

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
PROJECT IM 0907(79)308
INTERSTATE 90 EBL
AURORA & DAVISON
COUNTIES

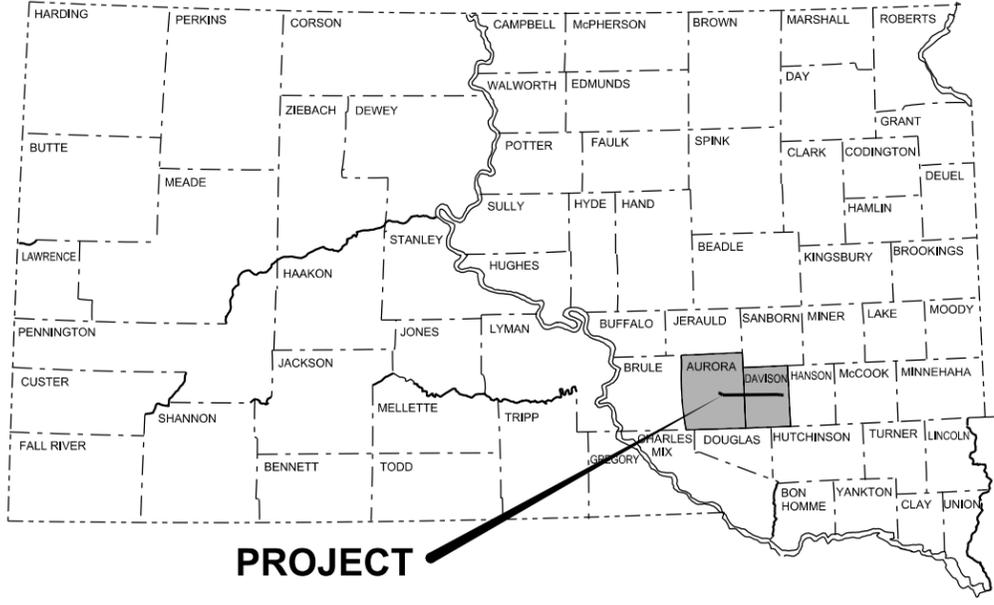
FENCE REPLACEMENT
PCN 02PJ

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	IM 0907(79)308	1	15

Plotting Date: 07/11/2014

INDEX OF SHEETS

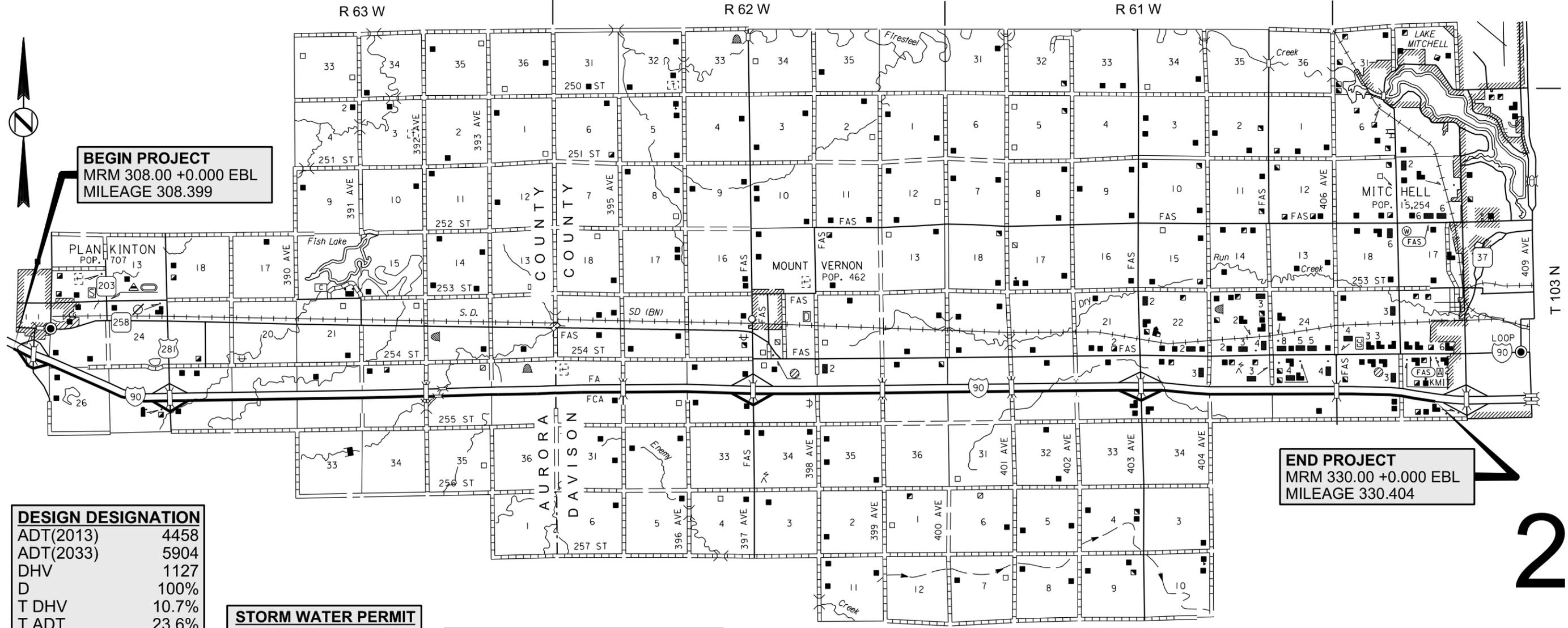
Sheet 1	Layout Map & Index of Sheets
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PROJECT

PLOT SCALE - 1:84,000

PLOT NAME - 7



BEGIN PROJECT
MRM 308.00 +0.000 EBL
MILEAGE 308.399

END PROJECT
MRM 330.00 +0.000 EBL
MILEAGE 330.404

DESIGN DESIGNATION

ADT(2013)	4458
ADT(2033)	5904
DHV	1127
D	100%
T DHV	10.7%
T ADT	23.6%
V	75 MPH

STORM WATER PERMIT
(None required)

Length: (190 EBL) 22.005 Miles

2

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ESTIMATE OF QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0907(79)308	2	15

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0600	Remove Fence	101,027	Ft
620E0030	Type 3 Right-of-Way Fence	76,006	Ft
620E0230	Modified Type 3 Right-of-Way Fence	1,172	Ft
620E0260	Modified Type 6 Right-of-Way Fence	218	Ft
620E0260	Modified Type 6 Right-of-Way Fence	26,298	Ft
620E1020	2 Post Panel	162	Each
620E1030	3 Post Panel	121	Each
620E1110	Wood Fence Post	108	Each
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2004 Edition
and Required Provisions, Supplemental Specifications and
Special Provisions as included in the Proposal.

TABLE OF FENCING QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0907(79)308	3	14

INTERSTATE 90 EASTBOUND MRM to MRM	REMOVE FENCE FT	TYPE 3 R/W FENCE FT	MODIFIED TYPE 3 R/W FENCE FT	MODIFIED TYPE 6 R/W FENCE FT	MODIFIED TYPE 6 R/W FENCE (Wet Area) FT	2 POST Panel EACH	3 POST Panel EACH	WIRE GATE EACH NABI*	WOOD FENCE POST EACH	RESET GATE EACH	Notes
308.010 to 308.019	65	65	0	0	0	2	0	0	0	0	From mainline fence to box culvert (west side).
308.024 to 308.035	86	86	0	0	0	2	0	0	0	0	From mainline fence to box culvert (east side).
308.035 Off-Ramp	1400	1400	0	0	0	1	3	0	0	0	Exit 308. Off-ramp to diagonal.
Exit 308 Off-Ramp	135	135	0	0	0	0	2	0	0	0	SW Quadrant. Off-ramp diagonal.
308.245	184	184	0	0	0	1	1	0	0	0	Exit 308. SW Quadrant. South to TD. End where wire ends.
308.749 to 309.566	4404	4404	0	0	0	7	1	0	0	0	Mainline.
309.566 to 309.606	211	0	211	0	0	0	0	0	16	0	Mainline. Through cattails.
309.606 to 310.221	3279	3279	0	0	0	5	2	0	0	0	Mainline. To 3-post panel.
310.221	298	298	0	0	0	0	1	0	0	0	Exit 310. Off-ramp diagonal.
310.279 Off-Ramp	1047	1047	0	0	0	1	1	0	0	0	Exit 310. Off-ramp to diagonal.
Exit 310 Off-Ramp	132	132	0	0	0	0	2	0	0	0	SW Quadrant. Off-ramp diagonal.
310.484	131	131	0	0	0	1	1	0	0	0	Exit 310. SW Quadrant. South to TD. End at first approach.
310.508	412	412	0	0	0	0	3	0	0	0	Exit 310. SE Quadrant. South to TD. End at 3-post panel.
310.508 On-Ramp	118	118	0	0	0	0	2	0	0	0	Exit 310. On-ramp diagonal.
Exit 310 to 310.705	975	975	0	0	0	1	2	0	0	0	SE Quadrant. On-ramp from diagonal to diagonal.
310.705 to 310.770	374	374	0	0	0	0	1	0	0	0	Exit 310. On-ramp diagonal.
310.770 to 311.450	3596	3596	0	0	0	4	2	0	0	0	Mainline.
312.822 to 314.412	8410	8410	0	0	0	12	3	24'	0	0	Mainline. Add gate at MRM 313.448.
314.412	765	932	63	0	0	2	6	32'	5	0	314.43 County Overhead. SW Quadrant. South to TD.
314.412 to 314.431	115	115	0	0	0	2	0	24'	0	0	Mainline. From north/south County Overhead fence up slope to bridge.

*NABI = Not a Bid Item

TD = Touch Down Point

TABLE OF FENCING QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0907(79)308	4	14

INTERSTATE 90 EASTBOUND MRM to MRM	REMOVE FENCE FT	TYPE 3 R/W FENCE FT	MODIFIED TYPE 3 R/W FENCE FT	MODIFIED TYPE 6 R/W FENCE FT	MODIFIED TYPE 6 R/W FENCE (Wet Area) FT	2 POST Panel EACH	3 POST Panel EACH	WIRE GATE EACH NABI*	WOOD FENCE POST EACH	RESET GATE EACH	Notes
314.441 to 314.464	124	124	0	0	0	3	0	0	0	0	Mainline. From bridge down slope to north/south County Overhead fence.
314.464	1021	0	0	986	35	2	9	0	3	0	314.43 County Overhead. SE Quadrant. South to TD. See Modified Type 6 notes.
314.806 to 315.557	3971	0	0	3971	0	5	2	24'	0	0	Mainline. Add gate at MRM 315.438.
315.557 to 315.571	74	0	0	0	74	0	0	0	6	0	Mainline. Through drainage area. See Modified Type 6 notes.
315.571 to 315.932	1906	0	0	1906	0	3	1	0	0	0	Mainline.
315.932 to 316.430	2644	2644	0	0	0	4	1	24'	0	0	Mainline.
316.954 to 317.445	2593	0	0	2593	0	5	2	0	0	0	Mainline.
317.445	152	152	0	0	0	1	1	0	0	0	317.47 County Overhead. SW Quadrant. South to TD.
317.445 to 317.468	128	128	0	0	0	2	0	24'	0	1	Mainline. From north/south County Overhead fence up slope to bridge. (Gate for reset is a round tubular gate.)
317.477 to 317.497	110	110	0	0	0	2	0	0	0	0	Mainline. From bridge down slope to north/south County Overhead fence.
317.497	1107	0	0	1107	0	2	4	32'	0	0	317.47 County Overhead. SE Quadrant. South to TD.
318.438 to 319.224	4161	0	0	4161	0	7	4	24'	0	0	Mainline.
319.224	1028	0	0	1028	0	0	3	0	0	0	Exit 319. Off-ramp to diagonal.
Exit 319	260	0	0	260	0	0	2	0	0	0	Exit 319. Off-ramp diagonal.
319.430	105	0	0	105	0	0	1	0	0	0	Exit 319. SW Quadrant. South to TD. End at telephone box.
319.454	235	235	0	0	0	1	1	0	0	0	Exit 319. SE Quadrant. South to TD. End at 2-post panel.
319.454	242	242	0	0	0	0	1	0	0	0	Exit 319. On-ramp to diagonal.
Exit 319	1135	1135	0	0	0	1	2	0	0	0	Exit 319. On-ramp from diagonal to mainline.
319.680 to 321.295	8549	8549	0	0	0	9	3	0	0	0	Mainline.
321.415	736	736	0	0	0	0	1	0	0	0	321.43 County Overhead. SW Quadrant. South to TD. End at first approach.

*NABI = Not a Bid Item

TD = Touch Down Point

TABLE OF FENCING QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0907(79)308	5	14

INTERSTATE 90 EASTBOUND MRM to MRM	REMOVE FENCE FT	TYPE 3 R/W FENCE FT	MODIFIED TYPE 3 R/W FENCE FT	MODIFIED TYPE 6 R/W FENCE FT	MODIFIED TYPE 6 R/W FENCE (Wet Area) FT	2 POST Panel EACH	3 POST Panel EACH	WIRE GATE EACH NABI*	WOOD FENCE POST EACH	RESET GATE EAH	Notes
321.415 to 321.438	111	111	0	0	0	2	0	24'	0	0	Mainline. From north/south County Overhead up slope to bridge.
321.447 to 321.469	121	121	0	0	0	2	0	0	0	0	Mainline. From bridge down slope to north/south County Overhead fence.
321.469	750	0	0	750	0	2	2	24'	0	0	321.43 County Overhead. SE Quadrant. South to TD.
321.469 to 321.945	2513	0	0	2513	0	2	2	0	0	0	Mainline.
321.945 to 322.041	507	507	0	0	0	1	0	0	0	0	Mainline.
322.041 to 322.060	100	0	100	0	0	0	0	0	8	0	Mainline. Through cattails. Remove silt.
322.060 to 323.328	6737	6737	0	0	0	10	2	0	0	0	Mainline.
323.328 to 323.345	90	0	90	0	0	0	0	0	7	0	Mainline. Through drainage area.
323.345 to 323.396	269	269	0	0	0	1	1	0	0	0	Mainline
323.396	850	850	0	0	0	1	3	32'	0	0	323.42 County Overhead. SW Quadrant. South to TD.
323.396 to 323.414	85	85	0	0	0	2	0	24'	0	0	Mainline. From North /South County Overhead fence up slope to bridge.
323.422 to 323.439	91	91	0	0	0	2	0	24'	0	0	Mainline. From bridge down slope to north/south County Overhead fence.
323.439	850	850	0	0	0	1	3	32'	0	0	323.42 County Overhead. SE Quadrant. South to TD.
323.439 to 324.013	2925	2925	0	0	0	4	2	0	0	0	Mainline.
324.013 to 324.027	74	0	74	0	0	0	0	0	6	0	Mainline. Through wet area.
324.027 to 325.183	6056	6056	0	0	0	6	5	0	0	0	Mainline.
325.183 Off-Ramp	428	428	0	0	0	1	2	24'	0	0	Exit 325. SW Quadrant. Diagonal.
Exit 325 Off-Ramp	391	391	0	0	0	1	0	0	0	0	Exit 325. SW Quadrant. To cattails.
Exit 325 Off-Ramp	200	0	200	0	0	0	0	0	15	0	Exit 325. SW Quadrant. Through cattails.
Exit 325 Off-Ramp	247	247	0	0	0	1	1	0	0	0	Exit 325. SW Quadrant. From cattails.

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TABLE OF FENCING QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0907(79)308	6	14

INTERSTATE 90 EASTBOUND MRM to MRM	REMOVE FENCE FT	TYPE 3 R/W FENCE FT	MODIFIED TYPE 3 R/W FENCE FT	MODIFIED TYPE 6 R/W FENCE FT	MODIFIED TYPE 6 R/W FENCE (Wet Area) FT	2 POST Panel EACH	3 POST Panel EACH	WIRE GATE EACH NABI*	WOOD FENCE POST EACH	RESET GATE EACH	Notes
325.399	521	521	0	0	0	1	4	0	0	0	Exit 325. SW Quadrant. South to TD. End at campground approach.
325.445	498	0	0	498	0	1	2	0	0	0	Exit 325. SE Quadrant. South to TD. End at business.
Exit 325 On-Ramp	72	0	0	72	0	1	0	0	0	0	Exit 325. SE Quadrant. Diagonal.
Exit 325 On-Ramp	56	0	0	0	56	1	0	0	5	0	Exit 325. SE Quadrant. Diagonal through cattails. See Modified Type 6 notes.
Exit 325 On-Ramp	1147	0	0	1147	0	1	2	0	0	0	Exit 325. SE Quadrant. From Diagonal.
326.410 to 326.902	2598	2598	0	0	0	3	3	0	0	0	Mainline.
327.534 to 327.544	128	53	0	0	0	0	0	0	0	0	Mainline. Through cattle pass. Remove fence to cattle pass.
327.624 to 328.287	3718	3590	0	0	0	5	1	0	0	0	Mainline. From cattle pass to box culvert. Remove fence to cattle pass.
328.287 to 328.297	53	0	53	0	0	0	0	0	4	0	Mainline. Through cattails.
328.297 to 328.390	491	491	0	0	0	2	0	0	0	0	Mainline.
328.390	1212	1212	0	0	0	1	7	32'	0	0	328.41 County Overhead. South to TD.
328.390 to 328.405	85	85	0	0	0	1	1	24'	0	0	Mainline. From north/south County Overhead fence up slope to bridge.
328.413 to 328.425	74	74	0	0	0	2	0	24'	0	0	Mainline. From bridge down slope to north/south County Overhead fence.
328.425	1225	1225	0	0	0	3	3	32'	0	0	328.41 County Overhead. South to TD.
328.425 to 328.908	2550	2550	0	0	0	3	2	0	0	0	Mainline.
328.908 to 329.240	1711	0	0	1711	0	2	0	0	0	0	Mainline.
329.240 to 329.250	53	0	0	0	53	0	0	0	4	0	Mainline. Through cattails. See Modified Type 6 notes.
329.250 to 329.411	850	0	0	850	0	1	1	0	0	0	Mainline.
329.411 to 329.833	2228	2228	0	0	0	3	0	24'	0	0	Mainline.
329.833 to 329.862	153	0	153	0	0	0	0	0	11	0	Mainline. Through cattails.

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TABLE OF FENCING QUANTITIES

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0907(79)308	7	14

INTERSTATE 90 EASTBOUND MRM to MRM	REMOVE FENCE FT	TYPE 3 R/W FENCE FT	MODIFIED TYPE 3 R/W FENCE FT	MODIFIED TYPE 6 R/W FENCE FT	MODIFIED TYPE 6 R/W FENCE (Wet Area) FT	2 POST Panel EACH	3 POST Panel EACH	WIRE GATE EACH NABI*	WOOD FENCE POST EACH	RESET GATE EACH	Notes
329.862 to 330.077	1130	1130	0	0	0	2	1	24'	0	0	Mainline. Add gate at 330.00.
330.077 to 330.093	85	0	85	0	0	0	0	0	7	0	Mainline. Through wet area.
330.093 to 330.175	433	433	0	0	0	2	0	0	0	0	Mainline.
330.175 to 330.202	143	0	143	0	0	0	0	0	11	0	Mainline. Through cattails. End at 3-post panel at Exit 330 off-ramp.
Locations determined on construction.				2640							
I-90 EBL TOTALS:	101,027	76,006	1,172	26,298	218	162	121	20	108	1	

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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0907(79)308	8	15

ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the State ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Highway, Road, and Railway Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) shall not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements shall apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the State ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the State ROW through the use of fences, gates, and placement of a sign or signs at the entrance to the site stating "No Dumping Allowed".
2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

COMMITMENT H: WASTE DISPOSAL SITE (CONTINUED)

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) shall be incidental to the various contract items.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all designated option borrow sites provided within the plans.

Action Taken/Required:

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: staging areas, borrow sites, waste disposal sites, and all material processing sites.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order to determine an appropriate course of action.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES (CONTINUED)

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands, threatened and endangered species, or waterways. The Contractor shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

UTILITIES

The Contractor shall contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It shall be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor shall contact the Project Engineer to determine modifications that will be necessary to avoid utility impacts.

RESTORATION OF INSLOPES AND DITCHES

Any slope area or ditch that is rutted or otherwise unduly disturbed during fencing operations shall be restored and seeded by the Contractor, at no expense to the State. Cost for this work shall be incidental to the contract unit prices for the various items.

REMOVE FENCE

The Contractor shall remove the existing right-of-way fence that is to be replaced as designated in the plans and/or as ordered by the Engineer.

Limited Access Security – All fence removed during any one working day is to be replaced during the same day if livestock are being restrained.

CLEARING

Prior to installing right-of-way fence, the fence alignment shall be cleared of all trees, tree branches, tree stumps, brush, vegetation, debris, bladed and leveled to the satisfaction of the Engineer. Sod cleared from the fence alignment may be disposed of on the interstate ditch back slope. Lumps or clods over 3 inches in diameter shall be broken up.

Silt shall also be removed from MRM 322.041 to MRM 322.060.

Clearing will be paid for at the contract lump sum price. Payment shall be full compensation for labor and equipment necessary to clear the entire line for fence and smooth ground irregularities.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	IM 0907(79)308	9	15

FENCE ALIGNMENT

Where fence is being removed and replaced, fence shall be installed on the same alignment as existing. It shall be the Contractor's responsibility to preserve the fence alignment.

The location of the fence in the SW Quadrant of County Overhead 314.43 shall be reestablished by the South Dakota Department of Transportation.

TYPE 3 RIGHT-OF-WAY FENCE

The Contractor shall furnish new posts. Wood and steel posts shall be installed alternately at 16'-6" spacing for Type 3 Right-of-Way Fence.

MODIFIED TYPE 3 RIGHT-OF-WAY FENCE

Modified Type 3 Right-of-Way Fence shall be installed at stream crossings, wide depressions and at other areas subject to flooding.

The Contractor shall furnish new 5" x 8' wood posts. The wood posts shall be installed at 14' spacing for Modified Type 3 Right-of-Way Fence. Cost for 5" x 8' wood posts shall be included in the contract unit price per each for Wood Fence Post.

MODIFIED TYPE 6 RIGHT-OF-WAY FENCE

The Contractor shall furnish new posts.

There are two different types of Modified Type 6 Right-of-Way Fence on this contract. The first type shall have wood and steel posts installed alternately at 14' spacing as per the details in these plans.

The second type shall have 5" x 8' wood posts installed at 14' spacing at stream crossings, wide depressions and at other areas subject to flooding as per the details in these plans. Cost for 5" x 8' wood posts shall be included in the contract unit price per each for Wood Fence Post.

Note the specification change for woven wire for Modified Type 6 Right-of-Way Fence to Design No. 832-6-11.

NEW POST PANELS

Existing post panels shall be replaced. Existing 5 Post and 4 Post Panels shall be replaced with a combination of 2 Post and 3 Post Panels as determined by the Engineer.

The number of 2 Post and 3 Post Panels will be the actual number installed and will be paid for at the contract unit price per each.

GENERAL MAINTENANCE OF TRAFFIC

Removing, relocating, covering, salvaging and resetting of permanent traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

Storage of vehicles and equipment shall be outside the clear zone and as near as possible to the right-of-way line. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work.

Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to the vegetation, surfacing, embankment, delineators and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the State, and to the satisfaction of the Engineer.

The Contractor shall provide documentation that all breakaway sign supports comply with FHWA NCHRP 350 or MASH crash-worthy requirements. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.

Cost for traffic control, including signs, shall be included in the contract lump sum price for Traffic Control, Miscellaneous.

Plotting Date: 07/11/2014

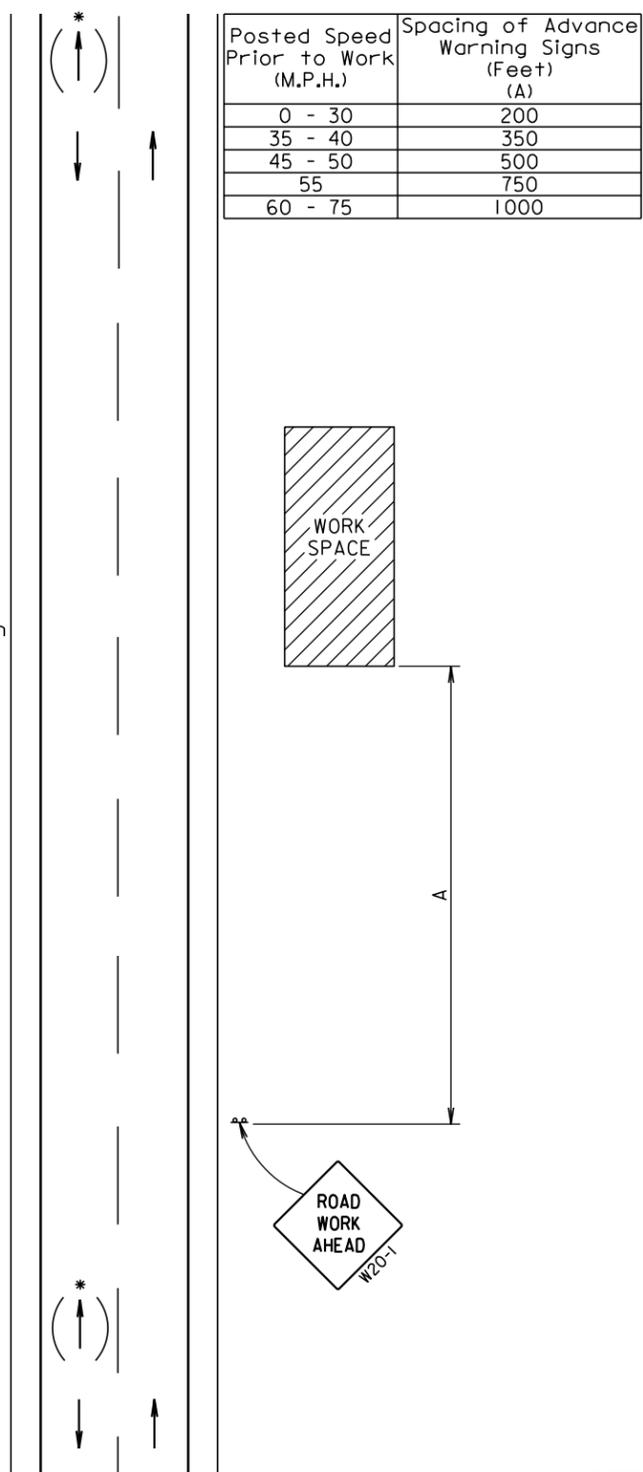
The signs illustrated are not required if the work space is behind a barrier, more than 2 feet behind the curb, or 15 feet or more from the edge of any roadway.

The signs illustrated shall be used where there are distracting situations; such as: vehicles parked on shoulder, vehicles accessing the work site via the highway, and equipment traveling on or crossing the roadway to perform work operations.

The ROAD WORK AHEAD sign may be replaced with other appropriate signs, such as the SHOULDER WORK sign. The SHOULDER WORK sign may be used for work adjacent to the shoulder.

* If the work space is on a divided highway, an advance warning sign should also be placed on the left side of the directional roadway.

For short term, short duration, or mobile operations, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used.



July 1, 2005

Published Date: 2nd Qtr. 2014	S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES WORK BEYOND THE SHOULDER	PLATE NUMBER 634.01
			Sheet 1 of 1

PLOT SCALE - 1:7000

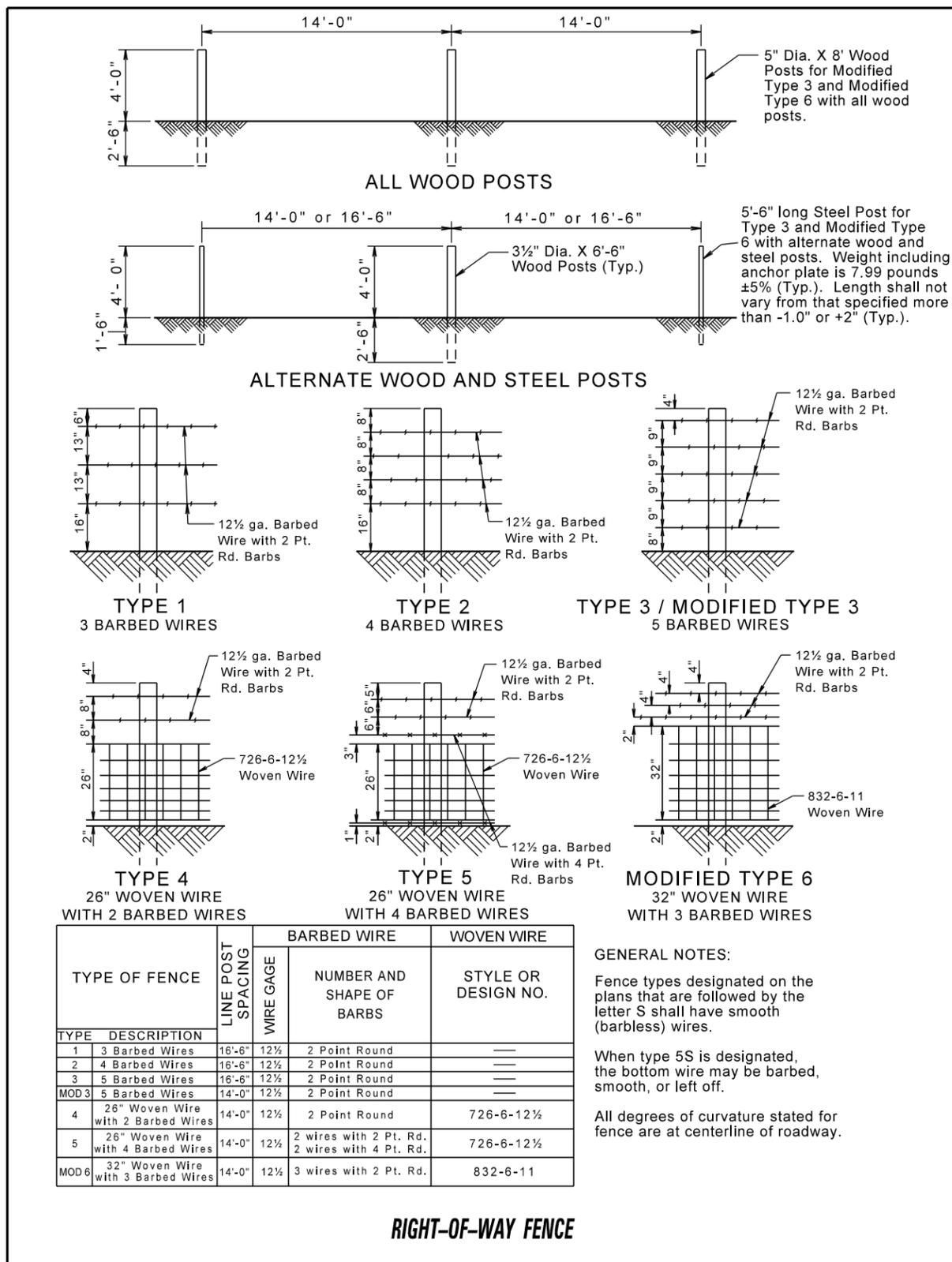
PLOTTED FROM - TRM\INT06

PLOT NAME - 7

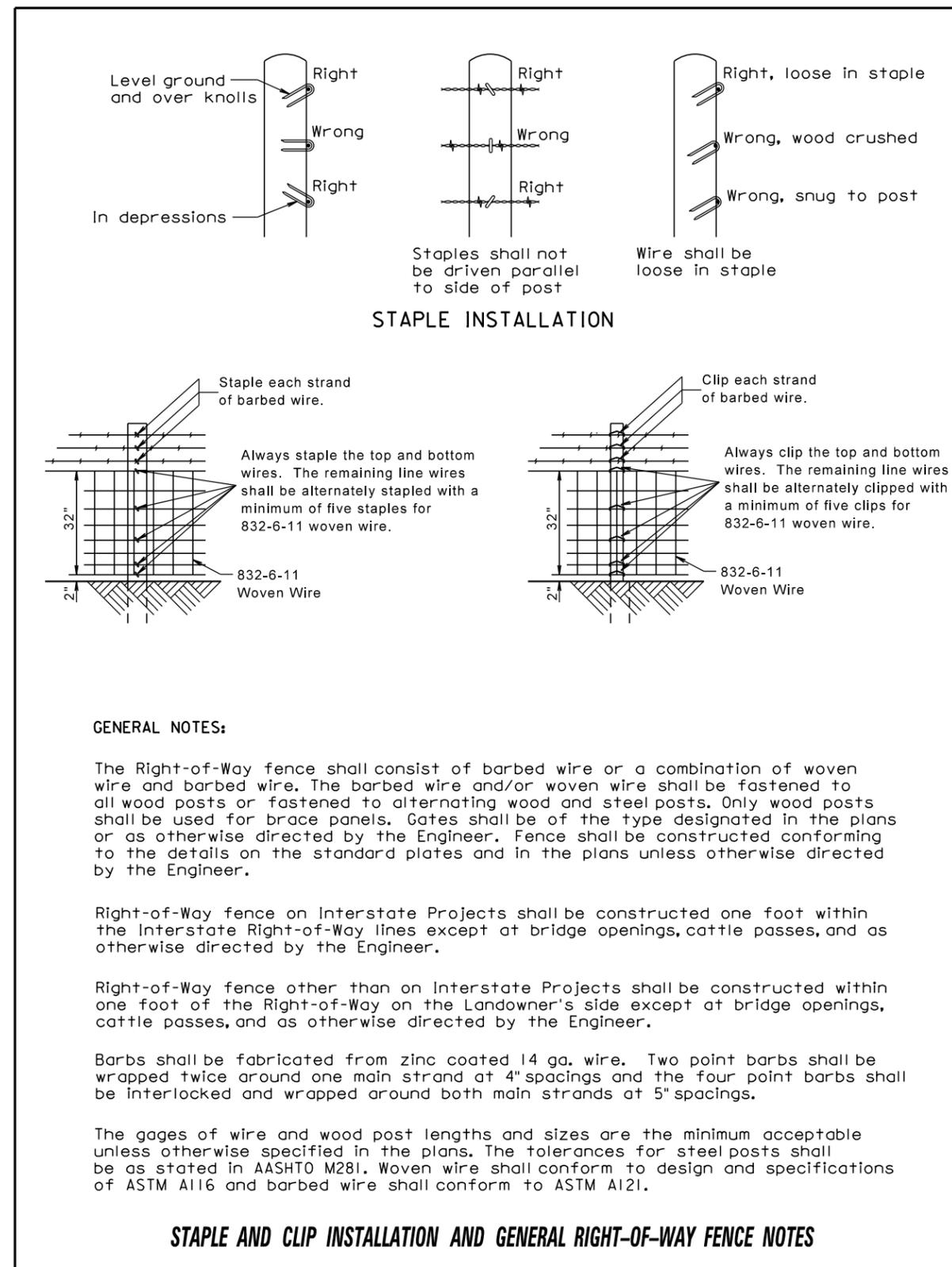
FILE - ... \AUR002PJ\BLANK BORDER 10.DGN

Plotting Date: 07/11/2014

PLOT SCALE - 1:8400



PLOTTED FROM - TRW11026



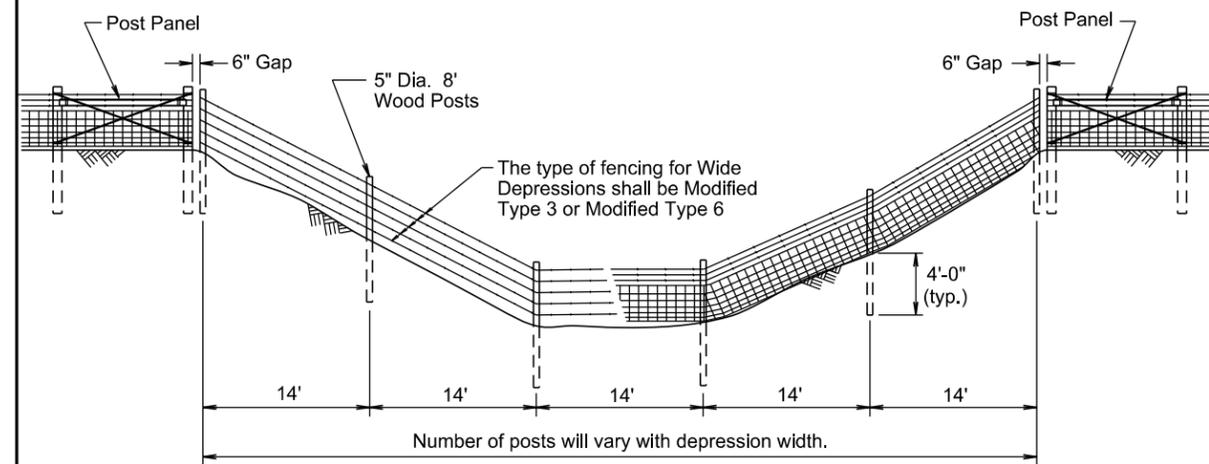
PLOT NAME - 7

FILE - ... \462001SP & 62002SP.DGN

Plotting Date: 07/11/2014

PLOT SCALE - 1:8400

Fencing At Wide Depression, Stream Crossing Or Areas Subject to Flooding



GENERAL NOTES:

Cost for fencing through stream crossing(s), wide depressions(s) or areas subject to flooding shall be included in the contract unit price per foot for Modified Type 3 Right-of-Way Fence or Modified Type 6 Right-of-Way Fence.

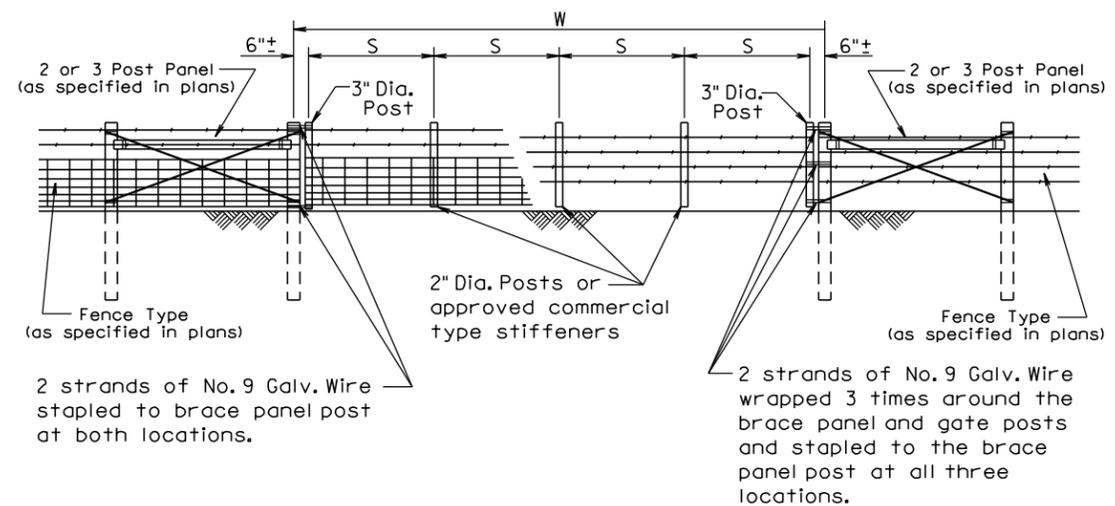
The Wood Fence Posts used in stream crossing(s), wide depression(s) or areas subject to flooding shall be 5" x 8' Wood Fence Posts. The designated fencing location(s) for the stream crossing(s), wide depression(s) or areas subject to flooding will be directed by the Engineer.

Cost for furnishing and installing the 5" x 8' Wood Fence Posts in stream crossing(s), wide depression(s) or areas subject to flooding shall be included in the contract unit price per each for Wood Fence Post.

PLOTTED FROM - TRWJ10106

PLOT NAME - 7

FILE - ... \462010SP & 462020SP.DGN



W Gate Width (ft.)	S Post Spacing
16	3 @ 5'-0" ±
20	4 @ 4'-9" ±
24	4 @ 5'-9" ±
30	5 @ 5'-10" ±
32	5 @ 6'-2" ±
40	6 @ 6'-6" ±

GENERAL NOTES:

Creosote treatment of the gate posts will not be accepted.

The type of fencing in the gate shall be of the same type as specified for the adjacent Right-of-Way fence.

All costs for furnishing and constructing the wire gate(s) shall be incidental to the contract unit price per Ft for the respective Right-of-Way fence bid item.

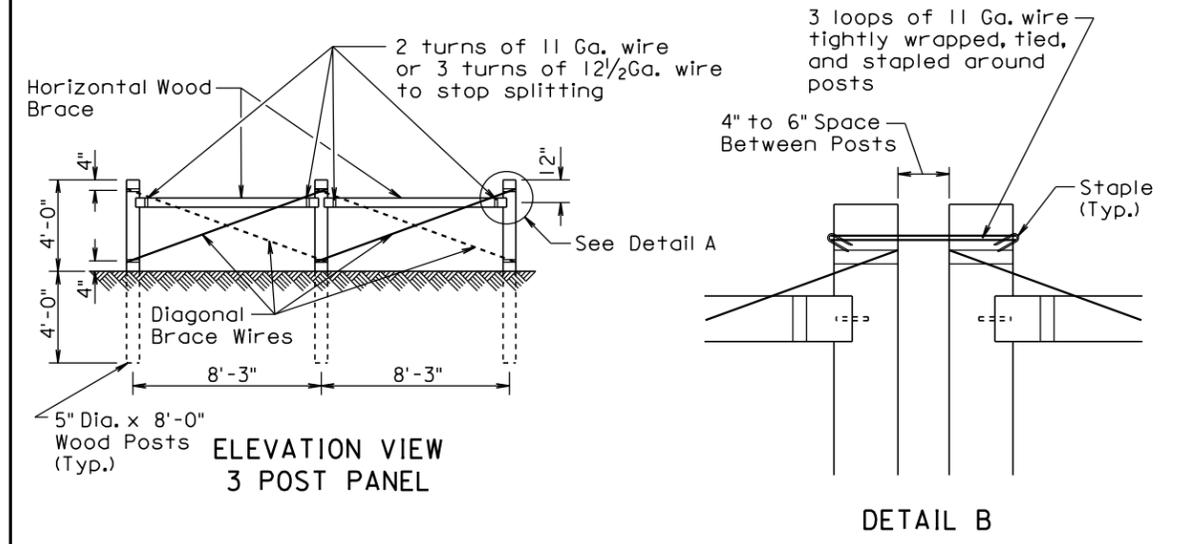
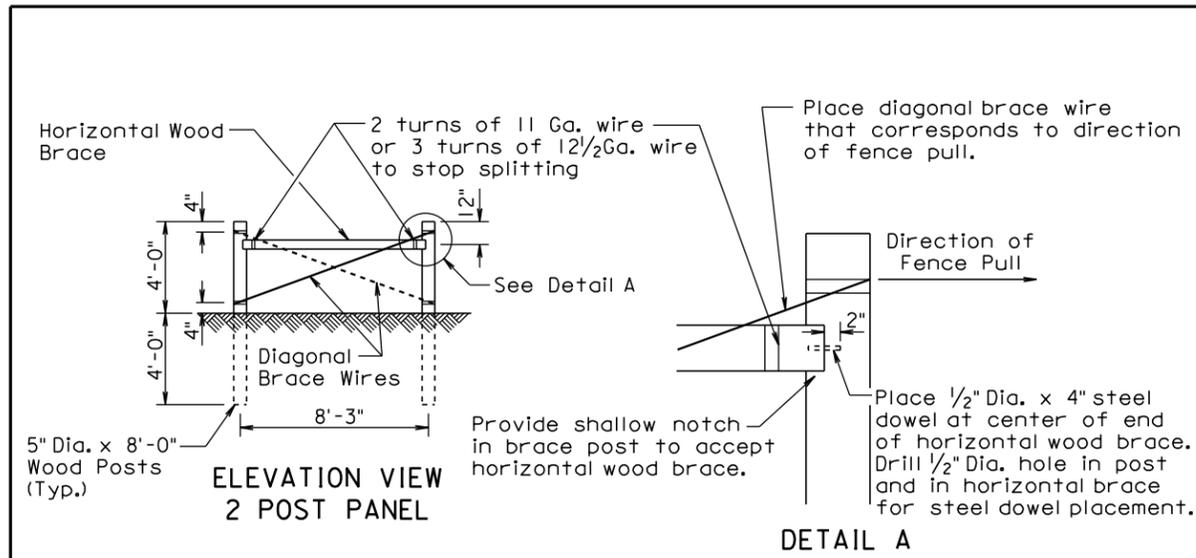
WIRE GATES

Plotting Date: 07/11/2014

PLOT SCALE - 1:7000

PLOT NAME - 7

FILE - ... \AUR002PJ\BLANK BORDER 13.DGN



GENERAL NOTES:

- Two Post Panels shall be installed at least every 1320' between corners.
- Two Post Panels shall be installed at any sharp vertical angle crest points and as directed by the Engineer.
- Horizontal wood braces shall consist of 4" dia. x 8' wood posts or rough 4" x 4" x 8' timbers.
- Diagonal brace wires shall be fabricated with 4 strands of 9 Ga. galvanized wire twisted tight. The diagonal brace wires shall be installed in accordance with the direction of the fence pull. Two diagonal brace wires are required if fence pull is in both directions.

December 23, 2004

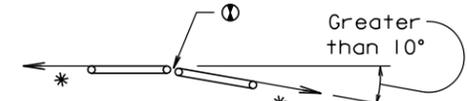
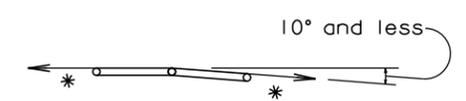
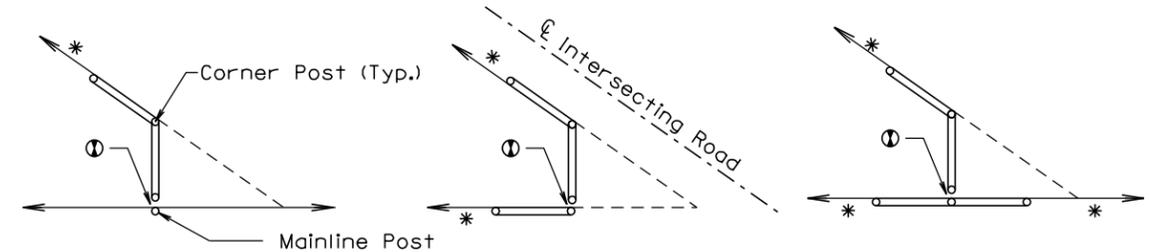
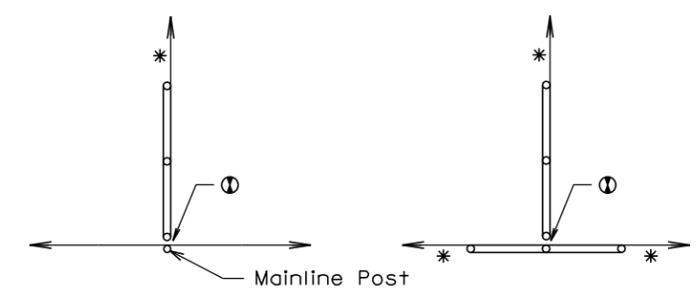
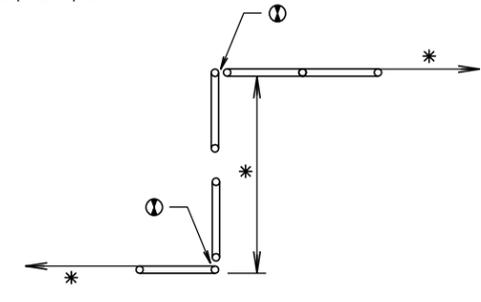
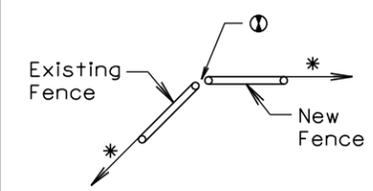
Published Date: 2nd Qtr. 2014	S D D O T	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 1 of 3

SPACING OF 2 POST PANELS WITHIN CURVES	
DEGREE OF CURVE	SPACING OF 2 POST PANEL
less than 3°15'	** 1320'
3°15' and greater	**At P.C., P.T., and at every 1320' between P.C. and P.T.

GENERAL NOTE:

All degrees of curvature stated for fence are at centerline of roadway.

- * If fence length is less than 600' to next corner use a 2 post panel. If fence length is greater than 600' to next corner use a 3 post panel.
- ** Fence lengths greater than 1320' and less than 2640' place 2 Post Panel approximately at midpoint.
- ① See Detail B on Sheet 1 of 3.



Additional fence panel is NOT required when an angle in the mainline fence is 10° and less.

Additional fence panel is required when an angle in the mainline fence is greater than 10°.

ANGLES IN MAINLINE FENCE

December 23, 2004

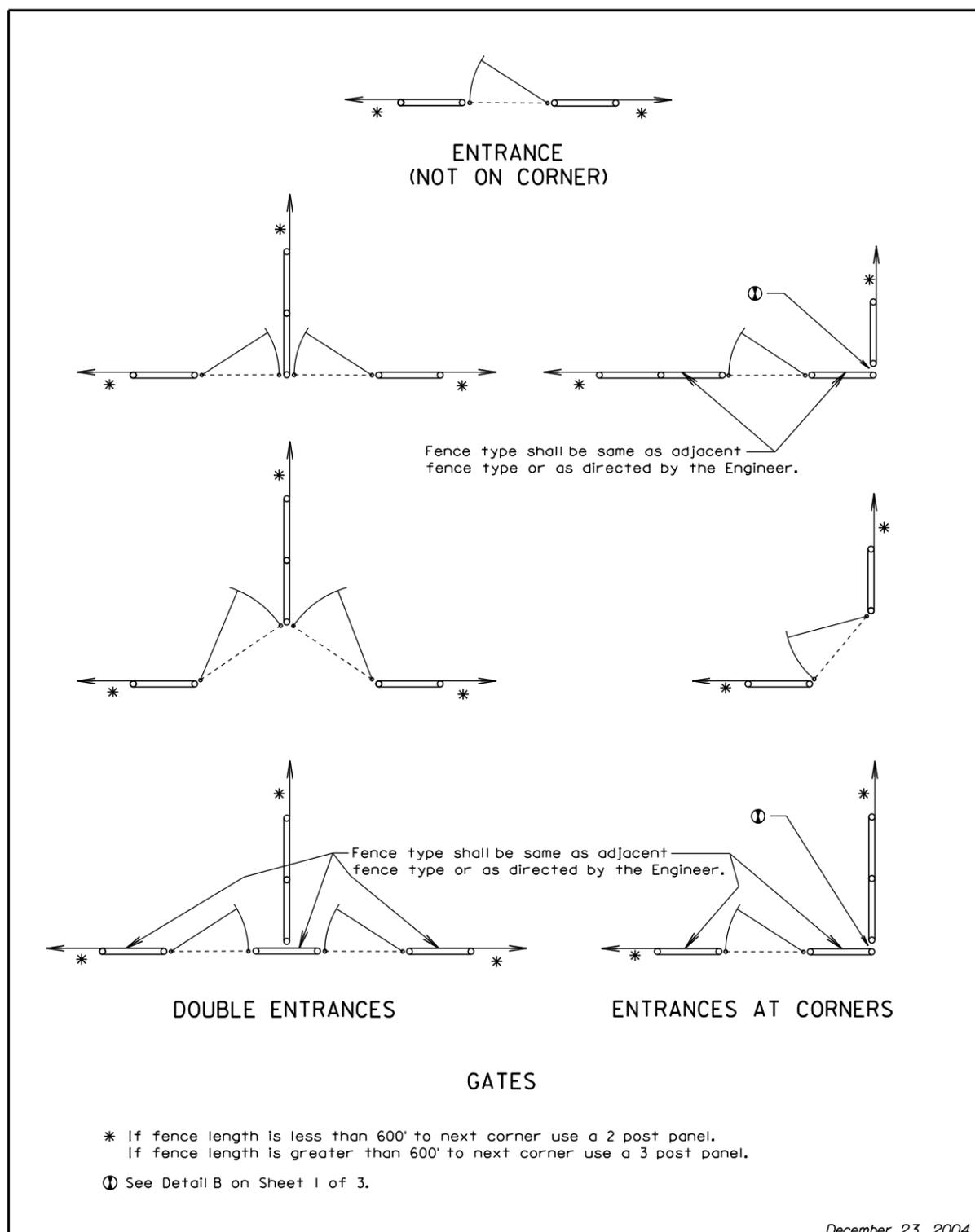
Published Date: 2nd Qtr. 2014	S D D O T	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 2 of 3

Plotting Date: 07/11/2014

PLOT SCALE - 1:7000

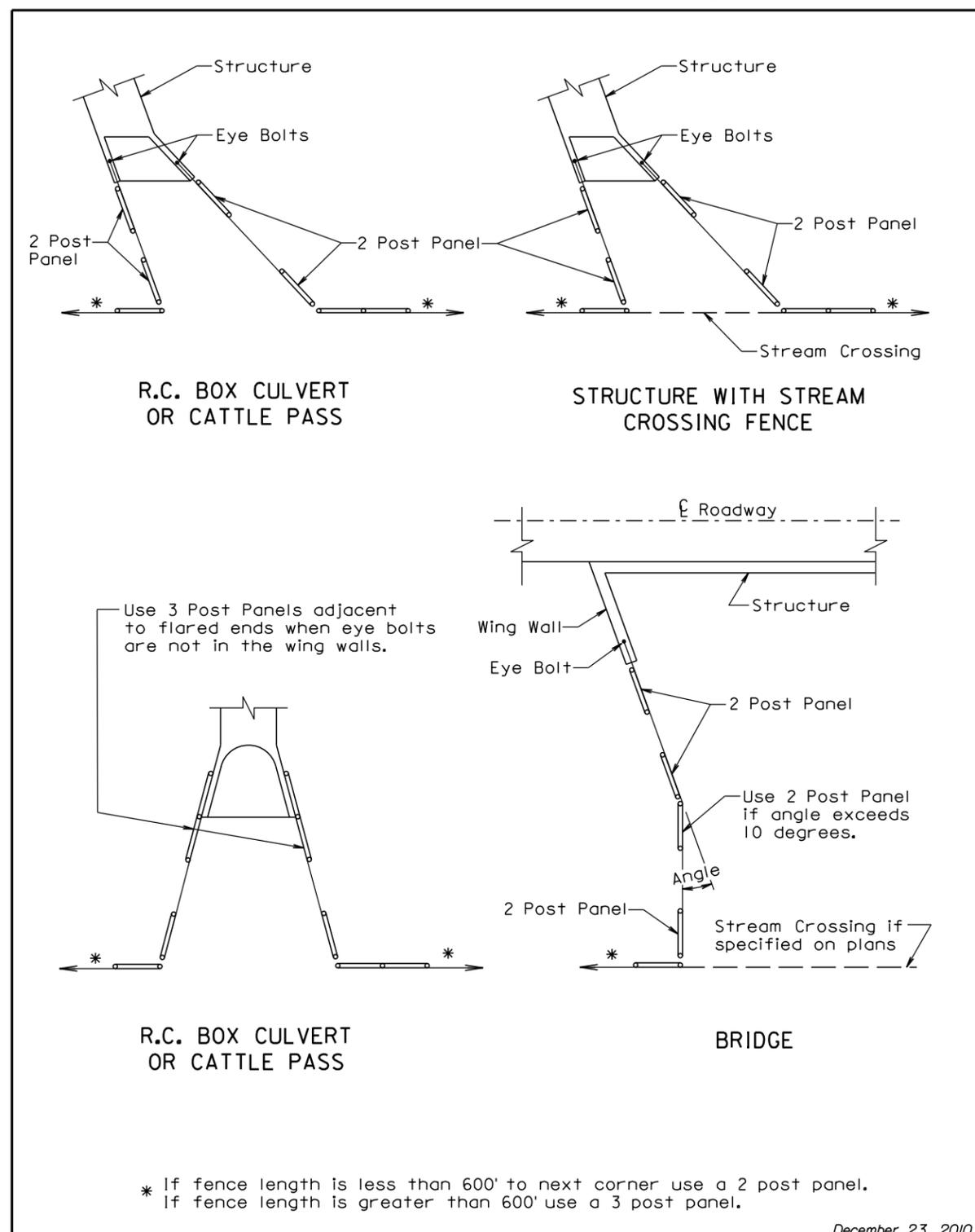
PLOT NAME - 7

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December 23, 2004

S D D O T	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
	Published Date: 2nd Qtr. 2014	Sheet 3 of 3



December 23, 2010

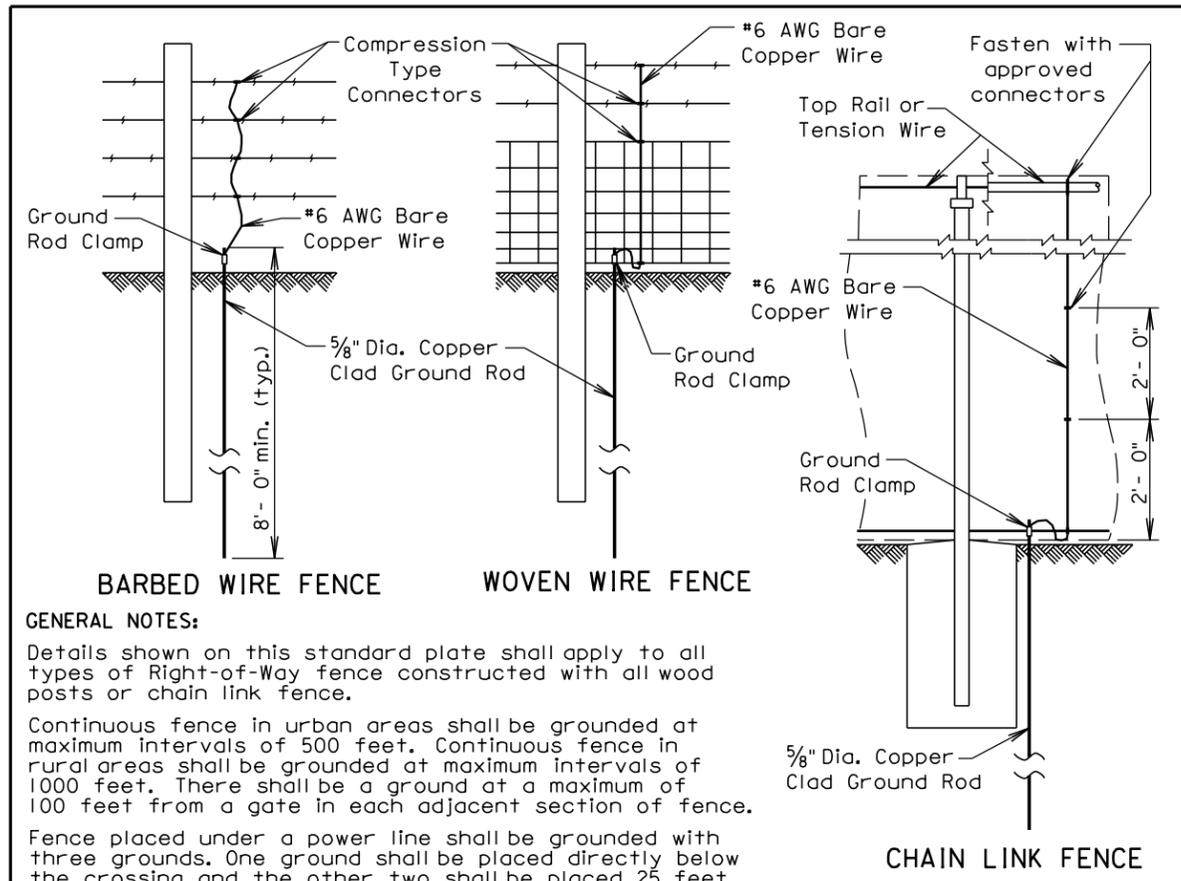
S D D O T	BRACE PANEL APPLICATIONS AT STRUCTURES	PLATE NUMBER 620.04
	Published Date: 2nd Qtr. 2014	Sheet 1 of 1

Plotting Date: 07/11/2014

PLOT SCALE - 1:7000

PLOT NAME - 7

FILE - ... \AUR002PJ\BLANK BORDER 15.DGN



GENERAL NOTES:

Details shown on this standard plate shall apply to all types of Right-of-Way fence constructed with all wood posts or chain link fence.

Continuous fence in urban areas shall be grounded at maximum intervals of 500 feet. Continuous fence in rural areas shall be grounded at maximum intervals of 1000 feet. There shall be a ground at a maximum of 100 feet from a gate in each adjacent section of fence.

Fence placed under a power line shall be grounded with three grounds. One ground shall be placed directly below the crossing and the other two shall be placed 25 feet to 50 feet away, one on each side.

One ground shall be placed directly below each telephone or cable crossing.

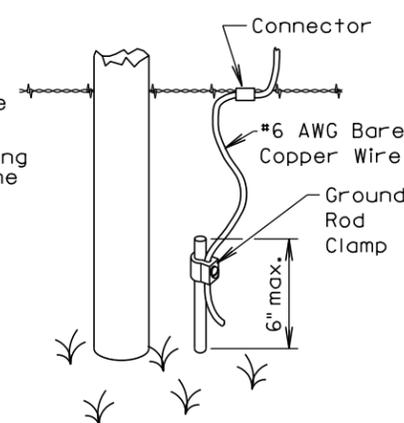
Ground rods shall be located on the post side of the fence and shall be as close as possible to the post and fence.

The cost of furnishing and placing all materials for grounding shall be incidental to the contract unit price per Ft for the respective Right-of-Way fence or chain link fence bid item.

The approximate quantities of materials per each installation of a ground are:

- 1 ground rod clamp.
- 1 5/8" dia. X 8' long copper clad ground rod
- 1 #6 AWG bare copper wire; 7' long for Right-of-Way fence or 10' long for chain link fence.

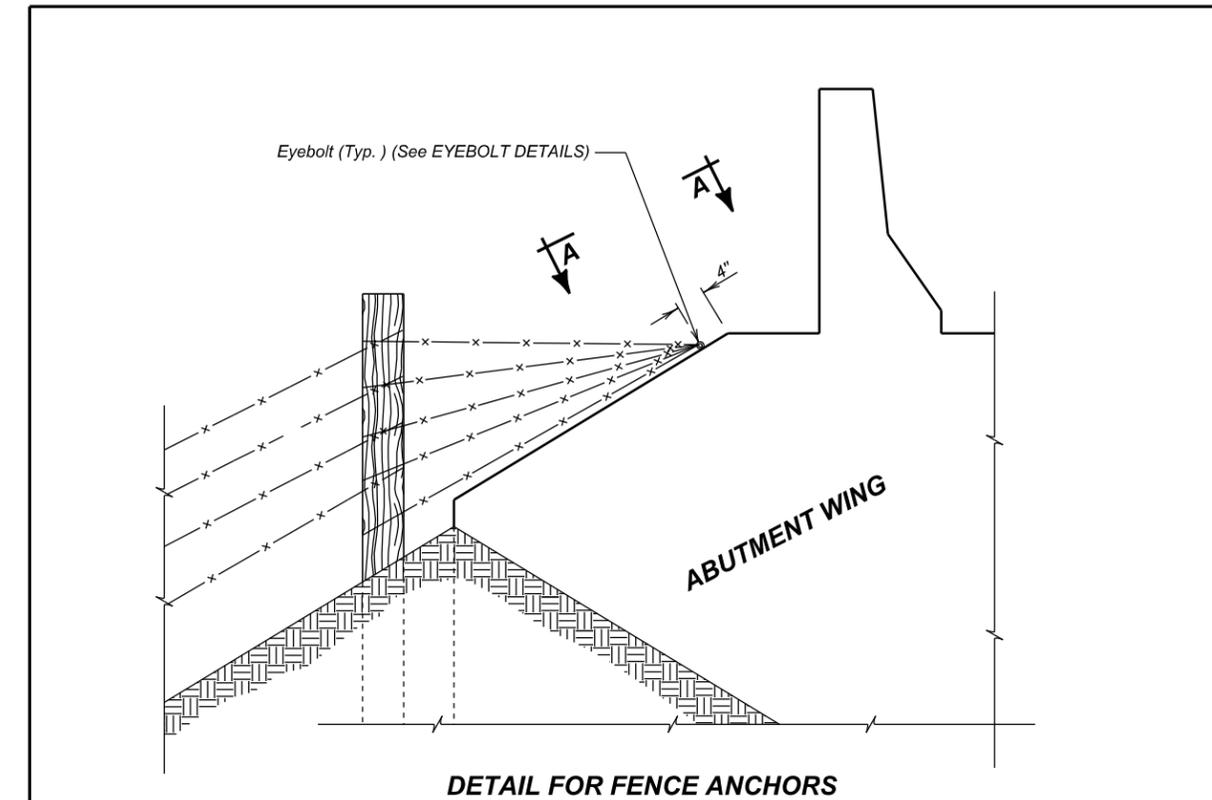
Compression type or other type of connectors:
 26" woven wire shall have a total of two connectors, one secured to the top and one secured to the bottom.
 32" woven wire shall have a total of three connectors, one secured to the top, one secured to the middle, and one secured to the bottom.
 One connector shall be used for each strand of barbed wire.
 A minimum of 3 connectors shall be installed on chain link fence, the connectors shall be placed vertically at every two foot increment and connectors shall be placed on the top and bottom tension wires or top rail.



GROUND ROD DETAIL

March 31, 2000

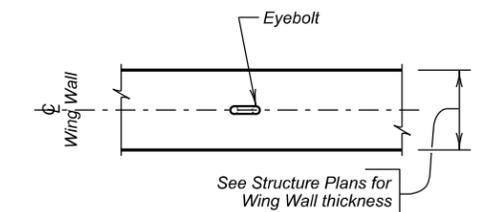
S D D O T	FENCE GROUNDING	PLATE NUMBER 620.11
	Published Date: 2nd Qtr. 2014	Sheet 1 of 1



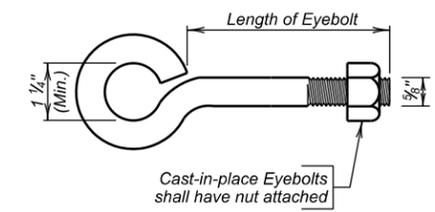
DETAIL FOR FENCE ANCHORS

GENERAL NOTES:

1. The fence and post details shown are for illustrative purpose only. The fence shall be as specified elsewhere in the plans.
2. Eyebolts shall be placed on all of the bridge abutment wings.
3. Eyebolts shall be 3/8 inch diameter and shall conform to ASTM A307.
4. Eyebolts, nuts, and concrete inserts shall be galvanized in accordance with AASHTO M232 (ASTM A153). Concrete inserts of corrosion resistant material need not be galvanized.
5. Cast-in-place eyebolts shall have a nut attached, be 4 1/2 inches (Min.) in length and shall be embedded such that the eye of the bolt is flush with the concrete surface. (See Eyebolt Details) As an alternate, cast-in-place concrete inserts, capable of developing the full strength of the 3/8 inch diameter threaded eyebolt, may be used and shall be set in the concrete in accordance with the manufacturer's recommendations. The eyebolt shall be of sufficient length to develop its full strength. The eye of the eyebolt shall be flush with the concrete surface.
6. The cost for furnishing and installing eyebolts and/or concrete inserts shall be incidental to various contract items.



VIEW A - A



EYEBOLT DETAILS

December 23, 2012

S D D O T	FENCE ANCHORS FOR BRIDGE ABUTMENT WINGS (WINGS 6' AND SHORTER)	PLATE NUMBER 620.18
	Published Date: 2nd Qtr. 2014	Sheet 1 of 1

PLOTTED FROM - TRWJLINT06