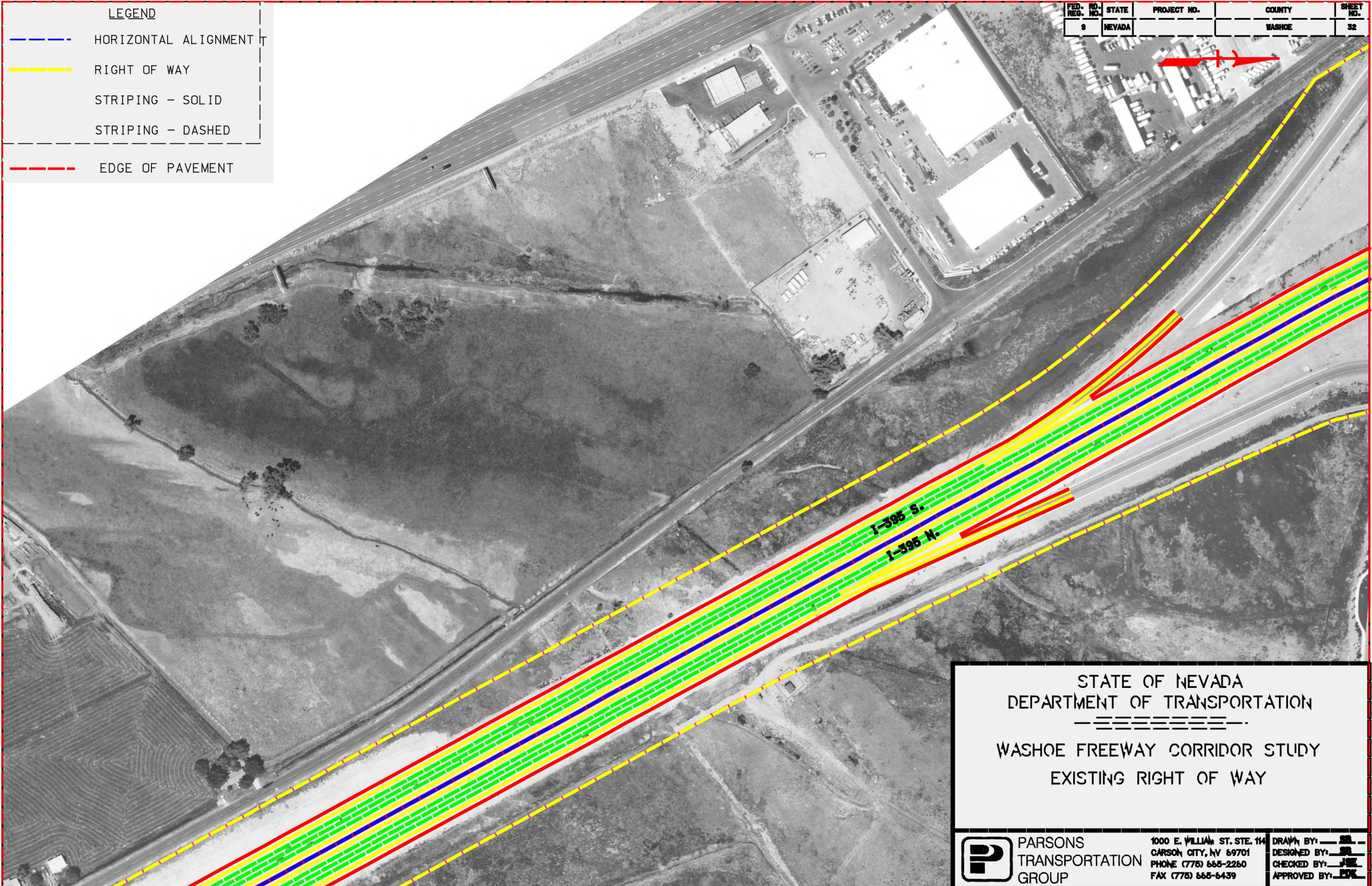
	PARSONS	1000 E. WILLIAM ST. STE. 114	DRAWN BY: <u>SA</u>
	TRANSPORTATION	CARSON CITY, NV 89701	DESIGNED BY: <u>SA</u>
	GROUP	PHONE (775) 665-2260	CHECKED BY: <u>JSE</u>
		FAX (775) 665-6439	APPROVED BY: <u>PKL</u>

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LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	32

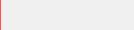
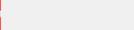


STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
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 WASHOE FREEWAY CORRIDOR STUDY
 EXISTING RIGHT OF WAY

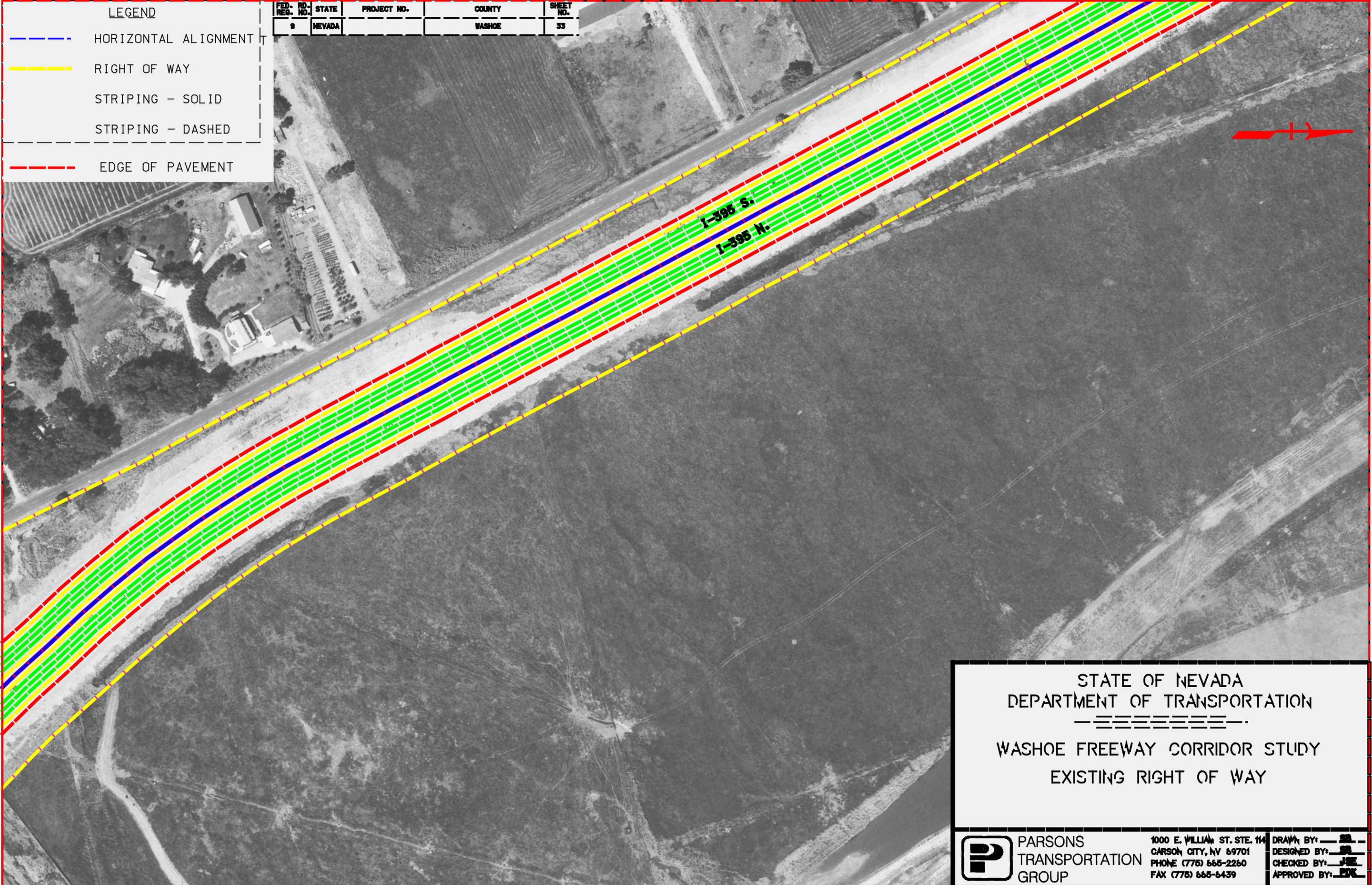
	PARSONS	1000 E. WILLIAM ST. STE. 114	DRAWN BY: <u>SA</u>
	TRANSPORTATION	CARSON CITY, NV 89701	DESIGNED BY: <u>SA</u>
	GROUP	PHONE (775) 665-2260	CHECKED BY: <u>JSE</u>
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LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	33



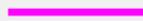
STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
 —=====—
 WASHOE FREEWAY CORRIDOR STUDY
 EXISTING RIGHT OF WAY

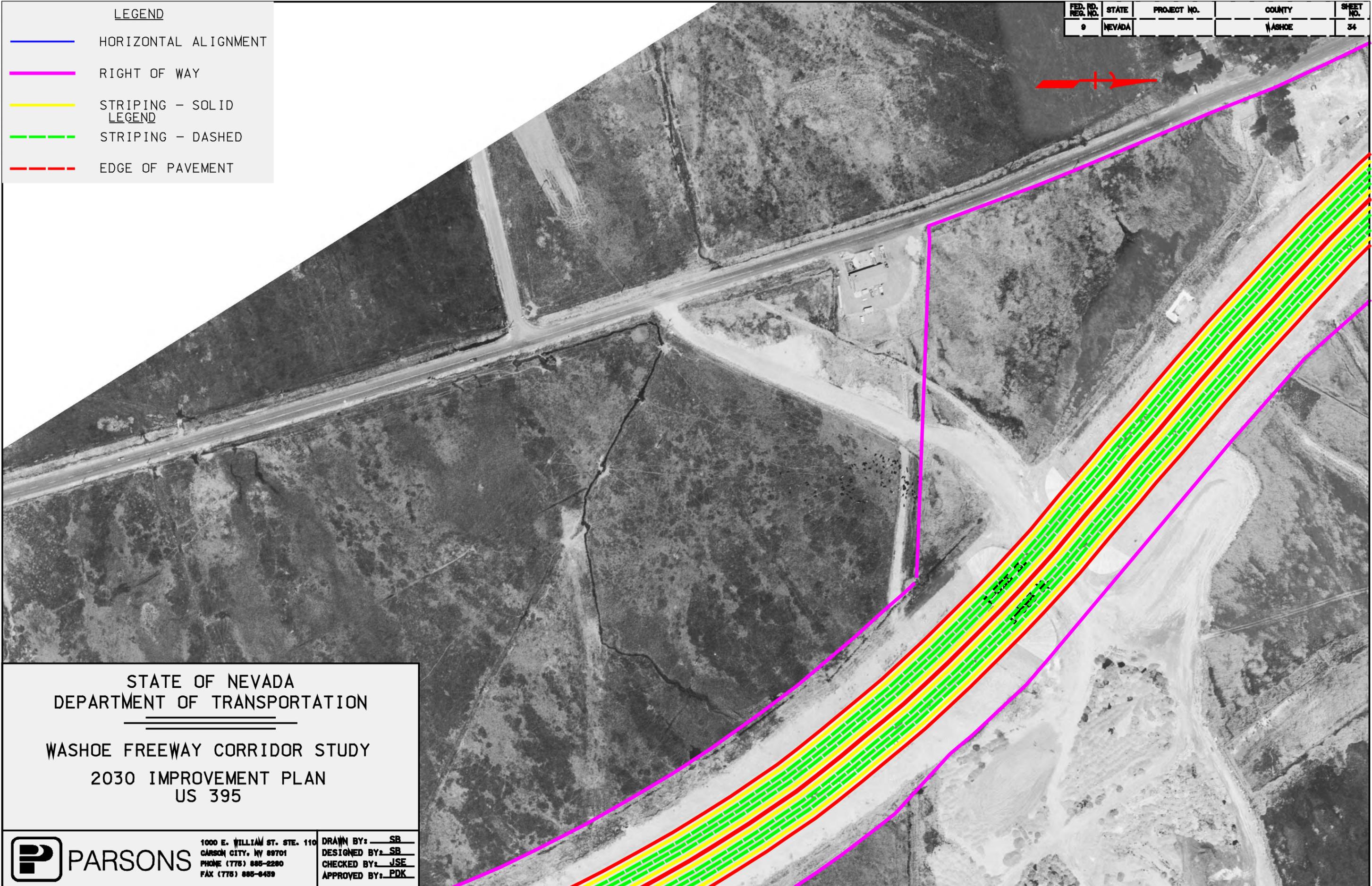
	PARSONS	1000 E. WILLIAM ST. STE. 114	DRAWN BY: <u>SA</u>
	TRANSPORTATION	CARSON CITY, NV 89701	DESIGNED BY: <u>SA</u>
	GROUP	PHONE (775) 665-2260	CHECKED BY: <u>JSE</u>
		FAX (775) 665-6439	APPROVED BY: <u>PKL</u>

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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	34

LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT



STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION

WASHOE FREEWAY CORRIDOR STUDY
 2030 IMPROVEMENT PLAN
 US 395

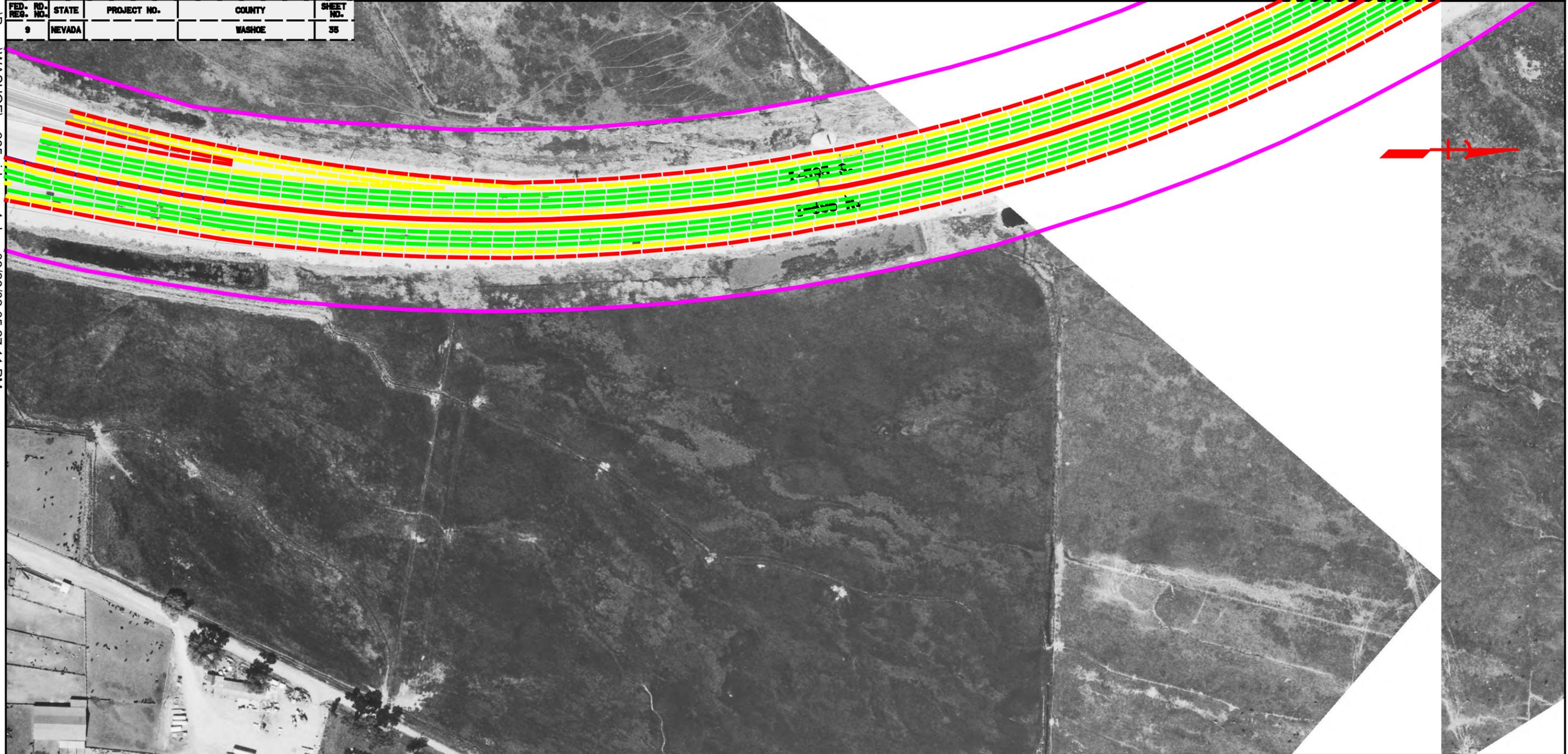


1000 E. WILLIAM ST. STE. 110
 CARSON CITY, NV 89701
 PHONE (775) 885-2280
 FAX (775) 885-0439

DRAWN BY: SB
 DESIGNED BY: SB
 CHECKED BY: JSE
 APPROVED BY: PDK

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FED. REG. NO.	RD. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9		NEVADA		WASHOE	35



LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

STATE OF NEVADA
 DEPARTMENT OF TRANSPORTATION
 WASHOE FREEWAY CORRIDOR STUDY
 2030 IMPROVEMENT PLAN
 US 395



1000 E. WILLIAM ST. STE. 110
 CARSON CITY, NV 89701
 PHONE (775) 885-2280
 FAX (775) 885-8439

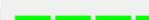
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FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	36

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LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
-  STRIPING - DASHED
-  EDGE OF PAVEMENT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US 395



1000 E. WILLIAM ST. STE. 110
CARSON CITY, NV 89701
PHONE (775) 885-2280
FAX (775) 885-8439

DRAWN BY: SB
DESIGNED BY: SB
CHECKED BY: JSE
APPROVED BY: PDK

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	37



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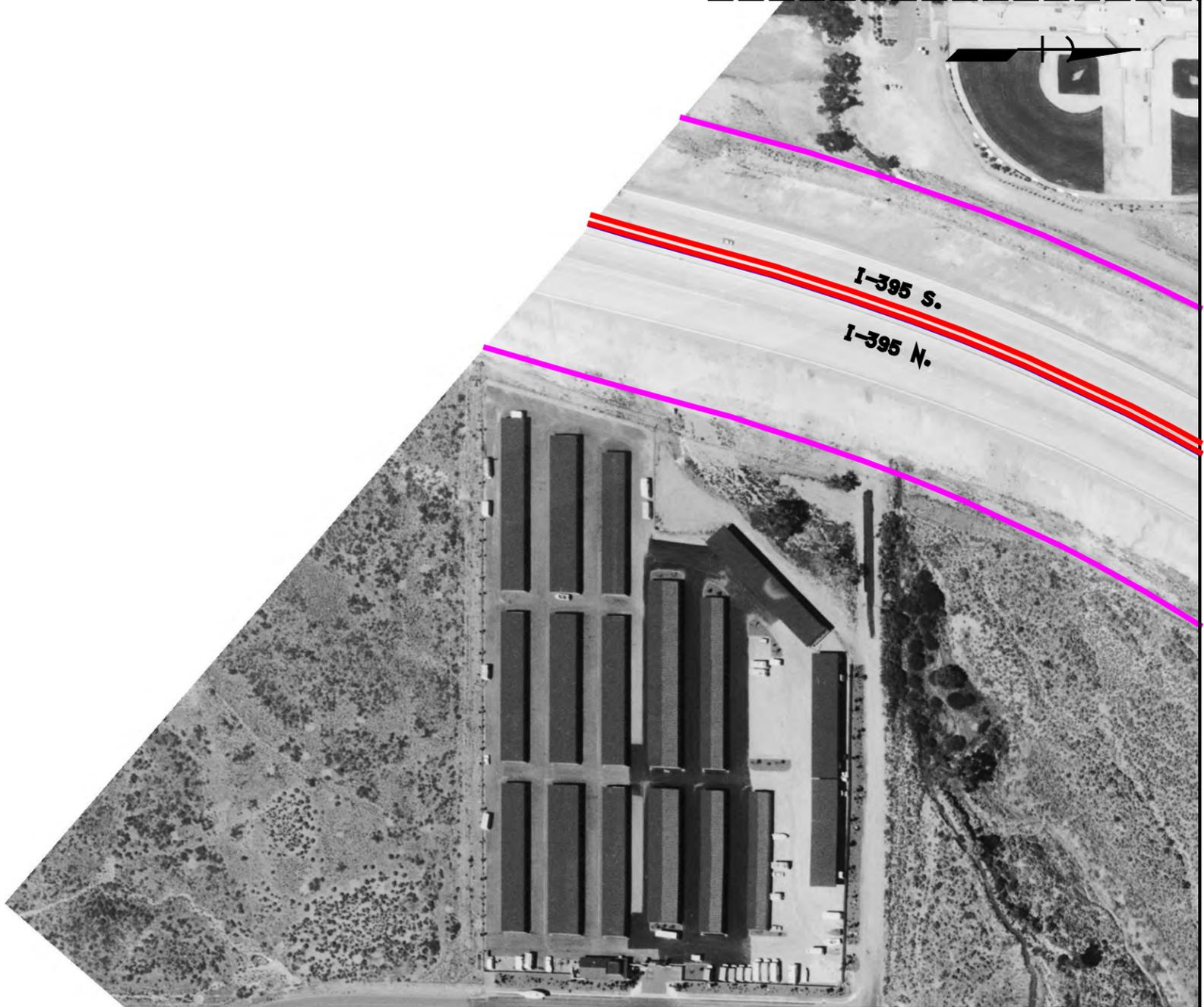
LEGEND	
	HORIZONTAL ALIGNMENT
	RIGHT OF WAY
	STRIPING - SOLID
	STRIPING - DASHED
	EDGE OF PAVEMENT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

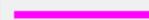
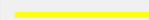
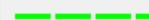
WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US 395

	1000 E. WILLIAM ST. STE. 110 CARSON CITY, NV 89701 PHONE (775) 885-2200 FAX (775) 885-8439	DRAWN BY: <u>SB</u>
		DESIGNED BY: <u>SB</u>
		CHECKED BY: <u>JSE</u>
		APPROVED BY: <u>PDK</u>

FED. RD. REG. NO.	STATE	PROJECT NO.	COUNTY	SHEET NO.
9	NEVADA		WASHOE	38



LEGEND

-  HORIZONTAL ALIGNMENT
-  RIGHT OF WAY
-  STRIPING - SOLID
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-  EDGE OF PAVEMENT

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

WASHOE FREEWAY CORRIDOR STUDY
2030 IMPROVEMENT PLAN
US 395



1000 E. WILLIAM ST. STE. 110
CARSON CITY, NV 89701
PHONE (775) 885-2200
FAX (775) 885-8439

DRAWN BY: SB
DESIGNED BY: SB
CHECKED BY: JSE
APPROVED BY: PDK

COST ESTIMATE WORKSHEETS

2010 US 395 Northbound		1		2		3		4		5		6	
		Plumb to Villanova		Mill On to Mill Off		Glendale to I-80 West		Oddie to McCarran		McCarran to Golden Valley		S. Virginia 2-Lane On-ramp	
Length of Improvement >		0.70	Lane miles	0.17	Lane Miles	0.59	Lane miles	0.44	Lane miles	4.81	Lane miles	0.15	Lane miles
Work Element	Cost per mile		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate
Roadway Items													
Removal items	\$306,235.00				\$52,199		\$181,247		\$133,746		\$1,472,596		\$46,399
Roadway excavation	\$85,000.00				\$14,489		\$50,308		\$37,123		\$408,741		\$12,879
Borrow embankment	\$166,334.00				\$28,352		\$98,446		\$72,645		\$799,852		\$25,202
Base	\$326,477.00				\$55,649		\$193,227		\$142,586		\$1,569,934		\$49,466
Plantmix including oils and opengrade	\$500,000.00								\$218,371		\$2,404,356		\$75,758
Portland cement concrete paving including other items	\$460,000.00				\$78,409		\$272,254						
Concrete Barrier rail	\$161,000.00				\$27,443		\$95,289		\$70,316		\$774,203		\$24,394
Guardrail including end treatments	\$48,114.00												
Miscellaneous Items(utilities)	\$1,000,000.00				\$170,455		\$591,856		\$436,742		\$4,808,712		\$151,515
Drainage Items													
	30% of roadway				\$128,099		\$444,788		\$333,459		\$3,671,518		\$115,684
Structural Items													
Removals													
Concrete Bridge (cost per whole structure sqft)		112,500	\$5,062,500	18,320	\$824,400	36,800	\$1,656,000	17,000	\$765,000	25,050	\$1,127,250		
Steel Bridge		1,300	\$4,160,000		\$0		\$0		\$0		\$0		
Retaining Wall	\$25 per sqft					1300 ft	\$325,000					800 ft	\$240,000
Sound Wall	\$1,060,000.00								\$462,947				
MSE Wall					\$0		\$0		\$0		\$0		\$0
					\$0		\$0		\$0		\$0		\$0
					\$0		\$0		\$0		\$0		\$0
Signals													
Signalized interchange per interchange both directions	\$300,000.00	1	\$300,000										
					\$0		\$0		\$0		\$0		\$0
Lighting													
High mast lighting	\$200,000.00				\$34,091		\$118,371		\$87,348		\$961,742		\$0
Interchange lighting													
Traffic Control													
Signing	\$700,000.00				\$119,318		\$414,299		\$305,720		\$3,366,098		\$106,061
@ 10 percent of total construction items			\$952,250		\$153,290		\$444,109		\$306,600		\$2,136,500		\$84,736
Mobilization @ 5% of total construction items			\$523,738		\$84,310		\$244,260		\$168,630		\$1,175,075		\$46,605
SUBTOTAL COST FOR ALL IMPROVEMENTS			\$10,998,488		\$1,770,505		\$5,129,453		\$3,541,234		\$24,676,578		\$978,698
20% CONTINGENCIES			\$2,199,698		\$354,101		\$1,025,891		\$708,247		\$4,935,316		\$195,740
ESTIMATED CONSTRUCTION COST			\$13,198,185		\$2,124,606		\$6,155,344		\$4,249,481		\$29,611,893		\$1,174,438
7% PRELIMINARY PROJECT DEVELOPMENT			\$923,873		\$148,722		\$430,874		\$297,464		\$2,072,833		\$82,211
14% PRELIMINARY PROJECT ENGINEERING			\$1,847,746		\$297,445		\$861,748		\$594,927		\$4,145,665		\$164,421
15% ENGINEERING/CONSTRUCTION MANAGEMENT			\$1,979,728		\$318,691		\$923,302		\$637,422		\$4,441,784		\$176,166
Right of Way + 7% R/W ENGINEERING									\$3,155,302				
TOTAL CONSTRUCTION COST			\$17,949,532		\$2,889,464		\$8,371,268		\$8,934,596		\$40,272,175		\$1,597,235

2010 US 395 Southbound		7		8		9		10		11	
		Mill On to Mill Off		Glendale Access		I-80 WB to Glendale On-ramp		Add Lane to Spaghetti Bowl		Mill Street 2-Lane Off-ramp	
Length of Improvement >		0.17	Lane miles	0.98	Lane miles	0.77	Lane miles	0.29	Lane miles	0.09	Lane miles
Work Element	Cost per mile		Estimate		Estimate		Estimate		Estimate		Estimate
Roadway Items											
Removal items	\$306,235.00		\$52,199				\$236,636				\$29,000
Roadway excavation	\$85,000.00		\$14,489				\$65,682				\$8,049
Borrow embankment	\$166,334.00		\$28,352				\$128,531				\$15,751
Base	\$326,477.00		\$55,649				\$252,278				\$30,916
Plantmix including oils and opengrade	\$500,000.00										\$47,348
Portland cement concrete paving including other items	\$460,000.00		\$78,409				\$355,455				
Concrete Barrier rail	\$161,000.00		\$27,443				\$124,409				
Guardrail including end treatments	\$48,114.00						\$37,179				
Miscellaneous Items (utilities)	\$1,000,000.00		\$170,455				\$772,727				\$94,697
Drainage Items											
	30% of roadway		\$128,099		\$0		\$591,869				\$67,729
Structural Items											
Removals											
Concrete Bridge (cost per whole structure sqft)		18,320	\$1,832,000	123,600	\$12,360,000	16,164	\$1,616,400				
Steel Bridge			\$0		\$0		\$0		\$0		\$0
Retaining Wall			\$0		\$0		\$0		\$0		\$0
Sound Wall	\$1,060,000.00										
MSE Wall			\$0		\$0		\$0		\$0		\$0
			\$0		\$0		\$0		\$0		\$0
			\$0		\$0		\$0		\$0		\$0
Signals											
Signalized interchange per interchange both directions	\$300,000.00										
			\$0		\$0		\$0		\$0		\$0
Lighting											
High mast lighting	\$200,000.00		\$34,091						\$57,765		\$9,846
Interchange lighting											
Traffic Control											
Signing	\$700,000.00		\$119,318		\$250,000		\$250,000		\$202,178		\$10,000
@ 10 percent of total construction items			\$254,050		\$1,261,000		\$419,453		\$25,994		\$31,334
Mobilization @ 5% of total construction items			\$139,728		\$693,550		\$220,988		\$14,297		\$17,234
SUBTOTAL COST FOR ALL IMPROVEMENTS			\$2,934,283		\$14,564,550		\$5,071,607		\$300,234		\$361,904
20% CONTINGENCIES			\$586,857		\$2,912,910		\$1,014,321		\$60,047		\$72,381
ESTIMATED CONSTRUCTION COST			\$3,521,139		\$17,477,460		\$6,085,928		\$360,281		\$434,285
7% PRELIMINARY PROJECT DEVELOPMENT			\$246,480		\$1,223,422		\$426,015		\$25,220		\$30,400
14% PRELIMINARY PROJECT ENGINEERING			\$492,959		\$2,446,844		\$852,030		\$50,439		\$60,800
15% ENGINEERING/CONSTRUCTION MANAGEMENT			\$528,171		\$2,621,619		\$912,889		\$54,042		\$65,143
Right of Way + 7% R/W ENGINEERING											
TOTAL CONSTRUCTION COST			\$4,788,749		\$23,769,346		\$8,276,862		\$489,983		\$590,627

2020 US 395 Northbound		12		13		14		15		16		17		18		19		20	
		South of Del Monte to Del Monte		Del Monte to South Virginia		New I-80 On-Ramp to Oddie Blvd.		Golden Valley to Stead		Del Monte 2-Lane Off-ramp		New Oddie Blvd Off-ramp		Panther Valley 2-Lane On-ramp		Golden Valley 2-Lane Off-ramp		Lemmon Valley 2-Lane Off-ramp	
Length of Improvement >		0.66	Lane miles	0.87	Lane miles	0.16	Lane miles	2.84	Lane miles	0.19	Lane miles	0.31	Lane miles	0.31	Lane miles	0.59	Lane miles	0.47	Lane miles
Work Element	Cost per mile		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate
Roadway Items																			
Removal items	\$306,235.00		\$200,677		Left blank on purpose.		\$48,429		\$869,986		\$59,159		\$96,278		\$96,278		\$179,797		\$144,998
Roadway excavation	\$85,000.00		\$55,701		Left blank on purpose.		\$13,442		\$241,477		\$16,420		\$26,723		\$26,723		\$49,905		\$40,246
Borrow embankment	\$166,334.00		\$108,999		Left blank on purpose.		\$26,305		\$472,540		\$32,133		\$52,294		\$52,294		\$97,658		\$78,757
Base	\$326,477.00		\$213,941		Left blank on purpose.		\$51,630		\$927,491		\$63,069		\$102,642		\$102,642		\$191,682		\$154,582
Plantmix including oils and opengrade	\$500,000.00						\$79,072		\$1,420,455		\$96,591		\$157,197		\$157,197		\$293,561		\$236,742
Portland cement concrete paving including other items	\$460,000.00		\$301,439		Left blank on purpose.														
Concrete Barrier rail	\$161,000.00		\$105,504		Left blank on purpose.		\$25,461		\$457,386		\$31,102		\$50,617		\$50,617		\$94,527		\$76,231
Guardrail including end treatments	\$48,114.00		\$31,529		Left blank on purpose.		\$7,609		\$136,688		\$9,295		\$15,127		\$15,127		\$28,249		\$22,781
Miscellaneous Items	\$1,000,000.00		\$655,303		Left blank on purpose.		\$158,144		\$2,840,909		\$193,182		\$314,394		\$314,394		\$587,121		\$473,485
Drainage Items																			
	30% of roadway		\$501,928		Left blank on purpose.		\$123,028		\$2,210,080		\$150,285		\$244,582		\$244,582		\$456,750		\$368,347
Structural Items																			
Removals																			
Concrete Bridge (cost per whole structure sqft)			0			15000'	675000	112,500	\$5,062,500										
Steel Bridge																			
Retaining Wall	\$25 per sqft	110'	\$27,500		Left blank on purpose.							1,600	\$400,000						
Sound Wall	\$1,060,000.00												\$333,258						
MSE Wall																			
Signals																			
Signalized interchange per interchange both directions	\$300,000.00	3.0			Left blank on purpose.	3.0													
Lighting																			
High mast lighting	\$200,000.00																		
Interchange lighting																			
Traffic Control																			
Signing	\$700,000.00		\$458,712		Left blank on purpose.		\$110,701		\$1,988,636		\$135,227		\$220,076		\$220,076		\$410,985		\$331,439
@ 10 percent of total construction items			\$266,123		Left blank on purpose.		\$131,882		\$1,662,815		\$78,646		\$201,319		\$127,993		\$239,023		\$192,761
Mobilization @ 5% of total construction items			\$146,368		Left blank on purpose.		\$72,535		\$914,548		\$43,256		\$110,725		\$70,396		\$131,463		\$106,018
SUBTOTAL COST FOR ALL IMPROVEMENTS			\$3,073,725		Left blank on purpose.		\$1,523,238		\$19,205,511		\$908,366		\$2,325,234		\$1,478,321		\$2,760,720		\$2,226,387
20% CONTINGENCIES			\$614,745		Left blank on purpose.		\$304,648		\$3,841,102		\$181,673		\$465,047		\$295,664		\$552,144		\$445,277
ESTIMATED CONSTRUCTION COST			\$3,688,470		Left blank on purpose.		\$1,827,886		\$23,046,613		\$1,090,039		\$2,790,280		\$1,773,985		\$3,312,864		\$2,671,665
7% PRELIMINARY PROJECT DEVELOPMENT			\$258,193		Left blank on purpose.		\$127,952		\$1,613,263		\$76,303		\$195,320		\$124,179		\$231,900		\$187,017
14% PRELIMINARY PROJECT ENGINEERING			\$516,386		Left blank on purpose.		\$255,904		\$3,226,526		\$152,605		\$390,639		\$248,358		\$463,801		\$374,033
15% ENGINEERING/CONSTRUCTION MANAGEMENT			\$553,270		Left blank on purpose.		\$274,183		\$3,456,992		\$163,506		\$418,542		\$266,098		\$496,930		\$400,750
Right of Way + 7% R/W ENGINEERING																			
TOTAL CONSTRUCTION COST			\$5,016,319		\$0		\$2,485,925		\$31,343,393		\$1,482,453		\$3,794,781		\$2,412,620		\$4,505,495		\$3,633,464

2020 US 395 Southbound		21		22		23		24		25		26		27		28	
		Stead to N. McCarran		N. McCarran to I-80 E&W		Lemmon Valley 2-Lane Off-ramp		Lemmon Valley 2-Lane On-ramp		Golden Valley 2-Lane On-ramp		Panther Valley 2-Lane Off-ramp		Panther Valley 2-Lane On-ramp		Del Monte 2-Lane Off-ramp	
Length of Improvement >	Cost per mile	6.60	Lane miles	0.65	Lane miles	0.40	Lane miles	0.55	Lane miles	0.35	Lane miles	0.53	Lane miles	0.49	Lane miles	0.29	Lane miles
Work Element	Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate
Roadway Items																	
Removal items	\$306,235.00		\$2,021,151		\$199,053		\$121,798		\$169,937		\$107,298		\$162,397		\$150,798		\$89,899
Roadway excavation	\$85,000.00		\$561,000		\$55,250		\$33,807		\$47,169		\$29,782		\$29,782		\$41,856		\$24,953
Borrow embankment	\$166,334.00		\$1,097,804		\$108,117		\$66,156		\$92,303		\$58,280		\$58,280		\$81,907		\$48,829
Base	\$326,477.00		\$2,154,748		\$212,210		\$129,849		\$181,170		\$114,391		\$114,391		\$160,765		\$95,841
Plantmix including oils and opengrade	\$500,000.00		\$3,300,000														
Portland cement concrete paving including other items	\$460,000.00				\$299,000		\$182,955		\$255,265		\$161,174		\$243,939		\$226,515		\$135,038
Concrete Barrier rail	\$161,000.00		\$1,062,600		\$104,650												
Guardrail including end treatments	\$48,114.00		\$317,552														
Miscellaneous Items	\$1,000,000.00		\$6,600,000		\$650,000		\$397,727		\$554,924		\$350,379		\$530,303		\$492,424		\$293,561
Drainage Items																	
30% of roadway			\$5,134,457		\$488,484		\$279,687		\$390,230		\$246,391		\$341,728		\$346,280		\$206,436
Structural Items																	
Removals																	
Concrete Bridge (cost per whole structure sqft)		25050	\$1,127,250														
Steel Bridge			\$0		\$0												
Retaining Wall			\$0		\$0												
Sound Wall	\$1,060,000.00			0.65	\$689,000												
MSE Wall			\$0		\$0												
Signals																	
Signalized interchange per interchange both directions	\$300,000.00	6	\$1,800,000	1	\$300,000												
			\$0		\$0												
Lighting																	
High mast lighting	\$200,000.00		\$1,320,000		\$130,000												
Interchange lighting																	
Traffic Control																	
Signing	\$700,000.00		\$4,620,000		\$455,000		\$278,409		\$388,447		\$245,265		\$371,212		\$344,697		\$205,492
@ 10 percent of total construction items			\$3,111,656		\$369,076		\$149,039		\$207,945		\$131,296		\$185,203		\$184,524		\$110,005
Mobilization @ 5% of total construction items			\$1,711,411		\$202,992		\$81,971		\$114,369		\$72,213		\$101,862		\$101,488		\$60,503
SUBTOTAL COST FOR ALL IMPROVEMENTS			\$35,939,630		\$4,262,832		\$1,721,397		\$2,401,759		\$1,516,469		\$2,139,097		\$2,131,254		\$1,270,555
20% CONTINGENCIES			\$7,187,926		\$852,566		\$344,279		\$480,352		\$303,294		\$427,819		\$426,251		\$254,111
ESTIMATED CONSTRUCTION COST			\$43,127,556		\$5,115,399		\$2,065,677		\$2,882,111		\$1,819,763		\$2,566,917		\$2,557,505		\$1,524,666
7% PRELIMINARY PROJECT DEVELOPMENT			\$3,018,929		\$358,078		\$144,597		\$201,748		\$127,383		\$179,684		\$179,025		\$106,727
14% PRELIMINARY PROJECT ENGINEERING			\$6,037,858		\$716,156		\$289,195		\$403,496		\$254,767		\$359,368		\$358,051		\$213,453
15% ENGINEERING/CONSTRUCTION MANAGEMENT			\$6,469,133		\$767,310		\$309,852		\$432,317		\$272,964		\$385,038		\$383,626		\$228,700
Right of Way + 7% R/W ENGINEERING																	
TOTAL CONSTRUCTION COST			\$58,653,476		\$6,956,942		\$2,809,321		\$3,919,671		\$2,474,878		\$3,491,007		\$3,478,207		\$2,073,546

2030 US 395 Northbound		29		30		31		32		33		34		35		36		37		38		39		40		41	
		S. Meadows Off to S. Meadows On		S. Virginia Off to S. Virginia On		Del Monte to Moana		Moana to Plumb		Airport to Glendale		I-80 on-ramp to N McCarran		N. McCarran to Pyramid Link		Parr to Lemmon		Damonte Ranch 2-Lane Off-ramp		Damonte Ranch 2-Lane On-ramp		Plumb Lane 2-Lane Off-Ramp		Airport Connector 2-Lane On-ramp		Parr Blvd 2-Lane Off-ramp	
Length of Improvement >	Cost per mile	0.53	Lane Miles	0.47	Lane Miles	1.61	Lane Miles	0.56	Lane Miles	1.52	Lane Miles	0.60	Lane Miles	0.75	Lane Miles	3.35	Lane Miles	0.38	Lane Miles	0.30	Lane Miles	0.39	Lane Miles	0.00	Lane Miles	0.51	Lane Miles
Work Element	Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate
Roadway Items																											
Removal items	\$306,235.00		\$162,397		\$144,998		\$492,992		\$171,492		\$465,477		\$183,277		\$229,676		\$1,025,887		\$115,998		\$90,479		\$118,898		\$0		\$156,597
Roadway excavation	\$85,000.00		\$45,076		\$40,246		\$136,837		\$47,600		\$129,200		\$50,871		\$63,750		\$284,750		\$32,197		\$25,114		\$33,002		\$0		\$43,466
Borrow embankment	\$166,334.00		\$88,207		\$78,757		\$267,773		\$93,147		\$252,828		\$99,548		\$124,751		\$557,219		\$63,005		\$49,144		\$64,580		\$0		\$85,057
Base	\$326,477.00		\$173,132		\$154,582		\$525,579		\$182,827		\$496,245		\$195,392		\$244,858		\$1,093,698		\$123,666		\$96,459		\$126,757		\$0		\$166,948
Plantmix including oils and opengrade	\$500,000.00												\$299,242		\$375,000		\$1,675,000										
Portland cement concrete paving including other items	\$460,000.00		\$243,939		\$217,803		\$740,530		\$257,600		\$699,200								\$174,242		\$135,909		\$178,598		\$0		\$235,227
Concrete Barrier rail	\$161,000.00		\$85,379		\$76,231		\$259,186		\$90,160		\$244,720		\$96,356		\$120,750		\$539,350		\$60,985		\$47,568		\$62,509		\$0		\$82,330
Guardrail including end treatments	\$48,114.00												\$28,796		\$36,086		\$161,182										
Miscellaneous Items	\$1,000,000.00		\$530,303		\$473,485		\$1,609,848		\$560,000		\$1,520,000		\$598,485		\$750,000		\$3,350,000		\$378,788		\$295,455		\$388,258		\$0		\$511,364
Drainage Items																											
30% of roadway			\$398,530		\$355,830		\$1,209,823		\$420,848		\$1,142,301		\$465,590		\$583,461		\$2,606,126		\$284,664		\$222,038		\$291,781		\$0		\$384,297
Structural Items																											
Removals																											
Concrete Bridge (cost per whole structure sqft)				26845	\$1,208,025		55680	\$2,505,600			36640	\$1,648,800				112,500	5062500					3330	\$149,850	2060'	\$8,240,000		
Steel Bridge																											
Retaining Wall	\$25 per sqft																										
Sound Wall	\$1,060,000.00																										
MSE Wall																											
Signals																											
Signalized interchange per interchange both directions	\$300,000.00						\$482,955				0				0	3.0	900000		3								
Lighting																											
High mast lighting	\$200,000.00						\$321,970		\$112,000		\$304,000				\$150,000		\$670,000										
Interchange lighting																											
Traffic Control																											
Signing	\$700,000.00						\$1,126,894		\$392,000		\$1,064,000				\$525,000		\$2,345,000		\$265,152		\$206,818		\$271,780		\$0		\$357,955
@ 10 percent of total construction items			\$172,696		\$274,996		\$967,999		\$262,467		\$796,677		\$201,756		\$320,333		\$2,027,071		\$149,870		\$116,898		\$168,601		\$824,000		\$202,324
Mobilization @ 5% of total construction items			\$94,983		\$151,248		\$532,399		\$144,357		\$438,172		\$110,966		\$176,183		\$1,114,889		\$82,428		\$64,294		\$92,731		\$453,200		\$111,278
SUBTOTAL COST FOR ALL IMPROVEMENTS																											
			\$1,994,643		\$3,176,200		\$11,180,384		\$3,031,498		\$9,201,620		\$2,330,278		\$3,699,847		\$23,412,672		\$1,730,995		\$1,350,176		\$1,947,347		\$9,517,200		\$2,336,843
20% CONTINGENCIES			\$398,929		\$635,240		\$2,236,077		\$606,300		\$1,840,324		\$466,056		\$739,969		\$4,682,534		\$346,199		\$270,035		\$389,469		\$1,903,440		\$467,369
ESTIMATED CONSTRUCTION COST			\$2,393,571		\$3,811,440		\$13,416,461		\$3,637,797		\$11,041,944		\$2,796,334		\$4,439,817		\$28,095,207		\$2,077,194		\$1,620,211		\$2,336,816		\$11,420,640		\$2,804,212
7% PRELIMINARY PROJECT DEVELOPMENT			\$167,550		\$266,801		\$939,152		\$254,646		\$772,936		\$195,743		\$310,787		\$1,966,664		\$145,404		\$113,415		\$163,577		\$799,445		\$196,295
14% PRELIMINARY PROJECT ENGINEERING			\$335,100		\$533,602		\$1,878,304		\$509,292		\$1,545,872		\$391,487		\$621,574		\$3,933,329		\$290,807		\$226,830		\$327,154		\$1,598,890		\$392,590
15% ENGINEERING/CONSTRUCTION MANAGEMENT			\$359,036		\$571,716		\$2,012,469		\$545,670		\$1,656,292		\$419,450		\$665,973		\$4,214,281		\$311,579		\$243,032		\$350,522		\$1,713,096		\$420,632
Right of Way + 7% R/W ENGINEERING																											
TOTAL CONSTRUCTION COST			\$3,255,257		\$5,183,558		\$18,246,386		\$4,947,405		\$15,017,044		\$3,803,014		\$6,038,151		\$38,209,481		\$2,824,984		\$2,203,487		\$3,178,070		\$15,532,070		\$3,813,728

2030 US 395 Southbound		42		43		44		45		46		47		48		49		50		51	
		Lemmon to N. McCarran		Mill To Plumb		Moana to S. Virginia Street		S. Meadows off to S. Meadows on		Parr Blvd 2-Lane Off-ramp		Airport Connector 2-Lane Off-ramp		Plumb Lane 2-Lane On-ramp		New Airport Connector On-ramp		S. Meadows 2-Lane Off-ramp		Damonte Ranch 2-Lane Off-ramp	
Length of Improvement >	Cost per mile	4.78	Lane miles	1.42	Lane miles	3.29	Lane miles	0.53	Lane miles	0.28	Lane miles	Lane miles	0.19	Lane miles	0.51	Lane miles	0.09	Lane miles	0.09	Lane miles	
Work Element	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	
Roadway Items																					
Removal items	\$306,235.00	\$1,463,803		\$434,854		\$1,007,513		\$162,397		\$85,839		\$0		\$56,839		\$156,597		\$29,000		\$29,000	
Roadway excavation	\$85,000.00	\$406,300		\$120,700		\$279,650		\$45,076		\$23,826		\$0		\$15,777		\$43,466		\$8,049		\$8,049	
Borrow embankment	\$166,334.00	\$795,077		\$236,194		\$547,239		\$88,207		\$46,624		\$0		\$30,873		\$85,057		\$15,751		\$15,751	
Base	\$326,477.00	\$1,560,560		\$463,597		\$1,074,109		\$173,132		\$91,512		\$0		\$60,596		\$166,948		\$30,916		\$30,916	
Plantmix including oils and opengrade	\$500,000.00	\$2,390,000								\$128,939											
Portland cement concrete paving including other items	\$460,000.00			\$653,200		\$1,513,400		\$243,939				\$0		\$85,379		\$235,227		\$43,561		\$43,561	
Concrete Barrier rail	\$161,000.00	\$769,580		\$228,620		\$529,690		\$85,379		\$45,129		\$0		\$29,883		\$82,330		\$15,246		\$15,246	
Guardrail including end treatments	\$48,114.00	\$229,985																			
Miscellaneous Items	\$1,000,000.00	\$4,780,000		\$1,420,000		\$3,290,000		\$530,303		\$280,303		\$0		\$185,606		\$511,364		\$94,697		\$94,697	
Drainage Items	30% of roadway	\$3,718,591		\$1,067,150		\$2,472,480		\$398,530		\$210,652		\$0		\$139,486		\$384,297		\$71,166		\$71,166	
Structural Items																					
Removals																					
Concrete Bridge (cost per whole structure sqft)				\$83,700	55680	\$2,505,600	26845	\$1,208,025			2850	\$11,400,000				\$4,984,000					
Steel Bridge		\$0		\$0		\$0		\$0													
Retaining Wall		\$0		\$0		\$0		\$0													
Sound Wall	\$1,060,000.00		0.65	\$689,000	0.65	\$0		\$0													
MSE Wall		\$0		\$0		\$0		\$0													
Signals		\$0		\$0		\$0		\$0													
Signalized interchange per interchange both directions	\$300,000.00	6	\$1,800,000	1	\$300,000	1	\$300,000														
			\$0		\$0		\$0														
Lighting																					
High mast lighting	\$200,000.00	\$956,000		\$284,000		\$658,000															
Interchange lighting																					
Traffic Control																					
Signing	\$700,000.00	\$3,346,000		\$994,000		\$2,303,000															
@ 10 percent of total construction items		\$2,221,590		\$697,501		\$1,648,068		\$293,499		\$91,282		\$1,140,000		\$60,444		\$664,929		\$30,839		\$30,839	
Mobilization @ 5% of total construction items		\$1,221,874		\$383,626		\$906,437		\$161,424		\$50,205		\$627,000		\$33,244		\$365,711		\$16,961		\$16,961	
SUBTOTAL COST FOR ALL IMPROVEMENTS		\$25,659,360		\$8,056,142		\$19,035,187		\$3,389,912		\$1,054,311		\$13,167,000		\$698,125		\$7,679,926		\$356,186		\$356,186	
20% CONTINGENCIES		\$5,131,872		\$1,611,228		\$3,807,037		\$677,982		\$210,862		\$2,633,400		\$139,625		\$1,535,985		\$71,237		\$71,237	
ESTIMATED CONSTRUCTION COST		\$30,791,232		\$9,667,371		\$22,842,225		\$4,067,894		\$1,265,173		\$15,800,400		\$837,750		\$9,215,911		\$427,423		\$427,423	
7% PRELIMINARY PROJECT DEVELOPMENT		\$2,155,386		\$676,716		\$1,598,956		\$284,753		\$88,562		\$1,106,028		\$58,643		\$645,114		\$29,920		\$29,920	
14% PRELIMINARY PROJECT ENGINEERING		\$4,310,773		\$1,353,432		\$3,197,911		\$569,505		\$177,124		\$2,212,056		\$117,285		\$1,290,228		\$59,839		\$59,839	
15% ENGINEERING/CONSTRUCTION MANAGEMENT		\$4,618,685		\$1,450,106		\$3,426,334		\$610,184		\$189,776		\$2,370,060		\$125,663		\$1,382,387		\$64,114		\$64,114	
Right of Way + 7% R/W ENGINEERING																\$20,582,931					
TOTAL CONSTRUCTION COST		\$41,876,076		\$13,147,624		\$31,065,426		\$5,532,336		\$1,720,636		\$21,488,544		\$1,139,340		\$33,116,570		\$581,296		\$581,296	

2010 I-80 Eastbound		52		53		54	
		W. McCarran 2-Lane On-ramp		Center Street 2-Lane On-ramp		Wells Ave 2-Lane On-ramp	
Length of Improvement >		0.21	Lane miles	0.13	Lane miles	0.18	Lane miles
Work Element	Cost per mile		Estimate		Estimate		Estimate
Roadway Items							
Removal items	\$306,235.00		\$65,539		\$41,179		\$56,549
Roadway excavation	\$85,000.00		\$18,191		\$11,430		\$15,696
Borrow embankment	\$166,334.00		\$35,598		\$22,367		\$30,715
Base	\$326,477.00		\$69,871		\$43,901		\$60,287
Plantmix including oils and opengrade	\$500,000.00		\$107,008		\$67,235		\$92,330
Portland cement concrete paving including other items	\$460,000.00						
Concrete Barrier rail	\$161,000.00		\$34,456				
Guardrail including end treatments	\$48,114.00						
Miscellaneous Items	\$1,000,000.00		\$214,015		\$134,470		\$184,659
Drainage Items							
	30% of roadway		\$163,404		\$96,175		\$132,071
Structural Items							
Removals							
Concrete Bridge (cost per whole structure sqft)							
Steel Bridge			\$0				
Retaining Wall			\$0				
Sound Wall	\$1,060,000.00						
MSE Wall			\$0				
Signals							
Signalized interchange per interchange both directions	\$300,000.00		\$0				
			\$0				
Lighting							
High mast lighting	\$200,000.00						
Interchange lighting							
Traffic Control							
Signing	\$700,000.00		\$149,811		\$94,129		\$129,261
@ 10 percent of total construction items			\$85,789		\$51,089		\$70,157
Mobilization @ 5% of total construction items			\$47,184		\$28,099		\$38,586
SUBTOTAL COST FOR ALL IMPROVEMENTS			\$990,866		\$590,073		\$810,311
20% CONTINGENCIES			\$198,173		\$118,015		\$162,062
ESTIMATED CONSTRUCTION COST			\$1,189,039		\$708,087		\$972,373
7% PRELIMINARY PROJECT DEVELOPMENT			\$83,233		\$49,566		\$68,066
14% PRELIMINARY PROJECT ENGINEERING			\$166,465		\$99,132		\$136,132
15% ENGINEERING/CONSTRUCTION MANAGEMENT			\$178,356		\$106,213		\$145,856
Right of Way + 7% R/W ENGINEERING							
TOTAL CONSTRUCTION COST			\$1,617,093		\$962,998		\$1,322,427

2010 I-80 Westbound		55		56		57		58		59	
		Sparks Blvd 2-Lane On-ramp		New US 395 On to 4th Street On		Wells 2-Lane Off-ramp		Sierra Ave 2-Lane Off-ramp		W. McCarran 2-Lane Off-ramp	
Length of Improvement >		0.40	Lane miles	0.24	Lane miles	1.47	Lane miles	0.30	Lane miles	0.33	Lane miles
Work Element	Cost per mile		Estimate		Estimate		Estimate		Estimate		Estimate
Roadway Items											
Removal items	\$306,235.00		\$123,538		\$74,239		\$448,913		\$92,798		\$99,758
Roadway excavation	\$85,000.00		\$34,290		\$20,606		\$124,602		\$25,758		\$27,689
Borrow embankment	\$166,334.00		\$67,101		\$40,323		\$243,831		\$50,404		\$54,185
Base	\$326,477.00		\$131,704		\$79,146		\$478,586		\$98,932		\$106,352
Plantmix including oils and opengrade	\$500,000.00		\$185,568				\$732,955		\$151,515		\$162,879
Portland cement concrete paving including other items	\$460,000.00				\$111,515		\$674,318		\$0		
Concrete Barrier rail	\$161,000.00		\$64,949		\$39,030		\$236,011				
Guardrail including end treatments	\$48,114.00										
Miscellaneous Items	\$1,000,000.00		\$403,409		\$242,424		\$1,465,909		\$303,030		\$325,758
Drainage Items											
	30% of roadway		\$303,167		\$182,185		\$1,321,537		\$216,731		\$232,986
Structural Items											
Removals											
Concrete Bridge (cost per whole structure sqft)											
Steel Bridge			\$0		\$0						
Retaining Wall			\$0		\$0						
Sound Wall	\$1,060,000.00				\$0						
MSE Wall			\$0		\$0						
Signals											
Signalized interchange per interchange both directions	\$300,000.00	6		6	\$0						
			\$0		\$0						
Lighting											
High mast lighting	\$200,000.00										
Interchange lighting											
Traffic Control											
Signing	\$700,000.00		\$282,386		\$169,697		\$1,026,136		\$212,121		\$228,030
@ 10 percent of total construction items			\$159,611		\$95,917		\$675,280		\$115,129		\$123,764
Mobilization @ 5% of total construction items			\$87,786		\$52,754		\$371,404		\$63,321		\$68,070
SUBTOTAL COST FOR ALL IMPROVEMENTS			\$1,843,510		\$1,107,837		\$7,799,482		\$1,329,741		\$1,429,471
20% CONTINGENCIES			\$368,702		\$221,567		\$1,559,896		\$265,948		\$285,894
ESTIMATED CONSTRUCTION COST			\$2,212,211		\$1,329,404		\$9,359,378		\$1,595,689		\$1,715,366
7% PRELIMINARY PROJECT DEVELOPMENT			\$154,855		\$93,058		\$655,156		\$111,698		\$120,076
14% PRELIMINARY PROJECT ENGINEERING			\$309,710		\$186,117		\$1,310,313		\$223,396		\$240,151
15% ENGINEERING/CONSTRUCTION MANAGEMENT			\$331,832		\$199,411		\$1,403,907		\$239,353		\$257,305
Right of Way + 7% R/W ENGINEERING											
TOTAL CONSTRUCTION COST			\$3,008,608		\$1,807,990		\$12,728,754		\$2,170,137		\$2,332,897

2020 I-80 Eastbound		60		61		62		63		64		65		66		67		68	
		Robb to W. Keystone		Sierra to Center		US 395 On to Rock Auxiliary Lane		Rock On to Rock Off		Pyramid to Sparks Blvd.		Center Street On-ramp Accel.		Rock Blvd. 2-Lane Off-ramp		New 4th Street On-ramp		Sparks Blvd 2-Lane Off-ramp	
Length of Improvement >	Cost per mile	3.55 Lane miles	Estimate	0.51 Lane Miles	Estimate	1.52 Lane Miles	Estimate	0.56 Lane Miles	Estimate	2.01 Lane Miles	Estimate	0.19 Lane Miles	Estimate	0.13 Lane Miles	Estimate	0.76 Lane Miles	Estimate	0.17 Lane Miles	Estimate
Work Element																			
Roadway Items																			
Removal items	\$306,235.00		\$1,087,134		\$156,180		\$465,477		\$171,492		\$615,532		\$57,999		\$39,439		\$231,996		\$52,199
Roadway excavation	\$85,000.00		\$301,750		\$43,350		\$129,200		\$47,600		\$170,850		\$16,098		\$10,947		\$64,394		\$14,489
Borrow embankment	\$166,334.00		\$590,486		\$84,830		\$252,828		\$93,147		\$334,331		\$31,503		\$21,422		\$126,011		\$28,352
Base	\$326,477.00		\$1,158,993		\$166,503		\$496,245		\$182,827		\$656,219		\$61,833		\$42,046		\$247,331		\$55,649
Plantmix including oils and opengrade	\$500,000.00		\$1,775,000																
Portland cement concrete paving including other items	\$460,000.00				\$234,600		\$699,200		\$257,600		\$924,600		\$87,121		\$59,242		\$348,485		\$78,409
Concrete Barrier rail	\$161,000.00		\$571,550		\$82,110		\$244,720		\$90,160		\$323,610		\$30,492		\$20,735		\$121,970		\$27,443
Guardrail including end treatments	\$48,114.00		\$170,805		\$24,538														
Miscellaneous Items	\$1,000,000.00		\$3,550,000		\$510,000		\$1,520,000		\$560,000		\$2,010,000		\$189,394		\$128,788		\$757,576		\$170,455
Drainage Items	30% of roadway		\$2,761,715		\$390,633		\$1,142,301		\$420,848		\$1,510,543		\$142,332		\$96,786		\$569,329		\$128,099
Structural Items																			
Removals																			
Concrete Bridge (cost per whole structure sqft)		112,500	5062500								\$10,000,000				12500	\$1,250,000			
Steel Bridge																			
Retaining Wall																			
Sound Wall	\$1,060,000.00																		
MSE Wall	\$30 per sqft																	525'	\$157,500
Signals																			
Signalized interchange per interchange both directions	\$300,000.00	3.0	900000																
Lighting																			
High mast lighting	\$200,000.00		\$710,000		\$102,000		\$304,000		\$112,000		\$402,000								
Interchange lighting																			
Traffic Control																			
Signing	\$700,000.00		\$2,485,000		\$357,000		\$1,064,000		\$392,000		\$1,407,000		\$132,576		\$90,152		\$320,038		\$119,318
@ 10 percent of total construction items			\$2,112,493		\$215,175		\$631,797		\$232,767		\$1,835,469		\$74,935		\$50,956		\$403,713		\$83,191
Mobilization @ 5% of total construction items			\$1,161,871		\$118,346		\$347,488		\$128,022		\$1,009,508		\$41,214		\$28,026		\$185,855		\$35,630
SUBTOTAL COST FOR ALL IMPROVEMENTS			\$24,399,298		\$2,485,266		\$7,297,256		\$2,688,463		\$21,199,661		\$865,497		\$588,538		\$4,626,696		\$950,735
20% CONTINGENCIES			\$4,879,860		\$497,053		\$1,459,451		\$537,693		\$4,239,932		\$173,099		\$117,708		\$925,339		\$190,147
ESTIMATED CONSTRUCTION COST			\$29,279,158		\$2,982,319		\$8,756,708		\$3,226,155		\$25,439,594		\$1,038,597		\$706,246		\$5,552,035		\$1,140,882
7% PRELIMINARY PROJECT DEVELOPMENT			\$2,049,541		\$208,762		\$612,970		\$225,831		\$1,780,772		\$72,702		\$49,437		\$388,642		\$79,862
14% PRELIMINARY PROJECT ENGINEERING			\$4,099,082		\$417,525		\$1,225,939		\$451,662		\$3,561,543		\$145,404		\$98,874		\$777,285		\$159,723
15% ENGINEERING/CONSTRUCTION MANAGEMENT			\$4,391,874		\$447,348		\$1,313,506		\$483,923		\$3,815,939		\$155,790		\$105,937		\$832,805		\$171,132
Right of Way + 7% R/W ENGINEERING																			
TOTAL CONSTRUCTION COST			\$39,819,654		\$4,055,953		\$11,909,122		\$4,387,571		\$34,597,847		\$1,412,492		\$960,494		\$7,550,768		\$1,551,599

2020 I-80 Westbound		69		70		71		72		73		74		75	
		Sparks Blvd to Pyramid		Pyramid to Rock On-ramp		Center St. to Sierra St.		Keystone to W. McCarran		Pyramid Ave. 2-Lane On-ramp		New 4th Street Off-ramp		Center Street Off-ramp Decel.	
Length of Improvement >		2.01	Lane miles	1.02	Lane Miles	0.50	Lane Miles	1.54	Lane Miles	0.11	Lane Miles	0.50	Lane Miles	0.14	Lane Miles
Work Element	Cost per mile		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate
Roadway Items															
Removal items	\$306,235.00		\$615,532		\$312,360		\$153,118		\$471,602		\$34,799		\$153,118		\$41,759
Roadway excavation	\$85,000.00		\$170,850		\$86,700		\$42,500		\$130,900		\$9,659		\$42,500		\$11,591
Borrow embankment	\$166,334.00		\$334,331		\$169,661		\$83,167		\$256,154		\$18,902		\$83,167		\$22,682
Base	\$326,477.00		\$656,219		\$333,007		\$163,239		\$502,775		\$37,100		\$163,239		\$44,520
Plantmix including oils and opengrade	\$500,000.00		\$1,005,000												
Portland cement concrete paving including other items	\$460,000.00				\$469,200		\$230,000		\$708,400		\$52,273		\$230,000		\$62,727
Concrete Barrier rail	\$161,000.00		\$323,610		\$164,220		\$80,500		\$247,940		\$18,295		\$80,500		\$21,955
Guardrail including end treatments	\$48,114.00		\$96,709		\$49,076										
Miscellaneous Items	\$1,000,000.00		\$2,010,000		\$1,020,000		\$500,000		\$1,540,000		\$113,636		\$500,000		\$136,364
Drainage Items															
	30% of roadway		\$1,563,675		\$781,267		\$375,757		\$1,157,331		\$85,399		\$375,757		\$102,479
Structural Items															
Removals															
Concrete Bridge (cost per whole structure sqft)		112,500	\$15,062,500									10760	\$1,076,000		
Steel Bridge															
Retaining Wall															
Sound Wall	\$1,060,000.00														
MSE Wall															
Signals															
Signalized interchange per interchange both directions	\$300,000.00	3.0	\$900,000		0		0		0		0		0		0
Lighting															
High mast lighting	\$200,000.00		\$402,000		\$204,000		\$100,000		\$308,000						
Interchange lighting															
Traffic Control															
Signing	\$700,000.00		\$1,407,000		\$714,000		\$350,000		\$1,078,000		\$79,545		\$350,000		\$95,455
@ 10 percent of total construction items			\$2,454,743		\$430,349		\$207,828		\$640,110		\$44,961		\$305,428		\$53,953
Mobilization @ 5% of total construction items			\$1,350,108		\$236,692		\$114,305		\$352,061		\$24,728		\$167,985		\$29,674
SUBTOTAL COST FOR ALL IMPROVEMENTS			\$28,352,278		\$4,970,531		\$2,400,413		\$7,393,273		\$519,298		\$3,527,693		\$623,158
20% CONTINGENCIES			\$5,670,456		\$994,106		\$480,083		\$1,478,655		\$103,860		\$705,539		\$124,632
ESTIMATED CONSTRUCTION COST			\$34,022,734		\$5,964,637		\$2,880,496		\$8,871,927		\$623,158		\$4,233,232		\$747,790
7% PRELIMINARY PROJECT DEVELOPMENT			\$2,381,591		\$417,525		\$201,635		\$621,035		\$43,621		\$296,326		\$52,345
14% PRELIMINARY PROJECT ENGINEERING			\$4,763,183		\$835,049		\$403,269		\$1,242,070		\$87,242		\$592,652		\$104,691
15% ENGINEERING/CONSTRUCTION MANAGEMENT			\$5,103,410		\$894,696		\$432,074		\$1,330,789		\$93,474		\$634,985		\$112,168
Right of Way + 7% R/W ENGINEERING															
TOTAL CONSTRUCTION COST			\$46,270,918		\$8,111,907		\$3,917,474		\$12,065,821		\$847,495		\$5,757,195		\$1,016,994

2030 I-80 Eastbound		79	
		Sparks Blvd. To Vista Blvd	
Length of Improvement >		0.93	Lane miles
Work Element	Cost per mile		Estimate
Roadway Items			
Removal items	\$306,235.00		\$284,195
Roadway excavation	\$85,000.00		\$78,883
Borrow embankment	\$166,334.00		\$154,363
Base	\$326,477.00		\$302,981
Plantmix including oils and opengrade	\$500,000.00		\$464,015
Portland cement concrete paving including other items	\$460,000.00		
Concrete Barrier rail	\$161,000.00		
Guardrail including end treatments	\$48,114.00		\$44,651
Miscellaneous Items	\$1,000,000.00		\$928,030
Drainage Items			
	30% of roadway		\$677,135
Structural Items			
Removals			
Concrete Bridge (cost per whole structure sqft)			
Steel Bridge			
Retaining Wall			
Sound Wall			
MSE Wall			
Signals			
Signalized interchange per interchange both directions			
	\$300,000.00		
Lighting			
High mast lighting			
	\$200,000.00		
Interchange lighting			
Traffic Control			
Signing			
	\$700,000.00		\$649,621
@ 10 percent of total construction items			
			\$358,387
Mobilization @ 5% of total construction items			
			\$197,113
SUBTOTAL COST FOR ALL IMPROVEMENTS			\$4,139,375
20% CONTINGENCIES			\$827,875
ESTIMATED CONSTRUCTION COST			\$4,967,251
7% PRELIMINARY PROJECT DEVELOPMENT			\$347,708
14% PRELIMINARY PROJECT ENGINEERING			\$695,415
15% ENGINEERING/CONSTRUCTION MANAGEMENT			\$745,088
Right of Way + 7% R/W ENGINEERING			
TOTAL CONSTRUCTION COST			\$6,755,461

2030 I-80 Westbound		76		77		78	
		Vista Blvd to Sparks Blvd		Wells Ave to Center Street		W McCarran to Robb Drive	
Length of Improvement >		0.93	Lane miles	0.24	Lane miles	1.37	Lane miles
Work Element	Cost per mile		Estimate		Estimate		Estimate
Roadway Items							
Removal items	\$306,235.00		\$284,195		\$72,499		\$419,542
Roadway excavation	\$85,000.00		\$78,883		\$20,123		\$116,450
Borrow embankment	\$166,334.00		\$154,363		\$39,378		\$227,878
Base	\$326,477.00		\$302,981		\$77,291		\$447,273
Plantmix including oils and opengrade	\$500,000.00		\$464,015		\$118,371		\$685,000
Portland cement concrete paving including other items	\$460,000.00						
Concrete Barrier rail	\$161,000.00						
Guardrail including end treatments	\$48,114.00		\$44,651		\$11,391		\$65,916
Miscellaneous Items	\$1,000,000.00		\$928,030		\$236,742		\$1,370,000
Drainage Items							
	30% of roadway		\$677,135		\$172,739		\$999,618
Structural Items							
Removals							
Concrete Bridge (cost per whole structure sqft)						112,500	5062500
Steel Bridge							
Retaining Wall							
Sound Wall	\$1,060,000.00						
MSE Wall							
Signals							
Signalized interchange per interchange both directions	\$300,000.00					3.0	900000
Lighting							
High mast lighting	\$200,000.00						
Interchange lighting							
Traffic Control							
Signing	\$700,000.00		\$649,621		\$165,720		\$959,000
@ 10 percent of total construction items			\$358,387		\$91,425		\$1,125,318
Mobilization @ 5% of total construction items			\$197,113		\$50,284		\$618,925
SUBTOTAL COST FOR ALL IMPROVEMENTS			\$4,139,375		\$1,055,963		\$12,997,419
20% CONTINGENCIES			\$827,875		\$211,193		\$2,599,484
ESTIMATED CONSTRUCTION COST			\$4,967,251		\$1,267,156		\$15,596,903
7% PRELIMINARY PROJECT DEVELOPMENT			\$347,708		\$88,701		\$1,091,783
14% PRELIMINARY PROJECT ENGINEERING			\$695,415		\$177,402		\$2,183,566
15% ENGINEERING/CONSTRUCTION MANAGEMENT			\$745,088		\$190,073		\$2,339,535
Right of Way + 7% R/W ENGINEERING							
TOTAL CONSTRUCTION COST			\$6,755,461		\$1,723,332		\$21,211,788

Spaghetti Bowl (System Interchange)		80		81		82		83		84		85		86		87	
		N-W Direct Connector 2010		N-E Ramp 2010		S-E Direct Connector 2020		S-W Ramp 2020		W-S Direct Connector 2010		W-N Ramp 2020		E-N Direct Connector 2030		E-S Ramp 2010	
Length of Improvement >	Cost per mile	0.47	Lane miles	0.51	Lane miles	Lane Miles		0.63	Lane Miles	Lane Miles		0.23	Lane Miles	Lane Miles		2.01	Lane Miles
Work Element	Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate		Estimate
Roadway Items																	
Removal items	\$306,235.00		\$143,930		\$156,180		\$0		\$192,928		\$0		\$70,434		\$0		\$615,532
Roadway excavation	\$85,000.00		\$39,950		\$43,350		\$0		\$53,550		\$0		\$19,550		\$0		\$170,850
Borrow embankment	\$166,334.00		\$78,177		\$84,830		\$0		\$104,790		\$0		\$38,257		\$0		\$334,331
Base	\$326,477.00		\$153,444		\$166,503		\$0		\$205,681		\$0		\$75,090		\$0		\$656,219
Plantmix including oils and opengrade	\$500,000.00		\$235,000		\$255,000		\$0		\$289,800		\$0		\$0		\$0		\$0
Portland cement concrete paving including other items	\$460,000.00						\$0		\$101,430		\$0		\$37,030		\$0		\$323,610
Concrete Barrier rail	\$161,000.00		\$75,670		\$82,110		\$0		\$30,312		\$0		\$11,066		\$0		\$96,709
Guardrail including end treatments	\$48,114.00		\$22,614		\$24,538		\$0		\$630,000		\$0		\$230,000		\$0		\$2,010,000
Miscellaneous Items	\$1,000,000.00		\$470,000		\$510,000		\$0										
Drainage Items																	
30% of roadway			\$365,636		\$396,753		\$0		\$482,547		\$0		\$144,428		\$0		\$1,262,175
Structural Items																	
Removals																	
Concrete Bridge (cost per whole structure sqft)		104,000	\$10,400,000		\$0	145,600	\$14,560,000		\$0	65,200	\$6,520,000		\$0	64,480	\$6,448,000	7,000	\$700,000
Steel Bridge																	
Retaining Wall									\$1,000,000				\$500,000				
Sound Wall	\$1,060,000.00								\$667,800				\$243,800				
MSE Wall																	
Signals																	
Signalized interchange per interchange both directions	\$300,000.00	3.0		3.0		0		0		0		0		0		0	
Lighting																	
High mast lighting	\$200,000.00		\$50,000		\$50,000		\$50,000		\$50,000		\$50,000		\$50,000		\$50,000		\$50,000
Interchange lighting																	
Traffic Control																	
Signing	\$700,000.00		\$300,000		\$300,000		\$300,000		\$300,000		\$300,000		\$300,000		\$300,000		\$300,000
@ 10 percent of total construction items			\$1,233,442		\$206,927		\$1,491,000		\$410,884		\$687,000		\$171,965		\$679,800		\$651,943
Mobilization @ 5% of total construction items			\$678,393		\$113,810		\$820,050		\$225,986		\$377,850		\$94,581		\$373,890		\$358,568
SUBTOTAL COST FOR ALL IMPROVEMENTS			\$14,246,256		\$2,390,001		\$17,221,050		\$4,745,708		\$7,934,850		\$1,986,201		\$7,851,690		\$7,529,938
20% CONTINGENCIES			\$2,849,251		\$478,000		\$3,444,210		\$949,142		\$1,586,970		\$397,240		\$1,570,338		\$1,505,988
ESTIMATED CONSTRUCTION COST			\$17,095,507		\$2,868,001		\$20,665,260		\$5,694,850		\$9,521,820		\$2,383,442		\$9,422,028		\$9,035,926
7% PRELIMINARY PROJECT DEVELOPMENT			\$1,196,686		\$200,760		\$1,446,568		\$398,639		\$666,527		\$166,841		\$659,542		\$632,515
14% PRELIMINARY PROJECT ENGINEERING			\$2,393,371		\$401,520		\$2,893,136		\$797,279		\$1,333,055		\$333,682		\$1,319,084		\$1,265,030
15% ENGINEERING/CONSTRUCTION MANAGEMENT			\$2,564,326		\$430,200		\$3,099,789		\$854,227		\$1,428,273		\$357,516		\$1,413,304		\$1,355,389
Right of Way + 7% R/W ENGINEERING			\$7,542,725		2178070		2320586.04				4510056.42				19676536.1		
TOTAL CONSTRUCTION COST			\$30,792,615		\$6,078,551		\$30,425,340		\$7,744,995		\$17,459,732		\$3,241,481		\$32,490,494		\$12,288,859

Steering Committee Meetings
MINUTES

**WASHOE FREEWAY CORRIDOR STUDY
STEERING COMMITTEE MEETING MINUTES**

November 15, 2000 @ 1:30 pm
NDOT District II -Conference Room
Reno, NV

Attendees: See attached list of attendees and non-attendees

1. Introductions - All attendees introduced themselves and signed the roster. The following agencies and firms were represented:
 - Nevada Department of Transportation
 - Washoe County Public Works and Community Development
 - Washoe County Regional Transportation Commission
 - Airport Authority of Washoe County
 - City of Reno
 - City of Sparks
 - Federal Highway Administration
 - Parsons Transportation Group
 - Fehr and Peers
 - Randy Bowling Consulting
 - Washington Infrastructure Services
2. Approval of Minutes from the 9-27-00 Kick-off Meeting - There were no comments from the Steering Committee on changes to the minutes.
3. Data Collection Review - P.D. Kiser, PTG, showed the committee the large 3-ring binder that contained most of the data that had been collected. He also mentioned the inventory of project data that was included with the meeting agenda. The inventory included:
 - Freeway geometrics
 - Ramp to ramp distances
 - Average mainline freeway speeds between ramps
 - Mainline freeway counts from NDOT
 - Freeway ramp counts from NDOT
 - Freeway ramp counts from PTG
 - Peak hour turning movement counts from PTG at ramp termini and adjacent signalized intersections
 - 3 year accident data on freeway mainlinePTG is also in the process of doing freeway mainline counts from aerial photos taken by NDOT. These will be used to determine the freeway levels of service during the AM and PM peak periods.

Bob Scales, PTG, displayed and explained two graphics that were compiled from the collected data. One graphic showed the forecasted 2030 distribution

of population and employment. As anticipated a high concentration of population is in the northeast along the Pyramid Highway and the employment concentration is in the Double Diamond area along the south US 395/I-580 freeway. This information will provide a guide for determining what freeway and street facilities may be used for the home to work trips.

The other graphic showed the diurnal distribution of traffic on the freeways for a 7-day period at a number of NDOT count stations on I-80 and US 395. These charts indicated definite traffic flow patterns that show very little variation from day to day. They also showed a sharp AM peak (no peak spreading) between 7 am and 8 am. The afternoon peak period is spread over a two-hour period, generally between 3 pm and 5 pm.

4. Report on the RTC 2030 RTP Update Project - Dan Grayuski, Fehr & Peers, gave a status report on this project. They have been working with their steering committee for about 12 months. They have developed 3 alternative packages for improvements on the arterial street system. These packages are being reviewed by their steering committee. In December the alternative package review will be completed. They will have a final plan developed around May 2001 and the RTC board will adopt the updated RTP in July 2001. PTG will continue the coordination effort between the freeway project and the arterial street project.

P.D. Kiser stated they had met with the RTC Planning staff that morning to gather information on the Pyramid Corridor connection to US 395. RTC anticipates this connection would be built sometime between 2020 and 2030 and would be a 6-lane facility. The traffic from this facility will have a significant impact to the US 395 freeway. The approved Alternative C shows potential connections to US 395 at Dandini, Panther or North McCarran interchanges.
5. Review of the Draft Public Involvement Plan - Randy Bowling, RBC, handed out and explained a draft of the Public Involvement Plan for the project. The plan will provide the blueprint for disseminating project information to the public and obtaining feedback from the public. Randy asked the committee members to review the hand out and provide him with comments. The best way to provide feedback would be through email. Randy's email address is randy@rbc.reno.nv.us. Jim Poston, RTC, recommended that State Legislators from the Truckee Meadows area be included as stakeholders and that project information be provided to them.
6. Washoe Freeway Corridor Study Hotline (885-8571) - The project telephone hotline has been activated to record citizen comments regarding the project. Following the approval of the Public Involvement Plan, PTG will advertise the Hotline number to the public.

Kent Cooper, NDOT, stated that many of the calls received on the hotline would not be related to the project. Those calls will need to be forwarded to the appropriate agencies. Those calls that are project related will receive a response and be recorded.

P.D. Kiser pointed out the list of freeway operational issues (attached to the agenda) that was received from committee members following the Kick-off Meeting on 9-27-00. Some of the comments dealt with current operational issues and were forwarded to the appropriate agency or NDOT section. Kent Cooper stressed that all comments are important and urged the committee to continue providing input on all facets of the project.

7. Other issues - P.D. Kiser gave an update on the project scope of work and project schedule. The majority of the data collection, Task 1, has been completed. PTG is starting the analysis of existing conditions, Task 2, and will include a CORSIM analysis of the Spaghetti Bowl area. This activity will continue into February/March 2001. It is expected the travel demand modeling, Task 3, will begin in December/January and continue through April 2001. A parallel effort is the RTC update of the travel forecast model to year 2000. Once PTG and RTC have done a validation check of the model the travel forecast for 2010, 2020 and 2030 can be obtained.
8. Next Steering Committee Meeting - The meeting has been tentatively scheduled for December 13, 2000, 1:30 pm at the NDOT District II office conference room. A final decision on the meeting date and time will be made and the committee notified by 11-27-00.

Washoe Freeway Corridor Study
Steering Committee Meeting (11-15-00)
Meeting Attendees (Steering Committee)

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WASHOE FREEWAY CORRIDOR STUDY STEERING COMMITTEE MINUTES

December 13, 2000 @ 1:30 p.m.
NDOT District II Conference Room
Reno, NV

Attendees: See attached list of attendees and non-attendees

1. Introductions - All attendees signed the roster and were asked to put their names on tent cards so everyone can identify them. The following agencies and firms were represented:
 - Nevada Department of Transportation
 - Washoe County Community Development
 - Washoe County Regional Transportation Commission
 - City of Reno
 - City of Sparks
 - Parsons Transportation Group
 - Fehr & Peers
 - Louis Berger Group
 - Washington Infrastructure Services
2. Approval of Minutes from the 11-15-00 Steering Committee Meeting - There were no comments from the Steering Committee on changes to the minutes.
3. Status of Task 1 (Data Collection) and Task 2 (Analysis of Existing Conditions) Activities - P.D. Kiser, PTG, indicated that most of the data and information required in Task 1 had been collected. The past month has been spent converting the raw data into usable information. Bob Scales, PTG, provided the committee with several handouts showing the results of the data processing. This included the following handouts:
 - Freeway Traffic Balancing - this table shows freeway mainline traffic compared to the on and off ramp traffic to find the "true" peak hour within the 2 hour peak period that was counted.
 - Freeway Traffic Balancing Maps - these maps show the actual balancing results for the AM and PM peak periods for I-80 and US 395.
 - Freeway Traffic Density Counts - These tables show the traffic density counts. The density is shown for every freeway section, i.e. between each freeway on and off ramp and by the time of day the aerial photo was taken. The table also shows the length of each section (feet), number of lanes and the corresponding Level of Service. This information is also shown for each direction of the freeway.
 - Level of Service Maps - Using the density data from above, maps were produced to graphically show the freeway Level of Service range for each direction over the 2 hour peak period when aerial photos were taken. By following the Level of Ser-

vice ranges on the map for LOS D, E and F, the recurring problem areas on the freeway are revealed.

- Diurnal Distribution Map - This map was updated from the November Steering Committee Meeting and shows additional distribution sites along both freeways.
- Aerial Photo Strip Maps - These are enlargements of the contact photos provided by NDOT and were used to do the traffic density counts for the Level of Service analysis.

PTG will continue with the analysis of existing conditions (Task 2) and the evaluation of future impacts (Task 3) in December and January. Jack Lorbeer, RTC, provided PTG with the travel forecast model runs for 2000, 2010, 2020 and 2030 showing Average Daily Traffic. We also requested they provide the same maps for peak hour traffic.

4. Report on the RTC 2030 RTP Update Project - Dan Grayuski, Fehr & Peers, gave a detailed report on this project and included a handout showing the following:
 - Level of Service Standard for the 2030 Regional Transportation Plan (RTP) for various streets (non-freeway).
 - Average Daily Traffic Level of Service Thresholds by Facility Type - this table, for planning efforts, shows a maximum flow rate for LOS A through F for various facility types.
 - Current schedule for completion of the RTP Update.
 - Don Campbell, Fehr & Peers, gave a report on existing funding sources.
5. Public Involvement Plan Review - The plan was updated from comments received after the November meeting. The issue of newsletters needs to be discussed with NDOT. Randy Bowling and P.D. Kiser will meet with Kent Cooper and Michelle Gardner-Lilley to finalize the plan.
6. Other Business - Kent Cooper addressed the steering committee about their involvement in the project. He asked the committee members to provide PTG with their input on the problem areas of the freeway they have experienced. He stressed the importance of having their input when we start the public outreach process with the local elected officials. He also stressed that the committee members should talk to their elected officials in advance of the public outreach process to alert them to the study and its purpose.
7. Next Steering Committee Meeting - The next meeting is tentatively scheduled for January 24, 2001 at 2:00 PM in the NDOT District II, Snow Control Conference Room.

Washoe Freeway Corridor Study
Steering Committee Meeting (12-13-00)
Meeting Attendees (Steering Committee)

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**WASHOE FREEWAY CORRIDOR STUDY
STEERING COMMITTEE MINUTES**
February 14, 2001 @ 1:00 p.m.
NDOT District II Safety Training Conference Room
Reno, NV

Attendees: See attached list of attendees and non-attendees

1. Introductions - All attendees signed the roster and were asked to put their names on tent cards so the committee members can be identified. The following agencies and firms were represented:
 - Nevada Department of Transportation
 - Washoe County Public Works
 - Washoe County Regional Transportation Commission
 - City of Reno
 - City of Sparks
 - Airport Authority of Washoe County
 - Parsons Transportation Group
 - Fehr & Peers
 - Randy Bowling Consulting
 - Washington Infrastructure Services
2. Approval of Minutes from the 12-13-00 Steering Committee Meeting - There were no comments from the Steering Committee on changes to the minutes.
3. Report on the RTC 2030 RTP Update Project - Dan Grayuski, Fehr & Peers, gave a report on this project. They will be selecting the proposed future improvements package in March 2001 and plan to have package adoption in April 2001. The following handouts were given to the committee members:
 - Potential roadway improvement projects - Packages 1, 2, and 3
 - Listing of projects by package for each segment and number of new lanes.
 - Level of Service deficiencies for Packages 1, 2, and 3 in 2030.
 - Package Scoring Worksheet - Methodology for selecting best package.

Don Campbell discussed how they determined the proposed freeway improvements of 8 lanes for 2030. These were based on certain assumptions, however the freeway improvements recommended to NDOT will come from the PTG study.
4. Status of the Public Involvement Program - Randy Bowling, RB Consulting, gave a report on the program. He handed out the new project information sheet that is being distributed to the local politicians and technical staffs. Also handed out was a summary of the Project Hotline calls. Information meetings have been held with the following individuals or groups:
 - Mike Harper and staff - Washoe County Planning
 - Randy Mellinger and staff - Sparks Community Development
 - Shaun Carey, Randy Mellinger and Wayne Seidel - City of Sparks

- Jack Lorbeer and Greg Krause - Washoe RTC
- CH2M-Hill/Washoe RTC - Pyramid Corridor Project
- Roger Trounday and Tom Newell - Sparks Nugget

Upcoming meetings will include the following:

- Truckee Meadows Regional Planning Agency
 - City of Reno
 - Washoe County Planning Commission
5. Update on NDOT's Spaghetti Bowl Project - Kathy Weaver, NDOT Project Manager gave a summary report on the Spaghetti Bowl project including recent changes on I-80 between Rock Blvd and US 395. Due to problems with the height of the retaining/sound walls the original braided ramp design was modified. The new design splits 4th Street on-ramp traffic into two separate ramps for access to I-80 and US 395. Kathy indicated the next step is to get local jurisdiction approval of these design changes in the next two months. She will provide PTG with an electronic file of the new changes. The Spaghetti Bowl project is scheduled to be advertised September 20, 2001.
 6. Project Status Report
 - Freeway Accident Analysis - P.D. Kiser handed out tables showing accident rates for various sections of I-80 and US 395. Also included were graphical representations of the accidents by location for 1997, 1998 and 1999.
 - Validation and calibration of the RTC 2000 model output - Bob Scales made a presentation on the 2000 counted traffic balancing effort and a comparison of the balanced traffic with the RTC 2000 model output (validation) and explained where differences existed between the counted and modeled traffic. Our analysis showed the external trip numbers from the RTC 2000 model needed to be adjusted (calibration) to fit the counted 2000 traffic numbers. RTC will be making these adjustments to the 2000 model and use similar procedures for the 2010, 2020 and 2030 model output.
 - Level of Service Analysis - Bob Scales handed out tables for I-80 and US 395 comparing levels of service determined by three accepted methods (Highway Capacity Manual 2000, Volume/Capacity and Field Observation/Density Counts). The comparison showed the three methods produce similar results. The most accurate analysis is from the density counts made off the peak-hour aerial photographs. This method shows how levels of service will vary significantly within the "peak period".
 - RTC Model Sensitivity Test for City of Sparks - Bob Scales stated the City of Sparks had a study done to determine the impact of the current city policies on development. The study indicated that residential development in the next 30 years would place a severe financial burden on city services and that the city needs to promote more growth in jobs. The city plans to create incentives through zoning and other methods to increase job growth (between 20,000 and 30,000 jobs) by 2030. As a test of the model sensitivity to this shift in jobs to the 2030 regional plan, PTG has asked RTC to do

a model run using modified 2030 demographic data obtained from the City of Sparks. The model will be reviewed to determine if the jobs growth in Sparks will have a significant impact on traffic on the freeways.

7. Next Steering Committee Meeting - The next meeting is scheduled for March 28, 2001 at 1:30 p.m.

Washoe Freeway Corridor Study
Steering Committee Meeting (2-14-01)
Meeting Attendees (Steering Committee)

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**WASHOE FREEWAY CORRIDOR STUDY
STEERING COMMITTEE MINUTES**

March 28, 2001 @ 1:00 p.m.
NDOT District II - Main Conference Room
Reno, NV

Attendees: See attached list of attendees and non-attendees

1. Introductions - All attendees signed the roster and introduced themselves. The following agencies and firms were represented:
 - Nevada Department of Transportation
 - Washoe County Public Works
 - Washoe County Community Development
 - Washoe County Regional Transportation Commission
 - City of Reno
 - City of Sparks
 - Airport Authority of Washoe County
 - Parsons Transportation Group
 - Fehr & Peers
 - Randy Bowling Consulting
 - Washington Infrastructure Services
2. Approval of Minutes from the 2-14-00 Steering Committee Meeting - There were no comments from the Steering Committee on changes to the minutes.
3. Report on the RTC 2030 RTP Update Project - Dan Grayuski, Fehr & Peers, gave the following update report on this project:
 - Held public meetings on March 6th and 20th and handed out the 3 improvement packages.
 - Improvement package #3 appears to be the preferred choice of the citizen steering committee, which includes a transit corridor, transit increases, limited amount of new roads, roadway widening projects, consideration of HOV lanes, and additional lanes on the freeways.
 - Remaining tasks for the RTP Update include selecting the preferred improvement package, establishing the key policies, i.e. level of service, determining final list of projects and finalizing the financial elements for funding.
 - Plan to have a plan draft in early May and the final plan for adoption by the RTC board in July.
4. Status of the Public Involvement Program - Randy Bowling, RB Consulting, gave a report on the program. No calls were received on the Project Hot Line since the last Steering Committee meeting. The following project introduction meetings were held:
 - City of Reno Planning Staff (2-16-01 and 3-23-01)
 - Truckee Meadows Regional Planning Agency (TMRPA Staff)
 - Washoe County Commission and Planning Commission (joint meeting)

- City of Sparks Planning Commission

During the above-mentioned meetings the majority of the questions and comments were not related to the project. A public meeting (open house) for the project is being planned for May. This meeting will introduce the project to the general public, describe the purpose of the project, point out current problem areas on the freeways and open a dialogue with the public. Upcoming meetings have been scheduled with the Reno and Sparks City Councils.

5. Project Status Report

- 2030 Traffic - Bob Scales handed out balanced traffic volumes on I-80 (mainline and ramps) showing existing 2000 (NDOT counted), 2000 RTC model, 2030 RTC model and 2030 adjusted (PTG). Bob used the handout to explain the validation of the RTC 2000 model output and how the 2030 adjusted volumes were derived. The US 395 traffic volumes are still being evaluated and will be provided to the committee at the next meeting.
- Preliminary I-80 lane requirements based on adjusted 2030 traffic volumes - Using the adjusted 2030 traffic volumes a preliminary freeway lane requirement was determined. This was shown in a separate handout along with the Level of Service calculations from the last meeting. The lane requirement was based on a Level of Service "D" operation or 1600 vehicles per hour per lane. Other assumptions included 7% trucks, peak hour factor of 0.9, passenger car equivalency factor of 2.5 (1 truck = 2.5 passenger cars) and the auxiliary lane volume of 1100 vehicles per hour per lane. The summary of lane requirements is as follows:
 - State line to Robb Drive - 2 lanes per direction
 - Robb Drive to Keystone - 3 lanes per direction
 - Keystone to Center Street - 4 lanes per direction
 - Center Street to Spaghetti Bowl - 5 lanes westbound, 4 lanes eastbound
 - Spaghetti Bowl to Rock Blvd - 5 lanes westbound, 4 lanes eastbound
 - Rock Blvd to East McCarran - 4 lanes per direction
 - East McCarran to Vista - 3 lanes per direction
 - East of Vista - 4 lanes per direction (based on traffic generated from full build out of the Reno/Tahoe Industrial Park)

Bob pointed out these lane requirement results are preliminary and will need further evaluation using the CORSIM model.

- Sensitivity Model Runs - Bob Scales pointed out several land use scenarios that need to be tested with sensitivity model runs by the RTC. One of these is the Reno/Tahoe Industrial Park in Storey County. Model runs will be done for various stages of development of the industrial park to determine impact to I-80.
- Freeway right-of-way and physical constraints - P.D. Kiser handed out aerial photos of the freeway alignments showing the existing right-of-way boundaries. He also handed out a listing of all structures (bridges and drainage facilities) that cross the freeway. A number of the bridge structures have limited clearance between columns and footings. These will be

further investigated to determine where constraints will exist for future widening.

6. Committee Comments/Questions -

- Dave Manning stated the NDOT Traffic Information Section was very pleased with the methodology that PTG has used to obtain the traffic volumes and validate the RTC model.
- Keith Lockard asked when the freeway ramp volumes would be finalized. Bob Scales indicated this would happen during the CORSIM model analyses. Keith also asked if RTC was in agreement with the PTG adjustments to the model output. Jack Lorbeer indicated they were in general agreement with the adjustments and that PTG had maintained communication with RTC on the adjustments.
- Kathy Weaver asked why the level of service from observed traffic densities was shown in a range rather than a single value such as the HCM or V/C methods. Bob Scales explained the traffic density fluctuates over time and the airplane made a photo run on each freeway about every 10 minutes. Each photo flight will show different densities throughout the peak period, thus the range of level of service values.
- Jack Lorbeer noted the proposed Mae Anne Ave. interchange had dropped out of the 2030 RTP Update Project list of new projects. This was in response to comments made by P.D. Kiser about new interchanges. No new interchanges are being proposed by PTG or Fehr & Peers at this point in time.

7. Next Steering Committee Meeting - The next meeting is scheduled for April 25, 2001 at 1:00 p.m. P.D. Kiser indicated they would provide a demonstration of the CORSIM model for the Reno freeways at the April meeting.

Washoe Freeway Corridor Study
Steering Committee Meeting (3-28-01)
Meeting Attendees (Steering Committee)

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**WASHOE FREEWAY CORRIDOR STUDY
STEERING COMMITTEE MINUTES**
April 25, 2001 @ 1:00 p.m.
NDOT District II - Main Conference Room
Reno, NV

Attendees: See attached list of attendees and non-attendees

1. Introductions - All attendees signed the roster. The following agencies and firms were represented:
 - Nevada Department of Transportation
 - Washoe County Public Works
 - Washoe County Community Development
 - Washoe County Regional Transportation Commission
 - City of Reno
 - City of Sparks
 - Airport Authority of Washoe County
 - Parsons Transportation Group
 - Fehr & Peers
 - Randy Bowling Consulting
 - Washington Infrastructure Services
2. Approval of Minutes from the 3-28-00 Steering Committee Meeting - There were no comments from the Steering Committee on changes to the minutes.
3. Report on the RTC 2030 RTP Update Project - Dan Grayuski, Fehr & Peers, gave the following update report on this project:
 - Improvement Package #3 was selected by the Citizens Steering Committee and RTC staff to take to the RTC board for approval on May 11, 2001. Package #3 includes a transit corridor, transit increases, limited amount of new roads, roadway widening projects, consideration of HOV lanes and additional lanes on the freeway. This plan shows 8 lanes on the freeways. A map showing the recommended improvement locations was handed out to the committee. Bob Scales requested the map have notes added to show the number of recommended freeway lanes. Jack Lorbeer indicated that about 95% of the improvements shown on the map are included in the RTC 2030 model run provided to PTG.
 - Handout provided on the Primary Transit Network, which includes Rapid Transit, Primary Local routes and Primary Express routes.
 - The recommended plan goes to the RTC board for approval on May 11, 2001. It will then be presented to the local agencies in June and July.
4. Status of the Public Involvement Program - Randy Bowling, RB Consulting, gave a report on the program. No calls were received on the Project Hot Line since the last Steering Committee meeting. The following project introduction meetings were held:
 - Sparks City Council (4-2-01)

- Sparks Citizen Advisory Committee (4-5-01)
- Reno City Council (4-17-01)

A public meeting (open house) for the project originally planned for May would likely be held in June. This meeting will introduce the project to the general public, describe the purpose of the project, point out current problem areas on the freeways and open a dialogue with the public. The proposed location for the meeting is the Lawlor Events Center. The citizens attending the meeting will be provided with project fact sheets, Q&A sheets and survey forms. In addition a number of charts, maps, aerial photos and other information formats will be available. Individual interviews with the various media will be planned in advance of the meeting as a means of getting the open house notice out to the public.

5. Project Status Report - Bob Scales and Robert Eckols began the status report with a demonstration of the CORSIM model that had been coded and run using the 2000 balanced traffic volumes for US 395 and I-80. P.D. Kiser pointed out that the diligent efforts they have made with the traffic volumes, i.e. field counts, validation with RTC 2000 model runs, comparison to NDOT counts and final balancing of traffic was paying off because these volumes were being used in the CORSIM model created for the freeway system in the Truckee Meadows. A considerable effort was made to set up and run the CORSIM model.

Bob Scales showed the committee a number of congestion points on US 395/I-80 as it appears in the CORSIM model. Some areas still additional calibration, however the model is close to simulating actual AM and PM peak hour conditions. Once the year 2000 calibration has been completed the model will be modified to reflect the Spaghetti Bowl improvements planned for next year and for the 2030 traffic conditions. A number of traffic/land use scenarios will be tested with the model. During the demonstration a table showing the measures of effectiveness (MOE's), i.e. percent of demand volume served by the model, average speeds and Levels of Service, was handed out. The CORSIM model produces this table.

Following the CORSIM demonstration handed out the final traffic balancing for US 395 that results in the preliminary lane requirements for 2030 traffic (the I-80 final traffic balancing and preliminary lane requirements were handed out to the committee at the March 28, 2001 committee meeting). The lane requirement was based on a Level of Service "D" operation or 1600 vehicles per hour per lane. Other assumptions included 7% trucks, peak hour factor of 0.9, passenger car equivalency factor of 2.5 (1 truck = 2.5 passenger cars) and the auxiliary lane volume of 1100 vehicles per hour per lane. The summary of US 395 lane requirements are as follows:

- State Line to Stead Blvd. - 2 lanes per direction
- Stead Blvd to Lemmon - 3 lanes per direction

- Lemmon to Spaghetti Bowl - 4 lanes per direction
- Spaghetti Bowl to Moana - 5 lanes per direction
- Moana to South Meadows - 4 lanes per direction
- South Meadows to So. Virginia - 3 lanes per direction
- So. Virginia to South of Mt. Rose - 2 lanes per direction

As mentioned in the March committee meeting these lane requirement results are preliminary and will need further evaluation.

Possible date and location for the first Public Open House - This meeting will be the first opportunity for the general public to get information on the project and to provide input on freeway improvements in the future. P.D. indicated he would be very appreciative of any Steering Committee members that would volunteer to be present at the Open House to help citizens find answers to questions, point out the purpose of the study and the expected study results. He will notify the Steering Committee Members by email about volunteering for the open house.

It was decided the Steering Committee should meet again on May 23, 2001 to be briefed on the Open House by the PTG staff prior to the Open House being held the week of May 28 or June 4, 2001.

6. Next Steering Committee Meeting - The next meeting is scheduled for May 23, 2001 at 1:30 p.m. Several committee members said it would be easier for them to make the meeting at 1:30 p.m. since it is held the same day as the RTC Technical Advisory Committee meeting.

Washoe Freeway Corridor Study
Steering Committee Meeting (4-25-01)
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**WASHOE FREEWAY CORRIDOR STUDY
STEERING COMMITTEE MINUTES**

October 31, 2001 @ 1:30 p.m.

NDOT District II - Main Conference Room
Reno, NV

Attendees: See attached list of attendees and non-attendees

1. Introductions - All attendees signed the roster. The following agencies and firms were represented:
 - Nevada Department of Transportation
 - Washoe County Public Works
 - Washoe County Community Development
 - Washoe County Regional Transportation Commission
 - Parsons Transportation Group
 - Fehr & Peers
 - Randy Bowling Consulting
 - Washington Infrastructure Services
 - City of Reno
 - City of Sparks
2. Approval of Minutes from the 9-26-01 Steering Committee Meeting - There were no changes to the minutes.
3. Review of 2030 travel forecasts – This item was held pending a review of the December 2000 and June 2001 model runs from RTC.
4. Conceptual 2030 Freeway Plans – P.D. Kiser made a presentation on the conceptual freeway plans needed to accommodate the 2030 traffic forecast. These plans only cover the portions of I-80 and US 395 that lie within the McCarran Blvd. Loop. P.D. pointed out that the preliminary freeway layout is based on a Level of Service “D” or better and, where possible, used standard width lanes and shoulders. He explained the reasoning for many of the concepts used in the layout. This includes the parallel collector-distributor type roadways used to overcome existing weaving problems due to closely spaced interchanges and the use of ramp braiding where interchanges are too close to the Spaghetti Bowl. The following items are either included in the layouts or are being considered:
 - Eight mainline lanes will be needed on I-80 by the Sparks Nugget by 2030. The gap between the bridges over the casino could be filled in to provide the two additional lanes needed.
 - The platform over I-80 between Virginia and Center Street would not have to be moved to accommodate the 8 lanes needed by 2030.
 - Airport freeway access to and from the south on US 395 is shown.
 - The proposed ramps on US 395 for the Meadow Wood Mall are not shown. PTG is waiting to receive additional information on geometrics and traffic volumes.

- The proposed Pyramid Connector interchange on US 395 is not shown on the layout, however the traffic to and from the Connector is reflected in the number of mainline lanes shown on the layout.
 - The Spaghetti Bowl will need a series of high speed, direct connector ramps to accommodate the movements between freeways.
 - Ramp braiding will be needed to serve movements between closely spaced interchanges and where direct connector ramps through the Spaghetti Bowl must tie back to the freeway mainline.
 - Two or three lane parallel roadways may be used to separate mainline traffic through the Spaghetti Bowl from traffic that will move to the intersecting freeway at the Spaghetti Bowl.
 - The number of lanes on I-80 east of the Spaghetti Bowl reflect a 50% build-out of the Reno/Tahoe Industrial Park.
 - There is no location or conceptual layout of the Pyramid Connector interchange.
 - The preliminary design for the Sutro/Clearacre interchange (on US 395 north of the No. McCarran interchange) will be incorporated into the 2030 freeway layout.
 - PTG is in the process of obtaining geometric information on the proposed Meadowood Mall interchange (add ramps to and from the south on US 395 to create a split diamond with the Del Monte interchange).
- An operational analysis is needed to determine the adequacy of the freeway mainline. In addition, each of the interchange ramps needs to be analyzed to determine if the current interchange type is adequate.
5. Next Steering Committee Meeting - The next meeting is scheduled for November 28, 2001 at 1:30 p.m.

Washoe Freeway Corridor Study
Steering Committee Meeting (10-31-01)
Meeting Attendees (Steering Committee)

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Steering Committee Meetings
PROJECT INFORMATION SHEETS



Nevada Department of Transportation

1263 South Stewart Street, Carson City, NV 89712

Washoe County Freeway Corridor Study Fact Sheet

Study Description: The Nevada Department of Transportation is leading a study in cooperation with the Washoe County Regional Transportation Commission, the Cities of Sparks and Reno, and Washoe County that will define future transportation alternatives along the Interstate 80 and US 395 freeway corridors. These alternatives will address solutions to traffic congestion and other mobility problems projected to occur over the next 30 years. The study area covers the I-80 freeway from the East Verdi Interchange to Vista Boulevard in Sparks, and the US 395 freeway from Cold Springs in the north to Mount Rose Highway in the south and includes the freeway mainline and interchange ramps.

Forty interchanges are included in the corridor study area. Also included in the study is the evaluation of major roadways that affect the operation and performance of the I-80 and US 395 freeways.

An important element of the study is consideration of public comments relating to the operational characteristics of the freeways. Public meetings will be held to explain the study progress and findings. Additionally, a telephone hotline (775/885-8571) has been established to allow public input.

Analysis and evaluation of future transportation operations, based on population and land use projections for the year 2030, will yield transportation alternatives that address identified problems. This will allow the selection of preferred alternatives on which actual improvements are based.

Project Consultant: Parsons Transportation Group
P.D. Kiser, Project Manager (775) 885-2280; Email (Paul.D.Kiser@Parsons.com)

Study Start Date: August 16, 2000

Estimated Completion Date: July 2002

Major Study Tasks: The first phase of the Corridor Study is scheduled for completion in the spring of 2001 with identification of preliminary alternatives. Evaluating current traffic conditions and characterizing the traffic conditions on I-80 and US 395 lead to identification of alternative solutions. Then, using a computerized traffic model, future traffic conditions are projected by using population estimates and land use forecasts. Alternative solutions are identified that address the problems shown by the traffic model. The second phase of the study consists of refining the alternative solutions and identifying improvements for future implementation and development.

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TELEPHONE HOTLINE CALLS

WASHOE FREEWAY CORRIDOR STUDY

PUBLIC INVOLVEMENT PLAN

PROJECT "HOTLINE" COMMENT LOG

Date	Time	Comment
12/26/00	6:22 am	Thinks there should be a new road corridor created on the east side of the Truckee Meadows (connected to Sparks Blvd.) to reduce traffic on I-80. RESPONSE - Called and left message that we received his call.
12/26/00	7:31 am	Don't allow trucks to pass on northbound US 395 between No. McCarran and Panther Valley interchanges. NO RESPONSE.
12/26/00	7:35 am	Moved here from Illinois. The freeway on and off ramps are too close together on US 395. NO RESPONSE.
12/26/00	8:35 am	I-80 westbound to US 395 southbound only has one lane. Needs at least two lanes. RESPONSE - Called and left message that we received her call.
12/26/00	8:40 am	Westbound I-80 traffic backs up to the Sparks Nugget every day. Need more lanes for eastbound and westbound traffic. NO RESPONSE.
12/26/00	9:06 am	Has suggestions for improving the Spaghetti Bowl. RESPONSE - Spoke with caller and he had two suggestions. He suggested a new ramp to 4 th Street from the eastbound I-80 to southbound US 395 ramp. He also said the left turn pocket on westbound No. McCarran to the southbound US 395 on-ramp needs to be lengthened.
12/26/00	9:10 am	Need to add more capacity to the Spaghetti Bowl, need direct connector ramps for freeway-to-freeway movements. RESPONSE - Unable to reach this person at either number.
12/26/00	9:28 am	Has suggestions for improvements on westbound I-80 near the Spaghetti Bowl. RESPONSE - Spoke with caller. He suggests some striping changes and additional signing for people sitting in the queue to exit but really want to go onto the west on I-80. Let them they can go west on I-80 without sitting in the queue.

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

Date	Time	Comment
12/26/00	11:02 am	Need more lanes on US 395 southbound south of the Spaghetti Bowl. She is also afraid of dirt and debris on SB US 395 from recent construction work blowing into the roadway. RESPONSE - Called her and discussed her concerns about the freeway operation. I forwarded her concern about the dirt and debris to the NDOT District II office.
12/26/00	11:31 am	I-80 should have 6 lanes between Robb Drive and Vista Blvd. Rebuild the Spaghetti Bowl to have full cloverleaf movements. Need 6 lanes on US 395 north of the Spaghetti Bowl. RESPONSE -
12/26/00	11:34 am	The eastbound off ramp at Vista and I-80 needs to have 2 lanes to handle the traffic demand. NO RESPONSE.
12/26/00	12:54 pm	Has a number of suggestions. He mentioned several congested areas on US 395, i.e. near Oddie Blvd., need for truck climbing lane north of No. McCarran and on I-80, i.e. westbound I-80 to US 395. He feels NDOT has been slow to respond to problem areas. RESPONSE - Spoke with caller and discussed several of his concerns and explained the purpose of our study.
12/26/00	1:21 pm	US 395 needs to be widened between No. McCarran and Red Rock interchanges. RESPONSE - Called and left message that we had received her call.
12/26/00	2:17 pm	She lives on "A" Street near I-80 and thinks there needs to be a sound wall along the north side of I-80 near the Rock Blvd. off ramp. Too noisy! RESPONSE - Spoke with caller and told her we would forward her comments to NDOT.
12/26/00	3:54 pm	Has some suggestions for the Spaghetti Bowl. RESPONSE - Spoke with caller and discussed his concerns. He stated that a couple of years ago he suggested to NDOT to install signs approaching the Spaghetti Bowl that say "Through Traffic Use Left Lane". He said NDOT installed some of these signs and it has helped, but they need to do more and use bigger signs. He realizes this is an interim fix but it should be pursued.
12/26/00	4:14 pm	New resident of Reno from California. Thinks Reno drivers are crazy and drive too fast. Do something to slow them down. NO RESPONSE.
12/26/00	6:34 pm	Spend the money and do double deck freeways to alleviate congestion. RESPONSE - Called and left message that we had received his call.

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

Date	Time	Comment
12/26/00	6:39 pm	No suggestions. RESPONSE - Spoke with caller and discussed his concerns. He mentioned a number of congested areas, i.e. US 395 northbound at Od-die, and north of No. McCarran and on I-80 west-bound at Rock and 4th Street. He suggested using the "Through Traffic Use Left Lane" signs.
12/26/00	6:50 pm	People are not merging properly onto the freeway. Need some type of merge barrier so people will not stop or slow down too much when they merge. NO RESPONSE.
12/26/00	11:05 pm	Freeway on and off ramps are too close together at several locations. RESPONSE - Called and left a message that we had received her call.
12/26/00	11:06 pm	Concrete debris is falling off the Center Street overpass (on I-80) and hitting cars. Hit his car twice. (Contractor is preparing this old overpass to place a building on it.) NO RESPONSE. Referred to NDOT District II.
12/26/00	11:23 pm	Traffic exiting eastbound I-80 at East McCarran is blinded by the sun at certain times in the morning. Knows we can't do anything about it but wanted us to know. NO RESPONSE.
12/27/00	6:42 am	Has some suggestions on the Spaghetti Bowl. RE-SPONSE - Spoke with caller and discussed his issues. His main concern is westbound I-80 to go to north or south on US395. He suggested using over-head signs designating that through traffic use the left two lanes on westbound I-80.
12/27/00	7:25 am	On eastbound I-80 to southbound US 395 drivers force the merge onto the ramp and cause congestion and accidents. Need to address this. RESPONSE – Spoke with caller and discussed his concerns about eastbound I-80 to southbound US 395. He is dis-turbed about the aggressive drivers that force their way into the queue at the ramp.
12/27/00	12:03 pm	Problems with roadway on US 50A between Fernley and Fallon. Referred to NDOT Traffic En-gineering.
12/27/00	12:31 pm	The westbound I-80 exit to US 395 (north or south) only has one lane but needs two lanes. RESPONSE – Spoke with caller and discussed his concern about westbound I-80 to US 395. He feels there is enough room to stripe for two exit ramp lanes. I told him about the upcoming NDOT project to braid the 4 th Street on ramp. (PDK)

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

Date	Time	Comment
12/28/00	8:35 am	Talked to caller. He called to complain that NDOT takes too long to complete projects.
1/2/01	10:46 am	Wanted information on right-turn-only sign on South Virginia Street near new post office. RE-SPONSE – Returned call for clarification. Caller said that right-turn-only sign for people leaving the post office requires them to make a U-turn on Vir-ginia Street. In a call back, I referred caller to Thor Dyson, NDOT District Office. (R. Bowling)
1/2/01	1:01 pm	Commented that she supports the editorial in the Reno Gazette Journal, especially adding lanes to EB I-80/ SB US 395 movement, where she recently had a bad accident.
1/2/01	1:59 pm	Commented that she had not driven on Reno free-ways in past four years, especially the spaghetti bowl, because she went the speed limit and was al-ways passed by speeders. Wants more enforce-ment.
1/2/01	4:54 pm	Has question on NDOT schedule for expanding spaghetti bowl and other freeways. RESPONSE – Called back, left message. (RB)
1/3/01	12:18 pm	Familiar with movable lanes, supports freeway im-provement plans described in recent newspaper ar-ticles. Is opposed to building on or under freeways because of wrongful death suits resulting from earthquakes, as happened in California, referring to Cypress Freeway in California.
1/3/01	2:16 pm	Cannot see freeway traffic when merging northbound on US 395 at North McCarran.
1/3/01	4:13 pm	Supports freeway improvements describe in news-paper articles except for adding lane in EB direction of I-80 between US 395 and Rock Boulevard be-cause reducing lanes from 4 to 2 is worsening the situation. If the added lane went all the way to E. McCarran, it would be much better.
1/8/01	1:41 pm	No message left. RESPONSE – RB called back. Asked if I-80 through Sparks will be widened, very concerned about the traffic back-ups and chance of rear-end accidents. RB said that the study is assess-ing solutions for the problems. Solutions now are premature. Caller is willing to be involved. (RB)

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

Date	Time	Comment
1/11/01	3:08 pm	Caller feels there needs to be a truck climbing lane on northbound US 395 north of the North McCarran interchange. RESPONSE - PDK talked to the caller and told him that NDOT has been considering a truck-climbing lane on that portion of US 395 and the freeway study will also be looking at that as a potential solution.
7/22/01	6:39 am	Lives in Mogul, EB I-80 on-ramp too short for limited sight distance. Recommends longer ramp.
7/22/01	7:19 am	Widen US395 SB and NB off-ramps onto I-80 to two lanes; remove Glendale on- and off-ramps.
7/22/01	8:00 am	US 395 speed limit between Oddie to Mill 55 mph; I-80 one interchange either side of Spaghetti Bowl 55 mph; share aggressive enforcement by Reno and Sparks; would allow better merging of traffic
7/22/01	11:31 am	Lower speed limit to 55 mph and strongly enforced; remove ramps or close periodically; eliminate Glendale on- and off-ramps; reroute to surface streets
7/22/01	1:04 pm	Too many on- and off-ramps in area of Wells Avenue (I-80)
7/22/01	2:27 pm	On- and off-ramps need to be longer; 55mph on I-80 from Keystone to Vista and on US395 from Parr to Moana; ramps need to be banked more to eliminate rollovers
7/22/01	5:04 pm	Bank turns more on ramps at Spaghetti Bowl
7/23/01	5:35 pm	Close Glendale on-ramp NB US395 and Neil off-ramp SB US395.
7/23/01	5:36 pm	NB US395 to WB I-80 loop ramp should be two lanes
7/23/01	6:24 pm	Spaghetti bowl need directional signs 2 miles in advance to describe the exact ramps available to take (not at the ramp); Also, during high congestion, flashing signs directing lower speed limits over the next several miles, enforced with cameras
7/26/01	3:33 pm	Ticket people who do not allow merging traffic to merge; US 395, N of McCarran and N of Stead requires truck lane all the way to the state line.
7/27/01	6:27 am	On NB US 395 at Reno Hilton, more advanced signing for people going to California as to which lane to be in and which ramp to take
7/27/01	8:22 am	Spaghetti bowl does not need fixing; the drivers need fixing, they're stupid
7/27/01	8:57 am	Eliminate every other off ramp and on ramp, beginning at the Spaghetti Bowl going south

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

Date	Time	Comment
7/27/01	8:58 am	Entrance ramp onto I-80 prior to US 395 are too close, close them; close some of them permanently or during business or rush hours
7/27/01	9:38 am	Three lanes on US 395 between Spaghetti Bowl to Caughlin Ranch (??)
7/27/01	10:47 am	(1) 3 lanes from W. McCarran to Vista Drive (2) 4 lanes on each exit ramp at Spaghetti Bowl, (3) WB I-80 from Keystone to Robb Drive needs truck lane.
7/27/01	10:48 am	Don't make on and off ramps on the same lane-too much lane changing.
7/27/01	3:57 pm	Spaghetti Bowl NB US 395 Oddie to McCarran is obvious choke point. Magruder said that another lane would be built on US 395 north, but it never happened. Wants to talk to someone.
7/28/01	11:28 am	I-80 WB on-ramp at 4 th street is difficult, requires a separate lane for NB US 395 and separate lane for SB US 395
7/28/01	1:10 pm	Close 4 th street on ramp (WB) during rush hours 6a-9a, 3p-6p; put up barricades to close ramp like in Los Angeles
7/29/01	9:18 am	Speed limit (65 mph) is too fast, can't merge at that speed, suggests 55; Oddie NB entrance is hazardous, should be closed; Oddie on-ramp (EB to SB) should be closed-use the loop ramp; US 395 SB to I-80 WB needs to be two lanes; US 395 NB to I-80 EB would be improved by closing Victorian Avenue ramp.
1/16/02	10:44 am	Put directional signs farther in advance of exits to allow timely lane changes. RESPONSE – Call back with thank you. The caller also responded with appreciation for call back (1/23/02)

Public Open House
ADVERTISEMENTS

Washoe County Freeway Corridor Study

Open House

4:00 pm to 7:00 pm
Thursday, July 26, 2001

Silver and Blue Room A
Lawlor Events Center
University of Nevada, Reno

The purpose of this open house is to introduce the Freeway Corridor Study to the public. At the same time, public comment and questions are welcome. Several displays will present information about the study, the analysis tools used in the study, and the purpose of the study.

Come anytime between 4:00 pm and 7:00 pm and spend as much time as you want. Free parking is available in the permit parking area in front of Lawlor Events Center.

Washoe County Freeway Corridor Study

Open House

4:00 pm to 7:00 pm
Thursday, July 26, 2001

Public Open House

FAQ SHEET

***WHY ARE THE FREEWAY CORRIDORS BEING STUDIED?***

As population grows, so does traffic congestion. The purpose of studying the freeways is to determine what can be done to meet future traffic needs for Interstate 80 and US 395/Interstate 580.

THE REGIONAL TRANSPORTATION COMMISSION (RTC) JUST COMPLETED A TRANSPORTATION PLAN. WHY ARE WE DOING THIS AGAIN?

You're right. RTC recently developed its 2030 Regional Transportation Plan (2030 RTP). RTC is circulating the 2030 RTP for public comment before the RTC Commissioners make a final decision on the Plan. The 2030 RTP and the Freeway Corridor Study differ in several key areas. The Freeway Corridor Study (design study) is analyzing the *operational characteristics* of one element of the roadway system: freeways. The Corridor Study focuses on how peak hour traffic volumes are analyzed. In contrast, the 2030 RTP (planning study) analyzed the entire Truckee Meadows street network. The 2030 RTP focused on average daily traffic volumes. In essence, the Corridor Study will look at one element of the street system in greater detail.

THE BIGGEST PROBLEM IS THE SPAGHETTI BOWL. WHY NOT DO SOMETHING NOW?

We are. In November of this year, NDOT will advertise for construction bids on a project that will solve sev-

eral problems that exist in the spaghetti bowl. The project is planned to start construction in the spring of next year (2002). Estimated to cost over \$50 million, the project will take 2½ years to complete. Not all freeway deficiencies will be cured by the project, but traffic flow will improve over the next several years.

HOW IS TRAFFIC ESTIMATED FOR FUTURE YEARS?

Traffic volumes on streets, including freeways, are based primarily on land use and the number and location of streets. Future traffic volumes are estimated with a traffic forecast model. Once future traffic volumes are estimated, a traffic analysis model projects the operating efficiencies of the roadways carrying the traffic. Elements considered by the traffic analysis model include roadway widths, number of lanes, spacing of on- and off-ramps, and other geometric aspects of the roadways.

ISN'T IT TOO LATE TO START A STUDY? FREEWAY TRAFFIC IS BAD NOW.

It is never too late for good planning. The end product of the Corridor Study will be a list of freeway improvements that will improve the freeway's ability to handle traffic. Four time horizons will be included: immediate action-plan items, short-term improvements (3 to 5 years into the future), intermediate improvements (10 years), and long-range improvements (30 years). The long-range types of improvements will probably require commitments of greater sums of money, and

therefore, require greater budgeting resources.

HOW WILL WE PAY FOR THESE IMPROVEMENTS?

Typically, freeway improvements are financed by a combination of federal, state and local funds. In some cases, such as in Clark County, voters approve additional taxes to finance much needed roadway improvements. A primary objective of the Freeway Corridor Study is to identify the improvements that are required. The willingness of the community to pay additional taxes for the needed improvements is an element of public comment that needs to be voiced by you.

WHAT WILL YOU DO WITH OUR COMMENTS?

Your comments provide the project study team with new ideas for solutions, identifies problems we may not know about, and gives us an idea of the community's willingness to welcome new transportation alternatives to relieve congestion. Your comments will be summarized and distributed to all project team members and to the Corridor Steering Committee, which consists of representatives of local and state agencies. If a team member or committee member wants to see an individual's comment, not just a summary, then a copy of the comment is sent. Public comments that have been received will then be addressed specifically in moving ahead with future analysis and evaluation of possible transportation improvements.

Public Open House

SUMMARY OF QUESTIONNAIRE RESPONSES

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001**

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY**

July 26, 2001

Twenty-six people attended the Washoe County Freeway Corridor Study Open House. The Open House was held at Lawlor Events Center on Thursday, July 26, 2001 between 4:00 pm and 7:00 pm. Eleven attendees completed and returned questionnaires during the Open House. One questionnaire was returned by US mail after the Open House.

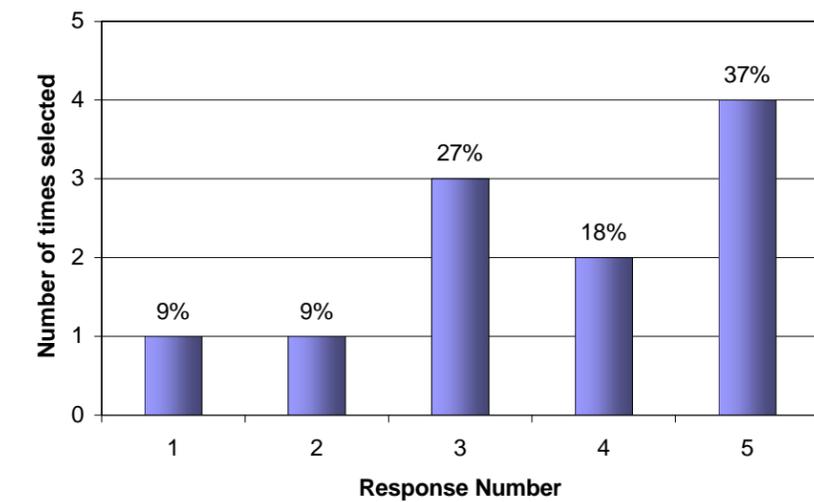
The Program Management Division of the Nevada Department of Transportation developed the questionnaire to identify the willingness and desire of the public regarding various transportation management measures. Another objective of the questionnaire is to identify areas in the freeway operation that are of concern to the public using the freeway systems.

The following pages summarize the response received. On each of the following pages is a restatement of the question, a summary of the responses to the question, and comments that responders included in their questionnaire. Also included at the end of this summary report is a list of comments submitted by responders.

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001**

Question 1: One way to improve traffic and safety on the freeway is to eliminate traffic entering onto the freeway by closing selected on-ramps. Would you support the short term closing of some on-ramps on the freeway during rush hours to reduce congestion and improve safety?

Strongly Disagree 1 2 3 4 5 Strongly Agree



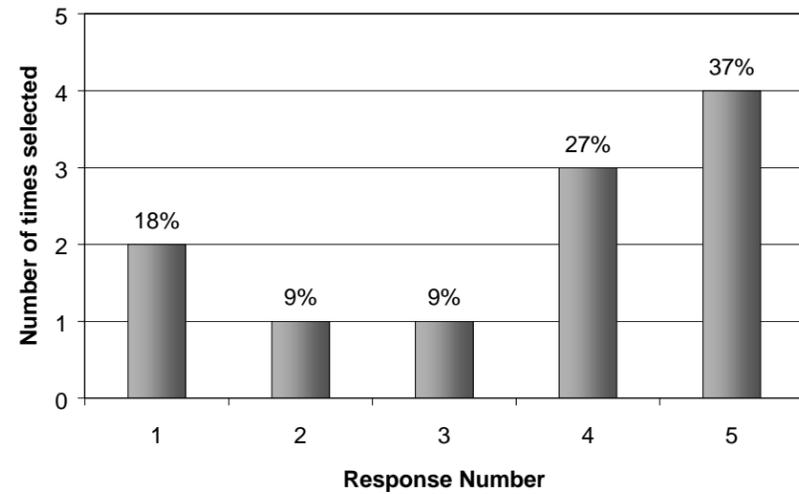
COMMENTS:

- Glendale is an excellent candidate. Response 5
- i.e., if surrounding streets can handle additional traffic. Response 4
- Why just during rush hour? If I was a tourist, I wouldn't be aware of changes. Either change or don't. Response 5
- It depends on which on/off ramps. Response 3
- Only as a last resort. (Maybe the on ramp should never have been built, but that is "water under the bridge.") Response 2
- Particularly the Glendale on ramp to 395 N. Response 5

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

Question 2: I would support ramp metering (A traffic signal that regulates the number of vehicles entering the freeway.) at some interchanges during rush hours to reduce congestion and improve safety conditions on the freeway.

Strongly Disagree 1 2 3 4 Strongly Agree 5



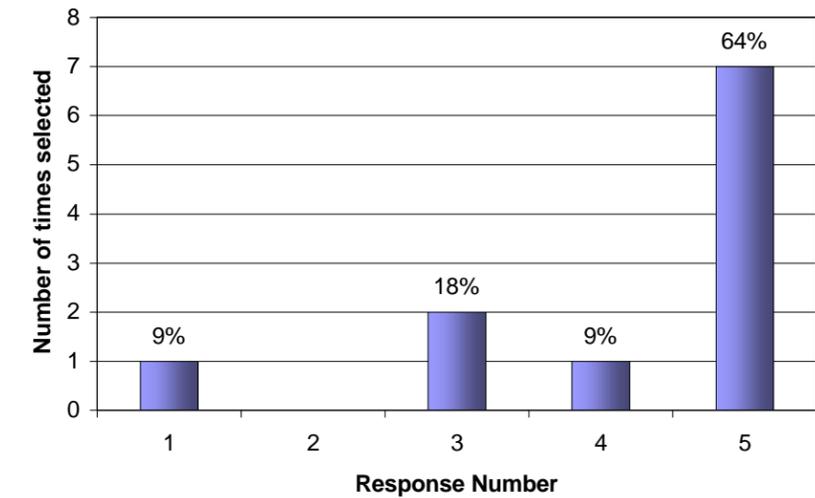
COMMENTS:

- Best way to reduce freeway congestion is to put it on the surface streets. Response 5
- There are a lot of other improvements that can be done before we have to do signals. Response 1
- In my experience, this works. Response 5
- You must accelerate to freeway speed from a dead stop. Response 2

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

Question 3: Widening the freeways is one solution to our traffic problems, but we need additional traffic carrying capability on north/south and east/west roads and streets.

Strongly Disagree 1 2 3 4 Strongly Agree 5



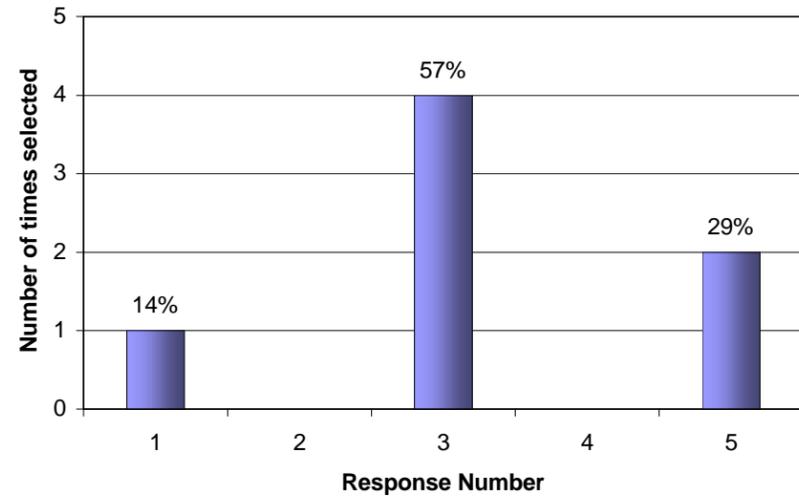
COMMENTS:

- Mostly north/south. Response 5
- I've long been concerned that many route alternatives are not available in this area. Response 5
- Absolutely. Especially from an emergency management standpoint. We need alternatives. Response 5
- Work those perimeter roads. Response 5. Additional comment: Having more perimeter roads would alleviate a lot of freeway use. Why did they (?) remove the proposed road in the east (Sparks Blvd SB/NB south of Glendale past Pembroke past Hidden Valley thru Double Diamond connecting to 395S)? When the freeway is congested, I often use back routes, which are now also becoming heavily congested.
- Arterial traffic can be speeded up. Response 3
- Use controlled growth. Response 1

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

Question 4: I would start carpooling to work, to utilize a High Occupancy Vehicle lane (A lane that can be used only by vehicles carrying 2 or more people.) to commute to work if it were built on our freeways.

Strongly Disagree Strongly Agree
1 2 3 4 5



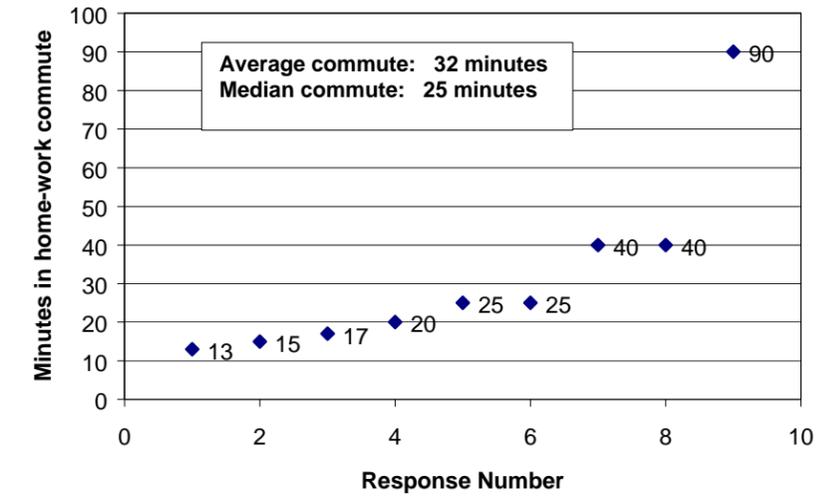
COMMENTS:

- In theory, yes. In reality, probably not. Response none
- I am retired and do not travel the freeways unless there is no other way to get around it.
- N/A. I am retired. Response none
- N/A

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

Question 5: Approximately how much time do you spend driving on the freeway to get to work?

_____ minutes

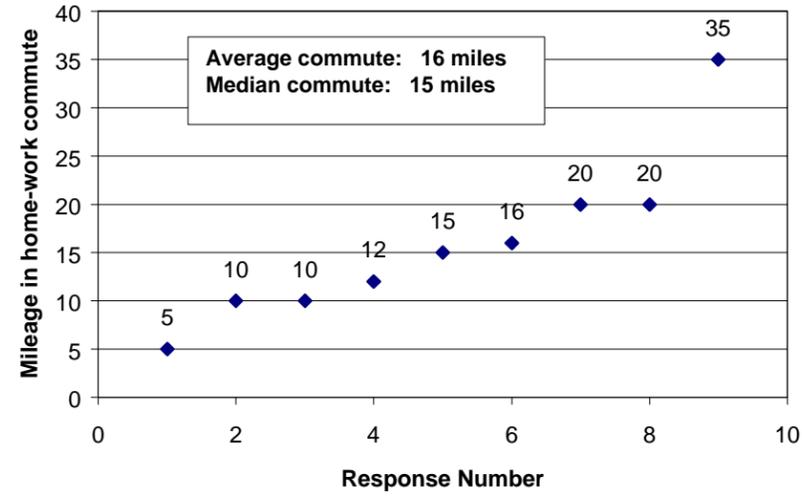


COMMENTS:

- N/A, I'm retired.
- Not counting getting to the freeway. [referring to "driving on the freeway" in the question]

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

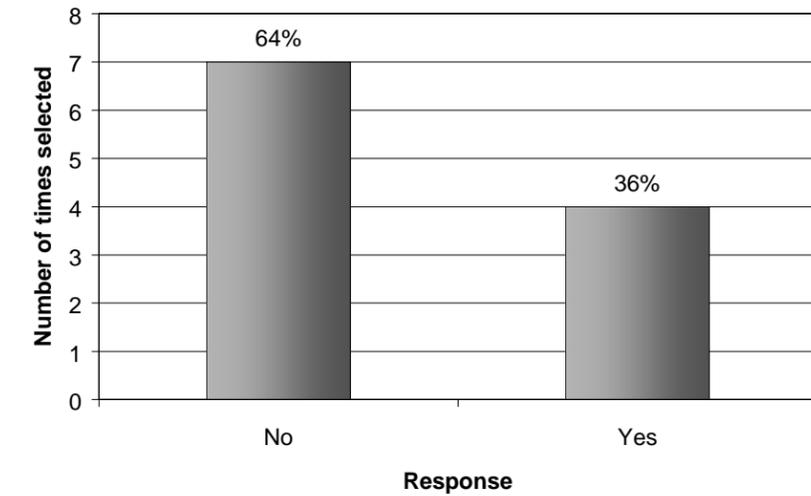
Question 6: Approximately how many miles do you travel to get from your home to where you work (one way)?
_____ Miles



COMMENTS: No comments received.

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

Question 7: Have you ever used the local transit bus system (Citifare)?
 Yes No (Please tell us why you never used the bus transit system?)



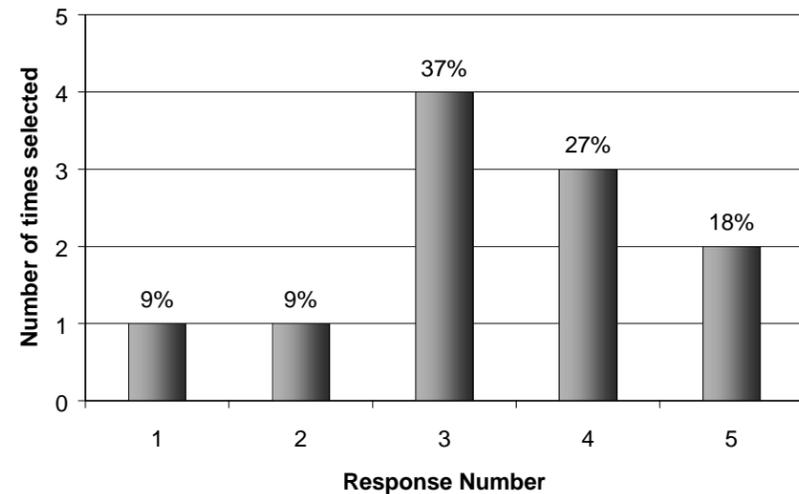
COMMENTS:

- Although Citifare service is not available to me in Washoe Valley. Response Yes
- What most people truly want is someone else to ride transit to improve their commute. Due to the increased time involved, and the fact that people often chain trips riding the bus isn't practical in most people's lives if they have other options. How do you get children to after school activities, go from work to the gym to workout, etc.? Response Yes
- I have 4 kids & am the family transit system. Time is ruling factor. Response No
- Job. Response No
- It is not convenient to where I live and having to ride to downtown to transfer is stupid. Response No
- Not near where I live. Response No
- It doesn't stop near me residence (several miles), not where I am going. Response No
- It would take much longer to get to work & back. Response No
- I would have to walk a mile or so along Military Road and Lemmon Drive to get to a bus stop. Response No

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

Question 8: I feel traffic congestion on the freeways in the Truckee Meadows is one of the worst problems we currently have and I would be willing to pay additional taxes to reduce our traffic congestion.

Strongly Disagree 1 2 3 4 5 Strongly Agree



COMMENTS:

- We've already been taxed twice for transportation issues. Response 1
- I would be more willing if we had controlled land use planning. As it is, the more we "improve traffic" the faster the new development will be approved. Response 3
- It is not the worst. Every project needs money: the court system, the schools, the fire, police, water, power. Put a priority on these? Response 3
- Ask Reno Sparks to use Room tax instead of River Study funding.
- No new taxes. Response 5
- However, I would then like to see my taxes reduced in another area.. Response 5

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY
July 26, 2001
(Continued)**

Question 9: Other than the Spaghetti Bowl, (I-80/US 395 Interchange) please identify where you feel the worst problems are on the freeways in the Truckee Meadows.

COMMENTS:

- East McCarran, south to Mill Street; US 395, northbound, north of interchange; US 395 southbound, north of interchange.
- On US 395 from Mill to Parr. On I-80 from Keystone to E. McCarran.
- I-80 between Pyramid and Rock; East McCarran to Pyramid. I'm not as familiar with US 395 during peak periods.
- *[Drawn on Spaghetti Bowl map.]*
 - Northbound US 395 exit ramp at N. McCarran: Need 2 lane exit. Left lane can go to signal at McCarran, right lane can merge on McCarran. The off ramp flow is often hindered by people slowing down for the signal when they are exiting. The people who are staying right to merge cannot pass through. Realign the exit would help. It appears to have plenty of space.
 - Eastbound I-80 to southbound US 395 ramp: I use this exit often and enjoy the outer (left lane) off ramp because I do not have to be in the wait. With this change *[restriping as shown on the Spaghetti Bowl project sketch]* I will have to be in the wait for 395 SB traffic. I think it should be a designated right lane for SB and left lane for NB or else you will restrict NB access at peak times because you will still have a bottleneck as SB traffic merges into one lane.
 - I-80 between Pyramid and Rock: You need to address the public concerns regarding the widening over the Nugget. Nice work to the east but then it ended.
- Rock Boulevard exit in the morning traveling EB; WB I-80 between Keystone and Robb Drive; during winter storms, need area by Boomtown to chain up.
- Short ramp 395 SB at McCarran; McCarran north onto 395 poorly laid out merge with traffic no visibility of traffic until you are near the end of the ramp.
- None to speak of.
- Some consideration should be given to the possibility of adding rapid transit/light rail in the freeway right-of-way (expanded if necessary).
- That is the worst, in all directions; Congestion on I-80 W near Nugget where it narrows to 2 lanes
- The 2-lane area over the J.A. Nugget is a huge problem for traffic-especially going west.
- Between North McCarran and Plumb Lane going north and south.

**WASHOE FREEWAY CORRIDOR STUDY
OPEN HOUSE QUESTIONNAIRE SUMMARY**

July 26, 2001

(Continued)

Other comments included in the questionnaires:

- If the NDOT principal engineer for the Spaghetti Bowl and a large number of the traveling public feel that the Glendale ramps are hazardous to US 395 traffic, why on earth would local public officials WANT to keep it open? I mean, after all, people can still get to the Hilton by using Mill St.
- A north/south alternative is definitely needed. There needs to be a route from Spanish Springs to Double Diamond area. This could alleviate traffic on US 395 and provide another way during disasters/emergencies. More low access major arterials are needed throughout the area. (Additional freeways could be helpful, but perhaps too expensive.)
- Regarding questions #3, it doesn't make sense to force everyone to drive into the center of the Spaghetti Bowl to travel from one part of the region to another because there aren't alternatives. We need to have better management of land use growth. The future population figures that existed at the time this study began have already been exceeded. How sane is this? We are well on our way to the congestion problems that plague California.
- Need sound wall at Mogul; need "No Jake Brake" signs at Mogul.
- There is no road courtesy. We need better enforcement and law enforcement presence in these areas. We need a merging traffic law. Vehicles on I-80 or US 395 will make room by moving over or slowing down to allow ramp traffic onto the freeway. There are laws to that effect in other states—Right lane yields to merging traffic.
- There is a serious deficiency in the long-range planning vision of our elected officials. Until there exists a strong public will for sensible regional planning for land and water use, and some elected leaders with the vision and strength to guide the planning efforts, this beautiful area will inevitably decline in its quality of life.
- Close Glendale NB on ramp; 4 lanes from Mill north to I-80 (2 for jockeying into I-80 west and east lanes); an off ramp from 395 north directly into airport; an on ramp directly from airport to 395 (I-80) south
- If we would have controlled growth or moratorium building, maybe 120 building permits a year, it would help reduce congestion.
- The freeways, no matter how we try to adapt to their structure, will never be able to handle the northeast Sparks-southwest Reno (Suburban Reno) traffic that is forced to use both I-80 and US 395. McCarran has too many stoplights to be an effective alternative. There needs to be a Tahoe-Pyramid (or Sparks Blvd) link.