

# STATE OF UTAH MSE WALL INSPECTION FORM

Compiled As Part of Research By The Utah Department of Transportation

**Instructions:**

- 1-Fill out required sections for MSE Wall Inspector and Wall Characteristics.
- 2-Inspect the wall using the attached form. Questions that require a "Yes" answer should be documented by noting the extent of the problem in the right most column and photo documentation. Photo documentation should consist of wall or bridge number, nature of problem, date, photo number for wall, and a size reference, which should be indicated in the photo (white board/paper). Photos taken should be placed on the Top View layout and indicated with the appropriate number. Note should be taken by the inspector that often anomalies are due to construction and should be distinguished from those that are a result of post-construction. If it is observable that they existed at the time of construction note should be taken in the space provided for drawings.
- 3- Shoot digital photos of the entire wall. This may require the use of a variety of shots and angles on each wall to cover the wall in its entirety.
- 4- Indicate Layout of MSE Wall in respect to major intersections, roadways, potential hazards, irrigation, vegetation, locations of conditions for which 'Yes' was marked, etc. in space provided below. Also Indicate approximate GPS Coordinates of Site of Interest in space provided below

<b>Region</b>	4	<b>Identifying Road/Intersection</b>	SR-18, 6
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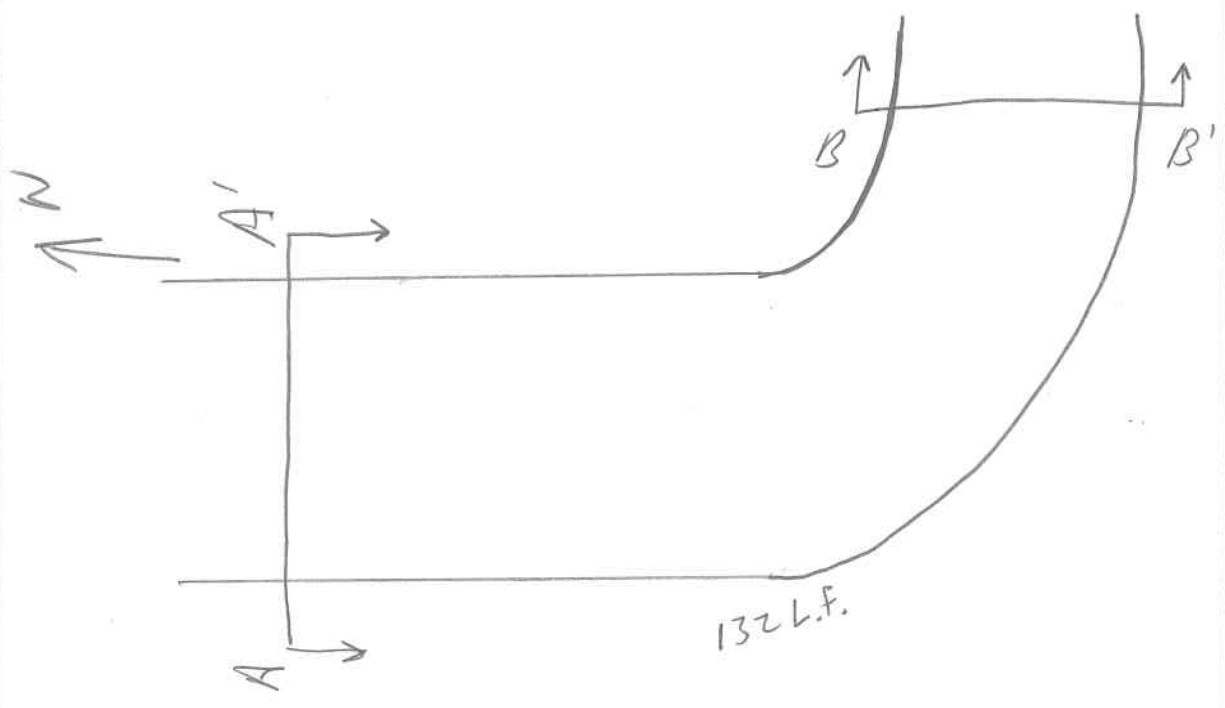
## MSE WALL CHARACTERISTICS

MSE Wall at Bridge	(Y) N	Bridge Number if applicable:		Wall Number	R-462-A,B
Surrounding Structures				Maximum Height of Wall (ft)	13
Distance to Each Structure				One Stage, Two Stage or Block Wall	modular/gravity
State Route Number	88			Estimated Max Length of Wall Abutment:	132
Approximate Mile Marker	9			Max Slope of Ground in front of wall:	
GPS Datum	WGS/84, NAD/83, or NAD/27			Max Height of wall burial line above surrounding level ground:	
MSE Wall GPS Coordinates (Location of Measurement shown on plan view)	Please draw rough layout of panel with approximate dimensions in space provided below:				
If known, Panel or System Manufacturer	<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p style="text-align: center;">48"</p> <p style="text-align: center;">dye Stone Face</p> <p style="text-align: left; margin-left: 20px;">16"</p> </div>				

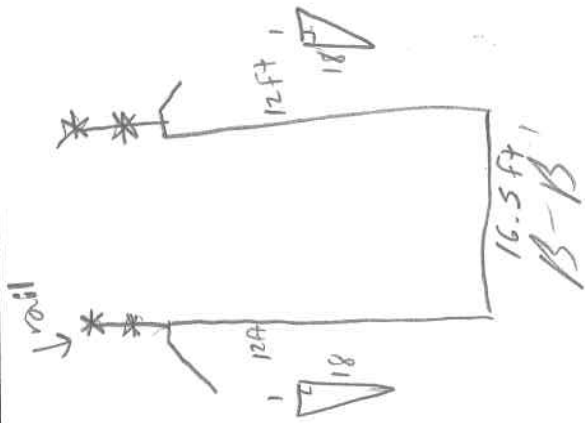
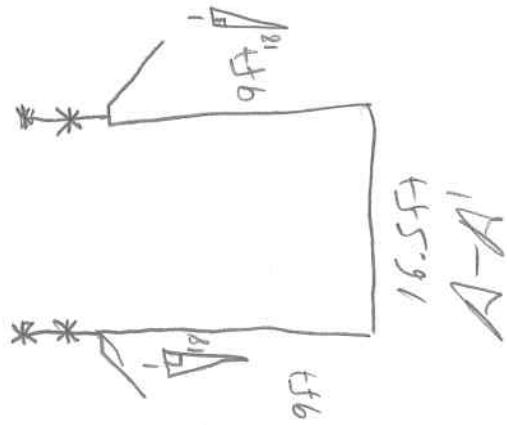
**Summary of Key Observations:**

geo-mesh at every vertical gap

Plan View/Drainage:



Cross Sections:



Cross Sections:

MISE WALL DRAINAGE

Required Finding	Urgency	Urgency/CFR	Camera	Drainage	Measurement/Extent of Problem/Location/Photo Numbers
Y	N/A	UNKN		1-Is there any visible water seepage near the toe of the wall (in the wall near a body of water with occur permitted)?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		2-If applicable, are the earth behind at the base of the wall blocked?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		3-Are there culverts protruding through the wall?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		4-Are there vertical drains that travel through the backfill?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		5-A clear orifice at the base of the wall or leveling pad? (Photo 12)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		6-A clear orifice along the wall?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		7-Are there any signs of water flow along the base of the wall?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		8-Are there less than 1 ft from between irrigation problemers and wall?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		9-Does the backfill or joint fabric appear to be maintained?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		10-Is there vegetation growing in panel joints (Photo 9)?	Blocked / 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		11-Are the deck drains and outlets at the top of the wall blocked? (Photo 14)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		12-Can water enter the wall between coping and slab (i.e., Drain appropriately)?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		13-Is there evidence of discharge point of fill washing through drain pipe?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /

*Not yet*

*Not yet, but likely 51-George*

MISE WALL JOINTS

Required Finding	Urgency	Urgency/CFR	Camera	Joint	Measurement/Extent of Problem/Location/Photo Numbers
Y	N/A	UNKN		14-Is backfill over or under joints or are there piles of backfill at the base of the wall? (Photos 2 & 3)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		15-Are the joints wide enough to see fabric or backfill behind panels when looking from joint? (Photo 3) If yes, record the approximate maximum joint width in inches.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		16-Are there any signs of water seepage from the horizontal joints? (Photo 1)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		17-Are there any signs of water seepage from the vertical joints? Is there evidence of backfill or water seeping through joint? (Do not use photos 1 & 2 for this finding)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		18-Do the joints have nonuniform horizontal spacing? Are some horizontal joints larger/smaller than others? (Photo 6)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		19-Do the joints have a nonuniform vertical spacing? Are some vertical joints larger/smaller than others? (Photo 6)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		20-Are the panels offset at the joints either in or out of the wall? (Photo 7) If yes, record the approximate maximum offset.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		21-Does the fabric appear brittle or appear as if it has undergone excessive UV exposure?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /

MISE WALL FACING

Required Finding	Urgency	Urgency/CFR	Camera	Crack	Measurement/Extent of Problem/Location/Photo Numbers
Y	N/A	UNKN		22-Are there any signs of cracking in the wall? (Photo 8)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		23-Do the cracks show any signs of movement? (Photo 8 & 10) If yes, record the approximate number of panels in the wall with cracks.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		24-Are there cracks that continue horizontally through adjacent panels (Photos 8 & 10)? If yes, record the approximate number of panels in the wall with cracks.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		25-Are the panel corners making contact with each other? If yes, record the approximate number in the wall.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		26-Are the panel corners "pepped-off" or chipped from contact with an adjacent panel? If yes, record the number in the wall.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		27-Does crack spacing suggest Differential Settlement?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		28-Does the overlying coping exhibit Vertical Offset?	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		29-Are the coping and parapet loose or detaching? If yes, it may be appropriate to contact UDOT if detachment occurs.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		30-Are the panels in danger of falling off? If panels exist contact appropriate UDOT regional.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		31-Are there any signs of delamination or spalling? If so, record maximum delamination from accessible coping to leveling pad. (Photo 11)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		32-Is there "lapping" at the top or bottom of the wall? (Record maximum degree of lapping from struich using vertical level and reference area)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /

MISE TOP OF WALL OBSERVATIONS

Required Finding	Urgency	Urgency/CFR	Camera	Top of Wall	Measurement/Extent of Problem/Location/Photo Numbers
Y	N/A	UNKN		33-Is there evidence of settlement at the top of the wall? ( pavement cracking, etc)	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		34-Are there any open cracks in the concrete coping (not hairline)? If yes record the approximate maximum crack width.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /
Y	N/A	UNKN		35-Is there the construction joint in the ascending coping, stepped up? (Photo 6) If yes, record the maximum joint width.	/ 0-Nb 1% 5% 10% 25% 50% 75% 90% 95% 100% /

Y	N	(S)		15-Is there a large gap between the approach slab and the approach pavement? (Point 15) (Other 15)	0-N6	1%	5%	10%	25%	50%	75%	90%	95%	100%/
Y	N	(S)	X	16-Is the finished depth of leveling of the approach slab less than the specified finish depth? (Point 16) (Other 16)	0-N6	1%	5%	10%	25%	50%	75%	90%	95%	100%/
Y	N	(S)	X	17-Is the finished depth of leveling of the approach slab less than the specified finish depth? (Point 17) (Other 17)	0-N6	1%	5%	10%	25%	50%	75%	90%	95%	100%/
Y	N	(S)	X	18-Is the existing wall pulling away from pavement/roadway section? Please record maximum displacement for wall.	0-N6	1%	5%	10%	25%	50%	75%	90%	95%	100%/

**RISE STABILITY**

Required Metric:	How to verify	Pass	Fail	Measurement Extent of Problem Location/Photo Numbers
Structural Integrity				
39-What is the location depth of leveling of the approach slab? Please Place Probe into wall located 2 inches from wall to a maximum depth of 24 inches (24 inches is the minimum depth for MSE Wall)		Y	N	0-N6
40-Is there any cracking in the leveling pad? (See record maximum crack size with page)		Y	N	0-N6
41-Is there a four foot back (feed slope) directly along the wall below the slope change? (Record width)		Y	N	0-N6
42-Is there a four foot back (feed slope) directly along the wall below the slope change? (Record width)		Y	N	0-N6
43-Is there a slope greater than V: 1.5 to H: 1.1 in front of the wall? Please record slope and height of backfill above top of wall.		Y	N	0-N6
44-Is there a slope greater than V: 1.5 to H: 1.1 below the wall? Please record slope and height of backfill below the wall.		Y	N	0-N6
45-Is there excessive degradation of paved face?		Y	N	0-N6

**RISE METAL CORROSION**

Required Metric:	How to verify	Pass	Fail	Measurement Extent of Problem Location/Photo Numbers
52-Does the reinforcement have a zinc coating?		Y	N	0-N6
53-Is there excessive corrosion on guardrails or other exposed metal that might indicate corrosion conditions?		Y	N	0-N6
54-Is there any joint stain on the face panels? Along joints? If so, record joint number.		Y	N	0-N6
55-Are any internal strips exposed? Does there appear to be corrosion on these strips? If applicable, please record the total number of strips affected.		Y	N	0-N6
56-Is there any rust or staining on the face of the wall? If so, please indicate depth in inches.		Y	N	0-N6
57-Is there any rust or staining on the face of the wall? If so, please indicate depth in inches.		Y	N	0-N6
58-Is there any rust or staining on the face of the wall? If so, please indicate depth in inches.		Y	N	0-N6

**RISE IMPACT COLLISION PROTECTION**

Required Metric:	How to verify	Pass	Fail	Measurement Extent of Problem Location/Photo Numbers
59-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6
60-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6
61-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6
62-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6
63-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6

**RISE OBSTRUCTIONS IN REINFORCEMENT GEOMETRY**

Required Metric:	How to verify	Pass	Fail	Measurement Extent of Problem Location/Photo Numbers
64-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6
65-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6
66-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6
67-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6
68-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6

**RISE AS BUILT DIFFERENT FROM DESIGN**

Required Metric:	How to verify	Pass	Fail	Measurement Extent of Problem Location/Photo Numbers
69-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6
70-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6
71-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6
72-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6
73-Is there any indication of other corrosion (buckling, staining, rust, exposed metal inside epoxy coating)? If so, please indicate depth in inches.		Y	N	0-N6