

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.

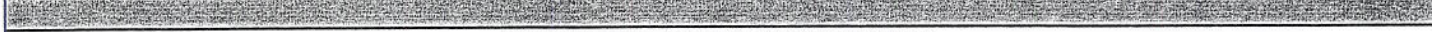
2- Inspect the wall using the attached form. Questions that require a 'Yes' answer should be documented by noting the extent of the problem in the right most column and photo documentation. Photo documentation should consist of wall or bridge number, nature of problem, date, photo number for wall, and 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.

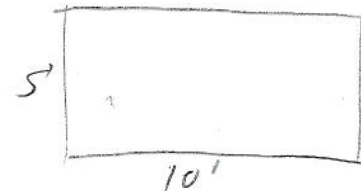
4- Indicate Layout of MSE Wall in respect to major intersections, roadways, potential hazards, irrigation, vegetation, locations of conditions for which 'Yes' was marked, etc. in space provided below. Also Indicate approximate GPS Coordinates of Site of Interest in space provided below



Region	2	Identifying Road/Intersection	900 W HARVIS
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MSE WALL CHARACTERISTICS

MSE Wall at Bridge	Y <input checked="" type="radio"/> N	Bridge Number if applicable:		Wall Number	R-349-4
Surrounding Structures				Maximum Height of Wall (ft)	17'
Distance to Each Structure				One Stage, Two Stage or Block Wall	2 stage
State Route Number				Estimated Max Length of Wall Abutment:	307'
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:	8ft
MSE Wall GPS Coordinates (Location of Measurement shown on plan view)	40° 43' 25.89" N 110° 55' 08.39" W		Please draw rough layout of panel with approximate dimensions in space provided below:		
If known, Panel or System Manufacturer					

Summary of Key Observations:

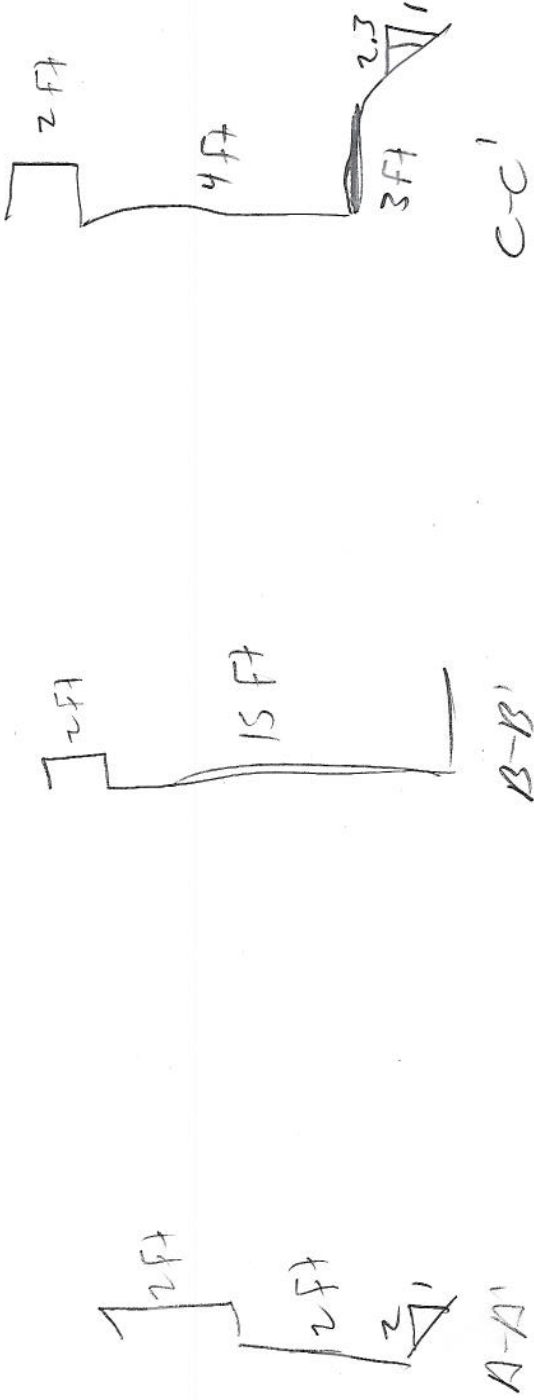
- erosion at end of wall



Plan View/Drainage:



Cross Sections:



Cross Sections:

NEE WALL DRAINAGE

Required Test:	Yes	No	N/A	UNKS	Measurement/Extent of Problem/Location/Photo Numbers
1-Is there an active water source near the toe of the wall (or the wall near a body of water with wave potential)?	Y	N	N/A	UNKS	/ 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	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3-Are there obstructions protruding through the wall?	Y	N	N/A	UNKS	/ 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	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
5-Is there erosion at the base of the wall or leveling pad? (Photo 12)	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
6-Is there erosion along the wing wall?	Y	N	N/A	UNKS	/ 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	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
8-Is there less than 14 feet between impingement spandrels and wall?	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
9-Does the backfill or joint fabric appear to be saturated?	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
10-Is there vegetation growing in panel joints (Photo 8)?	Y	N	N/A	UNKS	Blocked / 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
11-Do the deck drains and outlets at the top of the wall block? (Photo 14)	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
12-Can water enter the wall between coping and slab (i.e., drain appropriately)?	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
13-Is there evidence at discharge point of fill washing through drain pipe?	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

6 feet

RISE WALL JOINTS

Required Test:	Yes	No	N/A	UNKS	Measurement/Extent of Problem/Location/Photo Numbers
1-Is backfill coming out of joints or over the piles of backfill at the base of the wall? (Photos 2 & 3)	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2-Is the joint wider than 1/2 inch or backfill behind panels has broken into joint? (Photo 5) If yes, record the approximate maximum joint width in inches.	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3-Is exposed backfill visible in the horizontal joint? (Photo 4)	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
4-Are there visible signs of water leaking through wall? (Do not include additional damage to fabric)	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
5-Is the joint have a non-uniform horizontal spacing size? Are some horizontal joints larger smaller than others? (Photo 6)	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
6-Do the joints have a non-uniform vertical spacing size? Are some vertical joints larger smaller than others? (Photo 6)	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
7-Do the panels have a non-uniform vertical spacing size? Are some vertical joints larger smaller than others? (Photo 6)	Y	N	N/A	UNKS	/ 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	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

RISE WALL FACING

Required Test:	Yes	No	N/A	UNKS	Measurement/Extent of Problem/Location/Photo Numbers
1-Is there excessive cracking in the panel?	Y	N	N/A	UNKS	/ 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 in the wall with cracking.	Y	N	N/A	UNKS	/ 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	UNKS	/ 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 number in the wall.	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
5-Do the panel corners "pop-out" or chip off from contact with an adjacent panel? If yes record the number in the wall.	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
6-Do the existing coping exhibit Vertical Offset?	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
7-Do the coping and parapet base or detaching? If yes, (1) record the approximate UDOT if detachment score exist.	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
8-Are the panels in danger of falling off? (If potential exist contact appropriate UDOT region).	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
9-Is there any evidence of water seeping through the wall? (Record maximum degree of seeping from annual using vertical level and affected area).	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

RISE TOP OF WALL OBSERVATIONS

Required Test:	Yes	No	N/A	UNKS	Measurement/Extent of Problem/Location/Photo Numbers
1-Is there evidence of settlement at the top of the wall? (prevention cracking, etc)	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
2-Are there any open cracks in the concrete coping (not hairline)? If yes record the approximate maximum crack width.	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /
3-Is there any communication joints in the concrete coping opened up? (Photo 6). If yes, record the maximum joint width.	Y	N	N/A	UNKS	/ 0-No 1% 5% 10% 25% 50% 75% 90% 95% 100% /

Req'd	Obs	Issue	Notes	Measurements	Extent of Problem	Location	Photo Numbers							
Y	N/A	UN	56-Is there a large gap between the approach slab and the approach pavement? (Photo 13) Other than this procedure a blinding condition as the approach is raised. Record the approximate maximum gap size.	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N	UN	57-At the abutment, has the joint between the wall coping and the abutment opened up a significant? If so record maximum distance.	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	58-Is coping wall pulling away from pavement/roadway section? Please record maximum displacement to wall.	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%

NISE STABILITY

Req'd	Obs	Issue	Notes	Measurements	Extent of Problem	Location	Photo Numbers							
Yes	N/A	UN	59-What is the location depth of leveling pad? Found One Probe line well located 2 inches from wall to a maximum depth of 24 inches (24 inches is the minimum depth for MSE Wall)	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	60-Is leveling pad exposed?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	61-Is there cracking in the leveling pad? If so, record maximum crack size with edge.	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	62-Is there a four foot 'boom' (level) along directly along the wall before the slope change (Record width)?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	63-Is there a slope greater than V: 1.3 to H:1 in front of the wall? Please record slope and height of backfill above top of wall.	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	64-Is there a slope greater than V: 1.2 to H:1 below the wall? Please record slope and height of backfill below the wall.	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	65-Is there excess or degradation of panel fence?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%

NISE METAL CORROSION

Req'd	Obs	Issue	Notes	Measurements	Extent of Problem	Location	Photo Numbers							
Yes	N/A	UN	66-What is the location of the metal corrosion?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	67-Is there excessive corrosion on guardrail or other exposed metal that might indicate corroded condition?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	68-Are there imper for rust stains on the face panels? Along joint? If so, record total number.	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	69-Are any internal straps exposed? Does there appear to be corrosion on these straps? If applicable please record the total number of straps affected.	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	70-Was rebar/polymer staple/s of exposed wall? If so, please indicate depth in inches.	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	71-Is there any indication of other corrosion (swelling bars, rust, exposed metal inside epoxy coating)? If so please record the total number of posts affected.	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%

NISE IMPACT/COLLISION PROTECTION

Req'd	Obs	Issue	Notes	Measurements	Extent of Problem	Location	Photo Numbers							
Yes	N/A	UN	72-Is there any guardrail? (For protection in front of potential barrier)	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	73-Does it appear that the wall has been installed in an accident (replaced panel, recent dig in the wall)?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	74-Does it appear the wall functionally and integrity has been compromised by a collision or accident?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%

NISE OBSTRUCTIONS IN REINFORCEMENT GEOMETRY

Req'd	Obs	Issue	Notes	Measurements	Extent of Problem	Location	Photo Numbers							
Yes	N/A	UN	75-Are there any obstructions in Reinforcement Geometry?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%

NISE AS BUILT DIFFERENT FROM DESIGN

Req'd	Obs	Issue	Notes	Measurements	Extent of Problem	Location	Photo Numbers							
Yes	N/A	UN	76-Is there available drawing for the wall? Please indicate type (Situation and Layout, Design, As Built, etc.)	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	77-Is the layout in general accordance with drawings?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	78-Use the panel CIP? (Can fit panel) Does there appear to be excessive cracking in the panel?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	79-What GEC form used in the construction of the wall?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	80-Are there any structures on or near wall that were not included in initial drawings?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	81-Is there any irrigation, utilities, or structures that are not part of the initial drawings?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	82-Is there any excavation or evidence of excavation near the wall?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	83-Is there any vegetation, trees, or structures that were not included in the drawings (Additional structures, irrigation, etc.)	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%
Y	N/A	UN	84-Is there any pits located in the wall (bridge abutment)?	0-50	1%	5%	10%	25%	50%	75%	90%	95%	100%	100%