

# 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>	~	<b>Identifying Road/Intersection</b>
		200 S, I-15, SLC

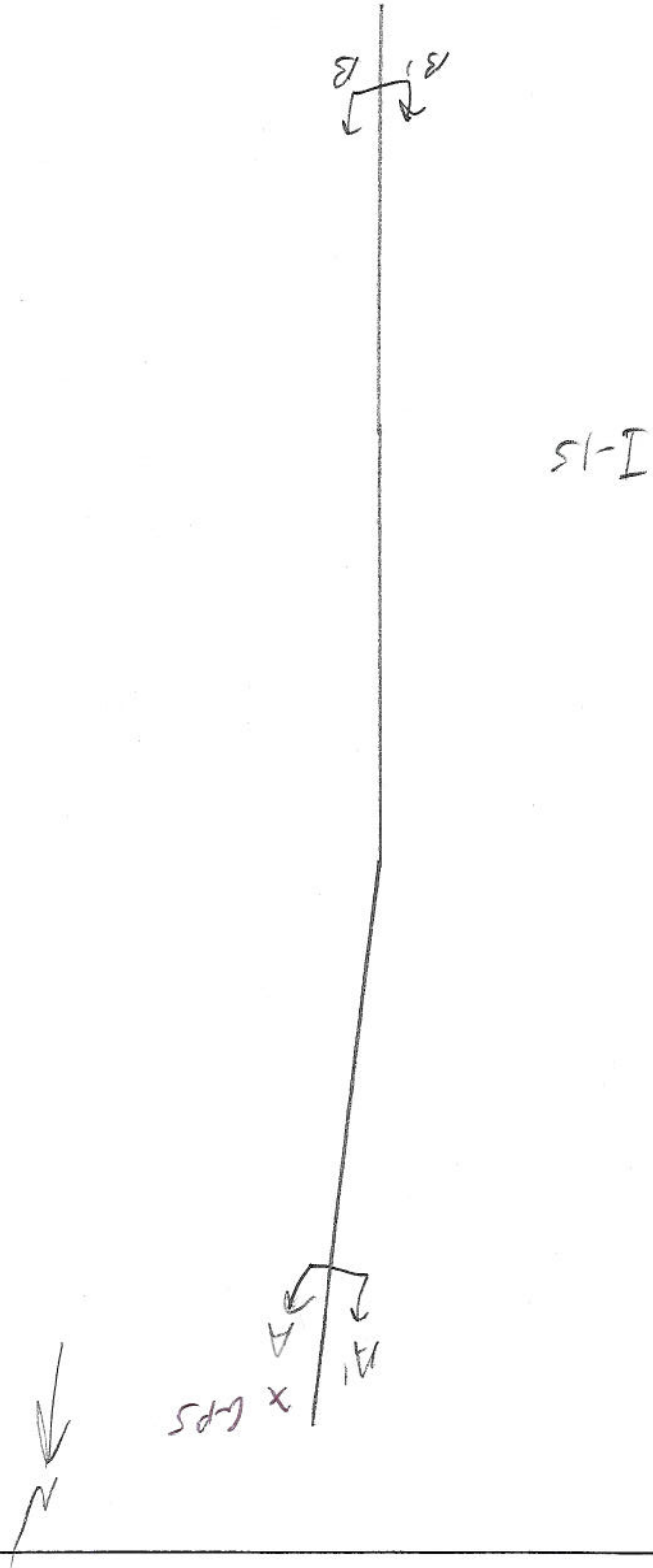
## MSE WALL CHARACTERISTICS

MSE Wall at Bridge	<input checked="" type="checkbox"/> N	Bridge Number if applicable:		Wall Number	R-351-43, 14
Surrounding Structures				Maximum Height of Wall (ft)	26 ft
Distance to Each Structure			One Stage, Two Stage or Block Wall		2-Stage
State Route Number			Estimated Max Length of Wall Abutment:		400 ft
Approximate Mile Marker			Max Slope of Ground in front of wall:		0
GPS Datum	WGS/84, NAD/83, or NAD/27			Max Height of wall burial line above surrounding level ground:	3 ft
MSE Wall GPS Coordinates (Location of Measurement shown on plan view)	40° 45' 52.60" N 111° 54' 47.16" W			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; width: 100%; height: 100%; position: relative;"> <div style="position: absolute; top: 0; left: 50%; transform: translate(-50%, 0);">10'</div> <div style="position: absolute; left: 0; bottom: 0; transform: rotate(-90deg);">5'</div> </div>				

**Summary of Key Observations:**

panels tipping, skinny shelf

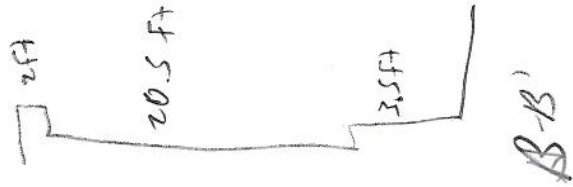
Plan View/Drainage:



Cross Sections:



A-A'



Cross Sections:

NISE WALL DRAINAGE

Required Topic	Yes	No	N/A	UKS	Measurement/Evident of Problem/Location/Photo Numbers
1-Is there an active water source near the base of the wall (to the wall near a body of water with seepage)?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2-If applicable, are the catch basins at the base of the wall blocked?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3-Are there culverts protruding through the wall?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
4-Are there vertical drains that travel through the backfill?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
5-Is there evidence at the base of the wall or leveling post? (Photo 12)	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
6-Is there evidence along the ring wall?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
7-Are there any signs of water flow along the base of the wall?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
8-Does the backfill or joint fabric appear to be saturated?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
9-Is there vegetation growing in pond joints (Photo 8)?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
10-Are the deck drains and conduits at the top of the wall blocked? (Photo 14)	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
11-Can water enter the wall between coping and slab (i.e., drain apron)?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
12-Is there evidence of discharge points of fill washing through drain pipes?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

NISE WALL JOINTS

Required Topic	Yes	No	N/A	UKS	Measurement/Evident of Problem/Location/Photo Numbers
1-Is the backfill coming out of joints or are there piles of backfill at the base of the wall? (Picture 2 & 3)	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2-Are the joints wide enough to see fabric or backfill behind joints when looking into joints? (Photo 2) If yes, record the approximate maximum joint width in inches.	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3-Is exposed backfill visible in the horizontal joints? (Photo 1)	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
4-Are there visible tears in the fabric? Is there evidence of backfill or water leaking through tears? (Do not include additional damage to fabric)	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
5-Do the joints have a non-uniform horizontal spacing? Are some horizontal joints larger than others? (Photo 6)	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
6-Do the joints have a non-uniform vertical spacing? Are some vertical joints larger than others? (Photo 6)	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
7-Are the joints wider in some areas than others? (Photo 7) If yes, record the approximate maximum offset.	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
8-Does the fabric appear brittle, or appear as if it has undergone excessive UV exposure?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

NISE WALL FINISHING

Required Topic	Yes	No	N/A	UKS	Measurement/Evident of Problem/Location/Photo Numbers
1-Is there excessive cracking in the panel?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2-Are there cracks that continue vertically through adjacent panels (Photos 9 & 10)? If yes, record the approximate number of panels that are cracked.	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3-Are there cracks that continue horizontally through adjacent panels (Photos 9 & 10)? If yes, record the approximate number of panels in the wall with cracking.	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
4-Are the panel corners making contact with each other? If yes, record the approximate number in the wall.	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
5-Are the panel corners "popped-off" or chipped from contact with an adjacent panel? If yes record the number in the wall.	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
6-Does crack spacing suggest Differential Settlement?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
7-Does the overlying coping exhibit Vertical Offset?	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
8-Are the coping and supports loose or detaching? If yes, is it appropriate to contact UDOT if detachment seems eminent.	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
9-Are the panels in danger of falling off? (If potential exist contact appropriate UDOT region).	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
10-Are the panels "bulging" (bowing horizontally)? If so, record maximum deformation from accessible coping to leveling post. (Photo 11)	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
11-Is there "lifting" at the top or bottom of the wall? (Record maximum degree of lifting from rainfall along vertical level of wall affected area)	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

NISE TOP OF WALL OBSERVATIONS

Required Topic	Yes	No	N/A	UKS	Measurement/Evident of Problem/Location/Photo Numbers
1-Is there evidence of settlement at the top of the wall? ( pavement cracking, etc.)	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2-Are there any open cracks in the concrete coping (not building)? If yes record the approximate maximum crack width.	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3-Is there the connection joints in the coping coping opened up? (Photo 5) If yes, record the maximum joint width.	Y	N	N/A	UKS	0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

2.5

